

October 22, 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. 2 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. Clarification

1. General

1. All survey and layout of the proposed work will be completed by the contractor.
2. The contractor must use a file explorer to locate the appendices folder on the advertising disk

B. Specifications - Contract Specific

1. Page CS-3

Delete page CS-3 in its entirety and replace it with page CS-3(R-1) attached to this Addendum No. 2. The plan volume titles are updated.

2. Page CS-6

Delete page CS-6 in its entirety and replace it with page CS-6(R-1) attached to this Addendum No. 2. Fixed typographical error on the Cox Communications Schedule.

3. Pages CS-7 and CS-8

Delete page CS-7 and CS-8 in their entirety and replace them with pages CS-7 (R-1) and CS-8 (R-1) attached to this Addendum No. 2. The special requirements concerning the Amtrak bridges is updated.

4. Pages CS-13 through CS-15

Delete page CS-13 through CS-15 in their entirety and replace them with page CS-13 (R-1) through CS-15 (R-1) attached to this Addendum No. 2. The listing of lump sum pay items is updated.

5. Appendix Cover Pages

Delete appendix cover pages in their entirety and replace them with the new appendix cover pages (R-1) attached to this Addendum No. 2. The pages are updated to refer bidders to separate folders containing the attachments to the appendix.

6. Appendix B - LARGE-SITE Stormwater Pollution Prevention Plan

Delete the file in the Appendix B folder of the Advertising CD and replace with the revised version of the file attached to this Addendum No. 2. Also, the respective drawings are attached hereto.

C. Specifications - Job Specific

1. Page JS-52

Delete Page JS-52 in its entirety and replace it with Page JS-52(R-1) attached to this Addendum No. 2. The specification has been revised.

2. Pages JS-58 through JS-60

Delete Pages JS-58 through JS-60 in their entirety and replace them with Pages JS-58 (R-1) through JS-60 (R-1). Add pages JS-60A and JS-60B. The specification has been revised.

3. Pages JS-86 and JS-87

Delete Pages JS-86 and JS-87 in their entirety and replace them with Pages JS-86(R-1) and JS-87(R-1) attached to this Addendum No. 2. Also insert new pages 87a,87b and 87c attached to this Addendum No. 2. The specification has been revised.

4. Page JS-163

Delete Page JS-163 in its entirety and replace it with Page JS-163 (R-1) attached to this Addendum No. 2. The specification has been revised.

5. Pages JS-198 through JS-200

Delete Pages JS-198, JS-199, and JS-200 in their entirety and replace them with Pages JS-198(R-1), JS-199(R-1), and JS-200(R-1) attached to this Addendum No. 2. The specification has been revised.

6. Page JS-201

Delete Page JS-201 in its entirety and replace it with Page JS-201(R-1) attached to this Addendum No. 2. The specification has been deleted.

7. Page JS-204

Delete Page JS-204 in its entirety and replace it with Page JS-204(R-1) attached to this Addendum No. 2. The specification has been revised.

8. Pages JS-205 and JS-206

Delete Pages JS-205 and JS-206 in their entirety and replace them with Pages JS-205(R-1) and JS-206(R-1) attached to this Addendum No. 2. The specification has been revised.

9. Page JS-208

Delete page JS-208 in its entirety and replace it with page JS-208(R-1) attached to this Addendum No. 2. The specification has been revised.

10. Page JS-120

Delete Page JS-120 in its entirety and replace it with revised Page JS-120 (R-1) attached to this Addendum No. 2. The specification has been revised.

D. Distribution of Quantities

1. Index Pages

Delete pages Index 2 through Index 9 in their entirety and replace with revised pages Index 2 (R-1) through Index 9 (R-1) attached to this Addendum No. 2. Items highlighted in bold have been revised, added or deleted.

2. Page 36

Delete Page 36 in its entirety and replace with revised Page 36 (R-1) attached to this Addendum No. 2. Item code 701.0618 quantity has been revised.

3. Page 65

Delete Page 65 in its entirety and replace with revised Page 65 (R-1) attached to this Addendum No. 2. Item Code 817.9902 unit of measure and quantity have been revised.

4. Pages 72 through 74

Delete Pages 72 through 74 in their entirety and replace with revised Pages 72 (R-1) through 74 (R-1) and add Page 72a attached to this Addendum No. 2. Item Code 901.9901, 901.9902, 901.9903 and 901.9904 quantities have been revised.

5. Page 89

Delete Page 89 in its entirety and replace with revised Page 89 (R-1) attached to this Addendum No. 2. Item Code 921.9901 unit of measure was revised.

6. Pages 109 and 110

Delete Pages 109 and 110 in their entirety and replace with revised Pages 109 (R-1) and 110 (R-1) and add Page 110a attached to this Addendum No. 2. Item Codes T06.1020, T06.1030, T06.3020 and T06.3030 quantities have been revised.

7. Pages 113 and 114

Delete Pages 113 and 114 in their entirety and replace them with Pages 113 (R-1) and 114 (R-1) attached to this Addendum No. 2. Item codes T08.0100, T08.1700 and T08.9902 quantities have been revised.

8. Pages 117 through 119

Delete Pages 117 through 119 in their entirety and replace them with revised Pages 117 (R-1) through 119 (R-1) and add Page 118a attached to this Addendum No. 2. Item code T12.9902 is deleted. Item code T12.9905 revised description. Item code T13.1004 quantity has been revised.

9. Page 122

Delete Page 122 in its entirety and replace with revised Page 122 (R-1) attached to this Addendum No. 2. Item code T15.0100 was revised.

10. Page 128

Delete Page 128 in its entirety and replace with revised Page 128 (R-1) attached to this Addendum No. 2. Item code T17.0205 quantity has been revised.

11. Page 131

Delete Page 131 in its entirety and replace with revised Page 131 (R-1) attached to this Addendum No. 2. Item code T18.9903 was revised.

12. Pages 142 and 143

Delete Page 142 in its entirety and replace it with the revised Page 142 (R-1) and add Page 143 attached to this Addendum No. 2. Item codes T07.9901, T07.9902 and T12.9908 have been added.

13. Page 125

Delete Page 125 in its entirety and replace it with the revised Page 125 attached to this Addendum No. 2. Insert Page 125a attached to this Addendum No. 2. Item T15.0100 quantity was revised.

E. Drawings/Plans - Change/Addition

1. Volume 1

1. Delete plan sheet 7 in its entirety and replace it with Sheet 7 (R-1) attached to this Addendum No. 2. The sheet has been revised for staging note and callout.

2. Delete plan sheet 151 in its entirety and replace it with Sheet 151 (R-1) attached to this Addendum No. 2. The sheet has been revised.

3. Delete plan sheet 167 in its entirety and replace it with Sheet 167 (R-1) attached to this Addendum No. 2. The cross section at 201+50 was modified.

2. Volume 2

1. Delete plan sheet 5 in its entirety and replace it with Sheet 5(R-1) attached to this Addendum No. 2. The sheet has been revised.
2. Delete plan sheet 9 in its entirety and replace it with Sheet 9(R-1) attached to this Addendum No. 2. The FAP Numbers have been added to the Project Limits.
3. Delete plan sheet 10 in its entirety and replace it with Sheet 10(R-1) attached to this Addendum No. 2. Route 37 on ramp guardrail has changed.
4. Delete plan sheet 12 in its entirety and replace it with Sheet 12(R-1) attached to this Addendum No. 2. The FAP Numbers have been added to the Project Limits.
5. Delete plan sheet 18 in its entirety and replace it with Sheet 18(R-1) attached to this Addendum No. 2. Route 37 on ramp guardrail has changed.
6. Delete plan sheet 19 in its entirety and replace it with Sheet 19(R-1) attached to this Addendum No. 2. The sheet has been revised.
7. Delete plan sheet 26 in its entirety and replace it with Sheet 26(R-1) attached to this Addendum No. 2. Route 37 on ramp guardrail has changed.
8. Delete plan sheet 38 in its entirety and replace it with Sheet 38(R-1) attached to this Addendum No. 2. The sheet has been revised.
9. Delete plan sheet 44 in its entirety and replace it with Sheet 44(R-1) attached to this Addendum No. 2. The sheet has been revised.
10. Delete plan sheet 47 in its entirety and replace it with Sheet 47(R-1) attached to this Addendum No. 2. The sheet has been revised.
11. Delete plan sheet 52 in its entirety and replace it with Sheet 52(R-1) attached to this Addendum No. 2. The sheet has been revised.
12. Delete plan sheet 53 in its entirety and replace it with Sheet 53(R-1) attached to this Addendum No. 2. The sheet has been revised.
13. Delete plan sheet 54 in its entirety and replace it with Sheet 54(R-1) attached to this Addendum No. 2. The sheet has been revised.

3. Volume 3

1. Delete plan sheet 19 in its entirety and replace it with Sheet 19(R-1) attached to this Addendum No. 2. The timber cribbing limits have been updated.
2. Delete plan sheet 20 in its entirety and replace it with Sheet 20(R-1) attached to this Addendum No. 2. The timber cribbing limits have been updated.

F. Other Item Changes

1. T07.9901 - GENERAL HIGHWAY LIGHTING LED COBRAHEAD CUTOFF LUMINAIRE
Quantity Updated To "15.00".

2. T07.9902 - WIRELESS LIGHTING CONTROLLER
Quantity Updated To "19.00".

A handwritten signature in blue ink that reads "David W. Froh". The signature is written in a cursive style and is positioned above a horizontal line.

RI Department of Transportation

Administrator, Division of Project Management

2. LIST OF CONTRACT DOCUMENTS

There is one Compact Disk (CD) containing the Contract Documents. The contents are as follows:

Contract Documents

Contract Specifications

RI Department of Administration Division of Purchases Procurement Regulations
Standard Specifications for Road & Bridge Construction (Amended August 2013)
Compilation of Approved Specifications (through May 2016)
Required Contract Provisions/Federal-Aid Construction Contracts
Rhode Island Standard Details
Bridge Standard Details
General Provisions
General Provisions – Contract Specific
Specifications – Job Specific
Distribution of Quantities
Federal Wage Rates

Quest Software Information & Files

Quest Lite User Manual
Quest Lite Installation
Quest Lite Upgrade
Quest Lite Launch (Bid File)

Plans – There are seven volumes of Plans that comprises the Contract Drawings for this Contract. The volumes of plans are as follows:

- Volume 1 of 7: Plans for Bridge Group 51A – Rt 37 C-2, Highway Plans 1
- Volume 2 of 7: Plans for Bridge Group 51A – Rt 37 C-2, Improvements to Pontiac Avenue and Route 37 West Ramps Highway Plans 2
- Volume 3 of 7: Plans for Bridge Group 51A – Rt 37 C-2, Replacement of Pontiac Avenue Bridge No. Bridge Nos. 062701 and Preservation of Bridge Nos., 126301, and 126401
- Volume 4 of 7: Plans for Bridge Group 51A – Rt 37 C-2, Preservation of Seven Bridges (Bridge Nos. 062601, 063001, 063101, 063201, 063301, 063401, 063801)
- Volume 5 of 7: Plans for Bridge Group 51A – Rt 37 C-2, Replacement of Pawtuxet River South Bridge Nos. 062801, Pawtuxet River North Bridge No. & 062901
- Volume 6 of 7: Plans for Bridge Group 51A – Rt 37 C-2, Replacement of Route 37 WB Bridge No. 063501 over Jefferson Boulevard
- Volume 7 of 7: Plans for Bridge Group 51A – Rt 37 C-2, Preservation of Amtrak Bridge Nos. 063601 & 063701

Sockanosset Cross Rd. – 4 Weeks

Verizon

Pontiac Ave. – 12 Weeks
Jefferson Blvd. – 8 Weeks
Sockanosset Cross Rd. – 4 Weeks

Cox Communications

Pontiac Ave. – 6 Weeks
Jefferson Blvd. – 4 Weeks
Sockanosset Cross Rd.4 – WWeeks

National Grid – Gas

Pontiac Ave. – 4 Weeks

Work times are based on one week being 5 eight hour days.

APPROVED SUBCONTRACTORS

The following is a list of approved contractors for completing the installation of underground conduits and manholes for **National Grid - Electric**. All work performed on these facilities must be completed by a subcontractor from this listing:

<i>Contractor</i>	<i>Contact</i>	<i>Email</i>	<i>Office Phone</i>	<i>Cell Phone</i>
G. Greene	Peter DeSisto	pdesisto@ggreene.com	617-560-1804	508-958-1450
JH Lynch	Scott O'Connor	soconnor@jhlynch.com	401-333-4300	
McCourt	Matt McCourt	mmccourt@mccourtconstruction.com		
Sertex	Mike Solitro	msolitro@sertexllc.com	860-317-1006	401-230-2420
United Civil	Michael Dell Isola	mdellisola@united-civil.com	978-304-1597	781-854-2666
Universal	John Alsfeld	john@unicori.et	401-942-3119	
Rosciti	Henry Rosciti	hvr@rosciti.com		

The following is a list of approved contractors for completing the installation of wiring the rectifier for **National Grid - Gas**. All work performed on this facility must be completed by a subcontractor from this listing:

<i>Contractor</i>	<i>Contact</i>	<i>Email</i>	<i>Office Phone</i>	<i>Cell Phone</i>
K-Electric	Corey Fontaine	c.fontaine@kelectricinc.com	401-739-6000	401-265-8293

4. SEQUENCE OF CONSTRUCTION

a. General

All work shall be completed in accordance with the Traffic-Related Work Restrictions indicated in the Transportation Management Plan.

The Contractor shall immediately establish temporary erosion and sedimentation controls including temporary sedimentation basins and construction accesses prior to the start of work. These controls shall be installed in phases to suit the sequence of construction where

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.

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.

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 working hours and is subsequently removed at the end of the workday. R.I. Std. 26.2.0 shall be used when a traffic control set-up will remain beyond working hours when no workers are present.
- d. The Contractor is hereby notified that work zone time and lane restrictions are listed in the Transportation Management Plans. Failure to comply with these requirements will result in the fines listed under Job Specification 937.1000.

6. SPECIAL REQUIREMENTS FOR PAVEMENT MARKINGS

All pavement markings are to be in accordance with the requirements of the “Manual of Uniform Traffic Control Devices,” 2009 Edition including all revisions. All existing striping must be replaced where required.

All temporary pavement markings shall be removed in accordance with the “Manual on Uniform Traffic Control Devices,” 2009 Edition, including all revisions.

All conflicting pavement markings shall be removed in accordance with the “Manual on Uniform Traffic Control Devices, 2009 Edition,” including all revisions.

The Contractor is responsible for providing temporary waterborne pavement markings (white and yellow) on the final bituminous surface course at the end of each day’s work at each location that will be opened to traffic. The Contractor shall place temporary waterborne markings at all lane, shoulder, and yield lines as shown on the plans.

Final epoxy resin pavement markings shall be placed no sooner than two weeks after final paving but no later than four weeks. Epoxy resin pavement markings shall be placed in accordance with Section T20.03.6 of the Standard Specifications.

7. POLICE COMPENSATION

It will be the responsibility of the Resident Engineer to retain the service of the State and local police with cruiser for traffic control and protection for this project. The Contractor will not be required to bid on, or compensate for, the service of the State and local police.

8. SHOP DRAWINGS AND SUBMITTALS

The following list of work for which shop drawings and/or other submittals are required is provided for the convenience of the contractor. This list includes only major items of work; it does not itemize all submittals required by the contract documents. All submittals shall be in accordance with Section 105.02 of the Specifications. The contractor is responsible for timely submission of all shop drawings and other documents required by the contract. No extra

19. COORDINATION WITH OTHER PROJECTS

The Contractor shall be aware of other construction projects ongoing or commencing during the construction period of this contract. It shall be the Contractor's responsibility to coordinate his contractual work with other contracts that may be adjacent to this project. The Engineer, at all times, shall be made aware of any delays due to such work conflict. The Contractor may be required to attend periodic coordination meetings with representatives of the Towns and State to discuss and resolve potential conflicts.

20. REPORTING OF QUALITY/PROCESS CONTROL TESTING AND SAMPLING RESULTS

The Contractor is required to record and report the results of all completed Quality/Process Control sampling and testing. Copies of the Quality/Process Control sampling and testing results shall be provided to the Engineer within 24 hours or as directed by the Engineer. All testing shall be performed at an AASHTO Accredited laboratory.

21. ACCEPTANCE SAMPLING AND TESTING

All acceptances will be based on sampling, testing and inspection performed by the State, and the Contractor's testing results will not be included in the acceptance decision.

22. SUBCONTRACTING

For work performed by a subcontractor, the subcontractor shall be subject to the reporting requirements as set forth for the prime contractor under the provisions of Section 12 of the RI DOA Procurement Regulations. The Contractor shall accept as full payment therefore, an amount equal to the actual cost to the Contractor of such work performed by the subcontractor as determined by the Engineer, plus 10 percent of said cost.

23. LUMP SUM BID ITEMS

The Contractor shall note that some bridge items on this project are paid for on a lump sum basis or are included for payment under other lump sum item(s). In general these include but are not limited to:

- Horizontal Bridge Slide – Br. 062801
- Horizontal Bridge Slide – Br. 062901
- Bridge Transport with SPMT – Pontiac Ave. Br. 062701 (Westbound)
- Bridge Transport with SPMT – Pontiac Ave. Br. 062701 (Eastbound)
- Pawtuxet River South Bridge No. 062801 Superstructure
- Pawtuxet River South Bridge No. 062901 Superstructure
- Pawtuxet River South Bridge No. 062801 Substructure
- Pawtuxet River South Bridge No. 062901 Substructure

- Jefferson Blvd. Bridge No. 063501 Superstructure
- Jefferson Blvd. Bridge No. 063501 Substructure
- Pontiac Avenue Bridge No. 062701 Superstructure
- Pontiac Avenue Bridge No. 062701 Substructure
- Repairs to Route 37 Bridge No. 062601
- Repairs to Route 37 Bridge No. 063001
- Repairs to Route 37 Bridge No. 063101
- Repairs to Route 37 Bridge No. 063201
- Repairs to Route 37 Bridge No. 063301
- Repairs to Route 37 Bridge No. 063401
- Repairs to Route 37 Bridge No. 063601
- Repairs to Route 37 Bridge No. 063701
- Repairs to Route 37 Bridge No. 063801
- Repairs to Route 37 Bridge No. 063701
- Construction Site Access – Bridge No. 062801 and Bridge No. 062901
- Construction Site Access – Bridge No. 063601 and Bridge No. 063701
- Remove and Dispose Existing Pontiac Avenue Bridge No. 062701
- Remove and Dispose Existing Pawtuxet River South Bridge No. 062801
- Remove and Dispose Existing Pawtuxet River North Bridge No. 062901
- Remove and Dispose Existing Jefferson Boulevard Bridge No. 063501

As provided for in Special Provisions Code 109.07 “Partial Payment of Lump Sum Items”, within ten (10) calendar days after the date of the Notice of Award, the Contractor shall submit to the Engineer for approval the breakdown of each lump sum bid item.

24. UNIT BID ITEM AND LUMP SUM BID ITEM PAYMENTS

For requirements and work described in the Contract Documents but not expressly identified to be measured separately for payment, the costs thereof shall be included in the contract bid prices of the items of work to which they pertain as listed in the Proposal.

25. ENVIRONMENTAL PERMITS

Environmental permits/assents issued for this project are included in the appendices to these Contract Specific General Provisions. It will be the Engineer’s responsibility to post the environmental permits in a noticeable location within the project area. It shall be the Contractor’s responsibility to adhere to all restriction and to furnish all information required to be submitted to the permitting agencies as stated or implied by the permits and orders attached hereto and included as part of the contract documents. There will be no special payment for work done to comply with these permits and orders.

26. TRANSPORTATION MANAGEMENT PLAN

The Transportation Management Plan (TMP) for this project is included as an appendix to these Contract Specific General Provisions. The TMP lays out the set of coordinated

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.

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

APPENDIX A

Transportation Management Plan

(See separate Appendices Folder)

APPENDIX B

LARGE-SITE Stormwater Pollution Prevention Plan

(See separate Appendices Folder)



Rhode Island Department of Transportation

RIDOT SWPPP TEMPLATE Instructions

For all projects with **one (1) acre or greater of disturbance**, a Storm Water Pollution Prevention Plan (SWPPP) is required by the RIPDES General Permit for Storm Water Discharges Associated with Construction Activities (GP).

This document is being provided as an aid in the preparation of a SWPPP. It is a comprehensive list of issues a SWPPP preparer must consider during the development of the document. The items in the template are derived from the General Permit of the Rhode Island Pollutant Discharge Elimination System Storm Water Discharge Associated with Construction Activity (General Permit), the RIDEM RI Model SWPPP Template, and the Environmental Protection Agency's model SWPPP template.

The use of this checklist does not guarantee compliance with the General Permit for Construction Activity. Additionally, using the template to generate a SWPPP is not a substitute for knowledge of the permit requirements; the template serves as a guidance document only.

Instructions for SWPPP Preparers:

When converting this model SWPPP into your site-specific SWPPP, please keep in mind the following:

- 1) Items in black should remain in the final site specific SWPPP and do not need to be modified.

- 2) Items highlighted in gray indicate where information must be inserted. Click on the highlighted text and type response – the gray highlighting will be over-written.
- 3) *Items in blue-italics are included to provide guidance to you, the SWPPP preparer, during the development of the site specific SWPPP, these items may be deleted in the final site specific SWPPP document.*

If there are any questions, please contact the Natural Resources Unit at 401-222-2023.

Stormwater Pollution Prevention Plan

For:

Route 37 Bridge Rehabilitation

Various Sites along Route 37

Cranston, RI and Warwick, RI

Owner:**RI DEPARTMENT OF TRANSPORTATION**

David W. Fish, P.E.

2 CAPITOL HILL

PROVIDENCE, RI 02903

401-222-2468

Operator:

*TO BE DETERMINED UPON
CONTRACT AWARD*

Company Name

Name

Address

City, State, Zip Code

Telephone Number

Estimated Project Dates:

Start Date: January 15, 2020

Completion Date: December 31, 2022

SWPPP Prepared By:

TranSystems Corporation

Michael Rieger

530 Preston Ave., Suite 100

Meriden, CT 06450

860-274-7544

**SWPPP Preparation
Date:**

June 19, 2019

OWNER CERTIFICATION

RIPDES Construction General Permit – Section V.G

I certify under penalty of law that this document and all attachments were prepared under the direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I am aware that it is the responsibility of the owner/operator to implement and amend the SWPPP as appropriate in accordance with the requirements of the RIPDES Construction General Permit.

Owner Signature:

Date

Owner Name: **David W. Fish, P.E.**

Owner Title: **Administrator of Project Management**

Company Name: **Rhode Island Department of Transportation**

OPERATOR CERTIFICATION

Upon contract award, the OPERATOR must sign this certification statement before construction may begin.

RIPDES Construction General Permit – Section V.G

I certify under penalty of law that this document and all attachments were prepared under the direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I am aware that it is the responsibility of the owner/operator to implement and amend the SWPPP as appropriate in accordance with the requirements of the RIPDES Construction General Permit.

Operator Signature:

Date

Contractor Representative: Name

Contractor Title: Title

Contractor Company Name: Company

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INTRODUCTION

This Construction Site Storm Water Pollution Prevention Plan (SWPPP) has been prepared for the State of Rhode Island Department of Transportation (RIDOT) pursuant to the Rhode Island Department of Environmental Management (RIDEM) Rhode Island Pollutant Discharge Elimination System (RIPDES) Program regulations (amended February 5, 2003). Pursuant to Rule 32 of the RIPDES Regulations, projects proposing to discharge storm water must seek authorization under a RIPDES General Permit. In accordance with the General Permit for Storm Water Discharge Associated with Construction Activity (General Permit), projects that disturb one (1) or more acres require the preparation of a SWPPP and RIDEM authorization following RIPDES review of a Notice of Intent (NOI). This SWPPP provides guidance for complying with the terms and conditions required under the General Permit, however, this document does not negate or eliminate the need to understand and adhere to all applicable RIPDES regulations.

The purpose of erosion and sedimentation best management practices (BMPs) is to prevent pollutants from leaving the construction site and entering waterways or environmentally sensitive areas during and after construction. This SWPPP has been prepared prior to the initiation of construction activities to address anticipated worksite conditions. The best management practices (BMPs) depicted on the site plan and described in this narrative should be considered the minimum measures required to control erosion, sedimentation, and stormwater runoff at the site. Since construction is a dynamic process with changing site conditions, it is the operator's responsibility to manage the site during the construction phases so as to prevent pollutants from leaving the site. This may require the owner or operator to revise and amend the SWPPP during construction to address varying site and/or weather conditions, such as by adding or realigning erosion or sediment controls, to ensure the SWPPP remains compliant with the General Permit. Records of these changes must be added to the amendment log attached to the SWPPP, and to the site plans as "red-lined" drawings.

The RIDOT Resident Engineer and designated Inspector are required to review the SWPPP and sign the Party Certification pages (Section 8). The prime contractor and all subcontractors involved in earthwork or exterior construction activities are also required to review the SWPPP and sign the certification pages before construction begins.

It is the responsibility of the RIDOT Resident Engineer to maintain the SWPPP, including all attachments, amendments and inspection records, at the project field office and to make all records available for inspection by RIDEM during construction. (RIPDES Construction General Permit – Section II.A.)

Any questions regarding the SWPPP, BMPs, inspection requirements, or any other facet of this document may be addressed to the RIDOT Natural Resources Unit at 401-222-2023.

Please note: Even if practices are correctly installed on a site according to the approved plan, the site is only in compliance when erosion and sedimentation are effectively controlled throughout the entire site.

ADDITIONAL RESOURCES

Rhode Island Department of Transportation
Natural Resources Unit
2 Capitol Hill, Room 368
Providence, RI 02903
401-222-2023

<http://www.dot.ri.gov/programs/stormwater/index.asp>

Rhode Island Department of Environmental Management
Office of Water Resources
235 Promenade Street
Providence, RI 02908
(401) 222-3961

<http://www.dem.state.ri.us/programs/benviron/water/index.htm>

RIDEM RIPDES website

<http://www.dem.state.ri.us/programs/benviron/water/permits/ripdes/index.htm>

RIDEM Water Quality website (for 303(d) and TMDL listings)

<http://www.dem.ri.gov/programs/benviron/water/quality/index.htm>

RIDEM Rhode Island Natural Heritage Program

<http://www.dem.ri.gov/programs/bpoladm/plandev/heritage/index.htm>

RIDEM Geographic Data Viewer – Environmental Resource Map

<http://www.dem.ri.gov/maps/index.htm>

RIDEM *RI Stormwater Design and Installation Standards Manual* (as amended)

<http://www.dem.state.ri.us/programs/benviron/water/permits/ripdes/stwater/t4guide/desman.htm>

RIDEM, USDA Soil Conservation Service, and RI State Conservation Committee *Soil Erosion and Sediment Control Handbook* (as amended)

http://www.dot.ri.gov/documents/enviro/stormwater/Soil_Erosion_Sediment_Control_Handbook.pdf

Rhode Island Department of Transportation *Standard Specifications for Road and Bridge Design and Other Specifications* and *Standard Details*

<http://www.dot.ri.gov/engineering/standards/index.asp>

Natural Resources Conservation Service - Rhode Island Soil Survey Program

<http://www.ri.nrcs.usda.gov/technical/soils.html>

EPA NPDES SWPPP website

<http://cfpub.epa.gov/npdes/stormwater/swppp.cfm#guide>

EPA National Menu of Stormwater Best Management Practices

<http://cfpub.epa.gov/npdes/stormwater/menuofbmps>

SECTION 1: SITE DESCRIPTION

RIPDES Construction General Permit – Section IV.E.1

1.1 Project/Site Information

Project/Site Name:

The proposed site is on Route 37 in Cranston and Warwick, Rhode Island. The project consists of replacing and rehabilitating 15 bridges throughout the corridor. In addition, the project will include minor widening of a connecting ramp and widening Route 37 westbound to add an auxiliary lane. Additionally, it is proposed that the following bridges will be replaced or rehabilitated:

- Bridge Replacement:
 - Rt. 37 Eastbound and westbound over Pontiac Avenue (Bridge No. 062701)
 - Rt. 37 Eastbound and westbound over the Pawtuxet River (Bridge No. 062801 & 062901)
 - Rt. 37 Westbound over Jefferson Boulevard (Bridge No. 063501)
- Bridge Rehabilitation:
 - Rt. 37 Eastbound and Westbound over Abandoned Railroad (Bridge No. 062601)
 - Rt. 37 Eastbound over Connecting (W-S) Ramp (Bridge No. 063001)
 - Rt. 37 Westbound over Connecting (S-E) Ramp (Bridge No. 063101)
 - Rt. 37 Eastbound and Westbound over I-95 (Bridge No. 063201 & 063301)
 - Rt. 37 Eastbound over Jefferson Boulevard (Bridge No. 063401)
 - Rt. 37 Eastbound and Westbound over Amtrak (Bridge No. 063601 & 063701)
 - Rt. 37 Eastbound and Westbound over U.S. Route 1 (Bridge No. 063801)
 - Pontiac Avenue over Unnamed Brook (Bridge No. 126301)
 - Route 37 Eastbound and Westbound over an Unnamed Brook (Bridge No. 126401)

The project also include a minor widening of the I-95 southbound ramp to Route 37 westbound and widening Route 37 westbound from the connecting ramp (W-S) to Pontiac Avenue.

Project Street/Location:

- Route 37 Cranston, Rhode Island 02903. Areas near the culvert under Pontiac Avenue (Bridge No. 126301) and the culvert under Route 37 near Pontiac Avenue (Br. No. 126301), and bridges eastbound and westbound over Pontiac Avenue (Br. No. 062701), eastbound and westbound over the Pawtuxet River (Br. Nos. 062801 & 062901), eastbound over connecting ramp (W-S)(Br. No. 063001), westbound over connecting ramp (S-E)(Br. No. 063101), eastbound and westbound over I-95 (Br. No. 063201 & 063301), eastbound and westbound over Jefferson Boulevard (Br. Nos. 063401 & 063501), eastbound and westbound over the Pontiac Branch Railroad (Bridge No. 062601), eastbound and westbound over Amtrak (Br. Nos. 063601 & 063701) and eastbound and westbound over U.S. Route 1 (Br. No. 063801). See Appendix A for a general location map.

1.2 Nature and Sequence of Construction Activity

RIPDES Construction General Permit – IV.E.1.b

The project involves the replacement of four bridges, rehabilitation of eleven bridges and culverts, highway widening, re-alignment of an entrance ramp and construction of a new access road. In general, the anticipated sequence of the work will be as follows:

1. Establish sedimentation and erosion controls for the roadway widening on Route 37 and the bridge replacements. (anticipated duration 1-month)
2. Construct the Pontiac Ave. bridge superstructures at adjacent staging areas and construct the Pawtuxet River bridge superstructures on temporary supports immediately adjacent to the existing bridges. Construct the bridge substructures below the existing bridges. Establish stage 1 for the Jefferson Boulevard bridge. (anticipated duration 18-months)
3. Complete the widening of Route 37 westbound, the I-95 southbound exit ramp to Route 37 westbound and the Pontiac Ave. exit ramp. (anticipated duration 4-months concurrent with the bridge replacements)
4. Initiate bridge rehabilitation of Br. Nos.062601, 063001 & 063101. Upon completion, move crews to Br. Nos. 063201, 063301 & 063401. Upon completion, move crews to Br. Nos. 063601, 063701 & 063801. Complete the rehabilitation of culvert Br. Nos. 126301 & 126401 simultaneously as deemed convenient to the contractor. (anticipated duration 15-months concurrent with the bridge replacements)
5. Over a period of four weekend periods, with not less than a two week period between weekends, Br. Nos. 062701 EB, 0062701 WB, 062801 & 062901 shall be installed while mainline Route 37 traffic is detoured around the site. Commence with stage 2 of the Jefferson Boulevard bridge.(anticipated duration 3-months)
6. Upon completion of the cleanup work and final paving at the bridge replacement tasks, commence the construction of the Rt. 37 westbound entrance ramp at Pontiac Ave. and construction of the new access road.(anticipated duration 2-months)
7. Final cleanup, paving, removal of sedimentation and erosion control, final planting and turf establishment.

Estimated Project Start Date: 10/15/2019

Estimated Project Completion Date: 12/15/2022

Estimated Number of Months: 38

1.3 Existing and Proposed Soils, Slopes, Vegetation, and Drainage Patterns

Soil type(s):

RIPDES Construction General Permit – IV.E.1.e

- Rt. 37 Ramps/Access Road at Pontiac Ave., Udorthents - Urban Land Complex
- Rt. 37 at Pawtuxet River West Bank, Udorthents – Urban Land Complex
- Rt. 37 at Pawtuxet River East Bank, Pootatuck fine sandy loam
- I-95 Southbound Ramp to Rt. 37 Westbound (S-W), Udorthents – Urban Land Complex
- Rt. 37 at Jefferson Boulevard, Udorthents – Urban Land Complex

Slopes:

There are several areas which will be impacted by construction activities with grading or filling. These areas are summarized by the general location where the work will occur as follows:

Route 37 at Pontiac Avenue

- Existing: Within the existing highway right-of-way is the bridge supporting Rt. 37 over Pontiac Ave. and interchange ramps. The infield areas within the westbound interchange primarily consist of grass surfaces.
- Proposed: The westbound exit ramp will be widened and the westbound entrance ramp will be relocated under this project. In addition, a new access road will be constructed adjacent to the relocated entrance ramp. The roadway embankment will be cut and regraded to accommodate the relocated entrance ramp and the new access road.

Route 37 at Pawtuxet River

- Existing: There are two existing bridges supporting Route 37 over the Pawtuxet River. The bridges are located on roadway embankment fill with side slopes of approximately 2:1 on the roadway approaches to each bridge.
- Proposed: The new bridge spans are shorter than the existing bridge and the final condition will include additional roadway embankment retained behind the new bridge abutments and wingwalls. During construction, temporary cutting of the area around each bridge and isolated areas within the median of the highway will be required to accommodate the construction activities.

Route 37 Westbound and Connecting Ramp (S-W) I-95 Southbound to Rt. 37 Westbound

- Existing: Existing roadway ramp and roadway mainline westbound are on filled embankments. The roadways are being widened on one side of the road at isolated locations within the corridor. Side slopes on the mainline are approximately 2:1, maximum.
- Proposed: The roadway widening will require cutting to remove the top layer of soil, then filling the embankment to widen the roadway. There is no change of alignment. The new side slopes will be stabilized with topsoil and seeded. The widened embankment will be constructed to a maximum slope of 2:1.

Route 37 Westbound at Jefferson Boulevard

- Existing: There is an existing bridge supporting Route 37 over Jefferson Boulevard. The bridge is located on a roadway filled embankment.
- Proposed: The bridge is being replaced which will require some excavation of the filled embankment in the immediate area around the bridge. The new bridge will be a shorter span than the existing bridge which will involve contained fill behind the new bridge abutments and wingwalls.

Vegetation/Impervious Area:

- Existing:

The profile of Route 37 is crowned with a high point in the center of the eastbound and westbound roads. The north side of Route 37 is generally developed with commercial properties west of the Amtrak railroad tracks and residential areas east of the Amtrak railroad tracks. The developed area is separated from Route 37 by wooded area. The south side is commercial properties are wooded area. The commercial properties are located between Pontiac Avenue and Amtrak railroad tracks. There are grassed areas between roads, and wooded area surrounding the Pawtuxet River.

The center median where Route 37 diverges contains grass and wooded area. The westbound barrel is generally lower in elevation than the eastbound barrel throughout the site. The roads have sloped concrete curbing or bituminous berm, except for along the median west of the Pawtuxet River. There are metal guardrails along both sides of the barrels except for at the exits and entrances. Attachment B includes a Hydrologic Soil Group (HSG) Web Soil Survey from the National Resource Conservation Service (NRCS) that summarizes the coverage of each soil

type. The majority of the site is identified as UD for Udothents-Urban land complex with a HSG of A. The surrounding soils are mostly HSG A or B.

- Proposed: The proposed stormwater design accommodates the proposed conditions after construction. To adhere to the Consent Decree between RIDOT and the Environmental Protection Agency (EPA) water quality improvements are required. The requirement is that 100% of all new impervious area and 50% of existing impervious area which is disturbed must be treated to increase the water quality of the stormwater runoff. For this project, in order to meet this requirement, five Stormwater Treatment Units (STU's), also commonly referred to as Best Management Practices (BMP's) are proposed to collect stormwater runoff. The runoff directed toward each STU will amount to, at a minimum, the requirement to satisfy the Consent Decree. For the project, the four reconstruction and replacement bridges are all classified as "50% of existing impervious area which is disturbed". An additional 10 feet on each approach side of the bridge is also classified as disturbance. For the nine preservation bridges, not knowing exactly the nature of the work involved with each preservation bridge (I.E. patch work, joint repairs, steel repairs), the entire existing footprint of the bridges and 10 feet on each approach side of the bridge is classified as "50% of existing impervious area which is disturbed". In addition, Pontiac Avenue roadway, which is milled and overlaid, is "50% of existing impervious area which is disturbed." Newly created impervious area for this project include the following areas and are treated at 100%:
 - The new access road (Frontage Road);
 - re-aligned Route 37 on-ramp from Pontiac Avenue;
 - new widened portion Route 37 WB between Route 37 WB off-ramp to Pontiac Avenue and Route 37 WB on-ramp from Pontiac Avenue, including the new widened portion of Bridge 062701 (Route 37 WB over Pontiac Avenue);
 - new widened portion of Route 37 WB between the Route 37 WB Off-ramp to I-95 SB and Route 37 WB off-ramp to Pontiac Avenue, including the new widened portion of Bridge 062901 (Route 37 WB over the Pawtuxet River);
 - And widening of the Route I-95 NB off-ramp to Route 37 WB beginning when the off-ramp splits toward Route 37 WB and Route 37 EB.

In general, all disturbed areas off the pavement will be covered with topsoil and re-seeded.

The forested area which is being disturbed by construction at the river will be replanted with an appropriate assortment of trees and shrubs according to the planting plan included with the contract documents. In addition, an assortment of plantings will be re-established at disturbed portions of the infield at the Pontiac Avenue interchange.

Drainage Patterns:

- Existing: Extensive stormwater infrastructure exists throughout the project site that channelizes and conveys runoff from the roadway surface. The sloped concrete curbing and bituminous berm limit the amount of sheet flow from the roadway, except for into the median west of the Pawtuxet River. Most of the stormwater is channelized by the curbing and berm and is sent to catch basins located on the north and south sides of the Route 37 roadways. In general, stormwater from areas around Bridge No. 062601 is sent north of Route 37, while the water from areas surrounding Bridge No. 062701 is sent to an infield area inside the loop ramp for the eastbound on-ramp. The water is directed towards a stream that flows through a culvert under Pontiac Ave. Here, the water is directed through another culvert under Route 37 that flows to a stream. East of Bridge No. 062701 and west of the Pawtuxet River, the stormwater sheet flows into or is directed to catch basins that flow to the median area between the eastbound and west bound area. In the median, there is an Area Subject to Stormwater Flowage (ASSF) which is a bituminous concrete swale that discharges runoff to the Pawtuxet River.

- Proposed: The existing drainage patterns shall be maintained in the proposed condition with the addition of five stormwater treatment units within the existing system.

1.4 Construction Site Estimates

RIPDES Construction General Permit – IV.E.1.c & IV.E.1.d

The following are estimates of the construction site:

Total Project Area	16.17 acres
Construction Site Area to be disturbed	16.17 acres
Percentage impervious area before construction	34 %
Runoff coefficient before construction	0.50
Percentage impervious area after construction	45 %
Runoff coefficient after construction	0.57

1.5 Receiving Waters

Receiving waters:

RIPDES Construction General Permit – III.A.7

List/description of receiving waters:

- Pawtuxet River
- Sand Pond

Storm sewer systems:

RIPDES Construction General Permit – III.A.7

Will construction site stormwater flow to any separate storm sewer systems?

Yes No

If yes, list the separate storm sewer systems and if permits/permission is required:

- Primarily all drainage systems directly affected by the project are owned and maintained by RIDOT and ultimately discharge into the Pawtuxet River.
- A small area adjacent to Br. No. 063801, at the east end of the project, may discharge into the Sand Pond basin. No excavation is anticipated for the rehabilitation of this bridge.
- The existing system will be modified at the Route 37 westbound entrance ramp at Pontiac Avenue to accommodate the relocated entrance ramp and a new access road. All drainage from this area will tie into the existing system and modified as part of this project.

303(d)/TMDL waters:

RIPDES Construction General Permit – Section IV

Will project site stormwater flow to any 303(d) listed or TMDL water body (include both active construction and post-construction flow)?

Yes No

If yes, list & provide description of 303(d)/TMDL waters and applicable TMDL requirements:

- Pawtuxet River – Main Stem (RI0006017R-03). According to the RIDEM 2016 Impaired Waters Report, no TMDL is required.

Special Resource Protection Waters (SRPWs):

Will construction site stormwater flow to any Special Resource Protection Waters (include both active construction and post-construction flow)?

Yes No

If yes, list & provide description of Special Resource Protection Waters:

- INSERT TEXT HERE

Cold Water Fisheries:

Will construction site stormwater flow to any cold water fishery water body (include both active construction and post-construction flow)?

Yes No

If yes, list & provide description of Cold Water Fisheries:

- INSERT TEXT HERE

1.6 Allowable Non-Storm Water Discharges

RIPDES Construction General Permit – IV.E.1.g

Are there allowable non-storm water discharges on or near the project area?

Yes No

List of allowable non-stormwater discharges:

- Water for dust control
- Footing drains

Are there any known or contaminated discharges, including dewatering operations, on or near the project area?

Yes No

If yes, list the discharges and the RIPDES individual permit number(s) or RIPDES Remediation General Permit Authorization number(s) associated with these discharges.

- RIPDES individual permit number : INSERT TEXT HERE
- RIPDES Remediation General Permit Authorization number: INSERT TEXT HERE

1.7 Existing Data of Known Discharges from Site

RIPDES Construction General Permit – IV.E.1.h

Are there known storm water discharges from the project area?

Yes No

Describe how this determination was made:

- Evaluation of existing roadway plans and field survey of the project corridor.

If yes, list discharges and locations:

- INSERT TEXT HERE

Is there existing data on the quality of the known storm water discharges?

Yes No

If yes, provide data:

- INSERT TEXT HERE

1.8 Endangered Species Certification/Natural Heritage Areas

RIPDES Construction General Permit – Section V

Are there any Natural Heritage Areas being disturbed by the construction activity or will discharges be directed to the Natural Heritage Area as a result of the construction activity?

Yes No

If yes, describe or refer to documentation which determines the likelihood of an impact on this area and the steps that will be taken to address any impacts.

- INSERT TEXT HERE

1.9 Historic Preservation/Cultural Resources

Are there any historic properties, historic cemeteries or cultural resources on or near the construction site?

Yes No

Describe how this determination was made and summarize RIDOT-CRU review comments:

- A Section 106 Due Diligence Memorandum, dated September 12, 2018, was prepared by Archaeological and Historical Services, Inc. in support of the review of this project. The memorandum identified two bridges located in or adjacent to historic cemeteries (Br. Nos. 062601 & 063801) and two bridges are located in areas of potential archaeological sensitivity (Br. Nos. 062801 & 062901).
- Subsequently, RIDOT determined that a Phase I Archaeological Survey is required and shall be conducted for the area affected by the construction of the new access road located adjacent to

Br. No. 062601 and the abandoned railroad ROW to clear the site of concern for unmarked burial plots.

The Phase I Archaeological Survey also includes a review of the area on the east bank of the Pawtuxet River near Br. Nos. 062801 & 062901 for archaeological remains.

- It was determined that the rehabilitation of Br. No. 063801 is located well beyond the 25-ft. buffer from the Lincoln Park Cemetery and no further research was required at this location.

If yes, describe or refer to documentation which determines the likelihood of an impact on this historic property, historic cemetery or cultural resource and the steps taken to address that impact including any conditions or mitigation measures that were approved by other parties.

- See notes above. A field investigation was conducted which did not identify any resources likely to be affected by the project.

1.10 Site Features and Sensitive Areas to be Protected

Sensitive areas and measures that will be implemented to protect them:

- Wetlands are located throughout the corridor and have been studied and documented in a report by BL Companies, Inc. dated October 1, 2018. In general disturbance of wetlands have been limited to work necessary to complete the construction of the bridges and effect the riverbank wetlands only.
- Slopes exceeding 15% existing throughout the corridor. In general, these slopes are stabilized by the existing vegetation. Where slopes will be disturbed for the work, temporary measures are included with the contract documents.
- A floodplain is located adjacent to Br. Nos. 062801 and 062901 and the area within the floodplain will be temporarily impacted by the project with the clearing of a forested area and installation of an access road for construction equipment and materials. Disturbed areas will be stabilized with geotextile fabric and crushed stone. Upon completion of the work, this forested area will be replanted with appropriate trees and shrubs under this project in accordance with a planting plan included under the contract.
- State Farm Cemetery is located adjacent to Br. No. 062601, Rt. 37 over an Abandoned Railroad, and adjacent to the proposed access road. This area is being evaluated prior to construction with a program of test pits to establish the absence or presence of unmapped burials.
- Lincoln Park Cemetery is located near Br. No. 063801, Rt. 37 over U.S. Route 1. It has been determined that the limit of work on this bridge is well outside the 25-ft. buffer around the cemetery.

1.11 Potential Sources of Pollution

RIPDES Construction General Permit – IV.E.1.f

Anticipated on this Project	Operation/ Location	Stormwater Pollutants
X	Clearing, grading, excavating, and unstabilized areas	Sediment; Trash/Debris
X	Construction Entrance	Sediment
X	Soil Stockpiles	Sediment
X	Paving operations	Sediment; Trash/Debris
X	Concrete washout and waste	Heavy metals; pH; Trash/Debris
X	Structure construction/ painting/ cleaning	Nutrients; pH; Trash/Debris; Toxic chemicals
X	Demolition and debris disposal	Sediment; Trash/Debris
	Dewatering operations	Sediment; Nutrients
	Drilling and blasting operations	Sediment; pH; Trash/Debris
X	Material delivery and storage	Sediment; Nutrients; Heavy metals; pH; Pesticides/Herbicides; Oil/Grease; Trash/Debris; Toxic chemicals
X	Material use during building process	Nutrients; heavy metals; pH; pesticides/herbicides; oil/grease; trash/debris; toxic chemicals
	Solid waste/ trash/ debris	trash/debris; toxic chemicals
X	Hazardous waste	heavy metals; pH; pesticides/herbicides; oil/grease; toxic chemicals
	Contaminated spills	Nutrients; heavy metals; pH; pesticides/herbicides; oil/grease; toxic chemicals
	Sanitary/septic waste	Nutrients; pH; Bacteria/Viruses; toxic chemicals
X	Vehicle/equipment fueling and maintenance	Oil/Grease; Toxic chemicals
X	Vehicle/equipment use and storage	Oil/Grease; Toxic chemicals
X	Landscaping operations	Sediment; Nutrients; Trash/Debris
	Off-site LUHPPL run-on	Industrial toxins; oil/grease; heavy metals; fuel; salt; hazardous materials
	Other:	

1.12 Site Plans

RIPDES Construction General Permit – IV.E.1.a

TITLE & DATE OF PLAN SET(S): Permit Plan Sheets

Plan/Sheet #(s)	Required Information
	Total Project Area , including all grading and/or excavation , and a defined Limit of Disturbance .
Vol. 1, Shts. 5-15	Pre- and post-development drainage patterns including (but not limited to): sub-watershed limits, direction(s) of stormwater flow , locations of storm drain inlets and outfalls , existing and proposed conveyance systems (i.e. grass channels, swales, closed drainage system)
	The location and name of the receiving waters &/or separate storm sewer system and the ultimate receiving waters (i.e. name of major watershed basin)
	Location of resource protection areas including waters of the State, wetlands lakes, ponds, coastal shoreline features and required setbacks (e.g. buffers, water supply wells, septic systems). Indicate below whether or not the areas have been verified in the field.
	Location of environmentally sensitive features /areas to be preserved &/or protected (i.e. endangered species habitats, historic sites, natural heritage areas, Qualified Pervious Areas (QPAs)) (Section 1.10)
	Boundaries of existing vegetation to remain undisturbed
Vol. 1, Shts. 16-23 Vol. 2, Shts.	The location of all impervious structures (existing and proposed roads, buildings, and other structures)
	Locations and timing of stabilization measures including phased clearing and grubbing based on scheduled activities
	The location of all structural erosion, sediment and runoff control BMPs (i.e. sediment basins, outlet protection, etc.)
	Locations of all non-structural BMPs (i.e. perimeter controls, check dams, storm drain protection, etc.)
Vol. 1, Shts. 6-22	The location of all permanent post-construction BMPs (i.e. WVTS, filtration systems, etc)
Vol. 1, Shts, 23-37	Constraint Map , indicating areas within the project limits which are unsuitable for material storage areas, equipment storage areas, designated concrete washout areas, dumpsters, stockpiles, fueling locations, etc. (i.e. locations where these activities will <u>not</u> occur, and recommendations of where they may occur) **<u>(RECOMMEND SEPARATE PLAN SHEET)</u>** Designated areas will not be within regulated wetlands, or within 50-feet of the storm drain system.
	The location of spill prevention and response equipment
FIELD VERIFICATION INFORMATION	
Date: Insert Date	By: Insert Person/Company
Verified by DEM: <input type="checkbox"/> N/A <input type="checkbox"/> No <input type="checkbox"/> Yes	Wetland Permit Issued: <input type="checkbox"/> No <input type="checkbox"/> Yes # _____

SECTION 2: EROSION AND SEDIMENTATION CONTROLS

RIPDES Construction General Permit – Section IV.E.2.a

The purpose of erosion controls is to prevent sediment from moving onto, around, or off of the construction site. Properly installed and maintained erosion controls are the primary defense against sediment pollution.

Sedimentation controls are a second line of defense against moving sediment. The purpose is to prevent moving sediment from leaving the construction site and entering environmentally important areas.

Runoff controls are used to slow the velocity of concentrated water flows. By intercepting and diverting stormwater runoff to a stabilized outlet or treatment BMP, erosion and sedimentation are reduced.

Please note: **Even if practices are correctly installed on a site according to the approved plan, the site is only in compliance when sediment and pollutants are effectively controlled throughout the entire site. If controls are repeatedly failing, it is the responsibility of the Resident Engineer and Construction Contractor to develop a corrective action plan that may include different controls than is depicted on the Approved Plan Set.**

2.1 Minimize Disturbed Area and Protect Natural Features and Soil

As far as is practicable, existing vegetation will be protected and left in place, in accordance with the clearing limits shown on the approved Plans. Prior to any land disturbance activities commencing on the site, the Contractor will physically mark limits of disturbance (LOD) on the site and any areas to be protected within the site, so that workers can see the areas to be protected.

The project plans depict the measures to be implemented for BMPs during construction. The following activities will involve disturbance and excavation:

- Pontiac Ave./Socokanosset Cross Rd. Intersection
- Bridge Replacement Route 37 over Pontiac Ave./Rt. 37 Westbound entrance and exit ramp reconstruction
- Route 37 Westbound roadway widening
- Bridge Replacement Route 37 over Pawtuxet River
- Bridge Replacement Route 37 over Jefferson Boulevard

2.2 Phase Construction Activity

Proper sequencing of construction activities is essential to maximize the effectiveness of erosion and sediment control measures. The purpose is to reduce the amount and duration of soil exposed to erosion by wind, rain, runoff, and vehicle tracking.

Construction sequencing and timing of construction activities will include:

1. Installation of all erosion and sediment controls that are required to be in place and functional before any earthwork begins. This will be done in accordance with Sections 201, 206 through 211 of the RIDOT Standard Specifications.
2. Upon acceptable completion of site preparation and installation of erosion and sediment controls, site construction activities may commence. Routine inspection and maintenance

and/or modification of erosion and sediment controls while earthwork is being done is required.

3. Final stabilization of any disturbed areas after earthwork has been completed.

- Phase I – BEFORE EARTHWORK
 - Bridge Rehabilitation – Br. Nos. 062601, 063001, 063101, 063201, 063301, 063401, 063801
 - Approx. 15 Months (Oct., 2019 – Dec., 2020)
 - Work involves rehabilitation with little to no excavation. BMPs for this work should be focused on good housekeeping.
 - The construction area will be restored to the existing conditions and disturbed earth will be seeded with a loam and seed mix.

- Phase II – DURING EARTHWORK
 - Bridge Replacements – Pontiac Ave., Pawtuxet River, Jefferson Boulevard. Roadway Widening – Route 37 Westbound. Roadway reconstruction – Rt. 37 westbound entrance and exit ramps at Pontiac Ave., Sockanosset Cross Rd. at Pontiac Ave.
 - Approx. 36 Months (Oct, 2019 – Dec., 2022)
 - BMPs will be in accordance with the Soil Erosion and Sedimentation Control Plans included with the permit drawings and with the contract drawings.
 - The construction area will be restored to the existing conditions and disturbed earth will be seeded with a loam and seed mix.

- Phase III – FINAL STABILIZATION
 - Final Site clean-up, demobilization
 - Approx. six months (May, 2022 – Nov. 2022)
 - All sedimentation & erosion control to be maintained until turf has germinated and stabilized, plantings are in-place with wood mulch and
 - The construction area will be restored to the existing conditions and disturbed earth will be seeded with a loam and seed mix. A reforestation plans will be implemented at the Pawtuxet River bridges.

2.3 Control Stormwater Flowing Onto and Through the Project

Structural BMPs will be used to prevent stormwater flow from coming onto the project area, and to divert and slow on-site stormwater flow from exposed soils to limit erosion, runoff, and the discharge of pollutants from the site.

Control measures &/or methods that may be used include diversion ditches or berms, compost filter socks, fiber rolls, gravel bag berms, slope drains, check dams, and riprap.

- Best management practices have been incorporated into the project and are depicted on the Soil Erosion and Sediment Control Site Plans and details included with the Permit plan set and are to be included with the contract drawings.
- Siltsack® catch basin inserts or similar BMP will be installed within catch basins on Route 37, Pontiac Avenue, and any arterial roads that will be used to access the Project Area.

2.4 Stabilizing Soils

Phased Clearing & Grubbing:

Only areas that can be reasonably expected to have active construction work being performed within 21-days of disturbance will be cleared/grubbed at any one time. It is NOT acceptable to clear and grub the entire construction site if disturbed portions will not be active within the 21-day time-frame.

Clearing/Grubbing will not take place during a rain event if erosion is likely to occur; nor will it occur if a rain event is forecasted and appropriate erosion controls can not be installed prior to the storm and in accordance with section 201, 206 through 211 of the RIDOT standard specifications.

No undisturbed areas will be cleared of existing vegetation after October 15th of any calendar year or during any period of full or limited winter shutdown. All disturbed soils exposed prior to October 15 of any calendar year will be seeded or protected by that date. Any such areas that do not have adequate vegetative stabilization, as determined by the resident engineer or environmental inspector, by November 15 of any calendar year, must be stabilized through the use of erosion control matting or hay mulch, in accordance with specifications contained within the RI Soil Erosion and Sediment Control Handbook (as amended). If work continues within any of these areas during the period from October 15 through April 15, care must be taken to ensure that only the area required for that Day's work is exposed, and all erodible soil must be restabilized within 5 working days.

As per RIDOT Standard Specification 201.03.1 – Clearing and Grubbing: After clearing, and by the end of each day's grubbing operation, the Contractor will install erosion control measures that are indicated on the Plans or as directed by the Engineer. Such erosion control measures will be installed in strict accordance with the requirements of **SECTIONS 206, 207, and 208** of these Specifications, **PERIMETER EROSION CONTROLS, CHECK DAMS, and TEMPORARY DEWATERING BASINS**, respectively.

Initiating Stabilization Practices

As per RIPDES General Permit (Construction Activity) Section IV.E.2.a: Upon completion and acceptance of site preparation and initial installation of erosion and sediment controls the operator will initiate appropriate stabilization practices during all phases of construction on all disturbed areas as soon as possible but not more than fourteen (14) days after the construction activity in that area has temporarily or permanently ceased, unless the activity is to resume within twenty one (21) days.

Any disturbed areas that will not have active construction activity occurring within twenty one (21) days must be stabilized using the BMPs depicted on the approved plan set and in accordance with RIDOT Standard Specifications Section L.02 – Seeding, Section L.05 - Seed Stabilizers and Section M.18 – Landscape Materials (M.18.08 – Mulch and M.18.09 – Seed Stabilizer Materials).

Maintaining Stabilization

Controls and methods that may be used to maintain soil stabilization include the placement of geotextiles, erosion control blankets/mats, and temporary seeding. If the stabilization BMPs fail and erosion occurs, then alternative control measures &/or methods may need to be substituted, with approval of the RIDOT Resident Engineer and the RIDOT Natural Resources Unit.

- Best management practices have been incorporated into the project and are depicted on the Soil Erosion and Sediment Control Site Plans and details included with the Permit plan set and are to be included with the contract drawings.

2.5 Protect Slopes

Controls will be used to protect slopes from erosion from concentrated stormwater flow.

Slopes that will have concentrated stormwater flow will be protected using the BMPs depicted on the approved plan set and in accordance with RIDOT Standard Specifications Sections 202, 206 – 211, or any method approved of by the RIDOT Resident Engineer and the RIDOT Natural Resources Unit.

Control measures &/or methods that may be used to protect slopes include pipe slope drains, compost filter socks, fiber rolls, gravel bag berms, erosion control mats/blankets, and temporary vegetative cover.

- Best management practices have been incorporated into the project and are depicted on the Soil Erosion and Sediment Control Site Plans and details included with the Permit plan set and are to be included with the contract drawings.

2.6 Protect Storm Drain Inlets

Storm drain inlet protection measures will be used to prevent soil and debris from entering storm drain inlets. These measures are usually temporary and are implemented before a site is disturbed. ALL stormwater inlets &/or catchbasins that are operational during construction and may receive sediment-laden stormwater flow from the construction site must be protected using any of the BMPs outlined in the RIDOT Standard Specifications Section 209 – Storm Drain Protection, or any method approved of by the RIDOT Resident Engineer and the RIDOT Natural Resources Unit.

Control measures &/or methods that may be used include compost filter socks, fiber rolls, gravel bag berms, or catch basin inserts.

- Siltsack® catch basin inserts or similar BMP will be installed within catch basins on Route 37, Pontiac Avenue, and any arterial roads that will be used to access the Project Area.

2.7 Protect Storm Drain Outfalls

Outfall protection will be used to prevent scour or severe erosion at discharge points. Outfalls often have high velocity, high volume flows, and require strong materials that will withstand the forces of the water. The function of these BMPs is to protect the soil surface, reduce velocity, and promote infiltration. Storm drain outlet BMPs also offer a last line of protection against sediment entering environmentally sensitive areas.

All stormwater outfalls that may discharge sediment-laden stormwater flow from the construction site must be protected.

Control measures &/or methods that may be used include compost filter socks, fiber rolls, gravel bag berms, or hay bales/silt fence.

- Best management practices have been incorporated into the project and are depicted on the Soil Erosion and Sediment Control Site Plans and details included with the Permit plan set and are to be included with the contract drawings.

2.8 Establish Perimeter Controls and Sediment Barriers

Perimeter controls will be used to prevent soil erosion and stop sediment from leaving the site. Perimeter controls will be installed, and maintained, as depicted on the approved plan set and in accordance with RIDOT Standard Specifications Section 201, 206 – 211, Perimeter Erosion Controls (installation) and Section 212 – Maintenance and Cleaning of Erosion and Pollution Controls (maintenance).

Control measures &/or methods that may be used include compost filter socks, fiber rolls, gravel bag berms, or hay bales/silt fence.

- Best management practices have been incorporated into the project and are depicted on the Soil Erosion and Sediment Control Site Plans and details included with the Permit plan set and are to be included with the contract drawings.

2.9 Retain Sediment On-Site and Control Dewatering Practices

Sediment traps, basins, and barriers are used to retain sediment on the site to protect streams, lakes, drainage systems, and adjacent property. These devices are used at the outlets of channels, diversions, and other runoff conveyance measures to allow sediment-filled water to pool and sediment to settle. These measures are often used as the last line of defense to stop sediment from leaving the site.

The dewatering of non-contaminated non-stormwater (i.e. groundwater) or accumulated precipitation discharge of sediment-laden water into storm drains, streams, lakes or wetlands prior to sediment removal is prohibited.

The dewatering of contaminated non-stormwater cannot be discharged without prior notice and approval from either the Rhode Island Department of Environmental Management (RIDEM) or the Coastal Resources Management Council (CRMC). Should dewatering of contaminated water be occurring on this construction project, appropriate permits will have been obtained, and will be included as part of the Contract Documents.

- Best management practices have been incorporated into the project and are depicted on the Soil Erosion and Sediment Control Site Plans and details included with the Permit plan set and are to be included with the contract drawings.
- No dewatering is expected for this project.

2.10 Monitoring Weather Conditions

Care will be taken to avoid having unstabilized areas exposed during precipitation events. Weather forecasts will be routinely checked, and in the case of an expected precipitation event of over 0.25-inches over a 24-hour period, all BMPs will be inspected, and maintained as necessary, prior to the weather event.

In the case of an extreme weather forecast (greater than one-inch of rain over a 24-hour period), additional erosion/sediment controls will be installed where appropriate.

List the weather gauge station that will be utilized to monitor weather conditions on the construction site. See www.wunderground.com or www.weather.gov for available stations.

- [by Contractor]

2.11 Additional BMPs

Describe additional BMPs that may not fit into the above categories.

- INSERT TEXT

2.12 Construction Site Erosion and Sediment Control BMPs

Complete the following table for each location where Erosion and Sediment Control BMPs will be utilized. This table is to be used as part of the SWPPP Inspection Report – please fill out accordingly.

It is expected that this table will be amended as needed throughout the construction project.

Location/Station	BMP Description/ Standard Spec Ref	Maintenance Requirement	Phase
Perimeter	Compost filter sock and straw bale barriers 206.01.4/9.1.0	212.03.1 Sediment accumulated greater than half way up bale; break through or significant strain of barrier or as directed by the Engineer	All Phases
INSERT TEXT			

SECTION 3: GOOD HOUSEKEEPING BMPS

RIPDES Construction General Permit – Section IV.E.2.c

The purpose of good housekeeping is to prevent daily construction activities from causing pollution.

Describe the key good housekeeping and pollution prevention measures that will be implemented to control pollutants in stormwater. Examples BMPs include the proper management of waste, material handling and storage, and equipment/vehicle fueling/washing/maintenance operations.

Include RIDOT Standard Specification or Standard Detail reference with maintenance requirements.

3.1 Off-site Tracking of Sediments

RIPDES Construction General Permit – IV.E.2.c.i

Any construction site access point will employ the BMPs depicted on the approved plan set and in accordance with RIDOT Standard Specifications Section 211 – Construction Accesses, or any method approved of by the RIDOT Resident Engineer and the RIDOT Natural Resources Unit. Construction accesses will be used in conjunction with the stabilization of construction roads to reduce the amount of mud picked up by construction vehicles. All RI STD 9.9.0 Construction Access roads will be constructed prior to any roadway accepting construction traffic.

If a Construction Access BMP is not designated on the plans, it is still the responsibility of the Operator to ensure that no sediment is tracked off of the construction site by any vehicles leaving the site. Additional control measures that may be used, upon approval, include a vehicle washing station and daily street sweeping.

The Operator will remain responsible for the clean-up of any mud or dirt that is tracked onto streets or paved areas, even with the installation of gravel construction entrances. Inspect access for excessive sediment build up. Remove sediment and rebuild the exit as necessary to retain effectiveness and prevent off-site tracking. Additional street cleaning may be required if unable to retain sediment on site.

Describe location(s) of vehicle entrance(s) and exit(s), procedures to remove accumulated sediment off-site (i.e., vehicle tracking), and stabilization practices (i.e., stone pads and/or wash racks) to minimize off-site vehicle tracking of sediments and discharges to stormwater.

- INSERT TEXT

3.2 Waste Disposal

RIPDES Construction General Permit – IV.E.2.c.ii

Building materials and other construction site wastes will be properly managed and disposed of to prevent the discharge of solid materials from wind and precipitation. All types of waste generated at the site will be disposed of in a manner consistent with State Law and/or regulations.

- The waste collection area will not be within any of the constraint areas located on the “Constraint Map” (Section 1.12) and will be approved by the RIDOT Resident Engineer.

- All waste containers will be covered to avoid contact with wind and precipitation.
- Waste collection will be scheduled frequently enough to prevent containers from overflowing.
- All construction site wastes will be collected, removed, and disposed of in accordance with applicable regulatory requirements and only at authorized disposal sites.
- Equipment and containers will be checked for leaks, corrosion, support or foundation failure, or other signs of deterioration. Those that are found to be defective will be immediately repaired or replaced.

Describe measures (i.e., trash disposal, sanitary wastes, recycling, and proper material handling) to prevent the discharge of solid materials. All types of waste generated at the site must be disposed of in a manner consistent with State Law and/or regulations.

- INSERT TEXT

3.3 Spill Prevention and Control Plan

RIPDES Construction General Permit – IV.E.2.c.iii

Spills and leaks will be avoided through frequent inspection of equipment and material storage areas. Heavy equipment and other vehicles will be routinely inspected for leaks and repaired as necessary. Material storage areas will be routinely inspected for leaky containers, open containers, or improper storage techniques that may lead to spills or leaks. Appropriate cleanup procedures and supplies will be available on-site.

Spills will be cleaned up immediately and following proper response procedures and in accordance with any applicable regulatory requirements. At no time will spills be cleaned and flushed down storm drains or in to any environmentally sensitive area (i.e. stream, pond, wetland).

Equipment/vehicle fueling and repair/maintenance operations or hazardous material storage will not take place within any of the constraint areas located on the “Constraint Map” (Section 1.12) and will be approved by the RIDOT Resident Engineer.

Describe all areas where potential spills can occur, and their accompanying drainage points, and describe the spill prevention and control plan to reduce the chance of spills, stop the source of spills, contain and clean up spills, dispose of materials contaminated by spills, and train personnel responsible for spill prevention and control.

- INSERT TEXT

3.4 Control of Allowable Non-Storm Water Discharges

RIPDES Construction General Permit – IV.E.2.c.iv

Non-storm water discharges must also be controlled to reduce the likelihood of contamination of the ‘clean’ water. Allowable discharges should be kept separate from stormwater flow through the use of BMPs.

For contaminated non-stormwater discharge(s), the requirements and regulations of the associated RIPDES individual permit or RIPDES Remediation General Permit must be adhered to at all times.

For the allowable non-stormwater discharge(s) associated with construction activity identified in Section 1.6, describe controls and measures that will be implemented at those sites to minimize pollutant contamination.

- INSERT TEXT

3.5 Establish Proper Building Material Staging Areas

RIPDES Construction General Permit – IV.E.2.c.v

Stock pile management consists of procedures and practices designed to minimize or eliminate the discharge of stockpiled material (soil, topsoil, base material, rubble) from entering drainage systems or water courses.

Stock piles will not be located within any of the constraint areas located on the “Constraint Map” (Section 1.12) and will be approved by the RIDOT Resident Engineer. They will have side slopes no greater than 30% and stockpiles of erodible material will be seeded and ringed with RI STD 9.1.0 to stabilize (or RIDOT approved equivalent: berms, dikes, fiber rolls, compost socks, sandbag, gravel bags).

If soil stockpiles are not stabilized with vegetation, then they must be securely covered at the end of each workday.

All chemicals and/or hazardous waste material must be stored properly and legally in covered areas, with containment systems constructed in or around the storage areas. Areas must be designated for materials delivery and storage. Designated areas will not be located within any of the constraint areas located on the “Constraint Map” (Section 1.12) and will be approved by the RIDOT Resident Engineer.

Describe construction materials expected to be stored on-site and procedures for storage of materials to minimize exposure of the materials to stormwater.

- INSERT TEXT

3.6 Designate Washout Areas

RIPDES Construction General Permit – IV.E.2.c.v

Concrete mixer trucks and chutes will be washed in a designated area or concrete wastes will be properly disposed of off-site. Washout areas for concrete, paint or any other material will not be within any of the constraint areas located on the “Constraint Map” (Section 1.12) and will be approved by the RIDOT Resident Engineer.

Temporary concrete washout areas must be constructed and maintained to contain all water and concrete waste generated by washout operations. A sign should be placed at the washout site to inform concrete equipment operators of the facility location. Facilities must be cleaned or replaced when they reach 75% capacity.

At no time will any material (concrete, paint, chemicals) be washed into storm drains, open ditches, streets, streams, wetlands, or any environmentally sensitive area. The site operator must ensure that construction waste is properly and legally disposed of, to avoid exposure to precipitation, at the end of each working day. Designated areas will not be located within any of the constraint areas located on the “Constraint Map” (Section 1.12) and will be approved by the RIDOT Resident Engineer.

Describe location(s) and controls to minimize the potential for stormwater pollution from washout areas for concrete mixers, paint, stucco, etc.

- INSERT TEXT

3.7 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices

RIPDES Construction General Permit – IV.E.2.c.v

Vehicle fueling, maintenance and/or washing will occur off-site, or in designated areas. Designated areas will not be located within any of the constraint areas located on the “Constraint Map” (Section 1.12) and will be approved by the RIDOT Resident Engineer.

Areas will be clearly designated, and berms, sandbags, or other barriers will be used around the perimeter of the maintenance area to prevent storm water contamination.

Construction vehicles will be inspected frequently for leaks. Repairs will take place immediately. Disposal of all used oil, antifreeze, solvents and other automotive-related chemicals will be according to applicable regulations; at no time will any material be washed down the storm drain or in to any environmentally sensitive area.

Describe equipment/vehicle fueling and maintenance practices that will be implemented to control pollutants to stormwater (e.g., secondary containment, drip pans, spill kits, etc.)

- INSERT TEXT

3.8 Dust Control

RIPDES Construction General Permit – IV.E.2.c.v

Dust control procedures and practices will be used to suppress dust on a construction site during the construction process, as applicable. Precipitation, temperature, humidity, wind velocity and direction will determine amount and frequency of applications. However, the best method of controlling dust is to prevent dust production. This can best be accomplished by limiting the amount of bare soil exposed at one time. RIDOT Standard Specifications Section 907 – Dust Control – will be followed.

Dust Control methods may include watering, surface roughening, wind barriers, walls, and covers.

Describe dust control practices that will be implemented to control pollutants to stormwater.

- INSERT TEXT

3.9 Sweeping

RIPDES Construction General Permit – IV.E.2.c.v

Sweeping of streets, roads, highways and parking lots that have accumulated significant amounts of pollutants (construction site sediment, trash, debris) will be done as necessary, or as directed by the RIDOT Resident Engineer. When construction exits are not keeping construction site sediment from the roadway, sweeping will be done on a daily basis. Disposal of collected sweeping material will follow RIDOT Standard Specifications Section 931 – Cleaning and Sweeping Pavement.

Describe sweeping practices and schedule that will be implemented to control pollutants to stormwater.

- INSERT TEXT

3.10 Additional BMPs

Describe any additional BMPs that don't fit into the above categories. Indicate the problem they are intended to address.

- INSERT TEXT

3.11 Construction Site Good Housekeeping BMPs

Complete the following table for each location where Good Housekeeping BMPs will be utilized. This table is to be used as part of the SWPPP Inspection Report – please fill out accordingly.

It is expected that this table will be amended as needed throughout the construction project.

Example:

Location/Station	BMP Description/ Standard Spec Ref	Maintenance Requirement	Phase
Construction Site Entrance/Exit	Rock/RipRap entrance pad 211.03/9.9.0	Replenish/Replace aggregate if it becomes clogged with sediment and is no longer effectively preventing sediment from being tracked into street	All Phases
Adjacent Roads	Public roads adjacent to a construction site will be clean at the end of each day 211.01.1	Street Sweep if construction site sediment is visible	All Phases
Site Wide	Pick up of construction trash and debris	All loose trash and debris must be disposed of properly at the end of each working day	All Phases
INSERT TEXT			

SECTION 4: POST-CONSTRUCTION BMPs

RIPDES Construction General Permit – Section IV.E.2.b

Post-Construction Best Management Practices are BMPs that are installed during the Construction Phase of a project to manage storm water flow after the construction project is completed.

Measures must be installed during the construction project to protect permanent or long term BMPs as they are installed so that they will function properly when they are brought online at the end of the construction phase.

Such long-term BMPs may include: infiltration basins, open vegetated swales and natural depressions, vegetated buffer strips, and detention/ retention structures. Controls may also be needed to prevent or minimize erosion at outfall locations or along the length of vegetated channels to reduce velocity flow from the structure to the receiving waters.

Control measures that may need to be implemented during the construction phase typically include measures to ensure proper installation of the long-term BMPs. Examples include: ensuring proper material staging areas, equipment routing (i.e. do not allow construction equipment to compact areas where infiltration BMPs will be installed), and final cleaning of structural BMPs before construction finalization.

4.1 Post-Construction BMPs

Describe all post-construction stormwater management measures that will be installed during the construction process to control pollutants in stormwater discharges after construction operations have been completed.

For each BMP, identify measures that are required to protect the BMP during the construction phase of the project to ensure that they will function appropriately once they are brought online.

- Refer to the table below and to the Operations, Maintenance and Pollution Prevention Manual submitted to RIDOT for this site.

Location/Station	BMP Description/ Standard Spec Ref	Protective Measures	Phase
EB 186 + 25, 60' RT	STU 1 – Infiltration Basin	Do not allow construction vehicles to compact soils	I
Pontiac 15 + 25, 140' LT	STU 2 - Infiltration Basin	Do not allow construction vehicles to compact soils	I
WB 190 + 40, 100' LT	STU 3 - Infiltration Basin	Do not allow construction vehicles to compact soils	II
WB 201 + 30, 30' RT to WB 205 + 00, 90' RT	STU 4 – Water Quality Swale	Do not allow construction vehicles to compact soils	I
WB 190 + 40, 140' LT	STU 5 - Infiltration Basin	Do not allow construction vehicles to compact soils	II

SECTION 5: MAINTENANCE and INSPECTIONS

RIPDES Construction General Permit – Section IV.E.2.d

5.1 Maintenance

Maintenance procedures for erosion and sedimentation controls and stormwater management structures/facilities are described on the plans, in **Section 212** of the RHODE ISLAND DEPARTMENT OF TRANSPORTATION *Standard Specifications for Road and Bridge Construction* 2004 EDITION (as amended), and in the Stormwater Management Analysis documentation.

As cited:

212.03 CONSTRUCTION METHODS. Erosion and pollution controls will be maintained by the Contractor to the satisfaction of the Engineer. Erosion and pollution controls must be able to prevent, under normal weather conditions, both the movement of soil materials and the intrusion of sediment-laden discharges into environmentally sensitive areas.

Construction will not commence or continue until all specified erosion and pollution controls are in place, properly installed and accepted by the Engineer.

Erosion and pollution controls will be routinely inspected by the Engineer. The Engineer will notify the Contractor immediately if problems develop. The Contractor will commence cleaning and maintenance measures no later than the next consecutive calendar day after receiving a directive from the Engineer to perform such measures. The Contractor will aggressively and expeditiously perform such cleaning and maintenance work until the original problem is remedied to the complete satisfaction of the Engineer. In the event of a weekend storm, the Contractor must have resources available to restore, and, if necessary, to replace any damaged controls.

The Contractor is required to have a full-time, on-site designated contact person responsible for working with the RIDOT Resident Engineer and the RIDOT designated Inspector to resolve SWPPP-related issues.

5.2 Inspections

RIPDES Construction General Permit – Section II.B & Section II.D

Minimum Monitoring and Reporting Requirements

All storm water control measures, disturbed areas, areas used for the storage of materials that are exposed to precipitation (including unstabilized soil stockpiles), discharge locations, and locations where vehicles enter or exit the site must be inspected at least once every seven (7) calendar days and within twenty-four (24) hours after any storm event which generates at least 0.25-inches of precipitation per twenty four (24) hour period and/or after a significant amount of runoff or snowmelt. An appropriate rain gauge (as identified in Section 2.4 of this SWPPP) will be utilized for the determination of the storm events.

It is the responsibility of the RIDOT Resident Engineer to coordinate with the designated SWPPP Inspector listed in SECTION 8 of this document to initiate site inspections. Inspections will begin as soon as the Contractor is mobilized and on site.

General Notes

- The RIDOT Designated Inspector will prepare a separate inspection report for each inspection.
- The Inspection Reference Number will be a combination of the Construction Contract Number - consecutively numbered inspections.
ex/ Inspection reference number for the 4th inspection of a project would be:
2011-AA-BBB-4
- Each report will be signed and dated by the Inspector and forwarded to the Engineer within 24 hours of the inspection.
- Each report will be signed and dated by the Engineer and forwarded to the Contractor's designated representative.
- Each report will be signed and dated by the Contractor upon receipt.
- If Corrective Actions are required, the Contractor will initiate appropriate measures within 24 hours of receiving of the inspection report.
- It is the responsibility of the RIDOT Resident Engineer to maintain a copy of the SWPPP, copies of all completed inspection reports, and amendments as part of the SWPPP documentation at the project field office during construction.

Submitting Reports to NRU

The Inspector will submit all Inspection Reports to:

RIDOT Natural Resources Unit
Two Capitol Hill, Rm. 323
Providence, RI 02903

At a minimum, the inspection reports must be submitted on a monthly basis, and must include:

- A copy of each completed, dated, and signed inspection report
- Associated photos – each photo should be dated and have a unique identification # and written description indicating where it is located within the project area. If a close up photo is required, it should be preceded with a photo including both the detail area and some type of visible fixed reference point. Photos should be annotated with Station numbers and other identifying information where needed.
- A copy of the daily rainfall summary data for the month as reported by the selected rain gauge.

One copy of the monthly inspection report will be printed double-sided (except for photo or plan sheet pages), and forwarded to the NRU by no later than the 10th of the month following the end of the reporting period.

Content, frequency, &/or submission format of inspection reports may be changed with approval of the applicable Natural Resources Unit personnel for the Project.

A copy of the inspection report is attached.

- [REFERENCE ATTACHMENT](#)

5.3 Corrective Actions

RIPDES Construction General Permit – Section II.C

If, in the opinion of the Engineer, corrective action is required, the Engineer will note it on the inspection report and will notify and direct the Contractor to take corrective action and make all necessary repairs whenever maintenance of the erosion and pollution controls is required.

In accordance with the SWPPP and Section 212 of the RIDOT Standard Specifications, the Contractor will commence with the requisite cleaning and maintenance measures no later than the next consecutive calendar day after receiving such a directive from the Engineer, and will aggressively and expeditiously perform such cleaning and maintenance work until the original problem is remedied to the complete satisfaction of the Engineer.

In accordance with the General Permit and the SWPPP, non-compliance issues will be addressed no later than seven (7) calendar days from the date of inspection.

If the Engineer decides on any given day that those erosion and pollution controls specified in the Contract are not in place or have not been adequately maintained as specified in this Section, the daily charge set forth in **Special Provision Code 212.1000** will be deducted from monies due the Contractor as a charge for failure to comply with this Specification. Moreover, the stated daily charge will continue each consecutive calendar day thereafter until the deficiencies noted have been corrected to the complete satisfaction of the Engineer.

SECTION 6: Amendments

RIPDES Construction General Permit – Section IV.D

This SWPPP is intended to be a working document. It is expected that amendments will be required throughout the construction of the project. **Even if practices are installed on a site according to the approved plan, the site is only in compliance when erosion and sedimentation are effectively controlled throughout the entire site.**

The SWPPP will be amended whenever there is a change in design, construction, operation, maintenance or other procedure which has a significant effect on the potential for the discharge of pollutants, or if the SWPPP proves to be ineffective in achieving its objectives (i.e. the selected BMPs are not effective in controlling erosion or sedimentation).

All revisions must be recorded in the Record of Amendments Log Sheet within the SWPPP, and dated red-line drawings and/or a detailed written description must be appended to the SWPPP. Inspection Forms must be revised to reflect all amendments. Update the Revision Date and the Version # in the footer of the Report to reflect amendments made.

All SWPPP Amendments, except minor non-technical revisions, must be approved by the Resident Engineer.

Attach a copy of the Amendment log

- [REFERENCE ATTACHMENT](#)

SECTION 7: Recordkeeping

RIPDES Construction General Permit – Section II.A & Section II.D

It is the RIDOT Resident Engineer's responsibility to have the following documents at the Field Office and immediately available for RIDEM review upon request:

- A copy of the fully signed and dated SWPPP, which includes:
 - The signed and certified NOI form or permit application form
INCLUDED AS ATTACHMENT _____
 - A copy of the RIPDES General Permit
INCLUDED AS ATTACHMENT _____
 - A copy of any regulatory permits (RIDEM Freshwater Wetlands Permit, CRMC, RIDEM Water Quality, etc)
INCLUDED AS ATTACHMENT _____
 - SWPPP Amendment Log
INCLUDED AS ATTACHMENT _____

- Copies of all signed and dated Inspection reports

SECTION 8: Party Certifications

RIPDES Construction General Permit – Section V.G

All parties working for the Rhode Island Department of Transportation are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that is performed on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. Contractors and Sub-Contractors are encouraged to advise all employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the RIDOT Field Office, or may be obtained from the RIDOT Natural Resources Office by calling (401) 222-2023.

The prime contractor and each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement.

I acknowledge that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the BMPs and practices described in the SWPPP.

RIDOT Resident Engineer:

Insert Company or Organization Name

Insert Name & Title

Insert Address

Insert City, State, Zip Code

Insert Telephone Number, Insert Fax/Email

signature/date

RIDOT SWPPP Inspector:

Insert Company or Organization Name

Insert Name & Title

Insert Address

Insert City, State, Zip Code

Insert Telephone Number, Insert Fax/Email

signature/date

Contractor SWPPP Contact:

Insert Company or Organization Name

Insert Name & Title

Insert Address

Insert City, State, Zip Code

Insert Telephone Number, Insert Fax/Email

signature/date

SubContractor SWPPP Contact:

Insert Company or Organization Name

Insert Name & Title

Insert Address

Insert City, State, Zip Code

Insert Telephone Number, Insert Fax/Email

signature/date

Insert more contact/signature lines as necessary



Rhode Island Department of **Transportation**

SWPPP APPENDICES

Attach the following documentation to the SWPPP:

Attachment A – General Location Map

Attachment B – Site Plans

Attachment C – Copy of RIPDES General Permit

Attachment D – Copy of RIPDES NOI

Attachment E – Copy of Regulatory Permits

Attachment F – Inspection Form

Attachment G – Amendments Log

Attachment H – Additional Information (i.e. documentation)



Rhode Island Department of Transportation

SWPPP Inspection Report Instructions

For all projects with **one (1) acre or greater of soil disturbance**, RIDOT is required to develop and enforce a Site-Specific Storm Water Pollution Prevention Plan (SWPPP) in order to remain in compliance with the Rhode Island Pollutant Discharge Elimination System General Permit for Stormwater Discharges Associated with Construction Activities (RIPDES Construction General Permit). As part of the SWPPP, a site-specific inspection report must be created and utilized.

Preparing the Inspection Report

This inspection report template has been provided by RIDOT for the development of the site-specific SWPPP Inspection Report. It must be customized for each individual Project to meet the requirements of the RIPDES Construction General Permit.

It is expected that this Inspection Report will be prepared as part of the preparation of the site-specific SWPPP. This inspection report template is designed to be customized according to the SWPPP document (initially) and then customized based on conditions at the site.

Review the site-specific SWPPP and the Plans to develop the inspection report. On a copy of the site plan, number all stormwater BMPs and areas of the site that will be inspected. Include both structural (basins, outlet protection, swales, etc) and non-structural (construction entrances, perimeter barriers, trash areas, etc) BMPs and areas that will be inspected. Also identify all point source outfalls, areas of highly erodable soils, and the priority natural resource areas (i.e. streams, wetlands, mature trees, etc). List each BMP or area to be inspected separately in the site-specific BMP section of the inspection report.

An appropriate rain gauge must be identified and utilized for the determination of the storm events. Rain gauges may be found on www.wunderground.com, www.nws.noaa.gov (or similar sites).



Rhode Island Department of Transportation

SWPPP Inspection Report Instructions for:

Resident Engineer

- The RIDOT Resident Engineer (RE) must review the SWPPP and sign the Certification Statement for RIDOT Resident Engineer in Section 8. If the RE has any questions, contact the RIDOT Natural Resources Unit at 401-222-2023.
- **It is the responsibility of the RIDOT Resident Engineer to initiate contact with the Inspector to start the SWPPP Inspections BEFORE EARTHWORK BEGINS.** The Inspector (typically a Consultant) will have been identified at the Pre-Construction meeting. Earthwork is NOT allowed to proceed until a SWPPP Inspection of the site has been completed.
- After an Inspection has been performed, the RE must sign the 'acknowledgement' certification on Page 1 of the Inspection Report at time of receipt from the Inspector.
- The RE must review the Inspection Report within 24-hours of receipt.
 - If the RE agrees with the Inspection report, the RE must:
 - Fill out the "NOTICE TO CONTACTOR" box on the last page of the Report
 - Have the Contractor sign the 'acknowledgement' certification on Page 1
 - Make a copy of the Inspection Report with all 3 signatures for the Contractor's use AND provide a copy to the Inspector
 - If the RE disagrees with a corrective action item, the RE must:
 - Document objection with each item and provide justifiable reason in the inspection report. The contractor will not responsible for initiating corrective actions for such items. The RIDOT Natural Resources Unit will review such items if warranted.
 - Fill out the "NOTICE TO CONTACTOR" box on the last page of the Report
 - Have the Contractor sign the 'acknowledgement' certification on Page 1
 - Make a copy of the Inspection Report with all 3 signatures for the Contractor's use AND provide a copy to the Inspector
- It is the responsibility of the RIDOT Resident Engineer to maintain a copy of the SWPPP, copies of all completed & signed inspection reports, and amendments as part of the SWPPP documentation at the project field office during construction.



Rhode Island Department of Transportation

SWPPP Inspection Report Instructions for:

INSPECTORS

- The RIDOT-designated inspector must sign the Certification Statement for RIDOT SWPPP Inspector in Section 8 of the Storm Water Pollution Prevention Plan (SWPPP).
- A separate inspection report will be prepared for each inspection.
- Complete any items that will remain constant, such as the project information and BMP locations and descriptions. Then print out multiple copies (double-sided!) of this customized inspection report to use during the inspections.
- The Inspection Reference Number shall be a combination of the **Construction Contract Number** - **consecutively numbered inspections**.
ex/ Inspection reference number for the 4th inspection of a project would be:
2006-AA-BBB-4
- Check the rain gauge for past & future weather data prior to inspection.
- Minimum Monitoring and Reporting Requirements
“...the site must be inspected at least once every seven (7) calendar days and within twenty-four (24) hours after any storm event which generates at least 0.25-inches of precipitation per twenty four (24) hour period and/or after a significant amount of runoff or snowmelt.” (RIPDES CGP)
- When conducting the inspection, walk the site by following the site map and numbered BMPs locations for inspection. Also note whether the overall site issues have been addressed.
- Associated photos – each photo should be dated and have a unique identification # and written description indicating where it is located within the project area. If a close up photo is required, it should be preceded with a photo including both the detail area and some type of visible fixed reference point. Photos should be annotated with Station numbers and other identifying information where needed.
- For each inspection, the Inspector must determine if the Construction site is in compliance with the CGP, or not. The Inspector must check the appropriate check-box on Page 1 of the inspection report.
- Each report must be signed and dated by the Inspector, and forwarded to the Engineer within 24-hours of the inspection.



Rhode Island Department of Transportation

SWPPP Inspection Report Instructions for:

INSPECTORS (continued)

- The inspector will submit a Monthly Inspection Report to:
RIDOT Natural Resources Unit, Two Capitol Hill, Rm. 323, Providence, RI 02903
At a minimum, the inspection reports must be submitted on a monthly basis, and must include:
 - A copy of each completed, dated, and signed inspection report
 - A copy of the daily rainfall summary data for the month as reported by the selected rain gauge (ex/ the monthly calendar from www.wunderground.com).
 - One copy of the Monthly Inspection Report will be printed double-sided (except for photo or plan sheet pages), and forwarded to the NRU by no later than the 10th of the month following the end of the reporting period.
 - Content, frequency, &/or submission format of inspection reports may be changed with approval of the applicable Natural Resources Unit personnel for the Project.



Rhode Island Department of Transportation

SWPPP Inspection Report Instructions for:

Contractor

- The Contractor must sign the 'acknowledgement' certification on Page 1 of the Inspection Report at time of receipt from the Resident Engineer.
- The RE will provide a copy of the signed Inspection Report to the Contractor.
- **The Inspection Report serves as your RIDOT directive to proceed with corrective actions.**
- In accordance with the SWPPP and Section 212 of the RIDOT Standard Specifications, the Contractor will commence with the requisite cleaning and maintenance measures no later than the next consecutive calendar day after receiving such a directive from the Engineer, and will aggressively and expeditiously perform such cleaning and maintenance work until the original problem is remedied to the complete satisfaction of the Engineer.
- Progress on Corrective Action items will be documented by the Inspector in subsequent inspections.

Inspector, Resident Engineer, & Contractor

Amendments

The SWPPP shall be amended whenever there is a change in design, construction, operation, maintenance or other procedure which has a significant effect on the potential for the discharge of pollutants, or if the SWPPP proves to be ineffective in achieving its objectives.

SWPPP Amendments may be recommended by any party, but all amendments must be approved by the Resident Engineer. The revision must be recorded in the Record of Amendments Log Sheet within the SWPPP, and dated red-line drawings and/or a detailed written description must be appended to the SWPPP. Inspection Forms must be revised to reflect all amendments by the Inspector.

Questions

Questions may be addressed to the RIDOT Natural Resources Unit, 2 Capitol Hill, Providence, RI 02903. 401-222-2023

SWPPP Inspection Report

Project Information

Name/Location			
RIDOT Project Manager		RIDOT Resident Engineer	
Contractor		SWPPP Contact	
E&S Sub-Contractor		SWPPP Contact	

Inspection Information

Inspector			
Inspection Date		Start/End Time	
Inspection Type			
<input type="checkbox"/> Weekly <input type="checkbox"/> Pre-storm event <input type="checkbox"/> During storm event <input type="checkbox"/> Post-storm event <input type="checkbox"/> Violation			

Weather Information

Rain Gauge:		
Last Rain Event		
Date:	Duration (hrs):	Approximate Rainfall (in):
Current Weather at time of this inspection:		
Weather Forecast at time of this inspection: (when is next precipitation or wind event anticipated?)		

Certification Statements

Inspector: (check one)		
<input type="checkbox"/> I, as the designated Inspector, certify that this site has been inspected and is in compliance with the site-specific SWPPP.		
<input type="checkbox"/> I, as the designated Inspector, certify that this site has been inspected and I have made the determination that the site requires corrective actions before it will be compliant with the site-specific SWPPP. The required corrective actions are noted within this inspection report.		
Print Name:	Signature:	Date:
Resident Engineer:		
I, the RIDOT Resident Engineer, acknowledge the receipt of this SWPPP inspection report, and understand the requirements set forth in the RIDOT Standard Specifications and the Contract Documents regarding the implementation and maintenance of erosion and sedimentation controls.		
Print Name:	Signature:	Date:
Contractor:		
I, the designated Contractor representative, acknowledge the receipt of this SWPPP inspection report, and understand the requirements set forth in the RIDOT Standard Specifications and the Contract Documents regarding the implementation and maintenance of erosion and sedimentation controls.		
Print Name:	Signature:	Date:

Site-specific BMPs

Number the structural and non-structural BMPs identified in the SWPPP on the site map and list them below (add as necessary). Bring a copy of this inspection form and numbered site map with you during your inspections. This list will help ensure that you are inspecting all required BMPs at your site.

FILL THIS TABLE USING THE SWPPP TABLES 2.14 & 3.11

	Location/Station	BMP Description	Installed & Operating Properly?	Assoc. Photo/ Figure #	Corrective Action
1			<input type="checkbox"/> Yes <input type="checkbox"/> No		
2			<input type="checkbox"/> Yes <input type="checkbox"/> No		
3			<input type="checkbox"/> Yes <input type="checkbox"/> No		
4			<input type="checkbox"/> Yes <input type="checkbox"/> No		
5			<input type="checkbox"/> Yes <input type="checkbox"/> No		
6			<input type="checkbox"/> Yes <input type="checkbox"/> No		
7			<input type="checkbox"/> Yes <input type="checkbox"/> No		
8			<input type="checkbox"/> Yes <input type="checkbox"/> No		
9			<input type="checkbox"/> Yes <input type="checkbox"/> No		
10			<input type="checkbox"/> Yes <input type="checkbox"/> No		
11			<input type="checkbox"/> Yes <input type="checkbox"/> No		
12			<input type="checkbox"/> Yes <input type="checkbox"/> No		
13			<input type="checkbox"/> Yes <input type="checkbox"/> No		
14			<input type="checkbox"/> Yes <input type="checkbox"/> No		
15			<input type="checkbox"/> Yes <input type="checkbox"/> No		

(add more as necessary)

Overall Site Issues

Below are some general site issues that should be assessed during inspections. Please customize this list as needed for conditions at the site. If item is not applicable, please note why.

EROSION AND SEDIMENTATION BMP INSPECTION		Installed & Operating correctly?	Assoc. Photo/ Figure #	CORRECTIVE ACTION
2.1	Are Limits of Disturbance clearly <u>marked</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
2.1	Are natural resource areas (e.g., streams, wetlands, trees, etc.) <u>protected</u> with barriers or similar BMPs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
2.2	Is construction sequencing being <u>followed</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
2.3	Are structural BMPs properly installed to <u>control stormwater flow</u> on the construction site?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
2.4	Is clearing/grubbing only occurring in areas that will have <u>active work</u> within 21-days?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
2.4	Is clearing/grubbing taking place inside the <u>Apr 15 - Oct 15</u> window?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
2.4	Do unstabilized areas have appropriate <u>controls</u> in place?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
2.5	Are all slopes <u>protected</u> from concentrated stormwater flow?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
2.6	Are storm drain inlets properly <u>protected</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
2.7	Are storm drain outfalls properly <u>protected</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
2.8	Are perimeter controls and sediment barriers adequately <u>installed and maintained</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
2.9	Are discharge points and receiving waters <u>free of sediment</u> deposits?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
2.10	Is weather forecast being <u>checked</u> regularly?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		

Notes on Erosion and Sediment Controls:

GOOD HOUSEKEEPING BMP INSPECTION		Installed & Operating correctly?	Assoc. Photo/ Figure #	CORRECTIVE ACTION
3 1	Are BMPs effectively limiting sediment from being <u>tracked</u> into the street?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
3 2	Is trash/litter from work areas collected and placed in <u>covered</u> containers regularly?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
3 3	Are on-site equipment , vehicles, containers, and storage areas <u>free from leaks</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
3 3	Are materials that are potential stormwater contaminants <u>stored</u> inside or under cover?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
3 4	Are non-storm water discharges free from <u>contamination</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
3 5	Are stockpiles <u>covered</u> (either with temporary vegetation or tarps), <u>ringed</u> with barrier BMPs, and <u>located</u> at least 50 feet away from natural resources and storm drains?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
3 6	Are washout facilities (e.g. paint, concrete) available, clearly marked, and maintained and <u>located</u> at least 50-feet away from natural resources and storm drains?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
3 7	Are vehicle and equipment fueling, cleaning, and maintenance areas <u>free from leaks</u> and <u>located</u> at least 50-feet away from natural resources and storm drains?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
3 8	Is dust being <u>controlled</u> on-site?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
3 9	Is sweeping being <u>used</u> to keep sediment off roads and parking lots?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		

PROCEURAL BMP INSPECTION		Installed & Operating correctly?	Assoc. Photo/ Figure #	Corrective Action
4.1	Are permanent BMPs being <u>protected</u> during the active construction phase?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
5.1	Are all structural BMPs being <u>maintained</u> in accordance with RIDOT	<input type="checkbox"/> Yes <input type="checkbox"/> No		

	Standard Spec Section 212?			
5.2	Are inspections taking place every 7-days & after storm events?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
5.3	Have previous Corrective Actions been initiated & completed by the Contractor?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
6.0	Are SWPPP Amendments being <u>logged</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
7.0	Are the SWPPP and ALL inspection reports being kept at the RIDOT Field Office?	<input type="checkbox"/> Yes <input type="checkbox"/> No		

Photo Log:

(Associated photos – each photo should be dated and have a unique identification # and written description indicating where it is located within the project area. If a close up photo is required, it should be preceded with a photo including both the detail area and some type of visible fixed reference point. Photos should be annotated with Station numbers and other identifying information where needed.)

Photo #: (insert Photo here)	Station:
	Description:

Photo #: (insert Photo here)	Station:
	Description:

Photo #: (insert Photo here)	Station:
	Description:

Photo #: (insert Photo here)	Station:
	Description:

Photo #: (insert Photo here)	Station:
	Description:

Photo #: (insert Photo here)	Station:
	Description:

(add more as necessary)

General Field Comments:

NOTICE TO CONTRACTOR

This SWPPP Inspection Report, completed by a RIDOT-designated inspector, indicates that this construction site is:

<input type="checkbox"/> COMPLIANT	<input type="checkbox"/> No immediate actions are required, other than keeping up the good work! <input type="checkbox"/> Work is required to maintain Site compliance
<input type="checkbox"/> NON-COMPLIANT	<p>This document serves as your RIDOT directive to proceed with corrective actions that have been outlined above.</p> <p>The SWPPP, Construction Contract documents, and the RIDOT Standard Specifications state that non-compliance issues shall be addressed no later than (7) seven calendar days from date of inspection. In accordance with the SWPPP and Section 212 of the RIDOT Standard Specifications, the contractor shall commence with the requisite cleaning and maintenance measures no later than the next calendar day after receiving such a directive from the engineer.</p>
	Date work to begin:
	Date work to be completed:
<p>R.E. initials: _____ R.E. Comments:</p> <p style="margin-left: 40px;">Date: _____</p>	



Rhode Island Department of Transportation

AMENDMENT LOG

ALL AMENDMENTS MUST BE APPROVED BY RIDOT RESIDENT ENGINEER

Describe amendment to be made to SWPPP, the date, and the person/title making the amendment. ALL amendments must be approved by the RIDOT Resident Engineer.

Amendment Number	Date	Description of Amendment	Amended by: Person/Title	R.E. initials
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

APPENDIX C

R.I. Department of Environmental Management

- **Insignificant Alteration Permit**

(See separate Appendices Folder)

APPENDIX D

Geotechnical Data Reports

(See separate Appendices Folder)

APPENDIX E

Limited Hazardous Building Material Survey Reports

(See separate Appendices Folder)

APPENDIX F

Pavement Cores

(See separate Appendices Folder)

CODE 800.9913
PONTIAC AVENUE BRIDGE NO. 062701 SUPERSTRUCTURE

CODE 800.9914
PONTIAC AVENUE BRIDGE NO. 062701 SUBSTRUCTURE

DESCRIPTION: Except for the excluded items of work indicated below, the work under these items shall consist of constructing the Pontiac Avenue Bridge No. 062701 in its entirety. This shall comprise all work pertaining to the construction of:

Superstructure: All the components above the beam seats inclusive of the bridge bearings, steel beams and diaphragms, reinforced concrete deck, integral backwall and permanent bridge barriers, snow fences, embedded conduits, waterproofing membrane, the bottom 1 ½” lift of pavement on the bridge deck, saw and seal joints, and components or materials that are embedded, attached, or applied. All work shall be complete in place and accepted in accordance with the Contract Documents except that the Method of Measurement and the Basis of Payment will be in accordance with this Special Provision.

Substructure:

- All the components and fills of the Geosynthetic Reinforced Soil (GRS) abutments from the bottom of the Reinforced Soil Foundation (RSF) to the underside of the approach slab and the top of the precast concrete wall cap including peastone and membranes.
- All the components and fills of the GRS walls from the bottom of the RSF to the top of the precast concrete wall cap.
- All the components from the bottom of the precast footings up to the tops of the precast concrete abutment stem inclusive of components or materials that are embedded, attached, or applied.
- All the components of precast concrete return walls from the bottom of the precast footings up to the tops of the precast concrete stems inclusive of components or materials that are embedded, attached or applied.
- Precast reinforced concrete approach slabs and sleeper slabs, polyethylene sheeting, cast-in-place approach slab mounted barriers, the bottom 1 ½” lift of pavement on the approach slab, asphaltic expansion joints and saw and seal joints to the limits indicated on the plans, inclusive of components or materials that are embedded, attached or applied; all grout below or between all of the various precast components.

All of the above work shall be complete in place and accepted in accordance with the Contract Documents except that the Method of Measurement and the Basis of Payment will be in accordance with this Special Provision.

Excluded Items of Work: The work pertaining to the following items of work are excluded from these lump sum items and instead will be measured and be paid for separately under their own appropriate unit bid or lump sum items as listed in the Proposal: Earthwork (structural excavation, common borrow outside and above of the GRS fills); Temporary earth retaining systems and dewatering; permanent approach median barriers; The top final 1 ½” lift of bituminous pavement on the bridge and approach slabs.

METHOD OF MEASUREMENT: These items will not be measured for payment.

BASIS OF PAYMENT: “PONTIAC AVENUE BRIDGE NO. 062701 SUPERSTRUCTURE” and “PONTIAC AVENUE BRIDGE NO. 062701 SUBSTRUCTURE” will be paid for at the respective contract “Lump Sum” prices as listed in the Proposal. The prices so stated shall constitute full and complete compensation for all labor, materials, tools, equipment, and all incidentals required to complete the construction of the Pontiac Avenue Bridge No. 062701 as described above under “DESCRIPTION” and elsewhere in the Contract Documents, complete in place and accepted by the Engineer.

CODE 800.9931

CONSTRUCTION SITE ACCESS – BRIDGE 063601 AND BRIDGE 063701

DESCRIPTION:

The item “Construction Site Access – Bridge 063601 and Bridge 063701” (Site Access) shall consist of the design and construction of all work shown on the plans or as directed by the Engineer to provide the Contractor with temporary access to the work sites for equipment, materials and personnel. Also included is the removal of all Site Access facilities, upon completion of the work.

Where working and/or access pads are required for direct access of the Contractor’s equipment onto or across active railroad tracks, these pads shall be constructed and removed by Amtrak Railroad (Railroad) and are for the Contractor’s use during the performance of the work. The Contractor shall submit a proposed site work plan to the Engineer that includes the plan limits of the working and/or access pad(s) required for the proposed Contractor construction. This plan must be submitted a minimum of 90 calendar days in advance of the proposed work requiring the pad to allow adequate time for coordination and construction by the Railroad. Additional working and/or access pads requested by the Contractor are subject to approval by the Engineer.

Working and/or access pads constructed by the Railroad are intended to allow Contractor rubber tired equipment to cross or work in the vicinity of the track without damaging the rails or ties. All Contractor equipment and operations proposed to work on or cross these pads shall be subject to the review and approval of the Engineer and the Railroad.

This work also includes the furnishing, installation, and removal of construction gates to restrict access to the work site from the adjacent roadways.

This work also includes monitoring movement of the existing rail facilities during construction for the replacement or rehabilitation of Bridge Nos. 063601 and 0063701. The monitoring program shall be adequate to document any settlement or horizontal movement of the railroad track and other miscellaneous rail facilities during construction activities at the site. The monitoring program shall be in conformance with the minimum requirements detailed in this specification or as noted on the plans for number of monitoring points, locations of points, interval for recording data, procedures and period of time to report the data to the Engineer, maintenance of points, and the removal of points after 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 railroad entry permit

restrictions. The Contractor shall also submit 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 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 proposed work at these bridges has been submitted for review by Amtrak. It is the responsibility of the Contractor to obtain an entry permit from the Railroad and to comply with all requirements of the Railroad for acquisition of the permit. The Contractor shall note that obtaining approvals from Amtrak is a time consuming process and should be taken into consideration when selecting the means and methods for construction.

MATERIALS:

Temporary fill placed immediately adjacent to existing rail embankments must conform to the material requirements for “Ballast” to prevent contamination of the existing ballast embankment unless alternative material is approved by the Engineer for use. Temporary fill not in direct contact with the railroad embankments must be a clean, well-draining material approved by the Engineer for use.

Guard timbers for access pads shall be in good condition constructed using select hardwood species.

Hardware for connecting the guard timbers to existing cross ties shall conform to the requirements of M.05.04.13 – Hardware for Timber Construction and as required.

Any material required for resetting fences shall be equal to the original construction materials.

Settlement monitoring points shall be constructed of materials specifically manufactured for use as survey reference points and shall be installed in accordance with the manufacturer’s recommendations, unless the Contractor proposes alternate monitoring points approved by the Engineer. Settlement monitoring points for railroad tracks shall be steel rods driven into the ballast between cross ties or painted or similarly marked locations on the rail that adequately identify the monitoring point to allow for consistency in monitoring of the point. No markings shall be made on any part of the rail without approval of the Engineer

CONSTRUCTION METHODS:

The access points are for the Contractor’s use to provide the Contractor with access to the work area for equipment, materials and personnel. The access roads shall not be used to store equipment or materials, except as approved by the Engineer.

The Contractor shall perform any necessary field survey of the proposed access point areas and shall procure guard timbers of the size and quantity to construct working/access pads of a sufficient length to support the Contractor's work plan. The Contractor shall also procure and install sufficient ballast adjacent to the guard timbers to provide a working surface for equipment approaching and crossing the track. The guard timbers shall be anchored to the existing cross ties in accordance with the plan details. Temporary ballast placed over the existing timber cross ties shall be placed on a geotextile layer to facilitate the removal of the ballast when the crossing is no longer required. The Contractor shall take care not to damage the existing track structure during the installation, use and removal of the temporary crossings.

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 temporary fill, temporary earth retaining systems, excavation and limits and details for temporary work platforms.

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.

Upon completion of the construction at a given site, the Contractor shall remove all materials installed for the temporary access and restore the area to the original condition.

The Settlement Monitoring programs shall be established a minimum of 2 days prior to the commencement of any construction at the site. Initial readings shall be recorded both at the time of point installation and prior to the commencement of construction activities to establish the baseline readings. The number and locations of monitoring points shall be in conformance with site specific plan details as applicable, and the following minimum criteria:

Track monitoring points shall be established at intervals not to exceed 25' ft. for a minimum distance of 100 'ft. from all construction activities which have the potential to cause settlement.

Monitoring points shall be established by the Contractor for the specific purpose of providing a reliable, reproducible reference point for the survey equipment to be used by the Contractor for the monitoring program.

The Contractor shall take location readings on the established monitoring points using survey equipment capable of reading to a precision of 0.01 ft. in both the horizontal and vertical datum.

The monitoring points shall be monitored at the following minimum intervals:

- Prior to the commencement of construction activities
- Daily at the completion of the day's construction activities for a given site with active construction
- Weekly for a given site without any active construction; this interval may be increased to an interval approved by the Engineer for sites that exhibit no evidence of settlement
- After the completion of all construction activities at a given site
- The next working day after rainfall in excess of 1-inch in a 24 hour period
- As ordered by the Engineer

Survey monitoring information shall be reduced and tabulated by the Contractor and shall be submitted to the Engineer in hard copy format weekly, at a minimum. For sites with measured movement exceeding 0.01 'ft., the reduced data shall be submitted to the Engineer daily.

The Contractor shall notify the Engineer if any movement has been measured at a settlement monitoring point. Any points that have measured movement exceeding 1/4"-inch shall be immediately brought to the attention of the Engineer, and construction activities in the immediate vicinity of the movement shall be halted until any necessary corrective action has been taken. The Contractor shall modify the means and methods associated with any construction activities that result in movement exceeding 1/4"-inch.

The Contractor shall maintain the monitoring points during the construction phase and shall be responsible to re-establish or replace monitoring points for all locations damaged during the time periods when monitoring is required at a given site. New baseline monitoring point elevations shall be established for replacement points prior to resuming construction activities at a given site.

Upon completion of the construction at a site, the Contractor shall remove any monitoring point(s) installed and restore the original condition of the affected structure(s) unless the Engineer approves the abandonment of the monitoring point in place.

METHOD OF MEASUREMENT:

This item will not be measured for payment.

BASIS OF PAYMENT:

Item CODE 800.9931 “CONSTRUCTION SITE ACCESS – BRIDGE 063601 AND BRIDGE 063701” will be paid for at the contract “Lump Sum” price as listed in the Proposal. The price so stated shall include all materials, tools, equipment, labor and work incidental to the design, construction, maintenance and removal of the temporary access facilities, and the restoration of all areas to their original condition including the resetting of fences where applicable, the furnishing and installation of monitoring points, survey monitoring of the points at the required intervals, maintenance and protection of the points, replacement of damaged monitoring points, removal or abandonment of monitoring points, the recording of the data, the transfer of data to the Engineer and all materials, equipment, tools, and labor incidental thereto, 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 805.9910
TEMPORARY EARTH RETAINING SYSTEMS

DESCRIPTION: The work under this Item shall be in accordance with Section 805 of the Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction except as modified herein.

All Temporary Earth Retaining Systems project wide are the responsibility of the Contractor, including but not limited to their need assessment, selection, design, construction, maintenance, operation and removal, as defined herein. This work shall consist of:

1. Contractor selection of the temporary works systems needed to undertake the work: Underpinning Systems and Temporary Earth Retaining Systems, herein considered to be synonymous, including their systems for pre-dewatering, dewatering, and unwatering, herein called dewatering. This shall include designing, constructing, maintaining, removing and legally disposing as applicable, the temporary earth retaining systems (including their dewatering systems) required to construct, protect and maintain all adjacent facilities project wide. These include, but are not limited to, new and existing structures, drainage and water quality areas, demolition work, utilities, roadways, and the Limits of Disturbance identified in the Contract Documents and as stipulated by the permit agencies.

The Contractor shall determine the locations where Temporary Earth Retaining Systems are required in order to undertake the proposed work, and submit shop drawings in accordance with this Special Provision and Subsection 105.02 of the RI Standard Specifications. At a minimum at any location where the excavation and/or dewatering extends into the zone of influence of a facility, the Contractor shall submit a design for the proposed Temporary Earth Retaining System or submit supporting calculations clearly demonstrating that a Temporary Earth Retaining System is not required. The zone of influence is defined as an imaginary line extending horizontally two feet from the bottom edge of the facility and down on a 2Horizontal:1Vertical (2H:1V) slope.

The requirements for Temporary Earth Retaining Systems shall include the excavation in front of the existing stub abutments necessary to construct the new GRS abutments. The existing abutments are constructed on cast-in-place concrete piles with no reinforcing steel below a depth of 14 feet. The Contractor's Earth Retaining System shall include drilled earth anchors or other means to resist the lateral forces on the existing abutment such that no additional loads are transferred to the concrete piles due to the removal of soil providing lateral support to the piles. This work will be performed under the existing bridge to remain in service during the GRS abutment construction, and will require low headroom equipment.

The Contractor shall be fully responsible for the safety and stability of excavations and/or slopes, including at locations where the Contractor determines that no Temporary Earth Retaining System is needed. The Contractor shall be fully responsible for the safety and stability of all its underpinnings.

2. Coordinating the installation, maintenance, and removal as applicable of the Temporary Earth Retaining Systems with the Contractor's below-grade construction activities (i.e., excavation and dewatering). The Contractor's activities shall be consistent with the approach and methodology outlined in the Contractor's submittals that have been reviewed by the Engineer.
3. Performing any and all preparatory work to discover, protect, maintain, relocate, underpin and restore all existing underground utilities as necessary.

4. Performing monitoring of the Temporary Earth Retaining System performance during all phases/stages of installation and during post construction and removal.
5. Pre-trenching along the alignment of the Temporary Earth Retaining System walls or implementing other procedures to remove obstructions in advance of Temporary Earth Retaining System construction.

MATERIALS: There are no additional material requirements.

CONSTRUCTION METHODS:

1. Submittals: The following submittals shall apply to Underpinning and Temporary Earth Retaining systems (including their dewatering systems) and shall be made by the Contractor for review by the Engineer prior to start of Temporary Earth Retaining System installation. The Contractor shall conform to all submittal requirements of the Subsection 105.02 of the RI Standard Specifications, including submitting the information specified herein to the Engineer.

All temporary works submittals under this special provision, including any permanent features of the earth retaining structures, shall be stamped by a Professional Engineer currently licensed in good standing by the State of Rhode Island and shall include:

- a. Detailed calculations of analyses and designs for each system to be employed (one set for each location).
- b. A detailed narrative describing the construction sequence for the temporary works system. The narrative shall detail the sequencing of the retaining system construction, including the installation of dewatering systems, anchors, bracing, struts, wales, soil nails, pre-excavation, mass excavation, permanent below-grade structure construction, ground anchor de-tensioning/brace/strut removal, and dewatering process for each temporary works system.
- c. Plans of the Contractor's proposed monitoring system to survey horizontal and vertical movements, indicating proposed monitoring materials, equipment, schedule and procedures.
- d. A Movement Mitigation Plan, developed for immediate implementation should movement of the Temporary Earth Retaining systems exceed the specified criterion in this Special Provision. The proposed Movement Mitigation Plan shall include, but not be limited to, additional bracing, segmented and/or slotted excavation, bracing slabs, water recharging and/or other measures.
- e. Manufacturer's information for equipment to be used for conducting performance and proof tests on ground anchors (if used), or soil nails (if used) and preloading of internal braces, tie rods and anchor rods. The Contractor shall submit diagram(s) showing the geometry of the equipment, end hardware, method of locking off specified pretension or preload, and load and calibration data for the system of jack, load cells and gauges, including:
 - i. A calibration, within six months prior to use on the project, conducted by a certified testing agency.

- ii. A diagram of the Contractor's proposed equipment set-up(s) for monitoring either the elongation of the anchor tendon during performance and proof tests or the movement of the wall with respect to the brace during preloading. The proposed test equipment set-up(s) shall be completely independent of the jack and shall include a minimum of one micrometer dial gauge, capable of measuring anchor tendon extension to the nearest 0.001 inch, having six inches of travel and shall be mounted on an adjustable tripod or other device with flexible extension arms or a "goose neck" to permit rapid alignment of the dial gauge axis with the axis of the tiebacks. The flexible extension arms shall be of adequate stiffness to hold the instrument in place to provide accurate readings.
- f. Qualifications: The Contractor shall submit:
- i. Qualifications and relevant experience of the Contractor's designer(s) proposed for the Underpinning and Temporary Earth Retaining Systems, including their dewatering systems. The designer(s) shall be a currently licensed Rhode Island Professional Engineer in good standing and have a minimum of 10 years of relevant design experience for this work.
 - ii. Qualifications and experience of the Contractor and Subcontractor personnel doing the work, including the supervisory personnel who shall be assigned to the project and be responsible for the construction, maintenance and removal of the designed systems. The supervisory personnel shall have a minimum of 10 years of relevant construction experience and shall have successfully constructed a minimum of 5 projects with similar work.
- g. Following installation, the Contractor shall submit electronic as-built plans and elevations for each of the Underpinning and Temporary Earth Retaining Systems used.
2. Design Criteria: Temporary Earth Retaining Systems, where used, shall be located in close proximity to the facilities which they are intended to protect.

The following criteria shall be used to design the Temporary Earth Retaining Systems:

- a. The Contractor shall include in the design of these temporary works all loads that shall be applied to the system including construction surcharge.
- b. The Contractor shall design Temporary Earth Retaining Systems to minimize deflections and prevent damage to nearby facilities, not to exceed the Limiting Value for horizontal movement described below. Underpinning shall be designed to prevent damage to the facility(ies) being underpinned.
- c. The earth anchors or other means to resist the lateral loads of the existing abutments shall be designed for a minimum horizontal service load of 3.5 kips per linear foot located at the bottom of the existing abutment. The earth anchors or other means to resist the lateral abutment load shall be post tensioned and locked off at this load to limit deflection.
- d. The Temporary Earth Restraining System to install the GRS abutments below the existing bridge shall be installed prior to excavating below the bottom of the existing abutments. If excavation is required prior to installation due to headroom constraints, the excavation shall be staged such

that the excavation is limited to the width necessary to install each earth anchor or soldier pile or 15 feet maximum, whichever is less, and to a maximum depth of two feet below the bottom of the existing abutments. The contractor's design submittal shall include the details of the staged excavation.

3. **Obstructions:** The Contractor is responsible for the removal of obstructions along the Temporary Earth Retaining System alignment to a depth of 15 feet below the existing grade. If an obstruction is encountered at a depth greater than 15 feet, the Contractor shall notify the Engineer immediately and propose a means of clearing the obstruction that will be subject to the approval of the Engineer.
4. **Water-tightness and control:** The Contractor shall seal the inside face of the Temporary Earth Retaining Systems as necessary to provide a reasonably watertight system. The Contractor shall limit water entering through the system facing, joints, tremie seal (if a tremie is used), and exposed bottom of excavation so as not to damage the permanent work. All water, including water entering from rainfall, including its runoff, shall be removed from the excavation to prevent damage to construction. If water is determined by either the Contractor or the Engineer to have damaged the permanent work, the Contractor is required to make repairs to the permanent work at the Contractor's own expense and to the satisfaction of the Engineer. If such repairs cannot be made, then the damaged works shall be removed and replaced with new construction, at no additional cost to the State.
5. **Adjacent Facilities:** Adjacent above- and below-grade facilities may be sensitive to ground movement and settlement.

The Contractor shall be solely responsible for conducting the work in a manner that protects existing and new facilities from damage associated with the work. Any damage shall be promptly repaired or replaced by the Contractor to the satisfaction of the Owner of the damaged facility at no additional cost to the State.

The Contractor shall monitor the existing bridge and nearby commercial and residential structures for movement and vibrations as required in the Special Provisions and drawings.

6. **Movement Control:** The Contractor shall monitor the horizontal movements of the Temporary Earth Retaining Systems. The Contractor shall install lateral monitoring points at the top of the earth retaining systems every fifteen feet along the face of the retaining system. The Contractor shall monitor the points by survey for lateral movement and submit the survey data at least once a week or more often as required by the Engineer, at no additional cost to the State.

The Limiting Value for horizontal movement of the system/wall in the direction towards the excavation is defined as 1 inches at the wall face at pre-excavation existing grade elevation after installation, using pre-excavation conditions as a baseline. The Limiting Value of 1 in. also applies to points on the wall face at all depths below the pre-excavation existing grade elevation. The baseline for each of these points should be established as soon as the point is exposed (prior to excavating below the point).

If the Limiting Value is approached or exceeded, the Contractor shall immediately notify the Engineer, and shall implement the Contractor's approved Movement Mitigation Plan to take immediate steps to stop any further movement by revising his procedures, by providing supplemental bracing or by other measures

(working 24 hours per day and temporarily terminating work in the area of movement if necessary), as required by the Engineer.

If movement of Temporary Earth Retaining Systems reaches or exceeds the specified Limiting Values, or the Contractor's operations cause any damage to adjacent facilities, the Engineer may direct the Contractor to temporarily terminate the work in the area where such movement is occurring and implement all necessary mitigation measures and/or repairs to the satisfaction of the Engineer. There shall be no claims for additional payment by the Contractor nor will there be an extension of the project Completion Dates for delays related to stopping work because of movements and/or damages, mitigating movements and/or repairing damages.

7. If in the opinion of the Engineer, the Contractor's excavation is causing distress, settlement or other problems for adjacent facilities, the Engineer may stop work and require the Contractor to provide remedial action to correct the situation. This may include the submittal of additional designs and construction of remedial measures. There shall be no claims for additional payment by the Contractor nor will there be an extension of the project Completion Dates for delays resulting from such work stoppage and/or related submittals and work.

METHOD OF MEASUREMENT: This item, being paid for on a lump sum basis, will not be measured for payment. The Contractor shall submit a schedule of values for the major work elements under these items, for the Engineer's use.

BASIS OF PAYMENT: "TEMPORARY EARTH RETAINING SYSTEMS" will be paid for at the contract unit price per "LUMP SUM" as listed in the Proposal. The price so stated shall constitute full and complete compensation for all labor, materials, tools, equipment, and all incidentals necessary to complete the work as described in this Special Provision and elsewhere in the Contract Documents, complete in place and accepted by the Engineer.

CODE 820.9901
PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES

DESCRIPTION:

The work included under this code shall consist of applying a protective coating to concrete surfaces.

Except as modified in this Special Provision, all work under this item shall be performed in accordance with Section 820 of the Rhode Island Standard Specifications for Road and Bridge Construction, amended 2018, including all the revisions (Standard Specifications).

METHOD OF MEASUREMENT:

This 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 800.9922 "Repairs to Route 37 Bridge No. 063202", Item Code 800.9923 "Repairs to Route 37 Bridge No. 063301", 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", Item Code 800.9927 "Repairs to Route 37 Bridge No. 063701", or Item Code 800.9928 "Repairs to Route 37 Bridge No. 062601". Those costs shall constitute full and complete compensation for all labor, tools, materials, tools, equipment 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.

CODE 921.9901
SLOPE PAVING REPAIR

DESCRIPTION:

This work shall consist of removing, stockpiling and reinstalling the existing concrete block pavers on the sloped areas at locations specified on the plans and/or as directed by the Engineer. Existing concrete blocks where indicated on the plans shall be removed, stockpiled and reinstalled in the same pattern as to maintain uniformity. Concrete block pavers damaged by the Contractor shall be replaced in-kind. New concrete block pavers require the approval of the Engineer prior to placement.

MATERIALS:

New concrete block pavers, if required, shall match the existing concrete block pavers in size, color, and texture to the most extent possible.

Mortar for the joints shall conform to Subsection M.04.03.5 of the RIDOT Standard Specifications.

Gravel borrow, if required, shall conform to the requirements of Subsection M.01.02 of the RIDOT Standard Specifications.

CONSTRUCTION METHODS:

The existing concrete block pavers shall be carefully removed, stored and protected until reset. Existing concrete blocks shall be cleaned to remove all cement mortar, paint, bituminous concrete and other undesirable material adhered to the concrete blocks before resetting. Concrete blocks which become damaged due to the Contractor's operations, shall be replaced with new concrete blocks of like size, color and texture, and shall first meet the approval of the Engineer.

Resetting of concrete block pavers shall be in accordance to Section 921.03 of the RIDOT Standard Specifications.

METHOD OF MEASUREMENT:

"Slope Paving Repair" will be measured for payment by the number of square feet in the face area of the surface in accordance with the Plans and/or as directed by the Engineer.

BASIS OF PAYMENT:

The accepted quantity of "Slope Paving Repair" will be paid for at the contract unit price per square feet as listed in the Proposal, which price shall include full compensation for all materials, equipment, tools, labor and work incidental thereto, complete in place and accepted by the Engineer. No payment will be made for gravel borrow or for excavation of existing slope paving,

CODE T12.9901
ACTUATED CONTROLLER TS-2, TYPE 1 W/ 8 PHASE ASSEMBLY GROUND MOUNTED
INCLUDING FOUNDATION AND CABINET STD. 19.1.0

CODE T12.9908
ACTUATED CONTROLLER TS-2, TYPE 1 W/ 8 PHASE ASSEMBLY GROUND MOUNTED
INCLUDING CABINET STD. 19.1.0 ON EXISTING FOUNDATION

DESCRIPTION: The work under this item shall conform to the applicable requirements of Section T.12 “Traffic Signal Controllers and Cabinets” of the Rhode Island Standard Specifications for Road and Bridge Construction, including all revisions, including the following additions. All controllers supplied under these items shall be of identical models of current production. Untried or prototype units shall not be acceptable. All software supplied shall be of the most recent revision.

MATERIALS: The materials for this item shall conform to the Rhode Island Standard Specifications for Road and Bridge Construction, including all revisions, with the following additions:

All proposed traffic signal controller cabinets shall be NEMA TS2 Type 1 cabinet size 6 (“P” Type) with nominal dimensions of 56”H x 44”W x 28”D and shall have a 12” riser base.

In addition, the proposed cabinets shall include a video monitor that is integrated into the controller cabinet and video detection system, where applicable. The monitor shall be specifically manufactured for use in a controller cabinet or similar environments. The monitor shall have the following requirements:

- Screen size: 9 inches
- Display Format: 16:9
- Resolution: 1440x234 dots
- System: NTSC/PAL
- HDMI Input
- Analog BNC Input
- Dual video input
- Reverse imaging left/right up/down
- Brightness/Contrast/Color/Tint adjustments
- Universal mount
- On-screen display
- Power supply: DC 12V

The TS-2, Type 1 controllers shall be Siemens Model M60 ATC, or Trafficware 980 ATC. The controller firmware shall be equipped with the manufactures latest revision at time of acceptance, and be capable of supporting a GPS Time Synchronization System (where called for on the plans) as well as transit signal priority. The Contractor’s traffic signal controller supplier representative shall perform a firmware upgrade to the latest manufacturer released firmware prior to project closeout. Selection of the TS-2, Type 1 controller shall determine which one of the two existing Advance Traffic Management Systems in use by RIDOT to interface into:

- ATMS.Now (Cloud Based)
- Siemens Tactics (RIDOT TMC)

The controller shall be supplied with 6 priority inputs as well as 12 preempt inputs. The 12 preempt inputs shall be user programmable to be configured as priority inputs.

The MMU2 (Malfunction Management Unit) shall be EDI Model MMU2-16LEip, or approved equivalent.

- 1.0 All traffic signal controllers supplied and installed as part of this project shall have the capability of supporting Transit Signal Priority (TSP) without the need for additional software or hardware. This capability shall be part of the controller firmware and be accessed without the need for additional controller firmware modifications or external key devices. The TSP algorithm shall be fully programmable to extend a phase or reduce a vehicle phase depending on user defined settings. This function shall be capable during both coordinated and free operation.
 - 1.1 TSP shall support a minimum of six priority routines.
 - 1.2 The TSP program shall be capable of extending the priority phase green time and truncating the non-priority phase(s) green when a priority call is received by the traffic signal controller.
 - 1.3 TSP operation shall not cause the traffic signal controller to skip any phases that have active vehicle/pedestrian demand.
 - 1.4 Emergency vehicle preemption (EVP) shall override TSP operation.
 - 1.5 The TSP program shall have the ability to delay and/or extend priority calls.
 - 1.6 The TSP program shall have the ability to support user defined time periods between servicing valid priority calls.
 - 1.7 All TSP events shall be logged (time/date stamped) in the traffic signal controller.
 - 1.8 The TSP algorithm shall allow for non-TSP phases to be conditionally truncated based on the absence of a concurrent pedestrian service of the non-TSP phase.
 - 1.9 It shall be possible to user define in the traffic controller a minimum time between responses to priority calls.
- 2.0 If TSP is included as part of the project, the Contractor is responsible for programming and testing a fully functional TSP system to achieve TSP operation to the satisfaction of the Engineer and the Owner for all new traffic signal controllers. The controllers shall initially be programmed by the Contractor with timings to provide a five second reduction in non-TSP phases and a green extension time to the priority phase equal to the cumulative time of the five second non-priority phase truncation times. Prior to installation of the traffic controllers in the field, a controller to be used as part of the project shall be fully programmed with all timings and TSP operation for the intersection. The set up and programming of the controller will be performed at the Contractors facility in the presence of the Engineer. Once the controller has been fully programmed by the Contactor, it shall be bench tested by the Contractor and witnessed by the Engineer for proper TSP operation. The TSP system shall initially be disabled by the Contractor until a future date to be determined by RIDOT and RIPTA.
- 3.0 TSP Coordinated Operation – Under coordinated operation, the controller shall modify existing signal operation to accommodate a priority call. This may include modification to per phase termination points established under normal coordinated control. During a priority event, per phase coordination modes shall remain in effect. Priority and non-priority phase duration shall be user programmable per coordination pattern.
- 4.0 TSP Non-Coordinated (Free operation) – Upon receipt of a valid priority call, the controller shall either extend the priority phase or reduce the non-priority(s). These settings for the adjusted green times shall be user defined, on a per phase basis, and adjustable on a time-of-day basis.
- 5.0 All traffic signal controllers supplied and installed as part of this project shall be Siemens Model M60 or Trafficware 980 ATC for compatibility with the existing RIDOT Advanced Traffic Management Systems.

- 6.0 All traffic signal controllers supplied and installed as part of this project shall contain the same controller firmware.
- 7.0 Prior to installation of the traffic controllers, all controller units shall be shop tested and approved by representatives of the Rhode Island Department of Transportation (RIDOT).
- 8.0 Three hardcopies of all programmable data shall be supplied by the Contractor. This includes all programmable devices supplied and installed as part of this project. The recorded data shall reflect settings resident in the devices upon acceptance of the project by the Engineer.

CONSTRUCTION METHODS: Where any modifications are made at existing traffic signal controller cabinets, Contractor shall supply two (2) copies of box prints showing all of the modifications that are made. If existing box prints are not available, the Contractor shall produce and supply function-based connection diagrams showing various in-cabinet interconnections and wiring changes made as part of the project. Where new loop detectors are installed, the Contractor shall install a revised cabinet door sticker table showing the detector assignment information including the approach names, detector numbers, terminal numbers, detector relay slot number, relay number, relay channel number, and phase associated with each detector.

Where new or existing preemption and/or priority systems are installed or modified, the Contractor shall install a door sticker indicating channel assignment, approach, preemption/priority level and corresponding field terminations. The door sticker should be suitably durable for long term use in an outdoor environment. The cost for the required box prints and door stickers shall be considered incidental to the cost of the items of work being performed.

Where new cabinets are being installed on existing foundations, the existing foundations shall be modified and expanded as needed to accommodate new cabinets and any proposed new conduits. The Contractor is responsible for obtaining the necessary measurements of the existing foundations and conduit locations.

The foundation and concrete work pad (where appropriate) shall be in accordance with RI Standard 19.1.0.

METHOD OF MEASUREMENT: “ACTUATED CONTROLLER TS-2, TYPE 1 W/ 8 PHASE ASSEMBLY GROUND MOUNTED INCLUDING FOUNDATION AND CABINET STD. 19.1.0” and “ACTUATED CONTROLLER TS-2, TYPE 1 W/ 8 PHASE ASSEMBLY GROUND MOUNTED INCLUDING CABINET STD. 19.1.0 ON EXISTING FOUNDATION” shall be measured for payment by the unit “EACH” for each unit installed and accepted.

BASIS OF PAYMENT: “ACTUATED CONTROLLER TS-2, TYPE 1 W/ 8 PHASE ASSEMBLY GROUND MOUNTED INCLUDING FOUNDATION AND CABINET STD. 19.1.0” and “ACTUATED CONTROLLER TS-2, TYPE 1 W/ 8 PHASE ASSEMBLY GROUND MOUNTED INCLUDING CABINET STD. 19.1.0 ON EXISTING FOUNDATION” shall be paid for at the contract unit price bid per "EACH", which price shall include full compensation for all materials, equipment, controller firmware to support TSP, existing controller data extraction and programming of new controllers, communication costs associated with the point of service connection if Trafficware 980 ATC controllers are supplied, tools, testing, labor, and work incidental thereto complete in place and accepted by the Engineer.

SPECIFICATION DELETED

The TSSM shall provide for a user specified security code entry before any data may be altered. In order to view any parameter, security code entry shall not be required. Security access shall be automatically rescinded in a set period at time after either access was gained or the last parameter change was entered. The master shall have the ability via keyboard to disable security code requirements, allowing for perpetual access.

The TSSM shall be installed at the intersection of Pontiac Avenue and Route 37 Westbound Off-Ramp.

The TSSM supplied shall be manufactured by Siemens for compatibility with RIDOT's Advanced Traffic Management System. The master shall have all harnesses properly terminated on the backpanel.

The TSSM shall be the ATMS.Now cloud based central system if a Trafficware 980 ATC controller is selected for use under item numbers T12.9901 and T12.9908.

System Telephone Service

The TSSM will communicate back to the RIDOT remote computer station via a new cellular modem located in the cabinet at the Pontiac Avenue at Route 37 Westbound Off-Ramp intersection.

If the Contractor is connecting to the existing RIDOT ATMS.Now cloud based system, a master controller will not be required. The Contractor shall configure the ATMS.Now system to perform the functions of the on-street master. All work associated with the configuration of the ATMS.Now system, including communication costs associated with the point of service connection shall be considered incidental to Item Codes T12.9901 and T12.9908 as required by the project.

METHOD OF MEASUREMENT: "TRAFFIC SIGNAL SYSTEM MASTER" shall be measured for payment by the unit "EACH" for each unit installed, tested, and accepted by the Engineer and the Owner.

BASIS OF PAYMENT: "TRAFFIC SIGNAL SYSTEM MASTER" will be paid for at the contract bid price "EACH", which price and payment shall constitute full compensation for furnishing all labor, materials, molding, mounting, hardware, and all required programming, settings, cable, and operating costs, required tests and incidentals complete in place, tested, and accepted by the Engineer and the Owner.

**CODE T12.9905
 MODIFY EXISTING ADVANCED TRAFFIC MANAGEMENT SYSTEM**

DESCRIPTION: This item of work shall conform to the applicable sections of the Standard Specifications, with all revisions with the following additions:

It shall consist of programming system software, copying local controller data bases, and providing dynamic intersection maps on the Advanced Traffic Management System as shown on the plans.

CONSTRUCTION METHODS: The Contractor shall make the required modifications to the existing RIDOT Advanced Traffic Management System (existing Siemens Tactics software or the existing cloud based Trafficware ATMS.now system) which include the following intersections under this contract. The required modifications shall be based on the type of controller selected and approved by the agency under item numbers T12.9901 and T12.9908.

1. General Requirements

1.1 System

The Contractor shall maintain the historical/existing system addresses for the following system intersections:

- Pontiac Avenue at Route 37 Eastbound Off-Ramp
- Pontiac Avenue at Route 37 Westbound Off-Ramp
- Pontiac Avenue at Sockanosset Cross Road

The Contractor shall copy the local controller databases into the Advanced Traffic Management System server, and shall update the following RIDOT computer workstations:

RIDOT Computer Name	Computer Type	Location
DOT-AP-TRAFFIC1 (DOT-AP-TRAFFIC1.dot.ri.gov)	Central Server	RIDOT TMC 2 Capitol Hill, Providence, RI, Server Room
DOT-DES-RHOLT1 (DOT-DES-RHOLT1.dot.ri.gov)	Desktop	RIDOT TMC 2 Capitol Hill, Providence, RI, Room 136
DOT-MNT-TRAFSIG	Desktop	RIDOT H&B Maintenance HQ 360 Lincoln Ave, Warwick, RI
DOT-MNT-TB05	Laptop	RIDOT H&B Maintenance HQ 360 Lincoln Ave, Warwick, RI
DOT-MNT-TSIGNAL	Laptop	RIDOT H&B Maintenance HQ 360 Lincoln Ave, Warwick, RI
Cloud Based ATMS.Now		

1.2 Dynamic Graphics Displays

Dynamic graphics displays shall be available on all RIDOT Advanced Traffic Management System workstations. As a minimum, the Advanced Traffic Management System software shall support the following:

For this project, the Contractor shall produce new or revised intersection graphics that depict the final intersection and/or corridor layout per the project for the newly configured intersections of Pontiac Avenue at Route 37 Eastbound and Westbound Off-Ramps and Pontiac Avenue at Sockanosset Cross Road for the purpose of remote monitoring of system status. The links shall be linked to real time data allowing for a dynamic representation of system status for the operator. The graphics will be a representation of existing geometry of the intersections/subsystem/system at the completion of the project. It will be the responsibility of the Contractor to

generate the graphics meeting the requirements of this specification. Each of the maps shall be custom produced for each of the system intersections representing the unique geometric configurations and lane pattern of each location.

At a minimum, the local intersection graphics shall contain the following:

- Graphical representation of the intersection (scaled maps are not required), including controller cabinet location.
- City (Cranston)
- Street Names
- System Name [Pontiac Avenue System]
- North Arrow (oriented similar to plans)
- Lane configuration showing accurate depiction of intersection pavement markings
- Signal displays; vehicle and pedestrian
- Detector calls; local and system
- System parameters; cycle, split and offset
- Intersection operation status (flash, coord, free, on-line, preemption)
- Time/Date

The Contractor shall also create or modify the existing Pontiac Avenue system graphic, as needed to add the project intersections.

If Siemens field equipment is supplied, the Contractor shall advise RIDOT on any equipment constraints that would prevent the upgrades to the Siemens Tactics Advanced Traffic Management System associated with integrating the Pontiac Avenue system. If it is determined that the upgrades are infeasible, then this item of work may be removed from the contract. If the item of work is removed from the contract, the cell modem shall not be activated for communications until a later date TBD by RIDOT.

METHOD OF MEASUREMENT: “MODIFY EXISTING ADVANCED TRAFFIC MANAGEMENT SYSTEM” shall be measured for payment by the unit “LUMP SUM” price for the completion of all work specified, complete in place and accepted by the Engineer.

BASIS OF PAYMENT: “MODIFY EXISTING ADVANCED TRAFFIC MANAGEMENT SYSTEM” shall be paid for at the contract bid price “LUMP SUM”, which price and payment shall constitute full compensation for furnishing all equipment, material, labor, hardware, software (including any licenses required to update the server), programming, local graphics, cabling, appurtenances, tests and incidentals necessary to complete this item of work complete in place and accepted.

**CODE T12.9907
CELLULAR MODEM**

DESCRIPTION: This item of work shall conform to the applicable sections of the Standard Specifications, with the following additions. The work consists of furnishing and installing a cellular modem that provides a cellular connection to a remote site. The cellular modem shall be installed within the field cabinet as shown on the plans or as directed by the Engineer. All cabinet wiring performed by the Contractor shall be cable tied and secured in the cabinet in a neat and orderly manner.

MATERIALS: The materials for this item shall conform to the Standard Specifications. The Contractor shall supply all necessary documentation, wiring and antenna to make for a fully functioning cellular connection. The Contractor shall coordinate with RIDOT MIS the final configuration of the cellular modem to ensure a working network connection between the field equipment and the existing Advanced Traffic Management System.

Per specification for Item T12.9905 Advanced Traffic Management System, if Item T12.9905 is removed from the contract, the cell modem shall not be activated for communications until a later date TBD by RIDOT.

METHOD OF MEASUREMENT: "CELLULAR MODEM" shall be measured for payment by the unit "EACH" for each unit installed and accepted by the Engineer.

BASIS OF PAYMENT: "CELLULAR MODEM" shall be paid for at the contract bid price "EACH", which price and payment shall include all labor, materials, cabling, mounting brackets, connection to antenna and signal controller, controller programming, testing, field adjustments and settings and other incidentals complete in place and accepted by the Engineer.

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
059	701.0418	Cont.		Item 701.0418 Total:		527.00
060	701.0424	REINFORCED CONCRETE PIPE M 170	LF			
		CLASS III 24 INCH				
		ROUTE 37				
		DS-67		23.00	0011	02
		Item 701.0424 Total:		23.00		
061	701.0612	REINFORCED CONCRETE PIPE M 170	LF			
		CLASS V 12 INCH				
		ROUTE 37				
		DS-27		15.00	0011	02
		DS-28		55.00	0011	02
		DS-74		26.00	0011	02
		DS-92		90.00	0011	02
		Item 701.0612 Total:		186.00		
062	701.0615	REINFORCED CONCRETE PIPE M 170	LF			
		CLASS V 15 INCH				
		ROUTE 37 628/629				
		ROUTE 37 628/629		25.00	0011	02
		Item 701.0615 Total:		25.00		
063	701.0618	REINFORCED CONCRETE PIPE M 170	LF			
		CLASS V 18 INCH				
		ROUTE 37				
		DS-59		25.00	0011	02
		DS-60		73.00	0011	02
		ROUTE 37 628/629				
		ROUTE 37 628/629			0011	02
		Item 701.0618 Total:		98.00		
064	701.2912	12 INCH CORR ALUMINUM CULVERT PIPE	LF			

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
140	817.9901 Cont.	EXISTING BRIDGE NO. 631		45.00	0011	02
		EXISTING BRIDGE NO. 632				
		EXISTING BRIDGE NO. 632		745.00	0011	02
		EXISTING BRIDGE NO. 633				
		EXISTING BRIDGE NO. 633		125.00	0011	02
		EXISTING BRIDGE NO. 634				
		EXISTING BRIDGE NO. 634		105.00	0011	02
		EXISTING BRIDGE NO. 636				
		EXISTING BRIDGE NO. 636		65.00	0011	02
		EXISTING BRIDGE NO. 637				
		EXISTING BRIDGE NO. 637		65.00	0011	02
		EXISTING BRIDGE NO. 638				
		EXISTING BRIDGE NO. 638		97.00	0011	02
Item 817.9901 Total:				1,390.00		
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		55.00	0011	02
		EXISTING BRIDGE NO. 634				
		EXISTING BRIDGE NO. 634		15.00	0011	02
		EXISTING BRIDGE NO. 636				
		EXISTING BRIDGE NO. 636		25.00	0011	02
		EXISTING BRIDGE NO. 637				
		EXISTING BRIDGE NO. 637		25.00	0011	02
		EXISTING BRIDGE NO. 638				
		EXISTING BRIDGE NO. 638		190.00	0011	02
Item 817.9902 Total:				336.00		
142	817.9904	EXPANSION JOINT HEADER REPAIRS	CF			
		WITH POLYMER MORTAR				

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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.
160	901.9901 Cont.	HWY 7				
		213+80 TO 216+00 LT		220.00	0011	02
		HWY 8				
		234+50 TO 235+80 LT		130.00	0011	02
		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. 200+93 TO STA. 205+58 LT		458.00	0021	03
		STA. 201+10 TO STA. 203+03 RT		200.00	0021	03
		ROUTE 37 WB ON-RAMP FROM PONTIAC AVENUE				
		STA. 300+50 TO STA. 308+08 RT		875.00	0003	04
Item 901.9901 Total:				8,690.00		
161	901.9902	GUARDRAIL STEEL BEAM ANCHORAGE	EACH			
		TRAILING END SECTION (MASH)				
		EB STA 195+00 RT				
		EB STA 195+00 RT		1.00	0011	02
		FRONTAGE ROAD				
		STA. 100+70 LT		1.00	0003	04
		STA. 103+00 RT		1.00	0003	04
		ROUTE 37 WB OFF-RAMP TO PONTIAC AVENUE				
		STA. 200+93 Lt		1.00	0021	03
		STA. 201+10 RT		1.00	0021	03
		ROUTE 37 WB ON-RAMP FROM PONTIAC AVENUE				
		STA. 308+08 RT		1.00	0021	03
		WB STA 186+00 LT				
		WB STA 186+00 LT		1.00	0011	02
		WB STA 200+20 RT				

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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.
161	901.9902 Cont.	WB STA 200+20 RT		1.00	0011	02
		WB STA 210+70 LT				
		WB STA 210+70 LT		1.00	0011	02

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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.
161	901.9902	Cont.				
				Item 901.9902 Total:	9.00	
162	901.9903	GUARDRAIL END TREATMENT - ENERGY	EACH			
		ABSORBING TERMINAL (MASH)				
		EB 198+60 RT				
		EB 198+60 RT		1.00	0021	03
		FRONTAGE ROAD				
		STA. 106+70 LT		1.00	0003	04
		STA. 108+73 RT		1.00	0003	04
		ROUTE 37 WB OFF-RAMP TO PONTIAC AVENUE				
		STA. 203+03 RT		1.00	0021	03
		ROUTE 37 WB ON-RAMP FROM PONTIAC AVENUE				
		STA. 308+02 RT			0003	04
		TTC				
		TTC		8.00	0021	03
		UNASSIGNED		1.00	0021	03
		W 200+20 RT				
		W 200+20 RT		1.00	0021	03
		WB 195+00 LT				
		WB 195+00 LT		1.00	0021	03
		WB 211+80 RT				
		WB 211+80 RT		1.00	0021	03
				Item 901.9903 Total:	16.00	
163	901.9904	GUARDRAIL END TREATMENT PLATFORM	EACH			
		FRONTAGE ROAD				
		STA 106+70 LT		1.00	0003	04
		STA 108+73 RT		1.00	0003	04
		ROUTE 37 WB OFF-RAMP TO PONTIAC AVENUE				
		STA 203+03 RT		1.00	0021	03

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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.
163	901.9904 Cont.	ROUTE 37 WB ON-RAMP FROM PONTIAC AVENUE STA. 308+02 RT			0003	04
Item 901.9904 Total:				3.00		
164	901.9905	STEEL BEAM GUARDRAIL TO END POST TRANSITION PROJECT WIDE EB STA 209+00 RT STA 190+90 STA 191+00 STA 192+25 STA 195+50 STA 205+40 STA 205+70 STA 209+00 STA 235+80 STA 236+00 STA 236+70 STA 236+90 WB STA 195+50 RT	EACH			
Item 901.9905 Total:				13.00		
165	901.9906	ENCASED POST FOR SHALLOW MOUNT GUARDRAIL FRONTAGE ROAD SAY 50% OF DRAINAGE CROSSINGS ROUTE 37 MAINLINE ROUTE 37 MAINLINE ROUTE 37 WB OFF-RAMP TO PONTIAC AVENUE SAY 50% OF DRAINAGE CROSSINGS ROUTE 37 WB ON-RAMP FROM	EACH			
					0003	04
				7.00	0011	02
				1.00	0021	03

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
208	920.0200	Cont.				
		DS-11		3.00	0011	02
		DS-111		40.00	0011	02
		DS-121		3.00	0011	02
		DS-14		3.00	0011	02
		DS-53		3.00	0011	02
		DS-56		3.00	0011	02
		END OF FRONTAGE ROAD		15.00	0011	02
		STU 4		147.00	0011	02
		ROUTE 37 OFF-RAMP TO PONTIAC AVENUE				
		STA. 203+30 TO STA. 203+50 LT		19.00	0011	02
Item 920.0200 Total:				304.00		
209	921.9901	SLOPE PAVING REPAIR	SF			
		EXISTING BRIDGE NO. 632				
		EXISTING BRIDGE NO. 632		200.00	0011	02
		EXISTING BRIDGE NO. 633				
		EXISTING BRIDGE NO. 633		130.00	0011	02
Item 921.9901 Total:				330.00		
210	922.0100	TEMPORARY CONSTRUCTION SIGNS	SF			
		STANDARD 29.1.0 AND 27.1.1				
		PONTIAC AVENUE				
		AS NEEDED		18.00	0011	02
		G20-2 (36"x18")		36.00	0011	02
		G20-2 (48"x24")		16.00	0011	02
		M4-9BL (24"x30")		5.00	0011	02
		M4-9BR (24"X30")		5.00	0011	02
		R3-7L (36"x36")		36.00	0011	02
		R7-3R (36"x36")		36.00	0011	02
		R9-11L (24"x18")		6.00	0011	02
		R9-11R (24"x18")		6.00	0011	02
		R9-9 (24"x12")		16.00	0011	02

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
259	T05.0310	Cont. ROUTE 37 AND PONTIAC AVE.				
		ROUTE 37 AND PONTIAC AVE.		7.00	0011	02
Item T05.0310 Total:				7.00		
S260	T05.9901	BREAK INTO EXISTING HANDHOLE	EACH			
		TRAFFIC SIGNAL PLAN NO. 2				
		AS SHOWN ON PLANS		1.00	0003	04
		TRAFFIC SIGNAL PLAN NO. 3				
		AS SHOWN ON PLANS		1.00	0021	03
Item T05.9901 Total:				2.00		
S261	T06.1020	2 IN. RIGID STEEL CONDUIT -	LF			
		UNDERGROUND				
		TRAFFIC SIGNAL PLAN NO. 2				
		AS SHOWN ON PLANS		80.00	0003	04
		TRAFFIC SIGNAL PLAN NO. 3				
		AS SHOWN ON PLANS		10.00	0021	03
Item T06.1020 Total:				90.00		
S262	T06.1030	3 IN. RIGID STEEL	LF			
		CONDUIT-UNDERGROUND				
		TRAFFIC SIGNAL PLAN NO. 2				
		AS SHOWN ON PLANS		60.00	0003	04
		TRAFFIC SIGNAL PLAN NO. 3				
		AS SHOWN ON PLANS		30.00	0021	03
Item T06.1030 Total:				90.00		
S263	T06.2020	2 IN. RIGID STEEL CONDUIT-OVERHEAD	LF			
		ROUTE 37 AND PONTIAC AVE.				
		ROUTE 37 AND PONTIAC AVE.		220.00	0011	02
		TRAFFIC SIGNAL PLAN NO. 2				
		AS SHOWN ON PLANS		20.00	0003	04
		TRAFFIC SIGNAL PLAN NO. 3				

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
S263	T06.2020	Cont.		20.00	0021	03
				Item T06.2020 Total:	260.00	
S264	T06.3020	2 IN. RIGID STEEL CONDUIT-UNDER EXISTING PAVEMENT	LF			
		TRAFFIC SIGNAL PLAN NO. 2				
		AS SHOWN ON PLANS		10.00	0003	04
		TRAFFIC SIGNAL PLAN NO. 3				
		AS SHOWN ON PLANS		60.00	0021	03
				Item T06.3020 Total:	70.00	
S265	T06.3030	3 IN. RIGID STEEL CONDUIT-UNDER EXISTING PAVEMENT	LF			
		SYSTEM INTERCONNECT PLAN				
		AS SHOWN ON PLANS		30.00	0021	03
		TRAFFIC SIGNAL PLAN NO. 2				
		AS SHOWN ON PLANS		70.00	0003	04
		TRAFFIC SIGNAL PLAN NO. 3				
		AS SHOWN ON PLANS		30.00	0021	03
				Item T06.3030 Total:	130.00	
S266	T06.3040	4 IN. RIGID STEEL CONDUIT-UNDER EXISTING PAVEMENT	LF			
		TRAFFIC SIGNAL PLAN NO. 2				
		AS SHOWN ON PLANS		10.00	0003	04
		TRAFFIC SIGNAL PLAN NO. 3				
		AS SHOWN ON PLANS		10.00	0021	03
				Item T06.3040 Total:	20.00	
S267	T06.5120	2 INCH SCHEDULE 40 POLYVINYL CHLORIDE PLASTIC CONDUIT - UNDERGROUND	LF			
		TRAFFIC SIGNAL PLAN NO. 2				

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
S267	T06.5120	Cont.		450.00	0003	04

TRAFFIC SIGNAL PLAN NO. 3

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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.
S276	T06.6020	Cont. CONDUIT-OVERHEAD				
		TRAFFIC SIGNAL PLAN NO. 2				
		AS SHOWN ON PLANS		20.00	0003	04
		TRAFFIC SIGNAL PLAN NO. 3				
		AS SHOWN ON PLANS		20.00	0021	03
Item T06.6020 Total:				40.00		
277	T06.7103	EXPANSION COUPLING WITHOUT	EACH			
		TRANSVERSE MOTION 3'' STEEL				
		ROUTE 37 AND PONTIAC AVE.				
		ROUTE 37 AND PONTIAC AVE.		1.00	0011	02
Item T06.7103 Total:				1.00		
278	T08.0100	LIGHT STANDARD FOUNDATION WITH	EACH			
		ANCHOR BOLTS STANDARD 18.1.0				
		ROUTE 37 AND PONTIAC AVE.				
		ROUTE 37 AND PONTIAC AVE.		28.00	0011	02
Item T08.0100 Total:				28.00		
279	T08.1700	REMOVE AND RELOCATE LIGHT STANDARD	EACH			
		ROUTE 37 AND PONTIAC AVE.				
		ROUTE 37 AND PONTIAC AVE.		9.00	0011	02
Item T08.1700 Total:				9.00		
280	T08.2041	ALUMINUM LIGHTING STD. 40 FT. W/	EACH			
		SINGLE DAVIT ARM EXTN. 10 FT.				
		STANDARD 18.3.0				
		ROUTE 37 AND PONTIAC AVE.				
		ROUTE 37 AND PONTIAC AVE.		8.00	0011	02
Item T08.2041 Total:				8.00		
281	T08.9901	UNDERPASS LUMINAIRE	EACH			
		ROUTE 37 AND PONTIAC AVE.				

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
281	T08.9901 Cont.	ROUTE 37 AND PONTIAC AVE.		4.00	0011	02
Item T08.9901 Total:				4.00		
282	T08.9902	ALUMINUM LIGHTING STD 30 X 8	EACH			
		RTE 37				
		RTE 37		7.00	0011	02
Item T08.9902 Total:				7.00		
283	T08.9903	RAISE LIGHT STANDARD TO GRADE	EACH			
		RTE 37				
		RTE 37		4.00	0011	02
Item T08.9903 Total:				4.00		
284	T09.1000	SERVICE PEDESTAL STANDARD 18.4.0	EACH			
		ROUTE 37 AND PONTIAC AVE.				
		ROUTE 37 AND PONTIAC AVE.		2.00	0011	02
Item T09.1000 Total:				2.00		
285	T09.9901	ELECTRIC METER PEDESTAL AND FOUNDATION	EACH			
		PONTIAC AVENUE				
		STA. 18+75 LT		1.00	0011	02
		STA. 18+75 RT		1.00	0011	02
Item T09.9901 Total:				2.00		
286	T09.9902	SERVICE PEDESTAL GROUNDING 18.4.1	EACH			
		ROUTE 37 AND PONTIAC AVE.				
		ROUTE 37 AND PONTIAC AVE.		2.00	0011	02
Item T09.9902 Total:				2.00		
287	T09.9903	SERVICE FEED/RISER CONNECTION	EACH			
		ROUTE 37 AND PONTIAC AVE.				
		ROUTE 37 AND PONTIAC AVE.		2.00	0011	02

Distribution of Quantities

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

Estimate Name - Addendum 2

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.
S296	T12.9150	METER SOCKET W/MANUAL BY-PASS	EACH			
		ROUTE 37 AND PONTIAC AVE.				
		ROUTE 37 AND PONTIAC AVE.		2.00	0011	02
		TRAFFIC SIGNAL PLAN NO. 2				
		AS SHOWN ON PLANS		1.00	0003	04
		TRAFFIC SIGNAL PLAN NO. 3				
		AS SHOWN ON PLANS		1.00	0021	03
Item T12.9150 Total:				4.00		
S297	T12.9901	ACTUATED CONTROLLER TS-2, TYPE 1	EACH			
		W/ 8 PHASE ASSEMBLY GROUND MOUNTED				
		INCLUDING FOUNDATION AND CABINET				
		STANDARD 19.1.0				
		TRAFFIC SIGNAL PLAN NO. 2				
		AS SHOWN ON PLANS		1.00	0003	04
		TRAFFIC SIGNAL PLAN NO. 3				
		AS SHOWN ON PLANS		1.00	0021	03
Item T12.9901 Total:				2.00		
S298	T12.9902	MODIFY EXISTING TRAFFIC SIGNAL	EACH			
		CONTROLLER				
		TRAFFIC SIGNAL PLAN NO. 1				
		AS SHOWN ON PLANS			0003	04
Item T12.9902 Total:					**DELETED**	
S299	T12.9903	VIDEO DETECTION SYSTEM HARDWARE	EACH			
		TRAFFIC SIGNAL PLAN NO. 3				
		AS SHOWN ON PLANS		1.00	0021	03
Item T12.9903 Total:				1.00		
S300	T12.9904	TRAFFIC SIGNAL SYSTEM MASTER	EACH			
		TRAFFIC SIGNAL PLAN NO. 2				
		AS SHOWN ON PLANS		1.00	0003	04

Distribution of Quantities

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

Estimate Name - Addendum 2

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.
S300	T12.9904	Cont.		1.00		
Item T12.9904 Total:				1.00		
S301	T12.9905	MODIFY EXISTING ADVANCED TRAFFIC MANAGEMENT SYSTEM	LS			
		TRAFFIC SIGNAL PLAN NO. 2				
		AS SHOWN ON PLANS		1.00	0003	04
Item T12.9905 Total:				1.00		
S302	T12.9906	GPS TIME SYNCHRONIZATION UNIT	EACH			
		TRAFFIC SIGNAL PLAN NO. 1				
		AS SHOWN ON PLANS		1.00	0003	04
		TRAFFIC SIGNAL PLAN NO. 2				
		AS SHOWN ON PLANS		1.00	0003	04
		TRAFFIC SIGNAL PLAN NO. 3				
		AS SHOWN ON PLANS		1.00	0021	03
Item T12.9906 Total:				3.00		
S303	T12.9907	CELLULAR MODEM	EACH			
		TRAFFIC SIGNAL PLAN NO. 2				
		AS SHOWN ON PLANS		1.00	0003	04
Item T12.9907 Total:				1.00		
S304	T13.1000	TRAFFIC DETECTORS-LOOP, STANDARD	LF			
		19.6.0				
		TRAFFIC SIGNAL PLAN NO. 2				
		AS SHOWN ON PLANS		1,435.00	0003	04
		TRAFFIC SIGNAL PLAN NO. 3				
		AS SHOWN ON PLANS		910.00	0021	03
Item T13.1000 Total:				2,345.00		
S305	T13.1004	TRAFFIC DETECTOR RELAY-LOOP 4 CHANNEL	EACH			
		TRAFFIC SIGNAL PLAN NO. 1				

Distribution of Quantities

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

Estimate Name - Addendum 2

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.
S305	T13.1004	Cont. AS SHOWN ON PLANS TRAFFIC SIGNAL PLAN NO. 2		4.00	0003	04

Distribution of Quantities

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

Estimate Name - Addendum 2

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.
S305	T13.1004	Cont.				
		AS SHOWN ON PLANS		4.00	0003	04
		TRAFFIC SIGNAL PLAN NO. 3				
		AS SHOWN ON PLANS		3.00	0021	03
				Item T13.1004 Total:		11.00
S306	T13.8210	ACCESSIBLE PEDESTRIAN DETECTOR -	EACH			
		PUSHBUTTON WITH SIGN				
		TRAFFIC SIGNAL PLAN NO. 2				
		P1		1.00	0003	04
		P2		1.00	0003	04
		P3		1.00	0003	04
		P4		1.00	0003	04
		TRAFFIC SIGNAL PLAN NO. 3				
		P1		1.00	0021	03
		P2		1.00	0021	03
		P3		1.00	0021	03
		P4		1.00	0021	03
				Item T13.8210 Total:		8.00
S307	T13.9901	FIRE PRE-EMPTION CONFIRMATION	EACH			
		BEACON				
		TRAFFIC SIGNAL PLAN NO. 2				
		AS SHOWN ON PLANS		1.00	0003	04
		TRAFFIC SIGNAL PLAN NO. 3				
		AS SHOWN ON PLANS		1.00	0021	03
				Item T13.9901 Total:		2.00
S308	T13.9902	VIDEO DETECTION SYSTEM CAMERA	EACH			
		TRAFFIC SIGNAL PLAN NO. 3				
		AS SHOWN ON PLANS		1.00	0021	03
				Item T13.9902 Total:		1.00
S309	T14.3513	1 WAY 3 SECTION MAST ARM MOUNTED	EACH			

Distribution of Quantities

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

Estimate Name - Addendum 2

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.
S315	T14.9903	REMOVE AND REPLACE SIGNAL HEAD LED	EACH			
		MODULE				
		TRAFFIC SIGNAL PLAN NO. 1				
		AS SHOWN ON PLANS		1.00	0003	04
		Item T14.9903 Total:		1.00		
316	T15.0100	DIRECTIONAL REGULATORY AND WARNING	SF			
		SIGNS				
		FRONTAGE ROAD				
		STA. 100+65 RT R5-1 (30"x30")		6.25	0003	04
		STA. 100+65 RT R5-1A		6.00	0003	04
		(36"x24")				
		STA. 100+66 LT R5-1 (30"x30")		6.25	0003	04
		STA. 100+66 LT R5-1A		6.00	0003	04
		(36"x24")				
		STA. 102+20 LT W1-1 (36"X36")		9.00	0003	04
		STA. 102+20 LT W13-1P		2.25	0003	04
		(18"X18")				
		PONTIAC AVENUE				
		STA. 12+83 LT R6-1L (54"x18")		6.75	0021	03
		STA. 12+83 LT R6-1R (54"x18")		6.75	0021	03
		STA. 12+84 LT W12-1 (36"x36")		6.25	0021	03
		STA. 13+16 LT R6-1L (54"x18")		6.75	0021	03
		STA. 13+16 LT R6-1R (54"x18")		6.75	0021	03
		STA. 14+50 LT D1-3 (108"x42")		31.50	0021	03
		STA. 14+80 LT W12-1 (36"x36")		6.25	0021	03
		STA. 16+17 RT R5-10A		7.50	0021	03
		(30"x36")				
		STA. 16+38 RT W12-1 (36"x36")		6.25	0021	03
		STA. 16+45 RT D1-3 (108"x42")		31.50	0021	03
		STA. 17+18 LT M1-5 (24"x24")		4.00	0021	03
		STA. 17+18 LT M3-2 (24"x12")		2.00	0021	03
		STA. 17+18 LT M6-2R (21"x15")		2.25	0021	03

Distribution of Quantities

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

Estimate Name - Addendum 2

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.
316	T15.0100	Cont.				
		(60"X30")				
		STA. 203+04 LT R3-5L		7.50	0021	03
		(30"X36")				
		STA. 203+04 LT R3-5R		15.00	0021	03
		(30"X36")				
		STA. 203+04 LT R3-6 (30"X36")		7.50	0021	03
		STA. 203+04 LT R3-8(MOD)		12.50	0021	03
		(60"X30")				
		ROUTE 37 WB ON-RAMP FROM				
		PONTIAC AVENUE				
		STA. 307+4LT R5-10A(30"X36")		7.50	0003	04
		SOCKANOSSET CROSS ROAD				
		STA. 408+30 LT R2-1 (24"X30")		5.00	0021	03
		STA. 410+33 RT R1-1 (30"x30")		6.25	0021	03
		STA. 410+60 RT R3-8 (30"x30")		6.25	0021	03
		STA. 411+71 RT R3-8 (30"x30")		6.25	0021	03
Item T15.0100 Total:				634.00		
317	T15.0200	REMOVE AND RELOCATE DIRECTIONAL	EACH			
		REGULATORY AND WARNING SIGN				
		BR 627				
		EB		2.00	0021	03
		WB		2.00	0021	03
		BR 628				
		BR 628		4.00	0021	03
		BR 629				
		BR 629		4.00	0021	03
		I-95 SB OFF RAMP				
		I-95 SB OFF RAMP		2.00	0021	03
		PONTIAC AVENUE				
		STA. 21+70 LT		1.00	0021	03
		RTE 37 WB				
		STA 197+00		3.00	0021	03

Distribution of Quantities

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

Estimate Name - Addendum 2

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.
317	T15.0200	Cont.				
Item T15.0200 Total:				18.00		

Distribution of Quantities

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

Estimate Name - Addendum 2

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.
324	T16.0300	Cont.				
		4 GROUND MOUNT SIGNS		8.00	0021	03
Item T16.0300 Total:				8.00		
325	T17.0100	OVERHEAD SIGN PANELS	SF			
		I-95 OFF RAMP				
		STA 215+10		484.00	0021	03
		PONTIAC AVENUE				
		STA. 18+59 LT D15-1(1)		26.00	0021	03
		(48"X78")				
		STA. 18+59 RT D15-1(2)		26.00	0021	03
		(48"X78")				
		STA. 18+59 RT D15-1(3)		26.00	0021	03
		(48"X78")				
		RT 37 WB				
		STA 196+50		301.00	0021	03
		STA 201+13		193.00	0021	03
		STA 204+40		534.00	0021	03
Item T17.0100 Total:				1,590.00		
S326	T17.0204	OVERHEAD SIGN STRUCTURE 31-35 FOOT EACH	EACH			
		CANTILEVER - STEEL				
		RTE 37 WB				
		STA 200+12		1.00	0021	03
Item T17.0204 Total:				1.00		
S327	T17.0205	OVERHEAD SIGN STRUCTURE 36-40 FOOT EACH	EACH			
		CANTILEVER - STEEL				
		PONTIAC AVENUE				
		STA. 18+81 RT			0021	03
		RTE 37 WB				
		STA 196+50		1.00	0021	03
Item T17.0205 Total:				1.00		

Distribution of Quantities

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

Estimate Name - Addendum 2

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.
333	T18.9903 Cont.	STA. 106+61 LT		1.00	0003	04
		PONTIAC AVENUE				
		STA. 21+11 LT		1.00	0021	03
		STA. 21+38 LT		1.00	0021	03
		ROUTE 37 WB				
		ROUTE 37 WB		4.00	0021	03
		ROUTE 37 WB OFF-RAMP TO PONTIAC AVENUE				
		STA. 203+03 RT		1.00	0021	03
Item T18.9903 Total:				8.00		
334	T18.9904	GUARDRAIL END DELINEATOR - GREEN	EACH			
		FRONTAGE ROAD				
		STA. 100+71 LT		1.00	0003	04
		STA. 103+01 RT		1.00	0003	04
		ROUTE 37 WB				
		ROUTE 37 WB		3.00	0021	03
		ROUTE 37 WB OFF-RAMP TO PONTIAC AVENUE				
		STA. 200+93 LT		1.00	0021	03
		STA. 201+10 RT		1.00	0021	03
Item T18.9904 Total:				7.00		
335	T20.0706	6 INCH WHITE WATERBORNE PAINT	LF			
		PAVEMENT MARKINGS				
		FRONTAGE ROAD				
		ON FINAL PAVED SURFACES		834.00	0003	04
		PONTIAC AVENUE				
		ON FINAL PAVED SURFACES		4,879.00	0021	03
		ON MICRO MILLED SURFACES		4,879.00	0021	03
		ROUTE 37				
		ROUTE 37		35,700.00	0021	03
		ROUTE 37 WB OFF-RAMP TO PONTIAC				

Distribution of Quantities

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

Estimate Name - Addendum 2

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.
350	T20.4506	Cont.				
		STA. 401+00 TO STA. 403+77	LT	30.00	0021	03
		STA. 401+00 TO STA. 409+72	LT	872.00	0021	03
		STA. 401+00 TO STA. 410+26		1,852.00	0021	03
		STA. 401+05 TO STA. 410+26	LT	240.00	0021	03
		STA. 401+00 TO STA. 407+84	LT	684.00	0021	03
		STAGING				
		STAGING		20,640.00	0011	02
		UNASSIGNED		400.00	0011	02
		TTC				
		TTC		8,000.00	0011	02
Item T20.4506 Total:				62,185.00		
351	T20.4508	REMOVE PAVEMENT MARKING LINE -	LF			
		GREATER THAN 6 INCHES WIDE				
		PONTIAC AVENUE				
		AS NEEDED		15.00	0021	03
		STA. 13+47	LT	25.00	0021	03
		STA. 14+85 TO STA. 15+36	LT	80.00	0021	03
		STA. 16+07 TO STA. 16+20	RT	30.00	0021	03
Item T20.4508 Total:				150.00		
352	T20.9901	EPOXY RESIN PAVEMENT MARKING "WEST"	EACH			
		PONTIAC AVENUE				
		STA. 19+09	LT	1.00	0021	03
Item T20.9901 Total:				1.00		
353	T20.9902	EPOXY RESIN PAVEMENT MARKING STATE	EACH			
		ROUTE 37 SYMBOL				
		PONTIAC AVENUE				
		STA. 18+72	LT	1.00	0021	03
Item T20.9902 Total:				1.00		
354	T07.9901	GENERAL HIGHWAY LIGHTING LED	EACH			

Distribution of Quantities

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

Estimate Name - Addendum 2

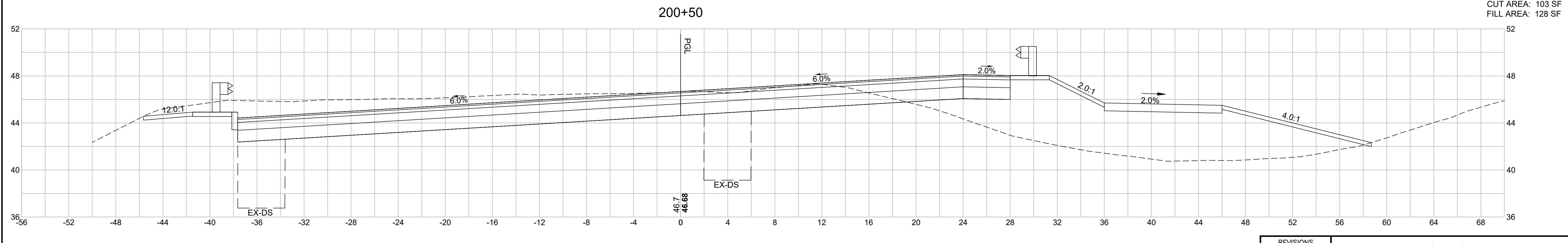
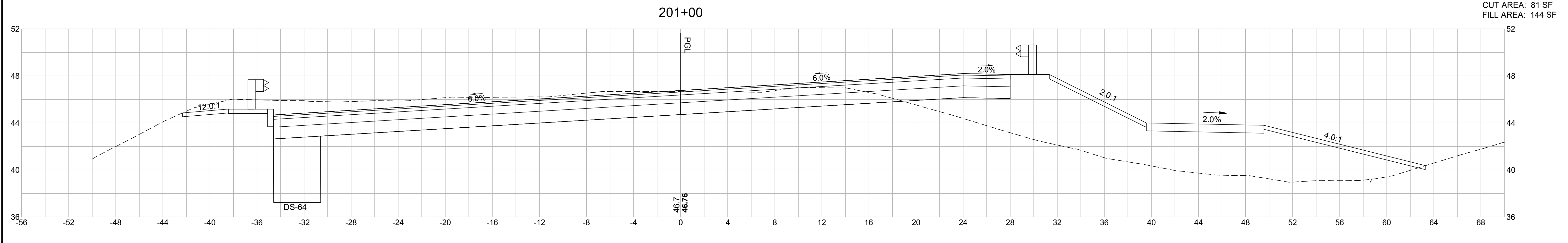
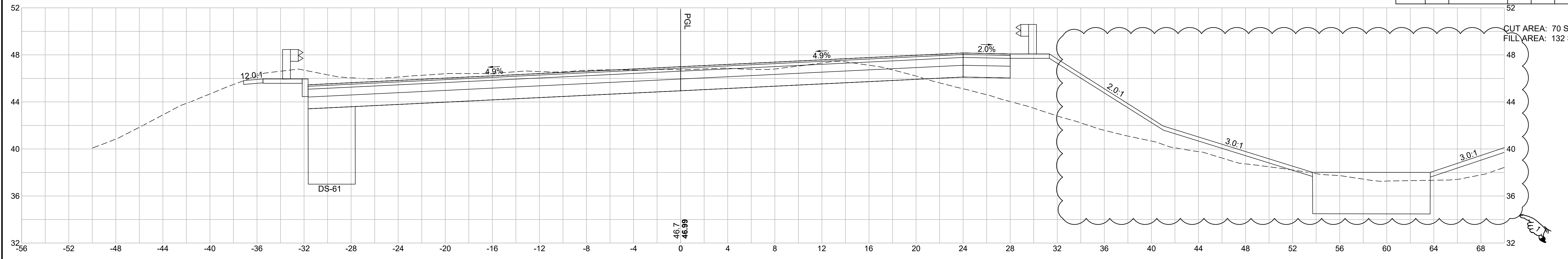
R.I. Contract No. - 2019-CB-027

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

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	RIP-00370123, NHFG-00370133, NHFG-TR20(2003)_3RD-PRTY(259)	2019	1	197

R-1



ADDENDUM No. 2



531 PRESTON AVENUE
MERRIDEN, CT 06450

REVISIONS		
NO.	DATE	BY
1	10/17/19	EKM

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

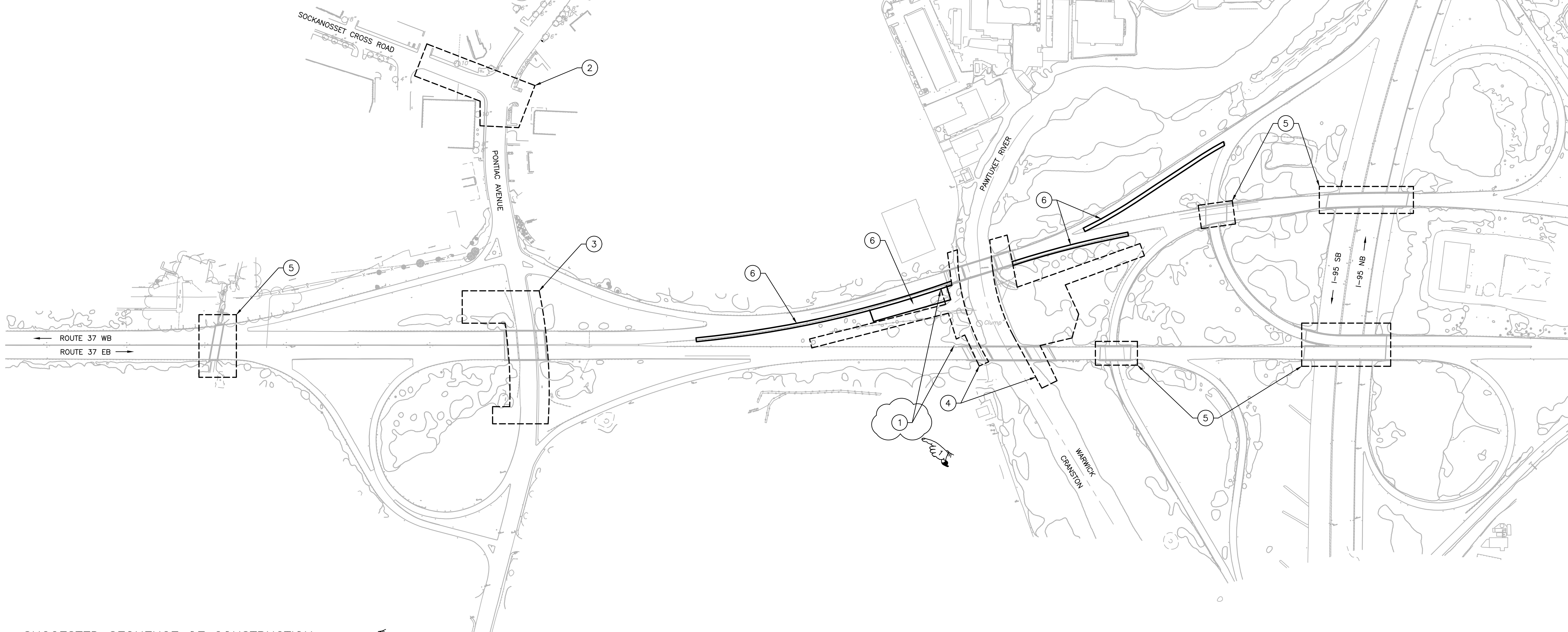
ROUTE 37 WB CROSS SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	NHP-00370121, NHP-00371013 NHP-TGR0003, 3RD-PRTY(258)	2019	7	197

SEQUENCE OF CONSTRUCTION NOTES:

1. THE SEQUENCE OF CONSTRUCTION DEPICTED HERE IS A SUGGESTED SEQUENCE. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING A SEQUENCE OF WORK THAT WILL SATISFY THE CONTRACT REQUIREMENTS INCLUDING SCHEDULE FOR COMPLETION OF THE WORK.
2. THE SEQUENCE DETAILED ON THIS AND THE FOLLOWING SHEETS IS INTENDED TO PROVIDE A GENERAL OVERVIEW OF THE ENTIRE PROJECT. REFER TO DETAILED PLANS FOR EACH SEGMENT OF WORK FOR IN-DEPTH DEPICTION OF THE SUGGESTED SEQUENCE.



MATCHLINE A - SEE SHEET NO. 8

SUGGESTED SEQUENCE OF CONSTRUCTION:

- 1 PLACE FILL ON THE SIDES OF ROUTE 37 WESTBOUND AND EASTBOUND WEST OF THE PAWTUXET RIVER TO FINAL GRADE TO ALLOW INSTALLATION OF UTILITY POLE(S) AND ASSOCIATED OVERHEAD FACILITIES.
- 2 SOCKANOSSET CROSS ROAD AT PONTIAC AVENUE
A. COMPLETE ROADWAY WIDENING
B. INSTALL NEW TRAFFIC SIGNAL EQUIPMENT
- 3 ROUTE 37 OVER PONTIAC AVENUE (BR. NO. 062701)
FOR A DETAILED DESCRIPTION OF THE SEQUENCE OF WORK FOR THIS BRIDGE, SEE VOLUME 3.
- 4 ROUTE 37 OVER PAWTUXET RIVER (BR. NOS. 062801 & 062901)
FOR A DETAILED DESCRIPTION OF THE SEQUENCE OF WORK FOR THIS BRIDGE, SEE VOLUME 5.
- 5 BRIDGE PRESERVATION (BR. NOS. 062601, 063001, 063101, 063201, SP063301, 063401, & 063801)
FOR GUIDANCE ON A SEQUENCE OF WORK FOR THE BRIDGE PRESERVATION, SEE VOLUME 4 & 7.
- 6 ROUTE 37 WESTBOUND - ROADWAY WIDENING - SEE STAGING PLANS, VOLUME 1 FOR SUGGESTED SEQUENCE OF CONSTRUCTION ACTIVITIES. OFF-ROAD CONSTRUCTION SHOULD COMMENCE FIRST.

**STAGE 1
SEQUENCE OF CONSTRUCTION**
SCALE: 1" = 150'

ADDENDUM No. 2



630 PRESTON AVENUE
MERIDEN, CT 06450

REVISIONS		
NO.	DATE	BY
1	10/17/19	EKM

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

PROJECT SEQUENCE OF
CONSTRUCTION STAGE 1
SHEET 1

CHECKED BY _____ DATE _____ SCALE AS NOTED

LIGHT POLE CALLOUTS

HAND HOLE SCHEDULE

LOCATION	HANDHOLE TYPE	RIDOT STANDARD	NOTES
R-1	A	18.1.0	
STA. 21+07, 45' RT	A	18.1.0	PONTIAC AVE BASELINE
R-3	A	18.1.0	
R-4	A	18.1.0	
R-5	A	18.1.0	
R-6	A	18.1.0	
R-7	A	18.1.0	
R-8	A	18.1.0	
R-9	A	18.1.0	
STA. 20+10.2, 41' LT	A	18.1.0	PONTIAC AVE BASELINE
R-10	A	18.1.0	
R-11	A	18.1.0	
R-12	A	18.1.0	
R-13	A	18.1.0	
R-14	A	18.1.0	
STA. 22+75.0, 42' RT	A	18.1.0	PONTIAC AVE BASELINE
STA. 21+05, 41.7' LT	A	18.1.0	PONTIAC AVE BASELINE
STA. 20+56, 39' RT	A	18.1.0	PONTIAC AVE BASELINE
STA. 22+14, 130' LT	A	18.1.0	PONTIAC AVE BASELINE
STA. 22+54, 89' LT	A	18.1.0	PONTIAC AVE BASELINE
STA. 22+87, 59' LT	A	18.1.0	PONTIAC AVE BASELINE
STA. 22+72, 36.6' LT	A	18.1.0	PONTIAC AVE BASELINE
LP-2	A	18.1.0	
LP-3	A	18.1.0	
LP-4	A	18.1.0	
LP-5	A	18.1.0	
LP-6	A	18.1.0	
LP-7	A	18.1.0	
LP-8	A	18.1.0	
LP-9	A	18.1.0	
STA. 19+46, 46.3' RT	W	18.1.0	PONTIAC AVE BASELINE
STA. 19+06, 44.4' RT	W	18.1.0	PONTIAC AVE BASELINE
U-1	W	18.1.0	
U-2	W	18.1.0	
U-3	W	18.1.0	
U-4	W	18.1.0	
STA. 18+81, 43.9' RT	W	18.1.0	PONTIAC AVE BASELINE
STA. 18+79, 39.7' RT	A	18.1.0	PONTIAC AVE BASELINE
STA. 17+95, 34' LT	A	18.1.0	PONTIAC AVE BASELINE

STD. 18.3.0 T2 145W LED R-1 240V FR STA.122+13 RT. 12.6 30' - 0" AFG 8' - 0" ARM CI BREAKAWAY COUPLING REQ. (RELOCATED)	STD. 18.3.0 T2 145W LED R-3 240V FR STA.120+69 LT. 14.5 30' - 0" AFG 8' - 0" ARM CI BREAKAWAY COUPLING REQ.	STD. 18.3.0 T2 145W LED R-4 240V FR STA.119+14 LT. 14.5 30' - 0" AFG 8' - 0" ARM CI BREAKAWAY COUPLING REQ.	STD. 18.3.0 T2 145W LED R-5 240V FR STA.117+63 LT. 14.5 30' - 0" AFG 8' - 0" ARM CI BREAKAWAY COUPLING REQ.	STD. 18.3.0 T2 145W LED R-6 240V FR STA.114+14 LT. 14.5 30' - 0" AFG 8' - 0" ARM CI BREAKAWAY COUPLING REQ.	STD. 18.3.0 T2 145W LED R-7 240V FR STA.116+62 LT. 14.5 30' - 0" AFG 8' - 0" ARM CI BREAKAWAY COUPLING REQ.	
STD. 18.3.0 T2 145W LED R-8 240V FR STA.114+09 LT. 14.5 30' - 0" AFG 8' - 0" ARM CI BREAKAWAY COUPLING REQ.	STD. 18.3.0 T2 145W LED R-9 240V OR STA.301+14 RT. 14.5 30' - 0" AFG 8' - 0" ARM CI BREAKAWAY COUPLING REQ. (RELOCATED)	STD. 18.3.0 T2 145W LED R-10 240V OR STA.302+63 RT. 14.5 30' - 0" AFG 8' - 0" ARM CI BREAKAWAY COUPLING REQ. (RELOCATED)	STD. 18.3.0 T2 145W LED R-11 240V OR STA.304+17 RT. 14.5 30' - 0" AFG 8' - 0" ARM CI BREAKAWAY COUPLING REQ. (RELOCATED)	STD. 18.3.0 T2 145W LED R-12 240V OR STA.305+68 RT. 14.5 30' - 0" AFG 8' - 0" ARM CI BREAKAWAY COUPLING REQ. (RELOCATED)	STD. 18.3.0 T2 145W LED R-13 240V OR STA.307+20 RT. 14.5 30' - 0" AFG 8' - 0" ARM CI BREAKAWAY COUPLING REQ. (RELOCATED)	STD. 18.3.0 T2 145W LED R-14 240V OR STA.308+66 RT. 15.0 30' - 0" AFG 8' - 0" ARM CI BREAKAWAY COUPLING REQ. (RELOCATED)
STD. 18.3.0 T2 145W LED LP-2 240V PA STA.22+83 RT. 34.3 40' - 0" AFG 10' - 0" ARM CI BREAKAWAY COUPLING REQ.	STD. 18.3.0 T2 145W LED LP-3 240V PA STA.22+12 LT. 39.7 40' - 0" AFG 10' - 0" ARM CI BREAKAWAY COUPLING REQ.	STD. 18.3.0 T2 145W LED LP-4 240V PA STA.20+91 RT. 38.3 40' - 0" AFG 10' - 0" ARM CI BREAKAWAY COUPLING REQ.	STD. 18.3.0 T2 145W LED LP-5 240V PA STA.20+19 LT. 41.3 40' - 0" AFG 10' - 0" ARM CI BREAKAWAY COUPLING REQ.	STD. 18.3.0 T2 145W LED LP-6 240V PA STA.18+74 LT. 41.3 40' - 0" AFG 10' - 0" ARM CI BREAKAWAY COUPLING REQ.	STD. 18.3.0 T2 145W LED LP-7 240V PA STA.17+85 RT. 36.4 40' - 0" AFG 10' - 0" ARM CI BREAKAWAY COUPLING REQ.	STD. 18.3.0 T2 145W LED LP-8 240V PA STA.16+76 LT. 28.6 40' - 0" AFG 10' - 0" ARM CI BREAKAWAY COUPLING REQ.
STD. 18.3.0 T2 145W LED LP-9 240V ER STA.201+18 RT. 43.8 40' - 0" AFG 10' - 0" ARM CI BREAKAWAY COUPLING REQ.	STD. 18.3.7 W 85W LED U-1 120V PA STA.19+08.5 OFF. 13.5 16' - 0" AFG PENDANT	STD. 18.3.7 W 85W LED U-2 120V PA STA.19+10.0 OFF. 13.2 16' - 0" AFG PENDANT	STD. 18.3.7 W 85W LED U-3 120V PA STA.19+50.4 OFF. 13.5 16' - 0" AFG PENDANT	STD. 18.3.7 W 85W LED U-4 120V PA STA.19+53.2 OFF. 13.2 16' - 0" AFG PENDANT		

FR - FRONTAGE ROAD BASELINE
OR - ROUTE 37 WB ON-RAMP BASELINE
PA - PONTIAC AVENUE BASELINE
ER - ROUTE 37 WB OFF-RAMP BASELINE

NOTES:

- REFER TO PROPOSED LIGHTING LAYOUT SHEETS FOR LIGHT POLE LOCATIONS
- ALL STATIONING AND OFFSETS SHALL BE COORDINATED WITH EXISTING AND PLANNED UTILITIES.
- COORDINATE WITH UTILITY COMPANY TO MAINTAIN REQUIRED CLEARANCES TO OVERHEAD POWER LINES.

ADDENDUM No. 2



530 PRESTON AVENUE
MERCEN, CT 06450

REVISIONS			NO.	DATE	BY
NO.	DATE	BY			
1	10/17/19	EKM			

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

LIGHTING CALLOUTS

CHECKED BY _____ DATE _____ SCALE AS NOTED

JOB SPECIFIC LEGEND:

- (6.1.0M)** SEEDED DITCH RI STD 8.1.0 – MODIFIED
- (20.1.0)** PAVEMENT MARKINGS—ARROWS AND ONLY, RI STD 20.1.0
- (20.3.0)** PAVEMENT MARKINGS—CROSSWALK, RI STD 20.3.0, 10' WIDTH
- (24.2.0)** SIGN POST SELECTION AND INSTALLATION DETAILS U—CHANNEL POST (SIGNS UP TO 8'-0"W x 4'-0"H), RI STD 24.2.0
- (34.1.0M)** ROADSIDE GUARDRAIL INSTALLATION MODIFIED (SEE DETAIL)
- (34.2.0M)** STEEL BEAM GUARDRAIL SINGLE FACE (MASH)
- (34.3.4M)** GUARDRAIL STEEL BEAM ANCHORAGE TRAILING END SECTION (MASH)
- (43.3.2)** RAMP LANDING FOR NARROW SIDEWALK, RI STD 43.3.2
- (CBIP)** CATCH BASIN INLET PROTECTION
- (CFS)** COMPOST FILTER SOCK
- (DDP)** REMOVE AND DISPOSE DELINEATOR PANEL AND POST
- (DRW)** REMOVE AND DISPOSE RETAINING WALL
- (DT)** REMOVE AND DISPOSE TREE
- (DW)** DELINEATOR – WHITE
- (DY)** DELINEATOR – YELLOW
- (ECM)** EROSION CONTROL MAT (SEE DETAIL)
- (EPS)** ENCASED POST FOR SHALLOW MOUNT GUARDRAIL (SEE DETAIL)
- (EPT)** END POST TO GUARDRAIL TRANSITION (SEE DETAIL)
- (ETEAM)** GUARDRAIL END TREATMENT – ENERGY ABSORBING TERMINAL (MASH)
- (ETP)** GUARDRAIL END TREATMENT PLATFORM
- (FDP1)** FULL DEPTH PAVEMENT
2" HOT MIX ASPHALT CLASS 12.5 – MODIFIED
7" HOT MIX ASPHALT CLASS 19.0
12" GRAVEL BORROW SUBBASE
- (FDP2)** FULL DEPTH PAVEMENT
1.5" FRICTION COURSE
2" HOT MIX ASPHALT CLASS 12.5 – MODIFIED
8" CONCRETE BASE
12" GRAVEL BORROW SUBBASE
- (FDP3)** FULL DEPTH PAVEMENT
1.5" FRICTION COURSE
2" HOT MIX ASPHALT CLASS 12.5 – MODIFIED
9" HOT MIX ASPHALT CLASS 19.0
12" GRAVEL BORROW SUBBASE
- (GDG)** GUARDRAIL END DELINEATOR—GREEN
- (GDR)** GUARDRAIL END DELINEATOR—RED
- (GHT)** GUARDRAIL HEIGHT TRANSITION
- (LP)** RI STD 18.1.0 FNDN. & RI STD 18.3.0 LIGHT STD.
- (LUM)** 250 WATT HPS LUMINAIRE
- (MED)** MEDIAN STRIPING (SEE DETAIL)
- (MM)** DEPTH MICROMILL
- (MRW)** MODULAR RETAINING WALL (SEE DETAIL)
- (OHSS)** OVERHEAD SIGN STRUCTURE – CANTILEVER
- (OV1)** OVERLAY
2" HOT MIX ASPHALT CLASS 12.5 – MODIFIED ASPHALT EMULSION TACK COAT
- (OV2)** OVERLAY
1.5" FRICTION COURSE
2" HOT MIX ASPHALT CLASS 12.5 – MODIFIED ASPHALT EMULSION TACK COAT
- (PMG)** PLACEMENT OF MILLINGS BENEATH GUARDRAIL
- (RDC)** REMOVE AND DISPOSE CONDUIT – ALL SIZES
- (RSP)** REFLECTIVE SIGN POST (SEE DETAIL)
- (RTPM)** EPOXY RESIN STATE ROUTE PAVEMENT MARKING (SEE DETAIL)
- (SC)** SELECTIVE CLEARING
- (UBS)** UNANCHORED BARRIER FOR TEMPORARY TRAFFIC CONTROL

JOB SPECIFIC LEGEND (CONTINUED):

- (WPM)** EPOXY RESIN WORD PAVEMENT MARKING (SEE DETAIL)
- (6BW)** 6 INCH BROKEN WHITE LANE LINE MARKING (SEE DETAIL)
- (6DSW)** 6 INCH INTERSECTION WHITE GUIDE LINE MARKING (SEE DETAIL)
- (12DWL)** 12 INCH DASHED WHITE LANE DROP MARKING (SEE DETAIL)
- 100 FT RIVERBANK WETLAND
- COMPOST FILTER SOCK
- STREAM < 10 FT WIDE

JOB SPECIFIC NOTES

- EXISTING SURVEY WAS TAKEN BY BL ENGINEERS, INC. DATED 11/19/2018.
- EXISTING WETLAND WERE DELINEATED BY BL ENGINEERS, INC. DATED 6/13/2018 THROUGH 6/21/2018.
- EXISTING BRIDGE PLANS ARE TAKEN FROM EXISTING PLANS AND DATA WHICH ARE LIMITED AND NOT COMPLETE.

GENERAL NOTES - TRAFFIC SIGNALS:

- ALL SALVAGED TRAFFIC SIGNAL EQUIPMENT SHALL BE DELIVERED TO THE RIDOT MAINTENANCE HEADQUARTERS, 360 LINCOLN AVENUE WARWICK, RHODE ISLAND. ALL SALVAGED TRAFFIC SIGNAL STRUCTURES SHALL BE DELIVERED TO THE RIDOT ANTHONY MAINTENANCE FACILITY AT 16 MAPLEDALE STREET IN COVENTRY, RHODE ISLAND. (THIS NOTE SHALL REPLACE TRAFFIC SIGNAL NOTE 1 ON STANDARD NOTES-2)
- BACKPLATES ARE REQUIRED ON ALL TRAFFIC SIGNAL HEADS ON NEW STRUCTURES AND SHALL BE INCLUDED IN THE PRICE OF THE SIGNAL HEADS. (THIS NOTE SHALL REPLACE TRAFFIC SIGNAL NOTE 2 ON STANDARD NOTES-2)
- TRAFFIC SIGNAL CONTROLLER CABINET SHALL BE ORIENTED SO THAT THE CABINET DOOR IS FACING AWAY FROM THE ROADWAY IF STATE PROPERTY ALLOWS, UNLESS OTHERWISE STATED ON THE PLANS OR DIRECTED BY THE ENGINEER.
- ACCESS TO PEDESTRIAN PUSHBUTTONS SHALL MEET PROWAG & 2009 MUTCD REQUIREMENTS. ALL PEDESTRIAN PUSHBUTTONS SHALL BE ADA COMPLIANT WITH A MINIMUM 2" DIAMETER. SIGNS INSTALLED AT PROPOSED PEDESTRIAN PUSHBUTTONS SHALL BE MUTCD 2009 CODE R10-3E (LEFT OR RIGHT) AND SHALL BE INSTALLED SO THAT IT IS CLEARLY INDICATED WHICH CROSSING IS ASSIGNED TO EACH BUTTON. ALL APS PUSHBUTTONS SHALL BE DRY FIT IN THE PRESENCE OF THE ENGINEER OR HIS REPRESENTATIVE TO DEMONSTRATE PROPER ORIENTATION OF THE PUSHBUTTON'S TACTILE ARROW/R10-3E SIGN ARROW WHICH IS TO BE ALIGNED PARALLEL TO THE CROSSWALK DIRECTION. (THIS NOTE SHALL SUPPLEMENT TRAFFIC SIGNAL NOTE 11 ON STANDARD NOTES-2)
- IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL.
- THE RIGHT OF WAY MAY BE ASSIGNED TO ANY PHASE, OR COMBINATION OF NON-CONFLICTING PHASES.
- CONTRACTOR SHALL HAND DIG AT ALL GAS PIPELINE CROSSINGS.
- A ROTARY WHEEL OR OTHER MECHANICAL TRENCHING METHOD SHALL NOT BE ALLOWED.
- A 1 FOOT VERTICAL CLEARANCE IS REQUIRED BETWEEN NEW CONDUIT AND NATIONAL GRID GAS FACILITIES.
- ALL NEW MANHOLES, HANDHOLES, PULL BOXES, AND FOUNDATIONS SHALL MEET A MINIMUM 2 FOOT LATERAL CLEARANCE AND NOT BE PLACED OVER NATIONAL GRID GAS AND WATER DEPARTMENT FACILITIES.
- LOCATIONS OF ALL PROPOSED TRAFFIC SIGNAL MAST ARMS AND PEDESTAL POLES HAVE BEEN PROBES FOR UTILITY CONFLICTS TO A MAXIMUM DEPTH OF 8 FEET AND 2.5 FEET RESPECTIVELY, EXCEPT WHERE NOTED ON THE PLANS. THE LOCATIONS OF THE PROPOSED EQUIPMENT SHOWN ON THE PLANS REFLECT THE RESULTS OF THE UTILITY INVESTIGATIONS AND ARE FREE OF CONFLICTS. THE LOCATIONS WHERE THE UTILITY PROBES WERE CONDUCTED HAVE BEEN MARKED IN THE FIELD AND HAVE BEEN PATCHED WITH BITUMINOUS CONCRETE. THE DIMENSIONS TO THE PROPOSED EQUIPMENT SHOWN ON THE PLANS ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MARK THE LOCATIONS WHERE THE UTILITY PROBES WERE TAKEN WITH NAILS IN THE ROAD. THERE SHALL BE A MINIMUM OF TWO (2) OFFSET POINTS FOR EACH PROPOSED FOUNDATION LOCATION.
- WHERE THE MODIFIED MAST ARMS ARE CALLED FOR TO ACCOMMODATE REQUIRED CLEARANCES FROM OVERHEAD UTILITIES AND THE ROADWAY, THE SHOP DRAWING SKETCHES SHALL INCLUDE THE APPROXIMATE HORIZONTAL AND VERTICAL LOCATIONS OF THE OVERHEAD WIRES WITH CLEARANCES DIMENSIONED TO THE MAST ARM TUBE AND SHAFT, AND CLEARANCES DIMENSIONED FROM THE MAST ARM TUBE TO THE ROADWAY SURFACE AT THE PROPOSED CURB LINE AS DETAILED ON THE RESPECTIVE MISCELLANEOUS DETAILS PLANS AND AS REFERENCED IN THE CONSTRUCTION NOTES ON THE TRAFFIC SIGNAL PLANS. THE STRUCTURE GEOMETRY SHALL BE DRAWN TO ACTUAL SCALE PER FABRICATOR'S CUSTOM DESIGN.
- ALL APS PUSHBUTTONS SHALL BE DRY FIT IN THE PRESENCE OF THE ENGINEER OR THEIR REPRESENTATIVE TO DEMONSTRATE PROPER ORIENTATION OF THE PUSHBUTTON'S TACTILE ARROW/R10-3E SIGN ARROW WHICH IS TO BE ALIGNED PARALLEL TO THE CROSSWALK DIRECTION.
- ALL CABLE DRIP LOOPS SHALL UTILIZE UV RATED CABLE TIES. THE USE OF ELECTRICAL TAPE WILL NOT BE ALLOWED.
- AN INDIVIDUAL CONTROL UNIT FOR EACH ACCESSIBLE PEDESTRIAN DETECTOR SHALL BE INSTALLED IN THE ASSOCIATED PEDESTRIAN SIGNAL HEAD OR IN THE DETECTOR HOUSING ITSELF. A CENTRAL CONTROL UNIT IN THE TRAFFIC SIGNAL CONTROLLER CABINET FOR THE ACCESSIBLE PEDESTRIAN DETECTORS SHALL NOT BE FURNISHED OR INSTALLED.
- ALL PROPOSED MAST ARMS SHALL BE DESIGNED AND FABRICATED TO ENSURE THAT ALL BASEPLATES ARE NO LARGER IN DIAMETER THAN RIDOT APPROVED MAST ARMS OF THE SAME LENGTH AS DESIGNED IN SUPPORT OF REVISED RIDOT STD. DETAIL 19.2.0.

UTILITY NOTES:

- EXISTING UTILITIES HAVE BEEN SHOWN ON THE PLANS USING THE BEST AVAILABLE INFORMATION AND ARE APPROXIMATE. BUILDING SERVICE CONNECTIONS (ELECTRIC, GAS, TELEPHONE, WATER AND SANITARY) ARE NOT SHOWN. CONTRACTOR IS TO ASSUME SERVICES ARE PRESENT TO ALL BUILDINGS.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING DRAINAGE AND UTILITIES BOTH UNDERGROUND AND OVERHEAD BEFORE EXCAVATION BEGINS IN ACCORDANCE WITH CHAPTER 39-1.2 OF THE R.I. GENERAL LAWS ENTITLED "EXCAVATION NEAR UNDERGROUND UTILITY FACILITIES", WITH AMENDMENTS EFFECTIVE AS OF NOVEMBER 1, 2009 AND, WHEN NECESSARY, BY CONTACTING THE INDIVIDUAL UTILITY COMPANIES. EXCAVATION SHALL BE IN ACCORDANCE WITH ALL STATUTES, ORDINANCES, RULES AND REGULATIONS OF ANY APPLICABLE CITY, TOWN, STATE OR FEDERAL AGENCY. THE CONTRACTOR SHOULD UNDERSTAND THAT NOT ALL UTILITIES SUBSCRIBE TO THE DIG SAFE PROGRAM. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES AND ENSURE THAT ALL UTILITIES HAVE BEEN MARKED PRIOR TO COMMENCING THEIR WORK. ANY DAMAGE TO EXISTING UTILITIES MARKED IN THE FIELD, OR AS A RESULT OF FAILING TO CONTACT THE APPROPRIATE UTILITY COMPANY, SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE STATE.

EMERGENCY VEHICLE PRE-EMPTION OPERATION

R-1

- MINIMUM GREEN, NORMAL VEHICLE CLEARANCE, AND PEDESTRIAN CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
- PRE-EMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PRE-EMPTION GREEN IS ON.

GENERAL NOTES - SIGNS:

- ALL NEW DIRECTIONAL, REGULATORY, WARNING, GUIDE SIGNS AND PARKING SIGNS SHALL HAVE SIGN SUPPORTS. UNLESS OTHERWISE INDICATED, SIGN MOUNTINGS SHALL BE R.I. STD. 24.2.0 OR 24.6.0 AS APPROPRIATE.
- FOR ALL GROUND MOUNTED STREET NAME SIGN MOUNTINGS, THE BRACKET LENGTH SHALL BE EQUAL TO OR GREATER THAN 3/4 (75%) OF THE LENGTH OF THE SIGN.
- PRIOR TO INSTALLATION, ALL SIGNS, MOUNTINGS AND LOCATIONS SHALL BE APPROVED OR MODIFIED BY THE RIDOT.
- ALL SIGNS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 7' OVER THE SIDEWALK.
- ALL SIGN RADIUS AND BORDERS SHALL BE AS SPECIFIED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS AMENDED.
- TEMPORARY CONSTRUCTION SIGN PANELS SHALL BE 3/4" THICK EXTERIOR GRADE PLYWOOD CONFORMING TO SECTION M-19 OF THE STANDARD SPECIFICATIONS.

FOR ALL OVERHEAD MAST ARM MOUNTED STREET NAME AND REGULATORY SIGNS TO BE MOUNTED ON MAST ARMS THAT ARE PERPENDICULAR TO INTERSECTION APPROACHES, TO OBTAIN THE PROPER SIGN ORIENTATION THE CONTRACTOR SHALL UTILIZE A SKYBRACKET SIGN MOUNTING, OR APPROVED EQUIVALENT. STREET NAME SIGNS INSTALLED UNDER THIS SCENARIO SHALL BE SINGLE SIDED.

FOR ALL OVERHEAD MAST ARM MOUNTED STREET NAME AND REGULATORY SIGNS TO BE MOUNTED ON MAST ARMS THAT ARE SKEWED TO INTERSECTION APPROACHES, TO OBTAIN THE PROPER SIGN ORIENTATION THE CONTRACTOR SHALL UTILIZE A PELCO ASTRO SIGN-BRAC ASSEMBLY PART NO. AS-0632, SIGN-BRAC TUBE WITH HARDWARE KIT PART NO. AB-0507, AND PELCO ANGLE PART NO. SE-0547-XX-PNC USED TO CONNECT SIGN PANELS TO THE SIGN-BRAC TUBE, OR APPROVED EQUIVALENT. STREET NAME SIGNS INSTALLED UNDER THIS SCENARIO SHALL BE DOUBLE SIDED.

THE COST OF THESE MOUNTING BRACKETS SHALL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE SIGN ITEMS T15.0100 – DIRECTIONAL REGULATORY AND WARNING SIGNS OR T15.1100 – STREET SIGN – OVERHEAD MOUNTED.

GENERAL NOTES - PAVEMENT MARKINGS:

- ALL PERMANENT PAVEMENT MARKINGS FOR THIS PROJECT SHALL BE EPOXY RESIN. PAVEMENT MARKINGS SHALL BE PLACED ON THE FINAL SURFACE COURSE NO SOONER THAN 2 WEEKS BUT NO LONGER THAN 4 WEEKS FROM COMPLETION OF PAVING OPERATIONS.
- THE LOCATION OF PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2009 EDITION, AS AMENDED.
- WHERE EXISTING PAVEMENT MARKINGS CONFLICT WITH PROPOSED PAVEMENT MARKINGS, EXISTING MARKINGS SHALL BE REMOVED BY METHOD APPROVED BY THE RIDOT.
- LIMITS OF PROPOSED PAVEMENT MARKINGS SHALL MEET EXISTING STRIPING, UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL VERIFY AND RECORD PAVEMENT MARKING LOCATIONS PRIOR TO ANY PAVEMENT REMOVAL. MARKINGS SHALL BE REPLACED IN ORIGINAL LOCATIONS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- WATERBORNE TRAFFIC MARKINGS SHALL BE USED ON MICRO MILLED SURFACES AND INTERMEDIATE PAVEMENT LAYERS WHICH WILL BE OPENED TO TRAFFIC AT THE COMPLETION OF EACH DAY'S PAVING OPERATION.
- TEMPORARY WATERBORNE PAVEMENT MARKINGS SHALL BE PLACED ON THE FINAL SURFACE COURSE LAYER WHICH WILL BE OPENED TO TRAFFIC AT THE COMPLETION OF EACH DAY'S PAVING OPERATION.

TRAFFIC SIGNAL PLANS SYMBOL LEGEND

	EXISTING UTILITY POLE		EXISTING PEDESTRIAN PUSH BUTTON		EXISTING VIDEO DETECTION CAMERA
	EXISTING CONTROLLER CABINET		PROPOSED PEDESTRIAN PUSH BUTTON		PROPOSED VIDEO DETECTION CAMERA
	PROPOSED CONTROLLER CABINET		EXISTING CONDUIT		EXISTING VIDEO DETECTION ZONE
	PROPOSED CONTROLLER CABINET WITH CONCRETE PAD		PROPOSED CONDUIT		PROPOSED VIDEO DETECTION ZONE
	EXISTING HANDHOLE		EXISTING SPAN OR PEDESTAL POLE		PROPOSED FIRE PRE-EMPTION CONFIRMATION BEACON
	PROPOSED HANDHOLE		PROPOSED SPAN OR PEDESTAL POLE		
	EXISTING TRAFFIC SIGNAL HEAD		EXISTING MAST ARM POLE		
	PROPOSED TRAFFIC SIGNAL HEAD		PROPOSED MAST ARM POLE		
	EXISTING PEDESTRIAN SIGNAL HEAD		EXISTING LOOP DETECTOR		
	PROPOSED PEDESTRIAN SIGNAL HEAD		PROPOSED LOOP DETECTOR		
			EXISTING OVERHEAD SIGN		
			PROPOSED OVERHEAD SIGN		

TYPICAL SIGN DESIGNATION SYMBOL

MUTCD SIGN DESIGNATION NUMBER (SIZE)
SIGN MOUNTING:

24.2.0 = R.I. STD. 24.2.0

24.2.0R = R.I. STD. 24.2.0 WITH REFLECTIVE SIGN POST (SEE DETAIL)

24.6.0 = R.I. STD. 24.6.0

24.6.1 = R.I. STD. 24.6.1

CANT = MOUNTED OVERHEAD ON CANTILEVER SIGN STRUCTURE

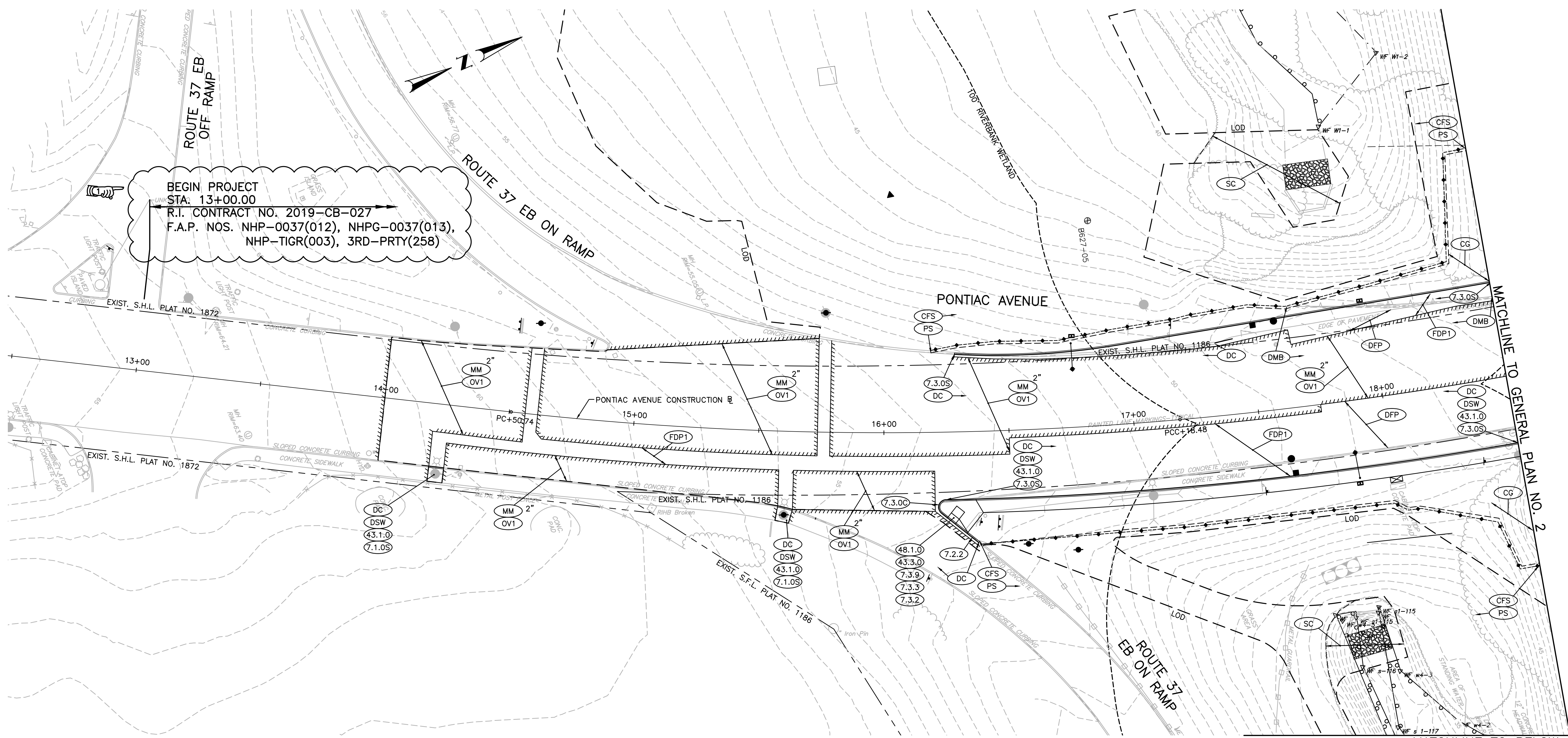
EXIST = ATTACHED TO EXISTING SIGN POST

MAST ARM = MOUNTED OVERHEAD ON MAST ARM

REVISIONS		
NO.	DATE	BY
1	10/11/19	VHB

RHODE ISLAND	
DEPARTMENT OF TRANSPORTATION	
BRIDGE GROUP 51A - RT. 37 C-2	
IMPROVEMENTS TO PONTIAC AVENUE AND ROUTE 37 WEST RAMPS	
CRANSTON,	RHODE ISLAND
JOB SPECIFIC PLAN SYMBOLS AND NOTES	
CHECKED BY _____	DATE _____ SCALE _____

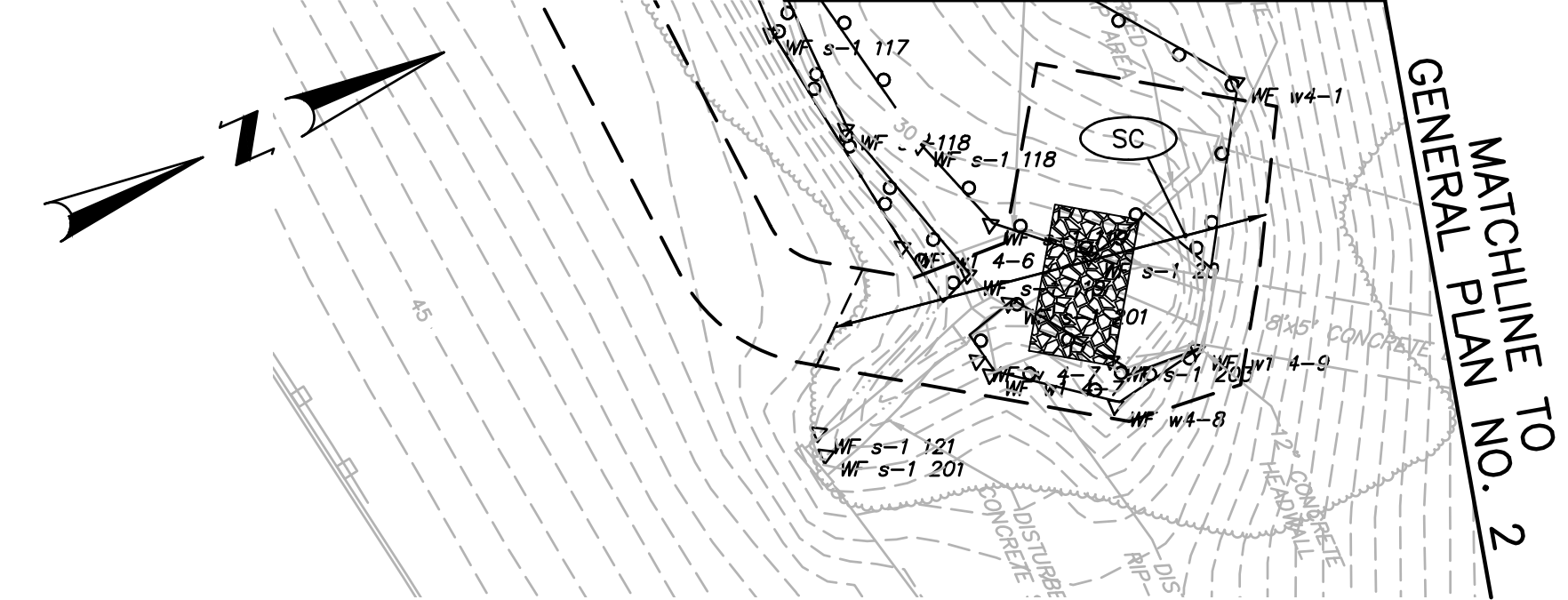
1 Cedar Street
Suite 400
Providence, RI 02903
401.272.8100



BEGIN PROJECT
 STA. 13+00.00
 R.I. CONTRACT NO. 2019-CB-027
 F.A.P. NOS. NHP-0037(012), NHPG-0037(013),
 NHP-TIGR(003), 3RD-PRTY(258)

MATCHLINE TO ABOVE

MATCHLINE TO BELOW



REVISIONS		
NO.	DATE	BY
1	10/7/19	VHB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2
IMPROVEMENTS TO PONTIAC AVENUE
AND ROUTE 37 WEST RAMPS

CRANSTON, RHODE ISLAND

GENERAL PLAN NO. 1

CHECKED BY _____ DATE _____ SCALE _____

1 Cedar Street
 Suite 400
 Providence, RI 02903
 401.272.8100



REVISIONS		
NO.	DATE	BY
1	10/7/19	VHB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2
IMPROVEMENTS TO PONTIAC AVENUE
AND ROUTE 37 WEST RAMPS

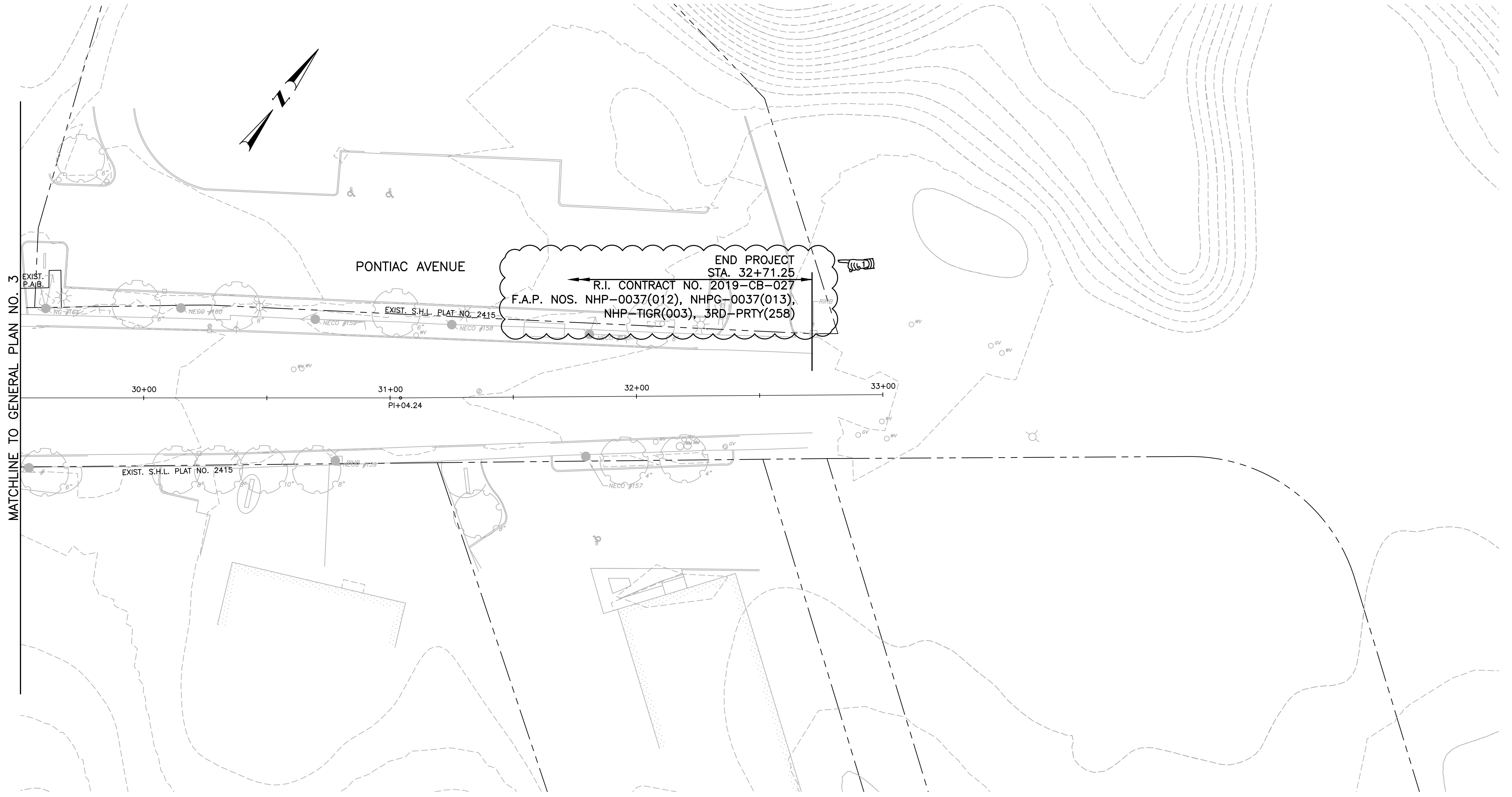
CRANSTON, RHODE ISLAND

GENERAL PLAN NO. 2

CHECKED BY _____ DATE _____ SCALE _____



FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2019	12	80



MATCHLINE TO GENERAL PLAN NO. 3

NO WORK ON THIS PLAN



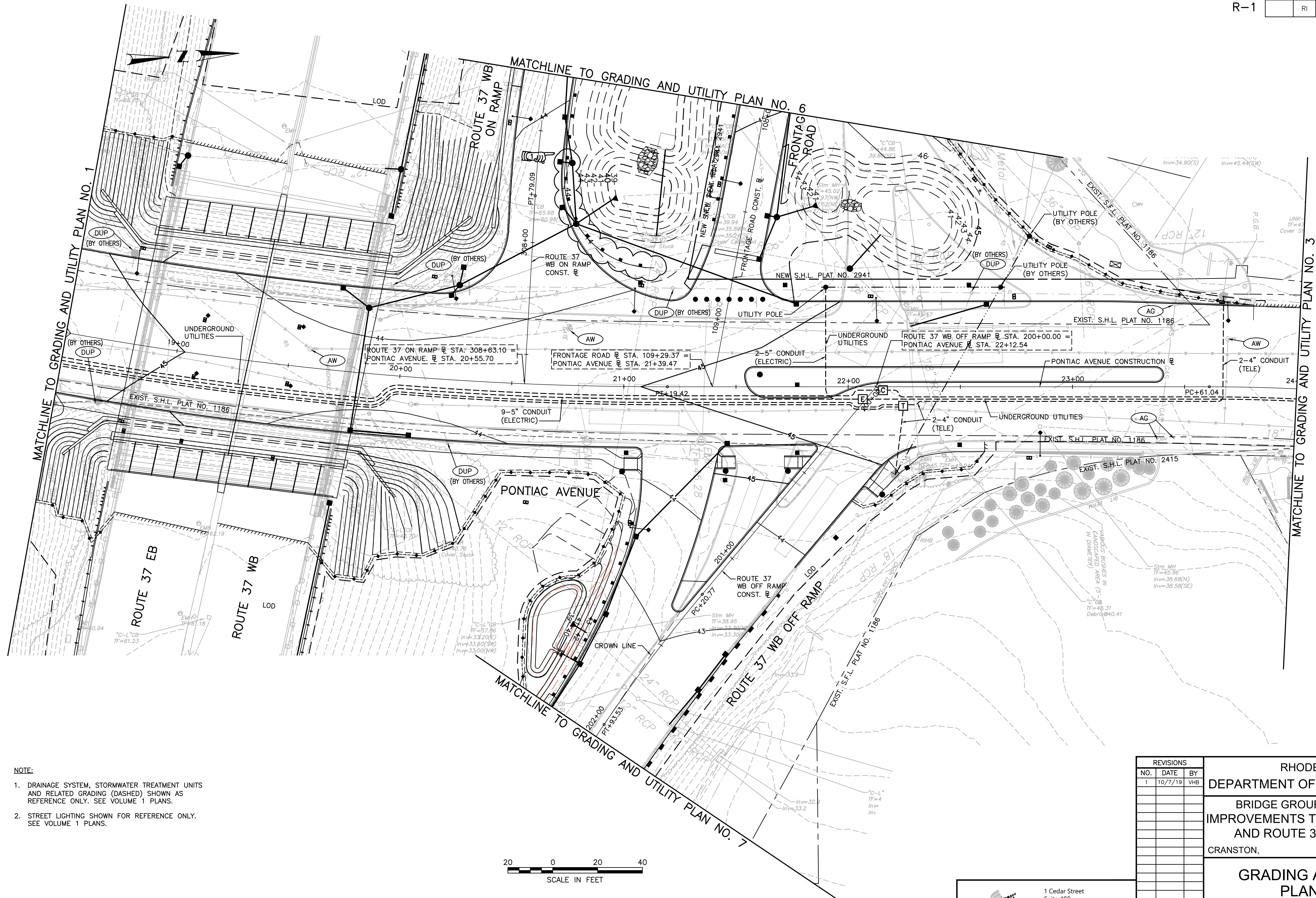
REVISIONS		
NO.	DATE	BY
1	10/7/19	VHB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2
IMPROVEMENTS TO PONTIAC AVENUE
AND ROUTE 37 WEST RAMP
CRANSTON, RHODE ISLAND

GENERAL PLAN NO. 4

CHECKED BY _____ DATE _____ SCALE _____



- NOTE:
1. DRAINAGE SYSTEM, STORMWATER TREATMENT UNITS AND RELATED GRADING (DASHED) SHOWN AS REFERENCE ONLY. SEE VOLUME 1 PLANS.
 2. STREET LIGHTING SHOWN FOR REFERENCE ONLY. SEE VOLUME 1 PLANS.



ADDENDUM NO. 2



REVISIONS		
NO.	DATE	BY
1	10/7/19	VHB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

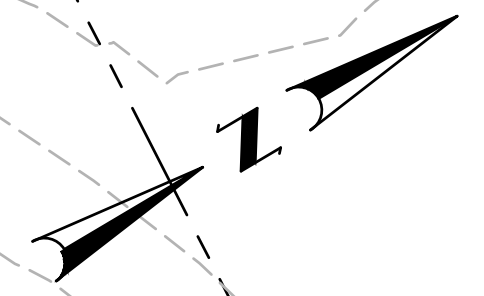
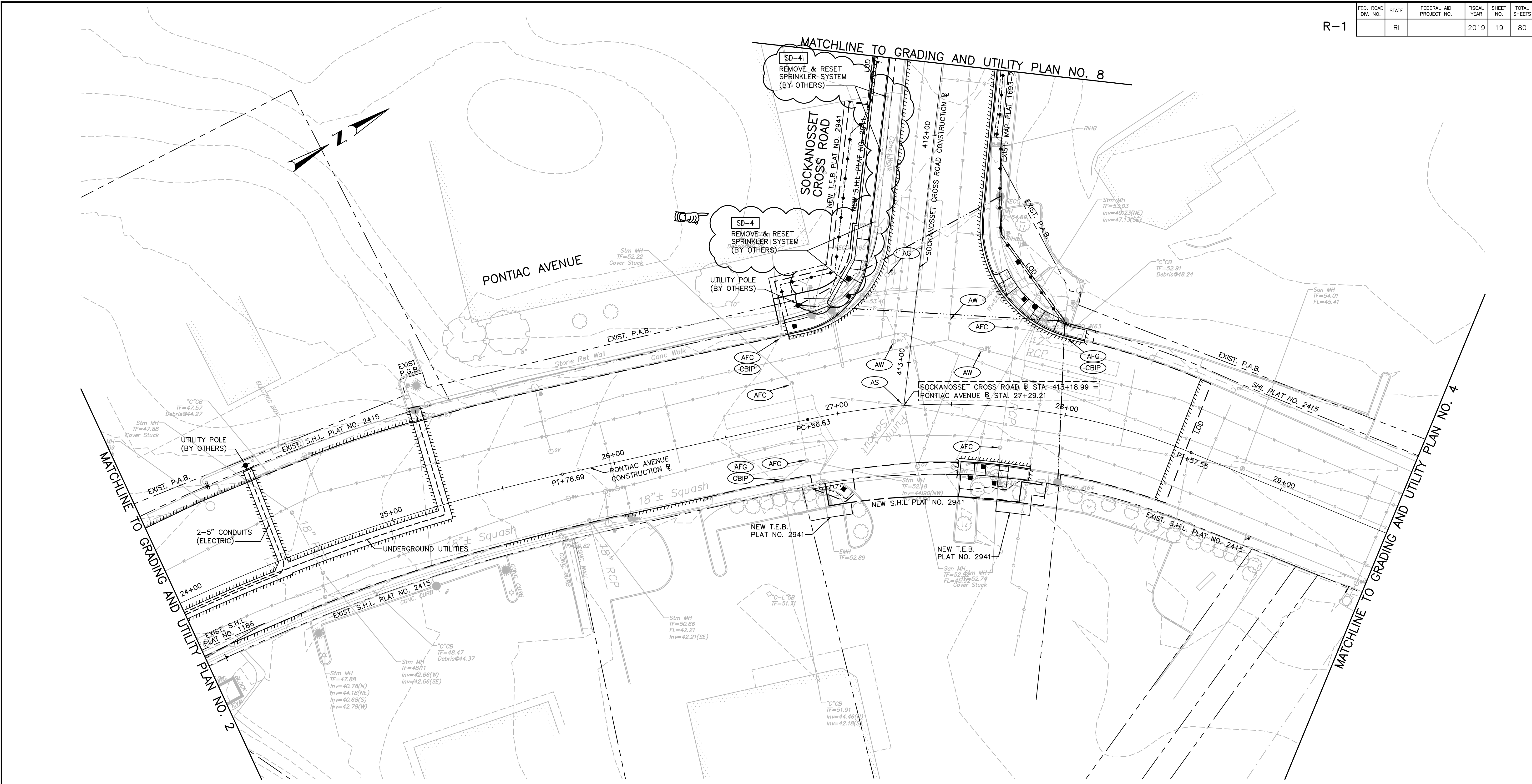
BRIDGE GROUP 51A - RT. 37 C-2
IMPROVEMENTS TO PONTIAC AVENUE
AND ROUTE 37 WEST RAMPS

CRANSTON, RHODE ISLAND

**GRADING AND UTILITY
PLAN NO. 2**

CHECKED BY _____ DATE _____ SCALE _____

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2019	19	80



REVISIONS		
NO.	DATE	BY
1	10/7/19	VHB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2
IMPROVEMENTS TO PONTIAC AVENUE
AND ROUTE 37 WEST RAMPS

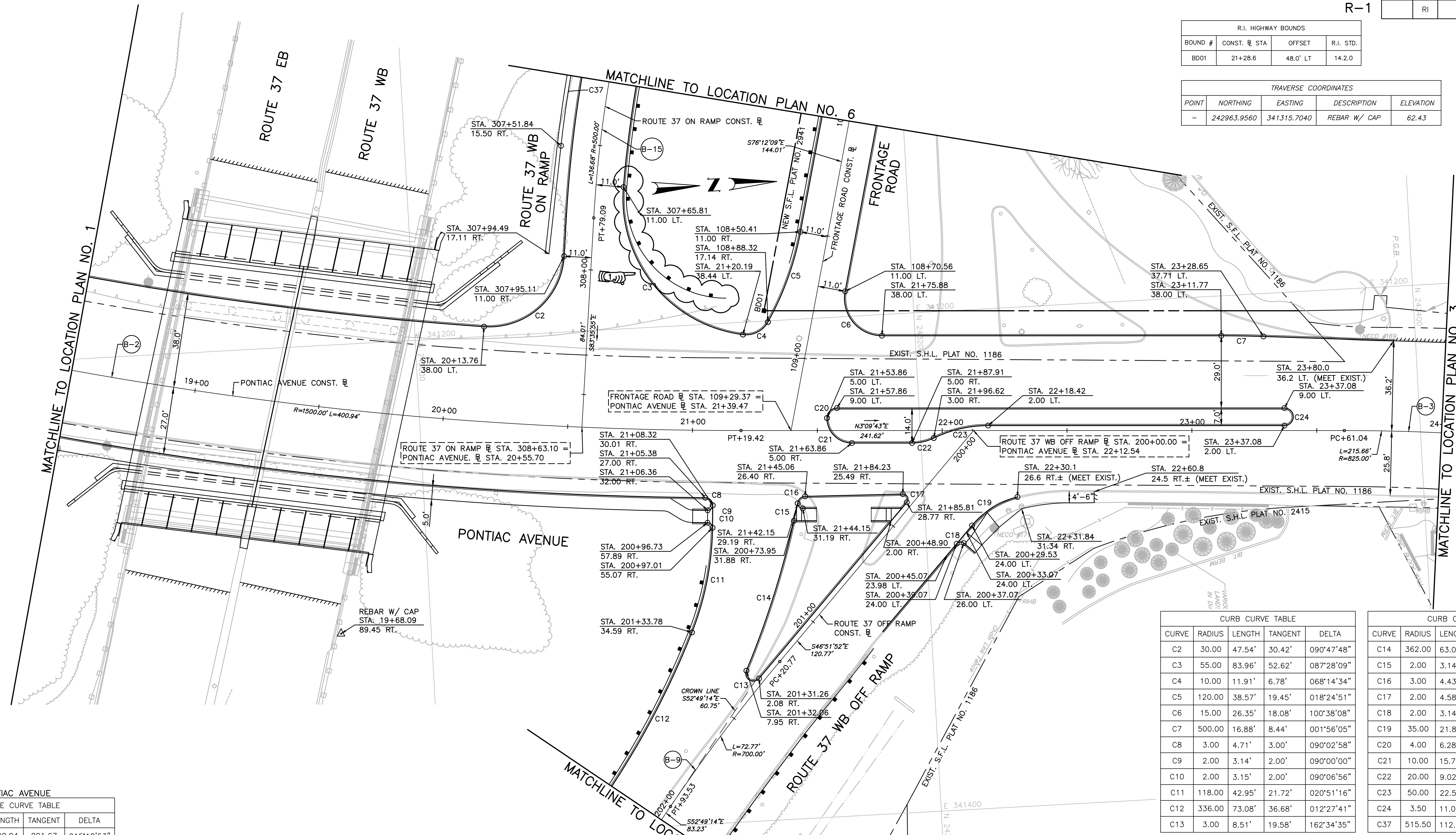
CRANSTON, RHODE ISLAND

**GRADING AND UTILITY
PLAN NO. 3**

CHECKED BY _____ DATE _____ SCALE _____

R.I. HIGHWAY BOUNDS			
BOUND #	CONST. & STA	OFFSET	R.I. STD.
BD01	21+28.6	48.0' LT	14.2.0

TRAVERSE COORDINATES				
POINT	NORTHING	EASTING	DESCRIPTION	ELEVATION
-	242963.9560	341315.7040	REBAR W/ CAP	62.43



PONTIAC AVENUE BASELINE CURVE TABLE				
CURVE	RADIUS	LENGTH	TANGENT	DELTA
B-2	1500.00	400.94	201.67	015°18'53"
B-3	825.00	215.66	108.45	014°58'38"

PONTIAC AVENUE CONSTRUCTION BASELINE COORDINATE DATA				
CURVE	DESCRIPTION	NORTHING	EASTING	
B-2	PC 17+18.48	242735.6427	341168.2518	
	PI	242926.9182	341232.1651	
	PT 21+19.42	243128.2823	341243.2891	
B-3	PC 23+61.04	243369.5341	341256.6165	
	PI	243477.8160	341262.5984	
	PT 25+76.69	243580.8735	341296.3609	
	CC	243324.0280	342080.3605	

ROUTE 37 OFF RAMP BASELINE CURVE TABLE				
CURVE	RADIUS	LENGTH	TANGENT	DELTA
B-9	700.00	72.77	36.42	005°57'22"

ROUTE 37 OFF RAMP CONSTRUCTION BASELINE COORDINATE DATA				
CURVE	DESCRIPTION	NORTHING	EASTING	
B-9	PC 201+20.77	243138.6897	341336.5525	
	PI	243113.7908	341363.1271	
	PT 201+93.53	243091.7838	341392.1419	
	CC	243649.5074	341815.1601	

ROUTE 37 ON RAMP BASELINE CURVE TABLE				
CURVE	RADIUS	LENGTH	TANGENT	DELTA
B-15	500.00	136.68	68.77	015°39'45"

ROUTE 37 ON RAMP CONSTRUCTION BASELINE COORDINATE DATA				
CURVE	DESCRIPTION	NORTHING	EASTING	
B-15	PC 306+42.41	243107.6251	341022.8659	
	PI	243081.7925	341086.5993	
	PT 307+79.09	243074.1253	341154.9402	
	CC	243571.0080	341210.6856	

CURB CURVE TABLE				
CURVE	RADIUS	LENGTH	TANGENT	DELTA
C2	30.00	47.54'	30.42'	090°47'48"
C3	55.00	83.96'	52.62'	087°28'09"
C4	10.00	11.91'	6.78'	068°14'34"
C5	120.00	38.57'	19.45'	018°24'51"
C6	15.00	26.35'	18.08'	100°38'08"
C7	500.00	16.88'	8.44'	001°56'05"
C8	3.00	4.71'	3.00'	090°02'58"
C9	2.00	3.14'	2.00'	090°00'00"
C10	2.00	3.15'	2.00'	090°06'56"
C11	118.00	42.95'	21.72'	020°51'16"
C12	336.00	73.08'	36.68'	012°27'41"
C13	3.00	8.51'	19.58'	162°34'35"

CURB CURVE TABLE				
CURVE	RADIUS	LENGTH	TANGENT	DELTA
C14	362.00	63.08'	31.62'	009°59'00"
C15	2.00	3.14'	2.00'	090°00'00"
C16	3.00	4.43'	2.73'	084°37'43"
C17	2.00	4.58'	4.42'	131°18'38"
C18	2.00	3.14'	2.00'	090°00'00"
C19	35.00	21.81'	11.27'	035°42'01"
C20	4.00	6.28'	4.00'	090°00'00"
C21	10.00	15.71'	10.00'	090°00'00"
C22	20.00	9.02'	4.59'	025°50'31"
C23	50.00	22.55'	11.47'	025°50'31"
C24	3.50	11.00'	INFINITY'	180°00'00"
C37	515.50	112.82'	56.64'	012°32'23"



REVISIONS		
NO.	DATE	BY
1	10/7/19	VHB

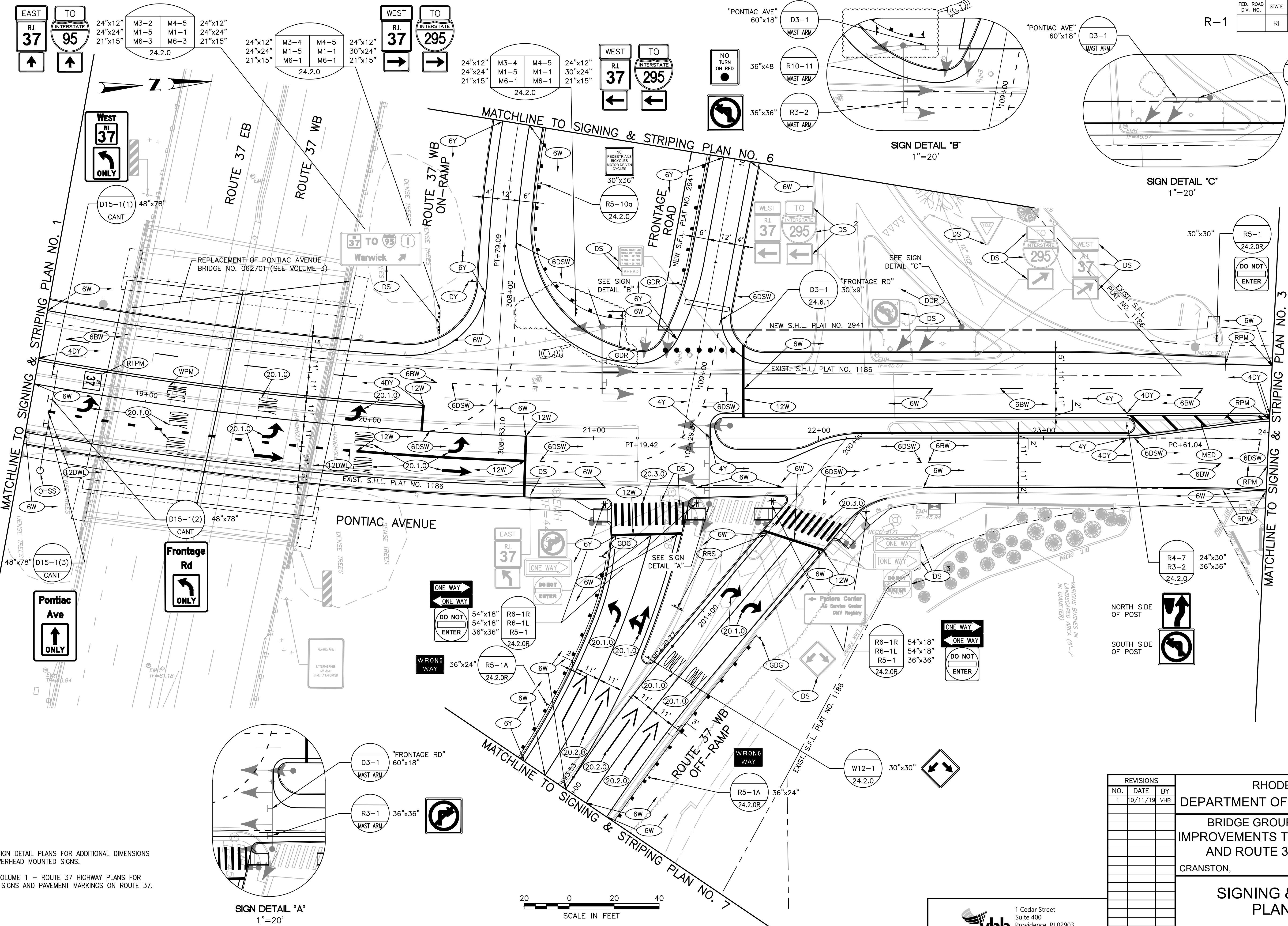
**RHODE ISLAND
DEPARTMENT OF TRANSPORTATION**

**BRIDGE GROUP 51A - RT. 37 C-2
IMPROVEMENTS TO PONTIAC AVENUE
AND ROUTE 37 WEST RAMPS**

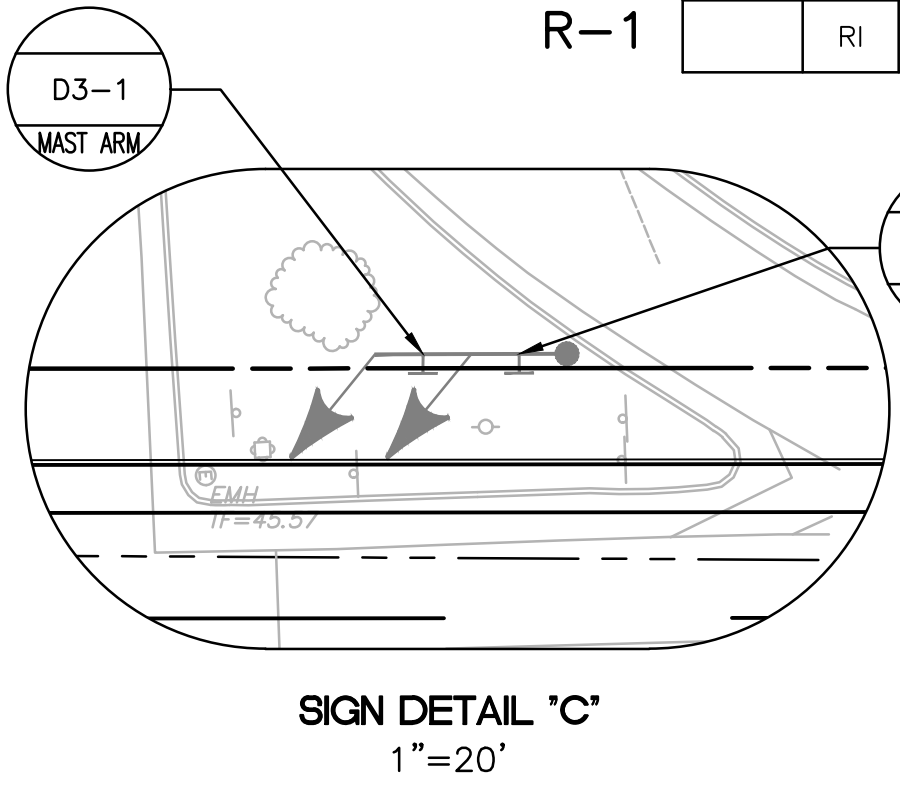
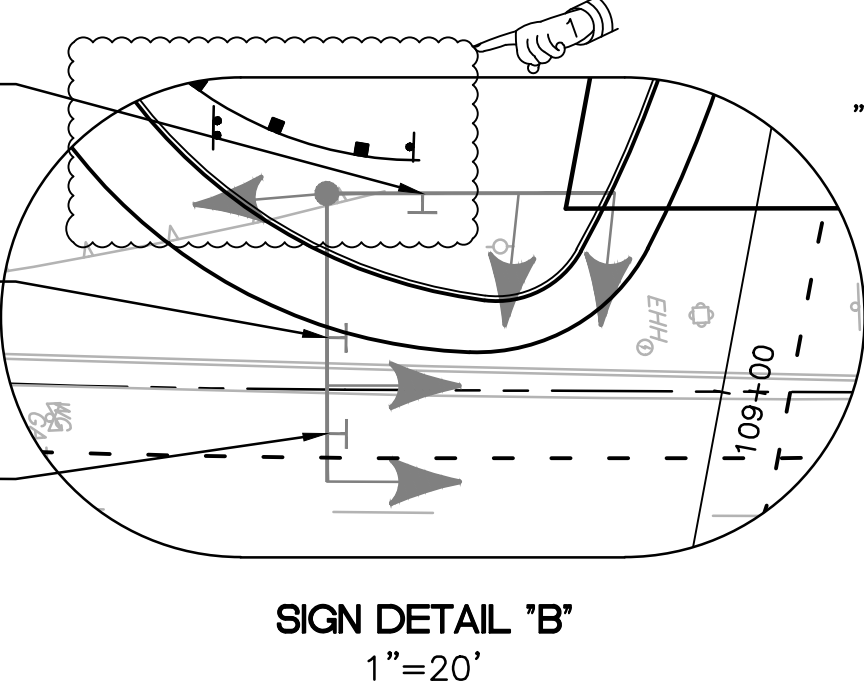
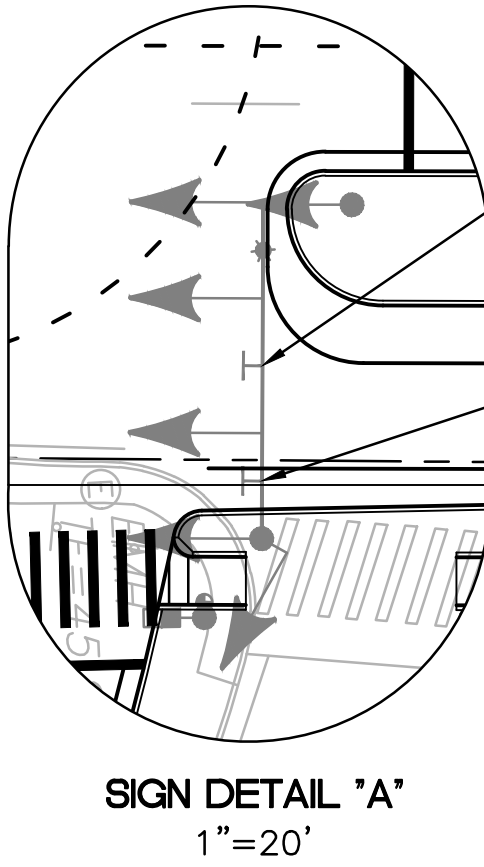
CRANSTON, RHODE ISLAND

LOCATION PLAN NO. 2

CHECKED BY _____ DATE _____ SCALE _____



- NOTES:
- SEE SIGN DETAIL PLANS FOR ADDITIONAL DIMENSIONS OF OVERHEAD MOUNTED SIGNS.
 - SEE VOLUME 1 - ROUTE 37 HIGHWAY PLANS FOR FINAL SIGNS AND PAVEMENT MARKINGS ON ROUTE 37.



ADDENDUM NO. 2

1 Cedar Street
Suite 400
Providence, RI 02903
401.272.8100

REVISIONS		
NO.	DATE	BY
1	10/11/19	VHB

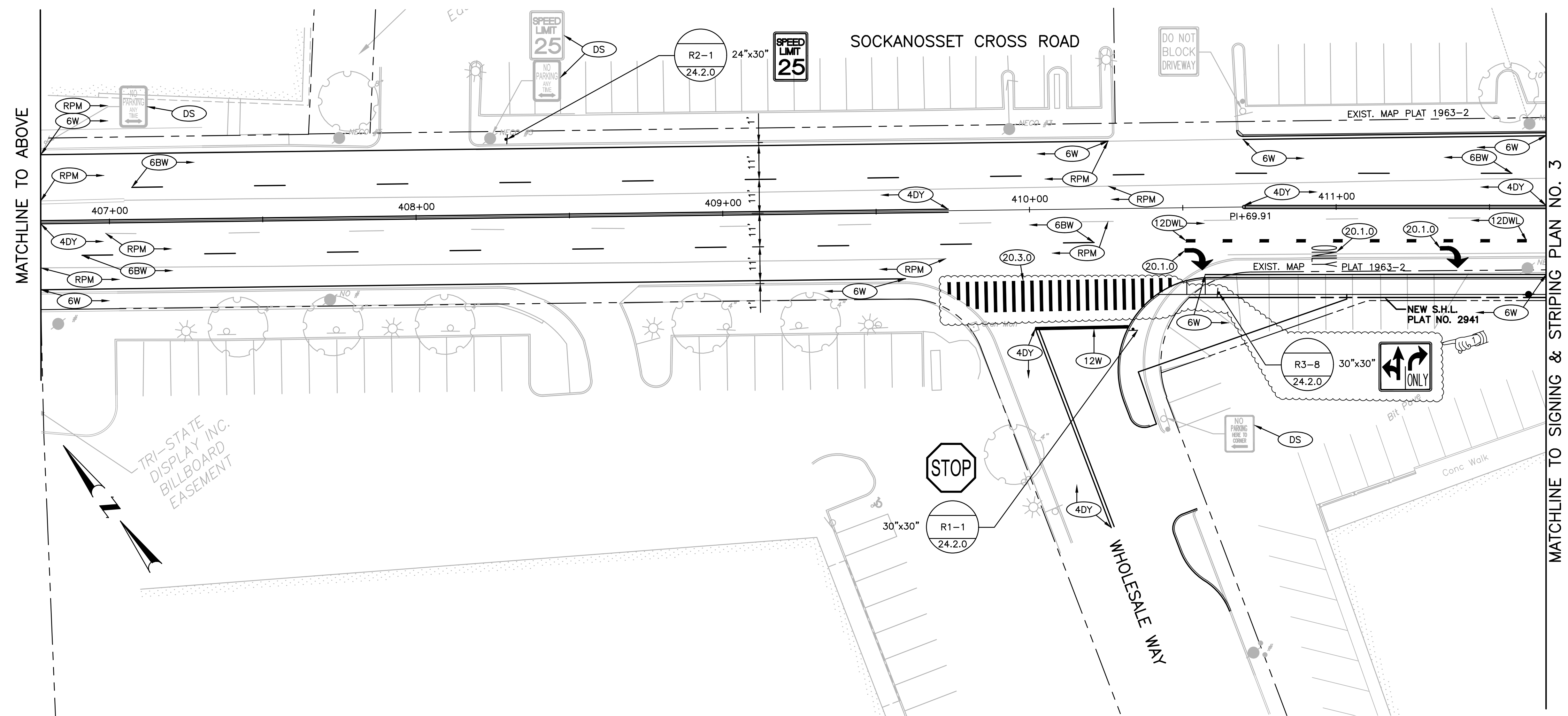
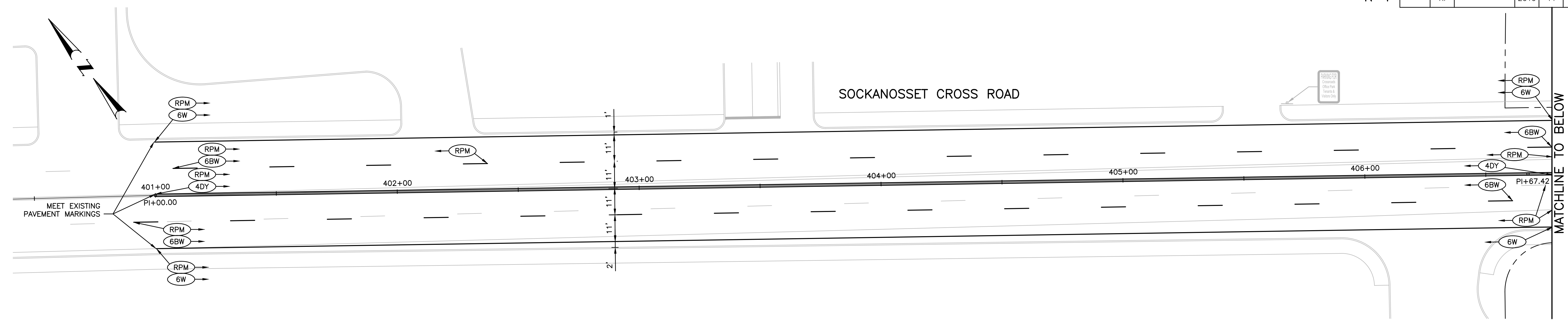
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2
IMPROVEMENTS TO PONTIAC AVENUE
AND ROUTE 37 WEST RAMPS

CRANSTON, RHODE ISLAND

**SIGNING & STRIPING
PLAN NO. 2**

CHECKED BY _____ DATE _____ SCALE _____



MATCHLINE TO ABOVE

MATCHLINE TO SIGNING & STRIPING PLAN NO. 3

MATCHLINE TO BELOW

TRI-STATE
 DISPLAY INC.
 BILLBOARD
 EASEMENT



vhb
 1 Cedar Street
 Suite 400
 Providence, RI 02903
 401.272.8100

REVISIONS		
NO.	DATE	BY
1	10/11/19	VHB

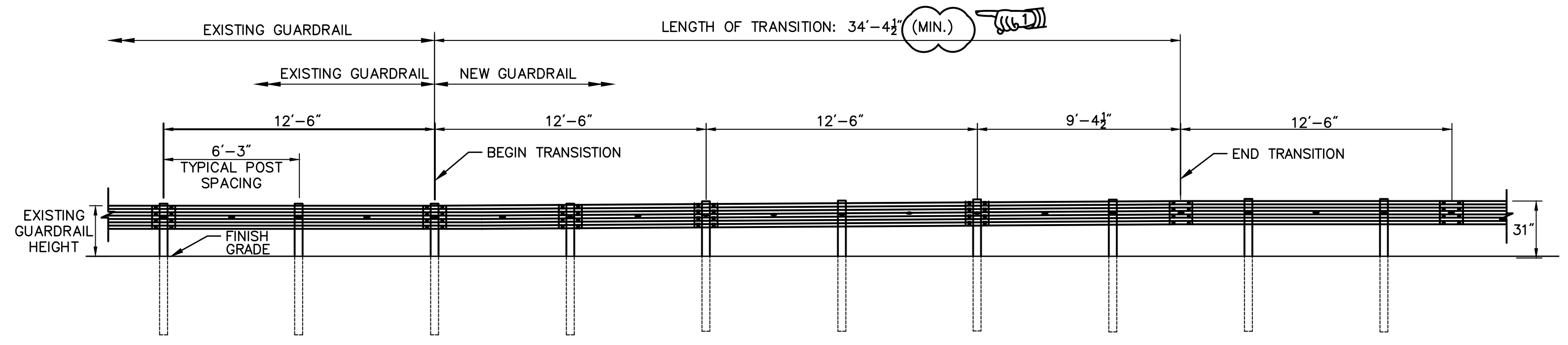
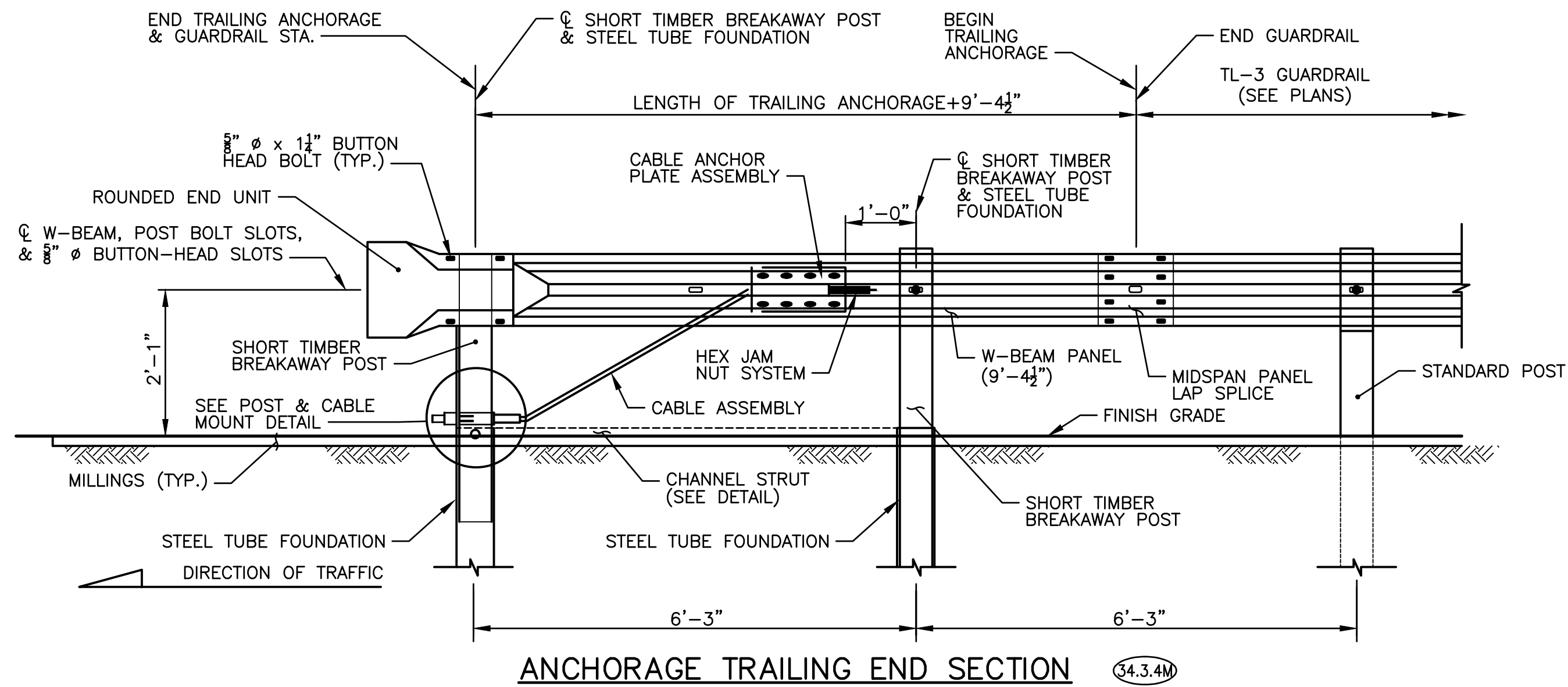
RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 BRIDGE GROUP 51A - RT. 37 C-2
 IMPROVEMENTS TO PONTIAC AVENUE
 AND ROUTE 37 WEST RAMPS
 CRANSTON, RHODE ISLAND

**SIGNING & STRIPING
 PLAN NO. 8**

CHECKED BY _____ DATE _____ SCALE _____

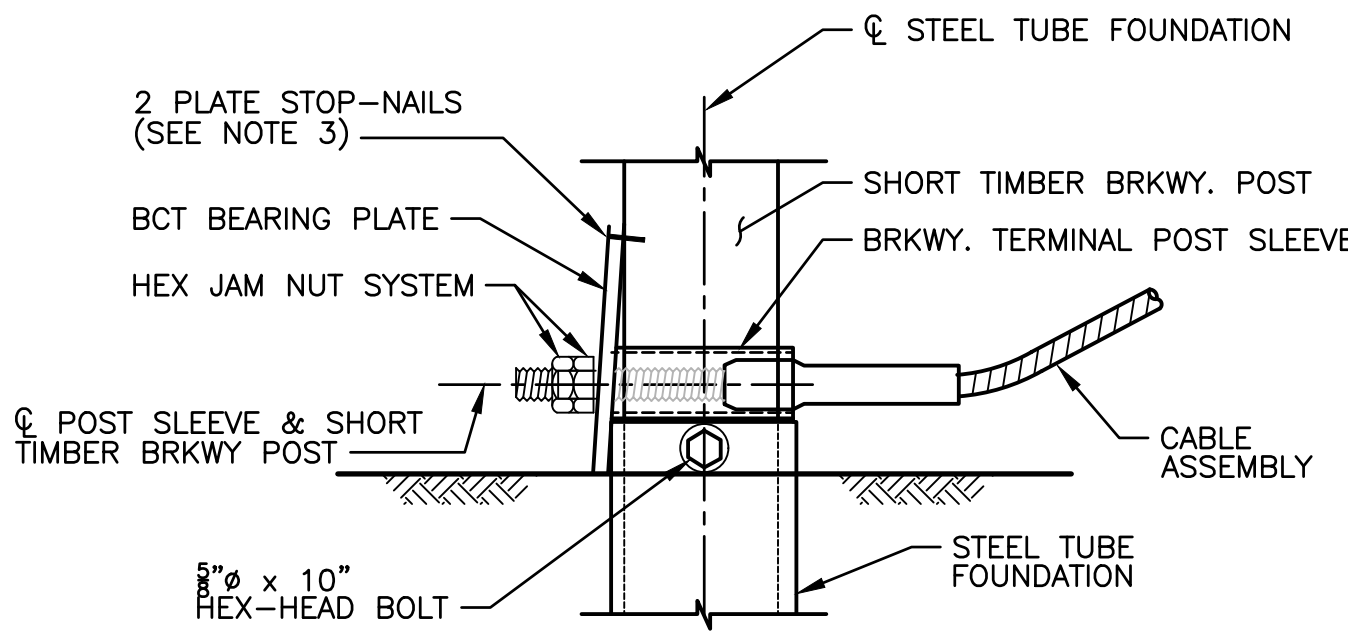
ADDENDUM NO. 2

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2019	47	80

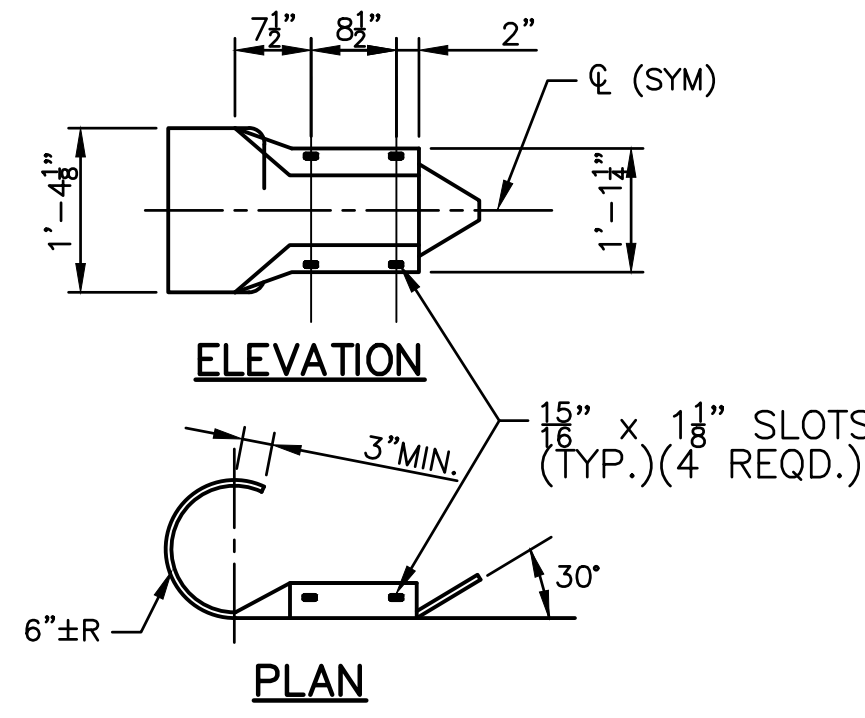


STEEL BEAM GUARDRAIL HEIGHT TRANSITION (GHT)
NOT TO SCALE

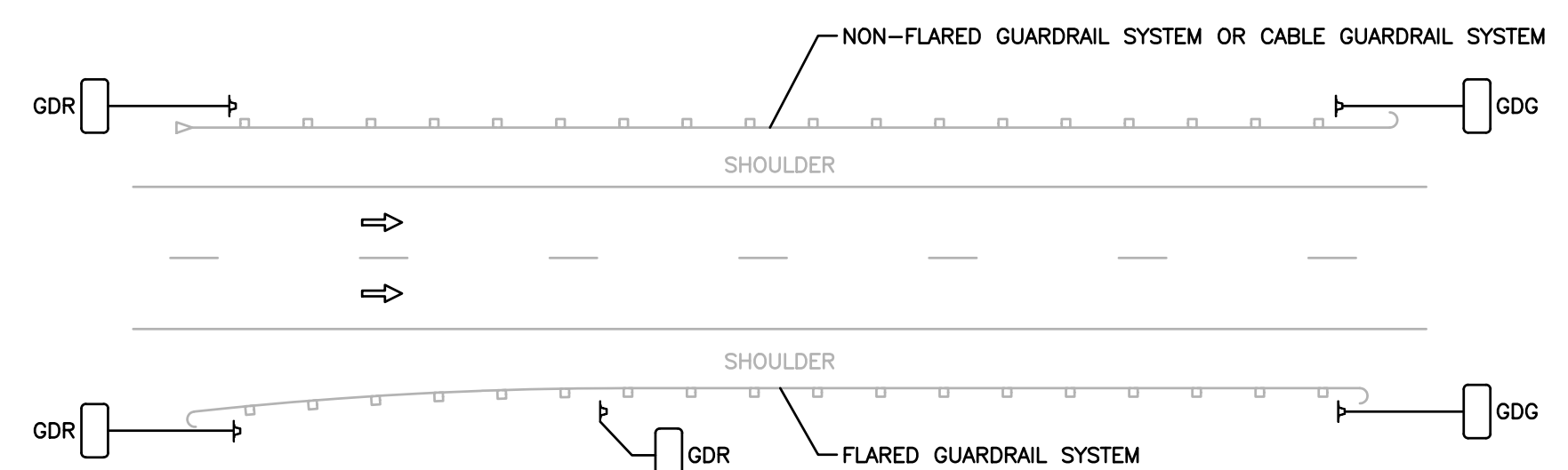
- NOTES:
1. MAINTAIN STANDARD 1" CLEARANCE OF POST ABOVE PANEL THROUGHOUT THE ENTIRE LENGTH OF TRANSITION.
 2. A MINIMUM OF ONE (1) 12'-6" PANEL SHALL BE PLACED BETWEEN THIS TRANSITION AND THE START OF ANY END TREATMENT OR ANCHORAGE.
 3. ALL NEW POSTS SHALL BE 72" IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
 4. ALL NEW POSTS AND OFFSET BLOCK MATERIALS SHALL MATCH EXISTING UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
 5. THE TRANSITION FROM THE NEW END TERMINAL (31" ABOVE GROUND ELEVATION) TO EXISTING GUARDRAIL RUN SHALL NOT EXCEED 10.57692 FT/IN. (PER TAC-0309)



POST & CABLE MOUNT ASSEMBLY

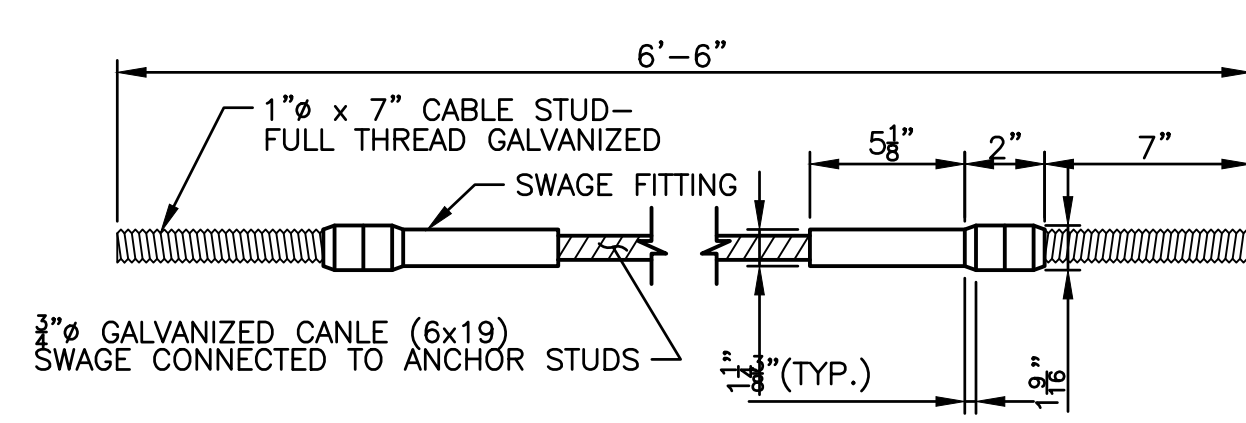


ROUNDED END UNIT

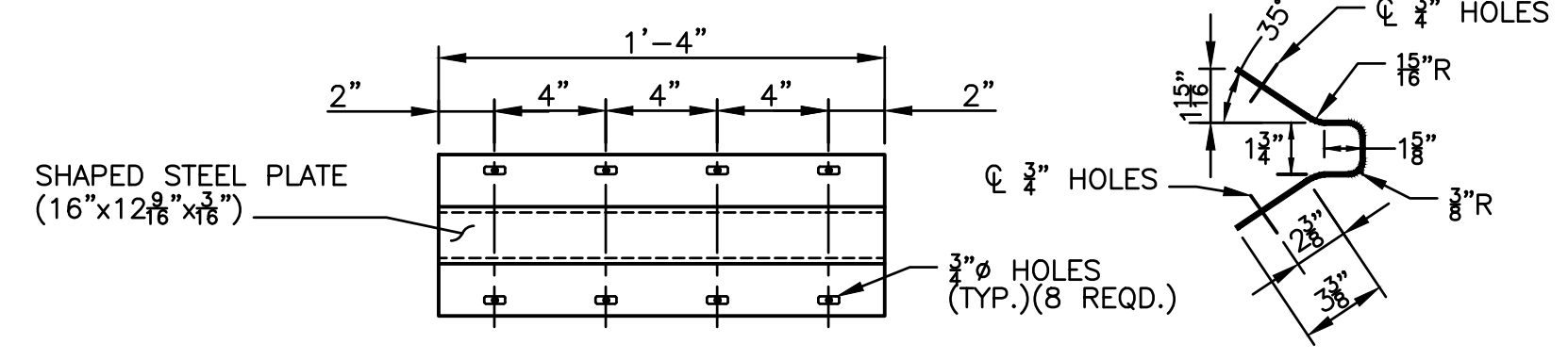


TYPICAL GUARDRAIL END DELINEATOR INSTALLATION
NOT TO SCALE

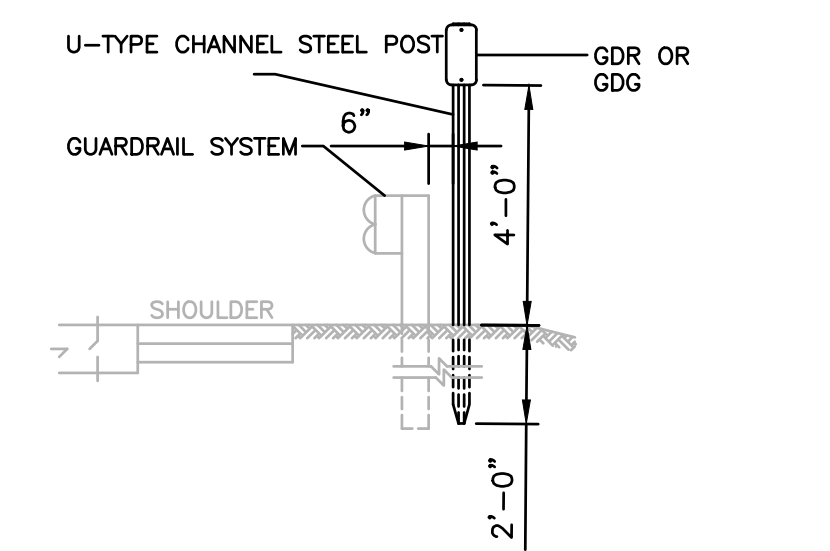
- LEGEND
- GGD GUARDRAIL END DELINEATOR - GREEN
 - GDR GUARDRAIL END DELINEATOR - RED
 - ▷ DELINEATOR
 - ⇨ DIRECTION OF TRAVEL
- NOTE
1. GUARDRAIL ENDS DELINEATOR GDR AND GGD SHALL BE USED TO MARK THE STARTS AND ENDS OF A LONGITUDINAL GUARDRAIL AND SHALL BE INSTALLED IMMEDIATELY BEHIND GUARDRAIL TERMINAL ENDS (ALL TYPES) AS SHOWN ON THIS SHEET. THE HOLE SHALL BE THOROUGHLY PAINTED WITH TOUCH-UP GALVANIZED SPRAY PAINT PRIOR TO ATTACHING THE DELINEATOR POST.
 2. WHEN LEDGE IS ENCOUNTERED BEFORE THE 2'-0" MINIMUM EMBEDMENT DEPTH, POSTS SHALL BE SECURED A MINIMUM OF 12" INTO LEDGE.



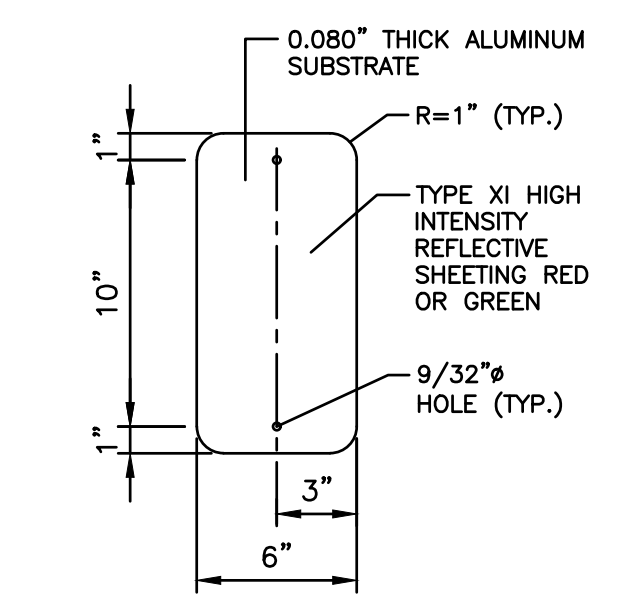
CABLE ASSEMBLY



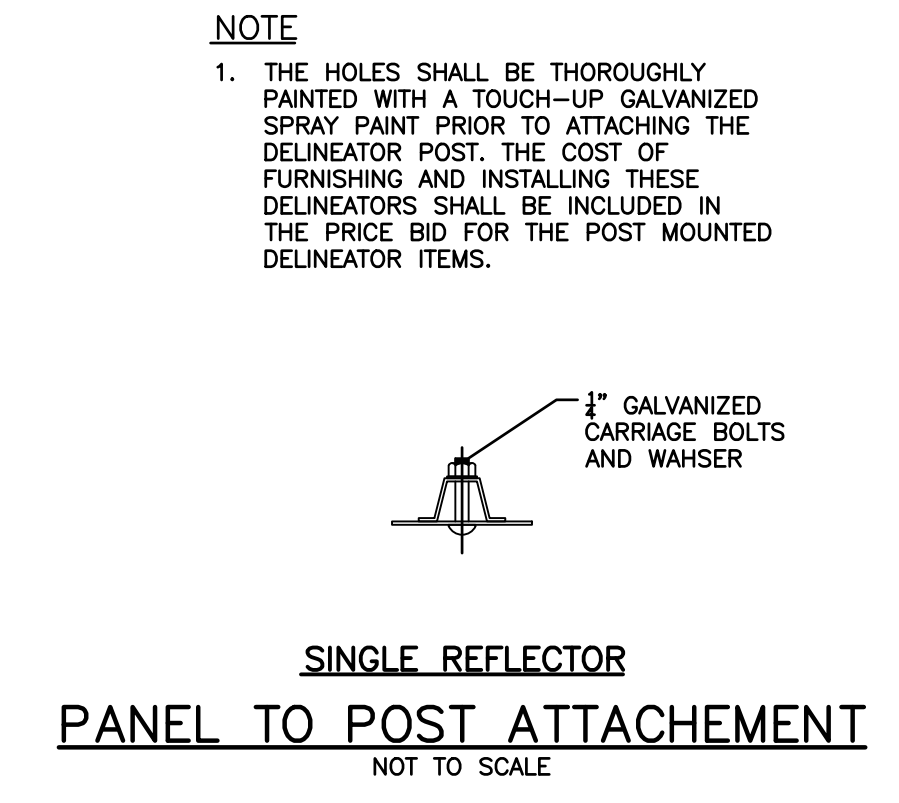
CABLE ANCHOR PLATE



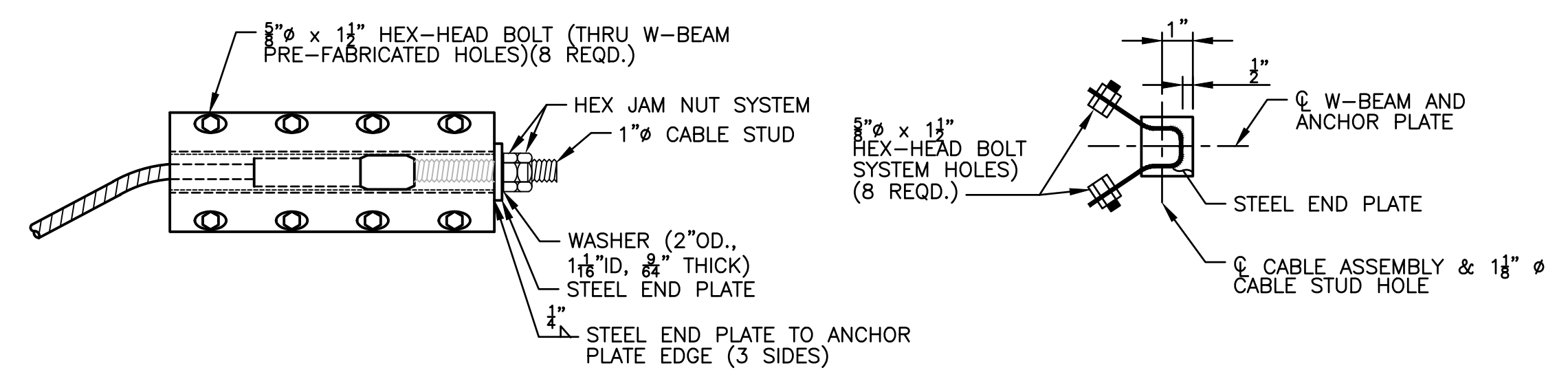
TYPICAL SHOULDER SECTION FOR GUARDRAIL END DELINEATOR
NOT TO SCALE



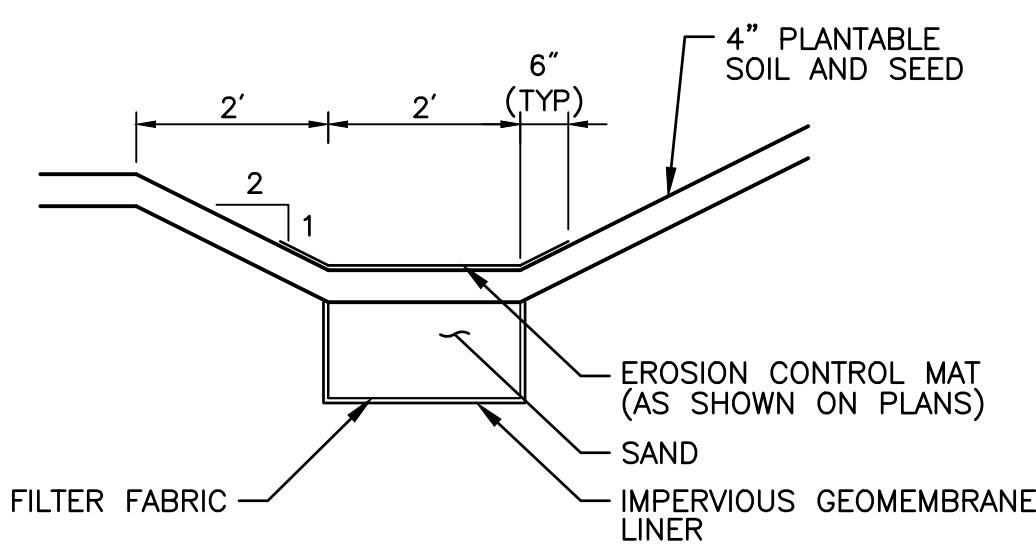
SINGLE FACE DELINEATOR PANEL 6X12
NOT TO SCALE



SINGLE REFLECTOR PANEL TO POST ATTACHEMENT
NOT TO SCALE



CABLE ANCHOR PLATE ASSEMBLY



SEEDED DITCH STANDARD 8.1.0 - MODIFIED (8.1.0M)
NOT TO SCALE



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NO.	DATE	BY
1	10/7/19	VHB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
BRIDGE GROUP 51A - RT. 37 C-2
IMPROVEMENTS TO PONTIAC AVENUE
AND ROUTE 37 WEST RAMPS
CRANSTON, RHODE ISLAND

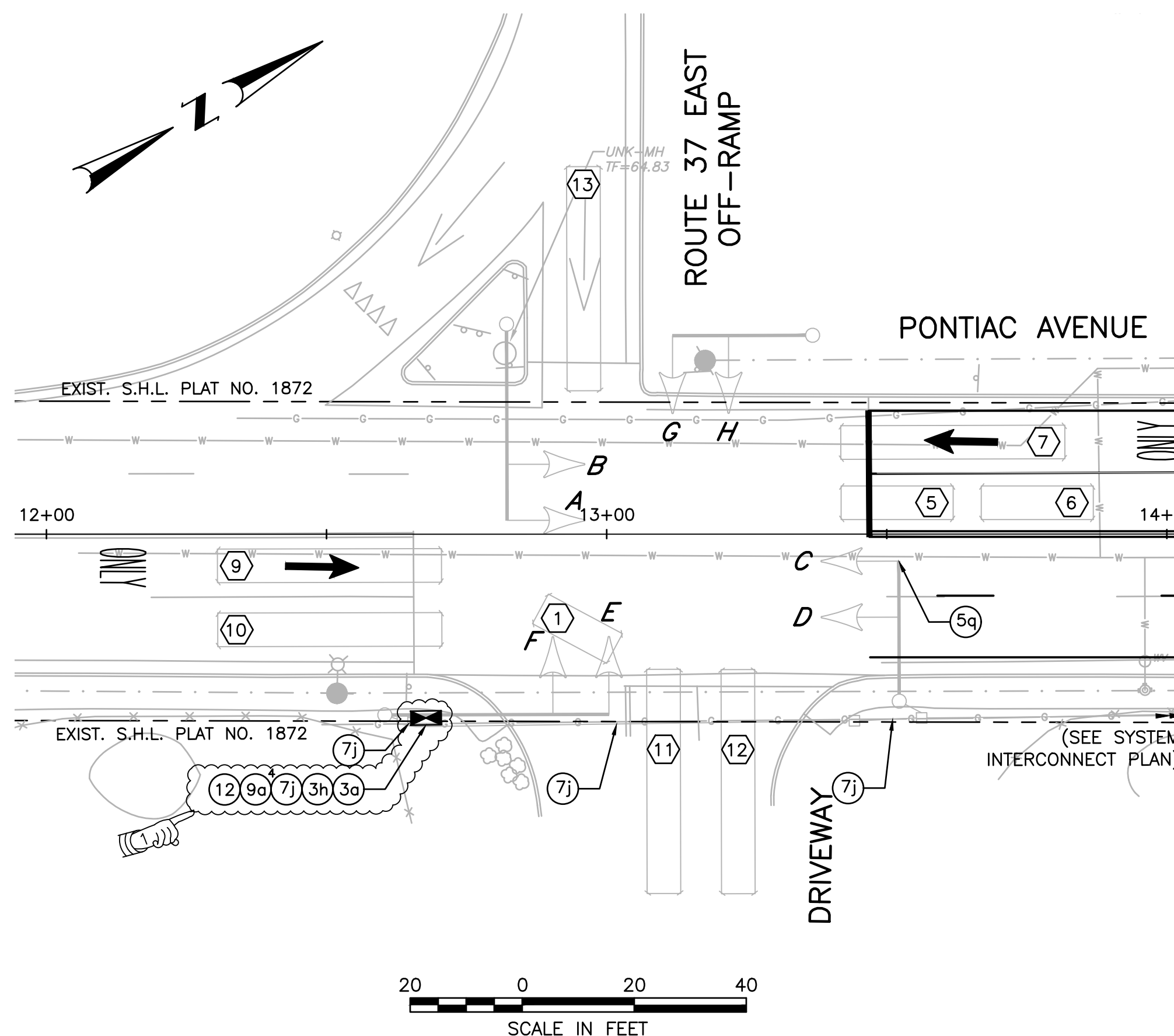
TYPICAL DETAILS PLAN NO. 3

CHECKED BY _____ DATE _____ SCALE _____

ITEM NO.	ITEM CODE	ITEM DESCRIPTION
3a	T12.9908	Actuated Controller TS-2, Type 1 w/8 Phase Assembly Ground Mounted Including Cabinet Std. 19.1.0 on Existing Foundation
3h	T12.9906	GPS Time Synchronization Unit
5q	T14.9903	Remove and Replace Signal Head LED Module
7i	T04.9902	19 AWG 6 Pair Traffic Communications Cable
9a	T13.1004	Traffic Detector Relay - Loop 4 Channel
12	945.0200	Remove and Salvage Traffic Signal Equipment

R-1

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2019	52	80



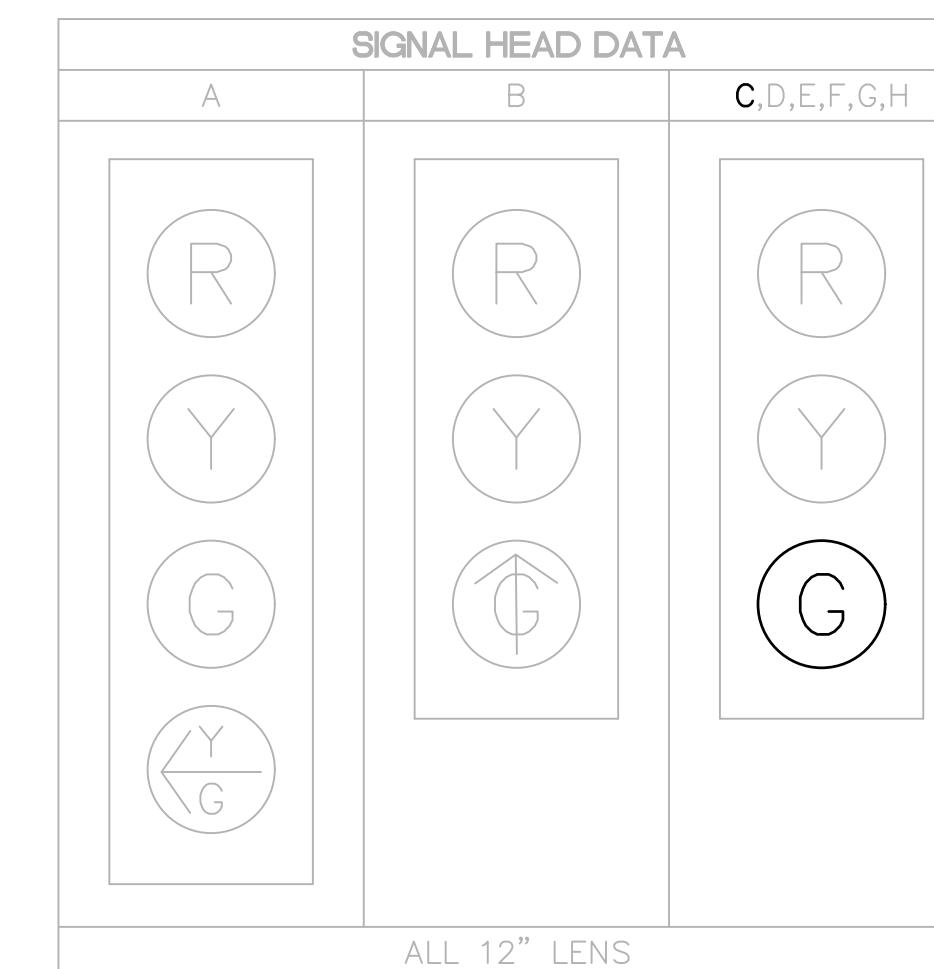
TRAFFIC SIGNAL CONSTRUCTION NOTES:

1. SEE STANDARD NOTES PLAN AND JOB SPECIFIC PLAN SYMBOLS, LEGEND & NOTES PLAN FOR ADDITIONAL INFORMATION.

2. THE EXISTING CONDUIT NETWORK SHOWN ON THIS PLAN IS BASED ON ASSUMED LOCATIONS AND SIZES. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING CONDUIT LOCATIONS AND SIZES FOR ACCURACY AND ADEQUACY PRIOR TO PERFORMING THE WORK.

3. THE ITEM "REMOVAL AND SALVAGING OF TRAFFIC SIGNAL EQUIPMENT" SHALL INCLUDE THE FOLLOWING MAJOR ITEMS:

(1) GROUND MOUNTED CABINET AND ALL ASSOCIATED EQUIPMENT SHALL BE REMOVED AND SALVAGED IN ACCORDANCE WITH SECTION 945 OF THE STANDARD SPECIFICATIONS.



NOTES:
 1. ALL TRAFFIC SIGNAL HEADS ARE EXISTING.
 2. REPLACE EXISTING STRAIGHT-THROUGH GREEN ARROW SIGNAL LED MODULE WITH A CIRCULAR GREEN LED MODULE ON TRAFFIC SIGNAL HEAD "C".

DETECTOR DATA						
DETECTOR NO.	NO. SECTION/ SIZE	RELAY NUMBER	SLOT	DELAY (SEC)	CALL PHASE	REMARKS
1	1-6'x15'	1	2	35	ø1	EXISTING
5	1-6'x20'	2	4	3	ø1	EXISTING
6	1-6'x20'	2	4	3	ø2	EXISTING
7	1-6'x40'	2	4	3	ø2	EXISTING
9	1-6'x40'	3	6	3	ø2	EXISTING
10	1-6'x40'	3	6	3	ø2	EXISTING
11	1-6'x40'	3	6	3	ø3	EXISTING
12	1-6'x40'	3	6	8	ø3	EXISTING
13	1-6'x40'	4	8	3	ø3	EXISTING

NOTES:
 1. LOOP 1 SHALL EXTEND PHASE 1 ONLY. LOOP 5 SHALL CALL PHASE 1 ONLY.
 2. CONTRACTOR SHALL PROVIDE A NEW CABINET DOOR STICKER WITH UPDATED LOOP INFORMATION.

COORDINATION DATA
(ALL ENTRIES IN SECONDS)

	PLAN 1	PLAN 2	PLAN 3
CYCLE LENGTH	80	80	80
OFFSET	76	0	0
SPLIT ø1	21	12	12
SPLIT ø2	24	46	45
SPLIT ø3	35	22	23
COORDINATED PHASE	ø2	ø2	ø2
PLAN 1 - MONDAY-FRIDAY 6:00AM-10:00AM			
PLAN 2 - MONDAY-FRIDAY 10:00AM-2:30PM SATURDAY-SUNDAY 10:00AM-7:00PM			
PLAN 3 - MONDAY-FRIDAY 2:30PM-7:00PM			
FREE - ALL OTHER TIME PERIODS			

NOTES:
 1. ø2 "CALL NON ACTUATED" DURING COORDINATION.
 2. OFFSET: BEG OF ø2 GREEN.
 3. PLAN FORCE OFF/FLOATING FORCE OFF SHALL BE IN EFFECT.
 4. SPLIT TIMES EQUAL GREEN PLUS CLEARANCES.
 5. INHIBIT MAX. TERMINATION SHALL BE IN EFFECT DURING COORDINATION.

SEQUENCE AND TIMING DIAGRAM												
APPROACH	DIRECTION	HOUSING	ø1			ø2			ø3			FLASHING OPERATION
MINIMUM INTERVAL			6		10			6				
VEHICLE EXTENSION			2.8		2.8			2.8				
MAXIMUM 1			20		40			30				
MAXIMUM 2			20		40			30				
YELLOW CLEARANCE				3.5		4			3.5			
RED CLEARANCE					1.5		1.5			1.5		
PONTIAC AVENUE	SB-LT	A	G*	Y*	R*	G	Y	R	R	R	R	FY
PONTIAC AVENUE	SB	B	G	Y*	R*	G	Y	R	R	R	R	FY
PONTIAC AVENUE	NB	C,D	R	R	R	G	Y	R	R	R	R	FY
ROUTE 37 EB OFF-RAMP	EB	E,F	R	R	R	R	R	R	G	Y	R	FR
DRIVEWAY	WB	G,H	R	R	R	R	R	R	G	Y	R	FR
DETECTOR			NON-LOCK			NON-LOCK			NON-LOCK			
RECALL			OFF			SOFT			OFF			
			ø1			ø2			ø3			ø4-ø8
			NOT USED			NOT USED			NOT USED			NOT USED

SEQUENCE AND TIMING NOTES:
 1. FLASHING OPERATION PER M.U.T.C.D.
 2. MAXIMUM 1 = NORMAL OPERATION
 3. MAXIMUM 2 = NOT USED
 4. * = SHALL REMAIN G IF PHASE 2 IS NEXT
 5. PERM = PERMISSIVE
 6. Y = YIELD

ADDENDUM NO. 2

TRAFFIC SIGNAL NO. 682

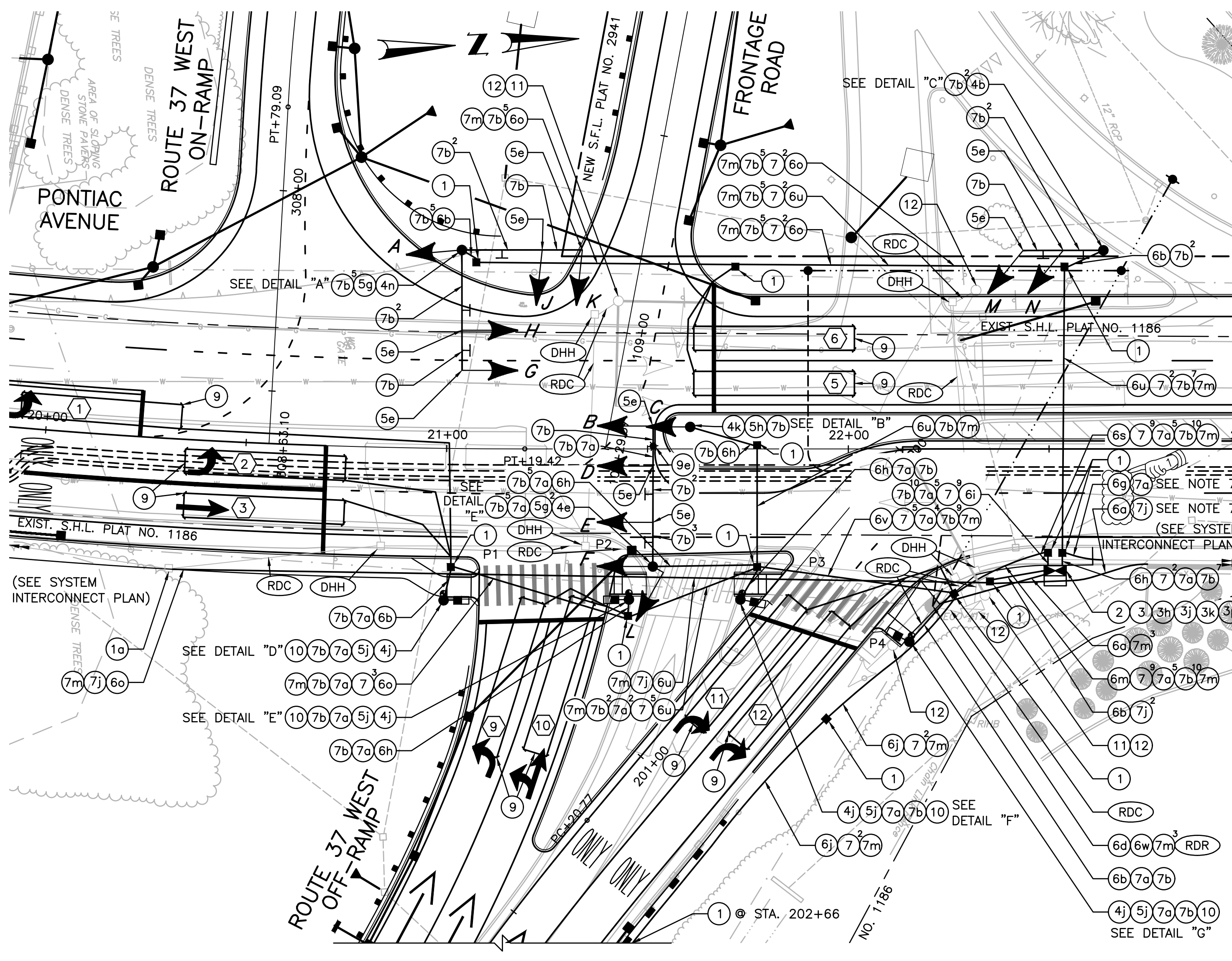
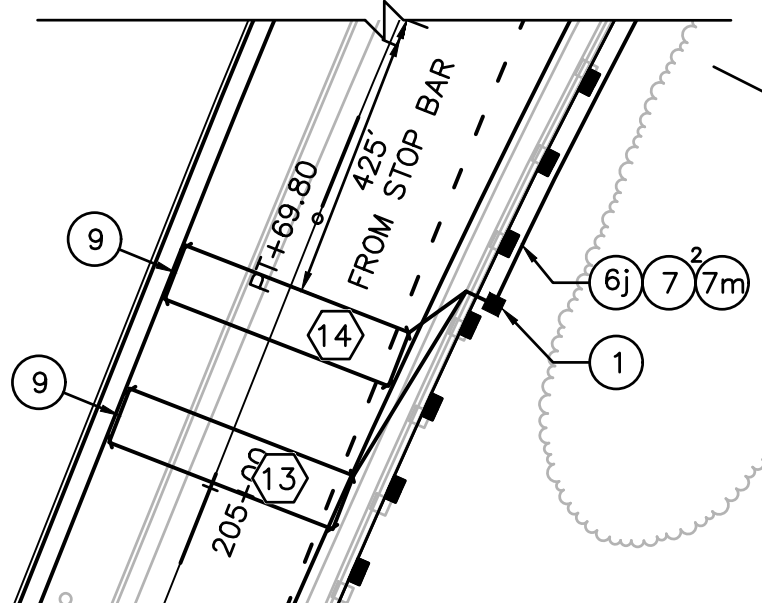


REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY		
1	10/11/19	VHB		
			BRIDGE GROUP 51A - RT. 37 C-2 IMPROVEMENTS TO PONTIAC AVENUE AND ROUTE 37 WEST RAMPS	
			CRANSTON, RHODE ISLAND	
			TRAFFIC SIGNAL PLAN NO. 1	
			PONTIAC AVENUE AT ROUTE 37 EB OFF-RAMP	
			CHECKED BY	DATE
				SCALE

ITEM NO.	ITEM CODE	ITEM DESCRIPTION
1	T05.0100	Precast Type "A" Handhole Std. 18.2.0
1a	T05.9901	Break Into Existing Handhole
2	T12.9150	Meter Socket w/ Manual Bypass
3	T12.9901	Actuated Controller TS-2, Type 1 w/8 Phase Assembly Ground Mounted Including Foundation and Cabinet Std. 19.1.0
3h	T12.9906	CPS Time Synchronization Unit
3j	T12.9904	Traffic Signal System Master
3k	T12.9905	Modify Existing Advanced Traffic Management System
3p	T12.9907	Cellular Modem
4b	T11.9901	20 Foot Galvanized Steel Mast Arm Traffic Signal Post and Foundation Std. 19.2.0
4e	T11.9903	35 Foot Galvanized Steel Mast Arm Traffic Signal Post and Foundation Std. 19.2.0
4j	T11.2008	Traffic Signal Standard, 8 Foot, Std 19.4.0 Aluminum Pedestal Pole and Foundation
4k	T11.2010	Traffic Signal Standard, 10 Foot, Std 19.4.0 Aluminum Pedestal Pole and Foundation
4n	T11.9906	Dual Mast Arm (30x30) Galvanized Steel Traffic Signal Post and Foundation Std. 19.2.0
5e	T14.3513	1 Way 3 Section Mast Arm Mounted Signal Head 12 Inch
5g	T14.3613	1 Way 3 Section Bracket Mounted Signal Head 12 Inch
5h	T14.3713	1 Way 3 Section Pedestal Mounted Signal Head 12 Inch
5j	T14.9901	1 Way Pedestal Mounted LED Pedestrian Signal Head With Countdown Timer 12 Inch
6a	T06.1020	2 Inch Rigid Steel Conduit - Underground
6b	T06.1030	3 Inch Rigid Steel Conduit - Underground
6d	T06.2020	2 Inch Rigid Steel Conduit Overhead
6g	T06.3020	2 Inch Rigid Steel Conduit - Under Existing Pavement
6h	T06.3030	3 Inch Rigid Steel Conduit - Under Existing Pavement
6i	T06.3040	4 Inch Rigid Steel Conduit - Under Existing Pavement
6j	T06.5120	2 Inch Schedule 40 Polyvinyl Chloride Plastic Conduit - Underground
6m	T06.5140	4 Inch Schedule 40 Polyvinyl Chloride Plastic Conduit - Underground
6o	T06.5230	3 Inch Schedule 80 Polyvinyl Chloride Plastic Conduit - Underground
6s	T06.5340	4 Inch Schedule 40 Polyvinyl Chloride Plastic Conduit - Under Existing Pavement
6u	T06.5430	3 Inch Schedule 80 Polyvinyl Chloride Plastic Conduit - Under Existing Pavement
6v	T06.5440	4 Inch Schedule 80 Polyvinyl Chloride Plastic Conduit - Under Existing Pavement
6w	T06.6020	2 Inch Polyvinyl Chloride Plastic Conduit Overhead
7	T04.5302	14 AWG 2 Conductor Twisted Shielded Cable
7a	T04.5303	14 AWG 3 Conductor Cable
7b	T04.5305	14 AWG 5 Conductor Cable
7j	T04.9902	19 AWG 6 Pair Traffic Communications Cable
7m	T04.5001	6 AWG Single Conductor Cable 600v Insulation
9	T13.1000	Traffic Detector - Loop Std. 19.6.0
9a	T13.1004	Traffic Detector Relay - Loop 4 Channel
9e	T13.9901	Fire Pre-emption Confirmation Beacon
10	T13.8210	Accessible Pedestrian Detector - Pushbutton with Sign
11	945.0100	Remove and Dispose Traffic Signal Equipment
12	945.0200	Remove and Salvage Traffic Signal Equipment
RDR	201.0413	Remove and Dispose Risers
DHH	201.0423	Remove and Dispose Handhole
RDC	201.0617	Remove and Dispose Conduit - All Sizes

SIGNAL HEAD SPACING

SIGNAL HEAD	DISTANCE FROM CENTER OF MAST ARM POLE
B	35'
D	25'
E	11'
G	30'
H	20'
J	20'
K	30'
M	20'
N	10'



COORDINATION DATA (ALL ENTRIES IN SECONDS)

	PLAN 1	PLAN 2	PLAN 3
CYCLE LENGTH	80	80	80
OFFSET	16	16	0
SPLIT Ø1	13	20	19
SPLIT Ø2	39	40	42
SPLIT Ø3	28	20	19
COORDINATED PHASE	Ø2	Ø2	Ø2
PLAN 1 - MONDAY-FRIDAY 6:00AM-10:00AM			
PLAN 2 - MONDAY-FRIDAY 10:00AM-2:30PM SATURDAY-SUNDAY 10:00AM-7:00PM			
PLAN 3 - MONDAY-FRIDAY 2:30PM-7:00PM			
FREE - ALL OTHER TIME PERIODS			

- NOTES:**
- #2 "CALL NON ACTUATED" DURING COORDINATION.
 - OFFSET: BEG OF Ø2 GREEN.
 - PLAN FORCE OFF/FLOATING FORCE OFF SHALL BE IN EFFECT.
 - SPLIT TIMES EQUAL GREEN PLUS CLEARANCES.
 - INHIBIT MAX. TERMINATION SHALL BE IN EFFECT DURING COORDINATION.

SIGNAL HEAD DATA				
A,B,C,D	E,F,G	H,J,K,L	M,N	P1-P4
				(ALL L.E.D. MODULES)

ALL 12" LENS

- NOTES:**
- ALL TRAFFIC SIGNAL HEADS ARE PROPOSED.
 - ALL PEDESTRIAN SIGNAL HEADS ARE PROPOSED.
 - ALL PROPOSED RED, YELLOW, AND GREEN SIGNAL DISPLAYS SHALL BE EQUIPPED WITH LED MODULES.
 - 5" BACKPLATE WITH A 3" REFLECTIVE STRIP (YELLOW, TYPE IIIB ADHESIVE SHEETING) SHALL BE PROVIDED ON ALL SIGNAL HEADS.

DETECTOR DATA

DETECTOR NO.	NO. SECTION/ SIZE	RELAY NUMBER	SLOT	DELAY (SEC)	CALL PHASE	REMARKS
1	1-6'x40'	1	2	3	Ø1	PROPOSED
2	1-6'x40'	1	2	3	Ø1	PROPOSED
3	1-6'x40'	1	2	3	Ø2	PROPOSED
5	1-6'x40'	2	4	3	Ø2	PROPOSED
6	1-6'x40'	2	4	3	Ø2	PROPOSED
9	1-6'x40'	3	6	3	Ø3	PROPOSED
10	1-6'x40'	3	6	3	Ø3	PROPOSED
11	1-6'x40'	3	6	3	Ø3	PROPOSED
12	1-6'x40'	3	6	3	Ø3	PROPOSED
13	1-6'x25'	4	8	10	Ø3	PROPOSED QUEUE
14	1-6'x25'	4	8	10	Ø3	PROPOSED QUEUE

- QUEUE DETECTOR OPERATION:**
- A QUEUE PRE-EMPT CALL SHALL BE PLACED INTO THE CONTROLLER AFTER THE DELAY TIME ON DETECTOR NOS. 13 AND 14 HAS TIMED OUT (INITIALLY SET AT 10 SECONDS).
 - THE QUEUE PRE-EMPT SHALL CAUSE THE CONTROLLER TO FORCE OFF THE ACTIVE PHASE ONCE MINIMUM GREEN, PEDESTRIAN WALK, PEDESTRIAN CHANGE, YELLOW CHANGE, AND RED CLEARANCE INTERVALS HAVE BEEN SATISFIED FOR THE ACTIVE PHASE AND SHALL THEN SERVICE PHASE 3.
 - QUEUE PRE-EMPT DURATION SHALL INITIALLY BE SET FOR 15 SECONDS.
 - UPON TERMINATION OF QUEUE PRE-EMPTION, THE CONTROLLER SHALL RETURN TO NORMAL OPERATION BY SERVICING PHASE 2.
 - THE CONTROLLER SHALL BE INITIALLY PROGRAMMED TO PROVIDE A MINIMUM RESERVE TIME FOR QUEUE PRE-EMPT OF 4 MINUTES.
 - EMERGENCY VEHICLE PRE-EMPTION SHALL OVERRIDE QUEUE DETECTION PRE-EMPTION.
 - THE QUEUE PRE-EMPTION SHALL OVERRIDE COORDINATION.

SEQUENCE AND TIMING DIAGRAM

APPROACH	DIRECTION	HOUSING	Ø1	Ø2	Ø3	PRE-EMPT	FLASHING OPERATION
MINIMUM INTERVAL			6	10	6		
VEHICLE EXTENSION			2.8	2.8	2.9		
MAXIMUM 1			15	40	25	30	
MAXIMUM 2			15	40	25	30	
YELLOW CLEARANCE			4	4	4.5	4	
RED CLEARANCE			2.5	2	4.5	2	
PED. WALK/CHANGE				8/24			
PONTIAC AVENUE	NB-LT	A,B,C,D	G	Y	R	R	FR
PONTIAC AVENUE	NB	E,F	R	R	R	R	FY
PONTIAC AVENUE	SB	G	R	R	R	R	FY
PONTIAC AVENUE	SB	H	R	R	R	G	FY
ROUTE 37 WB OFF-RAMP	WB	J,K,L	R	R	R	R	FR
ROUTE 37 WB OFF-RAMP	WB	M,N	G	Y	R	R	FR
PEDESTRIAN X-ING	N-S	P1-P4	DW	DW	DW	DW	DARK
DETECTOR			NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	
RECALL			OFF	SOFT	OFF	OFF	
			Ø1	Ø2	Ø3	PRE-EMPT	Ø4-Ø8

- SEQUENCE AND TIMING NOTES:**
- FLASHING OPERATION PER M.U.T.C.D.
 - MAXIMUM 1 = NORMAL OPERATION
 - MAXIMUM 2 = NOT USED
 - PED. W/FDW UPON PUSHBUTTON ACTUATION ONLY
 - * = SHALL REMAIN G IF PHASE 3 IS NEXT
 - OL = OVERLAP
- ADDENDUM NO. 2**

TRAFFIC SIGNAL CONSTRUCTION NOTES:

- THE ITEM "REMOVAL AND DISPOSAL OF TRAFFIC SIGNAL EQUIPMENT" SHALL INCLUDE THE FOLLOWING MAJOR ITEMS:

(2) MAST ARM FOUNDATIONS, MISCELLANEOUS TRAFFIC SIGNAL CABLE WIRING SHALL BE REMOVED AND LEGALLY DISPOSED OF IN ACCORDANCE WITH SECTION 945 OF THE STANDARD SPECIFICATIONS.
- THE ITEM "REMOVAL AND SALVAGING OF TRAFFIC SIGNAL EQUIPMENT" SHALL INCLUDE THE FOLLOWING MAJOR ITEMS:

(1) GROUND MOUNTED CABINET AND ALL ASSOCIATED EQUIPMENT, (1) MAST ARM AND TRAFFIC SIGNAL POST, (1) DUAL MAST ARM AND TRAFFIC SIGNAL POST, (2) PEDESTAL POLES AND FOUNDATIONS, (8) TRAFFIC SIGNAL HEADS, SHALL BE REMOVED AND SALVAGED IN ACCORDANCE WITH SECTION 945 OF THE STANDARD SPECIFICATIONS.
- REMOVAL OF EXISTING HANDHOLES, MANHOLES, CONDUIT, AND RISERS ASSOCIATED WITH THE TRAFFIC SIGNAL SHALL BE PAID FOR UNDER THE APPROPRIATE INDIVIDUAL AND SEPARATE PAY ITEMS.
- THE CONTRACTOR SHALL INSTALL THE SIGNAL CABINET ON A 12" RISER EXTENSION BASE. THE COST OF THE EXTENSION BASE SHALL BE CONSIDERED INCIDENTAL TO ITEM T12.9901.
- FINISHED GRADE OF PROPOSED TRAFFIC SIGNAL POLE FOUNDATIONS SHALL BE FLUSH WITH THE EXISTING OR PROPOSED FINISHED GRADE OF THE ADJACENT SIDEWALK. WHERE POLE FOUNDATIONS ARE PROPOSED WITHIN THE LIMITS OF WHEELCHAIR RAMPS, THE TOP OF FOUNDATION GRADE SHALL BE SET TO ALLOW THE POLE BASEPLATE TO BE INSTALLED ABOVE FINISHED WHEELCHAIR RAMP GRADE.
- SEE STANDARD NOTES PLAN AND JOB SPECIFIC PLAN SYMBOLS, LEGEND & NOTES PLAN FOR ADDITIONAL INFORMATION.
- THE EXISTING CONDUIT NETWORK SHOWN ON THIS PLAN IS BASED ON ASSUMED LOCATIONS AND SIZES. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING CONDUIT LOCATIONS AND SIZES FOR ACCURACY AND ADEQUACY PRIOR TO PERFORMING THE WORK. THE CONTRACTOR SHALL INTERCEPT AND CONNECT TO EXISTING CONDUIT AT THE LOCATIONS SHOWN ON THE PLAN.
- SEE TRAFFIC SIGNAL DETAILS PLAN FOR POLE LOCATION DETAILS.

TRAFFIC SIGNAL NO. 382



RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
BRIDGE GROUP 51A - RT. 37 C-2
IMPROVEMENTS TO PONTIAC AVENUE
AND ROUTE 37 WEST RAMPS
CRANSTON, RHODE ISLAND

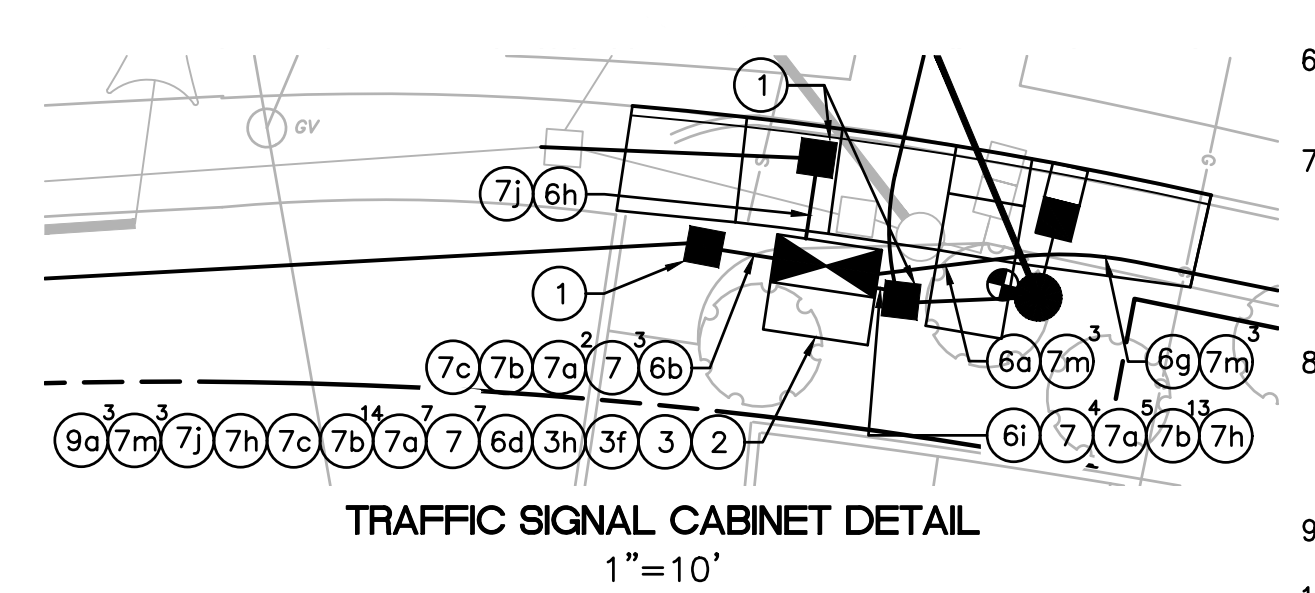
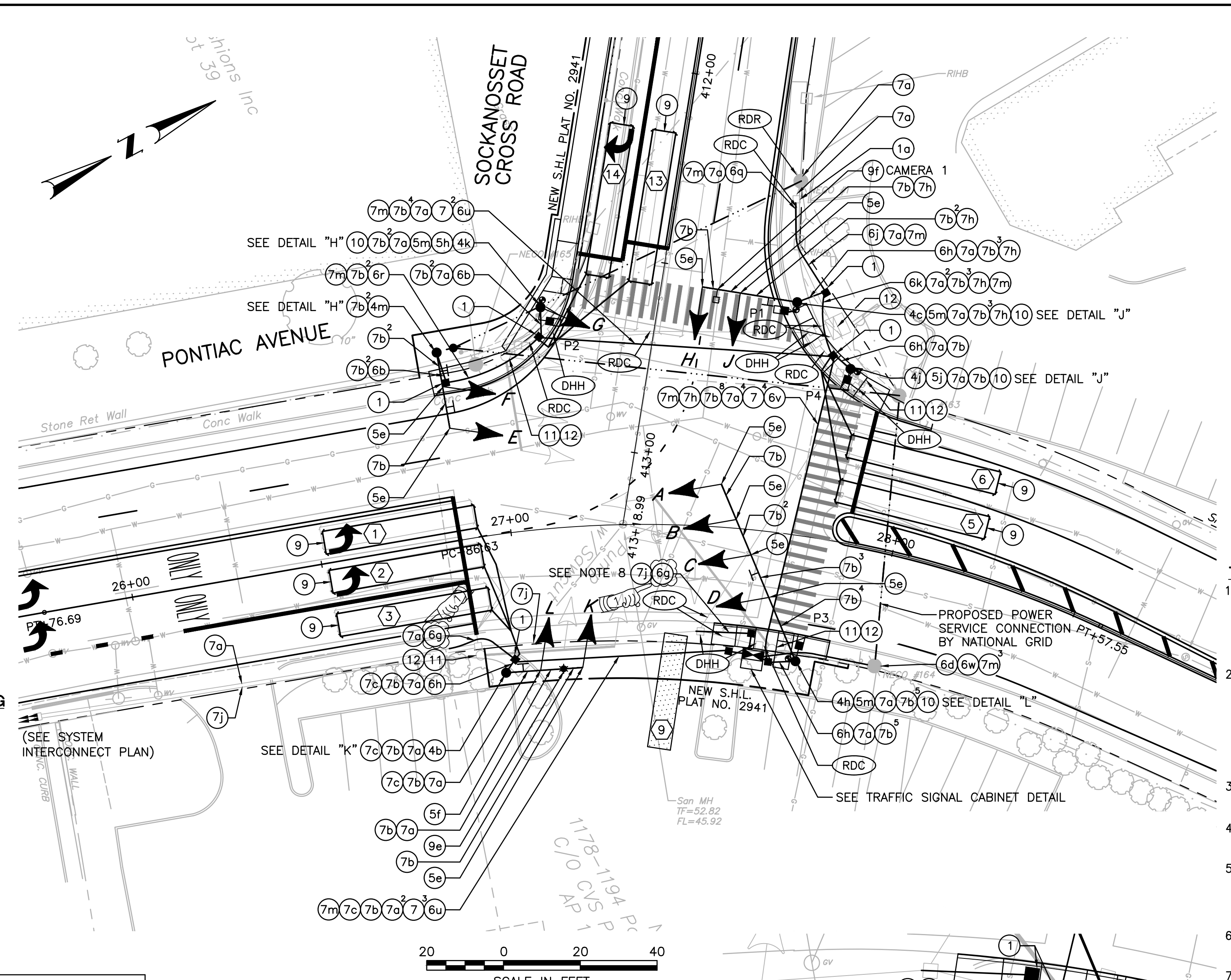
TRAFFIC SIGNAL PLAN NO. 2 PONTIAC AVENUE AT ROUTE 37 WB OFF-RAMP

CHECKED BY _____ DATE _____ SCALE _____

ITEM NO.	ITEM CODE	ITEM DESCRIPTION
1	T05.0100	Precast Type "A" Handhole Std. 18.2.0
1a	T05.9901	Break Into Existing Handhole
2	T12.9150	Meter Socket w/ Manual Bypass
3	T12.9901	Actuated Controller TS-2, Type 1 w/8 Phase Assembly Ground Mounted Including Foundation and Cabinet Std. 19.1.0
3f	T12.9903	Video Detection System Hardware
3h	T12.9906	GPS Time Synchronization Unit
4b	T11.9901	20 Foot Galvanized Steel Mast Arm Traffic Signal Post and Foundation Std. 19.2.0
4c	T11.9902	25 Foot Galvanized Steel Mast Arm Traffic Signal Post and Foundation Std. 19.2.0
4h	T11.9904	50 Foot Galvanized Steel Mast Arm Traffic Signal Post and Foundation Std. 19.2.0
4j	T11.2008	Traffic Signal Standard, 8 Foot, Std 19.4.0 Aluminum Pedestal Pole and Foundation
4k	T11.2010	Traffic Signal Standard, 10 Foot, Std 19.4.0 Aluminum Pedestal Pole and Foundation
4m	T11.9905	20 Foot Galvanized Steel Mast Arm Traffic Signal Post and Foundation Std. 19.2.0 Modified 1
5e	T14.3513	1 Way 3 Section Mast Arm Mounted Signal Head 12 Inch
5f	T14.3516	1 Way 4 Section Mast Arm Mounted Signal Head 12 Inch (w/Dual Ind., Dual Row L.E.D. Arrow)
5h	T14.3713	1 Way 3 Section Pedestal Mounted Signal Head 12 Inch
5j	T14.9901	1 Way Pedestal Mounted LED Pedestrian Signal Head With Countdown Timer 12 Inch
5m	T14.9902	1 Way Bracket Mounted LED Pedestrian Signal Head With Countdown Timer 12 Inch
6a	T06.1020	2 Inch Rigid Steel Conduit - Underground
6b	T06.1030	3 Inch Rigid Steel Conduit - Underground
6d	T06.2020	2 Inch Rigid Steel Conduit Overhead
6g	T06.3020	2 Inch Rigid Steel Conduit - Under Existing Pavement
6h	T06.3030	3 Inch Rigid Steel Conduit - Under Existing Pavement
6i	T06.3040	4 Inch Rigid Steel Conduit - Under Existing Pavement
6j	T06.5120	2 Inch Schedule 40 Polyvinyl Chloride Plastic Conduit - Underground
6k	T06.5130	3 Inch Schedule 40 Polyvinyl Chloride Plastic Conduit - Underground
6q	T06.5320	2 Inch Schedule 40 Polyvinyl Chloride Plastic Conduit - Under Existing Pavement
6r	T06.5330	3 Inch Schedule 40 Polyvinyl Chloride Plastic Conduit - Under Existing Pavement
6u	T06.5430	3 Inch Schedule 80 Polyvinyl Chloride Plastic Conduit - Under Existing Pavement
6v	T06.5440	4 Inch Schedule 80 Polyvinyl Chloride Plastic Conduit - Under Existing Pavement
6w	T06.6020	2 Inch Polyvinyl Chloride Plastic Conduit Overhead
7	T04.5302	14 AWG 2 Conductor Twisted Shielded Cable
7a	T04.5303	14 AWG 3 Conductor Cable
7b	T04.5305	14 AWG 5 Conductor Cable
7c	T04.5307	14 AWG 7 Conductor Cable
7h	T04.9901	Video Detection System Cable (As Specified By Manufacturer)
7j	T04.9902	19 AWG 6 Pair Traffic Communications Cable
7m	T04.5001	6 AWG Single Conductor Cable 600v Insulation
9	T13.1000	Traffic Detector - Loop Std. 19.6.0
9a	T13.1004	Traffic Detector Relay - Loop 4 Channel
9e	T13.9901	Fire Pre-Emption Confirmation Beacon
9f	T13.9902	Video Detection System Camera
9g	T13.8210	Accessible Pedestrian Detector - Pushbutton with Sign
11	945.0100	Remove and Dispose Traffic Signal Equipment
12	945.0200	Remove and Salvage Traffic Signal Equipment
(RDR)	201.0413	Remove and Dispose Risers
(DHH)	201.0423	Remove and Dispose Handhole
(RDC)	201.0617	Remove and Dispose Conduit - All Sizes

SIGNAL HEAD SPACING

SIGNAL HEAD	DISTANCE FROM CENTER OF MAST ARM POLE
A	50'
B	40'
C	30'
D	18'
E	20'
F	9'
H	25'
J	15'
K	20'
L	9'



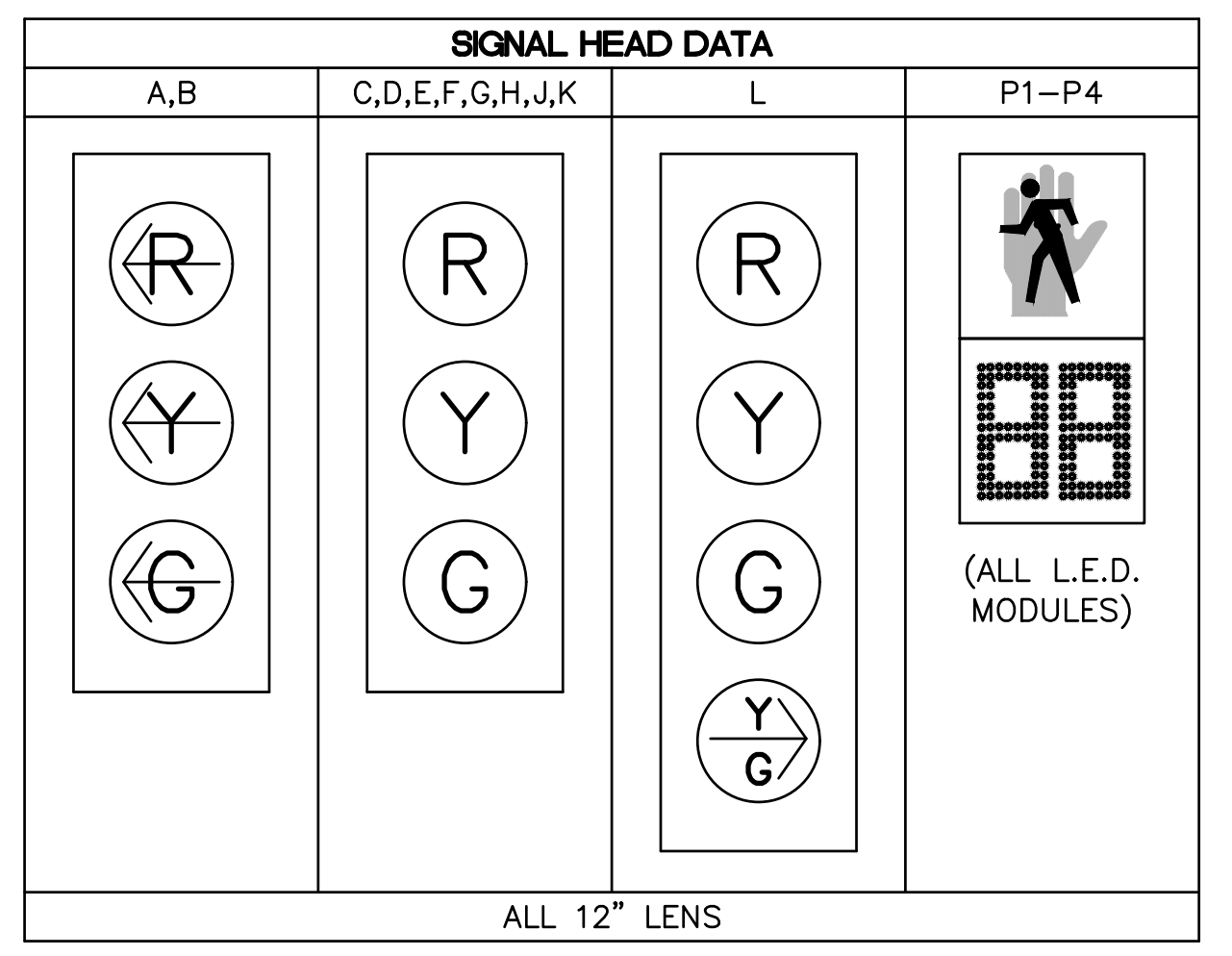
SEQUENCE AND TIMING DIAGRAM

APPROACH	DIRECTION	HOUSING	ø1	ø2	ø3	PRE-EMPT	FLASHING OPERATION
MINIMUM INTERVAL			6	10	6		
VEHICLE EXTENSION			2.8	2.8	2.6		
MAXIMUM 1			30	30	30	30	
MAXIMUM 2			30	30	30	30	
YELLOW CLEARANCE			3.5	4	3.5	3.5	
RED CLEARANCE			2.5	2	2.5	2.5	
PED. WALK/CHANGE				7/11		7/13	
PONTIAC AVENUE NB-LT	A,B	G, Y, R	G, Y, R	R, R, R	R, R, R	R, R, R	FR
PONTIAC AVENUE NB	C,D	G, Y, R	G, Y, R	R, R, R	R, R, R	R, R, R	FY
PONTIAC AVENUE SB	E,F,G	R, R, R	R, R, R	G, Y, R	R, R, R	R, R, R	FY
PRIVATE DRIVEWAY WB	H,J	R, R, R	R, R, R	R, G, Y	R, R, R	R, R, R	FR
SOCKANOSSET CROSS ROAD EB	K	R, R, R	R, R, R	R, R, R	R, G, Y	R, G, Y	FR
SOCKANOSSET CROSS ROAD EB-RT	L	R, R, R	R, R, R	R, R, R	R, G, Y	R, G, Y	FR
PEDESTRIAN X-ING N-S	P1-P2	DW	DW	DW	DW	DW	DW
PEDESTRIAN X-ING E-W	P3-P4	DW	DW	DW	DW	DW	DW
DETECTOR		NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK		
RECALL		OFF	SOFT	OFF	OFF		

COORDINATION DATA
(ALL ENTRIES IN SECONDS)

	PLAN 1	PLAN 2	PLAN 3
CYCLE LENGTH	80	80	80
OFFSET	65	70	28
SPLIT ø1	24	26	26
SPLIT ø2	30	28	27
SPLIT ø3	26	26	27
COORDINATED PHASE	ø1	ø1	ø1
PLAN 1 - MONDAY-FRIDAY	6:00AM-10:00AM		
PLAN 2 - MONDAY-FRIDAY	10:00AM-2:30PM		
SATURDAY-SUNDAY	10:00AM-7:00PM		
PLAN 3 - MONDAY-FRIDAY	2:30PM-7:00PM		
FREE	- ALL OTHER TIME PERIODS		

- NOTES:**
- ø1 "CALL NON ACTUATED" DURING COORDINATION.
 - OFFSET: BEG OF ø1 GREEN.
 - PLAN FORCE OFF/FLOATING FORCE OFF SHALL BE IN EFFECT.
 - SPLIT TIMES EQUAL GREEN PLUS CLEARANCES.
 - INHIBIT MAX. TERMINATION SHALL BE IN EFFECT DURING COORDINATION.



- NOTES:**
- ALL TRAFFIC SIGNAL HEADS ARE PROPOSED.
 - ALL PEDESTRIAN SIGNAL HEADS ARE PROPOSED.
 - ALL PROPOSED RED, YELLOW, AND GREEN SIGNAL DISPLAYS SHALL BE EQUIPPED WITH LED MODULES.
 - 5" BACKPLATE WITH A 3" REFLECTIVE STRIP (YELLOW, TYPE IIIB ADHESIVE SHEETING) SHALL BE PROVIDED ON ALL SIGNAL HEADS.

- TRAFFIC SIGNAL CONSTRUCTION NOTES:**
- THE ITEM "REMOVAL AND DISPOSAL OF TRAFFIC SIGNAL EQUIPMENT" SHALL INCLUDE THE FOLLOWING MAJOR ITEMS:
 - (3) MAST ARM FOUNDATIONS, MISCELLANEOUS TRAFFIC SIGNAL CABLE WIRING SHALL BE REMOVED AND LEGALLY DISPOSED OF IN ACCORDANCE WITH SECTION 945 OF THE STANDARD SPECIFICATIONS.
 - THE ITEM "REMOVAL AND SALVAGING OF TRAFFIC SIGNAL EQUIPMENT" SHALL INCLUDE THE FOLLOWING MAJOR ITEMS:
 - (1) GROUND MOUNTED CABINET AND ALL ASSOCIATED EQUIPMENT, (3) MAST ARMS AND TRAFFIC SIGNAL POSTS, (1) PEDESTAL POLE AND FOUNDATION, (10) TRAFFIC SIGNAL HEADS, (4) PEDESTRIAN SIGNAL HEADS, (4) PEDESTRIAN PUSHBUTTONS SHALL BE REMOVED AND SALVAGED IN ACCORDANCE WITH SECTION 945 OF THE STANDARD SPECIFICATIONS.
 - REMOVAL OF EXISTING HANDHOLES, MANHOLES, CONDUIT, AND RISERS ASSOCIATED WITH THE TRAFFIC SIGNAL SHALL BE PAID FOR UNDER THE APPROPRIATE INDIVIDUAL AND SEPARATE PAY ITEMS.
 - THE CONTRACTOR SHALL INSTALL THE SIGNAL CABINET ON A 12" RISER EXTENSION BASE. THE COST OF THE EXTENSION BASE SHALL BE CONSIDERED INCIDENTAL TO ITEM T12.9901.
 - FINISHED GRADE OF PROPOSED TRAFFIC SIGNAL POLE FOUNDATIONS SHALL BE FLUSH WITH THE EXISTING OR PROPOSED FINISHED GRADE OF THE ADJACENT SIDEWALK. WHERE POLE FOUNDATIONS ARE PROPOSED WITHIN THE LIMITS OF WHEELCHAIR RAMPS, THE TOP OF FOUNDATION GRADE SHALL BE SET TO ALLOW THE POLE BASEPLATE TO BE INSTALLED ABOVE FINISHED WHEELCHAIR RAMP GRADE.
 - SEE STANDARD NOTES PLAN AND JOB SPECIFIC PLAN SYMBOLS, LEGEND & NOTES PLAN FOR ADDITIONAL INFORMATION.
 - PRIOR TO FABRICATION OF THE MAST ARMS AND PEDESTAL POLES ON THE NORTHEAST, SOUTHWEST, AND SOUTHEAST CORNERS, THE CONTRACTOR SHALL PERFORM TEST PITS TO CONFIRM THAT THERE ARE NO OBSTRUCTIONS WITH THE PROPOSED FOUNDATIONS. IF OBSTRUCTIONS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF RECORD TO WORK TOGETHER ON IDENTIFYING AN ALTERNATE LOCATION OR FOUNDATION DESIGN FOR THE MAST ARM OR PEDESTAL POLE.
 - THE EXISTING CONDUIT NETWORK SHOWN ON THIS PLAN IS BASED ON ASSUMED LOCATIONS AND SIZES. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING CONDUIT LOCATIONS AND SIZES FOR ACCURACY AND ADEQUACY PRIOR TO PERFORMING THE WORK. THE CONTRACTOR SHALL INTERCEPT AND CONNECT TO EXISTING CONDUIT AT THE LOCATIONS SHOWN ON THE PLAN.
 - SEE TRAFFIC SIGNAL DETAILS PLAN FOR POLE LOCATION DETAILS.
 - CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE MAST ARM ON THE SOUTHWEST CORNER AND THE POWER SERVICE CONNECTION ON THE NORTHEAST CORNER WITH NATIONAL GRID.
 - THE CONTRACTOR SHALL ENSURE THAT EXISTING MAST ARMS AND UTILITY POLES ARE STABILIZED BEFORE INSTALLING THE MAST ARM FOUNDATIONS ON THE NORTHEAST AND SOUTHWEST CORNERS.

VIDEO DETECTOR DATA

DETECTOR ZONE NO.	CAMERA NUMBER	APPROX. SIZE DET. ZONE	DELAY (SEC)	CALL PHASE	REMARKS
9	1	6'x40'	3	ø3	PROPOSED

TRAFFIC SIGNAL NO. 383



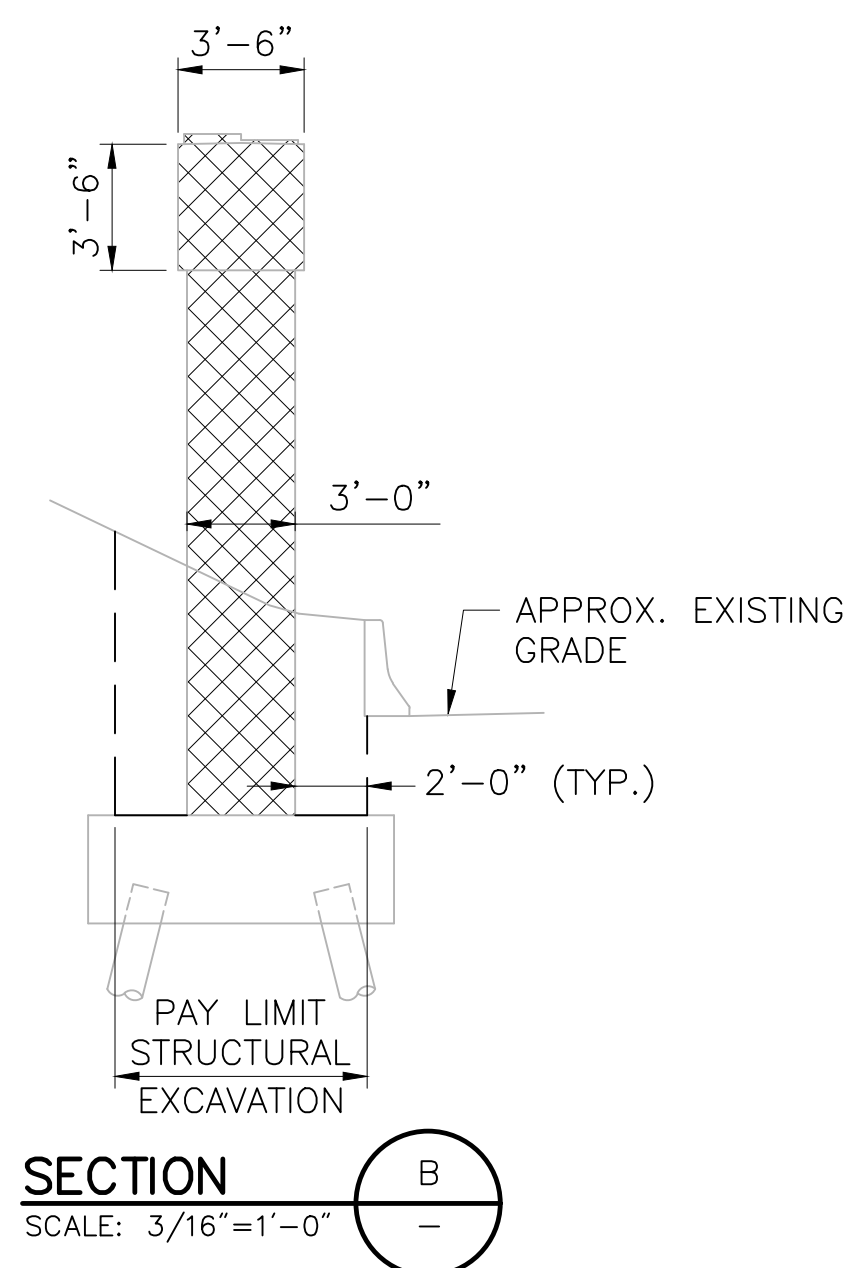
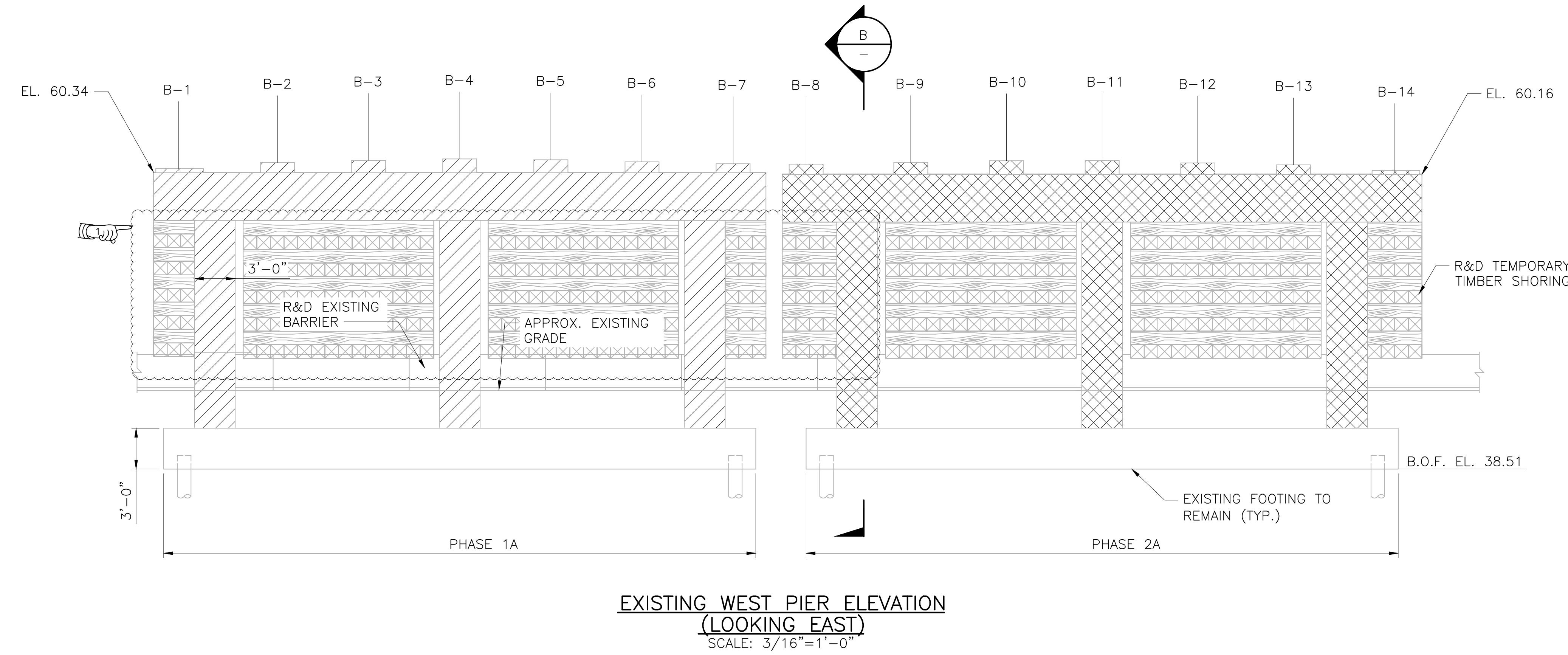
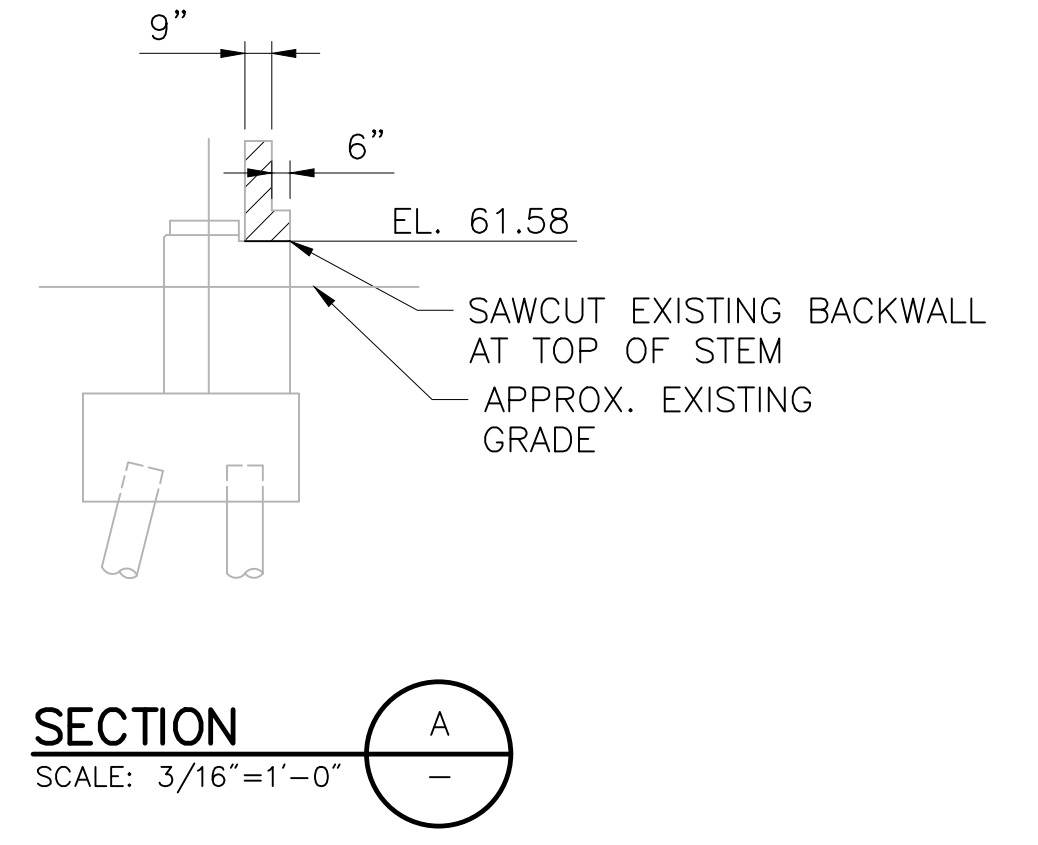
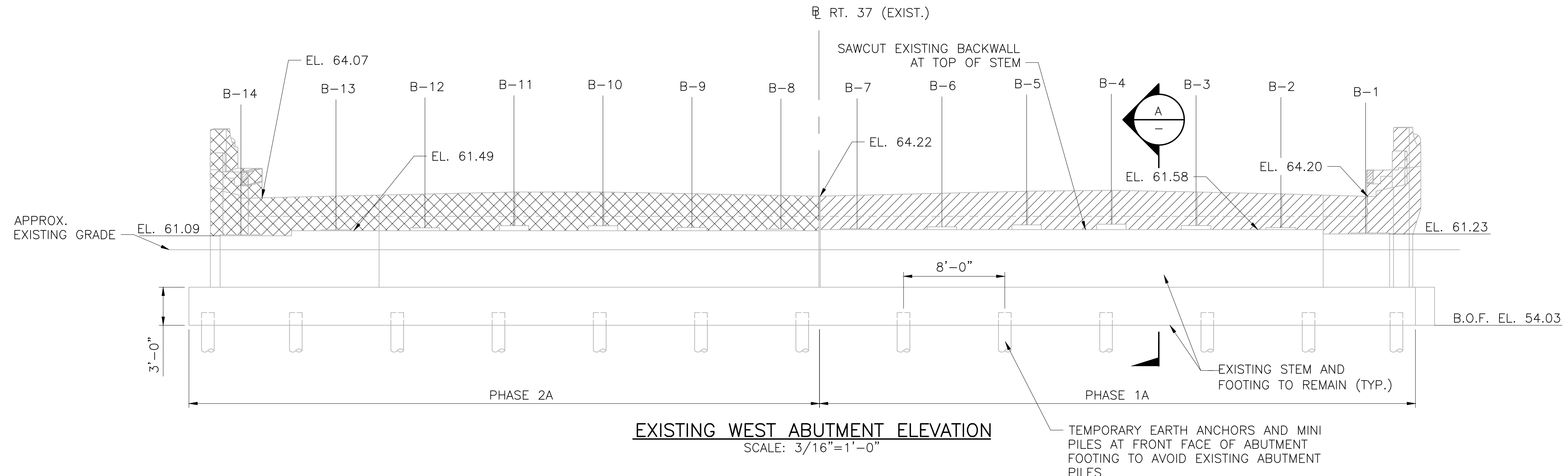
REVISIONS

NO.	DATE	BY
1	10/11/19	VHB

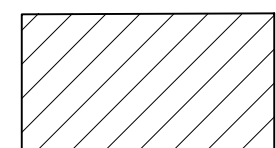
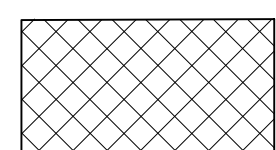
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2
IMPROVEMENTS TO PONTIAC AVENUE
AND ROUTE 37 WEST RAMPS
CRANSTON, RHODE ISLAND

TRAFFIC SIGNAL PLAN NO. 3
PONTIAC AVENUE AT SOCKANOSSET CROSS ROAD



LEGEND

	PHASE 1A DEMOLITION
	PHASE 1B DEMOLITION

NOTE:
ALL DIMENSIONS AND ELEVATIONS SHOWN ARE APPROXIMATE (±).

REVISIONS		
NO.	DATE	BY
1	10/11/19	VHB

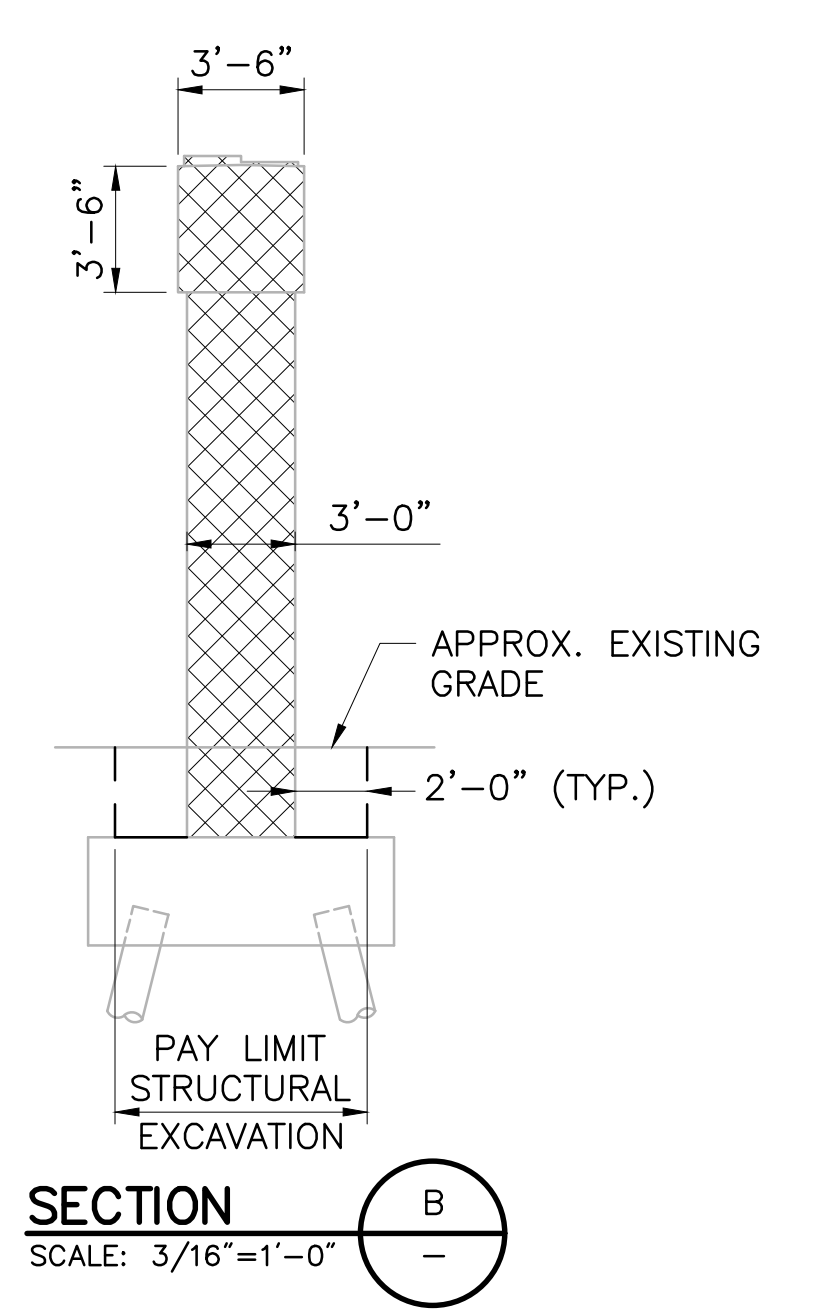
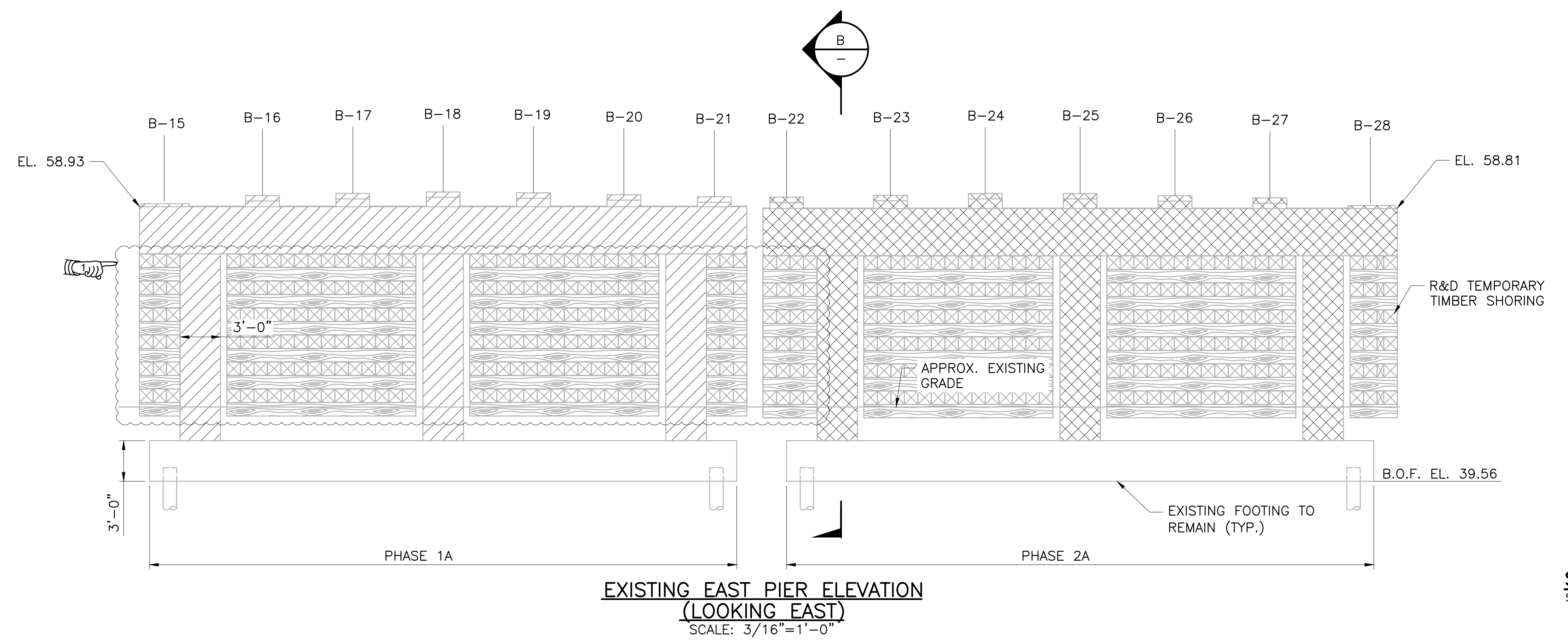
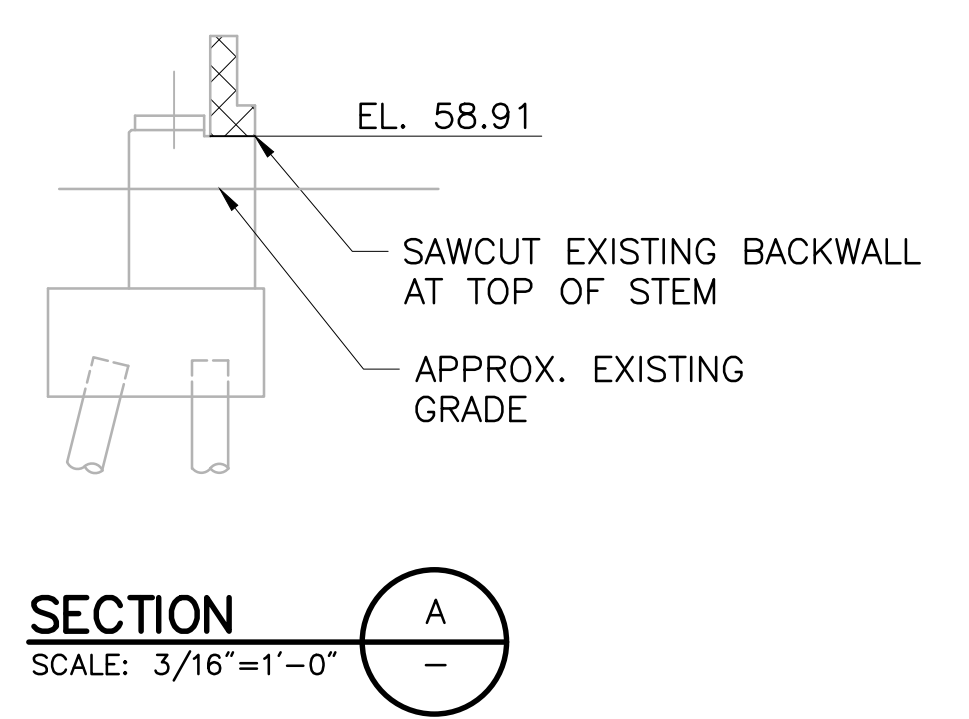
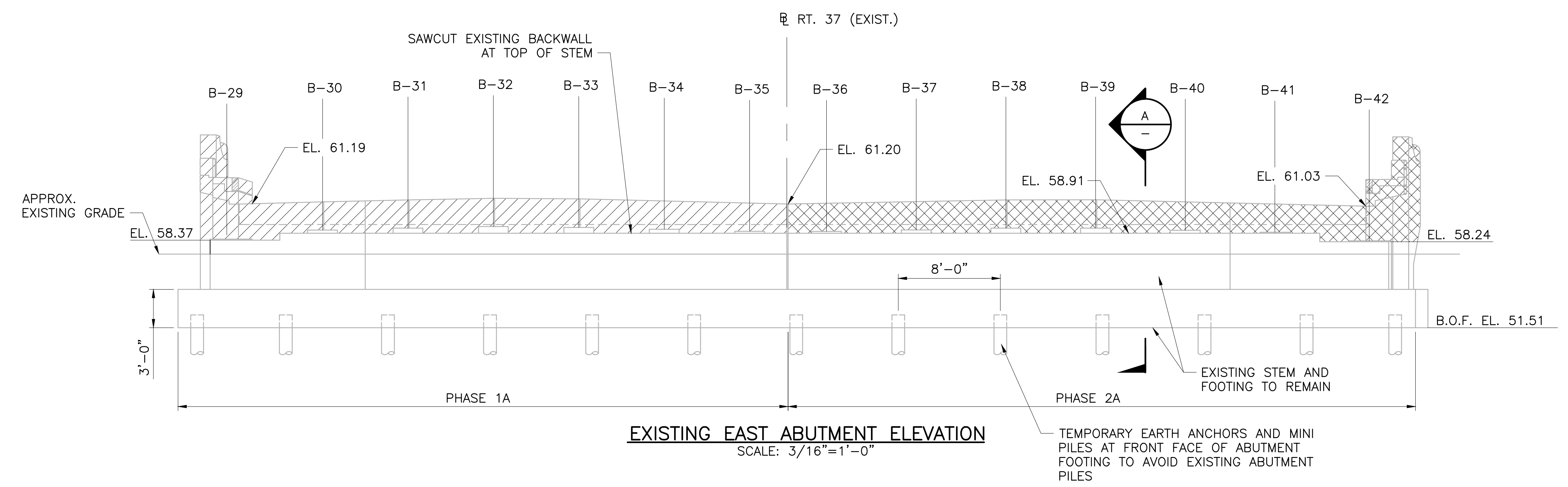
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2
REPLACEMENT OF PONTIAC AVENUE
BRIDGE NO. 062701 AND PRESERVATION
OF BRIDGE NOS. 126301 AND 126401
CRANSTON, RHODE ISLAND

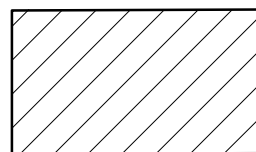
DEMOLITION PLAN 3

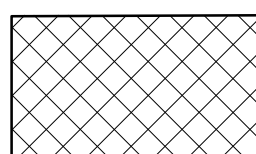
CHECKED BY _____ DATE _____ SCALE _____





LEGEND

 PHASE 1A DEMOLITION

 PHASE 2A DEMOLITION

NOTE:
ALL DIMENSIONS AND ELEVATIONS SHOWN ARE APPROXIMATE (±).

REVISIONS		
NO.	DATE	BY
1	10/11/19	vhb

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2
REPLACEMENT OF PONTIAC AVENUE
BRIDGE NO. 062701 AND PRESERVATION
OF BRIDGE NOS. 126301 AND 126401
CRANSTON, RHODE ISLAND

DEMOLITION PLAN 4

CHECKED BY _____ DATE _____ SCALE _____

