

May 7, 2020

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATION
DEPARTMENT OF ADMINISTRATION

DIVISION OF PURCHASES BID NO. 7602854

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

RHODE ISLAND CONTRACT NO.2020-CH-019

FEDERAL-AID PROJECT NO. FAP Nos: BHO-0185(001), NHP-0005(030)

Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Mayfield Avenue to Interstate 95 Bridge

CITY/TOWN OF Cranston, Warwick

COUNTY OF PROVIDENCE, KENT

NOTICE TO PROSPECTIVE BIDDERS

ADDENDUM NO. 1 Prospective bidders and all concerned are hereby notified of the following changes in the Plans, Specifications, Proposal and Distribution of Quantities for this contract. These changes shall be incorporated in the Plans, Specifications, Proposal and Distribution of Quantities, and shall become an integral part of the Contract Documents.

A. Contract Dates

1. Bid-Opening Date

Bid-Opening Date Updated To "06/02/2020" in accordance with COVID-19 Emergency Protocol attached to this Addendum No. 1.

B. Other Item Changes

1. 201.0409 - REMOVE AND DISPOSE FLEXIBLE PAVEMENT
Quantity Updated To "5600.00".
2. 201.9901 - DEMOLITION AND SITE PREPARATION
Unit of Measure Updated To "EACH".
3. 701.9901 - 6 INCH POLYVINYL CHLORIDE DRAIN PIPE
Description Updated To "6 INCH POLYVINYL CHLORIDE DRAIN PIPE".
4. 905.9901 - EXPOSED AGGREGATE CONCRETE SIDEWALK
Unit of Measure Updated To "SY".Quantity Updated To "950.00".
5. 914.5010 - FLAGPERSONS
Quantity Updated To "7000.00".

6. 914.5020 - FLAGPERSONS - OVERTIME
Quantity Updated To "2500.00".
7. 929.0110 - FIELD OFFICE
Quantity Updated To "42.00".
8. 302.0100 - GRAVEL BORROW SUBBASE COURSE
Quantity Updated To "3900.00".
9. 401.1000 - CLASS 19.0 HMA
Quantity Updated To "3000.00".
10. 204.0100 - TRIMMING AND FINE GRADING
Quantity Updated To "14800.00".
11. 701.0412 - REINFORCED CONCRETE PIPE M 170 CLASS III 12 INCH
Quantity Updated To "650.00".
12. 701.0415 - REINFORCED CONCRETE PIPE M 170 CLASS III 15 INCH
Quantity Updated To "750.00".
13. 701.0612 - REINFORCED CONCRETE PIPE M 170 CLASS V 12 INCH
Quest Item added. Quantity Updated To "235.00".
14. 701.0615 - REINFORCED CONCRETE PIPE M 170 CLASS V 15 INCH
Quest Item added. Quantity Updated To "235.00".
15. 701.8003 - PIPE BEDDING CLASS C
Quest Item added. Quantity Updated To "430.00".
16. 702.0533 - PRECAST CONCRETE APRON STONE 38" STANDARD 7.1.8
Quest Item added. Quantity Updated To "21.00".
17. 920.0150 - BEDDING FOR RIPRAP FS-2 STANDARD 8.3.0
Quest Item added. Quantity Updated To "25.00".
18. 920.0200 - FILTER FABRIC FOR RIP-RAP
Quest Item added. Quantity Updated To "130.00".
19. 702.0530 - PRECAST CONCRETE INLET STONE 5' STANDARD 7.1.5
Quantity Updated To "16.00".
20. 702.0531 - PRECAST CONCRETE INLET STONE 38" STANDARD 7.1.6
Quest Item Deleted.

21. 906.0230 - CEMENT CONCRETE SLOPE FACE CURB PRECAST STRAIGHT STANDARD
7.2.0
Quest Item added. Quantity Updated To "2200.00".
22. 906.0231 - CEMENT CONCRETE SLOPE FACE CURB PRECAST CIRCULAR STANDARD
7.2.0
Quest Item added. Quantity Updated To "350.00".
23. 803.9901 - GALVANIC ENCAPSULATION SYSTEM
Quantity Updated To "2975.00".
24. 817.2142 - REPAIRS TO STRUCTURE CONCRETE MASONRY - FORM AND CAST IN
PLACE CONCRETE
Quantity Updated To "1710.00".
25. L06.9903 - MAPLE - 'RED SUNSET' 2.5-3 INCH CALIPER
Quest Item Deleted.
26. L06.9904 - TULIP TREE 2.5-3 INCH CALIPER
Quest Item Deleted.
27. L06.9911 - ARBORVITAE - 'EMERALD GREEN' 6-7 FEET
Quest Item Deleted.
28. L06.9902 - MAPLE - 'OCTOBER GLORY' 2-2.5 INCH CALIPER
Quantity Updated To "1.00".
29. L06.9904 - SPRUCE - 'HOOPSI BLUE' 5-6 FEET
Quantity Updated To "8.00".
30. L06.9905 - SPRUCE - 'HOOPSI BLUE' 7-8 FEET
Quantity Updated To "8.00".
31. L06.9911 - WHITESPIRE BIRCH - 'WHITESPIRE' 2-2.5 INCH CALIPER
Description Updated To "WHITESPIRE BIRCH - 'WHITESPIRE' 2-2.5 INCH CALIPER".Quantity
Updated To "7.00".
32. L06.9913 - LONDON PLANETREE - 'BLOODGOOD' 3-3.5 INCH CALIPER
Quantity Updated To "3.00".
33. L06.9915 - AZALEA - 'PINK & SWEET' 18-24 INCH
Quantity Updated To "27.00".
34. L06.9916 - ARCTIC FIRE RED TWIG DOGWOOD - 'FARROW' 3-4 FEET
Description Updated To "ARCTIC FIRE RED TWIG DOGWOOD - 'FARROW' 3-4
FEET".Quantity Updated To "3.00".

35. L06.9917 - WINTERBERRY - 'JIM DANDY' 18-24 INCH
Description Updated To "WINTERBERRY - 'JIM DANDY' 18-24 INCH".Quantity Updated To "4.00".
36. L06.9918 - WINTERBERRY - 'RED SPRITE' 24-36 INCH
Quantity Updated To "17.00".
37. L06.9919 - DOUBLE KNOCKOUT ROSE - 'RADTKO' 24-36 INCH
Description Updated To "DOUBLE KNOCKOUT ROSE - 'RADTKO' 24-36 INCH".Quantity Updated To "14.00".
38. L06.9920 - DWARF MAIDEN GRASS - 'YAKUSHIMA' 24-36 INCH
Description Updated To "DWARF MAIDEN GRASS - 'YAKUSHIMA' 24-36 INCH".Quantity Updated To "15.00".
39. 920.0085 - PLACED STONE RIPRAP R-3, R-4, R-5 STANDARD 8.3.0
Quantity Updated To "35.00".
40. L15.9901 - DECORATIVE CRUSHED STONE
Quantity Updated To "70.00".

C. Contract Documents

1. General Provisions - Contract Specific
 - a. Page CS-ii
Delete Page CS-ii in its entirety and insert the revised Page CS-ii (R-1) attached to this Addendum No. 1. The revision made on this page is as follows:
 - Title of Section 32 under the Index was revised to "Lane Closure/Lane Split Coordination" in accordance with RIDOT TAC 0350.
 - Section 38 Boring Logs was added to the Index and Appendices.
 - b. Page CS-6
Delete Page CS-6 in its entirety and insert the revised Page CS-6 (R-1) attached to this Addendum No. 1. The revision made on this page is as follows:
 - "Modified Class 12.5 HMA" has been revised to include "with Pay Adjustments".
 - c. Page CS-8
Delete Page CS-8 in its entirety and insert the revised Page CS-8 (R-1) attached to this Addendum No. 1. The revision made on this page is as follows:
 - Paragraph 5 has been deleted.
 - d. Page CS-10
Delete Page CS-10 in its entirety and insert the revised Page CS-10 (R-1) attached to this Addendum No. 1. The revision made on this page is as follows:
 - Winter Shutdown date has been revised to December 15th.

- e. Page CS-12
Delete Page CS-12 in its entirety and insert the revised Page CS-12 (R-1) attached to this Addendum No. 1. The revision made on this page is as follows:
 - Bullet E under Section 17 Special Requirements has been added.
 - f. Page CS-14
Delete Page CS-14 in its entirety and insert the revised Page CS-14 (R-1) attached to this Addendum No. 1. The revision made on this page is as follows:
 - Two (2) items were added to the Shop Drawings list.
 - g. Page CS-17
Delete Page CS-17 in its entirety and insert the revised Page CS-17 (R-1) attached to this Addendum No. 1. The revision made on this page is as follows:
 - A paragraph was added at the beginning of Section 29 Installation of Electric.
 - h. Pages CS-18 thru CS-18a
Delete Page CS-18 in its entirety and insert the revised Page CS-18 (R-1) thru CS-18a attached to this Addendum No. 1. The revision made on these pages are as follows:
 - A paragraph including estimated work duration were added at the end of Section 29 Installation of Electric.
 - i. Page CS-20
Delete Page CS-20 in its entirety and insert the revised Page CS-20 (R-1) attached to this Addendum No. 1. The revision made on this page is as follows:
 - Title of Section 32 was revised to "Lane Closure/Lane Split Coordination" including addition of a paragraph to the beginning of this section in accordance with RIDOT TAC 0350.
 - Section 38 Boring Logs was added.
 - j. Appendix C
Delete Appendix C in its entirety and insert the revised Appendix C (R-1) attached to this Addendum No. 1. The revision made on this page is as follows:
 - A signed TMP has been included.
 - k. Appendix H
Add Appendix H in its entirety attached to this Addendum No. 1. The revision made on this page is as follows:
 - Boring Logs have been included.
2. Specifications - Job Specific
- a. Index
Delete Index in its entirety and insert the revised Index Pages i thru v (R-1) attached to this Addendum No. 1. The revision made on this page is as follows:
 - The Index sheet numbers were updated.
 - Landscape items (L06.9901 thru L06.9923) were updated.

- b. Pages JS 10 thru 11
- Delete Pages JS 10 thru 11 in its entirety and insert the revised Pages JS 10 thru 11 (R-1) attached to this Addendum No. 1. The revision made on this page is as follows:
- Materials, Construction Method, Method of Measurement, and Basis of Payment sections were updated.
 - Unit of Measure was updated from "Lump Sum" to "Each".
- c. Pages JS 56 thru 59
- Delete Pages JS 56 thru 59 in its entirety and insert the revised Pages JS 56 thru 59 (R-1) attached to this Addendum No. 1.
- d. Pages JS 63 thru 67
- Delete Pages JS 63 thru 67 in its entirety and insert the revised Pages JS 63 thru 67 (R-1) attached to this Addendum No. 1.
- e. Pages JS 71 thru 72
- Delete Pages JS 71 thru 72 in its entirety and insert the revised Pages JS 71 thru 72 (R-1) attached to this Addendum No. 1. The revision made on this page is as follows:
- Description section was updated.
 - First paragraph of the Materials section was updated.
 - Item name was updated under sections Method of Measurement and Basis of Payment for consistency.
- f. Page JS-81
- Delete Page JS-81 in its entirety and insert the revised Page JS-81 (R-1) attached to this Addendum No. 1. The revision made on this page is as follows:
- Materials section were updated.
- g. Pages JS-86 thru 87
- Delete Pages JS-86 thru 87 in its entirety and insert the revised Pages JS-86 thru 87 (R-1) attached to this Addendum No. 1. The revision made on this page is as follows:
- Daily charge deduction from the monies due to the to the Contractor for failure to keep all parking spaces within the Cork & Rye parking lot open at all times during construction was updated from per "day" to per "hour".
 - Liquid Asphalt and Diesel Fuel prices have been updated as of March 9, 2020.
- h. Pages JS 90 thru 109
- Delete Pages JS 90 thru 109 in its entirety and insert the revised Pages JS 90 thru 109 (R-1) attached to this Addendum No. 1. The revision made on this page is as follows:
- Formatting was updated.
 - Landscape items (L06.9901 thru L06.9923) were updated.
- i. Pages JS 146 thru 147
- Delete Pages JS 146 thru 147 in its entirety and insert the revised Pages JS 146 thru 147 (R-1) attached to this Addendum No. 1. The revision made on this page is as follows:
- Unit of Measure was updated from "Each" to "Lump Sum".
- j. Page JS-172

Delete Page JS-172 in its entirety and insert the revised Page JS-172 (R-1) attached to this Addendum No. 1. The revision made on this page is as follows:

- Materials section was updated.

3. Federal Wage Rates

Federal Wage Rates have been updated.

D. Distribution of Quantities

1. Page Index 1 thru 6

Delete Page Index 1 thru 6 in its entirety and insert the revised Page Index 1 thru 6 (R-1) attached to this Addendum No. 1.

2. Pages 1 thru 2

Delete Pages 1 thru 2 in its entirety and insert the revised Pages 1 thru 2 (R-1) attached to this Addendum No. 1. The only item revised on these pages are as follows:

- Item No. 004, Item Code 201.0409 Remove and Dispose Flexible Pavement

3. Page 4

Delete Page 4 in its entirety and insert the revised Page 4 (R-1) attached to this Addendum No. 1. The only item revised on this page is as follows:

- Item No. 012, Item Code 201.9901 Demolition and Site Preparation

4. Page 6

Delete Page 6 in its entirety and insert the revised Page 6 (R-1) attached to this Addendum No. 1. The only item revised on this page is as follows:

- Item No. 019, Item Code 204.0100 Trimming and Fine Grading

5. Pages 7 thru 7a

Delete Page 7 in its entirety and insert the revised Page 7 (R-1) thru 7a attached to this Addendum No. 1. The only items revised on these pages are as follows:

- Item No. 025, Item Code 302.0100 Gravel Borrow Subbase Course

- Item No. 026, Item Code 401.1000 Class 19.0 HMA

6. Pages 8 thru 9

Delete Pages 8 thru 9 in its entirety and insert the revised Pages 8 thru 9 (R-1) attached to this Addendum No. 1. The only items revised on these pages are as follows:

- Item No. 028, Item Code 401.3101 Modified Class 9.5 HMA for Bridge Decks

- Item No. 033, Item Code 701.0412 Reinforced Concrete Pipe M 170 Class III 12 Inch

- Item No. 034, Item Code 701.0415 Reinforced Concrete Pipe M 170 Class III 15 Inch

7. Pages 10 thru 10a

Delete Page 10 in its entirety and insert the revised Page 10 (R-1) thru 10a attached to this Addendum No. 1. The only item revised on these pages are as follows:

- Item No. 036, Item Code 701.9901 6 Inch Polyvinyl Chloride Drain Pipe

8. Pages 12 thru 12a

Delete Page 12 in its entirety and insert the revised Page 12 (R-1) thru 12a attached to this Addendum No. 1. The only items revised/deleted on these pages are as follows:

- Item No. 041, Item Code 702.0530 Precast Concrete Inlet Stone 5' Standard 7.1.5
- Item No. 042, Item Code 701.0531 Precast Concrete Inlet Stone 38" Standard 7.1.6

9. Pages 21 thru 22

Delete Pages 21 thru 22 in its entirety and insert the revised Pages 21 thru 22 (R-1) attached to this Addendum No. 1. The only items revised on these pages are as follows:

- Item No. 078, Item Code 803.9901 Galvanic Encapsulation System
- Item No. 081, Item Code 817.2142 Repairs to Structure Concrete Masonry - Form and Cast In Place Concrete

10. Pages 25 thru 29

Delete Pages 25 thru 29 in its entirety and insert the revised Pages 25 thru 29 (R-1) attached to this Addendum No. 1. The only items revised on these pages are as follows:

- Item No. 092, Item Code 905.9901 Exposed Aggregate Concrete Sidewalk
- Item No. 098, Item Code 914.5010 Flagpersons
- Item No. 099, Item Code 914.5020 Flagpersons - Overtime
- Item No. 104, Item Code 920.0085 Placed Stone Riprap R-3, R-4, R-5 Standard 8.3.0
- Item No. 112, Item Code 929.0110 Field Office

11. Pages 32 thru 37

Delete Pages 32 thru 37 in its entirety and insert the revised Pages 32 thru 37 (R-1) including 35a attached to this Addendum No. 1. The only items revised on these pages are as follows:

- All Plantings, Item Nos. 124 thru 149, Item Codes L06.9901 thru L06.9923
- Item No. 152, Item Code L15.9901 Decorative Crushed Stone

12. Page 56

Delete Page 56 in its entirety and insert the revised Page 56 (R-1) attached to this Addendum No. 1. The only item revised/added on this page is as follows:

- Item No. 235, Item Code 701.0612 Reinforced Concrete Pipe M 170 Class V 12 inch

13. Pages 57 thru 58

Insert the added Pages 57 thru 58 attached to this Addendum No. 1. The items added on these pages are as follows:

- Item No. 236, Item Code 701.0615 Reinforced Concrete Pipe M 170 Class V 15 Inch
- Item No. 237, Item Code 701.8003 Pipe Bedding Class C
- Item No. 238, Item Code 702.0533 Precast Concrete Apron Stone 38" Standard 7.1.8
- Item No. 239, Item Code 906.0230 Cement Concrete Slope Face Curb Precast Straight Standard 7.2.0
- Item No. 240, Item Code 906.0231 Cement Concrete Slope Face Curb Precast Circular Standard 7.2.0
- Item No. 241, Item Code 920.0150 Bedding for Riprap FS-2 Standard 8.3.0
- Item No. 242, Item Code 920.0200 Filter Fabric for Rip-Rap

E. Drawings/Plans - Change/Addition

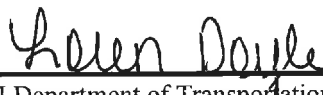
1. Volume 1 - F.A. Project No. NHP-0005(030)
 - a. Sheet 5 - Job Specific Plan Symbols, Legends, and Notes
Delete Sheet 5 in its entirety and insert the revised Sheet 5 (R-1) attached to this Addendum No. 1.
 - b. Sheet 8 - Typical Sections No. 3
Delete Sheet 8 in its entirety and insert the revised Sheet 8 (R-1) attached to this Addendum No. 1.
 - c. Sheet 34 - Construction Details - 2
Delete incorrect Sheet No. 34 - Construction Details - 2 in its entirety and insert the revised corrected Sheet No. 35 - Construction Details - 2 (R-1) attached to this Addendum No. 1.
 - d. Sheet 36 - Construction Details - 3
Delete Sheet 36 in its entirety and insert the revised Sheet 36 (R-1) attached to this Addendum No. 1.
 - e. Sheet 37 - General Plan No. 1
Delete Sheet 37 in its entirety and insert the revised Sheet 37 (R-1) attached to this Addendum No. 1.
 - f. Sheets 41 thru 43 - General Plan Nos. 5 thru 7
Delete Sheets 41 thru 43 in its entirety and insert the revised Sheets 41 thru 43 (R-1) attached to this Addendum No. 1.
 - g. Sheets 63 thru 67 - Drainage and Utility Plan Nos. 1 thru 5
Delete Sheets 63 thru 67 in its entirety and insert the revised Sheets 63 thru 67 (R-1) attached to this Addendum No. 1.
 - h. Sheets 69 thru 74 - Drainage and Utility Plan Nos. 7 thru 12
Delete Sheets 69 thru 74 in its entirety and insert the revised Sheets 69 thru 74 (R-1) attached to this Addendum No. 1.
 - i. Sheet 78 - Drainage Details - 4
Delete Sheet 78 in its entirety and insert the revised Sheet 78 (R-1) attached to this Addendum No. 1.

- j. Sheet 82 - Drainage Details - WQ 4
Delete Sheet 82 in its entirety and insert the revised Sheet 82 (R-1) attached to this Addendum No. 1.
 - k. Sheet 87 - Landscape Plan No. 2
Delete Sheet 87 in its entirety and insert the revised Sheet 87 (R-1) attached to this Addendum No. 1.
 - l. Sheet 89 - Landscape Details
Delete Sheet 89 in its entirety and insert the revised Sheet 89 (R-1) attached to this Addendum No. 1.
 - m. Sheets 94 thru 103 - Profile Nos. 1 thru 10
Delete Sheets 94 thru 103 in its entirety and insert the revised Sheets 94 thru 103 (R-1) attached to this Addendum No. 1.
2. Volume 2 - F.A. Project No. BHO-0185(001)
- a. Sheet 4 - General Notes (3 of 4)
Delete Sheet 4 in its entirety and insert the revised Sheet 4 (R-1) attached to this Addendum No. 1.
 - b. Sheet 10 - Typical Bridge Sections
Delete Sheet 10 in its entirety and insert the revised Sheet 10 (R-1) attached to this Addendum No. 1.
 - c. Sheet 18 - Pier Plan, Elevation, & Section
Delete Sheet 18 in its entirety and insert the revised Sheet 18 (R-1) attached to this Addendum No. 1.

F. Clarification

1. Bid Questions

Answers to Bid Questions are attached to this Addendum No. 1.



RI Department of Transportation
for: Administrator, Division of Project Management

A. CONTRACT DATES

1. Bid Opening Covid-19 Emergency Protocol



State of Rhode Island
Department of Administration / Division of Purchases
One Capitol Hill, Providence, Rhode Island 02908-5855
Tel: (401) 574-8100 Fax: (401) 574-8387

ADDENDUM #1

RFQ #7602854 TITLE: 2020-CH-019 ROUTE 5 LAMBERT LIND HIGHWAY C-1

SUBMISSION DEADLINE: 06/02/2020 at 2:00 PM

BID OPENING ADDENDUM -COVID-19 EMERGENCY PROTOCOL

Vendors and the public are advised that due to Covid-19 emergency social distancing requirements bid openings at the Division of Purchases shall be conducted via live streaming on the ZOOM . Vendors and the public shall not be permitted to enter the Division of Purchases to attend bid openings. Vendors and the public who attend bid openings via live streaming shall be required to identify themselves and a record of all such attendees shall be maintained by the Division of Purchases. Vendor bid proposals shall be opened and read aloud at the date and time listed herein. The results of bid solicitations requiring a public copy for public works projects shall be posted on the Division of Purchases website as soon as possible after the bid opening. For RFP solicitations only vendor names shall be read aloud at the opening.

Vendors and the public are further advised that visitor access to the Powers Building at One Capitol Hill, Providence, RI requires pre-screening at the entrance to the building. In accordance with the Governor's Executive Order(s) and Department of Health emergency regulations all visitors to the Powers Building must wear a cloth mask which covers the nose and mouth. Vendors delivering bid proposals to the Division of Purchases should allow sufficient time for the pre-screening process. The Division of Purchases assumes no responsibility for delays caused by the screening process or any other reason. Vendors are solely responsible for on time delivery of bid proposals. The Division of Purchases shall not accept late bids for any reason.

Division of Purchases is inviting you to a scheduled Zoom meeting.

Topic: 7602854

Time: June 06, 2020 2:00 PM Eastern Time (US and Canada)

Join Zoom meeting

<https://zoom.us/j/96117315346?pwd=eU10bWNodTRtcXVGb3dRM0tjUTNNUT09>

Meeting ID: 961 1731 5346

Password: 766559

One tap mobile

+16465588656,,96117315346#,,1#,766559# US (New York)

+13017158592,,96117315346#,,1#,766559# US (Germantown)

Dial by your location

+1 646 558 8656 US (New York)

+1 301 715 8592 US (Germantown)

+1 312 626 6799 US (Chicago)

+1 669 900 9128 US (San Jose)

+1 253 215 8782 US (Tacoma)

+1 346 248 7799 US (Houston)

Meeting ID: 961 1731 5346

Password: 766559

Find your local number: <https://zoom.us/u/aR6IpaUd1>

Marisa DelFarno

Buyer I



B. OTHER ITEM CHANGES (No Attachments)

C. CONTRACT DOCUMENTS

1. General Provisions – Contract Specifics
2. Specifications – Job Specific
3. Federal Wage Rates

1. General Provisions – Contract Specifics

<u>Paragraph</u>	<u>Title</u>	<u>Page</u>
23.	Requests for Information (Not Related to Shop Drawings)	CS-14
24.	Unit Bid Item and Lump Sum Bid Item Payments	CS-14
25.	Right-Of-Way and Access to Property	CS-15
26.	Document Management and Control	CS-15
27.	Covering Existing Signs	CS-15
28.	Installation of Gas Main	CS-15
29.	Installation of Electric	CS-17
30.	Installation of Sewer Force Main	CS-18
31.	Transportation Management Plan	CS-19
32.	Lane Closure/Lane Split Coordination	CS-20
33.	Rhode Island Department of Environmental Management Permits	CS-20
34.	Other Permits	CS-20
35.	Soil Borings	CS-20
36.	Pavement Cores	CS-20
37.	Structure Disposition	CS-20
38.	Boring Logs	CS-20

Appendices

Appendix A	National Grid Gas Notes and Requirements
Appendix B	National Grid Electric Standards
Appendix C	Transportation Management Plan
Appendix D	Environmental Permits (<i>Application No. 19-0218</i>)
Appendix E	Other Permits
	1. Warwick Commission on Historical Cemeteries
Appendix F	Pavement Cores
Appendix G	Structure Disposition
Appendix H	Boring Logs

Pavement Restoration – Surface Course Overlay

Restoration of the pavement will occur as follows:

- Oaklawn Avenue/Lambert Lind Highway/Greenwich Avenue (Route 5) between Bateman Avenue and the I-95 Bridge.
 - The pavement will be removed by micro-milling and shall be overlaid with 2 inches of Modified Class 12.5 HMA with Pay Adjustments within the limits identified on the plans.

Pavement Restoration – Full Depth Pavement

Restoration of the pavement will occur as follows:

- Oaklawn Avenue (Route 5) between Woodrow Avenue and Bateman Avenue.
 - The pavement will be removed full depth and shall be overlaid with 2 inches of Modified Class 12.5 HMA with Pay Adjustments over 6 inches of Modified Class 19.0 HMA within the limits identified on the plans.

Pavement Restoration – Full Depth Pavement Widening

Restoration of the pavement will occur as follows:

- Oaklawn Avenue/Lambert Lind Highway/Greenwich Avenue (Route 5) – Multiple locations.
 - The existing pavement will be removed full depth and shall be overlaid with 2 inches of Modified Class 12.5 HMA with Pay Adjustments over 6 inches of Modified Class 19.0 HMA or 6 inches of Portland Cement Concrete Base in areas of less than 4-foot widening over 12 inches of Gravel Borrow within the limits identified on the plans.

Paving

The Contractor shall submit a paving schedule to the Engineer seven (7) days prior to the proposed paving date.

The Contractor will be required to “square off” after each day’s paving run.

Asphalt Emulsion Tack Coat: The Contractor shall apply the asphalt emulsion tack coat to the milled surfaces and/or base surfaces. No tack coat shall be left exposed to traffic. The Contractor shall apply tack coat only to areas expected to receive final surface course by the end of the day’s operations.

The Contractor shall clean and sweep milled areas prior to the application of the surface course. No separate payment will be made for cleaning and sweeping. Payment for cleaning and sweeping operations shall be included in the cost of the paving operation.

7. PAVEMENT MARKINGSPermanent Pavement Markings

Permanent pavement markings shall be white and yellow epoxy resin pavement markings and shall be in accordance with the requirements of the “Manual on Uniform Traffic Control Devices”, 2009, including all revisions.

The Contractor may work on multiple blocks at a time. However, no construction work of any kind will be allowed on blocks adjacent to or directly across the roadway from those blocks being worked on at any given time.

During pavement removal operations, no over breakage into existing operational travel lanes will be allowed. At the end of each day's paving or pavement removal, the Contractor shall be required to place temporary pavement markings for all travel lanes, and shoulders. There will be no longitudinal pavement drop-offs allowed on the project.

The Contractor shall schedule all pavement removal operations such that no area is open to traffic for more than 3 days without new bituminous pavement in place. All areas in which bituminous pavement has been removed will be paved over by the end of the Friday workday.

The Contractor shall backfill or place steel plates capable of supporting HS-20 vehicle loading over all trenches and excavations at the end of work each day except when otherwise directed by the Engineer. There shall be no additional compensation for backfilling, re-excavating and/or plating these trenches.

Bridge No. 185 Rehabilitation

Temporary traffic control for bridge rehabilitation has been incorporated into the Contract Documents. The Contractor shall review the Traffic Control Plans prior to construction.

The Contractor shall follow the MUTCD, 2009 Edition for traffic control measures for this project and restrictions approved in the Traffic Management Plan (TMP).

A. Construction Phasing Operations

Construction phasing shall be implemented in accordance with these General Provisions/Contract Specific pages as follows:

- Pre-Phase 1
The existing underground communication line on the west side of the bridge will be permanently relocated (by others) overhead to new utility poles on the east side of Route 5. The existing overhead service wires (electric, telecom) across Route 5 on the northern end of the bridge will be temporarily relocated (by others). See Bridge Utility Relocation Plan.
- Phase 1
Contractor shall relocate all traffic to the east side of Route 5 and demolish and replace the west bridge structure. During this phase, 1 lane in each direction will be provided on Route 5. See Temporary Traffic Control Plans. One lane in each direction shall be permitted between February and October only. Four lanes of travel shall be provided during the fall/winter holiday season. See the General Restriction Charts (Attachment A) under Appendix C.

2. Gramercy Property Group, LLC

The Contractor shall notify Joe Cogan (Asset Manager) of Gramercy Property Group (400 Madison Avenue #9D, New York, NY 10017, Phone: 646-290-8190, Mobile: 917-710-7960, email: jcogan@gramercyypg.com) at least 72 hours prior to any construction work in and around the Marshall's and Bob's Stores Plaza entrance on Route 5.

12. CONTRACTOR'S RESPONSIBILITY FOR DAMAGED STORM DRAINS

The Contractor shall use care when working within or in the vicinity of existing drainage structures. Any drainage structures, pipes, or culverts damaged during the disposing of, cleaning of, installation of, or while making repairs to drainage structures/pipes or culverts or while carrying out any other work on this contract shall be the Contractor's responsibility. Any drainage structures, pipes, or culverts damaged by the Contractor, while carrying out this Contract shall be replaced or repaired by the Contractor to the satisfaction of the Engineer at no additional charge to the State of Rhode Island.

13. WINTER SHUTDOWN

The winter shutdown on this project will begin by December 15th of any particular year and end by Feb 1st of the following year.

The following conditions must be met prior to winter shutdown:

- A. No longitudinal or lateral drop-offs shall be permitted within any construction segment. This means that any phases of pavement construction that have begun must be completed.
- B. All safety related hardware such as temporary barriers, temporary impact attenuators, temporary pavement markings, regulatory and warning signing are in place.
- C. All non-applicable construction signing has been removed or covered.
- D. All drainage and utility structures within the paved roadway shall be adjusted to grade with the surrounding pavement prior to the winter shutdown.
- E. Winter shutdown may be modified by permission of the Engineer for certain tasks including demolition after December 15th.

14. STATE AND LOCAL POLICE COMPENSATION

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

The Contractor shall provide the Resident Engineer 48 hours advance notice of work activities that require Police detail services. Additionally, the Contractor shall provide the Resident Engineer 24 hour notice of work activities to be suspended for which Police details were scheduled.

17. SPECIAL REQUIREMENTS

- A. All parking spaces within the Cork and Rye Pub parking lot, 255 Lambert Lind Highway, shall remain open at all times.
- B. The Contract shall notify Gramercy Property Group, LLC at least 72 hours prior to any work in and around the Marshall's and Bob's Stores Plaza property (Assessor's Plat 18, Lot 1030) including at the driveway on Route 5. Contact information is listed on Item 11 Other Coordination Contacts. All work within this property will be performed during non-business hours such that ingress and egress to Oaklawn Avenue will remain open at all time during normal business.
- C. All work associated with water quality basin #4 including associated landscaping as shown on the plans shall be installed and completed by October 15, 2020.
- D. The Contractor shall perform a test pit for the new riser pole at Station 52+35±, 30' Left with a National Grid Supervisor/Foreman present to confirm any existing underground utilities prior to installing the new riser pole. The test pit shall be paid for under Item 919.0101 Test Pits. The new riser pole will be installed by others.
- E. The Contractor is restricted from doing any work on Assessor's Plat 274, Lots 169 (#413 Knight Street) and 173 (#401/#403 Knight Street) until all tenants have vacated both properties. Once the State obtains right of occupancy for both properties, the Contractor will be notified by the appropriate department.

18. ENVIRONMENTAL DOCUMENTS

It shall be the Contractor's responsibility to maintain copies of all environmental permits and documents for this Contract. Permits shall be posted in a noticeable location within the project area.

It shall be the Contractor's responsibility to comply with all restrictions and stipulations stated or implied by the environmental permits, documents and orders. There will be no separate payment of work done to comply with these requirements unless an item is provided in the Proposal for a specific requirement.

The following environmental documents are included in the appendices of these Contract Specific Documents;

- RIDEM and RIPDES Permits.

19. TRAFFIC FINES IN WORK ZONE

The Traffic Fines in Work Zone Regulatory Sign (R.I. Std. 27.1.1) shall be utilized wherever construction activities are in process and construction personnel are present. When work is not in progress, these signs shall either be removed from the site or covered.

20. SPECIAL NOTICE TO THE CONTRACTOR

The Contractor is responsible for damage to any existing structures, equipment, or signs in the entire right-of-way.

Shop drawings are anticipated for the following major items:

- Traffic Signal Equipment;
- Guardrail System;
- Drainage System;
- Concrete Mix Design;
- Temporary Cofferdams and Control of Water;
- Construction sequence and methods to be used;
- All reinforcement and layout;
- Method of superstructure demolition;
- Method of substructure demolition;
- Precast concrete temporary barrier;
- Temporary Earth Retaining Systems;
- Framing Plan;
- Deck outline, elevations, reinforcement, and formwork;
- Casting sequence of deck closure pours;
- Structural Steel;
- Elastomeric bearings;
- Method of girder installation;
- Prefabricated Bridge Unit (PBU) elements;
- Prefabricated Bridge Unit (PBU) assembly plan;
- Grouted splice couplers;
- Membrane waterproofing;
- Four Bar TL-4 Bridge Rail;
- Vertical face granite curb;
- Temporary barrier bolting and spacing;
- Bridge ID tablets;
- Ultra High Performance Link Slab;
- Galvanic Encapsulation System;
- Paint System and Quality Control Plan
- Ultra High Performance Concrete (UHPC) and Quality Control Plan

23. REQUESTS FOR INFORMATION (NOT RELATED TO SHOP DRAWINGS)

RFIs requesting clarification of, modification of, substitution of, or a waiver of materials, methods, construction details or specifications must be submitted into the Rhode Island Department of Transportation's Project Management Portal (PMP). No contract time extension or compensatory payments will be awarded for time associated with waiting for responses to RFIs.

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.

Infrasource Underground Construction / Infrasource Construction, LLC
 Butch McAreavy
 2311 Green Road, Suite D
 Kansas City, MO 48105
 734-845-6013 (butch.mcareavy@infrasourceinc.com)

Michels Corporation
 Kelsey Wasmund
 817 Main St
 Brownsville, WI 53006
 920-579-4015 (kwasmund@michels.us)

Safeway Construction Enterprises, LLC
 Sephir Hamilton
 5460 44th Street
 Maspeth, NY 11378
 718-289-9395 (shamilton@safewayce.com)

United Civil, Inc.
 Michael Dell Isola
 30 Log Bridge Road, Building 100
 Middletown, MA 01949
 781-854-2666 (mdellisola@united-civil.com)

29. INSTALLATION OF ELECTRIC

The Contractor, in accordance with the contract documents, is responsible for the installation of the proposed electric duct banks including manholes and all other associated work as part of the electric utility relocations within the project limits including rehabilitation of Bridge No. 185. Below are the approved National Grid contractors to be utilized for this work;

National Grid Electric Approved Electric Civil Work Contractors:

G Greene Construction
 Peter DeSisto
 240 Lincoln Street
 Allston, MA 02134
 617-560-1804/508-958-1450 (pdesisto@ggreene.com)

J.H. Lynch & Sons, Inc.
 Scott O'Connor
 50 Lynch Place
 Cumberland, RI 02864
 401-333-4300 (soconnor@jhlynch.com)

McCourt Construction
 Matt McCourt
 60 K Street
 Boston, MA 02127
 617-269-2330 (mmccourt@mccourtconstruction.com)

Sertex LLC
 Mike Solitro
 22 Center Parkway
 Plainfield, CT 06374
 860-317-1006 (msolitro@sertexllc.com)

United Civil
 Michael Dell Isola
 30 Log Bridge Road, Bldg. 100
 Middleton, MA 01949
 978-304-1597 (mdellisola@united-civil.com)

Universal Construction
 John Alsfeld
 16 Starr Street
 Johnston, RI 02919
 401-942-3119 (john@unicori.net)

Rosciti Construction
 Henry Rosciti
 123 King Phillip Street
 Johnston, RI 02919
 401-351-6681 (hvr@rosciti.com)

National Grid will be responsible for all work related to the relocation of overhead electrical wires only including installation and removal of utility poles. The following National Grid work duration to relocated overhead wires is an estimate and subject to change upon receipt of formal Force Account Estimates:

Step 1 (Pre-Phase 1 – Bridge Work) – Set utility poles and transfer overhead cables (2 Days)

Step 2 (Pre-Phase 2 – Bridge Work) – Relocation of overhead wires to underground ducts including bridge crossing (4 Weeks)

Step 3 – Pole line relocation work on West Natick Road (4 Days)

Step 4 – Removal of both temporary service and utility poles (5 Days).

30. INSTALLATION OF SEWER FORCE MAIN

As shown on the Contract Drawings, the project requires the relocation of two active (2) 6-inch sewage force mains that are owned by the Warwick Sewer Authority. The force mains are fed by three private pumping stations. One force main serves the pumping station at Greenwich Village and the other serves pumping stations at the Shalom Apartments and the Matthews XXV Apartments. Contact information for all entities mentioned above is provided at the end of this section.

The Contractor must maintain wastewater service for Greenwich Village, the Shalom Apartments and the Matthews XXV Apartments at all times. The existing force mains shall remain in services until the new force main is approved for service toward the end of Phase I work. This will allow new piping to be installed except for the connections back into the existing force mains. The Contractor shall provide a minimum of 72-hour notice to the Warwick Sewer Authority and the owners of the pumping stations before these connections are made and any disruption in sewer service occurs. With the notification, the Contractor shall estimate the duration that the pumps will need to be deactivated.

As previously stated, it shall be the responsibility of the Contractor to maintain sewer service at all times. Therefore, the Contractor shall make all necessary provisions to accomplish this such as performing the work during low flow periods (generally midnight to 6 AM), providing pumper trucks to evacuate wet wells and any other means acceptable to RIDOT, the Warwick Sewer Authority and the owners of the pumping stations.

32. LANE CLOSURE/ LANE SPLIT COORDINATION

The Contractor shall notify the Department 3 weeks in advance of a bridge or roadway closure/split/shift/travel lane width reductions on any roads within the State.

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

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

33. RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT PERMITS

See Appendix D for the RIDEM and RIPDES Permits.

34. OTHER PERMITS

See Appendix E for other permits.

35. SOIL BORINGS

The Contractor shall perform soil boring at each proposed traffic signal mast arm and/or span pole location as shown on the plans to determine soil type. The Contractor shall design for the mast arm and/or span pole foundation size based on the soil type determined from the soil boring in accordance with Rhode Island Standard Details, latest edition. If rock is encountered, the Contractor shall core through the rock at a minimum of 5'. The Contractor shall design a foundation to that rock if rock is found passed 5' and shall be stamped by a Rhode Island registered Professional Engineer. The cost of the soil boring shall be incidental to the cost of the mast arm and/or span pole. The depth of the soil boring shall be approved by the Engineer.

36. PAVEMENT CORES

See Appendix F for the core logs.

37. STRUCTURE DISPOSITION

See Appendix G for the Structure Disposition List.

38. BORING LOGS

See Appendix H for the boring logs.

APPENDIX C
(TRANSPORTATION MANAGEMENT PLAN)



Project Name: **Highway Improvements to Route 5 (Contract 1) from Mayfield Avenue to Interstate 95 Bridge**

RI Design Contract No(s): **2020-CH-019**

RI Construction Contract No(s):

Submission: **ADV** Date: **3/16/2020**

PROJECT INFORMATION

Brief The project involves rehabilitation of the Greenwich Avenue (Route 5) bridge (Bridge No. 185) over the Pawtuxet River, roadway pavement improvements including full depth pavement reconstruction, milling and overlay, and full depth pavement widening, realignment of Knight Street, sidewalk reconstruction, drainage improvements including installation of BMPs, installation of guardrail, traffic signal reconstruction, striping, signing, traffic control and all other incidentals necessary to complete the work to the satisfaction of the Engineer.

Project Description:

General

Work Greenwich Avenue (Route 5) from Mayfield Avenue to I-95 Bridge

Limits: Knight Street from Greenwich Avenue to Miner Street

ROADWAYS DIRECTLY AFFECTED BY PROJECT WORK ZONES

ROADWAY NAME or INTERSECTION	FROM	TO	LENGTH
Greenwich Avenue	Mayfield Avenue	I-95 Bridge under Route 5	1.06 mi
Knight Street	Greenwich Avenue (Route 5)	Miner Street	0.10 mi

General Route 5 improvements will begin in Spring 2020 with the substantial completion date anticipated in Fall 2022.

Project Phase 1 of Bridge No. 185 rehabilitation is anticipated to begin in Spring 2021 and be completed in Fall 2021.

Schedule*: Phase 2 of Bridge No. 185 rehabilitation is anticipated to begin in Spring 2022 and be completed in Fall 2022.

*The information in this section is not intended to and shall not supersede the approved schedule and milestone/completion dates for the project.

TRAFFIC-RELATED WORK RESTRICTIONS

General See Attachment "A" - General Restrictions

Restrictions:

Note: Traffic control set ups/break downs shall not be allowed during the restricted time periods.

Holiday Note: In case of discrepancy between the Holiday Restrictions and the General Restrictions, the former shall govern.

Restrictions:

No lane and/or shoulder closures allowed after 1:00 PM on the Friday preceding a holiday weekend.

EASTER

- No lane and/or shoulder closures allowed on Saturday.
- No Lane and/or shoulder closures allowed on the Sunday holiday until 22:00 (after 22:00, General Restrictions apply).

NEW YEAR'S DAY, INDEPENDENCE DAY, & CHRISTMAS DAY

- No lane and/or shoulder closures allowed after 13:00 on the day before the holiday.
- No lane and/or shoulder closures allowed on the holiday.

VETERANS DAY

- No lane and/or shoulder closures allowed after 13:00 on the day before the holiday.
- No Lane and/or shoulder closures allowed on the Sunday holiday until 22:00 (after 22:00, General Restrictions apply).

DR. MARTIN LUTHER KING JR. DAY, MEMORIAL DAY, VICTORY DAY, LABOR DAY, & COLUMBUS DAY

- No lane and/or shoulder closures allowed on Saturday and/or Sunday.
- No Lane and/or shoulder closures allowed on the Sunday holiday until 22:00 (after 22:00, General Restrictions apply).

THANKSGIVING DAY

- No lane and/or shoulder closures allowed after 13:00 on the Wednesday before Thanksgiving Day.
- No lane and/or shoulder closures allowed on Thanksgiving Day, Friday, Saturday, and/or Sunday

TEMPORARY TRAFFIC CONTROL PLANS

These RIDOT- and/or Designer-Developed TTC Plans will be used during the work on this project

RIDOT TYPICAL TTC PLANS	Included in:	
	TMP	Plan Set
<input type="checkbox"/> Mobile Operation	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Work Beyond the Shoulder	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Shoulder Closure - Two Lane Road	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Shoulder Closure - Limited Access	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 1-Side Lane Shift - Two Lane Road	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 2-Side Lane Shift - Two Lane Road	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Lane Shift - Limited Access	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Lane Closure - Two Lane Road	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Lane Closure - Four Lane Road	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Lane Closure - Limited Access	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Double Lane Closure - Limited Access	<input type="checkbox"/>	<input type="checkbox"/>

DESIGNER-DEVELOPED TTC PLANS	Included in:	
	TMP	Plan Set
Traffic Control Detail No. 1	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Traffic Control Detail No. 2	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Traffic Control Plan No. 3 SB Bridge Closure	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Traffic Control Plan No. 4 NB Bridge Closure	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Traffic Control Plan No. 5 Winter Shutdown	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>

PUBLIC INFORMATION PLAN

These strategies will be used to provide information concerning the project to road users and the community

SELECTED STRATEGIES

- RIDOT travel advisories news releases
- RIDOT travel advisories web site
- RIDOT 511 traveler information system

RESPONSIBILITIES / REQUIREMENTS / SPECIAL CONSIDERATIONS

- RIDOT TMP Imp. Mngr. to send RIDOT notification form to Communications min. 48 hrs. in advance of restrictions.
- RIDOT TMP Imp. Mngr. to send RIDOT notification form to Communication's min. 48 hrs. in advance of restrictions.
- RIDOT TMP Imp. Mngr. to send RIDOT notification form to RIDOT TMC min. 48 hrs. in advance of restrictions.

TRANSPORTATION OPERATIONS PLAN

These strategies will be used to provide improved transportation operations/safety within project work zones

SELECTED STRATEGIES

- Street/intersection improvements
- Temporary traffic barrier
- Crash attenuators

RESPONSIBILITIES / REQUIREMENTS / SPECIAL CONSIDERATIONS

- Striping and active police Traffic Detail Officers.
- To be implemented per TTC Plans.
- To be implemented per TTC Plans.

PERFORMANCE MONITORING, CHANGES TO TMP, & CONTINGENCIES

The **Contractor's TMP Implementation Manager (if identified below)** is responsible for keeping the portion of the project being used by public traffic in a condition that (1) safely and adequately accommodates such traffic and (2) is in accordance with the Traffic-Related Work Restrictions, the Temporary Traffic Control Plans, and where appropriate, the other transportation management strategies identified above. The **RIDOT TMP Implementation Manager** or his/her responsible designee should (1) inspect the project work zones at initial setup, at the start of each subsequent work day, and just prior to extended breaks in the work (e.g., weekends) for conformance with the Temporary Traffic Control Plans, the *ATSSA Quality Guidelines for Temporary Traffic Control Devices and Features*, and where applicable, the other transportation management strategies identified above and (2) document all work zone-related feedback and complaints that are received from the public.

If at any time (1) a significant deviation from any of the strategies included in the TMP (e.g., the use of an alternate construction sequence) is desired by one or more members of the project implementation team, (2) field observations and/or data suggest that impacts to road users are or will be unacceptable, or (3) one or more performance requirements established in the TMP are not being met in the field, the RIDOT TMP Implementation Manager shall report the situation to his/her supervisor or Division/Section/Unit manager. The supervisor / manager will coordinate with the State Traffic Engineer, the Deputy Chief Engineer, the TMP Implementation Manager(s), the Chief Engineer, and/or other interested parties as appropriate and/or necessary to consider and determine whether revised and/or alternate strategies should be implemented in an effort to lessen the adverse safety and/or mobility impacts of the project. If the supervisor / manager deems that strategy changes should be implemented, the changes shall be documented in a revised version of the TMP and the Deputy Chief Engineer, the State Traffic Engineer, and the Chief Engineer must approve of the revised TMP prior to their implementation.

If a significant deviation from any of the strategies included in the TMP is requested by the Contractor, unless directed otherwise by the RIDOT the Contractor is responsible for preparing and submitting to the RIDOT TMP Implementation Manager appropriate documentation (e.g., design calculations, analysis reports, Temporary Traffic Control Plans, etc.) showing that the requested change(s) are (1) feasible and (2) expected to result in safety and mobility impacts that are no more adverse than the impacts resulting from the strategies already included in the latest approved TMP. The RIDOT will review and consider the submittal(s) as described in the preceding paragraph and will determine whether the changes should be implemented. If the requested changes are approved by the RIDOT, unless otherwise directed by the RIDOT the Contractor shall prepare and submit to the RIDOT TMP Implementation Manager a revised version of the latest approved TMP in both printed and electronic (Microsoft® Excel) format that documents all of the approved changes. Work to implement the changes shall not begin until the Deputy Chief Engineer, the State Traffic Engineer, and the Chief Engineer have approved of the revised TMP.

When unexpected events (e.g., crashes, inclement weather, unforeseen traffic demands, etc.) occur in a project work zone where one or more lanes are closed, the RIDOT TMP Implementation Manager or his/her responsible designee should (1) determine whether or not the lane closure(s) can/should be removed in order to improve traffic operations and/or minimize delays and (2) if deemed appropriate, take action to remove the lane closure(s).

Other

Requirements:

TMP APPROVALS

All approvals must be obtained prior to start of work

ADMINISTRATOR - PROJECT MANAGEMENT		
Signature:	 David Fish, P.E.	
Date:	3-25-2020	
Revision #	Initials	Date

STATE TRAFFIC SAFETY ENGINEER		
Signature:	 Steve Pristawa, P.E.	
Date:	3-25-20	
Revision #	Initials	Date

CHIEF ENGINEER OF INFRASTRUCTURE		
Signature:	 for Robert Rocchio, P.E.	
Date:	3/25/20	
Revision #	Initials	Date

TMP IMPLEMENTATION MANAGERS

Project managers with the primary responsibility & authority for implementation of this TMP

RIDOT
Name: _____
Title: _____
Unit: _____
Office Phone: _____
Mobile Phone: _____
E-Mail: _____

CONTRACTOR (if contract work)
Name: _____
Title: _____
Company/Unit: _____
Office Phone: _____
Mobile Phone: _____
E-Mail: _____

TMP
Attachment A:
General Restrictions Chart

LOCATION	MINIMUM NUMBER OF LANES & SHOULDERS TO REMAIN OPEN TO TRAFFIC ⁵								
	Time of Day		Day of Week						
	From	To	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
Route 5 (February 1 st - October 15 th)	0:00	5:00	ALL	1 L	1 L	1 L	1 L	1 L	ALL
	5:00	9:00	ALL	ALL	ALL	ALL	ALL	ALL	ALL
	9:00	15:00	ALL	1 L	1 L	1 L	1 L	1 L	ALL
	15:00	21:00	ALL	ALL	ALL	ALL	ALL	ALL	ALL
	21:00	0:00	1 L	1 L	1 L	1 L	1 L	ALL	ALL
Route 5 North of Fessenden Street (October 15 th - February 1 st)	0:00	5:00	ALL	1 L	1 L	1 L	1 L	1 L	ALL
	5:00	9:00	ALL	ALL	ALL	ALL	ALL	ALL	ALL
	9:00	15:00	ALL	1 L	1 L	1 L	1 L	1 L	ALL
	15:00	21:00	ALL	ALL	ALL	ALL	ALL	ALL	ALL
	21:00	0:00	1 L	1 L	1 L	1 L	1 L	ALL	ALL
Route 5 South of Fessenden Street (October 15 th - February 1 st)	0:00	6:00	ALL	1 L	1 L	1 L	1 L	1 L	ALL
	6:00	9:00	ALL	ALL	ALL	ALL	ALL	ALL	ALL
	9:00	15:00	ALL	ALL	ALL	ALL	ALL	ALL	ALL
	15:00	22:00	ALL	ALL	ALL	ALL	ALL	ALL	ALL
	22:00	0:00	1 L	1 L	1 L	1 L	1 L	ALL	ALL
Bridge No. 185 ⁶ (February 1 st - October 15 th)	0:00	6:00	1 L	1 L	1 L	1 L	1 L	1 L	1 L
	6:00	9:00	1 L	1 L	1 L	1 L	1 L	1 L	1 L
	9:00	15:00	1 L	1 L	1 L	1 L	1 L	1 L	1 L
	15:00	21:00	1 L	1 L	1 L	1 L	1 L	1 L	1 L
	21:00	0:00	1 L	1 L	1 L	1 L	1 L	1 L	1 L

LEGEND

ALL All travel lanes and shoulders shall remain open to traffic

1 L A minimum of one 11-foot wide travel lane in each direction shall remain open to traffic

NOTES

- 1 The set-up and break-down of temporary traffic control devices within a traveled way shall be construed as a closure of that traveled way.
- 2 The provisions noted herein shall not free the Contractor from his responsibility to conduct all work in such a manner that assures the least possible obstruction to traffic.
- 3 Refer to General Provisions/Contract Specific pages for all construction activity including additional traffic control requirements and restrictions.
- 4 At locations with a sidewalk(s), a minimum of one sidewalk on one side of the roadway shall be open to pedestrian traffic at all times.
- 5 Access to and egress from all side streets, driveways, buildings, and other pedestrian pathways intersecting the Project work zones shall be maintained at all times unless otherwise noted or shown on Plans.
- 6 Restrictions apply only to the short section of Route 5 in the immediate vicinity of Bridge No. 185 as identified in the Temporary Traffic Control Plans.

APPENDIX H
(BORING LOGS)

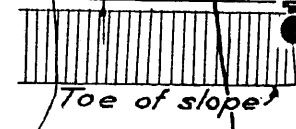
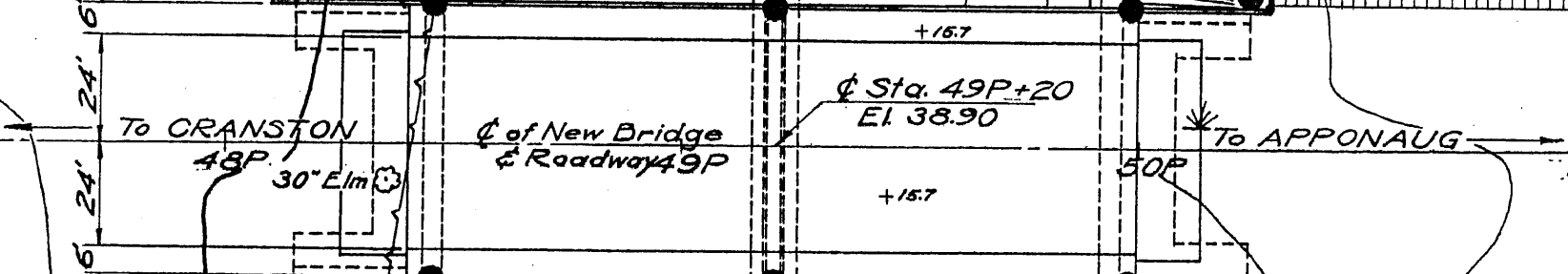
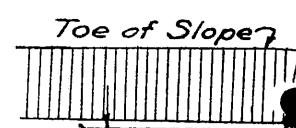
35,002

OPEN FIELD

Cem. Rubble Ret. Wall

RIVER

WOODED



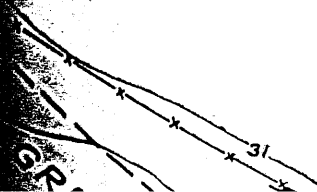
WE WILL BE ON THIS SIDE

PAWTUCKET

This area

OPEN FIELD

Cem. Rubble Ret. Wall



48P

50P

30

31

+25.5

+20.7

+16.7

+15.7

+25.4

+23.7

+16.7

+15.7

+17.9

+19.7

+16.7

+16.7

+16.5

+15.7

+15.7

Sta. 49P+20
El. 38.90

+15.7

+25.7

+16.7

+16.7

+15.7

26

+24.7

36° Elm

30° Elm

30° Elm

24" stump

Toe of Slope

Toe of slope

WOODED

WOODED

To APPONAUG

To CRANSTON

B1

B2

B3

B4

B5

3

4

7

9

10

5

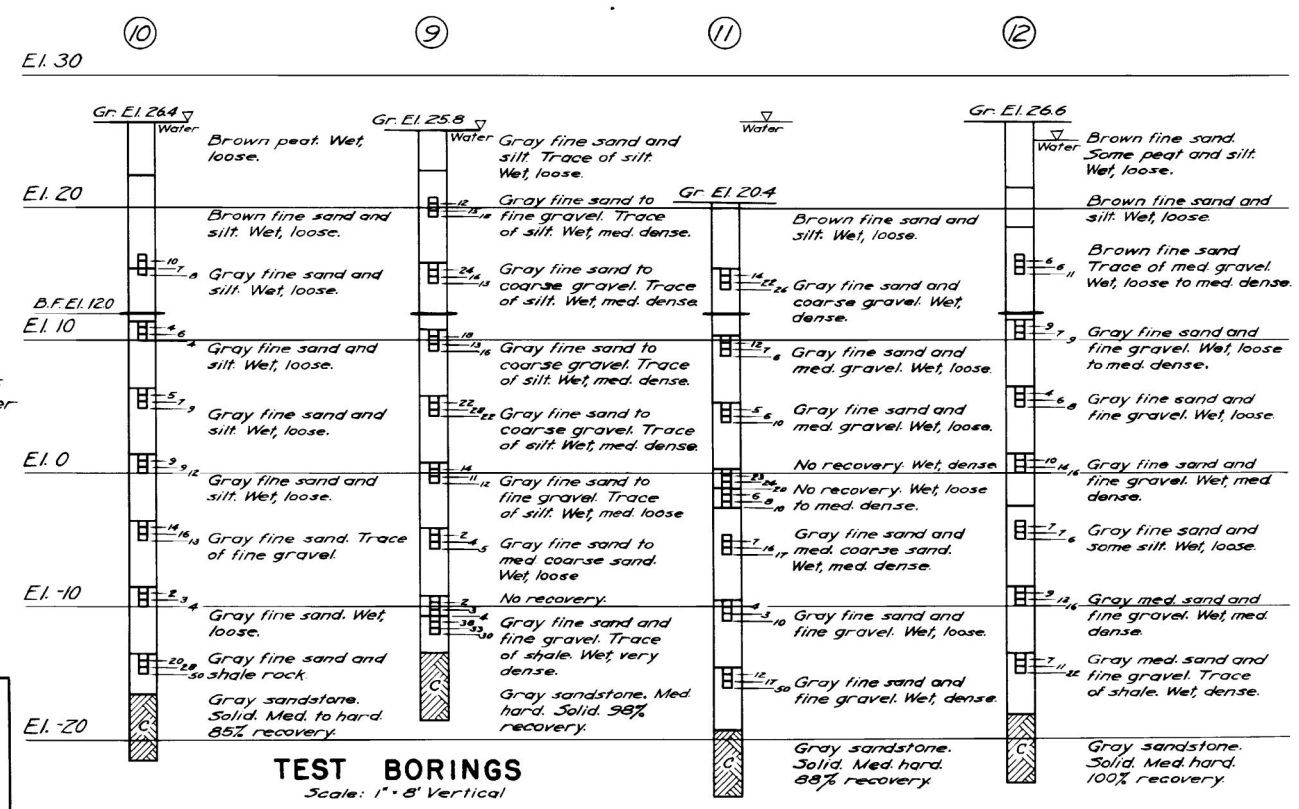
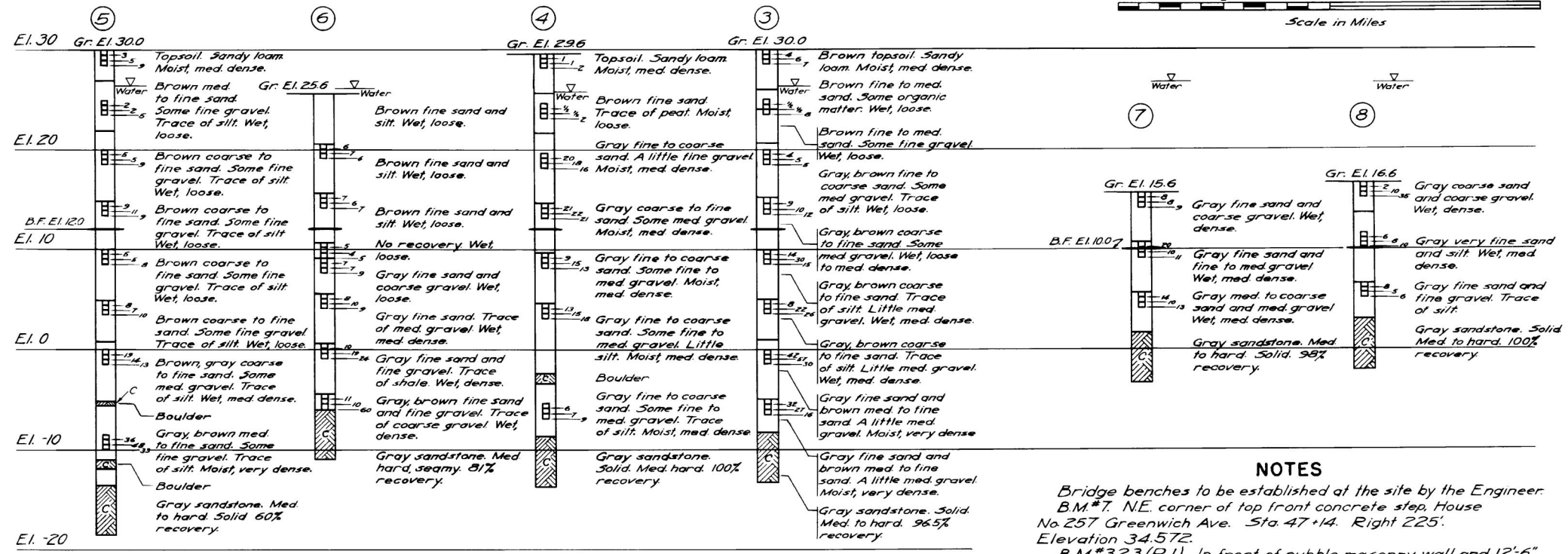
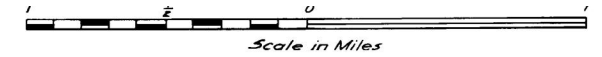
6

8

11

12

GRY



TEST BORINGS
Scale: 1" = 8' Vertical

NOTES

Bridge benches to be established at the site by the Engineer.
 B.M.#7. NE. corner of top front concrete step, House No 257 Greenwich Ave. Sta. 47+14. Right 225'. Elevation 34.572.
 B.M.#323(R.I.). In front of rubble masonry wall and 12'-6" east of N.E.T. & T. Co. pole. Sta. 55+40. Right 200'. Elevation 41.485 (U.S.C.G.S. datum).
 All footings to be approved by the Engineer before placing concrete.
 All bars requiring splicing to be lapped not less than 20 diameters, except horizontal bars having more than 12" of concrete below the bars shall be lapped not less than 35 diameters.
 All reinforcement bars shall conform to A.S.T.M. Specification A305-53T.
 Quantity for surface finish (rubbed) includes all exterior surfaces not otherwise designated to 1 foot below final grade or lowest water level.

DESIGN DATA

A.A.S.H.O.-1957 Spec. H-20-S16-44 L.L. and R.I. Legal Load Axle Concentration.
 Maximum Foundation Design Load—45 Tons Per Pile.

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF PUBLIC WORKS
 DIVISION OF ROADS & BRIDGES
PONTIAC BRIDGE
 WARWICK R.I.
LOCATION PLAN

DRAWN BY H. H. M. TRACED BY R. J. P. CHECKED BY H. H. M.

APPROVED	SUPERVISING CIVIL ENGINEER (BRIDGES)	SET NO. <input type="text"/>
APPROVED	CHIEF ENGINEER	PRINTED <input type="text"/>
FINAL DATE Sept. 13, 1960		ISSUED TO <input type="text"/>

GEO LOGIC, INC.

EARTH
EXPLORATION
SERVICES
35 Commercial Drive
TEL 5083844434

Wrentham, MA 02093
FAX 5083844452

CLIENT: BETA
PROJECT: Route 5, over Pawtucket River Bridge
LOCATION: Warwick, RI

BORING #:
B-1
PAGE
1 OF 2

File #:	<u>01361</u>	CASING	<u>HW</u>	SAMPLER	<u>SS</u>	CORE BARREL	Surface Elevation:	_____
Date Started:	<u>12/21/01</u>	TYPE	<u>4"</u>	<u>1 3/8</u>	_____	_____	Station:	_____
Date Completed:	<u>12/21/01</u>	SIZE	<u>300#</u>	<u>140#</u>	---	---	Groundwater level readings	_____
Driller:	<u>T. Tucker</u>	HAMMER	<u>24"</u>	<u>30"</u>	---	---	Date	<u>12/21/01</u> ▽ Depth <u>8.1'</u>
Site Rep.:	_____	FALL	_____	_____	_____	_____	Date	_____ Depth _____

Depth ft	Cas bl/ft	Sample					Sample Description
		No.	Depth ft	Pen. in	Rec. in	Blows/6"	
3		S-1	0.0-2.0	24	4	1-1-1-2	S-1 Loose brown fine SAND, trace gravel
5		S-2	4.0-6.0	24	6	12-5-5-4	S-2 Medium dense brown fine to medium SAND, trace coarse sand, trace gravel
10		S-3	9.0-11.0	24	15	3-1-2-2	S-3 Loose brown fine SAND, trace medium to coarse sand
15		S-4	14.0-16.0	24	0	7-7-8-8	S-4 No recovery, 2 attempts
20		S-5	19.0-21.0	24	1	4-2-5-7	S-5 Medium dense GRAVEL and coarse SAND
25		S-6	24.0-26.0	24	6	12-15-15-15	S-6 Medium dense brown fine to coarse SAND and GRAVEL
30		S-7	29.0-31.0	24	14	30-34-46-77	S-7 Similar to S-6, except very dense and gray
		S-8	34.0-36.0	24	8	17-51-29-36	S-8 Similar to S-6, except trace silt

Ground Surface to _____ used _____ then _____

Proportions Used	Cohesive Consistency				Cohesionless Density		Sample Type	
	Blows/ft				Blows/ft			
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:
1. The stratification lines represent the approximate boundary between soil types. The transition may be gradual.
2. Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks:

BL ALL 01361.GPJ GEOLOGIC.GDT 12/28/01

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CLIENT: BETA
PROJECT: Route 5, over Pawtucket River Bridge
LOCATION: Warwick, RI

BORING #:

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PAGE

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Depth ft	Cas bl/ ft	Sample					Sample Description
		No.	Depth ft	Pen. in	Rec. in	Blows/6"	
40	H E A D wash	S-9	39.0-41.0	24	10	31-56-68-71	S-9 Very dense gray/brown fine to coarse SAND and SILT, little fine to coarse gravel, weathered rock Top of rock @ 42' Bottom of exploration at 43.0'
45							
50							
55							
60							
65							
70							
75							

Proportions Used	Cohesive Consistency Blows/ft				Cohesionless Density Blows/ft		Sample Type	
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:

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- Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks:

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CLIENT: BETA
PROJECT: Route 5, over Pawtucket River Bridge
LOCATION: Warwick, RI

BORING #: B-2
PAGE 1 OF 2

File #:	<u>01361</u>	CASING	<u>HW</u>	SAMPLER	<u>SS</u>	CORE BARREL	<u>NX</u>	Surface Elevation:	_____
Date Started:	<u>12/14/01</u>	TYPE	<u>4"</u>	SIZE	<u>1 3/8</u>			Station:	_____
Date Completed:	<u>12/14/01</u>	HAMMER	<u>300#</u>	FALL	<u>24"</u>			Groundwater level readings	
Driller:	<u>T. Tucker</u>							Date _____	Depth _____
Site Rep.:	_____							Date _____	Depth _____

Depth ft	Cas bl/ft	Sample					Sample Description
		No.	Depth ft	Pen. in	Rec. in	Blows/6"	
		S-1	0.0-2.0	24	2	PUSH-BY -HAND	S-1 Loose gray/black fine SAND, trace of medium to coarse sand, little silt
	push						
	push	S-2	3.0-5.0	24	20	3-2-3-3	S-2 Loose dark brown SILT and fine SAND
5	8						
	9						
	44						
	71						
	46	S-3	8.0-10.0	24	3	8-6-13-20	S-3 Medium dense tan fine to coarse SAND, little fine to coarse gravel
10	26						
	33						
	47						
	32	S-4	13.0-15.0	24	6	9-6-7-7	S-4 Similar to S-3
15	33						
	37						
	74						
	51						
	51						
	49	S-5	18.0-20.0	24	13	12-14-16-19	S-5 Medium dense gray fine SAND, little medium to coarse sand, some silt
20	50						
	55						
	65						
	78						
	86	S-6	23.0-25.0	24	15	26-29-18-63	S-6 Dense to very dense gray SILT and fine SAND, trace medium to coarse sand
25							
		C-1	28.0-33.0	60	60	10-12-10-7-7 min/ft	Top of Rock @ 28' C-1 Cored 28' to 33'
30							
		C-2	33.0-38.0	60	58	7-7-6-7-7 min/ft	C-2 Cored 33' to 38'

Ground Surface to _____ used _____ then _____

Proportions Used	Cohesive Consistency			Cohesionless Density		Sample Type	
	Blows/ft			Blows/ft			
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10 Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30 M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50 Dense	OE = Open End Rod
And	35 to 50%					50+ V-Dense	* = 300# hammer

Notes:
1. The stratification lines represent the approximate boundary between soil types. The transition may be gradual.
2. Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks:

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CLIENT: BETA
PROJECT: Route 5, over Pawtucket River Bridge
LOCATION: Warwick, RI

BORING #:
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PAGE
2 OF 2

Depth ft	Cas bl/ ft	Sample					Sample Description
		No.	Depth ft	Pen. in	Rec. in	Blows/6"	
40							Bottom of exploration at 38.0' Top of rock @ 28' Core to 38' All measurements are from top of mud line Mud line 3' below top of water
45							
50							
55							
60							
65							
70							
75							

Proportions Used		Cohesive Consistency Blows/ft				Cohesionless Density Blows/ft		Sample Type
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:

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Remarks:

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CLIENT: BETA
PROJECT: Route 5, over Pawtucket River Bridge
LOCATION: Warwick, RI

BORING #: B-3
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File #: 01361
Date Started: 12/17/01
Date Completed: 12/17/01
Driller: T. Tucker
Site Rep.: _____

CASING	HW	SAMPLER	SS	CORE BARREL	Surface Elevation: _____
TYPE	HW	SS	---	---	Station: _____
SIZE	4"	1 3/8	---	---	Groundwater level readings
HAMMER	300#	140#	---	---	Date _____ Depth _____
FALL	24"	30"	---	---	Date _____ Depth _____

Depth ft	Cas bl/ft	Sample					Strata Change ft	Sample Description
		No.	Depth ft	Pen. in	Rec. in	Blows/6"		
5		S-1	0.0-2.0	24	3	1-1-2-2		S-1 Loose brown fine to coarse SAND, little fine to coarse gravel
5	10	S-2	4.0-6.0	24	0	1-FOR-A-FOOT		S-2 No recovery, 2 attempts
10	15	S-3	9.0-11.0	24	12	8-7-9-11		S-3 Medium dense gray fine to coarse SAND, SILT, and fine to coarse GRAVEL
15	86	S-4	14.0-15.9	23	13	17-23-18-100/5"		S-4 Similar to S-3, except dense Hit rock @ 16' Wash out to 18'
	wash ahead						18.0	
20		C-1	18.0-23.0	60	58	3-3-4-5-5 min/ft		C-1 ROCK Cored 18' to 23'
25		C-2	23.0-28.0	60	60	5-6-6-6-6 min/ft		C-2 ROCK Cored 23' to 28'
							28.0	Bottom of exploration at 28.0'
30								Top of rock @ 16' Wash out to 18' Core from 18' to 28' Mud line 7' below top of water

Ground Surface to _____ used _____ then _____

Proportions Used		Cohesive Consistency Blows/ft			Cohesionless Density Blows/ft		Sample Type	
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:
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2. Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks:

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CLIENT: BETA
PROJECT: Route 5, over Pawtucket River Bridge
LOCATION: Warwick, RI

BORING #: B-4
PAGE 1 OF 1

File #: 01361
Date Started: 12/17/01
Date Completed: 12/18/01
Driller: T. Tucker
Site Rep.: _____

CASING	SAMPLER	CORE BARREL	Surface Elevation: _____
TYPE <u>HW</u>	<u>SS</u>	<u>NX</u>	Station: _____
SIZE <u>4"</u>	<u>1 3/8</u>	<u>2"</u>	Groundwater level readings
HAMMER <u>300#</u>	<u>140#</u>	<u>---</u>	Date _____ Depth _____
FALL <u>24"</u>	<u>30"</u>	<u>---</u>	Date _____ Depth _____

Depth ft	Cas bl/ft	Sample					Strata Change ft	Sample Description
		No.	Depth ft	Pen. in	Rec. in	Blows/6"		
8		S-1	0.0-2.0	24	1	3-2-2-2		S-1 Loose brown fine SAND
5	14	S-2	5.0-7.0	24	11	23-22-25-22		S-2 Dense brown fine to coarse SAND, little fine to coarse gravel
10	52	S-3	10.0-12.0	24	12	14-15-14-14		S-3 Medium dense gray fine to coarse SAND, SILT, and fine to coarse GRAVEL
15	51	S-4	15.0-15.3	3	2	100/3"	16.0	S-4 Similar to S-3, except very dense
	56	C-1	16.0-21.0	60	60	5-3-4-5-5 min/ft		C-1 ROCK Cored 16' to 21'
20		C-2	21.0-26.0	60	60	5-5-5-5-5 min/ft		C-2 ROCK Cored 21' to 26'
25							26.0	Bottom of exploration at 26.0'
30								Top of rock @ 16' Core 16' to 26' Mud line 6' below top of water

Ground Surface to _____ used _____ then _____

Proportions Used	Cohesive Consistency				Cohesionless Density		Sample Type	
	Blows/ft				Blows/ft			
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:
1. The stratification lines represent the approximate boundary between soil types. The transition may be gradual.
2. Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks:

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CLIENT: BETA
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LOCATION: Warwick, RI

BORING #:
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PAGE
1 OF 2

File #:	<u>01361</u>	CASING	<u>HW</u>	SAMPLER	<u>SS</u>	CORE BARREL	Surface Elevation: _____
Date Started:	<u>12/18/01</u>	TYPE	<u>4"</u>	<u>1 3/8</u>			Station: _____
Date Completed:	<u>12/18/01</u>	SIZE	<u>300#</u>	<u>140#</u>	<u>---</u>		Groundwater level readings
Driller:	<u>T. Tucker</u>	HAMMER	<u>24"</u>	<u>30"</u>	<u>---</u>		Date <u>12/18/01</u> ▽ Depth <u>2.9'</u>
Site Rep.:		FALL					Date _____ Depth _____

Depth ft	Cas bl/ft	Sample					Sample Description
		No.	Depth ft	Pen. in	Rec. in	Blows/6"	
		S-1	0.0-2.0	24	9	3-4-4-6	S-1 Loose brown fine to coarse SAND, little fine to medium gravel, trace silt
5	5						
		S-2	4.0-6.0	24	10	2-1-1-2	S-2 Similar to S-1
5	3						
		S-3	9.0-11.0	24	7	7-4-12-20	S-3 Medium dense gray fine SAND and SILT
10	15						
		S-4	14.0-16.0	24	12	21-9-6-11	S-4 Medium dense gray/black fine to coarse SAND and fine to medium GRAVEL
15	21						
		S-5	19.0-21.0	24	7	11-10-10-15	S-5 Similar to S-4
20	29						
		S-6	24.0-26.0	24	1	16-13-13-11	S-6 Similar to S-4
25	31						
		S-7	29.0-31.0	24	0.5	8-10-13-8	S-7 Medium dense gray SILT and fine SAND
30	46						
		S-8	34.0-34.4	5	3	100/5"	S-8 Very dense brown fine to coarse SAND, fine to coarse GRAVEL, and SILT

Ground Surface to _____ used _____ then _____

Proportions Used	Cohesive Consistency				Cohesionless Density		Sample Type	
	Blows/ft				Blows/ft			
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:
1. The stratification lines represent the approximate boundary between soil types. The transition may be gradual.
2. Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks:

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BORING #:

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PAGE

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Depth ft	Cas bl/ ft	Sample					Sample Description
		No.	Depth ft	Pen. in	Rec. in	Blows/6"	
			34.4				Top of rock @ 34.4' Bottom of exploration at 34.4'
40							
45							
50							
55							
60							
65							
70							
75							

Proportions Used	Cohesive Consistency Blows/ft			Cohesionless Density Blows/ft		Sample Type	
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10 Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30 M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50 Dense	OE = Open End Rod
And	35 to 50%					50+ V-Dense	* = 300# hammer

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- Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks:

BL ALL 01361.GPJ GEOLOGIC.GDT 12/28/01

2. Specifications – Job Specific

INDEX**SPECIFICATIONS – JOB SPECIFIC**

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	108.01 Subletting of Contract	
	108.03 Prosecution and Progress	
	108.08 Failure to Complete on Time	
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L06.9907	Spruce – ‘ Colorado Blue’ 7-8 Feet	
L06.9908	Arborvitae – ‘Green Giant’ 6-7 Feet	
L06.9909	Arborvitae – ‘Emerald Green’ 8-10 Feet	
L06.9910	American Arborvitae – ‘Skinner Dwarf’ 2-2.5 Inch Caliper	
L06.9911	Whitespire Birch – ‘Whitespire’ 2-2.5 Inch Caliper	
L06.9912	American Redbud 2-2.5 Inch Caliper	
L06.9913	London Planetree – ‘Bloodgood’ 3-3.5 Inch Caliper	
L06.9914	Lilac Tree – ‘Ivory Silk’ 2-2.5 Inch Caliper	
L06.9915	Azalea – ‘Pink & Sweet’ 18-24 Inch	
L06.9916	Arctic Fire Red Twig Dogwood – ‘Farrow’ 3-4 Feet	
L06.9917	Winterberry – ‘Jim Dandy’ 18-24 Inch	
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L06.9919	Double Knockout Rose – ‘Radtko’ 24-36 Inch	
L06.9920	Dwarf Maiden Grass – ‘Yakushima’ 24-36 Inch	
L06.9921	Weigela – ‘Wine and Rose’ 2-2.5 Inch Caliper	
L06.9922	Lilac Tree – ‘Anthony Waterer’ 2-2.5 Inch Caliper	
L06.9923	Daylily – ‘Happy Returns’ 2-2.5 Inch Caliper	
L15.9901	Decorative Crushed Stone	JS-110
L15.9902	Decorative Boulders	JS-111
T01.9901	National Grid Precast Concrete Manhole	JS-112
T01.9902	National Grid 8-5” PVC Conduit	JS-118
T01.9903	National Grid Bridge-Mounted Fiberglass Conduit	JS-132
T04.9901	Video Detection System Cable	JS-136
T13.9901	Video Detection Camera	
T13.9902	Video Detection System Hardware	
T04.9902	19 AWG 6 Pair Twisted Shielded Communication Cable 300V	JS-140
T11.9901	45 Foot Standard Load Steel Curved Traffic Signal Mast Arm, Pole and Foundation Std. 19.2.0 (Gloss Black)	JS-141
T11.9902	Dual Curved Mast Arm (25x35) Galvanized Steel Traffic Signal Post and Foundation Std. 19.2.0 (Gloss Black)	
T11.9903	30 Foot Standard Load Steel Traffic Signal Mast Arm, Pole and Foundation Std. 19.2.0 (Gloss Black)	JS-143
T11.9904	40 Foot Standard Load Steel Traffic Signal Mast Arm, Pole and Foundation Std. 19.2.0 (Gloss Black)	
T11.9905	45 Foot Standard Load Steel Traffic Signal Mast Arm, Pole and Foundation Std. 19.2.0 (Gloss Black)	
T11.9906	Steel Traffic Signal Span Pole and Foundation Std. 19.3.0 (Gloss Black)	

T11.9907	Traffic Signal Standard, 8 Foot, Std. 19.4.0 Aluminum Pedestal Pole and Foundation (Gloss Black)	JS-145
T11.9908	Traffic Signal Standard, 10 Foot, Std. 19.4.0 Aluminum Pedestal Pole and Foundation (Gloss Black)	
T12.9901	Modify Existing Traffic Signal Controller Cabinet	JS-146
T12.9902	System Master	JS-148
T12.9903	Actuated Controller TS-2, Type 1 w/ 8 Phase Assembly Ground Mounted Including Foundation and Cabinet Std. 19.1.0 (Gloss Black)	JS-151
T13.9903	Single Point Video Detection System	JS-152
T13.9904	Pedestrian Pushbutton Extension Module	JS-156
T13.9905	Pedestrian Pushbutton Extension Module (Gloss Black)	JS-157
T14.9901	1-Way Pedestal Mounted L.E.D. Pedestrian Signal Head with Countdown Timer, 12-Inch	JS-159
T14.9902	2-Way Pedestal Mounted L.E.D. Pedestrian Signal Head with Countdown Timer, 12-Inch	
T14.9903	1-Way Bracket Mounted L.E.D. Pedestrian Signal Head with Countdown Timer, 12-Inch	
T14.9904	1-Way 4 Section Mast Arm Mounted Signal Head 12 inch (w/ Flashing Yellow Arrow)	
T14.9905	Bracket Mounted L.E.D. Pedestrian Signal Head with Countdown Timer, 12-Inch (Retrofit)	JS-162
T14.9906	1 Way 3 Section Span Mounted Signal Head 12 Inch (Gloss Black)	JS-163
T14.9907	2 Way 3 Section Span Mounted Signal Head 12 Inch (Gloss Black)	
T14.9908	1 Way 3 Section Mast Arm Mounted Signal Head 12 Inch (Gloss Black)	
T14.9909	1 Way 3 Section Pedestal Mounted Signal Head 12 Inch (Gloss Black)	
T14.9910	1-Way Pedestal Mounted L.E.D. Pedestrian Signal Head with Countdown Timer, 12-Inch (Gloss Black)	JS-164
T14.9911	2-Way Pedestal Mounted L.E.D. Pedestrian Signal Head with Countdown Timer, 12-Inch (Gloss Black)	
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T15.9901	Special Sign -RIPTA Bus Stop	JS-168
T15.9902	Gateway Sign	JS-169

T16.9901	Remove and Relocate Private Sign	JS-172
T16.9902	Remove and Stockpile Private Sign	JS-173
T20.9901	Epoxy Resin Pavement Markings – All Sizes, All Colors	JS-174
T20.9902	Temporary and Permanent Pavement Markings – Words, Arrows, And Symbols	JS-175
T20.9903	Temporary Pavement Markings – All Types, Colors, and Widths	JS-176

JOB SPECIFIC**CODE 201.9903****REMOVE AND RELOCATE BUS SHELTER**

DESCRIPTION. This work consists of removing, relocating, and resetting bus shelters including benches as indicated on the Plans or as directed by the Engineer.

MATERIALS. Concrete pad shall be Portland Cement Concrete Class XX (4,000 PSI) in accordance with Section 601 of the Rhode Island Department of Transportation Standard Specifications, latest edition. Gravel borrow subbase shall be in accordance with Section 302 Rhode Island Department of Transportation Standard Specifications, latest edition.

CONSTRUCTION METHOD.**Removal and Stockpiling:**

The existing bus shelter and bench shall be removed carefully, cleaned of any foreign substances, and stockpiled in a manner so as not to be damaged, and stored outside the roadway and pedestrian route. Care should be exercised so that the materials are not damaged during removal or installation at the proposed location. The Contractor will be responsible for protecting all stockpiled materials from damage, theft, and vandalism until installation and acceptance by the Owner.

Existing power feed for lights and advertising signage (2-120volt circuits) are routed via structure channel. Electrical contractor shall disconnect lights and signage for removal of shelter. Power wiring circuits shall be removed to adjacent handhole waterproofed and tagged as spare. Contractor shall disconnect fiber connection to signage and pull back to communications handhole and tag spare. Contractor shall carefully remove lighting and signage and turn over to RIPTA at Elmwood Ave site for storage. Remove and cap conduit in shelter to six (6) inches below grade.

The existing bus berth sign shall be removed as follows. Disconnect power feed and pull back to adjacent handhole waterproofed and tag spare. Disconnect at panels. Remove and cap conduit at sign to six (6) inches below grade.

The foundations shall be removed and disposed of legally off the project site to a minimum depth of one (1) foot below the final grade of the new sidewalk. Any backfill required shall be gravel borrow in accordance with Subsection M.01.02 of the RIDOT Standard Specifications for Road and Bridge Construction, latest edition.

All improvements, equipment, and existing surfaces disturbed, damaged or removed in the performance of this item of work, unless indicated on the Plans, shall be replaced to the satisfaction of the Engineer at no expense to the Owner.

Installation:

Removed and Stockpiled bus shelters shall be carefully installed at locations shown on the plans on a new 8-Inch thick concrete foundation over 6-Inch of gravel borrow subbase . Any power disconnected shall be reestablished to the new location of the bus shelter.

METHOD OF MEASUREMENT. “Remove and Relocate Bus Shelter” shall be measured for payment by the number per “Each”, complete in place.

BASIS OF PAYMENT. “Remove and Relocate Bus Shelter” will be paid for at the contract unit price per each as listed in the Bid. The price so stated shall constitute full and complete compensation for all excavation, removal, stockpiling, relocation, installation, new concrete pad, gravel borrow base, electrical power rewiring/connection, fill, all labor, materials, and equipment, including the removal and stockpiling of the bench and other incidentals required to finish the work, complete and accepted by the Engineer.

Bus Shelters damaged by the Contractor’s operations will be replaced by the Contractor at no additional cost to the Owner.

JOB SPECIFIC**CODE 803.9901****GALVANIC ENCAPSULATION SYSTEM**

DESCRIPTION: The work under this section consists of supplying, installing, and energizing a zinc-based galvanic corrosion protection system, including required electrical connections, materials, testing, and ensuring continuity of the reinforcing steel to all elements as outlined in the contract drawings.

Embedded galvanic anodes are designed to provide general corrosion protection. When distributed across the abutment and pier at the appropriate spacing, connected to the reinforcing steel, and covered in a concrete overlay, the anodes mitigate active corrosion to existing steel and initiation of new corrosion sites.

References:

- A. ACI Guideline No. 222 – Corrosion of Metals in Concrete
- B. ICRI Guideline 310.1R-2008 Guide for Surface Preparation for the Repair of Deteriorated Concrete resulting from Reinforcing Steel Corrosion
- C. ASTM B418-12 – Standard Specification for Cast and Wrought Galvanic Zinc Anodes

Submittals:

Shop drawings showing typical galvanic corrosion protection system installation details, such as distributed anode installation locations steel connections, and inter-anode connections shall be designed by a qualified engineer, or a NACE CP4-certified person with comparable background, and submitted for approval by The Engineer prior to any field installations.

MATERIALS:Distributed Anode System:

Distributed galvanic anodes shall be pre-manufactured using multiple layers of zinc. The anode shall include a solid core of ASTM B418 Type II-compliant zinc uniformly distributed along a steel wire that runs the full length of the anode and an outer layer of high surface area zinc. The distributed galvanic anode shall be alkali-activated (pH greater than 7) and contain internal alkaline-resistant reinforcing mesh which completely surrounds the solid zinc core. The anode unit shall contain no added chloride, bromide or other constituents that are corrosive to reinforcing steel as per ACI 222R.

Individual anode units shall be approximately 1.5 inches in diameter with 0.6 lbs of high purity zinc per foot of anode. Anode units shall be supplied with uncoated, non-galvanized steel tie wires for direct connection to the steel.

Approved anodes shall include verification of the following information and be included in the submittal:

1. The zinc anode is alkali-activated with a pH of 7 or greater and internally reinforced with alkaline-resistant mesh.
2. The distributed anode contains no added constituents corrosive to reinforcing steel or detrimental to concrete, e.g. chloride, bromide, sulfate, etc.
3. Proven track record of the anode technology showing satisfactory field performance with a minimum of three projects of similar size and application.
4. Anode units contain multiple layers of zinc around uncoated, non-galvanized steel tie wires.

Concrete:

Contractor to confirm that concrete mixture used for abutment and pier re-facing shall be of sufficient consistency to encapsulate the anodes without voids or segregation. Concrete shall have an electrical resistivity of less than 50,000 ohm-cm. Concrete mixtures that contain pozzolanic materials such as silica fume, ground-granulated blast-furnace slag, or fly ash will reduce the electrical conductivity of the concrete and may not be suitable for use. If higher resistance concrete is used, or the resistivity is unknown, use a mortar recommended by the cathodic protection system manufacturer to create a conductive bridge to the substrate prior to concrete installation.

The contractor shall be responsible to test the concrete resistivity in accordance with AASHTO T358 and submit the results to The Engineer for approval.

CONSTRUCTION METHODS:

General Description:

The galvanic corrosion protection shall consist of distributed galvanic anodes placed evenly across the concrete surface at a spacing no greater than 24 inches. The anode units are connected to the base concrete reinforcing steel and encased in a concrete overlay with a minimum of 1 inch of clear concrete cover over the anode units. After the anodes are installed and encased in concrete, the anodes provide galvanic protection to the embedded steel in the abutments and pier.

Manufacturer Technical Assistance:

The contractor will enlist and pay for the services of a NACE-qualified cathodic protection technician (CP2 or greater) supplied by the galvanic anode manufacturer. The qualified corrosion technician shall have verifiable experience in the installation and testing of embedded galvanic protection systems for reinforced concrete structures.

The technician shall provide the contractor training and support for development of application procedures, shop drawings for submittals, anode and concrete installation, reinforcing steel connection procedures, and verification of electrical continuity of embedded steel. The contractor shall coordinate its work with the designated technician to allow for site support during project startup and initial anode installation.

Concrete Removal:

Remove all loose and/or delaminated concrete. Undercut all exposed reinforcing steel by removing concrete from the full circumference of the steel as per ICRI R310.1R. Concrete shall be removed by means of hand chipping to a depth specified in the contract drawings. All work associated with removal of existing concrete required for anode installation shall be paid under Item 803.0300 "Partial Removal and Disposal of Existing Concrete Masonry".

Cleaning and Repair of Reinforcing Steel:

Clean exposed reinforcing steel of rust, mortar, etc. to provide sufficient electrical connection and mechanical bond. If significant reduction in the cross section of the reinforcing steel has occurred, replace or install supplemental reinforcement per the contract drawings or as directed by the engineer. Secure loose reinforcing steel by tying tightly to other bars with steel tie wire. Verify electrical continuity of all reinforcing steel, including supplemental steel, as specified in the succeeding section "Electrical Continuity of Steel and Anodes" of this specification.

Concrete Preparation:

Create a clean, sound substrate by removing bond-inhibiting materials from the concrete substrate by high pressure water blasting or abrasive blasting.

Electric Continuity of Steel and Anodes:

Reinforcing steel in the deck abutment and center pier shall be tested for electrical continuity by procedures as directed by the cathodic protection technician. Electrical connection is acceptable if the DC resistance measured with the multi-meter is 1 Ω or less or the DC potential is 1 mV or less. Reinforcing steel found to be discontinuous shall be bonded to continuous reinforcement by steel tie wire.

Any new steel added to the structure, such as supplemental reinforcing, wire mesh or rebar shall be electrically continuous. The new steel shall be connected to the anode grid or bonded to existing reinforcing steel. After the distributed galvanic anodes are installed, the continuity of the connection between anode tie wire and reinforcing steel is verify using the same procedures prior to concrete placement.

Reinforcing Steel Connections:

Distributed anode system must be connected to reinforcing steel to be protected. The anodes are directly tied to exposed steel in areas with cleaned exposed steel. In sound concrete areas, the anodes are interconnected to header wires to create a distributed anode grid. The anode grid shall be connected to reinforcing steel with a minimum of two connections per 500 ft² of concrete area.

If no exposed steel exists after preparation of the substrate, a small area of concrete shall be removed to expose reinforcing steel for anode connection. Electrical connections to the reinforcing steel shall be established by tying the header wire to the exposed steel or by alternate methods. Proposed electrical connection details shall be approved by the anode manufacturer and shall be detailed on the shop drawing submittal.

Concrete Placement:

After the distributed galvanic anodes have been installed, proceed with concrete placement taking care not to damage or leave voids around the anodes. Do not allow the anodes to soak in water greater than 20 minutes. Concrete placement shall be paid for under Item 817.2142 "Repairs to Structure Concrete Masonry – Form and Cast-In-Place".

METHOD OF MEASUREMENT. "Galvanic Encapsulation System" shall be measured for payment by the "Square Foot" of area to be installed with a galvanic encapsulation system.

BASIS OF PAYMENT. "Galvanic Encapsulation System" will be paid for at the contract unit price per square foot of area as listed in the Bid. The price so-stated constitutes full and complete compensation for all design, labor, materials, tools, and equipment, and all other incidentals to finish the work, complete and accepted by the Engineer.

Material for Crack Sealing:

The high molecular weight methacrylate (HMWM) resin shall be low viscosity and non-fuming. Acceptance is based on the manufacturer certifying that it conforms to the following, and the contractor forwarding the certification to the Engineer:

Viscosity Less than 25 cps when measured according to ASTM D2849

Density Greater than 8.4 lb/gal. @ 77° F.

Flash Point Greater than 200° F.

Vapor Pressure Less than 1.0 mm Hg @ 77° F. (ASTM D 323)

TG (DSC) Greater than 136° F (ASTM D3418)

Gel Time Greater than 40 minutes for a 100 gram mass

Percent Solids Greater than 90 % by weight

Bond Strength Greater than 1522.3 psi (ASTM C882)

Sand:

The sand shall be commercial quality dry blast sand. 95% of the sand shall pass the #8 sieve, and 95% shall be retained on the #30 sieve.

Water:

The water shall meet the requirements of Section 601.02.5 of the Standard Specifications.

Results of all the tests above, conducted by an AASHTO accredited testing lab shall be submitted to the Engineer along with the installation drawings. Provide to the Engineer a list of bridge projects in which the proposed UHPC material has been used as joint fill. The Engineer reserves the right to reject a proposed UHPC material which lacks a proven track record in concrete joint filling in bridge applications.

Storage:

The contractor shall assure the proper storage of premix, fibers and additives as required by the supplier's specifications in order to protect materials against loss of physical and mechanical properties.

Compressed Synthetic Sheet Gasket:

This specification covers the material requirements for sheet gasket, treated both sides with a parting agent to prevent adhesion to working surfaces. This material is used as a bond breaker and sliding surface in the bridge link slab.

The sheet gasket shall have a nominal 1/16-inch thickness and shall be treated on both sides with a parting agent. The material shall meet the following requirements:

SHEET GASKET REQUIRMENTS		
Property	Test Method	Requirement
Water Absorption, %	Prepare 3 samples (2x2 inches, 1/16±1/32 inch thick). Record initial weight of the specimen. Immerse the samples in a distilled water tank for 24 hrs at room temperature. Take out the samples and dry it with a dry cloth, then record final weight. Use the difference in weight to calculate the water absorption %.	25.0 Maximum
Coefficient of static friction	ASTM D1894	0.36 Maximum
Coefficient of kinetic friction	ASTM D1894	0.24 Maximim
Tensile Strength, psi in the weakest direction	ASTM F152, Type 2	1200 Minimum

Sheet gaskets shall be submitted to the Engineer for approval.

Compressible Foam Joint Filler:

Compressible foam joint filler shall be in accordance with Section M.02.10.1 of the Standard Specifications.

TESTING METHODS:

Acceptance Testing:

The Contractor shall complete the testing of the UHPC a minimum of one month before placement of the joint. The testing sequence will include the submission of a plan for casting and testing procedures to the Engineer for review and approval followed by casting and testing according to the approved plan.

Casting and testing must include the following:

- A minimum of 12 cylinders 3in. x 6 in. shall be cast.
- The temperature during curing shall be as per heat treatment temperature limits established in this specification. 2 cylinders shall be tested each testing interval. Testing intervals are at 10 hours, 12 hours, 14 hours, and 24 hours. The compressive strength shall be measured by ASTM C39. Only a concrete mix design that passes these tests may be used to form the link slab.
- Pullout Test: Cast 6 additional cylinders 12 in. diameter and 7.5 in. deep. Each cylinder shall have one 32 in. long galvanized reinforcing bar cast in the center of the circular face. The axis of the bar shall be perpendicular to the formed surface. 3 of the bars shall be #6 bars embedded 5 in. deep and 3 of the bars shall be #4 bars embedded 3 in. deep. The test shall be performed as soon as practical after the corresponding compressive strength samples reach 12 ksi. Acceptance criteria for pullout testing shall be when there is complete tensile failure of the reinforcing bar, prior to pullout from the concrete or failure of the concrete.

Equipment for Maturity Testing:

Use a Maturity Meter and thermocouples that can:

- Provide a maturity value based on the Equivalent Age or Temperature Time Method as detailed in ASTM C 1074-11.
- Continuously log and store maturity data.
- Accurate to within +/- 1° F when the meter is calibrated as per the manufacturer's instructions.
- Take readings every half hour for the first 48 hours and every hour after that at a minimum.
- Print data and/or download it into a spreadsheet.

Methodology for Maturity Testing:

The procedure for utilizing the maturity method to determine in-place UHPC strengths includes three steps: development of the strength-maturity relationship, monitoring the maturity of the placement, and regular validation of the strength maturity relationship. Any changes in the mix design, its components, or proportions will require that a new strength-maturity relationship be developed.

The strength-maturity relationship shall be developed one month prior to construction. Continue data collection for the strength-maturity relationship after acceptance of the maturity value until the strength reaches 21 ksi.

A procedure to develop the strength-maturity relationship shall be submitted to the Engineer for review and approval along with the shop drawings. The submitted procedure shall include all necessary information for the development of the strength maturity relationship. All necessary testing included in the procedure shall be conducted by an AASHTO accredited testing lab.

CONSTRUCTION METHODS:

Installation Drawings:

The proposed method of mixing, placing, and curing the UHPC link slab shall be shown on the installation drawings. The Contractor shall perform qualification testing using maturity method and the results shall be shown on the installation drawing to demonstrate that the proposed method of curing will achieve the required strength at the required time.

Pre-Pour Meeting:

Prior to the initial placement of the UHPC, the contractor shall arrange for an on site meeting with the UHPC representative. The contractor's staff and the RIDOT Engineer and Inspectors shall attend the site meeting. The objective of the meeting will be to clearly outline the procedures for mixing, transporting, finishing and curing of the UHPC material.

The contractor shall arrange for a representative of the UHPC supplier to be on site during the placement of the link slab. The representative shall be knowledgeable in the supply, mixing, delivery, placement, and curing of the UHPC material.

Storage:

The contractor shall assure the proper storage of premix, fibers and additives as required by the supplier's specifications in order to protect materials against loss of physical and mechanical properties.

Form Work, Batching and Curing:

The design and fabrication of forms shall follow approved installation drawings and shall follow the recommendations of the manufacturer. All the forms for UHPC shall be constructed from plywood. The forms shall be coated to prevent absorption of water.

Thoroughly and continuously wet the concrete contact area for 24 hours prior the placing of UHPC, keep wet and remove all surface water just prior to UHPC placement.

The contractor shall follow the batching sequence as specified by the supplier and approved by the Engineer.

The UHPC in the form shall be cured according to Manufacturer's recommendations to attain the required strength shown on the contract documents.

The contractor shall arrange for a representative of the UHPC supplier to be on site during the placement of the joints until the Contractor's own staff has become well-trained in the use of the material. The representative shall be knowledgeable in the supply, mixing, delivery, placement, and curing of the UHPC material.

Quality Control:

The contractor shall measure the slump flow on each batch of UHPC. The slump flow will be conducted using a mini-slump cone. The flow for each batch shall be between 7 in. and 10in. The contractor shall provide the Engineer with a copy of the Quality Control Plan to ensure the compliance with the specification in addition to meeting the applicable quality control requirements of Section 600 for Standard Specifications.

Estimation of In-Place Strength:

1. Two thermocouples per each UHPC link slabs, one at each end, shall be installed. The locations of these installations shall be shown on the installation drawings. These locations shall be revised if directed by the Engineer. The thermocouple wiring may be tied to reinforcing steel, but probe endings may not be in direct contact with the steel. Consider structural or exposure conditions when placing thermocouples.
2. Listed actions are allowed when the maturity value of all the thermocouples reaches the corresponding strength values listed below.

Action	Strength Requirement
Removal of top forms	10 ksi
Open Bridge deck to Traffic	12 ksi

3. Record and save the maturity data from the meter until the strength reaches 21 ksi. Disconnect the meter and clip all wires flush with the concrete surface.

A continuous read thermocouple or thermistor with a data logger can be used to estimate in place strength. The methodology outlined in ASTM C 1074-11 will be used. The maturity function used to estimate strength will be calculated with the same formula that is used by the maturity meter that established the initial strength maturity relationship. Copies of the calculations will be provided to the engineer.

Validation of the Strength-Maturity Relationship: For each day of placement, perform validation tests by casting 7 – 3in. x 6 in. cylinders. Equip one of the cylinders with a thermocouple. Test the cylinders as close as possible to the maturity value corresponding to 21 ksi. Record the maturity value immediately prior to testing. All testing shall be conducted by an AASHTO accredited testing lab. Report the results to The Engineer.

If the average value of compressive strength of each pair of cylinders is within 10% of the estimated value, the strength-maturity relationship will be validated. If the average cylinder value is more than 10% below the estimated value, the strength maturity relationship will need to be re-established. If the first four cylinders produce acceptable results, the remainder need not be tested.

The Department may perform additional testing for research purposes. Casting and testing in addition to that required in this spec will be performed by RIDOT personnel.

In case of loss of required data, or non-verification of the strength-maturity relationship, use the cylinders cast above, one pair at a time, to verify the strength upon approval from The Engineer.

Sealing of Temperature Cracks:

Prior to placement of the wearing surface and opening the bridge deck to traffic, the high molecular weight methacrylate (HMWM) resin shall be used to seal the temperature cracks (if any) on the UHPC joints in accordance with manufacturer's instructions and as ordered by the engineer.

METHOD OF MEASUREMENT: This item does not require a measurement for payment.

BASIS OF PAYMENT:

No separate payment will be made for this Item. Costs for this Item shall be included in the lump sum bid price for Item 800.9901 "Route 5 Bridge No. 0185". Work associated with this Item shall include all labor, equipment, material, and incidentals required to complete the work as shown in the Contract Documents to the satisfaction of the Engineer.

Unless otherwise provided, the work shall include cost of furnishing and placing formwork, sheet gaskets, bond breaker, water for wetting, joint sealing compound, joint filler, foam joint sealer, sealing of temperature cracks, concrete curing material, including any material for temperature management of environment and mixing components during the mixing and curing period, and the grinding of the overfilled UHPC to final grade. The cost of the mix design shall also be considered incidental to this item.

No extra compensation for corrective finishing or repairs to damaged or defective materials will be paid.

Bar reinforcement and reinforcement mechanical connectors (where required), shall also be paid under the lump sum Item 800.9901.

JOB SPECIFIC**CODE 905.9901****EXPOSED AGGREGATE SIDEWALK**

DESCRIPTION. This work shall consist of installing Portland Cement Concrete sidewalks (6" Thick) on prepared gravel bases and shall consist of exposing the aggregates on the surface to attain a rough texture finish at the locations indicated on the plans or directed by the Engineer, all in accordance with these specifications.

MATERIALS. All materials shall be in accordance with Subsection 905.02 of the Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction and its amendments unless specified below.

RETARDER: Retarder shall be one of the following products. Contractor must follow the manufacturer's products recommendations.

1. The Burke Company: "True Etch Surface Retarder".
2. Anti-hysro: "Spec No. 8-8A – Concrete Surface Retarder".
3. Sika Corp. "Rugasol-S".

SEALER: Sealer shall be THORO® ENVIROSEAL 20 (internationally known as Masterseal 303) or approved equal. The Contractor must follow the manufacturer's product recommendations. THORO® ENVIROSEAL 20 shall be stored under cover, clear of the ground and stacked not more than 2 containers high and shall be protected from freezing.

CONSTRUCTION METHODS. All construction methods shall be in accordance with Subsection 904.03 of the Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction and its amendments unless specified below.

The Contractor shall construct a 4' by 5' panel as an example of the finished sidewalk and have this panel approved by the Engineer before completing the rest of the sidewalks. This panel shall remain on site until the sidewalk work has been completed.

FINISHING: The method employed to achieve the desired results shall be in applying a chemical concrete set retarder admixture to the surface of the concrete immediately following the trowel finishing operations. The amount of retardant applied will be sufficient to expose 1/8 inch of the coarse aggregate using a water spray and provide an overall surface with a rough texture. The Contractor shall follow the manufacturer's recommendations for using the set retarder to attain the desired results with consideration given to the concrete mix, ambient, curing temperatures, and recommended curing time before performing the mortar procedure.

SEALER:**Preparation:**

New concrete surfaces shall be cleaned of all sand, surface dust/dirt, oil, grease, chemical films/coatings and other contaminants before applications. A complete water, sand, or shot blast may be needed to achieve the desired surface condition. Crack control, caulking, patching and expansion joint sealants can be installed before and after application of the sealer. Cure in accordance with manufacturer's instructions.

Application:

Surface, air and material temperature should be between 50°C and 35°C during application. Surfaces to be treated shall be dry. THORO® ENVIROSEAL 20 should not be applied if frost, ice or standing water are visible on the surface to be treated. All vegetation shall be protected from over-spray of this product.

Test a small area of the concrete surface before starting general application of any clear, penetrating sealer to assure desired results and coverage rates.

Stir material thoroughly before and during application. Apply to saturation. This may be done with a low-pressure spray, or by pouring, followed by brooming for even distribution on horizontal surfaces. Normal coverage rates are approximately 3 to 5 m²/ltr. The surfaces treated shall be left for 4 hours for proper penetration and shall not be opened to pedestrian traffic until completely dry.

METHOD OF MEASUREMENT. “Exposed Aggregate Sidewalk” shall be measured for payment by the “Square Yard” of sidewalk with exposed aggregate finish actually installed in accordance with the Plans and/or directed by the Engineer.

BASIS OF PAYMENT. “Exposed Aggregate Sidewalk ” will be paid at the contract unit price square yard as listed in the Bid. The price so-stated constitutes full and complete compensation for all labor, materials, and equipment, including retarder, expansion joint material, reinforcement, sealer, and for all incidentals required to finish the work, complete and accepted by the Engineer.

Excavation and gravel borrow subbase will be paid separately under appropriate work items.

JOB SPECIFIC

CODE 917.9901

REMOVE AND RESET USPS MAILBOX

DESCRIPTION. Work to be done under this item shall include removal and disposal of USPS mailbox concrete box, furnishing a concrete pad including anchor bolts into concrete at the proposed location of relocated United States Postal Service mailboxes.

MATERIALS. Concrete pad and bolts shall be in accordance with USPS standards.

CONSTRUCTION METHODS. The contractor shall coordinate with the United States Postal Service (USPS) for removal of Mailboxes. The USPS will remove and stack mailboxes and dispose of associated concrete pads if present.

Contact Information:

Name: Apponaug USPS

Phone: 401-732-8736

Address: 3205 Post Road, Warwick, RI 02886

The contractor shall provide a concrete pad with anchor bolts into the concrete in accordance with USPS standards. The Contractor shall coordinate with the USPS the size and thickness of the concrete pad and when locations are prepared for installation. The USPS will install the mailboxes in final location.

METHOD OF MEASUREMENT. “Remove and Reset USPS Mailbox” shall be measured for payment by the number per “Each”, complete in place.

BASIS OF PAYMENT. “Remove and Rest USPS Mailbox” will be paid for at the contract unit price per each as listed in the Bid, which price shall include all labor, materials, equipment, coordination with USPS, removal and disposal of mailbox concrete pad, furnishing and installing new concrete pad and anchor bolts and incidental costs required to complete the work.

JOB SPECIFIC

CODE 937.1000

MAINTENANCE AND MOVEMENT TRAFFIC PROTECTION

DESCRIPTION. Subsection 937.05.2; Failure to Comply, part a. Maintenance, of the Rhode Island Standard Specifications for Road and Bridge Construction, 2004 Edition with latest revisions, requires that a daily charge be deducted from monies due the Contractor for failure to adequately and safely maintain traffic control devices along any portion of the project.

The charge for this Contract will be:

\$1,000.00 per day

Subsection 937.05.2; Failure to Comply, part b. Movement, of the Standard Specifications, requires that a daily charge be deducted from monies due the Contractor for failure to remove and/or relocate traffic control devices for compliance with the traffic-related work restrictions included on the Transportation Management Plan or to otherwise meet changes in traffic conditions, construction operations, or other conditions affecting the safety and/or mobility of the traveling public.

The charge for this Contract will be:

\$1,000.00 per half hour per travel lane that is closed to traffic

In addition, a daily charge will be deducted from the monies due to the Contractor for failure to keep all parking spaces within the Cork & Rye parking lot open at all times during construction.

The charge for this Contract will be:

\$1,000.00 per hour per parking space that is closed to the public

JOB SPECIFIC**CODE 938.1000****PRICE ADJUSTMENTS****DESCRIPTION.**

- a. **Liquid Asphalt Cement.** * The Base Price of Liquid Asphalt Cement as required to implement **Subsection 938.03.1** of the Standard Specifications is \$ 552.50 per ton as of March 9, 2020.

* In the case of modified asphalt binder, this price adjustment provision shall only apply to the neat liquid asphalt component. This provision shall not apply to the modifier component, manufacture, storage, transportation or other associated costs.

- b. **Diesel Fuel.** The Base Price of Diesel Fuel as required to implement **Subsection 938.03.2** of the Standard Specifications is \$ 1.4975 per gallon as of March 9, 2020.

- c. **Steel.** The Base Price of Steel as required to implement **Subsection 938.03.03** of the Standard Specifications is:

Structural Steel \$ TBD per pound;

Reinforcing Steel \$ TBD per pound;

Stainless Steel \$ TBD per pound;

JOB SPECIFIC

L06.9901 AMELANCHIER – ‘AUTUMN BRILLIANCE’ 2-2.5 INCH CALIPER

L06.9902 MAPLE – ‘OCTOBER GLORY’ 2-2.5 INCH CALIPER

L06.9903 TUPELO – ‘WILDFIRE’ 2.5-3 INCH CALIPER

L06.9904 SPRUCE – ‘HOOPSI BLUE’ 5-6 FEET

L06.9905 SPRUCE – ‘HOOPSI BLUE’ 7-8 FEET

L06.9906 SPRUCE – ‘HOOPSI BLUE’ 8-10 FEET

L06.9907 SPRUCE – ‘COLORADO BLUE’ 7-8 FEET

L06.9908 ARBORVITAE – ‘GREEN GIANT’ 6-7 FEET

L06.9909 ARBORVITAE – ‘EMERALD GREEN’ 8-10 FEET

L06.9910 AMERICAN ARBORVITAE – ‘SKINNER DWARF’ 2-2.5 INCH CALIPER

L06.9911 WHITESPIRE BIRCH – ‘WHITESPIRE’ 2-2.5 INCH CALIPER

L06.9912 AMERICAN REDBUD 2-2.5 INCH CALIPER

L06.9913 LONDON PLANETREE – ‘BLOODGOOD’ 3-3.5 INCH CALIPER

L06.9914 LILAC TREE – ‘IVORY SILK’ 2-2.5 INCH CALIPER

L06.9915 AZALEA – ‘PINK & SWEET’ 18-24 INCH

L06.9916 ARCTIC FIRE RED TWIG DOGWOOD – ‘FARROW’ 3-4 FEET

L06.9917 WINTERBERRY – ‘JIM DANDY’ 18-24 INCH

L06.9918 WINTERBERRY – ‘RED SPRITE’ 24-36 INCH

L06.9919 DOUBLE KNOCKOUT ROSE – ‘RADTKO’ 24-36 INCH

L06.9920 DWARF MAIDEN GRASS – ‘YAKUSHIMA’ 24-36 INCH

L06.9921 WEIGELA – ‘WINE AND ROSE’ 2-2.5 INCH CALIPER

L06.9922 LILCA TREE – ‘ANTHONY WATERER’ 2-2.5 INCH CALIPER

L06.9923 DAYLILY – ‘HAPPY RETURNS’ 2-2.5 INCH CALIPER

DESCRIPTION. The work under these items shall conform to the requirements of section L06 and L07 of the Rhode Island Standard Specifications for Road and Bridge Construction, latest edition and the following:

For the above items the Contractor shall provide and install plant material of genus, species, variety, size and quantities in locations as directed by the Engineer. The work of this section includes, but is not limited to, the following:

- A. Purchasing and transporting plant material to construction sites
- B. Installation of plant material
- C. Plant care during 60-day Maintenance Period and one-year Establishment Period
- D. Replacement of defective or dead plants at End of Maintenance Period
- E. Replacement of defective or dead plants at End of Establishment Period

Cooperation by Contractor

The Landscape Contractor shall have five years continuous experience and expertise in management, handling and installation of ornamental plant material in large scale landscape construction projects. Site foreman shall have at least five years experience and shall be on-site during all times of plant installation.

Samples and Submittals

Plant Material: At least 180 days prior to anticipated planting, the Contractor shall submit a confirmation of availability for all plants on the list, accompanied by nursery sources. When the specified types and sizes of plants are not available, substitutions may be made upon request by the Contractor, if approved in writing by the Engineer. Substitutions proposed by the Contractor shall have equivalent overall form, height, and horticultural characteristics and must be approved in writing by the Engineer prior to tagging. At least 30 days prior to planting, the Contractor shall submit a schedule for tagging material to the Engineer.

For all other materials, at least 30 days prior to ordering, the Contractor shall submit to the Engineer material specifications and (where applicable) installation instructions attesting that the following materials meet the requirements specified. No materials shall be ordered until submittals have been approved by the Engineer. Delivered materials shall match the samples.

All material samples shall include supplier's literature and certification stating that material meets specifications. Submittals, including samples, material specifications, and installation specifications are as follows:

Fungal mycorrhizae: Submit sample with supplier specifications and certification.

Loam: The Contractor shall submit two 10-lb samples of loam to be used as backfill per the requirements of Section 751 of the Standard Specifications, accompanied by laboratory certified test results per the requirements of Section 751.

Backfill Mix: The contractor shall submit a 10 lb. representative sample of existing soil, which shall then be mixed with loam and tested according to the requirements specified herein. Mixing shall be done in the presence of the Engineer.

Water: Submit a watering schedule, including sources of water, methods of irrigation, and any incidental work required to provide water for the plants.

Testing Methods: The Contractor shall submit to the Engineer for his inspection and approval, equipment and methods for testing soil moisture and soil pH.

The Contractor shall provide to the Engineer two new functioning moisture gauges, including instructions for use and batteries if required, for his use during the duration of the Contract. The meters shall be hand held and shall be capable of measuring moisture at a depth of 6 inches. Meter scale shall be sufficient to determine moist, dry, or wet soil. The meters shall be regularly checked for calibration against watered loam and shall be replaced if found faulty at no additional cost.

In addition, the Contractor shall provide to the Engineer one copy of the "American Standard for Nursery Stock," ANSI Z-60.1, latest edition, published by American Association of Nurserymen (AAN) for the duration of this Contract.

References and Standards

The following standards shall apply to the Work of this Section.

ASNS: "American Standard for Nursery Stock," ANSI Z-60.1, latest edition, published by American Association of Nurserymen (AAN).

Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses. Michael Dirr. Stipes Publishing Company, latest ed.

Examination of Conditions

The Contractor shall be responsible for judging the full extent of work requirements involved. This responsibility includes, but is not limited to, the following: transportation, purchase, temporary storage and maintenance of plants; plant rehandling prior to final installation; removal and off-site disposal of existing loam that has been determined unacceptable; purchase, transport, and supply of loam.

MATERIALS.

Plant Materials

The Contractor shall furnish all plants as shown on the plans, unless otherwise directed in writing by the Engineer. All plants shall be nursery grown.

All plants shall be legibly tagged with the botanical name. Only plant stock grown within hardiness Zones 1 through 6a, as established by the USDA Plant Hardiness Zone Map, will be accepted. The Contractor's suppliers must certify in writing that the stock has actually been grown under Zone 6a or harder conditions. Plants not so certified will not be accepted.

All plants shall be typical of their species or variety in growth habit. Plant sizes, habit, rootballs, and containers shall be in accordance with the American Standard for Nursery Stock (ASNS), Standards of the American Association of Nurserymen (AAN) as a minimum requirement for acceptance

All plants must be moved with the root systems in soil. Balled and burlapped plants shall be wrapped with untreated 8 ounce burlap, firmly held in place by a stout cord or wire. Wire containers of adequate size to allow root development for the plant size as per ASNS requirements. Plants prepared with plastic or other non bio-degradable wrappings will not be accepted. Rootballs shall remain intact during all operations. No plant will be accepted if the rootball has been badly cracked or broken prior to, or during, the process of planting. Rootballs shall be moist upon arrival and shall be kept moist until installation. All balled and burlapped plants that cannot be planted at once must be heeled in by setting them in the ground, covering the rootballs with soil, and watering them adequately.

Container-grown stock shall have been grown in the container long enough for the root system to have developed sufficiently to hold its soil together firmly. No plants shall be loose in the container. Container-grown plants shall not be pot bound, with spiraling roots or roots growing densely against the sides of the container. Score or butterfly cut rootball of all container-grown plants prior to planting.

Each plant shall have plenty of fibrous roots, healthy buds, and shall be free of disease or insect pests, eggs or larvae. All plant parts shall show active green cambium when cut. They shall be densely foliated when in leaf.

The trunk of each tree shall be free from sun scald, frost cracks, or wounds resulting from abrasions, fire or other causes. Pruning wounds shall be no larger than 2 inches and shall show vigorous scar tissue. No trees with double leaders or twin heads will be acceptable without the written approval of the Engineer. No plant material from cold storage will be accepted. In regard to shrubs, no single stemmed or thin plants will be accepted. The side branches must be generous and well-twigged, and the plant as a whole must be well branched to the ground. The plants must be in a vigorous condition, free from dead wood, bruises or other root or branch injuries.

Loam Borrow

Loam borrow, sometimes referred to as loam, for planting soil mix shall be in accordance with the requirements of Standard 751 of the Standard Specifications.

Soil Amendments

Soil amendments, including ground limestone, sulfur, gypsum, and organic materials, shall meet the requirement of Loam Borrow, as described herein.

Planting Soil Mix

Planting soil for backfill shall be a mixture of equal parts approved loam and excavated material. Mixed material shall be pH tested by the Contractor in the presence of the Engineer, and adjusted according to particular planting applications, using lime or sulfur as required. For plants that require an acid soil, such as ericaceous plants and broad-leaved evergreens, planting soil shall have a true pH of 4.5 to 5.5. Planting soil for all other plants shall have a true pH value of 6.0 to 6.5. Proposed soil amendments shall be submitted to the Engineer for approval prior to application.

Bark Mulch

Bark mulch shall be shredded pine bark aged a minimum of six (6) months. The mulch shall be dark brown in color, free of chunks and pieces of wood thicker than one-quarter (1/4) inch and shall not contain, in the judgement of the Engineer, an excess of fine particles. Unless otherwise specified in these special provisions, bark mulch shall be incidental to the cost of the planting items. Do not use wood chips.

Water

The Contractor shall be responsible for furnishing his own supply of water to the site at no extra cost. All plants injured or damaged due to the lack of water, or due to the use of too much water, shall be the Contractor's responsibility to correct. Water shall be free from impurities injurious to vegetation.

Fungal Mycorrhizae

Each plant shall be planted with fungal mycorrhizae. Mycorrhizae shall include at least three species of vesicular arbuscular (endomycchorizal) fungi as well as ectomycorrhizal fungi. Mycorrhizae shall be shipped in individual dosage packets.

CONSTRUCTION METHODS. Furnishing and planting of plant material shall include, but is not limited to, the following: digging of the pits and plant beds; amendment of loam as required to produce planting soil mix; provision of soil additives for pH requirements of specific plants; provision of mycorrhizal fungi; furnishing the plants as specified; plant installation; watering and maintenance.

Seasons for Planting

Spring: Deciduous materials - March 21 through May 1
 Evergreen materials - April 15 through June 1

Fall: Deciduous materials - Oct. 1 through Dec. 1
 Evergreen materials - Aug. 15 through October 15

Requests for exceptions to this schedule shall be submitted in writing to the Engineer for his approval.

Plant Tagging and Approval

The Contractor shall locate, secure, tag, and ship plant material in a sufficiently timely manner to ensure minimal substitution and storage of plants.

Plants shall be tagged at least one month prior to the expected planting date. The Contractor shall be responsible for tagging the material at the nursery and providing a representative. The Contractor shall request that the Engineer provide a representative to approve tagged stock to be planted under this Section. Contractor shall tag or allow the nursery to tag material for approval of the Engineer's representative. In the event that satisfactory material cannot be located, the Contractor shall be responsible for any necessary travel and overnight accommodations for the Engineer's representative during the period of time required to locate, select, and approve plant material.

All trees and a representative sample of each shrub species on the Plant List shall be tagged by the Contractor at the nursery and approved by the Engineer or his representative, prior to digging, for conformity to specification requirements as to quality, size, and variety. Cost of replacement of materials rejected by the Engineer at the site shall be borne by the Contractor.

Approval of tagged material at the nursery shall not prevent the right of inspection and rejection upon delivery at the site or during the progress of the work.

Tree trunks shall be protected during shipping by a heavy walled cardboard sleeve or other suitable material. Plants shall either be shipped in enclosed trucks or all surfaces, leaves and branches shall be wrapped to prevent damage and dessication.

Plant Delivery and Installation

Locations for all plants shall be approved by the Engineer before any plant pits or plant beds are dug.

The Contractor shall locate all underground utilities within 10 feet of the proposed planting pits and notify the Engineer of any conflicts prior to digging plant pits.

The Contractor shall notify the Engineer 3 working days prior to the proposed arrival of plant material on the site. All plants shall be planted within 5 days of arrival on site or shall be rejected by the Engineer. Plants stored on site shall be shaded from direct sunlight at all times and shall not be stored on paved surfaces. Plants stored on site shall be watered daily.

Planting

Prior to the installation of any plant material, the Contractor shall dig test pits to determine percolation rates. Percolation of less than 1 inch per hour shall require corrective measures as recommended by the Contractor and approved by the Engineer.

Plant pits shall be excavated as shown on plans and the sides scarified to prevent glazed soils.

Trees and shrubs shall be placed as shown on the plans, with the root crown exposed above finished grade. After placement of balled and burlapped plants and prior to backfilling, remove all rope, wire baskets and burlap from the root balls. For container material, remove pots just before planting, and loosen the perimeter roots and soil before placement. Handle plants carefully to prevent damaging roots or stems.

Add mycorrhizal fungi per manufacturer specifications. After planting, the Contractor shall submit fungi dose packets to the Engineer to certify installation of material.

Prepare planting soil mix as specified above to depths as shown on the drawings. Place backfill mix in layers of not more than 6 inches, and water each layer sufficiently to settle soil before the next layer is put in place. Backfill mix shall meet finished grade after settlement. Shape edge of planting pit to form a saucer for holding water and place mulch as shown in the plans. Do not cover the stem flare of the plants with mulch.

Water plants immediately following planting as necessary to thoroughly moisten rootball and planting soil.

Plants shall not be wrapped after installation. Wounds shall not be painted. Trees shall not be staked unless wind or other local conditions require the additional protection. Staking and guying shall be incidental to tree installation. Use cloth tape rather than wire. The Contractor shall be responsible for removing all staking and guying materials at the end of the Maintenance Period.

Plant Care

Contractor shall provide plant care for the duration of the Maintenance and Establishment periods.

During the 60 day Maintenance Period, plants shall be inspected for watering needs at least twice each week using moisture meters supplied by the Contractor. In addition, during the portion of the Establishment period occurring between May 1 and October 1, the plants shall be inspected weekly using moisture meters.

Plant care shall consist of keeping the plants in a healthy growing condition. Plant care shall include watering, weeding, pruning, re-mulching, removal of dead material, resetting plants to proper grades or upright position, and maintaining the planting saucer.

Trees and shrubs shall be pruned, if necessary, following planting and in accordance with the American Nurserymen's Association Standards for Class I, fine pruning, to preserve the natural character of the plant. All dead wood or suckers and all broken or badly bruised branches shall be removed. Do not cut leaders.

Any decline in the condition of new plantings shall require the Contractor to take immediate action to identify potential problems and undertake corrective measures. If required, the Contractor shall engage professional arborists and/or horticulturists to inspect plant materials and to identify problems and recommend corrective procedures. The Engineer shall be immediately advised of such actions. Inspection and recommendation reports shall be submitted to the Engineer.

Absolutely no debris may be left on the site. The Contractor shall repair any damage to site as directed by the Engineer, at no additional cost.

Maintenance Period: 60 Days

The Maintenance Period shall begin immediately after each plant is planted and shall continue for a minimum of 60 days following the completion of all planting installations, or until the Conditional Acceptance of all planting work, whichever is a longer period of time.

At the end of the Maintenance Period, the Contractor will request inspection by the Engineer at least 10 days before the anticipated date of inspection.

At the time of inspection, if the plant materials and workmanship are acceptable to the Engineer, the Engineer shall issue a written Certificate of Conditional Acceptance to the Contractor. The date of the inspection shall establish the end of the Maintenance Period and the commencement of the required one-year Establishment Period for planting work.

If in the Engineer's opinion, plant materials and/or workmanship is deficient, acceptance will not be granted, and the Maintenance Period for all the plants shall be extended until plant replacements are made or other deficiencies are corrected. All dead and unsatisfactory plants shall be removed promptly from the project. Replacement plants shall conform in all respects to the Specifications for the original plants and shall be planted in the same manner.

Establishment Period: One Year

The purpose of the Establishment Period is to nurture plants through at least one full growing season and one full winter. All plants shall be inspected by the Engineer one year after Conditional Acceptance and shall be alive and in satisfactory growth at the end of that time. The Contractor is responsible for arranging inspection early enough in the season to allow adequate time to procure and install replacement material.

At the end of the Establishment Period, each plant shall show healthy growth on at least 75 percent of its terminal stems, as determined by the Engineer. Determination of healthy growth shall include, but is not necessarily limited to, viable leaves (in season) and terminal buds, as well as live cambium. Plants found to be unacceptable shall be removed promptly from the site and replaced immediately or during the next normal planting season, as permitted by the specifications.

Planted areas shall be free of weeds and debris, and plantings shall be re-mulched as necessary. The Engineer will inspect the replacement planting work upon the request of the Contractor. Request for inspection, shall be received by the Engineer at least ten days before the anticipated date of inspection.

Stakes and guying, if any, shall be removed from all plants before Final Acceptance.

Upon acceptance of the work of replacement planting, the Engineer shall issue a written Certificate of Final Acceptance for all plants installed under this Section to the Contractor.

METHOD OF MEASUREMENT. “Amelanchier – ‘Autumn Brilliance’ 2-2.5 inch Caliper”, “Maple – ‘October Glory’ 2-2.5 Inch Caliper”, “Tupelo – ‘Wildfire’ 2-2.5 Inch Caliper”, “Spruce – ‘Hoopsi Blue’ 5-6 Feet”, “Spruce – ‘Hoopsi Blue’ 7-8 Feet”, “Spruce – ‘Hoopsi Blue’ 8-10 Feet”, “Spruce – ‘Colorado Blue’ 7-8 Feet”, “Arborvitae – ‘Green Giant’ 6-7 Feet”, “Arborvitae – ‘Emerald Green’ 8-10 Feet”, “American Arborvitae – ‘Skinner Dwarf’ 2-2.5 Inch Caliper”, “Whitespire Birch – ‘Whitespire’ 2-2.5 Inch Caliper”, “American Redbud 2-2.5 Inch Caliper”, “London Planetree – ‘Bloodgood’ 3-3.5 Inch Caliper”, “Lilac Tree – ‘Ivory Silk’ 2-2.5 Inch Caliper”, “Azalea – ‘Pink & Sweet’ 18-24 Inch”, “Arctic Fire Red Twig Dogwood – ‘Farrow’ 3-4 Feet”, “Winterberry – ‘Jim Dandy’ 18-24 Inch”, “Winterberry – ‘Red Sprite’ 24-36 Inch”, “Double Knockout Rose – ‘Radtko’ 24-36 Inch”, “Dwarf Maiden Grass – ‘Yakushima’ 24-36 Inch”, “Weigela – ‘Wine and Rose’ 2-2.5 Inch Caliper”, “Lilac Tree – ‘Anthony Waterer’ 2-2.5 Inch Caliper”, and “Daylily – ‘Happy Returns’ 2-2.5 Inch Caliper” shall be measured for payment by the number per "Each" for each unit installed and accepted by the Engineer.

BASIS OF PAYMENT. “Amelanchier – ‘Autumn Brilliance’ 2-2.5 inch Caliper”, “Maple – ‘October Glory’ 2-2.5 Inch Caliper”, “Tupelo – ‘Wildfire’ 2-2.5 Inch Caliper”, “Spruce – ‘Hoopsi Blue’ 5-6 Feet”, “Spruce – ‘Hoopsi Blue’ 7-8 Feet”, “Spruce – ‘Hoopsi Blue’ 8-10 Feet”, “Spruce – ‘Colorado Blue’ 7-8 Feet”, “Arborvitae – ‘Green Giant’ 6-7 Feet”, “Arborvitae – ‘Emerald Green’ 8-10 Feet”, “American Arborvitae – ‘Skinner Dwarf’ 2-2.5 Inch Caliper”, “Whitespire Birch – ‘Whitespire’ 2-2.5 Inch Caliper”, “American Redbud 2-2.5 Inch Caliper”, “London Planetree – ‘Bloodgood’ 3-3.5 Inch Caliper”, “Lilac Tree – ‘Ivory Silk’ 2-2.5 Inch Caliper”, “Azalea – ‘Pink & Sweet’ 18-24 Inch”, “Arctic Fire Red Twig Dogwood – ‘Farrow’ 3-4 Feet”, “Winterberry – ‘Jim Dandy’ 18-24 Inch”, “Winterberry – ‘Red Sprite’ 24-36 Inch”, “Double Knockout Rose – ‘Radtco’ 24-36 Inch”, “Dwarf Maiden Grass – ‘Yakushima’ 24-36 Inch”, “Weigela – ‘Wine and Rose’ 2-2.5 Inch Caliper”, “Lilac Tree – ‘Anthony Waterer’ 2-2.5 Inch Caliper”, and “Daylily – ‘Happy Returns’ 2-2.5 Inch Caliper” will be paid for at their respective contract unit prices per each as listed in the Bid. The prices so-stated constitute full and complete compensation for all labor, materials, equipment, and incidentals to provide plant pit excavation, soil preparation, soil amendments, planting mix preparation, loam for planting mix, mycorrhizal fungi planting, plant protection, bark mulch including placement, watering, maintenance, disposal of unsuitable soils, and all other incidentals required for furnishing and installing the plantings in accordance with the drawings, and as directed by the Engineer.

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JOB SPECIFIC**CODE T12.9901****MODIFY EXISTING TRAFFIC SIGNAL CONTROLLER CABINET**

DESCRIPTION. This item of work shall conform to the applicable sections of the Standard Specifications and include the following additions:

The work consists of the necessary rewiring/wiring terminations and reprogramming in the existing controller cabinet at the intersections as indicated on the plans to accommodate accessible pedestrian systems, proposed timings, signal head replacement, or detection modifications at the locations called for on the plans. Any existing Siemens M50 model controllers being modified shall have its firmware upgraded by the Contractor to a minimum version 3.55 or the latest available version compatible with the M50 controllers and the owner agency's version of TACTICS central software. If required for compatibility with a proposed Siemens M60 controller, any existing Siemens M50 model master controller on that system shall have its firmware updated as needed.

Three hardcopies of all programmable controller data shall be supplied by the Contractor. The recorded data shall reflect settings resident in the controller upon acceptance of the project by the Engineer and the Owner.

CONSTRUCTION METHODS. The Contractor shall make the required modifications in the existing controller cabinets, as called for on the plans, to accommodate the traffic signal timings, accessible pedestrian systems, and detection as shown on the plans.

Where any modifications are made at existing traffic signal controller cabinets, Contractor shall supply two (2) copies of box prints and/or revised controller data 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 or existing loop detectors zones are installed/modified, 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/video processor number, relay/video processor channel number, and phase associated with each detector. A supplemental cabinet door sticker which depicts the intersection layout, including detection, shall also be installed by the Contractor where needed.

METHOD OF MEASUREMENT. This item does not require a measurement for payment.

BASIS OF PAYMENT. “Modify Existing Traffic Signal Controller Cabinet” will be paid for at the contract Lump Sum price as listed in the Proposal and as accepted by The Engineer. The price and payment shall constitute full compensation for furnishing all labor, tools, equipment, materials, relays, load switches, rewiring, splicing, reprogramming, firmware upgrade, disabling of existing detection, cabinet door stickers and incidentals necessary to complete this item of work to the satisfaction of the Engineer.

JOB SPECIFIC**CODE T16.9901****REMOVE AND RELOCATE PRIVATE SIGN**

DESCRIPTION. Work includes removing and relocating privately owned signs including all necessary and incidental work for following signs

“Villa Del Rio Luxury Apartments” located in the vicinity of station 49+41± at 61.2’ ± RT.

“Law Offices of Sangiovanni & Ahn” located in the vicinity of station 501+19± at 5.4’± LT

The work includes the removal and disposal of the existing sign foundations, if applicable, and construction of new foundations at the proposed location shown on the plans.

MATERIALS. Foundations for the relocated signs shall be in accordance with Section T16.03.2 of the Rhode Island Department of Transportation Standard Specifications, latest edition.

CONSTRUCTION METHODS. All items above will be removed and relocated to the new location as shown of the plans and determined by the Engineer in the field.

All items shall be removed carefully. The contractor will be held responsible for any damage during the removal and relocating of these items and shall replace or repair the damaged item as directed by the Engineer in the field at his/her own expense.

The contractor shall backfill with compacted gravel all holes resulting from the removal of the existing signs and their foundations and restore the area to match existing conditions of the adjacent area or as directed by the Engineer in the field.

The sign support foundation shall be new in its relocated position, of similar material and dimensions as the existing sign support foundation. The Contractor shall submit photographic documentation of the existing hardware, existing support and dimensioned support foundation details to the Engineer prior to approval for resetting as a condition of payment.

METHOD OF MEASUREMENT. “Remove and Relocate Private Sign” shall be measured for payment by the number per “Each”, complete in place.

BASIS OF PAYMENT. “Remove and Relocate Private Sign” will be paid for at the contract unit price per each as listed in the Bid, which price shall include all labor, materials, equipment and incidental cost required to complete the work.

3. Federal Wage Rates

"General Decision Number: RI20200001 03/13/2020

Superseded General Decision Number: RI20190001

State: Rhode Island

Construction Types: Building, Heavy (Heavy and Marine) and Highway

Counties: Rhode Island Statewide.

BUILDING CONSTRUCTION PROJECTS (does not include residential construction consisting of single family homes and apartments up to and including 4 stories) HEAVY, HIGHWAY AND MARINE CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.80 for calendar year 2020 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.80 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2020
1	01/24/2020
2	02/21/2020
3	03/06/2020
4	03/13/2020

ASBE0006-006 12/01/2019

	Rates	Fringes
HAZARDOUS MATERIAL HANDLER (Includes preparation, wetting, stripping, removal scrapping, vacuuming, bagging & disposing of all insulation materials, whether they contain asbestos or not, from mechanical systems).....	\$ 36.60	22.40

ASBE0006-008 09/01/2019

	Rates	Fringes
Asbestos Worker/Insulator Includes application of all insulating materials, protective coverings, coatings & finishes to all types of mechanical systems.	\$ 43.60	29.90

BOIL0029-001 01/01/2017

	Rates	Fringes
BOILERMAKER.....	\$ 42.42	24.92

BRII0003-001 12/01/2019

	Rates	Fringes
Bricklayer, Stonemason, Pointer, Caulker & Cleaner.....	\$ 41.00	27.83

BRII0003-002 03/01/2020

	Rates	Fringes
Marble Setter, Terrazzo Worker & Tile Setter.....	\$ 40.78	28.92

BRII0003-003 03/01/2020

	Rates	Fringes
Marble, Tile & Terrazzo Finisher.....	\$ 34.10	27.88

CARP0330-001 09/01/2019

	Rates	Fringes
CARPENTER (Includes Soft Floor Layer).....	\$ 38.48	28.60
Diver Tender.....	\$ 36.28	27.15
DIVER.....	\$ 49.28	28.50
Piledriver.....	\$ 37.13	28.45
WELDER.....	\$ 39.48	28.60

FOOTNOTES:

When not diving or tending the diver, the diver and diver tender shall receive the piledriver rate. Diver tenders shall receive \$1.00 per hour above the pile driver rate when tending the diver.

Work on free-standing stacks, concrete silos & public utility electrical power houses, which are over 35 ft. in height when constructed: \$.50 per hour additional.

Work on exterior concrete shear wall gang forms, 45 ft. or more above ground elevation or on setback: \$.50 per hour additional.

The designated piledriver, known as the ""monkey"": \$1.00 per hour additional.

CARP1121-002 01/06/2020

	Rates	Fringes
MILLWRIGHT.....	\$ 39.07	29.15

ELEC0099-002 06/01/2019

	Rates	Fringes
ELECTRICIAN.....	\$ 40.40	57.24%
Teledata System Installer.....	\$ 30.30	13.10%+14.53

FOOTNOTES:

Work of a hazardous nature, or where the work height is 30 ft. or more from the floor, except when working OSHA-approved lifts: 20% per hour additional.

Work in tunnels below ground level in combined sewer outfall:
20% per hour additional.

ELEV0039-001 01/01/2020

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 53.25	34.765+a+b

FOOTNOTES:

A. PAID HOLIDAYS: New Years Day; Memorial Day; Independence Day; Labor Day; Veterans' Day; Thanksgiving Day; the Friday after Thanksgiving Day; and Christmas Day.

B. Employer contributes 8% basic hourly rate for 5 years or more of service of 6% basic hourly rate for 6 months to 5 years of service as vacation pay credit.

ENGI0057-001 12/01/2019

	Rates	Fringes
Operating Engineer: (power plants, sewer treatment plants, pumping stations, tunnels, caissons, piers, docks, bridges, wind turbines, subterranean & other marine and heavy construction work)		
GROUP 1.....	\$ 42.55	25.95+a
GROUP 2.....	\$ 40.55	25.95+a
GROUP 3.....	\$ 36.17	25.95+a
GROUP 4.....	\$ 33.32	25.95+a
GROUP 5.....	\$ 39.60	25.95+a
GROUP 6.....	\$ 30.40	25.95+a
GROUP 7.....	\$ 24.40	25.95+a
GROUP 8.....	\$ 36.25	25.95+a
GROUP 9.....	\$ 40.17	25.95+a

a. BOOM LENGTHS, INCLUDING JIBS:

- 150 feet and over + \$ 2.00
- 180 feet and over + \$ 3.00
- 210 feet and over + \$ 4.00
- 240 feet and over + \$ 5.00
- 270 feet and over + \$ 7.00

300 feet and over + \$ 8.00
350 feet and over + \$ 9.00
400 feet and over + \$10.00

a. PAID HOLIDAYS:

New Year's Day, President's Day, Memorial Day, July Fourth, Victory Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, Christmas Day. a: Any employee who works 3 days in the week in which a holiday falls shall be paid for the holiday.

a. FOOTNOTES:

Hazmat work: \$2.00 per hour additional.
Tunnel/Shaft work: \$5.00 per hour additional.

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, lighters, boom trucks and derricks

GROUP 2: Digging machine, Ross Carrier, locomotive, hoist, elevator, bidwell-type machine, shot & water blasting machine, paver, spreader, graders, front end loader (3 yds. and over), vibratory hammer & vacuum truck, roadheaders, forklifts, economobile type equipment, tunnel boring machines, concrete pump and on site concrete plants.

GROUP 3: Oilers on cranes.

GROUP 4: Oiler on crawler backhoe.

GROUP 5: Bulldozer, bobcats, skid steer loader, tractor, scraper, combination loader backhoe, roller, front end loader (less than 3 yds.), street and mobile-powered sweeper (3-yd. capacity), 8-ft. sweeper minimum 65 HP).

GROUP 6: Well-point installation crew.

GROUP 7: Utility Engineers and Signal Persons

GROUP 8: Heater, concrete mixer, stone crusher, welding machine, generator and light plant, gas and electric driven pump and air compressor.

GROUP 9: Boat & tug operator.

ENGI0057-002 11/01/2019

Rates

Fringes

Power Equipment Operator
 (highway construction
 projects; water and sewerline
 projects which are incidental
 to highway construction
 projects; and bridge projects
 that do not span water)

GROUP 1.....	\$ 35.70	25.95+a
GROUP 2.....	\$ 30.40	25.95+a
GROUP 3.....	\$ 24.40	25.95+a
GROUP 4.....	\$ 30.98	25.95+a
GROUP 5.....	\$ 34.68	25.95+a
GROUP 6.....	\$ 34.30	25.95+a
GROUP 7.....	\$ 29.95	25.95+a
GROUP 8.....	\$ 31.33	25.95+a
GROUP 9.....	\$ 33.28	25.95+a

a. FOOTNOTE: a. Any employee who works three days in the week in which a holiday falls shall be paid for the holiday.

a. PAID HOLIDAYS: New Year's Day, President's Day, Memorial Day, July Fourth, Victory Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day & Christmas Day.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Digging machine, crane, piledriver, lighter, locomotive, derrick, hoist, boom truck, John Henry's, directional drilling machine, cold planer, reclaimer, paver, spreader, grader, front end loader (3 yds. and over), vacuum truck, test boring machine operator, veemere saw, water blaster, hydro-demolition robot, forklift, economobile, Ross Carrier, concrete pump operator and boats

GROUP 2: Well point installation crew

GROUP 3: Utility engineers and signal persons

GROUP 4: Oiler on cranes

GROUP 5: Combination loader backhoe, front end loader (less than 3 yds.), forklift, bulldozers & scrapers and boats

GROUP 6: Roller, skid steer loaders, street sweeper

GROUP 7: Gas and electric drive heater, concrete mixer, light plant, welding machine, pump & compressor

GROUP 8: Stone crusher

GROUP 9: Mechanic & welder

ENGI0057-003 12/01/2019

BUILDING CONSTRUCTION

	Rates	Fringes
Power Equipment Operator		
GROUP 1.....	\$ 41.82	25.95+a
GROUP 2.....	\$ 39.82	25.95+a
GROUP 3.....	\$ 39.60	25.95+a
GROUP 4.....	\$ 35.60	25.95+a
GROUP 5.....	\$ 32.75	25.95+a
GROUP 6.....	\$ 38.90	25.95+a
GROUP 7.....	\$ 38.47	25.95+a
GROUP 8.....	\$ 35.79	25.95+a

a. BOOM LENGTHS, INCLUDING JIBS:

- 150 ft. and over: + \$ 2.00
- 180 ft. and over: + \$ 3.00
- 210 ft. and over: + \$ 4.00
- 240 ft. and over: + \$ 5.00
- 270 ft. and over: + \$ 7.00
- 300 ft. and over: + \$ 8.00
- 350 ft. and over: + \$ 9.00
- 400 ft. and over: + \$10.00

a. PAID HOLIDAYS: New Year's Day, President's Day, Memorial Day, July Fourth, Victory Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day & Christmas Day. a: Any employee who works 3 days in the week in which a holiday falls shall be paid for the holiday.

- a. FOOTNOTE: Hazmat work: \$2.00 per hour additional.
Tunnel/Shaft work: \$5.00 per hour additional.

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, lighters, boom trucks and derricks.

GROUP 2: Digging machine, Ross carrier, locomotive, hoist, elevator, bidwell-type machine, shot & water blasting machine, paver, spreader, front end loader (3 yds. and over), vibratory hammer and vacuum truck

GROUP 3: Telehandler equipment, forklift, concrete pump & on-site concrete plant

GROUP 4: Fireman & oiler on cranes

GROUP 5: Oiler on crawler backhoe

GROUP 6: Bulldozer, skid steer loaders, bobcats, tractor, grader, scraper, combination loader backhoe, roller, front end loader (less than 3 yds.), street and mobile powered sweeper (3 yds. capacity), 8-ft. sweeper (minimum 65 hp)

GROUP 7: Well point installation crew

GROUP 8: Heater, concrete mixer, stone crusher, welding machine, generator for light plant, gas and electric driven pump & air compressor

IRON0037-001 09/16/2019

	Rates	Fringes
IRONWORKER.....	\$ 36.27	28.98

LABO0271-001 06/02/2019

BUILDING CONSTRUCTION

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 31.80	25.05
GROUP 2.....	\$ 32.05	25.05
GROUP 3.....	\$ 32.55	25.05
GROUP 4.....	\$ 32.80	25.05
GROUP 5.....	\$ 33.80	25.05

LABORERS CLASSIFICATIONS

GROUP 1: Laborer, Carpenter Tender, Mason Tender, Cement Finisher Tender, Scaffold Erector, Wrecking Laborer, Asbestos Removal [Non-Mechanical Systems]

GROUP 2: Asphalt Raker, Adzemen, Pipe Trench Bracer, Demolition Burner, Chain Saw Operator, Fence & Guard Rail Erector, Setter of Metal Forms for Roadways, Mortar Mixer, Pipelayer, Riprap & Dry Stonewall Builder, Highway Stone Spreader, Pneumatic Tool Operator, Wagon Drill Operator, Tree Trimmer, Barco-Type Jumping Tamper, Mechanical Grinder

Operator

GROUP 3: Pre-Cast Floor & Roof Plank Erectors

GROUP 4: Air Track Operator, Hydraulic & Similar Self-Powered Drill, Block Paver, Rammer, Curb Setter, Powderman & Blaster

GROUP 5: Toxic Waste Remover

LAB00271-002 06/02/2019

HEAVY AND HIGHWAY CONSTRUCTION

	Rates	Fringes
LABORER		
COMPRESSED AIR		
Group 1.....	\$ 49.23	23.50
Group 2.....	\$ 38.75	23.50
Group 3.....	\$ 51.23	23.50
FREE AIR		
Group 1.....	\$ 41.30	23.50
Group 2.....	\$ 38.75	23.50
Group 3.....	\$ 43.30	23.50
LABORER		
Group 1.....	\$ 31.80	23.05
Group 2.....	\$ 32.05	23.05
Group 3.....	\$ 32.80	23.05
Group 4.....	\$ 25.30	23.05
Group 5.....	\$ 33.80	23.05
OPEN AIR CAISSON, UNDERPINNING WORK AND BORING CREW		
Bottom Man.....	\$ 37.80	23.05
Top Man & Laborer.....	\$ 36.85	23.05
TEST BORING		
Driller.....	\$ 38.25	23.05
Laborer.....	\$ 36.85	23.05

LABORER CLASSIFICATIONS

GROUP 1: Laborer; Carpenter tender; Cement finisher tender; Wrecking laborer; Asbestos removers [non-mechanical systems]; Plant laborer; Driller in quarries

GROUP 2: Adzeperson; Asphalt raker; Barcotype jumping tamper; Chain saw operators; Concrete and power buggy operator; Concrete saw operator; Demolition burner; Fence and guard rail erector; Highway stone spreader; Laser beam

operator; Mechanical grinder operator; Mason tender; Mortar mixer; Pneumatic tool operator; Riprap and dry stonewall builder; Scaffold erector; Setter of metal forms for roadways; Wagon drill operator; Wood chipper operator; Pipelayer; Pipe trench bracer

GROUP 3: Air track drill operator; Hydraulic and similar powered drills; Brick paver; Block paver; Rammer and curb setter; Powderperson and blaster

GROUP 4: Flagger & signaler

GROUP 5: Toxic waste remover

LABORER - COMPRESSED AIR CLASSIFICATIONS

GROUP 1: Mucking machine operator, tunnel laborer, brake person, track person, miner, grout person, lock tender, gauge tender, miner: motor person & all others in compressed air

GROUP 2: Change house attendant, powder watchperson, top person on iron

GROUP 3: Hazardous waste work within the ""HOT"" zone

LABORER - FREE AIR CLASSIFICATIONS

GROUP 1: Grout person - pumps, brake person, track person, form mover & stripper (wood & steel), shaft laborer, laborer topside, outside motorperson, miner, conveyor operator, miner welder, heading motorperson, erecting operator, mucking machine operator, nozzle person, rodperson, safety miner, shaft & tunnel, steel & rodperson, mole nipper, concrete worker, form erector (wood, steel and all accessories), cement finisher (this type of work only), top signal person, bottom person (when heading is 50' from shaft), burner, shield operator and TBM operator

GROUP 2: Change house attendant, powder watchperson

GROUP 3: Hazardous waste work within the ""HOT"" zone

PAIN0011-005 06/01/2019

Rates

Fringes

PAINTER

Brush and Roller.....	\$ 34.62	21.80
Epoxy, Tanks, Towers, Swing Stage & Structural Steel.....	\$ 36.62	21.80
Spray, Sand & Water Blasting.....	\$ 37.62	21.80
Taper.....	\$ 35.37	21.80
Wall Coverer.....	\$ 35.12	21.80

PAIN0011-006 06/01/2019

	Rates	Fringes
GLAZIER.....	\$ 38.18	21.80

FOOTNOTES:

SWING STAGE: \$1.00 per hour additional.

PAID HOLIDAYS: Labor Day & Christmas Day.

PAIN0011-011 06/01/2019

	Rates	Fringes
Painter (Bridge Work).....	\$ 51.00	21.80

PAIN0035-008 06/01/2011

	Rates	Fringes
Sign Painter.....	\$ 24.79	13.72

PLAS0040-001 06/03/2019

BUILDING CONSTRUCTION

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 36.00	27.15

FOOTNOTE: Cement Mason: Work on free swinging scaffolds under
3 planks width and which is 20 or more feet above ground
and any offset structure: \$.30 per hour additional.

PLAS0040-002 07/01/2019

HEAVY AND HIGHWAY CONSTRUCTION

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 32.85	22.20

PLAS0040-003 07/01/2019		

	Rates	Fringes
PLASTERER.....	\$ 37.55	27.50

PLUM0051-002 03/02/2020		

	Rates	Fringes
Plumbers and Pipefitters.....	\$ 43.69	30.05

ROOF0033-004 12/01/2019		

	Rates	Fringes
ROOFER.....	\$ 37.90	27.25

* SFRI0669-001 01/02/2020		

	Rates	Fringes
SPRINKLER FITTER.....	\$ 45.67	24.74

SHEE0017-002 12/01/2018		

	Rates	Fringes
Sheet Metal Worker.....	\$ 36.13	35.13

TEAM0251-001 05/01/2019		

HEAVY AND HIGHWAY CONSTRUCTION

	Rates	Fringes
TRUCK DRIVER		
GROUP 1.....	\$ 27.96	26.8525+A+B+C
GROUP 2.....	\$ 27.61	26.8525+A+B+C
GROUP 3.....	\$ 27.66	26.8525+A+B+C
GROUP 4.....	\$ 27.71	26.8525+A+B+C
GROUP 5.....	\$ 27.81	26.8525+A+B+C
GROUP 6.....	\$ 28.21	26.8525+A+B+C
GROUP 7.....	\$ 28.41	26.8525+A+B+C
GROUP 8.....	\$ 27.91	26.8525+A+B+C

GROUP 9.....	\$ 28.16	26.8525+A+B+C
GROUP 10.....	\$ 27.96	26.8525+A+B+C

FOOTNOTES:

A. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, plus Presidents' Day, Columbus Day, Veteran's Day & V-J Day, providing the employee has worked at least one day in the calendar week in which the holiday falls.

B. Employee who has been on the payroll for 1 year or more but less than 5 years and has worked 150 Days during the last year of employment shall receive 1 week's paid vacation; 5 to 10 years - 2 weeks' paid vacation; 10 or more years - 3 week's paid vacation.

C. Employees on the seniority list shall be paid a one hundred dollar (\$100.00) bonus for every four hundred (400) hours worked, up to a maximum of five hundred dollars (\$500.00)

All drivers working on a defined hazard material job site shall be paid a premium of \$2.00 per hour over applicable rate.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Pick-up trucks, station wagons, & panel trucks

GROUP 2: Two-axle on low beds

GROUP 3: Two-axle dump truck

GROUP 4: Three-axle dump truck

GROUP 5: Four- and five-axle equipment

GROUP 6: Low-bed or boom trailer.

GROUP 7: Trailers when used on a double hook up (pulling 2 trailers)

GROUP 8: Special earth-moving equipment, under 35 tons

GROUP 9: Special earth-moving equipment, 35 tons or over

GROUP 10: Tractor trailer

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

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

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

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

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this

classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

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

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

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

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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

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

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

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

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

D. DISTRIBUTION OF QUANTITIES

Table of Contents - Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)
 Estimate Name - Addendum No. 1
 R.I. Contract No. - 2020-CH-019
 FAP Nos: BHO-0185(001), NHP-0005(030)

ItemCode	Description	Page
201.0301	CUTTING AND DISPOSING ISOLATED TREES AND STUMPS (4"- 24")	1
201.0321	CLEARING AND GRUBBING	1
201.0406	REMOVE AND DISPOSE HIGHWAY BOUNDS	1
201.0409	REMOVE AND DISPOSE FLEXIBLE PAVEMENT	1
201.0410	REMOVE AND DISPOSE CATCH BASINS	2
201.0412	REMOVE AND DISPOSE MANHOLE	2
201.0414	REMOVE AND DISPOSE PIPE - ALL SIZES	2
201.0415	REMOVE AND DISPOSE GUARDRAIL AND POST ALL TYPES	2
201.0428	REMOVE AND DISPOSE FRAME AND GRATE OR FRAME AND COVER	3
201.0440	REMOVE AND DISPOSE ASBESTOS CEMENT PIPE/ DUCT (TRANSITE) ALL TYPES AND SIZES	3
201.0610	REMOVE AND DISPOSE DIRECTIONAL, WARNING, REGULATORY, SERVICE, AND STREET SIGNS	3
201.9901	DEMOLITION AND SITE PREPARATION	4
201.9902	REMOVE AND DISPOSE STONES	4
201.9903	REMOVE AND RELOCATE BUS SHELTER	4
202.0100	EARTH EXCAVATION	5
203.0100	STRUCTURAL EXCAVATION EARTH	5
203.0700	PERVIOUS FILL	5
203.9901	TEMPORARY COFFERDAM AND CONTROL OF WATER	5
204.0100	TRIMMING AND FINE GRADING	5
205.0240	TRENCH ROCK EXCAVATION (0-7')	6
206.0301	COMPOST FILTER SOCK	6
209.0200	SACK INSERT CATCH BASIN INLET PROTECTION	6
212.2100	MAINTENANCE AND CLEANING OF EROSION AND POLLUTION CONTROLS	6
213.0100	PLACEMENT OF MILLINGS BENEATH GUARDRAIL	7
302.0100	GRAVEL BORROW SUBBASE COURSE	7
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701.0415	REINFORCED CONCRETE PIPE M 170 CLASS III 15 INCH	9
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701.9901	6 INCH POLYVINYL CHLORIDE DRAIN PIPE	10
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702.0517	FRAME AND GRATE, STANDARD 6.3.2	10
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702.0522	FRAME AND COVER STANDARD 6.2.1	11
702.0530	PRECAST CONCRETE INLET STONE 5' STANDARD 7.1.5	12
702.0531	** ITEM DELETED **	12
702.0605	PRECAST CATCH BASIN 4' DIAMETER STANDARD 4.4.0	12
702.0630	PRECAST MANHOLE 4' DIAMETER STANDARD 4.2.0	13
702.0635	PRECAST MANHOLE 5' DIAMETER STANDARD 4.2.1	13
702.0705	CATCH BASIN W/GUTTER INLET STANDARD 3.4.1	13
702.9901	STORMWATER TREATMENT SYSTEM 1	13
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702.9904	STORMWATER TREATMENT SYSTEM 4	14

Table of Contents - Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)
 Estimate Name - Addendum No. 1
 R.I. Contract No. - 2020-CH-019
 FAP Nos: BHO-0185(001), NHP-0005(030)

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702.9906	DIVERSION MANHOLE	14
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702.9908	HYDRO-DYNAMIC SEPARATOR UNIT	15
703.9901	GAS MAIN INSTALLATION ACROSS BRIDGE NO. 185	15
703.9902	INSTALL 6 INCH SANITARY FORCE MAIN SEWER PIPE	15
704.0100	RECONSTRUCT CATCH BASIN/CORBEL CONES	15
704.0200	RECONSTRUCT MANHOLE/CORBEL CONES	15
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707.0955	ADJUST ELECTRICAL MANHOLE TO GRADE	16
707.1000	ADJUST SANITARY MANHOLE	17
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708.9040	CLEANING AND FLUSHING PIPE ALL SIZES	17
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001	201.0301	CUTTING AND DISPOSING ISOLATED TREES AND STUMPS (4"- 24")	EACH			
		PROJECTWIDE				
		CONTINGENCY		5.00	0004	01
Item 201.0301 Total:				5.00		
002	201.0321	CLEARING AND GRUBBING	SY			
		SITE PREP PLANS (SP)				
		CONTINGENCY		460.00	0004	01
		SP-09		360.00	0004	01
		SP-10		1,180.00	0004	01
Item 201.0321 Total:				2,000.00		
003	201.0406	REMOVE AND DISPOSE HIGHWAY BOUNDS	EACH			
		GENERAL PLANS (GEN)				
		CONTINGENCY		2.00	0004	01
		GEN-04		2.00	0004	01
		GEN-05		2.00	0004	01
		GEN-07		2.00	0004	01
		GEN-08		2.00	0004	01
Item 201.0406 Total:				10.00		
004	201.0409	REMOVE AND DISPOSE FLEXIBLE PAVEMENT	SY			
		SITE PREP PLANS (SP)				
		CONTINGENCY		50.00	0004	01
		SP-01		3,500.00	0004	01
		SP-02		480.00	0004	01
		SP-03		10.00	0004	01
		SP-04		30.00	0004	01
		SP-05		110.00	0004	01
		SP-06		30.00	0004	01
		SP-07		890.00	0004	01

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004	201.0409	Cont.				
		SP-08		460.00	0004	01
		SP-10		40.00	0004	01
Item 201.0409 Total:				5,600.00		
005	201.0410	REMOVE AND DISPOSE CATCH BASINS	EACH			
		DRAINAGE AND UTILITY PLANS (DU)				
		DU-05		1.00	0004	01
		DU-07		3.00	0004	01
		DU-09		2.00	0004	01
		DU-10		2.00	0004	01
Item 201.0410 Total:				8.00		
006	201.0412	REMOVE AND DISPOSE MANHOLE	EACH			
		PROJECTWIDE				
		CONTINGENCY		1.00	0004	01
Item 201.0412 Total:				1.00		
007	201.0414	REMOVE AND DISPOSE PIPE - ALL SIZES LF				
		DRAINAGE AND UTILITY PLANS (DU)				
		CONTINGENCY		30.00	0004	01
		DU-01		20.00	0004	01
		DU-05		25.00	0004	01
		DU-08		25.00	0004	01
Item 201.0414 Total:				100.00		
008	201.0415	REMOVE AND DISPOSE GUARDRAIL AND	LF			
		POST ALL TYPES				
		SITE PREP PLANS (SP)				
		CONTINGENCY		45.00	0004	01
		SP-01		100.00	0004	01
		SP-03		100.00	0004	01
		SP-05		120.00	0004	01
		SP-06		290.00	0004	01

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011	201.0610	Cont.				
		SIGN AND STRIPING PLANS (SS)				
		CONTINGENCY		15.00	0004	01
		SS-01		8.00	0004	01
		SS-02		16.00	0004	01
		SS-03		4.00	0004	01
		SS-04		7.00	0004	01
		SS-05		13.00	0004	01
		SS-06		7.00	0004	01
		SS-07		15.00	0004	01
		SS-09		2.00	0004	01
		SS-10		4.00	0004	01
		SS-11		3.00	0004	01
		SS-12		6.00	0004	01
Item 201.0610 Total:				100.00		
012	201.9901	DEMOLITION AND SITE PREPARATION	EACH			
		SITE PREP PLANS (SP)				
		SP-07 & SP-08		1.00	0004	01
Item 201.9901 Total:				1.00		
013	201.9902	REMOVE AND DISPOSE STONES	SY			
		SITE PREP PLANS (SP)				
		CONTINGENCY		20.00	0004	01
		SP-03		150.00	0004	01
		SP-04		90.00	0004	01
		SP-05		40.00	0004	01
Item 201.9902 Total:				300.00		
014	201.9903	REMOVE AND RELOCATE BUS SHELTER	EACH			
		GENERAL PLANS (GP)				
		GEN-01		1.00	0004	01
Item 201.9903 Total:				1.00		

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019	204.0100	Cont.				
		FULL DEPTH MILLING/ RECLAIM		4,000.00	0004	01
		FULL DEPTH WIDENING		2,750.00	0004	01
		LOAM AND SEED		7,340.00	0004	01
Item 204.0100 Total:				14,800.00		
020	205.0240	TRENCH ROCK EXCAVATION (0-7')	CY			
		PROJECTWIDE				
		CONTINGENCY		50.00	0004	01
Item 205.0240 Total:				50.00		
021	206.0301	COMPOST FILTER SOCK	LF			
		DRAINAGE DETAILS				
		WQ-1		200.00	0004	01
		WQ-2		280.00	0004	01
		WQ-3		510.00	0004	01
		WQ-4		330.00	0004	01
		SITE PREP PLANS (SP)				
		CONTINGENCY		40.00	0004	01
		SP-07		150.00	0004	01
		SP-09		710.00	0004	01
		SP-10		480.00	0004	01
Item 206.0301 Total:				2,700.00		
022	209.0200	SACK INSERT CATCH BASIN INLET	EACH			
		PROTECTION				
		PROJECTWIDE				
		PROJECTWIDE		60.00	0004	01
Item 209.0200 Total:				60.00		
023	212.2100	MAINTENANCE AND CLEANING OF	LS			
		EROSION AND POLLUTION CONTROLS				
		PROJECTWIDE				
		PROJECTWIDE		1.00	0004	01

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023	212.2100	Cont.		1.00		
Item 212.2100 Total:						
024	213.0100	PLACEMENT OF MILLINGS BENEATH GUARDRAIL	LF			
		GENERAL PLANS (GP)				
		CONTINGENCY		50.00	0004	01
		GP-01		400.00	0004	01
		GP-03		140.00	0004	01
		GP-05		110.00	0004	01
		GP-06		300.00	0004	01
		GP-07		30.00	0004	01
		GP-09		580.00	0004	01
		GP-10		690.00	0004	01
Item 213.0100 Total:				2,300.00		
025	302.0100	GRAVEL BORROW SUBBASE COURSE	CY			
		PROJECTWIDE				
		CEM. CONC. DRIVEWAY		64.00	0004	01
		CEM. CONC. SIDEWALK		652.00	0004	01
		CONTINGENCY		82.00	0004	01
		DRAIN PIPE TRENCH		800.00	0004	01
		EXPOSED AGGREGATE SIDEWALK		170.00	0004	01
		FULL DEPTH PAVEMENT MILLING		536.00	0004	01
		FULL DEPTH WIDENING < 4'		100.00	0004	01
		FULL DEPTH WIDENING > 4'		790.00	0004	01
		HMA DRIVEWAY & PARKING		96.00	0004	01
		SWELL		610.00	0004	01
Item 302.0100 Total:				3,900.00		
026	401.1000	CLASS 19.0 HMA	TON			
		PROJECTWIDE				
		CONTINGENCY		70.00	0004	01
		FULL DEPTH PAVEMENT MILLING		1,560.00	0004	01

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026	401.1000	Cont.	FULL DEPTH WIDENING	950.00	0004	01

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
026	401.1000	Cont.		420.00	0004	01
Item 401.1000 Total:				3,000.00		
027	401.2110	MODIFIED CLASS 12.5 HMA WITH PAY	TON			
		ADJUSTMENTS				
		PROJECTWIDE				
		BOX WIDENING <4'		38.00	0004	01
		CONTINGENCY		72.00	0004	01
		FULL DEPTH PAVEMENT MILLING		450.00	0004	01
		FULL DEPTH WIDENING		310.00	0004	01
		MILL & OVERLAY		4,530.00	0004	01
Item 401.2110 Total:				5,400.00		
028	401.3101	MODIFIED CLASS 9.5 HMA FOR BRIDGE	TON			
		DECKS				
		BRIDGE NO 185				
		53+48 - 55+04		150.00	0014	02
Item 401.3101 Total:				150.00		
029	401.9901	PAY ADJUSTMENTS	EACH			
		PROJECTWIDE				
		PROJECTWIDE		50,000.00	0004	01
Item 401.9901 Total:				50,000.00		
030	403.0300	ASPHALT EMULSION TACK COAT	SY			
		PROJECTWIDE				
		CONTINGENCY		400.00	0004	01
		FULL DEPTH MILLING/RECLAIM		12,000.00	0004	01
		FULL DEPTH WIDENING		7,100.00	0004	01
		MILL & OVERLAY		34,500.00	0004	01
Item 403.0300 Total:				54,000.00		
031	601.0200	CLASS XX PORTLAND CEMENT CONCRETE	CY			

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
031	601.0200	Cont.				
		PROJECTWIDE				
		WIDENING <4'		50.00	0004	01
				Item 601.0200 Total:	50.00	
032	603.1000					
		CONTROLLED LOW STRENGTH MATERIAL	CY			
		PROJECTWIDE				
		FILL ABAN PIPES		40.00	0004	01
		WINGWALLS				
		VARIES		110.00	0014	02
				Item 603.1000 Total:	150.00	
033	701.0412					
		REINFORCED CONCRETE PIPE M 170	LF			
		CLASS III 12 INCH				
		DRAINAGE AND UTILITY PLANS (DU)				
		CONTINGENCY		15.00	0004	01
		DU-01		20.00	0004	01
		DU-02		50.00	0004	01
		DU-05		50.00	0004	01
		DU-07		170.00	0004	01
		DU-08			0004	01
		DU-09		30.00	0004	01
		DU-10		30.00	0004	01
		DU-11			0004	01
		DU-12		285.00	0004	01
				Item 701.0412 Total:	650.00	
034	701.0415					
		REINFORCED CONCRETE PIPE M 170	LF			
		CLASS III 15 INCH				
		DRAINAGE AND UTILITY PLANS (DU)				
		CONTINGENCY		30.00	0004	01
		DU-09		45.00	0004	01
		DU-10		260.00	0004	01
		DU-11		395.00	0004	01

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
034	701.0415	Cont.	DU-12	20.00	0004	01
Item 701.0415 Total:				750.00		
035	701.7712	12 INCH REINFORCED CONCRETE PIPE	EACH			
		END SECTION STANDARD 2.3.0				
		DRAINAGE DETAILS				
		WQ-3		1.00	0004	01
		WQ-4		1.00	0004	01
Item 701.7712 Total:				2.00		
036	701.9901	6 INCH POLYVINYL CHLORIDE DRAIN	LF			
		PIPE				
		DRAINAGE DETAILS				
		CONTINGENCY		55.00	0004	01
		WQ-1		100.00	0004	01
		WQ-2		120.00	0004	01
		WQ-3		125.00	0004	01
Item 701.9901 Total:				400.00		
037	702.0516	FRAME AND GRATE, HIGH CAPACITY,	EACH			
		STANDARD 6.3.4				
		DRAINAGE AND UTILITY PLANS (DU)				
		DU-01		4.00	0004	01
		DU-03		3.00	0004	01
		DU-04		1.00	0004	01
		DU-05		2.00	0004	01
		DU-07		3.00	0004	01
		DU-10		2.00	0004	01
Item 702.0516 Total:				15.00		
038	702.0517	FRAME AND GRATE, STANDARD 6.3.2	EACH			
		DRAINAGE AND UTILITY PLANS (DU)				
		DU-01		5.00	0004	01

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
038	702.0517	Cont.	DU-02	7.00	0004	01

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
040	702.0522	Cont.	DU-12	2.00	0004	01
Item 702.0522 Total:				21.00		
041	702.0530	PRECAST CONCRETE INLET STONE 5'	EACH			
		STANDARD 7.1.5				
		DRAINAGE AND UTILITY PLANS (DU)				
		DU-01		3.00	0004	01
		DU-02		2.00	0004	01
		DU-03		3.00	0004	01
		DU-04		2.00	0004	01
		DU-05		2.00	0004	01
		DU-07		2.00	0004	01
		DU-08			0004	01
		DU-09		2.00	0004	01
		DU-11			0004	01
		DU-12			0004	01
Item 702.0530 Total:				16.00		
042	702.0531	PRECAST CONCRETE INLET STONE 38''	EACH			
		STANDARD 7.1.6				
		DRAINAGE AND UTILITY PLANS (DU)				
		DU-01			0004	01
		DU-02			0004	01
		DU-03			0004	01
		DU-04			0004	01
		DU-05			0004	01
		DU-07			0004	01
		DU-09			0004	01
Item 702.0531 Total:					**DELETED**	
043	702.0605	PRECAST CATCH BASIN 4' DIAMETER	EACH			
		STANDARD 4.4.0				
		DRAINAGE AND UTILITY PLANS (DU)				

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
043	702.0605	Cont.	DU-01	2.00	0004	01

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
073	714.8263	REMOVE AND RELOCATE POST TYPE	EACH			
		HYDRANT				
		DRAINAGE AND UTILITY PLANS (DU)				
		DU-01		1.00	0004	01
		DU-07		1.00	0004	01
Item 714.8263 Total:				2.00		
074	800.9901	ROUTE 5 BRIDGE NO. 0185	LS			
		BRIDGE NO. 185				
		VARIES		1.00	0014	02
Item 800.9901 Total:				1.00		
075	803.0100	REMOVE AND DISPOSE EXISTING	LS			
		SUPERSTRUCTURE				
		BRIDGE NO 185				
		53+48 - 55+04		1.00	0014	02
Item 803.0100 Total:				1.00		
076	803.0200	REMOVE AND DISPOSE EXISTING	LS			
		SUBSTRUCTURE				
		VARIES				
		VARIES		1.00	0014	02
Item 803.0200 Total:				1.00		
077	803.0500	TEMPORARY DECK UNDERSIDE AND SIDE	SF			
		PROTECTIVE SHIELDING				
		BRIDGE NO. 185				
		VARIES		10,000.00	0014	02
Item 803.0500 Total:				10,000.00		
078	803.9901	GALVANIC ENCAPSULATION SYSTEM	SF			
		CENTER PIER				
		54+26		2,157.00	0014	02

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
078	803.9901 Cont.	NORTH ABUTMENT				
		53+48		438.00	0014	02
		SOUTH ABUTMENT				
		55+04		380.00	0014	02
Item 803.9901 Total:				2,975.00		
079	805.9901	TEMPORARY EARTH RETAINING SYSTEMS	LS			
		NORTH ABUTMENT				
		53+48		0.50	0014	02
		SOUTH ABUTMENT				
		55+04		0.50	0014	02
Item 805.9901 Total:				1.00		
080	817.2112	REPAIRS TO STRUCTURE CONCRETE	CF			
		MASONRY - PATCHING MORTAR				
		WINGWALL/ENDPOST				
		VARIES		46.00	0014	02
Item 817.2112 Total:				46.00		
081	817.2142	REPAIRS TO STRUCTURE CONCRETE	CF			
		MASONRY - FORM AND CAST IN PLACE				
		CONCRETE				
		CENTER PIER				
		54+26		1,240.00	0014	02
		NORTH ABUTMENT				
		53+48		250.00	0014	02
		SOUTH ABUTMENT				
		55+04		220.00	0014	02
Item 817.2142 Total:				1,710.00		
082	819.0800	DRILL AND GROUT REINFORCING DOWELS	EACH			
		CENTER PIER				
		54+26		233.00	0014	02

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
089	901.9901 Cont.	CONTINGENCY		70.00	0004	01
		GEN-01		360.00	0004	01
		GEN-03		110.00	0004	01
		GEN-05		95.00	0004	01
		GEN-06		290.00	0004	01
		GEN-09		480.00	0004	01
		GEN-10		595.00	0004	01
Item 901.9901 Total:				2,000.00		
090	901.9902	TRAILING END ANCHORAGE SECTION FOR EACH GUARDRAIL (MASH)				
		GENERAL PLANS (GEN)				
		GEN-01		2.00	0004	01
		GEN-03		1.00	0004	01
		GEN-05		1.00	0004	01
		GEN-07		1.00	0004	01
		GEN-09		1.00	0004	01
		GEN-10		2.00	0004	01
Item 901.9902 Total:				8.00		
091	901.9903	GUARDRAIL TRANSITION (MASH) TO EACH EXISTING GUARDRAIL				
		GENERAL PLANS (GEN)				
		GEN-01		1.00	0004	01
Item 901.9903 Total:				1.00		
092	905.9901	EXPOSED AGGREGATE CONCRETE SIDEWALK SY				
		GENERAL PLANS (GEN)				
		CONTINGENCY			0004	01
		GEN-04		20.00	0004	01
		GEN-05		220.00	0004	01
		GEN-06		210.00	0004	01
		GEN-07		500.00	0004	01

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
092	905.9901	Cont.				
		Item 905.9901 Total:		950.00		
093	905.9902	PERMEABLE PAVERS	SY			
		LANDSCAPE PLANS (LA)				
		LA-02		50.00	0004	01
		Item 905.9902 Total:		50.00		
094	905.9903	BRICK WALK REMOVED AND RELAID	SY			
		GENERAL PLANS (GEN)				
		GEN-07		5.00	0004	01
		Item 905.9903 Total:		5.00		
095	906.9910	CURBING AND SIDEWALKS	SY			
		PROJECTWIDE				
		PROJECTWIDE		7,940.00	0004	01
		Item 906.9910 Total:		7,940.00		
096	907.0100	WATER FOR DUST CONTROL	MGAL			
		PROJECTWIDE				
		PROJECTWIDE		290.00	0004	01
		Item 907.0100 Total:		290.00		
097	907.0200	CALCIUM CHLORIDE FOR DUST CONTROL	TON			
		(PROJECT WIDE)				
		PROJECTWIDE				
		PROJECTWIDE		26.00	0004	01
		Item 907.0200 Total:		26.00		
098	914.5010	FLAGPERSONS	MHRS			
		PROJECTWIDE				
		PROJECTWIDE		7,000.00	0004	01
		Item 914.5010 Total:		7,000.00		

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
099	914.5020	FLAGPERSONS - OVERTIME	MHRS			
		PROJECTWIDE				
		PROJECTWIDE		2,500.00	0004	01
Item 914.5020 Total:				2,500.00		
100	915.0100	HIGHWAY BOUND GRANITE STANDARD	EACH			
		14.2.0				
		GENERAL PLANS (GEN)				
		GEN-04		2.00	0004	01
		GEN-05		2.00	0004	01
		GEN-06		4.00	0004	01
		GEN-07		7.00	0004	01
		GEN-08		4.00	0004	01
Item 915.0100 Total:				19.00		
101	916.9901	TEMPORARY TRAFFIC CONTROL FOR	LS			
		REHABILITATION OF BRIDGE NO. 185				
		TRAFFIC CONTROL PLANS				
		BRIDGE NO. 185		1.00	0004	01
Item 916.9901 Total:				1.00		
102	917.9901	REMOVE AND RESET USPS MAILBOX	EACH			
		GENERAL PLANS (GEN)				
		GEN-01		1.00	0004	01
Item 917.9901 Total:				1.00		
103	919.0101	TEST PITS	EACH			
		PROJECTWIDE				
		CONTINGENCY		15.00	0004	01
Item 919.0101 Total:				15.00		
104	920.0085	PLACED STONE RIPRAP R-3, R-4, R-5	CY			
		STANDARD 8.3.0				

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
104	920.0085	Cont.				
		DRAINAGE DETAILS				
		WQ-3		20.00	0004	01
		WQ-4		15.00	0004	01
Item 920.0085 Total:				35.00		
105	920.9901	CONCRETE FILLED GROUT BAGS FOR	CF			
		SCOUR				
		NORTH ABUTMENT				
		VARIES		33.00	0014	02
		SOUTH ABUTMENT				
		VARIES		33.00	0014	02
Item 920.9901 Total:				66.00		
106	922.0100	TEMPORARY CONSTRUCTION SIGNS	SF			
		STANDARD 29.1.0 AND 27.1.1				
		PROJECTWIDE				
		PROJECTWIDE		550.00	0004	01
Item 922.0100 Total:				550.00		
107	923.0105	DRUM BARRICADE STANDARD 26.2.0	BDAY			
		PROJECTWIDE				
		PROJECTWIDE		21,600.00	0004	01
Item 923.0105 Total:				21,600.00		
108	923.0125	PLASTIC PIPE TYPE III BARRICADE	EACH			
		STANDARD 26.3.1				
		PROJECTWIDE				
		PROJECTWIDE		5.00	0004	01
Item 923.0125 Total:				5.00		
109	923.0200	FLUORESCENT TRAFFIC CONES STANDARD	EACH			
		26.1.0				
		PROJECTWIDE				

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
109	923.0200	Cont. PROJECTWIDE		100.00	0004	01
Item 923.0200 Total:				100.00		
110	924.0113	ADVANCE WARNING ARROW PANEL PROJECTWIDE	PDAY			
		PROJECTWIDE		720.00	0004	01
Item 924.0113 Total:				720.00		
111	925.0112	PORTABLE CHANGEABLE MESSAGE SIGN PROJECTWIDE	PDAY			
		PROJECTWIDE		720.00	0004	01
Item 925.0112 Total:				720.00		
112	929.0110	FIELD OFFICE PROJECTWIDE	PMO			
		PROJECTWIDE		42.00	0004	01
Item 929.0110 Total:				42.00		
113	931.0110	CLEANING AND SWEEPING PAVEMENT PROJECTWIDE	HSY			
		PROJECTWIDE		430.00	0004	01
Item 931.0110 Total:				430.00		
114	932.0100	CUTTING AND MATCHING ASPHALT GENERAL PLANS (GEN)	LF			
		CONTINGENCY		45.00	0004	01
		GEN-01		120.00	0004	01
		GEN-02		105.00	0004	01
		GEN-03		110.00	0004	01
		GEN-04		110.00	0004	01
		GEN-05		80.00	0004	01
		GEN-07		30.00	0004	01
		GEN-08		55.00	0004	01

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
123	L06.0513 Cont.	GEN-02		60.00	0004	01
		GEN-03		30.00	0004	01
		GEN-04		70.00	0004	01
		GEN-05		30.00	0004	01
		GEN-11		30.00	0004	01
		GEN-12		90.00	0004	01
Item L06.0513 Total:				500.00		
124	L06.9901	AMELANCHIER - 'AUTUMN BRILLIANCE'	EACH			
		2-2.5 INCH CALIPER				
		LANDSCAPE PLANS (LA)				
		LA-03		4.00	0004	01
Item L06.9901 Total:				4.00		
125	L06.9902	MAPLE - 'OCTOBER GLORY' 2-2.5 INCH	EACH			
		CALIPER				
		LANDSCAPE PLANS (LA)				
		LA-02		1.00	0004	01
Item L06.9902 Total:				1.00		
126	L06.9903	MAPLE - 'RED SUNSET' 2.5-3 INCH	EACH			
		CALIPER				
		LANDSCAPE PLANS (LA)				
		LA-02			0004	01
		LA-03			0004	01
Item L06.9903 Total:					**DELETED**	
127	L06.9904	TULIP TREE 2.5-3 INCH CALIPER	EACH			
		LANDSCAPE PLANS (LA)				
		LA-02			0004	01
Item L06.9904 Total:					**DELETED**	
128	L06.9903	TUPELO - 'WILDFIRE' 2-2.5 INCH	EACH			

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
128	L06.9903	Cont. CALIPER				
		LANDSCAPE PLANS (LA)				
		LA-02		2.00	0004	01
Item L06.9903 Total:				2.00		
129	L06.9904	SPRUCE - 'HOOPSI BLUE' 5-6 FEET	EACH			
		LANDSCAPE PLANS (LA)				
		LA-02		3.00	0004	01
		LA-03		5.00	0004	01
Item L06.9904 Total:				8.00		
130	L06.9905	SPRUCE - 'HOOPSI BLUE' 7-8 FEET	EACH			
		LANDSCAPE PLANS (LA)				
		LA-02		8.00	0004	01
Item L06.9905 Total:				8.00		
131	L06.9906	SPRUCE - 'HOOPSI BLUE' 8-10 FEET	EACH			
		LANDSCAPE PLANS (LA)				
		LA-03		5.00	0004	01
Item L06.9906 Total:				5.00		
132	L06.9907	SPRUCE - 'COLORADO BLUE' 7-8 FEET	EACH			
		LANDSCAPE PLANS (LA)				
		LA-02		1.00	0004	01
Item L06.9907 Total:				1.00		
133	L06.9908	ARBORVITAE - 'GREEN GIANT' 6-7 FEET	EACH			
		LANDSCAPE PLANS (LA)				
		LA-02		1.00	0004	01
		LA-03		9.00	0004	01
Item L06.9908 Total:				10.00		
134	L06.9911	ARBORVITAE - 'EMERALD GREEN' 6-7	EACH			

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
134	L06.9911	Cont. FEET				
		LANDSCAPE PLANS (LA)				
		LA-02			0004	01
Item L06.9911 Total:					**DELETED**	
135	L06.9909	ARBORVITAE - 'EMERALD GREEN' 8-10 FEET	EACH			
		LANDSCAPE PLANS (LA)				
		LA-03		21.00	0004	01
Item L06.9909 Total:				21.00		
136	L06.9910	AMERICAN ARBORVITAE - 'SKINNER DWARF' 2-2.5 INCH CALIPER	EACH			
		LANDSCAPE PLANS (LA)				
		LA-01		7.00	0004	01
Item L06.9910 Total:				7.00		
137	L06.9911	WHITESPIRE BIRCH - 'WHITESPIRE' 2-2.5 INCH CALIPER	EACH			
		LANDSCAPE PLANS (LA)				
		LA-02		7.00	0004	01
Item L06.9911 Total:				7.00		
138	L06.9912	AMERICAN REDBUD 2-2.5 INCH CALIPER	EACH			
		LANDSCAPE PLANS (LA)				
		LA-02		3.00	0004	01
Item L06.9912 Total:				3.00		
139	L06.9913	LONDON PLANETREE - 'BLOODGOOD' 3-3.5 INCH CALIPER	EACH			
		LANDSCAPE PLANS (LA)				
		LA-02		3.00	0004	01
Item L06.9913 Total:				3.00		

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
140	L06.9914	LILAC TREE - 'IVORY SILK' 2-2.5 INCH CALIPER	EACH			
		LANDSCAPE PLANS (LA)				
		LA-01		8.00	0004	01
Item L06.9914 Total:				8.00		
141	L06.9915	AZALEA - 'PINK & SWEET' 18-24 INCH	EACH			
		LANDSCAPE PLANS (LA)				
		LA-02		27.00	0004	01
Item L06.9915 Total:				27.00		
142	L06.9916	ARCTIC FIRE RED TWIG DOGWOOD - 'FARROW' 3-4 FEET	EACH			
		LANDSCAPE PLANS (LA)				
		LA-02		3.00	0004	01
Item L06.9916 Total:				3.00		
143	L06.9917	WINTERBERRY - 'JIM DANDY' 18-24 INCH	EACH			
		LANDSCAPE PLANS (LA)				
		LA-02		4.00	0004	01
Item L06.9917 Total:				4.00		
144	L06.9918	WINTERBERRY - 'RED SPRITE' 24-36 INCH	EACH			
		LANDSCAPE PLANS (LA)				
		LA-02		17.00	0004	01
Item L06.9918 Total:				17.00		
145	L06.9919	DOUBLE KNOCKOUT ROSE - 'RADTKO' 24-36 INCH	EACH			
		LANDSCAPE PLANS (LA)				
		LA-02		14.00	0004	01

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
145	L06.9919	Cont.				
				Item L06.9919 Total:	14.00	
146	L06.9920	DWARF MAIDEN GRASS - 'YAKUSHIMA'	EACH			
		24-36 INCH				

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
146	L06.9920 Cont.	LANDSCAPE PLANS (LA)				
		LA-02		15.00	0004	01
Item L06.9920 Total:				15.00		
147	L06.9921	WEIGELA - 'WINE AND ROSE' 2-2.5 INCH CALIPER	EACH			
		LANDSCAPE PLANS (LA)				
		LA-01		6.00	0004	01
Item L06.9921 Total:				6.00		
148	L06.9922	LILAC TREE - 'ANTHONY WATERER' 2-2.5 INCH CALIPER	EACH			
		LANDSCAPE PLANS (LA)				
		LA-01		14.00	0004	01
Item L06.9922 Total:				14.00		
149	L06.9923	DAYLILY - 'HAPPY RETURNS' 2-2.5 INCH CALIPER	EACH			
		LANDSCAPE PLANS (LA)				
		LA-01		61.00	0004	01
Item L06.9923 Total:				61.00		
150	L11.0102	TREE PLANT PROTECTION DEVICE STANDARD 51.1.0	EACH			
		SITE PREP PLANS (SP)				
		SP-01		2.00	0004	01
		SP-02		5.00	0004	01
		SP-03		1.00	0004	01
		SP-04		6.00	0004	01
		SP-05		3.00	0004	01
		SP-09		1.00	0004	01
		SP-11		1.00	0004	01
		SP-12		6.00	0004	01

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
150	L11.0102	Cont.				
				Item L11.0102 Total:	25.00	
151	L11.0103	SHRUB PLANT PROTECTION DEVICE	LF			
		STANDARD 51.2.0				
		SITE PREP PLANS (SP)				
		CONTINGENCY		5.00	0004	01
		SP-01		145.00	0004	01
		SP-02		220.00	0004	01
		SP-03		105.00	0004	01
		SP-04		250.00	0004	01
		SP-05		105.00	0004	01
		SP-06		30.00	0004	01
		SP-07		45.00	0004	01
		SP-11		95.00	0004	01
		SP-12		250.00	0004	01
				Item L11.0103 Total:	1,250.00	
152	L15.9901	DECORATIVE CRUSHED STONE	CY			
		LANDSCAPE PLANS				
		WQ-3		70.00	0004	01
				Item L15.9901 Total:	70.00	
153	L15.9902	DECORATIVE BOULDERS	EACH			
		LANDSCAPE PLANS				
		WQ-3		10.00	0004	01
				Item L15.9902 Total:	10.00	
154	T01.9901	NATIONAL GRID PRECAST CONCRETE	EACH			
		MANHOLE				
		BRIDGE UTILITY RELOCATION PLAN				
		BRIDGE NO. 185		2.00	0004	01
				Item T01.9901 Total:	2.00	

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)
 Estimate Name - Addendum No. 1
 R.I. Contract No. - 2020-CH-019
 FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
230	T20.4506	Cont.				
				Item T20.4506 Total:	6,000.00	
231	T20.4508	REMOVE PAVEMENT MARKING LINE - GREATER THAN 6 INCHES WIDE	LF			
				PROJECTWIDE		
				PROJECTWIDE	1,000.00	0004 01
				Item T20.4508 Total:	1,000.00	
232	T20.9901	EPOXY RESIN PAVEMENT MARKINGS - ALL SIZES, ALL COLORS	LF			
				PROJECTWIDE		
				PROJECTWIDE	33,900.00	0004 01
				Item T20.9901 Total:	33,900.00	
233	T20.9902	TEMPORARY AND PERMANENT PAVEMENT MARKINGS - WORDS, ARROWS, AND SYMBOLS	EACH			
				PROJECTWIDE		
				PROJECTWIDE	64.00	0004 01
				Item T20.9902 Total:	64.00	
234	T20.9903	TEMPORARY PAVEMENT MARKINGS - ALL TYPES, COLORS, AND WIDTHS	LF			
				PROJECTWIDE		
				PROJECTWIDE	73,000.00	0004 01
				Item T20.9903 Total:	73,000.00	
235	701.0612	REINFORCED CONCRETE PIPE M 170 CLASS V 12 INCH	LF			
				DRAINAGE UTILITY PLANS (DU)		
				DU-08	80.00	0004 01
				DU-10	55.00	0004 01
				DU-11	45.00	0004 01

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
235	701.0612	Cont.	DU-12	55.00	0004	01
Item 701.0612 Total:				235.00		
236	701.0615	REINFORCED CONCRETE PIPE M 170	LF			
		CLASS V 15 INCH				
		DRAINAGE AND UTILITY PLANS (DU)				
		DU-10		235.00	0004	01
Item 701.0615 Total:				235.00		
237	701.8003	PIPE BEDDING CLASS C	CY			
		DRAINAGE AND UTILITY PLANS (DU)				
		FROM ITEMS 701.0412 & 701.0612		200.00	0004	01
		FROM ITEMS 701.0415 & 701.0615		230.00	0004	01
Item 701.8003 Total:				430.00		
238	702.0533	PRECAST CONCRETE APRON STONE 38''	EACH			
		STANDARD 7.1.8				
		DRAINAGE AND UTILITY PLANS (DU)				
		DU-01		2.00		
		DU-02		1.00		
		DU-04		1.00		
		DU-05		1.00		
		DU-07		5.00		
		DU-08		2.00		
		DU-10		4.00		
		DU-11		2.00		
		DU-12		3.00		
Item 702.0533 Total:				21.00		
239	906.0230	CEMENT CONCRETE SLOPE FACE CURB	LF			
		PRECAST STRAIGHT STANDARD 7.2.0				

Distribution of Quantities

Project Name - Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95)

Estimate Name - Addendum No. 1

R.I. Contract No. - 2020-CH-019

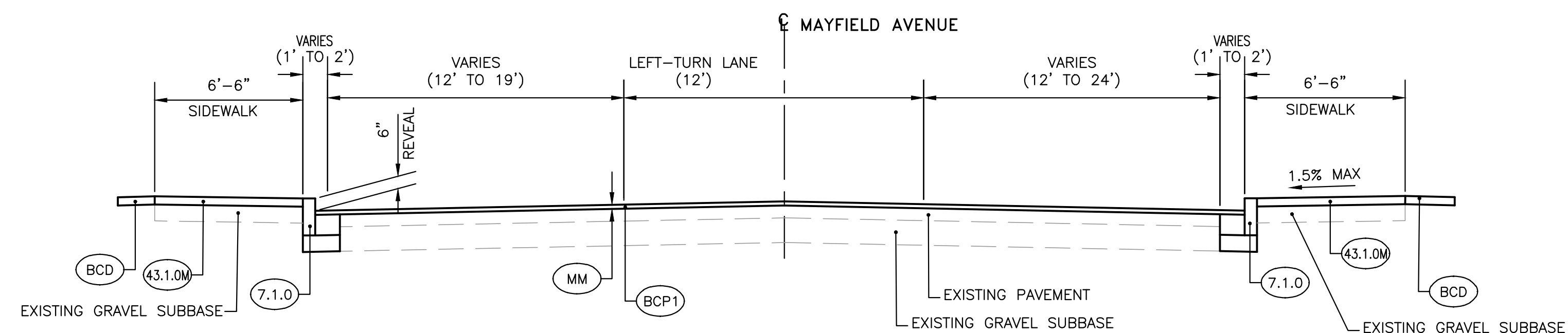
FAP Nos: BHO-0185(001), NHP-0005(030)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
239	906.0230	Cont.				
		GENERAL PLANS (GEN)				
		GEN-04		80.00	0004	01
		GEN-05		720.00	0004	01
		GEN-06		550.00	0004	01
		GEN-07		850.00	0004	01
Item 906.0230 Total:				2,200.00		
240	906.0231					
		CEMENT CONCRETE SLOPE FACE CURB	LF			
		PRECAST CIRCULAR STANDARD 7.2.0				
		GENERAL PLANS (GEN)				
		GEN-04		10.00	0004	01
		GEN-05		110.00	0004	01
		GEN-06		70.00	0004	01
		GEN-07		160.00	0004	01
Item 906.0231 Total:				350.00		
241	920.0150					
		BEDDING FOR RIPRAP FS-2 STANDARD	CY			
		8.3.0				
		DRAINAGE DETAILS				
		WQ-3		15.00		
		WQ-4		10.00		
Item 920.0150 Total:				25.00		
242	920.0200					
		FILTER FABRIC FOR RIP-RAP	SY			
		DRAINAGE DETAILS				
		WQ-3		90.00		
		WQ-4		40.00		
Item 920.0200 Total:				130.00		

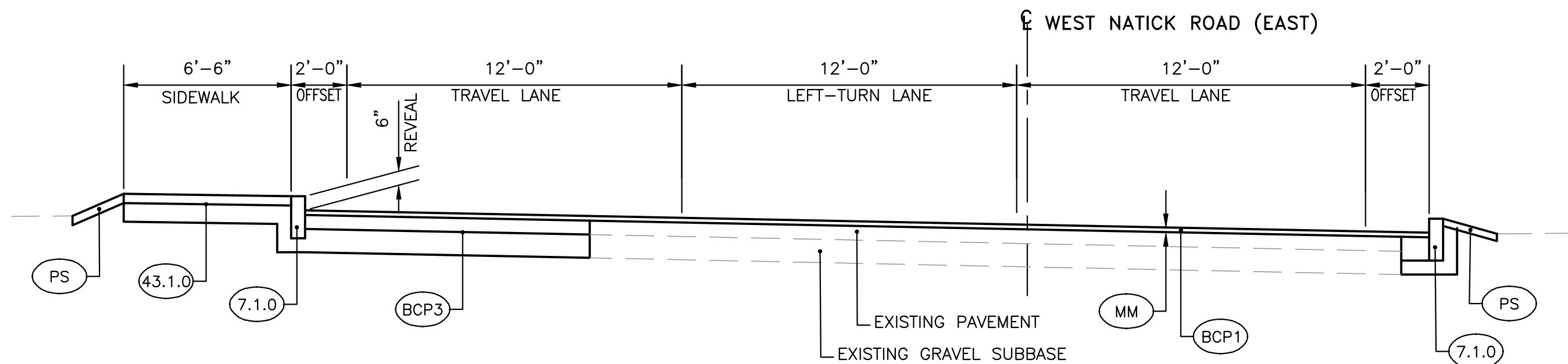
E. DRAWINGS/PLANS – CHANGE/ADDITION

1. Volume 1 – F.A. Project No. NHP-0005(030)
2. Volume 2 – F.A. Project No. BHO-0185(001)

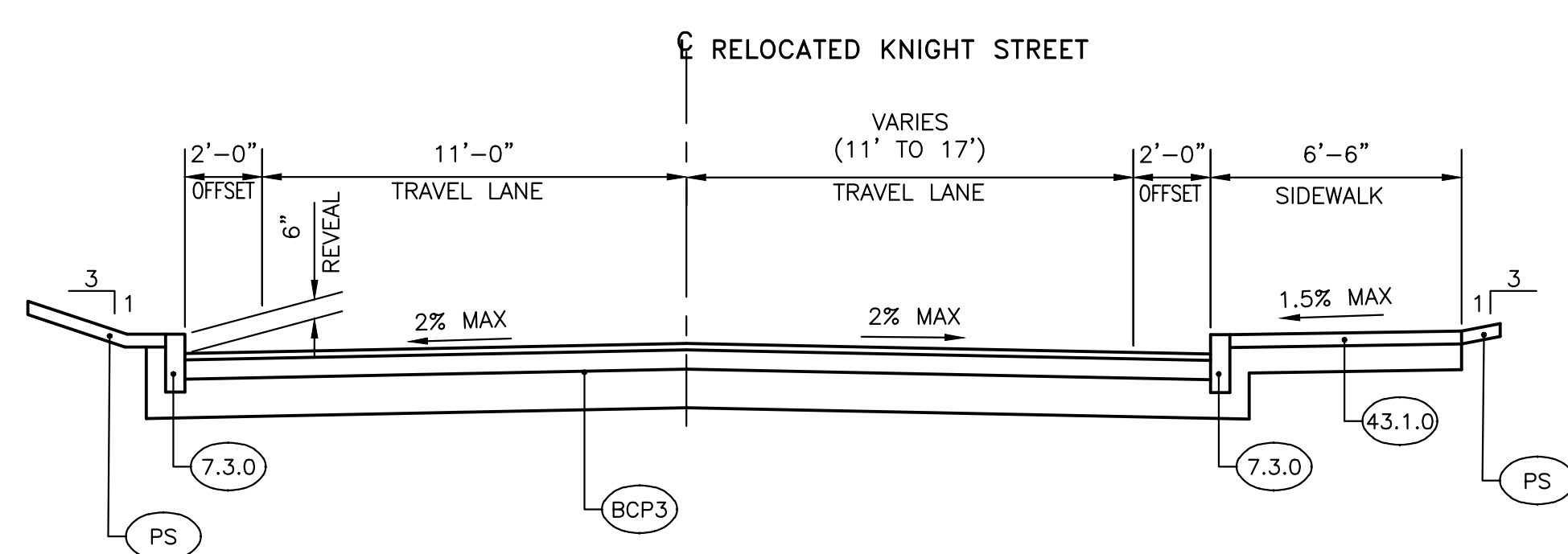
1. Volume 1 – F.A. Project No. NHP-0005(030)



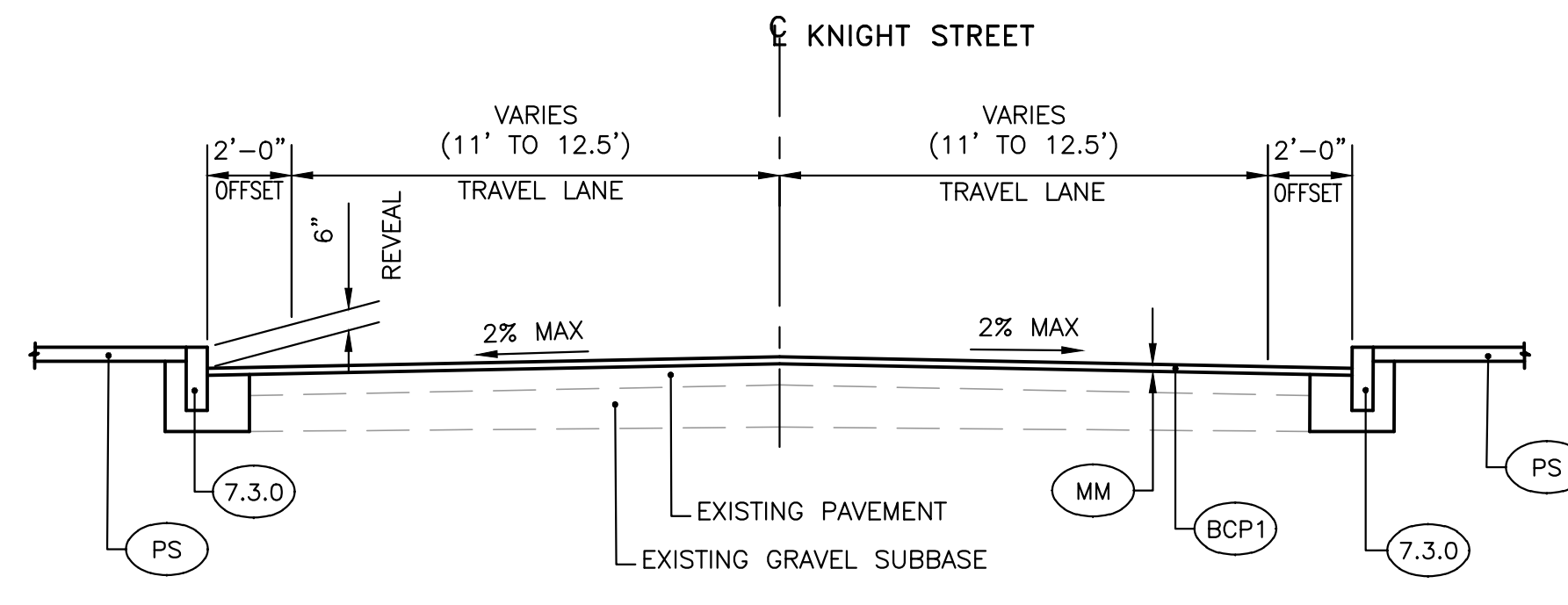
STA. 100+44± TO STA. 102+33±
TYPICAL SECTION
 SCALE: 1/4"=1'-0"



STA. 301+00± TO STA. 302+68±
TYPICAL SECTION
 SCALE: 1/4"=1'-0"



STA. 501+05± TO STA. 504+00±
TYPICAL SECTION
 SCALE: 1/4"=1'-0"



STA. 504+00± TO STA. 505+04±(END)
TYPICAL SECTION
 SCALE: 1/4"=1'-0"

REVISIONS		
NO.	DATE	BY
1	4/20	HP

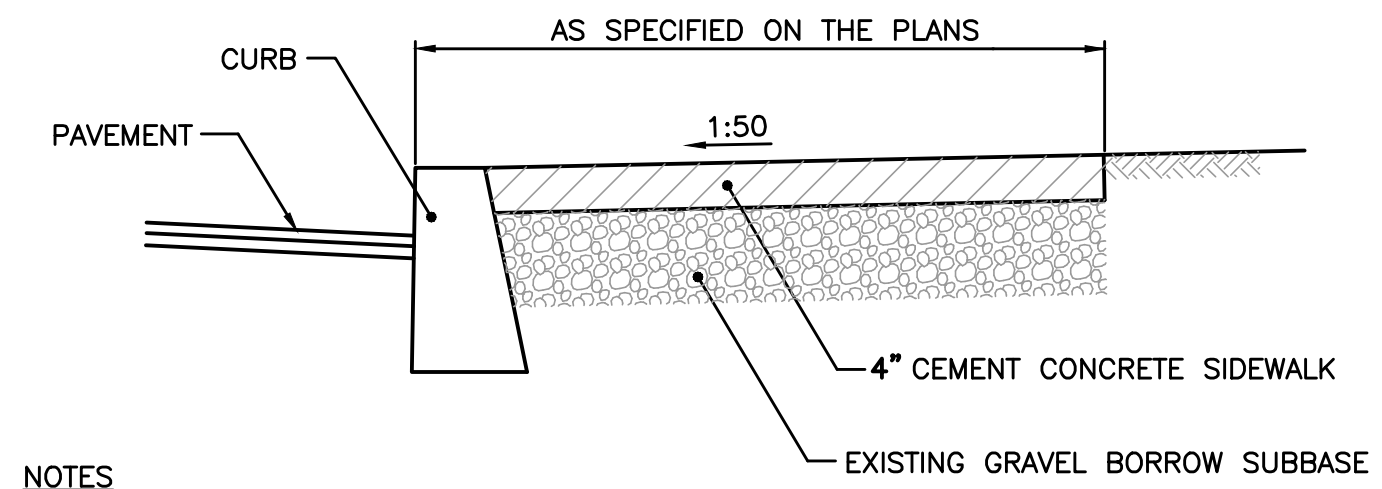
RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

**HIGHWAY IMPROVEMENTS
 TO
 ROUTE 5 (CONTRACT No. 1)**
 WARWICK AND CRANSTON, RHODE ISLAND

TYPICAL SECTIONS No. 3

CHECKED BY _____ DATE _____ SCALE AS SHOWN





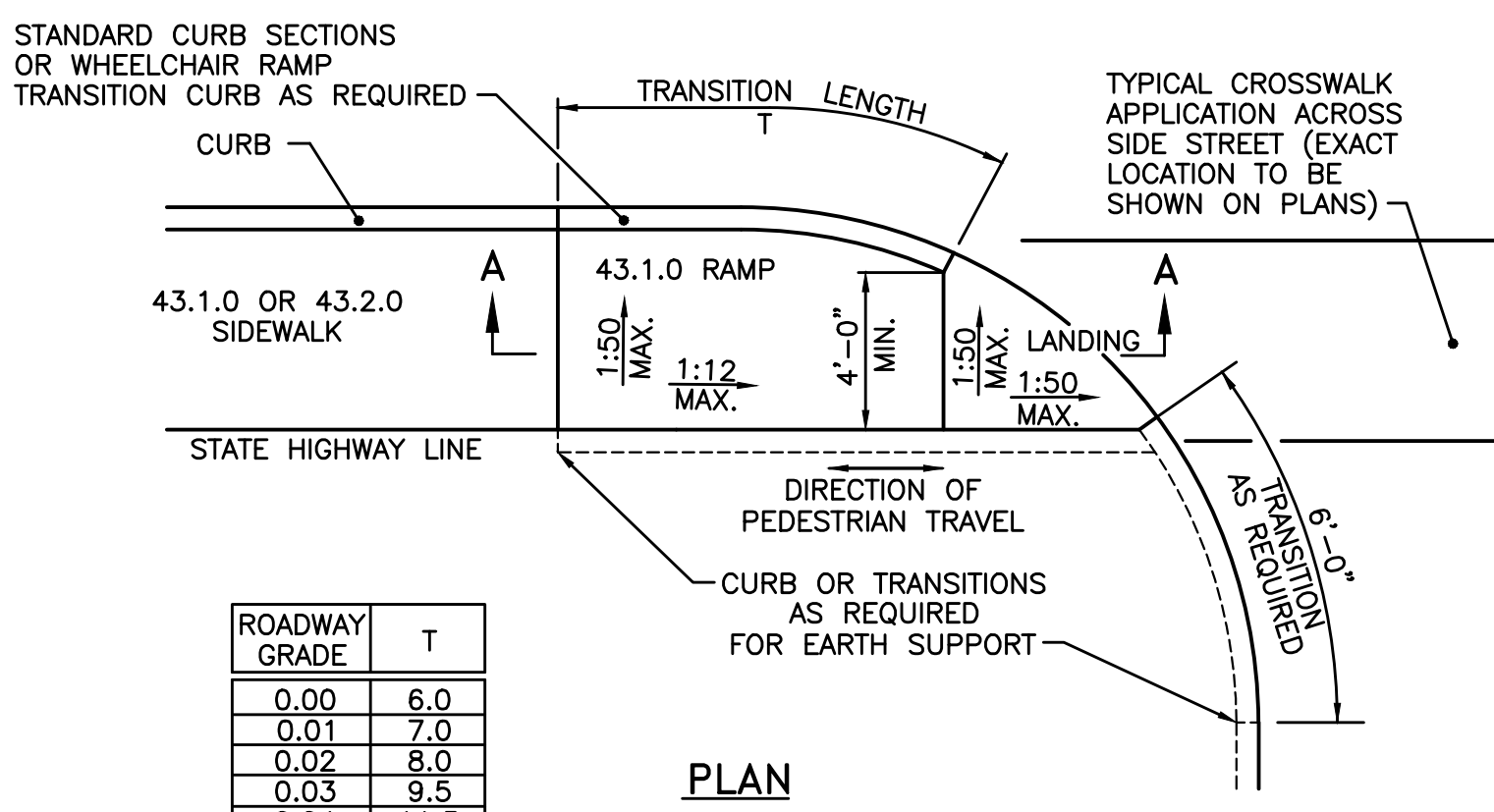
NOTES

- SHALL BE IN ACCORDANCE WITH SECTION 904 OF THE R.I. STANDARD SPECIFICATIONS.
- FOR CURB SETTING DETAIL REFERENCE STD. 7.6.0.
- EXISTING GRAVEL BORROW SUBBASE SHALL BE ADJUSTED TO CLOSE CONFORMANCE WITH THE LINES, GRADES, AND TYPICAL CROSS SECTIONS INDICATED ON THE PLANS. ANY NEW GRAVEL BORROW SUBBASE REQUIRED AS A RESULT OF ADJUSTMENT SHALL BE INCLUDED AND PAID FOR UNDER ITEM 906.9901 CURBING AND SIDEWALKS.
- IF EXISTING GRAVEL BORROW SUBBASE DOES NOT EXIST BENEATH ANY NEW SIDEWALKS, NEW GRAVEL BORROW SUBBASE SHALL BE INSTALLED AT A DEPTH OF 8 INCHES AND SHALL BE PAID FOR UNDER ITEM 906.9901 CURBING AND SIDEWALKS.

CEMENT CONCRETE SIDEWALK

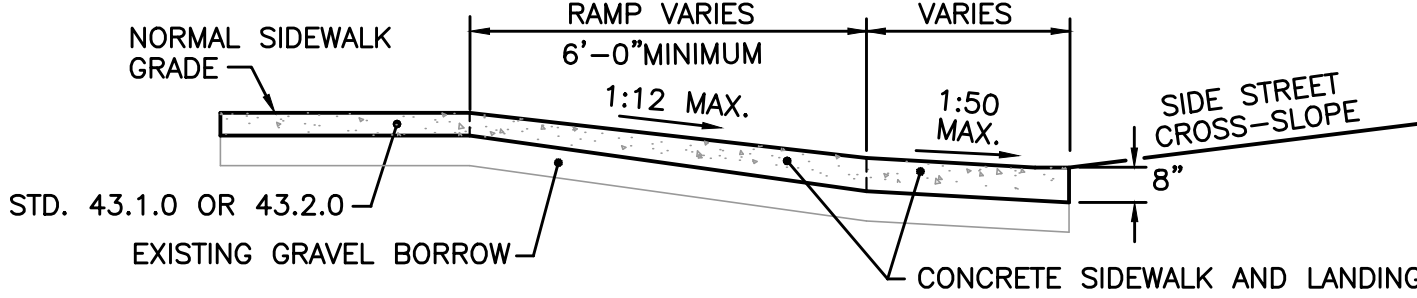


(MODIFIED)



PLAN

ROADWAY GRADE	T
0.00	6.0
0.01	7.0
0.02	8.0
0.03	9.5
0.04	11.5
0.05	15.0



SECTION A-A

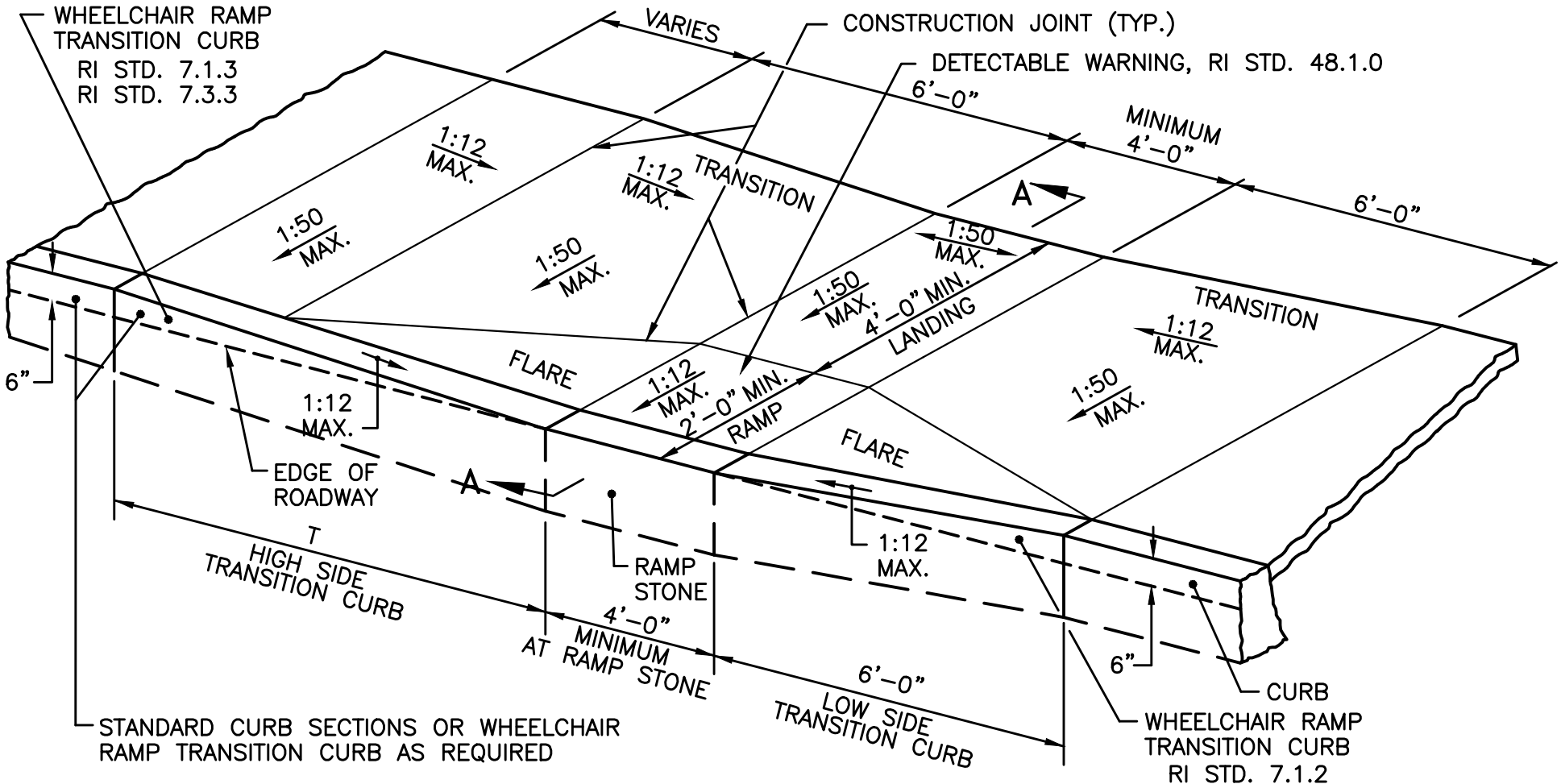
NOTES:

- SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
- THIS DETAIL IS TO BE USED ONLY WHEN STATE RIGHT-OF-WAY IS LIMITED TO BACK OF SIDEWALK, AND SIDEWALK IS NARROW WITH NO PEDESTRIAN TRAFFIC FROM SIDE STREET.
- WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK AREA, IF POSSIBLE, THE OBSTRUCTION SHALL BE PLACED SUCH THAT IT FALLS OUTSIDE OF THE RAMP.
- AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
- DRAINAGE FACILITIES ARE TO BE LOCATED UP-GRADE OF ALL WHEELCHAIR RAMPS.
- LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
- ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
- WHERE THE ROAD PROFILE EXCEEDS 5% THE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'-0").
- THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
- MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).
- AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 4'-0" SHALL BE MAINTAINED.
- EXISTING GRAVEL BORROW SUBBASE SHALL BE ADJUSTED TO CLOSE CONFORMANCE WITH THE LINES, GRADES, AND TYPICAL CROSS SECTIONS INDICATED ON THE PLANS. ANY NEW GRAVEL BORROW SUBBASE REQUIRED AS A RESULT OF ADJUSTMENT SHALL BE INCLUDED AND PAID FOR UNDER ITEM 906.9901 CURBING AND SIDEWALKS.
- IF EXISTING GRAVEL BORROW SUBBASE DOES NOT EXIST BENEATH ANY NEW WHEELCHAIR RAMP, NEW GRAVEL BORROW SUBBASE SHALL BE INSTALLED AT A DEPTH OF 8 INCHES AND SHALL BE PAID FOR UNDER ITEM 906.9901 CURBING AND SIDEWALKS.

WHEELCHAIR RAMP FOR LIMITED RIGHT-OF-WAY AREAS



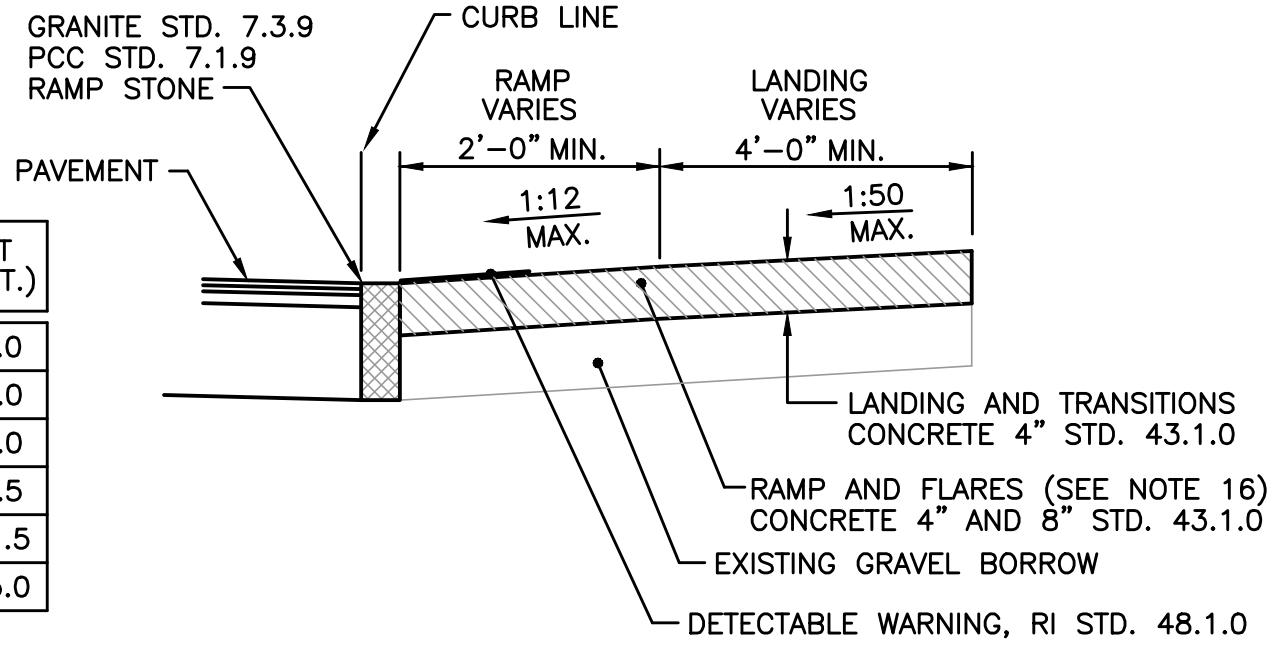
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ISOMETRIC VIEW

NOT TO SCALE

ROADWAY PROFILE GRADE	T (FT.)
0.00	6.0
0.01	7.0
0.02	8.0
0.03	9.5
0.04	11.5
0.05	15.0



SECTION A-A

NOT TO SCALE

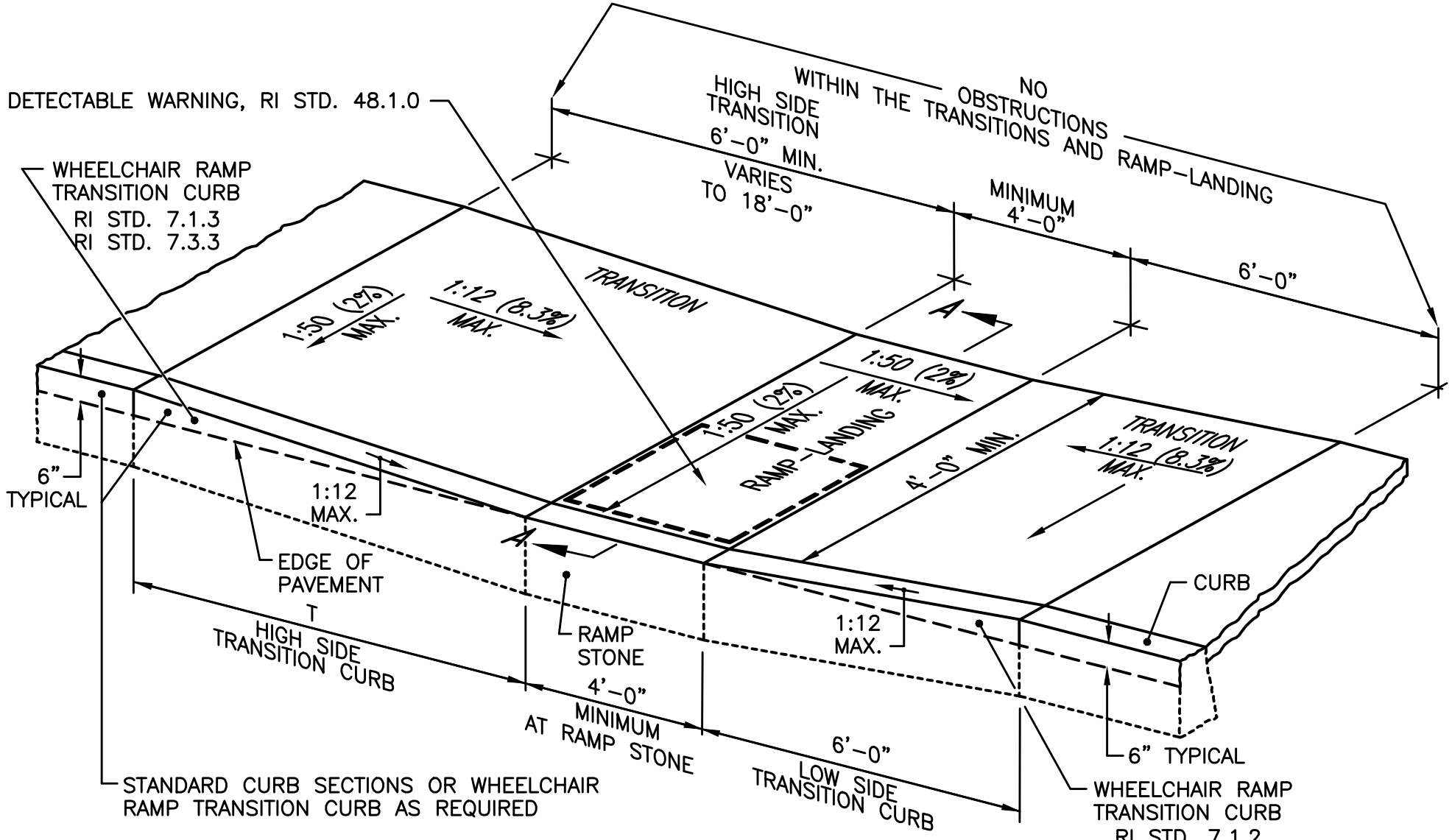
NOTES:

- SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
- WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, THE WHEELCHAIR RAMP WILL BE PLACED SUCH THAT THE OBSTRUCTION FALLS OUTSIDE OF THE RAMP.
- AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
- DRAINAGE FACILITIES ARE TO BE LOCATED UP-GRADE OF ALL WHEELCHAIR RAMPS.
- LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
- IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 1:50 EXCEPT WITHIN THE RAMP AREA.
- AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 4'-0" SHALL BE MAINTAINED.
- THE WHEELCHAIR RAMP SLOPE AND SIDE SLOPES (TRANSITIONS), MUST NOT BE STEEPER THAN 1:12. HOWEVER, THESE SLOPES MAY BE FLATTER THAN 1:12 WHEN WARRANTED BY SURROUNDING CONDITIONS.
- WHERE THE ROAD PROFILE EXCEEDS 5% THE HIGH SIDE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'-0").
- IN NO CASE, WHERE A STOP LINE IS WARRANTED, SHALL A RAMP BE PLACED BEHIND THE STOP LINE.
- THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
- THE WHEELCHAIR RAMP SHALL BE CENTERED RADIALLY, OPPOSITE THE RADIUS POINT WHEN POSSIBLE.
- MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).
- ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
- DETECTABLE WARNINGS TO BE PAID FOR UNDER SECTION 942 OF THE R.I. STANDARD SPECIFICATION.
- 8" CONCRETE DEPTH FOR RADIUS WHEELCHAIR RAMPS ONLY. USE 4" DEPTH FOR TANGENT (MID-BLOCK) LOCATIONS.
- EXISTING GRAVEL BORROW SUBBASE SHALL BE ADJUSTED TO CLOSE CONFORMANCE WITH THE LINES, GRADES, AND TYPICAL CROSS SECTIONS INDICATED ON THE PLANS. ANY NEW GRAVEL BORROW SUBBASE REQUIRED AS A RESULT OF ADJUSTMENT SHALL BE INCLUDED AND PAID FOR UNDER ITEM 906.9901 CURBING AND SIDEWALKS.
- IF EXISTING GRAVEL BORROW SUBBASE DOES NOT EXIST BENEATH ANY NEW WHEELCHAIR RAMPS, NEW GRAVEL BORROW SUBBASE SHALL BE INSTALLED AT A DEPTH OF 8 INCHES AND SHALL BE PAID FOR UNDER ITEM 906.9901 CURBING AND SIDEWALKS.

WHEELCHAIR RAMP

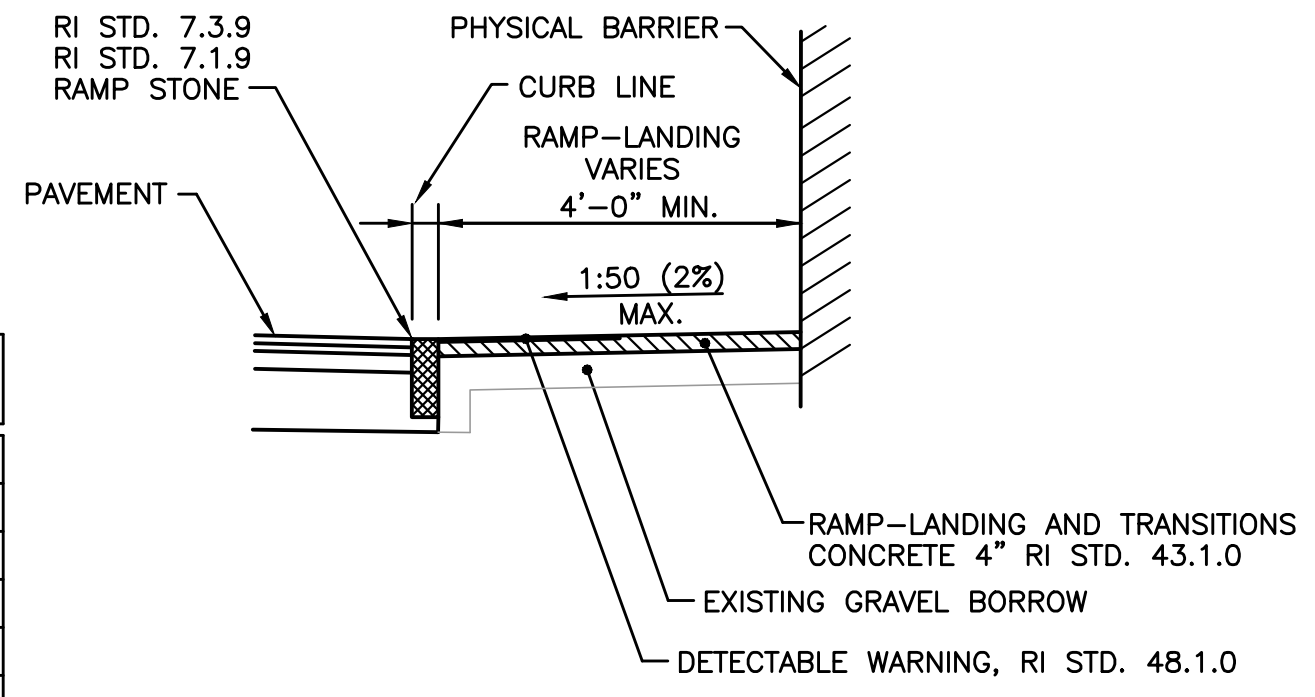


(MODIFIED)



ISOMETRIC VIEW

NOT TO SCALE



SECTION A-A

NOT TO SCALE

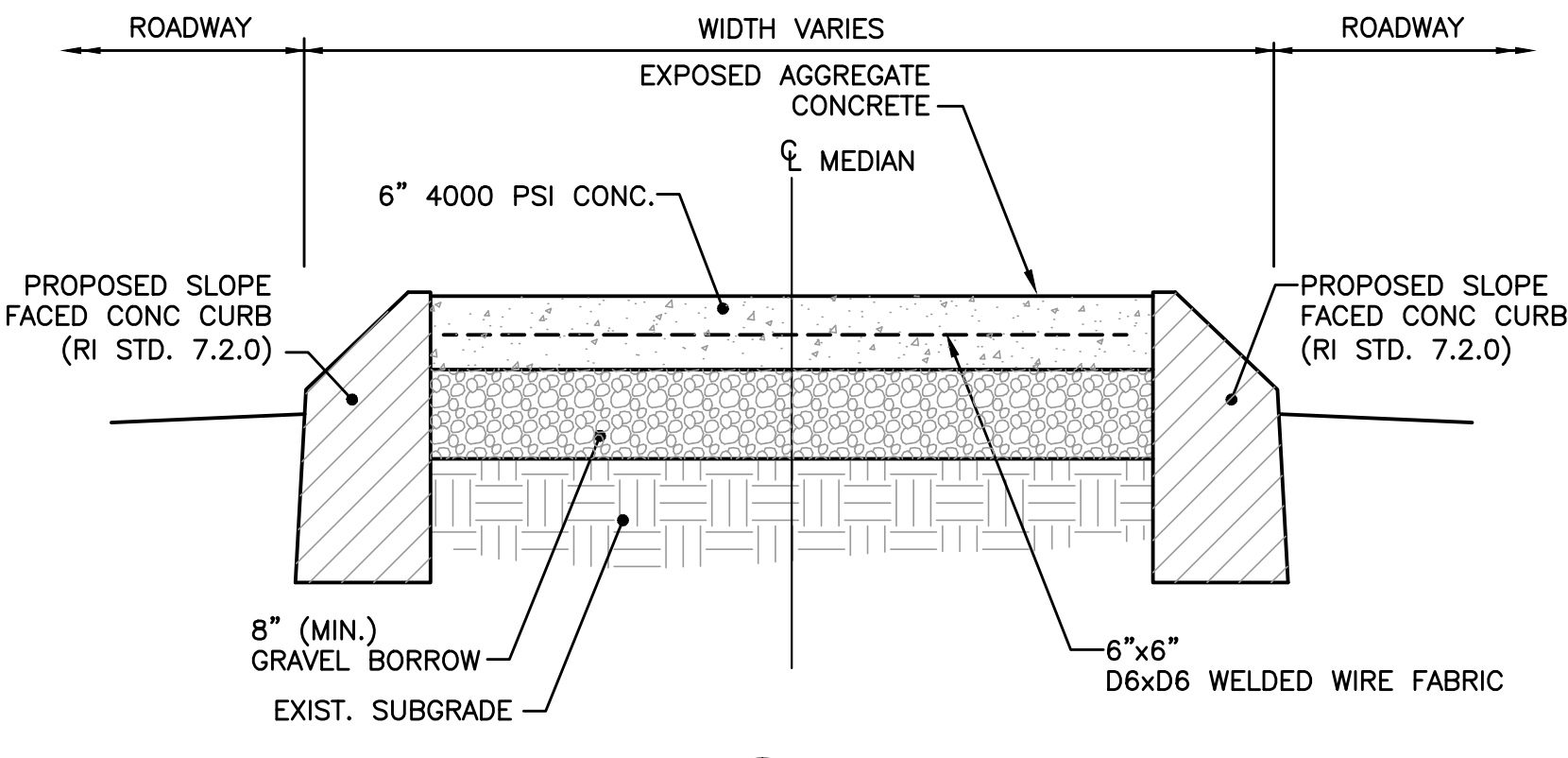
NOTES:

- THIS DETAIL MAY BE USED WHEN A PHYSICAL BARRIER IS PRESENT AND THERE IS INSUFFICIENT ROOM TO PROPERLY CONSTRUCT AN ADA ACCESSIBLE RAMP AND LANDING; A TECHNICAL FEASIBILITY FINDING IS REQUIRED.
- SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
- THE RAMP-LANDING AND TRANSITIONS SHALL BE FREE OF OBSTRUCTIONS.
- LOCATION OF THE RAMP-LANDING IS AS SHOWN ON THE CONTRACT DRAWINGS.
- AN UNOBSTRUCTED PEDESTRIAN ACCESS ROUTE (PATH OF TRAVEL) WITH A MINIMUM WIDTH OF 4'-0" SHALL BE MAINTAINED.
- THE ENTRANCE OF THE RAMP-LANDING SHALL BE FLUSH WITH THE PAVEMENT.
- MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).
- ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
- DETECTABLE WARNINGS TO BE PAID FOR UNDER SECTION 942 OF THE R.I. STANDARD SPECIFICATIONS.
- EXISTING GRAVEL BORROW SUBBASE SHALL BE ADJUSTED TO CLOSE CONFORMANCE WITH THE LINES, GRADES, AND TYPICAL CROSS SECTIONS INDICATED ON THE PLANS. ANY NEW GRAVEL BORROW SUBBASE REQUIRED AS A RESULT OF ADJUSTMENT SHALL BE INCLUDED AND PAID FOR UNDER ITEM 906.9901 CURBING AND SIDEWALKS.
- IF EXISTING GRAVEL BORROW SUBBASE DOES NOT EXIST BENEATH ANY NEW WHEELCHAIR RAMP, NEW GRAVEL BORROW SUBBASE SHALL BE INSTALLED AT A DEPTH OF 8 INCHES AND SHALL BE PAID FOR UNDER ITEM 906.9901 CURBING AND SIDEWALKS.

RAMP-LANDING FOR NARROW SIDEWALK



(MODIFIED)



EXPOSED AGGREGATE CONCRETE MEDIAN

NOT TO SCALE

REVISIONS		
NO.	DATE	BY
1	4/20	HP

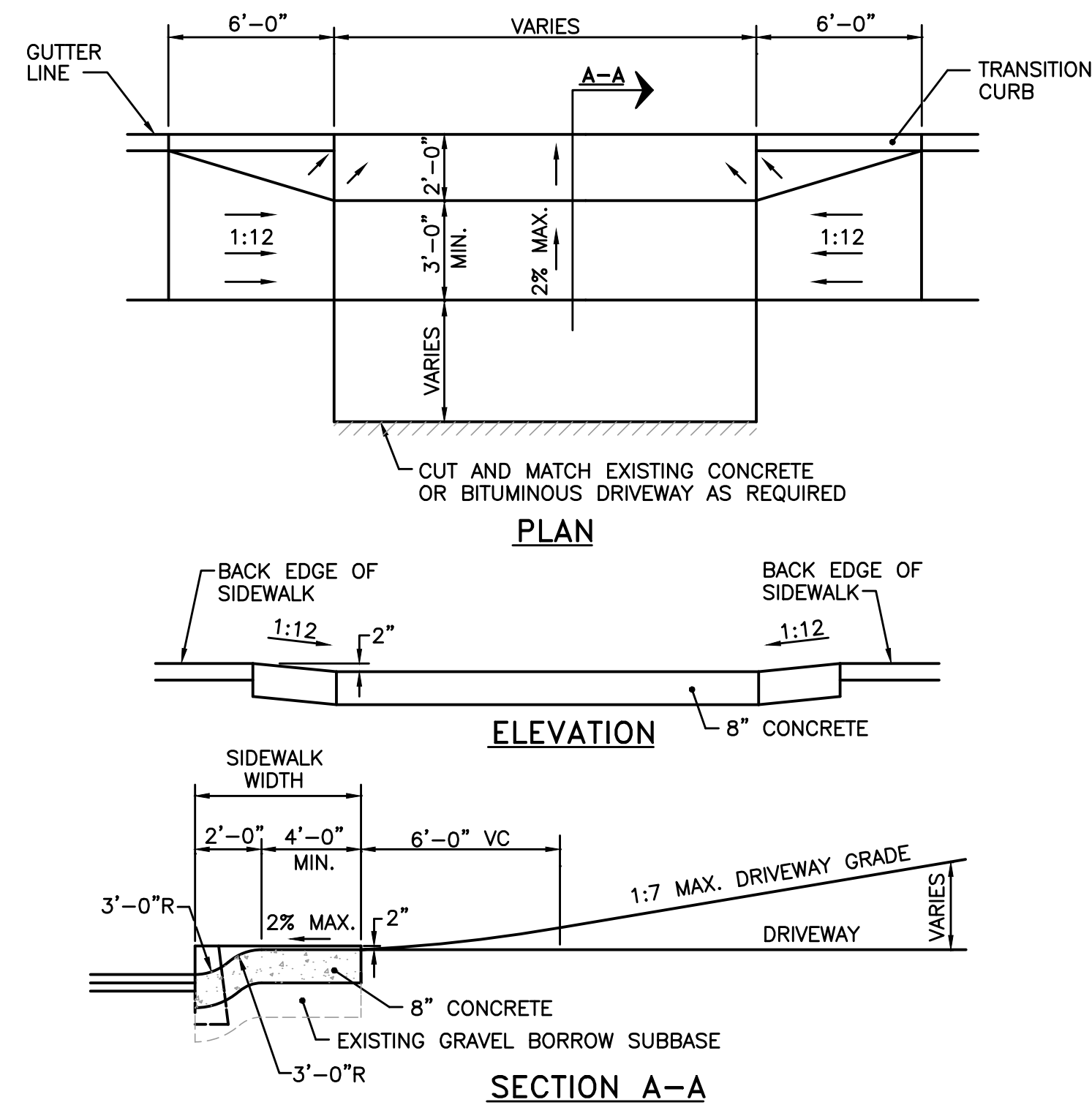
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

**HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)**

WARWICK AND CRANSTON, RHODE ISLAND

CONSTRUCTION DETAILS - 2





NOTES

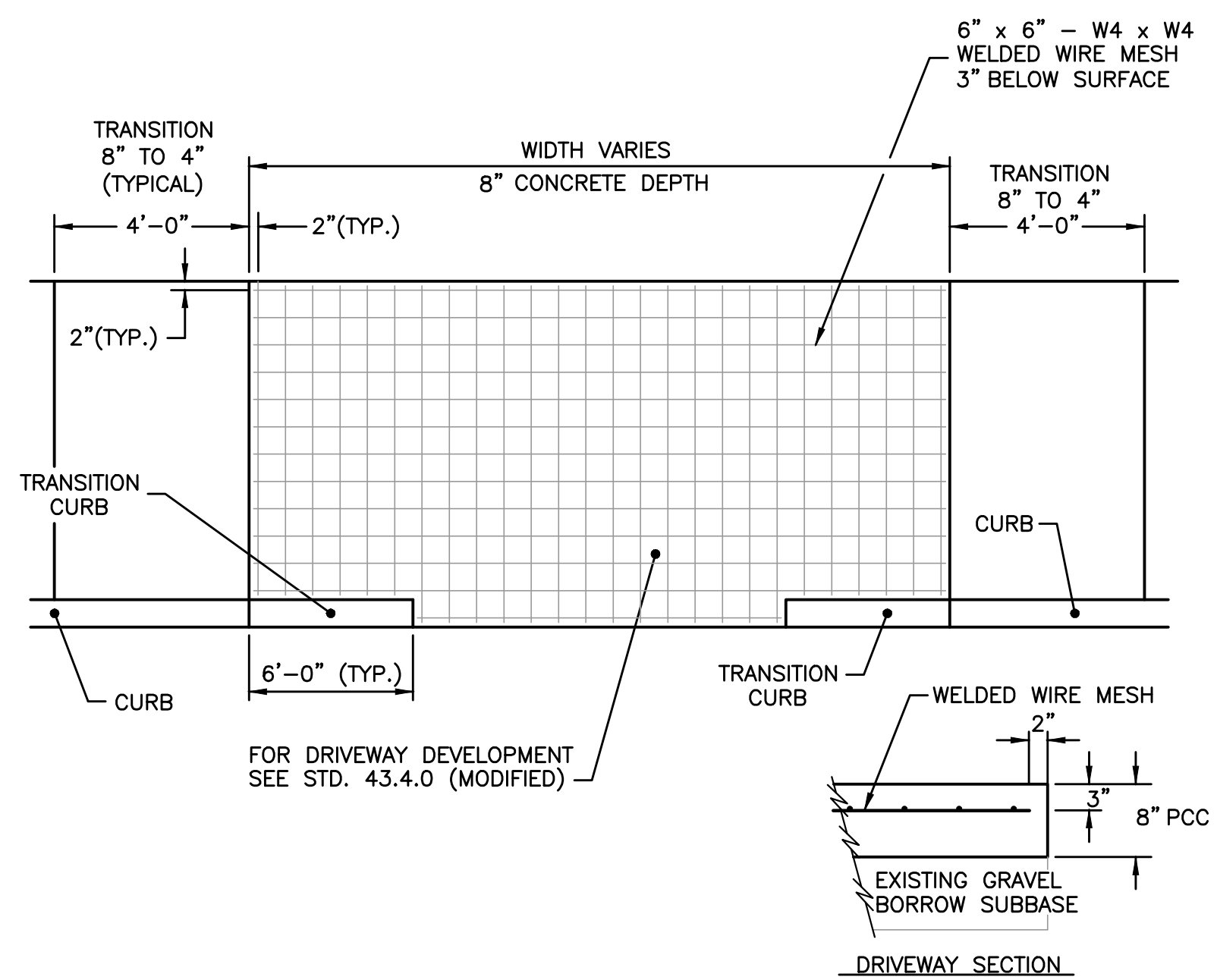
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN DRIVEWAY IS BELOW BACK EDGE OF SIDEWALK PROFILE, STD. 43.4.1 MUST BE USED.
3. EXISTING GRAVEL BORROW SUBBASE SHALL BE ADJUSTED TO CLOSE CONFORMANCE WITH THE LINES, GRADES, AND TYPICAL CROSS SECTIONS INDICATED ON THE PLANS. ANY NEW GRAVEL BORROW SUBBASE REQUIRED AS A RESULT OF ADJUSTMENT SHALL BE INCLUDED AND PAID FOR UNDER ITEM 906.9901 CURBING AND SIDEWALKS.
4. IF EXISTING GRAVEL BORROW SUBBASE DOES NOT EXIST BENEATH ANY NEW DRIVEWAYS, NEW GRAVEL BORROW SUBBASE SHALL BE INSTALLED AT A DEPTH OF 8 INCHES AND SHALL BE PAID FOR UNDER ITEM 906.9901 CURBING AND SIDEWALKS.

DRIVEWAY DEVELOPMENT FOR 6'-0" TRANSITION CURB



NOT TO SCALE

(MODIFIED)



NOTE:

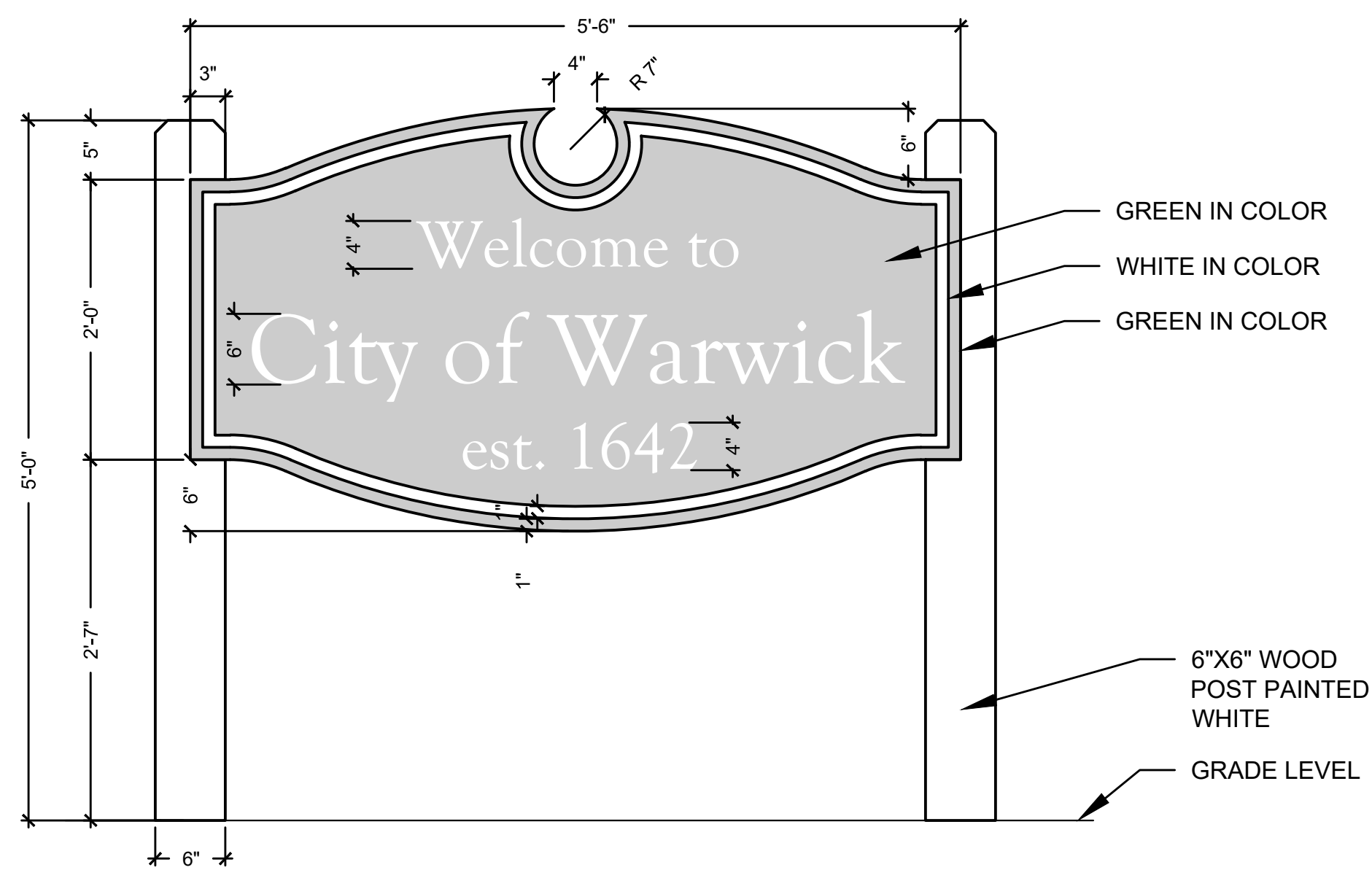
SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.

CEMENT CONCRETE DRIVEWAYS



NOT TO SCALE

(MODIFIED)



NOTE:

1. ALL LETTERING SHALL BE ENGRAVED $\frac{1}{8}$ " PAIN WHITE IN COLOR, AND CENTERED ON SIGN HORIZONTALLY.
2. POSTS SHALL EXTEND 4' BELOW GRADE AND BE ENCASED WITH 18" Ø CONC. FOUNDATIONS.
3. LEVEL FOUNDATIONS/POSTS WITH CRUSHED STONE (8" DEPTH) AT THE BOTTOM OF THE EXCAVATION AS NEEDED.

GATEWAY SIGN

SCALE: 1" = 1'-0"



REVISIONS			NO.	DATE	BY
NO.	DATE	BY			
1	4/20	HP			

**RHODE ISLAND
DEPARTMENT OF TRANSPORTATION**

**HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)
WARWICK AND CRANSTON, RHODE ISLAND**

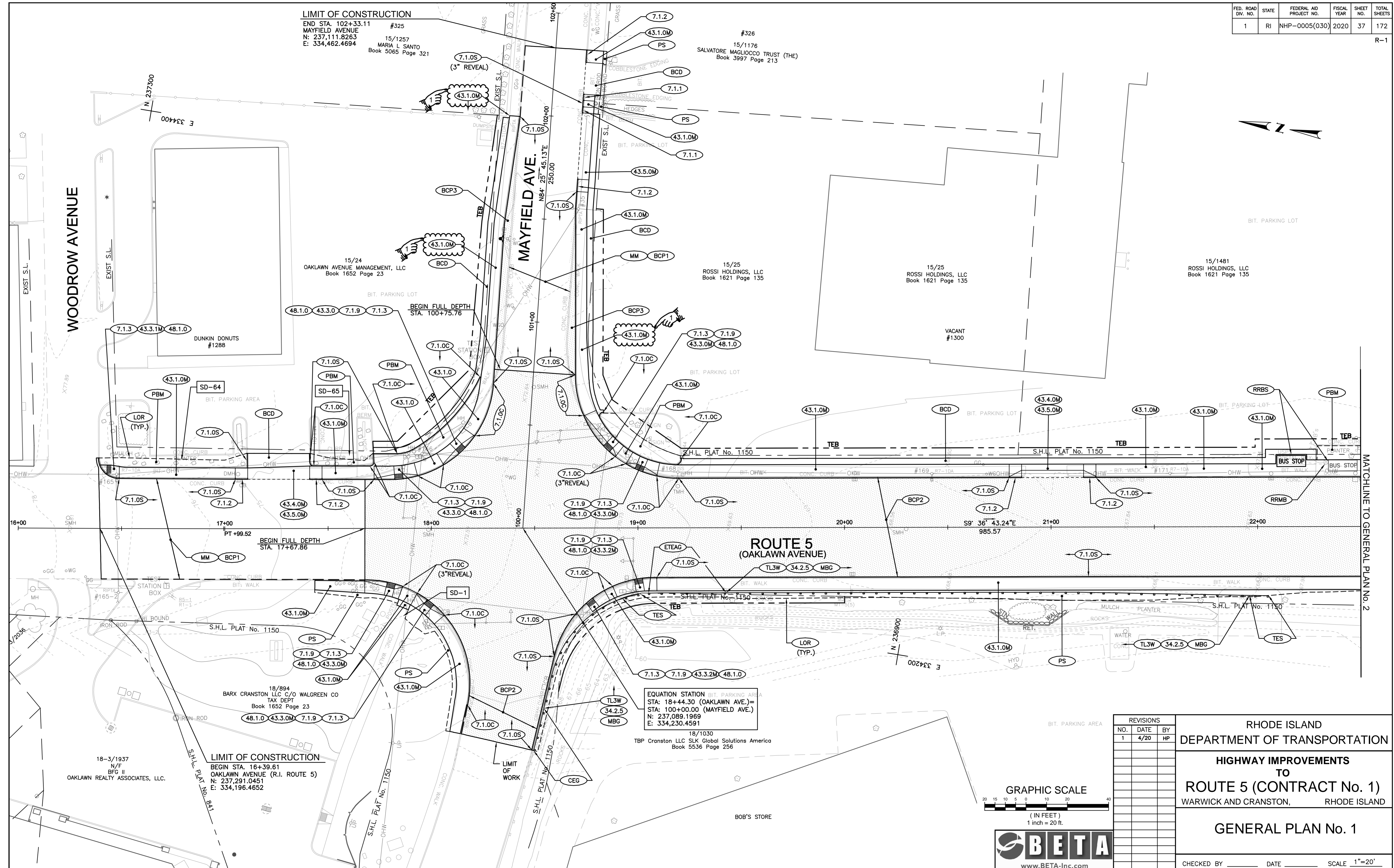
CONSTRUCTION DETAILS - 3

CHECKED BY _____ DATE _____ SCALE NO SCALE



FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	NHP-0005(030)	2020	37	172

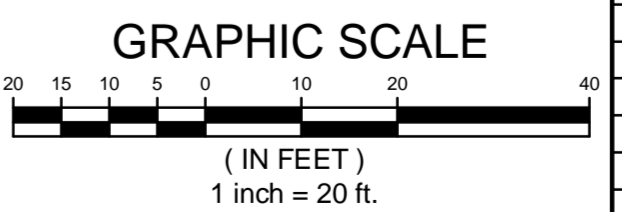
R-1



LIMIT OF CONSTRUCTION
 END STA. 102+33.11
 MAYFIELD AVENUE
 N: 237,111.8263
 E: 334,462.4694
 #325
 15/1257
 MARIA L SANTO
 Book 5065 Page 321

LIMIT OF CONSTRUCTION
 BEGIN STA. 16+39.61
 OAKLAWN AVENUE (R.I. ROUTE 5)
 N: 237,291.0451
 E: 334,196.4652
 18-3/1937
 N/F
 BFG II
 OAKLAWN REALTY ASSOCIATES, LLC.

EQUATION STATION BIT. PARKING AREA
 STA: 18+44.30 (OAKLAWN AVE.) =
 STA: 100+00.00 (MAYFIELD AVE.)
 N: 237,089.1969
 E: 334,230.4591
 18/1030
 TBP Cranston LLC SLK Global Solutions America
 Book 5536 Page 256



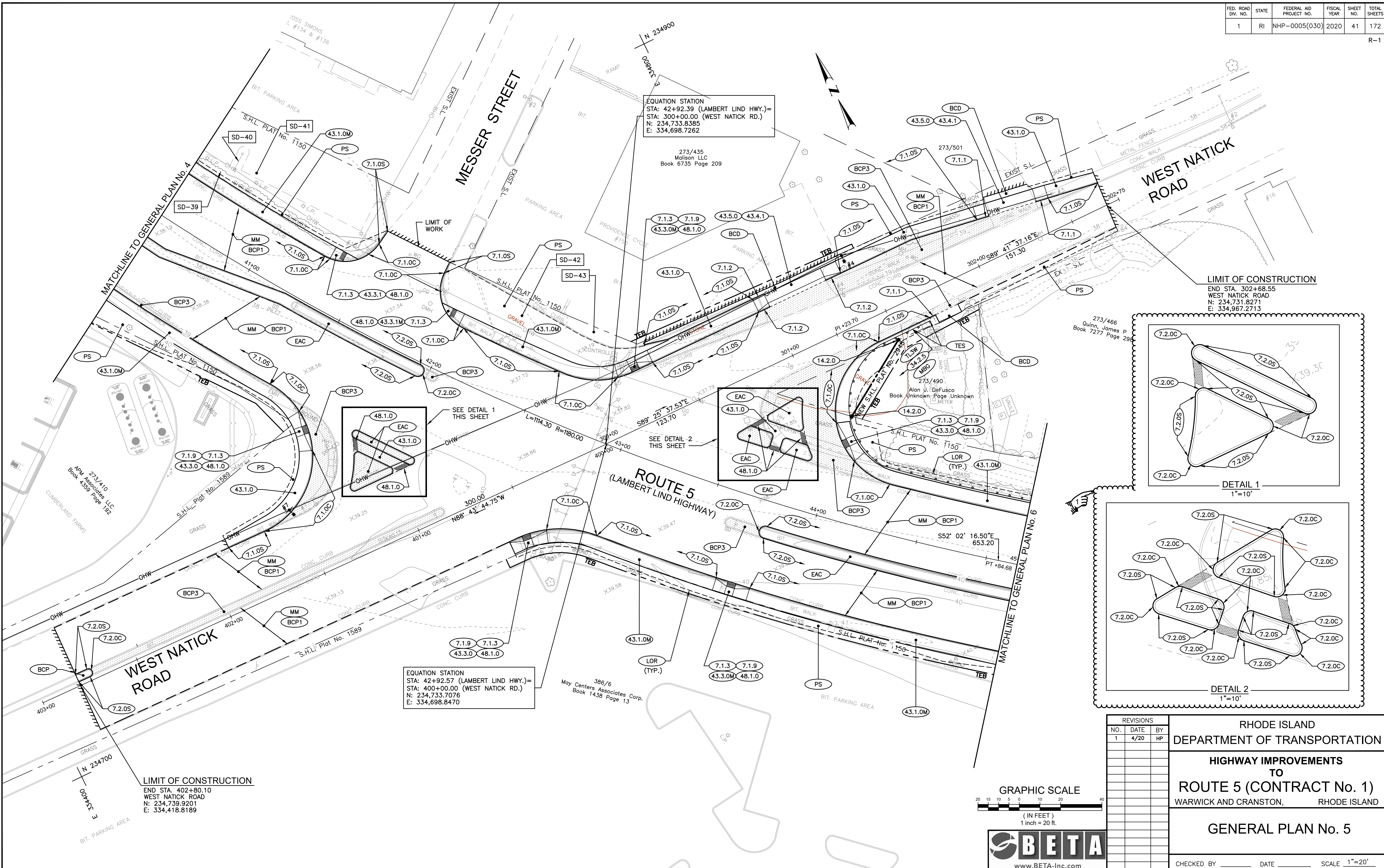
REVISIONS		
NO.	DATE	BY
1	4/20	HP

RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

**HIGHWAY IMPROVEMENTS
 TO
 ROUTE 5 (CONTRACT No. 1)**
 WARWICK AND CRANSTON, RHODE ISLAND

GENERAL PLAN No. 1

CHECKED BY _____ DATE _____ SCALE 1"=20'

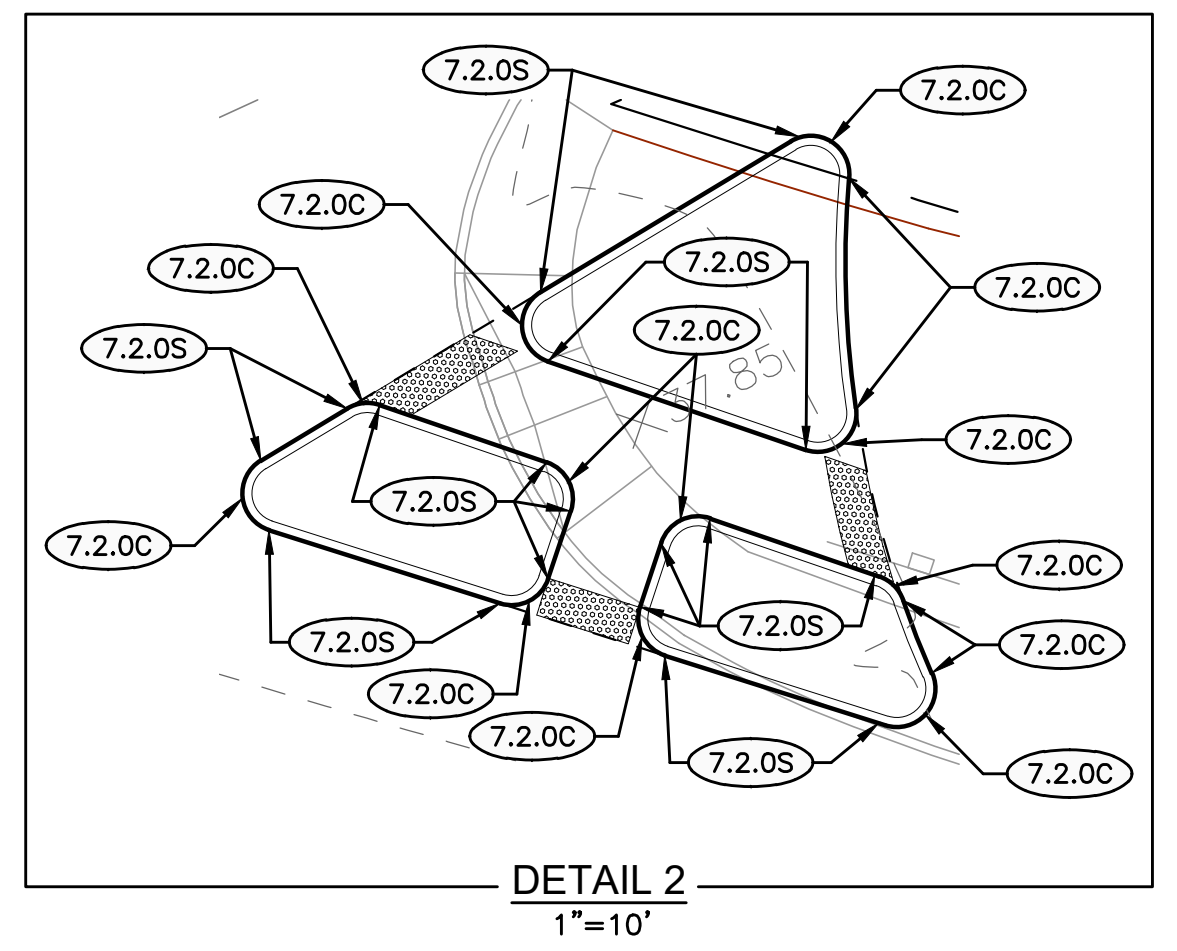
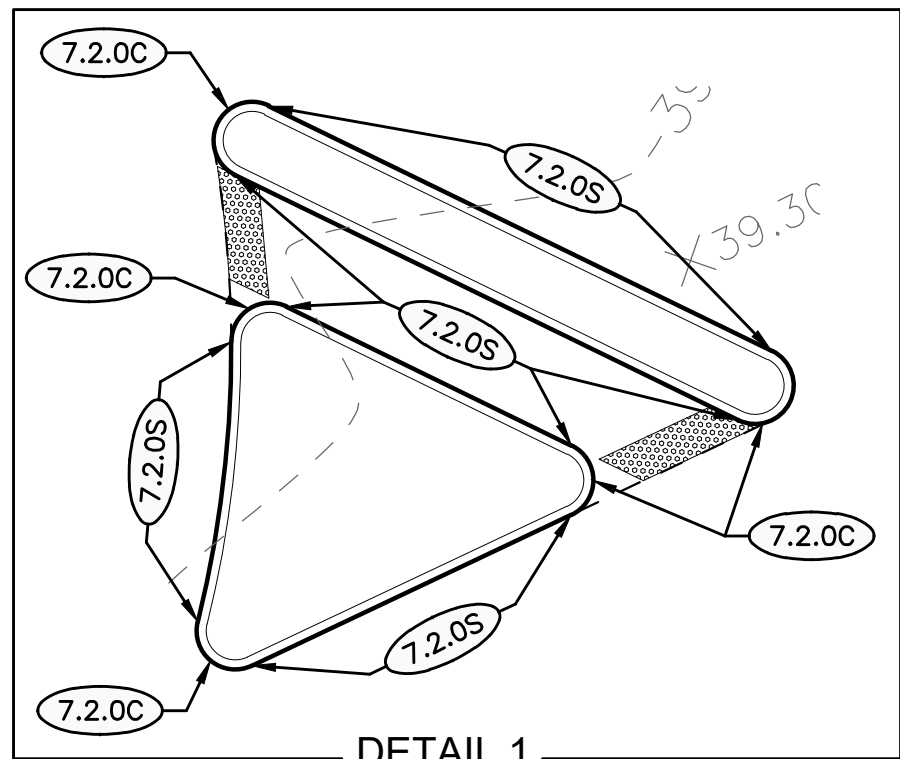


LIMIT OF CONSTRUCTION
 END STA. 302+68.55
 WEST NATICK ROAD
 N: 234,731.8271
 E: 334,967.2713

LIMIT OF CONSTRUCTION
 END STA. 402+80.10
 WEST NATICK ROAD
 N: 234,739.9201
 E: 334,418.8189

EQUATION STATION
 STA: 42+92.57 (LAMBERT LIND HWY.)=
 STA: 400+00.00 (WEST NATICK RD.)
 N: 234,733.7076
 E: 334,698.8470

EQUATION STATION
 STA: 42+92.39 (LAMBERT LIND HWY.)=
 STA: 300+00.00 (WEST NATICK RD.)
 N: 234,733.8385
 E: 334,698.7262



REVISIONS		
NO.	DATE	BY
1	4/20	HP

RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

**HIGHWAY IMPROVEMENTS
 TO
 ROUTE 5 (CONTRACT No. 1)**
 WARWICK AND CRANSTON, RHODE ISLAND

GENERAL PLAN No. 5

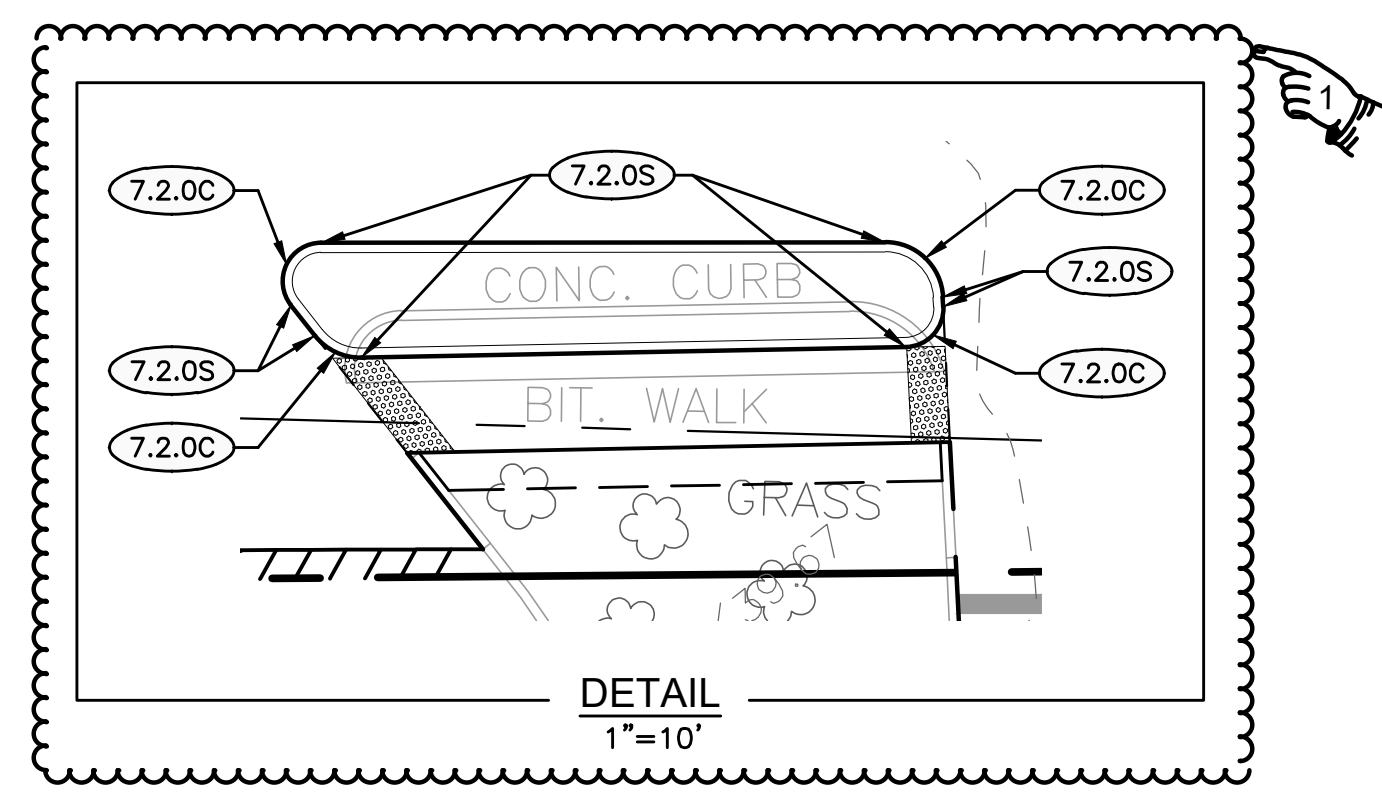
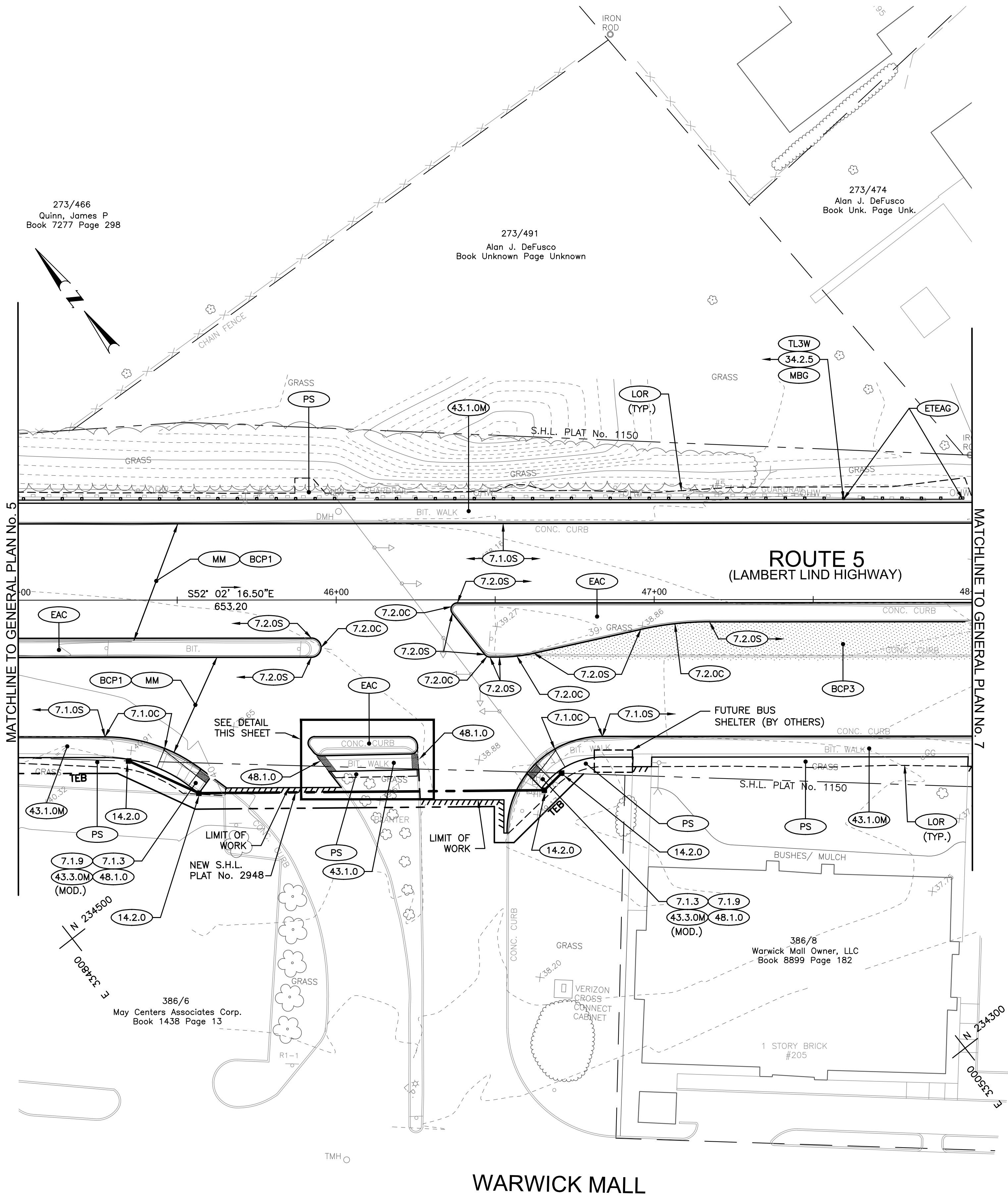
CHECKED BY _____ DATE _____ SCALE 1"=20'

GRAPHIC SCALE

BETA
www.BETA-Inc.com

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	NHP-0005(030)	2020	42	172

R-1



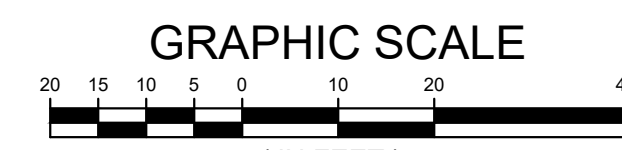
REVISIONS		
NO.	DATE	BY
1	4/20	HP

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

**HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)**
WARWICK AND CRANSTON, RHODE ISLAND

GENERAL PLAN No. 6

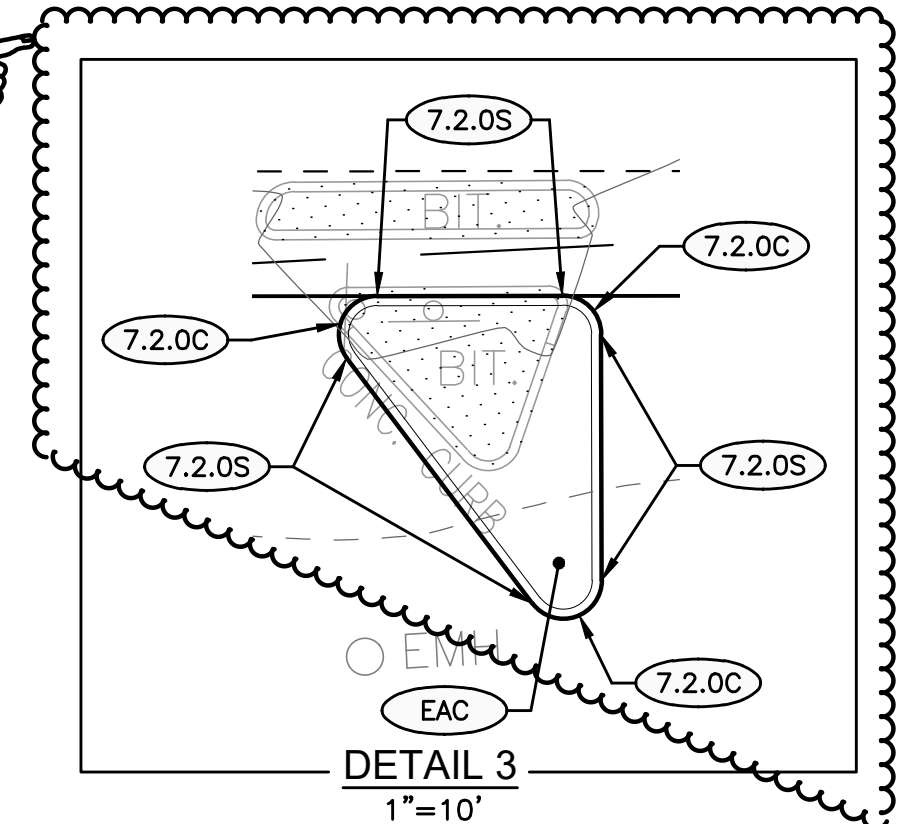
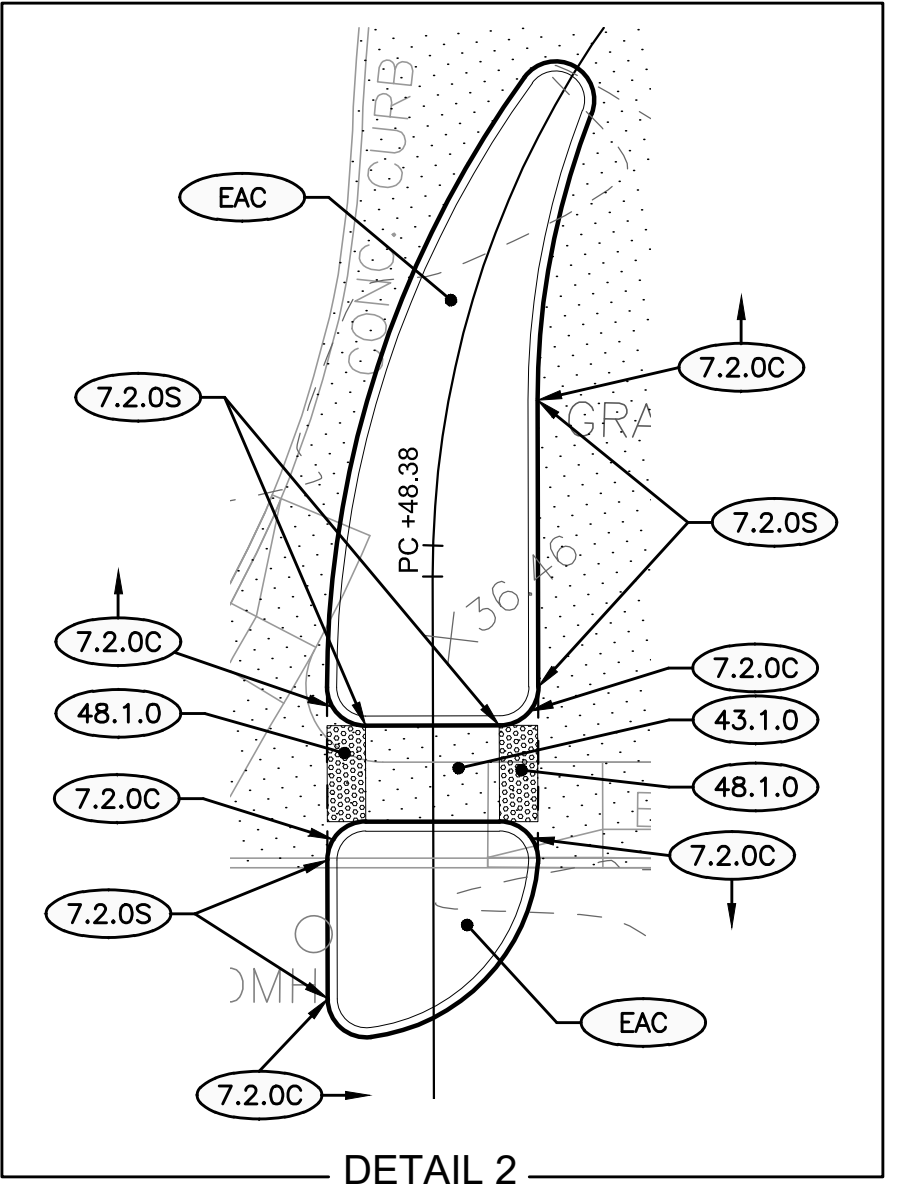
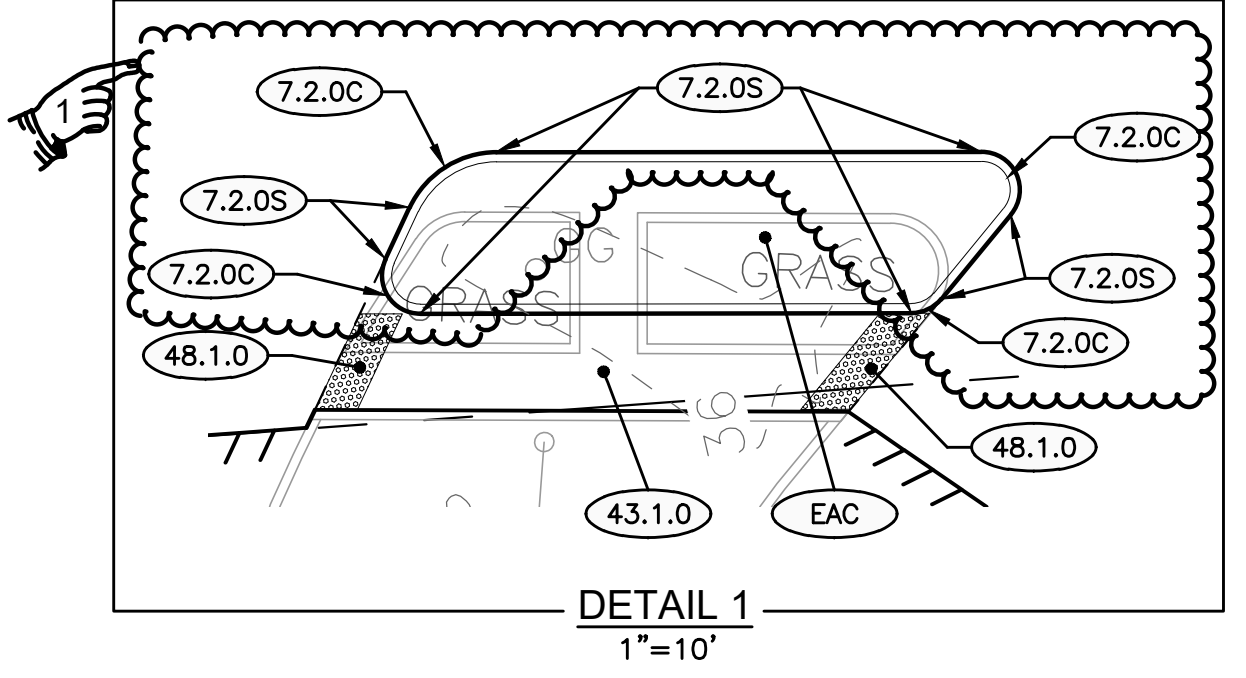
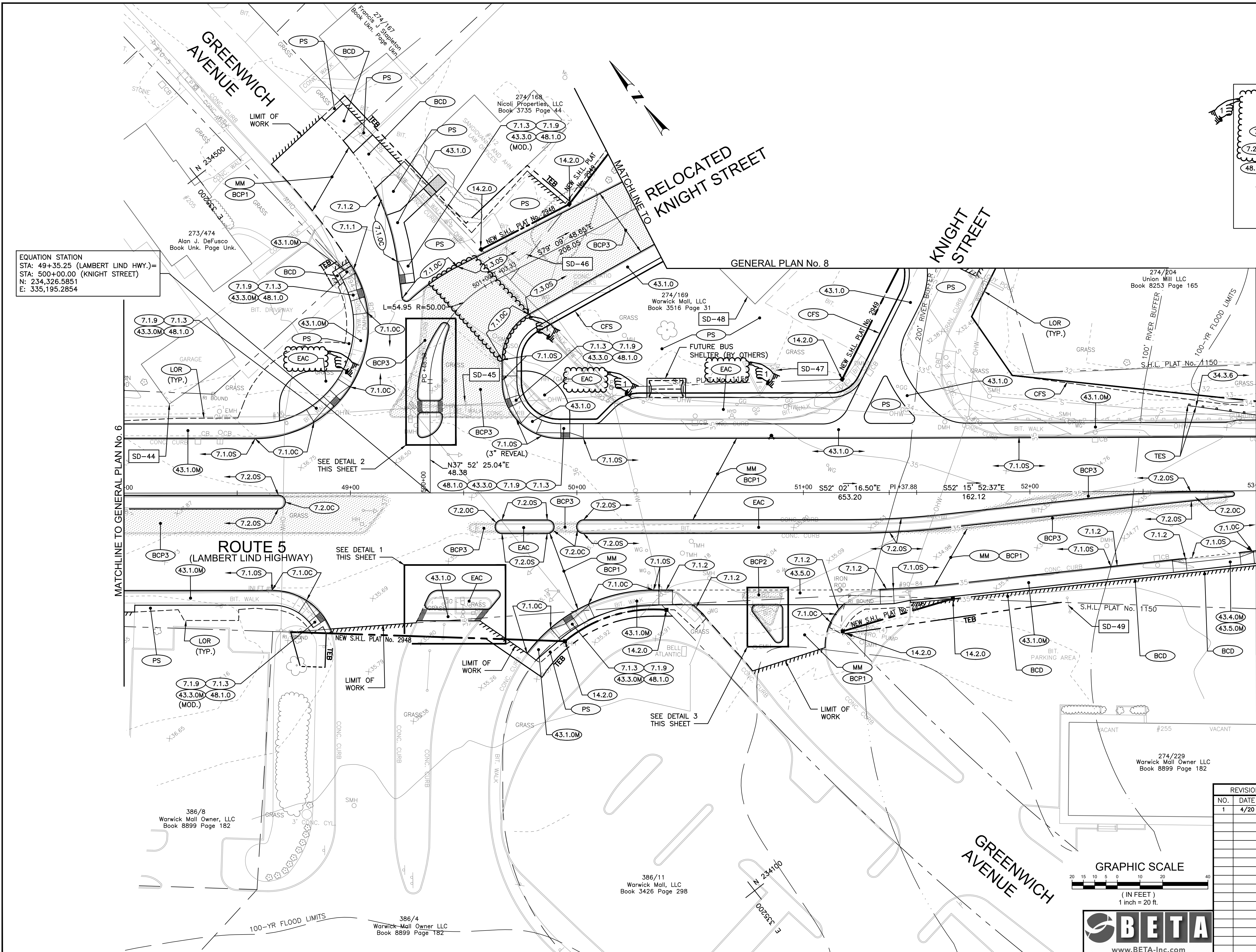
CHECKED BY _____ DATE _____ SCALE 1"=20'



FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	NHP-0005(030)	2020	43	172

R-1

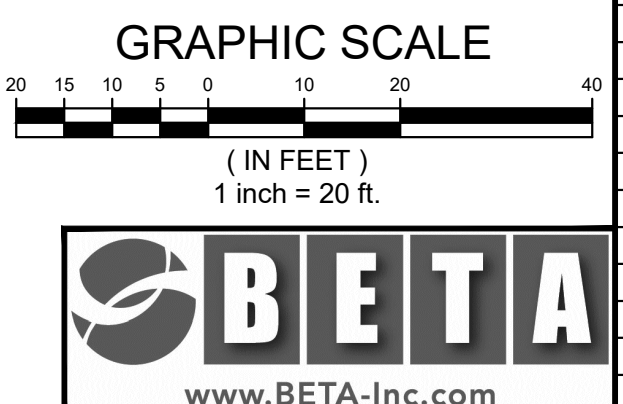
EQUATION STATION
 STA: 49+35.25 (LAMBERT LIND HWY.)=
 STA: 500+00.00 (KNIGHT STREET)
 N: 234,326.5851
 E: 335,195.2854

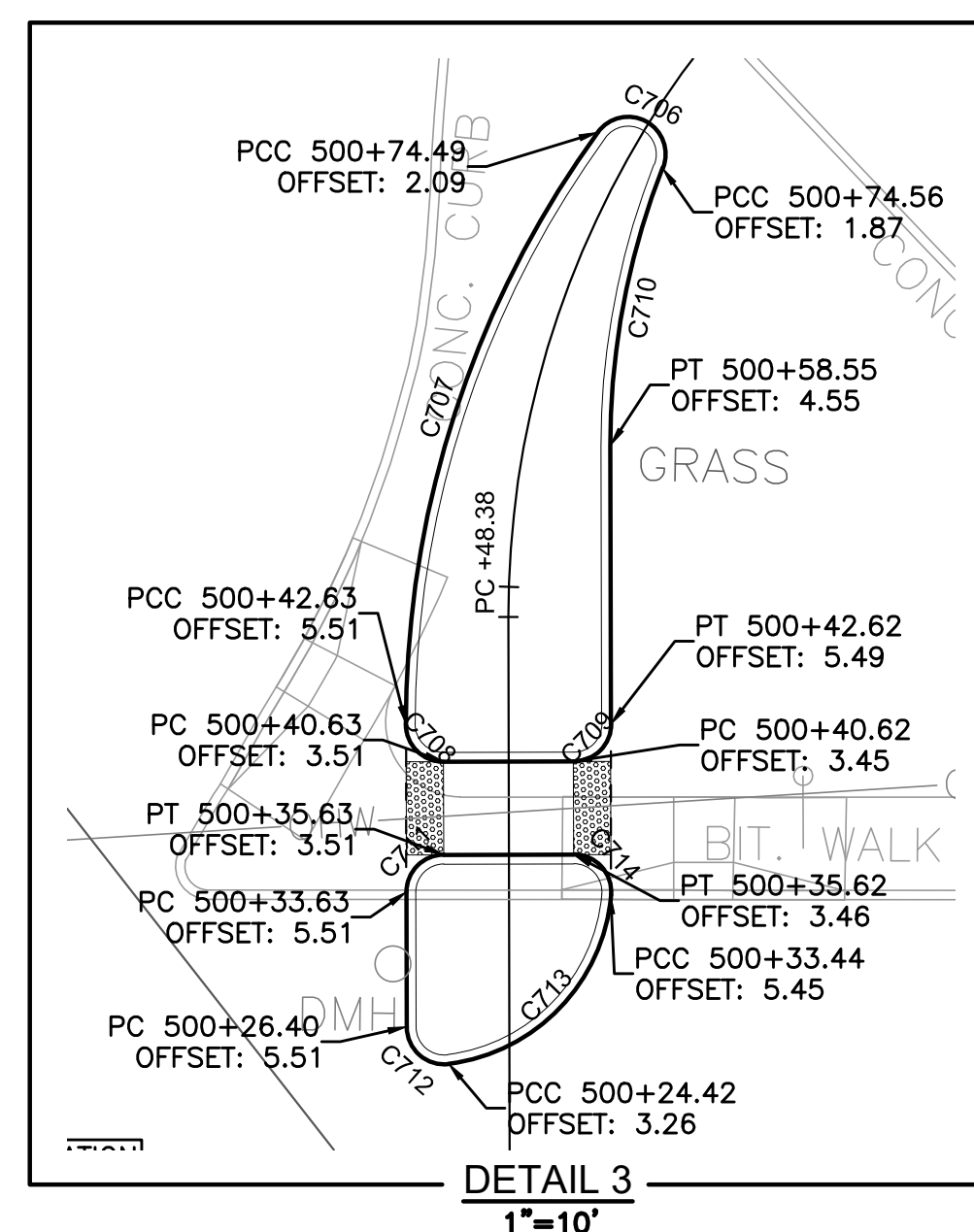
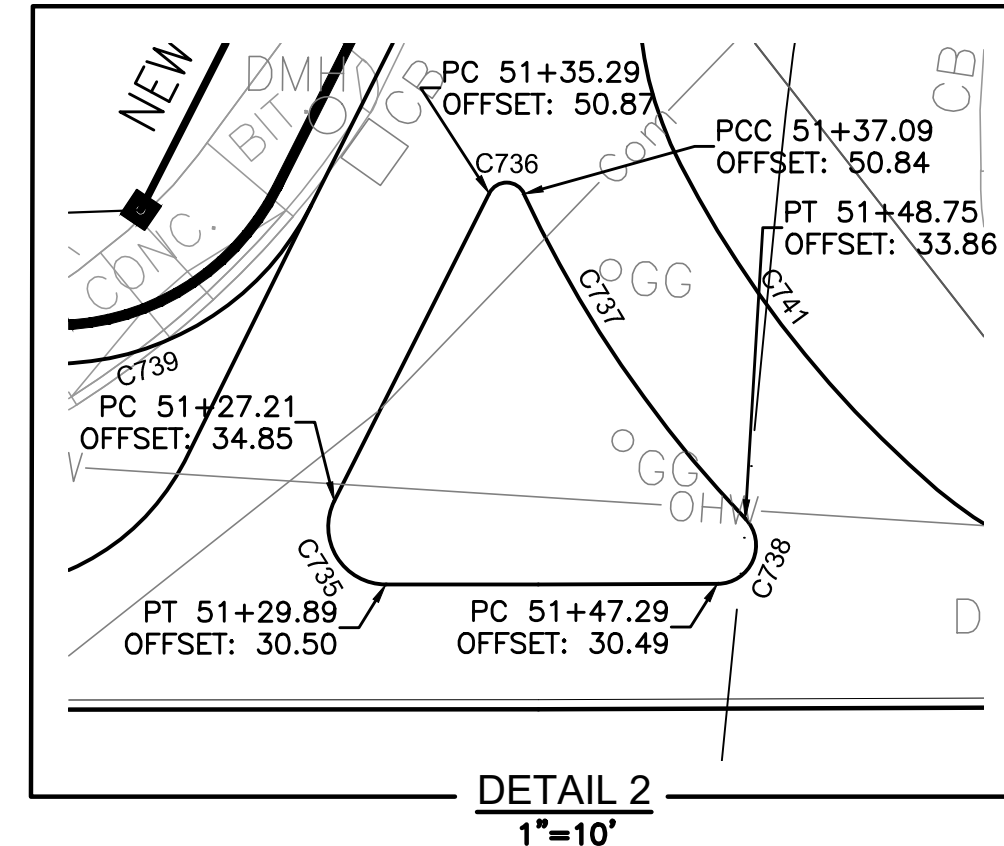
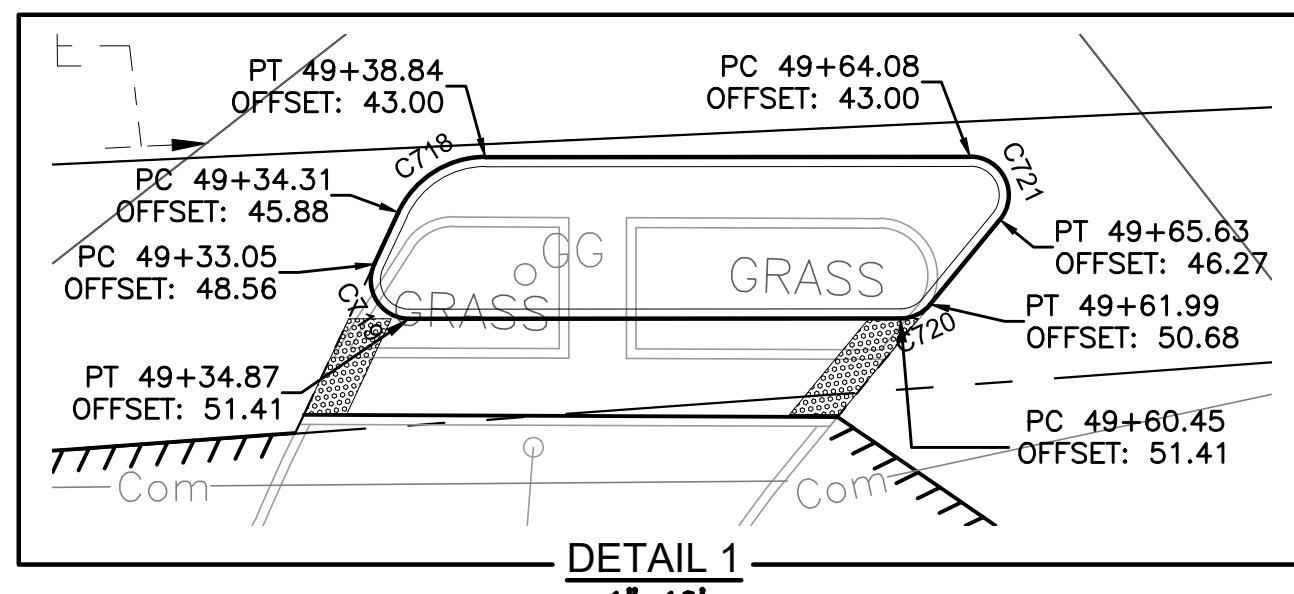
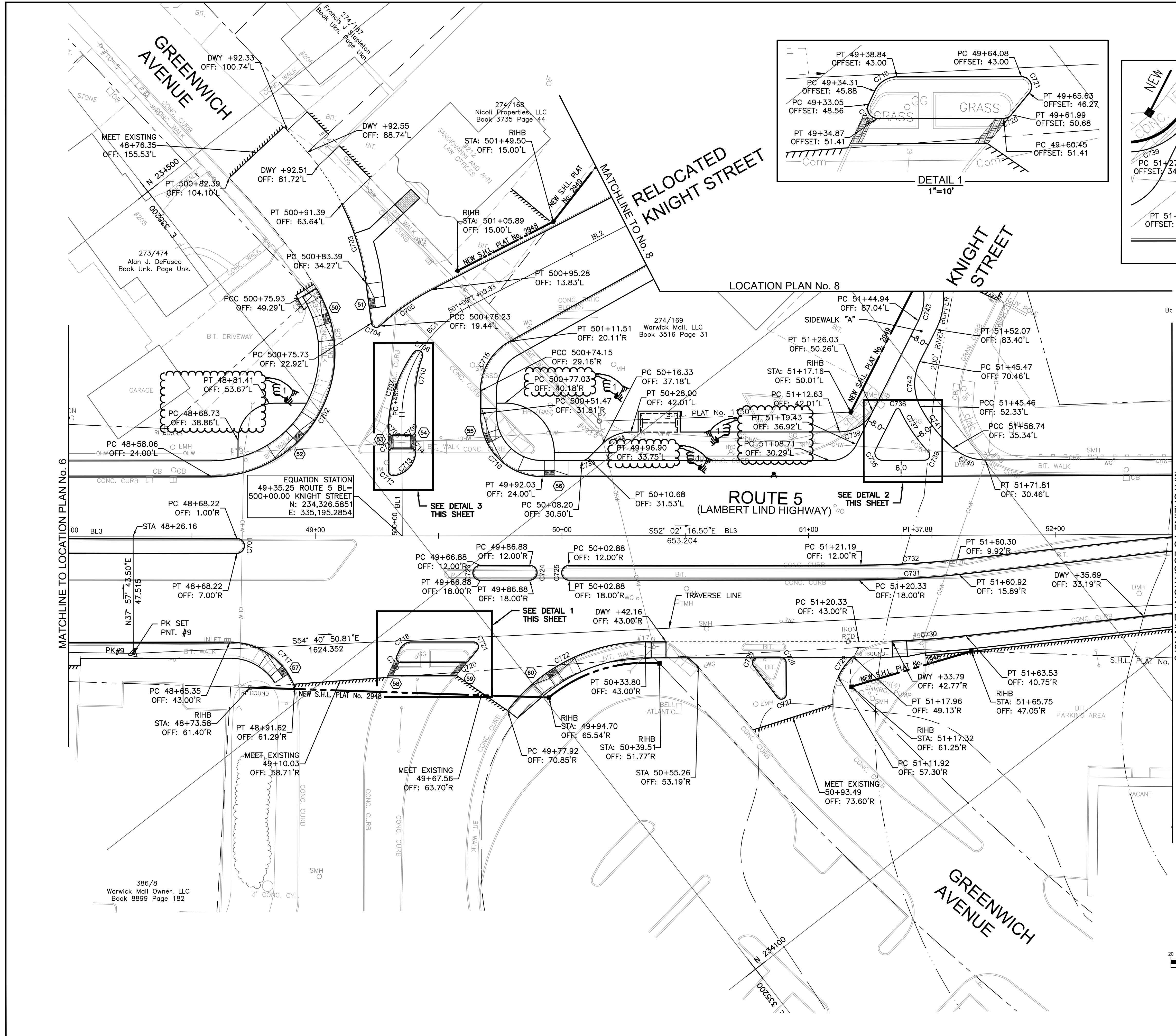


REVISIONS		
NO.	DATE	BY
1	4/20	HP

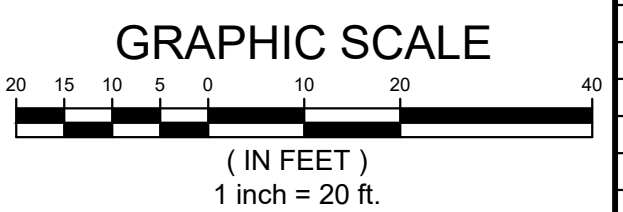
RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 HIGHWAY IMPROVEMENTS
 TO
 ROUTE 5 (CONTRACT No. 1)
 WARWICK AND CRANSTON, RHODE ISLAND
 GENERAL PLAN No. 7

CHECKED BY _____ DATE _____ SCALE 1"=20'





CR #	WIDTH OF SIDEWALK (W)	WIDTH OF RAMP ENTRANCE 4.0' (MIN.)	TRANSITION LENGTH		RAMP STONE MIDPOINT	NOTES
			LT. SIDE	RT. SIDE		
50	6.0'	4.0'	6.0'	6.0'	STA: 49+05.83 OFF: 88.50' L	
51	6.0'	4.0'	6.0'	N/A	STA: 49+21.79 OFF: 94.18' L	
52	6.0'	4.0'	9.5'	6.0'	STA: 48+94.23 OFF: 39.57' L	
53	5.0'	N/A	N/A	N/A	STA: 49+29.68 OFF: 38.12' L	
54	5.0'	N/A	N/A	N/A	STA: 49+40.65 OFF: 38.12' L	
55	6.0'	4.0'	8.5'	6.5'	STA: 49+68.98 OFF: 39.31' L	
56	6.0'	4.0'	8.5'	6.0'	STA: 49+94.88 OFF: 24.00' L	
57	6.0'	4.0'	N/A	6.0'	STA: 48+87.82 OFF: 54.29' R	
58	5.0'	N/A	N/A	N/A	STA: 49+30.55 OFF: 53.91' R	
59	5.0'	N/A	N/A	N/A	STA: 49+59.33 OFF: 53.91' R	
60	6.0'	4.0'	8.0'	6.0'	STA: 49+95.38 OFF: 54.49' R	



REVISIONS		
NO.	DATE	BY
1	4/20	HP

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

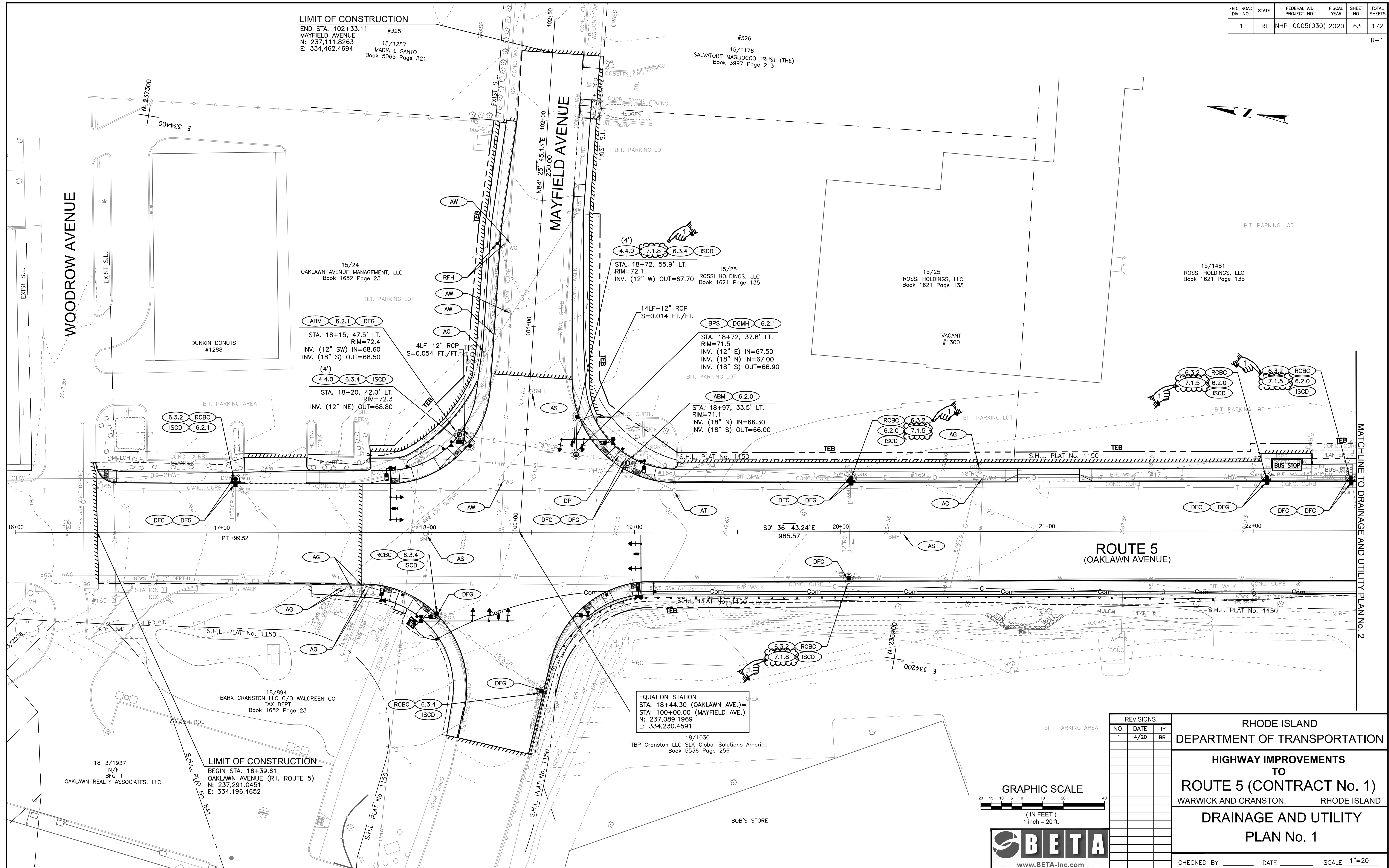
**HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)**
WARWICK AND CRANSTON, RHODE ISLAND

LOCATION PLAN No. 7

CHECKED BY _____ DATE _____ SCALE 1"=20'

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	NHP-0005(030)	2020	63	172

R-1



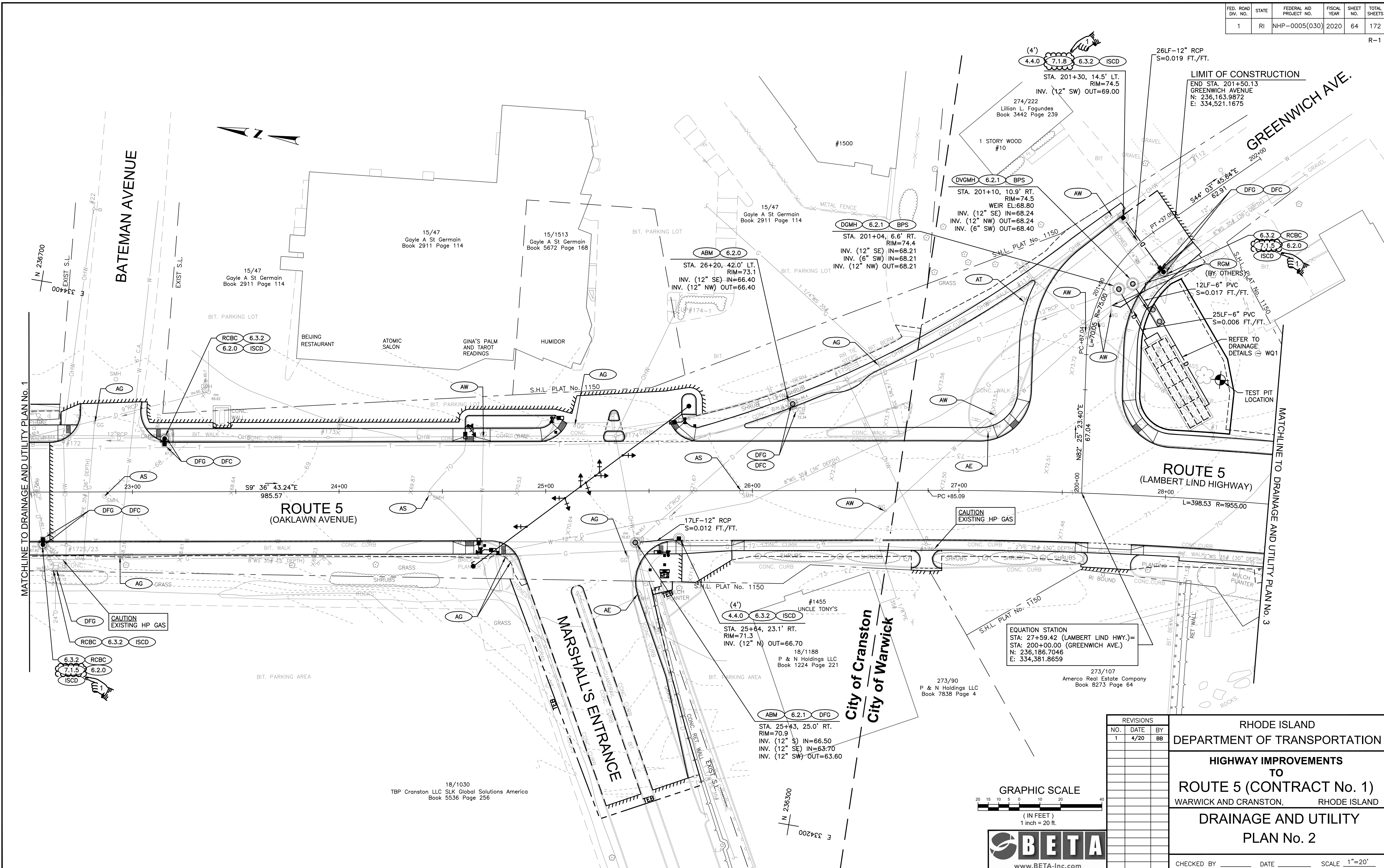
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

**HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)**
WARWICK AND CRANSTON, RHODE ISLAND

**DRAINAGE AND UTILITY
PLAN No. 1**

REVISIONS		
NO.	DATE	BY
1	4/20	BB

CHECKED BY _____ DATE _____ SCALE 1"=20'



LIMIT OF CONSTRUCTION
 END STA. 201+50.13
 GREENWICH AVENUE
 N: 236,163.9872
 E: 334,521.1675

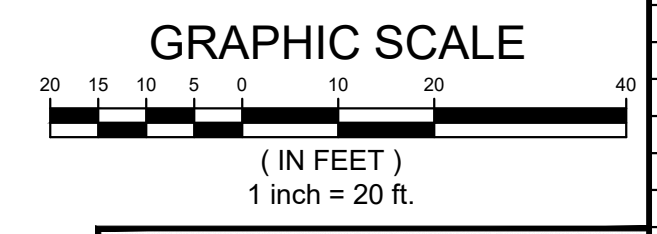
EQUATION STATION
 STA: 27+59.42 (LAMBERT LIND HWY.) =
 STA: 200+00.00 (GREENWICH AVE.)
 N: 236,186.7046
 E: 334,381.8659

REVISIONS		
NO.	DATE	BY
1	4/20	BB

RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

**HIGHWAY IMPROVEMENTS
 TO
 ROUTE 5 (CONTRACT No. 1)**
 WARWICK AND CRANSTON, RHODE ISLAND

**DRAINAGE AND UTILITY
 PLAN No. 2**



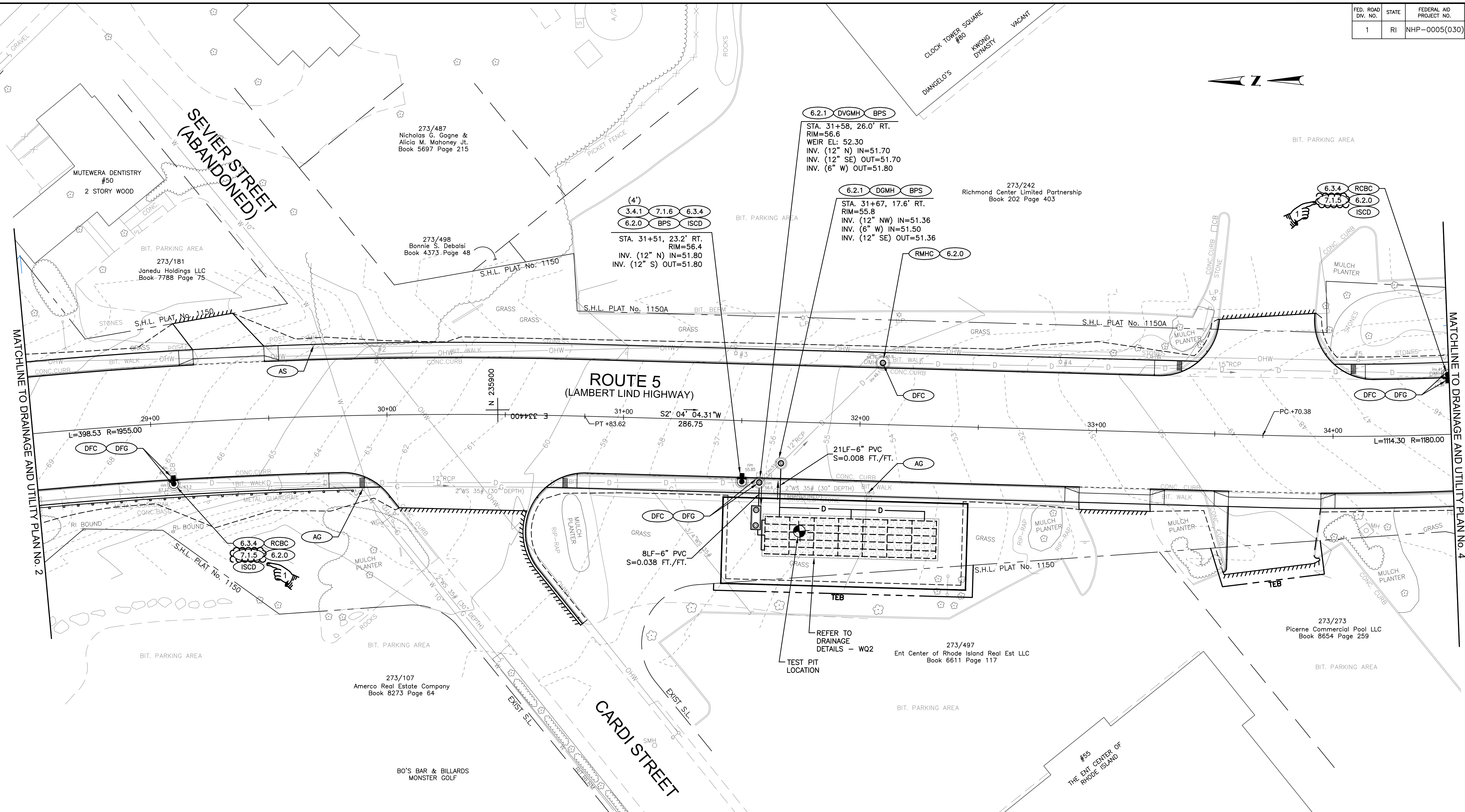
CHECKED BY _____ DATE _____ SCALE 1"=20'

18/1030
 TBP Cranston LLC SLK Global Solutions America
 Book 5536 Page 256

City of Cranston
 City of Warwick

CAUTION
 EXISTING HP GAS

CAUTION
 EXISTING HP GAS



MATCHLINE TO DRAINAGE AND UTILITY PLAN No. 2

MATCHLINE TO DRAINAGE AND UTILITY PLAN No. 4

REVISIONS		
NO.	DATE	BY
1	4/20	BB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

**HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)**
WARWICK AND CRANSTON, RHODE ISLAND

**DRAINAGE AND UTILITY
PLAN No. 3**

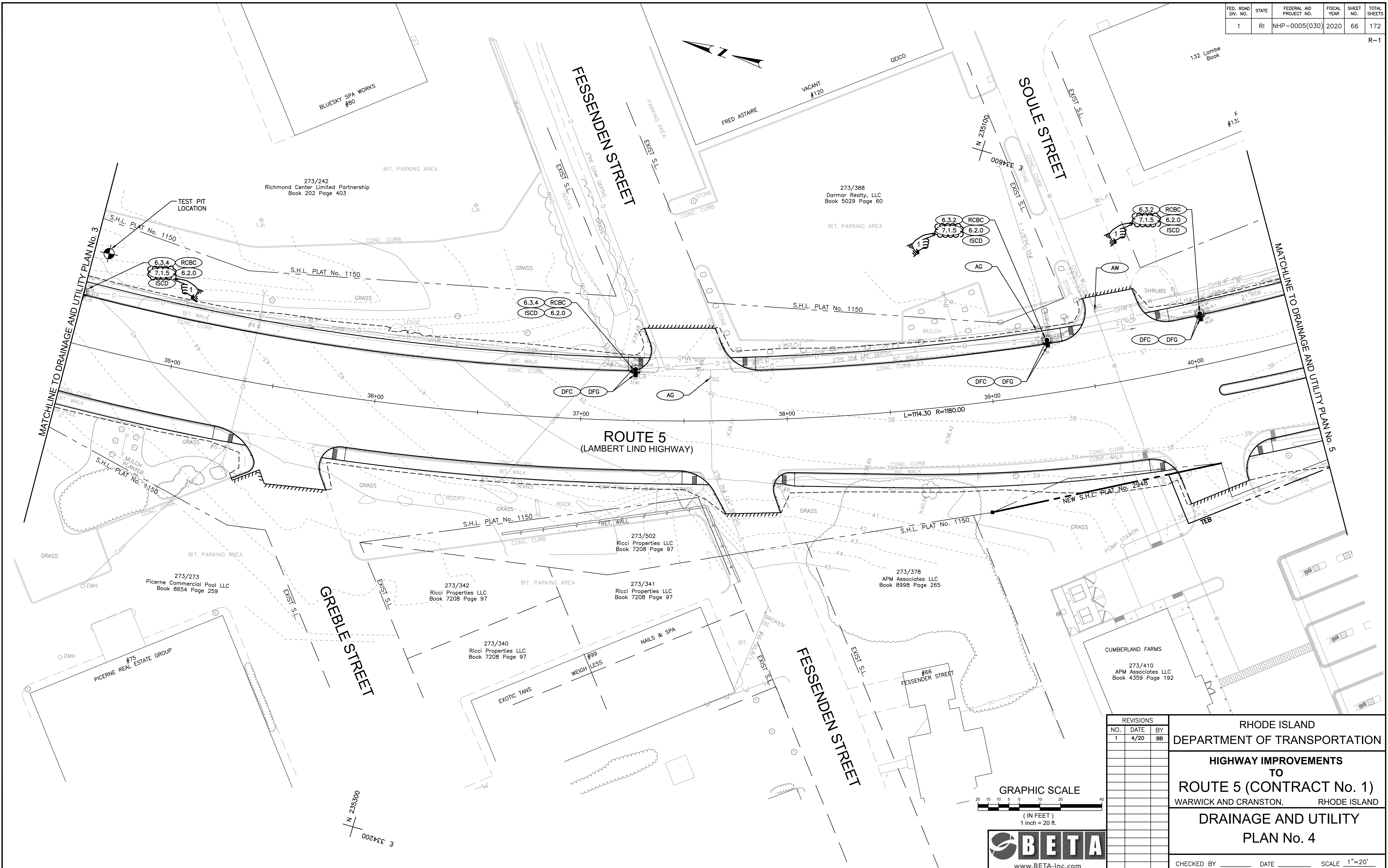
CHECKED BY _____ DATE _____ SCALE 1"=20'

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

BETA
www.BETA-Inc.com

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	NHP-0005(030)	2020	66	172

R-1



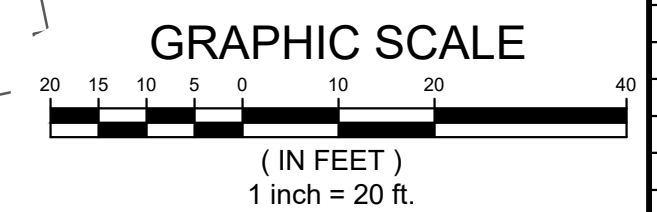
REVISIONS		
NO.	DATE	BY
1	4/20	BB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

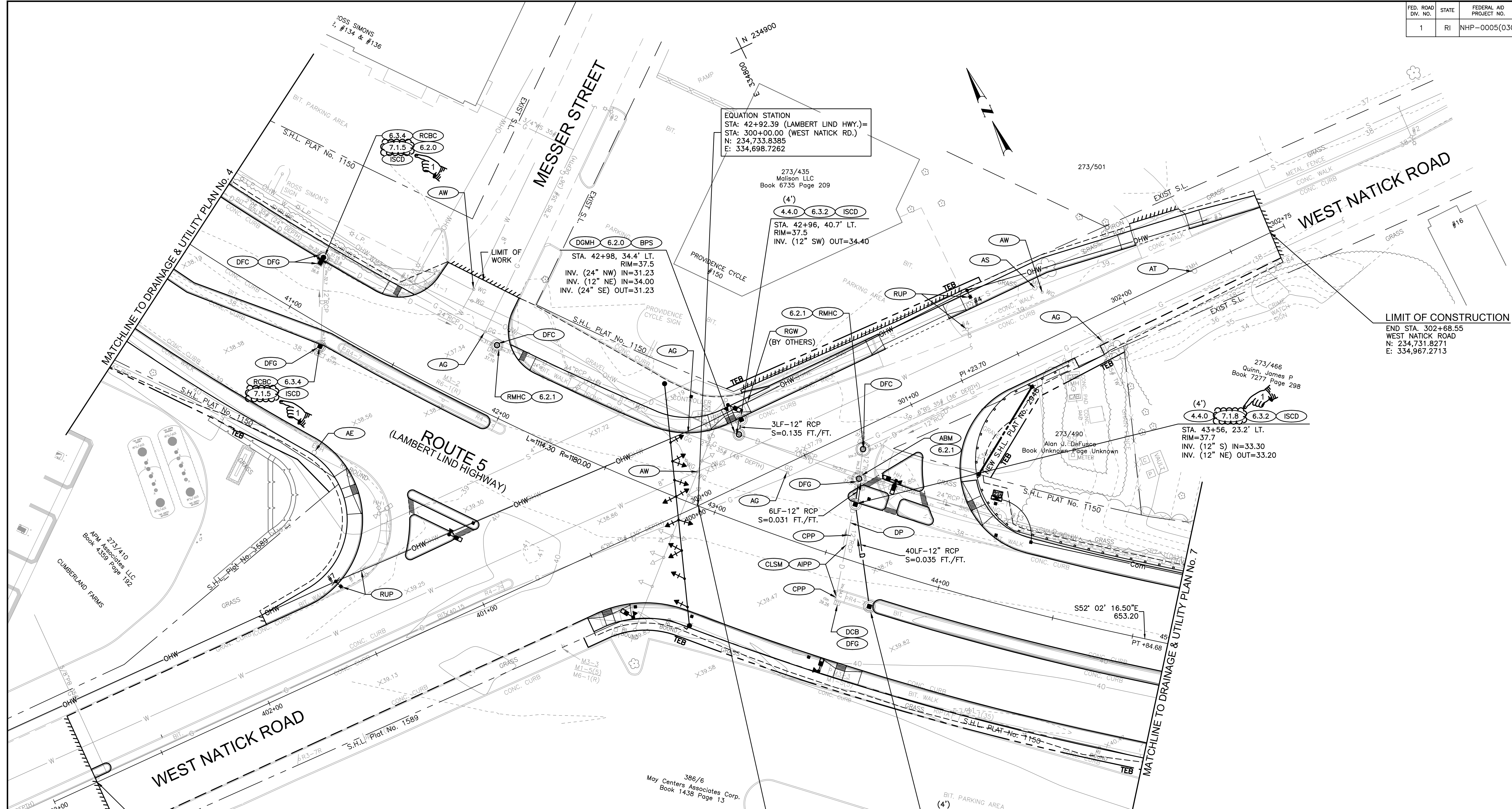
**HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)**
WARWICK AND CRANSTON, RHODE ISLAND

**DRAINAGE AND UTILITY
PLAN No. 4**

CHECKED BY _____ DATE _____ SCALE 1"=20'



FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	NHP-0005(030)	2020	67	172



EQUATION STATION
STA: 42+92.39 (LAMBERT LIND HWY.)=
STA: 300+00.00 (WEST NATICK RD.)
N: 234,733.8385
E: 334,698.7262

STA. 42+98, 34.4' LT.
RIM=37.5
INV. (24" NW) IN=31.23
INV. (12" NE) IN=34.00
INV. (24" SE) OUT=31.23

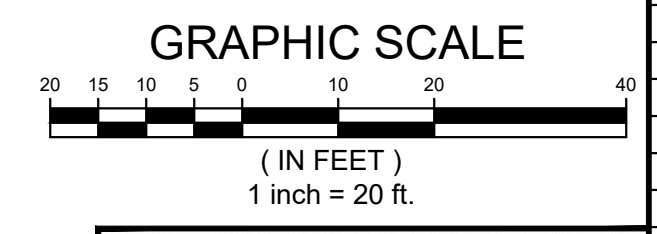
(4')
4.4.0 6.3.2 ISCD
STA. 42+96, 40.7' LT.
RIM=37.5
INV. (12" SW) OUT=34.40

LIMIT OF CONSTRUCTION
END STA. 302+68.55
WEST NATICK ROAD
N: 234,731.8271
E: 334,967.2713

LIMIT OF CONSTRUCTION
END STA. 402+80.10
WEST NATICK ROAD
N: 234,739.9201
E: 334,418.8189

EQUATION STATION
STA: 42+92.57 (LAMBERT LIND HWY.)=
STA: 400+00.00 (WEST NATICK RD.)
N: 234,733.7076
E: 334,698.8470

BIT. PARKING AREA
(4')
4.4.0 6.3.2 ISCD
STA. 43+74, 16.2' RT.
RIM=39.4
INV. (12" N) OUT=34.70



REVISIONS		
NO.	DATE	BY
1	4/20	BB

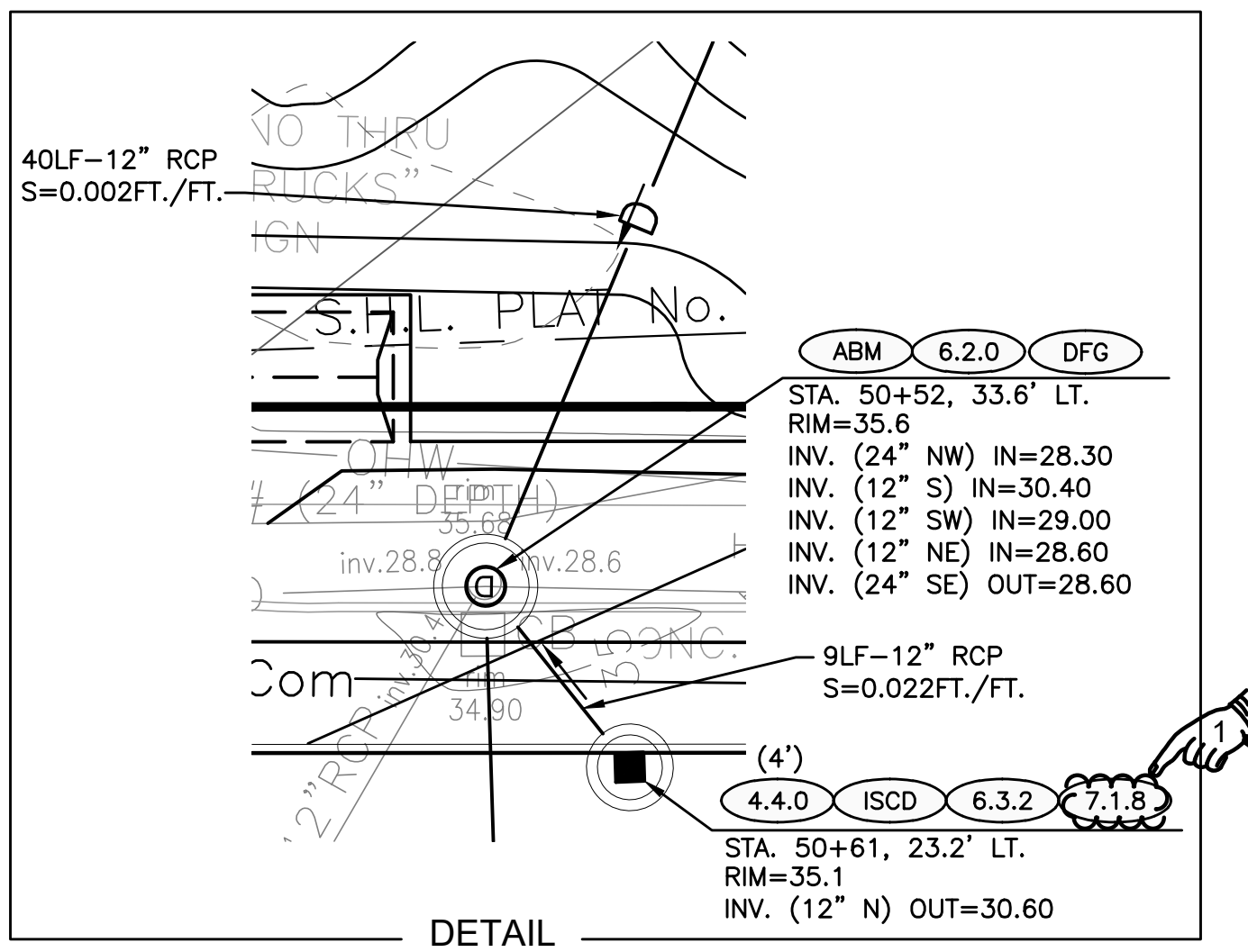
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
**HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)**
WARWICK AND CRANSTON, RHODE ISLAND
**DRAINAGE AND UTILITY
PLAN No. 5**

CHECKED BY _____ DATE _____ SCALE 1"=20'
0079B_V1_067_DRAINUTL005_ADD01



FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	NHP-0005(030)	2020	69	172

R-1



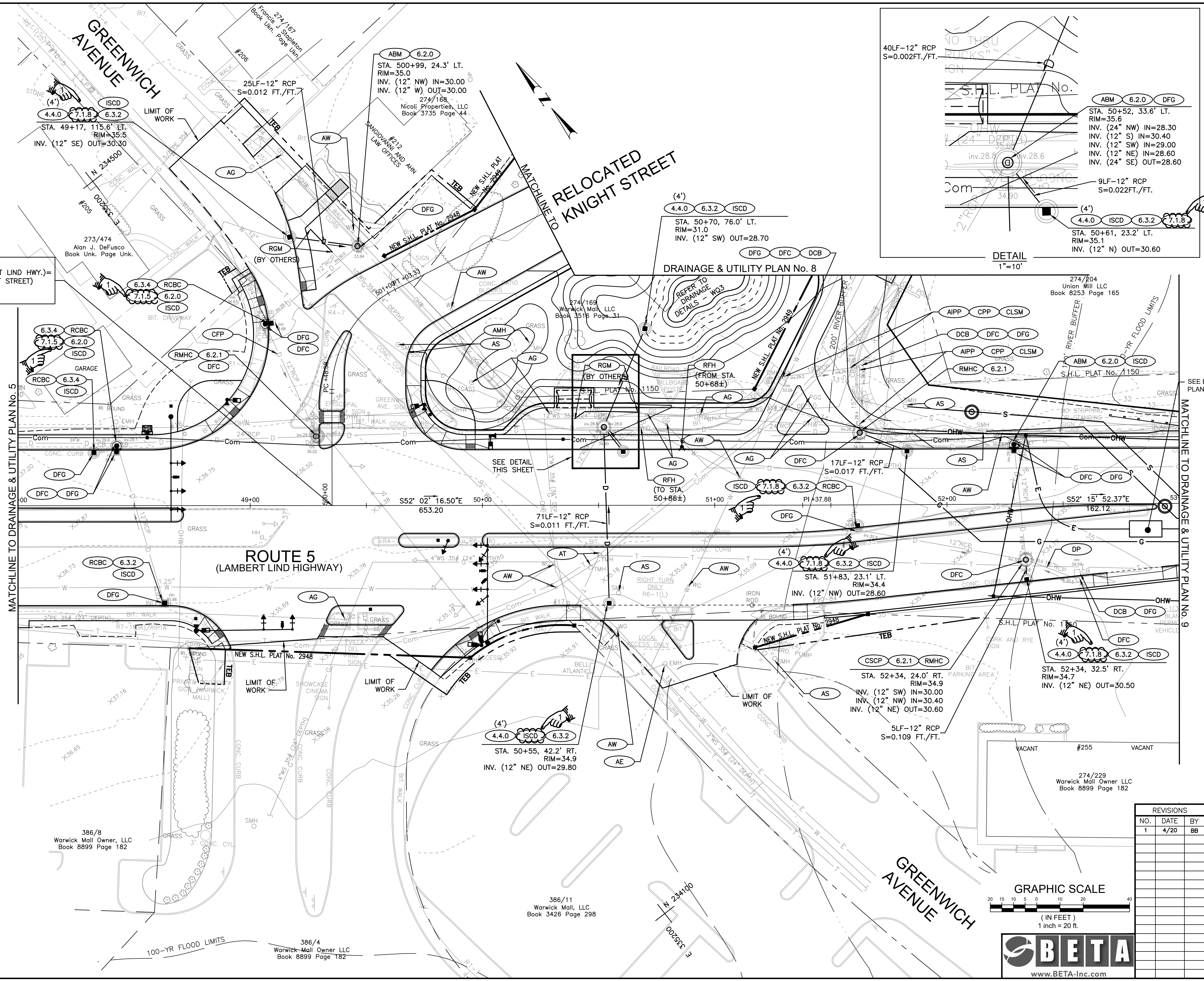
EQUATION STATION
STA: 49+35.25 (LAMBERT LIND HWY.)=
STA: 500+00.00 (KNIGHT STREET)
N: 234,326.5851
E: 335,195.2854

DRAINAGE & UTILITY PLAN No. 8

SEE BRIDGE UTILITY RELOCATION PLAN (SHEET 90)

MATCHLINE TO DRAINAGE & UTILITY PLAN No. 5

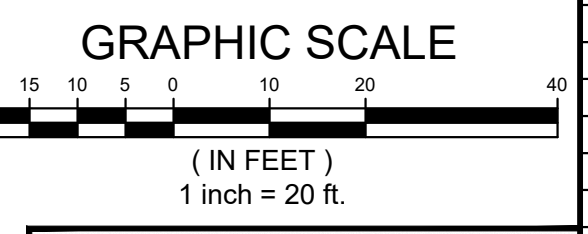
MATCHLINE TO DRAINAGE & UTILITY PLAN No. 9



386/8
Warwick Mall Owner, LLC
Book 8899 Page 182

386/11
Warwick Mall, LLC
Book 3426 Page 298

386/4
Warwick Mall Owner LLC
Book 8899 Page 182



REVISIONS

NO.	DATE	BY
1	4/20	BB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

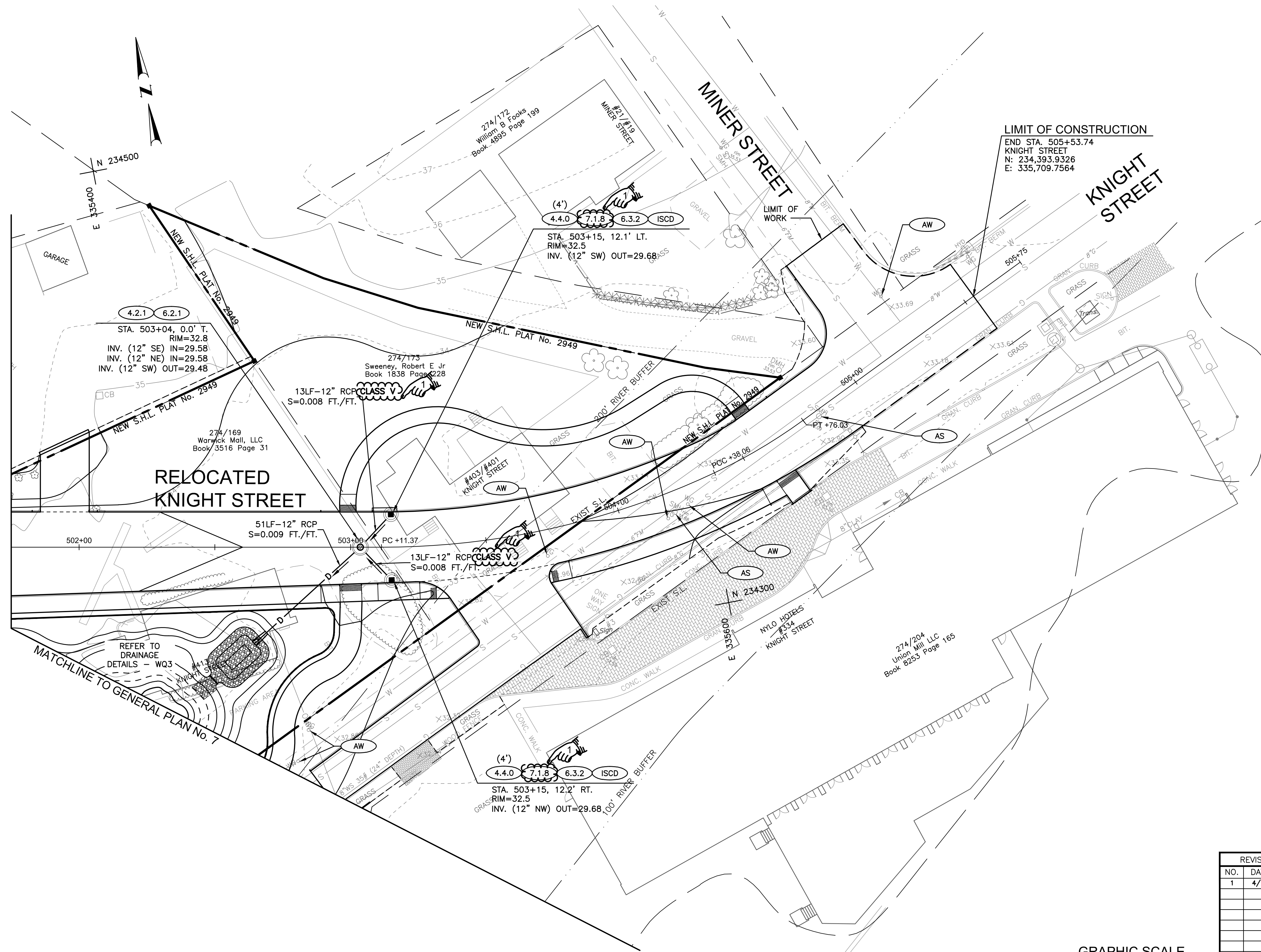
HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)
WARWICK AND CRANSTON, RHODE ISLAND

DRAINAGE AND UTILITY
PLAN No. 7

CHECKED BY _____ DATE _____ SCALE 1"=20'

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	NHP-0005(030)	2020	70	172

R-1



LIMIT OF CONSTRUCTION
 END STA. 505+53.74
 KNIGHT STREET
 N: 234,393.9326
 E: 335,709.7564

**RELOCATED
 KNIGHT STREET**

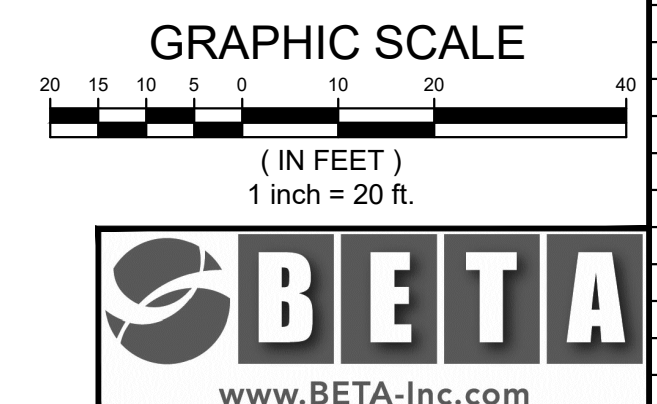
REVISIONS		
NO.	DATE	BY
1	4/20	BB

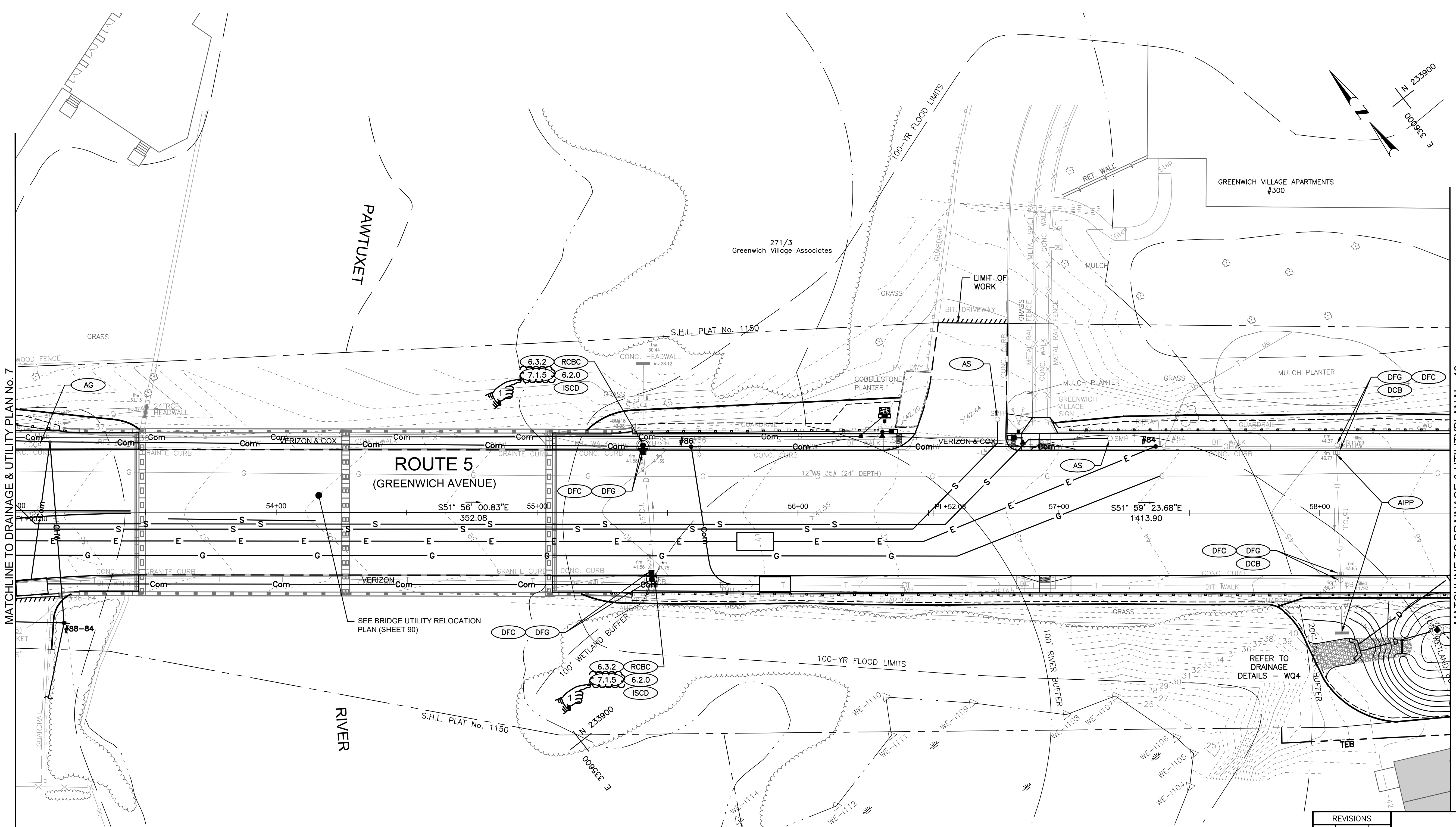
RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

**HIGHWAY IMPROVEMENTS
 TO
 ROUTE 5 (CONTRACT No. 1)**
 WARWICK AND CRANSTON, RHODE ISLAND

**DRAINAGE AND UTILITY
 PLAN No. 8**

CHECKED BY _____ DATE _____ SCALE 1"=20'





MATCHLINE TO DRAINAGE & UTILITY PLAN No. 7

MATCHLINE TO DRAINAGE & UTILITY PLAN No. 10

REVISIONS		
NO.	DATE	BY
1	4/20	BB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

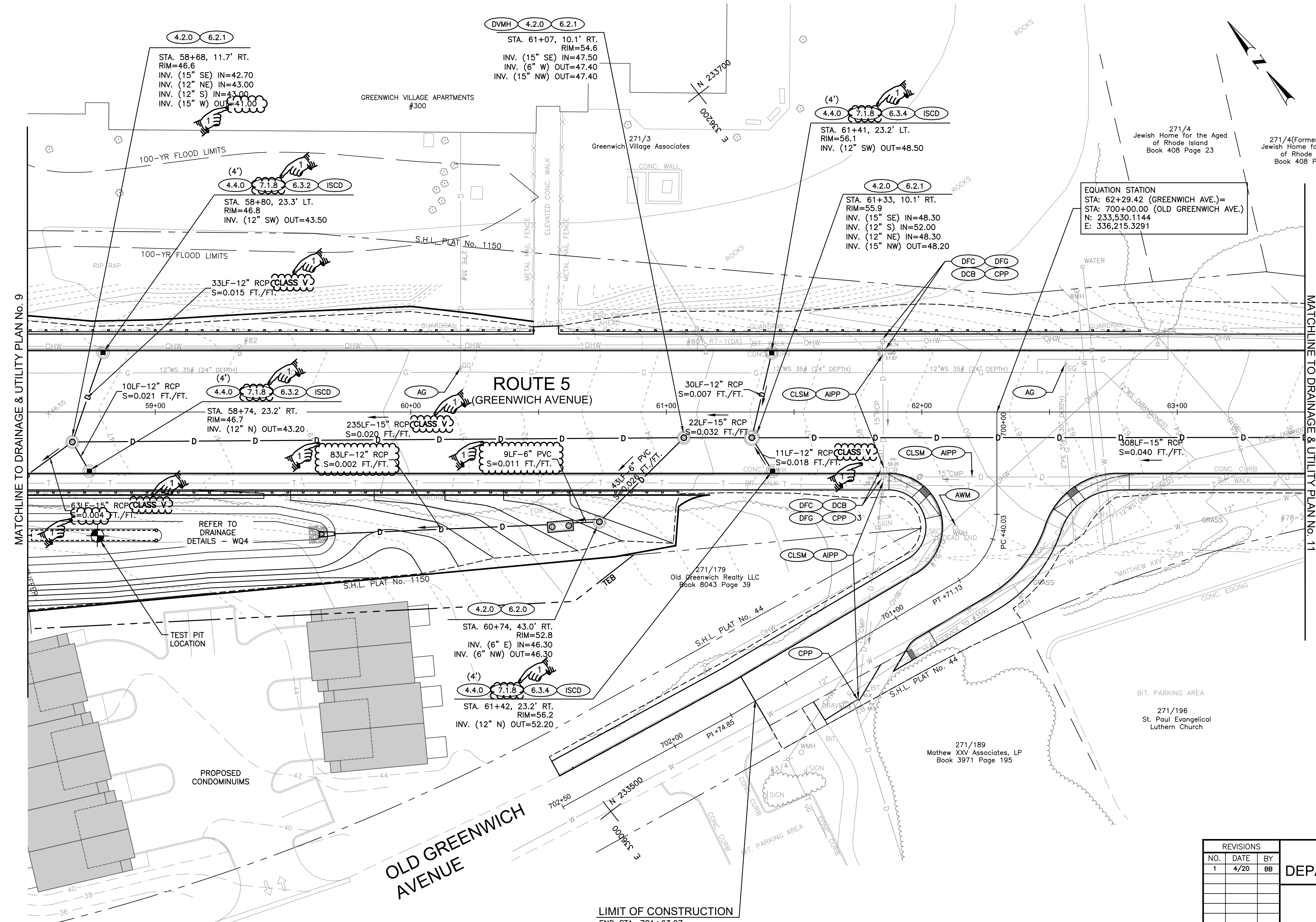
**HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)**
WARWICK AND CRANSTON, RHODE ISLAND

**DRAINAGE AND UTILITY
PLAN No. 9**

CHECKED BY _____ DATE _____ SCALE 1"=20'

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

BETA
www.BETA-Inc.com

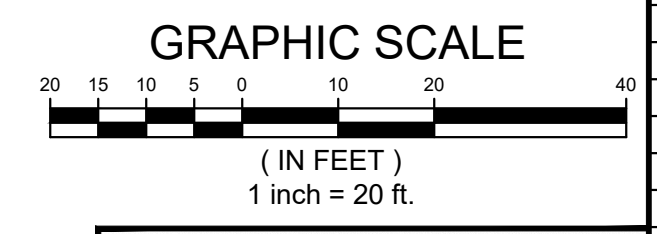


MATCHLINE TO DRAINAGE & UTILITY PLAN No. 9

MATCHLINE TO DRAINAGE & UTILITY PLAN No. 11

EQUATION STATION
 STA: 62+29.42 (GREENWICH AVE.)=
 STA: 700+00.00 (OLD GREENWICH AVE.)
 N: 233,530.1144
 E: 336,215.3291

LIMIT OF CONSTRUCTION
 END STA. 701+63.97
 OLD GREENWICH AVENUE
 N: 233,499.2587
 E: 336,071.1081



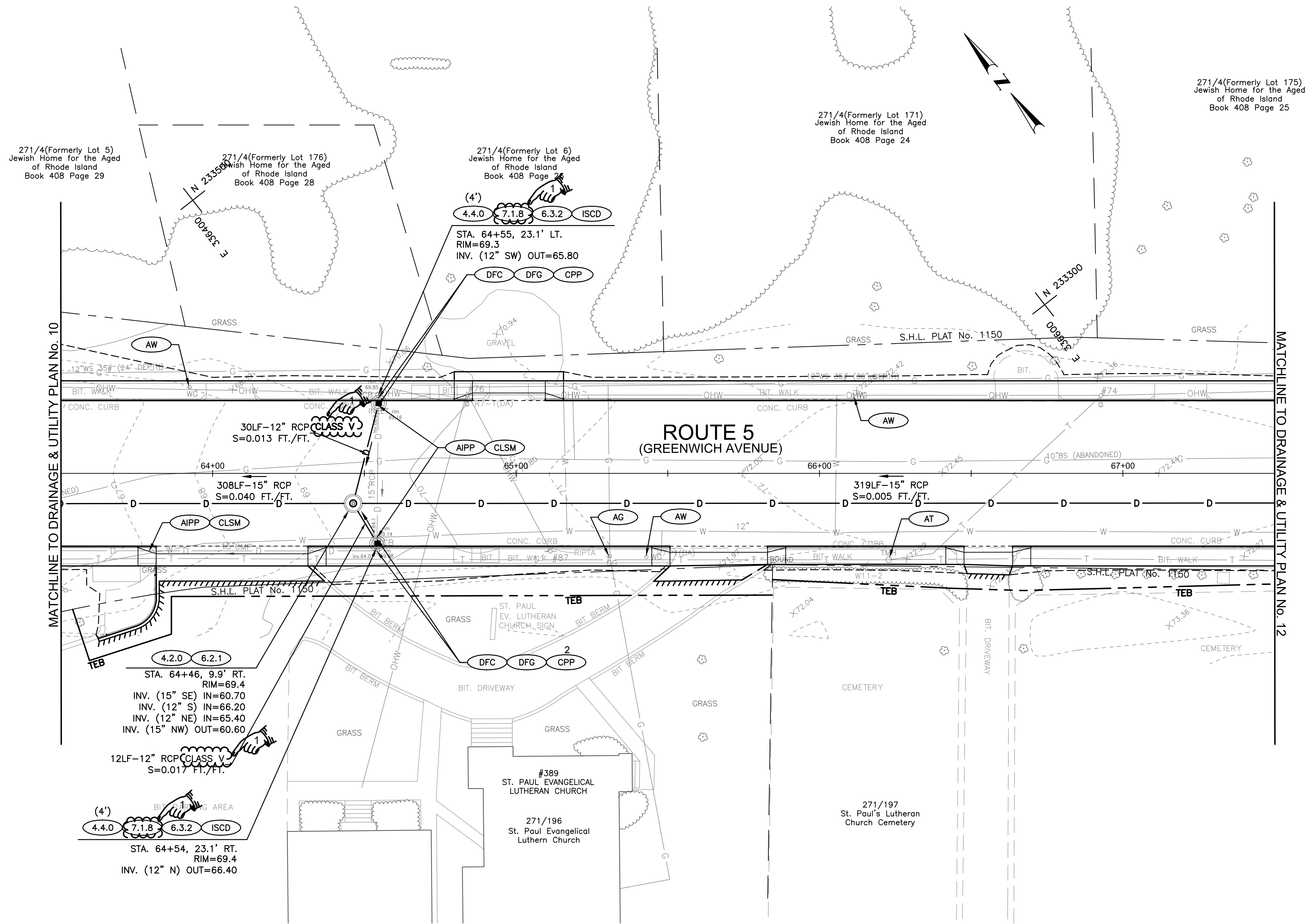
REVISIONS		
NO.	DATE	BY
1	4/20	BB

RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

**HIGHWAY IMPROVEMENTS
 TO
 ROUTE 5 (CONTRACT No. 1)**
 WARWICK AND CRANSTON, RHODE ISLAND

**DRAINAGE AND UTILITY
 PLAN No. 10**

CHECKED BY _____ DATE _____ SCALE 1"=20'



MATCHLINE TO DRAINAGE & UTILITY PLAN No. 10

MATCHLINE TO DRAINAGE & UTILITY PLAN No. 12

271/4(Formerly Lot 175)
Jewish Home for the Aged
of Rhode Island
Book 408 Page 25

271/4(Formerly Lot 171)
Jewish Home for the Aged
of Rhode Island
Book 408 Page 24

271/4(Formerly Lot 6)
Jewish Home for the Aged
of Rhode Island
Book 408 Page 26

271/4(Formerly Lot 176)
Jewish Home for the Aged
of Rhode Island
Book 408 Page 28

271/4(Formerly Lot 5)
Jewish Home for the Aged
of Rhode Island
Book 408 Page 29

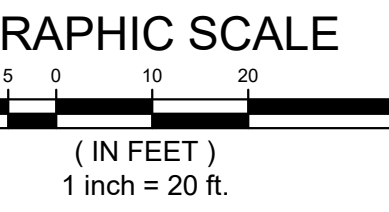
**ROUTE 5
(GREENWICH AVENUE)**

ST. PAUL
EV. LUTHERAN
CHURCH SIGN

#389
ST. PAUL EVANGELICAL
LUTHERAN CHURCH

271/196
St. Paul Evangelical
Luthern Church

271/197
St. Paul's Lutheran
Church Cemetery



REVISIONS		
NO.	DATE	BY
1	4/20	BB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

**HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)**
WARWICK AND CRANSTON, RHODE ISLAND

**DRAINAGE AND UTILITY
PLAN No. 11**

CHECKED BY _____ DATE _____ SCALE 1"=20'

271/4 (Formerly Lot 175)
Jewish Home for the Aged
of Rhode Island
Book 408 Page 25

LIMIT OF CONSTRUCTION
END STA. 800+87.25
SHALOM DRIVE
N: 233,188.6298
E: 336,793.1675

271/4 (Formerly Lot 172)
Jewish Home for the Aged
of Rhode Island
Book 408 Page 27

STA. 67+79, 23.2' LT.
RIM=71.6
INV. (12" SW) OUT=67.60

STA. 67+79, 23.1' RT.
RIM=71.7
INV. (12" N) OUT=68.70

STA. 67+71, 9.8' RT.
RIM=72.0
INV. (12" SE) IN=62.40
INV. (12" S) IN=68.50
INV. (12" NE) IN=67.20
INV. (15" NW) OUT=62.30

SHALOM DRIVE

271/195
Wave Federal Credit Union
Book 5711 Page 118

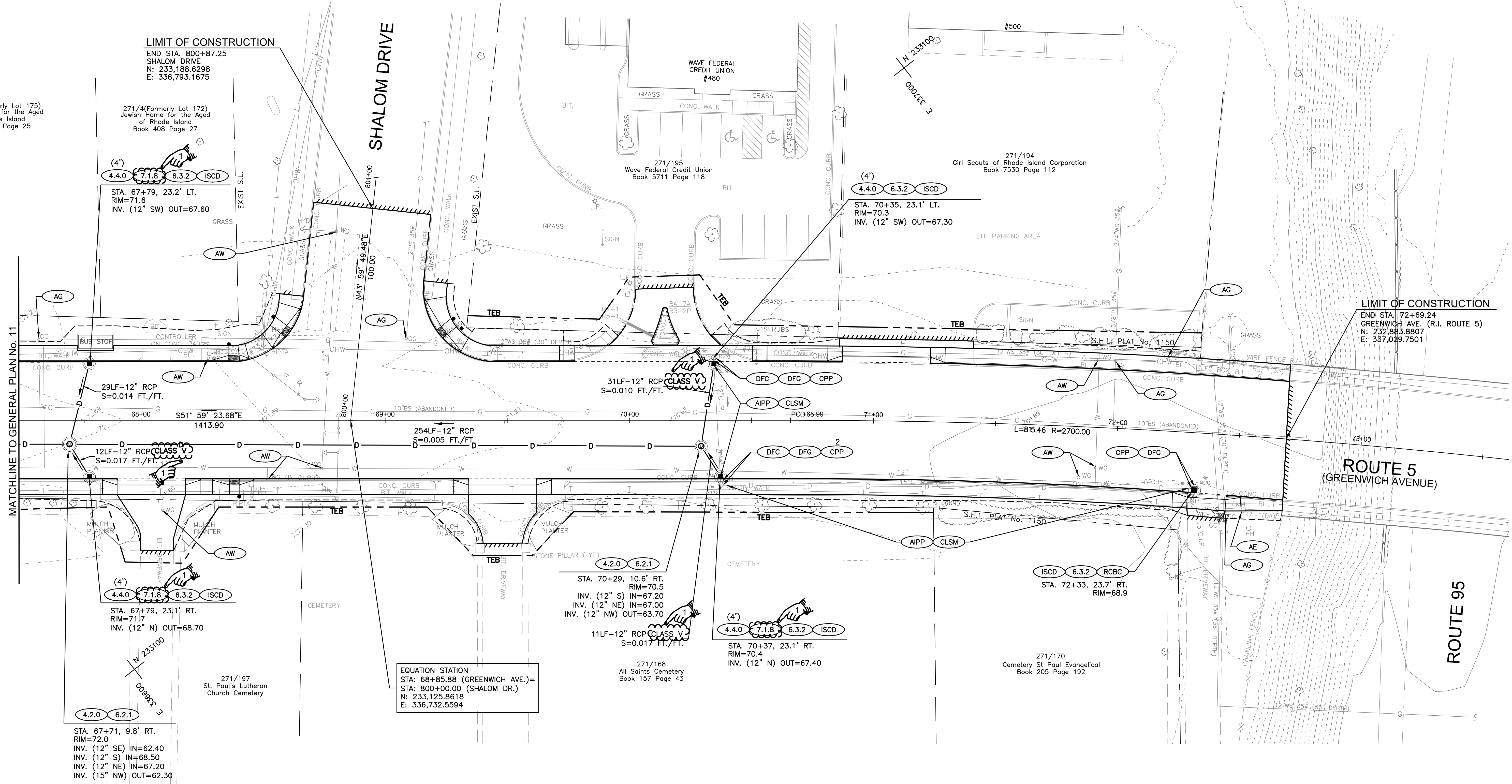
271/194
Girl Scouts of Rhode Island Corporation
Book 7530 Page 112

LIMIT OF CONSTRUCTION
END STA. 72+69.24
GREENWICH AVE. (R.I. ROUTE 5)
N: 232,883.8807
E: 337,029.7501

**ROUTE 5
(GREENWICH AVENUE)**

ROUTE 95

MATCHLINE TO GENERAL PLAN No. 11



EQUATION STATION
STA: 68+85.88 (GREENWICH AVE.)=
STA: 800+00.00 (SHALOM DR.)
N: 233,125.8618
E: 336,732.5594

STA. 70+29, 10.6' RT.
RIM=70.5
INV. (12" S) IN=67.20
INV. (12" NE) IN=67.00
INV. (12" NW) OUT=63.70

STA. 70+37, 23.1' RT.
RIM=70.4
INV. (12" N) OUT=67.40

STA. 72+33, 23.7' RT.
RIM=68.9

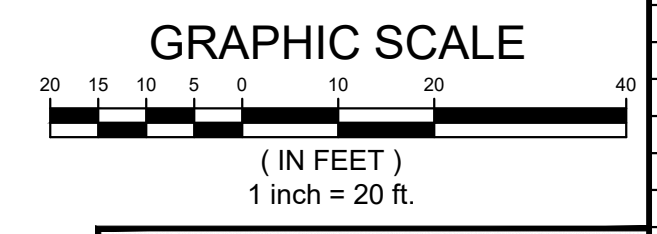
REVISIONS		
NO.	DATE	BY
1	4/20	BB

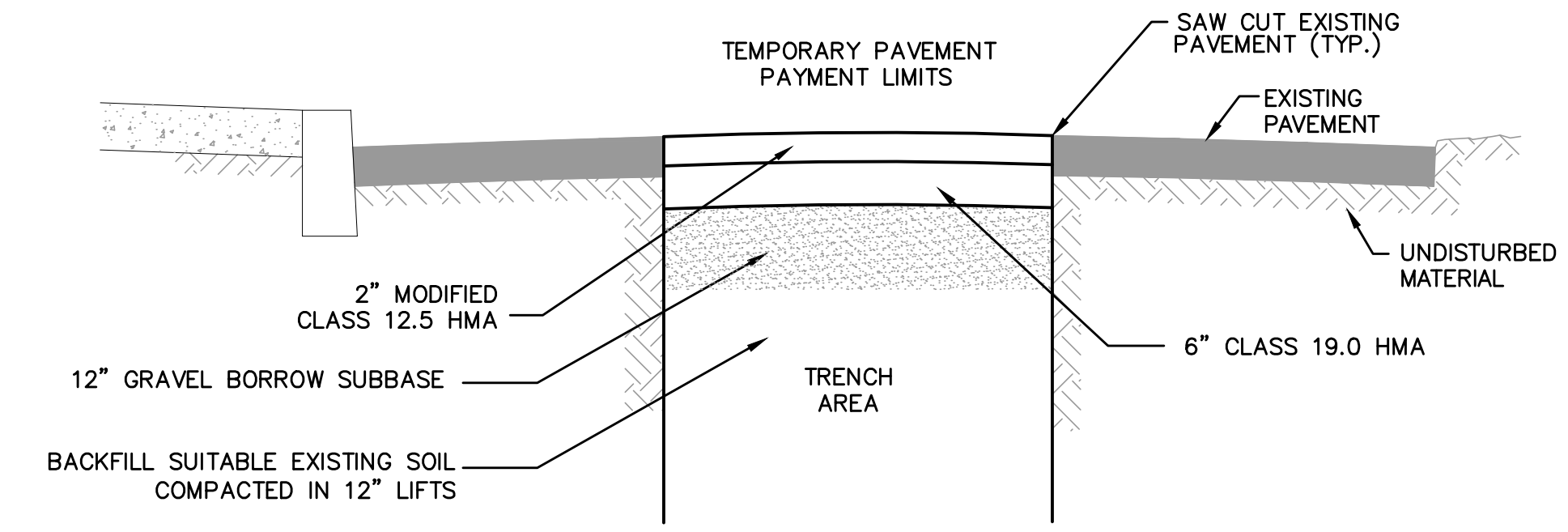
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

**HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)**
WARWICK AND CRANSTON, RHODE ISLAND

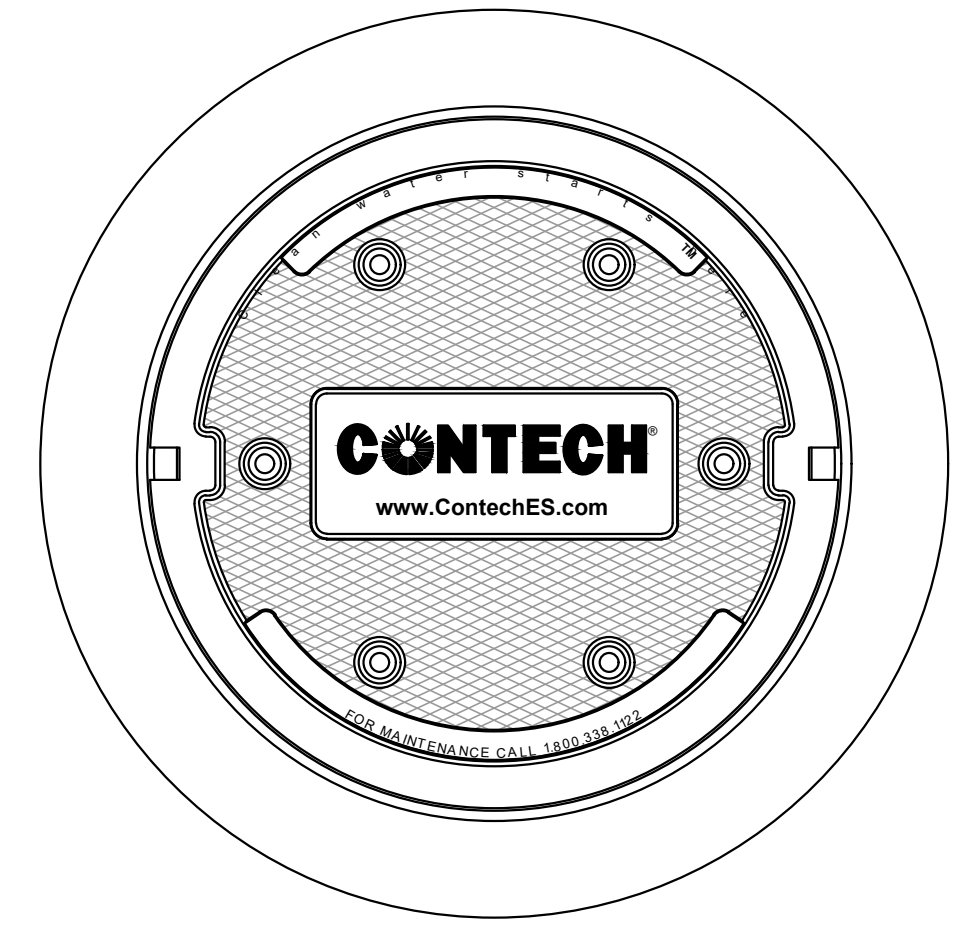
**DRAINAGE AND UTILITY
PLAN No. 12**

CHECKED BY _____ DATE _____ SCALE 1"=20'





TEMPORARY PAVEMENT
NOT TO SCALE



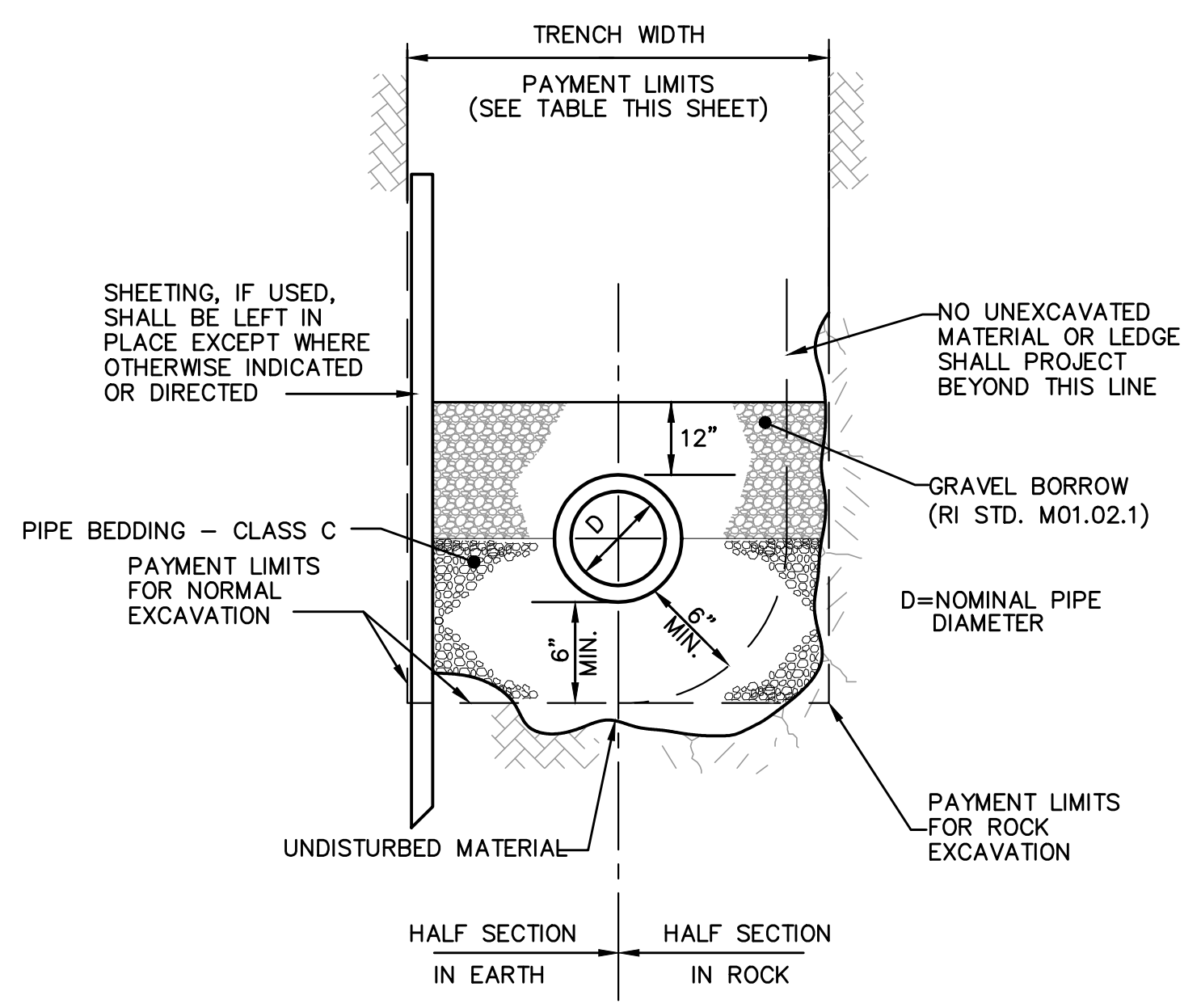
FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

VORTECHS 1000 DESIGN NOTES

VORTECHS 1000 RATED TREATMENT CAPACITY IS 1.6 CFS, OR PER LOCAL REGULATIONS. IF THE SITE CONDITIONS EXCEED RATED TREATMENT CAPACITY, AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

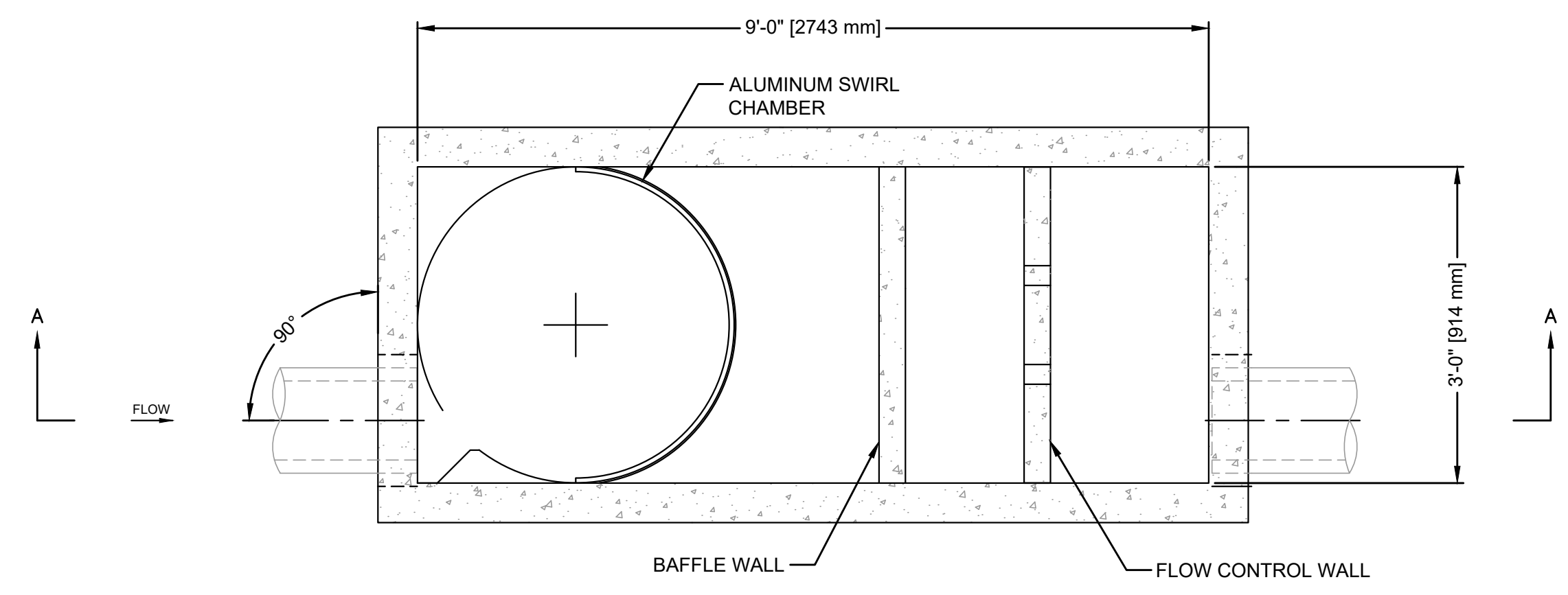
THE STANDARD INLET/OUTLET CONFIGURATION IS SHOWN. FOR OTHER CONFIGURATION OPTIONS, PLEASE CONTACT YOUR CONTECH REPRESENTATIVE. www.ContechES.com

SITE SPECIFIC DATA REQUIREMENTS			
STRUCTURE ID	-		
WATER QUALITY FLOW RATE (CFS)	-		
PEAK FLOW RATE (CFS)	-		
RETURN PERIOD OF PEAK FLOW (YRS)	-		
PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	-	-	-
INLET PIPE 2	-	-	-
OUTLET PIPE	-	-	-
RIM ELEVATION	-		
ANTI-FLOTATION BALLAST	WIDTH	HEIGHT	
-	-	-	
NOTES/SPECIAL REQUIREMENTS:			
* PER ENGINEER OF RECORD			

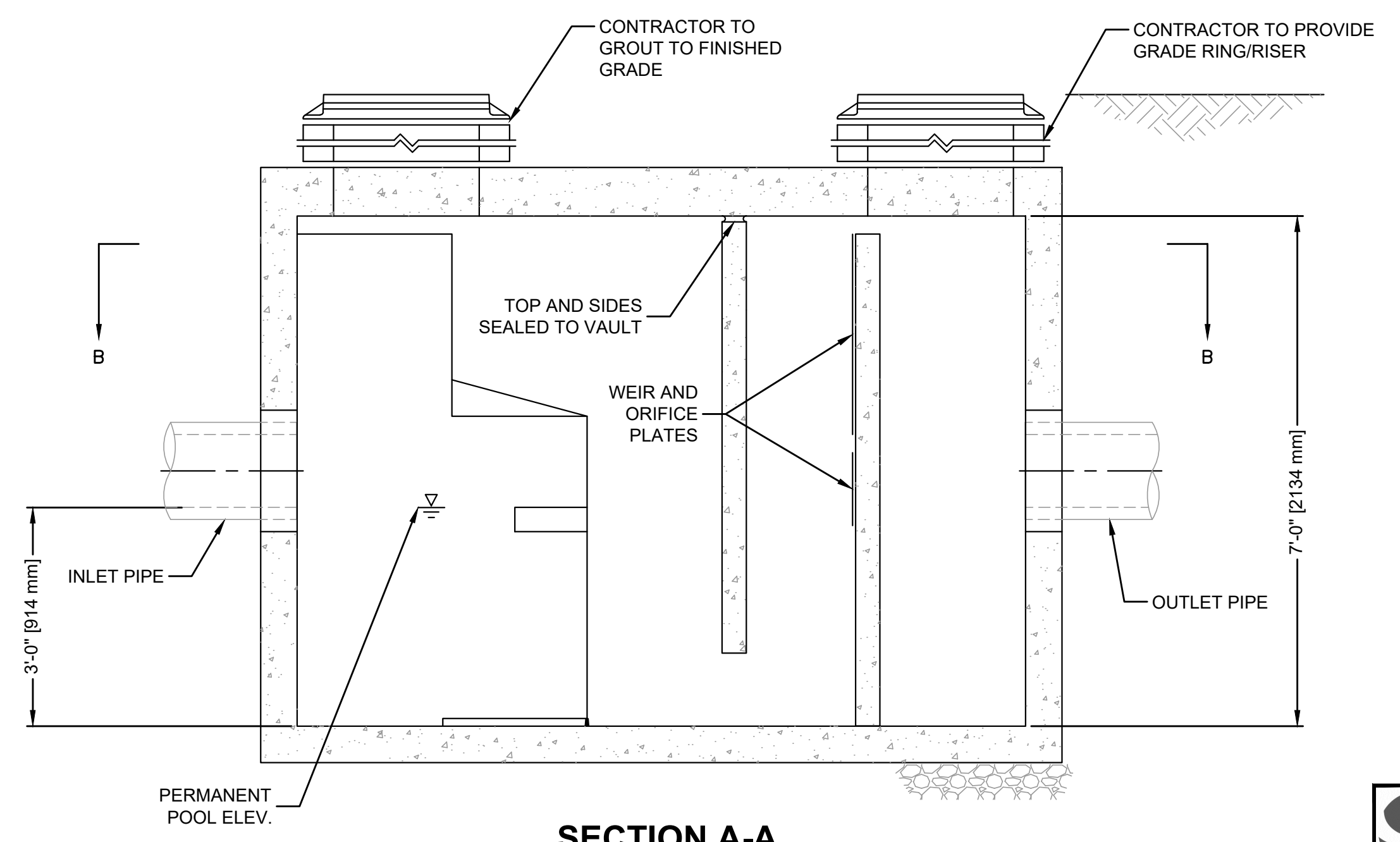


DRAIN TRENCH SECTION

MAXIMUM PAYMENT LIMITS			
DIAMETER OF PIPE D IN INCHES	TRENCH WIDTH IN FEET	TEMPORARY PAVEMENT IN FEET	
		TRENCH DEPTH < OR = 10'	> 10'
12 AND SMALLER	6.00	7.00	8.00
15	6.25	7.25	8.25
18	6.50	7.50	8.50
21	6.75	7.75	8.75
24	7.00	8.00	9.00
27	7.25	8.25	9.25
30	7.50	8.50	9.50
36	8.00	9.00	10.00
42	8.50	9.50	10.50
48	9.00	10.00	11.00
54	9.50	10.50	11.50



SECTION B-B



SECTION A-A

- GENERAL NOTES**
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
 - DIMENSIONS MARKED WITH () ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
 - FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH REPRESENTATIVE. www.ContechES.com
 - VORTECHS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
 - STRUCTURE SHALL MEET AASHTO HS20 AND CASTINGS SHALL MEET AASHTO M306 LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
 - INLET PIPE(S) MUST BE PERPENDICULAR TO THE VAULT AND AT THE CORNER TO INTRODUCE THE FLOW TANGENTIALLY TO THE SWIRL CHAMBER. DUAL INLETS NOT TO HAVE OPPOSING TANGENTIAL FLOW DIRECTIONS.
 - OUTLET PIPE(S) MUST BE DOWN STREAM OF THE FLOW CONTROL BAFFLE AND MAY BE LOCATED ON THE SIDE OR END OF THE VAULT. THE FLOW CONTROL WALL MAY BE TURNED TO ACCOMMODATE OUTLET PIPE KNOCKOUTS ON THE SIDE OF THE VAULT.

- INSTALLATION NOTES**
- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
 - CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE VORTECHS STRUCTURE (LIFTING CLUTCHES PROVIDED).
 - CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
 - CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
 - CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

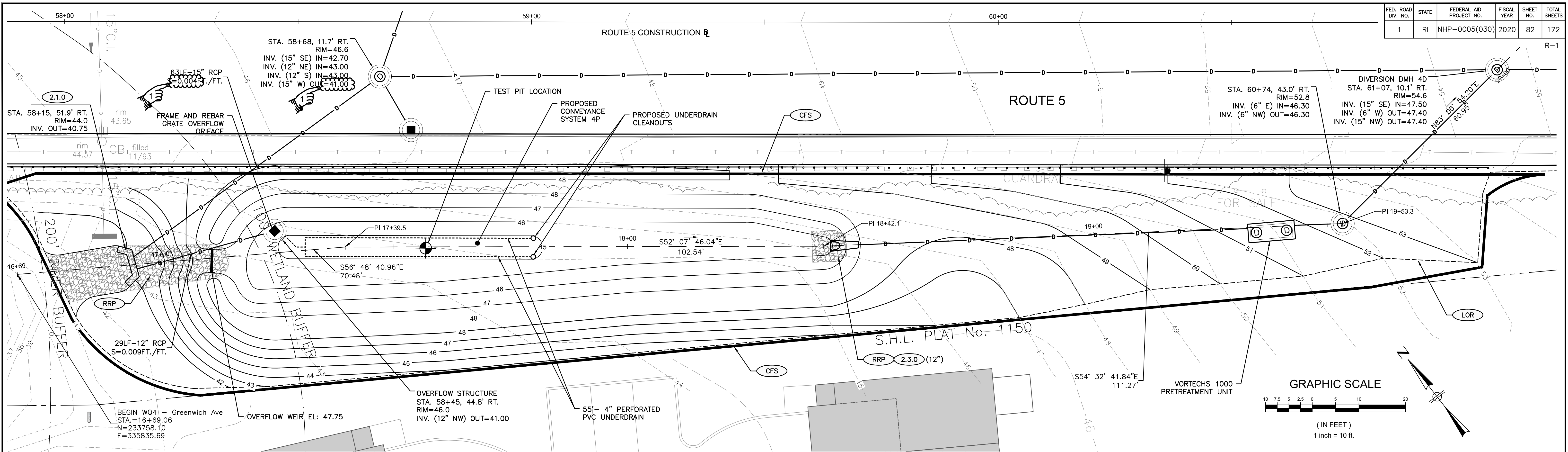
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NO.	DATE	BY
1	4/20	BB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)
WARWICK AND CRANSTON, RHODE ISLAND

DRAINAGE DETAILS - 4

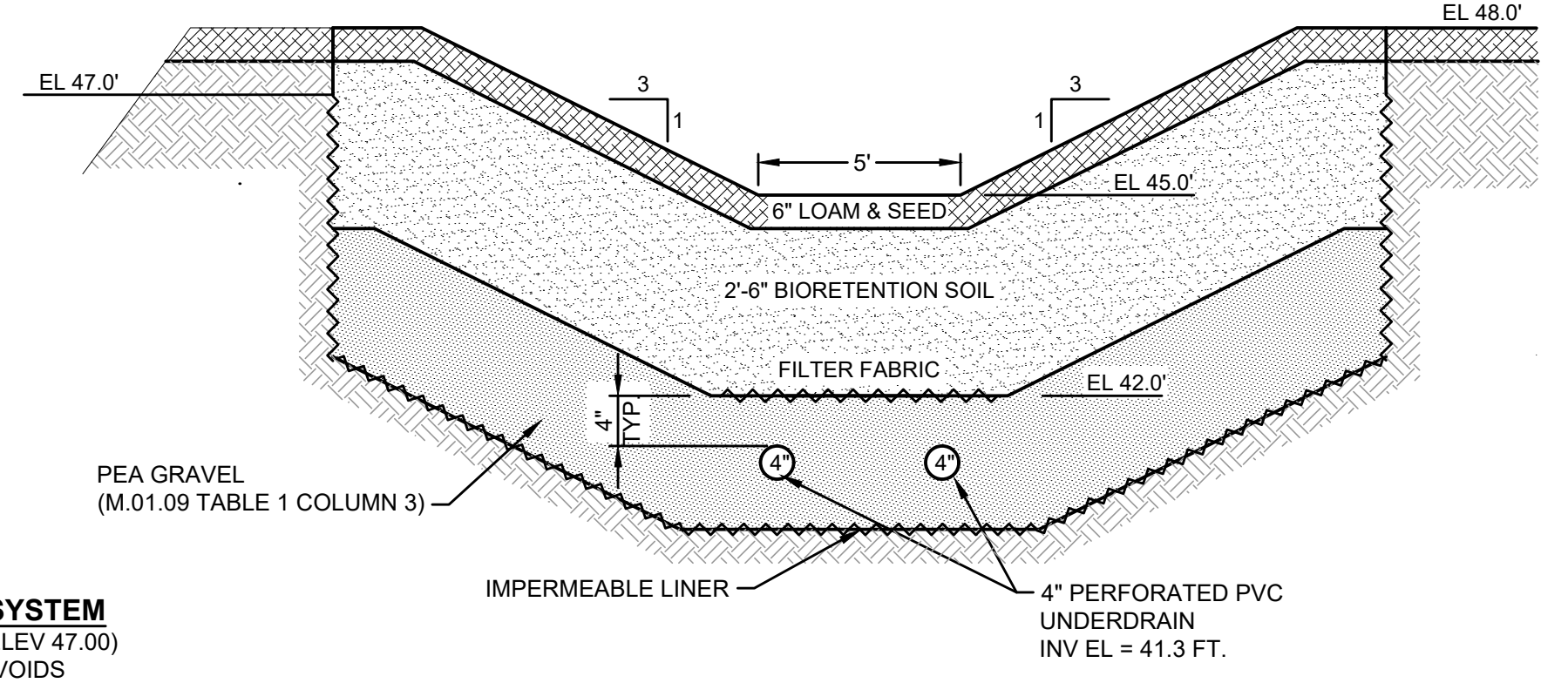




NOTES
 1. ALL WORK ASSOCIATED WITH WATER QUALITY BASIN 4 INCLUDING ASSOCIATED LANDSCAPING SHALL BE INSTALLED AND COMPLETED BY OCTOBER 15, 2020.

PLAN: WATER QUALITY 4 - CONVEYANCE SYSTEM

**WQ4 - GREENWICH AVE
 STA 16+50 TO STA 20+15.00**



**CONVEYANCE BASIN
 NOT TO SCALE**

- NOTES**
- BIORETENTION SOIL SHALL BE FREE OF STONES, ROCKS COBBLES, BRUSH, STUMPS, ROOTS AND OTHER MATERIALS LARGER THAN TWO INCHES. THE SOIL SHALL HAVE A COMPOSITION ON A VOLUME BASIS OF 85-88% SAND (ASTM C-33), 8-12% (NO MORE THAN 2% CLAY) SOIL FINES (PASS NO. 200 SIEVE), AND 3-5% ORGANIC MATTER.
 - IF BIORETENTION SOILS DEPTH IS LESS THAN 4 FEET, A WELL-AGED (3 MONTHS MINIMUM), WELL AERATED LEAF COMPOST SHALL BE ADDED TO THE MIXTURE. THE LEAF COMPOST SHALL BE AT LEAST 20% BY VOLUME.
 - FILTER FABRIC SHALL HAVE CLASS "C" APPARENT OPENING SIZE (ASTM-D-4751), GRAB TENSILE STRENGTH (ASTM-D-4632), BURST STRENGTH (ASTM-D-4833).
 - UNDERDRAIN PIPING SHALL MEET RIDOT SPEC SECT 703, AASHTO M-43.

WATER QUALITY UNIT 4 CONVEYANCE SYSTEM
 AVAILABLE STORAGE VOLUME: 2,580 CF (BELOW ELEV 47.00)
 1,299 CF IN MEDIA VOIDS

PRETREATMENT VOLUME REQ'D:
 614 CF

PRETREATMENT VOLUME PROVIDED:
 2,932 CF VORTECHS - 2,932 CF

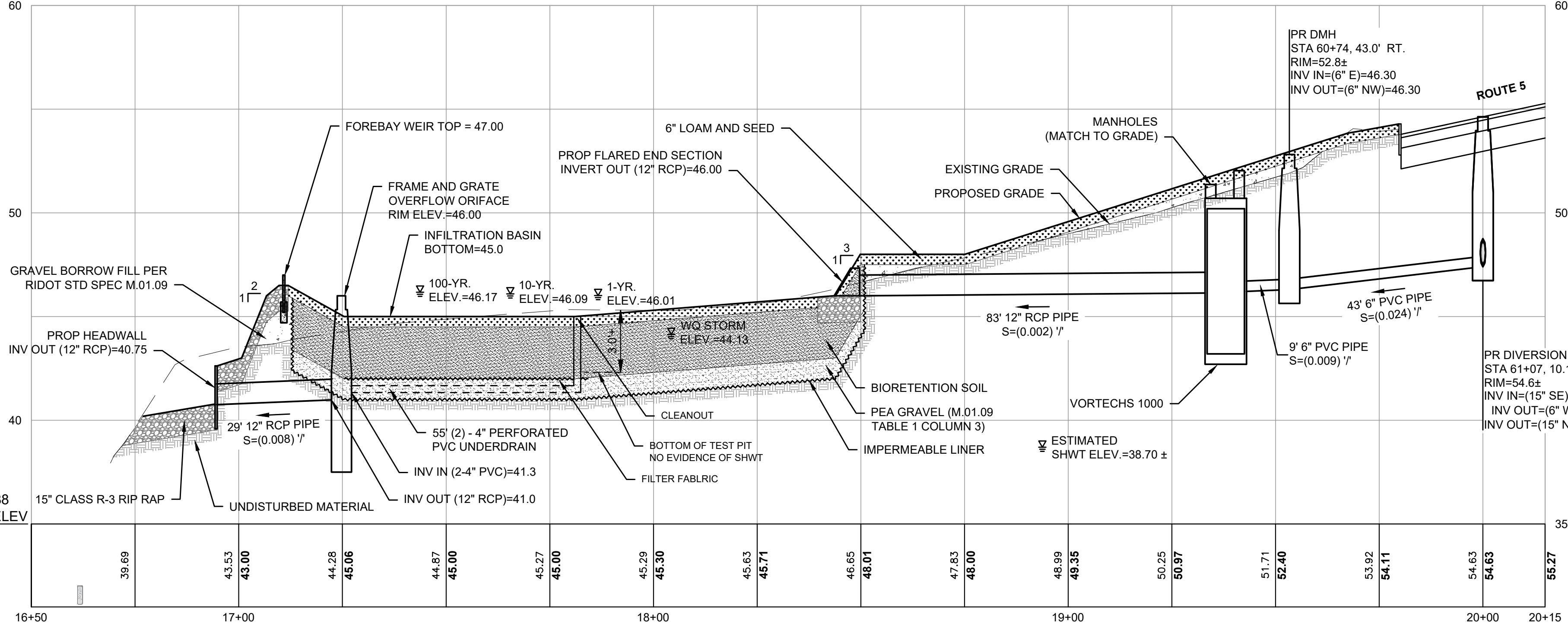
WQ STORAGE AVAILABLE IN BMP:
 5,322 CF BASIN

WQV. PROVIDED: 2,932 CF WQV GENERATED BY 1.2" RAINFALL
 2,932 CF FILTRATION INTO UNDERDRAIN

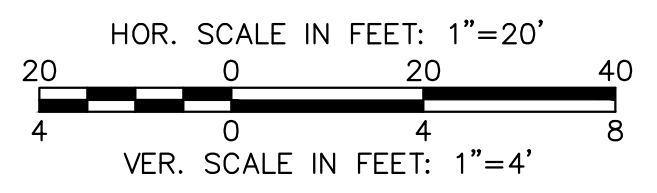
PEAK INFLOW RATES:
 1-YEAR: 0.83 CFS
 10-YEAR: 1.00 CFS
 100-YEAR: 2.17 CFS

PEAK OUTFLOW RATES (VIA 12" RCP OVERFLOW PIPE):
 1-YEAR: 0.29 CFS
 10-YEAR: 0.95 CFS
 100-YEAR: 2.12 CFS

- NOTES**
 1. CONTRACTOR SHALL AVOID OVER COMPACTION OF SOILS WITH CONSTRUCTION VEHICLES WITHIN INFILTRATION AREAS.



PROFILE: WATER QUALITY 4



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1	4/20	BB

**RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION**

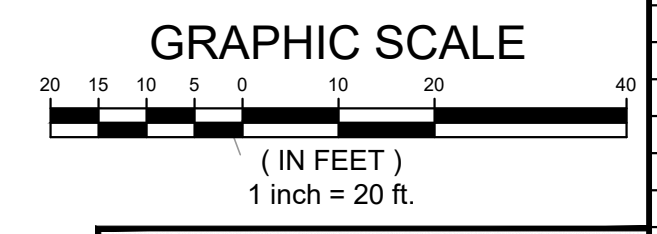
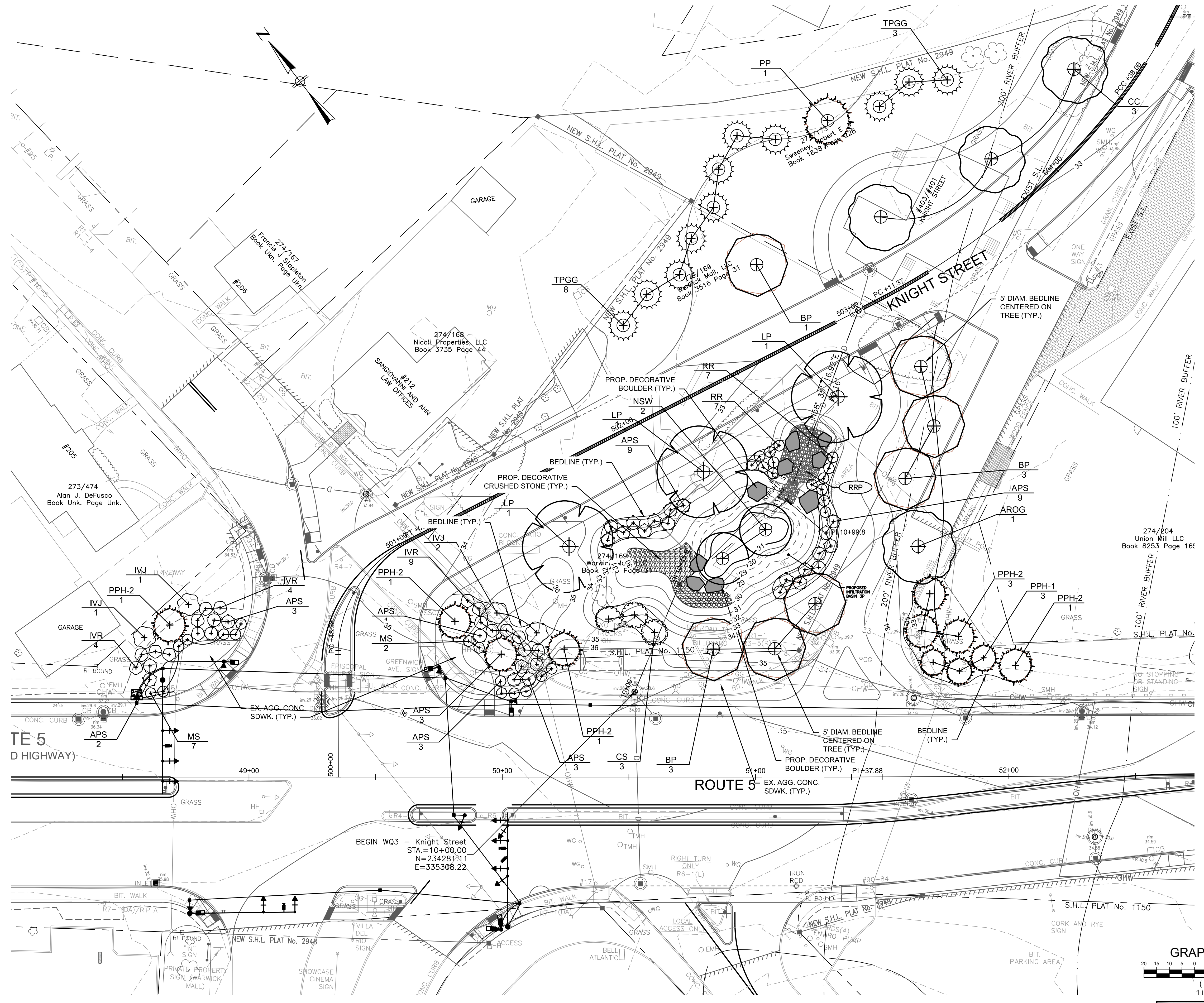
**HIGHWAY IMPROVEMENTS
 TO
 ROUTE 5 (CONTRACT No. 1)
 WARWICK AND CRANSTON, RHODE ISLAND**

DRAINAGE DETAILS - WQ 4

CHECKED BY _____ DATE _____ SCALE AS SHOWN

PLANT LIST - THIS SHEET ONLY

Trees				
Key	Botanical Name Common Name	Qty.	Size	Notes
AROG	<i>Acer rubrum</i> 'October Glory' October Glory Maple	1	2"-2.5" Cal.	B&B
BP	<i>Betula populifolia</i> 'Whitespire' Whitespire Birch	7	2"-2.5" cal.	B&B
CC	<i>Cercis canadensis</i> Eastern Redbud	3	2"-2.5" Cal.	B&B
LP	<i>Platanus x acerifolia</i> London Plantree	3	3"-3.5" cal.	B&B
NSW	<i>Nyssa sylvatica</i> 'Wildfire' Wildfire Tupelo	2	2.5"-3" Cal	B&B
PP	<i>Picea pungens</i> Colorado Blue Spruce	1	6'-7'	B&B
PPH-1	<i>Picea pungens</i> 'Hoopsii' Hoopsii Blue Spruce	3	5'-6"	B&B
PPH-2	<i>Picea pungens</i> 'Hoopsii' Hoopsii Blue Spruce	8	7'-8"	B&B
TPGG	<i>Thuja plicata</i> 'Green Giant' Green Giant Arborvitae	1	6'-7'	B&B
SHRUBS				
APS	<i>Azalea viscosum</i> 'Pink & Sweet' Pink & Sweet Azalea	27	18"-24"	Cont.
CS	<i>Cornus stolonifera</i> 'Farrow' Arctic Fire red Twig Dogwood	3	3'-4"	B&B
IVJ	<i>Ilex verticillata</i> 'Jim Dandy' Jim Dandy Winterberry	4	18"-24"	B&B
IVR	<i>Ilex verticillata</i> 'Red Sprite' Red Sprite Winterberry	17	24"-36"	Cont.
RR	<i>Rosa x 'Radtko'</i> Double Knock Out Rose	14	24"-36"	Cont.
SHRUBS				
MS	<i>Miscanthus sinensis</i> 'Takushima' Dwarf Maiden Grass	15	24"-36"	Cont.



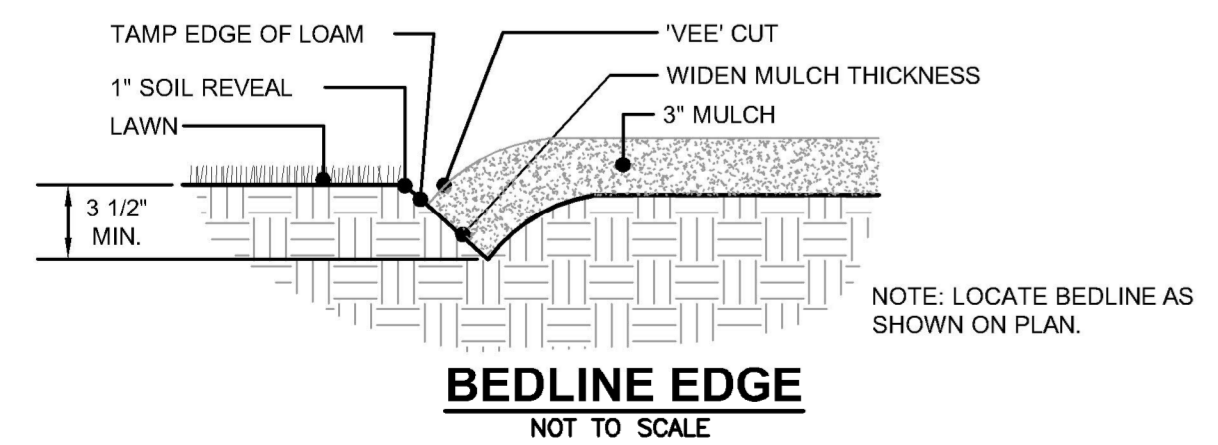
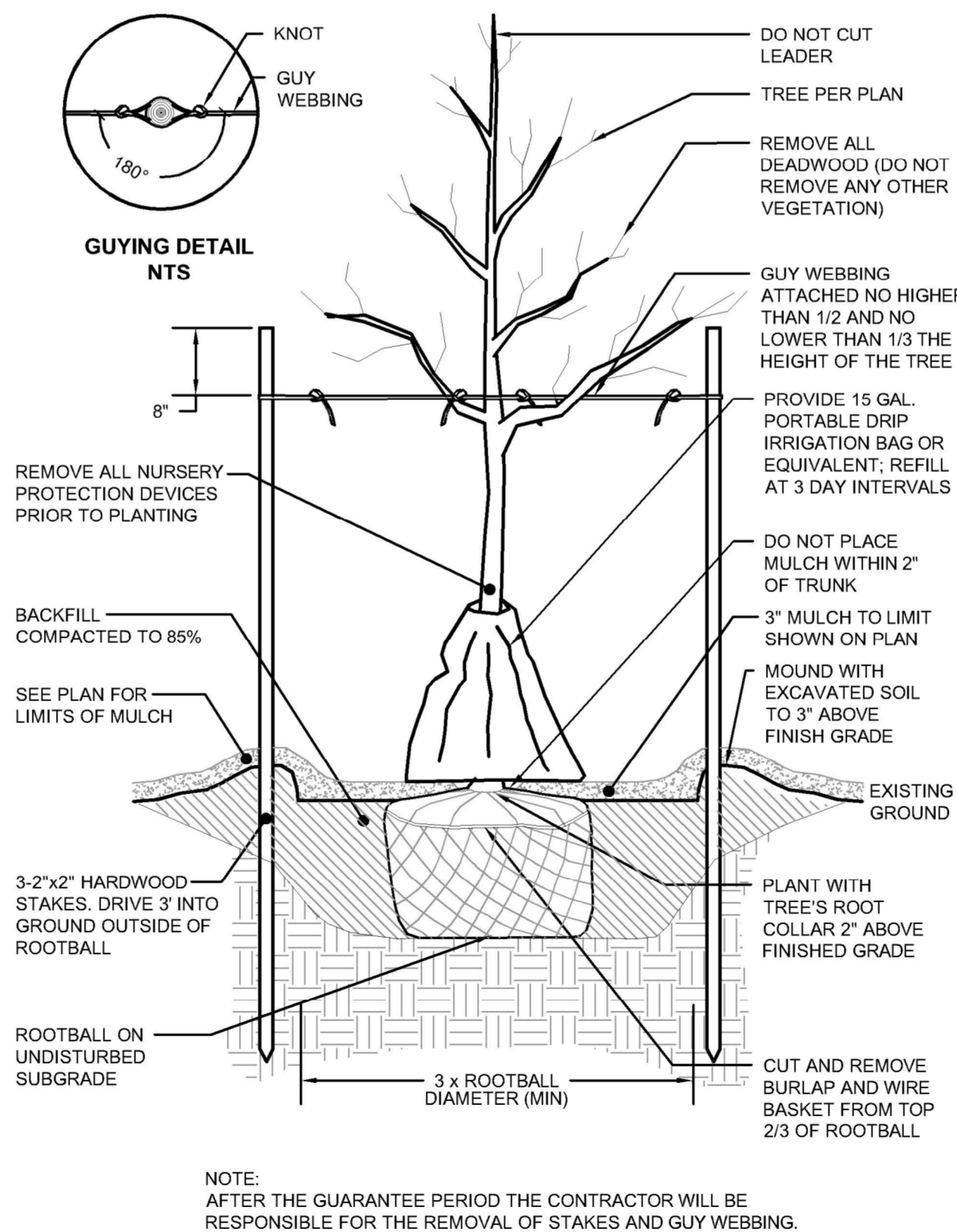
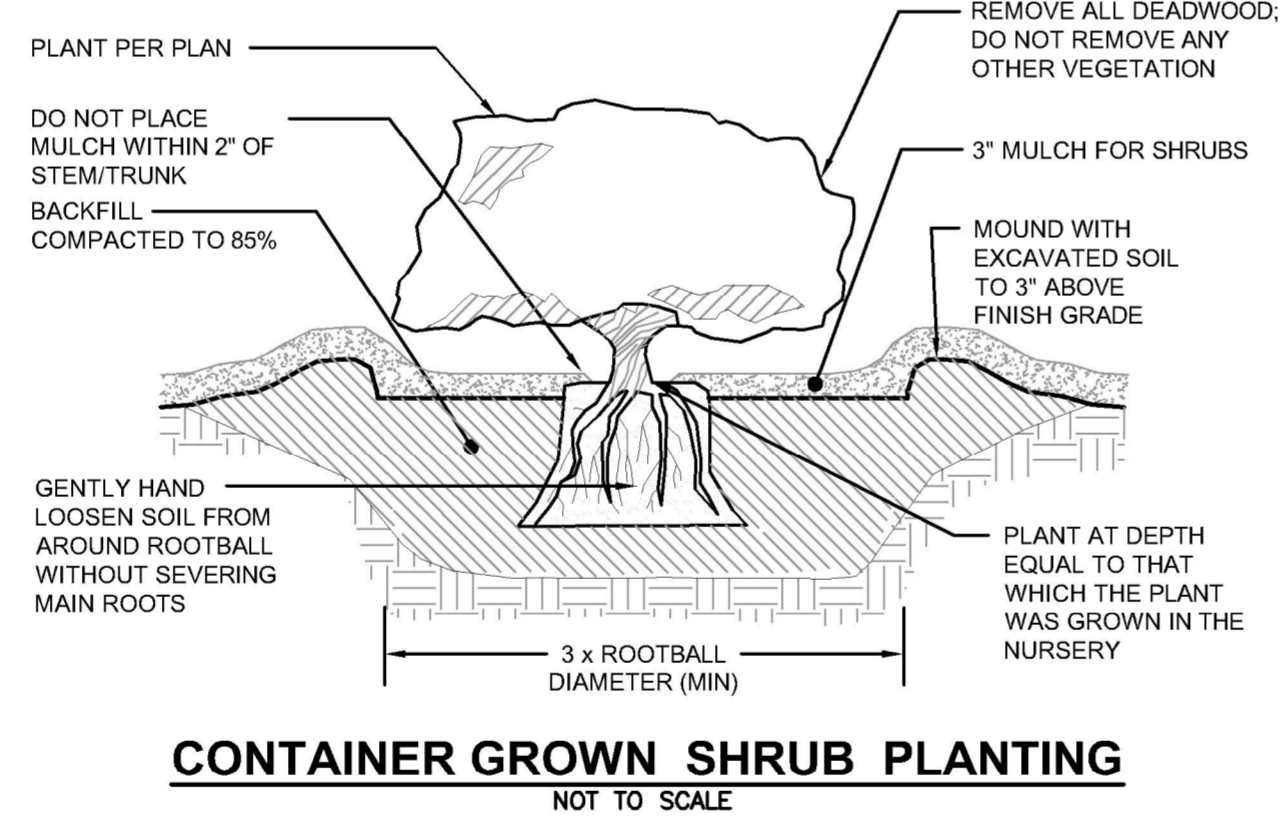
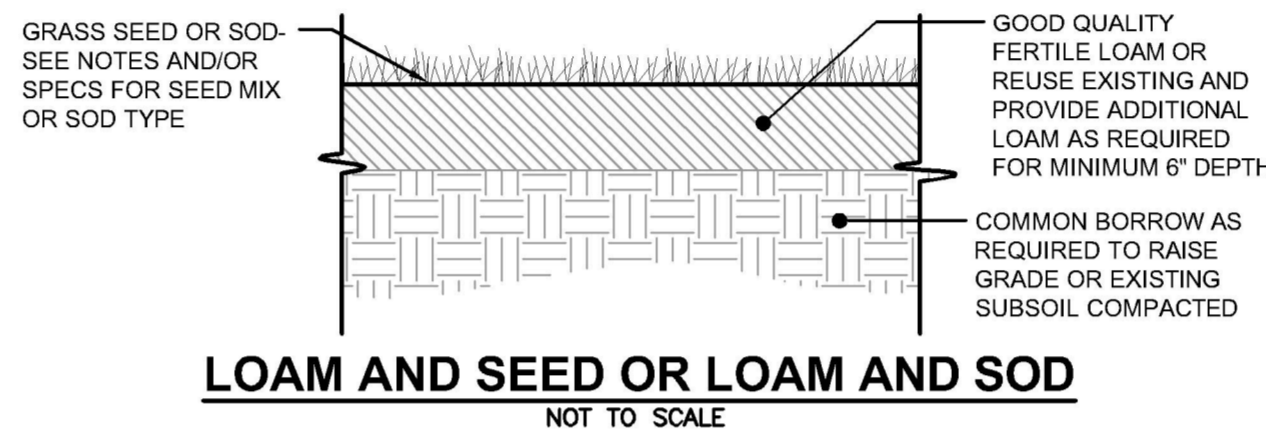
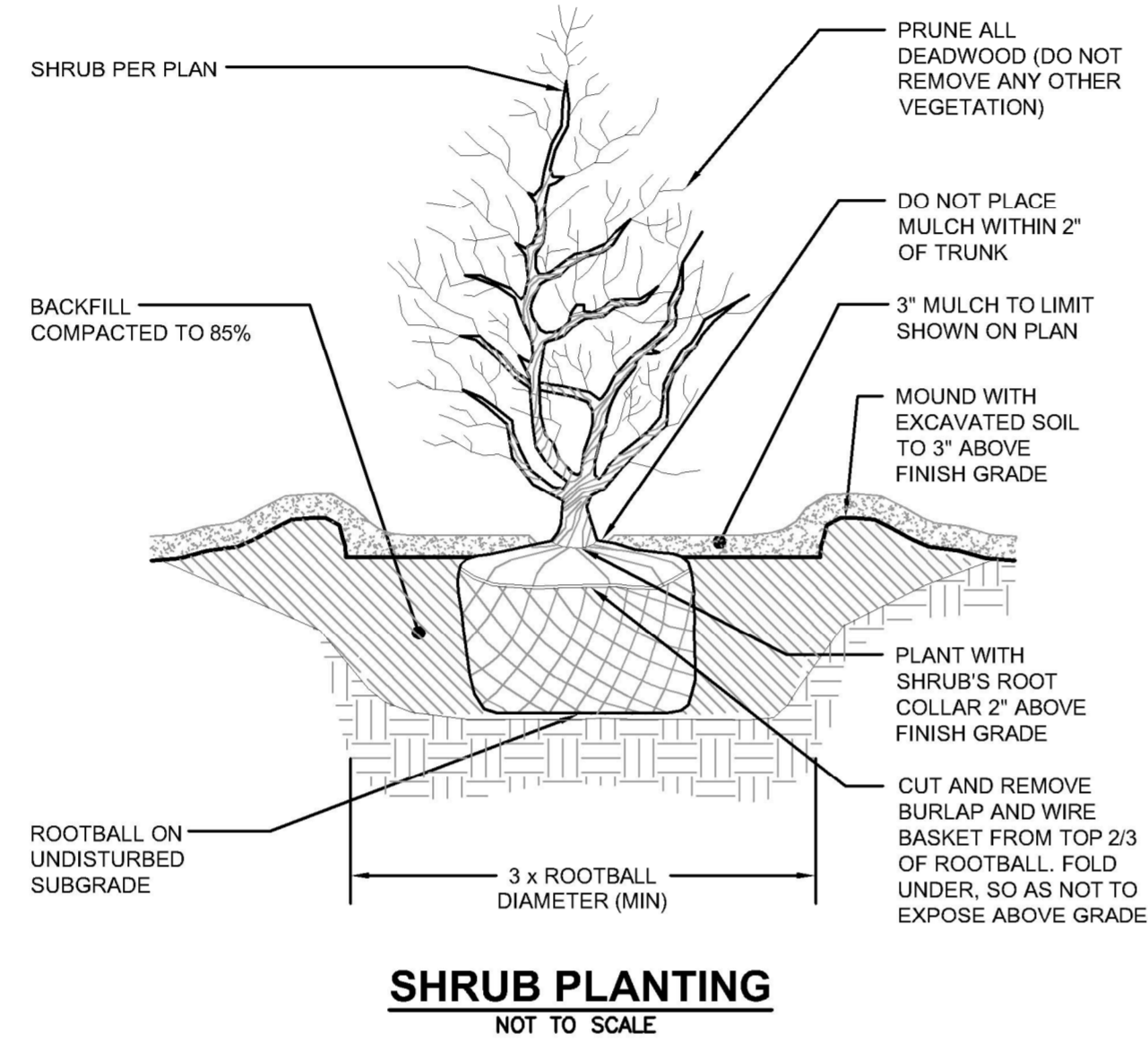
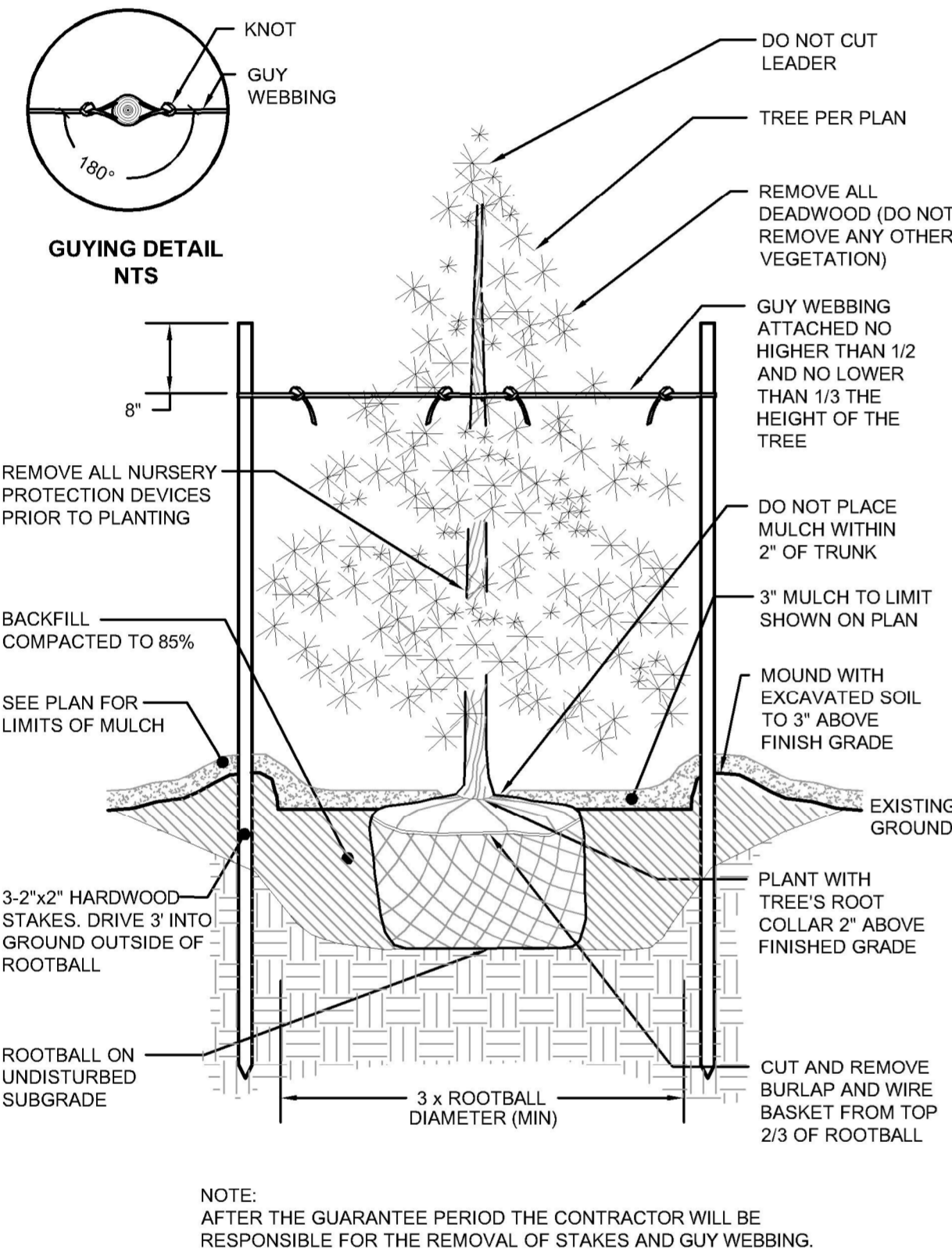
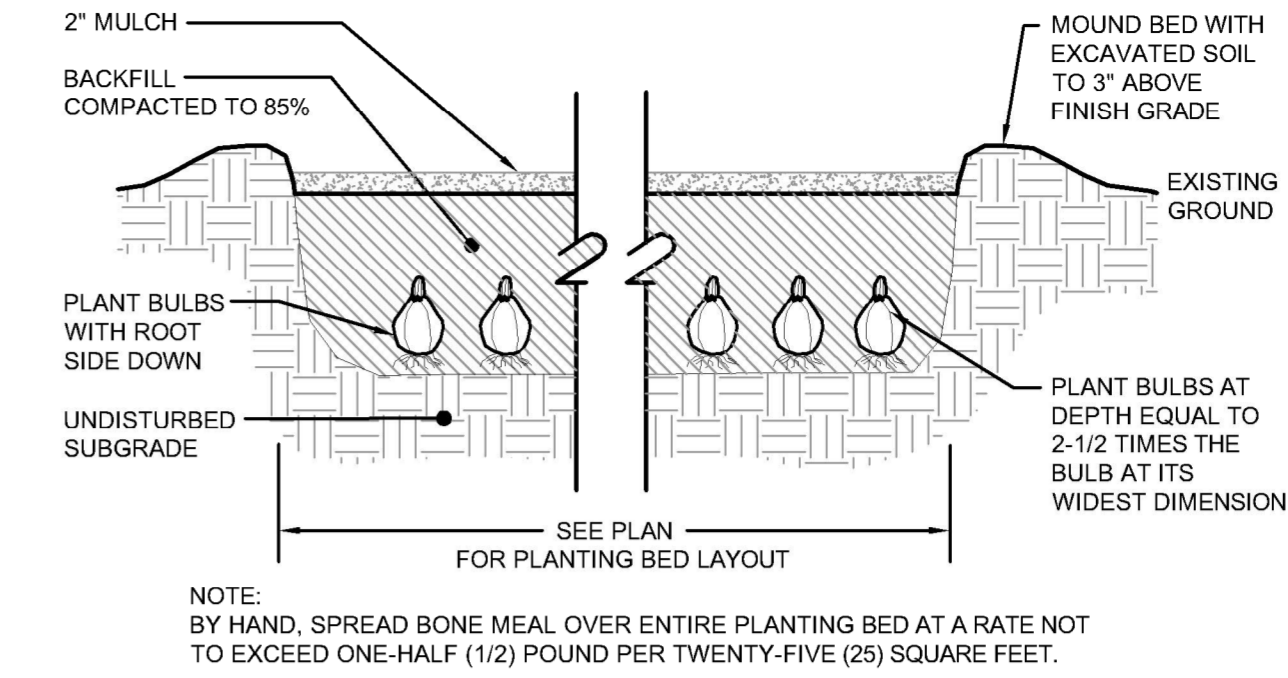
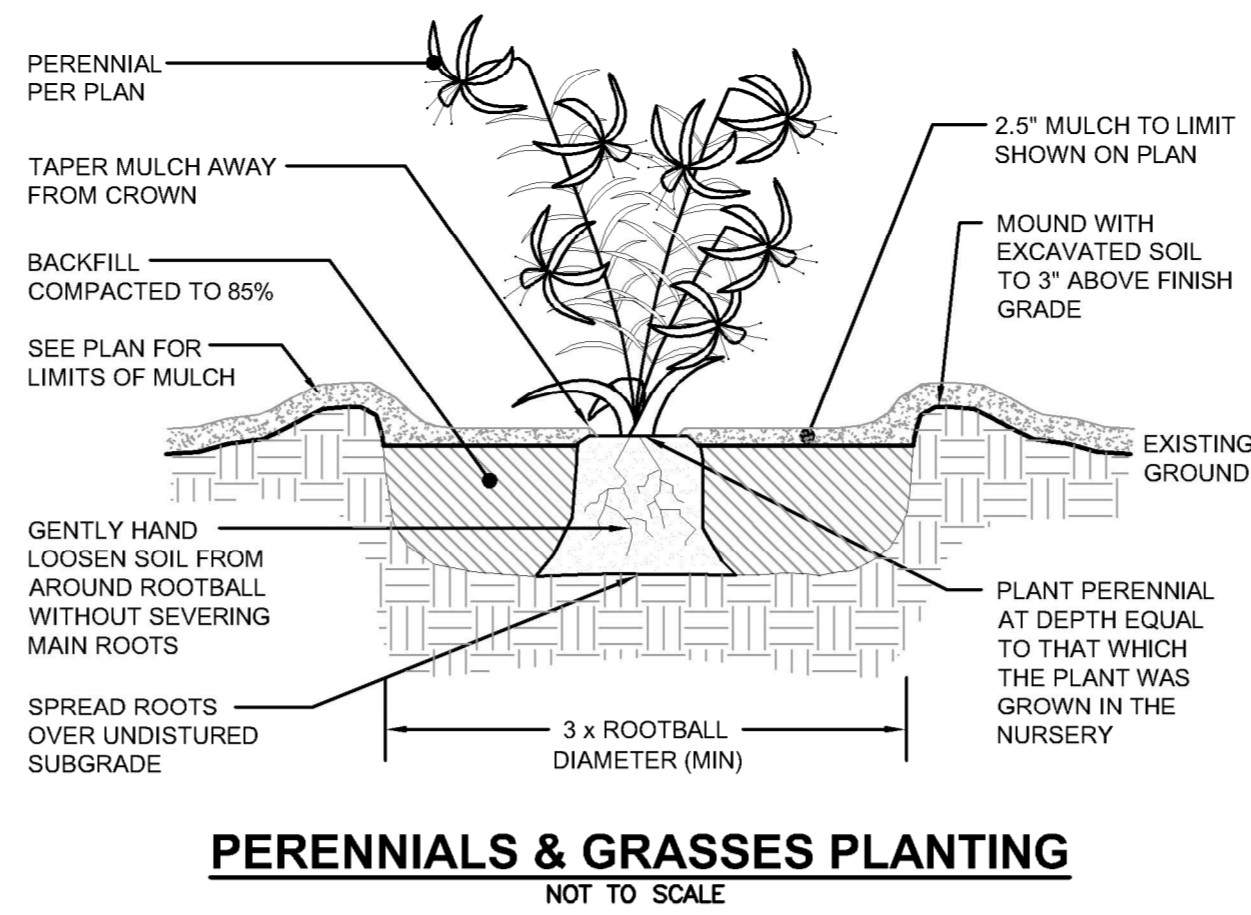
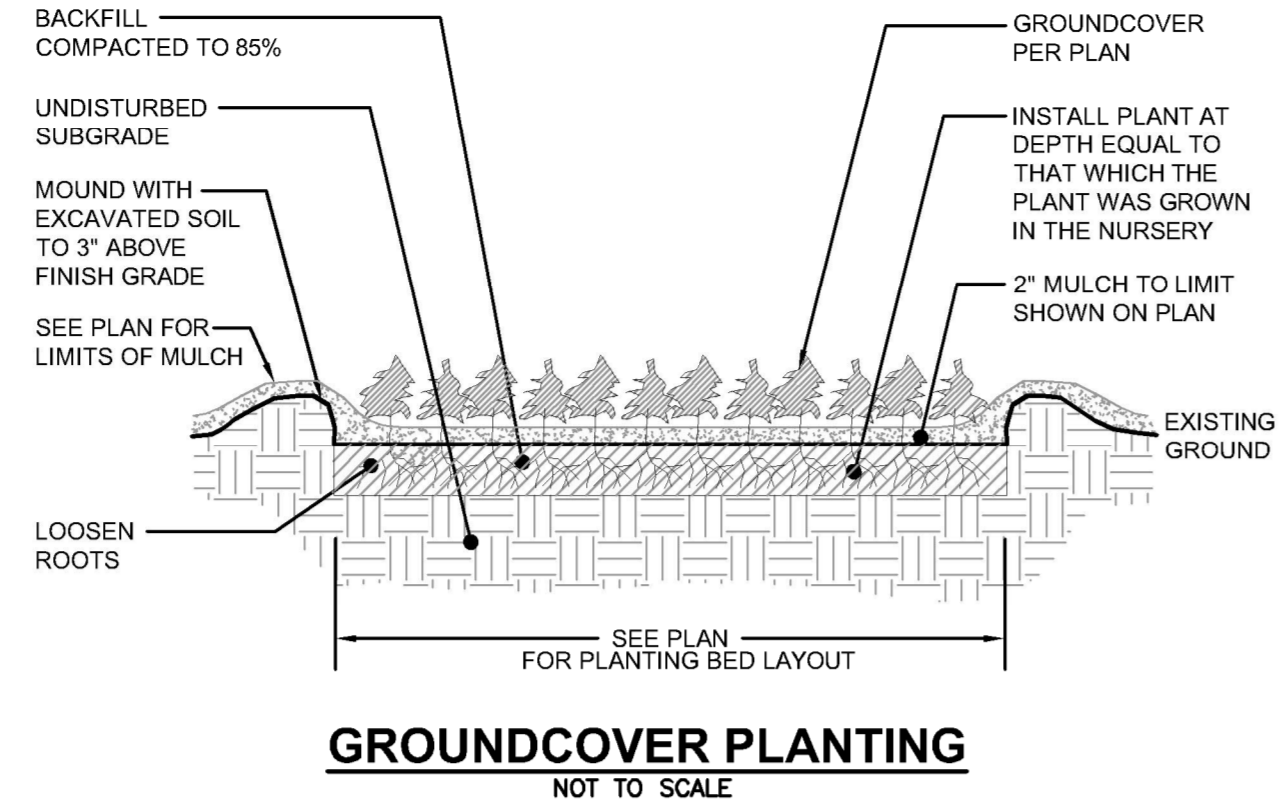
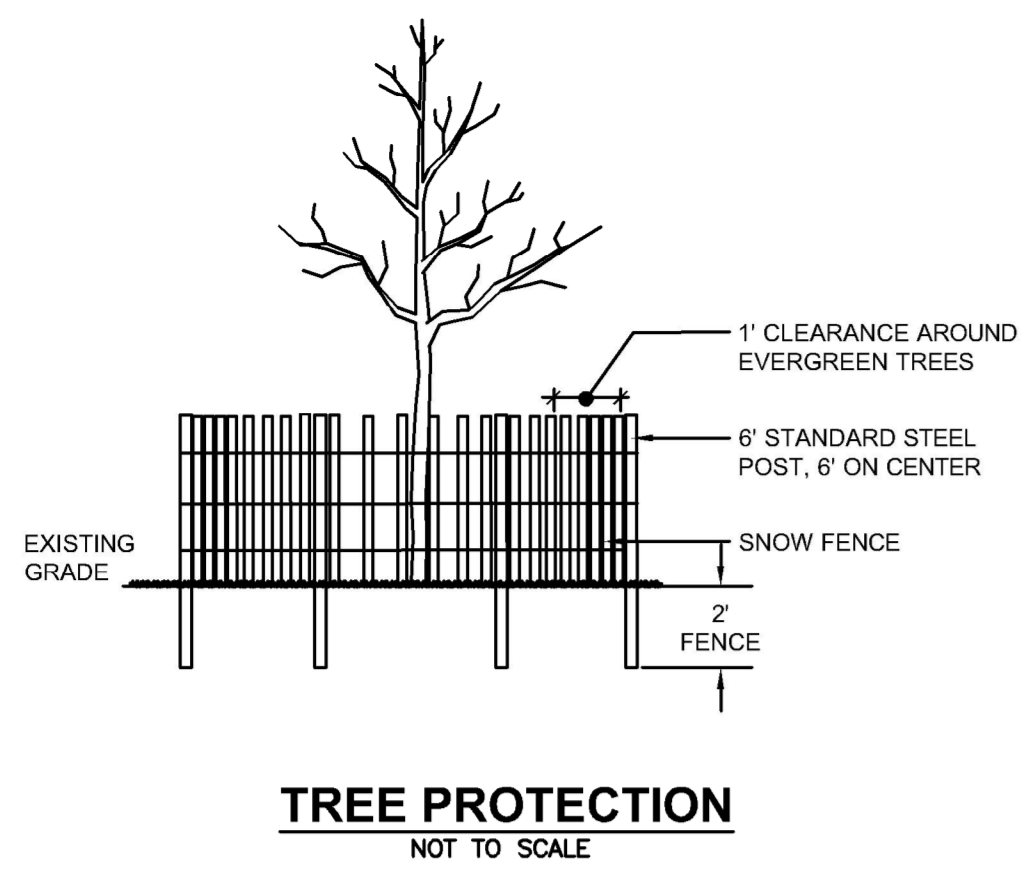
REVISIONS		
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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

**HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)**
WARWICK AND CRANSTON, RHODE ISLAND

LANDSCAPE PLAN No. 2

CHECKED BY _____ DATE _____ SCALE 1"=20'



TOTAL PLANT LIST

Key	Botanical Name Common Name	Qty.	Size	Notes
Trees				
AGAB	Amelanchier x 'Grandiflora' Autumn Brilliance Amelanchier	4	2"-2.5" Cal.	B&B
AROG	Acer rubrum 'October Glory' October Glory Maple	1	2"-2.5" Cal.	B&B
ARRS	Acer rubrum 'Red Sunset' Red Sunset Maple	6	2.5"-3" Cal	B&B
BP	Betula papyrifera Paper Birch Tree	7	#10	B&B
CC	Cercis canadensis American Redbud	3	2"-2.5" Cal.	B&B
LP	Platanus x acerifolia London Plane Tree	3	3"-3.5" cal.	B&B
NSW	Nyssa sylvatica 'Wildfire' Wildfire Tupelo	2	2.5"-3" Cal	B&B
PP	Picea pungens Colorado Blue Spruce	1	6'-7'	B&B
PPH-1	Picea pungens 'Hoopsii' Hoopsii Blue Spruce	8	5'-6'	B&B
PPH-2	Picea pungens 'Hoopsii' Hoopsii Blue Spruce	8	7'-8'	B&B
PPH-3	Picea pungens 'Hoopsii' Hoopsii Blue Spruce	5	8'-10'	B&B
SRIS	Syringa reticulata 'Ivory Silk' Ivory Silk Tree Lilac	8	2" - 2.5" cal.	B&B
TPGG	Thuja plicata 'Green Giant' Green Giant Arborvitae	10	6'-7'	B&B
TOS-2	Thuja occidentalis 'Smaragd' Emerald Green Arborvitae	21	8'-10'	B&B
TSD	Thuja 'Skinner Dwarf' Skinner Dwarf American Arborvitae	7	3-4'	B&B
SHRUBS				
APS	Azalea viscosum 'Pink & Sweet' Pink & Sweet Azalea	27	18"-24"	Cont.
CS	Cornus stolonifera 'Farrow' Arctic Fire red Twig Dogwood	3	3'-4'	B&B
HHR	Hemerocallis 'Happy Returns' Happy Returns Daylily	61	1 Gal.	Cont.
IVJ	Ilex verticillata 'Jim Dandy' Jim Dandy Winterberry	4	18"-24"	B&B
IVR	Ilex verticillata 'Red Sprite' Red Sprite Winterberry	17	24"-36"	Cont.
RR	Rosa x 'Radtko' Double Knock Out Rose	14	24"-36"	Cont.
SPAW	Spiraea japonica 'Anthony Waterer' Anthony Waterer Spiraea	14	24"-36"	Cont.
WFWR	Weigela florida 'Wine and Rose' Wine and Rose Weigela	6	24"-36"	Cont.
GRASSES				
MS	Miscanthus sinensis 'Takushima' Dwarf Maiden Grass	15	24"-36"	Cont.

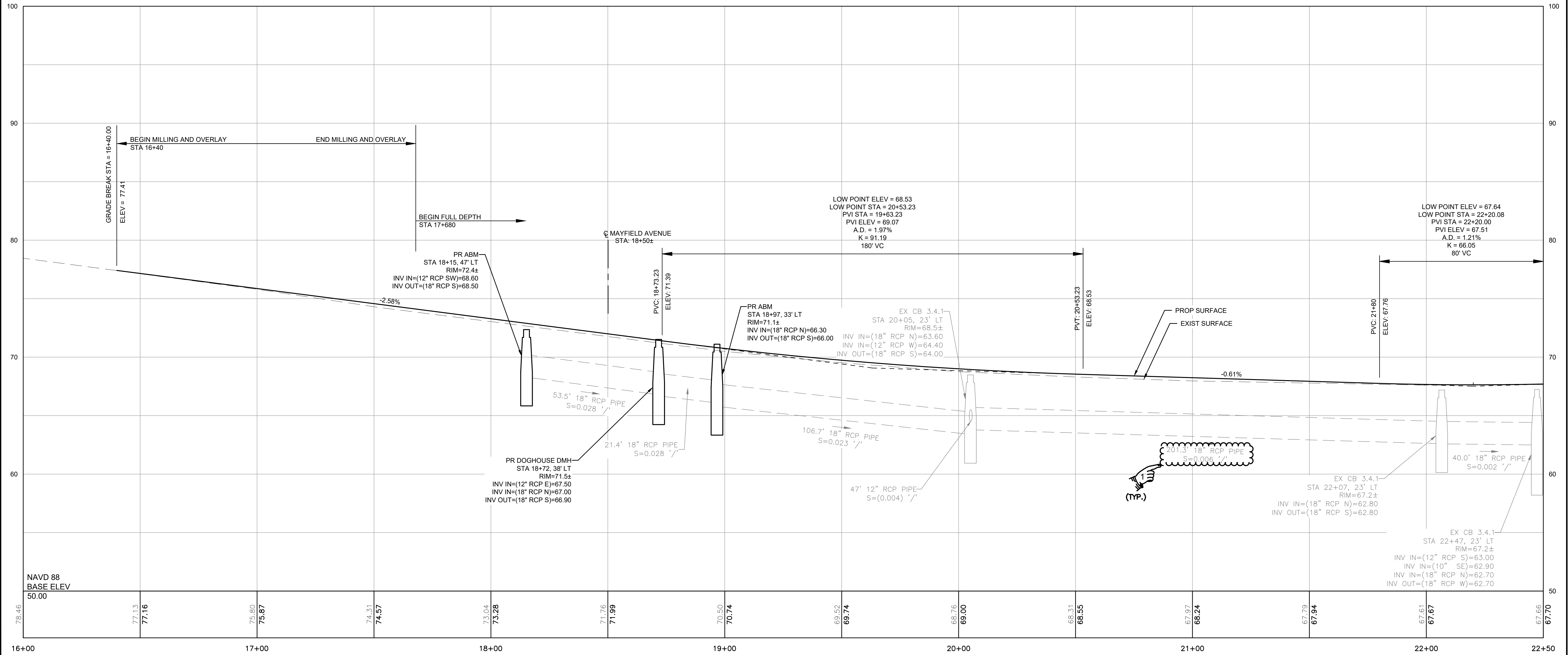
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NO.	DATE	BY
1	4/20	CC

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)
WARWICK AND CRANSTON, RHODE ISLAND
LANDSCAPE DETAILS

CHECKED BY _____ DATE _____ SCALE AS SHOWN



ROUTE 5 BL STA 16+00 TO STA 22+50.00



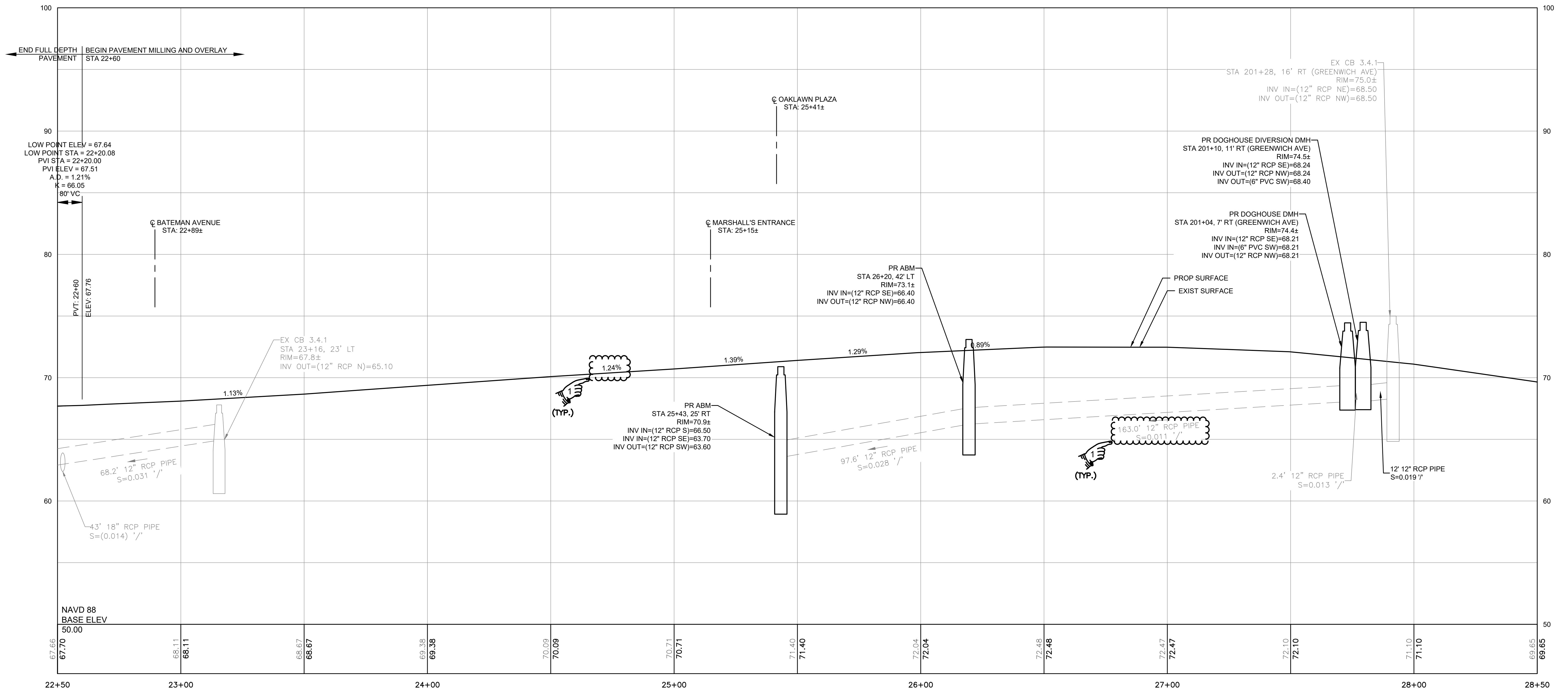
PROFILE
SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=4'

REVISIONS		
NO.	DATE	BY
1	4/20	BB

RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
HIGHWAY IMPROVEMENTS TO ROUTE 5 (CONTRACT No. 1)	
WARWICK AND CRANSTON,	RHODE ISLAND
PROFILE No. 1	
CHECKED BY _____	DATE _____ SCALE AS SHOWN



ROUTE 5 BL
STA 22+50 TO STA 28+50.00



PROFILE
SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=4'

REVISIONS		
NO.	DATE	BY
1	4/20	BB

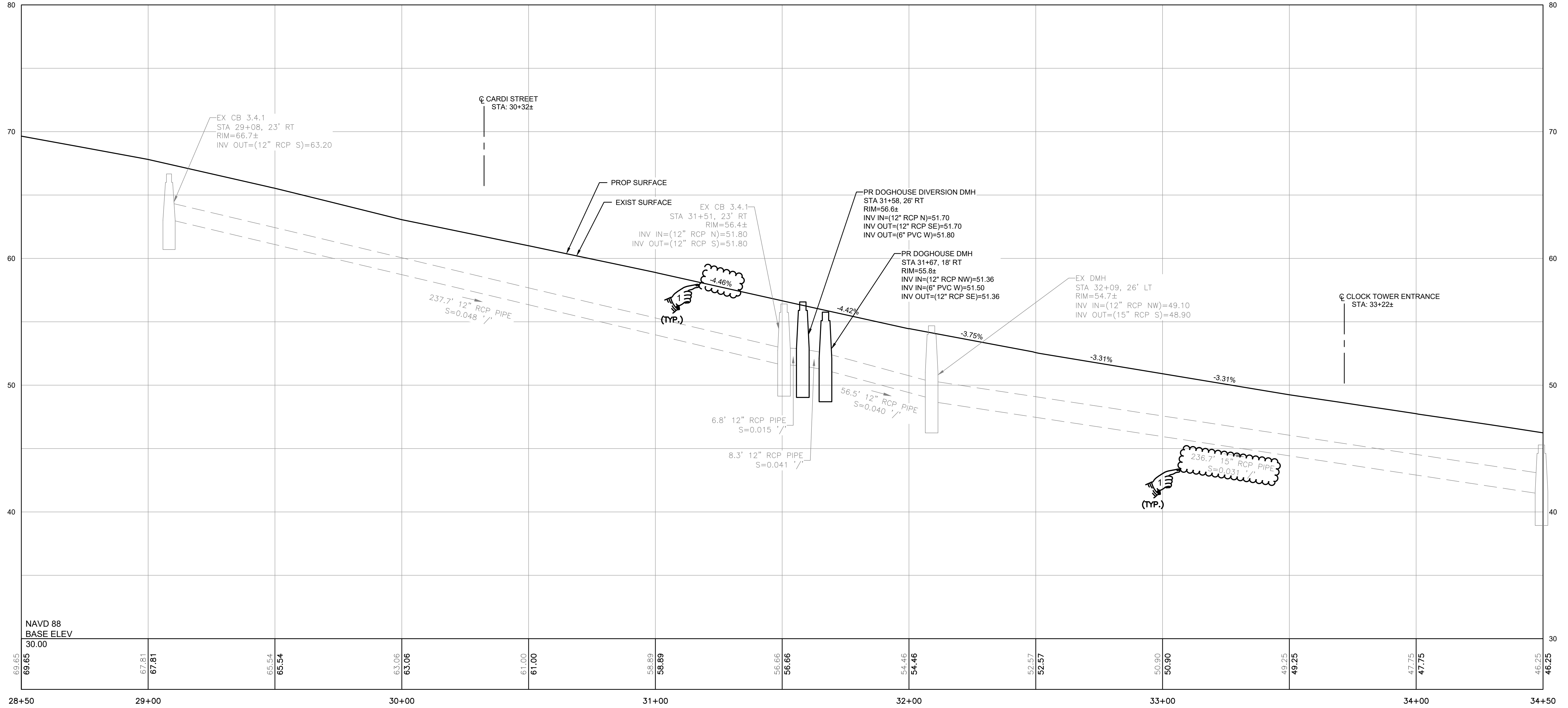
RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
HIGHWAY IMPROVEMENTS TO ROUTE 5 (CONTRACT No. 1) WARWICK AND CRANSTON, RHODE ISLAND	
PROFILE No. 2	
CHECKED BY	DATE
SCALE AS SHOWN	



FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	NHP-0005(030)	2020	96	172

R-1

ROUTE 5 BL STA 28+50 TO STA 34+50.00



NAVD 88
BASE ELEV
30.00

PROFILE
SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=4'

REVISIONS		
NO.	DATE	BY
1	4/20	BB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

**HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)**
WARWICK AND CRANSTON, RHODE ISLAND

PROFILE No. 3

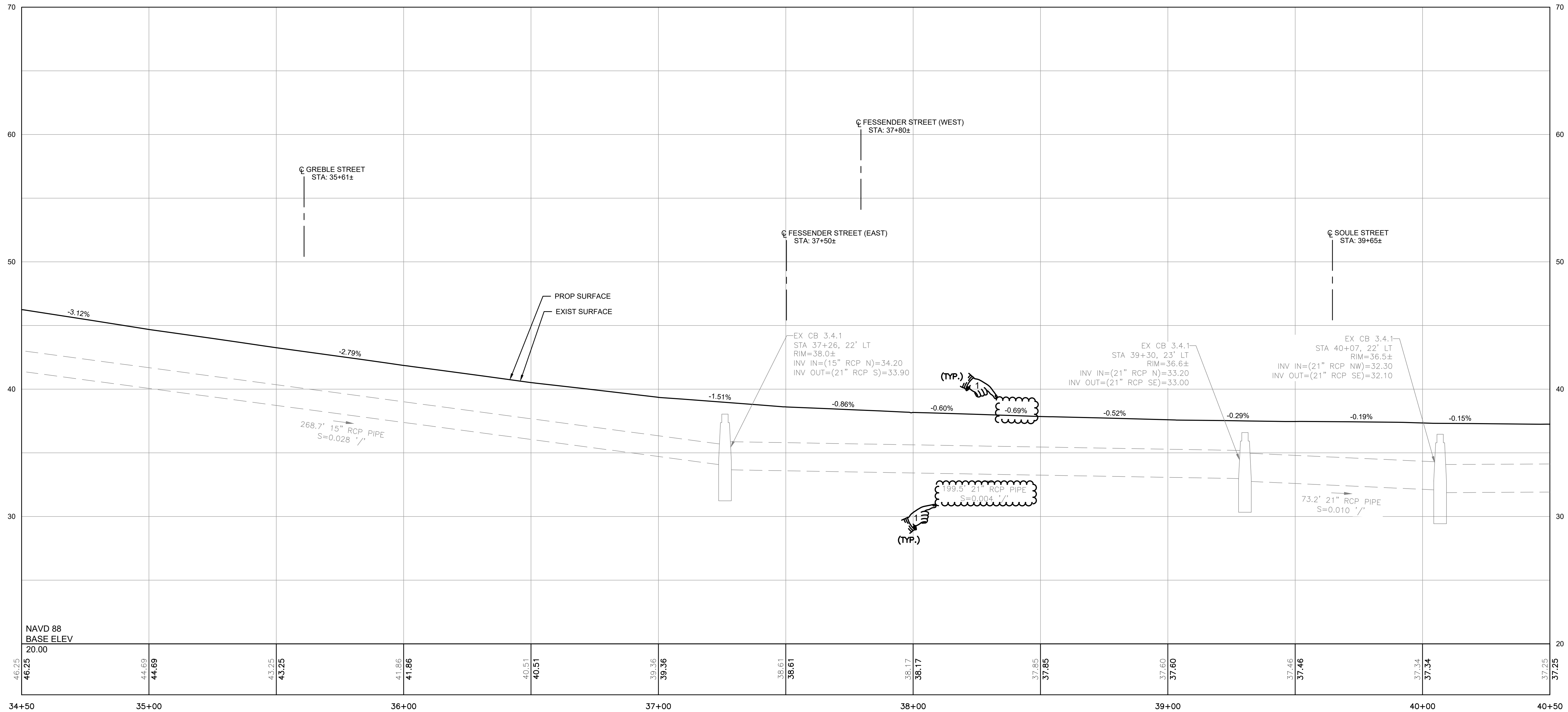
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FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	NHP-0005(030)	2020	97	172

R-1

ROUTE 5 BL
 STA 34+50 TO STA 40+50.00



PROFILE
 SCALE: HORIZONTAL 1"=20'
 VERTICAL 1"=4'

REVISIONS		
NO.	DATE	BY
1	4/20	BB

RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

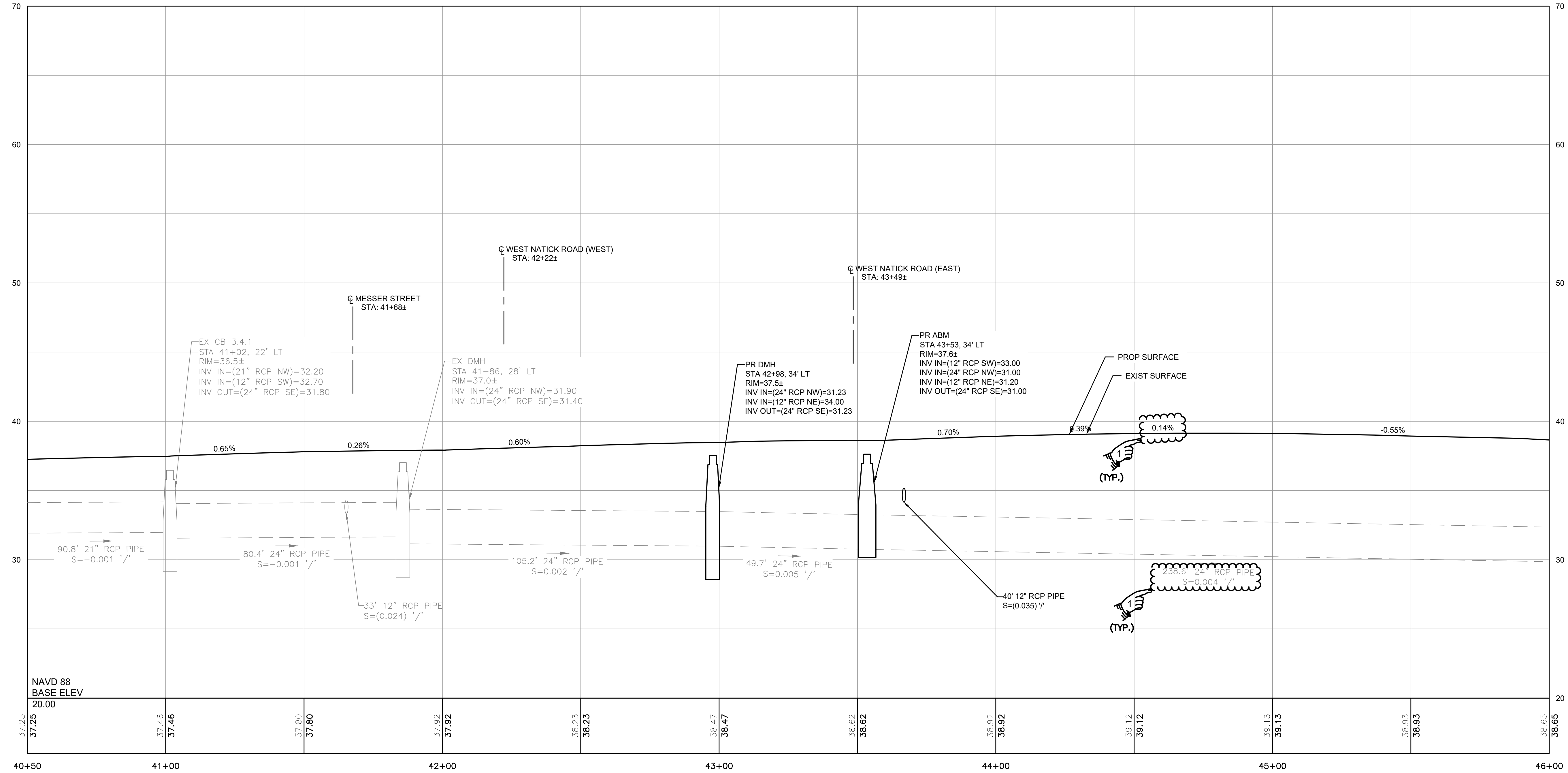
**HIGHWAY IMPROVEMENTS
 TO
 ROUTE 5 (CONTRACT No. 1)**
 WARWICK AND CRANSTON, RHODE ISLAND

PROFILE No. 4

CHECKED BY _____ DATE _____ SCALE AS SHOWN



ROUTE 5 BL STA 40+50 TO STA 46+00.00



PROFILE
SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=4'

REVISIONS		
NO.	DATE	BY
1	4/20	BB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

**HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)**
WARWICK AND CRANSTON, RHODE ISLAND

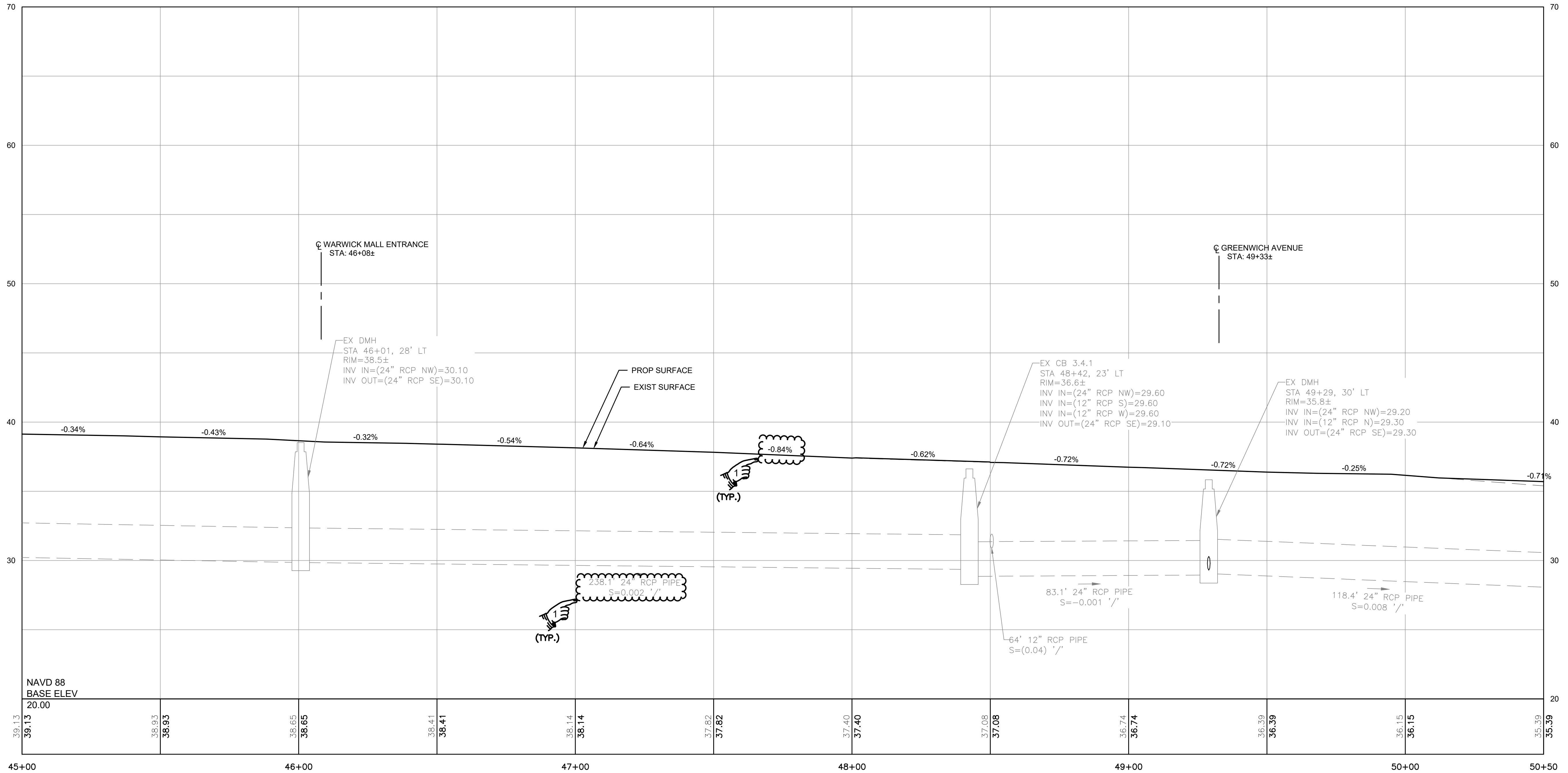
PROFILE No. 5



FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	NHP-0005(030)	2020	99	172

R-1

ROUTE 5 BL
STA 45+00 TO STA 50+50.00



PROFILE
 SCALE: HORIZONTAL 1"=20'
 VERTICAL 1"=4'

REVISIONS		
NO.	DATE	BY
1	4/20	BB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

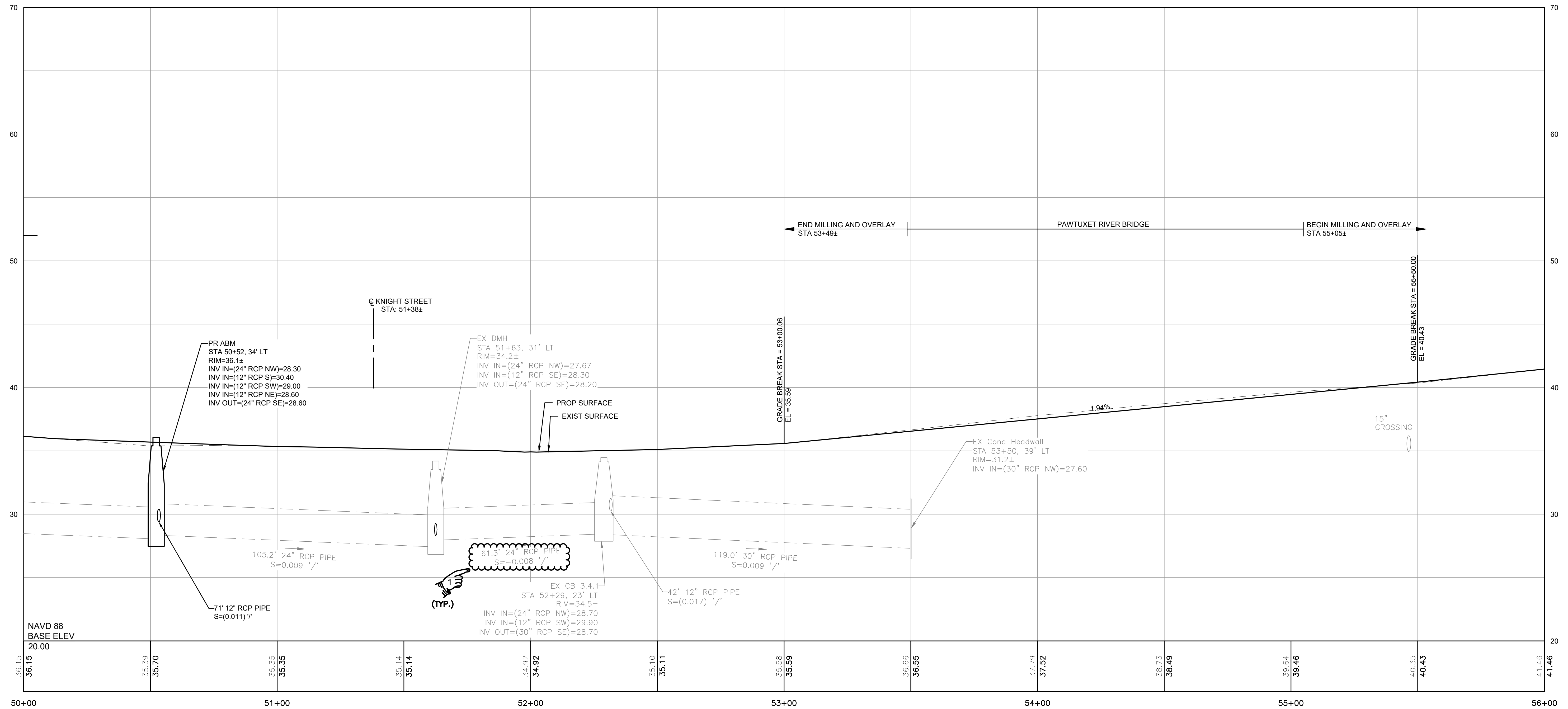
HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)
 WARWICK AND CRANSTON, RHODE ISLAND

PROFILE No. 6

CHECKED BY _____ DATE _____ SCALE AS SHOWN



ROUTE 5 BL
STA 50+00 TO STA 56+00.00



PROFILE
SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=4'

REVISIONS		
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1	4/20	BB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

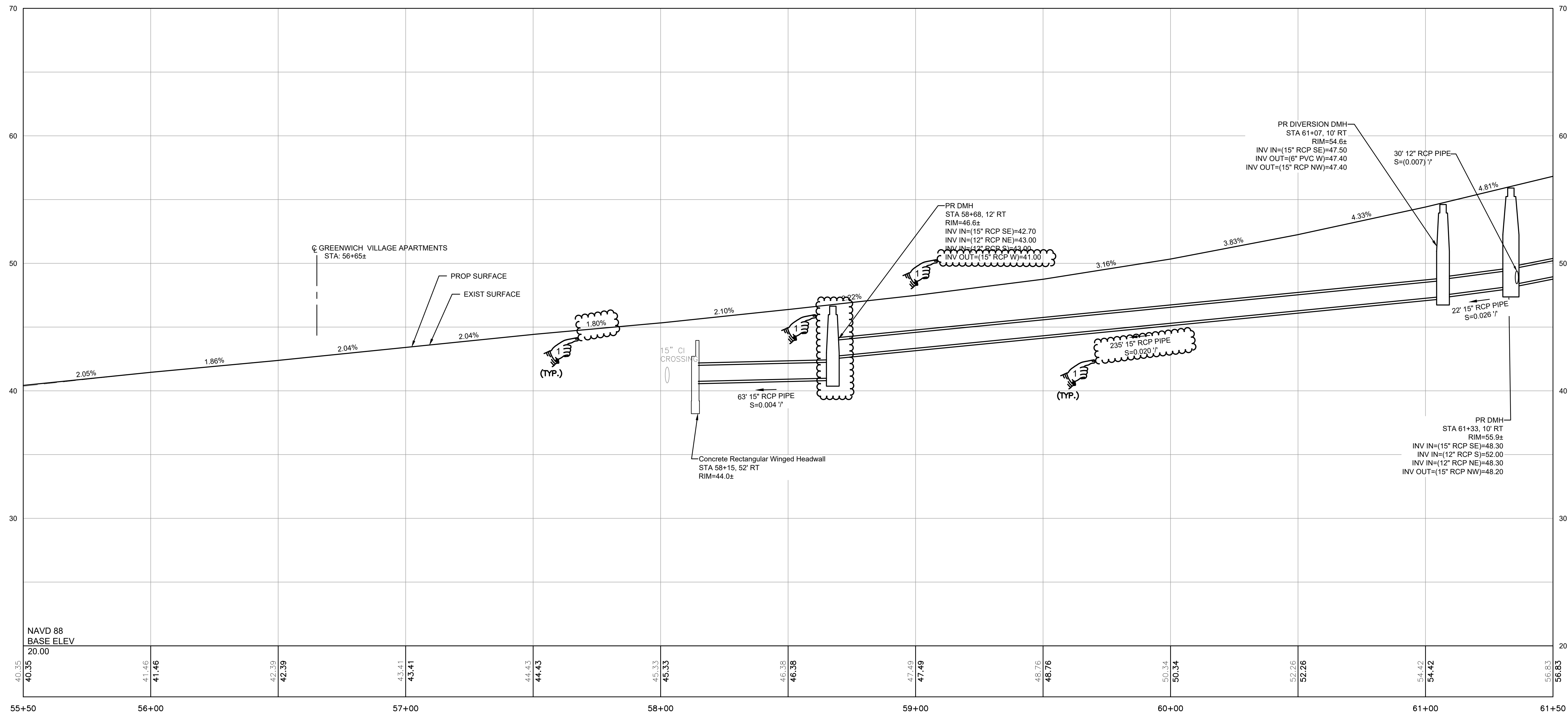
**HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)**
WARWICK AND CRANSTON, RHODE ISLAND

PROFILE No. 7

CHECKED BY _____ DATE _____ SCALE AS SHOWN



ROUTE 5 BL
STA 55+50 TO STA 61+50.00



PROFILE
SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=4'

REVISIONS		
NO.	DATE	BY
1	4/20	BB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

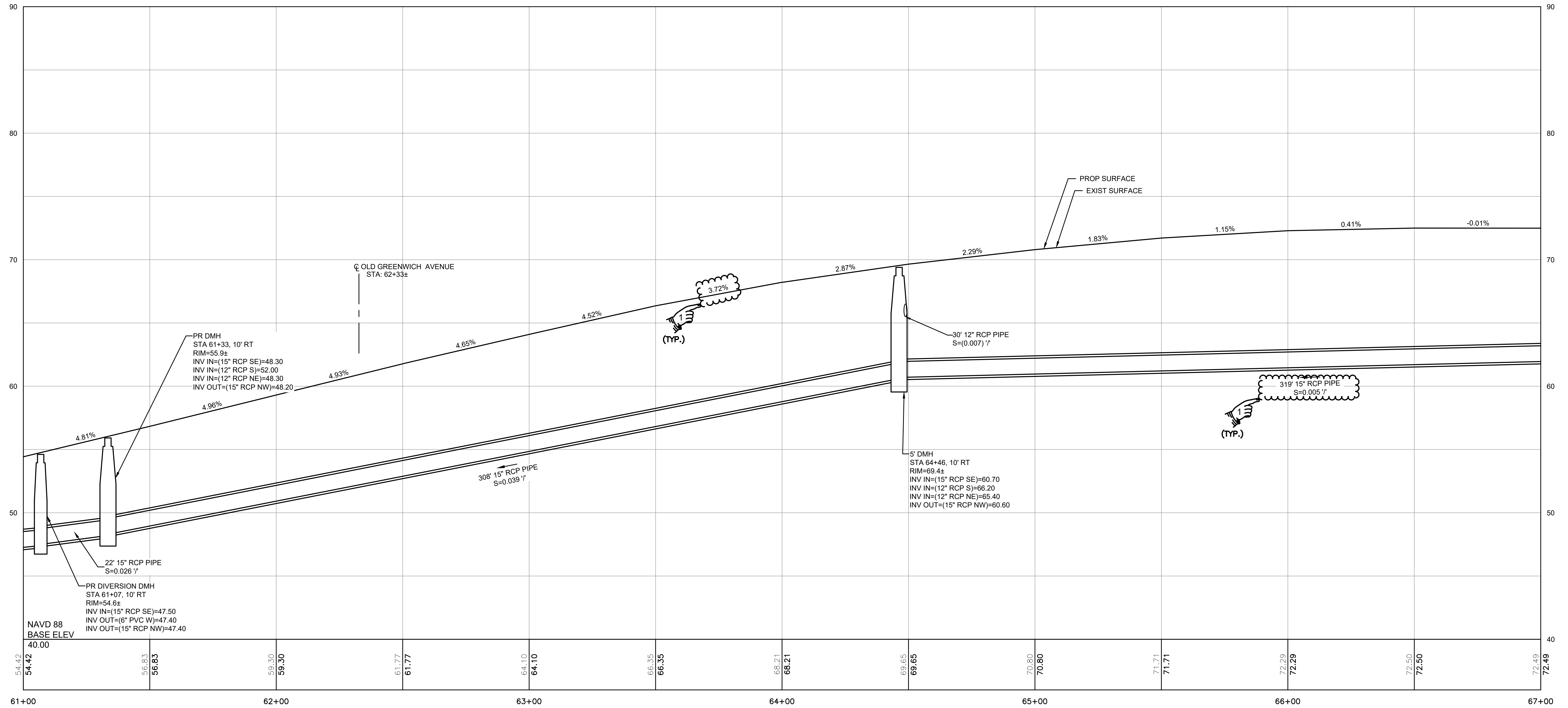
**HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)**
WARWICK AND CRANSTON, RHODE ISLAND

PROFILE No. 8

CHECKED BY _____ DATE _____ SCALE AS SHOWN



ROUTE 5 BL STA 61+00 TO STA 67+00.00



PROFILE
SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=4'

REVISIONS		
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1	4/20	BB

**RHODE ISLAND
DEPARTMENT OF TRANSPORTATION**

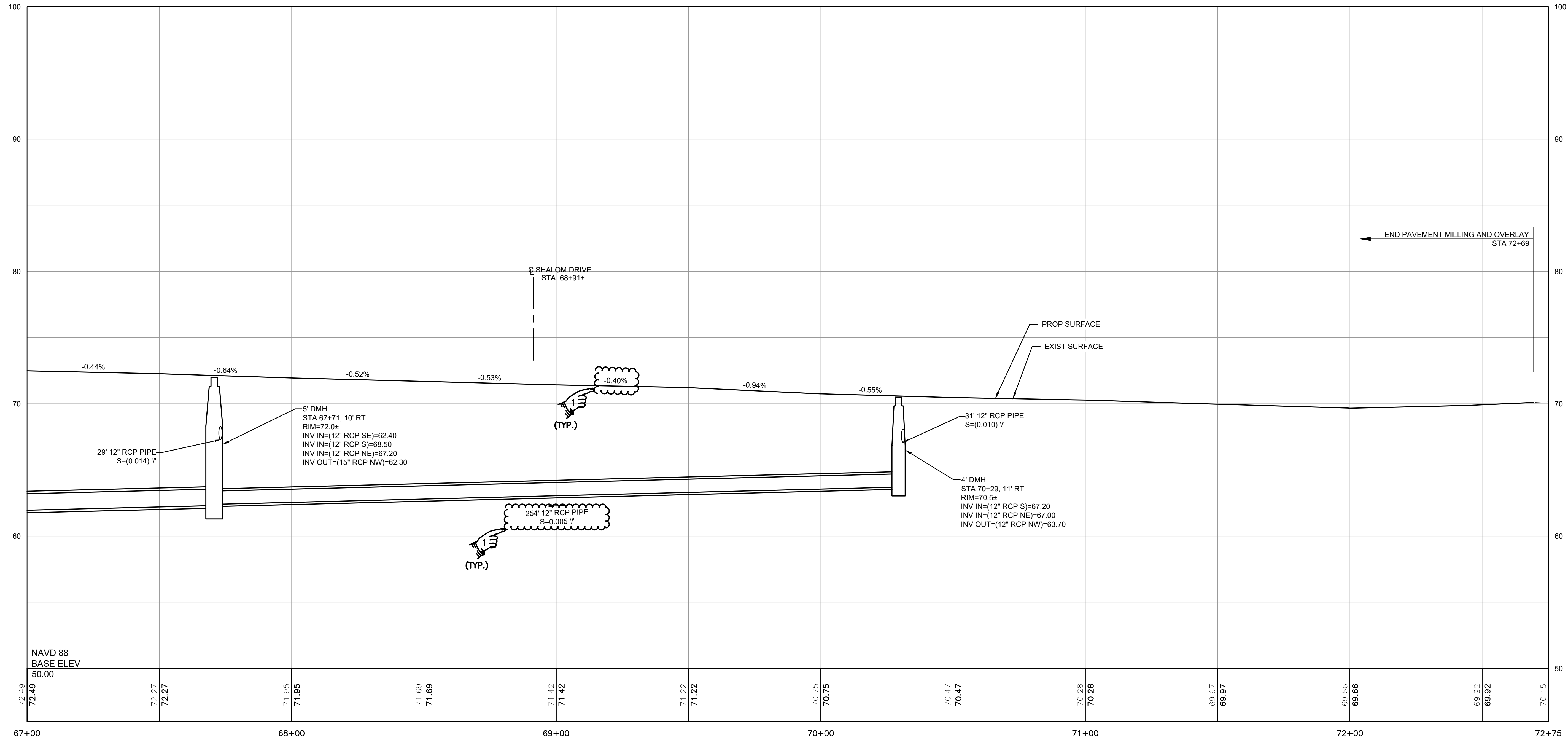
**HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)
WARWICK AND CRANSTON, RHODE ISLAND**

PROFILE No. 9

CHECKED BY _____ DATE _____ SCALE AS SHOWN



ROUTE 5 BL
STA 67+00 TO STA 72+75.00



PROFILE
SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=4'

REVISIONS		
NO.	DATE	BY
1	4/20	BB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

**HIGHWAY IMPROVEMENTS
TO
ROUTE 5 (CONTRACT No. 1)**
WARWICK AND CRANSTON, RHODE ISLAND

PROFILE NO. 10

CHECKED BY _____ DATE _____ SCALE AS SHOWN



2. Volume 2 – F.A. Project No. BHO-0185(001)

STRUCTURAL STEEL NOTES

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

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

THE FABRICATOR MUST SUBMIT PROOF OF CURRENT CERTIFICATION AS SPECIFIED.
- THE STEEL ERECTOR/CONTRACTOR FOR THIS PROJECT SHALL BE CERTIFIED FOR "ADVANCED CERTIFIED STEEL ERECTOR (ASCE)" IN ACCORDANCE WITH THE AISC QUALITY CERTIFICATION PROGRAM. THE ERECTOR/CONTRACTOR OF THE STRUCTURAL STEEL SHALL BE REQUIRED TO SUBMIT PROOF OF CURRENT CERTIFICATION AS SPECIFIED.
- SHOP DRAWINGS FOR ALL FABRICATED STEEL INCLUDING BEARINGS, RAILINGS AND FALSEWORK SHALL BE SUBMITTED TO THE ENGINEER IN SUFFICIENT TIME TO PERMIT CAREFUL CHECKING PRIOR TO FABRICATION.
- INSPECTION OF WELDS INCLUDING RADIOGRAPHIC TESTING (RT) AND MAGNETIC PARTICLE TESTING (MT) SHALL BE IN ACCORDANCE WITH THE RI STANDARD SPECIFICATIONS AND THE AASHTO/AWS BRIDGE WELDING CODE, EXCEPT THAT THE REMAINING PERCENTAGE OF ALL GROOVE WELDS NOT RT TESTED SHALL BE MT OR DYE-PENETRANT TESTED.
- STRUCTURAL STEEL SHAPES AND PLATES SHALL CONFORM TO THE LATEST PROVISIONS OF AASHTO DESIGNATION M 270 GRADE 36 AND GRADE 50 AS DESIGNATED ON THE PLANS.

ALL AASHTO M 270 STRUCTURAL STEEL USED IN GIRDERS (INCLUDING CONNECTION PLATES AND STIFFENERS), SHALL MEET THE ZONE 2 CHARPY V-NOTCH FRACTURE TOUGHNESS TEST REQUIREMENTS AS SPECIFIED IN TABLE 6.6.2-2 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR "NONFRACTURE-CRITICAL" COMPONENTS. THE ZONE 2 FRACTURE TOUGHNESS REQUIREMENTS ARE AS FOLLOWS:

NONFRACTURE-CRITICAL

GRADE 50 15 FT-LBS @ 40°F (UP TO AND INCLUDING 2 INCHES THICK)

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

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

• BEARINGS, MASONRY PLATES AND SOLE PLATES
• RAILINGS
• SUPPORT OF EXCAVATION COMPONENTS
- WELDING SHALL BE IN ACCORDANCE WITH THE LATEST BRIDGE WELDING CODE AASHTO/AWS D1.5 (INCLUDING ALL INTERIMS TO DATE) AND APPLICABLE SUPPLEMENTAL AWS PUBLICATIONS.
- ALL HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM F3125 GRADE A325, AND THEY SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 824 OF THE RI STANDARD SPECIFICATIONS.
- WASHERS MEETING ASTM F436 ARE TO BE USED OVER ALL HOLES THAT ARE MORE THAN 1/16" IN DIAMETER GREATER THAN THE BOLT DIAMETER AND UNDER ALL PARTS TURNED DURING ASSEMBLY.



STRUCTURAL STEEL NOTES (CONT'D)

- WELDING ELECTRODES SHALL HAVE THE SAME CORROSION RESISTANCE AS THE BASE METAL AND SHALL BE FREE OF MOISTURE AT THE TIME OF USE.
- STRUCTURAL STEEL SHALL BE PREPARED, AND PAINTED IN ACCORDANCE WITH THE RI STANDARD SPECIFICATIONS.
- UNLESS OTHERWISE SPECIFIED, THE UPPER SURFACES OF GIRDER TOP FLANGES SHALL BE FREE OF PAINT, OIL OR OTHER IMPURITIES THAT WOULD IN ANY WAY REDUCE THE BOND OF CONCRETE TO STEEL.
- PRIOR TO FABRICATION, ALL MATERIALS SHALL FIRST BE SOLVENT CLEANED TO SSPC-SP1 TO REMOVE ALL OIL, GREASE AND DIRT; FOLLOWED BY BLAST-CLEANING TO SSPC-SP10 TO REMOVE ALL MILL SCALE, RUST, AND OTHER DELETERIOUS MATERIALS FROM THE SURFACES OF THE STEEL TO BE FABRICATED.
- PRIOR TO SHOP COATING AS SPECIFIED IN SECTION 825 OF THE RI STANDARD SPECIFICATIONS, ALL CORNERS AND EDGES OF STEEL WHICH HAVE BEEN FLAME CUT OR OTHERWISE HARDENED SHALL BE SOFTENED BY GRINDING OR BLAST-CLEANING TO PROVIDE A SURFACE SUITABLE FOR APPLICATION OF THE SPECIFIED PAINT SYSTEM.

UPON COMPLETION OF ALL FABRICATION AND PRIOR TO THE APPLICATION OF THE SHOP PRIMER COAT THE STRUCTURAL STEEL SHALL BE RESTORED TO AN SSPC-SP10 CONDITION.
- WELDING OF ATTACHMENTS TO GIRDER FLANGES OR WEBS FOR CONSTRUCTION PURPOSES IS NOT PERMITTED EXCEPT WHEN APPROVED BY THE ENGINEER.
- THE ENDS OF ALL GIRDERS SHALL BE VERTICAL AFTER ALL DEAD LOADS HAVE BEEN PLACED.
- INTERMEDIATE STIFFENERS SHALL BE PLACED ON THE INTERIOR SIDE OF THE FASCIA PLATE GIRDER WEBS AND ON BOTH SIDES OF ALL INTERIOR PLATE GIRDER WEBS.
- BEARING STIFFENERS SHALL BE FABRICATED AS SHOWN ON THE PLANS AND SHALL BE PLACED ON BOTH SIDES OF ALL GIRDER WEBS.
- INTERMEDIATE STIFFENERS AND CONNECTION PLATES SHALL BE SET PERPENDICULAR TO THE FLANGES OF THE GIRDERS.
- END BEARING STIFFENERS AT GIRDER ENDS SHALL BE PLUMB AFTER DEAD LOADS ARE APPLIED.
- BOLTED CONNECTIONS SHALL BE DESIGNED AS SLIP-CRITICAL CONNECTIONS. THE FAYING SURFACES SHALL SATISFY CLASS B SURFACE CONDITION AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
- THE GIRDERS SHALL BE CAMBERED TO THE AMOUNTS SHOWN ON THE PLANS. THE FABRICATOR'S SHOP DRAWINGS SHALL INCLUDE, IN ADDITION TO ANY CUTTING OR CAMBER DIAGRAMS NECESSARY FOR THEIR PURPOSES, A SHOP ASSEMBLY DIAGRAM WHICH PROVIDES CAMBER OFFSETS CALCULATED BY THE FABRICATOR AT THE REFERENCE POINTS PROVIDED BY THE ENGINEER (USUALLY TENTH POINTS OF THE SPANS). THE INFORMATION PROVIDED SHALL BE SUFFICIENT ENOUGH FOR THE ENGINEER TO EVALUATE WHETHER THE CAMBER HAS BEEN CORRECTLY INTERPRETED.
- ALL FILLET WELDS SHALL BE IN ACCORDANCE WITH THE BRIDGE WELDING CODE AASHTO/AWS D1.5 TABLE 2.1 (1/4" MINIMUM).
- ALL SHEAR STUD CONNECTORS SHALL BE WELDED BY THE AUTOMATIC TIMED ELECTRIC ARC PROCESS. SHEAR STUDS SHALL BE INSPECTED AND TESTED IN ACCORDANCE WITH SECTION 824 OF THE RI STANDARD SPECIFICATIONS.
- WHEN STEEL DIE STAMPS ARE USED TO IDENTIFY PIECES AND MEMBERS, FABRICATORS SHALL UTILIZE LOW STRESS STAMPS.
- FOR SIZE AND LOCATION OF ANCHOR BOLTS, SEE PIER, ABUTMENT AND BEARING DRAWINGS.
- STRUCTURAL STEEL PAINT COLOR SHALL BE FEDERAL STANDARD 25183.
- ALL STEEL SHALL BE METALIZED AND PAINTED EXCEPT THE BEARING ASSEMBLY. SEE BEARING SHEETS 30 AND 31 FOR METALIZING AND GALVANIZING REQUIREMENTS.

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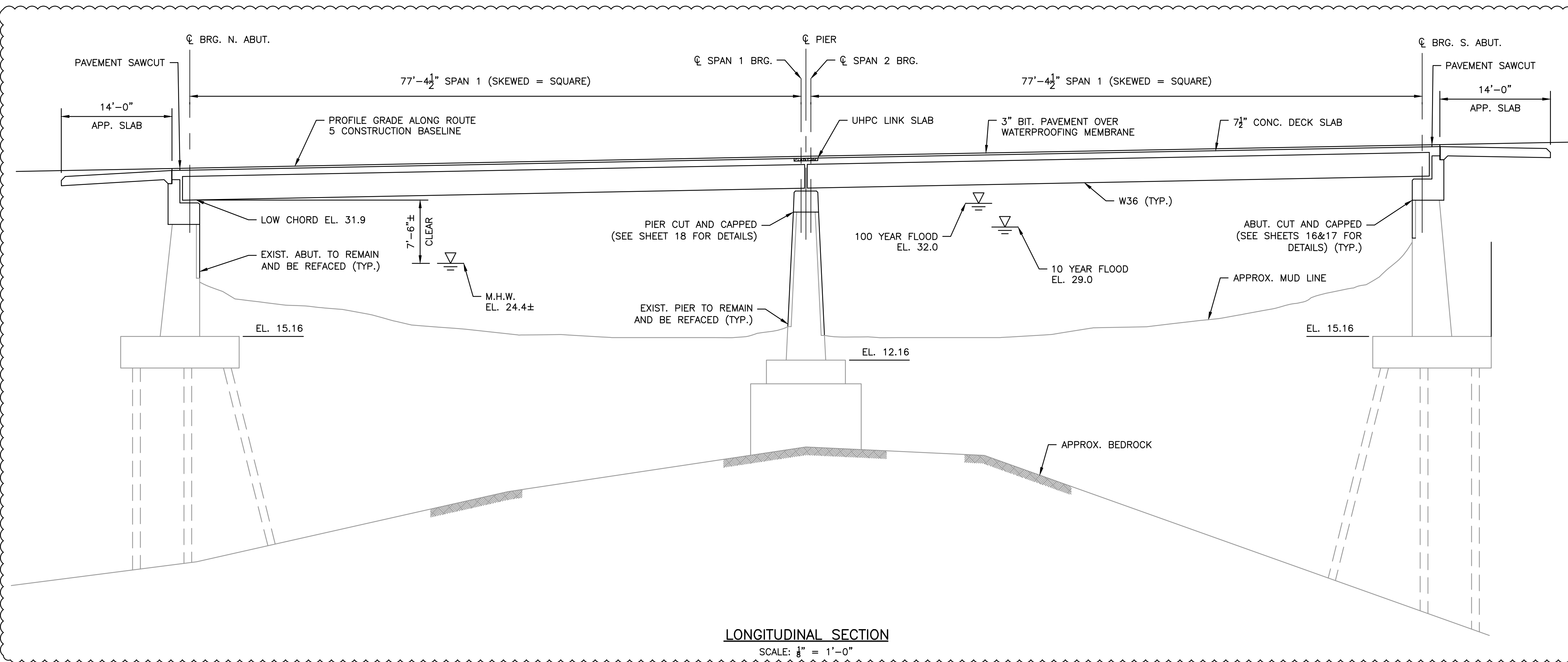
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

**BRIDGE REHABILITATION
TO
BRIDGE NO. 185**
WARWICK AND CRANSTON, RHODE ISLAND

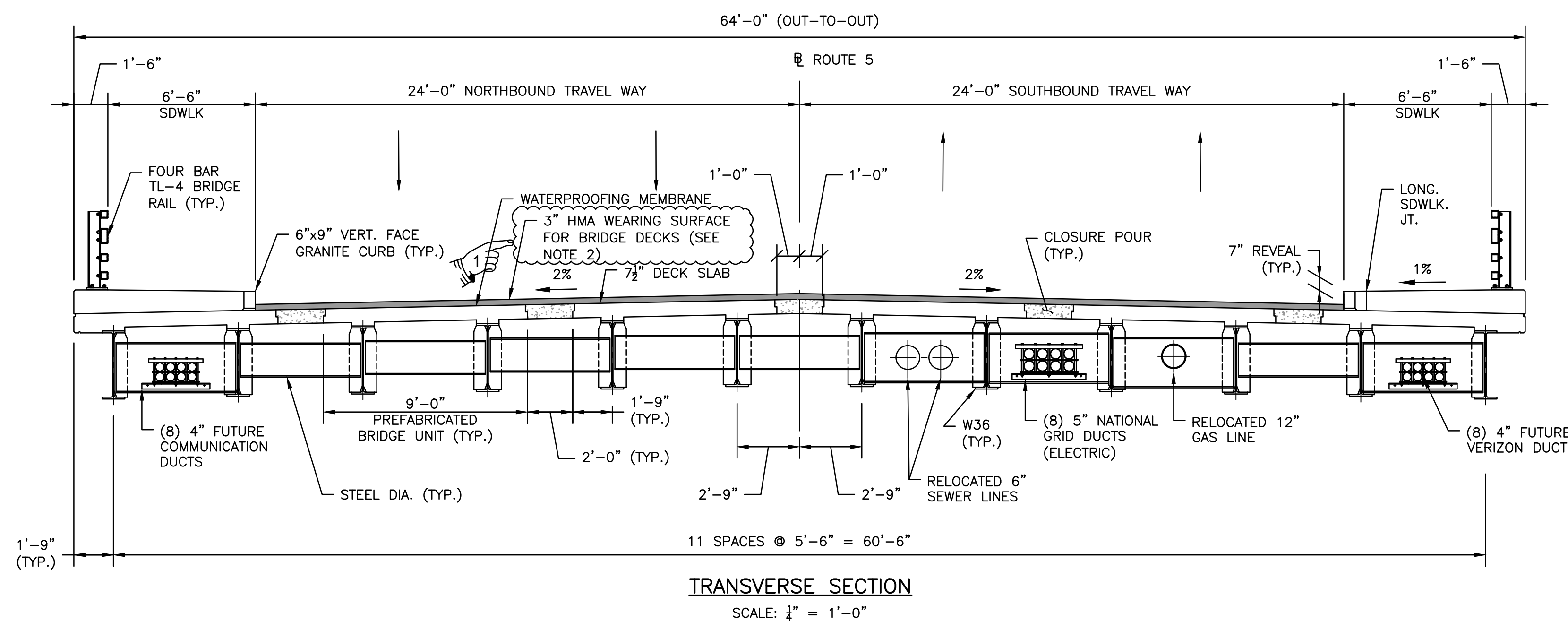
GENERAL NOTES (3 OF 4)

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NOTE:
1. FOR TYPICAL BRIDGE APPROACH SECTION SEE HIGHWAY PLANS VOLUME 1.
WEARING SURFACE NOTE:
2. 3" OF MODIFIED CLASS 9.5 HMA FOR BRIDGE DECKS POURED IN 1.5" LIFTS OVER HEAT-APPLIED PREFABRICATED MEMBRANE WATERPROOFING.



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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE REHABILITATION TO BRIDGE NO. 185
WARWICK AND CRANSTON, RHODE ISLAND

TYPICAL BRIDGE SECTIONS

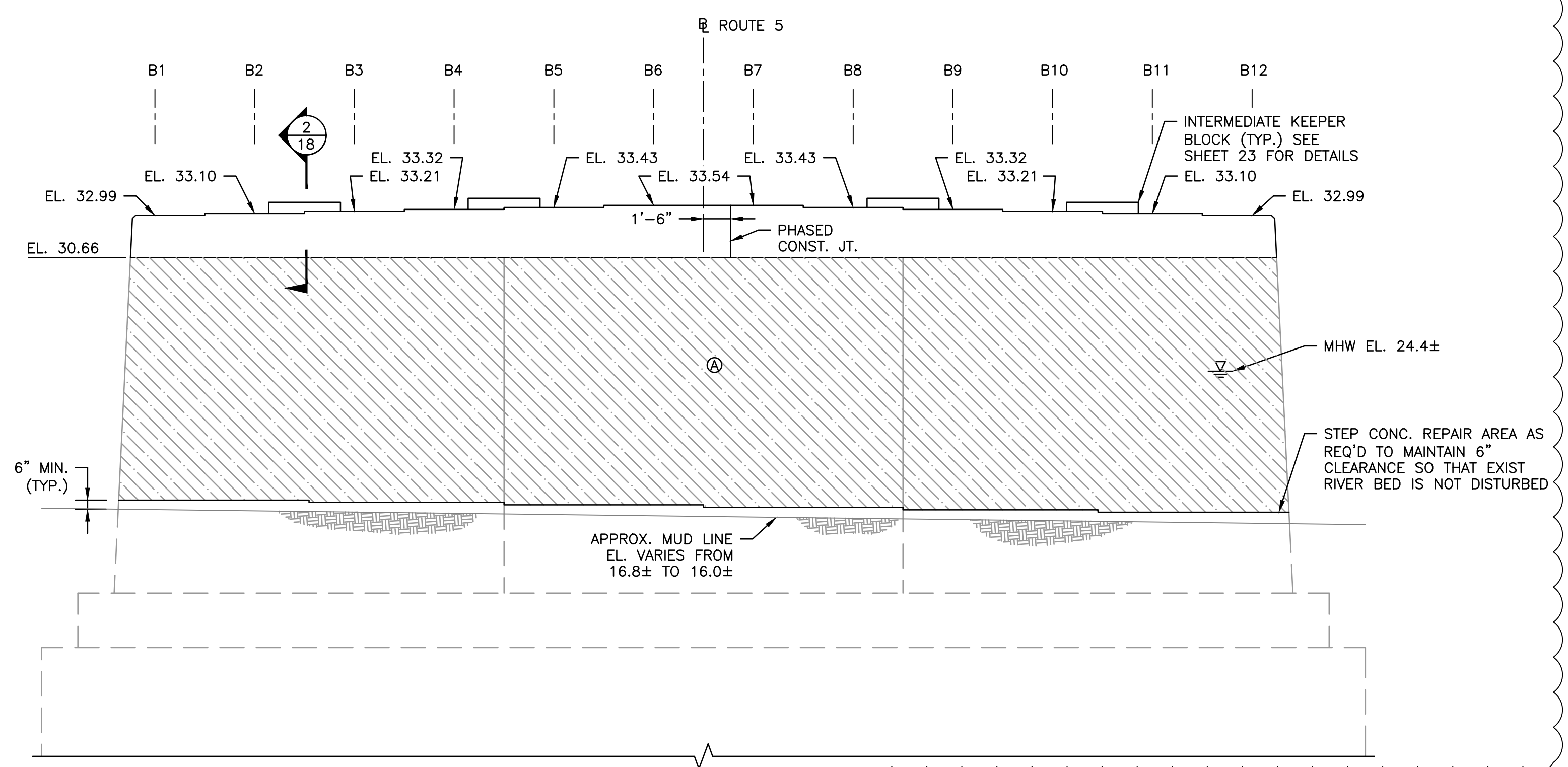
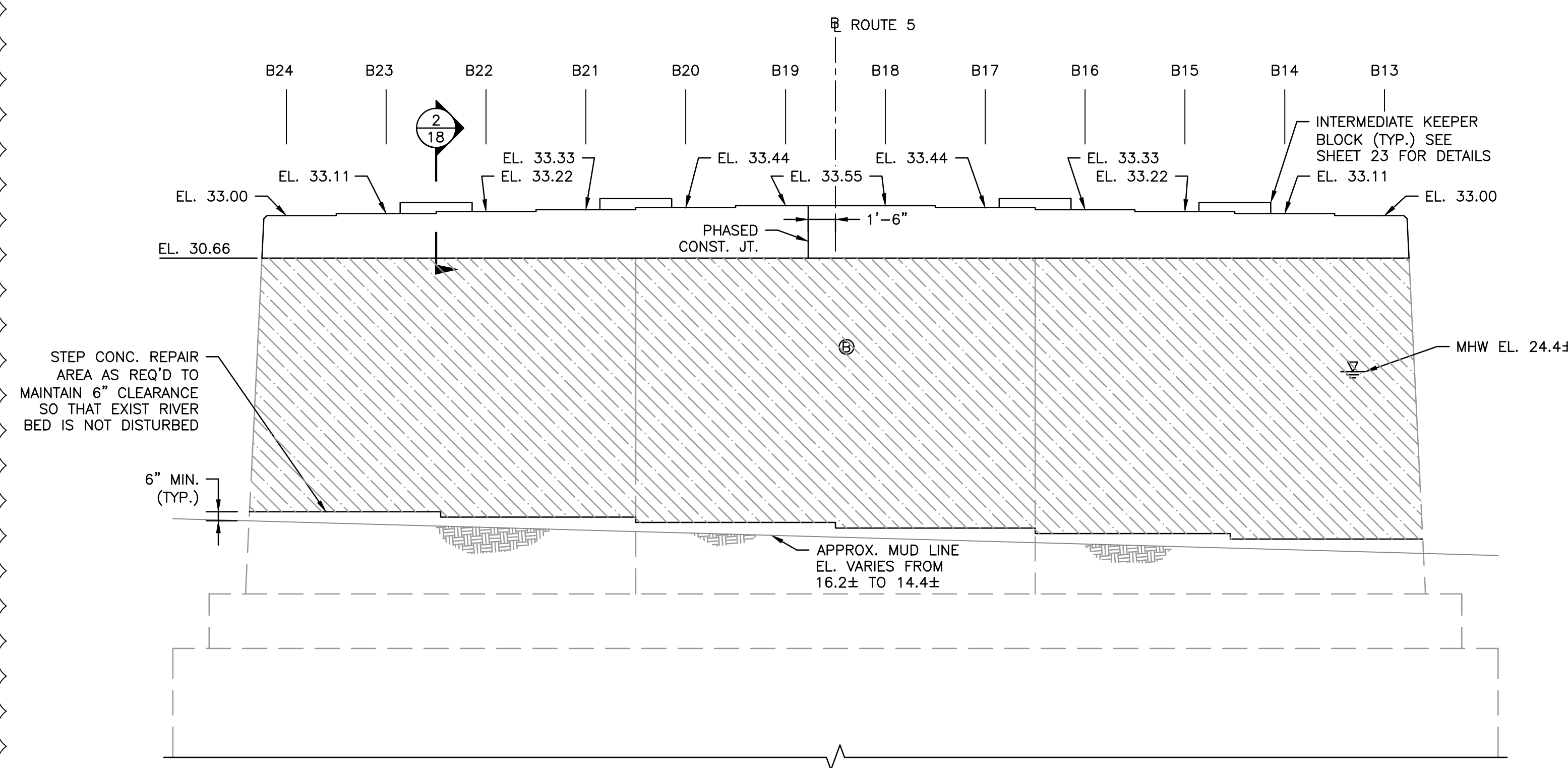
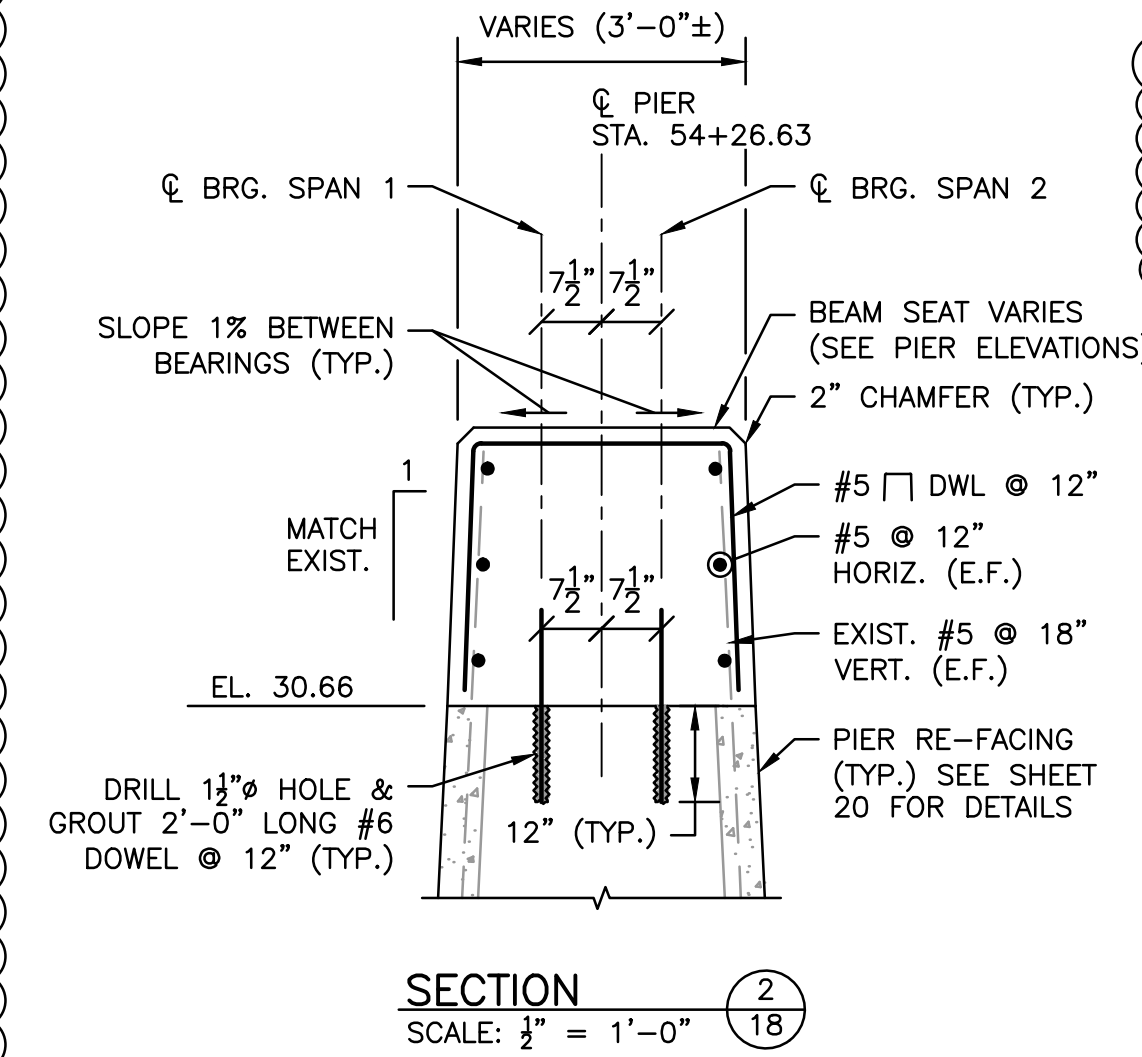
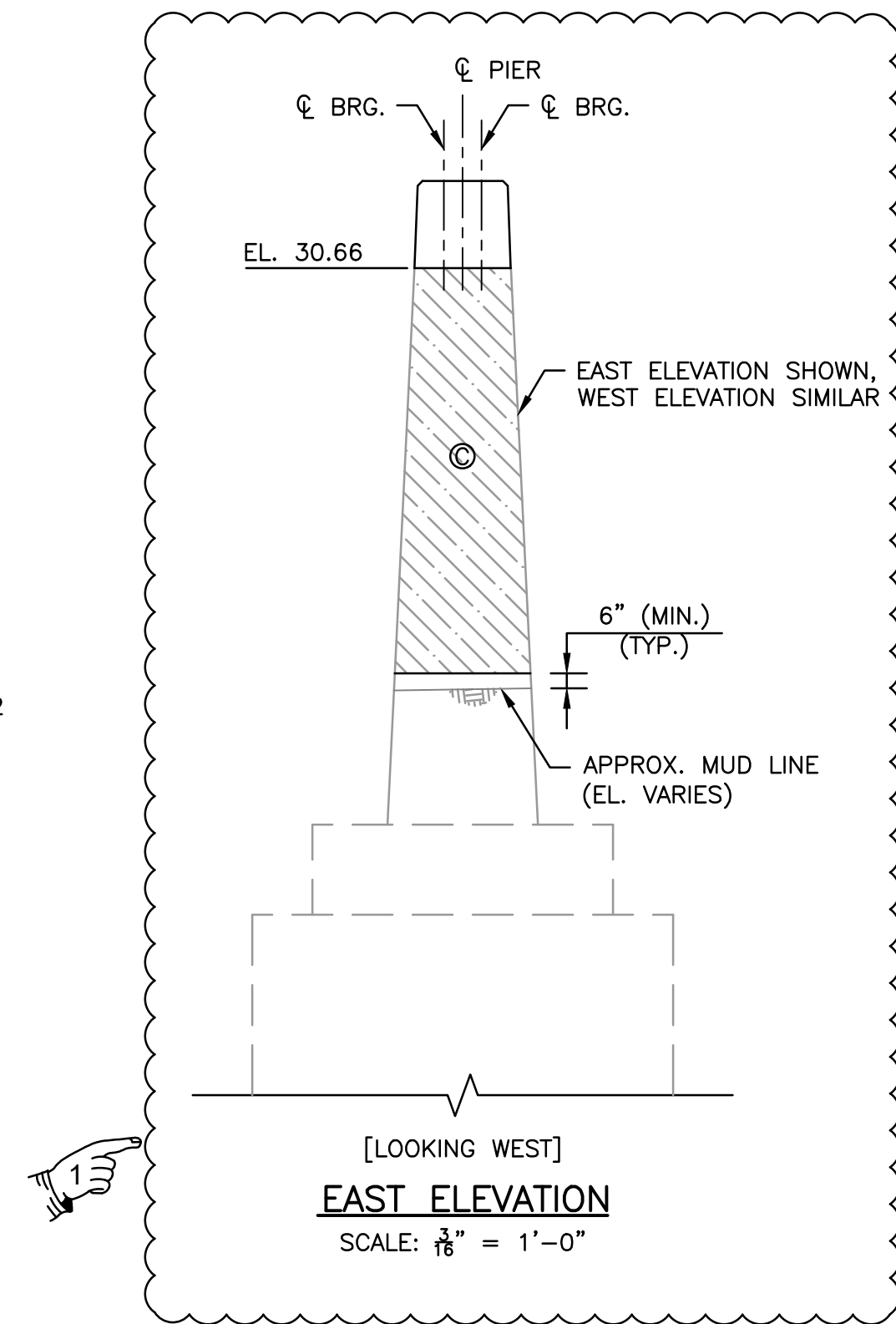
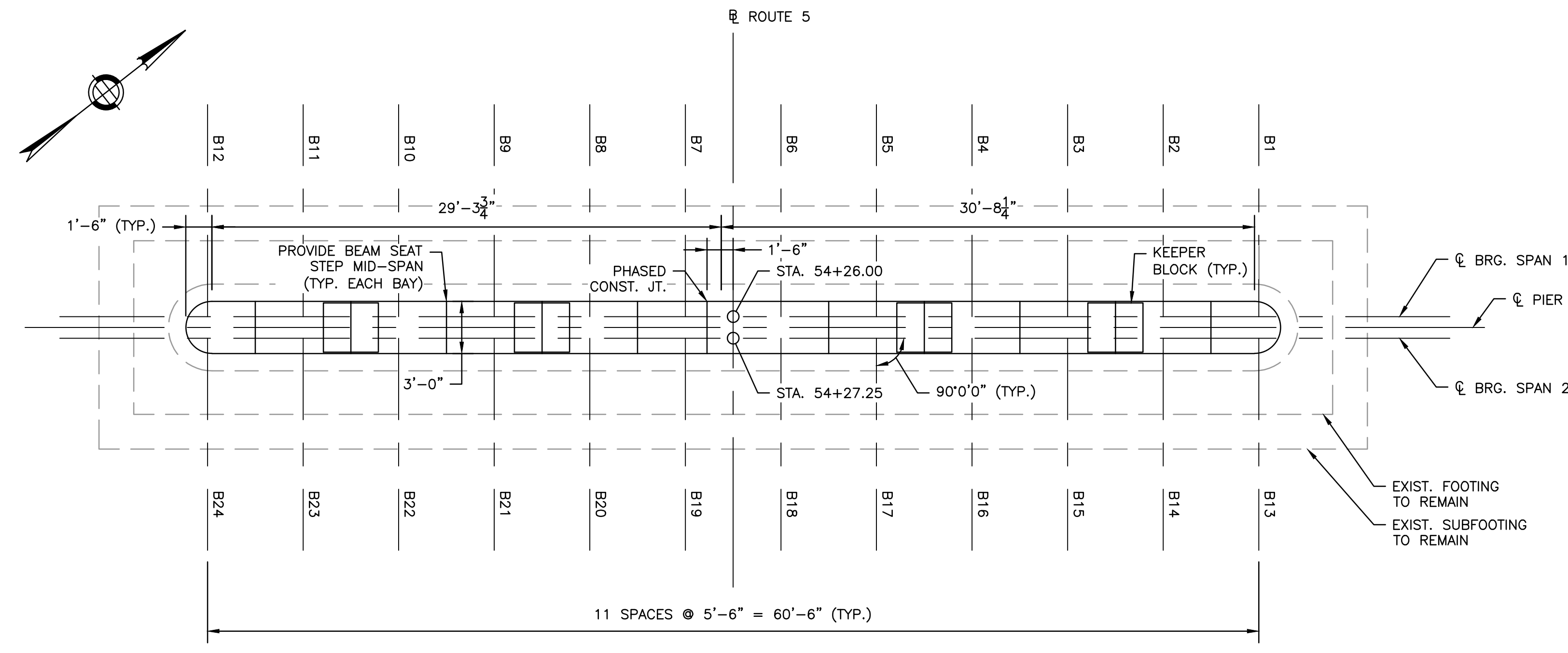


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R-1

- NOTES:**
- ALL EXISTING DIMENSIONS AND ELEVATIONS TAKEN FROM THE ORIGINAL CONSTRUCTION DRAWINGS.
 - AREA TO BE REPAIRED WITH CAST-IN-PLACE CONCRETE (SEE DETAIL ON SHEET 20) AND GALVANIC ENCAPSULATION INSTALLED.

REPAIR AREA:
 A = 65'x15'±
 B = 65'x16'±
 C = 14'x5'± (EACH SIDE)



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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE REHABILITATION TO BRIDGE NO. 185
 WARWICK AND CRANSTON, RHODE ISLAND

PIER PLAN, ELEVATION, & SECTION

CHECKED BY CJ DATE 2/18/2020 SCALE AS SHOWN



F. CLARIFICATION

1. Bid Questions

1. Bid Questions



Questions and Answers For:

Rt 5 - Lambert Lind Hwy C-1 (Mayfield Ave - I-95) 2020-CH-019

Please Note: *If this is the first time accessing our system on our new web site, you will be required to reset your password.*

**The ask question function is now disabled;
please call 401-563-4100 with any new questions.**

Date Asked: 05/01/2020

Date Answered: 05/05/2020

Poster: [Lee Taylor \(mailto:\)](mailto:Lee Taylor)

Company: D'Ambra Const. Co., Inc.

Question:

Page CS-8, 5th paragraph down states contractor to coordinate with Cities of Cranston/Warwick and all utility companies to ensure all scheduled utility work is "Completed" prior to contractor "Commencing" his work within this contract. At this time is RIDOT aware of any such projects that are scheduled? The way the paragraph is written work can not commence within the project even if some small incidental work by the cities/utility companies are being performed. This could have an impact on the project schedule.

Answer:

The utility coordination requirements are covered under Section 3 on CS Page 3 and therefore the paragraph in question will be deleted and will be revised in Addendum No. 1.

Date Asked: 04/29/2020

Date Answered: 05/04/2020

Poster: [Lee Taylor \(mailto:\)](mailto:Lee Taylor)

Company: D'Ambra Const. Co., Inc.

Question:

Please indicate which plan view shows access to the abutment areas for the work

Answer:

Access to the abutment areas are at the Contractor's discretion.

Date Asked: 04/29/2020

Date Answered: 05/04/2020

Poster: [Peter Calcagni \(mailto:\)](mailto:Peter.Calcagni)

Company: Manafort Brothers Inc

Question:

Does Cox Communication go in the same conduits duct bank as Verizon for the phase 2 switch or is the Cox remaining overhead for phase 2?

Answer:

Cox Communications is presently and in the future will remain overhead on existing poles as shown on the plans. As referenced in previous question, Verizon will consolidate existing underground service across the bridge and relocate to overhead in advance of the Phase 1 bridge work and will remain overhead. Communication duct banks to be installed for future use.

Date Asked: 04/29/2020

Date Answered: 05/04/2020

Poster: [Peter Calcagni \(mailto:\)](mailto:Peter.Calcagni)

Company: Manafort Brothers Inc

Question:

Can you provide an estimated duration of Verizon to install the duct bank on the bridge broken out per phase?

Answer:

Verizon will be relocating underground utilities overhead prior to the contractor starting Phase 1 of the bridge work. The intent is for this initial work to be complete prior to the 2021 construction season. Verizon will not be relocating their service back underground, the new duct bank is being installed for future use. Once Verizon relocates to overhead prior to Phase 1 bridge work, they will remain overhead and in place for phase 2.

Date Asked: 04/29/2020

Date Answered: 05/05/2020

Poster: [Peter Calcagni \(mailto:\)](mailto:Peter.Calcagni)

Company: Manafort Brothers Inc

Question:

Can you provide a estimated duration for National Grid Electric to perform the switch over from overhead to underground power between phase 1&2 including the demo of the overhead lines?

Answer:

National Grid is estimating approximately 4-5 weeks for their work associated with the bridge.

Date Asked: 04/28/2020

Date Answered: 05/04/2020

Poster: [Peter Calcagni \(mailto:\)](mailto:Peter.Calcagni@manafort.com)

Company: Manafort Brothers Inc

Question:

Is there any existing plans available for the bridge?

Answer:

Existing plans for the bridge are available from the Plan Room at the RIDOT. Original contract #6048.

Date Asked: 04/28/2020

Date Answered: 05/04/2020

Poster: [Raymond Giordano \(mailto:\)](mailto:Raymond.Giordano@cardi.com)

Company: Cardi Corporation

Question:

The typical section for Mayfield Avenue shows 43.1.0M sidewalk detail on both sides. On General plan 1 the sidewalk on the right side is labeled 43.1.0M and 43.1.0. Which is correct?

Answer:

The Typical Section is correct and the General Plan will be revised in Addendum No. 1.

Date Asked: 04/28/2020

Date Answered: 05/04/2020

Poster: [nicholas tanionos \(mailto:\)](mailto:nicholas.tanionos@specialtydiving.com)

Company: specialty diving services, inc.

Question:

- Soil Borings: o Please provide any available soil borings in vicinity of the pier structure to facilitate design of the cofferdam.

Answer:

Borings are included as part of Addendum 1 and can be found in Appendix H of the CS Pages. Borings include those from the original construction drawings taken circa 1960, and borings taken by GEO LOGIC, INC. in 2001.

Date Asked: 04/27/2020

Date Answered: 04/30/2020

Poster: [Lee Taylor \(mailto:\)](mailto:Lee.Taylor@dambrac.com)

Company: D'Ambra Const. Co., Inc.

Question:

Sheet #34 - Construction Details #2 shows slope faced concrete curbing in the island areas with exposed aggregate sidewalks (item #92). Please indicate the bid item this curbing will be paid for.

Answer:

A bid item for slope face curbing will be added in Addendum 1.

Date Asked: 04/23/2020**Date Answered:** 04/30/2020**Poster:** [WAYNE CLARKE \(mailto:\)](mailto:WAYNE CLARKE)**Company:** cardi corp**Question:**

In Volume 2, the 'Mud Line' elevations shown on Sheet 10 of 36 appear very different from the elevations noted on Sheet 17 of 36. Please clarify which bottom elevation represents the actual field conditions.

Answer:

Approximate mud line elevations on Sheet 10 and 18 have been edited per the 2017 RIDOT Underwater Inspection Report and will be included as part of Addendum 1.

Date Asked: 04/23/2020**Date Answered:** 04/30/2020**Poster:** [WAYNE CLARKE \(mailto:\)](mailto:WAYNE CLARKE)**Company:** cardi corp**Question:**

The plans are noting the bottom of the river as 'Mudline'. Is there a layer of mud or is the term 'Mudline' just noting the 'River Bottom'? if there is mud, how thick is the layer?

Answer:

The term "mudline" is noting the river bottom. Previous borings indicate the river bottom to be fine to course SAND.

Date Asked: 04/23/2020**Date Answered:** 04/30/2020**Poster:** [WAYNE CLARKE \(mailto:\)](mailto:WAYNE CLARKE)**Company:** cardi corp**Question:**

Were any boring taken in the river by the pier and/or abutments? if so, please provide.

Answer:

Borings will be included as part of Addendum 1 and can be found in Appendix H of the CS Pages. Borings include those from the original construction drawings taken circa 1960, and borings taken by GEO LOGIC, INC. in 2001.

Date Asked: 04/23/2020**Date Answered:** 04/30/2020

Poster: [WAYNE CLARKE \(mailto:\)](mailto:WAYNE CLARKE)

Company: cardi corp

Question:

Please provide the Normal Water Level (NWL) and Low Water Level (LWL).

Answer:

We are not in possession of the Normal Water Level (NWL) and Low Water Level (LW) elevations.

Date Asked: 04/23/2020

Date Answered: 04/30/2020

Poster: [WAYNE CLARKE \(mailto:\)](mailto:WAYNE CLARKE)

Company: cardi corp

Question:

In Volume 2, the 'Mud Line' elevations shown on Sheet 10 of 36 appear very different from the elevations noted on Sheet 18 of 36. Please clarify which bottom elevation represents the actual field conditions.

Answer:

Approximate mud line elevations on Sheet 10 have been edited to match Sheet 17. Sheet 10 Rev1 will be included in Addendum 1.

Date Asked: 04/20/2020

Date Answered: 04/23/2020

Poster: [Peter Calcagni \(mailto:\)](mailto:Peter Calcagni)

Company: Manafort Brothers Inc

Question:

The Environmental Permit only allows in water work with soil disturbance from July 1st-Oct 31st during low flow period. Does this mean that the cofferdam can only be installed between these dates?

Answer:

Any work that may disturb existing soil conditions, including installation of the cofferdam, can only be performed July 1st thru October 31st. The installed cofferdam may be left-in-place between Phase 1 and Phase 2 construction.

Date Asked: 04/20/2020

Date Answered: 04/23/2020

Poster: [Peter Calcagni \(mailto:\)](mailto:Peter Calcagni)

Company: Manafort Brothers Inc

Question:

If the contractor feels that they can meet the contract schedule building the bridge with a conventional cast in place deck using stay in place forms will this be allowed?

Answer:

RIDOT will consider value engineering proposals for a conventional cast-in-place concrete deck using removable forms.

Date Asked: 04/15/2020**Date Answered:** 04/23/2020**Poster:** [Lee Taylor \(mailto:\)](mailto:Lee Taylor)**Company:** D'Ambra Const. Co., Inc.**Question:**

At the pier work it may be necessary to use a concrete tremi-pour seal between the existing footing and the temp cofferdam to enable dewatering for pier refacing. This would require removal of the river bottom material below the existing mud line. Will this be allowed, and will the tremi concrete be allowed to remain in place after the completion of the work?

Answer:

This will not be allowed. Earthwork done inside the cofferdam must be a temporary disturbance. Removal of river bottom material is not allowed under the permit.

Date Asked: 04/13/2020**Date Answered:** 04/14/2020**Poster:** [WAYNE CLARKE \(mailto:\)](mailto:WAYNE CLARKE)**Company:** cardi corp**Question:**

Please disregard the question pertaining to the cofferdam at the center pier. I see the notes stating to perform the work in phases. Thank you.

Answer:

Noted. Thank you.

Date Asked: 04/13/2020**Date Answered:** 04/14/2020**Poster:** [WAYNE CLARKE \(mailto:\)](mailto:WAYNE CLARKE)**Company:** cardi corp**Question:**

The Bridge plans show a steel closed cofferdam around the center pier with sheeting extending down to bedrock (not done in phases). The length of sheets from the 10 Year Flood Elevation to the bedrock is ~28 feet long. The M.H.W. Elevation to the mud line is ~18 feet. How are the ~28 steel sheets supposed to be installed with the limited headroom as shown?

Answer:

No response required.