October 4, 2012

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATION
DEPARTMENT OF TRANSPORTATION

RHODE ISLAND CONTRACT NO.2012-CH-018

FEDERAL-AID PROJECT NO. FAP Nos: STP-HSIP(001), STP-RESF(215)

Route 165 Reclamation

Route 3 to the Connecticut State Line

CITY/TOWN OF Exeter

COUNTY OF WASHINGTON

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. Clarification

1. Pre-Bid Meeting

   1. Warm Mix Asphalts are to be used on this job.

   2. Rhode Island Contract No. 8654 was added to the contract disc for information only.

   3. Pre-Bid sign in sheet has been provided as part of this Addendum No. 1

B. Contract Documents

1. Scope of Work

   1. Delete CS-2 in its entirety and replace it with CS-2(R-1) attached to this Addendum No. 1. The survey requirements have changed.

   2. Delete CS-7 in its entirety and replace it with CS-7(R-1) attached to this Addendum No. 1. Paragraph 19 has changed. .

C. Specifications

1. Job Specific

   1. Delete Index Pages JS- i, JS-ii, and JS-iii in their entirety and replace them with Index Pages JS-i (R-1), JS-ii(R-1), and JS-iii(R-1) attached to this Addendum No. 1. The pages have changed.

2. Delete JS-3 in its entirety and replace it with JS-3 (R-1) attached to this Addendum No. 1. Construction methods paragraph has changed.

3. Delete JS-9 through JS-13 in their entirety and replace them with JS-9(R-1) through JS-13(R-1) attached to this Addendum No. 1. Class 19.0 Hot Mix Asphalt with Pay Factors and Warm Mix Asphalt Specification has changed.

4. Insert new pages JS-13a and JS-13b in their entirety to this Addendum No. 1. Class 19.0 Hot Mix Asphalt with Pay Factors and Warm Mix Asphalt Specification has changed.

5. Delete JS-14 through JS-18 in their entirety and replace them with JS-14(R-1) through JS-18(R-1) attached to this Addendum No. 1. Modified Class 12.5 Hot Mix Asphalt with Pay Factors and Warm Mix Asphalt Specification has changed.

6. Insert new pages JS-18a and JS-18b in their entirety to this Addendum No. 1. Modified Class 12.5 Hot Mix Asphalt with Pay Factors and Warm Mix Asphalt Specification has changed.

7. Delete JS-19 through JS-22 in their entirety and replace them with JS-19(R-1) through JS-22(R-1) attached to this Addendum No. 1. Class 9.5 Hot Mix Asphalt Specification has changed.

8. Insert new page JS-22a in its entirety to this Addendum No. 1. Class 9.5 Hot Mix Asphalt Specification has changed.

9. Delete JS-37 in its entirety and replace it with JS-37(R-1) attached to this Addendum No. 1. Installer Qualifications has been deleted from Item Code 406.9905 - Geogrid Mechanically Stabilized Layer.

10. Delete JS-38 in its entirety and replace it with JS-38(R-1) attached to this Addendum No. 1. Basis of Payment has changed.

11. Delete JS-45 and JS-46 in their entirety and replace them with JS-45(R-1) and JS-46(R-1) attached to this Addendum No. 1. Integrally Colored Concrete specification has changed.

12. Delete JS-47 through JS-49 in their entirety and replace them with JS-47(R-1) through JS-49(R-1) attached to this Addendum No.1. The Wood River Bridge No. 340 – Superstructure specification has changed.

13. Delete JS-50 through JS-52 in their entirety and replace them with JS-50(R-1) through JS-52(R-1) attached to this Addendum No. 1. The Wood River Bridge No. 340 – Remove and Dispose Portion of Existing Superstructure Wood River Bridge No. 340 specification has changed.

14. Delete JS-59 in its entirety and replace it with JS-59(R-1) attached to this Addendum No. 1. Sentence on traffic control has been removed.

15. Delete JS-62 in its entirety and replace it with JS-62(R-1) attached to this Addendum No. 1. RI STD 34.5.4 was changed to 34.5.3.

16. Delete JS-64 and JS-65 in their entirety and replace them with JS-64(R-1) and JS-65(R-1) attached to this Addendum No. 1. Specification has been deleted.

17. Delete JS-87 in its entirety and replace it with JS-87(R-1) attached to this Addendum No. 1. The Text and Construction Methods paragraphs have changed.

18. Insert new pages JS-90 through JS-93 in their entirety attached to this Addendum No. 1. Galvanized Bar Reinforcement for Structures specification has been added.

19. Insert new JS-94 in its entirety attached to this Addendum No. 1. Bituminous Berm specification has been added.

D. Distribution of Quantities

1. DoQ Pages

1. Delete Index Pages 1 through 4 in their entirety and replace them with Index Pages 1(R-1) through 4(R-1) attached to this Addendum No. 1. Various items in the DoQ have been added, deleted or changed.

2. Delete Pages 1 through 3 in their entirety and replace them with Pages 1 (R-1) through 3(R-1) attached to this Addendum No. 1. Items 4 and 11 have changed.

3. Insert new Page 3a in its entirety to this Addendum No. 1. Page ran over to the next page.

4. Delete Page 4 in its entirety and replace it with Page 4(R-1) attached to this Addendum No. 1. Item 12 ran over into the next page.

5. Delete Page 9 in its entirety and replace it with Page 9(R-1) attached to this Addendum No. 1. Item 18 was deleted.

6. Delete Page 10 in its entirety and replace it with Page 10(R-1) attached to this Addendum No. 1. Items 21 and 22 have changed.

7. Insert new Page 10a in its entirety to this Addendum No. 1. Item 25 ran over the page. Please see Page 11 for continuance.

8. Delete Page 11 in its entirety and replace it with Page 11(R-1) attached to this Addendum No. 1. Items have changed.

9. Insert new Page 11a in its entirety to this Addendum No. 1. Item 31 ran over to the next page.

10. Delete Page 36 in its entirety and replace it with Page 36(R-1) attached to this Addendum No. 1. Item S070 has changed.

11. Delete Pages 38 and 39 in their entirety and replace them with Page 38(R-1) and Page 39(R-1) attached to this Addendum No. 1. Items 73 and 79 ran over into the next page.

12. Insert new Page 39a in its entirety to this Addendum No. 1. Item 79 ran over to the next page.

13. Delete Page 40 in its entirety and replace it with Page 40(R-1) attached to this Addendum No. 1. Item 79 ran over into the next page.

14. Delete Page 43 in its entirety and replace it with Page 43(R-1) attached to this Addendum No. 1. Item 87 has changed.

15. Delete Page 44 in its entirety and replace it with Page 44(R-1) attached to this Addendum No. 1. Item 91 has changed.

16. Insert new Page 44a in its entirety to this Addendum No. 1. Item 91 ran over to the next page.

17. Delete Page 45 in its entirety and replace it with Page 45(R-1) attached to this Addendum No. 1. Item 91 ran over to the next page.

18. Insert new Page 45a in its entirety to this Addendum No. 1. Item 92 ran over to the next page.

19. Delete Page 46 in its entirety and replace it with Page 46(R-1) attached to this Addendum No. 1. Item 97 has been deleted.

20. Delete Page 47 in its entirety and replace it with Page 47(R-1) attached to this Addendum No. 1. Item 100 has been deleted.

21. Delete Page 48 in its entirety and replace it with Page 48(R-1) attached to this Addendum No. 1. Item 100 has been deleted.

22. Delete Page 51 in its entirety and replace it with Page 51(R-1) attached to this Addendum No. 1. Page has changed.

23. Insert new Page 51a in its entirety to this Addendum No. 1. Item 114 ran over to the next page.

24. Delete Page 60 in its entirety and replace it with Page 60(R-1) attached to this Addendum No. 1. Page has changed.

25. Delete Page 61 in its entirety and replace it with Page 61(R-1) attached to this Addendum No. 1. Items S129 and S130 have been deleted.

26. Delete Page 62 in its entirety and replace it with Pages 62(R-1) attached to this Addendum No. 1. Page has changed.

27. Insert new Pages 63, 64, 65 and 66 in their entirety to this Addendum No. 1. Items 138 through 153 have been added.

E. Plans

1. General

1. Delete Sheet 5 in its entirety and replace it with Sheet 5(R-1) attached to this Addendum No. 1. The notes have changed.

2. Delete Sheet 6 in its entirety and replace it with Sheet 6(R-1) attached to this Addendum No. 1. Handholds and fiber optic cable have been added to stations 15+50 to 16+00. Guardrail std 34.5.4 has been changed to 34.5.3.

3. Delete Sheet 9 in its entirety and replace it with Sheet 9(R-1) attached to this Addendum No. 1. Striping detail has changed.

4. Delete Sheet 15 in its entirety and replace it with Sheet 15(R-1) attached to this Addendum No. 1. Guardrail std 34.5.4 has been changed to 34.5.3.

5. Delete Sheet 16 in its entirety and replace it with Sheet 16(R-1) attached to this Addendum No. 1. Guardrail std 34.5.4 has been changed to 34.5.3.

6. Delete Sheet 21 in its entirety and replace it with Sheet 21(R-1) attached to this Addendum No. 1. Label was added to station 332+50. Existing sidewalk and bridge curbing on Bridge 342 are not to be touched.

7. Insert new Sheet 24A in its entirety to this Addendum No. 1. Plan has been added.

8. Insert new 21 Sheets for Information Only concerning the as built plans for Ten Rod Road Bridges 339, 340, 341 and 342. attached to this Addendum No. 1.

RI Department of Transportation
Chief Engineer

State of Rhode Island and Providence Plantations
2 Capitol Hill, Providence RI 02903
Sign – In - Sheet

PROJECT: Reclamation of Route 165 R.I. CONTRACT NO: 2012-CH-018

SUBJECT: Pre-Bid DATE: 9·27·2012

MEETING LOCATION: Construction Conference Room

NAME	ORGANIZATION	PHONE	EMAIL
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Emilie Holland			
Barry Simpson			

ADDENDUM NO. 1

All work shall be completed in accordance with the Traffic-Related Work Restrictions indicated in the Transportation Management Plan. The schedule submission requirement is "B".

The Contractor shall perform a survey baseline and edge shots at 50 foot intervals. The survey data shall be given to the Resident Engineer and Design Engineer 2 weeks prior to the start of construction operations. The Contractor shall perform a final survey from top of reclaimed grades before paving operations. Contractor shall match final grades and sections after paving 100 feet before and after all bridges. It will be the responsibility of the Contractor/Survey party to develop a grade plan based on sections taken and typical sections required. The roadway has rutted over the years and grades may need to be modified and it is permissible to raise the grades uniformly.

The pavement make up is 2.5" of Class 19.0 Hot Mix Asphalt with Pay Factors and Warm Mix Asphalt and 2.00" of Modified Class 12.5 Hot Mix Asphalt with Pay Factors and Warm Mix Asphalt from Route 3 to the Connecticut State Line. The fluffing of the reclamation material will be incidental to excavation and removal. The reclamation material removed shall be based on quantity of material prior to recycling. The contractor shall determine the fluff factor. Any extra material shall be used for shoulder repair and under mail boxes.

Side streets and driveways are to be done concurrently with paving operations.

The following provisions applies if traffic will be allowed in areas where pavement is to be removed at the end of the work day. The Contractor shall at the end of each working day the pavement removal operation leave a "squared-off" condition, approximately perpendicular to the direction of travel. Existing gravel or temporary patch material may be used to construct slopes. This material is to be removed before paving operations and the cost shall be considered incidental to the contract. The Contractor shall place W8-1 (36"x36") "BUMP AHEAD" and "BUMP" signs at each drop-off for each direction of traffic.

5. SPECIAL REQUIREMENTS FOR TRAFFIC PROTECTION

In addition to the requirements of the Standard Specifications for Road and Bridge Construction and the special requirements of other sections of this contract document, the following requirements shall be undertaken by the Contractor.

1. The Contractor shall be required to install and maintain proper warning and construction signing and protective devices at each work location to conform with the latest "Manual on Uniform Traffic Control Devices", including all revisions. All Maintenance and Protection of Traffic Devices shall be in place and approved by the Engineer prior to starting construction at a particular location. This work shall be included under item 937.0200, "Maintenance and Protection of Traffic Protection". There will be no separate pay item.
2. The Contractor shall install and maintain a Rhode Island Standard 26.2.0 Polyethylene Drum with Markings at each location where either adjustments to grade and/or reconstruction of drainage and utility structures have been made until resurfacing work has been performed. Other types of protective devices may be used, if approved by the Engineer.

(R-1)

18. RIDEABILITY

This contract is subject to a rideability price adjustment. See job specification 413. The specification covers pavement smoothness as determined by the Engineer and unit price adjustments in accordance to the rating scale based on final rideability determination. The pre-construction average International Roughness Index (IRI) provided by Mass Highway can be found in appendix C.

19. OPENING SECTIONS OF PROJECT TO TRAFFIC

The contractor shall schedule pavement removal by reclamation such that no location within the limits of the project over which traffic flow is to be maintained shall remain without a Class 19.0 Hot Mix Asphalt for longer than 7 working days, unless otherwise approved in writing by the engineer.

20. GENERAL NOTES – UTILITIES PIEZO INSTALLATION

The Contractor is to run #6 bare ground wire through all PVC conduits. Cost of the wire shall be considered incidental to the price of the conduit.

All handholes shall have ground rods and bare ground wire connected to bare ground wire running through the conduit system.

21. GENERAL NOTES – CONSTRUCTION PIEZO INSTALLATION

A. All piezo loop sites shall have dry-cut loop installation.

B. The connection of the loop wire to the existing control cabinet and power supply will be considered incidental to the installation of the loop wire. There will be no separate payment for the connection.

C. Any damage to the existing equipment during construction is the responsibility of the Contractor. Repair or replacement to the satisfaction of the Engineer will occur at no cost to the State.

22. STORMWATER POLLUTION PREVENTION PLAN

The Department of Transportation has prepared a Stormwater Pollution Prevention Plan for this project, pursuant to the Rhode Island Department of Environmental Management (RIDEM) Rhode Island Pollutant Discharge Elimination System (RIPDES) Program regulations (amended February 5, 2003). This SWPPP provides guidance for complying with the terms and conditions required under the General Permit, however, this document does not negate or eliminate the need to understand and adhere to all applicable RIPDES regulations.

Addendum No. 1

SPECIAL PROVISIONS/CONSTRUCTION INDEX

Item Code	Title	Page
12.108.1000	Prosecution and Progress	JS-1
12.109.07	Partial Payment of Lump Sum Items	JS-2
206.9901	Inlet Sediment Control	JS-3
207.9901	Compost Filter Sock 12" Diameter	JS-4
212.1000	Maintenance and Cleaning of Erosion and Pollution Controls	JS-6
401	Safety Edge	JS-7
401.9901	Class 19 Hot Mix Asphalt with Pay Factors and Warm Mix Asphalt	JS-9
401.9902	Modified Class 12.5 Hot Mix Asphalt with Pay Factors and Warm Mix Asphalt	JS-14
401.9903	Class 9.5 Hot Mix Asphalt	JS-19
401.9904	**Class 9.5 Hot Mix Asphalt for Bridge 342**	
406.9901	Cold Recycled Base Course Calcium Chloride	JS-23
406.9903	Cold Recycled Base Course Bituminous Stabilizer	JS-26
406.9904	Pavement Reclamation with Cement	JS-29
406.9905	Geogrid Mechanically Stabilized Layer	JS-36

SPECIAL PROVISIONS/CONSTRUCTION INDEX

410.9901	Insitu Pavement Displacement Sensors and Measurement Systems	JS-39
413	Rideability	JS-41
413.9901	Rideability Price Adjustment	JS-44
601.9901	Integrally Colored Concrete	JS-45
800.9901	Wood River Bridge No. 340 – Superstructure	JS-47
800.9911	Resurfacing Roaring Brook Bridge No. 339	JS-49
800.9912	Resurfacing Wood River Bridge No. 340	
800.9913	Resurfacing Parris Brook Bridge No. 341	
800.9914	Resurfacing Beach Pond bridge No. 342	
803.9902	R&D Portions of Existing Superstructure – Wood River Br. 340	JS-50
813	Waterproofing and Damp Proofing	JS-53
818.9901	Concrete Bridge Deck Slab Repair	JS-58
901.9902	Guardrail End Treatment Absorbing Terminal	JS-60
901.9908	Steel Thrie Beam Guardrail **Single** Face RI Std **34.5.3**	JS-62
901.9909	Steel Thrie Beam Transitional Section	JS-63
931.9901	**Specification Deleted**	**JS-64**
937.1000	Maintenance and Movement of Traffic Protective Devices	JS-66

SPECIAL PROVISIONS/CONSTRUCTION INDEX

938.1000	Price Adjustments	JS-67
L.02.1000	Seeding	JS-68
T06.9901	1" Flexible PVC Conduit	JS-69
T06.9902	1" Flexible Metallic Liquid Tight Conduit	JS-70
T06.9903	1-1/4 inch High Density Polyethylene – Corrugated Innerduct	JS-71
T13.9901	Class I Piezoelectric Sensors	JS-73
T13.9902	AVC/WIM Pavement Temperature Sensor	JS-76
T13.9903	Traffic Detector - Loop (Dry Cut)	JS-78
T15	Sign Inventory	JS-81
T18.9901	Ground Mounted Steel Post Delineator – Single White Reflector 5-1/2" x 12"	JS-83
18.9902	Object Markers	JS-85
T18.9913	Guardrail End Terminal Delineator	JS-86
T19.9901	Mile Post Marker	JS-87
T20.9920/9922	Reflectorized Pavement Marker	JS-88
810.99	**Galvanized Bar Reinforcement for Structures**	**JS-90**
906	**Bituminous Berm**	**JS-94**

Job Specific **(R-1)**
2012-CH-018
ITEM CODE 206.9901
INLET SEDIMENT CONTROL

DESCRIPTION:

This work shall consist of furnishing and installing individual sediment bags at each catch basin within the project area, and removing them at the completion of the project. The purpose of these bags is to catch construction related sediment prior to its entry into the existing highway storm drainage system.

MATERIALS:

The Sediment catchment bags shall be pre-manufactured for the express purpose described here-in, and shall be constructed of an engineered textile material. While the plans details depict a specific manufactured product, an acceptable equal may be proposed by the Contractor, subject to Engineer review and approval.

CONSTRUCTION METHODS:

The Contractor shall be responsible for providing to the Engineer two (2) copies of the manufacturer's instructions for the installation and maintenance of the Inlet Sediment Control, and the installation and maintenance shall conform to these instructions.
The installation of the Inlet Sediment Control Devices shall take place:

- **Inlet sediment control devices shall be installed and cleaning and flushing of storm drainage system shall be complete before earth disturbance for any construction occurs in those particular locations. Inlet Sediment Controls shall be removed during winter shutdown and reset in the spring.**

METHOD OF MEASUREMENT:

"Inlet Sediment Control" as indicated on the plans or as directed by the engineer will be measured per EACH, representing the number of catch basins actually furnished with the Inlet Sediment Control device in accordance with the plans or as directed by the engineer.

BASIS OF PAYMENT :

The accepted quantities of **"Inlet Sediment Control"** will be paid for at the contract unit price per "EACH" as listed in the Proposal. This price so-stated constitutes full and complete compensation for all labor, materials, equipment, tools and incidentals necessary to finish the work, complete and accepted by the Engineer.

No separate payment will be made for the replacement of devices deemed by the Engineer to be the result of the Contractor's operations.

The cleaning and maintenance of the Inlet Sediment Control devices shall be paid for under the bid item for "Cleaning and Maintenance of Erosion Controls."

Addendum No. 1

Special Provision 401.9901
Class 19.0 Hot Mix Asphalt with Pay Factors and Warm Mix Asphalt

xxx.01 DESCRIPTION.

Class 19.0 with Pay Adjustments shall conform to the requirements of the RI Standard Specifications for Road and Bridge Construction with the following exceptions and modifications.

xxx.02 MATERIALS.

1. Aggregate

The aggregate shall conform to the 3 to <10 million ESAL requirements of Table 5 in AASHTO M 323. No more than 10% of the aggregate shall be natural sand. All aggregate properties of Section M.03 shall apply.

2. Performance Graded Binder

The binder shall meet the requirements of PG 64-22, Grade S as specified in AASHTO M 320 and MP 19. Table 2 of AASHTO M 323 shall be used to determine any changes to the binder grade due to the addition of RAP. The contractor shall use an approved warm mix additive (WMA) at a dosage rate recommended by the manufacturer. Only chemical or organic WMAs may be used. Mechanical water injection will not be allowed.

3. Mix Design

HMA mixes shall conform to AASHTO M 323, "Standard Specification for Superpave Volumetric Mix Design". The design procedure shall follow AASHTO R 35 "Standard Practice for Superpave Volumetric Design for Hot-Mix Asphalt (HMA)". The design specifications found in AASHTO M 323 shall supersede those found in the RI Standard Specifications for Road and Bridge Construction. A mix design using PG 64-22 Grade S shall be used to determine the design binder content. The voids in the mineral aggregate (VMA) and $VMA_{effective}$ shall be calculated for each asphalt content during the mix design process. The following specific requirements and exceptions to AASHTO M 323 shall apply.

a. Mixes shall be designed with a 0%, 10%, 15%, 20% or 25% RAP content.

b. $N_{initial}$ shall be 6, N_{design} shall be 50 and N_{max} shall be 75 gyrations.

c. A moisture susceptibility test will not be required.

d. The mix shall be designed at 4% voids.

e. The VMA shall be greater than or equal to 14.5%.

f. The voids filled with asphalt (VFA) shall be 70 to 80%.

g. The mix shall be coarse graded as defined in Section 6.1.3 of AASHTO M 323.

h. The dust to binder ratio ($P_{0.075}/P_{be}$) shall be 0.5 – 1.0. The design effective binder content shall be used to calculate this ratio.

i. In addition to the sieves listed in Table 3 of AASHTO M 323, the 0.600 mm, 0.300 mm and 0.150 mm sieves will be required. The 50.0 mm and 37.5 mm sieves will not be required.

The following procedures shall be adhered to for the mix design:

- Three aggregate trial blends shall be submitted and accepted before beginning the mix design procedure.
- All trial mixture data and calculations determined for Section 9 of AASHTO R 35 shall be submitted to the Engineer. The Engineer will determine which trial mixture shall be used for the mix design procedure.
- After the mix design is completed it shall be submitted to the Engineer for acceptance.
- The correction factors for the ignition furnace in the plant lab shall be provided.

The gyratory cores and Rice (AASHTO T 209) samples at the design binder content shall be submitted to the Engineer.

A successful plant trial batch shall be performed before beginning production of HMA.

xxx.03 CONSTRUCTION METHODS.

1. Plant Laboratory

In addition to the requirements of Section 930, the contractor provided lab shall be equipped with the following:

- Gyratory compactor conforming to AASHTO T 312 and two molds.

- All equipment required to determine the theoretical maximum specific gravity in accordance with AASHTO T 209 Test Method A and Section 13.1. A metal pycnometer and electronic digital vacuum gauge shall also be provided.

- All sieves required for the mix design process.

- Facilities and equipment to perform a wet-wash in accordance with AASHTO T 30 and a faucet spray hose shall be provided.

2. Production Tolerances

In the event that the air void content deviates from the design air void content by more than 2.0% or if the binder content deviates from the design binder content by more than 0.5% for any single test, the plant shall cease production of HMA. Production will be allowed to resume after completion of a successful trial batch.

The following tolerances for gradation shall apply:

25.0mm	100%
19.0mm	90% - 100%
12.5mm	90% max
2.36mm	Established by the mix design ± 5%
0.075mm	Greater than or equal to 2.0%

3. Mix Production – Lots and Sublots

One standard lot shall be 3000 tons and one standard sublot shall be 600 tons for HMA sampled at the plant. An acceptance test will be performed once every sublot.

In the event production of a specific mix finishes for the contract before a standard 600 ton sublot is completed, the HMA tonnage will be added to the previous sublot if it is less than 300 tons or will be considered a separate sublot if it is greater than or equal to 300 tons.

If a test is not performed on a sublot then the quantity in that sublot will be combined with the previous sublot and the previous test result will be apply to this combined sublot.

If the quantity of HMA needed to finish production is projected to be less than 600 tons, a sample may be taken at the Engineer's discretion.

If one or two sublots are tested after the end of the final standard 3000 ton lot, they will be added to the previous lot. Three or more sublots will constitute a new lot.

4. Pay Adjustments

The following pay adjustments for deviation from the Design Binder Content (DBC) established by the mix design will apply:

Deviation from DBC	Pay Adjustment
Less than or equal to 0.2 %	103%
0.3%	101%
0.4%	100%
0.5%	95%
0.6%	85%
0.7%	70%
0.8%	60%
Greater than 0.8 %	Remove and Replace

The following pay adjustments for deviation from the design air void content will apply:

Deviation from Design Air Void Content	Pay Adjustment
Less than or equal to 0.5%	102%
0.6% to 1.0%	100%
1.1% to 1.5%	95%
1.6% to 2.0%	80%
2.1% to 2.5%	70%
2.6% to 3.0%	60%
Greater than 3.0%	Remove and Replace

5. Calculation of Pay Adjustments for DBC and Air Void Content

For each test, absolute deviations will be used when determining DBC and air void content pay adjustments. Absolute deviations are the values of deviation regardless of sign (±).

The average of the absolute deviations from the DBC of all of the sublots in each lot will be used to determine the appropriate pay adjustments for the lots. The same will apply for air void content. The pay adjustments will be applied to their respective total lot tonnage to determine the adjusted tonnage for the lots. The final adjustment for tonnage will be rounded to two decimal places.

Note: All deviation values will be rounded to the nearest 0.1% before applying pay adjustments.

All other tolerances shall conform to the RI Standard Specifications.

xxx.03.2 Hauling Equipment.

Cleaning of truck beds shall be done off site and will not be allowed in any area that will be paved.

xxx.03.10 In-Place Density.

The mat and joint densities will be determined by taking field cores and using the respective bulk and maximum theoretical densities. Bulk densities of the field cores will be determined in the central lab and the maximum theoretical densities will be determined in the plant lab.

1. Density Cores

One standard lot shall be 3000 tons and one standard sublot shall be 600 tons for mat density. One 4" core shall be taken randomly from the mat every 300 tons for a total of two cores per 600 ton sublot.

The location of all cores will be determined by the Engineer. The center of each core used to determine mat density will be at least one foot away from any transverse or longitudinal joints and three feet away from any drainage structures.

One 4" joint density core shall be taken from the joint for every sublot placed when a joint is formed. Joint cores shall be taken within two inches of the middle of the sloped portion of the joint for notched-wedge joints or within two inches of the intersection of the two paving passes for butt joints.

All cores shall be taken by the contractor after completion of rolling operations and within 30 days of the pavement being placed. The Engineer will take immediate possession of the cores upon extraction.

The section of the mat and joint at the end of paving for each mix will be added to the previous sublot if it is less than 300 tons or will be considered a full sublot if it is greater than or equal to 300 tons.

The contractor may obtain cores for QC purposes to monitor in-place density.

2. Pay Adjustments

The following pay adjustments will be made for in-place density:

In-Place Mat Density	Pay Adjustment
94.0% and greater	103%
93.0% to 93.9%	102%
92.0% to 92.9%	100%
91.0% to 91.9%	90%
90.0% to 90.9%	80%
89.0% to 89.9%	70%
88.0% to 88.9%	60%
Below 88.0%	Remove and Replace

In-Place Joint Density	Pay Adjustment
92.0% and greater	103%
91.0% to 91.9%	102%
90.0% to 90.9%	100%
89.0% to 89.9%	90%
88.0% to 88.9%	80%
87.0% to 87.9%	70%
86.0% to 86.9%	60%
Below 86.0%	0%

In the event material must be removed and replaced, the Engineer will determine the limits of the removal.

3. Calculation of Pay Adjustments for In-Place Density

For Mat Density:

The bulk specific gravity (G_{mb}) of the mat density cores within a sublot shall be averaged and compared with the corresponding plant theoretical maximum specific gravity (G_{mm}) to calculate the in-place density for each sublot. The average of the sublot densities in a lot will be used to determine the appropriate pay adjustment for that lot. The lot pay adjustments will be applied to their respective total lot tonnage to determine the adjusted tonnage for the lots. For sublots that form joints the calculated quantity of material used to form the joint will be subtracted from the sublot. The final adjustment for tonnage will be rounded to two decimal places.

For Joint Density:

The G_{mb} of each joint density core shall be compared with the average of the two corresponding plant G_{mm}'s to calculate the in-place joint densities. The average of five joint densities will be used to determine the appropriate pay adjustments. The calculation of material

quantity used to construct the joints will be based on the core density, the design thickness, a

width of one foot and the length of the joint that each core represents. This quantity will be deducted from the overlapping paving pass that formed the joint. The final adjustment for tonnage will be rounded to two decimal places.

xxx.03.11 Joints.

A notched wedge joint shall be used. It shall be constructed so that the height of the notch is the same as the nominal maximum aggregate size. The width of the sloped portion of the joint shall be at least 6" for each inch of lift thickness if the joint will be exposed to traffic, otherwise it shall be 12" minimum.

xxx.03.17 Drop-Offs.

Any longitudinal drop-offs that are left open to traffic require a notched wedge joint. Longitudinal drop-offs will not be allowed on both sides of a lane. Tack coat shall be applied to the longitudinal notched wedge joint using a brush or the tack coat distribution truck. Transverse joints and joints at intersections shall be manually brushed with tack coat.

xxx.04 Method of Measurement.

Subsection 401.04 of the RI Standard Specifications for Road and Bridge Construction will be used as the method of measurement with the following modifications:

Five Percent Tolerance Limitation. Pavement thickness will be considered acceptable when placed within the tolerances specified. The total tonnage delivered and placed shall not exceed the tonnage calculated from the approved areas measured from the final surface course width, by the project length, and the pavement thickness in the Contract, by more than 5-percent.

A thicker pavement may be acceptable; however, no payment will be made for all quantities of hot-mix asphalt delivered which exceed 105-percent of the final measured length, multiplied by the measured width, multiplied by the specified thickness, multiplied by the unit weight derived from the density cores, even when the pavement thickness is within tolerance.

xxx.05 Basis of Payment.

Subsection 401.05 of the RI Standard Specifications for Road and Bridge Construction will be used as the basis of payment.

Special Provision 401.9902
Modified Class 12.5 Hot Mix Asphalt with Pay Factors and Warm Mix Asphalt

xxx.01 DESCRIPTION.

Modified Class 12.5 with pay adjustments shall conform to the requirements of the RI Standard Specifications for Road and Bridge Construction with the following exceptions and modifications.

xxx.02 MATERIALS.

1. Aggregate

The aggregate shall conform to the 3 to <10 million ESAL requirements of Table 5 in AASHTO M 323. No more than 10% of the aggregate shall be natural sand. All aggregate properties of Section M.03 shall apply.

2. Performance Graded Binder

The binder shall meet the requirements of PG 64-28, Grade V as specified in AASHTO M 320 and MP 19. The contractor shall use an approved warm mix additive (WMA) at a dosage rate recommended by the manufacturer. Only chemical or organic WMAs may be used. Mechanical water injection will not be allowed.

3. Mix Design

HMA mixes shall conform to AASHTO M 323, "Standard Specification for Superpave Volumetric Mix Design". The design procedure shall follow AASHTO R 35 "Standard Practice for Superpave Volumetric Design for Hot-Mix Asphalt (HMA)". The design specifications found in AASHTO M 323 shall supersede those found in the RI Standard Specifications for Road and Bridge Construction. A mix design using PG 64-28 Grade S shall be used to determine the design binder content. The voids in the mineral aggregate (VMA) and $VMA_{effective}$ shall be calculated for each asphalt content during the mix design process. The following specific requirements and exceptions to AASHTO M 323 shall apply.

a. $N_{initial}$ shall be 6, N_{design} shall be 50 and N_{max} shall be 75 gyrations.

b. A moisture susceptibility test will not be required.

c. The mix shall be designed at 4% voids.

d. The VMA shall be greater than or equal to 15.5%.

e. The voids filled with asphalt (VFA) shall be 70 to 80%.

f. The mix shall be coarse graded as defined in Section 6.1.3 of AASHTO M 323.

g. The dust to binder ratio ($P_{0.075}/P_{be}$) shall be 0.5 – 1.0. The design effective binder content shall be used to calculate this ratio.

h. No RAP will be allowed in the mix.

i. In addition to the sieves listed in Table 3 of AASHTO M 323, the 0.600 mm, 0.300 mm and 0.150 mm sieves will be required. The 50.0 mm and 37.5 mm sieves will not be required.

The following procedures shall be adhered to for the mix design:

- Three aggregate trial blends shall be submitted and accepted before beginning the mix design procedure.
- All trial mixture data and calculations determined for Section 9 of AASHTO R 35 shall be submitted to the Engineer. The Engineer will determine which trial mixture shall be used for the mix design procedure.
- After the mix design is completed it shall be submitted to the Engineer for acceptance.
- The correction factors for the ignition furnace in the plant lab shall be provided.

The gyratory cores and Rice (AASHTO T 209) samples at the design binder content shall be submitted to the Engineer.

A successful plant trial batch shall be performed before beginning production of HMA.

xxx.03 CONSTRUCTION METHODS.

1. Plant Laboratory

In addition to the requirements of Section 930, the contractor provided lab shall be equipped with the following:

- Gyratory compactor conforming to AASHTO T 312 and two molds.
- All equipment required to determine the theoretical maximum specific gravity in accordance with AASHTO T 209 Test Method A and Section 13.1. A metal pycnometer and electronic digital vacuum gauge shall also be provided.
- All sieves required for the mix design process.

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- Facilities and equipment to perform a wet-wash in accordance with AASHTO T 30 and a faucet spray hose shall be provided.

2. Production Tolerances

In the event that the air void content deviates from the design air void content by more than 2.0% or if the binder content deviates from the design binder content by more than 0.5% for any single test, the plant shall cease production of HMA. Production will be allowed to resume after completion of a successful trial batch.

The following tolerances for gradation shall apply:

19.0mm	100%
12.5mm	90% - 100%
9.5mm	90% max
2.36mm	Established by the mix design ±5%
0.075mm	Greater than or equal to 2.0%

3. Mix Production – Lots and Sublots

One standard lot shall be 3000 tons and one standard sublot shall be 600 tons for HMA sampled at the plant. An acceptance test will be performed once every sublot.

In the event production of a specific mix finishes for the contract before a standard 600 ton sublot is completed, the HMA tonnage will be added to the previous sublot if it is less than 300 tons or will be considered a separate sublot if it is greater than or equal to 300 tons.

If a test is not performed on a sublot then the quantity in that sublot will be combined with the previous sublot and the previous test result will be apply to this combined sublot.

If the quantity of HMA needed to finish production is projected to be less than 600 tons, a sample may be taken at the Engineer's discretion.

If one or two sublots are tested after the end of the final standard 3000 ton lot, they will be added to the previous lot. Three or more sublots will constitute a new lot.

4. Pay Adjustments

The following pay adjustments for deviation from the Design Binder Content (DBC) established by the mix design will apply:

Deviation from DBC	Pay Adjustment
Less than or equal to 0.2 %	103%
0.3%	101%
0.4%	100%
0.5%	95%
0.6%	85%
0.7%	70%
0.8%	60%
Greater than 0.8 %	Remove and Replace

The following pay adjustments for deviation from the design air void content will apply:

Deviation from Design Air Void Content	Pay Adjustment
Less than or equal to 0.5%	102%
0.6% to 1.0%	100%
1.1% to 1.5%	95%
1.6% to 2.0%	80%
2.1% to 2.5%	70%
2.6% to 3.0%	60%
Greater than 3.0%	Remove and Replace

5. Calculation of Pay Adjustments for DBC and Air Void Content

For each test, absolute deviations will be used when determining DBC and air void content pay adjustments. Absolute deviations are the values of deviation regardless of sign (±).

The average of the absolute deviations from the DBC of all of the sublots in each lot will be used to determine the appropriate pay adjustments for the lots. The same will apply for air void content. The pay adjustments will be applied to their respective total lot tonnage to determine the adjusted tonnage for the lots. The final adjustment for tonnage will be rounded to two decimal places.

Note: All deviation values will be rounded to the nearest 0.1% before applying pay adjustments.

All other tolerances shall conform to the RI Standard Specifications.

xxx.03.2 Hauling Equipment.

Cleaning of truck beds shall be done off site and will not be allowed in any area that will be paved.

xxx.03.10 In-Place Density.

The mat and joint densities will be determined by taking field cores and using the respective bulk and maximum theoretical densities. Bulk densities of the field cores will be determined in the central lab and the maximum theoretical densities will be determined in the plant lab.

1. Density Cores

One standard lot shall be 3000 tons and one standard sublot shall be 600 tons for mat density. One 4" core shall be taken randomly from the mat every 300 tons for a total of two cores per 600 ton sublot.

The location of all cores will be determined by the Engineer. The center of each core used to determine mat density will be at least one foot away from any transverse or longitudinal joints and three feet away from any drainage structures.

One 4" joint density core shall be taken from the joint for every sublot placed when a joint is formed. Joint cores shall be taken within two inches of the middle of the sloped portion of the joint for notched-wedge joints or within two inches of the intersection of the two paving passes for butt joints.

All cores shall be taken by the contractor after completion of rolling operations and within 30 days of the pavement being placed. The Engineer will take immediate possession of the cores upon extraction.

The section of the mat and joint at the end of paving for each mix will be added to the previous sublot if it is less than 300 tons or will be considered a full sublot if it is greater than or equal to 300 tons.

The contractor may obtain cores for QC purposes to monitor in-place density.

2. Pay Adjustments

The following pay adjustments will be made for in-place density:

In-Place Mat Density	Pay Adjustment
95.0% and greater	103%
94.0% to 94.9%	102%
93.0% to 93.9%	100%
92.0% to 92.9%	90%
91.0% to 91.9%	80%
90.0% to 90.9%	70%
89.0% to 89.9%	60%
Below 89.0%	Remove and Replace

In-Place Joint Density	Pay Adjustment
93.0% and greater	103%
92.0% to 92.9%	102%
91.0% to 91.9%	100%
90.0% to 90.9%	90%
89.0% to 89.9%	80%
88.0% to 88.9%	70%
87.0% to 87.9%	60%
Below 87.0%	0%

In the event material must be removed and replaced, the Engineer will determine the limits of the removal.

3. Calculation of Pay Adjustments for In-Place Density

For Mat Density:

The bulk specific gravity (G_{mb}) of the mat density cores within a sublot shall be averaged and compared with the corresponding plant theoretical maximum specific gravity (G_{mm}) to calculate the in-place density for each sublot. The average of the sublot densities in a lot will be used to determine the appropriate pay adjustment for that lot. The lot pay adjustments will be applied to their respective total lot tonnage to determine the adjusted tonnage for the lots. For sublots that form joints the calculated quantity of material used to form the joint will be subtracted from the sublot. The final adjustment for tonnage will be rounded to two decimal places.

For Joint Density:

The G_{mb} of each joint density core shall be compared with the average of the two corresponding plant G_{mm}'s to calculate the in-place joint densities. The average of five joint densities will be used to determine the appropriate pay adjustments. The calculation of material quantity used to construct the joints will be based on the core density, the design thickness, a width of one foot and the length of the joint that each core represents. This quantity will be deducted from the overlapping paving pass that formed the joint. The final adjustment for tonnage will be rounded to two decimal places.

xxx.03.11 Joints.

A notched wedge joint shall be used. It shall be constructed so that the height of the notch is the same as the nominal maximum aggregate size. The width of the sloped portion of the joint shall be at least 6" for each inch of lift thickness if the joint will be exposed to traffic, otherwise it shall be 12" minimum.

xxx.03.17 Drop-Offs.

Any longitudinal drop-offs that are left open to traffic require a notched wedge joint. Longitudinal drop-offs will not be allowed on both sides of a lane. Tack coat shall be applied to the longitudinal notched wedge joint using a brush or the tack coat distribution truck. Transverse joints and joints at intersections shall be manually brushed with tack coat.

xxx.04 METHOD OF MEASUREMENT.

Subsection 401.04 of the RI Standard Specifications for Road and Bridge Construction will be used as the method of measurement with the following modifications:

Five Percent Tolerance Limitation. Pavement thickness will be considered acceptable when placed within the tolerances specified. The total tonnage delivered and placed shall not exceed the tonnage calculated from the approved areas measured from the final surface course width, by the project length, and the pavement thickness in the Contract, by more than 5-percent.

A thicker pavement may be acceptable; however, no payment will be made for all quantities of hot-mix asphalt delivered which exceed 105-percent of the final measured length, multiplied by the measured width, multiplied by the specified thickness, multiplied by the unit weight derived from the density cores, even when the pavement thickness is within tolerance.

xxx.05 BASIS OF PAYMENT.

Subsection 401.05 of the RI Standard Specifications for Road and Bridge Construction will be used as the basis of payment.

Special Provision 401.9903 Class 9.5 Hot Mix Asphalt
401.9904 Class 9.5 Hot Mix Asphalt for Bridge 342

xxx.01 DESCRIPTION.

Class 9.5 with pay adjustments shall conform to the requirements of the RI Standard Specifications for Road and Bridge Construction with the following exceptions and modifications.

xxx.02 MATERIALS.

1. Aggregate

The aggregate shall conform to the 3 to <10 million ESAL requirements of Table 5 in AASHTO M 323. No more than 10% of the aggregate shall be natural sand. All aggregate properties of Section M.03 shall apply.

2. Performance Graded Binder

The binder shall meet the requirements of PG 64-28, Grade S as specified in AASHTO M 320 and MP 19. The contractor shall use an approved warm mix additive (WMA) at a dosage rate recommended by the manufacturer. Only chemical or organic WMAs may be used. Mechanical water injection will not be allowed.

3. Mix Design

HMA mixes shall conform to AASHTO M 323, "Standard Specification for Superpave Volumetric Mix Design". The design procedure shall follow AASHTO R 35 "Standard Practice for Superpave Volumetric Design for Hot-Mix Asphalt (HMA)". The design specifications found in AASHTO M 323 shall supersede those found in the RI Standard Specifications for Road and Bridge Construction. A mix design using PG 64-28 Grade S shall be used to determine the design binder content. The voids in the mineral aggregate (VMA) and $VMA_{effective}$ shall be calculated for each asphalt content during the mix design process. The following specific requirements and exceptions to AASHTO M 323 shall apply.

a. $N_{initial}$ shall be 6, N_{design} shall be 50 and N_{max} shall be 75 gyrations.

b. A moisture susceptibility test will not be required.

c. The mix shall be designed at 4% voids.

d. The VMA shall be greater than or equal to 16.5%.

e. The voids filled with asphalt (VFA) shall be 70 to 80%.

f. The mix shall be coarse graded as defined in Section 6.1.3 of AASHTO M 323.

g. The dust to binder ratio ($P_{0.075}/P_{be}$) shall be 0.5 – 1.0. The design effective binder content shall be used to calculate this ratio.

h. No RAP will be allowed in the mix.

i. In addition to the sieves listed in Table 3 of AASHTO M 323, the 0.600 mm, 0.300 mm and 0.150 mm sieves will be required. The 50.0 mm and 37.5 mm sieves will not be required.

The following procedures shall be adhered to for the mix design:

- Three aggregate trial blends shall be submitted and accepted before beginning the mix design procedure.
- All trial mixture data and calculations determined for Section 9 of AASHTO R 35 shall be submitted to the Engineer. The Engineer will determine which trial mixture shall be used for the mix design procedure.
- After the mix design is completed it shall be submitted to the Engineer for acceptance.
- The correction factors for the ignition furnace in the plant lab shall be provided.

The gyratory cores and Rice (AASHTO T 209) samples at the design binder content shall be submitted to the Engineer.

A successful plant trial batch shall be performed before beginning production of HMA.

xxx.03 CONSTRUCTION METHODS.

1. Plant Laboratory

In addition to the requirements of Section 930, the contractor provided lab shall be equipped with the following:

- Gyratory compactor conforming to AASHTO T 312 and two molds.
- All equipment required to determine the theoretical maximum specific gravity in accordance with AASHTO T 209 Test Method A and Section 13.1. A metal pycnometer and electronic digital vacuum gauge shall also be provided.
- All sieves required for the mix design process.

- Facilities and equipment to perform a wet-wash in accordance with AASHTO T 30 and a faucet spray hose shall be provided.

2. Production Tolerances

In the event that the air void content deviates from the design air void content by more than 2.0% or if the binder content deviates from the design binder content by more than 0.5% for any single test, the plant shall cease production of HMA. Production will be allowed to resume after completion of a successful trial batch.

The following tolerances for gradation shall apply:

12.5mm	100%
9.5mm	90% - 100%
4.75mm	90% max
2.36mm	Established by the mix design ±5%
0.075mm	Greater than or equal to 2.0%

3. Mix Production – Lots and Sublots

One standard lot shall be 3000 tons and one standard sublot shall be 600 tons for HMA sampled at the plant. An acceptance test will be performed once every sublot.

In the event production of a specific mix finishes for the contract before a standard 600 ton sublot is completed, the HMA tonnage will be added to the previous sublot if it is less than 300 tons or will be considered a separate sublot if it is greater than or equal to 300 tons.

If a test is not performed on a sublot then the quantity in that sublot will be combined with the previous sublot and the previous test result will be apply to this combined sublot.

If the quantity of HMA needed to finish production is projected to be less than 600 tons, a sample may be taken at the Engineer's discretion.

If one or two sublots are tested after the end of the final standard 3000 ton lot, they will be added to the previous lot. Three or more sublots will constitute a new lot.

4. Pay Adjustments

The following pay adjustments for deviation from the Design Binder Content (DBC) established by the mix design will apply:

Deviation from DBC	Pay Adjustment
Less than or equal to 0.2 %	103%
0.3%	101%
0.4%	100%
0.5%	95%
0.6%	85%
0.7%	70%
0.8%	60%
Greater than 0.8 %	Remove and Replace

The following pay adjustments for deviation from the design air void content will apply:

Deviation from Design Air Void Content	Pay Adjustment
Less than or equal to 0.5%	102%
0.6% to 1.0%	100%
1.1% to 1.5%	95%
1.6% to 2.0%	80%
2.1% to 2.5%	70%
2.6% to 3.0%	60%
Greater than 3.0%	Remove and Replace

5. Calculation of Pay Adjustments for DBC and Air Void Content

For each test, absolute deviations will be used when determining DBC and air void content pay adjustments. Absolute deviations are the values of deviation regardless of sign (±).

The average of the absolute deviations from the DBC of all of the sublots in each lot will be used to determine the appropriate pay adjustments for the lots. The same will apply for air void content. The pay adjustments will be applied to their respective total lot tonnage to determine the adjusted tonnage for the lots. The final adjustment for tonnage will be rounded to two decimal places.

Note: All deviation values will be rounded to the nearest 0.1% before applying pay adjustments.

All other tolerances shall conform to the RI Standard Specifications.

xxx.03.2 Hauling Equipment.

Cleaning of truck beds shall be done off site and will not be allowed in any area that will be paved.

xxx.03.10 In-Place Density

The area to be patched shall be thoroughly cleaned and tack coat shall be applied. Compaction shall be accomplished using a tamper or by other approved mechanical means.

xxx.04 METHOD OF MEASUREMENT.

Subsection 401.04 of the RI Standard Specifications for Road and Bridge Construction will be used as the method of measurement with the following modifications:

Five Percent Tolerance Limitation. Pavement thickness will be considered acceptable when placed within the tolerances specified. The total tonnage delivered and placed shall not exceed the tonnage calculated from the approved areas measured from the final surface course width, by the project length, and the pavement thickness in the Contract, by more than 5-percent.

A thicker pavement may be acceptable; however, no payment will be made for all quantities of hot-mix asphalt delivered which exceed 105-percent of the final measured length, multiplied by the measured width, multiplied by the specified thickness, multiplied by the unit weight derived from the density cores, even when the pavement thickness is within tolerance.

xxx.05 BASIS OF PAYMENT.

Subsection 401.05 of the RI Standard Specifications for Road and Bridge Construction will be used as the basis of payment.

Manufacturer's Certificate: Certify products meet or exceed specified requirements. Provide a separate certificate for each lot of material furnished.

QUALITY ASSURANCE.

Manufacturer Qualifications:

1. The geogrid supplier shall have no less than five years documented experience in the manufacture of geogrid products. Include brief description of were the product was used, project and name and phone number of the owner's representative knowledgeable in each listed project.

2. The geogrid manufacturer shall provide documented evidence of an established quality control program to assure products with consistent compliance with the requirements of this specification.

Pre-Construction Meeting:

1. Prior to construction of interlayer reinforcement system, conduct a meeting at the site with the materials supplier and the Contractor to review the preparation and installation requirements.

2. Notify the Engineer at least 3 days in advance of the time of the meeting.

DELIVERY, STORAGE, AND HANDLING.

1. Store products in manufacturer's unopened packaging until ready for installation.

PROJECT CONDITIONS.

1. Install in accordance with published installation guidelines of the MSL product manufacturer.
2. Do not place asphalt during wet or freezing weather that prevents conformance with specified requirements.

CONSTRUCTION METHODS.

Construct geogrid MSL in accordance with the manufacturer's published installation guidelines.

Preparation:

1. Do not begin MSL system installation until reclamation has been completed for the area specified on the plans.

METHOD OF MEASUREMENT.

"GEOGRID MECHANICALLY STABILIZED LAYER" will be measured by the number of "Square Yard" of reinforcement actually placed in accordance with the Plans and/or as directed by the Engineer.

BASIS OF PAYMENTS.

"GEOGRID MECHANICALLY STABILIZED LAYER" shall be paid for at the contract unit price per "Square Yard", as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials and equipment, and for all other incidentals required to finish the work, complete and accepted by the Engineer.

Select Leveling and Filler Aggregate (304.0100) will be paid for separately under appropriate work items.

CODE 601.9901

INTEGRALLY COLORED CONCRETE

DESCRIPTION: Work under this item will consist of furnishing Portland cement concrete to which an approved coloring agent has been added complete and in place, as shown on the plans and as directed by the Engineer. The concrete shall be of the class specified in the plans and as approved by the Engineer. The color of the concrete shall match the color of the existing (cleaned) concrete against which it will be placed and be at the approval of the Engineer and the RIDOT Historic Preservation Specialist. All work shall be performed in accordance with Part 600 of the Rhode Island Standard Specifications and latest revisions and as specified in this specification.

MATERIALS: All concrete material components shall be in accordance with Section M.02 of the Rhode Island Standard Specifications for Road and Bridge Construction except as modified under this specification.

Aggregates. The fine and coarse aggregates must be approved by the Engineer as to color and texture.

Coloring Agent. Coloring agents for integrally colored concrete shall meet the requirements of ASTM C979 and be approved by the Engineer. Coloring agents shall be used in accordance with manufacturer's recommendations.

Form Release Agent. The Contractor shall use a method/material in accordance with the manufacturer's recommendations for facilitating form release that will not cause discoloration, staining, etc. of the concrete, subject to the approval of the Engineer.

Color Modified Concrete Mix Design and Approval Process. Proportioning and testing of the concrete components and mixture shall be accomplished by using the methods outlined in Section 601. The Contractor shall proportion the concrete mix including the coloring additives and finishing methods to obtain the desired color and texture to meet the appropriate mixture classification requirements of Tables 1 and 2 of Section 601.

The following information shall be added in addition to the requirements listed in Section 601 to be included in the laboratory test data report:

1. Coloring Agents
2. Form Release Agents
3. Special finishing methods used to obtain the desired concrete texture.

Trial Run. After the concrete mix design provided by the Contractor has been reviewed by the Engineer and no exception taken, the Contractor shall conduct a trial run in accordance with the requirements listed in Section 601 prior to production, using the submitted mix design's component materials and proportions including the amount of admixtures, color additives, finishing and curing techniques which will be necessary to produce concrete of the specified plasticity, workability, air content, compressive strength, color, texture and any other specified concrete property.

During the field trial runs, the Contractor shall also manufacture and submit two (2) prototypes (1 foot x 1 foot x 3.5 inches) in accordance with the above-listed requirements.

When all specified concrete parameters have been attained, including color and texture; the Engineer, in consultation with the RIDOT Historic Preservation Specialist, shall approve the proposed mix design, color and texture for production.

CONSTRUCTION METHODS: Construction methods shall conform to Section 601 of the RI Standard Specifications except as otherwise provided in these Specifications.

The Contractor shall observe any special treatments required for existing surfaces to which this concrete is cast, as detailed on the Contract Plans.

CURING: All curing procedures and methods shall be completed according to the color additive manufacturer's recommendations and as specified in Section 601 of the RI Standard Specifications or as otherwise directed by the Engineer. Use of curing compounds is not permitted.

FINISHING: All exposed surfaces shall be finished straight and true, to match the details. The final finished surfaces shall match the color and texture specified in the plans and as directed by the Engineer.

METHOD OF MEASUREMENT: This item will not be measured for payment.

BASIS OF PAYMENT: This item will be paid for as provided in the specification covering the particular use.

CODE 800.9901
WOOD RIVER BRIDGE NO. 340 - SUPERSTRUCTURE

DESCRIPTION:

Except for the excluded items of work indicated below, the work under this item shall consist of constructing the Wood River Bridge No. 340 superstructure from the West Abutment to the East Abutment, in its entirety. This shall comprise all work pertaining to the construction of all the components above the beam (abutment) seats, and any and all embedded or attached components as identified on the plans.

The work under this item shall also include all materials, equipment, and labor required for replacing the bituminous pavement and fill removed under Item Code 803.9902, REMOVE AND DISPOSE PORTIONS OF EXISTING SUPERSTRUCTURE – WOOD RIVER BRIDGE NO. 340 with compacted gravel borrow and two (2) inches of Class 12.5 bituminous course to match adjacent roadway grade.

The work under this item shall also include the reinstallation of the bridge identification tablet removed and salvaged under Item Code 803.9902, REMOVE AND DISPOSE PORTIONS OF EXISTING SUPERSTRUCTURE – WOOD RIVER BRIDGE NO. 340 at the west end of the southern curb.

All of the above work shall be complete in place and accepted in accordance with the Contract Documents. The Method of Measurement and the Basis of Payment will be in accordance with these Special Provisions.

Excluded Items of Work: The work pertaining to the resurfacing of the entire deck slab of Wood River Bridge No. 340 is excluded from this lump sum item and instead will be paid for separately under the appropriate bid item as listed in the Proposal.

MATERIALS:

Concrete – Concrete shall be Class XX f'c = 4000 PSI. The concrete shall be integrally colored to match the existing, cleaned concrete as closely as possible (refer to Codes 601, Portland Cement Concrete of the RI Standard Specifications and Special Provision Code 601.9901, Integrally Colored Concrete.
Grout – Grout for the installation of the bridge identification tablet shall be a non-shrink material that is included on RIDOT's list of approved materials.
Paint – Shall comply with Section M.06 of the RI Standard Specifications and be on the RIDOT list of approved materials. The paint color shall be Federal Standard No. 24272 Green (semi-gloss).

Steel/Iron (for any necessary railing modifications) – Shall comply with Section M.05 of the RI Standard Specifications, as determined by the Engineer.

CONSTRUCTION METHODS:

All surfaces against which new concrete will be placed shall be prepared in accordance with the Contract Documents and the RI Standard Specifications. Care shall be taken to set forms tight and straight to reproduce the original lines, shapes and elevations of the bridge. Forms shall be sealed for prevent bleed water from staining the existing concrete to remain. Any staining or discolorization that does occur shall be cleaned by the Contractor, to the satisfaction of the Engineer. The Contractor shall not drill or nail into any visible concrete surfaces designated to remain.

The Contractor shall prepare the railings to SSPC-SP3 or SP6 standard, and repaint them in accordance with Section 825, Painting Structural Steel (including all revisions) of the RI Standard Specifications. If any of the railing connection points are deteriorated to the point where a competent reconnection cannot be achieved, the Contractor shall develop a plan to strengthen the existing connection(s) that will not change the character of or unnecessarily alter the appearance of the railings and submit it to the Engineer for approval. The Contractor must receive written approval from the Engineer prior to implementation of any plan to modify the railings.

The Contractor shall carefully construct the formwork to incorporate the historic railing, which will be cast into the new concrete. Forms shall have the appropriate diameter holes cut into them such that the concrete has a smooth, uniform finish around the railing anchorage pipes. **The historic railings are not to be used in any way to support or stabilize the formwork, safety netting or anything else.** The railings shall be protected from damage during all phases of the work.

The bridge identification tablet shall be set into the recess created to receive it such that it is flush with the surrounding concrete. The recess shall be square, with opposing sides parallel and created to allow for a maximum of ¼ inch space around each side of the tablet. The tablet shall be installed such that the space around it is equal on all sides.

METHOD OF MEASUREMENT:

This item will not be measured for payment.

BASIS OF PAYMENT:

Item Code 800.9901 "WOOD RIVER BRIDGE NO. 340 - SUPERSTRUCTURE" will be paid for at the contract "Lump Sum" price as listed in the Proposal. The price so stated shall constitute full and complete compensation for all labor, materials, tools, equipment, and all other incidentals required to complete the construction of the superstructure as described above and elsewhere in the Contract Documents (except for any railing repairs required by the Engineer due to deterioration of the metal), complete in place and accepted by the Engineer.

Partial payments for this Lump Sum item will be made in accordance with Special Provision Code 12.109.07.

Payment for any necessary engineering, labor and materials associated with repairing deteriorated portions of the railings will be made under force account, as approved by and subject to the conditions put forth by the Engineer. Payment will not be made for repairs necessary to correct damage caused by the Contractor.

CODE 803.9902
REMOVE AND DISPOSE PORTIONS OF EXISTING SUPERSTRUCTURE
WOOD RIVER BRIDGE NO. 340

DESCRIPTION:

The work under this item shall consist of the removal, handling, transportation, and legal disposal of portions of the existing Wood River Bridge No. 340 to the limits indicated on the Contract Drawings and as described below. These Special Provisions shall supplement the requirements of Section 803 of the State of Rhode Island Standard Specifications for Road and Bridge Construction, 2004 Edition (hereinafter referred to as the RI Standard Specifications), including all revisions, and the work shall be performed as detailed in the Contract Documents and these Special Provisions.

For the purposes of these Special Provisions, the portions of the existing superstructure to be removed and disposed (to the limits indicated on the Contract Drawings) are in general described as follows:

- The reinforced concrete bridge curbs of both the north and south sides from the West Abutment to the East Abutment including all components attached to and embedded in the bridge curbs with the exception of vertical reinforcement extending from the deck slab and the historic, 2-inch diameter, metal, 3-bar railing embedded in the back of each curb. Attached or embedded items to be removed and disposed include, but may not be limited to, longitudinal steel reinforcement; steel guardrail, posts and base plates; joint materials; associated fasteners; vegetation and debris. The vertical limit of bridge curb removal and disposal shall be as shown in the Contract Drawings.

- Pavement structure and fill adjacent to the bridge curbs to effectuate the curb repairs, including full-depth saw cutting of bituminous pavement and full-depth removal of bituminous pavement and fill.

The work under this item includes retaining and protecting the existing 2-inch diameter, metal 3-bar railings embedded in the back of each curb. Because the historic railings cannot be disassembled and are likely to fracture if moved in one piece, it is anticipated that they will have to be supported and remain in-place while the concrete removal/replacement work is carried out. It is also anticipated that the work of supporting the railing and removing/replacing the concrete will be carried out in four (4) segments (separated at the center pier joint on each side) to avoid fully detaching the railings on one side.

The Contractor shall submit as a shop drawing, the proposed methods/equipment to be employed to support and protect the railings during all phases of the work. The railing support system shall be rigid, so that no bending or twisting forces are born by the railings. Extra care shall be exercised while removing the concrete from around the railings during demolition operations to avoid cutting, nicking, deforming or otherwise damaging the railings.

The work under this item also includes the removal and salvaging of the existing bridge identification tablet at the west end of the southern curb. This bridge identification tablet is the only remaining tablet on this bridge structure and the bottom left corner of this tablet has broken off and is missing. Extra care shall be exercised to remove the tablet from the concrete substrate without further damage to the tablet. The Contractor shall submit a shop drawing that describes and illustrates the methods, tools and measures to protect and remove the tablet. The work of salvaging the tablet shall be carried out by experienced personnel who have verifiable experience with successfully removing comparably fragile tablets from concrete.

MATERIALS:

None Specified.

CONSTRUCTION METHODS:

The Contractor shall phase and/or perform this work in accordance with the provisions of Contract Drawings (including the Traffic Control and Construction Phasing requirements) and the restrictions noted in the CS pages.

The Wood River Bridge is a historic structure. Therefore, all work shall be carried out in a cautious manner that protects the structure from damage and preserves the historic/architectural integrity of the historic resource. The Contractor shall ensure that the removal and disposal operations do not cause damage to the existing bridge to remain, the railings or to any existing structures or properties. Any resulting damages shall be repaired by the Contractor to the satisfaction of the Engineer and property owner(s) at the expense of the Contractor. **No blasting or explosive demolition will be allowed. The historic railings are not to be used in any way to support or stabilize safety netting, fencing or anything else.** The railings shall be protected from damage during all phases of the work.

The Contractor shall ensure that no debris or any other foreign material falls into the Wood River below the bridge. Should any debris inadvertently fall into the Wood River, the debris shall be removed immediately and all work shall stop until such time as a revised procedure of operation has been submitted and approved by the Engineer. Any delay caused as a result of cessation of work shall not relieve the Contractor of any responsibilities under this contract, including the timely completion of work.

Boundaries of concrete areas to remain where indicated on the Contract Drawings or as directed by the Engineer, shall be saw cut square to a minimum depth of 1 inch. Care shall be taken during the removal of the designated portions of the structure to avoid damaging any portions that are to remain. Existing vertical steel reinforcement extending from the deck slab shall remain and shall be thoroughly hand tool cleaned just prior to placement of concrete for the bridge curb reconstruction (refer to Code 800.9901, WOOD RIVER BRIDGE NO. 340 – SUPERSTRUCTURE).

Pneumatic hammers used to remove concrete that is monolithic with concrete to remain in place shall not be heavier than the nominal 15 pound class. If in the opinion of the Engineer the removal operation may cause excessive damage to portions of the concrete or to the railings which are to remain, the Contractor shall cease operations until such time that an alternate removal method has been proposed by the Contractor and approved by the Engineer. An Engineer-ordered "cease of operations" to establish an alternate removal method shall not result in claims for additional payment, nor an extension of the project completion date.

Prior to commencement of any demolition activities, the Contractor shall prepare and submit detailed demolition plans to the Engineer for approval. Said demolition plans shall include, but not be limited to, equipment types and locations, removal sequence and effects on remaining structural elements, method of preventing debris from falling into the Wood River, and all else necessary to clearly describe the work to be performed. The Contractor may propose alternate methods for working around the railings. All means and methods proposed by the Contractor will be reviewed in consultation with the RIDOT Historic Preservation Specialist and are subject to the Engineer's approval. An approved demolition plan as described above is required prior to commencement of any demolition activities. Approval(s) of demolition plans, procedures, etc. shall in no way relieve the Contractor of sole liability for damages resulting from the removal and disposal operations.

METHOD OF MEASUREMENT:

This item will not be measured for payment.

BASIS OF PAYMENT:

Item 803.9902 REMOVE AND DISPOSE PORTIONS OF EXISTING SUPERSTRUCTURE – WOOD RIVER BRIDGE NO. 340 will be paid for at the contract "Lump Sum" price as listed in the Proposal. The price so stated shall constitute full and complete compensation for all labor, materials, tools, equipment and all other incidentals required to complete the work as described in these Special Provisions and elsewhere in the Contract Documents, complete in place and accepted by the Engineer.

Partial payments for this Lump Sum item will be made in accordance with Special Provision Code 12.109.07.

Item Codes 800.9911 "RESURFACING ROARING BROOK BRIDGE NO. 339", 800.9912 "RESURFACING WOOD RIVER BRIDGE NO. 340", 800.9913 "RESURFACING PARRIS BROOK BRIDGE NO. 341", and 800.9914 "RESURFACING BEACH POND BRIDGE NO. 342"

METHOD OF MEASUREMENT – This item will not be measured for payment.

BASIS OF PAYMENT – Payment for this item of work shall be on a force account basis as set forth in Subsection 12.109.04 Differing Site Conditions, Changes, Extra Work and Force Account Work of the Rhode Island Department of Administration Division of Purchases Procurement Regulations. Funding for the force account is established by the RIDOT and as extended in the proposal as an authorized amount from which payments will be drawn. This payment shall constitute full compensation for all labor, tools, materials, equipment and incidental items necessary to complete this item in accordance with these special provisions and the Standard Specifications, and to the satisfaction of the Engineer.

CODE 901.9908
STEEL THRIE BEAM GUARDRAIL SINGLE FACE RI STD 34.5.3

DESCRIPTION:

The item covered under this Special Provision consists of performing all operations necessary to furnish and install all components for the replacement of STEEL THRIE BEAM GUARDRAIL SINGLE FACE RI STD 34.5.3.

MATERIALS:

Materials shall conform to the applicable requirements of subsection M of the Rhode Island Standard Specifications for Road and Bridge Construction 2010 edition and all revisions.

METHOD OF MEASUREMENT:

The STEEL THRIE BEAM GUARDRAIL SINGLE FACE RI STD 34.5.3 will be measured for payment on per "linear foot" basis, complete, and accepted in place.

BASIS OF PAYMENT:

Payment of the STEEL THRIE BEAM GUARDRAIL SINGLE FACE RI STD 34.5.3 including all materials, equipment, tools, and labor complete in place will be paid for at the contract unit price per "linear foot" for the specific item of work as contained in the contract.

Addendum No. 1

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JOB SPECIFIC

R.I. CONTRACT 2012-CH-018

CODE T19.9901

MILE POST MARKER 4"X 4" X 60"

DESCRIPTION :

This work consist of furnishing and installing a Mile Post Marker in accordance with these specifications, plan details, and in reasonable close conformity to the lines and grades shown on the plans or established by the Engineer.

MATERIALS:

All lumber shall be #2 yellow pine and shall be treated with ACQ wood preservative .4 LSB/CF. 4"x 4" wood posts, 5' long, painted white. 3" text routered into the wood post on two sides and painted black. The text will consist of stationing and additional text.

TEXT:

Station	East Facing	West Facing
48+50	"48+50 CACL"	"48+50 Recycled Base"
75+00	"75+00 Recycled Base"	"75+00 w/ Cement "
232+00	**"232+00 w/Cement"**	**"232+00 Geogrid"**
267+00	**"267+00 Geogrid"**	**"267+00 Bit. Stab"**
333+00	"333+00 Bit. Stab"	

CONSTRUCTION METHODS:

Mile Post are to be placed at locations as shown on the plans with posts buried 2'-6" below grade. All posts shall be set plumb and true in line and grade. The holes shall be backfilled with **2'-6"** of cement concrete and 6" of gravel borrow as shown on the detail. All construction shall be performed to the satisfaction of the Engineer.

METHOD OF MEASUREMENT:

"Mile Post Marker 4" x 4" x 60" will be measured by the "EACH" installed.

BASIS OF PAYMENT:

"Mile Post Marker 4"x 4"x 60" shall be paid at the contract unit price bid per "EACH" as listed in the proposal. The price so states shall constitute full and complete compensation for all labor, materials, tools, excavation, and equipment required to complete the work in accordance with this special provision, complete and accepted by the Engineer.

JOB SPECIFIC

CODE 810.99
GALVANIZED BAR REINFORCEMENT FOR STRUCTURES

DESCRIPTION: This work consists of furnishing and placing deformed galvanized reinforcing steel in accordance with the plans, and in a manner satisfactory to the Engineer.

MATERIALS:

A. **Bar Reinforcement**. Galvanized steel reinforcing bars shall be billet steel bars, AASHTO M31 or ASTM A706 as designated on the plans, Grade 60.

B. **Galvanizing** - The bar reinforcement shall be class 1 galvanized after bar fabrication, in accordance with ASTM A767, Zinc-Coated (Galvanized) Steel Bars for Concrete Reinforcement, including Supplemental Requirements S1 and S3.

In accordance with ASTM A767, the average coating thickness, of a minimum of 3 tests, shall be 3.5 oz/sf or 6 mils.

The requirements of Section 5.3 (Chromating) of ASTM A767 shall be waived.

Bending of reinforcing bars or fabric reinforcement after galvanizing as provided for in Section 7.2 of ASTM A767 shall not be allowed except as provided for in these special provisions.

Prior to galvanizing, the material shall have all grease, dirt, mortar, mill scale, injurious rust, or any other foreign substance removed.

For the purpose of these special provisions, the term "injurious rust" shall be interpreted to mean rust which is not firmly bonded to the steel. Rust which is difficult to remove, even by vigorous scrubbing with a wire brush, shall be considered firmly bonded to the steel.

The galvanized threads of nuts and mechanical connectors used for assembly with galvanized bolts and reinforcement shall be tapped oversize prior to coating and need not be retapped afterwards. The minimum additional diameter for Class-2A threads galvanized to Class C is as follows:

Class-2A Thread Diameter (in.)	Additional Diameter (in.)*
7/16" and smaller	0.016"
Over 7/16" to 1"	0.021"
Over 1"	0.031"

* applies to both pitch and minor diameters, minimum and maximum limits.

Material galvanized in accordance with these special provisions shall be free from any buildup of unadhered wet storage stains (white rust). These corrosion deposits, if present, shall be removed in a manner satisfactory to the Engineer prior to incorporation of the material in the work. After removal of these deposits, the coating shall have a uniform appearance free from uncoated spots, lumps, blisters, gritty areas, acid flux and black spots. Materials with these defects, or not meeting the finish and adherence of coating requirements as defined in the above ASTM specification, will be rejected and immediately removed from the work site. Acceptable material will be provided to replace rejected material at no additional cost to the State.

C. **Zinc-Rich Paint**. Zinc-rich paint used for the field application and repair of galvanized coatings shall meet the following requirements:

1. One application of the material shall provide a dry coating thickness of at least 2.0 mils.
2. The applied coating shall provide barrier protection and shall preferably be anodic to steel.
3. Application of the coating material shall be possible under shop or field conditions.
4. The dried film shall have a minimum zinc dust content equal to 94% (by weight).
5. The brand of material used shall be approved by the galvanizer, and shall be compatible with the galvanizing, and inert in concrete.

D. **Miscellaneous Hardware** - Chairs, tie wires, nuts, bolts, washers, other devices, and miscellaneous hardware used to support, position, or fasten the reinforcement shall be made of or coated with, a non-conducting material, or galvanized. The specific hardware that the Contractor proposes to use shall be approved by the Engineer. If the specific hardware is galvanized, the hardware shall be prepared and galvanized in accordance with the requirements of both ASTM A153 and this special provision.

CONSTRUCTION METHODS:

Placing and Fastening Bar Reinforcement - Prior to placing galvanized reinforcement, all grease, dirt, mortar and any other foreign substances shall be removed. Galvanized reinforcement shall be placed in the position indicated and within the allowable tolerances specified. Before concrete is placed, all reinforcement shall be securely fastened and supported with approved chairs or other approved devices.

Inspection - Concrete shall not be placed until the reinforcing steel is inspected and permission for placing concrete is granted by the Engineer. All concrete placed in violation of this provision will be rejected and shall be removed.

Hazardous Materials - The Contractor's operations shall conform with all OSHA regulations that apply to working with zinc based materials. Contractor's operations which may be affected by these regulations include, but are not limited to, welding splices and coating repair.

Reinforcement -

A. Ordering Bar Reinforcement - Prior to ordering bar reinforcement, the Contractor shall carefully check all bar lists, and assume full responsibility for their accuracy.

B. Field Bending - Galvanized bars shall not be bent in the field more than 10 degrees, regardless of the diameter of the bend. Where field bending of galvanized reinforcing bars in excess of this limitation is indicated on the Plans or allowed by the Engineer, these bars shall be touched-up after field bending with a zinc rich primer, in accordance with the requirements of this Special Provision.

C. Bar Splices - Splices for bar sizes No. 11, or smaller, shall be made by means of a mechanical connector or by placing the bars in contact and wiring them together for the full lap length of the splice. Lap splices are not allowed in certain specific locations as described in the plans.

   Splices for bars larger than No. 11 shall be made by use of a mechanical connector.

   Splices made with mechanical connectors shall be installed in accordance with the manufacturer's written requirements.

   Prior to welding of reinforcing bars, the galvanized coating shall be removed for the length of the bar to be welded plus six inches on each side of the weld. After welding, all slag, weld spatter, and other foreign material shall be removed and the spliced area shall be cleaned and regalvanized in accordance with the field repair procedure described herein.

Field Repair - The Contractor shall be required to field-repair any damage to the galvanized coating done during shipping and handling, and to replace bars exhibiting severely damaged coatings. Repairable damage is defined as any bare or loose spots, or breaks in the coating which affects an area smaller than 4 square inches.

Field repair shall be allowed only when the total number of repairable damaged areas in any 10 foot length of bar is less than 6. Any material with a total number of damaged areas greater than the amount specified above, or material with any damaged area greater than 4 square inches, will be rejected, and shall be immediately removed from the work site, and replaced by the Contractor at no cost to the State.

The galvanized coating is to be repaired with a zinc-rich paint by the following method:

1. Clean the damaged area by power disk, wire brushing, sand or grit blasting, or any other suitable method approved by the Engineer to a near-white metal condition in accordance with SSPC-SP10 (1 to 2 mil anchor pattern), as a minimum. The surface shall also be clean, dry and free of oil, grease, flux residue, corrosion products, and any other foreign substance.

2. Using a minimum of two coats, and the methods recommended by the manufacturer of the zinc-rich paint, spray or brush apply the zinc-rich paint to the area in a manner to achieve the applicable ASTM adherence and quality requirements of the original coating, and a minimum dry film thickness of 4 mils.

3. These repair procedures are allowed only for those field repairs directed by the Engineer. This method shall not be allowed for shop repairs. All repairs shall be made at no cost to the State.

METHOD OF MEASUREMENT:

This item will not be measured 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 prices of the appropriate items as listed in the Proposal.

Neither the approved substitution of larger bars than those specified, nor the approved use of splices not shown on the plans will result in additional compensation to the Contractor.

Section 906

Bituminous Berm

906.01 Description.

906.02 Materials.

906.02.4 Bituminous Berm. Bituminous material for berm shall conform to the requirements for Modified Class 12.5 Hot Mix Asphalt with Pay Factors and Warm Mix Asphalt as set forth in the Special Provisions 401.9902 of Rhode Island Contract 2012-CH-018. Tack coat shall conform to the requirements for emulsified asphalt as set forth in Subsection M.03.03.4 of these specifications.

906.03.4 Bituminous Berm. The bituminous berm shall be placed on the underlying pavement course in accordance with Method A as described below.

Method A. The berm is placed at the same time as the asphalt surface course in one operation. The underlying pavement shall be broom cleaned and tacked prior to placement. The bituminous berm will be placed in one lift and will be compacted by a smooth wheel roller of a type and weight acceptable to the Engineer.

906.04.4

906.05.4 Bituminous Berm. The accepted quantity of "Bituminous Berm" will be paid for at the contract unit price per linear foot as listed in the Proposal. However, the quantity of bituminous material used in the berm is not included in this contract unit price, but rather in included in the unit price listed for Modified Class 12.5 Hot Mix Asphalt with Pay Factors and Warm Mix Asphalt 401.9902. The unit price for Bituminous Berm includes all preparatory items required for proper placement of the berm, including bituminous tack coat, placement and compaction of the berm; sealing of the joints; and all other incidentals necessary to finish the work, complete and accepted by the Engineer.

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
001	201.0402	**REMOVE AND DISPOSE CONCRETE CURB**	**LF**			
		PROJECT WIDE				
		315+70 - 320+00 RT		430.00	0004	01
		315+70 - 330+20 LT		1,450.00	0004	01
		320+50 RT		40.00	0004	01
		320+85 - 332+40 RT		1,155.00	0004	01
		330+26 - 332+33 LT		207.00	0004	01
		332+60 - 333+20 RT		60.00	0004	01
		Item 201.0402 Total:		**3,342.00**		
002	201.0403	**REMOVE AND DISPOSE SIDEWALKS**	**SY**			
		WEST END				
		318+65 - 333+25 LT & RT		1,296.00	0004	01
		Item 201.0403 Total:		**1,296.00**		
003	201.0407	**REMOVE AND DISPOSE PAVEMENT AND RIGID BASE**	**SY**			
		SIDEWALK REPLACEMENT				
		3,342' X 2' / 9 =		745.00	0004	01
		Item 201.0407 Total:		**745.00**		
004	201.0409	**REMOVE AND DISPOSE FLEXIBLE PAVEMENT**	**SY**			
		8.4.0				
		SEE ITEM 711.0110		3,266.00	0004	01
		DRIVEWAYS				
		DRIVEWAYS		1,575.00	0004	01
		GRO GRID SECTION				
		STA 232+00 - 267+00			0004	01
		Item 201.0409 Total:		**4,841.00**		
005	201.0410	**REMOVE AND DISPOSE CATCH BASINS**	**EACH**			
		PROJECT WIDE				

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005	201.0410 Cont.	PER DIRECTION OF ENGINEER		5.00	0004	01
		Item 201.0410 Total:		**5.00**		
006	201.0412	**REMOVE AND DISPOSE MANHOLE**	**EACH**			
		PROJECT WIDE				
		PER DIRECTION OF ENGINEER		3.00	0004	01
		Item 201.0412 Total:		**3.00**		
007	201.0414	**REMOVE AND DISPOSE PIPE - ALL SIZES**	**LF**			
		END SECTION S				
		52 EACH X 6.1 =		317.00	0004	01
		PIPES				
		STA 189+45		42.00	0004	01
		STA 316+05 RT		48.00	0004	01
		Item 201.0414 Total:		**407.00**		
008	201.0415	**REMOVE AND DISPOSE GUARDRAIL AND POST ALL TYPES**	**LF**			
		PROJECT WIDE				
		STA 18+25 TO 21+50 RT		325.00	0004	01
		STA 28+40 TO STA 29+35 LT		95.00	0004	01
		PROJECT WIDE 44+82.6 BK = 0+00				
		AH				
		BRIDGE 339		600.00	0004	01
		BRIDGE 340		630.00	0004	01
		EXTRA		100.00	0004	01
		STA 195+15 TO 205+45 LT		1,030.00	0004	01
		STA 208+00 TO 214+00 LT		600.00	0004	01
		STA 208+55 TO 211+50 RT		295.00	0004	01
		STA 219+80 TO 224+60 LT		480.00	0004	01
		STA 221+90 TO 224+60 RT		270.00	0004	01
		STA 319+50 TO 332+39 LT		1,324.00	0004	01
		STA 320+60 TO 324+60 RT		400.00	0004	01

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
008	201.0415 Cont.	STA 324+60 TO 327+65 RT		305.00	0004	01
		STA 327+65 TO 333+00 RT		535.00	0004	01
		STA 330+00 TO 333+40 LT		40.00	0004	01
		STA 333+00 TO 333+20 RT		20.00	0004	01
		Item 201.0415 Total:		**7,049.00**		
009	201.0428	**REMOVE AND DISPOSE FRAME AND GRATE OR FRAME AND COVER**	**EACH**			
		PROJECT WIDE				
		REMOVE AND DISPOSE ALL FRAMES, GRATES AND COVERS		136.00	0004	01
		Item 201.0428 Total:		**136.00**		
010	201.0610	**REMOVE AND DISPOSE DIRECTIONAL, WARNING, REGULATORY, SERVICE, AND STREET SIGNS**	**EACH**			
		PROJECT WIDE				
		ROUTE 3 TO CONN S/L - DO NOT REMOVE NEW SPEED SIGNS		98.00	0004	01
		Item 201.0610 Total:		**98.00**		
011	202.0100	**EARTH EXCAVATION**	**CY**			
		EXTRA				
		20% EXTRA			0004	01
		GEO GRID				
		12500 SY X 1.33' / 3'		5,545.00	0004	01
		PROJECT WIDE				
		SHOULDERS BUILD UP OF SILT 4'		8,400.00	0004	01
		SIDEWALK REPLACEMENT				
		BRIDGE 342		8.00	0004	01
		GUARDRAIL INSTALLATION		361.00	0004	01
		Item 202.0100 Total:		**14,314.00**		

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
012	202.0800	GRAVEL BORROW	CY			

PAVED WATER WAYS 8.2.0, 8.3.0,

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
012	202.0800 Cont.	8.4.0				
		8348 SY X 6"/ 3		1,400.00	0004	01
		Item 202.0800 Total:		**1,400.00**		
013	204.0100	**TRIMMING AND FINE GRADING**	**SY**			
		SHOULDERS				
		DRIVEWAYS		10,000.00	0004	01
		PAVED WATER WAYS (CODE 711.0110)		4,000.00	0004	01
		SHOULDERS		33,450.00	0004	01
		Item 204.0100 Total:		**47,450.00**		
S014	206.9901	**INLET SEDIMENT CONTROL**	**EACH**			
		PROJECT WIDE				
		SEE ITEMS FOR FRAMES AND GRATES		96.00	0004	01
		Item 206.9901 Total:		**96.00**		
015	207.9901	**COMPOST FILTER SOCK 12 INCH DIAMETER (SOCK)**	**LF**			
		SHEET 1				
		1+75 - 6+55 RT		730.00	0004	01
		13+00 LT /RT		100.00	0004	01
		15+50 LT/RT		100.00	0004	01
		19+00 LT		50.00	0004	01
		20+50 LT/RT		100.00	0004	01
		22+25 LT		50.00	0004	01
		23+25 RT		60.00	0004	01
		4+25 LT		20.00	0004	01
		4+95 - 11+20 LT		965.00	0004	01
		7+45 RT -11+25 RT		590.00	0004	01
		SHEET 10				
		171+50 - 179+50 LT		940.00	0004	01

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
017	213.0100 Cont.	AH				
		319+15 - 333+32 LT		1,417.00	0004	01
		321+85 -333+32 RT		1,147.00	0004	01
		BRIDGE 339 (NOT ON THE BRIDGE ITSELF)		550.00	0004	01
		BRIDGE 340 (NOT ON THE BRIDGE ITSELF)		570.00	0004	01
		SHEET 1. 18+35- 21+50 RT		325.00	0004	01
		STA 195+15 TO 205+45 LT		1,030.00	0004	01
		STA 208+00 TO 214+00 LT		600.00	0004	01
		STA 208+55 TO 211+50 RT		295.00	0004	01
		STA 219+80 TO 224+60 LT		480.00	0004	01
		STA 221+90 TO 224+60 RT		270.00	0004	01
		Item 213.0100 Total:		**6,684.00**		
018	301.0300	CRUSHED STONE OR CRUSHED GRAVEL BASE MODIFIED	CY			
		SEE ITEM 406.9905				
		8"/3 X 12500 SY =			0004	01
		Item 301.0300 Total:		**DELETED**		
019	302.0100	**GRAVEL BORROW SUBBASE COURSE**	**CY**			
		PROJECT WIDE				
		RAISE ROADWAY BED			0004	01
		SIDEWALK		260.00	0004	01
		Item 302.0100 Total:		**260.00**		
020	303.0100	**SPECIAL GRADED AGGREGATE FOR SHAPING AND TRIMMING DRIVEWAYS OR SHOULDERS**	**CY**			
		DRIVEWAYS + UNDER MAILBOXES				
		9000' X 10' X 6" / 27		1,500.00	0004	01
		Item 303.0100 Total:		**1,500.00**		

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
021	401.9901	**CLASS 19.0 HOT MIX ASPHALT WITH**	**TON**			
		PAY FACTORS AND WARM MIX ASPHALT				
		PROJECT WIDE				
		140,000 SY X .0575 X 2.5"		20,125.00	0004	01
		Item 401.9901 Total:		**20,125.00**		
022	401.9902	**CLASS 12.5 HOT MIX ASPHALT WITH**	**TON**			
		PAY FACTORS AND WARM MIX ASPHALT				
		CLASS 12.5 BERM				
		50170' X 1.5' /9 X .0575 X 1"		4,330.00	0004	01
		PROJECT WIDE				
		140,000 SY X .0575 X 2.25"		18,200.00	0004	01
		DRIVEWAYS AND STREET		2,000.00	0004	01
		Item 401.9902 Total:		**24,530.00**		
023	401.9903	**CLASS 9.5 HOT MIX ASPHALT**	**TON**			
		PROJECT WIDE				
		2.0"; TEMP PAVING OVER BAD		1,200.00	0004	01
		SECTIONS PER ENGINEER OR				
		POT HOLE REPAIR.				
		Item 401.9903 Total:		**1,200.00**		
024	403.0300	**ASPHALT EMULSION TACK COAT**	**SY**			
		PROJECT WIDE				
		140,000 SY		140,000.00	0004	01
		TEMP PAVEMENT CLASS 9.5 PER		10,000.00	0004	01
		ENGINEER				
		Item 403.0300 Total:		**150,000.00**		
025	406.0100	**COLD RECYCLED BASE COURSE**	**SY**			
		COLD RECYCLED				
		BERM RECLAMATION TEST SECTION		883.00	0004	01
		GEO GRID BERM		1,200.00	0004	01

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
025	406.0100 Cont.	STA 267+00 TO 232+00		12,000.00	0004	01
		SECTION				
		STA 48+50 TO 75+00 TEST		9,000.00	0004	01
		Item 406.0100 Total:		23,083.00		
026	406.9901	COLD RECYCLED BASE COURSE WITH	SY			

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
026	406.9901 Cont.	**CALCIUM CHLORIDE**				
		CALCIUM CHORIDE TEST SECTION				
		BERM RECLAMATION		3,110.00	0004	01
		STA 0+00 TO BK 44+82 AH - 48+50		31,000.00	0004	01
		Item 406.9901 Total:		**34,110.00**		
027	406.9903	**COLD RECYCLED BASE COURSE WITH BITUMINOUS STABILIZER**	SY			
		BITUMINOUS STABILIZER TEST SECTION				
		BERM RECLAMATION		2,200.00	0004	01
		STA 267+00 -333+00		22,000.00	0004	01
		Item 406.9903 Total:		**24,200.00**		
028	406.9904	**PAVEMENT RECLAMATION WITH CEMENT**	SY			
		CEMENT TEST SECTION				
		BERM RECLAMATION		5,233.00	0004	01
		STA 75+00 - 232+00		52,335.00	0004	01
		Item 406.9904 Total:		**57,568.00**		
S029	406.9905	**GEOGRID MECHANICALLY STABILIZED LAYER**	SY			
		GEO GRID TEST SECTION				
		STA 232+00 - 267+00		12,500.00	0004	01
		Item 406.9905 Total:		**12,500.00**		
S030	410.9901	**INSITU PAVEMENT DISPLACEMENT SENSORS AND MEASUREMENT SYSTEMS**	LS			
		PROJECT WIDE				
		AS DIRECTED - 4 LOCATIONS		1.00	0004	01
		Item 410.9901 Total:		**1.00**		

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
031	413.9901	**RIDEABILITY PRICE ADJUSTMENT**	**EACH**			
		ROUTE 165				
		PROJECT WIDE		55,000.00	0004	01

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
S069	901.9902 Cont.	219+80 LT		1.00	0021	02
		221+90 RT		1.00	0021	02
		224+60 LT		1.00	0021	02
		224+60 RT		1.00	0021	02
		27+60 RT		1.00	0021	02
		28+60 LT		1.00	0021	02
		30+60 LT		1.00	0021	02
		PROJECT WIDE 44+82.6 BK = 0+00				
		AH				
		195+15 LT		1.00	0021	02
		205+45 LT		1.00	0021	02
		208+00 LT		1.00	0021	02
		208+55 RT		1.00	0021	02
		211+50 RT		1.00	0021	02
		214+00 LT		1.00	0021	02
		319+15 LT		1.00	0021	02
		320+85 RT		1.00	0021	02
		Item 901.9902 Total:		**23.00**		
S070	901.9908	**STEEL THRIE BEAM GUARDRAIL SINGLE FACE RI STD 34.5.3**	**LF**			
		PROJECT WIDE				
		STA 18+25 TO 21+50 RT		275.00	0004	01
		STA 28+65 TO 29+10 LT		45.00	0004	01
		PROJECT WIDE 44+82.6 BK = 0+00				
		AH				
		EXTRA		100.00	0004	01
		STA 195+15 TO 205+45 LT		980.00	0004	01
		STA 208+00 TO 214+00 LT		550.00	0004	01
		STA 208+55 TO 211+50 RT		245.00	0004	01
		Item 901.9908 Total:		**2,195.00**		
S071	901.9909	**STEEL THRIE BEAM TRANSITIONAL**	**EACH**			

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
073	906.0210 Cont.	STA 1+00 TO 2+50 LT		150.00	0004	01
		Item 906.0210 Total:		**3,492.00**		
074	906.0221	**6' PRECAST CONCRETE TRANSITION**	**EACH**			
		CURB STANDARD 7.1.2				
		PROJECT WIDE				
		2+50 LT		2.00	0004	01
		320+20 RT		1.00	0004	01
		320+70 RT		1.00	0004	01
		332+66 LT		2.00	0004	01
		Item 906.0221 Total:		**6.00**		
075	906.0230	**CEMENT CONCRETE SLOPE FACE CURB**	**LF**			
		PRECAST STRAIGHT STANDARD 7.2.0				
		ISLAND AT BEACH POND ROAD				
		ISLAND		40.00	0004	01
		Item 906.0230 Total:		**40.00**		
076	906.0231	**CEMENT CONCRETE SLOPE FACE CURB**	**LF**			
		PRECAST CIRCULAR STANDARD 7.2.0				
		PROJECT WIDE				
		320+50 RT CURVE 2		26.00	0004	01
		320+50 RT CURVE 3 4.5 R ;		29.00	0004	01
		CURVE 4 4.5 R				
		Item 906.0231 Total:		**55.00**		
077	906.0250	**PRECAST CONCRETE WHEELCHAIR RAMP**	**EACH**			
		CURB STANDARDS 7.1.3, 43.3.0 AND				
		43.3.1				
		PROJECT WIDE				
		318+75 LT & RT		2.00	0004	01
		DEM PARKING LOT		2.00	0004	01
		Item 906.0250 Total:		**4.00**		

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078	906.0280	**3' PRECAST CONCRETE TRANSITION**	**EACH**			
		CURB STANDARD 7.1.1				
		PROJECT WIDE				
		STA 318+75		4.00	0004	01
		STA 319+00 LT DRIVEWAY		2.00	0004	01
		STA 320+15 RT		2.00	0004	01
		STA 320+85 RT		2.00	0004	01
		Item 906.0280 Total:		**10.00**		
079	906.0602	**BITUMINOUS BERM STANDARD 7.5.1**	**LF**			
		44+82.6 BK = 0+00 AH USE CLASS 12.5				
		STA 10+25 - 40+00 RT		2,975.00	0004	01
		STA 103+00 - 105+50 LT		250.00	0004	01
		STA 105+75 - 128+50 RT		2,275.00	0004	01
		STA 106+25 - 128+50 LT		2,225.00	0004	01
		STA 138+30 - 142+50 LT		420.00	0004	01
		STA 138+30 - 151+00 RT		1,270.00	0004	01
		STA 155+80 - 204+50 RT		4,870.00	0004	01
		STA 155+80 -204+50 LT		4,870.00	0004	01
		STA 213+50 - 218+50 LT		500.00	0004	01
		STA 213+50 -218+50 RT		500.00	0004	01
		STA 225+00 - 231+50 LT		650.00	0004	01
		STA 225+00 - 231+50 RT		650.00	0004	01
		STA 233+00 - 264+00 LT		3,100.00	0004	01
		STA 238+00 - 264+00 RT		2,600.00	0004	01
		STA 277+50 - 290+00 LT		1,250.00	0004	01
		STA 277+50 - 290+00 RT		1,250.00	0004	01
		STA 292+50 - 299+00 RT		650.00	0004	01
		STA 292+50 -301+00 LT		850.00	0004	01
		STA 307+00 - 315+65 LT		865.00	0004	01
		STA 310+00 - 315+65 RT		565.00	0004	01
		STA 32+50 - 40+00 LT		820.00	0004	01

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FAP Nos: STP-HSIP(001), STP-RESF(215)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
079	906.0602 Cont.	STA 5+50 - 27+50 LT		2,200.00	0004	01

Distribution of Quantities

Project Name - Route 165 Reclamation
Estimate Name - Addendum to PS&E
R.I. Contract No. - 2012-CH-018
FAP Nos: STP-HSIP(001), STP-RESF(215)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
079	906.0602 Cont.	STA 5+50 - 9+75 RT		425.00	0004	01
		STA 55+00 - 98+50 LT		4,350.00	0004	01
		STA 57+00 - 98+50 RT		4,150.00	0004	01
		PROJECT WIDE - USE CLASS 12.5				
		STA 23+40 - 26+50 LT		310.00	0004	01
		STA 23+40 - 26+50 RT		310.00	0004	01
		STA 34+50 - 37+10 LT		260.00	0004	01
		STA 34+50 - 37+10 RT		260.00	0004	01
		STA 4+50 - 23+40 LT		1,890.00	0004	01
		STA 4+50 - 8+60 RT		465.00	0004	01
		STA 40+10 - 43+30 LT		320.00	0004	01
		STA 40+10 - 43+45 RT		335.00	0004	01
		STA 8+95 - 23+40 RT		1,490.00	0004	01
		Item 906.0602 Total:		**50,170.00**		
080	906.9901	**PRECAST CONCRETE RAMP STONE STD 7.1.9**	**EACH**			
		PROJECT WIDE				
		@ WHEEL CHAIR RAMPS		4.00	0004	01
		Item 906.9901 Total:		**4.00**		
081	907.0100	**WATER FOR DUST CONTROL**	**MGAL**			
		ROADWAY				
		PROJECT		350.00	0004	01
		Item 907.0100 Total:		**350.00**		
082	914.5010	**FLAGPERSONS**	**MHRS**			
		PROJECT				
		FLAGGERS @ 40 HOURS DAY X 12 MONTHS		5,120.00	0004	01
		Item 914.5010 Total:		**5,120.00**		
083	914.5020	**FLAGPERSONS - OVERTIME**	**MHRS**			

Distribution of Quantities

Project Name - Route 165 Reclamation
Estimate Name - Addendum to PS&E
R.I. Contract No. - 2012-CH-018
FAP Nos: STP-HSIP(001), STP-RESF(215)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
086	918.0200 Cont.	PROJECT WIDE				
		EXTRA		6.00	0004	01
		SEE ITEM 917.0105/0106		56.00	0004	01
		Item 918.0200 Total:		**62.00**		
087	919.0101	**TEST PITS**	**EACH**			
		CHECK WATER TABLE LEVEL				
		251+00 CT			0004	01
		293+00 CT			0004	01
		311+00 CT			0004	01
		35+50 CT			0004	01
		81+25 CT			0004	01
		PIPE CONDITION AND LOCATION				
		279+25 LT /RT			0004	01
		287+00 RT /LT			0004	01
		293+00 LT/RT			0004	01
		311+00 RT/LT			0004	01
		35+00 LT/RT			0004	01
		81+25 LT /RT			0004	01
		PROJECT WIDE				
		AS DIRECTED BY THE ENGINEER		35.00	0004	01
		Item 919.0101 Total:		**35.00**		
088	920.0050	**PLACED STONE RIPRAP R-1, R-2**	**SY**			
		STANDARD 8.3.0				
		STA 185+85 LT				
		STA 185+85 LT		2.00	0004	01
		STA 190+75				
		RT, LT		4.00	0004	01
		Item 920.0050 Total:		**6.00**		
089	920.0130	**BEDDING FOR RIPRAP FS-1 STANDARD**	**SY**			
		8.3.0				

Distribution of Quantities

Project Name - Route 165 Reclamation
Estimate Name - Addendum to PS&E
R.I. Contract No. - 2012-CH-018
FAP Nos: STP-HSIP(001), STP-RESF(215)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
089	920.0130 Cont.	STA 185+85 LT				
		STA 185+85 LT		11.00	0004	01
		STA 290+75				
		RT, LT		22.00	0004	01
		Item 920.0130 Total:		**33.00**		
090	920.0200	**FILTER FABRIC FOR RIP-RAP**	**SY**			
		STA 185+85 LT				
		STA 185+85		11.00	0004	01
		STA 290+75				
		RT, LT		22.00	0004	01
		Item 920.0200 Total:		**33.00**		
091	922.0100	**TEMPORARY CONSTRUCTION SIGNS**	**SF**			
		STANDARD 29.1.0 AND 27.1.1				
		ARCADIA ROAD				
		G20-2A 36" X 18"		4.50	0004	01
		W21-4 36"X36"		9.00	0004	01
		BATES SCHOOL HOUSE ROAD				
		G20-2A 36"X18"		4.50	0004	01
		W20-1 36" X 36"		9.00	0004	01
		BLACK PLAIN ROAD				
		G20-2A 36"X 18"		4.50	0004	01
		W20-1 36"X36"		9.00	0004	01
		BOONE LAKE				
		G20-2A 36" X 18"		4.50	0004	01
		W20-1 36"X36"		9.00	0004	01
		BRIDGE 340				
		27.1.1 24"X36" 2 SIGNS		12.00	0004	01
		G20-2 36" X 18" 2 SIGNS		9.00	0004	01
		R4-7 24" X 30" 2 SIGNS		10.00	0004	01
		W20-1 36" X 36" 2 SIGNS		36.00	0004	01
		W24-1R,L 36" X 36" 2 SIGNS		18.00	0004	01

Distribution of Quantities

Project Name - Route 165 Reclamation
Estimate Name - Addendum to PS&E
R.I. Contract No. - 2012-CH-018
FAP Nos: STP-HSIP(001), STP-RESF(215)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
091	922.0100 Cont.	BUMP AHEAD				
		W8-1; 36" X 36"		99.00	0004	01
		CONNECTICUT S/L				
		G20-2A 36" X 18"		4.50	0004	01
		W20-1 36"X36"		9.00	0004	01
		ESCHOGEAG HILL ROAD				

Distribution of Quantities

Project Name - Route 165 Reclamation
Estimate Name - Addendum to PS&E
R.I. Contract No. - 2012-CH-018
FAP Nos: STP-HSIP(001), STP-RESF(215)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
091	922.0100 Cont.	G20-2A 36"X18"		4.50	0004	01
		W20-1 36"X36"		9.00	0004	01
		FLAGGERS				
		W20-7			0004	01
		W20-7A		96.00	0004	01
		FROSTY HOLLOW ROAD				
		G20-2A 36"X18"		4.50	0004	01
		W20-1 36"X36"		9.00	0004	01
		MT TOM ROAD				
		G20-2A 36"X18"		4.50	0004	01
		W20-1 36"X36"		9.00	0004	01
		PROJECT WIDE				
		BUMP SIGN W8-1 36"X36"		27.00	0004	01
		W16-2P 4 SIGNS 24"X 18"		12.00	0004	01
		ROUTE 165				
		27.1.1 24"X36" 4 SIGNS		24.00	0004	01
		G20 -1 36" X 36" 4 SITES		54.00	0004	01
		G20-4 36" X 36" 4 SITES		54.00	0004	01
		G20-7A 36" X 36" 4 SITES		54.00	0004	01
		W13-1P 30" X 30' 4 SIGNS 35		25.00	0004	01
		MPH OR 30 MPH				
		W3-4 36" X 36" 4 SIGNS		54.00	0004	01
		SHORT ROAD				
		G20-2A 36"X18"		4.50	0004	01
		W20-1 36"X36"		9.00	0004	01
		SUMMIT ROAD				
		G20-2A 36"X18"		4.50	0004	01
		W20-1 36"X36"		9.00	0004	01
		WOODY HILL ROAD				
		G20-2A 36"X18"		4.50	0004	01
		W20-1 36"X36"		9.00	0004	01
		Item 922.0100 Total:		**732.50**		

Distribution of Quantities

Project Name - Route 165 Reclamation
Estimate Name - Addendum to PS&E
R.I. Contract No. - 2012-CH-018
FAP Nos: STP-HSIP(001), STP-RESF(215)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
092	923.0105	**DRUM BARRICADE STANDARD 26.2.0**	**BDAY**			
		PROJECT WIDE				
		ROUTE 3 TO CONN S/L		50,000.00	0004	01

Distribution of Quantities

Project Name - Route 165 Reclamation
Estimate Name - Addendum to PS&E
R.I. Contract No. - 2012-CH-018
FAP Nos: STP-HSIP(001), STP-RESF(215)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
092	923.0105 Cont.	Item 923.0105 Total:		50,000.00		
093	923.0120	PLASTIC PIPE BARRICADE STANDARD	EACH			
		26.3.0				
		PROJECT WIDE				
		ROUTE 3 TO CONN S/L		40.00	0004	01
		Item 923.0120 Total:		40.00		
094	923.0200	FLUORESCENT TRAFFIC CONES STANDARD	EACH			
		26.1.0				
		PROJECT WIDE				
		ROUTE 3 TO CONN S/L		500.00	0004	01
		Item 923.0200 Total:		500.00		
095	924.0113	ADVANCE WARNING ARROW PANEL	PDAY			
		PROJECT WIDE				
		ROUTE 3 TO CONN S/L		1,000.00	0004	01
		Item 924.0113 Total:		1,000.00		
096	925.0112	PORTABLE CHANGEABLE MESSAGE SIGN	PDAY			
		PROJECT WIDE				
		ROUTE 3 TO CONN S/L		1,000.00	0004	01
		Item 925.0112 Total:		1,000.00		
097	928.0800	TRUCK MOUNTED ATTENUATOR WITH	PDAY			
		TRUCK MOUNTED FLASHING ARROW BOARD				
		ROUTE 165				
		PROJECT WIDE			0004	01
		Item 928.0800 Total:		**DELETED**		
098	929.0110	FIELD OFFICE	PMO			
		PROJECT WIDE				
		PROJECT		18.00	0004	01

Distribution of Quantities

Project Name - Route 165 Reclamation
Estimate Name - Addendum to PS&E
R.I. Contract No. - 2012-CH-018
FAP Nos: STP-HSIP(001), STP-RESF(215)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
098	929.0110 Cont.	**Item 929.0110 Total:**		**18.00**		
099	931.0110	**CLEANING AND SWEEPING PAVEMENT**	**HSY**			
		ROADWAY				
		7 MILES X 30' / 9 +		1,232.00	0004	01
		INTERSECTIONS				
		ST SWEEP TO CONTROL OFF-SITE		1,000.00	0004	01
		TRACKING OF SED.				
		TEMP PAVE BEFORE CLASS 9.5			0004	01
		Item 931.0110 Total:		**2,232.00**		
100	931.9901	CLEANING AND SWEEPING OF PAVED WATERWAYS	SY			
		SHEET 10				
		172+10 - 173+40 LT			0004	01
		173+10 - 178+50 RT			0004	01
		173+50 - 181+00 LT			0004	01
		181+30 - 185+80 RT			0004	01
		186+30 - 189+40 RT			0004	01
		189+80 - 192+00 LT			0004	01
		192+30 - 193+60 LT			0004	01
		192+30 - 194+50 RT			0004	01
		SHEET 13				
		248+00 - 250+50 LT			0004	01
		269+70 - 271+35 LT			0004	01
		SHEET 14				
		280+00 - 282+00 LT / RT			0004	01
		285+50 - 290+10 RT			0004	01
		SHEET 15				
		291+50 - 293+50 RT			0004	01
		294+00 - 298+50 LT			0004	01
		305+10 - 308+20 RT			0004	01
		306+05 - 308+95 LT			0004	01

Distribution of Quantities

Project Name - Route 165 Reclamation
Estimate Name - Addendum to PS&E
R.I. Contract No. - 2012-CH-018
FAP Nos: STP-HSIP(001), STP-RESF(215)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
100	931.9901 Cont.	310+10 - 316+05 LT / RT			0004	01
		SHEET 2				
		34+50 -37+05 LT			.0004	01
		40+15 -41+95 RT			0004	01
		SHEET 4				
		32+50 - 38+20			0004	01
		34+00 - 38+70 RT			0004	01
		44+50 - 45+85 LT			0004	01
		SHEET 5				
		56+10 - 63+50 RT			0004	01
		57+50 - 63+50 LT			0004	01
		75+90 - 78+10 RT			0004	01
		SHEET 6				
		74+40 - 78+10 LT			0004	01
		75+90 - 78+10 RT			0004	01
		SHEET 7				
		80+80 - 82+10 LT			0004	01
		80+90 - 82+75 RT			0004	01
		SHEET 8				
		146+20 - 149+50 RT			0004	01
		146+20 - 152+00 LT			0004	01
		SHEET 9				
		163+85 - 168+30 RT			0004	01
		167+05 - 171+90 LT			0004	01
		169+60 - 170+50 RT			0004	01
		Item 931.9901 Total:		**DELETED**		
101	932.0100	**CUTTING AND MATCHING ASPHALT**	**LF**			
		PROJECT WIDE				
		10+00 RT		15.00	0004	01
		145+50 LT		20.00	0004	01
		194+50 LT		22.00	0004	01
		21+85 LT & RT		72.00	0004	01

Distribution of Quantities

Project Name - Route 165 Reclamation
Estimate Name - Addendum to PS&E
R.I. Contract No. - 2012-CH-018
FAP Nos: STP-HSIP(001), STP-RESF(215)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
S109	L02.0101 Cont.	SEE ITEM L01.0102		33,804.00	0004	01
		Item L02.0101 Total:		**33,804.00**		
110	L02.0103	**TEMPORARY SEEDING (TYPE 3)**	**SY**			
		PROJECT WIDE				
		STABILIZE SOILS - M18.09		50,000.00	0004	01
		Item L02.0103 Total:		**50,000.00**		
S111	L05.0502	**ADHESIVE MULCH STABILIZER**	**ACRE**			
		PROJECT				
		PER DIRECTION OF ENGINEER		4.00	0004	01
		Item L05.0502 Total:		**4.00**		
S112	L05.0506	**JUTE MESH**	**SY**			
		PROJECT WIDE				
		BETWEEN UP 417-420; STA		6,000.00	0004	01
		141+69 - 150+50 BOTH SIDES				
		PER DIRECTION OF ENGINEER		35,000.00	0004	01
		Item L05.0506 Total:		**41,000.00**		
113	T05.0100	**PRECAST TYPE A HANDHOLE STANDARD**	**EACH**			
		18.2.0				
		FUTURE CAMERA CONDUIT				
		STA 16+01 LT 28'		1.00	0004	01
		STA 16+08 LT 28'		1.00	0004	01
		STA 16+90 RT 22'		1.00	0004	01
		STA 17+05 RT 22'		1.00	0004	01
		WIM LOCATION - POLE 518				
		HPMS 110031		1.00	0004	01
		Item T05.0100 Total:		**5.00**		
114	T06.5120	**2 INCH SCHEDULE 40 POLYVINYL**	**LF**			
		CHLORIDE PLASTIC CONDUIT -				

Distribution of Quantities

Project Name - Route 165 Reclamation
Estimate Name - Addendum to PS&E
R.I. Contract No. - 2012-CH-018
FAP Nos: STP-HSIP(001), STP-RESF(215)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
114	T06.5120 Cont.	UNDERGROUND				
		WIN LOCATION POLE 518				
		HPMS 110031		20.00	0004	01
		Item T06.5120 Total:		20.00		

Distribution of Quantities

Project Name - Route 165 Reclamation
Estimate Name - Addendum to PS&E
R.I. Contract No. - 2012-CH-018
FAP Nos: STP-HSIP(001), STP-RESF(215)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
123	T18.0330	**30 INCH HAZARD MARKER**	**EACH**			
		ROUTE 165				
		STA 32+30 RT OM-3R		3.00	0021	02
		Item T18.0330 Total:		**3.00**		
S124	T18.9901	**GROUND MOUNTED STEEL POST DELINEATOR - SINGLE WHITE REFLECTOR 5-1/2" X 12"**	**EACH**			
		PROJECT WIDE				
		SEE ROADWAY DELINEATION SPACING CHART		180.00	0021	02
		Item T18.9901 Total:		**180.00**		
S125	T18.9902	**OBJECT MARKERS**	**EACH**			
		PROJECT WIDE				
		UTILITY POLE		220.00	0021	02
		Item T18.9902 Total:		**220.00**		
126	T18.9913	**GUARDRAIL END TERMINAL DELINEATOR**	**EACH**			
		PROJECT WIDE				
		SEE GUARDRAIL TERMINAL END REFLECTOR DETAIL		13.00	0004	01
		Item T18.9913 Total:		**13.00**		
127	T19.9901	**MILE POST MARKER 4"X4"X60"**	**EACH**			
		AT STATION LOCATIONS ONLY				
		STA 232+00 LT RT		2.00	0004	01
		STA 267+00 LT RT		2.00	0004	01
		STA 333+00 RT LT		2.00	0004	01
		STA 48+50 LT RT		2.00	0004	01
		STA 75+00 LT RT		2.00	0004	01
		Item T19.9901 Total:		**10.00**		

Distribution of Quantities

Project Name - Route 165 Reclamation
Estimate Name - Addendum to PS&E
R.I. Contract No. - 2012-CH-018
FAP Nos: STP-HSIP(001), STP-RESF(215)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
S128	T20.2112	12 INCH EPOXY RESIN PAVEMENT MARKINGS WHITE	HLF			
		PROEJCT WIDE				
		CROSS WALKS		0.20	0004	01
		SIDE STREETS		1.10	0004	01
		Item T20.2112 Total:		1.30		
S129	T20.9901	TEMPORARY EPOXY RESIN PAVEMENT MARKING WHITE	LF			
		PROJECT WIDE				
		2 X 74,700 L F EACH PAVEMENT LAYER			0004	01
		TEMP RESURFACING			0004	01
		Item T20.9901 Total:		**DELETED**		
S130	T20.9902	TEMPORARY EPOXY RESIN PAVEMENT MARKINGS YELLOW	LF			
		PROJECT WIDE				
		2 X 49, 400 LF			0004	01
		TEMP PATCH			0004	01
		Item T20.9902 Total:		**DELETED**		
S131	T20.9920	REFLECTORIZED PAVEMENT MARKER (SLOTTED IN PAVEMENT) WHITE	EACH			
		PROJECT WIDE				
		CENTER LINE ONLY - WHITE TO BE PLACED IN CLASS 12.5		650.00	0021	02
		Item T20.9920 Total:		650.00		
S132	T20.9922	REFLECTORIZED PAVEMENT MARKER (SLOTTED IN PAVEMENT) YELLOW	EACH			
		PROJET WIDE				
		CENTER LINE ONLY - YELLOW		400.00	0021	02

Distribution of Quantities

Project Name - Route 165 Reclamation
Estimate Name - Addendum to PS&E
R.I. Contract No. - 2012-CH-018
FAP Nos: STP-HSIP(001), STP-RESF(215)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
S132	T20.9922 Cont.	**Item T20.9922 Total:**				
133	304.0100	**SELECT LEVELING AND FILLER AGGREGATE**	CY			
		ITEM CODE 406.9905				
		8"/3 X 12500 SY; TO BE USED		2,780.00	0004	01
		6" WITH 2" BLENDED				
		Item 304.0100 Total:		**2,780.00**		
134	401.9904	**CLASS 9.5 HOT MIX ASPHALT FOR BRIDGE 342**	TON			
		BRIDGE 342 DECK				
		30'X18'/9 X .0575 X 3.25		12.00	0004	01
		Item 401.9904 Total:		**12.00**		
135	601.9901	**PORTLAND CEMENT**	LBS			
		SEE REQUIREMENTS FOR CEMENT IN SPEC 406.9904				
		52,335 SY X 4LBS/SY		209,340.00	0004	01
		Item 601.9901 Total:		**209,340.00**		
136	707.0950	**ADJUST TELEPHONE MANHOLE TO GRADE**	EACH			
		PROJECT WIDE				
		STATION 17+00 LT; ADJUSTED TWICE		2.00	0004	01
		Item 707.0950 Total:		**2.00**		
137	916.0600	**SHOCK ABSORBING BARRIER MODULES**	GRP			
		BRIDGE 340 TRAFFIC CONTROL				
		PHASE 1, SHOULDER		2.00	0004	01
		PHASE 3, CENTER		2.00	0004	01
		Item 916.0600 Total:		**4.00**		
138	916.0650	**REMOVE, RELOCATE AND RESET SHOCK**	GRP			

Distribution of Quantities

Project Name - Route 165 Reclamation
Estimate Name - Addendum to PS&E
R.I. Contract No. - 2012-CH-018
FAP Nos: STP-HSIP(001), STP-RESF(215)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
138	916.0650 Cont.	ABSORBING BARRIER MODULES				
		BRIDGE 340 TRAFFIC CONTROL				
		PHASE 1 SHOULDER TO PHASE 2		1.00	0004	01
		SHOULDER				
		PHASE 2 SHOULDER TO CENTER		1.00	0004	01
		Item 916.0650 Total:		2.00		
139	926.0130	PRECAST MEDIAN BARRIER FOR TEMPORARY TRAFFIC CONTROL STANDARD 40.5.0	LF			
		BRIDGE 340 TRAFFIC CONTROL				
		PHASE 1 SHOULDER		320.00	0004	01
		PHASE 2 SHOULDER		320.00	0004	01
		PHASE 3 CENTER		640.00	0004	01
		Item 926.0130 Total:		1,280.00		
140	926.0140	REFLECTIVE DELINEATORS FOR TEMPORARY CONCRETE BARRIERS	EACH			
		BRIDGE 340				
		WHITE		26.00	0004	01
		YELLOW		26.00	0004	01
		Item 926.0140 Total:		52.00		
141	T05.0200	PRECAST TYPE H HEAVY DUTY HANDHOLE STANDARD 18.2.1	EACH			
		FUTURE CAMERA CONDUIT				
		STA 16+98 RT 18'		1.00	0004	01
		Item T05.0200 Total:		1.00		
142	T06.5340	4 INCH SCHEDULE 40 POLYVINYL CHLORIDE PLASTIC CONDUIT - UNDER EXISTING PAVEMENT	LF			
		FUTURE CAMERA CONDUIT				

Distribution of Quantities

Project Name - Route 165 Reclamation
Estimate Name - Addendum to PS&E
R.I. Contract No. - 2012-CH-018
FAP Nos: STP-HSIP(001), STP-RESF(215)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
142	T06.5340 Cont.	SEE GP #1 AND CS-9 AND CS-10		800.00	0004	01
		Item T06.5340 Total:		**800.00**		
143	T06.9903	**1-1/4" HIGH DENSITY POLYETHYLENE - CORRUGATED INNERDUCT**	**LF**			
		FUTURE CAMERA CONDUIT				
		SEE GP #1 AND CS PAGES 9 AND 10		1,500.00	0004	01
		Item T06.9903 Total:		**1,500.00**		
144	T11.0130	**TRAFFIC SIGNAL STANDARD, WOOD, 30 FT. CLASS 3**	**EACH**			
		FUTURE CAMERA CONDUIT				
		STA 16+08 LT 40'		1.00	0004	01
		Item T11.0130 Total:		**1.00**		
145	T18.9914	**GUARDRAIL END TERMINAL LEFT(GD-L)**	**EACH**			
		PROJECT WIDE				
		SEE ITEM 901.9902		13.00	0004	01
		Item T18.9914 Total:		**13.00**		
146	T20.0004	**4 INCH WHITE FAST - DRYING WATERBORNE PAVEMENT MARKING PAINT**	**LF**			
		PROJECT WIDE				
		ROUTE 3 TO CONN S/L		76,000.00	0004	01
		Item T20.0004 Total:		**76,000.00**		
147	T20.0006	**6 INCH WHITE FAST - DRYING WATERBORNE PAVEMENT MARKING PAINT**	**LF**			
		BRIDGE 340 TRAFFIC CONTROL				
		PHASE 1 - SHOULDER		1,360.00	0004	01
		PHASE 2 - SHOULDER		1,360.00	0004	01
		Item T20.0006 Total:		**2,720.00**		

Distribution of Quantities

Project Name - Route 165 Reclamation
Estimate Name - Addendum to PS&E
R.I. Contract No. - 2012-CH-018
FAP Nos: STP-HSIP(001), STP-RESF(215)

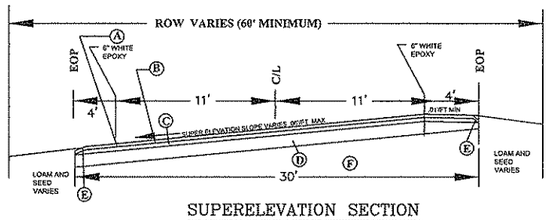
Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
148	T20.0012	**12 INCH WHITE FAST - DRYING**	**LF**			
		WATERBORNE PAVEMENT MARKING PAINT				
		ROUTE 3 TO CONN S/L				
		STOP BARS		2,800.00	0004	01
		Item T20.0012 Total:		**2,800.00**		
149	T20.0104	**4 INCH YELLOW FAST - DRYING**	**LF**			
		WATERBORNE PAVEMENT MARKING PAINT				
		PROJECT WIDE				
		ROUTE 3 TO CONN S/L		76,000.00	0004	01
		Item T20.0104 Total:		**76,000.00**		
150	T20.0106	**6 INCH YELLOW FAST - DRYING**	**LF**			
		WATERBORNE PAVEMENT MARKING PAINT				
		BRIDGE 340				
		2 YELLOW STRIPE		2,720.00	0004	01
		Item T20.0106 Total:		**2,720.00**		
151	T20.1000	**REMOVE EXISTING PAVEMENT MARKINGS**	**LF**			
		BRIDGE 340 TRAFFIC CONTROL				
		EXISITNG PAVEMENT MARKING		4,080.00	0004	01
		SEE ITEM T20.0006 AND		5,440.00	0004	01
		T20.0106				
		Item T20.1000 Total:		**9,520.00**		
152	T20.2006	**6 INCH EPOXY RESIN PAVEMENT**	**LF**			
		MARKINGS WHITE				
		PROJECT WIDE				
		ROUTE 3 TO CONN S/L		38,000.00	0004	01
		Item T20.2006 Total:		**38,000.00**		
153	T20.2012	**12 INCH EPOXY RESIN PAVEMENT**	**LF**			
		MARKINGS WHITE				

Distribution of Quantities

Project Name - Route 165 Reclamation
Estimate Name - Addendum to PS&E
R.I. Contract No. - 2012-CH-018
FAP Nos: STP-HSIP(001), STP-RESF(215)

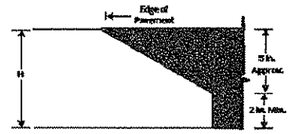
Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
153	T20.2012 Cont.	PROJECT WIDE				
		ROUTE 3 TO CONN S/L		1,340.00	0004	01
		Item T20.2012 Total:		**1,340.00**		
154	T20.2014	**4 INCH EPOXY RESIN PAVEMENT MARKINGS YELLOW**	LF			
		PROJECT WIDE				
		ROUTE 3 TO CONN S/L		38,000.00	0004	01
		Item T20.2014 Total:		**38,000.00**		

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	R.I.		2012	5	24



SUPERELEVATION SECTION
NOT TO SCALE

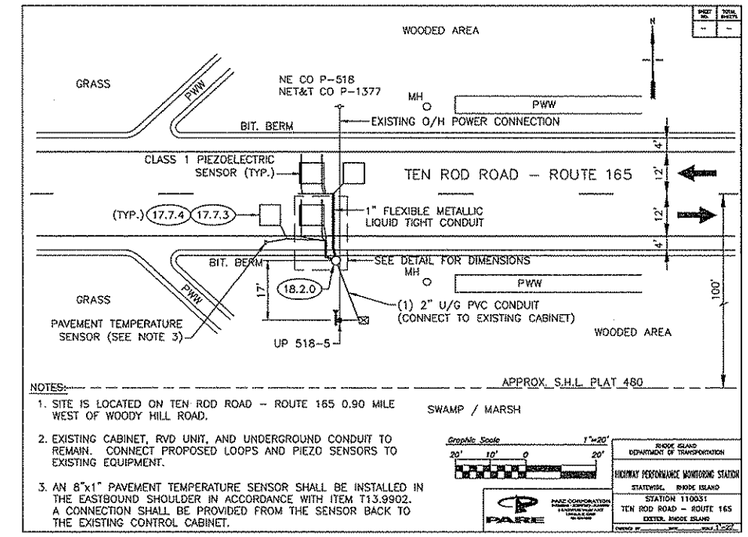
LEGEND
(A) 2" SUPER PAVE WARM MIX ASPHALT - 12.5 MM SURFACE COURSE
(B) TACK COAT
(C) 2.5" SUPERPAVE WARM MIX ASPHALT - 19 MM BASE COURSE
(D) RECLAIMED BITUMINOUS ASPHALT 8"
(E) SAFETY EDGE OR BERM
(F) EXISTING GRAVEL BORROW SUBBASE COURSE TO REMAIN
EOP EDGE OF PAVEMENT
ROW RIGHT OF WAY
RESTRIPE PAVEMENT WITH 11' LANES AND 4' SHOULDERS



SAFETY EDGE

JOB SPECIFIC LEGEND

DSW	REMOVE AND DISPOSE CONCRETE SIDEWALK & CURB
GTD	GRADE TO DRAIN
GSG	SPECIAL GRADED AGGREGATE FOR SHAPING & TRIMMING DRIVEWAYS OR SHOULDERS (303.0100)
OM-3R	OBJECT MARKER – SEE DDO
RCC	REBUILD CORBEL CONE AND VERTICAL WALLS
RMH	REBUILD MANHOLE CORBEL CONE AND VERTICAL WALLS
35.5.4	STEEL THRIE BEAM GUARDRAIL SINGLE FACE
SOCK	COMPOST FILTER SOCK, 12" DIAMETER
EAT	ENERGY ABSORBING TERMINAL
MPM	MILE POST MARKERS
NEAT	NON-ENERGY ABSORBING TERMINAL
TP	TEST PIT
EDGE	SAFETY EDGE

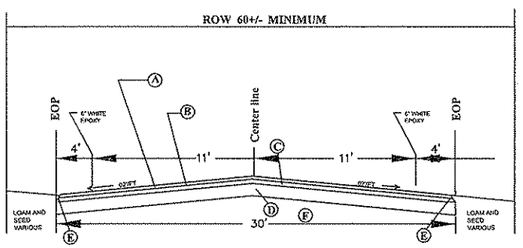


NOTES:
1. SITE IS LOCATED ON TEN ROD ROAD – ROUTE 165 0.90 MILE WEST OF WOODY HILL ROAD.
2. EXISTING CABINET, RVD UNIT, AND UNDERGROUND CONDUIT TO REMAIN. CONNECT PROPOSED LOOPS AND PIEZO SENSORS TO EXISTING EQUIPMENT.
3. AN 8"x1" PAVEMENT TEMPERATURE SENSOR SHALL BE INSTALLED IN THE EASTBOUND SHOULDER IN ACCORDANCE WITH ITEM T13.9902. A CONNECTION SHALL BE PROVIDED FROM THE SENSOR BACK TO THE EXISTING CONTROL CABINET.

Graphic Scale 1"=20'

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
HIGHWAY PERFORMANCE MONITORING STATION
STATEWIDE, RHODE ISLAND
STATION 110031
TEN ROD ROAD – ROUTE 165
EXETER, RHODE ISLAND

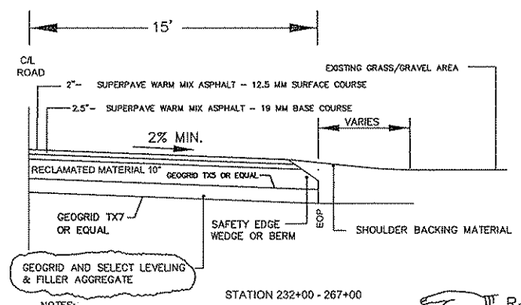
PARE CORPORATION



TYPICAL SECTION / NORMAL SECTION
NOT TO SCALE

LEGEND
(A) 2" SUPER PAVE WARM MIX ASPHALT - 12.5 MM SURFACE COURSE
(B) TACK COAT
(C) 2.5" SUPERPAVE WARM MIX ASPHALT - 19 MM BASE COURSE
(D) RECLAIMED BITUMINOUS ASPHALT 8"
(E) SAFETY EDGE
(F) EXISTING GRAVEL BORROW SUBBASE COURSE TO REMAIN
EOP EDGE OF PAVEMENT
ROW RIGHT OF WAY
RESTRIPE PAVEMENT WITH 11' LANES AND 4' SHOULDERS

SAFETY EDGE IS TO BE PLACED IN AREAS WHERE THERE IS NO BERM.

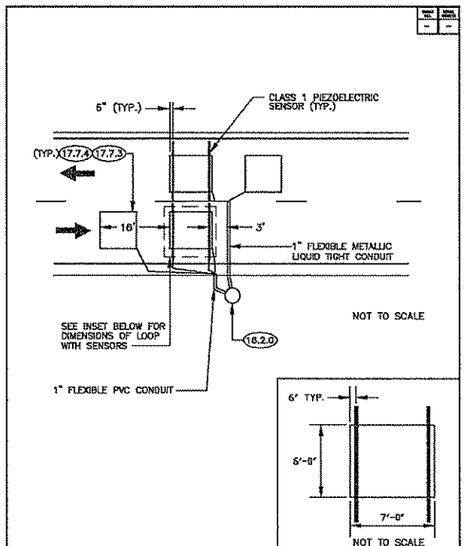


STATION 232+00 - 267+00

R-001

NOTES:
1. THE CONTRACTOR SHALL EXCAVATE 16" OF RECLAIMED MATERIAL AND GRAVEL BORROW FROM ONE TRAVEL LANE AT A TIME AND WHAT CAN BE REPLACED IN ONE DAY.
2. INSTALL GEO-GRID TX7 OR OTHER SUITABLE PRODUCT ON BOTTOM OF 16" THEN INSTALL 6" SELECT LEVELING AND FILLER AGGREGATE (COMPACTED IN 6" LIFTS). PLACE GEO-GRID TX5 OR OTHER SUITABLE PRODUCT.
3. INSTALL TRAFFIC SENSOR.
4. 10" OF RECLAIMED MATERIAL AND/OR BLENDED SELECT LEVELING & FILLER AGGREGATE WITH RECLAMATION IS TO BE PLACED AND COMPACTED IN 5" LIFTS.

GEOTECHNICAL FABRIC SECTION
NOT TO SCALE



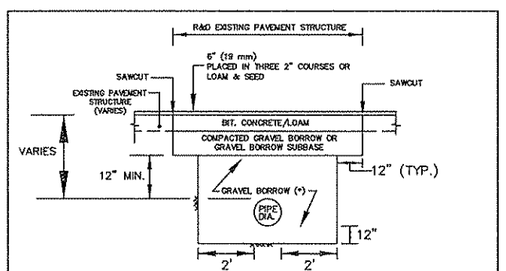
NOT TO SCALE

NOT TO SCALE

PARE CORPORATION
ENGINEERS · SURVEYORS · PLANNERS
8 BLACKSTONE VALLEY PLACE
LINCOLN, RI 02865
401-334-1225

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
HIGHWAY PERFORMANCE MONITORING STATION

AVC/WIM LAYOUT FOR 2-LANE ROAD



*GRAVEL BORROW SHALL CONFORM TO SECTION M.01.02.3 OF THE ROOT SPECS. FOR ROAD & BRIDGE CONST. 2004 ED. AND, IN ADDITION, THE MAXIMUM PARTICLE SIZE SHALL NOT EXCEED THREE (3) INCHES. GRAVEL BORROW IS TO BE WELL COMPACTED IN SIX (6) INCH LIFTS UP TO 12" ABOVE THE PIPE(S).

TRENCH DETAIL: DRAINAGE PIPE (TP)
N.T.S.

JOB SPECIFIC DRAINAGE NOTES:

THE R.I.D.O.T. WILL BE RESPONSIBLE FOR THE LONG TERM MAINTENANCE OF THE PROPOSED DRAINAGE SYSTEM – CATCH BASINS SHALL BE INSPECTED AT LEAST SEMI-ANNUALLY: IN THE FALL AFTER TREE LEAVES HAVE FALLEN AND IN THE SPRING AFTER THE SNOW MELT. CATCH BASINS SHALL BE CLEANED WHEN 50% OF THE SUMP IS FILLED WITH SEDIMENT.

STATE OF RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
Two Capitol Hill
Providence, Rhode Island 02903-1124
(401) 222-2023

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

STATEWIDE DRAINAGE IMPROVEMENTS

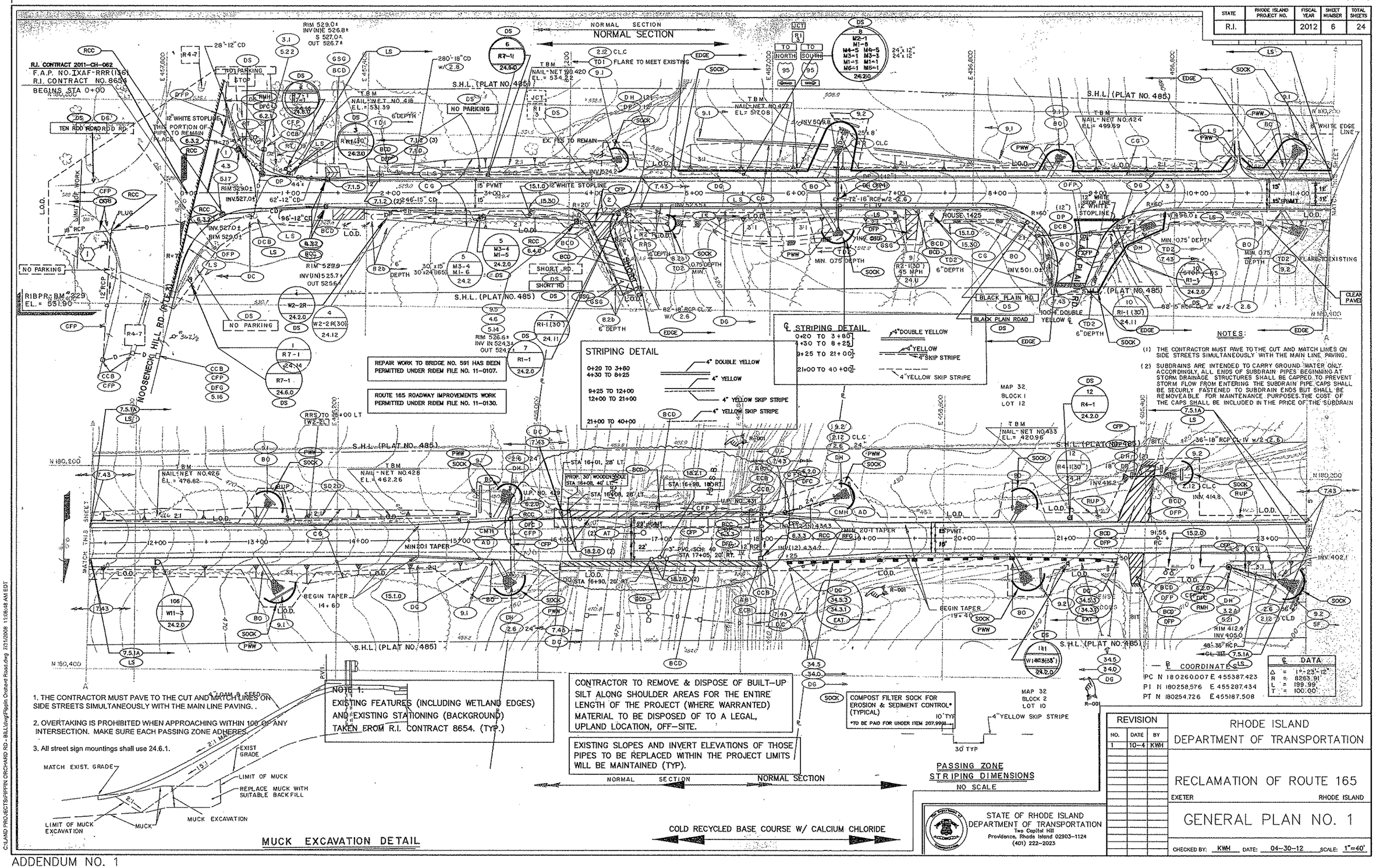
RECLAMATION OF ROUTE 165

EXETER RHODE ISLAND

JOB SPECIFIC
PLAN SYMBOLS, LEGEND & NOTES

CHECKED BY K.W.H. DATE 04-30-12 SCALE AS NOTED

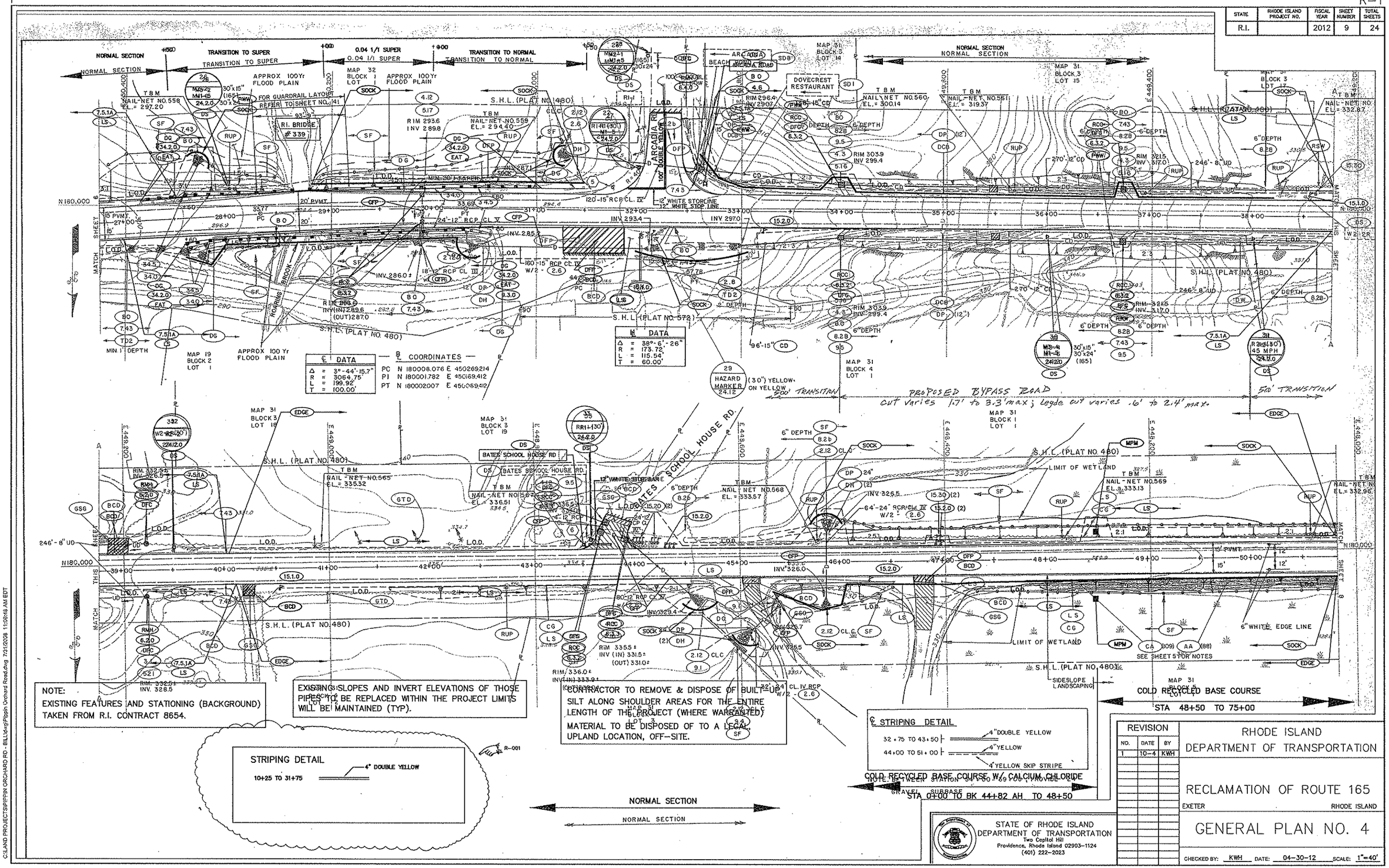
STATE	RHODE ISLAND PROJECT NO.	FISCAL YEAR	SHEET NUMBER	TOTAL SHEETS
R.I.		2012	6	24



ADDENDUM NO. 1

C:\LAND PROJECTS\FIPPIN ORCHARD RD - BILL\Layg\Fippin Orchard Road.dwg 7/31/2008 11:06:48 AM EDT

STATE	RHODE ISLAND PROJECT NO.	FISCAL YEAR	SHEET NUMBER	TOTAL SHEETS
R.I.		2012	9	24



℄ DATA	
Δ =	3°-44'-15.7"
R =	3064.75'
L =	199.92'
T =	100.00'

℄ COORDINATES		
PC	N 180008.076	E 450269.214
PI	N 180001.782	E 450169.412
PT	N 180002.007	E 450069.412

℄ DATA	
Δ =	38°-6'-26"
R =	173.72'
L =	115.54'
T =	60.00'

NOTE:
EXISTING FEATURES AND STATIONING (BACKGROUND) TAKEN FROM R.I. CONTRACT 8654.

EXISTING SLOPES AND INVERT ELEVATIONS OF THOSE PIPES TO BE REPLACED WITHIN THE PROJECT LIMITS WILL BE MAINTAINED (TYP).

CONTRACTOR TO REMOVE & DISPOSE OF BUILT UP SILT ALONG SHOULDER AREAS FOR THE ENTIRE LENGTH OF THE PROJECT (WHERE WARRANTED) MATERIAL TO BE DISPOSED OF TO A LEGAL UPLAND LOCATION, OFF-SITE.

STRIPING DETAIL
10+25 TO 31+75 — 4" DOUBLE YELLOW

℄ STRIPING DETAIL
32+75 TO 43+50 — 4" DOUBLE YELLOW
44+00 TO 51+00 — 4" YELLOW
4" YELLOW SKIP STRIPE

REVISION		
NO.	DATE	BY
1	10-4	KWH

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

RECLAMATION OF ROUTE 165
EXETER — RHODE ISLAND

GENERAL PLAN NO. 4

CHECKED BY: KWH DATE: 04-30-12 SCALE: 1"=40'

STATE OF RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
Two Capitol Hill
Providence, Rhode Island 02903-1124
(401) 222-2023

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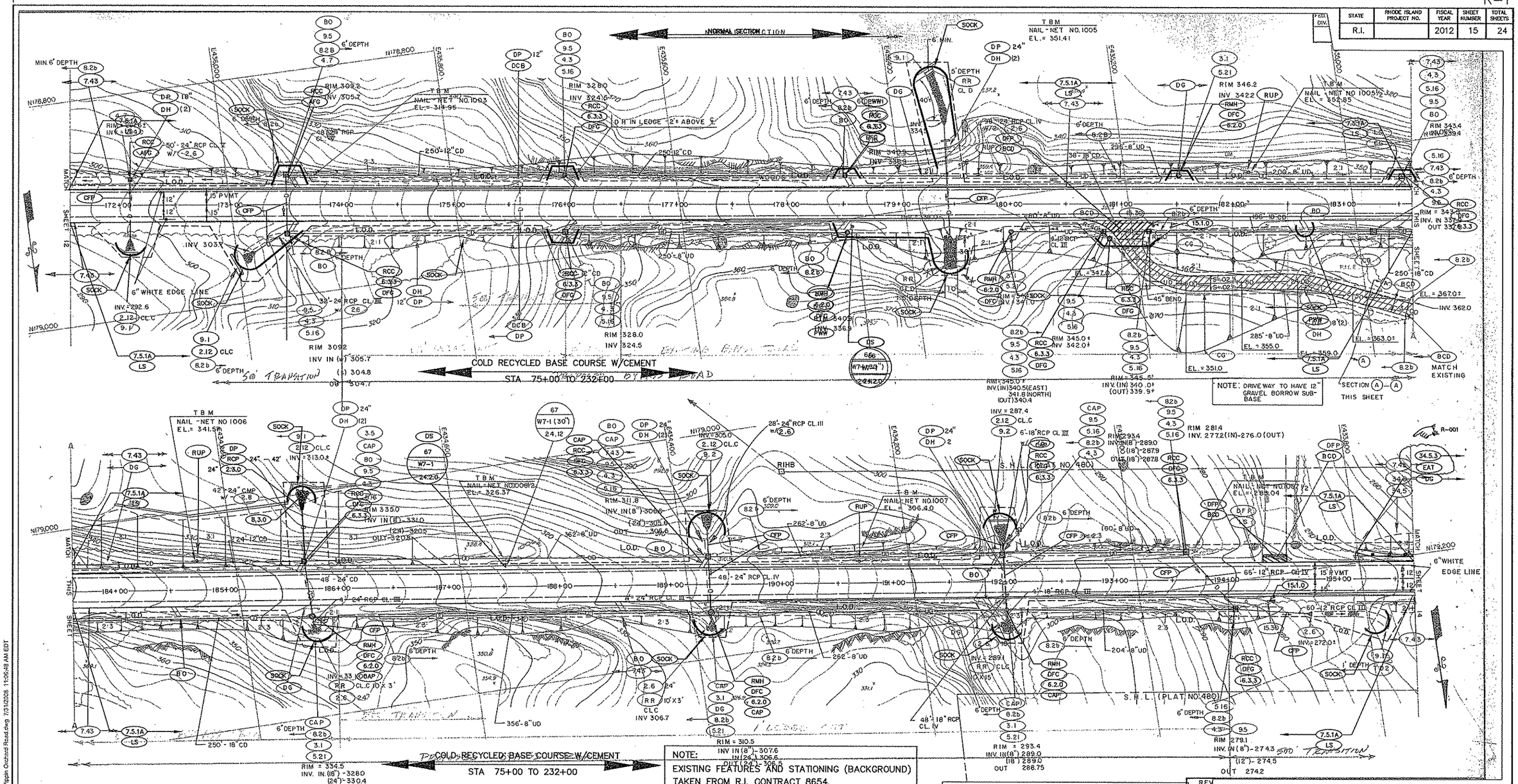
ADDENDUM NO. 1

STATE	RHODE ISLAND PROJECT NO.	FISCAL YEAR	SHEET NUMBER	TOTAL SHEETS
R.I.		2012	15	24



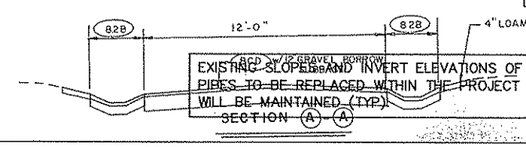
NOTE:
EXISTING FEATURES AND STATIONING (BACKGROUND) TAKEN FROM R.I. CONTRACT 8654.

CONTRACTOR TO REMOVE & DISPOSE OF BUILT-UP SILT ALONG SHOULDER AREAS FOR THE ENTIRE LENGTH OF THE PROJECT (WHERE WARRANTED)
MATERIAL TO BE DISPOSED OF TO A LEGAL, UPLAND LOCATION, OFF-SITE.

STRIPING DETAIL

STRIPING DETAIL
177+00 TO 185+00 — 4" DOUBLE YELLOW ℄ / 4" DOUBLE YELLOW
177+00 to 185+00 — 4" YELLOW LINE
185+00 TO 196+00 — 4" YELLOW SKIP STRIPE
185+00 TO 196+00 — 4" YELLOW / 4" YELLOW SKIP STRIPE

NORMAL SECTION



EXISTING SLOPES AND INVERT ELEVATIONS OF THOSE PIPES TO BE REPLACED WITHIN THE PROJECT LIMITS WILL BE MAINTAINED (TYP).
SECTION (A) - (A)

REV NO.	REVISION NO.	DATE	BY
	1	10-4	KWH

STATE OF RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
Two Capitol Hill
Providence, Rhode Island 02903-1124
(401) 222-2023

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

RECLAMATION OF ROUTE 165
EXETER — RHODE ISLAND

GENERAL PLAN NO. 10

CHECKED BY: KWH DATE: 04-30-12 SCALE: 1"=40'

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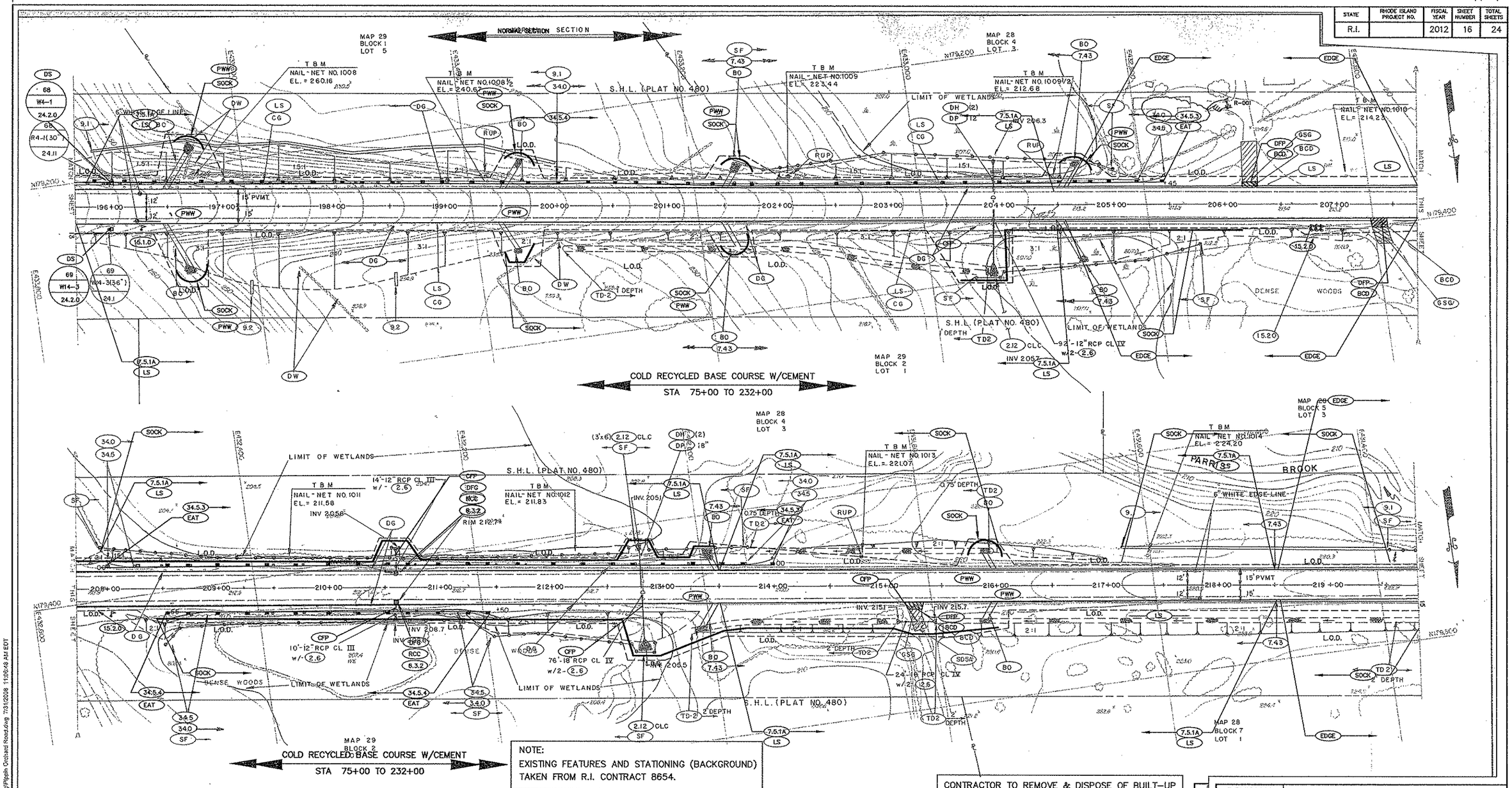
ADDENDUM NO. 1

STATE	RHODE ISLAND PROJECT NO.	FISCAL YEAR	SHEET NUMBER	TOTAL SHEETS
R.I.		2012	16	24



NOTE:
EXISTING FEATURES AND STATIONING (BACKGROUND) TAKEN FROM R.I. CONTRACT 8654.

EXISTING SLOPES AND INVERT ELEVATIONS OF THOSE PIPES TO BE REPLACED WITHIN THE PROJECT LIMITS WILL BE MAINTAINED (TYP).

CONTRACTOR TO REMOVE & DISPOSE OF BUILT-UP SILT ALONG SHOULDER AREAS FOR THE ENTIRE LENGTH OF THE PROJECT (WHERE WARRANTED)
MATERIAL TO BE DISPOSED OF TO A LEGAL, UPLAND LOCATION, OFF-SITE.

STRIPING DETAIL

STRIPING DETAIL

196+00 TO 220+25 — 4" YELLOW SKIP STRIPE, 4" YELLOW SKIP LINE

220+25 TO 232+25 — 4" YELLOW SKIP STRIPE, 4" YELLOW SKIP LINE, 4" YELLOW, 4" YELLOW LINE

NORMAL SECTION

REVISION		
NO.	DATE	BY
1	10-4	KWH

STATE OF RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
Two Capitol Hill
Providence, Rhode Island 02903-1124
(401) 222-2023

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

RECLAMATION OF ROUTE 165

EXETER — RHODE ISLAND

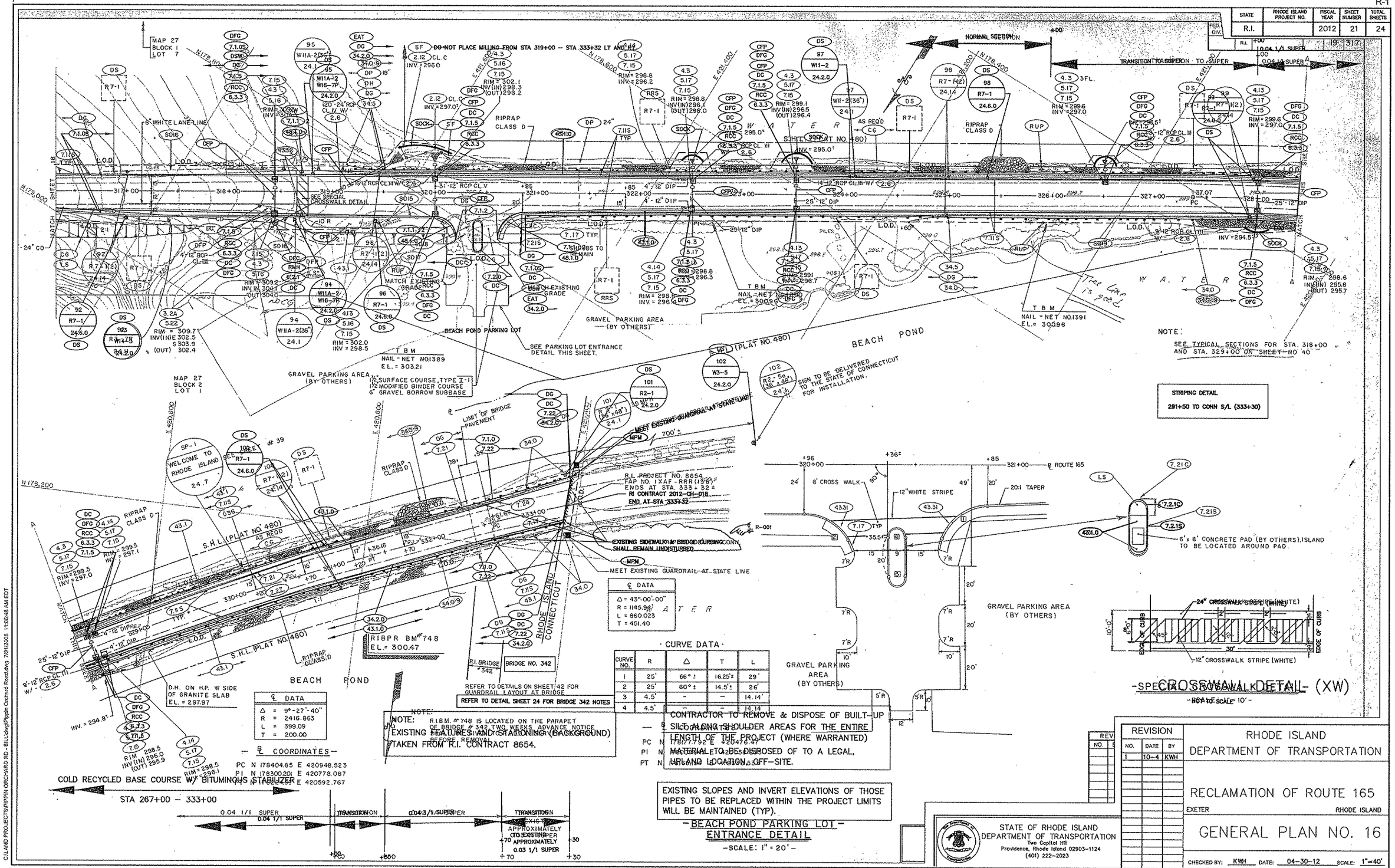
GENERAL PLAN NO. 11

CHECKED BY: KWH DATE: 04-30-12 SCALE: 1"=40'

C:\LAND PROJECTS\PIPPIN ORCHARD RD - BILL\dwg\Pippin Orchard Road.dwg 7/31/2008 11:06:48 AM EDT

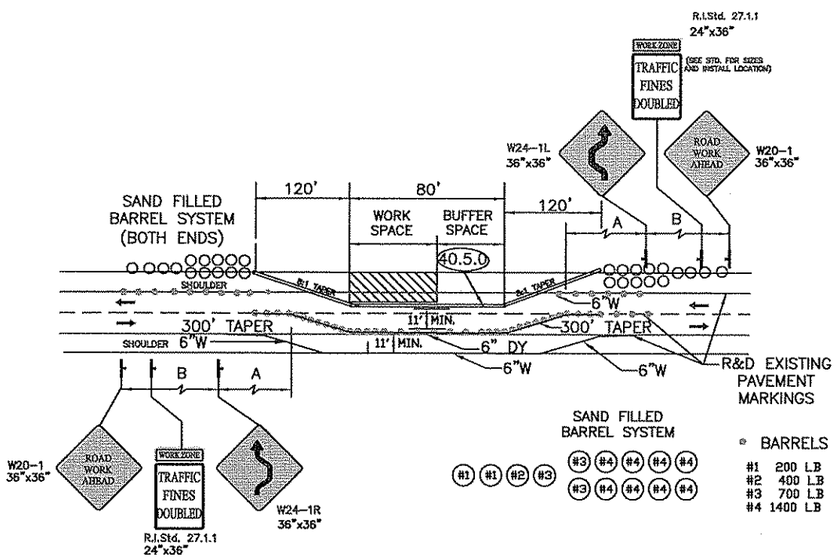
ADDENDUM NO. 1

STATE	RHODE ISLAND PROJECT NO.	FISCAL YEAR	SHEET NUMBER	TOTAL SHEETS
R.I.		2012	21	24

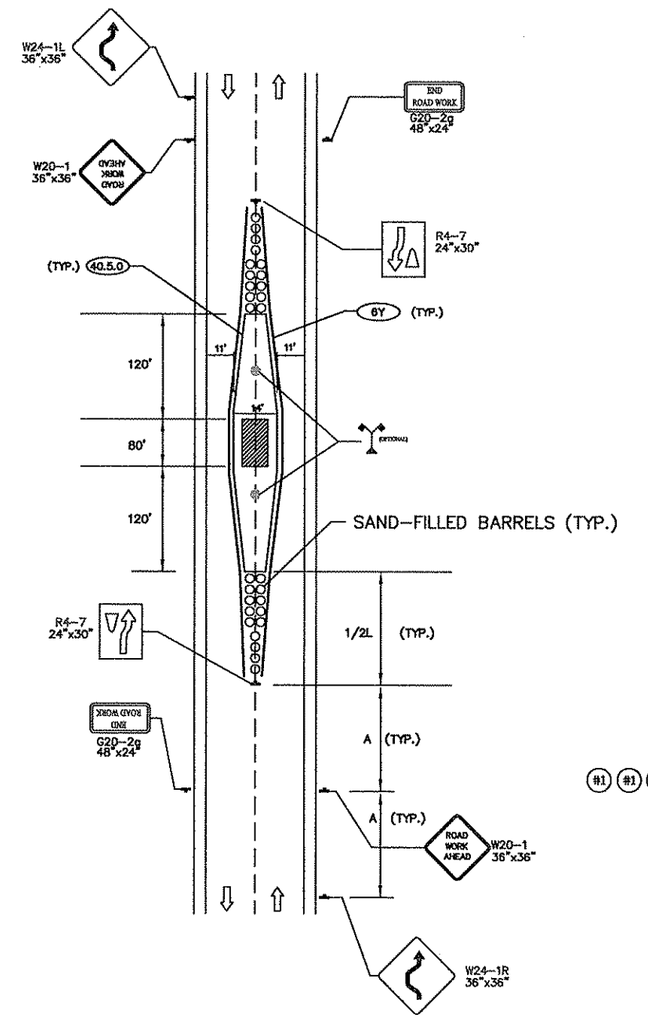


ADDENDUM NO. 1

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	R.I.		2012	24A	24



TYPICAL LANE SHIFT ON BRIDGE NO. 340
NOT TO SCALE



WORK IN CENTER OF ROAD WITH LOW TRAFFIC VOLUMES
NOT TO SCALE

MINIMUM ADVANCE WARNING SIGN SPACING

Posted Speed Limit & Location	Distance Between Signs (Feet)		
	A	B	C
30 MPH OR LESS IN URBAN OR RURAL AREA	100	100	100
35 MPH OR GREATER IN URBAN AREA	350	350	350
35 MPH OR GREATER IN RURAL AREA	500	500	500

TAPER AND BUFFER LENGTHS

Speed Limit	Taper Length* (L) (Feet)	Buffer Space** (Feet)
25 MPH	125	55
30 MPH	180	85
35 MPH	245	120
40 MPH	320	170
45 MPH	540	220
50 MPH	600	280

* Required
** Suggested

BARRELS
#1 200 LB
#2 400 LB
#3 700 LB
#4 1400 LB

SAND FILLED BARREL SYSTEM
#1 #1 #2 #3
#3 #4 #4 #4 #4
#3 #4 #4 #4 #4

REVISION		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

STATEWIDE DRAINAGE IMPROVEMENTS
RECLAMATION OF ROUTE 165
EXETER RHODE ISLAND

TRAFFIC CONTROL PLAN 2

CHECKED BY: KW DATE: 10-03-12 SCALE: AS NOTED

STATE OF RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
Two Capitol Hill
Providence, Rhode Island 02903-1124
(401) 222-2023

S:\Design\Highways\JoeRotto\LAND PROJECTS\ROUTE 104-ROUTE 5-NSWFLD\dwg\Route 104-Route 5 - North Smithfield.dwg 1/3/2009 9:33:25 AM EST

ADDENDUM NO. 1

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	R.I.	W.P.S.O. 117-B	1	3

STATE OF RHODE ISLAND

STATE BOARD OF PUBLIC ROADS

DEPT. OF PUBLIC WORKS — DIV. OF ROADS AND BRIDGES

INDEX OF SHEETS
DIVISION 'B'

SHEET NO. 1		TITLE SHEET
" " 2	339,001	CONSTRUCTION PLAN
" " 3	339,002	DETAILS & REINFORCEMENT

PLAN, PROFILE AND SECTIONS OF PROPOSED

STATE HIGHWAY

BRIDGE NO. 339

TO BE KNOWN AS

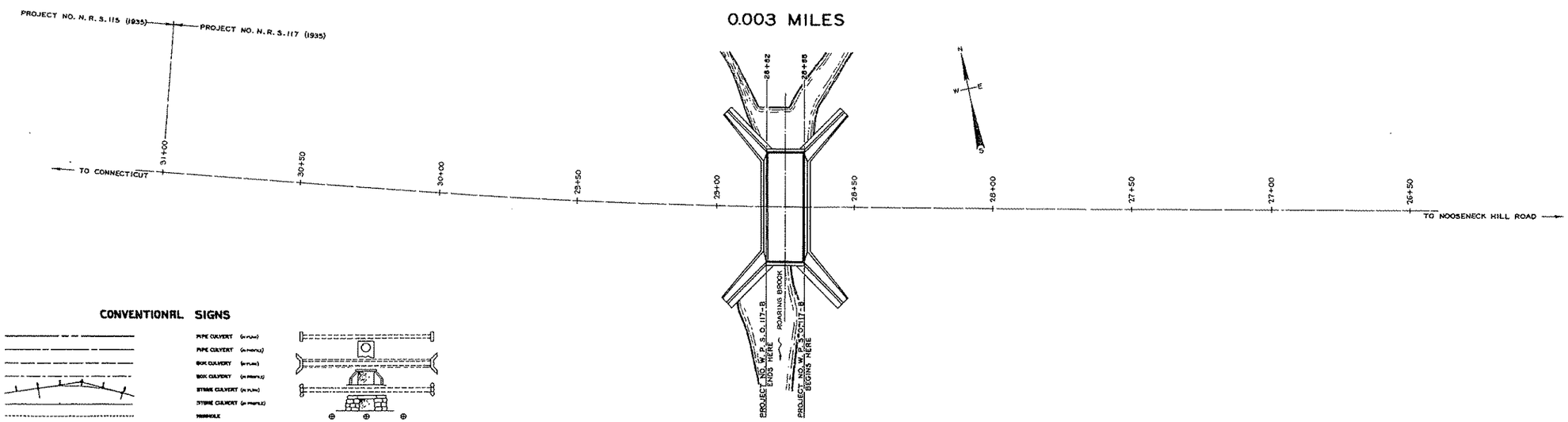
ROARING BROOK BRIDGE

EXETER

WASHINGTON COUNTY

U. S. WORKS PROGRAM HIGHWAY BRIDGE PROJECT NO. W. P. S. O. 117-B

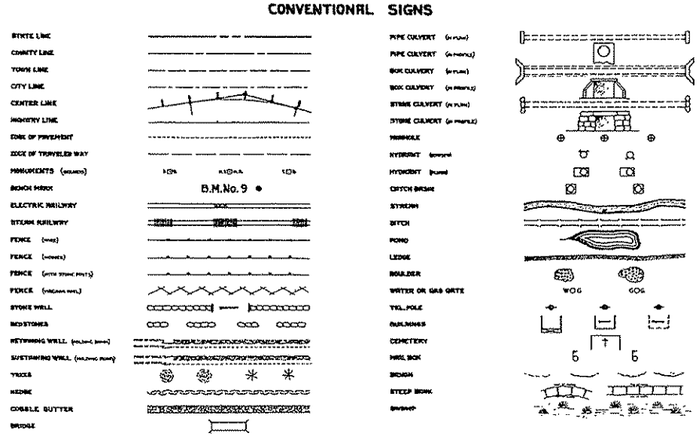
0.003 MILES



LAYOUT

SCALE 1 IN. — 20 FEET

CONVENTIONAL SIGNS



SCALES OF DRAWINGS

Plans, - - 1 inch = 40 feet, 4 feet, 1 foot
Profiles, - - 1 inch = 40 feet Horizontal
" - - 1 inch = 8 feet Vertical
Cross Sections, 1 inch = 4 feet

Contract Number
Number of Sheet 1
Total Sheets 3

APPROVED
DANIEL O. CARGILL
BRIDGE ENGINEER — DIVISION OF ROADS AND BRIDGES

APPROVED
JOHN H. CATON, 3RD
CHIEF — DIVISION OF ROADS AND BRIDGES

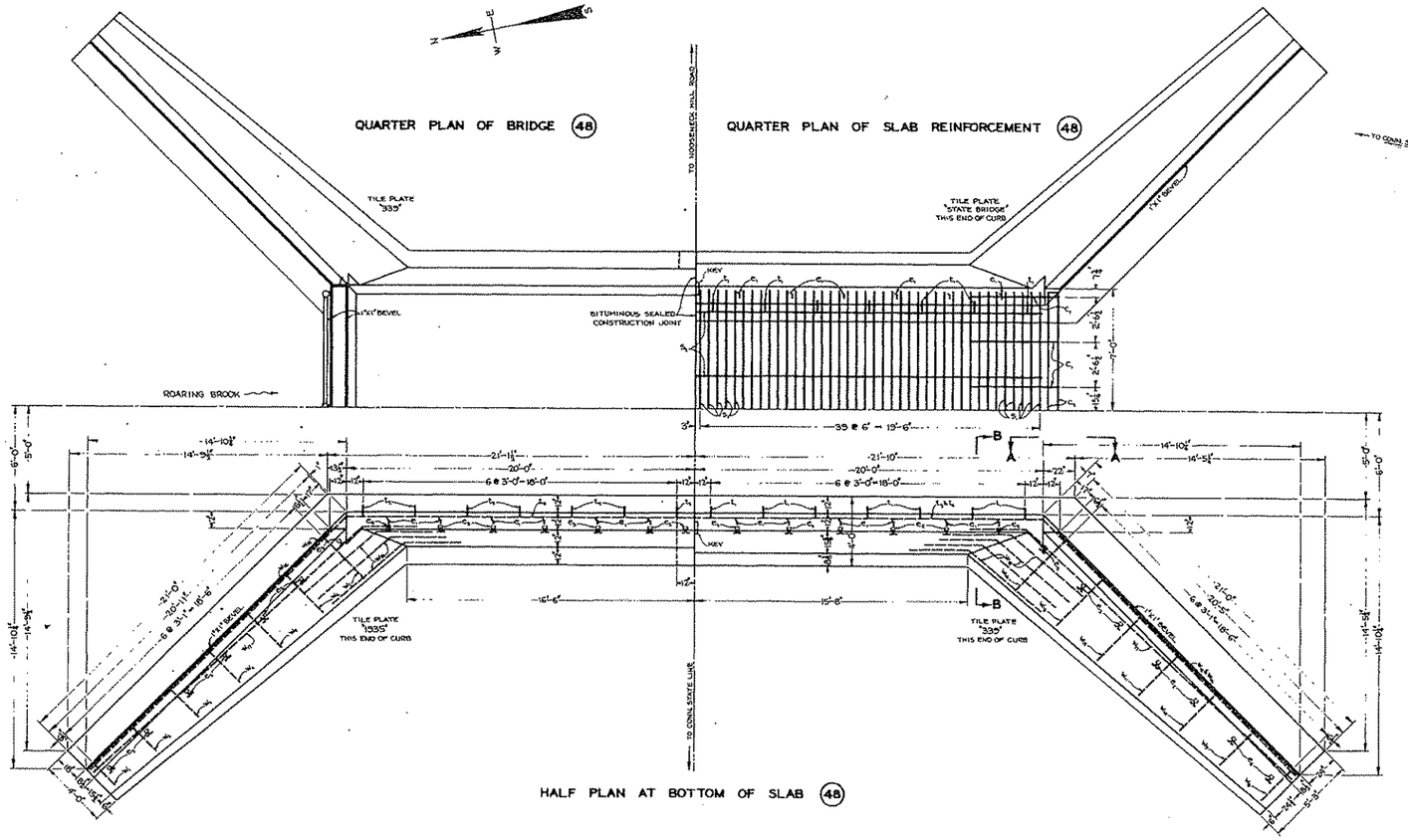
RECOMMENDED FOR APPROVAL
CHARLES F. McELROY
DIRECTOR — DEPARTMENT OF PUBLIC WORKS

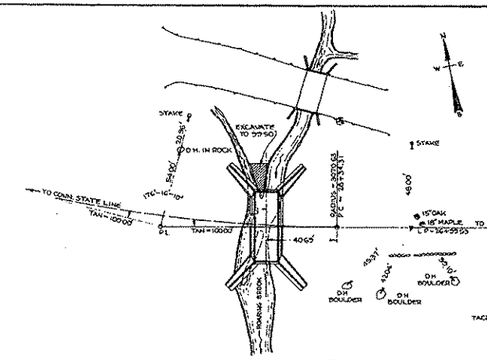
RECOMMENDED FOR APPROVAL
DISTRICT ENGINEER — BUREAU OF PUBLIC ROADS

APPROVED
CHIEF ENGINEER — BUREAU OF PUBLIC ROADS

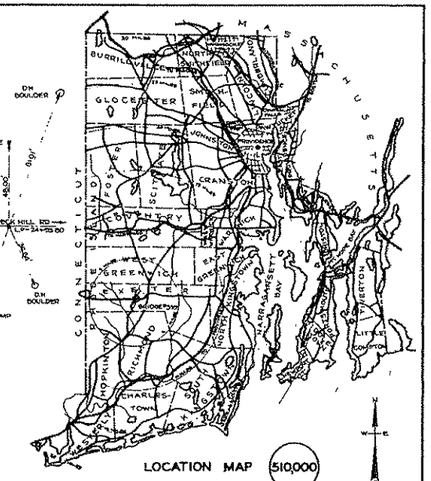
ADDENDUM NO. 1

339,001

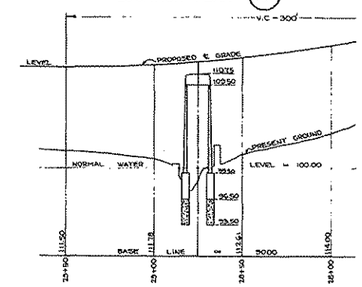




LOCATION PLAN (480)



LOCATION MAP (510,000)



PROFILE VERTICAL (96) HORIZONTAL (480)

NOTES

BRIDGE BENCH TO BE ESTABLISHED AT THE SITE BY THE ENGINEER

BRIDGE BENCHES:— B.M. #13 DRILL MARK ROCK, STA 23+63.7± 40'± RIGHT, ELEVATION = 140.03

B.M. #14 TOP CORNER WHEEL GUARD SOUTH END OF BRIDGE, EAST SIDE, ELEVATION = 111.68

B.M. #3 DRILL MARK LARGE BOULDER, STA. 38+18.0± 31.5'± LEFT, ELEVATION = 153.23

BRIDGE GRADE 100.00 — ROAD GRADE 25.162

ALL FOOTINGS MUST BE APPROVED BY THE ENGINEER BEFORE PLACING CONCRETE

ALL BARS REQUIRING SPLICING TO BE LAPPED NOT LESS THAN 50 DIAMETERS AND RIGIDLY WIRED TOGETHER

EXCAVATE STREAM BED UNDER BRIDGE TO GRADE 99.50

* MATERIAL ON HAND

SCALE RECIPROCAL 480 REDUCTION

SCALE RECIPROCAL 96 REDUCTION

SCALE RECIPROCAL 48 REDUCTION

NET QUANTITIES

				REVISED QUANTITIES
BRIDGE EARTH EXCAVATION BELOW 100.00	124		CU.YDS.	90
BRIDGE EARTH EXCAVATION ABOVE 100.00	9		CU.YDS.	9
TOTAL BRIDGE EARTH EXCAVATION		133	CU.YDS.	99
CHANNEL EARTH EXCAVATION		10	CU.YDS.	10
LEDGE EXCAVATION		12	CU.YDS.	46
CLASS 'B' CONCRETE BELOW 100.00	87.10		CU.YDS.	87.10
CLASS 'A' CONCRETE BELOW 100.00	31.32		CU.YDS.	31.32
CLASS 'A' CONCRETE ABOVE 100.00	116.16		CU.YDS.	116.16
TOTAL CONCRETE		234.58	CU.YDS.	254.58
CONCRETE SURFACE FINISH (RUBBED)		1,321	SQ.FT.	1,321
1" ϕ CUT & BENT REINFORCEMENT BARS 1227 LIN.FT	3276		LBS.	3276
¾" ϕ CUT & BENT REINFORCEMENT BARS 1874 LIN.FT.	2815		LBS.	2,815
TOTAL CUT & BENT REINFORCEMENT BARS		6091	LBS.	6,091
*DOWELS (SPLICE BARS - 24" LONG)		24	REQ'D	24
*DOWELS (60" RAILS - 24" LONG)		54	REQ'D	54
2"-3 BAR PIPE RAIL		26	LIN.FT	26
BORROW IN PLACE		700	CU.YDS.	616
BACKFILL		23	CU.YDS	23
STANDARD WOODEN GUARD RAIL			LIN.FT.	460

STATE BOARD OF PUBLIC ROADS

BRIDGE DEPARTMENT

ROARING BROOK BRIDGE

EXETER, R.I.

CONSTRUCTION PLAN

DRAWN BY P.D.C. TRACED BY G.H.H. CHECKED BY BW.

FINAL DATE FEB. 21, 1935 NOV. 27, 1936

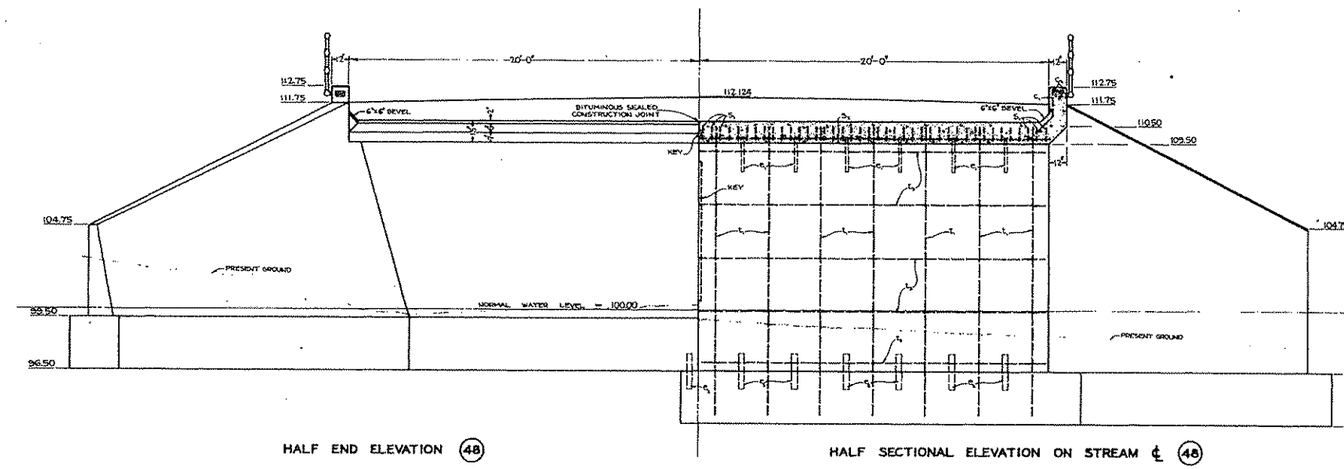
PASSED BY David A. Boyle BRIDGE ENGINEER

APPROVED CHIEF ENGINEER

PRINT NO.

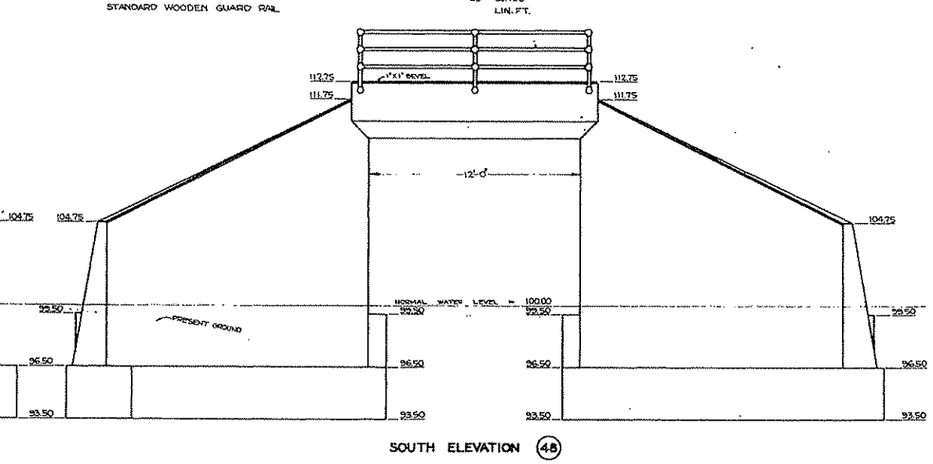
PRINTED

ISSUED TO



HALF END ELEVATION (48)

HALF SECTIONAL ELEVATION ON STREAM ℄ (48)

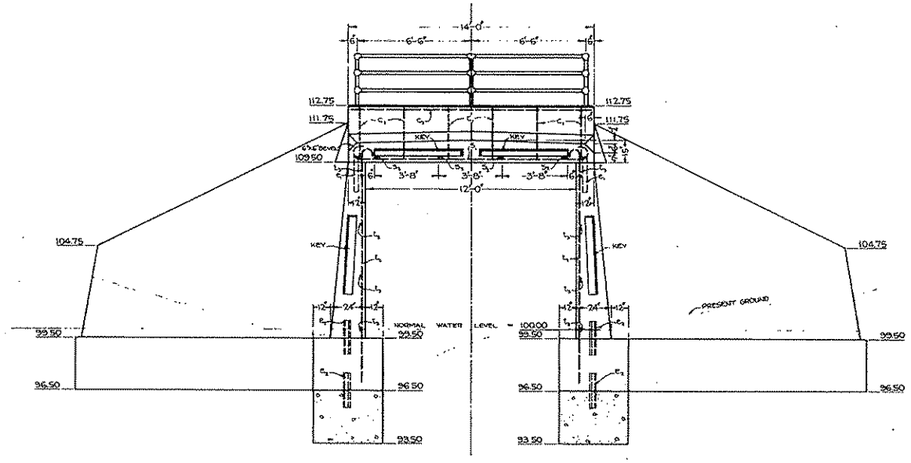


SOUTH ELEVATION (48)

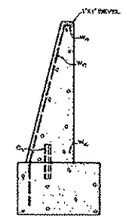
339,001 A

ADDENDUM NO. 1

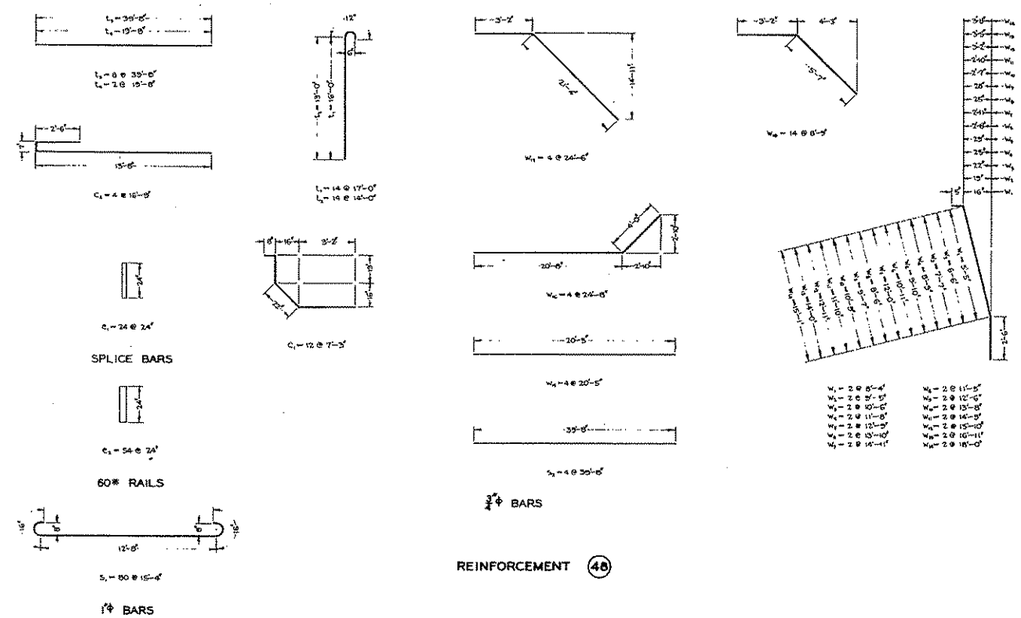
339,002



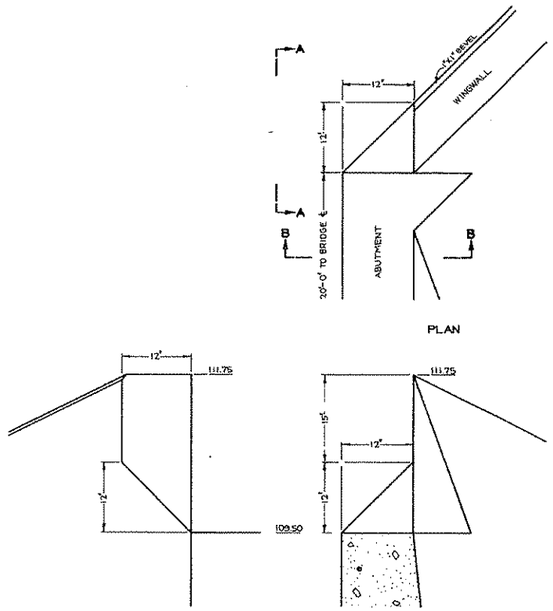
SECTIONAL ELEVATION ON ROAD ℄ (48)



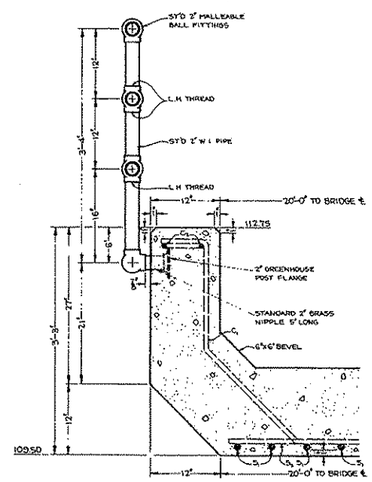
TYPICAL SECTION OF WINGWALL (48)



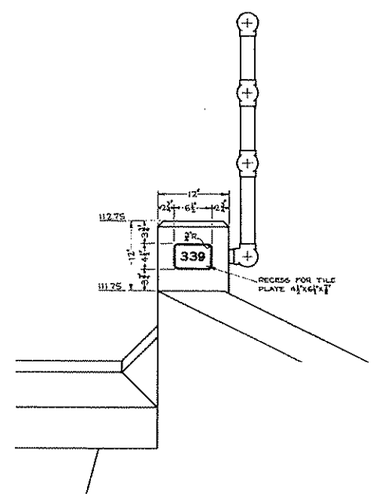
REINFORCEMENT (48)



DETAIL OF JOINT AT WINGWALL (12)



SECTION THRU CURB (12)



END ELEVATION OF CURB (12)

REINFORCEMENT SCHEDULE

SIZE	MARK	LOCATION OF BARS	NO.	LENGTH
1¼	S_1	LONGITUDINAL IN BOTTOM OF SLAB	80	15'-4"
¾	C_1	VERTICAL IN CURB	12	7'-3"
¾	C_1	HORIZONTAL IN CURB	4	12'-9"
¾	S_2	TRANSVERSE IN SLAB	4	39'-8"
¾	E_1	VERTICAL IN ABUTMENT	14	12'-0"
¾	E_1	" " " "	14	14'-0"
¾	E_2	HORIZONTAL IN ABUTMENT	8	39'-8"
¾	E_2	" " " "	2	19'-8"
¾	W_1	VERTICAL IN N.E. & N.W. WINGWALLS	2	8'-4"
¾	W_1	" " " " " "	2	9'-3"
¾	W_1	" " " " " "	2	10'-6"
¾	W_1	" " " " " "	2	11'-8"
¾	W_1	" " " " " "	2	12'-9"
¾	W_1	" " " " " "	2	13'-10"
¾	W_1	" " " " " "	2	14'-11"
¾	W_2	VERTICAL IN S.E. & S.W. WINGWALLS	2	11'-3"
¾	W_2	" " " " " "	2	12'-6"
¾	W_2	" " " " " "	2	13'-9"
¾	W_2	" " " " " "	2	14'-9"
¾	W_2	" " " " " "	2	15'-10"
¾	W_2	" " " " " "	2	16'-11"
¾	W_2	" " " " " "	2	18'-0"
¾	W_3	SLOPING IN TOP OF WINGWALL	4	22'-5"
¾	W_4	HORIZONTAL IN BOTTOM OF WINGWALL	4	23'-5"
¾	W_5	HORIZONTAL IN BACK OF WINGWALL	4	24'-0"
¾	W_6	" " " " " "	16	8'-9"
SPLICE BARS	C_2	DOWELS	24	24"
60# RAILS	C_3	DOWELS	54	24"

SCALE RECIPROCAL 48 REDUCTION

SCALE RECIPROCAL 12 REDUCTION

STATE BOARD OF PUBLIC ROADS
BRIDGE DEPARTMENT
ROARING BROOK BRIDGE
EXETER, R.I.

DETAILS & REINFORCEMENT

DRAWN BY W.S.C. TRACED BY G.H.H. CHECKED BY S.M.

FINAL DATE FEB. 21, 1935 NOV. 27, 1936

PASSED BY BRIDGE ENGINEER

APPROVED CHIEF ENGINEER

PRINT NO

PRINTED

ISSUED TO

339,002

ADDENDUM NO. 1

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	R. I.	W.P.S.O. 115-B	1	8

STATE OF RHODE ISLAND

~~STATE BOARD OF PUBLIC ROADS~~

DEPT. OF PUBLIC WORKS — DIV. OF ROADS AND BRIDGES

PLAN, PROFILE AND SECTIONS OF PROPOSED

STATE HIGHWAY

BRIDGES NO. ~~339,~~ 340, 341 & 342

TEN ROD ROAD BRIDGES

EXETER

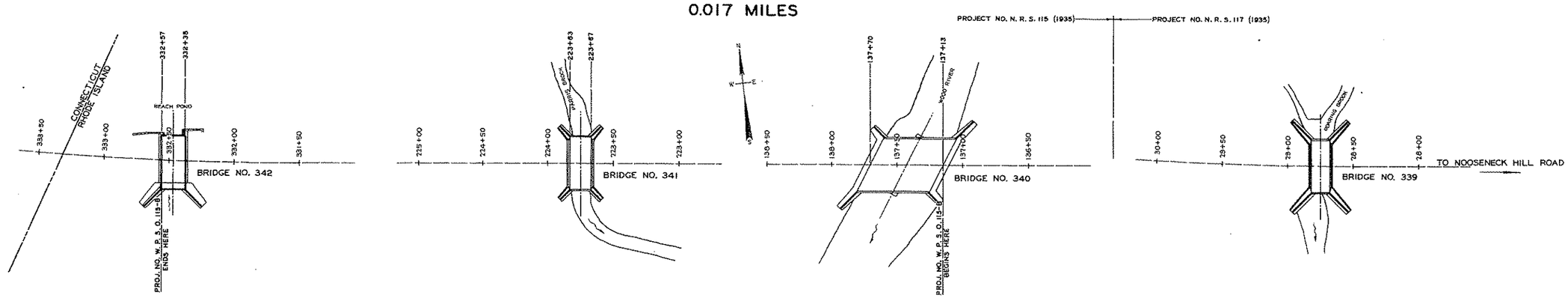
WASHINGTON COUNTY

U. S. WORKS PROGRAM HIGHWAY BRIDGE PROJECT NO. W. P. S. O. 115-B

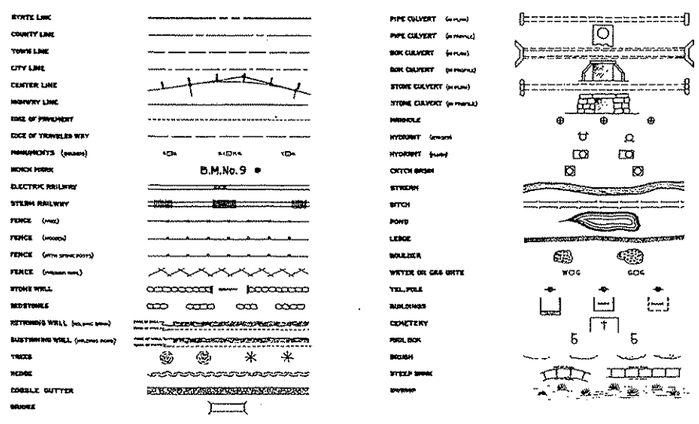
0.017 MILES

INDEX OF SHEETS
DIVISION 'B'

SHEET NO.	1		TITLE SHEET
" "	2	340,001	CONSTRUCTION PLAN
" "	3	340,002	ELEVATIONS
" "	4	340,003	DETAILS & REINFORCEMENT
" "	5	341,001	CONSTRUCTION PLAN
" "	6	341,002	DETAILS & REINFORCEMENT
" "	7	342,001	CONSTRUCTION PLAN
" "	8	342,002	ELEVATIONS & DETAILS



CONVENTIONAL SIGNS



LAYOUT

SCALE 1 IN. = 40 FEET

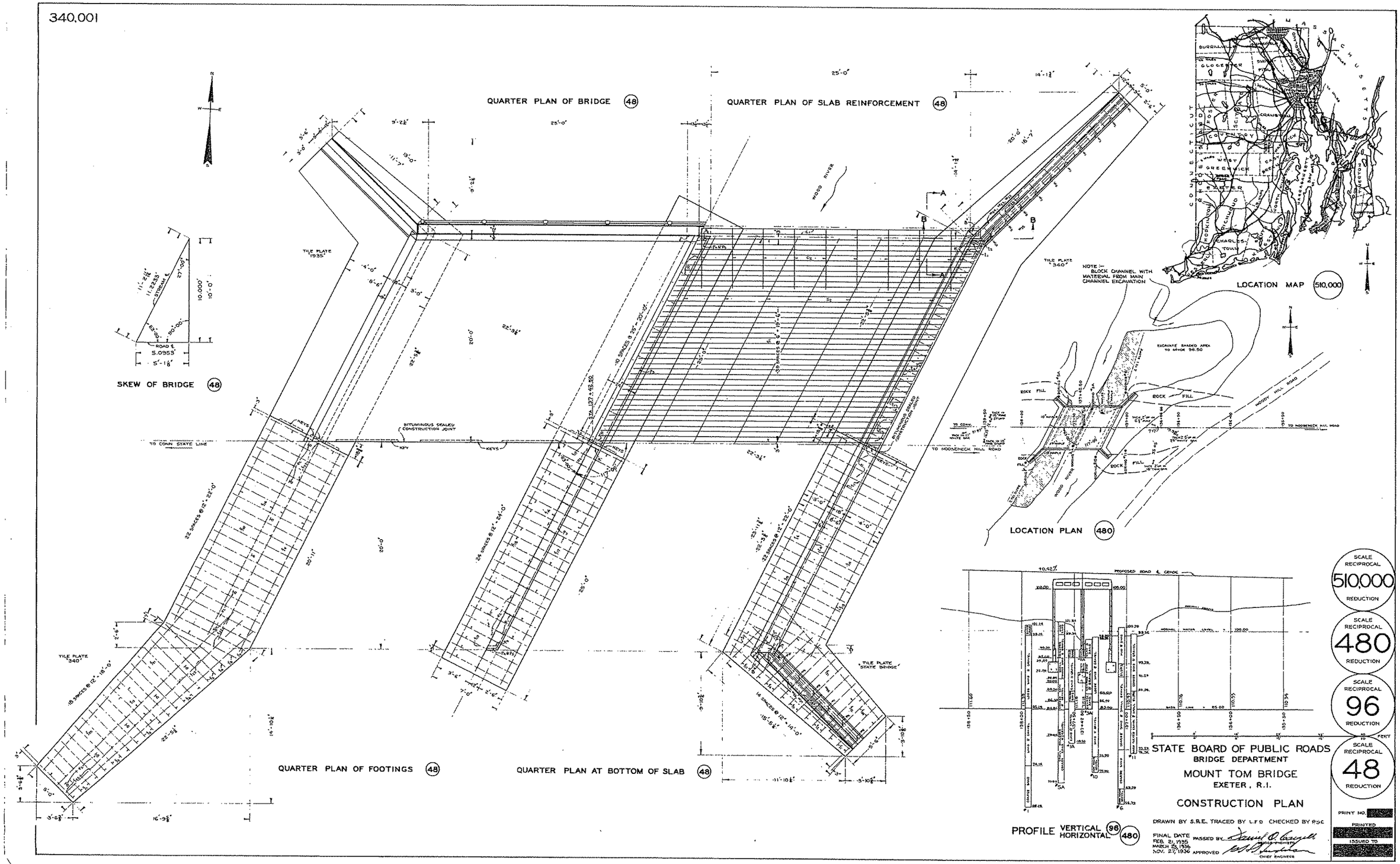
SCALES OF DRAWINGS

Plans, - - 1 inch = 40 feet, 20 feet, 4 feet, 2 feet, 1 foot
Profiles, - - 1 inch = 40 feet, 20 feet Horizontal
" - - 1 inch = 8 feet, 4 feet Vertical
Cross Sections, 1 inch = 4 feet

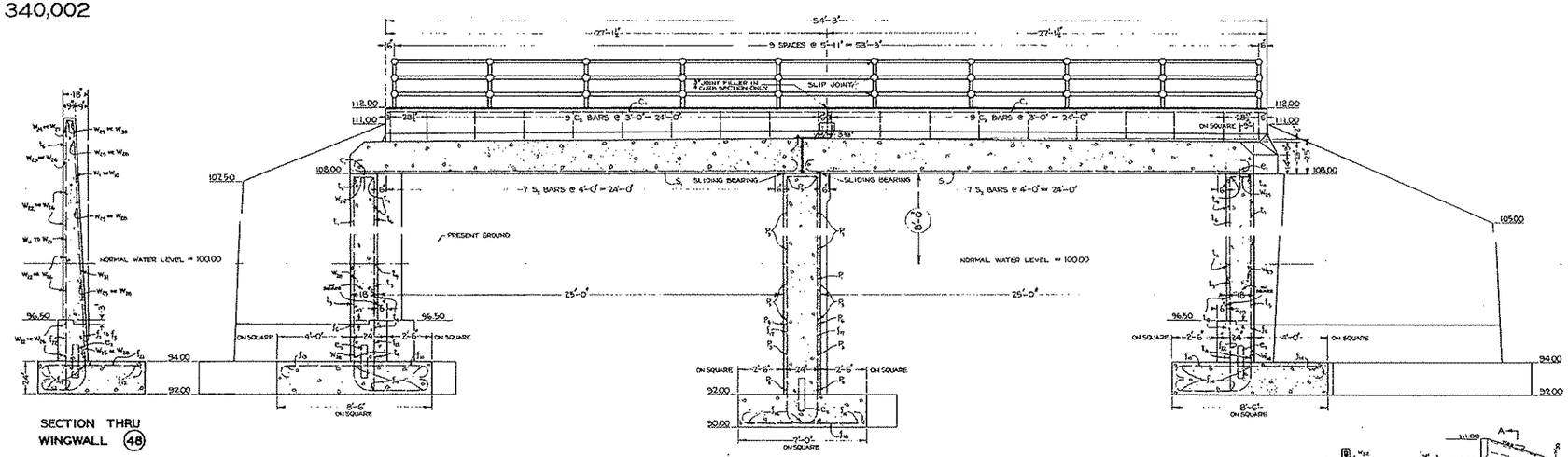
Contract Number.....
Number of Sheet..... 1
Total Sheets..... 8

APPROVED
DANIEL O. CARGILL
BRIDGE ENGINEER — DIVISION OF ROADS AND BRIDGES
APPROVED
JOHN H. CATON, 3RD
CHIEF — DIVISION OF ROADS AND BRIDGES
RECOMMENDED FOR APPROVAL
CHARLES F. McELROY
DIRECTOR — DEPARTMENT OF PUBLIC WORKS
RECOMMENDED FOR APPROVAL
DISTRICT ENGINEER — BUREAU OF PUBLIC ROADS
APPROVED
CHIEF ENGINEER — BUREAU OF PUBLIC ROADS

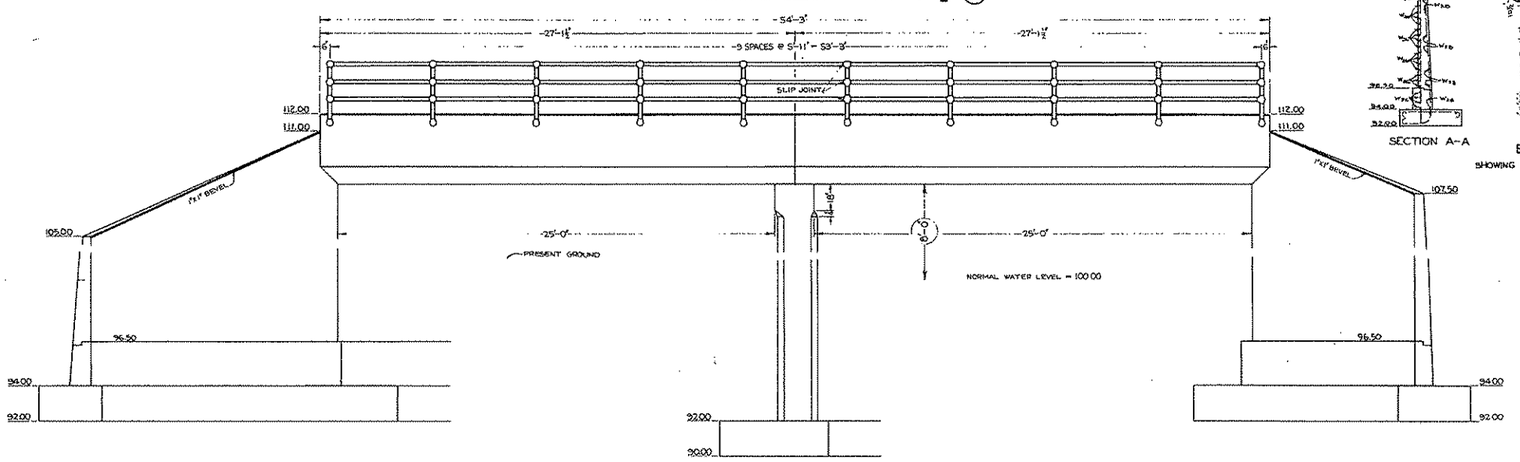
ADDENDUM NO. 1


QUARTER PLAN OF BRIDGE (48)
QUARTER PLAN OF SLAB REINFORCEMENT (48)
SKEW OF BRIDGE (48)
QUARTER PLAN OF FOOTINGS (48)
QUARTER PLAN AT BOTTOM OF SLAB (48)
LOCATION MAP (510,000)
LOCATION PLAN (480)
PROFILE VERTICAL (96) HORIZONTAL (480)
TO CONN. STATE LINE
TO HOOSENECK HILL ROAD
BITUMINOUS SEALED CONSTRUCTION JOINT
TILE PLATE "1935"
TILE PLATE "340"
TILE PLATE "STATE BRIDGE"
WOOD RIVER
NOTE:- BLOCK CHANNEL WITH MATERIAL FROM MAIN CHANNEL EXCAVATION
ROCK FILL
SCALE RECIPROCAL 510,000 REDUCTION
SCALE RECIPROCAL 480 REDUCTION
SCALE RECIPROCAL 96 REDUCTION
SCALE RECIPROCAL 48 REDUCTION
STATE BOARD OF PUBLIC ROADS
BRIDGE DEPARTMENT
MOUNT TOM BRIDGE
EXETER, R.I.
CONSTRUCTION PLAN
DRAWN BY S.R.E. TRACED BY L.F.D. CHECKED BY P.S.C.
FINAL DATE FEB. 21, 1935
MARCH 25, 1936
NOV. 27, 1936
PASSED BY
APPROVED
CHIEF ENGINEER
PRINT NO.
PRINTED
ISSUED TO

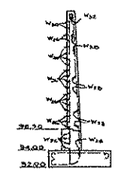
SECTION THRU WINGWALL (48)



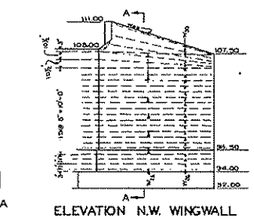
SECTIONAL ELEVATION II ROAD ℄ (48)



ELEVATION (48)



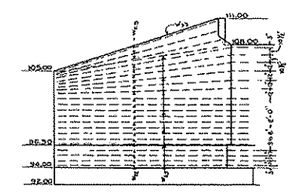
SECTION A-A



ELEVATION N.W. WINGWALL

SHOWING LOCATION OF HORIZONTAL REINFORCEMENT

SCALE 1" = 8' 0"



ELEVATION S.W. WINGWALL

SHOWING LOCATION OF HORIZONTAL REINFORCEMENT

SCALE 1" = 8'-0"

NOTES

BRIDGE BENCH TO BE ESTABLISHED AT THE SITE BY THE ENGINEER

BRIDGE BENCHES :— B M #23 SPIKE IN ROOT 15" PINE STA 135+35± RIGHT 65.3' ELEVATION 105.63

B M #24 DRILL MARK ON BOULDER STA 140+19.5± LEFT 59.3' ELEVATION 118.03

BRIDGE GRADE 100.00 ~ ROAD GRADE 129.51

ALL FOOTINGS MUST BE APPROVED BY THE ENGINEER BEFORE PLACING CONCRETE

ALL BARS REQUIRING SPLICING TO BE LAPPED NOT LESS THAN 50 DIAMETERS AND RIGIDLY WIRED TOGETHER

* MATERIAL ON HAND

NET QUANTITIES

					REVISED QUANTITIES	FINAL REVISED QUANTITIES
BRIDGE EARTH EXCAVATION BELOW 100.00		440		CU YDS		440
BRIDGE EARTH EXCAVATION ABOVE 100.00		35		CU YDS.		35
TOTAL BRIDGE EARTH EXCAVATION			475	CU YDS.		475
CHANNEL EARTH EXCAVATION			350	CU YDS.		350
CLASS 'A' CONCRETE BELOW 100.00		185.45		CU. YDS	192.25	192.2
CLASS 'A' CONCRETE ABOVE 100.00		237.17		CU YDS	264.09	264.0
TOTAL CONCRETE			422.62	CU YDS	456.34	456.3
CONCRETE SURFACE FINISH (RUBBED)			2670	SQ. FT	3280	3280
½" ⌀ CUT & BENT REINFORCEMENT BARS	59 LIN FT	314		LBS		314
⅝" ⌀ CUT & BENT REINFORCEMENT BARS	4,720 LIN FT	20,311		LBS		20,311
¾" ⌀ CUT & BENT REINFORCEMENT BARS	1,065 LIN FT	2,844		LBS	3950	3,950
⅞" ⌀ CUT & BENT REINFORCEMENT BARS	2,152 LIN FT	4,399		LBS	5560	5,560
1" ⌀ CUT & BENT REINFORCEMENT BARS	4,347 LIN FT	6,530		LBS	6837	6,923
1¼" ⌀ CUT & BENT REINFORCEMENT BARS	3,744 LIN FT	3,183		LBS	3631	3,157
TOTAL CUT & BENT REINFORCEMENT BARS			37,581	LBS	40603	41,221
*1.00" ⌀ RAIL DOWELS			52	REQ'D		52
2"—3 BAR PIPE RAIL			106.5	LIN FT		106
26 GAUGE SHEET METAL			124	LBS		124
BORROW IN PLACE			500	CU YDS	2100	2,231
BACKFILL			263	CU YDS		263
COVER PLATE COMPLETE			625	LBS		625
½" JOINT FILLER			7	SQ FT		7
ROCK FILL				CU. YDS.	200	100
STANDARD WOODEN GUARD RAIL				LIN. FT		364

STATE BOARD OF PUBLIC ROADS

BRIDGE DEPARTMENT

MOUNT TOM BRIDGE

EXETER, R. I.

ELEVATIONS

DRAWN BY G.H.H. TRACED BY G.H.H. CHECKED BY P.S.C.

FINAL DATE FEB. 21, 1935 MARCH 23, 1936 NOV. 27, 1936

PASSED BY Harold P. Carroll BRIDGE ENGINEER

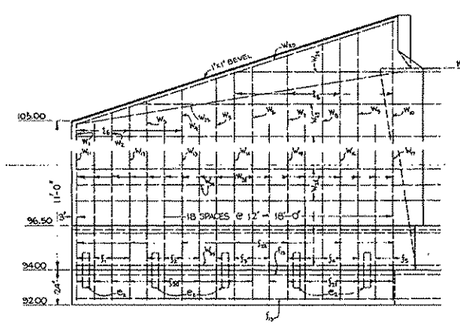
APPROVED P. S. Sadwin CHIEF ENGINEER

SCALE RECIPROCAL 48 REDUCTION

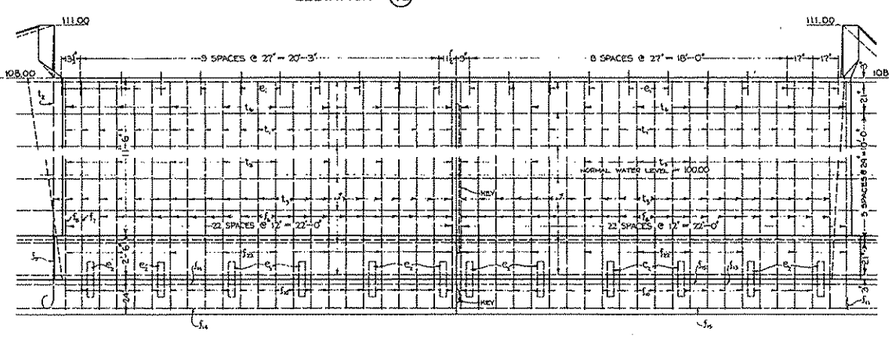
PRINT NO

PRINTED

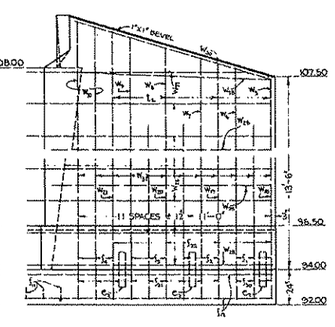
ISSUED TO



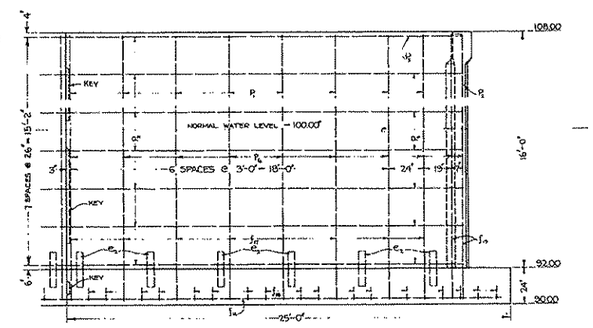
ELEVATION N.E. & S.W. WINGWALLS (48)



ELEVATION OF ABUTMENT WALL (48)

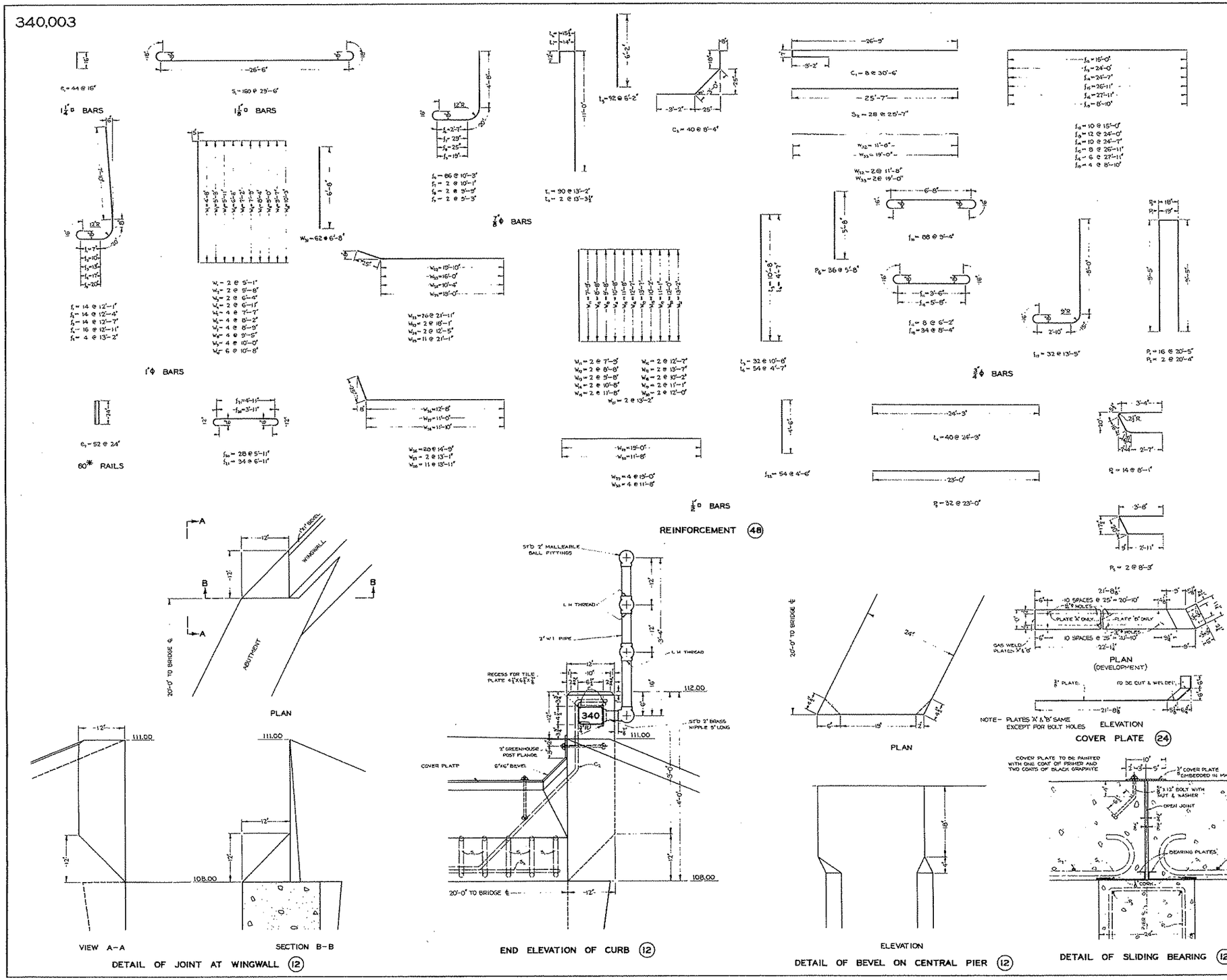


ELEVATION N.W. & S.E. WINGWALLS (48)



HALF ELEVATION OF CENTER PIER (48)

340,003



REINFORCEMENT SCHEDULE

SIZE	MARK	LOCATION OF BARS	NO.	LENGTH
1¼"Φ	e_1	DOWELS IN ABUTMENTS	44	16'
1⅛"Φ	S_1	LONGITUDINAL IN SLAB	160	29'-6"
1"Φ	f_1	WINGWALL FOOTINGS	14	12'-1"
	f_2	" "	14	12'-4"
	f_3	" "	14	12'-7"
	f_4	" "	16	12'-11"
	f_5	" "	4	13'-2"
	w_1	VERTICAL IN WINGWALLS	2	5'-1"
	w_2	" " "	2	5'-8"
	w_3	" " "	2	6'-4"
	w_4	" " "	2	6'-11"
	w_5	" " "	4	7'-7"
	w_6	" " "	4	8'-2"
	w_7	" " "	4	8'-9"
	w_8	" " "	4	9'-5"
	w_9	" " "	4	10'-0"
	w_{10}	" " "	6	10'-8"
	w_{11}	" " "	62	5'-8"
⅞"Φ	f_6	ABUTMENT FOOTINGS	86	10'-3"
	f_7	" "	2	10'-1"
	f_8	" "	2	9'-9"
	f_9	" "	2	9'-3"
	t_1	VERTICAL IN ABUTMENT WALLS	30	13'-2"
	t_2	" " " "	2	13'-3½"
	t_3	" " " "	92	6'-2"
¾"Φ	C_1	LONGITUDINAL IN CURBS	8	30'-6"
	C_2	VERTICAL IN CURBS	40	8'-4"
	f_{10}	ABUTMENT FOOTINGS	88	9'-4"
	f_{11}	ABUTMENT & WINGWALL FOOTINGS	8	6'-2"
	f_{12}	TRANSVERSE IN WINGWALL FOOTINGS	10	15'-0"
	f_{13}	" " " & ABUT FOOTINGS	12	24'-0"
	f_{14}	TRANSVERSE IN ABUTMENT FOOTINGS	10	24'-7"
	f_{15}	" " " "	8	26'-11"
	f_{16}	TRANSVERSE IN PIER FOOTINGS	6	27'-11"
	f_{17}	PIER FOOTINGS	32	13'-5"
	f_{18}	"	34	8'-4"
	f_{19}	"	4	8'-10"
	W_{32}	SLOPING IN N.W. WINGWALL	2	11'-8"
	P_1	VERTICAL IN CENTRAL PIER	10	20'-5"
	P_2	" " "	2	20'-4"
	P_3	" " "	36	5'-8"
	S_2	TRANSVERSE IN SLAB	28	75'-7"
	W_{33}	SLOPING IN S.W. WINGWALL	2	19'-8"
½"Φ	f_{20}	WINGWALL FOOTINGS	28	5'-11"
	f_{21}	" "	34	6'-11"
	f_{22}	WINGWALL & ABUTMENT FOOTINGS	54	4'-6"
	P_4	HORIZONTAL IN CENTRAL PIER	32	23'-0"
	P_5	" " " "	14	8'-1"
	P_6	" " " "	2	6'-3"
	t_5	VERTICAL IN ABUTMENTS	32	10'-8"
	t_4	HORIZONTAL IN ABUTMENTS	40	24'-3"
	t_6	VERTICAL IN ABUTMENTS & WINGWALLS	54	4'-7"
	W_{12}	VERTICAL IN WINGWALLS	2	7'-8"
	W_{13}	" " "	2	8'-8"
	W_{14}	" " "	2	9'-8"
	W_{15}	" " "	2	10'-8"
	W_{16}	" " "	2	11'-8"
	W_{17}	" " "	2	12'-7"
	W_{18}	" " "	2	13'-7"
	W_{19}	" " "	2	10'-2"
	W_{20}	" " "	2	11'-1"
	W_{21}	" " "	2	12'-0"
	W_{22}	" " "	2	13'-2"
	W_{23}	HORIZONTAL IN WINGWALLS	26	21'-11"
	W_{24}	" " "	2	18'-1"
	W_{25}	" " "	2	12'-5"
	W_{26}	" " "	11	21'-1"
	W_{27}	" " "	28	14'-5"
	W_{28}	" " "	2	13'-1"
	W_{29}	" " "	11	13'-11"
	W_{30}	SLOPING IN WINGWALLS	4	19'-0"
	W_{31}	" " "	4	11'-8"
60# RAILS	e_2	DOWELS IN FOOTINGS	52	24'

SCALE RECIPROCAL 48 REDUCTION

SCALE RECIPROCAL 12 REDUCTION

STATE BOARD OF PUBLIC ROADS
BRIDGE DEPARTMENT
MOUNT TOM BRIDGE
EXETER, R. I.

DETAILS & REINFORCEMENT

DRAWN BY S.A.E. G.H.H. TRACED BY G.H.H. CHECKED BY P.S.C.

FINAL DATE
FEB. 21, 1935
MARCH 23, 1936
NOV. 27, 1936

PASSED BY David G. Cargill, BRIDGE ENGINEER
APPROVED Chas. H. Sherman, CHIEF ENGINEER

PRINT NO.
PRINTED
ISSUED TO

340,003

ADDENDUM NO. 1

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	R. I.	W.P.S.O. 115-B	1	8

STATE OF RHODE ISLAND

~~STATE BOARD OF PUBLIC ROADS~~

DEPT. OF PUBLIC WORKS — DIV. OF ROADS AND BRIDGES

PLAN, PROFILE AND SECTIONS OF PROPOSED

STATE HIGHWAY

BRIDGES NO. ~~339,~~ 340, 341 & 342

TEN ROD ROAD BRIDGES

EXETER

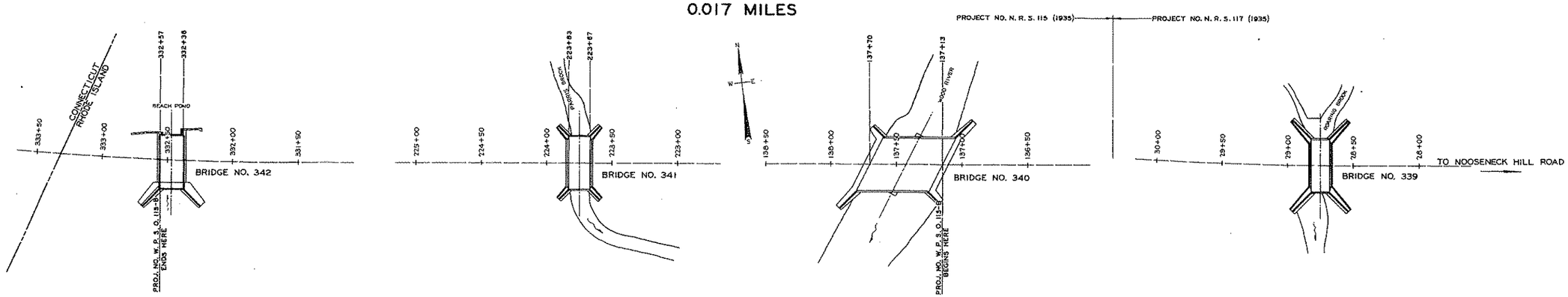
WASHINGTON COUNTY

U. S. WORKS PROGRAM HIGHWAY BRIDGE PROJECT NO. W. P. S. O. 115-B

0.017 MILES

INDEX OF SHEETS
DIVISION 'B'

SHEET NO.	1		TITLE SHEET
" "	2	340,001	CONSTRUCTION PLAN
" "	3	340,002	ELEVATIONS
" "	4	340,003	DETAILS & REINFORCEMENT
" "	5	341,001	CONSTRUCTION PLAN
" "	6	341,002	DETAILS & REINFORCEMENT
" "	7	342,001	CONSTRUCTION PLAN
" "	8	342,002	ELEVATIONS & DETAILS



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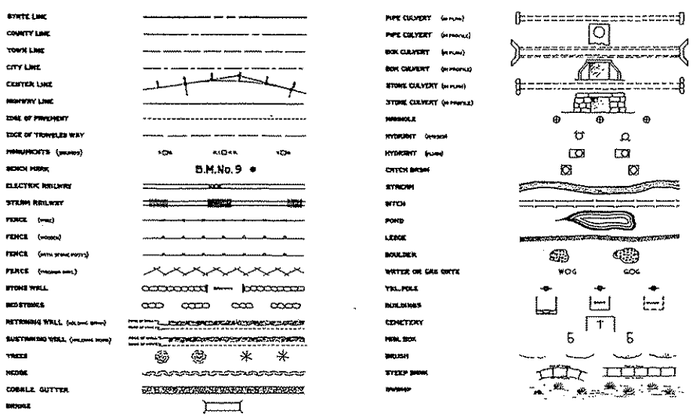


LAYOUT

SCALE 1 IN. = 40 FEET

SCALES OF DRAWINGS

Plans, - - 1 inch = 40 feet, 20 feet, 4 feet, 2 feet, 1 foot
Profiles, - - 1 inch = 40 feet, 20 feet Horizontal
" - - 1 inch = 8 feet, 4 feet Vertical
Cross Sections, 1 inch = 4 feet

Contract Number
Number of Sheet 1
Total Sheets 8

APPROVED
DANIEL O. CARGILL
BRIDGE ENGINEER — DIVISION OF ROADS AND BRIDGES

APPROVED
JOHN H. CATON, 3RD
CHIEF — DIVISION OF ROADS AND BRIDGES

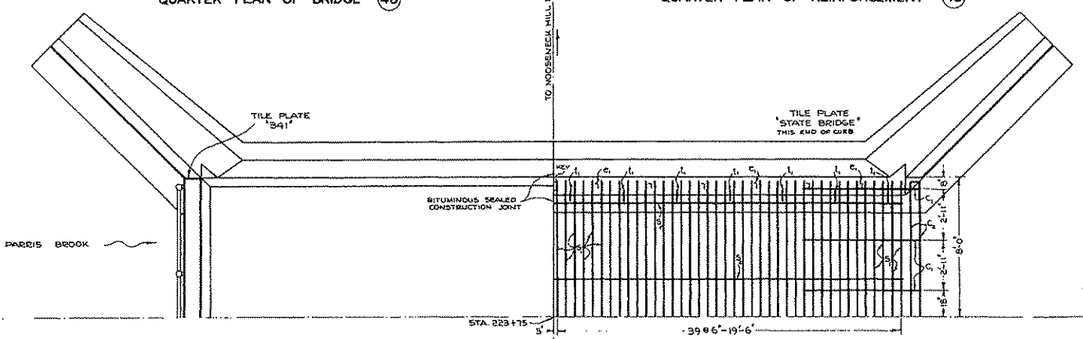
RECOMMENDED FOR APPROVAL
CHARLES F. McELROY
DIRECTOR — DEPARTMENT OF PUBLIC WORKS

RECOMMENDED FOR APPROVAL
DISTRICT ENGINEER — BUREAU OF PUBLIC ROADS

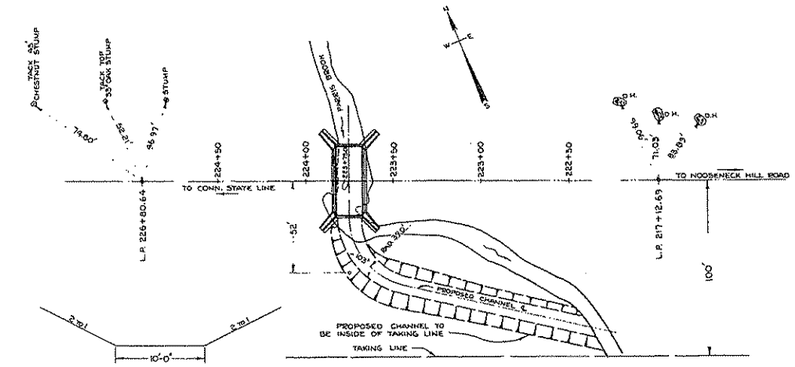
APPROVED
CHIEF ENGINEER — BUREAU OF PUBLIC ROADS

ADDENDUM NO. 1

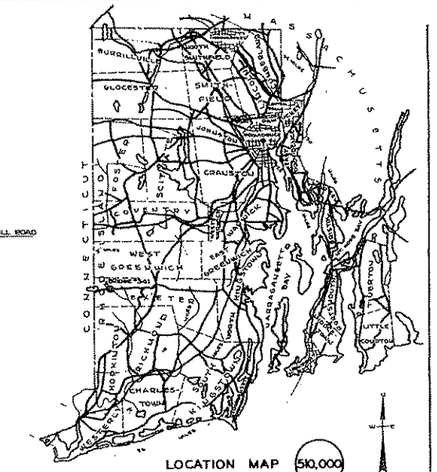
QUARTER PLAN OF BRIDGE (48)



QUARTER PLAN OF REINFORCEMENT (48)

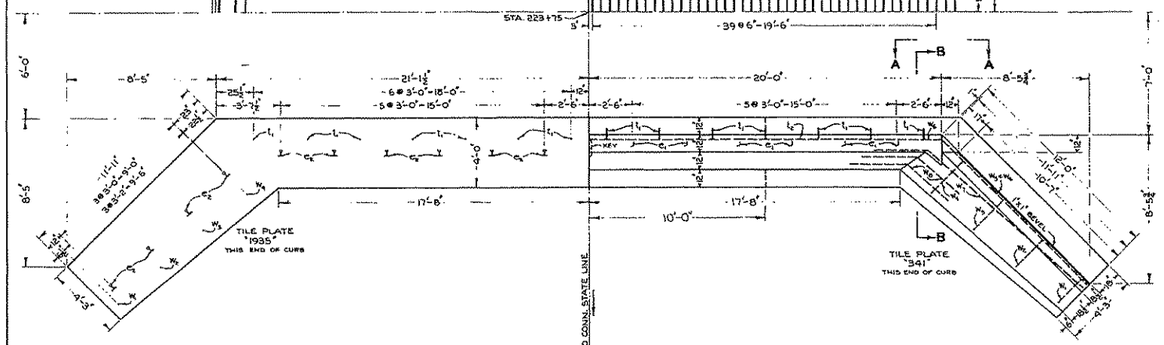


TYPICAL SECTION THRU PROPOSED CHANNEL (96)



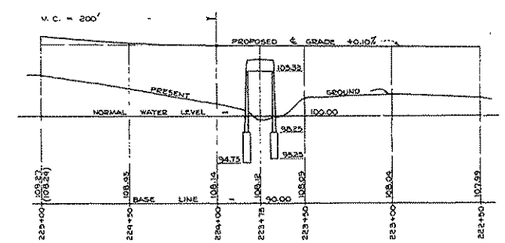
LOCATION MAP (510,000)

LOCATION PLAN (480)



QUARTER PLAN OF FOOTINGS (48)

QUARTER PLAN AT BOTTOM OF SLAB (48)



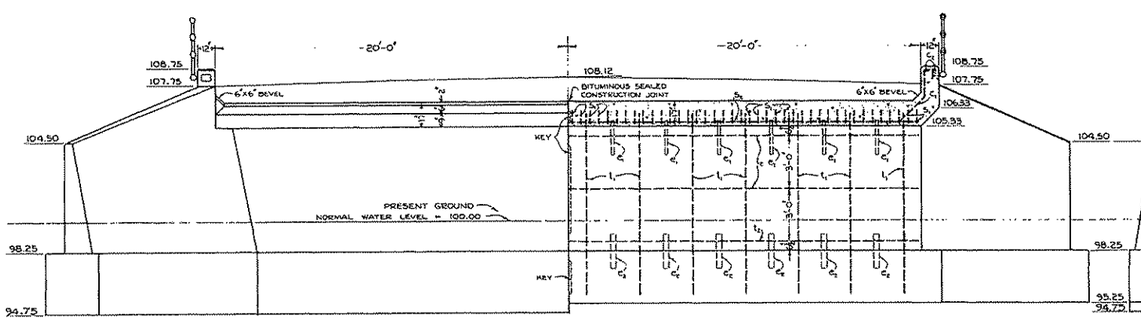
PROFILE HORIZONTAL VERTICAL (96) (480)

NOTES

BRIDGE BENCH TO BE ESTABLISHED AT THE SITE BY THE ENGINEER
BRIDGE BENCHES:- B.M #39 HIGH POINT LARGE BOULDER, STA. 218+56±, 157.6' RIGHT, ELEVATION = 111.86
B.M #40 POINT BOULDER IN FIELD NORTH OF OLD ROAD, STA. 228+14±, 130'± RIGHT, ELEVATION = 121.06
B.M #41 BOULDER S.E. CORNER OF WALL INTERSECTION OF ROADS, BARBERS CORNERS, ELEVATION = 138.35
BRIDGE GRADE 100.00 = ROAD GRADE 224.00
ALL FOOTINGS MUST BE APPROVED BY THE ENGINEER BEFORE PLACING CONCRETE
ALL BARS REQUIRING SPLICING TO BE LAPPED NOT LESS THAN 50 DIAMETERS AND RIGIDLY WIRED TOGETHER
* MATERIAL ON HAND

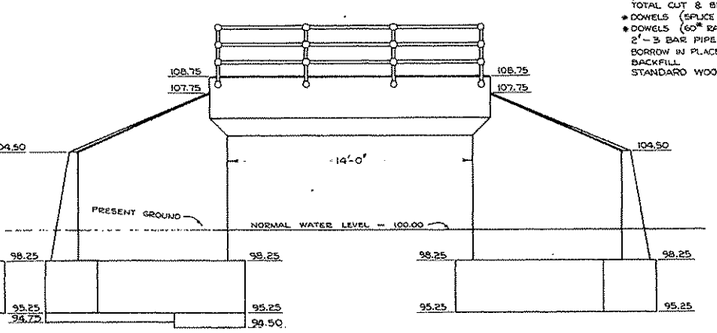
NET QUANTITIES

				REVISED QUANTITIES
BRIDGE EARTH EXCAVATION BELOW 100.00	94		CU. YDS.	97.58
BRIDGE EARTH EXCAVATION ABOVE 100.00	9		CU. YDS.	9
TOTAL BRIDGE EARTH EXCAVATION		103	CU. YDS.	106.58
CHANNEL EARTH EXCAVATION		267	CU. YDS.	267.
CLASS 'B' CONCRETE BELOW 100.00	59.30		CU. YDS.	62.88
CLASS 'A' CONCRETE BELOW 100.00	16.90		CU. YDS.	16.90
CLASS 'A' CONCRETE ABOVE 100.00	72.13		CU. YDS.	72.13
TOTAL CONCRETE		148.33	CU. YDS.	151.91
CONCRETE SURFACE FINISH (RUBBED)		753	SQ. FT.	753
1" ϕ CUT & BENT REINFORCEMENT BARS 1454 LIN. FT.	3882		LBS.	3882
¾" ϕ CUT & BENT REINFORCEMENT BARS 1260 LIN. FT.	1893		LBS.	1893
TOTAL CUT & BENT REINFORCEMENT BARS		5775	LBS.	5775
* DOWELS (SPLICE BARS ~ 24' LONG)		24	REQUIRED	24
* DOWELS (60" RAILS ~ 24' LONG)		40	REQUIRED	40
2'-3 BAR PIPE RAIL		30	LIN. FT.	30
BORROW IN PLACE		100	CU YDS	157
BACKFILL		21	CU. YDS.	21
STANDARD WOODEN GUARD RAIL			LIN. FT.	232



HALF END ELEVATION (48)

HALF SECTIONAL ELEVATION ON STREAM ℄ (48)



ELEVATION (48)

SCALE RECIPROCAL 510,000 REDUCTION

SCALE RECIPROCAL 480 REDUCTION

SCALE RECIPROCAL 96 REDUCTION

SCALE RECIPROCAL 48 REDUCTION

STATE BOARD OF PUBLIC ROADS
BRIDGE DEPARTMENT

PARRIS BROOK BRIDGE
EXETER, R. I.

CONSTRUCTION PLAN

DRAWN BY P.S.C. TRACED BY R. CHECKED BY

FINAL DATE FEB. 21, 1935 NOV. 20, 1936

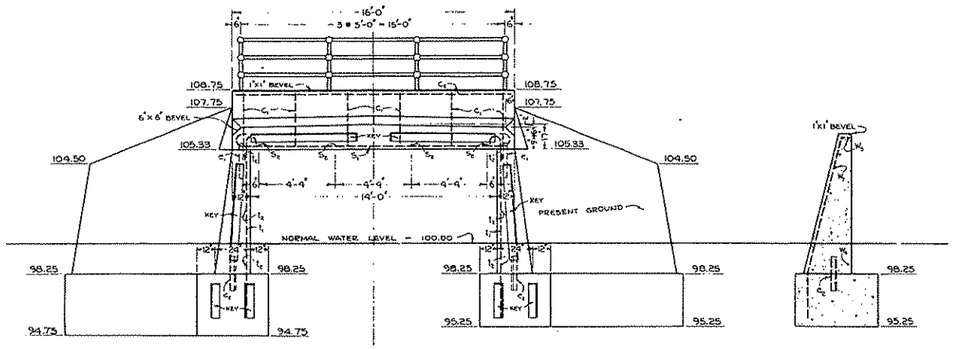
PASSED BY: DIVISION ENGINEER

APPROVED: CHIEF ENGINEER

PRINT NO.

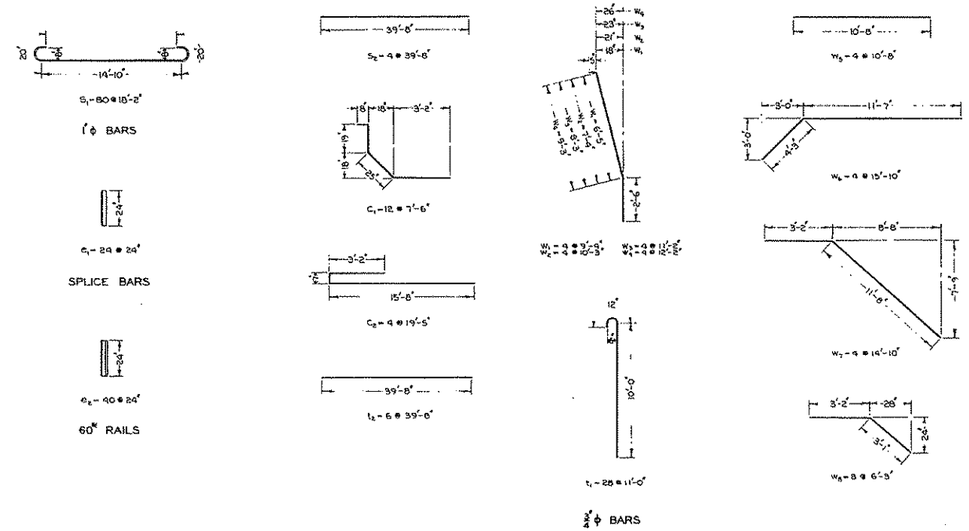
PRINTED

ISSUED TO

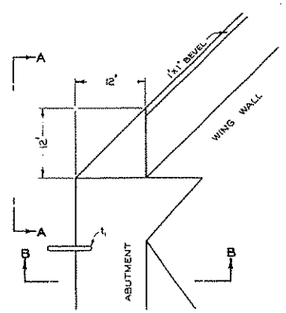


SECTIONAL ELEVATION ON BRIDGE ℄ (48)

TYPICAL SECTION THRU WINGWALL (48)

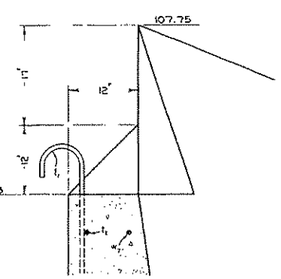


REINFORCEMENT (48)



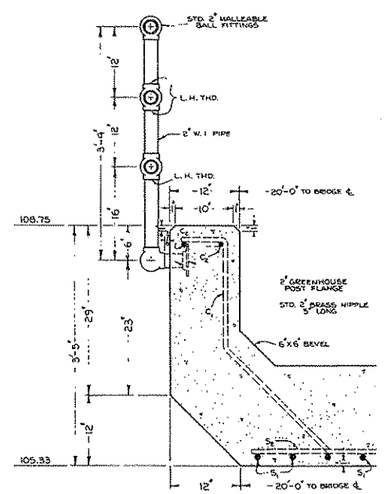
PLAN

VIEW A-A

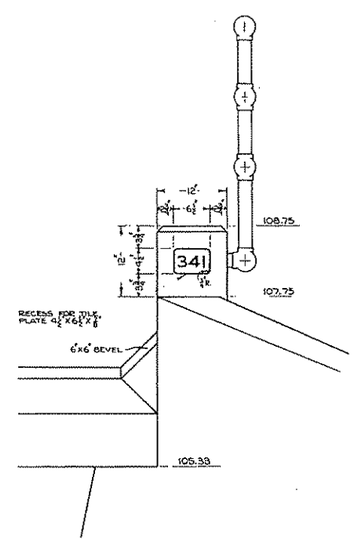


SECTION B-B

DETAIL OF JOINT AT WINGWALL (12)



SECTION THRU RAIL & CURB (12)



END ELEVATION OF CURB (12)

REINFORCEMENT SCHEDULE

SIZE	MARK	LOCATION OF BARS	NO.	LENGTH
1" ϕ	S_1	LONGITUDINAL IN SLAB	80	18'-2"
¾" ϕ	C_1	VERTICAL IN CURB	12	7'-6"
	C_2	HORIZONTAL IN CURB	4	19'-5"
	S_2	TRANSVERSE IN SLAB	4	39'-8"
	t_1	VERTICAL IN ABUTMENT	28	11'-0"
	t_2	HORIZONTAL IN "	6	39'-8"
	W_1	VERTICAL IN WINGWALL	4	9'-4"
	W_2	" " "	4	10'-3"
	W_3	" " "	4	11'-2"
	W_4	" " "	4	12'-2"
	W_5	SLOPING IN TOP OF WINGWALL	4	10'-8"
	W_6	HORIZONTAL IN BOTTOM OF WINGWALL	4	15'-10"
	W_7	SLOPING IN BACK OF WINGWALL	4	14'-10"
	W_8	HORIZONTAL IN BACK OF WINGWALL	8	6'-3"
SPLICE BARS	c_1	DOWELS	24	24"
60# RAILS	e_2	DOWELS	40	24"

SCALE RECIPROCAL 48 REDUCTION

SCALE RECIPROCAL 12 REDUCTION

STATE BOARD OF PUBLIC ROADS
BRIDGE DEPARTMENT

PARRIS BROOK BRIDGE
EXETER, R. I.

DETAILS & REINFORCEMENT

DRAWN BY F.J.C. TRACED BY E.C. CHECKED BY

FINAL DATE
FEB. 21, 1935
NOV. 20, 1936

PASSED BY David A. Cargill, BRIDGE ENGINEER

APPROVED C. H. Sullivan, CHIEF ENGINEER

PRINT NO.

PRINTED

ISSUED TO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	R. I.	W.P.S.O. 115-B	1	8

STATE OF RHODE ISLAND

~~STATE BOARD OF PUBLIC ROADS~~

DEPT. OF PUBLIC WORKS — DIV. OF ROADS AND BRIDGES

INDEX OF SHEETS
DIVISION 'B'

SHEET NO.	1		TITLE SHEET
" "	2	340,001	CONSTRUCTION PLAN
" "	3	340,002	ELEVATIONS
" "	4	340,003	DETAILS & REINFORCEMENT
" "	5	341,001	CONSTRUCTION PLAN
" "	6	341,002	DETAILS & REINFORCEMENT
" "	7	342,001	CONSTRUCTION PLAN
" "	8	342,002	ELEVATIONS & DETAILS

PLAN, PROFILE AND SECTIONS OF PROPOSED

STATE HIGHWAY

BRIDGES NO. ~~339,~~ 340, 341 & 342

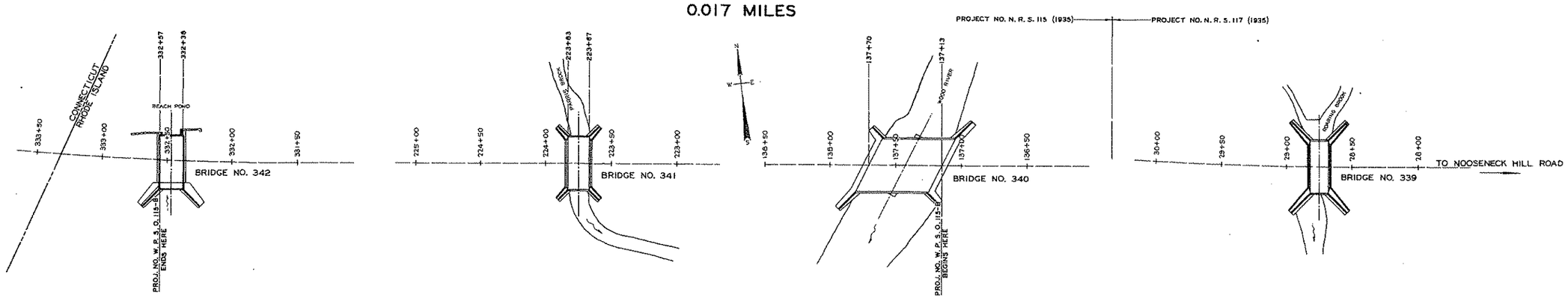
TEN ROD ROAD BRIDGES

EXETER

WASHINGTON COUNTY

U. S. WORKS PROGRAM HIGHWAY BRIDGE PROJECT NO. W. P. S. O. 115-B

0.017 MILES



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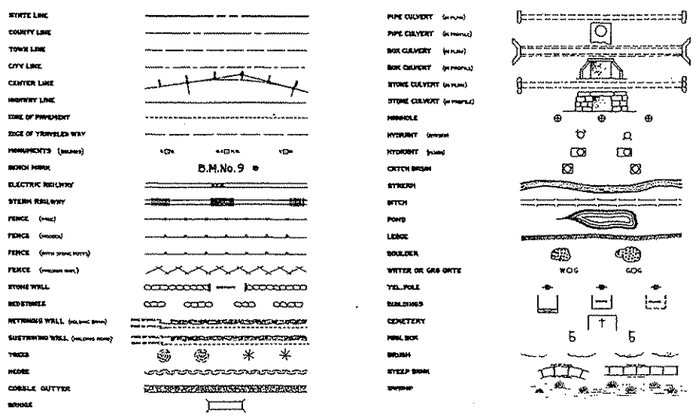


LAYOUT

SCALE 1 IN. = 40 FEET

SCALES OF DRAWINGS

Plans, - - 1 inch = 40 feet, 20 feet, 4 feet, 2 feet, 1 foot
Profiles, - - 1 inch = 40 feet, 20 feet Horizontal
" - - 1 inch = 8 feet, 4 feet Vertical
Cross Sections, 1 inch = 4 feet

Contract Number.....
Number of Sheet..... 1
Total Sheets..... 8

APPROVED
DANIEL O. CARGILL
BRIDGE ENGINEER — DIVISION OF ROADS AND BRIDGES

APPROVED
JOHN H. CATON, 3RD
CHIEF — DIVISION OF ROADS AND BRIDGES

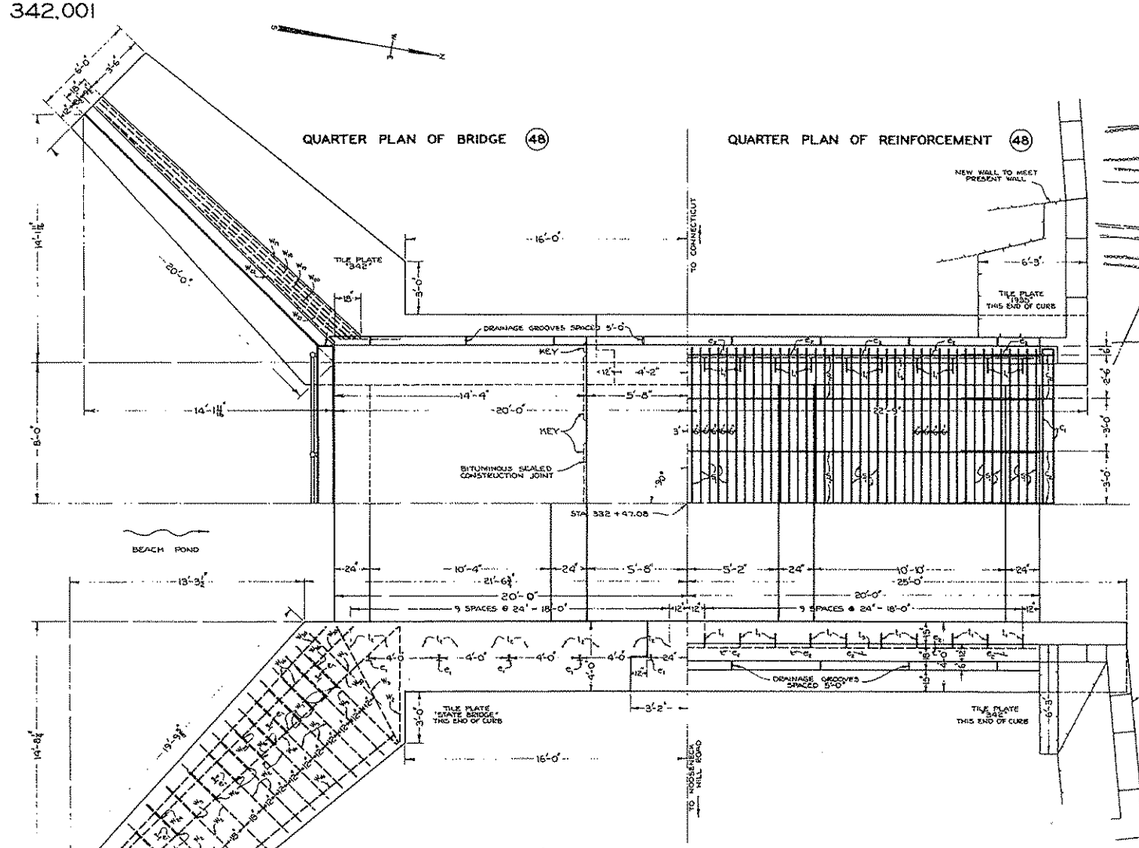
RECOMMENDED FOR APPROVAL
CHARLES F. McELROY
DIRECTOR — DEPARTMENT OF PUBLIC WORKS

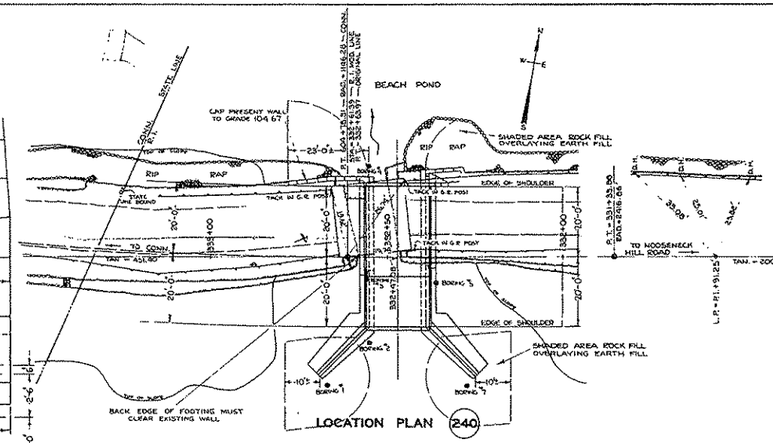
RECOMMENDED FOR APPROVAL
DISTRICT ENGINEER — BUREAU OF PUBLIC ROADS

APPROVED
CHIEF ENGINEER — BUREAU OF PUBLIC ROADS

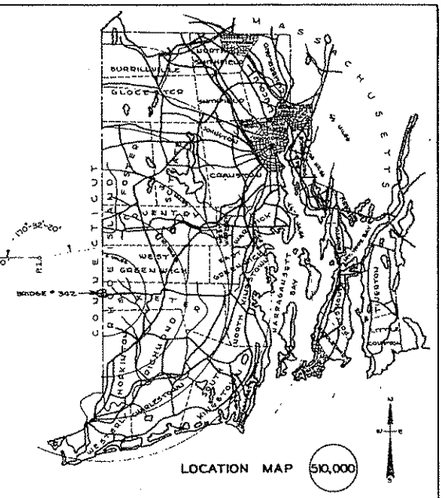
ADDENDUM NO. 1

342.001

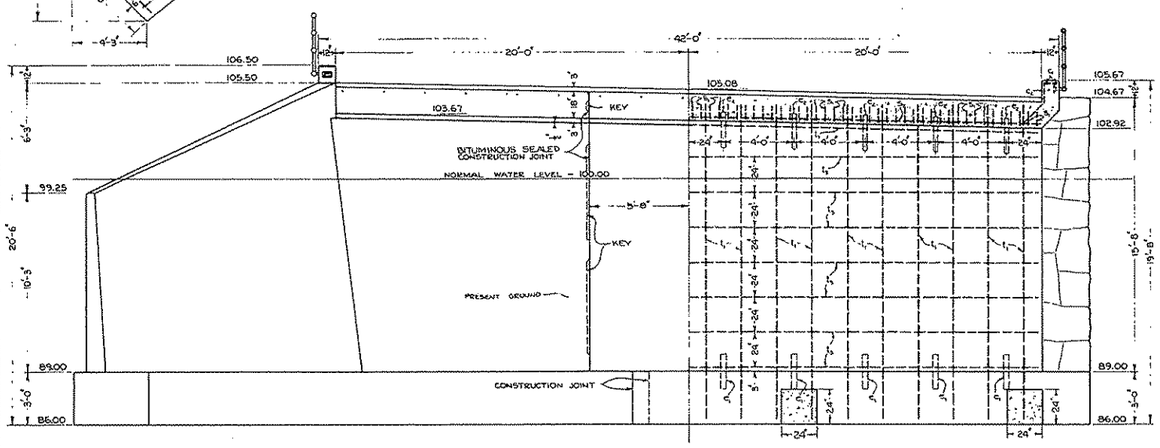




LOCATION PLAN (240)

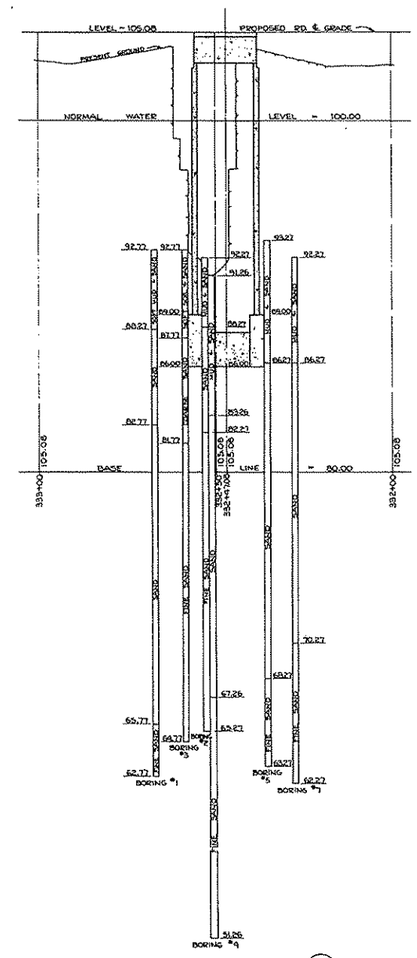


LOCATION MAP (510,000)



HALF END ELEVATION (48)

HALF SECTIONAL ELEVATION ON STREAM ℄ (48)



PROFILE HORIZONTAL (240) VERTICAL (48)

NOTES

BRIDGE BENCH WILL BE ESTABLISHED AT THE SITE BY THE ENGINEER
BRIDGE BENCHES :- R. I. B. M. "58 H. P. ON BOULDER, 75' WEST OF BEACH POND IN CONN., 60'± SOUTH OF E. MAC., ELEVATION = 113.705
CONN. B. M. "62 SPIKE IN 24" OAK ON RIGHT OF CONN. STATION 599+45±, ELEVATION = 105.16
BRIDGE GRADE 100.00 - ROAD GRADE 303.72
ALL FOOTINGS TO BE APPROVED BY THE ENGINEER BEFORE PLACING CONCRETE
ALL BARS REQUIRING SPLICING TO BE LAPPED NOT LESS THAN 50 DIAMETERS AND RIGIDLY WIRED TOGETHER
* MATERIAL ON HAND
EXCAVATION QUANTITIES INCLUDE CHANNEL EXCAVATION TO GRADE 92.00

NET QUANTITIES

					REVISED QUANTITIES
BRIDGE EARTH EXCAVATION BELOW 100.00		225		CU. YDS.	227
BRIDGE EARTH EXCAVATION ABOVE 100.00		23		CU. YDS.	23
TOTAL EARTH EXCAVATION			248	CU. YDS.	250
MASONRY EXCAVATION			84.0	CU. YDS.	84
RIP RAP EXCAVATION			9.5	CU. YDS.	9.5
WET STONE MASONRY			29.17	CU. YDS.	29.17
CLASS 'B' CONCRETE BELOW 100.00		77.68		CU. YDS.	77.68
CLASS 'A' CONCRETE BELOW 100.00		70.18		CU. YDS.	70.18
CLASS 'A' CONCRETE ABOVE 100.00		60.61		CU. YDS.	60.61
TOTAL CONCRETE			208.47	CU. YDS.	210.47
CONCRETE SURFACE FINISH (RUBBED)			550	SQ. FT.	550
* 1" ϕ CUT + BENT REINFORCEMENT BARS	1560 LIN. FT.	4166		LBS.	4166
* ¾" ϕ CUT + BENT REINFORCEMENT BARS	900 LIN. FT.	1640		LBS.	1640
* ½" ϕ CUT + BENT REINFORCEMENT BARS	1428 LIN. FT.	2145		LBS.	2145
* ⅜" ϕ CUT + BENT REINFORCEMENT BARS	1324 LIN. FT.	1126		LBS.	1126
TOTAL CUT + BENT REINFORCEMENT BARS			9277	LBS.	9277
* DOWELS (60" RAILS)			30	REQUIRED	30
* DOWELS (SPLICE BARS)			20	REQUIRED	20
2"-3 BAR PIPE RAIL			34	LIN. FT.	34
PAVEMENT RETAINING PLATES			866	LBS.	866
BRIDGE PAVEMENT			80	SQ. YDS	80
BACKFILL			99	CU. YDS.	99
ROCK FILL			114	CU. YDS.	100
BORROW IN PLACE			367	CU. YDS.	388
STANDARD WOODEN GUARD RAIL				LIN. FT.	548

SCALE RECIPROCAL 510,000 REDUCTION

SCALE RECIPROCAL 240 REDUCTION

SCALE RECIPROCAL 48 REDUCTION

0' 20' 40' 60' 80' 100 FEET
0 2 4 6 8 10 20

STATE BOARD OF PUBLIC ROADS
BRIDGE DEPARTMENT

BEACH POND BRIDGE
EXETER, R. I.

CONSTRUCTION PLAN

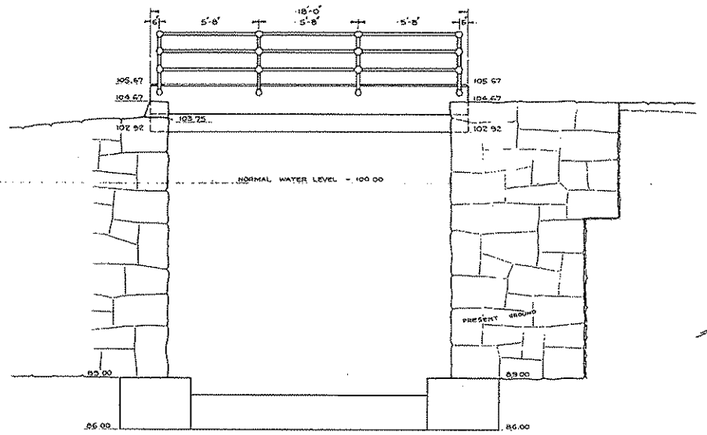
DRAWN BY J.K.T. TRACED BY R. CHECKED BY P.S.C.

FINAL DATE FEB. 21, 1936 NOV. 23, 1936 PASSED BY BRIDGE ENGINEER APPROVED CHIEF ENGINEER

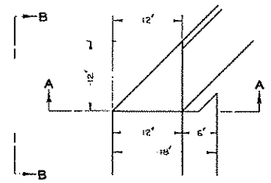
PRINT NO.
PRINTED
PRINT PLATE
ISSUED TO

342,001

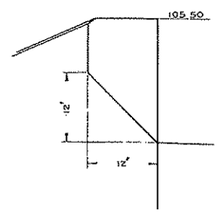
ADDENDUM NO. 1



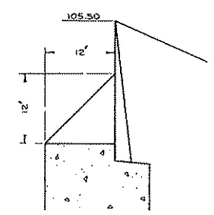
NORTH ELEVATION (48)



PLAN

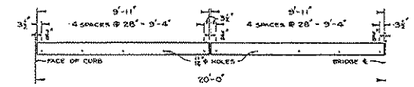


VIEW B-B

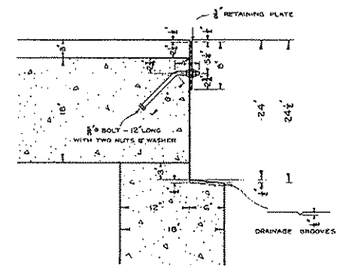


SECTION A-A

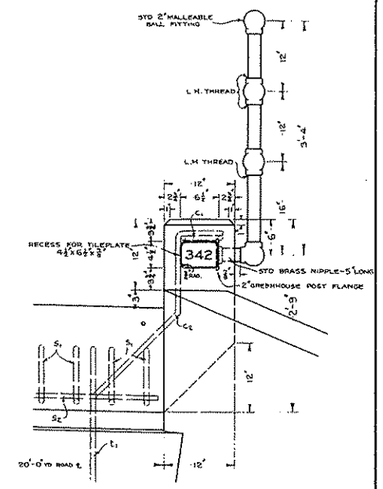
DETAIL OF JOINT AT WINGWALL (12)



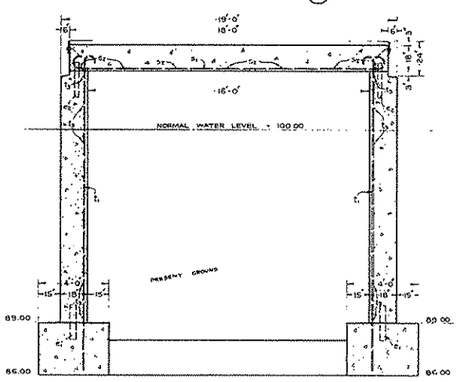
HALF ELEVATION OF RETAINING PLATES (48)



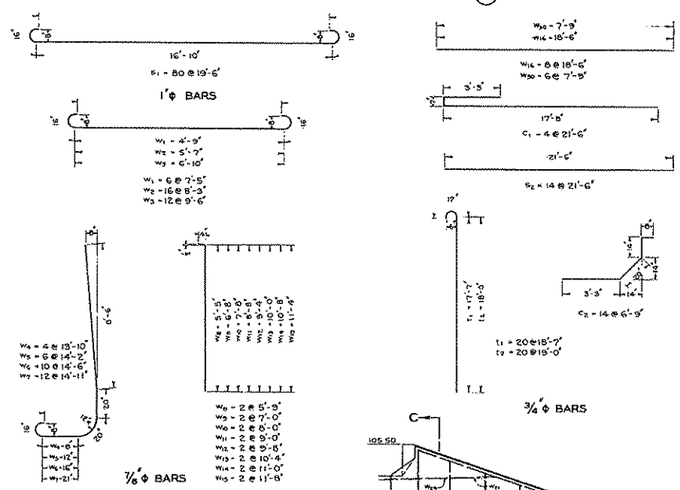
DETAIL AT END OF BRIDGE SLAB (12)

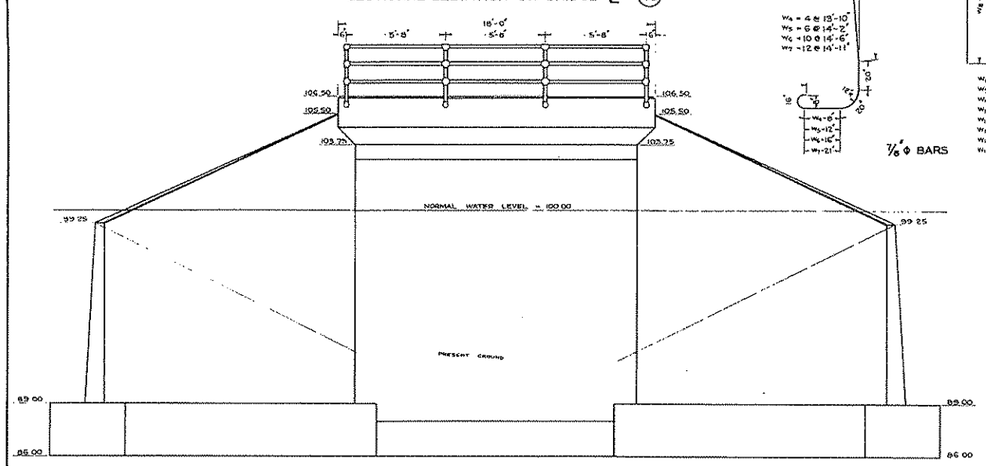


END ELEVATION OF CURB (12)

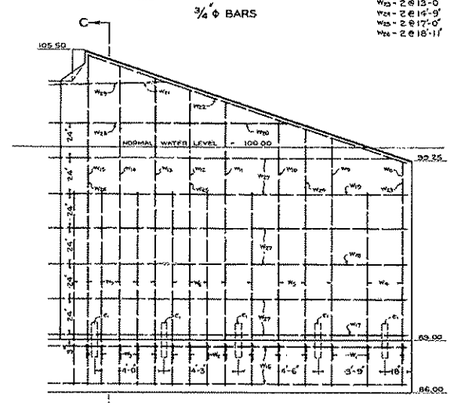


SECTIONAL ELEVATION ON BRIDGE ℄ (48)

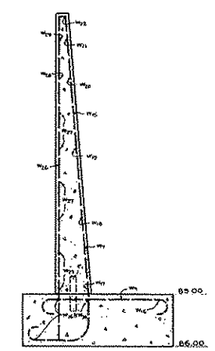




SOUTH ELEVATION (48)



ELEVATION OF WINGWALL (48)



SECTION C-C (48)

REINFORCEMENT SCHEDULE

SIZE	MARK	LOCATION OF BARS	NO.	LENGTH
1"Φ	S1	LONGITUDINAL IN SLAB	80	19'-6"
7/8"Φ	W1	LONGITUDINAL IN TOP OF WINGWALL FOOTING	6	27'-5"
	W2	" " " " " "	16	8'-3"
	W3	" " " " " "	12	5'-5"
	W4	VERTICAL IN WINGWALL	4	13'-10"
	W5	" " " "	6	14'-1"
	W6	" " " "	10	16'-6"
	W7	" " " "	12	18'-11"
	W8	" " " "	2	5'-5"
	W9	" " " "	2	5'-0"
	W10	" " " "	2	9'-0"
	W11	" " " "	2	10'-0"
	W12	" " " "	2	8'-3"
	W13	" " " "	2	10'-8"
	W14	" " " "	2	11'-0"
	W15	" " " "	2	11'-0"
3/4"Φ	C1	HORIZONTAL IN CURB	4	21'-6"
	C2	VERTICAL " "	14	6'-9"
	S2	TRANSVERSE IN SLAB	14	21'-6"
	L1	VERTICAL IN ABUTMENT	20	18'-7"
	L2	" " " "	20	19'-0"
1/2"□	W16	HORIZONTAL IN WINGWALL FOOTING	8	19'-6"
	W20	" " " "	6	9'-3"
	E3	HORIZONTAL IN ABUTMENT	32	21'-0"
	W17	HORIZONTAL IN BACK OF WINGWALL	2	22'-3"
	W18	" " " "	2	21'-11"
	W19	" " " "	2	21'-7"
	W29	" " " "	2	14'-9"
	W31	" " " "	2	7'-3"
	W32	SLOPING " " " "	2	19'-10"
	W33	VERTICAL IN FRONT OF WINGWALL	2	13'-10"
	W34	" " " "	2	14'-9"
	W35	" " " "	2	15'-0"
	W36	" " " "	2	16'-11"
	W37	HORIZONTAL " "	12	20'-0"
	W38	" " " "	2	15'-3"
	W39	" " " "	2	8'-3"
60# RAILS	C3	DOWELS IN FOOTINGS	30	24"
	S2	DOWELS (BRIDGE BARS)	20	24"

SCALE RECIPROCAL 48 REDUCTION

SCALE RECIPROCAL 12 REDUCTION

STATE BOARD OF PUBLIC ROADS
BRIDGE DEPARTMENT
BEACH POND BRIDGE
EXETER, R.I.

ELEVATIONS & DETAILS

DRAWN BY J.K.T. TRACED BY L.P.D. CHECKED BY P.S.K.

FINAL DATE FEB. 21, 1932 NOV. 24, 1932 PASSED BY David O. Cassidy, ASSIST. ENGINEER

APPROVED E. A. Stevenson, CHIEF ENGINEER

PRINT NO.

PRINTED

ISSUED TO

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. No.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	R.I.	IXAF-RRR(136)		1	317

STATE OF RHODE ISLAND

DEPARTMENT OF TRANSPORTATION
DIVISION OF PUBLIC WORKS

PLAN, PROFILE AND SECTIONS OF PROPOSED

STATE HIGHWAY

3R HIGHWAY IMPROVEMENTS

ROUTE 165

FROM ROUTE 3 TO CONNECTICUT S/L

TOWN OF EXETER

COUNTY OF WASHINGTON

R.I. CONTRACT NO. 8654 F.A. PROJECT NO. IXAF-RRR(136)

PAVEMENT STRUCTURE

1-1/2" CLASS I-1 SURFACE COURSE
2-1/2" MODIFIED BINDER COURSE
5" COLD RECYCLED BASE COURSE
8" EXISTING GRAVEL SUBBASE

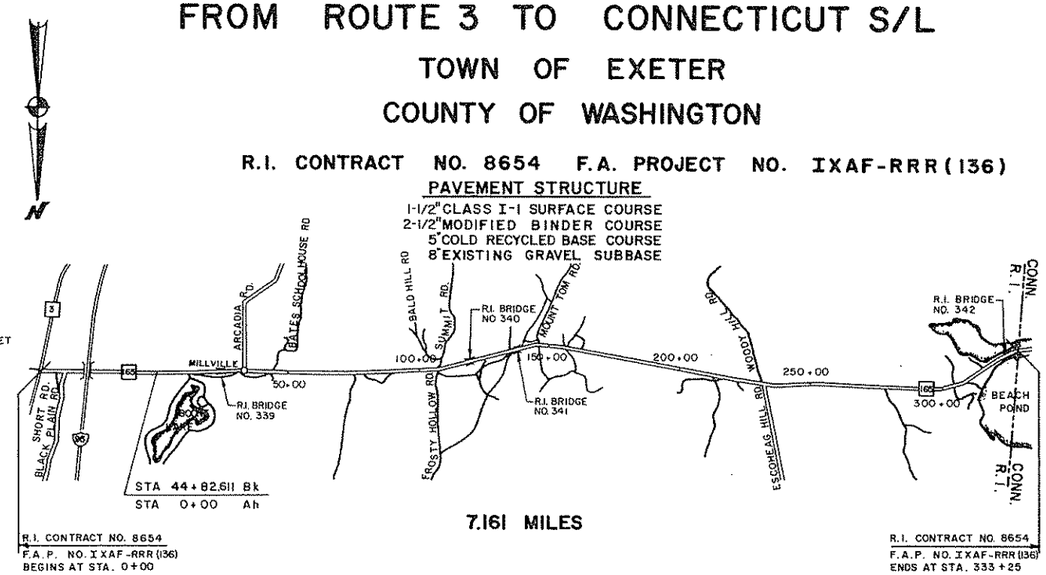
INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	LEGEND
3	TYPICAL SECTIONS & DETAILS
4-19	GENERAL PLANS 1-16
20-38	PROFILE PLANS 1-19
39-43	MISCELLANEOUS DETAILS 1-5
44-60	R.I. STANDARD DETAILS
61-317	CROSS SECTIONS

R.I. STANDARD SPECIFICATIONS AND STANDARD DETAILS

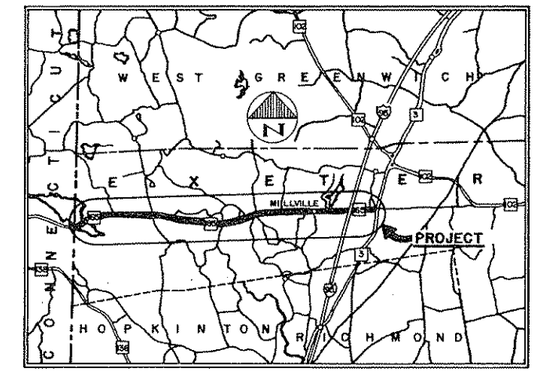
SPECIFICATIONS TO GOVERN THIS PROJECT ARE R.I. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, REVISION OF 1971 WITH LATEST REVISIONS THROUGH JUNE 1, 1974 AND STATE AND FEDERAL SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS. STANDARD DETAILS FOR THIS PROJECT ARE R.I. STANDARD DETAILS, AS INCLUDED IN THIS PLAN SET. THE FOLLOWING STANDARD DETAILS ARE INCLUDED IN THIS PROJECT.

STANDARD NO.	DESCRIPTION
1.1	UNDERDRAIN
1.2	COMBINATION DRAIN
1.4	CONCRETE CONNECTING COLLAR
1.5	CORRUGATED METAL BENDS AND BANDS
2.6	PRECAST CONCRETE FLARED END SECTION
2.8	METAL END SECTIONS - ROUND TYPE
2.12	ROCK FILL RIP-RAP AT FLARED END SECTIONS
3.1	MANHOLE - BRICK OR BLOCK
3.2	MANHOLE - 5' OR 6' DIAMETER
4.3	CATCH BASIN - TYPE "F" - BRICK OR BLOCK ROUND
4.6	CATCH BASIN - TYPE "R" - BRICK OR BLOCK
4.7	FLUSH CATCH BASIN - BLOCK
4.12	PRECAST CONCRETE DROP INLET
4.13	PRECAST CONCRETE DROP INLET WITH APRON STONE - LATERAL OUTLET
5.14	ROUND FRAME AND GRATE
5.16	HIGH CAPACITY FRAME AND GRATE
5.17	SQUARE FRAME AND GRATE
5.22	ROUND FRAME & COVER HEAVY DUTY MANHOLE
5.33	CATCH BASIN / MANHOLE STEP
7.11	PRECAST CONCRETE CURB
7.15	PRECAST CONCRETE APRON STONE FOR ROUND CATCH BASIN
7.17	PRCAST CONCRETE TRANSITION CURB
3.5	VERTICAL LINEAR FEET OF 12" WALL - MANHOLES & CATCHBASINS
7.21	PRECAST CONCRETE CURB (SLOPED FACE)
4.14	PRECAST CONCRETE DROP INLET WITH APRON STONE - LONGITUDINAL OUTLET
7.43	BITUMINOUS BERM
8.2	BITUMINOUS CONCRETE DITCH
9.1, 9.5	BALED HAY EROSION CHECK
9.2	BALED HAY DITCH EROSION CHECK
9.4	LOG AND HAY CHECK DAM
10.3	RUBBLE MASONRY WALL
15.20	MULTIPLE MOUNTING FOR RURAL MAILBOXES
15.30	POST & MOUNTING FOR RURAL MAILBOXES
19.10	STEET NAME SIGN
24.0 TO 24.12	REGULATORY AND WARNING SIGN MOUNTINGS
25.0 TO 25.6	CONSTRUCTION & TEMPORARY SIGN & MOUNTINGS
25.8	BOX FORM
26.0	BARRICADES
26.5	POLYETHYLENE DRUM WITH MARKINGS
26.6	FLUORESCENT TRAFFIC CONE
26.15	(PVC) PLASTIC PIPE BARRICADE
27.0	REGULATORY SIGNS
28.0	WARNING SIGNS
29.0	GUIDE SIGNS AND CONSTRUCTION SIGNS
34.1	GUARDRAIL - TYPICAL INSTALLATION
34.3	GUARDRAIL - BURIED APPROACH SECTION
34.5	GUARDRAIL - ANCHORAGE APPROACH SECTION
24.14	PARKING SIGN - MOUNTING
34.7	GUARDRAIL - POST INSTALLATION IN LEDGE
34.32-34.35	STEEL BEAM GUARDRAIL
34.51	GUARDRAIL - ANCHORAGE APPROACH SECTION DETAILS
40.5	PRECAST MEDIAN BARRIER FOR TEMPORARY TRAFFIC CONTROL
43.1	CEMENT CONCRETE SIDEWALK
43.32	WHEELCHAIR RAMP
51.1	TREE PROTECTIVE DEVICE
51.2	TYPICAL SHRUB PROTECTION DEVICE
24.2	ROUTE MARKER MOUNTING
24.7	DIRECTIONAL SIGN MOUNTING
43.31	WHEEL CHAIR RAMP (AT LARGE RADIUS CORNER)
7.24	PRECAST TRANSITION CURB - SLOPE FACE
7.27	PRECAST TRANSITION CURB - VERTICAL FACE TO SLOPE FACE
4.31	PRECAST CATCH BASIN 4', 5' OR 6' DIAMETER
4.32	PRECAST MANHOLE 4' DIAMETER
4.33	PRECAST MANHOLE 5' DIAMETER
4.35	PRECAST MANHOLE AND CATCH BASINS MAXIMUM PIPE SIZE STANDARD
24.15	LIGHTWEIGHT STEEL DELINEATOR
34.37	STEEL BEAM GUARDRAIL REFLECTORIZED TRIANGULAR DELINEATOR



LAYOUT

SCALE IN MILES: 0 1/4 1/2 3/4 1



LOCATION PLAN

SCALE IN MILES: 0 1/2 1 2 3 4 5

DESIGN DESIGNATION

ROUTE 3 TO ARCADIA RD.		ARCADIA RD. TO CONN. S/L	
1984 ADT	2325	1984 ADT	1475
1989 ADT	2575	1989 ADT	1625
DHV	189	DHV	113
K	8%	K	8%
D	58%	D	60%
DDHV	109	DDHV	69
V	50 MPH	V	50 MPH
T	27%	T	27%

SCALE OF DRAWINGS

PLANS: 1 INCH = 40 FEET
PROFILES: 1 INCH = 40 FEET HORIZONTAL
: 1 INCH = 8 FEET VERTICAL
CROSS SECTIONS: 1 INCH = 4 FEET

BASE OF LEVELS

MEAN SEA LEVEL

CROSSMAN ENGINEERING, INC.
Consulting Engineers
255 Main Street, Pawtucket R.I.

E. RAYMOND CROSSMAN
NO. 3923
REGISTERED PROFESSIONAL ENGINEER

Contract Number 8654
Number of Sheet 1
Total Sheets 317

R.I.D.E.M. REVISION DATE: 12-23-85

R.I. DEPARTMENT OF TRANSPORTATION
DIVISION OF PUBLIC WORKS

APPROVED
Edmund F. Parkhurst 5/13/85
CHIEF OF DESIGN DATE

APPROVED
James A. Cipolli 5/13/85
CHIEF ENGINEER DATE

APPROVED
DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ADMINISTRATOR DATE

ADDENDUM NO. 1

FEDERAL AID PROJECT NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	R.I.			2	317

PLAN SYMBOLS

EXISTING		NEW
	EDGE OF PAVEMENT	
	CURB	
	GUARDRAIL	
	MAILBOX	
NO.	UTILITY POLE	NO.
D.M.	POLE GUY OR DEADMAN	D.M.
	LUMINAIRE	
	SIGN	
(SIZE) CD	COMBINATION DRAIN	CD
(SIZE) UD	UNDERDRAIN	(Length, Size, Material) UD
(SIZE) D	STORM DRAIN	(Length, Size, Material) D
(SIZE) S	SANITARY SEWER	(Length, Size, Material) S
(SIZE) W	WATER MAIN	(Length, Size, Material) W
(SIZE) G	GAS MAIN	(Length, Size, Material) G
(SIZE) T	TELEPHONE DUCT	(Length, Size, Material) T
(SIZE) E	ELECTRIC DUCT	(Length, Size, Material) E
	FLARED END SECTION	
	HEADWALL	
WG	WATER GATE	W
GG	GAS GATE	G
	CATCH BASIN	
	MANHOLE	
	HYDRANT	
1+0 2+0	BASELINE OR CENTERLINE	1+0 2+0
S.H.L. (PLAT NO.)	STATE HIGHWAY LINE	S.H.L.
F.L. (PLAT NO.)	FREEWAY LINE	F.L.
R	PROPERTY LINE	
CITY NAME / TOWN NAME	CITY OR TOWN LINE	
	PAVED WATERWAY	PWW
ELEV	CONTOUR LINE	ELEV.
	OPEN DITCH	
R.I.H.B.	R.I. HIGHWAY BOUND	R.I.H.B.
S.B.	STONE BOUND	
	RETAINING WALL	
	FIELD STONE WALL	
	LEDGE OR ROCK	
	BORINGS	NO.
	CORES	NO
TYPE	WIRE FENCE	TYPE
TYPE	FENCE	TYPE
	HEDGE	
	WOOD OR BRUSH LINE	
	TREES	
(NAME)	RIVER OR STREAM	
(NAME)	POND OR LAKE	
	SWAMP	
NO. TYPE MATERIAL	BUILDING	
	FOUNDATION	
	CEMETERY	
	GAS PUMPS	
FD	FIRE CALL BOX	
PD	POLICE CALL BOX	
	BILLBOARD	
	RAILROAD TRACKS	
	CUT & MATCH	
	RIP-RAP	
	CUT SLOPE	ROADWAY TOP OF SLOPE
	FILL SLOPE	ROADWAY TOE OF SLOPE
	UTILITY TO BE ABANDONED	
	AREA GRADED TO DRAIN	X ELEV Y ELEV

GENERAL LEGEND

1.4		CONCRETE CONNECTING COLLAR, R.I. STD 1.4
2.1		CONCRETE HEADWALL, R.I. STD. 2.1.
2.11		ROCKFILL RIP-RAP AT HEADWALLS, R.I. STD 2.11
2.12		ROCKFILL RIP-RAP AT FLARED END SECTIONS, R.I. STD. 2.12
2.6	(DIA)	PRECAST CONCRETE FLARED END SECTION, R.I. STD. 2.6
3.1		MANHOLE-4' DIAMETER R.I. STD 3.1
3.2A		MANHOLE-BRICK, 5' DIAMETER, R.I. STD. 3.2
3.2B		MANHOLE-BRICK 6' DIAMETER, R.I. STD. 3.2
3.5		VERTICAL LINEAR FEET OF 12" WALL, M.H. & C.B., R.I. STD. 3.5
4.1		CATCH BASIN TYPE "D" ROUND, R.I. STD 4.1
4.11		DROP INLET, BRICK, R.I. STD. 4.11
4.12		PRECAST CONCRETE DROP-INLET, R.I. STD 4.12
4.13		PRECAST CONCRETE DROP INLET-LATERAL OUTLET R.I. STD 4.13
4.14		PRECAST CONCRETE DROP INLET-LONGITUDINAL OUTLET, R.I. STD. 4.14
4.16		DOUBLE GRATE CATCH BASIN, R.I. STD. 4.16
4.17		CATCH BASIN WITH DOUBLE GRATES, R.I. STD. 4.17
4.2		CATCH BASIN-TYPE "D" SQUARE, R.I. STD. 4.2
4.3		CATCH BASIN-TYPE "F" ROUND, R.I. STD. 4.3
4.4		CATCH BASIN-TYPE "P" SQUARE, R.I. STD. 4.4
4.5		CATCH BASIN WITH GUTTER INLET, R.I. STD. 4.5
4.6		CATCH BASIN TYPE "R", R.I. STD 4.6
4.7		FLUSH CATCH BASIN, BLOCK, R.I. STD. 4.7
4.71		FLUSH CATCH BASIN, SQUARE, R.I. STD. 4.71
4.8A	(TYPE)	CATCH BASIN-5' DIAMETER R.I. STD. 4.8
4.8B	(TYPE)	CATCH BASIN - 6' DIAMETER, R.I. STD. 4.8
5.11		SQUARE FRAME AND ROUND COVER-LIGHT DUTY, R.I. STD. 5.11
5.12	NUMBER (FLANGE)	SQUARE FRAME & GRATE, R.I. STD. 5.12
5.13	NUMBER (FLANGE)	SQUARE FRAME & GRATE, R.I. STD. 5.13
5.14		ROUND FRAME & GRATE, R.I. STD 5.14
5.15	NUMBER (FLANGE)	HIGH CAPACITY FRAME & GRATE, R.I. STD. 5.15
5.16	NUMBER (FLANGE)	HIGH CAPACITY FRAME & GRATE, R.I. STD. 5.16
5.21		ROUND FRAME & COVER LIGHT DUTY, R.I. STD. 5.21
5.22		ROUND FRAME & COVER-HEAVY DUTY, R.I. STD. 5.22
7.11S		PRECAST CONCRETE CURB-VERTICAL FACE, (STRAIGHT) R.I. STD. 7.11
7.11C		PRECAST CONCRETE CURB-VERTICAL FACE, (CIRCULAR), R.I. STD 7.11
7.12		PRECAST CONCRETE INLET STONE, FOR SQUARE C.B., R.I. STD. 7.12
7.13		PRECAST CONCRETE INLET STONE, FOR ROUND C.B., R.I. STD 7.13
7.14		PRECAST CONCRETE APRON STONE, FOR SQUARE C.B., R.I. STD. 7.14
7.15		PRECAST CONCRETE APRON STONE, FOR ROUND C.B., R.I. STD. 7.15
7.16A		PRECAST 2' RADIUS CORNER, R.I. STD. 7.16
7.16B		PRECAST 3' RADIUS CORNER, R.I. STD. 7.16
7.17		PRECAST TRANSITION CURB - VERTICAL FACE, R.I. STD. 7.17
7.21S		PRECAST CONCRETE CURB - SLOPE FACE -(STRAIGHT), R.I. STD. 7.21
7.21C		PRECAST CONCRETE CURB - SLOPE FACE - (CIRCULAR), R.I. STD. 7.21
7.22		PRECAST CONCRETE INLET STONE, FOR SQUARE C.B., R.I. STD. 7.22
7.23		PRECAST CONCRETE INLET STONE, FOR ROUND C.B., R.I. STD 7.23
7.24		PRECAST CONCRETE TRANSITION CURB-SLOPE FACE, R.I. STD 7.24
7.41		BITUMINOUS CONCRETE LIP CURB, R.I. STD. 7.41
7.43		BITUMINOUS BERM, R.I. STD. 7.43
7.51S		GRANITE CURB QUARRY SPLIT, (STRAIGHT), R.I. STD. 7.51
7.51C		GRANITE CURB QUARRY SPLIT, (CIRCULAR), R.I. STD. 7.51
7.52		GRANITE INLET STONE, FOR SQUARE C.B., R.I. STD. 7.52
7.53		GRANITE INLET STONE, FOR ROUND C.B., R.I. STD. 7.53
7.54		GRANITE APRON STONE, FOR SQUARE C.B., R.I. STD. 7.54
7.55		GRANITE APRON STONE, FOR ROUND C.B., R.I. STD. 7.55
7.56A		GRANITE CURB QUARRY SPLIT 2' RADIUS CORNER, R.I. STD. 7.56
7.56B		GRANITE CURB QUARRY SPLIT 3' RADIUS CORNER, R.I. STD. 7.56
7.57		GRANITE TRANSITION CURB, R.I. STD 7.57
8.2A		BITUMINOUS CONCRETE DITCH, (2"), R.I. STD 8.2
8.2B		BITUMINOUS CONCRETE DITCH, (3"), R.I. STD. 8.2
8.3		RIP-RAP DITCH, R.I. STD. 8.3
9.1		BALED HAY EROSION CHECK, R.I. STD. 9.1
9.2		BALED HAY DITCH EROSION CHECK, R.I. STD. 9.2
9.4		LOG & HAY CHECK DAM, R.I. STD. 9.4
9.5		BALED HAY EROSION CHECK, R.I. STD. 9.5
10.1		WETSTONE MASONRY RETAINING WALL, R.I. STD 10.1
10.2		CONCRETE RETAINING WALL, R.I. STD. 10.2
10.9	(H")	PRECAST CEMENT CONCRETE LOT CURB, R.I. STD. 10.9
10.11		WET STONE MASONRY RETAINING WALL, R.I. STD. 10.11
10.12		STONE MASONRY STEPS, R.I. STD. 10.12
14.1		CONCRETE HIGHWAY BOUND, R.I. STD. 14.1
15.30		POST & MOUNTINGS FOR RURAL MAIL BOXES, R.I. STD. 15.30
34.0		STEEL BEAM GUARDRAIL, R.I. STD 34.0 SERIES; TYPICAL INSTALLATION, R.I. STD. 34.1 STEEL BEAM GUARDRAIL, R.I. STDS. 34.32 & 34.33 STEEL BEAM GUARDRAIL FIXTURES, R.I. STD. 34.34 BACK-UP PLATE, R.I. STD. 34.35
34.3		GUARDRAIL - BURIED APPROACH TREATMENT, R.I. STD. 34.3
34.5		GUARDRAIL - ANCHORAGE APPROACH SECTION, R.I. STD. 34.5
34.6		GUARDRAIL - ANCHORAGE DETAIL - TRAILING END, R.I. STD. 34.6
43.1		CEMENT CONCRETE SIDEWALK, R.I. STD 43.1
43.2		BITUMINOUS CONCRETE SIDEWALK, R.I. STD. 43.2
43.31		WHEELCHAIR RAMP, R.I. STD 43.2 AT LARGE RADIUS CORNER (R.I. STD. 7.11 OR 7.51 CURB)
RRG		REMOVE & REST STEEL BEAM RAIL, BACK-UP PLATES OFFSET BRACKETS TO NEW POSTS. REMOVE AND DISPOSE EXISTING POSTS.
340-9		GUARDRAIL STEEL BEAM SINGLE FACE EARTH AND RIPRAP STD. 34.0 C.I.P WITH 9' LONG POSTS
43.32		WHEELCHAIR RAMP, R.I. STD. 43.32, CONCRETE WHEELCHAIR RAMP TRANSITION CURB, R.I. STD. 7.17, 7.57 OR 7.24
44.1	(H")	PRECAST MEDIAN MARKER- 2'-0" (ONE WAY), R.I. STD. 44.1
44.2	(H")	PRECAST MEDIAN MARKER - 1'-0" (TWO WAY), R.I. STD. 44.2
44.3		PRECAST MEDIAN MARKER - 4'-0" (ONE WAY), R.I. STD. 44.3
44.4	(H")	PRECAST MEDIAN MARKER - 1'-0" (TWO WAY), R.I. STD 44.4
45.1		PRECAST CEMENT CONCRETE GORE MARKER, R.I. STD. 45.1
51.1		TREE PROTECTIVE DEVICE, R.I. STD. 51.1
51.2		SHRUB PROTECTION DEVICE, R.I. STD 51.2
10.3		RUBBLE MASONRY WALL, R.I. STD. 10.3
BO		SAFETY BERM PAVED WATERWAY
5.17		SQUARE FRAME AND GRATE, R.I. STD. 5.17
GTD		GRADE TO DRAIN
DW		DISMANTLE STONE WALL
GSG		GRADED SCREEN GRAVEL - 6"
RRF		REMOVE AND RELOCATE FENCE (ALL TYPES)
RUP		REMOVE AND RELOCATE UTILITY POLE (BY OTHERS)
SD		REFER TO STRUCTURE DISPOSITION SHEET (SPECIAL PROVISIONS)
RRS		REMOVE AND RESET SIGN
TD-1		ROADSIDE DITCH - SOD
TD-R		ROADSIDE DITCH - RIPRAP CLASS "B"
RT	(DIA)	REMOVE TREE (DIA)
TEB		TEMPORARY EASEMENT BOUNDARY
2.8		METAL END SECTIONS - ROUND TYPE, R.I. STD. 2.8
15.20		MULTIPLE MOUNTING FOR RURAL MAILBOXES, R.I. STD. 15.20
RSW		REMOVE AND REBUILD STONE WALL R.I. STD. 10.3
RR	(CL.)	12" RIPRAP W/6" RIP RAP BEDDING
DFG		REMOVE & DISPOSE FRAME & GRATE
ECB		ENTER EXISTING CATCH BASIN
CAP		CAP UNDERDRAIN AT MANHOLE - SEE NOTE SH 4
19.10		STREET NAME SIGN, R.I. STD 19.10
RSG		RESET STOCKPILE GUARDRAIL
RRR		REMOVE & DISPOSE RIP-RAP
SF		SILT FENCE
RCB		RECONSTRUCT CATCH BASIN, TYPE "D" TO CATCH BASIN WITH GUTTER INLET.
CCB		CLEAN CATCH BASIN
CMH		CLEAN MANHOLE
CFP		CLEAN AND FLUSH PIPE
RHH		REMOVE, HANDLE, HAUL, TRIM, RESET CURB EDGING, STRAIGHT, CIRCULAR ALL TYPE
DSW		REMOVE AND DISPOSE SIDEWALK
DC		REMOVE AND DISPOSE CONCRETE CURB
DB		REMOVE AND DISPOSE BITUMINOUS CURB
DG		REMOVE AND DISPOSE GUARDRAIL
DF		REMOVE AND DISPOSE FENCE
DFP		REMOVE AND DISPOSE FLEXIBLE PAVEMENT
DP		REMOVE AND DISPOSE PIPE
DH		REMOVE AND DISPOSE HEADWALL
DCB		REMOVE AND DISPOSE CATCH BASIN
DDI		REMOVE AND DISPOSE DROP INLET
DMH		REMOVE AND DISPOSE MANHOLE
DS		REMOVE AND DISPOSE SIGN
SG		REMOVE AND STOCKPILE GRANITE CURB
SGR		REMOVE AND STOCKPILE GUARDRAIL
SH		REMOVE AND STOCKPILE HYDRANT
STS		REMOVE AND STOCKPILE TRAFFIC SIGNAL SYSTEM
CG		CLEARING AND GRUBBING
AW		ADJUST WATER GATE BOX TO GRADE
AG		ADJUST GAS GATE BOX TO GRADE
AC		ADJUST CURB STOP TO GRADE
AB		ADJUST CATCH BASIN TO GRADE
AS		ADJUST SANITARY SEWER MANHOLE TO GRADE
AT		ADJUST TELEPHONE MANHOLE TO GRADE
AE		ADJUST ELECTRIC MANHOLE TO GRADE
AD		ADJUST DRAINAGE MANHOLE TO GRADE
ABM		ADJUST CATCH BASIN TO MANHOLE
BCD		BITUMINOUS CONCRETE DRIVEWAY 2" BITUMINOUS CONCRETE, TYPE I-2 6" GRAVEL BORROW SUBBASE COURSE
CCD		CEMENT CONCRETE DRIVEWAY 4" CEMENT CONCRETE CLASS "B" 6" GRAVEL BORROW SUBBASE COURSE
LS		4" LOAM AND SEED

TYPICAL SIGN DESIGNATION SYMBOL

PERMANENT
- SIGN LOCATION NUMBER
- SIGN NUMBER (SIZE)
- SIGN MOUNTING (R.I. STD. NO.)

STREET SIGN
- SIGN NUMBER

TEMPORARY
- SIGN NUMBER
- SIGN SIZE

REVISIONS		
NO	DATE	BY
1	4/23/86	J.C.

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
DIVISION OF PUBLIC WORKS

RRR HIGHWAY IMPROVEMENTS
ROUTE 165
EXETER, R.I.

PLAN SYMBOLS & GENERAL LEGEND

CHECKED BY ____ DATE ____ SCALE ____

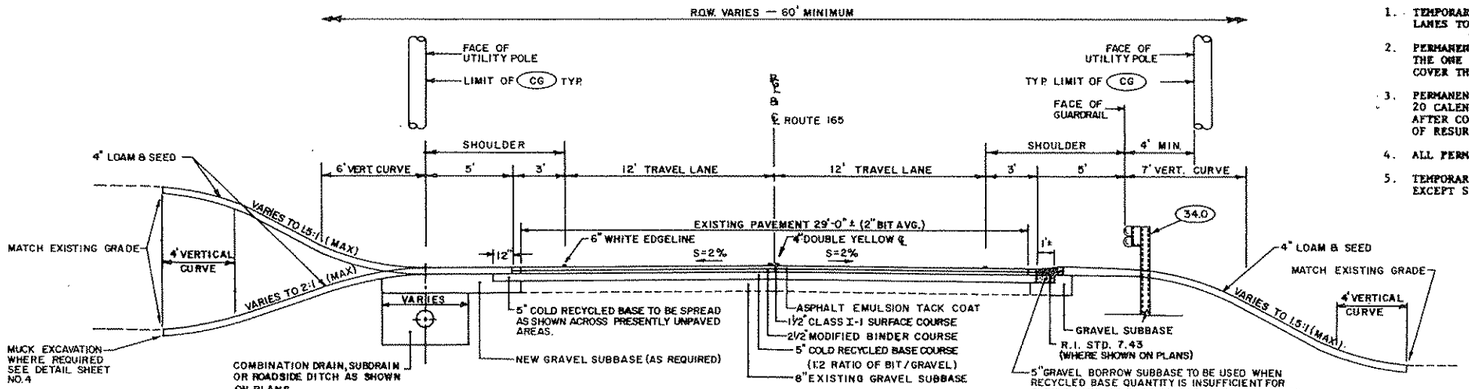
GROSSMAN ENGINEERING, INC.
Consulting Engineers
PAWTUCKET, RHODE ISLAND 02860

DATE ____ DESIGNED BY ____
SCALE NO SCALE SHEET 2 OF 317

RHODE ISLAND BLUEPRINT CO.

ADDENDUM NO. 1

FED.ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	R.I.			3	317



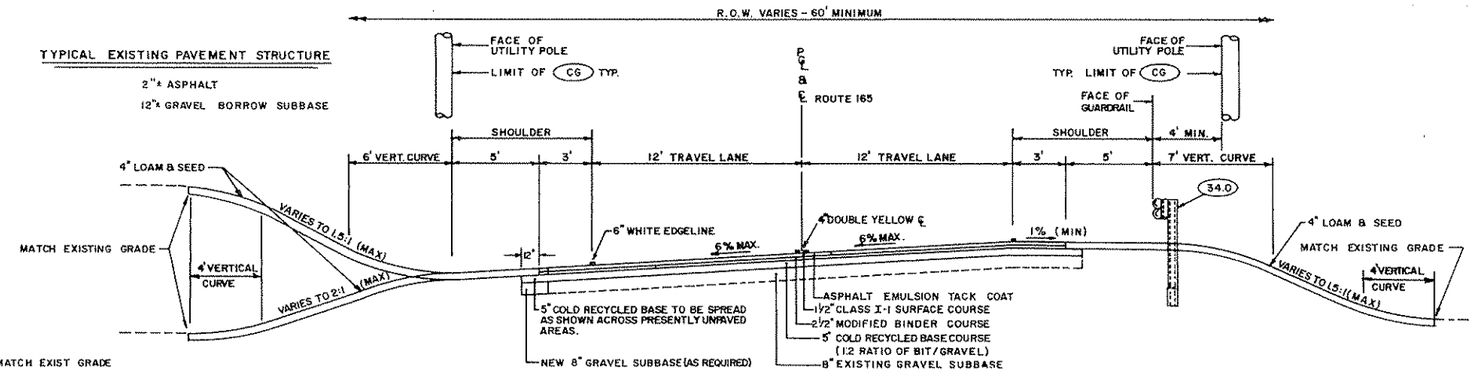
—TYPICAL NORMAL SECTION—

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

TYPICAL EXISTING PAVEMENT STRUCTURE

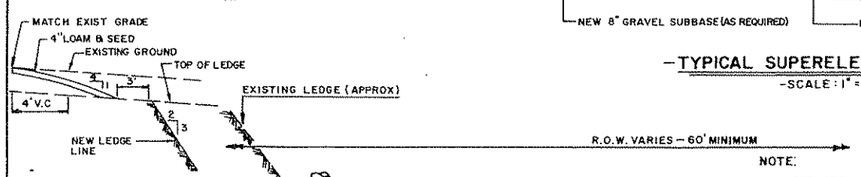
2" ± ASPHALT

12" ± GRAVEL BORROW SUBBASE



—TYPICAL SUPERELEVATED SECTION—

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

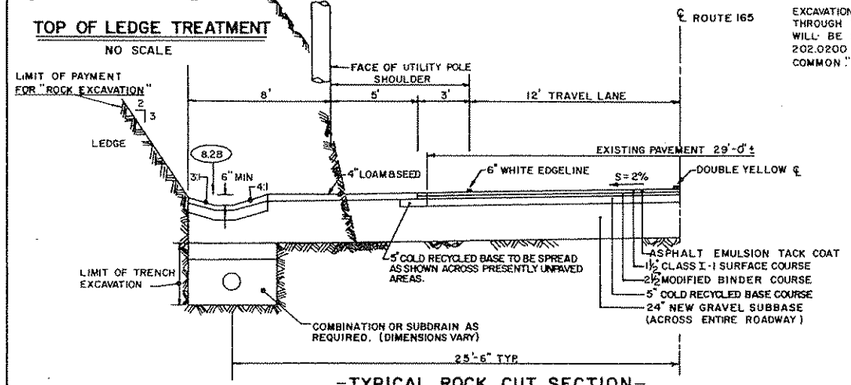


TOP OF LEDGE TREATMENT

NO SCALE

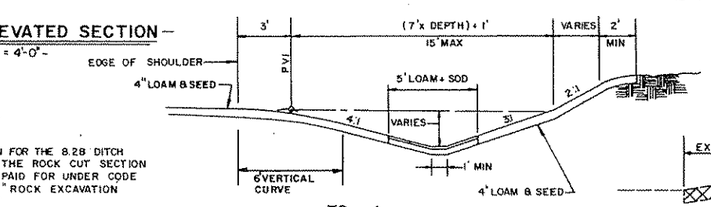
NOTE:

EXCAVATION FOR THE 8.28' DITCH THROUGH THE ROCK CUT SECTION WILL BE PAID FOR UNDER CODE 202.0200 "ROCK EXCAVATION COMMON".

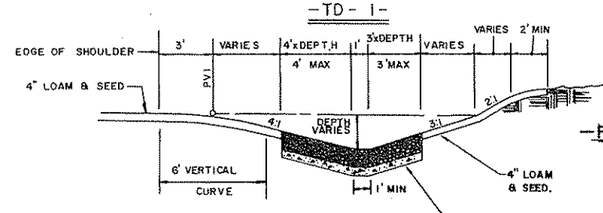


—TYPICAL ROCK CUT SECTION—

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



—TD - 1—



—TD - 2—

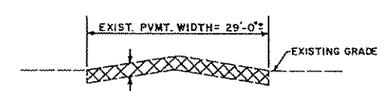
(1) EXCAVATION TO BE PAID FOR UNDER "TRENCH EXCAVATION"

(2) SLOPES MAY VARY TO MEET CONDITIONS AS PER CONSTRUCTION ENGINEER., BUT TYPICALLY 4:1 FRONT & 3:1 BACK SLOPE

(3) FOR DITCHES WITH DEPTHS OF 6" OR LESS, BEGIN DITCH AT EDGE OF GRADED SHOULDER (EXCEPT IN ROCK CUT SECTIONS.)

—ROADSIDE DITCH DETAILS—

- NO SCALE -



NOTE: THE CONTRACTOR WILL EXCAVATE THE ENTIRE WIDTH OF PAVEMENT. PAYMENT FOR EXCAVATING THIS MATERIAL IS INCLUDED IN THE UNIT PRICE BID FOR "PAVEMENT REHABILITATION/RECYCLING"

—RECYCLED PAVEMENT EXCAVATION DETAIL—

-NOT TO SCALE-

23. RECYCLED MATERIAL WILL BE STOCKPILED IN ALL ROCK CUT AREAS, PROFILE ADJUSTMENT AREAS AND AS DIRECTED BY THE ENGINEER. THERE WILL BE NO SEPARATE PAYMENT. THE COST IS INCLUDED IN CODE 301.0201 "PAVEMENT REHABILITATION / RECYCLING".

24. IN AREAS WHERE CURBING IS SET TO FINISH LINE AND GRADE, THE CONTRACTOR WILL NOT BE REQUIRED TO UTILIZE THE SENSOR AND SKI-TYPE DEVICE FOR AUTOMATIC GRADE CONTROL, BUT WILL BE ALLOWED TO MANUALLY ADJUST THE BITUMINOUS PAVER FOR CONTROLLING GRADE.

PAVEMENT MARKING NOTES:

1. TEMPORARY MARKINGS MUST BE IN PLACE BEFORE OPENING LANES TO TRAFFIC.
2. PERMANENT MARKINGS SHALL BE PLACED DIRECTLY BESIDE THE ONE INCH TEMPORARY MARKINGS, AND SHALL NOT COVER THEM.
3. PERMANENT MARKINGS ARE TO BE PLACED NO SOONER THAN 20 CALENDAR DAYS AND NO LATER THAN 30 CALENDAR DAYS AFTER COMPLETION OF ANY PHASE OF THE FINISHED LAYER OF RESURFACING.
4. ALL PERMANENT MARKINGS ARE TO BE THERMOPLASTIC.
5. TEMPORARY MARKINGS ARE TO BE USED FOR ALL LINES EXCEPT STOP BARS AND CROSSWALKS.

SURVEY REQUIREMENT

PROVISIONS ARE MADE IN THIS CONTRACT FOR THE CONTRACTOR TO PROVIDE HIS OWN HORIZONTAL AND VERTICAL CONTROL LAYOUT OF THE PROPOSED WORK IN ACCORDANCE WITH THE DESCRIPTIVE INTENT OF THE DESIGN AND/OR THE VARIOUS BASIC CONTROL DIMENSIONS SHOWN ON THE DRAWINGS. ACCORDINGLY, THE CONTRACTOR SHALL RETAIN THE SERVICES OF A LAND SURVEYOR, REGISTERED IN THE STATE OF RHODE ISLAND, TO ESTABLISH THE HORIZONTAL AND VERTICAL CONTROL AND SUBSEQUENTLY, LAYOUT ALL LINE, GRADE AND STRUCTURES. THE RESIDENT ENGINEER WILL NOT AUTHORIZE CONSTRUCTION ACTIVITIES TO BEGIN UNTIL HE IS SATISFIED THAT ALL GROUND CONTROL HAS BEEN ESTABLISHED, TIED DOWN, AND DULY RECORDED IN STANDARD FIELD BOOKS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT EXISTING CONDITIONS ARE NOT OBLITERATED BEFORE CONTROL IS ESTABLISHED. THE CONTRACTOR SHALL INSURE THAT CONSTRUCTION LAYOUT IS PROVIDED IN SUFFICIENT DETAIL, THEREBY ENABLING HIM TO CONSTRUCT THE PROJECT IN CONFORMITY WITH THE PLANS AND SPECIFICATIONS.

SPECIFIC LAYOUT INSTRUCTIONS

IT IS THE INTENT OF THIS CONTRACT TO MAINTAIN THE EXISTING HORIZONTAL ALIGNMENT. ACCORDINGLY, PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL ESTABLISH SUFFICIENT OFFSETS, WITH TIES, TO QUICKLY AND EFFICIENTLY REPRODUCE THE CENTER LINE. CONSTRUCTION LAYOUT NAILS ARE LOCATED ON THE ROADWAY CENTER LINE EVERY 50 FEET AND AT THE PC'S AND PT'S OF CURVES. THE VERTICAL ALIGNMENT IS BEING MODIFIED AS SHOWN ON THE PROFILE PLANS AND NEW GRADES ARE GIVEN.

—GENERAL NOTES—

1. ALL PROPOSED PIPES SHALL HAVE A MINIMUM ONE FOOT OF COVER, UNLESS OTHERWISE NOTED.
2. THE LOCATION AND DEPTH OF EXISTING UTILITIES, AS SHOWN ON THE PLANS, ARE ESTIMATED AND SHOULD NOT BE RELIED UPON BY THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE PROPER AUTHORITY TO DETERMINE THE EXACT LOCATIONS BEFORE ANY WORK BEGINS. ALL EXCAVATION SHALL BE IN ACCORDANCE WITH ALL STATUTES, ORDINANCES, RULES AND REGULATIONS OF ANY TOWN, STATE, OR FEDERAL AGENCY THAT MAY BE APPLICABLE. ANY DAMAGE TO EXISTING UTILITIES AND ANY OTHER COSTS ARISING OUT OF SAID EXCAVATION OR BY REASON THEREOF SHALL BE CONTRACTORS RESPONSIBILITY.
3. ALL DUCTILE IRON DRAIN PIPE SHALL BE ANSI CLASS 52 WITH RUBBER GASKET JOINTS.
4. ALL RIPRAP SHALL HAVE A MINIMUM DEPTH OF 12" ON A MINIMUM 6" OF RIPRAP BEDDING.
5. THE SLOPE OF DRIVEWAY EMBANKMENTS SHALL BE NO GREATER THAN 10:1 OR AS DIRECTED BY THE ENGINEER.
6. THE ROADSIDE SLOPES IN FRONT OF GUARDRAIL SHOULD BE NO GREATER THAN 10:1.
7. 4" LOAM & SEED SHALL BE PLACED IN ALL DISTURBED AREAS NOT OTHERWISE LABELED WITHIN THE ROW OR AS DIRECTED BY THE ENGINEER.
8. STATE HIGHWAY LINES AND PROPERTY LINES SHOWN ARE GRAPHIC ONLY.
9. CLEARING AND GRUBBING SHALL OCCUR IN ALL AREAS OF DRAINAGE DITCH CONSTRUCTION, SHOULDERS, SLOPE AREAS AND AS DIRECTED BY THE ENGINEER.
10. R.I. STD 1.1 UNDERDRAIN SHALL BE 8" CORRUGATED ALUMINUM PIPE M197, 16 GAUGE WITH AN INVERT DEPTH OF LEAST 3'-0" BELOW PAVEMENT SURFACE WHERE 24" GRAVEL SUBBASE IS USED AND 2'-0" IN OTHER LOCATIONS. THE COST OF ALL BENDS, BANDS AND FITTINGS ARE TO BE INCLUDED IN THE COST OF THE PIPE. 2.5
11. R.I. STD. 1.2 COMBINATION DRAIN SHALL BE PCAP M197, GAUGE 16. DRAIN LOCATION VARIES FROM PAVEMENT EDGE IN SOME LOCATIONS. ALWAYS EXTEND GRAVEL SUBBASE TO COMBINATION DRAIN.
12. THE CONTRACTOR SHALL HAVE THE OPTION TO SUBSTITUTE R.I STD. PRECAST CATCH BASINS AND MANHOLES AS AN ALTERNATE TO BRICK OR BLOCK STANDARD STRUCTURES.
13. THE COORDINATE GRID SYSTEM SHOWN IS ASSUMED.
14. ON SLOPES STEEPER THAN 2:1, THE CONTRACTOR MUST USE ADHESIVE SLOPE STABILIZER.
15. EXISTING DRIVEWAYS WILL BE MATCHED WITH A MINIMUM 5' LENGTH OF (BCD) AND AS REQUIRED (GSG)
16. ALL CMP TO BE BCRCMP M190 16 GAUGE TYPE C, WITH BENDS. ALL JOINTS TO HAVE MINIMUM 2' BANDS. THE COST OF ALL BANDS AND FITTINGS ARE TO BE INCLUDED IN THE COST OF THE PIPE. THIS NOTE DOES NOT APPLY TO COMBINATION DRAINS AND UNDERDRAINS. 2.5
17. FOR STRIPING LAYOUT AT STREET INTERSECTIONS REFER TO DETAIL ON SHEET 39.
18. THE DELINEATED WETLAND AREAS ARE NOT TO BE TRESPASSED UPON BEYOND THE REQUIRED WORK AREAS.
19. THE FLOOD PLAIN LIMITS SHOWN ARE APPROXIMATE AND ARE BASED UPON "THE FLOOD INSURANCE RATE MAP" DATED 3-1-82.
20. ALL FRAMES AND GRATES SHALL BE 4 FLANGE EXCEPT WHERE APRON STONES ARE UTILIZED.
21. DRAINAGE STRUCTURE ELEVATIONS ARE APPROXIMATE.
22. R.I. STD. 9.5 BALED HAY SHALL BE USED AT ALL CATCH BASINS THAT ARE NOT LOCATED IN THE ROADWAY.

REVISIONS		
NO.	DATE	BY
1	4/23/86	J.C.
2	5/12/96	J.C.

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
DIVISION OF PUBLIC WORKS

RRR HIGHWAY IMPROVEMENTS
ROUTE 165
EXETER, R.I.

TYPICAL SECTIONS & DETAILS - 1

CROSSMAN ENGINEERING, INC.
Consulting Engineers
PAWTUCKET, RHODE ISLAND, 02860

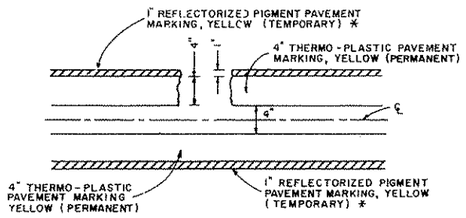
DATE: DESIGNED BY:
SCALE: AS SHOWN SHEET 3 OF 317

CHECKED BY _____ DATE _____ SCALE AS SHOWN

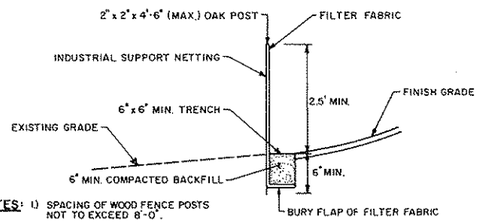
ADDENDUM NO. 1

FED.ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	R.I.			39	317

* IF CONC. BASE, BIT. BASE, OR BIT. BINDER IS TO BE DRIVEN ON, TEMPORARY 4" REFLECTORIZED PIGMENT PAVEMENT MARKINGS MUST BE USED.



TYPICAL TEMPORARY PAVEMENT MARKING DETAIL
(SURFACE APPLICATION SHOWN)
— NO SCALE —
REFER TO SPECIAL PROVISIONS CODE 808.0800



NOTES: 1) SPACING OF WOOD FENCE POSTS NOT TO EXCEED 8'-0".
2) SILT FENCE SHALL BE INSTALLED BEFORE ANY EARTH REMOVAL OR EXCAVATION TAKES PLACE.

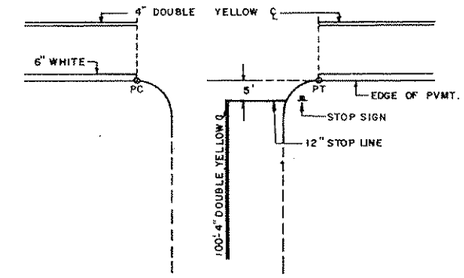
SILT FENCE DETAIL
NOT TO SCALE

STREET SIGN DETAIL	
NO.	SIGN LEGEND
1	NOOSENECK HILL RD.
	TEN ROD RD.
2	SHORT RD.
	TEN ROD RD.
3	BLACK PLAIN RD
	TEN ROD RD.
4	BOONE LAKE
	TEN ROD RD.
5	ARCADIA RD.
	TEN ROD RD.
6	BATES SCHOOLHOUSE RD.
	TEN ROD RD.
7	SUMMIT RD.
	BALD HILL RD.
	TEN ROD RD.
8	FROSTY HOLLOW RD.
	TEN ROD RD.
9	MT. TOM RD.
	TEN ROD RD.
10	WOODY HILL RD.
	TEN ROD RD.
11	ESCOHEAG HILL RD.
	TEN ROD RD.

TYPICAL STREET NAME SIGN
NO SCALE

NOTES:
1. SIGN BLADE TO BE .09 GA. ALUMINUM WITH HIGH INTENSITY GREEN BACKGROUND AND SILVER COPY.
2. EACH SIGN SHALL HAVE LEGEND ON BOTH SIDES.
3. MOUNTING TO BE R.I. STD. 19.10.

SIGN NO.	SIGN SIZE HEIGHT (FT)	WIDTH (FT)	AREA (S.F.)	LEGEND	LETTER HEIGHT (IN.) UPPER CASE	LOWER CASE	CAPITALS	NUMERALS	RTE MARKER OR SHIELD	CRITICAL SPACING	MOUNTING TYPE
SP-1	3'-0"	8'-0"	24.0 S.F.	Welcome To Rhode Island GREEN BACK GROUND WITH WHITE COPY	8" 8"	6" 6"				7" 6" 7"	R.I. STD. 24.7

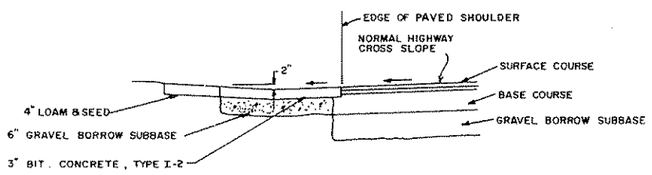


TYPICAL SIDE STREET STRIPING
NOT TO SCALE

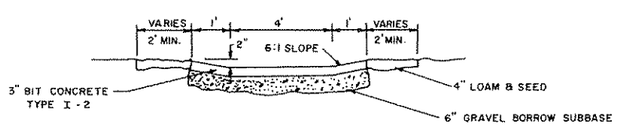
NOTE: ALL PERMANENT PAVEMENT MARKINGS SHALL BE THERMOPLASTIC

DRIVEWAY WIDTH (FEET)	CORNER RADII (FEET)
10-18	4
18-24	6
24-32	8

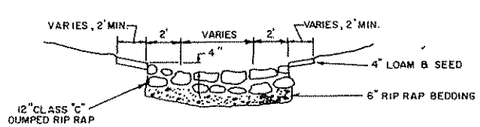
DRIVEWAY RADII



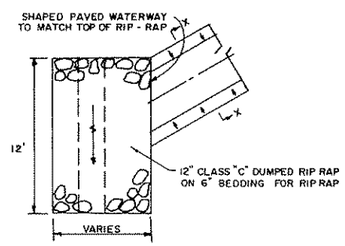
SECTION Y-Y
SCALE: 1/2" = 1'-0"



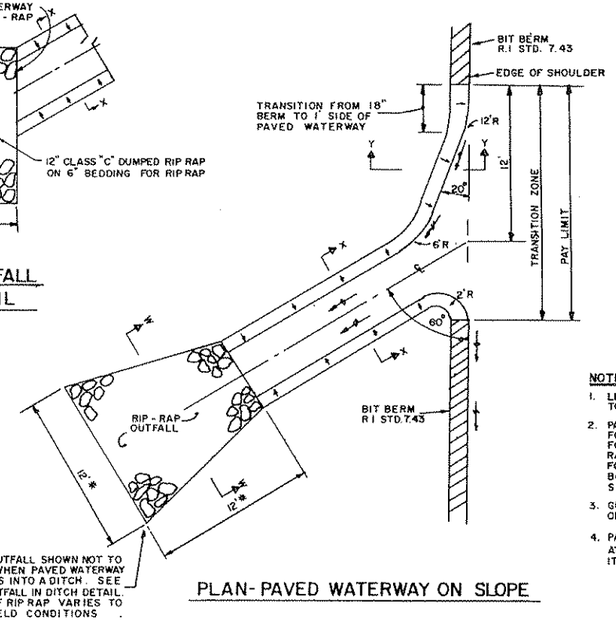
SECTION X-X
SCALE: 1/2" = 1'-0"



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



RIP-RAP OUTFALL IN DITCH DETAIL

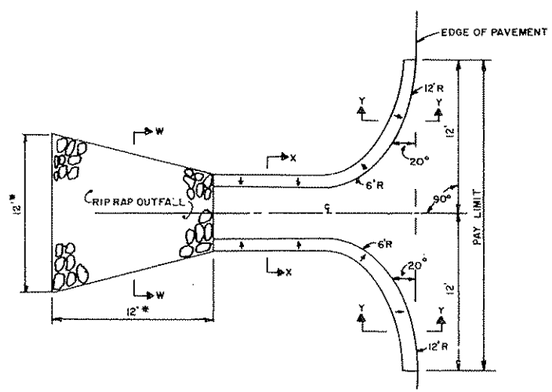


PLAN - PAVED WATERWAY ON SLOPE

SAFETY BERM PAVED WATERWAY WITH RIP-RAP OUTLET
SCALE: 3/16" = 1'-0"

* UNLESS OTHERWISE NOTED ON GENERAL PLANS.

NOTES:
1. LENGTH OF PAVED WATERWAY VARIES TO MEET FIELD CONDITIONS.
2. PAYMENT OF PAVED WATERWAYS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER S.Y. FOR "SAFETY BERM PAVED WATERWAY WITH RIP RAP OUTLET" AND SHALL INCLUDE COMPENSATION FOR FURNISHING AND PLACING THE GRAVEL BORROW BASE, PAVEMENT AND ALL EXCAVATION. SEE "SPECIAL PROVISIONS."
3. GUARDRAIL POSTS SHALL NOT BE SET IN CENTER OF PAVED WATERWAYS.
4. PAYMENT FOR RIPRAP AND BEDDING SHALL BE AT THE UNIT PRICE BID UNDER THE APPLICABLE ITEM.



PLAN - PAVED WATERWAY AT LOW POINT

REVISIONS NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
DIVISION OF PUBLIC WORKS

RRR HIGHWAY IMPROVEMENTS
ROUTE 165
EXETER, R.I.

MISCELLANEOUS DETAILS - I

CROSSMAN ENGINEERING, INC.
Consulting Engineers
PAWTUCKET, RHODE ISLAND, 02860

DATE: DESIGNED BY:
SCALE: AS NOTED SHEET 39 OF 317

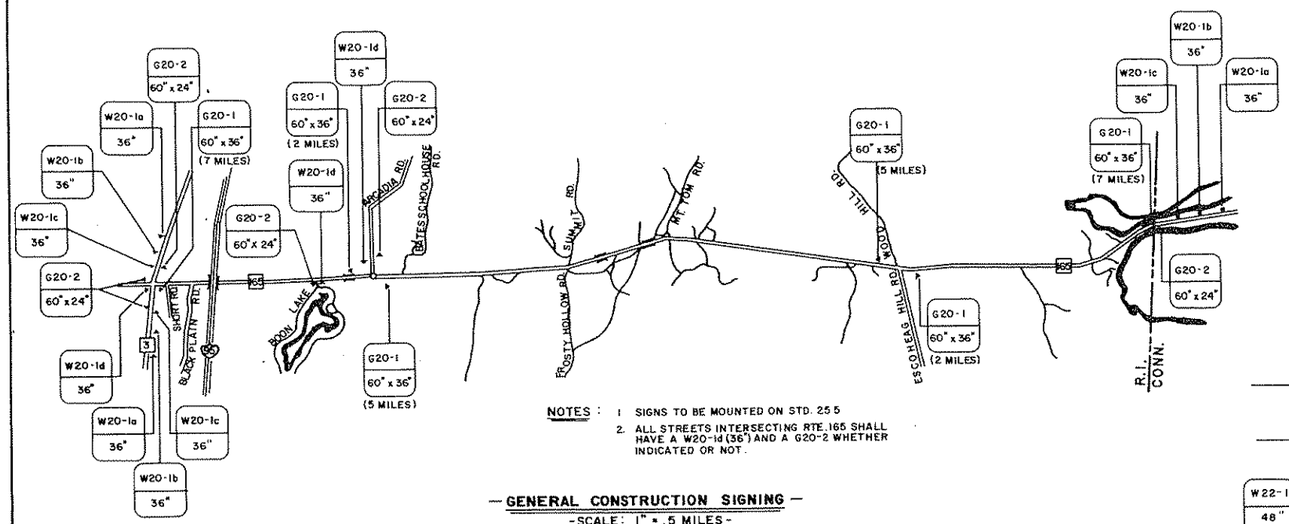
CHECKED BY ____ DATE ____ SCALE AS NOTED

ADDENDUM NO. 1

FED.ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	R.I.			40	317

LEGEND

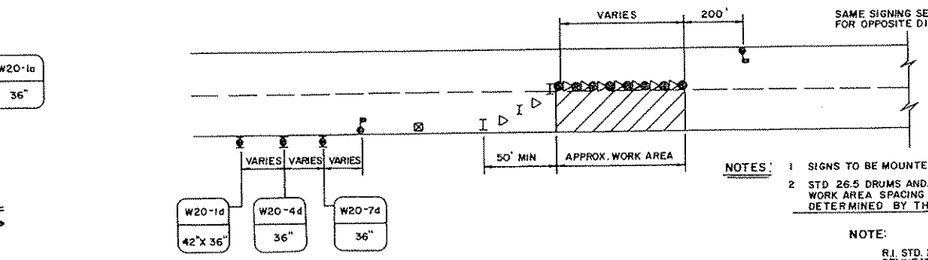
- DRUM - R.I. STD. 26.5
- CONES - R.I. STD 26.6
- PORTABLE FLASHING BARRICADE
- (PVC) PLASTIC PIPE BARRICADE - R I STD 26.15
- FLAGPERSON



NOTES:
1. SIGNS TO BE MOUNTED ON STD. 25.5
2. ALL STREETS INTERSECTING RTE. 165 SHALL HAVE A W20-1d (36") AND A G20-2 WHETHER INDICATED OR NOT.

— GENERAL CONSTRUCTION SIGNING —

-SCALE: 1" = .5 MILES-

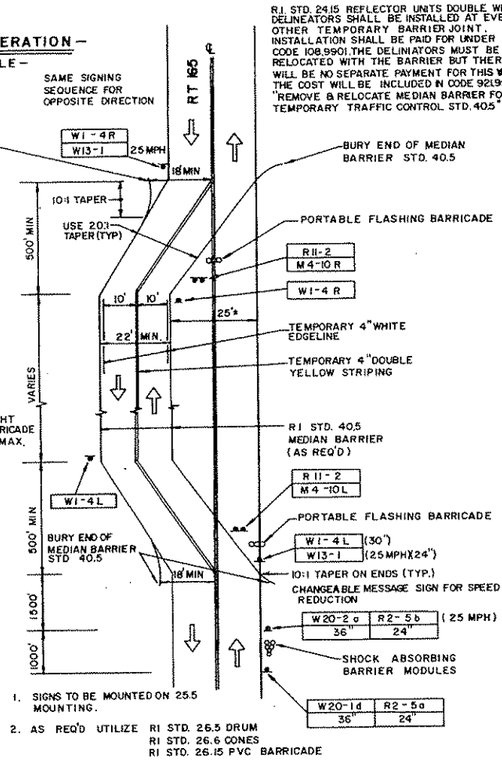


NOTES:
1. SIGNS TO BE MOUNTED ON STD. 26.15 BARRICADE
2. STD 26.5 DRUMS AND/OR STD. 26.6 CONES SEPARATE WORK AREA. SPACING OF DRUMS AND CONES TO BE DETERMINED BY THE ENGINEER.

NOTE:
R.I. STD. 24.15 REFLECTOR UNITS DOUBLE WHITE DELINEATORS SHALL BE INSTALLED AT EVERY OTHER TEMPORARY BARRIER JOINT. INSTALLATION SHALL BE PAID FOR UNDER CODE 108.9901. THE DELINIATORS MUST BE RELOCATED WITH THE BARRIER BUT THERE WILL BE NO SEPARATE PAYMENT FOR THIS WORK. THE COST WILL BE INCLUDED IN CODE 9219901 "REMOVE & RELOCATE MEDIAN BARRIER FOR TEMPORARY TRAFFIC CONTROL STD. 40.5"

— SINGLE LANE OPERATION —

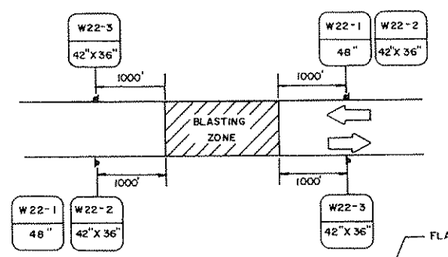
-NOT TO SCALE-



NOTES:
1. SIGNS TO BE MOUNTED ON 25.5 MOUNTING.
2. AS REQ'D UTILIZE R1 STD. 26.5 DRUM
R1 STD. 26.6 CONES
R1 STD. 26.15 PVC BARRICADE

LEDGE REMOVAL DETOUR DETAIL

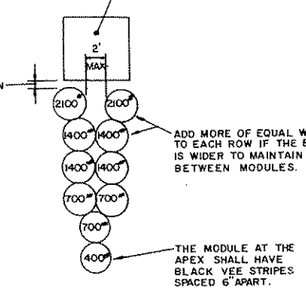
— NOT TO SCALE —



NOTES:
1. SIGNS TO BE MOUNTED ON STD 26.15 BARRICADE
2. SIGNS SHALL BE REMOVED OR COVERED WHEN THERE ARE NO EXPLOSIVES IN THE AREA.

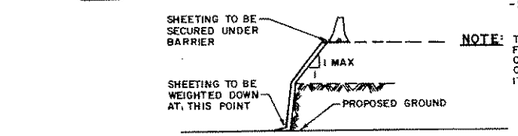
— BLASTING ZONE SIGNING —

— NOT TO SCALE —



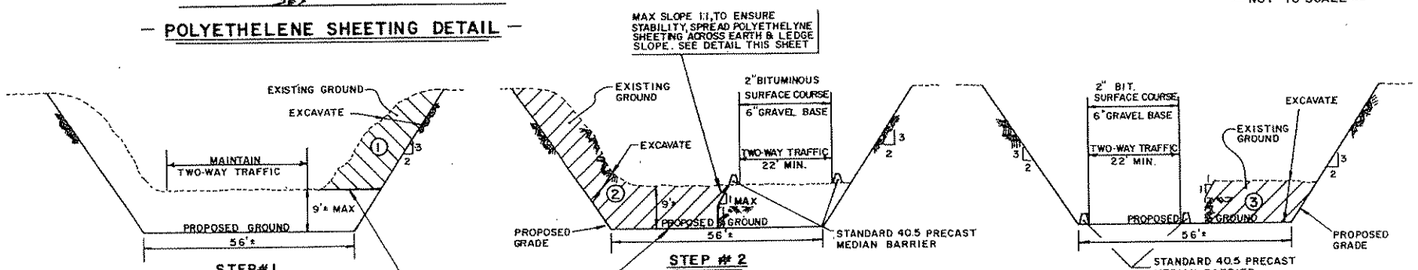
SHOCK ABSORBING BARRIER MODULES FOR FLASHING BARRICADES

— NOT TO SCALE —



NOTE: THERE WILL BE NO SEPARATE PAYMENT FOR THE POLYETHELENE SHEETING. THE COST SHALL BE COVERED UNDER THE CONTRACT UNIT BID PRICES FOR OTHER ITEMS.

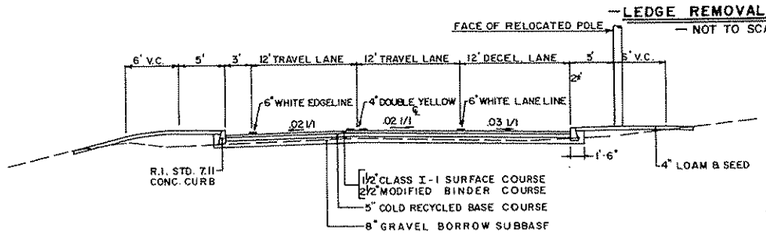
— POLYETHELENE SHEETING DETAIL —



NOTES:
(1) 4" DOUBLE YELLOW CENTERLINE AND 6" WHITE EDGELINES SHALL BE PROVIDED ON TEMPORARY PAVEMENT.
(2) ALL RECYCLED MATERIAL IN LEDGE CUT AREAS WILL HAVE TO BE STOCKPILED.

— LEDGE REMOVAL SEQUENCE —

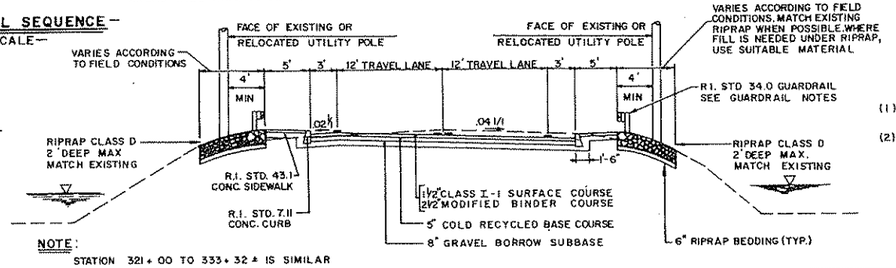
— NOT TO SCALE —



NOTE:
STATION 316+00 TO 320+00 IS SIMILAR

- TYPICAL SECTION STA. 318 + 00 -

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



NOTE:
STATION 321+00 TO 333+32 ± IS SIMILAR

- TYPICAL SECTION STA. 329 + 00 -

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

GUARDRAIL NOTES:
(1) DRIVE POSTS BEFORE RIPRAP IS INSTALLED.
(2) GUARDRAIL IN RIPRAP WILL REQUIRE 9'-0" POSTS.

CROSSMAN ENGINEERING, INC.
Consulting Engineers
PAWTUCKET, RHODE ISLAND, 02860

DATE: DESIGNED BY:
SCALE: AS NOTED SHEET 40 OF 317

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
DIVISION OF PUBLIC WORKS

RRR HIGHWAY IMPROVEMENTS
ROUTE 165
EXETER, R.I.

MISCELLANEOUS DETAILS-2

CHECKED BY _____ DATE _____ SCALE AS NOTED

ADDENDUM NO. 1

FEDROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	R.I.			41	317

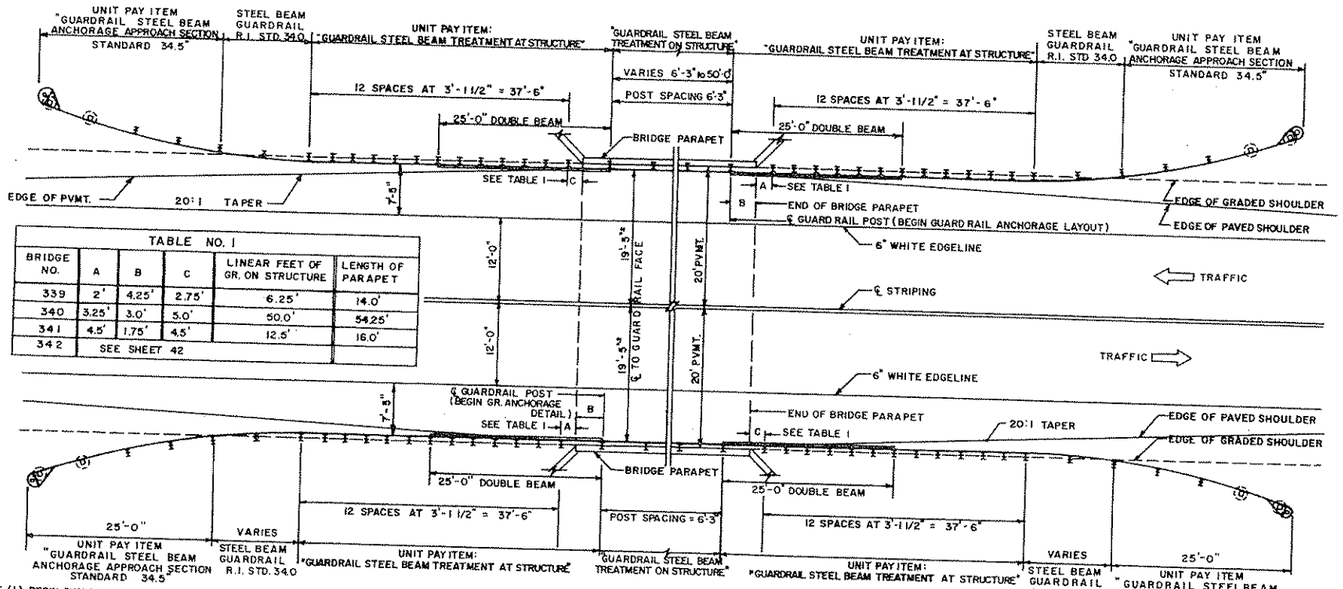
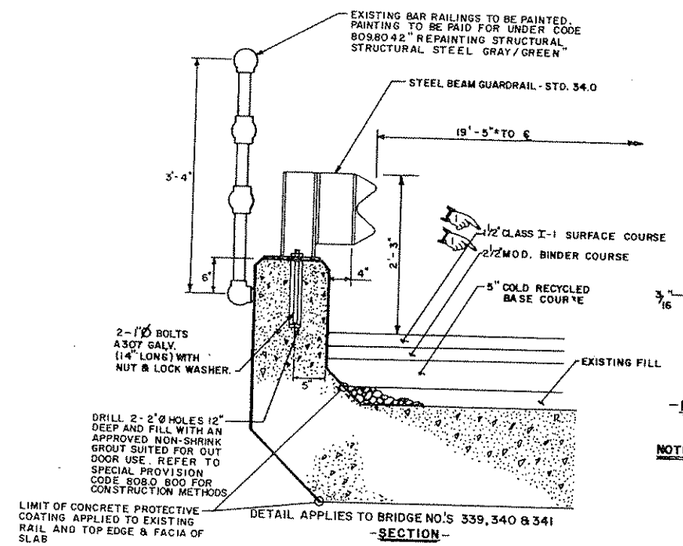


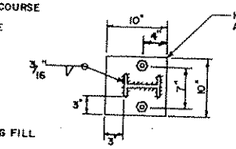
TABLE NO. I					
BRIDGE NO.	A	B	C	LINEAR FEET OF GR. ON STRUCTURE	LENGTH OF PARAPET
339	2'	4.25'	2.75'	6.25'	14.0'
340	3.25'	3.0'	5.0'	50.0'	54.25'
341	4.5'	1.75'	4.5'	12.5'	16.0'
342	SEE SHEET 42				

NOTES: (1) BEGIN GUARDRAIL INSTALLATION ON STRUCTURE, AS SHOWN, TO ENSURE PROPER GUARDRAIL POST SPACING
(2) WORK ON BRIDGE NO. 342 SHALL BE LIMITED TO ONE SIDE OF ROAD AT ONE TIME.
(3) THE EXISTING JOINT ON BRIDGE NO. 342 SHALL BE RESEALED WITH POLYURETHANE JOINT SEALANT.
(4) MAINTENANCE OF TRAFFIC ON BRIDGE: DURING CONSTRUCTION OPERATION, A MINIMUM OF ONE LANE OF TRAFFIC MUST REMAIN OPEN. DURING OFF WORK HOURS, TWO LANES OF TRAFFIC MUST BE OPEN.
(5) BRIDGE ITEMS ARE TO BE PAID FOR ON A UNIT PRICE BASIS. THE BRIDGE QUANTITIES ARE INCLUDED IN THE "DISTRIBUTION OF QUANTITIES".
(6) MINOR CONCRETE REPAIRS TO BE MADE WITH POLYMER MODIFIED MORTAR AS REQUIRED.
(7) WHEN THE DIMENSIONS FOR "A" & "C" IN TABLE I ARE MORE THAN 3.25', AN EXTRA POST SHALL BE ADDED EQUIDISTANT BETWEEN THE EXISTING PARAPET & THE FIRST POST. THE COST OF THE EXTRA POSTS, OFFSET BRACKETS & BACK-UP PLATES REQUIRED SHALL BE INCLUDED IN THE PRICE BID FOR "GUARDRAIL STEEL BEAM TREATMENT AT STRUCTURE".

-TYPICAL- -GUARDRAIL LAYOUT FOR BRIDGES-

-SCALE: 1" = 10'-0"-



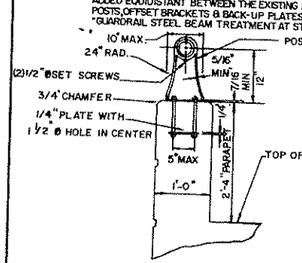


-PLAN AT BASE PLATE-
-SCALE: 1" = 1'-0"-

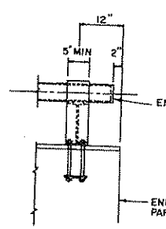
NOTE: POSTS AND BASE PLATE SHALL BE SHOP WELDED AND HOT-DIPPED GALVANIZED AFTER FABRICATION.

-GUARDRAIL ATTACHMENT TO PARAPET- & -TYPICAL BRIDGE SECTION DETAIL-

SCALE: 1" = 1'-0"

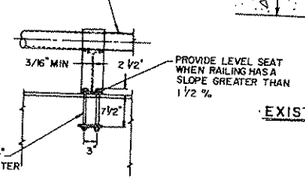


-SECTION-SIDEWALK-



-RAILING NOTES-

(1) POST SPACING TO BE 8'-0" ON CENTER.
(2) PROVIDE LEAD OR ALUMINUM SHIMS UNDER BASE PLATE FOR LEVELING, AS PER STANDARD SPECIFICATION SECTION 812.
(3) ALL ALUMINUM IN CONTACT WITH CONCRETE OR STEEL SURFACES SHALL BE THOROUGHLY COATED WITH AN APPROVED ALUMINUM IMPREGNATED CAULKING COMPOUND.
(4) ANCHOR BOLTS ASTM A 307
(5) GALVANIZE ENTIRE ANCHOR BOLT ASSEMBLY

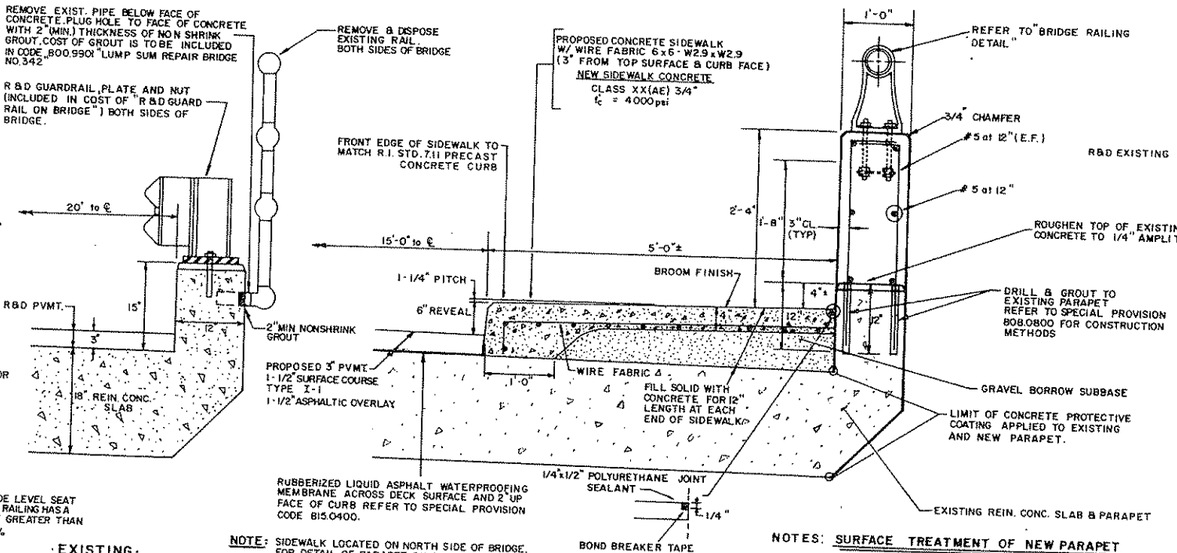


-ELEVATIONS-

-BRIDGE RAILING DETAIL-

BRIDGE NO. 342

-NO SCALE-



·EXISTING·

·PROPOSED·

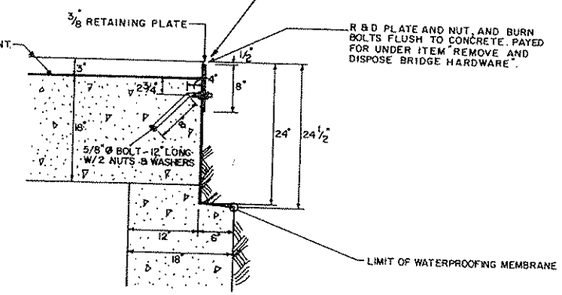
NOTE: SIDEWALK LOCATED ON NORTH SIDE OF BRIDGE. FOR DETAIL OF PARAPET ON SOUTH SIDE SEE SHEET NO. 43.

-BRIDGE SIDEWALK DETAIL - BRIDGE #342-

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

NOTES: SURFACE TREATMENT OF NEW PARAPET

1. NEW VERTICAL SURFACES SHOULD BE RUBBED REGULAR.
2. TOP SURFACES SHOULD HAVE A FLOAT FINISH.
3. SURFACE OF PARAPET SHOULD HAVE PROTECTIVE COATING APPLIED.



-DETAIL AT END OF BRIDGE NO. 342 SLAB-

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

CROSSMAN ENGINEERING, INC.
Consulting Engineers
PAWTUCKET, RHODE ISLAND, 02860

DATE: DESIGNED BY:
SCALE: AS NOTED SHEET 41 OF 317

REVISIONS		
NO.	DATE	BY
1	4/23/86	J.C.

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
DIVISION OF PUBLIC WORKS

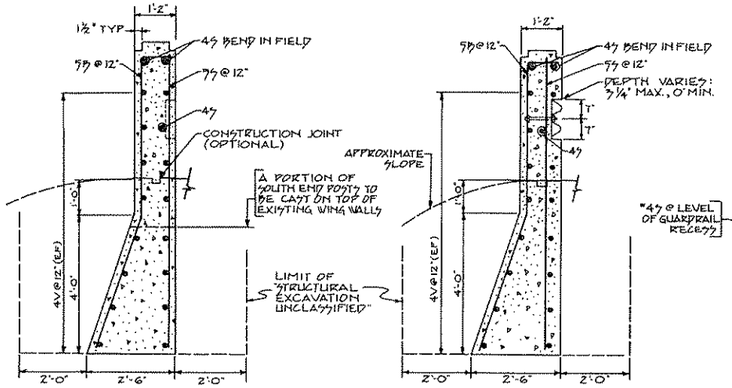
RRR HIGHWAY IMPROVEMENTS
ROUTE 165
EXETER, R.I.

MISCELLANEOUS DETAILS-3

CHECKED BY ____ DATE ____ SCALE AS NOTED

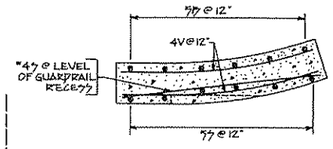
ADDENDUM NO. 1

FEDERAL DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	R.I.			42	317

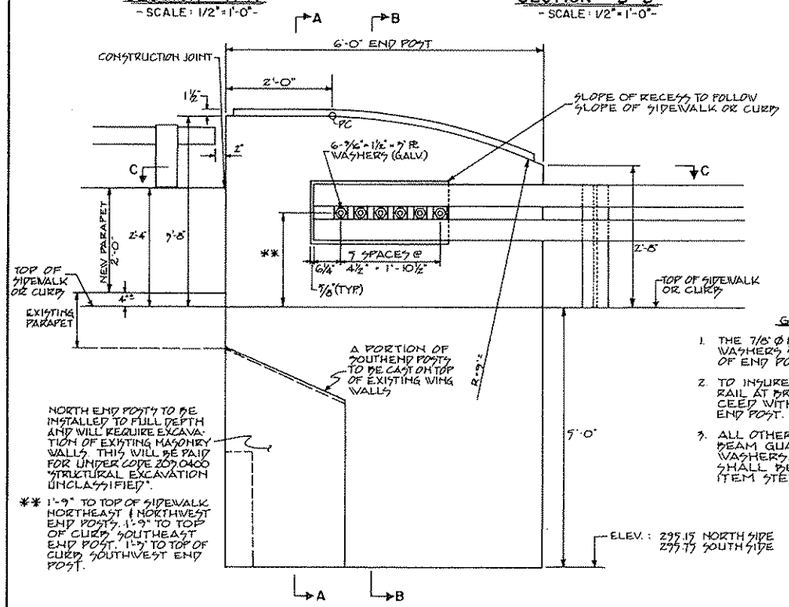


-SECTION A-A-
- SCALE: 1/2" = 1'-0" -

-SECTION B-B-
- SCALE: 1/2" = 1'-0" -



-SECTION C-C-
- SCALE: 1/2" = 1'-0" -



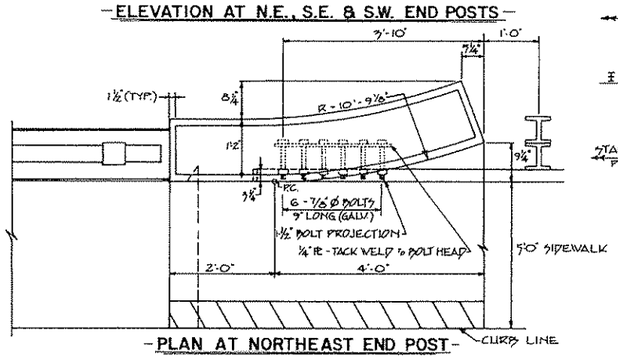
-ELEVATION AT N.E., S.E. & S.W. END POSTS-

* SOME BARS WILL HAVE TO BE CUT TO FIT FIELD CONDITIONS. THERE WILL BE NO SEPARATE PAYMENT FOR THE CUTTING. IT WILL BE INCLUDED UNDER "LUMP SUM REPAIR BRIDGE NO. 342".

GUARDRAIL NOTES

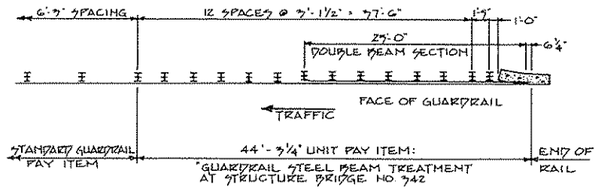
1. THE 7/8" Ø BOLTS, NUTS, 1/4" PLATE AND 3/16" WASHERS SHALL BE INCLUDED IN THE COST OF END POST CONCRETE.
2. TO INSURE PROPER ATTACHMENT OF GUARD RAIL AT BRIDGE, THE CONTRACT SHALL PROCEED WITH INSTALLATION STARTING AT EACH END POST.
3. ALL OTHER ITEMS RELATED TO THE STEEL BEAM GUARDRAIL CONNECTION (PLATE WASHERS, STD METAL, BEAM RAIL, ETC.) SHALL BE PAID FOR UNDER HIGHWAY ITEM STEEL BEAM GUARDRAIL.)

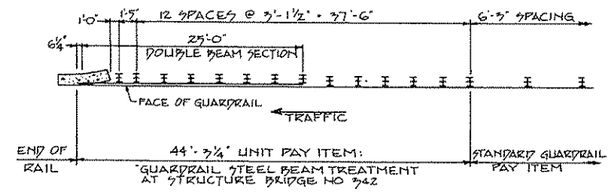
** 1'-9" TO TOP OF SIDEWALK NORTHEAST & NORTHWEST END POSTS. 1'-9" TO TOP OF CURB SOUTHEAST END POST. 1'-3" TO TOP OF CURB SOUTHWEST END POST.



-PLAN AT NORTHEAST END POST-

-END POST DETAILS-
-SCALE: 3/4" = 1'-0"-





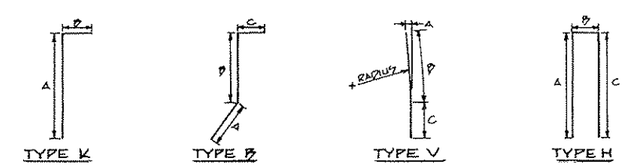
GUARDRAIL TREATMENTS AT BRIDGE NO. 342
SCALE: 1/8" = 1'-0"

NOTE: GUARDRAIL TREATMENTS AT BRIDGE NO. 342 REQUIRE 9'-0" POSTS. THE EXTRA COST FOR THE POSTS SHALL BE INCLUDED IN THE PRICE BID FOR THE GUARDRAIL.

REINFORCING SCHEDULE

NO	SIZE	TYPE	LENGTH FT.	LENGTH IN.	A	B	C	REMARKS
NORTH PARAPET								
12	5	5	3	0				DOVEL 1'-6" INTO END POSTS
38	5	K	3	6	2'-9"	6"		DRILL & GROUT
6	5	5	17	8				
SOUTHEAST, SOUTHWEST, & NORTHEAST END POSTS *								
3	7	B	9	3	4'-0"	4'-7"	10"	
3	7	B	9	1	4'-0"	4'-9"	10"	
3	7	B	8	10	4'-0"	4'-0"	10"	
3	7	B	8	6	4'-0"	3'-8"	10"	
3	7	5	8	2				
3	7	5	8	0				
3	7	5	7	9				
3	7	5	7	7				
6	4	5	7	8				BEND IN FIELD
2	4	5	5	8				AT LEVEL OF GUARDRAIL RECESS
21	4	V	5	8	8"	3'-10"	1'-10"	10'-6" RADIUS
24	4	V	5	8	8"	3'-10"	1'-10"	9'-10" RADIUS
NORTHWEST END POST								
3	7	K	9	0	8'-2"	10"		
1	7	K	8	10	8'-0"	10"		
1	7	K	8	7	7'-9"	10"		
1	7	K	4	0	3'-2"	10"		
3	7	5	8	2				
1	7	5	8	0				
1	7	5	7	9				
1	7	5	4	10				
2	7	5	3	10				
1	7	5	3	6				
2	4	5	7	8				BEND IN FIELD
1	4	5	7	8				AT LEVEL OF GUARDRAIL RECESS
2	4	V	7	8	8"	3'-10"	1'-10"	10'-6" RADIUS
3	4	V	7	8	8"	3'-10"	1'-10"	9'-10" RADIUS
7	4	5	7	8				
5	4	5	3	3				
7	4	5	1	3				
SOUTH PARAPET								
12	5	5	3	0				DOVEL 1'-6" INTO END POSTS
6	5	5	17	8				
SOUTH CURB								
1	5	5	17	8				
19	5	5	2	4				DRILL & GROUT
19	5	H	5	10	2'-7"	8"	2'-7"	
19	5	K	1	10	1'-4"	6"		
2	4	5	17	8				

NOTE: THE BAR SCHEDULES AND BENDING DIAGRAMS SHOWN ON THE PLANS ARE FURNISHED FOR INFORMATIONAL PURPOSES ONLY, AND THE STATE DOES NOT ASSUME RESPONSIBILITY FOR THEIR ACCURACY. THE CONTRACTOR'S BAR FABRICATOR SHALL VERIFY THE CORRECTNESS IN PREPARING HIS ORDER LISTS AND BENDING DIAGRAMS. ANY EXPENSE INCIDENT TO REVISION OF MATERIAL AS SHOWN ON THE BAR SCHEDULES AND BENDING DIAGRAMS IN ORDER TO MAKE IT COMPLY WITH THE DESIGN DRAWINGS SHALL BE BORNE BY THE CONTRACTOR.



BRIDGE NO. 342

LUMP SUM REPAIR QUANTITIES

CODE NO.	DESCRIPTION	QUANTITY
402.0200	BITUMINOUS SURFACE COURSE TYPE I-1	6 TONS
402.0700	ASPHALTIC OVERLAY (BRIDGE DECK CONSTRUCTION)	6 TONS
807.7701	REMOVE AND DISPOSE BRIDGE RAILING	36 L.F.
807.7702	REMOVE AND DISPOSE ASPHALT FROM STRUCTURE	80 S.Y.
807.7707	REMOVE AND DISPOSE A PORTION OF PARAPET	0 C.Y.
807.7901	CONCRETE CLASS XX (AE) CURBING (SOUTH SIDE)	1.5 C.Y.
807.1702	CONCRETE SUPERSTRUCTURE CLASS XX (AE) BRIDGE SIDEWALKS	2 C.Y.
807.1707	CONCRETE SUPERSTRUCTURE CLASS XX (AE) PARAPETS	3 C.Y.
807.1709	CONCRETE SUPERSTRUCTURE CLASS XX (AE) WALLS	10 C.Y.
807.1670	POLYURETHANE JOINT SEALANT	81 C.F.
807.1690	SAWING & SEALING JOINTS IN BITUMINOUS CONC PAVEMENT	69 L.F.
806.0900	EPOXY COATED BAR REINFORCEMENT FOR STRUCTURE	1370 Lbs.
008.0700	WIRE FABRIC BRIDGE ITEM	40 Lbs
806.0600	DRILL AND GROUT REINFORCING DOWELS	37 Each
809.7901	REMOVE AND DISPOSE BRIDGE HARDWARE	1 Lg.
809.7902	REMOVE AND DISPOSE GUARDRAIL ON BRIDGE	36 L.F.
812.0110	ALUMINUM 1-BAR RAIL	36 L.F.
817.0400	RUBBERIZED ASPHALT LIQUID MEMBRANE (WATERPROOFING MEMBRANE)	90 S.Y.

UNIT BID REPAIR QUANTITIES

CODE NO.	DESCRIPTION	QUANTITY
202.7701	ROCK EXCAVATION COMMON - MECHANICAL	10 C.Y.
209.0400	STRUCTURAL EXCAVATION UNCLASSIFIED	40 C.Y.
807.2020	PORTLAND CEMENT CONCRETE DECK REPAIRS (PARTIAL DEPTH REMOVAL)	500 S.F.
807.7701	POLYMER MODIFIED MORTAR FOR VERTICAL & OVERHEAD REPAIRS	7 C.F.
807.7702	POLYMER MODIFIED MORTAR FOR HORIZONTAL REPAIRS	1 C.F.
818.0110	CONCRETE SURFACE TREATMENT (PROTECTIVE COATING)	360 S.F.

BRIDGE NO. 341

UNIT BID REPAIR QUANTITIES

CODE NO.	DESCRIPTION	QUANTITY
807.7701	POLYMER MODIFIED MORTAR FOR VERTICAL & OVERHEAD REPAIRS	7 C.F.
807.7702	POLYMER MODIFIED MORTAR FOR HORIZONTAL REPAIRS	1 C.F.
809.8042	REPAINTING STRUCTURAL STEEL GRAY/GREEN	80 S.F.
818.0110	CONCRETE SURFACE TREATMENT (PROTECTIVE COATING)	200 S.F.

BRIDGE NO. 340

UNIT BID REPAIR QUANTITIES

CODE NO.	DESCRIPTION	QUANTITY
807.7701	POLYMER MODIFIED MORTAR FOR VERTICAL & OVERHEAD REPAIRS	10 C.F.
807.7702	POLYMER MODIFIED MORTAR FOR HORIZONTAL REPAIRS	2 C.F.
809.8042	REPAINTING STRUCTURAL STEEL GRAY/GREEN	270 S.F.
818.0110	CONCRETE SURFACE TREATMENT (PROTECTIVE COATING)	675 S.F.

BRIDGE NO. 339

UNIT BID REPAIR QUANTITIES

CODE NO.	DESCRIPTION	QUANTITY
807.7701	POLYMER MODIFIED MORTAR FOR VERTICAL & OVERHEAD REPAIRS	7 C.F.
807.7702	POLYMER MODIFIED MORTAR FOR HORIZONTAL REPAIRS	1 C.F.
809.8042	REPAINTING STRUCTURAL STEEL GRAY/GREEN	77 S.F.
818.0110	CONCRETE SURFACE TREATMENT (PROTECTIVE COATING)	177 S.F.

REVISIONS		
NO.	DATE	BY
1	4/23/96	J.C.

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
DIVISION OF PUBLIC WORKS

RRR HIGHWAY IMPROVEMENTS
ROUTE 165
EXETER, R.I.

MISCELLANEOUS DETAILS-4

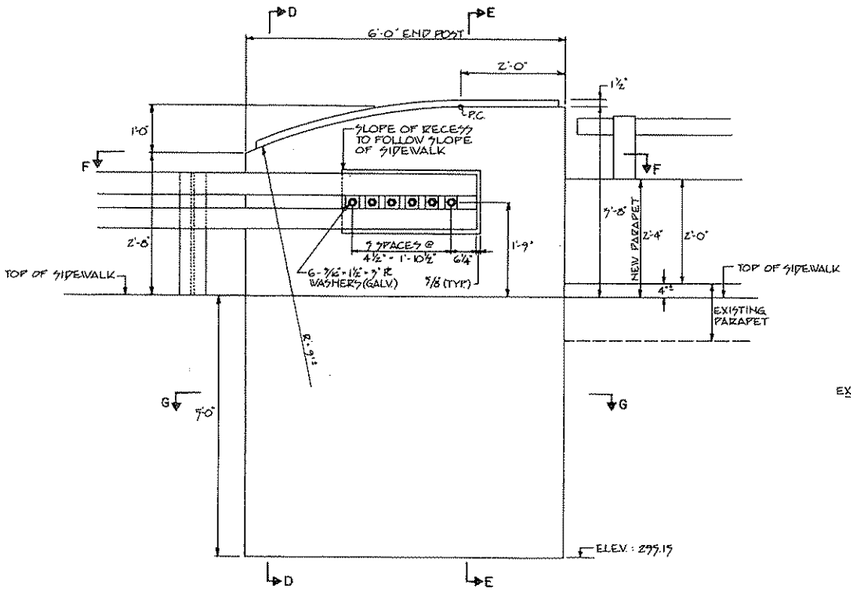
CROSSMAN ENGINEERING, INC
Consulting Engineers
PAWTUCKET, RHODE ISLAND, 02860

DATE: DESIGNED BY:
SCALE: AS NOTED SHEET 42 OF 317

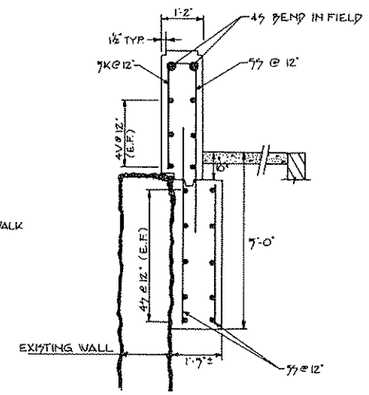
CHECKED BY _____ DATE _____ SCALE AS NOTED

ADDENDUM NO. 1

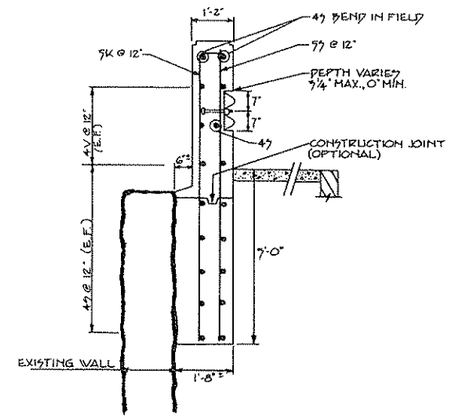
FED.ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	R.I.			43	317



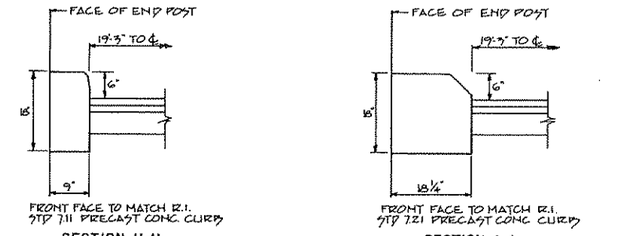
ELEVATION



SECTION D-D
-SCALE: 1/2" = 1'-0"-

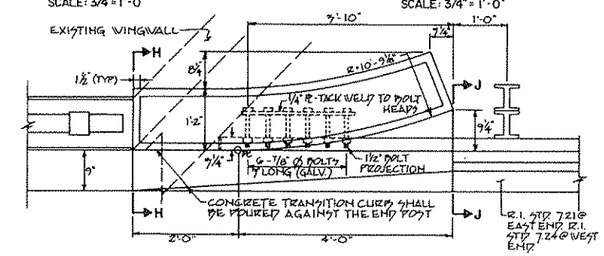


SECTION E-E
-SCALE: 1/2" = 1'-0"-



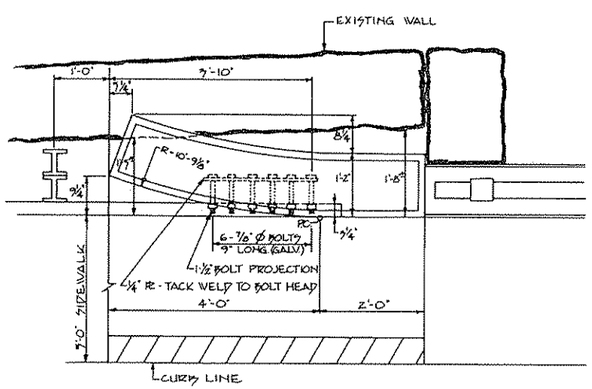
SECTION H-H
SCALE: 3/4" = 1'-0"

SECTION J-J
SCALE: 3/4" = 1'-0"



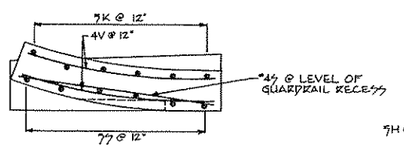
NOTES: 1) CURB SHOWN IS AT SOUTHWEST END POST. FOR CURB AT SOUTHEAST END POST USE OPPOSITE HAND.
2) FOR ELEVATION SEE SHEET 42.

PLAN AT SOUTH END POSTS
SCALE: 3/4" = 1'-0"

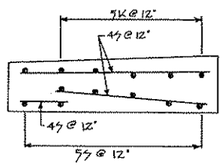


PLAN

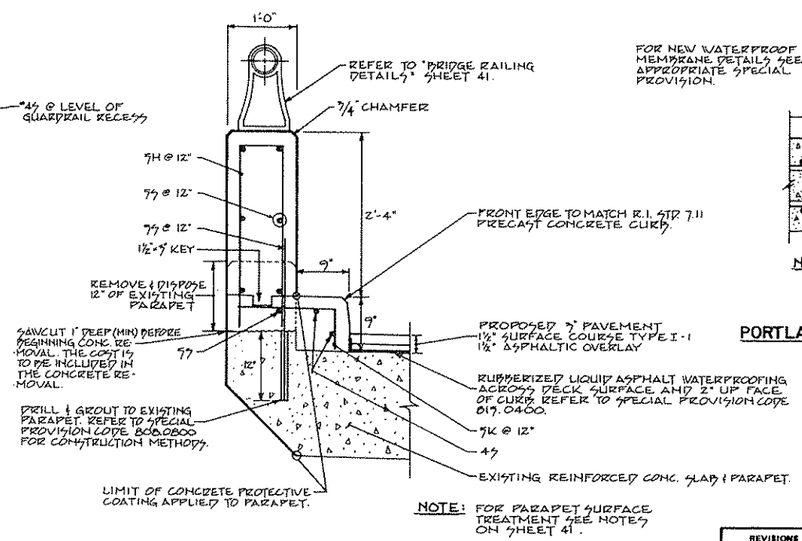
-NORTHWEST END POST-
-SCALE: 3/4" = 1'-0"-



-SECTION F-F-
SCALE: 1/2" = 1'-0"

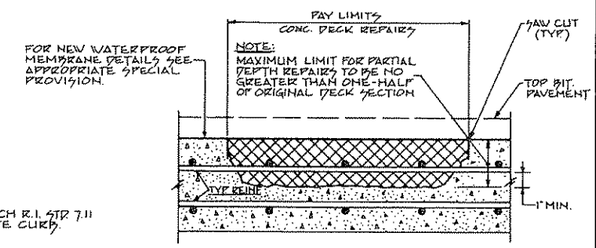


-SECTION G-G-
SCALE: 1/2" = 1'-0"



NOTE: FOR PARAPET SURFACE TREATMENT SEE NOTES ON SHEET 41.

SOUTH PARAPET DETAIL
-SCALE: 1" = 1'-0"-



NOTE: REPLACE CROSS HATCHED AREA WITH CLASS XX (AE) CONCRETE (MODIFIED)

PORTLAND CEMENT CONCRETE DECK REPAIR
(PARTIAL DEPTH REMOVAL)
NOT TO SCALE

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
DIVISION OF PUBLIC WORKS

RRR HIGHWAY IMPROVEMENTS
ROUTE 165
EXETER, R.I.

MISCELLANEOUS DETAILS-5

CROSSMAN ENGINEERING, INC.
Consulting Engineers
PAWTUCKET, RHODE ISLAND, 02860

DATE: DESIGNED BY:
SCALE: AS NOTED SHEET 43 OF 317

CHECKED BY _____ DATE _____ SCALE AS NOTED

ADDENDUM NO. 1