



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

ADDENDUM #2

RFP #7551623

TITLE: DESIGN/BUILD SERVICES FOR ACCELERATED BRIDGE
CONSTRUCTION – OXFORD STREET BRIDGE #653
(2017-DB-022)

SUBMISSION DEADLINE: 6/30/17 – 11:30 A.M. (NOTE CHANGE)

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1. The submission deadline has been changed as follows:
FROM: 6/15/17 – 11:30 a.m.
TO: 6/30/17 – 11:30 a.m.
 2. Please note that the Question and Answer portal will remain active through June 23, 2017 at midnight.

Lisa Hill

Lisa Hill
Chief Buyer

May 19, 2017

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATION
DEPARTMENT OF TRANSPORTATION
DIVISION OF PURCHASES BID NO. 7551623
RHODE ISLAND CONTRACT NO. 2017-DB-022
FEDERAL AID PROJECT NO. FAP No. BRO-0653(001)

Improvements to I-95
Accelerated Bridge Construction (ABC) of
Bridge No. 653 Superstructure Replacement
I-95 NB/SB over Oxford Street

CITY OF PROVIDENCE

COUNTY OF PROVIDENCE

NOTICE TO PROSPECTIVE BIDDERS

ADDENDUM NO. 2:

Prospective Bidders and all concerned are hereby notified of the following changes in the Plans, Specifications, Proposal, and Distribution of Quantities for this contract. These changes shall be incorporated in the Plans, Specifications, Proposal and Distribution of Quantities, and shall become an integral part of the Contract Documents.

A. Clarification

1. Deadline for Questions & Comments
Deadline for Questions & Comments Date updated to "June 23, 2017 @ Midnight"
2. Proposal Submission Date
Proposal Submission Date updated to "June 30, 2017 (11:30 AM)"
3. Evaluate Technical Proposals (Score and Rank)
Evaluate Technical Proposals (Score and Rank) Date updated to "July 14, 2017"
4. Open Price Proposals
Open Price Proposals Date updated to "August 4, 2017 (Estimated)"
5. Notice of Tentative Award
Notice of Tentative Award Date updated to "September 1, 2017 (Estimated)"
6. Design-Build Contract Execution
Design-Build Contract Execution Date updated to "September 15, 2017 (Estimated)"

7. Notice to Proceed
Notice to Proceed Date updated to “September 29, 2017 (Estimated)”

B. Part 1, Instructions for Respondents

1. Delete page 4 in its entirety and replace it with page 4 (R1) attached to this Addendum No. 2. The page has been revised.
2. Delete page 5 in its entirety and replace it with page 5 (R1) attached to this Addendum No. 2. The page has been revised.
3. Delete page 6 in its entirety and replace it with page 6 (R1) attached to this Addendum No. 2. The page has been revised.
4. Delete page 7 in its entirety and replace it with page 7 (R1) attached to this Addendum No. 2. The page has been revised.
5. Page 7A - The page has been added.
6. Delete page 8 in its entirety and replace it with page 8 (R1) attached to this Addendum No. 2. The page has been revised.
7. Delete page 9 in its entirety and replace it with page 9 (R1) attached to this Addendum No. 2. The page has been revised.
8. Delete page 10 in its entirety and replace it with page 10 (R1) attached to this Addendum No. 2. The page has been revised.
9. Delete page 11 in its entirety and replace it with page 11 (R1) attached to this Addendum No. 2. The page has been revised.
10. Delete page 12 in its entirety and replace it with page 12 (R1) attached to this Addendum No. 2. The page has been revised.
11. Delete page 21 in its entirety and replace it with page 21 (R1) attached to this Addendum No. 2. The page has been revised.
12. Delete page 22 in its entirety and replace it with page 22 (R1) attached to this Addendum No. 2. The page has been revised.
13. Delete page 24 in its entirety and replace it with page 24 (R1) attached to this Addendum No. 2. The page has been revised.

C. Part 2, Project Technical Requirements

The following pages shall be deleted in their entirety and replaced with pages marked (RI) attached to this Addendum No. 2. These pages have been revised.

1. Delete page 2 in its entirety and replace it with page 2 (R1) attached to this Addendum No. 2. The page has been revised.
2. Delete page 5 in its entirety and replace it with page 5 (R1) attached to this Addendum No. 2. The page has been revised.
3. Delete page 8 in its entirety and replace it with page 8 (R1) attached to this Addendum No. 2. The page has been revised.
4. Delete page 9 in its entirety and replace it with page 9 (R1) attached to this Addendum No. 2. The page has been revised.
5. Page 9A - The page has been added.
6. Delete page 19 in its entirety and replace it with page 19 (R1) attached to this Addendum No. 2. The page has been revised.
7. Page 19A- The page has been added.

D. Plans

VOLUME 1

1. VOLUME 1 COVER SHEET
This sheet has been revised.
2. VOLUME 1 SHEET 5 OF 26 – JOB SPECIFIC PLANS, SYMBOLS, LEGEND
AND NOTES
This sheet has been revised.
3. VOLUME 1 SHEET 6 OF 26 – TYPICAL SECTION
This sheet has been revised.
4. VOLUME 1 SHEET 7 OF 26 – GENERAL PLAN
Delete Sheet 7 in its entirety and replace with Sheet 7 (RI) attached to this Addendum No. 2. This sheet has been revised.
5. VOLUME 1 SHEET 8 OF 26 – GENERAL DETAILS

This sheet has been revised.

6. VOLUME 1 SHEET 9 OF 26 – LOCATION PLAN

Delete Sheet 9 in its entirety and replace with Sheet 9 (RI) attached to this Addendum No. 2. This sheet has been revised.

7. VOLUME 1 SHEET 10 OF 26 – DRAINAGE AND UTILITY PLAN

Delete Sheet 10 in its entirety and replace with Sheet 10 (RI) attached to this Addendum No. 2. This sheet has been revised.

8. VOLUME 1 SHEET 11 OF 26 – PROFILE I-95

Delete Sheet 11 in its entirety and replace with Sheet 11 (RI) attached to this Addendum No. 2. This sheet has been revised.

9. VOLUME 1 SHEET 12 OF 26 – PROFILE OXFORD STREET

This sheet has been revised.

10. VOLUME 1 SHEET 16 OF 26 – TRAFFIC CONTROL STAGE 1B

This sheet has been revised.

VOLUME 2

11. VOLUME 2 COVER SHEET - SHEET 1 OF 25

This sheet has been revised.

12. VOLUME 2 SHEET 3 OF 25 – PROFILES

This sheet has been revised.

13. VOLUME 2 SHEET 5 OF 25 – GENERAL BRIDGE NOTES

This sheet has been revised.

14. VOLUME 2 SHEET 6 OF 25 – GENERAL BRIDGE NOTES

15. VOLUME 2 SHEET 6A OF 25 – BRIDGE KEY PLAN

This sheet has been added.

16. VOLUME 2 SHEET 7 OF 25 – GENERAL PLAN AND ELEVATION

Delete Sheet 7 in its entirety and replace with Sheet 7 (RI) attached to this Addendum No. 2. This sheet has been revised.

17. VOLUME 2 SHEET 8 OF 25 – TYPICAL BRIDGE AND APPROACH SECTION

This sheet has been revised.

18. VOLUME 2 SHEET 9 OF 25 – CONSTRUCTION STAGING AND DEMOLITION DETAILS

This sheet has been revised.

19. VOLUME 2 SHEET 10 OF 25 – CONSTRUCTION STAGING AND DEMOLITION DETAILS

This sheet has been revised.

20. VOLUME 2 SHEET 11 OF 25 – CONSTRUCTION STAGING AND DEMOLITION DETAILS

This sheet has been revised.

21. VOLUME 2 SHEET 12 OF 25 – CONSTRUCTION STAGING AND DEMOLITION DETAILS

This sheet has been revised.

22. VOLUME 2 SHEET 13 OF 25 – CONSTRUCTION STAGING AND DEMOLITION DETAILS

This sheet has been revised.

23. VOLUME 2 SHEET 14 OF 25 – CONSTRUCTION STAGING AND DEMOLITION DETAILS

This sheet has been revised.

24. VOLUME 2 SHEET 16 OF 25 – NORTH ABUTMENT PLAN AND

ELEVATION

This sheet has been revised.

25. VOLUME 2 SHEET 18 OF 25 – WALLS SHEET 1 OF 2

Delete Sheet 18 in its entirety and replace with Sheet 18 (RI) attached to this Addendum No. 2. This sheet has been revised.

26. VOLUME 2 SHEET 19 OF 25 – WALLS SHEET 2 OF 2

This sheet has been revised.

27. VOLUME 2 SHEET 19A OF 25 – EAST WALLS AND BARRIER
DEMOLITION

This sheet has been added.

28. VOLUME 2 SHEET 19B OF 25 – EAST WALLS AND BARRIER PROPOSED

This sheet has been added.

29. VOLUME 2 SHEET 22 OF 25 – DIAPHRAGM DETAILS

This sheet has been revised.

30. VOLUME 2 SHEET 25 OF 25 – SUPERSTRUCTURE DETAILS

This sheet has been revised.

31. VOLUME 2 SHEET 25A OF 25 – END POST DETAILS FOR PL3 RAIL TYPE

HT

This sheet has been added.



RI Department of Transportation
Administrator, Division of Project Management

Part 1, Instructions for Respondents

INSTRUCTIONS FOR RESPONDENTS

1.0 INTRODUCTION

Requests for Proposals (RFPs) are hereby solicited by the State of Rhode Island Department of Administration (RIDOA)/ Division of Purchases on behalf of the Rhode Island Department of Transportation (RIDOT) to acquire Design/Build services for:

Bid # XXXXXX
**Design-Build Services for the Accelerated Bridge Construction of Superstructure
Replacement for Oxford Street Bridge No. 653, Providence, RI**
DBE GOAL: 10% for Construction Qualifying Work, 10% for Design Qualifying Work

This Request for Proposals (“RFP”) is issued to those entities interested in designing and constructing the Oxford Street Bridge No. 653 (PROJECT) on a fixed price/ fixed term basis in accordance with the design/build procurement provisions of Rule 8.11 “*CONSTRUCTION CONTRACTING MANAGEMENT*” of the State Procurement Regulations.

The Project priorities are:

- Replace the superstructure and reopen the road as soon as possible;
- Provide the best price for the scope of work identified;
- Cost effective and efficient design of the Project that meets all requirements;
- Compliance with NEPA and all other state and federal regulatory requirements.

2.0 BACKGROUND INFORMATION

2.1 Project Description and Scope of Work

The PROJECT is located in Providence, Rhode Island and includes the design and construction for replacement of the superstructure and rehabilitation of the existing substructure for RIDOT Bridge No. 653, Interstate I-95 over Oxford Street. The Bridge No. 653 carries I-95 NB and SB over Oxford Street. The work in this contract will include, but will not be limited to, replacing the bridge superstructure using Accelerated Bridge Construction (ABC) techniques, rehabilitation of the existing abutment, and replacing the concrete barrier on the existing east wall. The bridge construction will be performed as a design-build Project.

The Project will consist of removing the existing superstructure, existing concrete barrier and end post on the east wall, bearings, and installing new superstructure, concrete barrier and end post on the existing east wall, bearings, roadway approach work, repaving Oxford Street and related tasks as necessary to complete the Scope of Work. Repaving limits shall be to the extent that roadway approach work is necessary due to the bridge superstructure replacement and concrete barrier replacement activities, or as specified by the Engineer. The replacement of the bridge must minimize changes in roadway profile and approach work to the greatest extent possible. The curb-to-curb roadway width on the bridge and approaches shall be maintained. The sidewalks widths on Oxford Street shall be maintained. If a steel superstructure is used, the steel must be metalized *and* painted.

The Design-Build work will generally consist of providing the necessary design and construction, including an exacting Design-Build quality assurance program. Although the final Project length may vary depending on the Respondent Team's final design, the bridge must be open to traffic no later than **November 5th 2018**.

The Project conceptual design has been advanced to a thirty percent (30%) design level. The replacement bridge is to be designed and constructed essentially as a "footprint" replacement. This is to include, but not be limited to, constructing new superstructure, concrete barrier and end post on the existing east wall, and bearings, rehabilitating the existing abutments, and all associated roadway approach work as necessary to facilitate the bridge replacement. All design and construction must meet all the standards and specifications noted in this RFP.

The Project scope for the Respondent include, but will not be limited to: (a) design and construction of a replacement bridge superstructure, concrete barrier and end post on the east wall, bearings as described above including all necessary temporary works; rehabilitation of the existing abutment, (b) utility relocations/adjustments and coordination as necessary to complete the work; (c) reconstruction of roadway approaches at each end of the replacement bridge and new concrete barrier and end post on the east wall; (d) traffic assessment and analysis to prepare a Traffic Control Plan and a Transportation Management Plan; e) survey as required to develop Highway Plans, Bridge Plans, and Profiles, rehabilitation of existing abutment and return walls and structures as necessary to facilitate the work, (f) quality assurance and quality control for design and construction; (g) design and construction Project management; (h) stormwater management systems and catch basin(s); (i) Environmental and Cultural Permit application services as required by Rhode Island Historical Preservation and Heritage Commission and Rhode Island Department of Environmental Management; (j) Right-of-Way Plans and Right-of-Way (ROW) acquisition services (if required, due to the selected D/B Team's approved design); k) design support to the RIDOT Environmental Agency for the adjacent Toll Gantry Project. The D/B Team should note that all work performed on this PROJECT shall be completed using English Units.

RIDOT'S goals for this PROJECT are:

- To deliver a cost-effective PROJECT

- To design and build a quality bridge that will have a minimum 75 YEAR design life
- To design and construct a bridge that will require minimal maintenance

The selected Design-Build Team shall also be responsible for the following:

- Acquisition, interpretation and evaluation of geotechnical data as required to verify the adequacy of the existing foundation to support the D/B Teams selected approved design.
- Traffic data and analysis provided by RIDOT shall be supplemented by conducting traffic data collection to support the D/B Teams selected approved design. This may include origin-destination counts. The D/B Team shall perform traffic assessment and analysis to determine expected delays and queues during construction. Findings will be used to determine updated timing for additional lane closure during off-peak hours. For Traffic Data and Analysis provided by RIDOT, See Appendix A.
- Utility coordination, accommodation, contracts and negotiation
- All survey required to complete the Project
- Preparation of all necessary environmental permit applications and Sections 106 and 4(f) compliance documentation¹ based upon the D/B Team's design and construction plan. RIDOT will not be responsible for any costs or time delays due to the acquisition of environmental permits.

Brief descriptions of the anticipated work are set forth below:

DESIGN SERVICES are anticipated to include but are not limited to: surveying, roadway approach work, barrier replacement, guardrail replacement, highway temporary works and facilities, traffic control plans and traffic control devices, transportation management plan, pavement markings, roadway lighting, and utility coordination and relocations, superstructure, concrete barrier, end post, and bearing replacement, substructure repairs, return walls repairs, bridge barrier replacement, bridge temporary works and facilities. Other anticipated bridge related data collection and technical studies include geotechnical investigation, borings and analysis, and materials analysis. Any damage to existing wingwalls or adjacent properties shall be repaired to the satisfaction of the Engineer.

RIDOT does not anticipate obtaining any environmental permits prior to award. The Respondent will be responsible for final determination of and preparation of all applicable and necessary permit applications for RIDOT's review and submission to regulatory agencies (See Part 2 for RIDOT review times).

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¹ See Section 2.6 of RFP Part 2 for more information on environmental and cultural resource assessment and permitting

The Respondent shall document their decision making process for determining necessary versus unnecessary environmental permit applications and or regulations. RIDOT has processed this Project as a NEPA Categorical Exclusion (CE) under the scope of work described in this RFP. Any changes in scope or footprint (as expressed in the CE) proposed by the D/B Team, that are acceptable to RIDOT, may require additional environmental studies and analysis. The D/B Team would be responsible for any additional environmental studies or analysis and/or right-of-way to support the proposed changes in scope, and would be responsible for any resulting increase in costs or impacts to the schedule.

RIDOT/FHWA is coordinating with the Rhode Island State Historic Preservation Officer (“RI SHPO”) in compliance with Section 106 of the National Historic Preservation Act and a “no adverse effect” determination for this Project is anticipated to be received. This determination of “no adverse effect” is based on the RIDOT’s Conceptual 30% Design scheme. Significant change from the Conceptual 30% Design may require additional coordination with RI SHPO.

Notwithstanding any other requirements specified in the Contract Documents, the Contractor shall not commence final design or any construction activities prior to RIDOT obtaining the necessary environmental approvals as per FHWA Order 6640.1A FHWA Policy on Permissible Project-Related Design Activities during the NEPA Process.

<http://www.fhwa.dot.gov/legregs/directives/orders/66401a.cfm>

CONSTRUCTION SERVICES for the I-95 corridor are anticipated to include, but is not limited to roadway micro-milling and overlay, full depth roadway construction at median barrier, adjusting storm drain structure frames, roadway lighting, replacement of median barrier and steel and concrete highway guardrail. The work on Oxford Street is anticipated to include, but is not limited to roadway micro-milling and overlay and sidewalk reconstruction.

The roadway work for this Project will in general consist of erosion and sediment control, clearing and grubbing, saw cutting, pavement removal, excavation and grading, trimming and fine grading, dust control, bituminous pavement, gravel borrow for subbase course, curbing, sidewalk, pavement markings, drainage structures and other roadway drainage, utility relocations/adjustments and coordination, landscaping, plantable soil borrow and seed, traffic control plan/transportation management plan implementation including signs and signals, traffic control, uniformed traffic persons, flag persons, temporary construction signs, temporary closures, guard rail replacement, and construction field office.

The bridge work is anticipated to be completed using Accelerated Bridge Construction (ABC) methods. ABC will be accomplished by the use of, but not limited to, prefabricated modular units for the superstructure. Construction will include, but not be limited to the demolition of the entire existing bridge superstructure, utilities, to the limits shown on the contract drawings. The work for the bridge

superstructure shall include the installation of superstructure modular units comprising of either steel beams or precast pre-stressed concrete beams with composite 8” minimum thick concrete deck, cast-in-place closure pours, bridge paving, concrete barriers, and snow fences. Butted box and butted deck beams shall not be allowed. Substructure work includes replacement of the concrete barrier for the total length of the east wall, replacement of the end post, concrete repair of portions of the existing abutment and return wall concrete faces.

Other anticipated bridge related work includes but is not limited to: bridge survey, temporary support of excavation, shoring support for superstructure during construction staging, maintaining the structural stability of all adjacent structures, installing structure monitoring devices on adjacent structures, conducting pre and post-construction surveys on adjacent structures, temporary structures, geotechnical investigation, borings and analysis, and materials analysis.

Access to adjacent properties shall be maintained at all times during construction. Provision for emergency response vehicles to access properties on Oxford Street shall be maintained during construction.

All design and construction shall be in and compliance with all State and Federal environmental laws, regulations, requirements, permit conditions, and commitments.

QA/QC SERVICES: The D/B Team will be responsible for providing quality assurance and quality control (QA/QC) plans for design, inspection, sampling and testing for all materials.

The Respondent will be responsible for providing Construction Quality Control at the Construction Contractor level and for providing a complete Quality Control and Quality Assurance program for all engineering and design. The Construction Quality Control function is to assess and adjust design, production and construction so as to control the level of quality being produced in the Project. The purpose of QC is to measure those quality characteristics and to inspect those activities that affect the production at a time when corrective action can be taken to substantially decrease the likelihood that appreciable non-conforming material will be incorporated in the Project.

Acceptance Sampling and Testing will be performed by RIDOT or their consultant. Independent Assurance Sampling and Testing will be performed by RIDOT staff.

Submittals received must be in accordance with guidelines as outlined in this RFP and the State's General Conditions of Purchase which can be accessed online through the *Rhode Island Vendor Information Program*, or "RIVIP" as it is known at:

<http://www.purchasing.ri.gov>

All Respondents are advised to review all sections of this RFP thoroughly and to follow the instructions carefully. Failure to make a complete submission as described elsewhere herein may result in rejection of the submission.

2.2 Right-of-Way and Site Acquisition

The D/B Team shall acquire temporary easements, permanent easements, and or permanent takings necessary for the replacement of the RIDOT Bridge No. 653 superstructure, bearings, wingwalls and approaches over Oxford Street as described in this RFP. The R.O.W will be certified prior to award of the Contract. The Respondent shall be responsible for assuming all risks associated with the acquisition of R.O.W (to accommodate its unique solution), including any public hearings that may be required,

and no modifications to the Contract Price or Contract Time will be granted or considered. Traffic Control Plans and the Transportation Management Plans shall take into consideration access to all nearby businesses, properties, City Streets and Hospital.

2.3 Project Milestone Schedule

RIDOT currently anticipates conducting this procurement in accordance with the following list of milestones. This schedule is subject to revision and RIDOT reserves the right to modify this schedule as it finds necessary, in its sole discretion.

Advertise RFP	April 28, 2017
Deadline for Questions & Comments	June 23, 2017 @ Midnight
Proposal Submission Date	June 30, 2017 (11:30 AM)
Evaluate Technical Proposals (Score and Rank)	July 14, 2017
Open Price Proposals	August 4, 2017 (Estimated) (X:XX AM prevailing local time)
Notice of Tentative Award	September 1, 2017 (Estimated)
Design-Build Contract Execution	September 15, 2017 (Estimated)
Notice to Proceed	September 29, 2017 (Estimated)
Bridge Open Date	November 5, 2018
Substantial Completion	June 14, 2019

Respondents are on notice that any earlier completion date(s) identified by Respondent in response to this RFP will be deemed by RIDOT as the contractual completion date(s) for this Project.

2.4 Online Proposal Questions

There will be NO point of contact at RIDOT who will directly answer questions either in person, through e-mail, or by telephone.

Any pertinent questions subsequent to this solicitation must be posted at RIDOT'S "Bidding Opportunities" web page accessible at: <http://www.dot.state.ri.us/contracting/bids> and follow the

link to “?” to submit questions for this solicitation. Interested parties must disclose their name/company affiliation along with posted inquiry; responses to questions submitted for the subject PROJECT will also be posted under the same questions menu.

A determination will be made by RIDOT, in coordination with the RIDOA/ Division of Purchases, whether an addendum will be required. The Q & A Forum will disable ***SEVEN (7) FULL CALENDAR DAYS*** prior to the due date for this PROJECT. **Therefore, questions will not be accepted after Midnight on June 23, 2017.**

2.5 RFP Documents

The RFP and Project Specific Documents are available for download from the *Rhode Island Vendor Information Program*, or “RIVIP” as it is known at:

<http://www.purchasing.ri.gov>

No CD's or copies will be provided. All Plans, Specifications, Reports, etc. are provided for reference use only. The Conceptual 30% Design was developed to represent RIDOT preferences and to establish the minimum baseline requirements that must be equaled or exceeded by the DB Entity. All DB Entities acknowledge by receipt of such plans that they explicitly understand that while these plans have been advanced to the level shown by RIDOT, the DB Entity will be required to provide a final, complete Project design that is stamped and sealed by its own designer of record, for review and approval by RIDOT and possible third parties. RIDOT makes no representations as to the accuracy or completeness of information contained in any documents not obtained from RIDOT, and will not be responsible in any way for a DB Entity's reliance on or utilization of the contents of such documents. The DB Entity shall perform supplemental testing, data collection, survey, borings, etc. as necessary.

Respondents shall base their Proposals on the terms and conditions of the Design-Build Contract included in the latest issued Addendum. The D/B Contract will include all RFP Documents, all documents referenced within the RFP Documents, and the selected Proposal.

Respondents are hereby notified that the following list of Standards shall be utilized and applied by the DB Entity:

- The State of Rhode Island Standard Specifications for Road and Bridge Construction, 2004 edition, with all subsequent revisions
- The Rhode Island Standard Details, 1998 Edition, with all revisions (thru May 2015)
- The Rhode Island Bridge Standard Details, 2015 Edition, with all revisions
- The Division of Purchases Procurement Regulations Adopted December 2010
- Additional RIDOT, FHWA and AASHTO standards as listed in Part 2 of this RFP.

Addendum No. 2

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The terms Respondent, Contractor, Design-Builder, Design-Build Team, D/B Team and DB Entity shall be considered interchangeable throughout this RFP.

Addenda to the RFP Documents, if any, will be posted at the RIVIP's website at www.purchasing.ri.gov.

2.6 Deviations from the RFP Documents

Respondents are hereby notified that no deviations shall be accepted prior to the proposal due date. All Qualifications/Technical and corresponding Price Proposals shall respond to the Scope of Work as written in the RFP. RIDOT will evaluate proposals and select a Design-Builder based on the Scope of Work as written in the RFP.

Respondents may provide in their Proposals, any betterments, exceptions and/or qualifications to any aspect of the RFP Documents, including, but not limited to the technical requirements of the RFP Documents. Such exceptions and/or qualifications to the RFP Documents are intended to include: (a) issues associated with the proposed Design-Build Contract; and (b) variations with the design requirements in the RFP Documents. Notwithstanding the above, Respondents are on notice that RIDOT is under no obligation to accept any exception and/or qualification, and RIDOT specifically reserves the right to require the Successful Respondent to strictly conform with all requirements of the RFP Documents.

3.0 ADMINISTRATIVE REQUIREMENTS, GENERAL INSTRUCTIONS AND NOTIFICATIONS

In addition to the specific submittal requirements set forth in Contents of Proposals Section 4.0 below, all Respondents shall comply with the following:

All Respondents MUST register online at the RIVIP'S Internet website at www.purchasing.ri.gov. A fully completed and signed **RIVIP BIDDER CERTIFICATION COVER SHEET** – All three pages MUST accompany EACH response submitted. This document must be downloaded from the RIVIP website. Failure to make a complete submission inclusive of this three-page document may result in disqualification.

Should there be a need for assistance in registering and/or downloading any document, call (401) 574-8100 and request the RIVIP help desk for technical assistance. Office Hours: 8:30 AM – 4:00 PM, Monday through Friday.

The State does not require E-VERIFY compliance in any of its purchasing and/or hiring of services; however, Respondents are hereby advised that in line with the Federal Acquisition Regulations any federal contract based on the services requested may require that the State obtain evidence of E-VERIFY compliance from the successful Respondent.

RIDOT will not consider for award any Proposals submitted by any Respondents and will not consent to subcontracting any portions of the proposed Design-Build Contract to any subconsultants in violation of the provisions of the Federal Immigration Reform and Control Act of 1986, which prohibits employment of illegal aliens.

The Respondent shall provide evidence that the LEAD DESIGNER is licensed to practice engineering in the State of Rhode Island in accordance with Chapter 5-8 of the Rhode Island General Laws. A copy of the **current Rhode Island Certificate of Authorization FOR THE FIRM and current Rhode Island registration(s) FOR THE INDIVIDUAL(S)** who would perform the specified engineering services required **MUST BE INCLUDED WITH THIS SUBMITTAL.**

The State Board for Design Professionals can be contacted as follows:

**Board for Design Professionals
1511 Pontiac Avenue Building
68-2 Cranston, RI 02920**

**Telephone: (401) 462-9592
Fax: (401) 462-9532
Website: www.bdp.state.ri.us**

Pursuant to Section 7-1.2-1401 of the Rhode Island General Laws, no foreign corporation has the right to transact business in this State until it has procured a certificate of authority from the Office of the Secretary of State (401) 222-2357. **IF APPLICABLE, A COPY OF RESPONDENT'S CERTIFICATE OF AUTHORITY MUST BE INCLUDED AS PART OF THE SUBMITTAL.**

The Rhode Island Department of Transportation, in accordance with Title VI of the Civil Rights Act of 1964, 42 U.S.C. §§ 2000d – 2000d-4 and 49 C.F.R. Part 21, Nondiscrimination in Federally-Assisted Programs of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964, issued pursuant to such Act, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, Disadvantaged Business Enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, sex, national origin, age, or disability in consideration for an award.

Services provided by the successful Respondent - and if applicable any sub-contracts generated through this Contract - shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The successful Respondent shall carry out applicable requirements of 49 C.F.R., Part 26, Participation of Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs, in the award and administration of DOT-assisted contracts. Failure by the successful Respondent to carry out these requirements is a material breach of this Contract, which

the Project (**SECTION D OF SF 330**). Additionally, furnish a narrative describing the functional relationships among participants listed on the organizational chart (**LIMITED TO ONE (1) PAGE**).

A brief description of significant functional relationships among participants shall accompany each chart.

If significant changes to the Respondent's organization are planned for any part of the Project, or if Respondent contemplates changes to its organization as the work progresses from design through construction, separate organizational charts shall be provided identifying Key Personnel. Respondent shall identify and explain the rationale for making the changes described above.

RELEVANT WORK EXPERIENCE:

The Respondent shall provide a description of EACH D/B TEAM Member's experience and qualifications, particularly with respect to experience in similar design-build bridge replacement Projects with a particular focus on the ability to deliver such s on time and on budget. *The LEAD CONTRACTOR and LEAD DESIGNER shall each identify and describe UP TO 3 PROJECTS with a construction value of a minimum of \$5 MIL or more completed by the Primary D-B Team Members within the past TEN (10) YEARS.*

4.6.2 Technical Criteria

Respondent shall provide sufficient information to enable RIDOT to understand and evaluate the Respondent's approach to managing, designing, and constructing the Project. At a minimum, each Proposal shall respond to the following requirements:

DESIGN CONCEPT: Respondents shall provide specific information relative to its design concept for the Project, including but not limited to:

1. Provide Project layout, indicating (a) typical sections, roadway and bridge; (b) profiles that deviate from those shown on the existing plans.
2. Provide a description and structural concept for the bridge structure(s) proposed. Include 11"x17" copies of an elevation view, transverse section, foundation, and abutment configurations. Outline conceptual solutions for any complex problems that are identified.
3. Describe construction staging for ABC technique and traffic management with least impact to traffic and nearby businesses
4. Identify what additional geotechnical investigation Respondent expects or intends to undertake to supplement or verify the geotechnical information. If Respondent intends to exceed the RIDOT requirements, then explain the basis and benefits/value for doing so.

5. Deleted
6. Describe Respondent's understanding of what utilities are believed to be in conflict with design features and will need to be relocated. Identify and list all known utilities and describe Respondent's coordination and relocation plan.
7. Describe Respondent's plan to coordinate with other agencies and the public, and to meet historical agency requirements.
8. Describe Respondent's plan to identify, coordinate and address all applicable Federal and State environmental laws and regulations **including, but limited to** the following: Rhode Island Department of Environmental Management(RIDEM) Rules and Regulations. Governing the Administration and Enforcement of the Freshwater Wetlands Act, RIDEM Water Quality Regulations, RIDEM RI Pollutant Discharge Elimination System(RIPDES) General Permit for Storm water Discharge Associated with Construction Activity², RIDEM RIPDES Remediation General Permit, RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, RIDEM Rules and Regulations For Dam Safety, RIDEM Fish and Wildlife, Army Corp. of Engineers(ACOE) State of Rhode Island Programmatic General Permit.

PROPOSED PLAN FOR DESIGNING THE PROJECT: Describe the proposed plan for designing the Project, including but not limited to: (a) how design personnel will interface with construction personnel; (b) how each design package will be integrated into the construction plans; and (c) how the design and plan reviews will be coordinated with RIDOT and other stakeholders.

QUALITY CONTROL AND QUALITY ASSURANCE: Include a narrative describing Respondent's general approach to quality control and quality assurance during design and construction, including but not limited to:

1. A description of how the quality control function will be organized, including the name(s) of quality control manager(s).
2. A description of how the quality control program will operate, including how it will interface with the Respondent's organization and RIDOT.
3. A detailed summary of Respondent's proposed Design and Construction Quality Management Plans.
 - Describe how the Respondent will address deficiencies or trends indicating declining quality. What specific steps will the Respondent take to ensure that quality deficiencies result in increased QA/QC efforts by the Respondent, and will not require additional RIDOT oversight?

Addendum No. 2

R-1

² See Section 2.6 of RFP Part 2 for more information on environmental assessment and permitting

apply exclusively to the Preliminary Proposal Schedule for the Qualifications/Technical Proposal. The successful Respondent's formal work Schedule (Level A) shall be in accordance with the Standard Specifications. Schedules containing a Bridge Open Date earlier than November 5, 2018 will weigh significantly in the evaluation of this criteria PROJECT CONTROLS.

3. Respondent's understanding of the biggest risks and challenges to attaining the contractual completion dates and what can be done to mitigate such risks and challenges.

4.7 Price Proposal

Respondent shall specify on the Price Proposal Form, the Total Proposal Price, in both numbers and words. The price shall be broken out into the associated cost for each line item set forth in the Price Proposal Form. The Respondent shall also include with the Price Proposal a Bid Bond in the amount of 5% of the Total Proposal Price. The Price Proposal Deposit must take the form of a Bid Bond furnished by a surety company incorporated and authorized to do business in the State of Rhode Island.

Respondent shall provide a schedule of values for the Price Proposal. This schedule of values shall identify the material quantities and costs of each major work task based on, but not limited to, the items listed in the Price Proposal. The value associated with each work task shall be inclusive of all direct and indirect costs, overhead, profit and any other expenses of any kind.

Respondent shall submit, for the Price Proposal, a proposed monthly payment schedule showing the anticipated schedule on which funds will be required and the associated dollar value for the work. Respondent shall provide the required information set forth in the RIDOT Adjustments to Asphalt, Fuel and Steel Prices.

See Section 4.3 above for the DBE form that is to be submitted with the Price Proposal only.

Respondent shall include within the separately sealed Price Proposal package a Public Copy of the Price Proposal in accordance with State of Rhode Island Purchasing Regulations.

4.8 Design/Build Evaluation Committee (COMMITTEE)

A **Design/Build Evaluation Committee (COMMITTEE)** will be appointed by RIDOT comprised of a Chairperson and RIDOT technical personnel (VOTING MEMBERS) responsible for the PROJECT under consideration. The COMMITTEE will be assigned to evaluate and score all proposals until a final recommendation has been determined. The COMMITTEE Chairperson will be responsible to present final selection recommendation for Departmental approval. In addition to the appointed COMMITTEE Members, RIDOT may use any appropriate technical resources to provide assistance in evaluating the submittals. Technical resources will act in an advisory capacity only and will not review or score any documentation.

All RFP documents will be treated with extreme confidentiality. Documents will not be accessible to

Part 2, Project Technical Requirements

PART 2

PROJECT TECHNICAL REQUIREMENTS

1.0 DESIGN-BUILDER'S SCOPE OF WORK

The Project for the replacement of superstructure and rehabilitation of substructure for the Interstate I-95 Bridge over Oxford street (called Oxford Street Bridge, Bridge No. 653) will consist of carefully dismantling the existing superstructure, bearings, and constructing new superstructure, bearings, rehabilitation of the existing abutment, and replacing the concrete barrier on the existing east wall, roadway approach work, repaving Oxford Street and related tasks as necessary to complete the Scope of Work (see Conceptual 30% Plans on the RFP CD). Repaving limits shall be to the extent that roadway approach work is necessary due to the bridge rehabilitation activities, or as specified by the Engineer. The replacement superstructure must minimize changes in roadway profile and approach work to the greatest extent possible. If a steel superstructure is used, the steel must be metalized *and* painted.

A detailed Scope of Work and descriptions of the design and construction services anticipated for the Project are included in Part 1 of this RFP.

The following requirements shall apply during construction:

- Access to the adjacent business properties and maintenance of their business activities shall be maintained throughout the duration of the Project. Provision for ambulance to pass through on Oxford Street shall be maintained throughout the construction duration. Traffic counts are provided in Part 1 of this RFP.
- The RIDOT reserves the right to require the Design-Builder to modify the traffic control setup in the field to improve traffic conditions.
- If the bridge deck/superstructure is to be paved, the proprietary waterproofing system "Eliminator" by Sterling Lloyd of Newington, CT (or an approved equal) must also be used to waterproof the entire superstructure.
- The design and construction of this Project must be reviewed and coordinated in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended and Section 4(f) of the Department of Transportation Act. The Design-Builder shall consult with the RIDOT Cultural Resources Unit to identify the Project's area of potential effect (APE) and any measures required to ensure Section 106 and 4(f) compliance.
- Restore all existing grass areas, land and vegetation in the construction site and within the temporary easement areas, if any, to pre-construction conditions and to the satisfaction of the Engineer.
- The ADA ramps on Oxford Street sidewalks shall be reconstructed to meet the latest Code requirements.
- Vibrations shall be minimized to the greatest extent possible in order to protect existing adjacent structures. Any damage to the existing buildings and structures shall be restored and/or repaired to the satisfaction of the Engineer at no additional cost to the State.
- No equipment or storage of materials shall be allowed in the temporary easement areas.

Addendum No. 2

R-1

- Guide Specifications for Seismic Isolation Design 2014, 4th Edition
- NCHRP Report 350 Recommended Procedures for Safety Performance Evaluation of Highway Features, 1993
- RIDOT Traffic Design Manual
- RIDOT Highway Design Manual
- RIDOT CAD Standards Manual, 2007 from the following website: <http://www.pmp.dot.ri.gov>
- RIDOT Approved Materials List from the following website: <http://www.dot.state.ri.us/documents/engineering/research/approvals/RIDOTApprovedProducts.pdf>
- December 2010 Rhode Island Storm water Design and Installation Standards Manual
- AASHTO Guide Design Specifications for Bridge Temporary Works
- AASHTO Guide Specifications for Distribution of Loads for Highway Bridges
- AASHTO Guide Specifications for Strength Evaluation of Existing Steel and Concrete Bridges
- AASHTO Guide Specifications for Thermal Effects on Concrete Bridge Superstructures
- AASHTO Guide Specifications for Structural Supports for Highway Signs, Luminaries, and Traffic Signals
- ANSI/AASHTO/AWS D1.1 Welding Code
- AASHTO Maintenance Manual for Roadways and Bridges
- “Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation’s Bridges,” FHWA-PD-96-001, 1995
- “Bridge Inspector’s Training Manual 90,” FHWA-PD-91-015 (1991; rev.1995)
- AASHTO/FHWA Research Report RD-87-014, Bridge Deck Drainage Guidelines
- NSBA/AASHTO Collaboration Standard Steel Details/Guidelines from the following website: <http://www.aisc.org/contentNSBA.aspx?id=20130>
- USDA, NRCS, Title 210, National Engineering Handbook, Section 6
- USDA, NRCS, Title 210, National Engineering Handbook, Section 11
- Federal Aid Policy Guide (FAPG) 637, Construction Inspection and Approval
- RIDOT Master Schedule for the preparation of a Project Schedule for Sampling, Testing and Certification of Materials (MST)
- RIDOT Procedures for Uniform Record Keeping (PURK) Manual

Geotechnical Work:

- AASHTO Manual on Subsurface Investigations
- “Standard Practice for Description and Identification of Soils” (Visual-Manual Procedure) ASTM D2488-00
- ““Earth Retaining Structures,” FHWA-NHI-99-025, 1999
- “Soil Slope & Embankment Designs,” FHWA-NHI-01-026, 2002
- “Geosynthetic Design and Construction Guidelines,” FHWA-HI-95-038 (April, 1998)
- FHWA, Bridge Technology, Checklist and Guidelines for Review of Geotechnical Reports and Preliminary Plans and Specifications, found at: <http://www.fhwa.dot.gov/bridge/checklist.htm>

The bridge superstructure shall be designed and constructed for a minimum 75-year service life.

- b. Geometry** – Overall bridge geometry, including horizontal alignment, vertical profile, and cross slope, shall match the existing bridge. The Design-Builder shall provide final bridge geometry including all elevations, plan dimensions, girder framing, top of deck elevations, bottom of slab elevations, beam cambers, etc. All survey shall be provided by the Design-Builder as necessary for construction and operation of the completed Project.
- c. Live Load-** The Design–Builder’s attention is directed to the following minimum live load design requirements of the Bridge Design Manual:
- | | |
|--------------------------------|---|
| Bridge Design Loading: | AASHTO HL 93
Rhode Island legal load |
| Live Load deflection criteria: | L/1100 |
- d. Wind Loads Exposure Criteria** – The wind pressures at various heights shall be determined in accordance with criteria as specified for the AASHTO LRFD “urban” category.
- e. Seismic Loading** – Seismic analysis shall conform to the Rhode Island LRFD Bridge Design Manual 2007 Edition including all revisions to date. The Seismic Site Class is D. The Seismic Zone is Zone 3. No in-depth seismic analysis will be required for the bridge structures.
- f. Load Rating** – The Design-Builder will be responsible for producing a load rating report for the new bridge. The load rating report shall be in accordance with the RIDOT Guidelines for Load and Resistance Factor Rating (LRFR) – April 2009.
- g. Vertical Clearance** – The proposed minimum roadway vertical clearance shall not be less than the existing clearance.
- h. Accelerated Bridge Construction (ABC)** – Upon RIDOT's approval, the Design-Builder has the option of using ABC method such as prefabricated components and systems, Self-Propelled Modular Transport (SPMT) method, etc. The Design-Builder is responsible for designing and detailing the ABC system in the contract plans.
- i. Support of Excavation** – Any temporary or permanent support of excavation that is necessary to maintain the safety of the traveling public, the structural integrity of nearby structures, or utilities, shall be considered critical and shall be designed and detailed in the plans. The Design-Builder is responsible for designing and detailing the support of excavation as deemed necessary.

j. Bridge Inspection

- **Notification for Inspection** – Before any bridge may be opened for public use, the Design-Builder shall notify the RIDOT that the bridge is complete and ready for RIDOT inspection. For any unit or portion of the work that will be installed utilizing Accelerated Bridge Construction (ABC) methods with the intent of immediately opening for public use, the Design-Builder shall notify the Engineer at least 7 days in advance.
- **RIDOT Inspection** – After notification by the Design-Builder and prior to the opening of the bridge for public use, the RIDOT will perform an inspection of the bridge. For ABC methods, the Engineer must be present on site during the ABC installation to immediately inspect the bridge upon completion of the portion of the work and to provide partial acceptance for the portion of the work prior to opening the bridge for public use.

k. Damage To Existing Utilities and Utility Structures

The locations of all utilities as shown on the attached plans are approximate. The Design-Builder shall check and verify the location of all existing utilities and service connections both underground and overhead in accordance with the “Dig Safe Program Law” enacted by Rhode Island Legislation Bill No. 79S-291, which became effective July 1, 1979. The Design-Builder should be aware that not all utility companies subscribe to the Dig Safe Program. It is the Design-Builder’s responsibility to ensure that all utility companies have been notified and all utilities have been marked prior to commencing their work. Any damage to the utilities which are shown on the plans or detailed by Dig Safe shall be the Design-Builder’s responsibility. Electric conduits on the abutment walls shall be protected during construction and power shall be restored to the lighting on the underside of the bridge.

The Design-Builder will be responsible for:

- Damage to any existing structures or equipment in the roadway.
- Damage to existing walls, fences, light poles, guy wires, hand holes, manholes, fire hydrants, buried utilities under the roadway and/or sidewalks, and adjacent properties.

The Design-Builder shall make every effort to prevent debris from falling into existing catch basins on the roadway. Should any debris fall inside a structure, it shall be removed immediately.

I. Storage of Construction Material and/or Equipment

The Design-Builder shall place all equipment and material in his yard or on site in a location approved by the Engineer.

Storage of materials on State or City property will require the approval of the Engineer.

Construction:

- C-1 Mobilization
- C-2 Structure monitoring
- C-3 Site preparation
- C-4 Traffic Management Implementation
- C-5 Easements
- C-6 Demolition
- C-7 Substructure Rehabilitation
- C-8 Superstructure Replacement
- C-9 Roadway Work

2.6 Environmental

Introduction

Coordination with RIDOT's Natural Resources Unit (NRU) and Cultural Resource Unit (CRU) is an important aspect of the project and respondents are expected to address both natural and cultural resource issues in their proposals. The Environmental Manager role is necessary for this project as described in RFP Part 1, Section 4.6.1. The project will be subject to requirements for management of stormwater, erosion control, and other pollution prevention measures. The Design-Builder responsibilities will include environmental compliance monitoring and reporting to RIDOT, as well as compliance with RI Department of Environmental Management (RIDEM) Environmental Justice (EJ) policy and notification requirements (as the project is located within an EJ area).

The Oxford Street Bridge No. 653 project is part of a larger project that RIDOT is undertaking, which includes the installation of 14 toll gantries and work at other bridge locations. RIDOT is coordinating with the Federal Highway Administration (FHWA) to complete an Environmental Assessment (EA) for the toll gantry projects, as required under the National Environmental Policy Act (NEPA). Discussions are underway to clarify the EA process and how the bridge work (including Bridge No. 653) will be incorporated in the NEPA review. RIDOT will be obtaining the necessary environmental approvals as per FHWA Order 6640.1A FHWA Policy on Permissible Project-Related Design Activities During the NEPA Process.

(<http://www.fhwa.dot.gov/legsregs/directives/orders/66401a.cfm>).

RIDOT expects that the Bridge 653 work will qualify for a Categorical Exclusion (CE) under NEPA. RIDOT is undertaking a Section 106 review for historical and cultural resource impacts as part of the NEPA process, and an analysis of environmental impacts. The Design-Builder will be expected to

coordinate with the RIDOT CRU and NRU to ensure that, as the Bridge 653 project progresses to final design and implementation, there will not be any changes that conflict with the Section 106 assessment and that the project is consistent with the anticipated CE approval.

RIDOT has undertaken an environmental assessment and analysis of permit requirements for the 30% Conceptual Design. The Respondent should note that additional assessment and permitting requirements may be applicable depending on the staging areas and haul routes selected by the Design-Builder. Other environmental requirements may also apply if the Design-Builder changes the scope or footprint of the project as proposed in this RFP. Such additional assessment and permitting requirements or modifications, as well associated schedule implications, would be the responsibility of the Design-Builder.

Please see below (2.6.1 – 2.6.10) for additional information on environmental and cultural resources, permitting, agency coordination and other environmental management aspects of the project.

2.6.1 NEPA Compliance/Environmental Documentation

As noted above and in Section 1.0 of this document, the RIDOT is processing this Project as a NEPA Categorical Exclusion (CE) under the current anticipated scope of work. Notwithstanding any other requirements specified in the Contract Documents, the Design-Builder shall not commence final design or any construction activities prior to RIDOT obtaining the necessary environmental approvals as per FHWA Order 6640.1A FHWA Policy on Permissible Project-Related Design Activities During the NEPA Process. (<http://www.fhwa.dot.gov/legsregs/directives/orders/66401a.cfm>)

Changes in the scope of the Project (as expressed in this RFP) proposed by the Design-Builder shall require coordination with the RIDOT to determine if a re-evaluation of the CE by the RIDOT is necessary. Such changes may necessitate additional environmental studies or coordination with regulatory agencies to be carried out by the Design-Builder. The Design-Builder shall carry out any additional environmental commitments as a result of any re-evaluation proposed by the Design-Builder and will be responsible for any schedule delays and associated costs.

2.6.2 Wetland and Water Quality

The RIDOT has conducted desktop surveys of the proposed Project area and expected limits of disturbance (LOD) for the presence of streams, wetlands, storm water drainage features and listed species. Note that the environmental assessment for the Project area assessment to date includes the bridge work Limit of Disturbance (LOD) only. The staging area has not yet been finalized. See Figure 1 for Locations of Potential Staging Areas.

Plans: VOLUME 1

Plans: VOLUME 2

INDEX

SHEET NO.	DESCRIPTION
VOLUME 1	
1	COVER
2	STANDARD PLAN SYMBOLS & STANDARD LEGEND
3	STANDARD NOTES - 1
4	STANDARD NOTES - 2
5	JOB-SPECIFIC PLAN SYMBOLS, LEGEND & NOTES
6	TYPICAL SECTION
7	GENERAL PLAN
8	GENERAL DETAILS
9	LOCATION PLAN
10	DRAINAGE & UTILITY PLAN
11	PROFILE - I-95
12	PROFILE - OXFORD STREET
13	PAVEMENT MARKING PLAN
14 - 26	TRAFFIC CONTROL PLANS

VOLUME 2	BRIDGE NO. 653 - BRIDGE PLANS
	FOR INDEX SEE "BRIDGE PLANS VOLUME 2"

R.I. STANDARD SPECIFICATIONS AND STANDARD DETAILS

SPECIFICATIONS TO GOVERN THIS PROJECT ARE THE R.I. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AMENDED AUGUST 2013, WITH ALL REVISIONS AND THE STATE AND FEDERAL SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS. STANDARD DETAILS FOR THIS PROJECT ARE R.I. STANDARD DETAILS, 1998 EDITION, WITH ALL REVISIONS.

STATE OF RHODE ISLAND



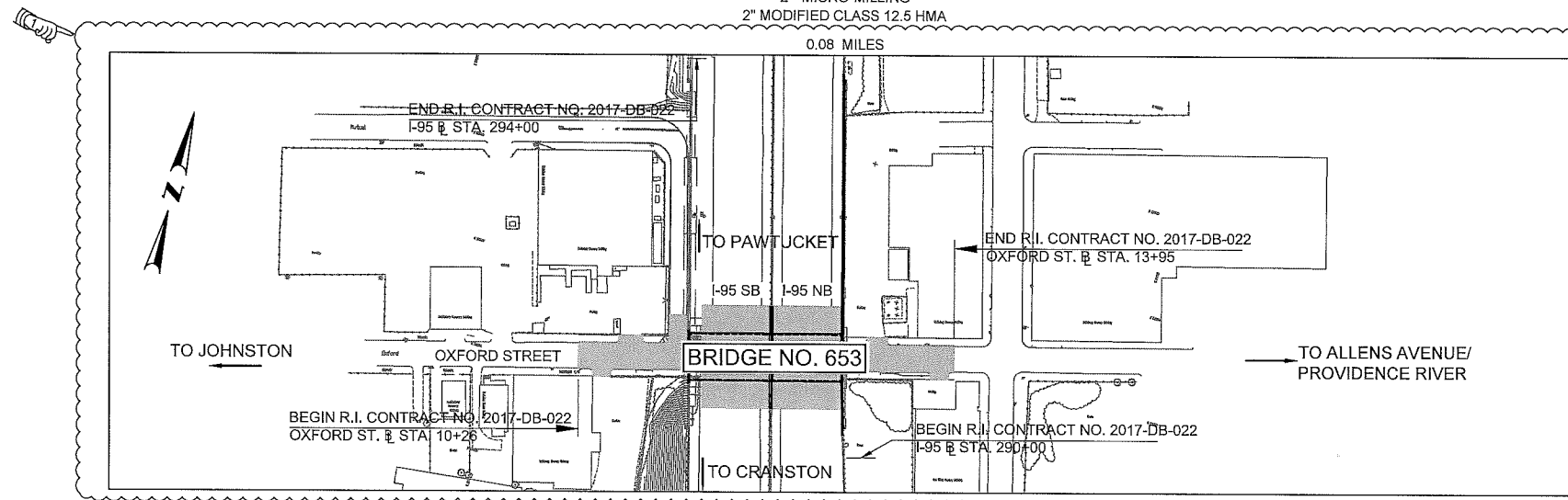
DEPARTMENT OF TRANSPORTATION

PLAN, PROFILE AND SECTIONS OF PROPOSED
STATE HIGHWAY
IMPROVEMENTS TO I-95
ACCELERATED BRIDGE CONSTRUCTION (ABC) OF
BRIDGE NO. 653 SUPERSTRUCTURE REPLACEMENT
I-95 NB/SB OVER OXFORD STREET
VOLUME 1 OF 2 - HIGHWAY PLANS

CITY OF PROVIDENCE
COUNTY OF PROVIDENCE
R.I. CONTRACT NO. 2017-DB-022 F.A. PROJECT NO.

PAVEMENT STRUCTURE (FDC)
2" MODIFIED CLASS 9.5 HMA FOR BRIDGE DECKS
10" CLASS 19 HMA
12" (MINIMUM) GRAVEL BORROW SUBBASE COURSE

PAVEMENT STRUCTURE (MMO)
2" MICRO-MILLING
2" MODIFIED CLASS 12.5 HMA

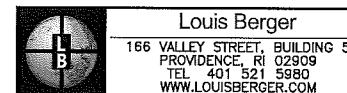


LAYOUT PLAN
SCALE: 1" = 80'

SCALES OF DRAWINGS

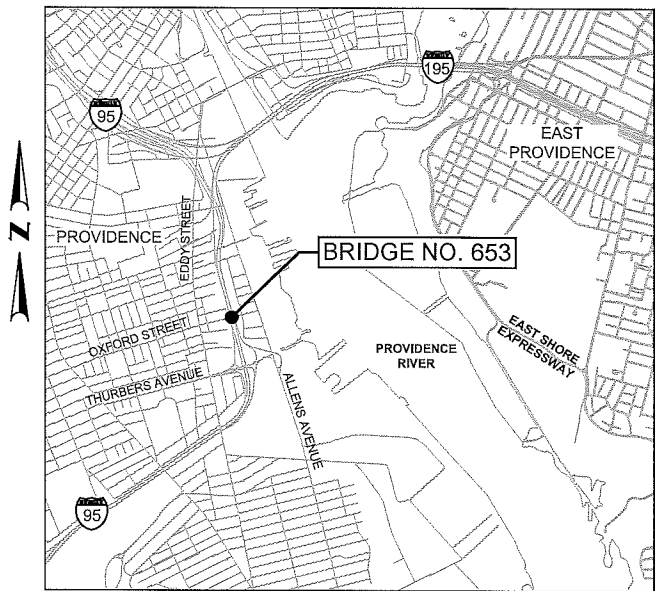
Plans	1 inch = 20 & 40 feet
Profiles	1 inch = 20 feet Horizontal
Profiles	1 inch = 4 feet Vertical
Cross Sections	1 inch = 4 feet Horizontal
Cross Sections	1 inch = 4 feet Vertical

BASE OF LEVELS
NGVD 29



Contract Number 2017-DB-022
Number of Sheet 1
Total Sheets 26

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
R-1	RI		2017	1	26



LOCATION MAP
SCALE: 1"=2,000'

DESIGN DESIGNATION

I-95		OXFORD STREET	
AADT (2017)	151,000 V.P.D.	AADT (2017)	XX,XXX V.P.D.
AADT (2037)	184,200 V.P.D.	AADT (2037)	XX,XXX V.P.D.
D	50%	D	XXX%
K	9%	K	XX%
T	6%	T	X%
DDHV	8,290 V.P.H.	DDHV	X,XXX V.P.H.
DHV	16,580 V.P.H.	DHV	X,XXX V.P.H.
DESIGN SPEED	55 M.P.H.	DESIGN SPEED	30 M.P.H.

HURRICANE EVACUATION ROUTE

This project includes work on a designated Hurricane Evacuation and Diversionary Route as follows:
- Intersection of
Refer to General Note 18 on Sheet

30% SUBMISSION HIGHWAY PLANS

R.I. DEPARTMENT OF TRANSPORTATION	
APPROVED	
ADMINISTRATOR, PROJECT MANAGEMENT	DATE
APPROVED	
CHIEF ENGINEER OF INFRASTRUCTURE	DATE
APPROVED	
DIRECTOR	DATE
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED	
DIVISION ADMINISTRATOR	DATE

ADDENDUM NO. 2

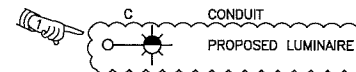
JOB SPECIFIC LEGEND

- 6YT 6" TEMPORARY PAVEMENT REMOVABLE TAPE - YELLOW
- 8W 8" EPOXY RESIN PAVEMENT MARKING - WHITE
- 3.3.5 BRICK/SOLID BLOCK DOUBLE GRATE CATCH BASIN GRATE PERPENDICULAR TO EDGE OF PAVEMENT
- 7.3.9 GRANITE RAMP STONE
- 7.3.9C GRANITE RAMP STONE CURVED
- 20.1.0 PAVEMENT MARKINGS ARROWS AND ONLY
- 24.1.0 SIGN POST SELECTION AND INSTALLATION DETAILS SQUARE POST (SIGNS UP TO 8'-0"W X 4'-0"H)
- 24.2.0 SIGN POST SELECTION AND INSTALLATION DETAILS U-CHANNEL POST (SIGNS UP TO 8'-0"W X 4'-0"H)
- 25.1.0 FLUORESCENT TRAFFIC CONE
- 34.3.7 GUARDRAIL CONNECTION TO BARRIER - APPROACH END SECTION
- 34.3.8 GUARDRAIL CONNECTION TO BARRIER - TRAILING END SECTION
- CCS CEMENT CONCRETE SURFACE (ITEM CODE 904.0110)
- CDF CONTROL DENSITY FILL
- CDI CLEAN DROP INLET
- CGI CLEAN GUTTER INLET
- CRD CLEAN AND REGRADE DITCH (ITEM CODE 708.9902)
- CS CRUSHED STONE
- CST CONCRETE SURFACE TREATMENT
- DCS REMOVE AND DISPOSE CONCRETE SURFACE
- DEC REMOVE AND DISPOSE CONDUIT - ALL SIZES
- DGC REMOVE AND DISPOSE GRANITE CURB
- DT (SIZE) CUTTING AND DISPOSING ISOLATED TREES AND STUMPS (ITEM CODE 201.0301 OR 201.0302)
- ETR EXISTING TO REMAIN
- FDC 2" MODIFIED CLASS 9.5 HMA FOR BRIDGE DECK
10" CLASS 19 HMA
12" GRAVEL BORROW SUBBASE COURSE
- FDCC 4" MODIFIED CLASS 9.5 HMA FOR BRIDGE DECK
10" CEMENT CONCRETE
12" GRAVEL BORROW SUBBASE COURSE
- FDCCC 4" MODIFIED CLASS 9.5 HMA FOR BRIDGE DECK
10" CEMENT CONCRETE
- JMD CLEAN AND REGRADE JUTE MESH DITCH (ITEM CODE 708.9901)
- MMO MICRO-MILLING 2" AND OVERLAY WITH 2" MODIFIED CLASS 12.5 HMA
- MUL MULCH
- NGB FURNISH AND INSTALL NEW GAS GATE VALVE BOX
- PF PERVIOUS FILL (ITEM CODE 203.0700)
- PT-2 PAVEMENT TRANSITION - FULL DEPTH TO EXISTING
- PT-3 PAVEMENT TRANSITION - MICRO-MILLING TO EXISTING
- RC REPAIR CONCRETE AS NEEDED
- RCC REMOVE AND STOCKPILE CURB CORNER
- RCG REMOVE AND DISPOSE CONCRETE GORE
- RCI REPAIR CATCH BASIN WITH GUTTER INLET
- RDC REPAIR DOUBLE GRATE CATCH BASIN
- RDI RECONSTRUCT DROP INLET
- RMH RECONSTRUCT MANHOLE
- RPC REPAIR CATCH BASIN
- RPD REPAIR DROP INLET
- RPM REPAIR MANHOLE
- RRD CLEAN AND REGRADE RIP RAP DITCH
- RS RUMBLE STRIP
- S-1 FULL DEPTH SAWCUT OF BITUMINOUS PAVEMENT
- S-2 FULL DEPTH SAWCUT OF CONCRETE SIDEWALK
- PT-1 PAVEMENT TRANSITION
- 40.2.8 BARRIER LIGHT FOUNDATION
- 40.2.9 BARRIER TRANSITION UNIT
- 43.6.0 BITUMINOUS CONCRETE DRIVEWAY
- 6.4.9 CATCH BASIN INLET WITH SIDEWALK COVER

ADDENDUM NO. 2

JOB SPECIFIC LEGEND - LIGHTING

- 2CL 200 WATT HPS CUTOFF LUMINAIRE ON 30' ALUMINUM POLE (10' SINGLE DAVIT) (ITEM CODE T07.990 & T08.200)
- 4CL 400 WATT HPS CUTOFF LUMINAIRE ON 40' ALUMINUM POLE (SINGLE DAVIT) (ITEM CODE T07.9901 & T08.2041)
- DHH REMOVE AND DISPOSE HANDHOLE AND RETURN FRAME AND COVER TO RIDOT
- RGS RIGID STEEL
- SL SERVICE LINE
- UG UNDERGROUND
- R&S REMOVE AND STOCKPILE POLE/LUMINAIRE AT RIDOT MAINTENANCE DEPT. 300 LINCOLN AVENUE, WARWICK
- R&D REMOVE AND DISPOSE STANDARD FOUNDATION
- 18.1.0 CONCRETE LIGHT STANDARD BASE
- 18.1.1 BREAKAWAY SUPPORT COUPLINGS FOR LIGHT STANDARDS
- 18.2.2 PRECAST TYPE "B" HEAVY DUTY HANDHOLE
- 18.3.1 ALUMINUM POLE - GROUNDING DETAIL
- 18.3.2 TYPICAL LUMINAIRE - WIRING DETAIL
- 18.4.0 SERVICE PEDESTAL
- 18.4.1 SERVICE PEDESTAL - GROUNDING DETAIL
- 18.4.2 SERVICE PEDESTAL - 240/480 VOLTS - 3W (SWITCHGEAR DETAIL)
- 18.4.3 SERVICE PEDESTAL - 240/480 VOLTS - 3W (POWER SCHEMATIC)
- 18.4.6 SERVICE PEDESTAL FOUNDATION
- 18.6.1 LIGHTING CONDUIT - ROAD / RAMP CROSSING
- 18.6.3 PULLBOXES - TYPE "V" AND TYPE "W"
- 18.7.0 RISER POLE DETAIL



JOB SPECIFIC GENERAL NOTES:

- ALL SUBCONTRACTORS EMPLOYED BY THE CONTRACTOR OR R.I.D.O.T. ON THIS PROJECT SHALL WORK WITHIN THE SAME PROTECTED WORK AREAS AS THE CONTRACTOR. NO SEPARATE LANE CLOSURES WILL BE PAID FOR.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING STORM DRAIN PIPE SIZES WHERE NEEDED TO COMPLETE THE WORK.
- IT IS THE INTENT OF THE PROPOSED DRAINAGE DESIGN TO AVOID EXISTING UTILITIES. AT LOCATIONS WHERE THERE IS AN UNANTICIPATED CONFLICT, THE CONTRACTOR SHALL, WHERE POSSIBLE AND AS DIRECTED BY THE ENGINEER, MODIFY THE DRAINAGE STRUCTURES SUCH THAT THE PROPOSED DRAINAGE AVOIDS THE UTILITY.
- SANITARY SEWER, GAS, WATER AND OTHER UTILITY SERVICES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL RELOCATED UTILITY POLES ARE PROPERLY STABILIZED DURING EACH PHASE OF CONSTRUCTION.
- THE FINAL LOCATION OF ALL WHEELCHAIR RAMPS MUST BE COORDINATED, IN THE FIELD, WITH THE PROPOSED LOCATIONS OF UTILITY POLES, LANDSCAPING, DRAINAGE GRATES AND COVERS TO ENSURE A CLEAR PEDESTRIAN PATH.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE PROPER UTILITY AGENCIES FOR THE SEQUENCE OF CONSTRUCTION TO REMOVE THE EXISTING STREET LIGHTING AND THE INSTALLATION OF NEW STREET LIGHTING. STREET AND SIDEWALK LIGHTING MUST BE PROVIDED AT ALL TIMES.
- THE CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIALS WITHIN THE DRIP LINE OF ANY TREES OR SHRUBS.
- ALL ITEMS NOT REFERENCED FOR MODIFICATION WILL BE "EXISTING TO REMAIN" UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL PLACE ALL EQUIPMENT AND STOCKPILED MATERIAL A MINIMUM DISTANCE OF 30 FEET FROM THE I-95 MAINLINE, AND 10 FEET FROM THE OXFORD STREET OUTSIDE EDGE OF TRAVEL LANE SO AS NOT TO CAUSE A SAFETY HAZARD. ALL STORAGE AND LAYDOWN AREAS REQUIRE APPROVAL BY THE ENGINEER. ALL WORKZONES SHALL BE BEHIND BARRIERS AS SHOWN ON THE MAINTENANCE AND PROTECTION OF TRAFFIC PLANS.
- THE FREQUENCY AND APPLICATION RATES FOR WATER FOR DUST CONTROL SHALL BE DETERMINED BY THE ENGINEER, PAID FOR UNDER ITEM CODE 906.0100. NO CALCIUM CHLORIDE FOR DUST CONTROL SHALL BE USED ON THIS PROJECT.
- THE CONTRACTOR SHALL EXERCISE CARE WHEN WORKING IN THE AREA OF EXISTING HIGHWAY BOUNDS. ANY HIGHWAY BOUNDS DISTURBED OR DESTROYED AS A RESULT OF THE CONTRACTOR'S ACTIONS SHALL BE RESET OR REPLACED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER AND IN CONFORMANCE WITH SECTION 915. OF THE R.I. STANDARD SPECIFICATIONS. SAID RESETING OR REPLACING OF BOUND REQUIRED SHALL BE AT THE CONTRACTOR'S EXPENSE.
- NO LONGITUDINAL DROP-OFFS WILL BE ALLOWED TO REMAIN BETWEEN LANES DURING NON-CONSTRUCTION HOURS. THE CONTRACTOR SHALL SCHEDULE THE MICROMILLING OPERATIONS TO PROVIDE A CONSISTENT FULL-WIDTH PAVEMENT SURFACE AT THE END OF THE WORK DAY.

JOB SPECIFIC GENERAL NOTES - DRAINAGE & UTILITY:

- ALL EROSION CONTROL MEASURES SHALL BE PUT IN PLACE PRIOR TO COMMENCING WORK.
- ALL REINFORCED CONCRETE PIPE SHALL BE AASHTO. CLASS III WITH MORTAR JOINTS UNLESS OTHERWISE NOTED.
- ALL EXISTING DRAIN PIPES, CATCH BASINS, AND DRAIN MANHOLES TO REMAIN WITHIN THE PROJECT LIMITS ARE TO BE CLEANED AS NEEDED IN ACCORDANCE WITH THE SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.
- EXISTING PIPE INVERT ELEVATIONS SHOWN ON THE DRAINAGE AND UTILITY PLANS ARE APPROXIMATE.
- ADJUSTMENTS TO BE MADE TO NARRAGANSETT BAY COMMISSION (NBC) MANHOLE FRAMES AND COVERS WILL REQUIRE A NBC SEWER ALTERATION PERMIT. SEE CS PAGES.
- DRAINAGE STRUCTURES NEEDING TO BE RECONSTRUCTED, AS INDICATED ON THE PLANS, SHALL BE RECONSTRUCTED PRIOR TO PLACING ANY TEMPORARY TRAFFIC OVER THAT STRUCTURE.

JOB SPECIFIC GENERAL NOTES - SIGNS:

- PRIOR TO INSTALLATION, ALL SIGNS, MOUNTINGS AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
- ALL NEW AND RELOCATED SIGNS SHALL BE MOUNTED AT THE BACK OF CURB OR LOCATED AS DIRECTED BY THE ENGINEER.
- ALL SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES 2009 EDITION WITH THE LATEST REVISIONS.

JOB SPECIFIC GENERAL NOTES - PAVEMENT MARKINGS:

- TEMPORARY PAVEMENT MARKINGS:
- THE CONTRACTOR SHALL PROVIDE 15 MIL THICK WATERBORNE PAINT PAVEMENT MARKINGS TO MATCH THE FINAL COLORS, WIDTHS AND LOCATIONS. ON THE ROADWAY MICRO MILLING SURFACES AND THE BASE AND INTERMEDIATE BITUMINOUS SURFACE COURSES OF NEWLY PAVED ROADWAYS WHICH WILL BE OPENED TO TRAFFIC AT THE COMPLETION OF EACH DAY'S PAVING OPERATION. THESE WATERBORNE PAVEMENT MARKINGS SHALL ALSO BE USED ON EXISTING ROADWAY SURFACES, WHICH ARE IN NEED OF RE-STRIPING BUT ARE SCHEDULED TO BE REPAVED WITHIN A YEAR.
 - THE CONTRACTOR SHALL PROVIDE 8 MIL THICK TEMPORARY WATERBORNE PAINT PAVEMENT MARKINGS ON THE FINAL SURFACE COURSE OF NEWLY PAVED ROADWAYS THAT WILL BE OPENED TO TRAFFIC AT THE COMPLETION OF EACH DAY'S PAVING OPERATION.
 - ALL TEMPORARY PAVEMENT MARKINGS THAT ARE NO LONGER APPLICABLE SHALL BE REMOVED, AND NEW PAVEMENT MARKINGS SHALL BE PLACED PRIOR TO ALLOWING TRAFFIC TO TRAVEL ON THE AFFECTED ROAD.
 - EXISTING EPOXY PAVEMENT MARKINGS AND CONFLICTING WATERBORNE PAVEMENT MARKINGS SHALL BE REMOVED BY GRINDING THE MARKINGS OFF THE PAVEMENT. THIS SHALL BE PAID FOR UNDER ITEM CODE T20.1000.
- PERMANENT PAVEMENT MARKINGS:
- THE INSTALLATION OF PERMANENT PAVEMENT MARKINGS WILL NOT BE ALLOWED PRIOR TO THE COMPLETE PLACEMENT OF THE FINAL RIDING SURFACE WITHIN THE PROJECT LIMIT.
 - PERMANENT PAVEMENT MARKINGS SHALL BE WHITE AND YELLOW EPOXY RESIN PAVEMENT MARKINGS AT THE LOCATIONS INDICATED IN THE PLANS. THE EPOXY PAVEMENT MARKINGS SHALL BE PLACED ON THE FINAL SURFACE COURSE NO SOONER THAN 2 WEEKS, BUT NO LATER THAN 4 WEEKS FROM THE COMPLETION OF PAVING OPERATION.

JOB SPECIFIC GENERAL NOTES - ELECTRICAL:

- ALL ELECTRICAL WORK SHALL CONFORM TO THE LATEST REVISION OF THE NATIONAL ELECTRICAL CODE, STATE OF RHODE ISLAND, AND THE CITY OF EAST PROVIDENCE ELECTRICAL STANDARDS AND CODES.
- ALL WORK SHALL BE COORDINATED WITH LOCAL PUBLIC UTILITIES. NO CONSTRUCTION SHALL COMMENCE UNTIL THE CONTRACTOR HAS NOTIFIED DIG-SAFE AND ALL UTILITIES HAVE BEEN PROPERLY IDENTIFIED. COORDINATE ELECTRICAL WORK WITH NARRAGANSETT ELECTRIC CO., A NATIONAL GRID CO., THROUGH THOMAS CAPOBIANCO AT TEL. (401) 784-7248.
- ALL LIGHTING CONDUITS ARE TO BE 3" PVC SCH. 40, EXCEPT WHERE OTHERWISE SHOWN, AND SHALL BE INSTALLED AT A DEPTH OF 24" BELOW GRADE FOR DIRECT BURIED INSTALLATIONS. INSTALL NYLON PULLING ROPE IN ALL SPARE CONDUITS FOR FUTURE USE. COMMUNICATIONS CONDUITS SHALL BE 4" PVC SCH. 40, EXCEPT WHERE OTHERWISE SHOWN. MAINTAIN CONDUIT SEPARATION AS SHOWN IN DETAILS.
- PROVIDE ENOUGH SLACK (CABLE) AT ALL HANDHOLES AND PULLBOXES TO ALLOW FOR SPLICING AND REPAIRS TO BE MADE.
- IDENTIFY AND TAG ALL CIRCUITS AT EACH HANDHOLE AND PULLBOX. PROVIDE NUMBERING TAGS ACCORDING TO CIRCUIT DESIGNATION AND AS SHOWN ON THE PLANS.

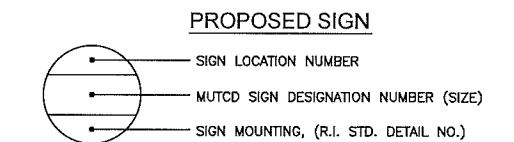
JOB SPECIFIC GENERAL NOTES - SITE RESTORATION:

- ALL PUBLIC AND PRIVATE PROPERTY WITHIN OR ADJACENT TO THE PROJECT LIMITS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO ITS PRE-CONSTRUCTION CONDITION BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER. ALL RESTORATION SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2004 EDITION WITH AMENDMENTS. THE COST OF RESTORATION SHALL BE INCLUDED IN THE PRICES BID FOR OTHER SCHEDULED ITEMS OF WORK AND NO SEPARATE PAYMENT SHALL BE MADE.

JOB SPECIFIC GENERAL NOTES - SURVEY:

- PRIOR TO THE REMOVAL OF ANY EXISTING ROADWAY OR CURBING, THE CONTRACTOR MUST COORDINATE WITH THE RESIDENT ENGINEER AND THE RIDOT SURVEY SECTION. CONSTRUCTION LAYOUT SHALL BE PERFORMED BY THE CONTRACTOR.
- THE STATE HIGHWAY LAYOUT LINES SHOWN ON THE PLANS WERE TAKEN FROM RECORD PLANS AND ASSESSMENT MAPS. NO PHYSICAL SURVEY WAS PERFORMED FOR THIS PROJECT AND LAYOUT LINES SHOULD BE CONSIDERED APPROXIMATE.
- THE MUNICIPAL HIGHWAY LAYOUT LINES SHOWN ON THE PLANS WERE TAKEN FROM RECORD PLANS AND ASSESSMENT MAPS. NO PHYSICAL SURVEY WAS PERFORMED FOR THIS PROJECT AND LAYOUT LINES SHOULD BE CONSIDERED APPROXIMATE.
- THE PROPERTY LINES SHOWN ON THE PLANS WERE TAKEN FROM RECORD PLANS AND ASSESSMENT MAPS. NO PHYSICAL SURVEY WAS PERFORMED FOR THIS PROJECT AND PROPERTY LINES SHOULD BE CONSIDERED APPROXIMATE.

TYPICAL SIGN DESIGNATION SYMBOL



REVISIONS		
NO.	DATE	BY
1	5/17/17	PS

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

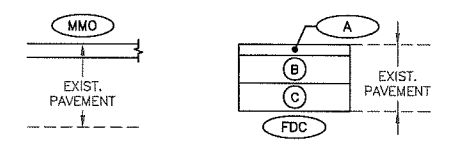
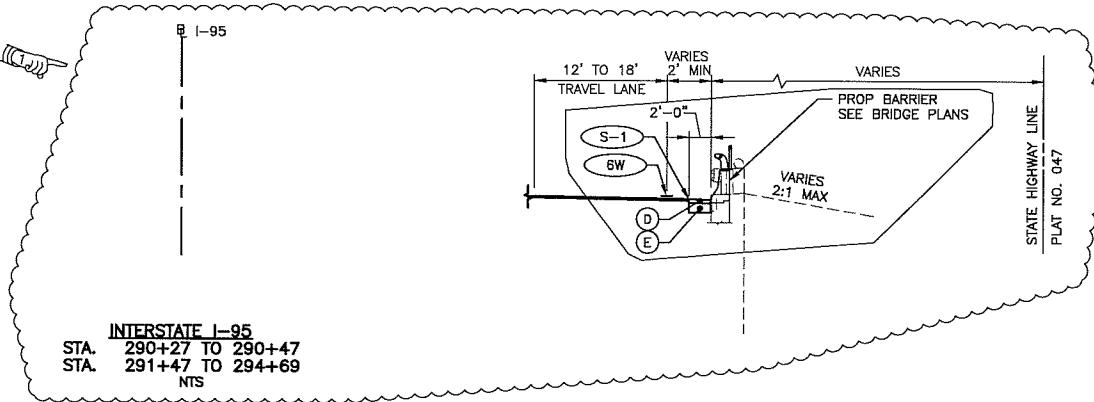
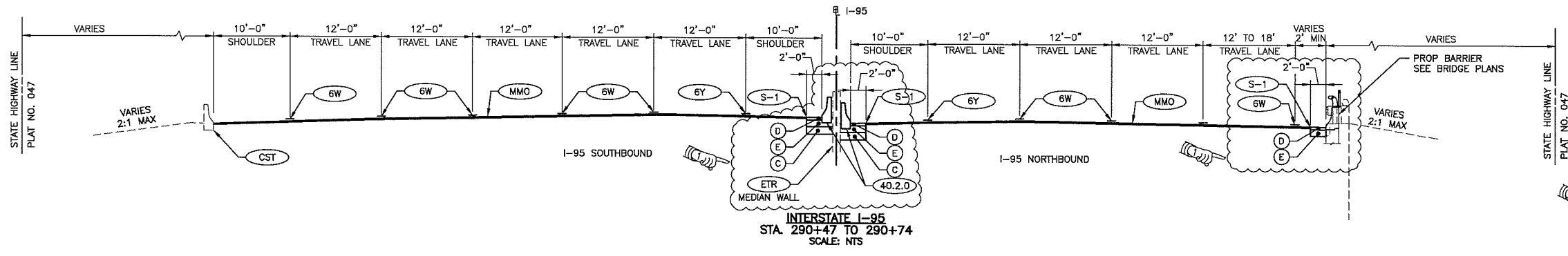
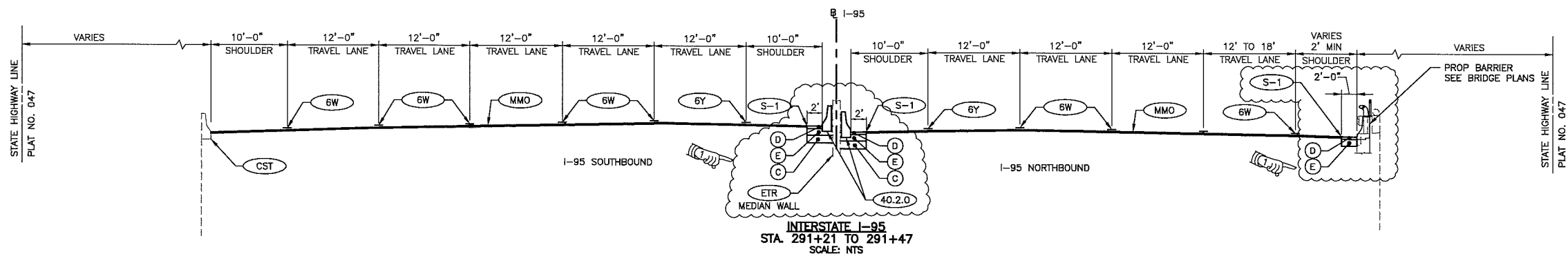
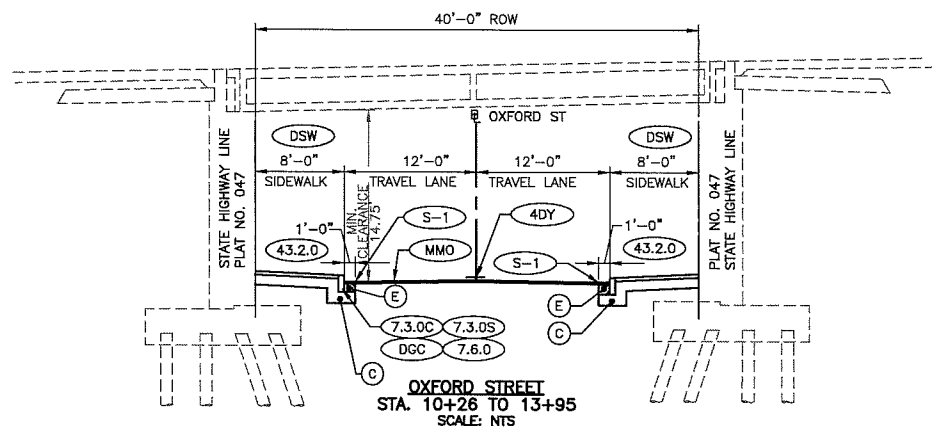
IMPROVEMENTS TO I-95
REPLACEMENT OF BRIDGE 653
OVER OXFORD STREET
PROVIDENCE, RHODE ISLAND

JOB-SPECIFIC PLAN SYMBOLS,
LEGEND & NOTES

CHECKED BY _____ DATE _____ SCALE NO SCALE



Louis Berger
166 VALLEY STREET, BUILDING 5
PROVIDENCE, RI 02909
TEL 401 521 5980
WWW.LOUIBERGER.COM



PAVEMENT STRUCTURE DETAIL
SCALE: NTS

- PAVEMENT LEGEND**
- MMO 2" MICRO-MILLING AND 2" MODIFIED CLASS 12.5 HMA
 - FDC (A) 2" MODIFIED CLASS 9.5 HMA FOR BRIDGE DECK
 - (B) 10" CLASS 19 HMA
 - (C) 12"(MIN.) GRAVEL BORROW SUBBASE
 - FDCC (D) 4" MODIFIED CLASS 9.5 HMA FOR BRIDGE DECK
 - (E) 10" CEMENT CONCRETE
 - (C) 12"(MIN.) GRAVEL BORROW SUBBASE
 - FDCCC (D) 4" MODIFIED CLASS 9.5 HMA FOR BRIDGE DECK
 - (E) 10" CEMENT CONCRETE
 - 43.2.0 (F) 3" BITUMINOUS CONCRETE, TYPE 1-2
 - (G) 8"(MIN.) GRAVEL BORROW SUBBASE
 - 43.6.0 (F) 4" BITUMINOUS CONCRETE, TYPE 1-2
 - (G) 8"(MIN.) GRAVEL BORROW SUBBASE

REVISIONS		
NO.	DATE	BY
1	5/17/17	PS

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DEPARTMENT OF TRANSPORTATION

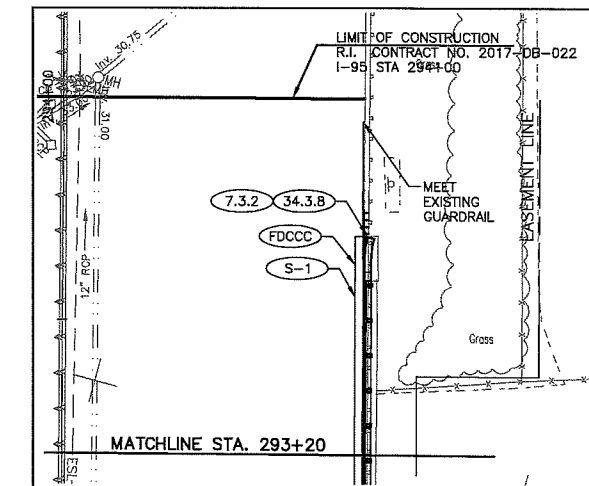
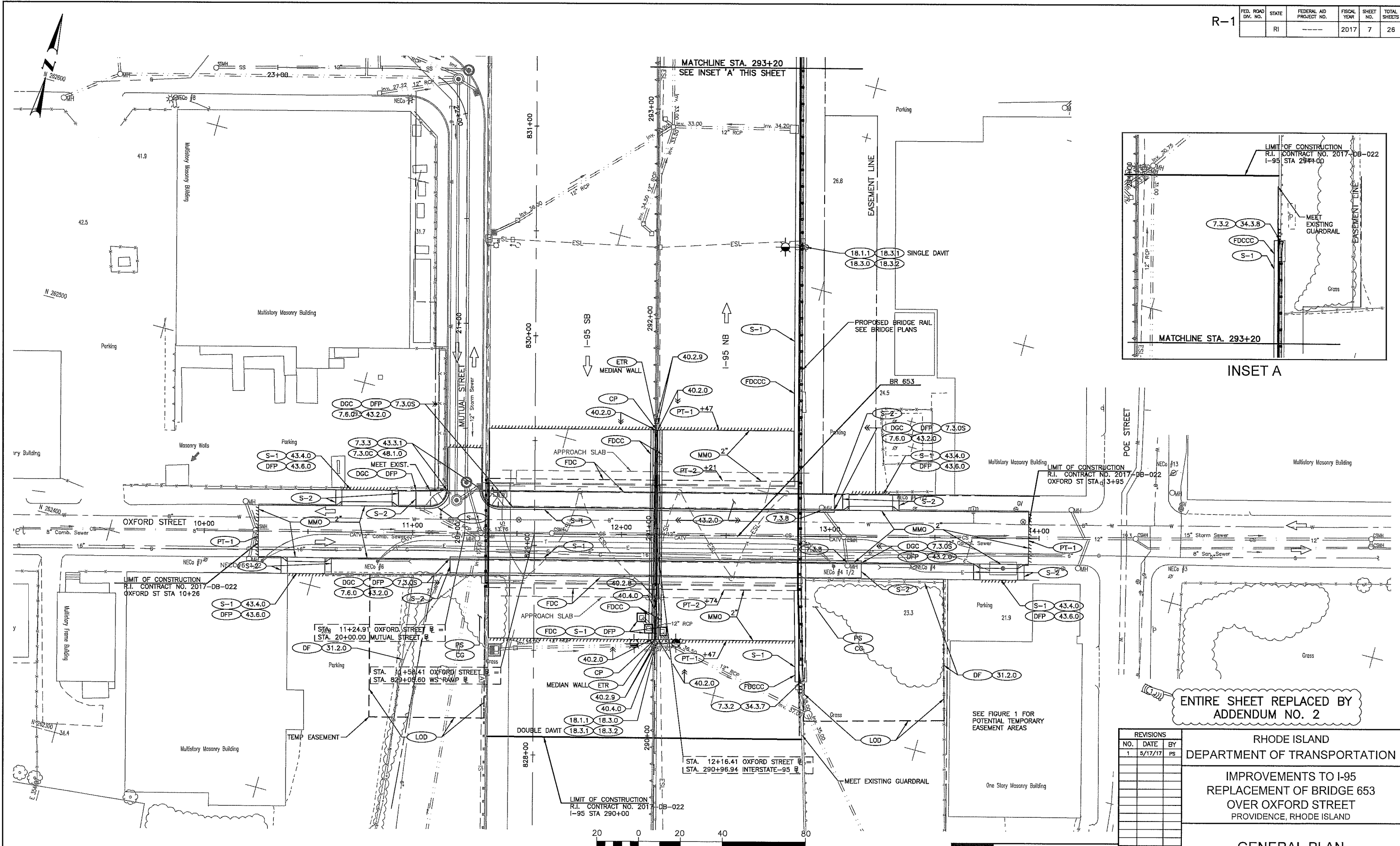
IMPROVEMENTS TO I-95
REPLACEMENT OF BRIDGE 653
OVER OXFORD STREET
PROVIDENCE, RHODE ISLAND

TYPICAL SECTION

CHECKED BY BMB DATE 02/27/17 SCALE NTS

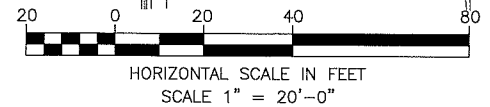


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INSET A

ADDENDUM NO. 2



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RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

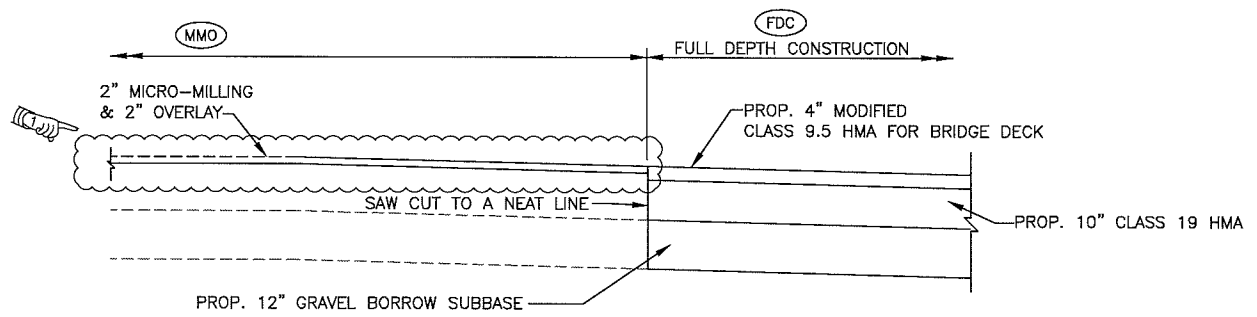
 IMPROVEMENTS TO I-95
 REPLACEMENT OF BRIDGE 653
 OVER OXFORD STREET
 PROVIDENCE, RHODE ISLAND

GENERAL PLAN

CHECKED BY BMB DATE 02/27/17 SCALE 1"=20'

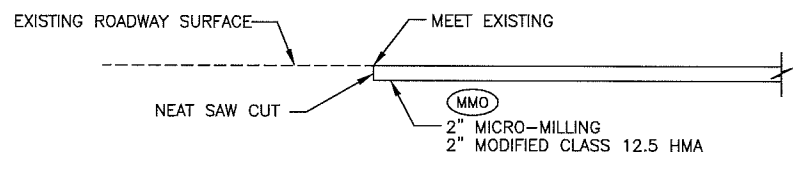
R-1

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	-----	2017	8	26



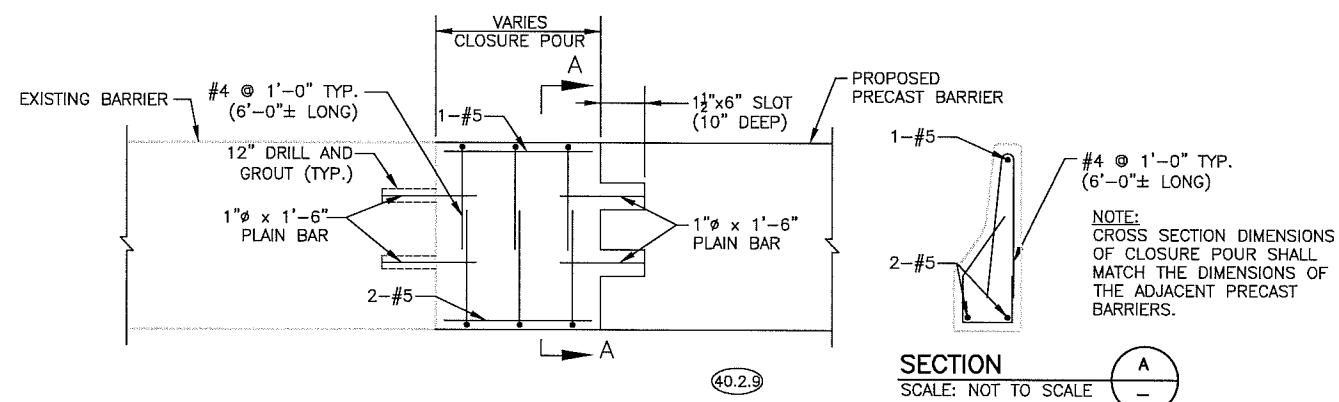
PAVING TRANSITION AT FULL DEPTH CONSTRUCTION (PT-2)

NOT TO SCALE



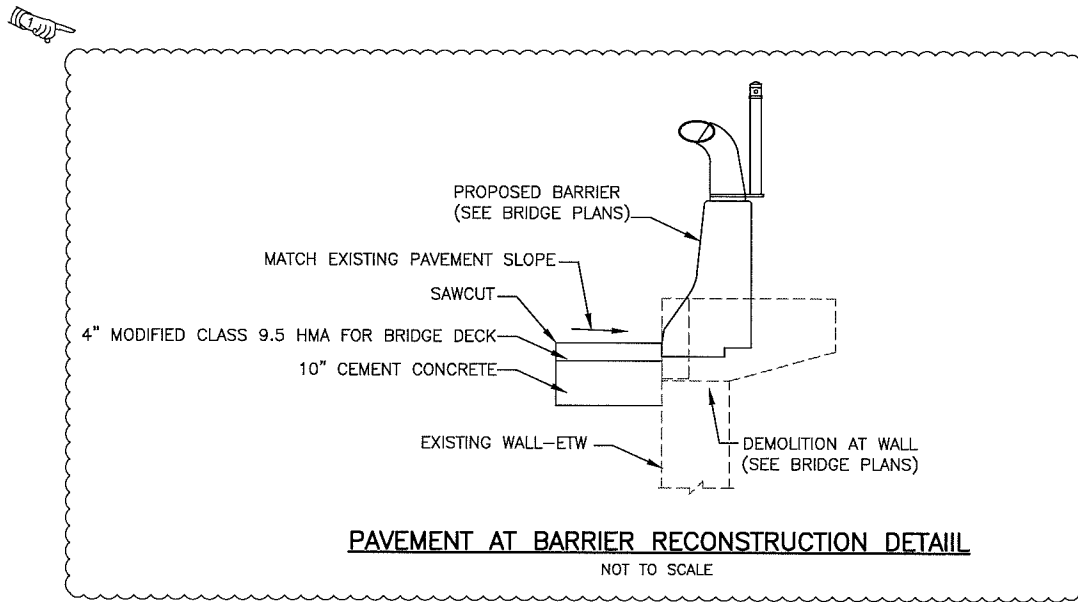
LIMIT OF MICRO-MILLING AND OVERLAY (PT-1)

NOT TO SCALE



SECTION
SCALE: NOT TO SCALE

NOTE:
CROSS SECTION DIMENSIONS OF CLOSURE POUR SHALL MATCH THE DIMENSIONS OF THE ADJACENT PRECAST BARRIERS.



PAVEMENT AT BARRIER RECONSTRUCTION DETAIL
NOT TO SCALE

ADDENDUM NO. 2

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-95
REPLACEMENT OF BRIDGE 653
OVER OXFORD STREET
PROVIDENCE, RHODE ISLAND

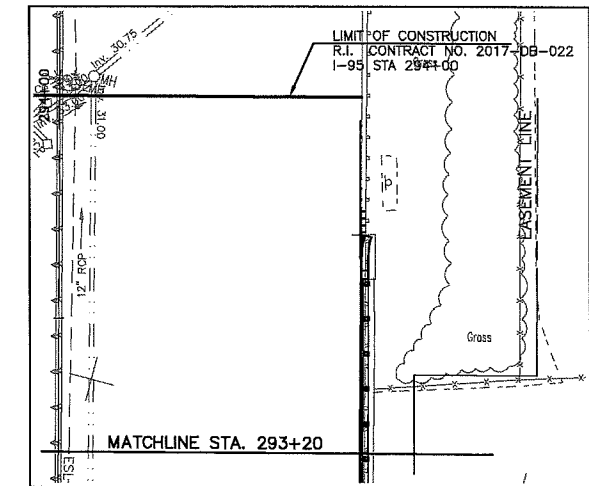
GENERAL DETAILS

CHECKED BY BMB DATE 02/27/17 SCALE NTS

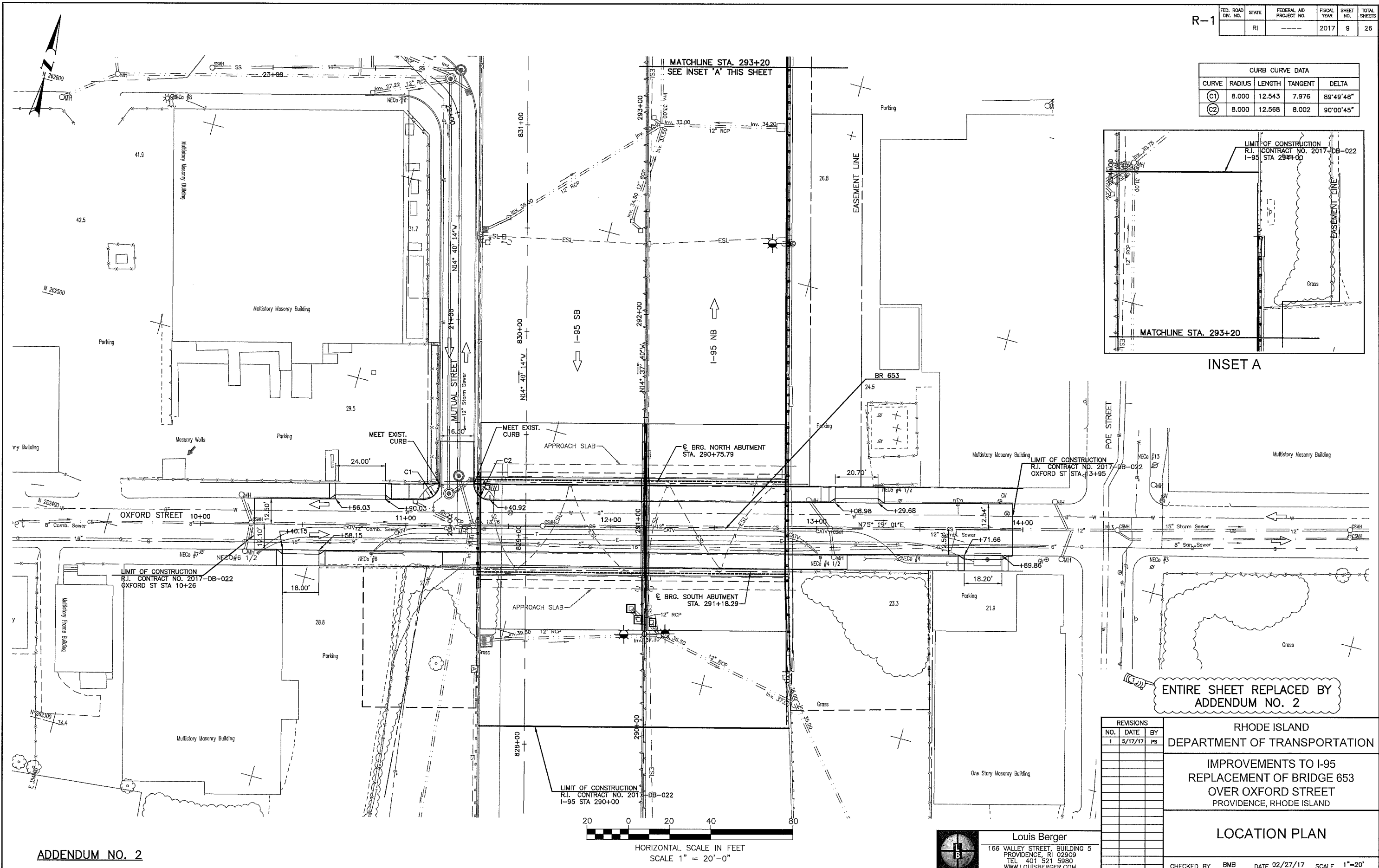
R-1

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2017	9	26

CURB CURVE DATA				
CURVE	RADIUS	LENGTH	TANGENT	DELTA
(C1)	8.000	12.543	7.976	89°49'48"
(C2)	8.000	12.568	8.002	90°00'45"



INSET A



ENTIRE SHEET REPLACED BY ADDENDUM NO. 2

REVISIONS		
NO.	DATE	BY
1	5/17/17	PS

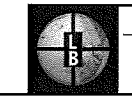
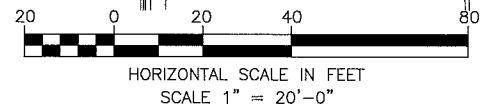
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-95 REPLACEMENT OF BRIDGE 653 OVER OXFORD STREET PROVIDENCE, RHODE ISLAND

LOCATION PLAN

CHECKED BY BMB DATE 02/27/17 SCALE 1"=20'

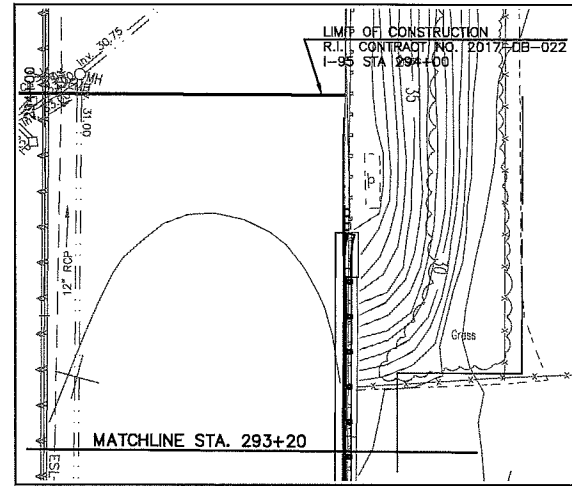
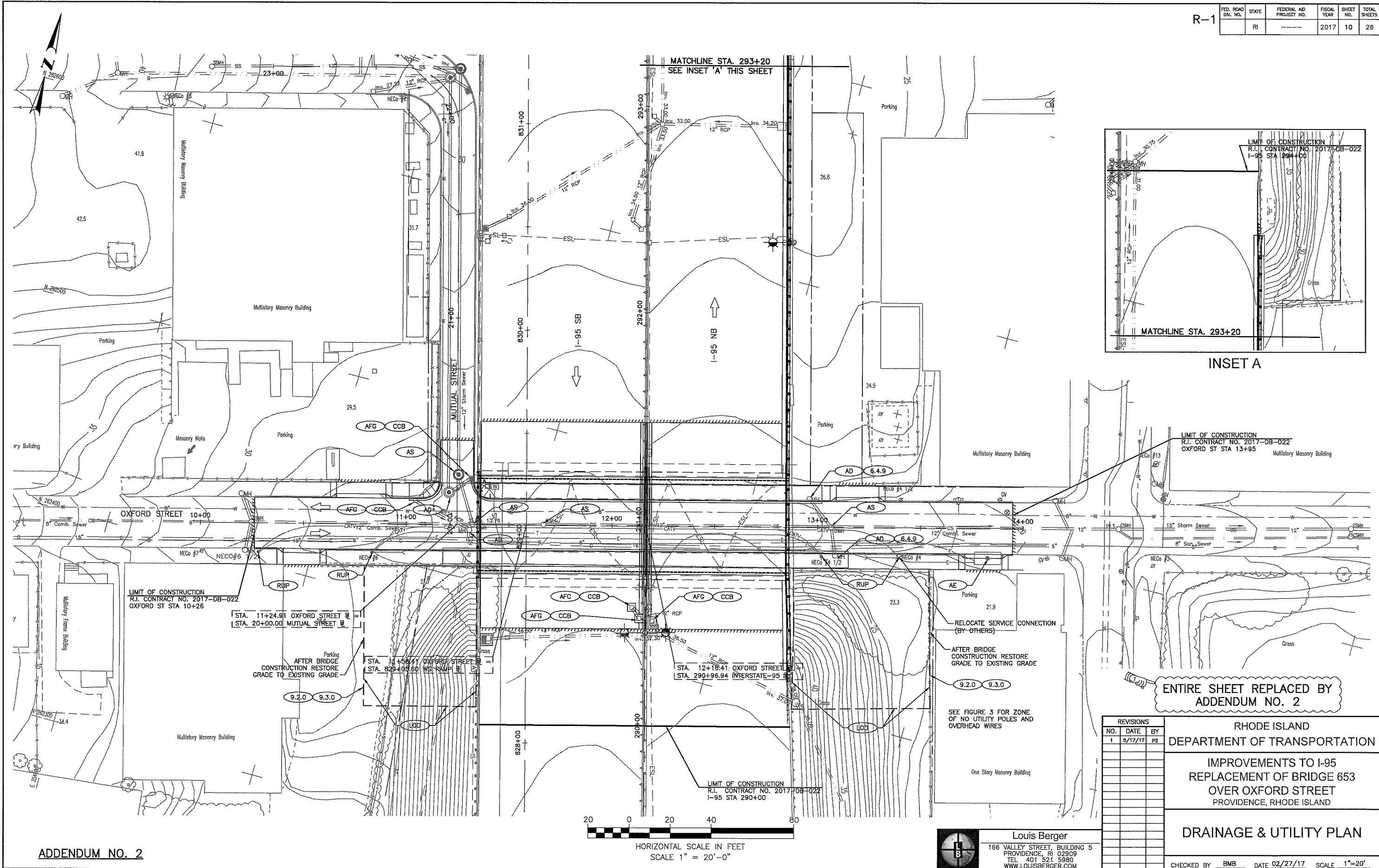
ADDENDUM NO. 2



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R-1

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2017	10	26



INSET A

LIMIT OF CONSTRUCTION
 R.I. CONTRACT NO. 2017-DB-022
 OXFORD ST STA 13+95

LIMIT OF CONSTRUCTION
 R.I. CONTRACT NO. 2017-DB-022
 OXFORD ST STA 10+26

STA. 11+24.91 OXFORD STREET @
 STA. 20+00.00 MUTUAL STREET @

STA. 14+58.47 OXFORD STREET @
 STA. 829+09.60 I-95 RAMP @

STA. 12+18.41 OXFORD STREET @
 STA. 290+96.94 INTERSTATE-95 @

LIMIT OF CONSTRUCTION
 R.I. CONTRACT NO. 2017-DB-022
 I-95 STA 290+00

RELOCATE SERVICE CONNECTION
 (BY OTHERS)

AFTER BRIDGE CONSTRUCTION RESTORE GRADE TO EXISTING GRADE

SEE FIGURE 3 FOR ZONE OF NO UTILITY POLES AND OVERHEAD WIRES

ENTIRE SHEET REPLACED BY
 ADDENDUM NO. 2

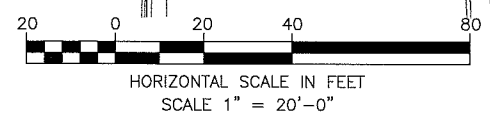
REVISIONS		
NO.	DATE	BY
1	5/17/17	PS

RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-95
 REPLACEMENT OF BRIDGE 653
 OVER OXFORD STREET
 PROVIDENCE, RHODE ISLAND

DRAINAGE & UTILITY PLAN

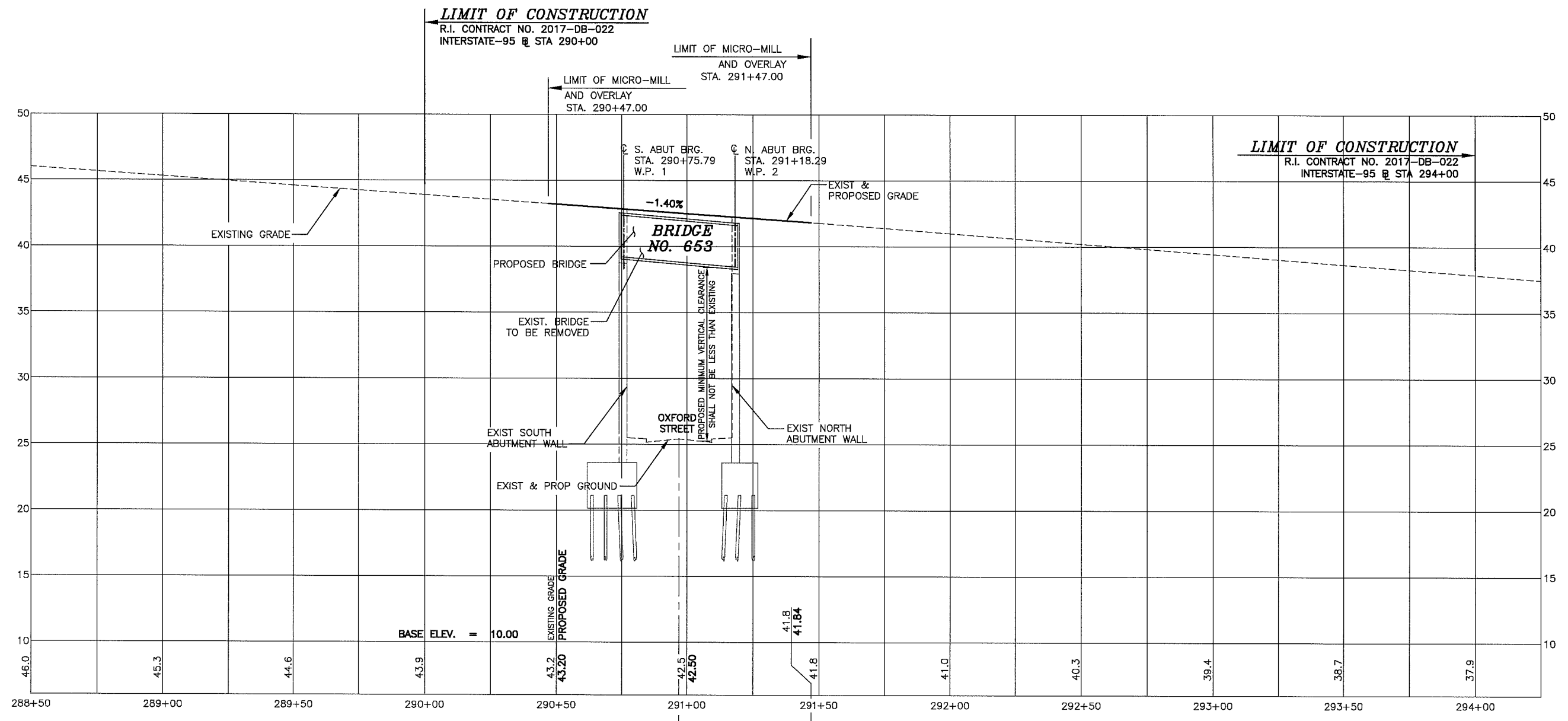
CHECKED BY BMB DATE 02/27/17 SCALE 1"=20'



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ADDENDUM NO. 2

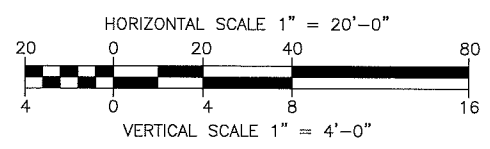
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2017	11	26



STA. 12+16.41 OXFORD STREET @ =
 STA. 290+96.94 INTERSTATE-95 @

ENTIRE SHEET REPLACED BY
 ADDENDUM NO. 2

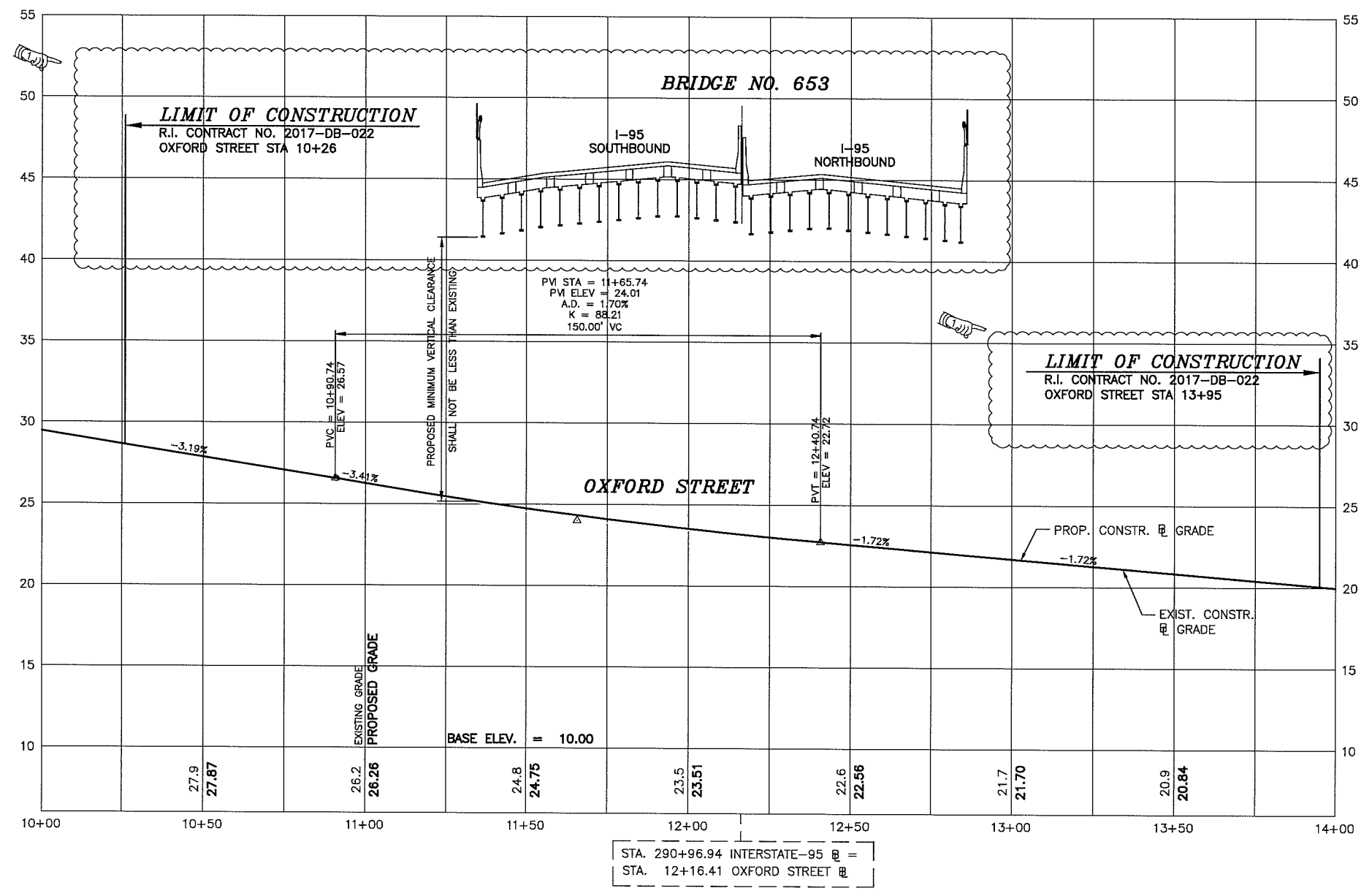
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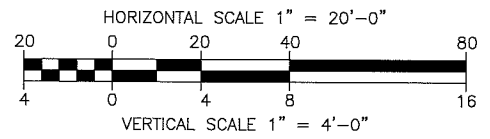
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NO.	DATE	BY	
1	5/17/17	PS	
			PROFILE I-95

CHECKED BY BMB DATE 2/27/17 SCALE AS SHOWN



ADDENDUM NO. 2



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NO.	DATE	BY
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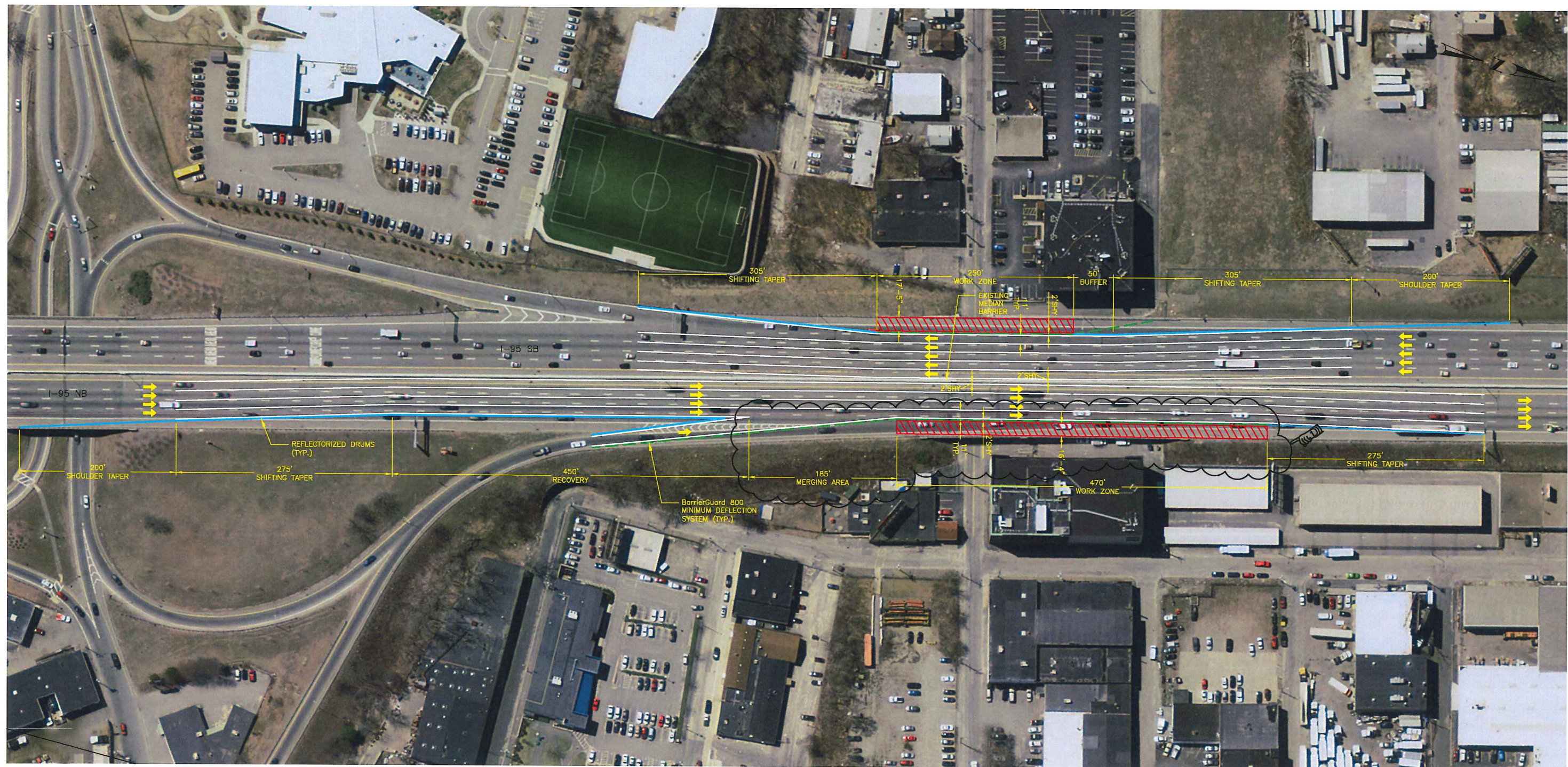
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-95
REPLACEMENT OF BRIDGE 653
OVER OXFORD STREET
PROVIDENCE, RHODE ISLAND

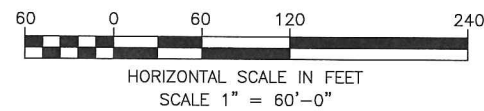
PROFILE
OXFORD STREET

CHECKED BY BMB DATE 2/27/17 SCALE AS SHOWN

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2017	16	26



ADDENDUM NO. 2



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NO.	DATE	BY
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RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-95
 REPLACEMENT OF BRIDGE 653
 OVER OXFORD STREET
 PROVIDENCE, RHODE ISLAND

TRAFFIC CONTROL
 STAGE 1B
 SHEET 1 OF 1

CHECKED BY LBF DATE 04/06/17 SCALE 1"=60'

INDEX

I-95 NB/SB OVER OXFORD STREET BRIDGE NO. 653 SUPERSTRUCTURE REPLACEMENT

SHEET NO.	DESCRIPTION
VOLUME 1	
HIGHWAY PLANS	
FOR INDEX SEE "HIGHWAY PLANS VOLUME 1"	
VOLUME 2	
BRIDGE NO. 653 - BRIDGE PLANS	
1	BRIDGE COVER
2	BRIDGE ABBREVIATIONS
3	PROFILES
4	GENERAL NOTES SHEET 1 OF 3
5	GENERAL NOTES SHEET 2 OF 3
6	GENERAL NOTES SHEET 3 OF 3
6A	BRIDGE KEY PLAN
7	GENERAL PLAN AND ELEVATION
8	TYPICAL BRIDGE SECTION AND APPROACH SECTION
9	CONSTRUCTION STAGING AND DEMOLITION DETAILS SHEET 1 OF 6
10	CONSTRUCTION STAGING AND DEMOLITION DETAILS SHEET 2 OF 6
11	CONSTRUCTION STAGING AND DEMOLITION DETAILS SHEET 3 OF 6
12	CONSTRUCTION STAGING AND DEMOLITION DETAILS SHEET 4 OF 6
13	CONSTRUCTION STAGING AND DEMOLITION DETAILS SHEET 5 OF 6
14	CONSTRUCTION STAGING AND DEMOLITION DETAILS SHEET 6 OF 6
15	REHABILITATION DETAILS
16	NORTH ABUTMENT PLAN AND ELEVATION
17	ABUTMENT DETAILS
18	WALLS SHEET 1 OF 2
19	WALLS SHEET 2 OF 2
19A	EAST WALLS AND BARRIER - DEMOLITION
19B	EAST WALLS AND BARRIER - PROPOSED
20	FRAMING PLAN
21	TYPICAL DECK SECTION AND STEEL DETAILS
22	DIAPHRAGM DETAILS
23	DECK PLAN
24	DECK DETAILS
25	SUPERSTRUCTURE DETAILS
25A	END POST DETAILS FOR TL-5 RAIL

STATE OF RHODE ISLAND



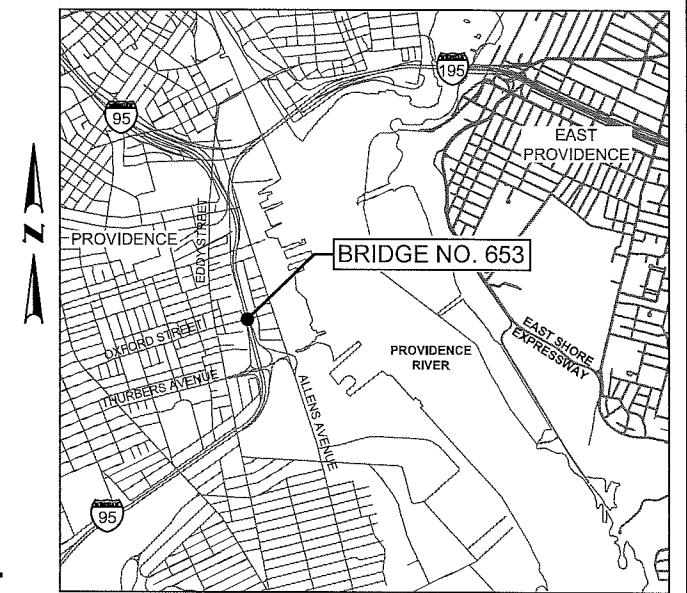
DEPARTMENT OF TRANSPORTATION

PLAN, PROFILE AND SECTIONS OF PROPOSED STATE HIGHWAY IMPROVEMENTS TO I-95 ACCELERATED BRIDGE CONSTRUCTION (ABC) OF BRIDGE NO. 653 SUPERSTRUCTURE REPLACEMENT I-95 NB/SB OVER OXFORD STREET VOLUME 2 OF 2 - BRIDGE PLANS

CITY OF PROVIDENCE
COUNTY OF PROVIDENCE

R.I. CONTRACT NO. 2017-DB-022 F.A. PROJECT NO.

R-1	FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		RI		2017	1	25



LOCATION MAP
SCALE: 1"=2,000'

DESIGN DESIGNATION

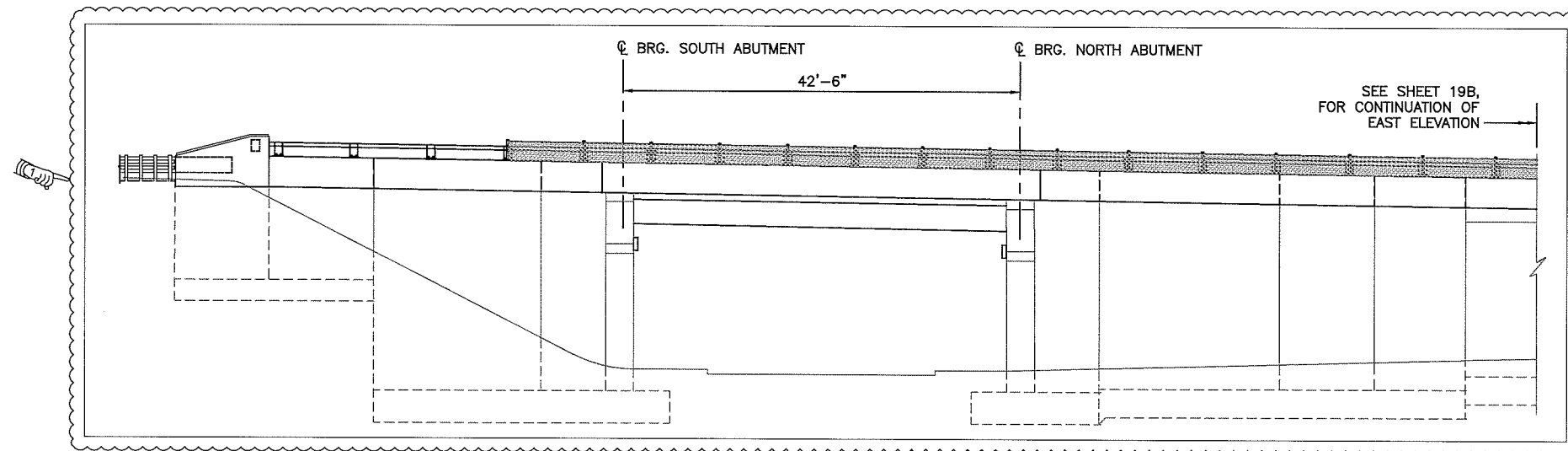
	I-95	OXFORD STREET
AADT (2016)	143,545 V.P.D.	AADT (2016) XX,XXXV.P.D.
AADT (2036)	174,194 V.P.D.	AADT (2036) XX,XXX V.P.D.
D	50%	D XXX%
K	9%	K XX%
T	6%	T X%
DDHV	7,839 V.P.H.	DDHV X,XXX V.P.H.
DHV	15,677 V.P.H.	DHV X,XXX V.P.H.
DESIGN SPEED	55 M.P.H.	DESIGN SPEED 30 M.P.H.

HURRICANE EVACUATION ROUTE

This project includes work on a designated Hurricane Evacuation and Diversionary Route as follows:
- Intersection of
Refer to General Note 18 on Sheet

R.I. STANDARD SPECIFICATIONS AND STANDARD DETAILS

SPECIFICATIONS TO GOVERN THIS PROJECT ARE THE R.I. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AMENDED AUGUST 2013, WITH ALL REVISIONS AND THE STATE AND FEDERAL SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS. STANDARD DETAILS FOR THIS PROJECT ARE R.I. STANDARD DETAILS, 1998 EDITION, WITH ALL REVISIONS.



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

SCALES OF DRAWINGS

AS SHOWN

BASE OF LEVELS
NGVD 29

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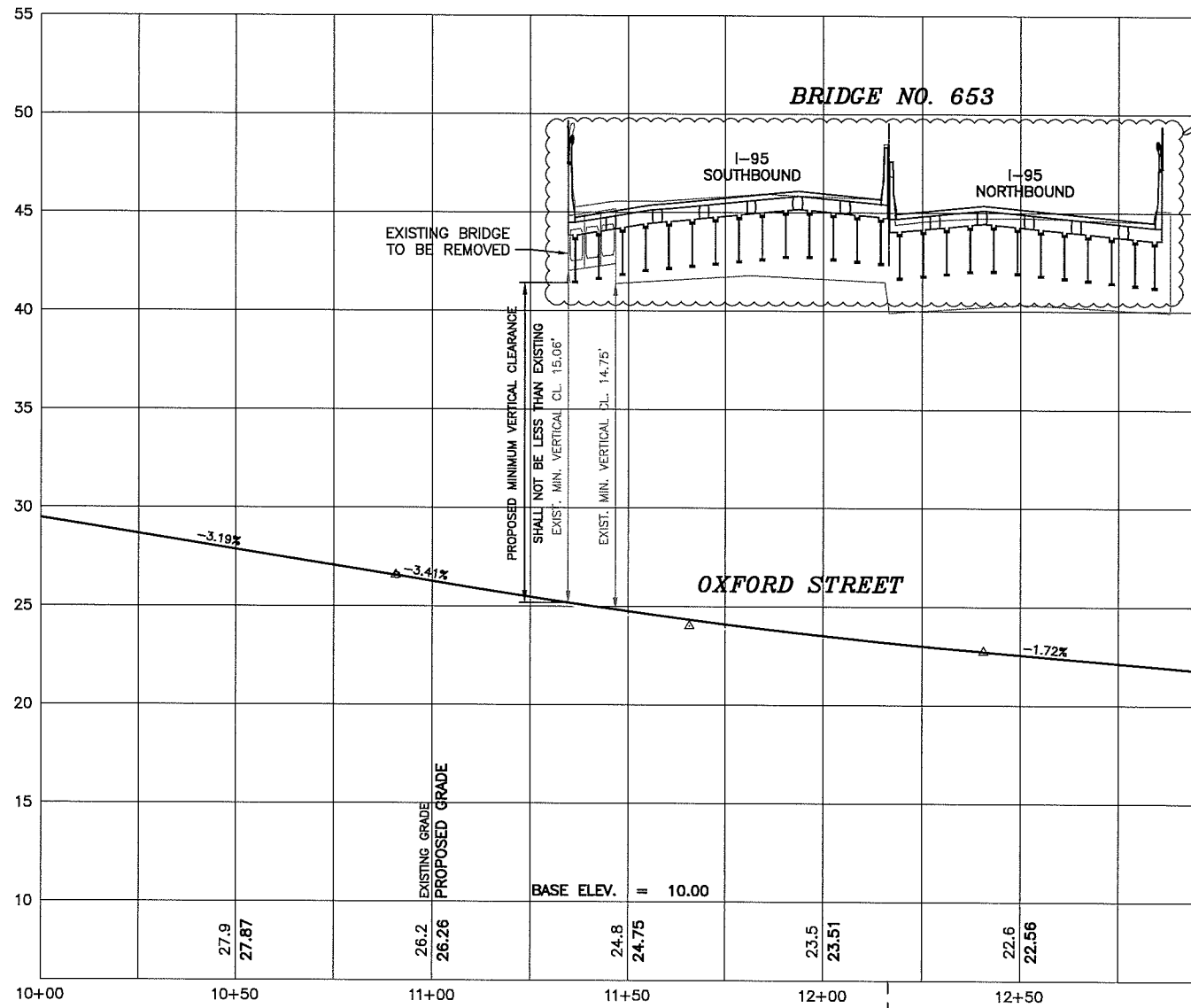
Contract Number 2017-DB-022
Number of Sheet 1
Total Sheets 25

30% SUBMISSION BRIDGE PLANS

R.I. DEPARTMENT OF TRANSPORTATION	
APPROVED	
ADMINISTRATOR, PROJECT MANAGEMENT	DATE
APPROVED	
CHIEF ENGINEER OF INFRASTRUCTURE	DATE
APPROVED	
DIRECTOR	DATE
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED	
DIVISION ADMINISTRATOR	DATE

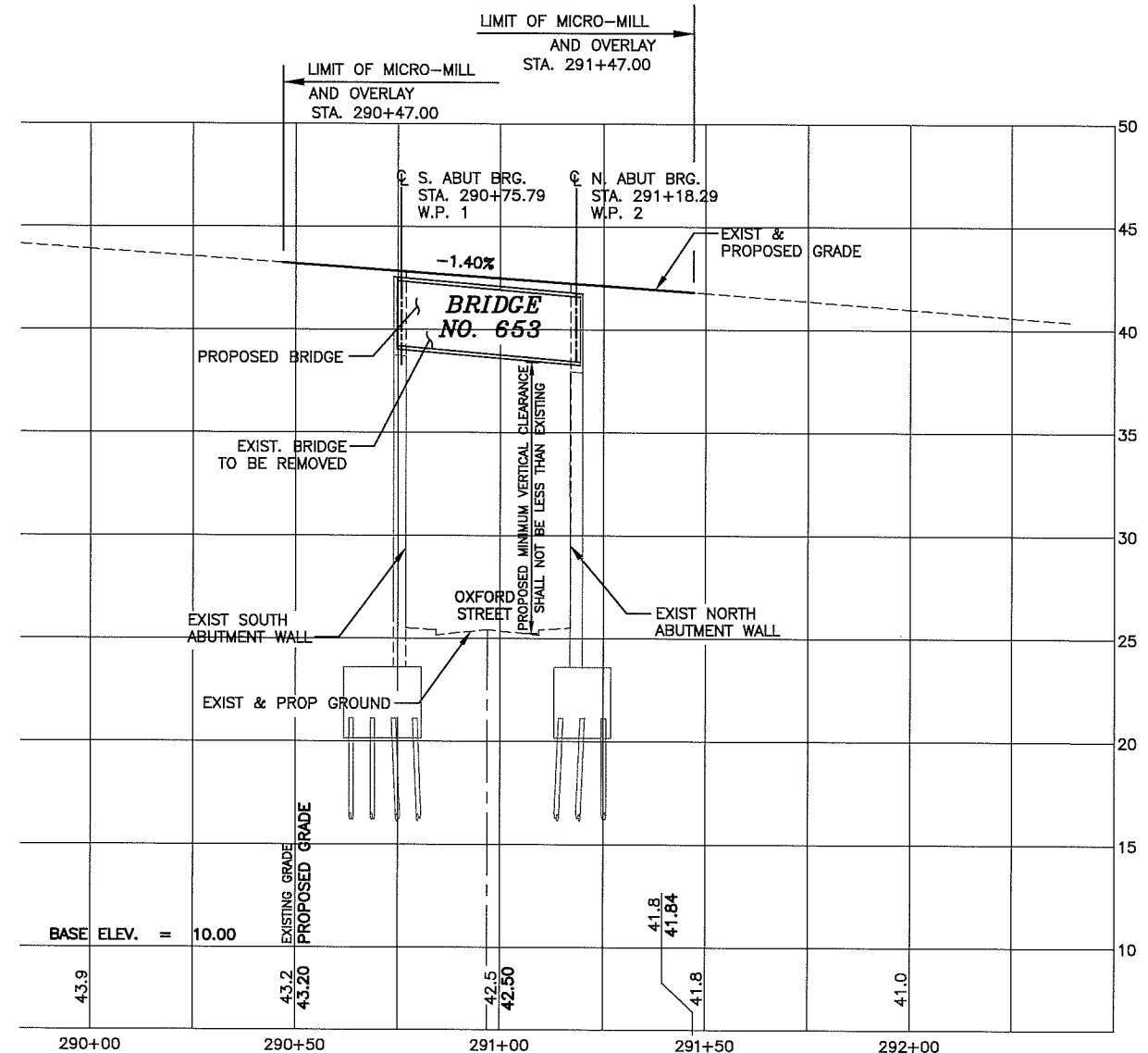
ADDENDUM NO. 2

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2017	3	25



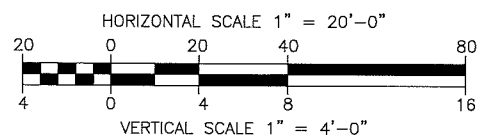
STA. 290+96.94 INTERSTATE-95 =
 STA. 12+16.41 OXFORD STREET =

OXFORD STREET



STA. 12+16.41 OXFORD STREET =
 STA. 290+96.94 INTERSTATE-95 =

I-95



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REVISIONS		
NO.	DATE	BY
1	5/17/17	PNF

RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-95
 REPLACEMENT OF BRIDGE 653
 OVER OXFORD STREET
 PROVIDENCE, RHODE ISLAND

PROFILES

CHECKED BY PNF DATE 4/28/17 SCALE AS SHOWN

ADDENDUM NO. 2

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	-----	2017	5	25

CONCRETE NOTES

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

5A. THE TOP BARS IN THE DECK SLABS SHALL BE SPLICED AT THE CENTER OF SPANS BETWEEN GIRDERS. THE BOTTOM BARS SHALL BE SPLICED OVER THE GIRDERS.

- UNLESS OTHERWISE INDICATED ON THE PLANS, ALL MAIN REINFORCING BARS SHALL HAVE THE FOLLOWING MINIMUM COVER:

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

COVER TO TIES AND STIRRUPS MAY BE 0.5 INCH LESS THAN THE ABOVE VALUES SPECIFIED FOR MAIN REINFORCING, BUT IN NO CASE LESS THAN 1.5 INCHES.

- ALL ANCHOR BOLTS SHALL BE ASTM DESIGNATION A 307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO DESIGNATION M 232 OR METALIZED IN ACCORDANCE WITH SECTION M.05. SWEDGED RODS SHALL BE AASHTO DESIGNATION M 270 GRADE 36 AND SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO DESIGNATION M 232.

- ALL ANCHOR BOLTS SHALL BE SET PRIOR TO PLACEMENT OF CONCRETE UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.

- HORIZONTAL CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON PLANS WILL NOT BE PERMITTED WITHOUT A WRITTEN REQUEST BY THE CONTRACTOR AND PRIOR AUTHORIZATION BY THE ENGINEER.

- UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CONCRETE SURFACES VISIBLE IN ELEVATION TO ONE FOOT BELOW FINAL GROUND LINE (AND THE UNDERSIDE OF ALL CONCRETE DECK SLABS OUTSIDE OF THE FASCIA BEAMS), SHALL RECEIVE A CONCRETE SURFACE RUBBED FINISH IN ACCORDANCE WITH THE RI STANDARD SPECIFICATIONS.

- THE ENTIRE TOPSIDE SURFACES OF ABUTMENT BEAM SEATS, AS WELL AS VERTICAL FACES OF BACKWALLS, SHALL BE PROVIDED WITH A FILM-FORMING SEALER (M12.03.1) CONCRETE SURFACE TREATMENT-PROTECTIVE COATING IN ACCORDANCE WITH SECTION 820 OF THE RI STANDARD SPECIFICATIONS.

- ALL EXPOSED EDGES AND REENTRANT CORNERS NOT OTHERWISE DETAILED ON THE PLANS SHALL HAVE A MINIMUM 3/4" CHAMFER.

- ALL JOINT SEALANT SHALL BE POLYURETHANE, POLYURETHANE ELASTOMERIC, OR SILICONE SEALANT AS DESIGNATED ON THE PLANS. THE COLOR OF THE JOINT SEALANT, WHERE EXPOSED, SHALL BE NEUTRAL (LIGHT GRAY OR TAN), THE COLOR OF THE SEALANT, WHERE NOT EXPOSED, WILL BE AT THE DISCRETION OF THE CONTRACTOR.

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING CONCRETE STAINS OR DISCOLORATIONS DURING CONSTRUCTION UNTIL SUCH TIME WHEN THE SURFACES ARE APPROVED AND ACCEPTED. ANY CONCRETE STAINS OR DISCOLORATIONS OCCURRING PRIOR TO ACCEPTANCE OF THE SURFACES SHALL BE REMOVED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.

- UNLESS OTHERWISE NOTED ON THE PLANS, JOINT FILLER IS TO BE A PREFORMED, NON-EXPANSIVE, NON-EXTRUDING TYPE IN ACCORDANCE WITH SECTION M.02.11.1 OF THE RI STANDARD SPECIFICATIONS.

- PLACEMENT, FINISHING AND CURING OF BRIDGE DECK CONCRETE SHALL BE IN ACCORDANCE WITH SECTION 814 OF THE RI STANDARD SPECIFICATIONS AND IN ACCORDANCE WITH THE SEQUENCE AND DIRECTION OF POURS AS SHOWN ON THE PLANS.

SUPPORT RAILS FOR THE FINISHING MACHINE(S) SHALL BE LOCATED BEYOND THE CURB LINE SUCH THAT THE ENTIRE BRIDGE DECK SHALL RECEIVE A MACHINE FINISH. THE CONTRACTOR SHALL INCLUDE THE LOADING OF THE FINISHING MACHINE(S) AND THE SUPPORT RAIL SYSTEM IN THE DESIGN OF THE CANTILEVER DECK SUPPORT SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST AND DESIGN OF THIS SUPPORT SYSTEM WHICH MAY REQUIRE THE ADDITION OF TEMPORARY DIAPHRAGMS OR BRACES TO PREVENT FASCIA STRINGER ROTATION.

- UNLESS OTHERWISE INDICATED ON THE PLANS, ALL DECK FORMS SHALL BE OF THE REMOVABLE TYPE THAT WILL PRODUCE THE DIMENSIONS SHOWN ON THE PLANS.

- IN ACCORDANCE WITH THE RI STANDARD SPECIFICATIONS, ALL METAL TIES OR ANCHORAGES WHICH ARE REQUIRED FOR CONCRETE FORMWORK SHALL BE SO CONSTRUCTED THAT THEY CAN BE REMOVED TO AT LEAST ONE INCH BELOW THE EXPOSED SURFACE OF THE CONCRETE WITHOUT CAUSING DAMAGE TO THE CONCRETE SURFACE. SNAP TIES MAY BE USED ONLY IF APPROVED BY THE ENGINEER. IF THE CONTRACTOR PROPOSES TO USE THEM, A CATALOG CUT AND OTHER NECESSARY INFORMATION MUST BE SUBMITTED TO THE ENGINEER TO DEMONSTRATE THAT THE TIES WILL SNAP-OFF FAR ENOUGH INTO THE CONCRETE TO ALLOW FOR PROPER PATCHING. SNAP TIES MUST PROVIDE ADEQUATE STRENGTH TO SUPPORT THE FORMS. ALL CAVITIES SHALL BE FILLED WITH AN APPROVED CEMENT MORTAR MEETING THE REQUIREMENTS OF ASTM C 928.

- EMBEDMENT LENGTHS FOR DRILLED AND GROUTED DOWELS SHALL BE IN ACCORDANCE WITH SECTION 819 OF THE STANDARD SPECIFICATION, UNLESS OTHERWISE INDICATED ON THE PLANS.

- WATER STOPS ARE REQUIRED FOR HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS IN ABUTMENTS AND WALLS WHEN EXPOSED TO BACKFILL EARTH MATERIAL. WATER STOPS SHALL BE INSTALLED AT THE LOCATIONS DETAILED ON THE PLANS, AT THE LOCATIONS AS SPECIFIED ABOVE AND AT ALL LOCATIONS AS DIRECTED BY THE ENGINEER, ALL IN ACCORDANCE WITH SECTION 812 OF THE RI STANDARD SPECIFICATIONS.

REINFORCEMENT NOTE

THE CONTRACTOR'S BAR FABRICATOR SHALL VERIFY THE CORRECTNESS IN PREPARING HIS ORDER LISTS AND BENDING DIAGRAMS. ANY EXPENSE INCIDENT TO REVISIONS OF MATERIAL AS SHOWN ON THE ORDER LISTS AND BENDING DIAGRAMS IN ORDER TO MAKE IT COMPLY WITH THE DESIGN DRAWINGS SHALL BE BORNE BY THE CONTRACTOR. SHOP DRAWINGS FOR ALL REINFORCEMENT DETAILS AND SCHEDULE SHALL BE SUBMITTED TO THE ENGINEER IN SUFFICIENT TIME TO PERMIT CAREFUL CHECKING.

PREFABRICATED BRIDGE ELEMENTS AND SYSTEMS

- THE FABRICATION OF ALL PRECAST ELEMENTS SHALL BE IN ACCORDANCE WITH SECTION 809 "PRECAST/PRESTRESSED CONCRETE MASONRY" OF THE RI STANDARD SPECIFICATIONS AND AS MODIFIED BY THE SPECIAL PROVISIONS ACCOMPANYING THESE PLANS.

SHOP DRAWING SUBMITTAL

- | | | |
|---|--|-----------------------------------|
| 1. BRIDGE DEMOLITION | 11. BRIDGE BEARING ASSEMBLY | 20. MISCELLANEOUS METALS |
| 2. CRANE SUBMITTALS | 12. BEAM ERECTION PROCEDURES | 21. WELDING PROCEDURES |
| 3. TEMPORARY PROTECTION SHIELDS | 13. BRIDGE NAME/SEAL TABLETS | 22. MATERIAL CUT SHEETS |
| 4. CONCRETE: MIX DESIGNS, PLACING AND METHODS AND EQUIPMENT, CURING PLAN AND METHODS, PERSONNEL RESOURCES | 14. CONCRETE SUBCONTRACTOR'S QUALIFICATIONS AND EXPERIENCE | 23. PEDESTRIAN BARRIER SYSTEMS |
| 5. REINFORCING STEEL, SPLICES AND INSERTS | 15. SEQUENCE PLAN | 24. GROUTED SPLICE COUPLER SYSTEM |
| 6. DRILL AND GROUT REINFORCING | 16. TEMPORARY EARTH SUPPORTS | |
| 7. CONCRETE FORMS | 17. TEMPORARY SHORING | |
| 8. STRUCTURAL STEEL | 18. REINFORCING FABRICATION DRAWINGS | |
| 9. SLOPE PAVING | 19. WATER STOPS/NEOPRENE SEALS | |
| | 20. UTILITY SUPPORTS | |

NECESSARY SUBMITTALS MAY NOT BE LIMITED TO THE ABOVE LIST AND MAY REQUIRE OTHER SUBMITTALS AT THE RESIDENT ENGINEER'S REQUEST FOR: SHOP DRAWINGS, CERTIFICATE OF COMPLIANCE, PRODUCT INFORMATION, CATALOG CUTS, TEST DATA OR OTHER.

ADDENDUM NO. 2

REVISIONS		
NO.	DATE	BY
1	5/17/17	PNF

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-95
REPLACEMENT OF BRIDGE 653
OVER OXFORD STREET
PROVIDENCE, RHODE ISLAND

GENERAL BRIDGE NOTES
SHEET 2 OF 3



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CHECKED BY PNF DATE 4/28/17 SCALE NONE

R-1

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2017	6	25

STRUCTURAL STEEL NOTES

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

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

THE FABRICATOR MUST SUBMIT PROOF OF CURRENT CERTIFICATION AS SPECIFIED.
- THE STEEL ERECTOR/CONTRACTOR FOR THIS PROJECT SHALL BE CERTIFIED FOR "ADVANCED CERTIFIED STEEL ERECTOR (ASCE)" IN ACCORDANCE WITH THE AISC QUALITY CERTIFICATION PROGRAM. THE ERECTOR/CONTRACTOR OF THE STRUCTURAL STEEL SHALL BE REQUIRED TO SUBMIT PROOF OF CURRENT CERTIFICATION AS SPECIFIED.
- THIS BRIDGE CONTAINS FATIGUE SENSITIVE DETAILS (FSD). THESE DETAILS HAVE BEEN DESIGNATED ON THE STEEL FRAMING AND/OR THE STEEL DETAIL SHEETS.
- SHOP DRAWINGS FOR ALL FABRICATED STEEL INCLUDING BEARINGS, EXPANSION JOINTS, RAILINGS AND FALSEWORK SHALL BE SUBMITTED TO THE ENGINEER IN SUFFICIENT TIME TO PERMIT CAREFUL CHECKING PRIOR TO FABRICATION.
- INSPECTION OF WELDS INCLUDING RADIOGRAPHIC TESTING (RT) AND MAGNETIC PARTICLE TESTING (MT) SHALL BE IN ACCORDANCE WITH THE RI STANDARD SPECIFICATIONS AND THE AASHTO/AWS BRIDGE WELDING CODE, EXCEPT THAT THE REMAINING PERCENTAGE OF ALL GROOVE WELDS NOT RT TESTED SHALL BE MT OR DYE-PENETRANT TESTED.
- STRUCTURAL STEEL SHAPES AND PLATES SHALL CONFORM TO THE LATEST PROVISIONS OF AASHTO DESIGNATION M 270 GRADE 36 AND GRADE 50, AS DESIGNATED ON THE PLANS.
- ALL AASHTO M 270 STRUCTURAL STEEL USED IN BEAMS (INCLUDING CONNECTION PLATES AND STIFFENERS), SHALL MEET THE ZONE 2 CHARPY V-NOTCH FRACTURE TOUGHNESS TEST REQUIREMENTS AS SPECIFIED IN TABLE 6.6.2-2 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR "NONFRACTURE-CRITICAL" AND "FRACTURE-CRITICAL" COMPONENTS. THE ZONE 2 FRACTURE TOUGHNESS REQUIREMENTS ARE AS FOLLOWS:
NONFRACTURE-CRITICAL

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

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

THE CHARPY V-NOTCH FRACTURE TOUGHNESS TEST REQUIREMENT IS NOT MANDATORY FOR THE FOLLOWING STEEL COMPONENTS:
 - BEARINGS AND SOLE PLATES
 - EXPANSION JOINTS
 - DRAINAGE MATERIAL
 - RAILINGS
 - SUPPORT OF EXCAVATION COMPONENTS
- WELDING SHALL BE IN ACCORDANCE WITH THE LATEST STRUCTURAL WELDING CODE AASHTO/AWS D1.5 (INCLUDING ALL INTERIMS TO DATE) AND APPLICABLE SUPPLEMENTAL AWS PUBLICATIONS.
- ALL HIGH STRENGTH BOLTS SHALL CONFORM TO AASHTO DESIGNATION M 164, AND THEY SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 824 OF THE RI STANDARD SPECIFICATIONS.
- WASHERS MEETING AASHTO DESIGNATION M 293 ARE TO BE USED OVER ALL HOLES THAT ARE MORE THAN 1/16" IN DIAMETER GREATER THAN THE BOLT DIAMETER AND UNDER ALL PARTS TURNED DURING ASSEMBLY.
- WELDING ELECTRODES SHALL HAVE THE SAME CORROSION RESISTANCE AS THE BASE METAL AND SHALL BE FREE OF MOISTURE AT THE TIME OF USE.
- STRUCTURAL STEEL SHALL BE PREPARED AND PAINTED IN ACCORDANCE WITH THE RI STANDARD SPECIFICATIONS.
- UNLESS OTHERWISE SPECIFIED, THE UPPER SURFACES OF BEAM TOP FLANGES SHALL BE FREE OF PAINT, OIL OR OTHER IMPURITIES THAT WOULD IN ANY WAY REDUCE THE BOND OF CONCRETE TO STEEL.
- PRIOR TO FABRICATION, ALL MATERIALS SHALL BE BLAST-CLEANED TO AT LEAST SSPC-SP6 TO REMOVE ALL OIL, DIRT, GREASE, MILL SCALE AND OTHER DELETERIOUS MATERIALS FROM THE SURFACES OF THE STEEL TO BE FABRICATED.
- PRIOR TO SHOP COATING AS SPECIFIED IN SECTION 825 OF THE RI STANDARD SPECIFICATIONS, ALL CORNERS AND EDGES OF STEEL WHICH HAVE BEEN FLAME CUT OR OTHERWISE HARDENED SHALL BE SOFTENED BY GRINDING OR BLAST-CLEANING TO PROVIDE A SURFACE SUITABLE FOR APPLICATION OF THE SPECIFIED PAINT SYSTEM.
- WELDING OF ATTACHMENTS TO BEAM FLANGES OR WEBS FOR CONSTRUCTION PURPOSES IS NOT PERMITTED EXCEPT WHEN APPROVED BY THE ENGINEER.
- THE ENDS OF ALL BEAMS SHALL BE VERTICAL AFTER ALL DEAD LOADS HAVE BEEN PLACED.
- INTERMEDIATE STIFFENERS SHALL BE PLACED ON THE INTERIOR SIDE OF THE FASCIA BEAM WEBS AND ON BOTH SIDES OF ALL INTERIOR BEAM WEBS.
- BEARING STIFFENERS SHALL BE FABRICATED AS SHOWN ON THE PLANS AND SHALL BE PLACED ON BOTH SIDES OF ALL BEAM WEBS.

- INTERMEDIATE STIFFENERS AND CONNECTION PLATES SHALL BE SET PERPENDICULAR TO THE FLANGES OF THE BEAMS.
- END BEARING STIFFENERS AT BEAM ENDS SHALL BE PLUMB.
- BOLTED CONNECTIONS SHALL BE DESIGNED AS SLIP-CRITICAL CONNECTIONS. THE FAYING SURFACES SHALL SATISFY CLASS B SURFACE CONDITION AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
- THE BEAMS SHALL BE CAMBERED TO THE AMOUNTS SHOWN ON THE PLANS, AND AT THE TIME AND PLACE OF ERECTION THEY SHALL HAVE THE REQUIRED AMOUNT OF CAMBER. THE ERECTED VERTICAL ALIGNMENT (CAMBER) SHALL NOT DEVIATE FROM THE THEORETICAL ERECTED VERTICAL ALIGNMENT BY MORE THAN THE FOLLOWING: -0, +1/4" x (TOTAL LENGTH, IN FEET, FROM THE NEAREST SUPPORT)/10. THE MAXIMUM DEVIATION IS 1/2" BETWEEN SUPPORTS.
- NO SHOP FILLET WELD SHALL BE LESS THAN 1/4 INCH.
- ALL SHEAR STUD CONNECTORS SHALL BE WELDED BY THE AUTOMATIC TIMED ELECTRIC ARC PROCESS. SHEAR STUDS SHALL BE INSPECTED AND TESTED IN ACCORDANCE WITH SECTION 824 OF THE RI STANDARD SPECIFICATIONS.
- WHEN STEEL DIE STAMPS ARE USED TO IDENTIFY PIECES AND MEMBERS, FABRICATORS SHALL UTILIZE LOW STRESS STAMPS.
- FOR SIZE AND LOCATION OF ANCHOR BOLTS, SEE ABUTMENT, AND BEARING DRAWINGS.

- THE COST OF PREPARING AND STAMPING THE ERECTION PLAN, COMPUTATIONS, AND REPORTS, RESPONDING TO RIDOT'S COMMENTS AND MAKING THE NECESSARY REVISIONS, AND ATTENDANCE AT MEETINGS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE SUPERSTRUCTURE PAY ITEM, BE IT CONCRETE, STEEL OR TIMBER.

3. TEMPORARY BARRIER ON BRIDGES:

TEMPORARY BARRIER TO BE UTILIZED ON BRIDGES AND THEIR APPROACH DURING CONSTRUCTION SHALL MEET TEST LEVEL TL-4.

GENERAL NOTES REGARDING TEMPORARY CONSTRUCTION CONDITIONS:

- DESIGN WIND PRESSURES FOR CONSTRUCTION:

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

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

TABLE NOTES:

- APPLICATION OF THE TABULAR PRESSURE:
 - BRIDGE COMPONENTS DURING CONSTRUCTION, PRIOR TO THE INSTALLATION OF THE PERMANENT BRACING SYSTEMS, NOT INCLUDING CRANE LIFTING.
 - FALSE WORK, SHORING, AND SCAFFOLDING AS DEFINED IN FHWA "GUIDE DESIGN SPECIFICATION FOR BRIDGE TEMPORARY WORKS", EXCLUDING 3-DIMENSIONAL LATTICED OR TRUSSED FRAMES OR TOWERS;
 - TEMPORARY SHIELDING.
 - FOR STRUCTURES SITUATED ABOVE LIVE INTERSTATE TRAFFIC, THE TABULAR VALUES SHALL BE INCREASED BY 5 PSF.
- ERECTION OF BRIDGE COMPONENTS:

FOR THE ERECTION OF STRUCTURES, THE FOLLOWING SHALL APPLY:
 - THE CONTRACTOR SHALL SUBMIT AN ERECTION PLAN THAT PROVIDES COMPLETE DETAILS OF THE PROCESS INCLUDING, BUT NOT LIMITED TO, TEMPORARY SUPPORTS, SCHEDULING AND OPERATION SEQUENCING, CRANE PLACEMENT, AND ASSUMED LOADS AND CALCULATED STRESSES DURING VARYING STAGES OF LIFTING. THIS APPLIES TO STRUCTURES OF ANY KIND. THE CAPACITY OF THE CRANE AND ALL LIFTING AND CONNECTING DEVICES SHALL BE ADEQUATE FOR 150 PERCENT OF THE TOTAL PICK LOAD INCLUDING SPREADERS AND OTHER MATERIALS. THIS FACTOR OF SAFETY SHALL BE IN ADDITION TO ALL MANUFACTURERS' PUBLISHED FACTORS OF SAFETY.
 - A REGISTERED PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF RHODE ISLAND, WILL BE REQUIRED TO STAMP THE CONTRACTOR'S ERECTION PLAN.
 - THE CONTRACTOR'S PROFESSIONAL ENGINEER WILL BE REQUIRED TO INSPECT AND PROVIDE WRITTEN APPROVAL OF EACH PHASE OF A PREFABRICATED BRIDGE ELEMENT (PBE) INSTALLATION, PRIOR TO ALLOWING VEHICLES OR PEDESTRIANS ON OR BELOW THE STRUCTURE. THE PROFESSIONAL ENGINEER MUST ALSO STAMP ALL CHANGES TO THE CONTRACTOR'S ERECTION PLAN. ADDITIONALLY, ALL PROPOSED CHANGES MUST BE SUBMITTED TO RIDOT FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.
 - A MANDATORY PRE-ERECTION CONFERENCE WILL BE HELD AT LEAST TWO WEEKS PRIOR TO THE START OF THE PBE INSTALLATION TO DISCUSS THE PLAN AND PROCEDURES, WORK SCHEDULES, CONTINGENCY PLANS, SAFETY REQUIREMENTS AND TRAFFIC CONTROL. THE CONTRACTOR'S PROFESSIONAL ENGINEER AND ERECTION SUBCONTRACTOR WILL BE REQUIRED TO ATTEND THIS MEETING, AS WILL THE RIDOT RESIDENT ENGINEER, THE DESIGN PROJECT ENGINEER AND THE DESIGN CONSULTANT. BASED UPON DISCUSSIONS AT THIS MEETING AND A REVIEW OF THE CONTRACTOR'S ERECTION PLAN, RIDOT MAY ORDER THE CONTRACTOR TO MODIFY AND RESUBMIT THE ERECTION PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.
 - THE CONTRACTOR WILL BE REQUIRED TO PERFORM DAILY INSPECTIONS OF THE ERECTED PBE'S UNTIL THE BRIDGE DECK IS COMPLETELY POURED.

ADDENDUM NO. 2



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REVISIONS		
NO.	DATE	BY
1	5/17/17	PNF

**RHODE ISLAND
DEPARTMENT OF TRANSPORTATION**

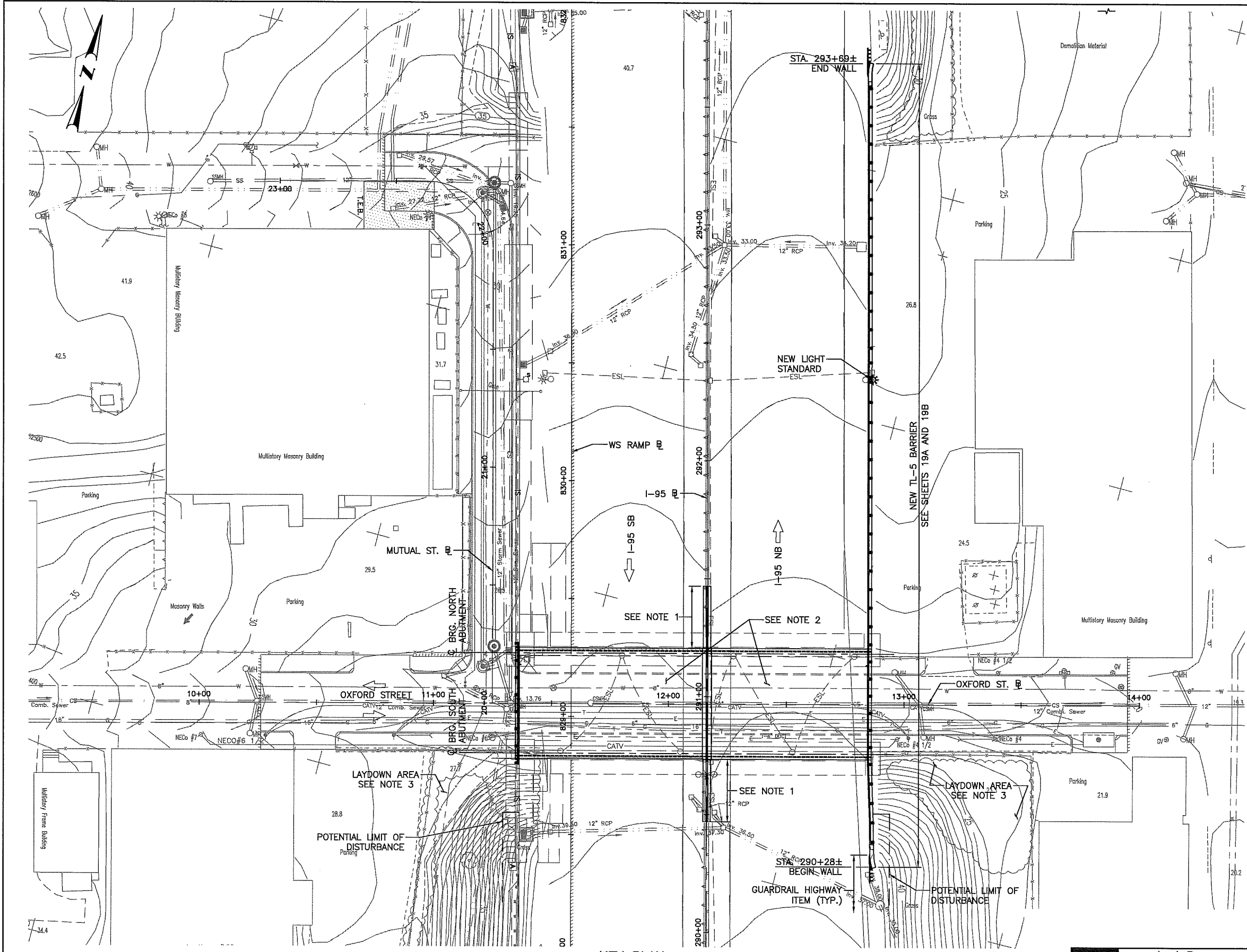
**IMPROVEMENTS TO I-95
REPLACEMENT OF BRIDGE 653
OVER OXFORD STREET
PROVIDENCE, RHODE ISLAND**

GENERAL BRIDGE NOTES
SHEET 3 OF 3

CHECKED BY PNF DATE 4/28/17 SCALE _____

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2017	6A	25

- NOTES:**
1. APPROACH MEDIAN BARRIER IS A HIGHWAY ITEM, SEE HIGHWAY DRAWINGS FOR DETAILS.
 2. EXISTING SUPERSTRUCTURE TO BE REMOVED AND REPLACED.
 3. POTENTIAL LAYDOWN AREAS SHOWN. USE OF THESE AREAS WILL REQUIRE THE DESIGN BUILD TEAM TO DESIGN AND CONSTRUCT TEMPORARY SUPPORT OF EXCAVATION TO PROTECT THE BRIDGE WALLS.



SHEET ADDED BY
ADDENDUM NO. 2

ADDENDUM NO. 2

KEY PLAN
SCALE: 1"=20'-0"



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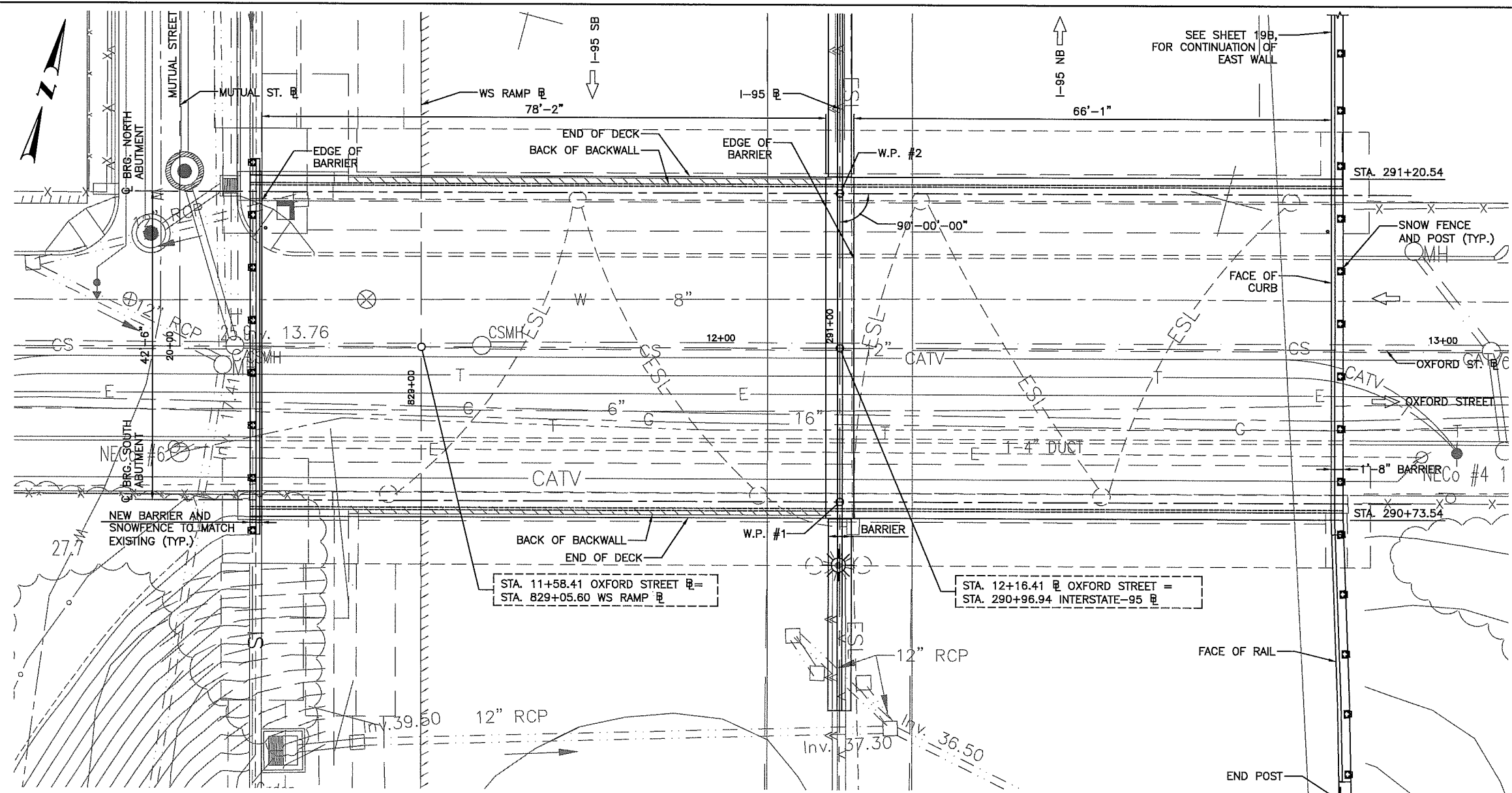
REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-95
REPLACEMENT OF BRIDGE 653
OVER OXFORD STREET
PROVIDENCE, RHODE ISLAND

BRIDGE KEY PLAN

CHECKED BY PNF DATE 5/17/17 SCALE 1"=20'



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

LEGEND:

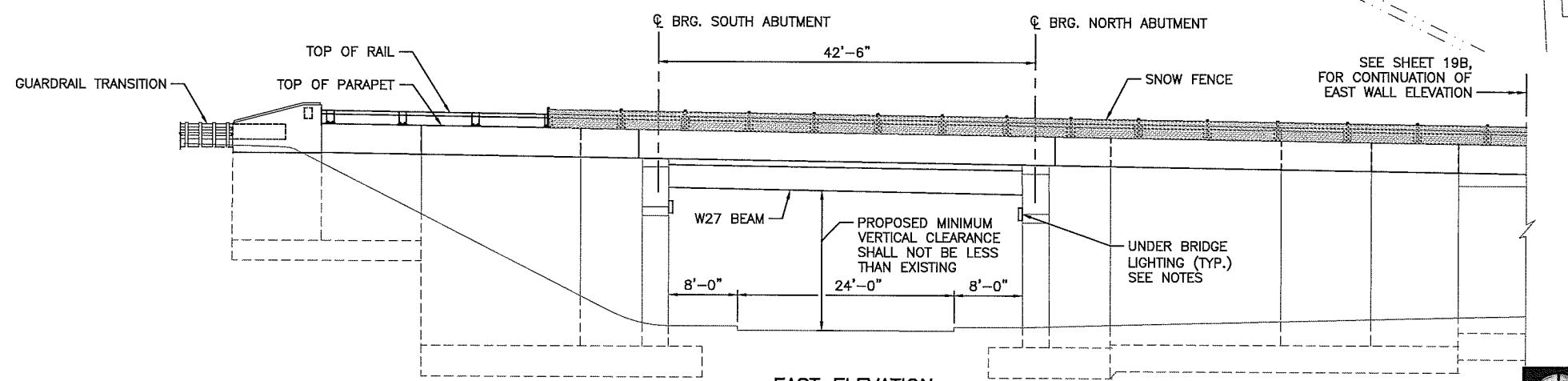
ELECTRIC DUCT	---	E
SANITARY SEWER	---	S
DRAINAGE	---	D
WATER MAIN	---	W
GAS MAIN	---	G
OVERHEAD WIRE	---	OHW
CATCH BASIN	□	CB
DRAINAGE MANHOLE	○	DMH
SEWER MANHOLE	○	SMH
UTILITY POLE	○	UP
WATER GATE	○	WG
DIRECTION OF TRAVEL	→	

WORKING POINTS

W.P. #	STATION	NORTHING	EASTING
W.P. 1	STA. 290+75.79	262445.2319	354259.0778
W.P. 2	STA. 291+18.29	262487.2334	354248.0821

- NOTES:**
1. THE EXISTING LIGHTING UNDER/ON THE BRIDGE SHALL BE REMOVED AND REPLACED PER RIDOT STANDARDS.
 2. FOR END POST AND APPROACH GUARDRAIL DETAILS, SEE RIDOT STANDARD DRAWING 9.4.1.

ENTIRE SHEET REPLACED BY
 ADDENDUM NO. 2



EAST ELEVATION
 SCALE: 1/8"=1'-0"

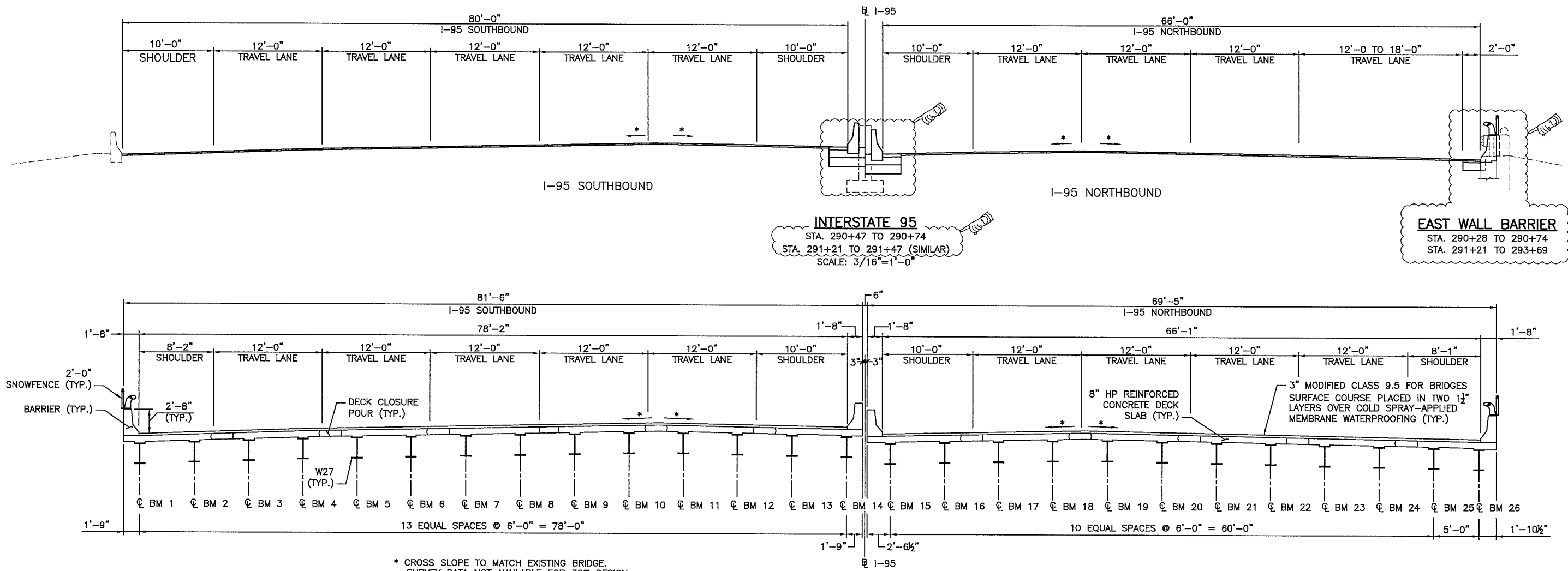
REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY		
1	5/17/17	PNF		
			IMPROVEMENTS TO I-95 REPLACEMENT OF BRIDGE 653 OVER OXFORD STREET PROVIDENCE, RHODE ISLAND	
			GENERAL PLAN AND ELEVATION	
			CHECKED BY PNF	DATE 4/28/17 SCALE 1"=10'

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ADDENDUM NO. 2

R-1

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2017	8	25



INTERSTATE 95
 STA. 290+47 TO 290+74
 STA. 291+21 TO 291+47 (SIMILAR)
 SCALE: 3/16"=1'-0"

EAST WALL BARRIER
 STA. 290+28 TO 290+74
 STA. 291+21 TO 293+69

* CROSS SLOPE TO MATCH EXISTING BRIDGE.
 SURVEY DATA NOT AVAILABLE FOR 30% DESIGN.
 CONTRACTOR SHALL SURVEY EXISTING BRIDGE DECK
 AND APPROACHES AS REQUIRED TO MATCH EXISTING
 GRADES.

TYPICAL TRANSVERSE BRIDGE SECTION
 (LOOKING UPSTATION)
 SCALE: 3/16"=1'-0"

- NOTES:**
1. SEE HIGHWAY PLANS FOR ADDITIONAL NOTES AND DIMENSIONS.
 2. PAVEMENT MARKING LAYOUT TO BE SHOWN ON HIGHWAY SIGNING AND STRIPPING PLANS.

ADDENDUM NO. 2

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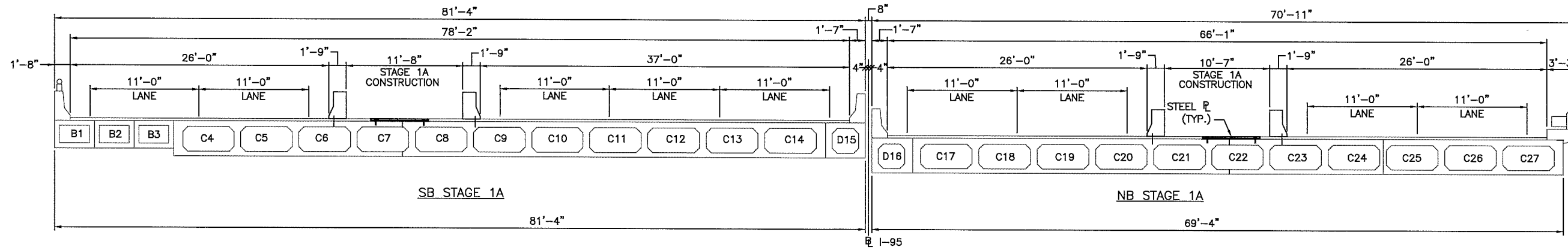
RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-95
 REPLACEMENT OF BRIDGE 653
 OVER OXFORD STREET
 PROVIDENCE, RHODE ISLAND

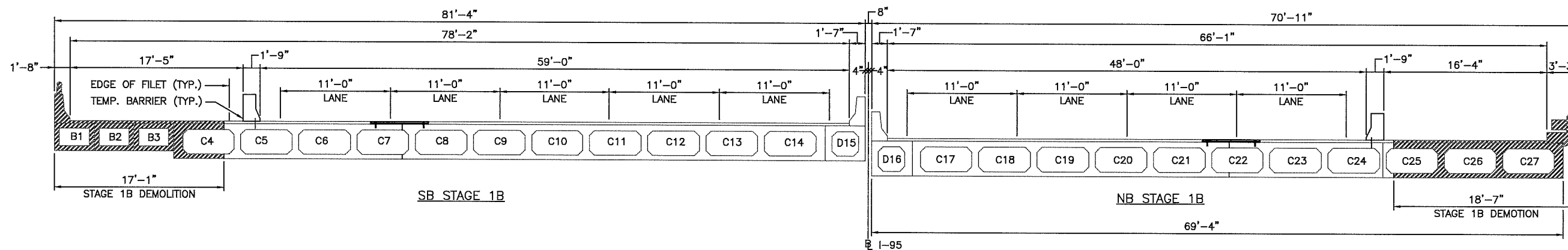
TYPICAL BRIDGE AND APPROACH SECTION

CHECKED BY PNF DATE 4/28/17 SCALE NTS

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2017	9	25



STAGE 1A
SCALE: 3/16"=1'-0"



STAGE 1B
SCALE: 3/16"=1'-0"

LEGEND:

- SMU - SUPERSTRUCTURE MODULAR UNIT
- [Hatched Box] - CLOSURE POUR
- [Rectangular Box] - ANCHORED PRECAST BARRIER
- [Line with Arrow] - BOLTED TEMPORARY STEEL PLATE

STAGE 1

CONSTRUCTION SEQUENCE FOR SOUTHBOUND TRAFFIC:

- STAGE 1A** - ANY TIME/NO LANE CLOSURE
- PREP WORK FOR STAGE 1C DEMOLITION: SAW CUT TOP AND BOTTOM FLANGES OF CONCRETE BOX BEAM C7.
 - PLACE TEMPORARY STEEL PLATES OVER CUT LOCATIONS AS SHOWN.
- STAGE 1B** - ANY TIME/NO LANE CLOSURE
- REMOVE EXISTING CONCRETE BARRIER, BOX BEAMS B1-B3 AND PARTIAL C4.

STAGE 1

CONSTRUCTION SEQUENCE FOR NORTHBOUND TRAFFIC:

- STAGE 1A** - ANY TIME/NO LANE CLOSURE
- PREP WORK FOR STAGE 1C DEMOLITION: SAW CUT TOP AND BOTTOM FLANGES OF CONCRETE BOX BEAM C22.
 - PLACE TEMPORARY STEEL PLATES OVER CUT LOCATIONS AS SHOWN.
- STAGE 1B** - ANY TIME/NO LANE CLOSURE
- REMOVE EXISTING CONCRETE BARRIER AND BOX BEAMS C25-C27.

NOTES:

- INSTALL SMU UNITS WITHOUT PAVEMENT.
- PLACE WATERPROOF AND PLACE BINDER COURSE.
- TOP COURSE OF PAVEMENT TO BE PLACED AFTER THE COMPLETION OF STAGE 3. REPEAT THE TRAFFIC SETUPS IN STAGE 1-3 FOR PLACING THE PAVEMENT.
- ALL DIMENSIONS TO BE FIELD VERIFIED BY THE CONTRACTOR.
- NORTHBOUND AND SOUTHBOUND WORK MAY OCCUR CONCURRENTLY IN STAGES 1A AND 1B.

ADDENDUM NO. 2



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NO.	DATE	BY
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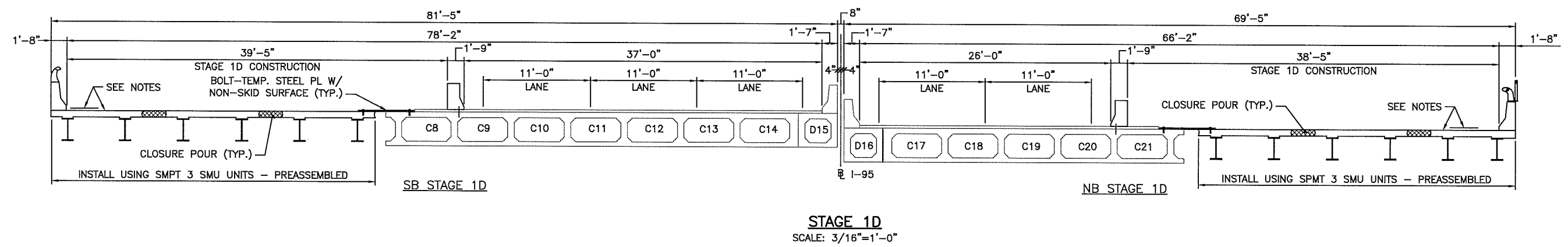
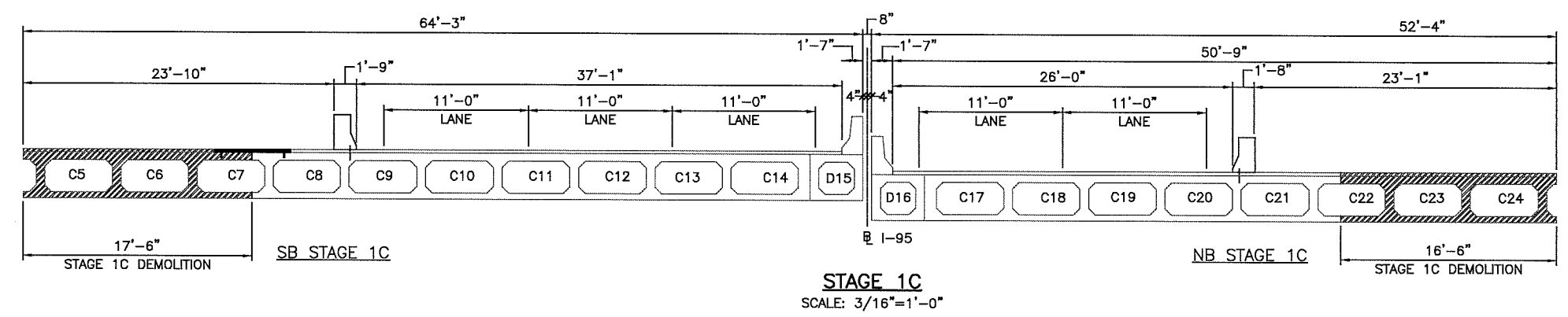
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-95
REPLACEMENT OF BRIDGE 653
OVER OXFORD STREET
PROVIDENCE, RHODE ISLAND

**CONSTRUCTION STAGING AND
DEMOLITION DETAILS**

SHEET 1 OF 6

CHECKED BY PNF DATE 4/28/17 SCALE AS NOTED



- LEGEND:**
- SMU - SUPERSTRUCTURE MODULAR UNIT
 - [Cross-hatched box] - CLOSURE POUR
 - [Trapezoidal shape] - ANCHORED PRECAST BARRIER
 - [Arrow with line] - BOLTED TEMPORARY STEEL PLATE

- STAGE 1 CONSTRUCTION SEQUENCE FOR SOUTHBOUND TRAFFIC:**
- STAGE 1C/1D - ONE WEEKEND NIGHT/2 LANE CLOSURES
1. REMOVE EXISTING CONCRETE BOX BEAMS C5-C7.
 2. PLACE PREASSEMBLED 3-SMU UNITS WITH CLOSURE POURS AS SHOWN.
 3. PLACE TEMPORARY STEEL PLATES AS SHOWN.
 4. SHIFT BARRIERS FOR STAGE 1B TRAFFIC SETUP BEFORE END OF SPECIFIED TIME LIMIT.
 5. REVERT TO STAGE 1D TRAFFIC SETUP.
 6. PLACE WATERPROOFING AND BINDER COURSE.
 7. SHIFT BARRIERS FOR STAGE 2A TRAFFIC SETUP BEFORE END OF SPECIFIED TIME LIMIT.

- STAGE 1 CONSTRUCTION SEQUENCE FOR NORTHBOUND TRAFFIC:**
- STAGE 1C/1D - ONE WEEKEND NIGHT/2 LANE CLOSURES
1. REMOVE EXISTING CONCRETE BOX BEAMS C22-C24.
 2. PLACE PREASSEMBLED 3-SMU UNITS WITH CLOSURE POURS AS SHOWN.
 3. PLACE TEMPORARY STEEL PLATES AS SHOWN.
 4. SHIFT BARRIERS FOR STAGE 1B TRAFFIC SETUP BEFORE END OF SPECIFIED TIME LIMIT.
 5. REVERT TO STAGE 1D TRAFFIC SETUP.
 6. PLACE WATERPROOFING AND BINDER COURSE.
 7. SHIFT BARRIERS FOR STAGE 2A TRAFFIC SETUP BEFORE END OF SPECIFIED TIME LIMIT.

- NOTES:**
1. INSTALL SMU UNITS WITHOUT PAVEMENT.
 2. WATERPROOF AND PLACE BINDER COURSE.
 3. TOP COURSE OF PAVEMENT TO BE PLACED AFTER THE COMPLETION OF STAGE 3. REPEAT THE TRAFFIC SETUPS IN STAGE 1-3 FOR PLACING THE TOP COURSE PAVEMENT.
 4. ALL DIMENSIONS TO BE FIELD VERIFIED BY THE CONTRACTOR.
 5. NORTHBOUND AND SOUTHBOUND WORK SHALL NOT OCCUR CONCURRENTLY IN STAGES 1C AND 1D.

REVISIONS		
NO.	DATE	BY
1	5/17/17	PNF


RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-95
 REPLACEMENT OF BRIDGE 653
 OVER OXFORD STREET
 PROVIDENCE, RHODE ISLAND

**CONSTRUCTION STAGING AND
 DEMOLITION DETAILS**

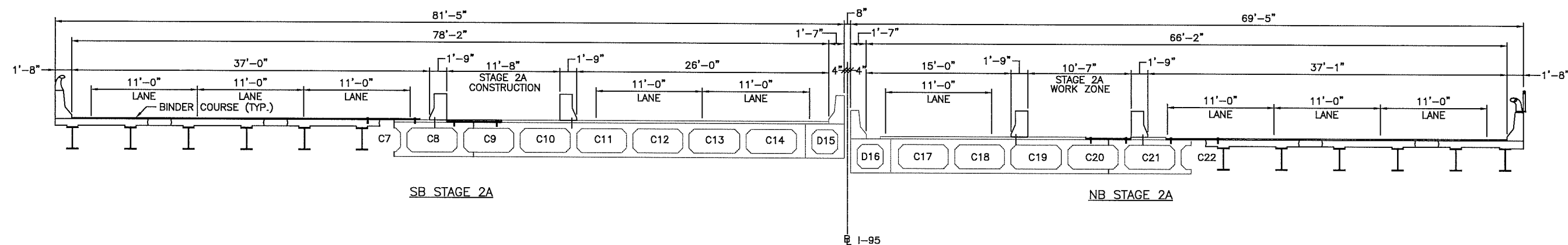
SHEET 2 OF 6

CHECKED BY PNF DATE 4/28/17 SCALE AS NOTED

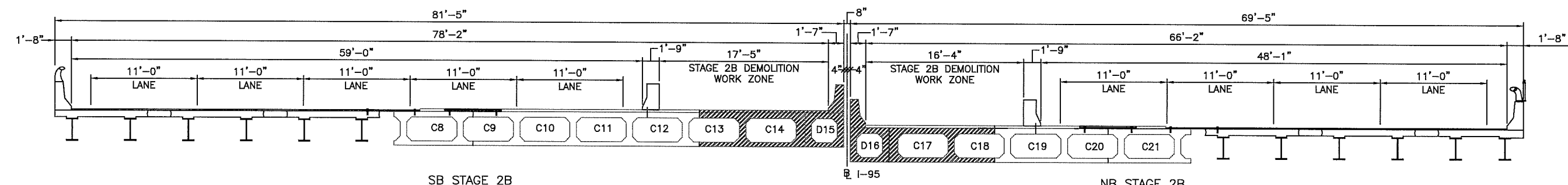

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R-1

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	----	2017	11	25



STAGE 2A
SCALE: 3/16"=1'-0"



STAGE 2B
SCALE: 3/16"=1'-0"

LEGEND:

- SMU - SUPERSTRUCTURE MODULAR UNIT
- CLOSURE POUR
- ANCHORED PRECAST BARRIER
- BOLTED TEMPORARY STEEL PLATE

STAGE 2

CONSTRUCTION SEQUENCE FOR SOUTHBOUND TRAFFIC:

- STAGE 2A** - ANY TIME/NO LANE CLOSURE
- PREP WORK FOR STAGE 2C DEMOLITION: SAW CUT TOP AND BOTTOM FLANGES OF CONCRETE BOX BEAM C9.
 - PLACE TEMPORARY STEEL PLATES AS SHOWN.
- STAGE 2B** - ANY TIME/NO LANE CLOSURE
- REMOVE EXISTING CONCRETE BARRIER, BOX BEAMS C13, C14 AND D15

STAGE 2

CONSTRUCTION SEQUENCE FOR NORTHBOUND TRAFFIC:

- STAGE 2A** - ANY TIME/NO LANE CLOSURE
- PREP WORK FOR STAGE 2C DEMOLITION: SAW CUT TOP AND BOTTOM FLANGES OF CONCRETE BOX BEAM C20.
 - PLACE TEMPORARY STEEL PLATES AS SHOWN.
- STAGE 2B** - ANY TIME/NO LANE CLOSURE
- REMOVE EXISTING CONCRETE BARRIER AND BOX BEAMS C16-C18.

NOTES:

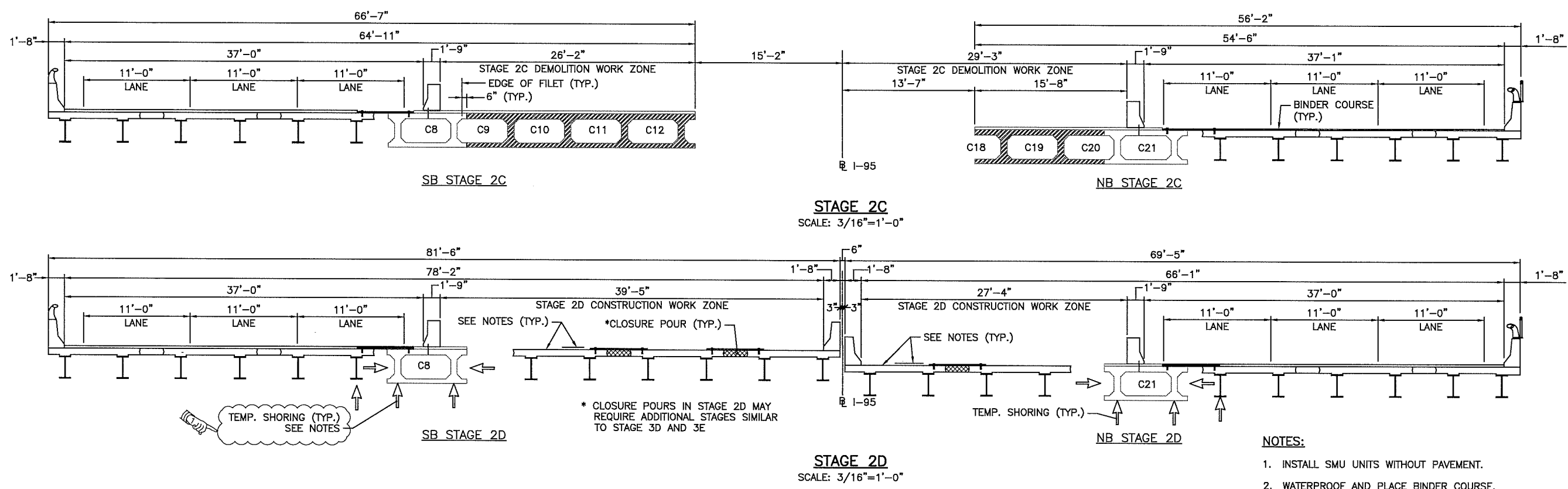
- PAVEMENT TO BE PLACED AFTER THE COMPLETION OF STAGE 3. REPEAT THE TRAFFIC SETUPS IN STAGE 1-3 FOR PLACING THE PAVEMENT.
- INSTALL SMU UNITS WITHOUT PAVEMENT.
- ALL DIMENSIONS TO BE FIELD VERIFIED BY THE CONTRACTOR.
- NORTHBOUND AND SOUTHBOUND WORK MAY OCCUR CONCURRENTLY IN STAGES 2A AND 2B.

REVISIONS			RHODE ISLAND	
NO.	DATE	BY	DEPARTMENT OF TRANSPORTATION	
1	5/17/17	PNF	IMPROVEMENTS TO I-95 REPLACEMENT OF BRIDGE 653 OVER OXFORD STREET PROVIDENCE, RHODE ISLAND	
			CONSTRUCTION STAGING AND DEMOLITION DETAILS	
			SHEET 3 OF 6	
			CHECKED BY PNF	DATE 04/28/17 SCALE AS NOTED

ADDENDUM NO. 2

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FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2017	12	25



- NOTES:**
1. INSTALL SMU UNITS WITHOUT PAVEMENT.
 2. WATERPROOF AND PLACE BINDER COURSE.
 3. TOP COURSE OF PAVEMENT TO BE PLACED AFTER THE COMPLETION OF STAGE 3. REPEAT THE TRAFFIC SETUPS IN STAGE 1-3 FOR PLACING THE TOP COURSE PAVEMENT.
 4. ALL DIMENSIONS TO BE FIELD VERIFIED BY THE CONTRACTOR.
 5. NORTHBOUND AND SOUTHBOUND WORK SHALL NOT OCCUR CONCURRENTLY IN STAGES 2C AND 2D.
 6. THE SUGGESTED TEMPORARY SHORING SYSTEM SHOWN ON THIS SHEET AND ELSEWHERE IS CONCEPTUAL FOR BIDDING PURPOSES ONLY. THE DESIGN BUILD TEAM SHALL PROVIDE TEMPORARY VERTICAL AND LATERAL SHORING SYSTEM FOR THE EXISTING AND PROPOSED SUPERSTRUCTURE ELEMENTS DURING THE TEMPORARY STAGED CONDITIONS AS NEEDED TO SUPPLEMENT THE SUPPORT OF ALL DEAD LOAD AND LIVE LOAD TRAFFIC AS REQUIRED BY DESIGN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE DESIGN BUILD TEAM WILL BE RESPONSIBLE FOR DETERMINING IF, WHEN, AND WHERE SUPPLEMENTAL SHORING IS REQUIRED, DESIGNING, FABRICATING AND INSTALLING THE TEMPORARY SHORING SYSTEM. THE PLANS AND CALCULATIONS SHALL BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF RHODE ISLAND.

- STAGE 2 CONSTRUCTION SEQUENCE FOR SOUTHBOUND TRAFFIC:**
- STAGE 2C/2D - ONE WEEKEND NIGHT/2 LANE CLOSURES
1. REMOVE EXISTING CONCRETE BOX BEAMS C9-C12.
 2. PLACE SMU UNITS AS SHOWN.
 3. PLACE TEMPORARY STEEL PLATES AS SHOWN.
 4. SHIFT BARRIERS FOR STAGE 2B TRAFFIC SETUP.
 5. REVERT BACK TO STAGE 2D.
 6. REMOVE STEEL PLATE, REPAIR DECK AT BOLT HOLES AND PLACE CLOSURE POURS.
 7. WATERPROOF AND PLACE BINDER COURSE.
 8. SHIFT BARRIER FOR STAGE 3A TRAFFIC SETUP.

- STAGE 2 CONSTRUCTION SEQUENCE FOR NORTHBOUND TRAFFIC:**
- STAGE 2C/2D - ONE WEEKEND NIGHT/1 LANE CLOSURES
1. REMOVE EXISTING CONCRETE BOX BEAMS C18-C20.
 2. PLACE SMU UNITS AS SHOWN.
 3. PLACE TEMPORARY STEEL PLATES AS SHOWN.
 4. SHIFT BARRIERS FOR STAGE 3A TRAFFIC SETUP.
 5. REVERT BACK TO STAGE 2D.
 6. REMOVE STEEL PLATE, REPAIR DECK AT BOLT HOLES AND PLACE CLOSURE POURS.
 7. WATERPROOF AND PLACE BINDER COURSE.
 8. SHIFT BARRIER FOR STAGE 3A TRAFFIC SETUP.

- LEGEND:**
- SMU - SUPERSTRUCTURE MODULAR UNIT
 - CLOSURE POUR
 - ANCHORED PRECAST BARRIER
 - BOLTED TEMPORARY STEEL PLATE
 - TEMPORARY SHORING

ADDENDUM NO. 2

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1	5/17/17	PNF

**RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION**

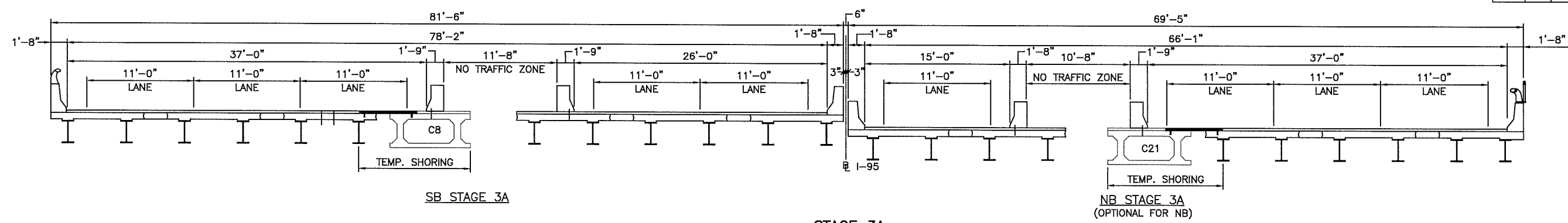
**IMPROVEMENTS TO I-95
 REPLACEMENT OF BRIDGE 653
 OVER OXFORD STREET
 PROVIDENCE, RHODE ISLAND**

**CONSTRUCTION STAGING AND
 DEMOLITION DETAILS**

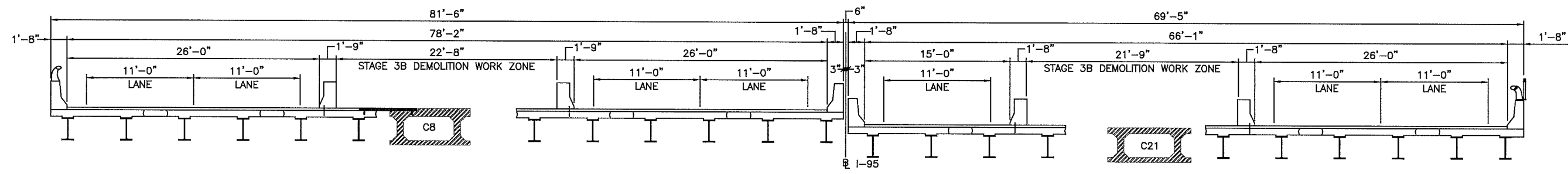
SHEET 4 OF 6

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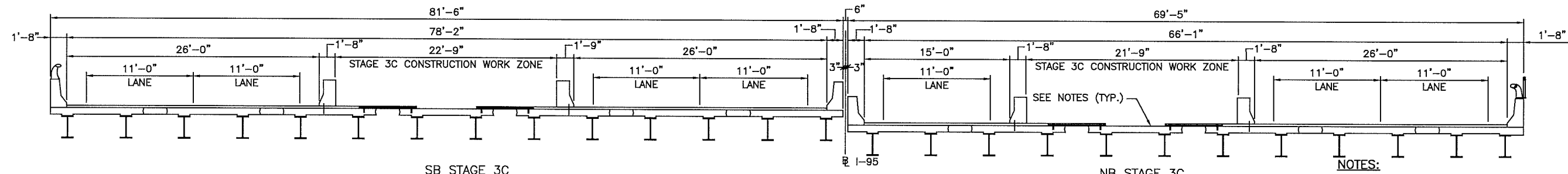
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	----	2017	13	25



STAGE 3A
SCALE: 3/16"=1'-0"



STAGE 3B
SCALE: 3/16"=1'-0"



STAGE 3C
SCALE: 3/16"=1'-0"

- LEGEND:**
- SMU - SUPERSTRUCTURE MODULAR UNIT
 - ▨ - CLOSURE POUR
 - - ANCHORED PRECAST BARRIER
 - - BOLTED TEMPORARY STEEL PLATE

- STAGE 3:**
CONSTRUCTION SEQUENCE FOR SOUTHBOUND TRAFFIC:
- STAGE 3A - ANY TIME/NO LANE CLOSURE -TEMPORARY CONDITION**
- NO TRAFFIC ALLOWED OVER NO-TRAFFIC-ZONE DURING SHORT TERM TEMPORARY CONDITION.
- STAGE 3B/STAGE 3C - ONE WEEKEND NIGHT/1 LANE CLOSURE**
- REMOVE EXISTING CONCRETE BOX BEAM C8 AND PLACE SMU AS SHOWN.
 - INSTALL TEMPORARY STEEL PLATE.
 - REMOVE ALL BARRIERS FOR NO LANE CLOSURE TRAFFIC BEFORE END OF SPECIFIED TIME LIMIT.

- STAGE 3:**
CONSTRUCTION SEQUENCE FOR NORTHBOUND TRAFFIC:
- STAGE 3A - ANY TIME/NO LANE CLOSURE -TEMPORARY CONDITION**
- NO TRAFFIC ALLOWED OVER NO TRAFFIC ZONE DURING SHORT TERM TEMPORARY CONDITION.
- STAGE 3B/STAGE 3C - ONE WEEKEND NIGHT/1 LANE CLOSURE**
- REMOVE EXISTING CONCRETE BOX BEAM C21 AND PLACE SMU AS SHOWN.
 - INSTALL TEMPORARY STEEL PLATES.
 - REMOVE BARRIERS FOR NO LANE CLOSURE TRAFFIC BEFORE END OF SPECIFIED TIME LIMIT.

- NOTES:**
- INSTALL SMU UNITS WITHOUT PAVEMENT.
 - WATERPROOF AND PLACE BINDER COURSE.
 - TOP COURSE OF PAVEMENT TO BE PLACED AFTER THE COMPLETION OF STAGE 3. REPEAT THE TRAFFIC SETUPS IN STAGE 1-3 FOR PLACING THE TOP COURSE PAVEMENT.
 - ALL DIMENSIONS TO BE FIELD VERIFIED BY THE CONTRACTOR.
 - NORTHBOUND AND SOUTHBOUND WORK SHALL NOT OCCUR CONCURRENTLY IN STAGES 3A, 3B AND 3C.

NO.	DATE	BY
1	5/17/17	PNF

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-95
REPLACEMENT OF BRIDGE 653
OVER OXFORD STREET
PROVIDENCE, RHODE ISLAND

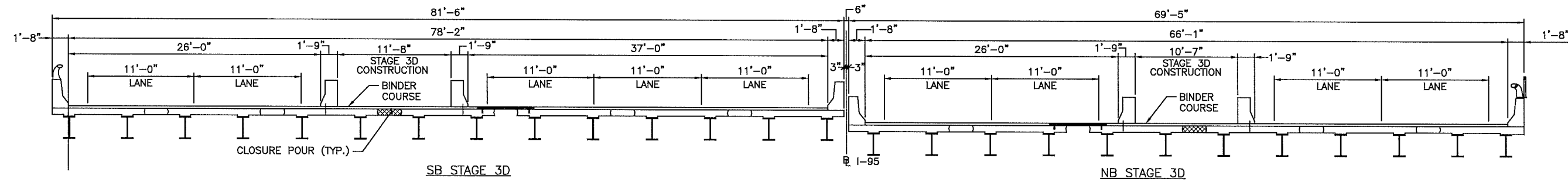
CONSTRUCTION STAGING AND
DEMOLITION DETAILS

SHEET 5 OF 6

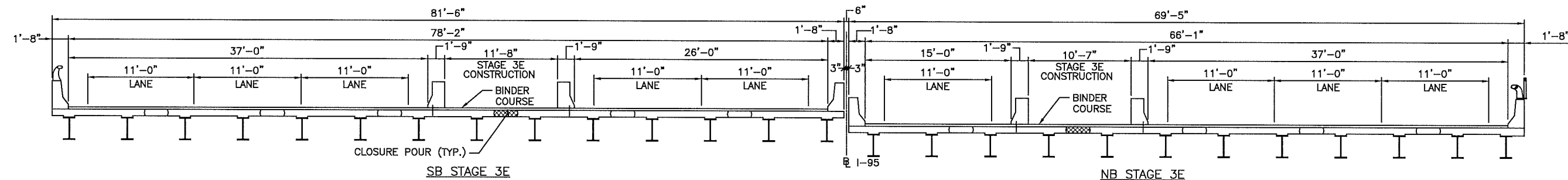
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FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2017	14	25



CLOSURE POUR STAGE 3D
SCALE: 3/16"=1'-0"



CLOSURE POUR STAGE 3E
SCALE: 3/16"=1'-0"

LEGEND:

- SMU - SUPERSTRUCTURE MODULAR UNIT
- [Hatched Box] - CLOSURE POUR
- [Barrier Symbol] - ANCHORED PRECAST BARRIER

**STAGE 3:
CONSTRUCTION SEQUENCE FOR SOUTHBOUND TRAFFIC:**

- STAGE 3D/STAGE 3E - ANYTIME
1. PLACE CLOSURE POUR.
 2. AFTER CLOSURE POUR HAS ATTAINED 3000 PSI STRENGTH REMOVE PRECAST BARRIERS AND REPAIR BOLT HOLES.
 3. WATERPROOF AND PLACE BINDER COURSE.

**STAGE 3:
CONSTRUCTION SEQUENCE FOR NORTHBOUND TRAFFIC:**

- STAGE 3D/STAGE 3E - ANYTIME
1. PLACE CLOSURE POUR.
 2. AFTER CLOSURE POUR HAS ATTAINED 3000 PSI STRENGTH REMOVE PRECAST BARRIERS AND REPAIR BOLT HOLES.
 3. WATERPROOF AND PLACE BINDER COURSE.

NOTES:

1. INSTALL SMU UNITS WITHOUT PAVEMENT.
2. WATERPROOF AND PLACE BINDER COURSE.
3. TOP COURSE OF PAVEMENT TO BE PLACED AFTER THE COMPLETION OF STAGE 3. REPEAT THE TRAFFIC SETUPS IN STAGE 1-3 FOR PLACING THE TOP COURSE PAVEMENT.
4. ALL DIMENSIONS TO BE FIELD VERIFIED BY THE CONTRACTOR.
5. NORTHBOUND AND SOUTHBOUND WORK SHALL NOT OCCUR CONCURRENTLY IN STAGES 3D AND 3E.
6. SIMILAR CLOSURE POUR TRAFFIC SETUPS MAY BE REQUIRED FOR STAGE 2D CLOSURE POURS.

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NO.	DATE	BY
1	5/17/17	PNF

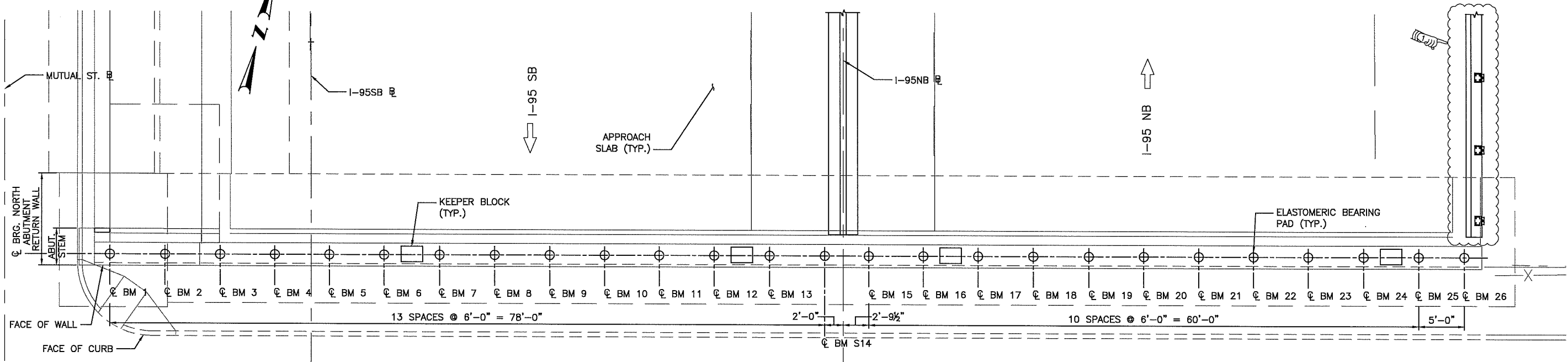
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-95
REPLACEMENT OF BRIDGE 653
OVER OXFORD STREET
PROVIDENCE, RHODE ISLAND

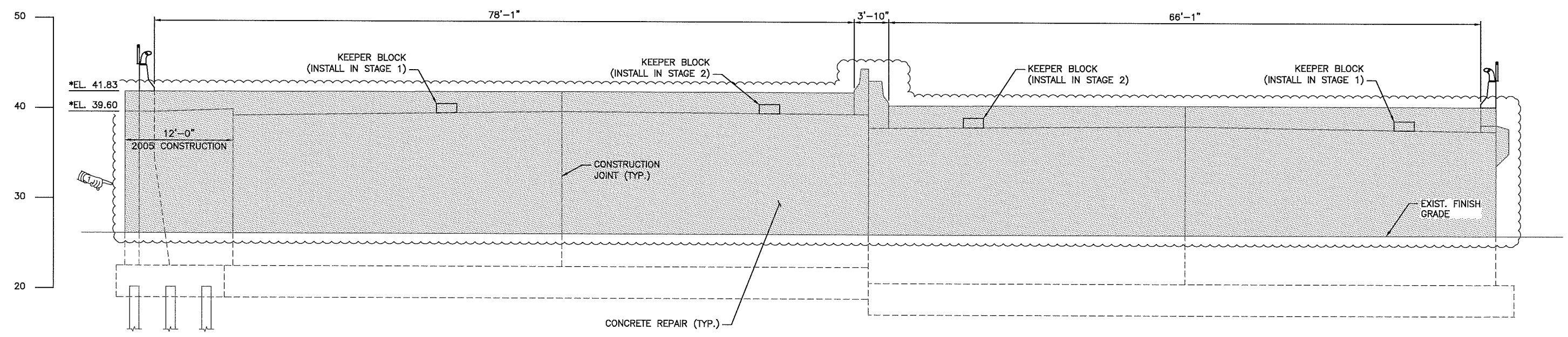
**CONSTRUCTION STAGING AND
DEMOLITION DETAILS**

SHEET 6 OF 6

CHECKED BY PNF DATE 4/28/17 SCALE AS NOTED



NORTH ABUTMENT PLAN
SCALE: 3/16"=1'-0"



NORTH ABUTMENT ELEVATION
(SOUTH ABUTMENT SIMILAR)
SCALE: 3/16"=1'-0"

LEGEND:

- NEW CONCRETE AREA
- LIMITS OF STRUCTURE TO BE INSPECTED AND EVALUATED FOR REPAIRS. THE DESIGN BUILD TEAM SHALL INSPECT, IDENTIFY ON PLANS THE CONCRETE AREAS REQUIRING REPAIR AND PROVIDE REPAIR DETAILS FOR RIDOT APPROVAL
- * ELEVATIONS AND DIMENSIONS TAKEN FROM EXISTING DRAWINGS AND SHALL BE VERIFIED IN THE FIELD

- NOTES:**
- FOR ABUTMENT SECTIONS AND KEEPER BLOCK DETAILS, SEE SHEET 17.
 - FOR RETURN WALL ELEVATIONS, SEE SHEET 18.
 - FOR BEARING LAYOUT AND DETAILS, SEE SHEET 25.

REVISIONS		
NO.	DATE	BY
1	5/17/17	PNF

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-95
REPLACEMENT OF BRIDGE 653
OVER OXFORD STREET
PROVIDENCE, RHODE ISLAND

**NORTH ABUTMENT
PLAN AND ELEVATION**

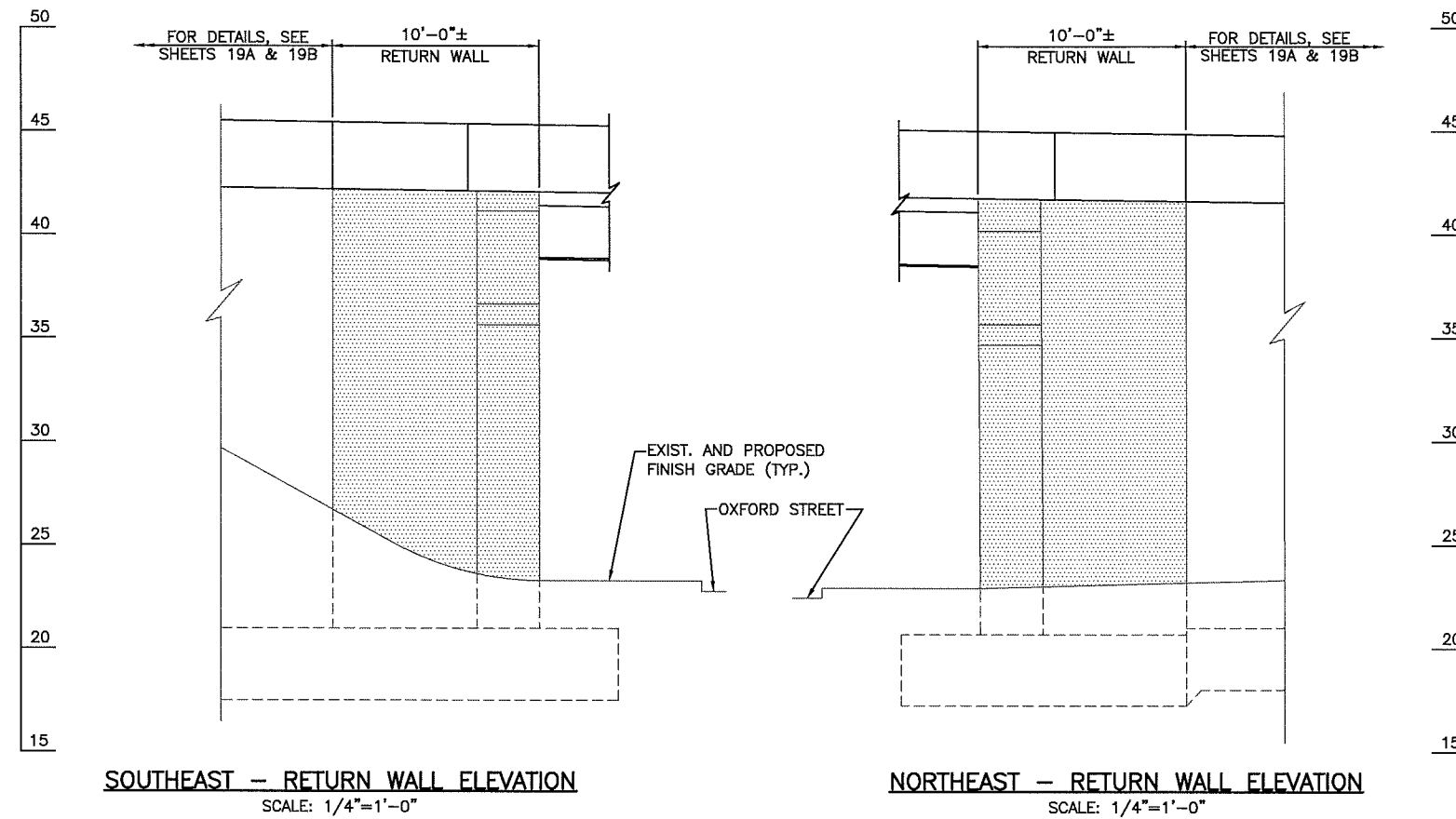
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ADDENDUM NO. 2

R-1

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	-----	2017	18	25



LEGEND:

LIMITS OF STRUCTURE TO BE INSPECTED AND EVALUATED FOR REPAIRS. THE DESIGN BUILD TEAM SHALL INSPECT, IDENTIFY ON PLANS THE CONCRETE AREAS REQUIRING REPAIR AND PROVIDE REPAIR DETAILS FOR RIDOT APPROVAL

ENTIRE SHEET REPLACED BY ADDENDUM NO. 2

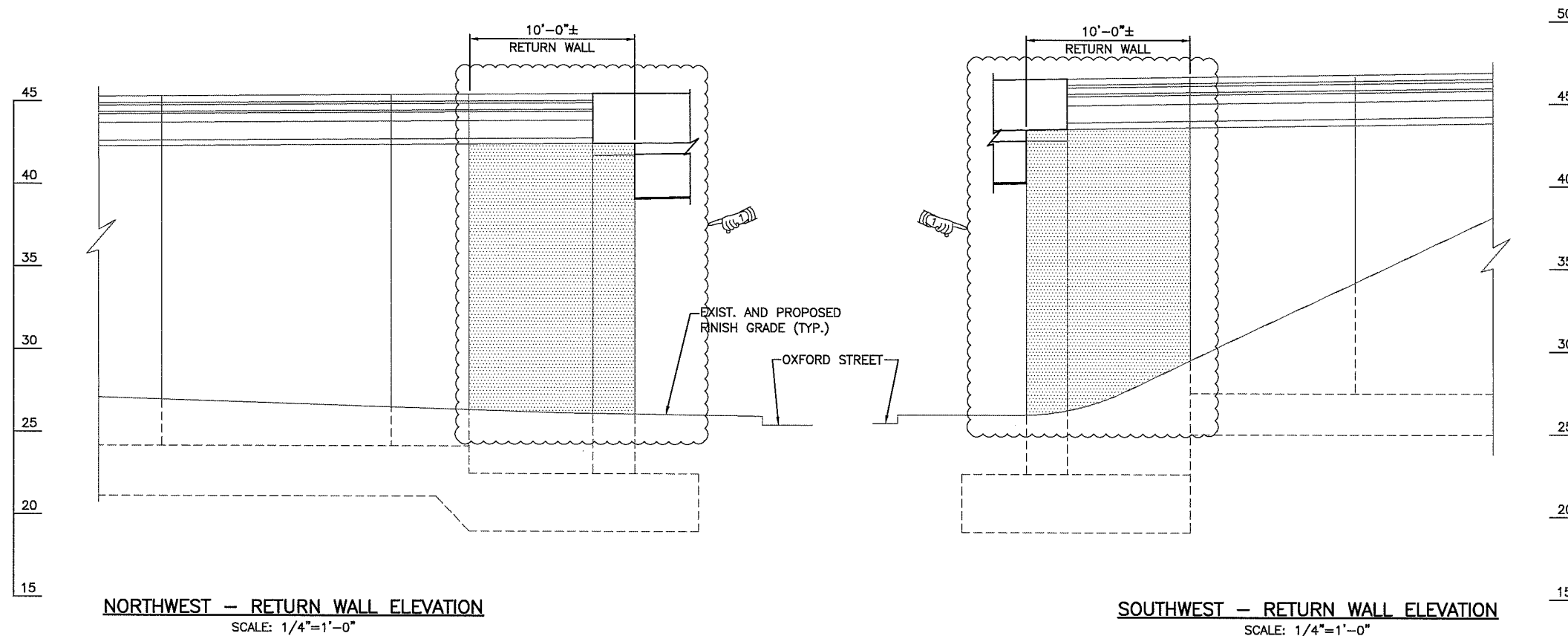
REVISIONS			NO.	DATE	BY
NO.	DATE	BY			
1	5/17/17	PNF			

RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
IMPROVEMENTS TO I-95 REPLACEMENT OF BRIDGE 653 OVER OXFORD STREET PROVIDENCE, RHODE ISLAND	
WALLS SHEET 1 OF 2	
CHECKED BY	PNF DATE 4/28/17 SCALE

ADDENDUM NO. 2

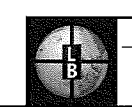
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FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	-----	2017	19	25



LEGEND:

LIMITS OF STRUCTURE TO BE INSPECTED AND EVALUATED FOR REPAIRS. THE DESIGN BUILD TEAM SHALL INSPECT, IDENTIFY ON PLANS THE CONCRETE AREAS REQUIRING REPAIR AND PROVIDE REPAIR DETAILS FOR RIDOT APPROVAL



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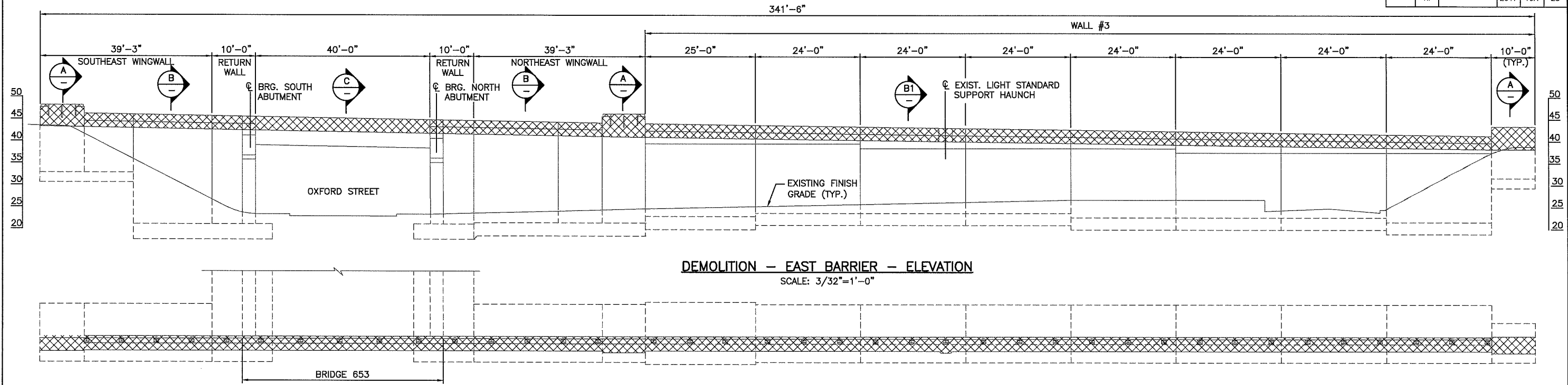
RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-95
 REPLACEMENT OF BRIDGE 653
 OVER OXFORD STREET
 PROVIDENCE, RHODE ISLAND

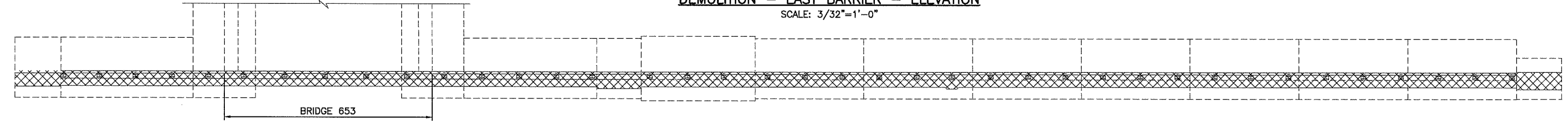
WALLS SHEET 2 OF 2

CHECKED BY PNF DATE 5/17/17 SCALE _____

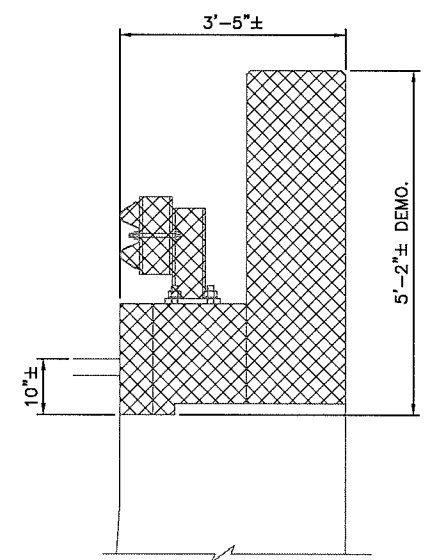
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	RI		2017	19A	25



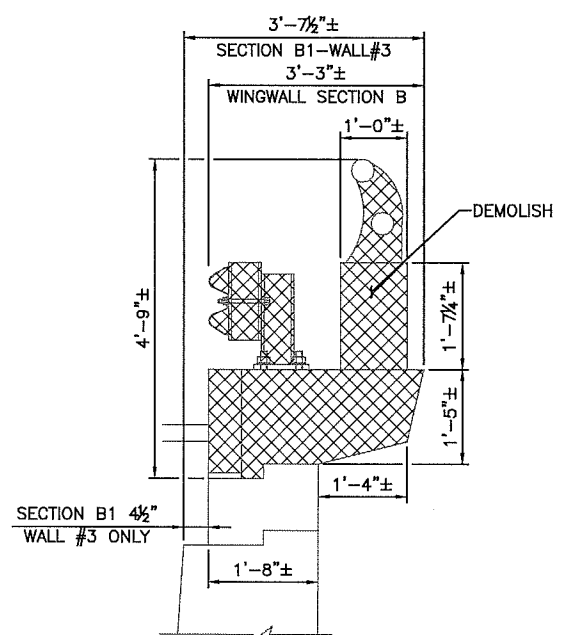
DEMOLITION - EAST BARRIER - ELEVATION
SCALE: 3/32"=1'-0"



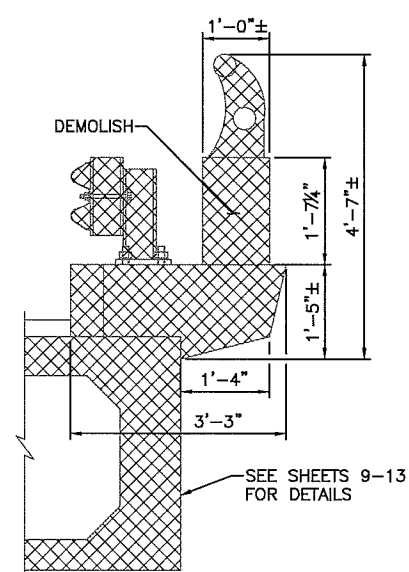
DEMOLITION - EAST BARRIER - PLAN
SCALE: 3/32"=1'-0"



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



SECTION B
(SECTION B1 AS NOTED)
SCALE: 3/4"=1'-0"



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

LEGEND:
 AREA OF DEMOLITION

SHEET ADDED BY ADDENDUM NO. 2

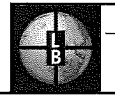
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NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-95
REPLACEMENT OF BRIDGE 653
OVER OXFORD STREET
PROVIDENCE, RHODE ISLAND

**EAST WALLS AND
BARRIER-DEMOLITION**

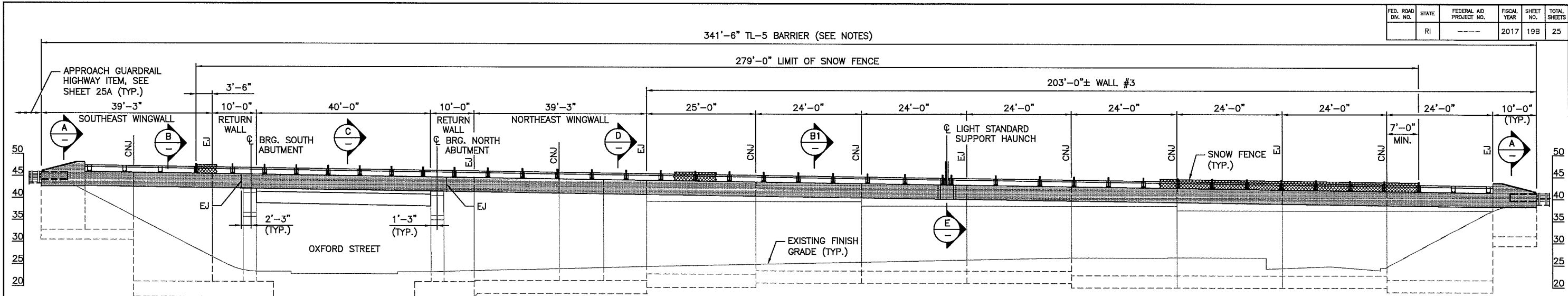
CHECKED BY PNF DATE 5/17/17 SCALE



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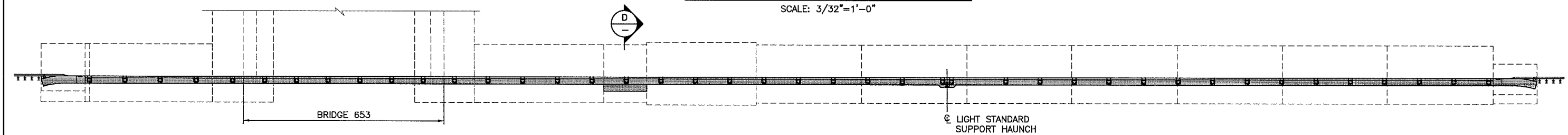
ADDENDUM NO. 2

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2017	19B	25



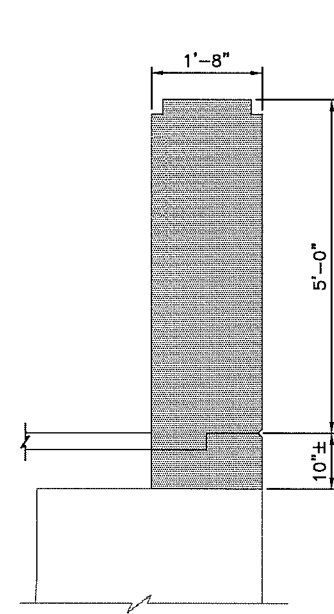
PROPOSED - EAST BARRIER - ELEVATION

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



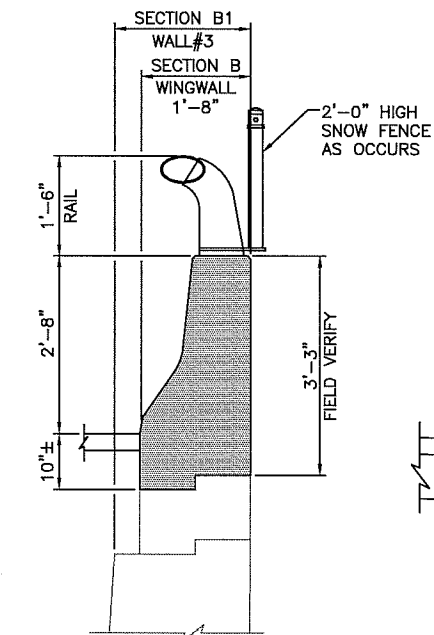
PROPOSED - EAST BARRIER - PLAN

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



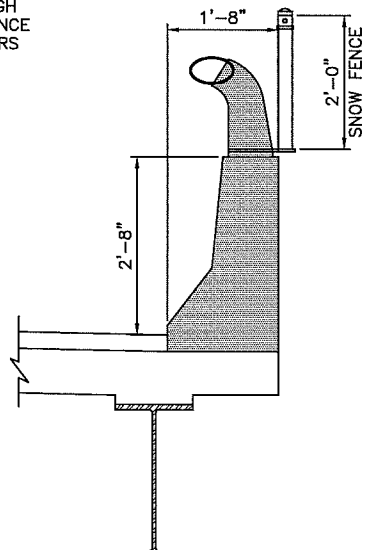
SECTION AT ENDPOST

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



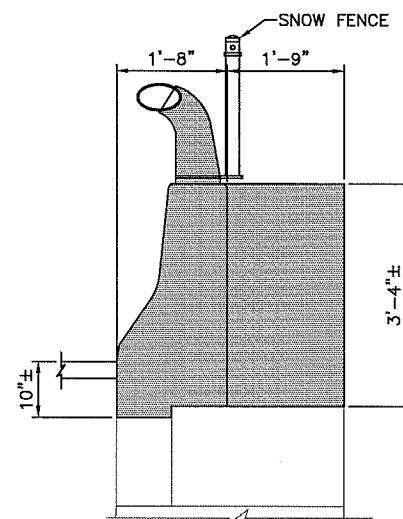
TYPICAL SECTION AT WINGWALL AND WALL #3

SECTION B
(SECTION B1 AS NOTED)
SCALE: 3/4"=1'-0"



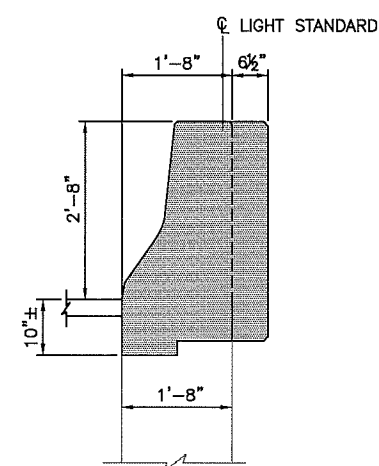
DETAIL AT BRIDGE

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



SECTION AT N.E. ENDPOST 1

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



AT BARRIER AND LIGHT STANDARD

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

LEGEND:

- EJ = EXPANSION JOINT
- CNJ = CONTRACTION JOINT

NOTES:

1. FOR BARRIER, RAILING AND SNOW FENCE DETAILS, SEE SHEET 25.
2. FOR LIGHTING DETAILS, SEE HIGHWAY PLANS.
3. PROVIDE EXPANSION JOINTS AND CONTRACTION JOINTS TO MATCH EXISTING BRIDGE AND WALLS.
4. THE EXISTING EAST BARRIER FROM THE SOUTHEAST END POST TO THE NORTHEAST END POST AS SHOWN ON THE PLANS TO BE REPLACED WITH TL-5 BARRIER. THE DESIGN BUILD TEAM IS RESPONSIBLE FOR EVALUATING THE TL-5 BARRIER LOADING ON THE EXISTING WALLS AND MAKING ANY REQUIRED MODIFICATIONS TO THE STRUCTURE.

ADDENDUM NO. 2

**SHEET ADDED BY
ADDENDUM NO. 2**



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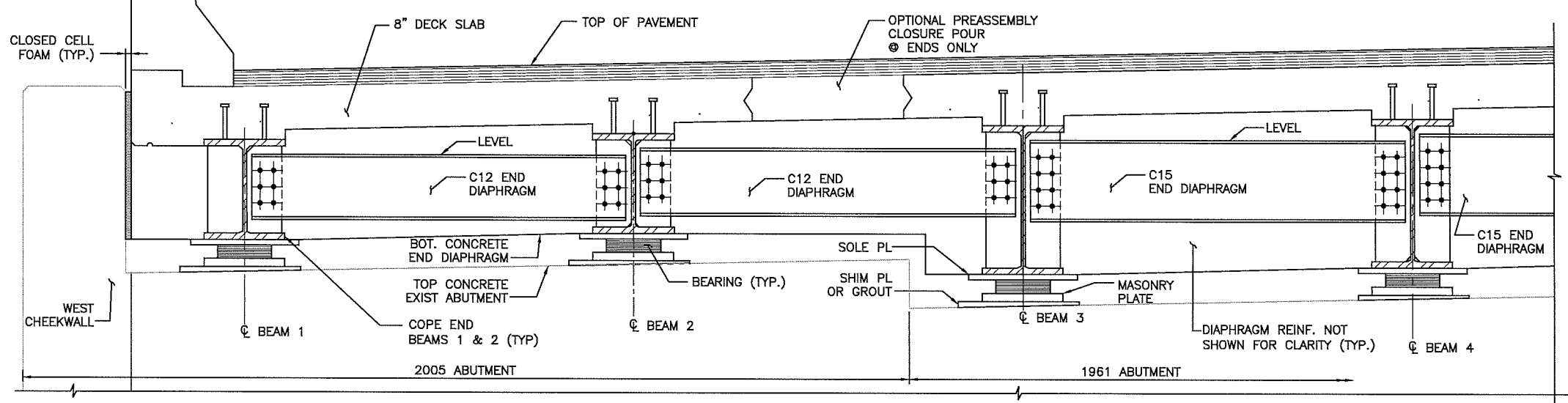
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NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-95
REPLACEMENT OF BRIDGE 653
OVER OXFORD STREET
PROVIDENCE, RHODE ISLAND

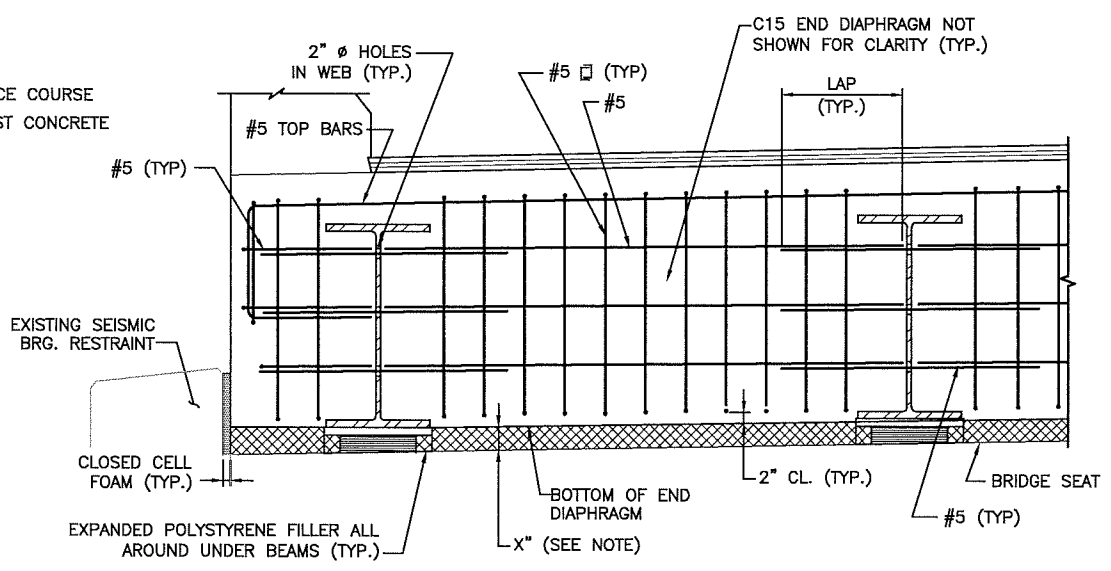
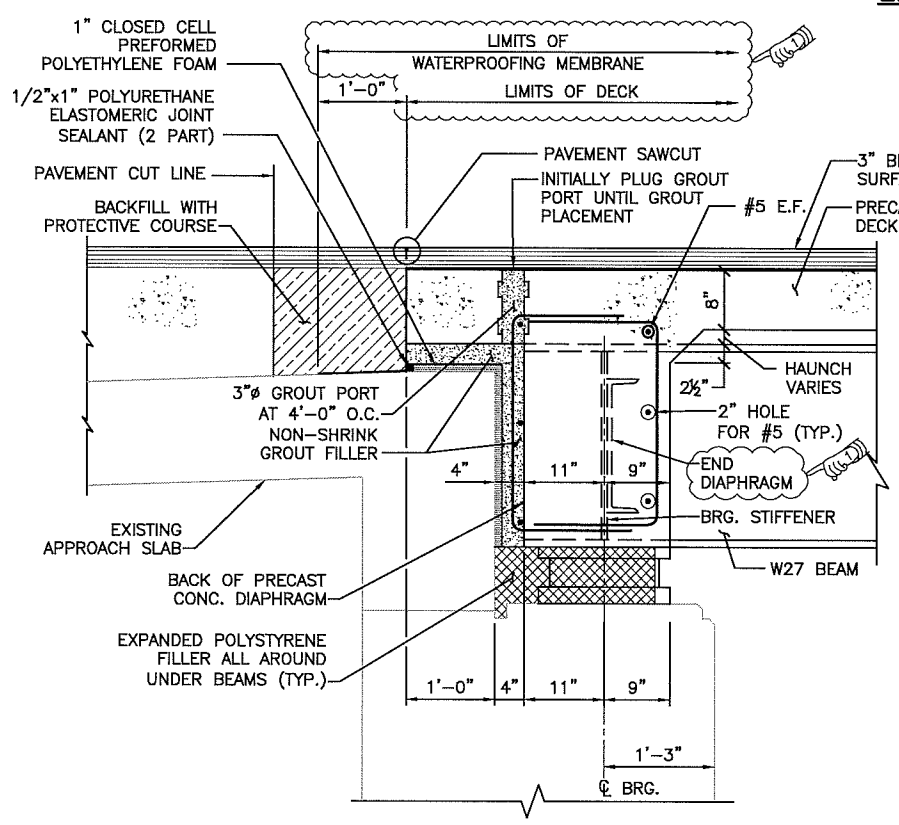
**EAST WALLS AND
BARRIER-PROPOSED**

CHECKED BY PNF DATE 5/17/17 SCALE



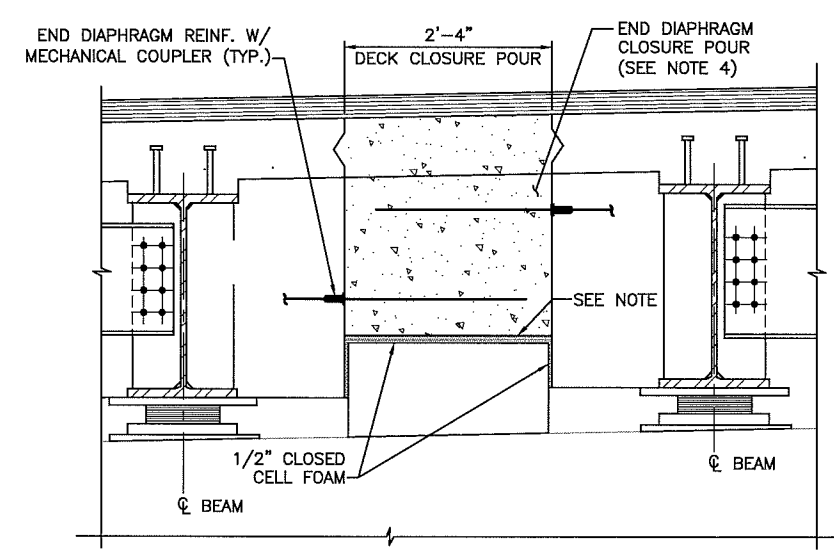
- NOTES:**
1. THE END DIAPHRAGMS SHALL FOLLOW THE CROSS SLOPE OF THE ROADWAY.
 2. LOCATIONS OF HOLES IN CONNECTION PLATES SHALL BE DETERMINED BY THE FABRICATOR.
 3. TOP OF INTERMEDIATE KEEPER BLOCK SHALL BE TROWELED SMOOTH PARALLEL TO PROFILE GRADE.
 4. SEE FRAMING PLAN FOR LOCATION OF END DIAPHRAGMS. OMIT THE C15 END DIAPHRAGMS WHERE STAGE CONSTRUCTION IS PRESENT AND PROVIDE ADDITIONAL REINFORCEMENT THAT SHALL BE SPLICED WITH DOWEL BAR SPLICERS WITHIN THE END DIAPHRAGM CLOSURE POUR.

(SW ABUTMENT CORNER SIMILAR)
END DIAPHRAGM DETAILS AT NW ABUTMENT CORNER
SCALE: 1"=1'-0"



NOTE:
CONTRACTOR MAY USE EXPANDED POLYSTYRENE FILLER OR A REMOVABLE FORM TO FORM THE BOTTOM OF THE NON-SHRINK GROUT FILLER BEHIND THE END DIAPHRAGM.

END DIAPHRAGM ELEVATION AT SE CORNER
(NORTHEAST ABUTMENT CORNER SIMILAR)
SCALE: 1"=1'-0"



TYPICAL END DIAPHRAGM/CLOSURE POUR DETAIL
SCALE: 1"=1'-0"

NOTE:
TOP OF INTERMEDIATE KEEPER BLOCK SHALL BE TROWELED SMOOTH PARALLEL TO PROFILE GRADE.

END DIAPHRAGM SECTION
SCALE: 1"=1'-0"

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IMPROVEMENTS TO I-95
REPLACEMENT OF BRIDGE 653
OVER OXFORD STREET
PROVIDENCE, RHODE ISLAND

DIAPHRAGM DETAILS

CHECKED BY PNF DATE 4/28/17 SCALE

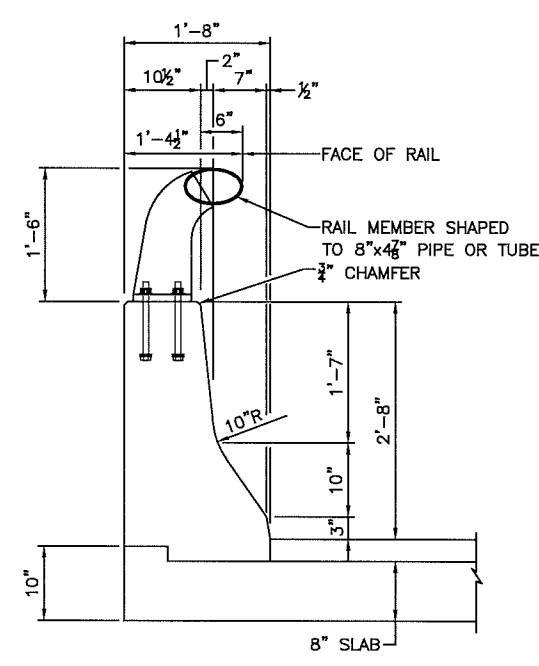


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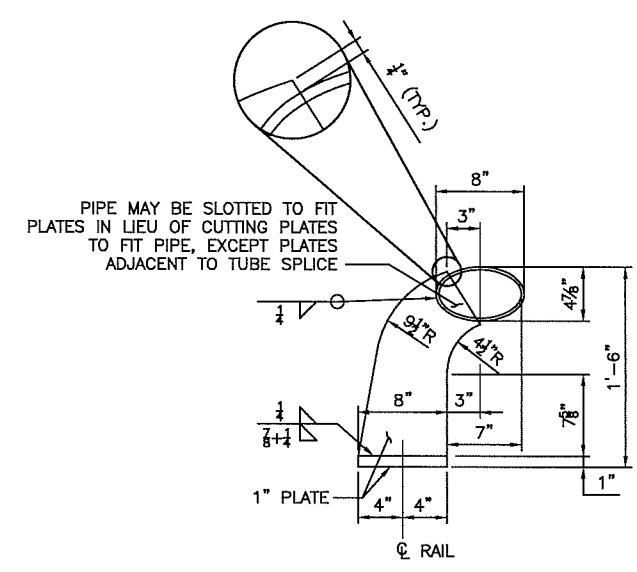
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2017	25	25

NOTES:

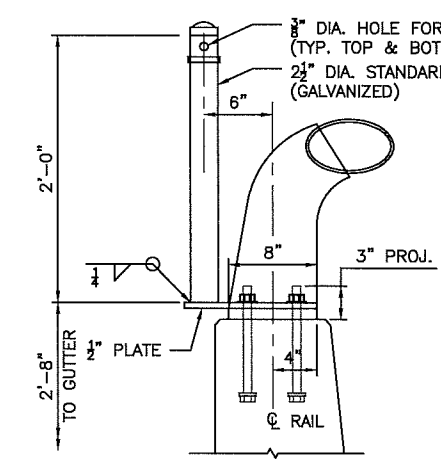
1. ALL STEEL COMPONENTS FOR RAILING AND SNOW FENCE SHALL BE GALVANIZED UNLESS OTHERWISE NOTED ON THE PLANS.
2. TEXAS TYPE HT (MODIFIED T5) RAIL SHOWN. BARRIER SHALL BE TL-5 IN ACCORDANCE WITH NCHRP 350 OR EQUIVALENT TEST LEVEL TL-5.



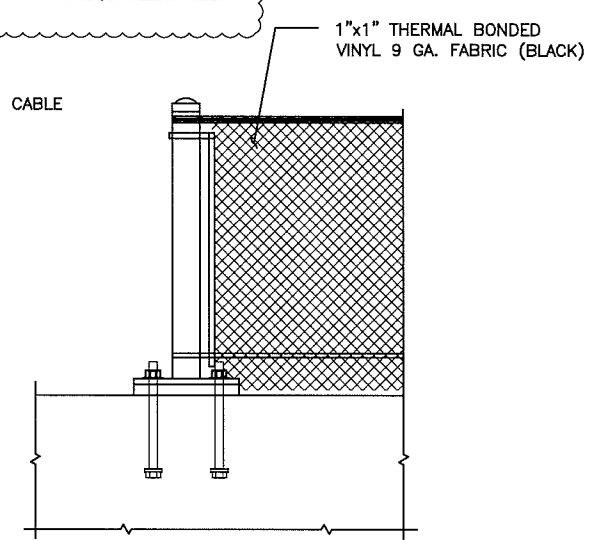
SECTION THRU RAIL
SCALE: 1"=1'-0"



END VIEW OF POST
SCALE: 1 1/2"=1'-0"

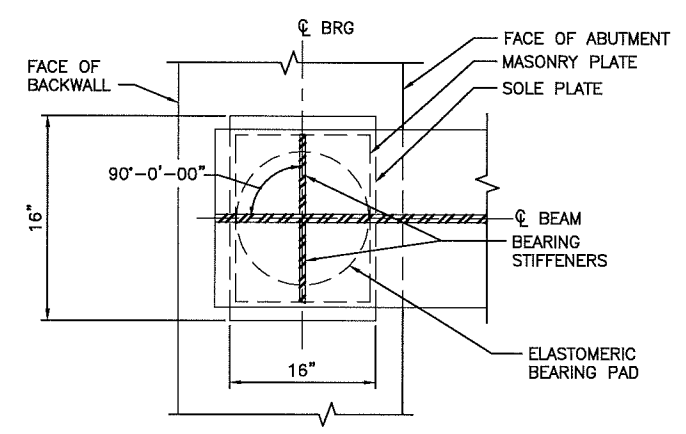


SECTION

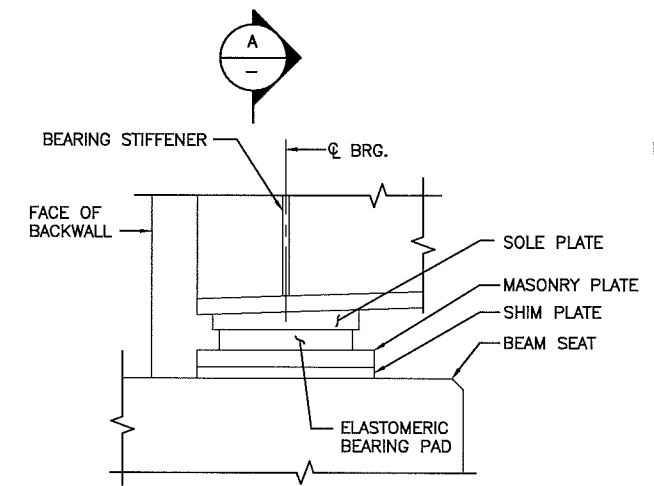


ELEVATION

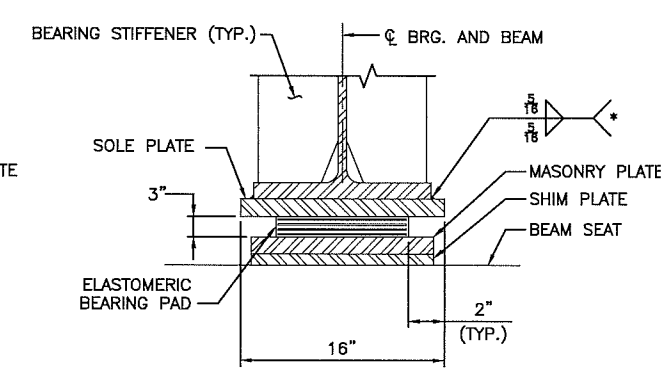
TYPICAL SNOW FENCE DETAILS
SCALE: 1 1/2"=1'-0"



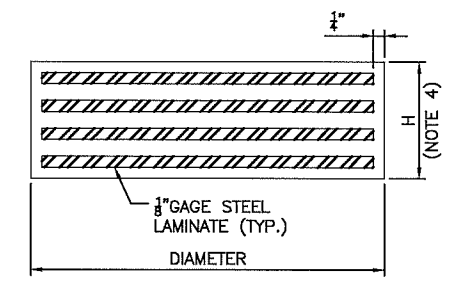
PLAN - STEEL BEARING
SCALE: 1 1/2"=1'-0"



ELEVATION - BEARING
SCALE: 1 1/2"=1'-0"



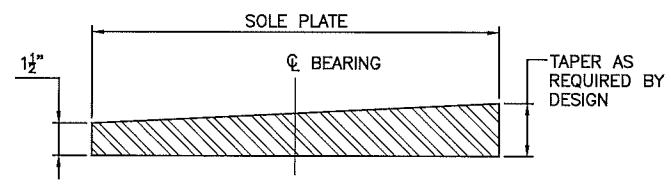
SECTION
SCALE: 1 1/2"=1'-0"



NOTES:

1. ELASTOMER SHALL HAVE A SHEAR MODULUS OF 0.106 KSI.
2. STEEL LAMINATES SHALL CONFORM TO ASTM A 1011 GRADE 36.
3. ELASTOMERIC BEARING PAD SHALL NOT BE VULCANIZED TO THE SOLE PLATE.
4. THE BEARING DETAILS AND HEIGHT SHALL BE GENERATED IN THE FINAL DESIGN STAGE.

ELASTOMERIC BEARING PAD - STEEL BEAMS
NOT TO SCALE.



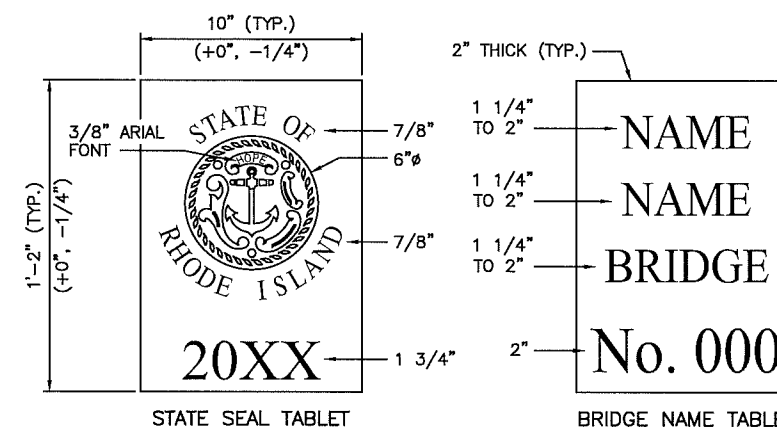
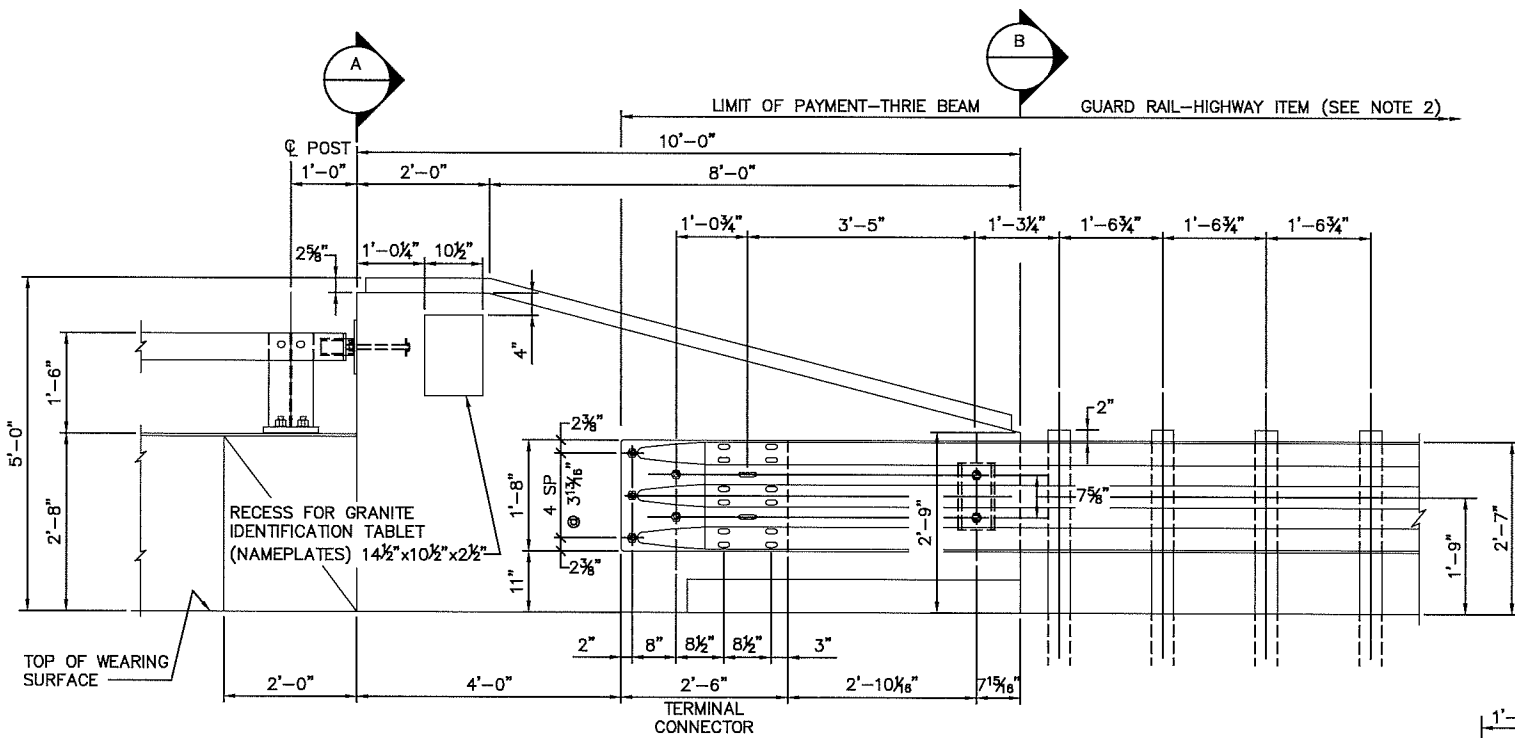
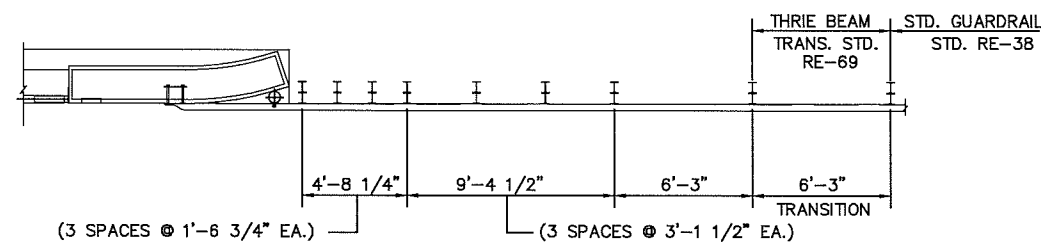
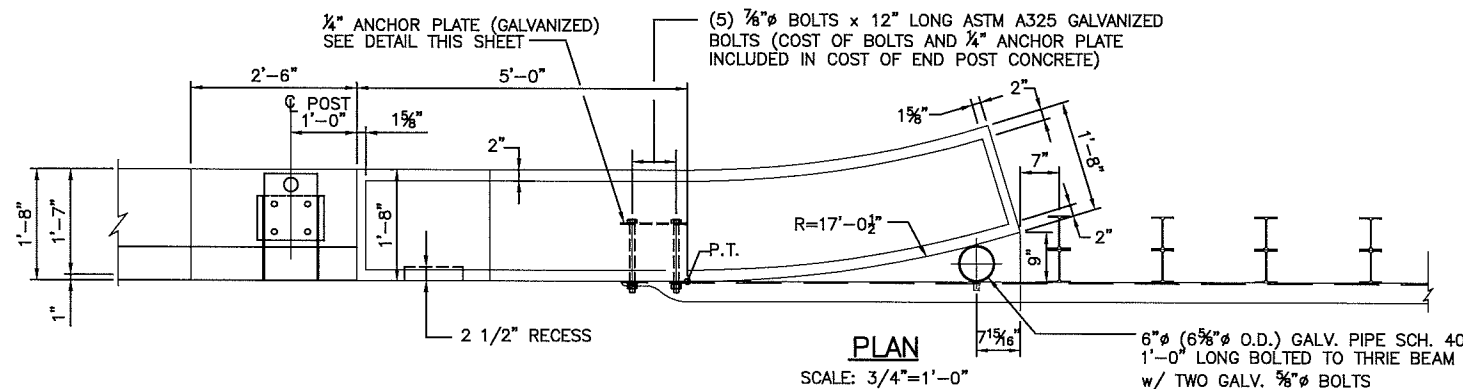
SOLE PLATE SECTION
NOT TO SCALE

ADDENDUM NO. 2

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IMPROVEMENTS TO I-95
REPLACEMENT OF BRIDGE 653
OVER OXFORD STREET
PROVIDENCE, RHODE ISLAND
SUPERSTRUCTURE DETAILS
CHECKED BY PNF DATE 4/28/17 SCALE



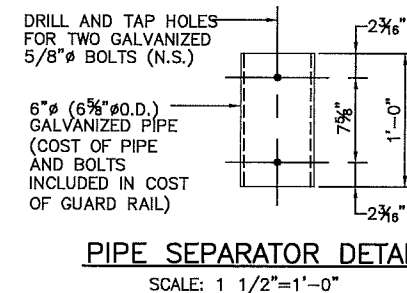
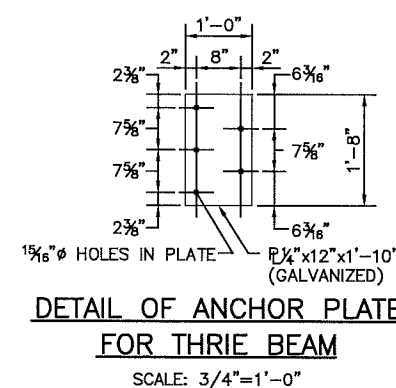
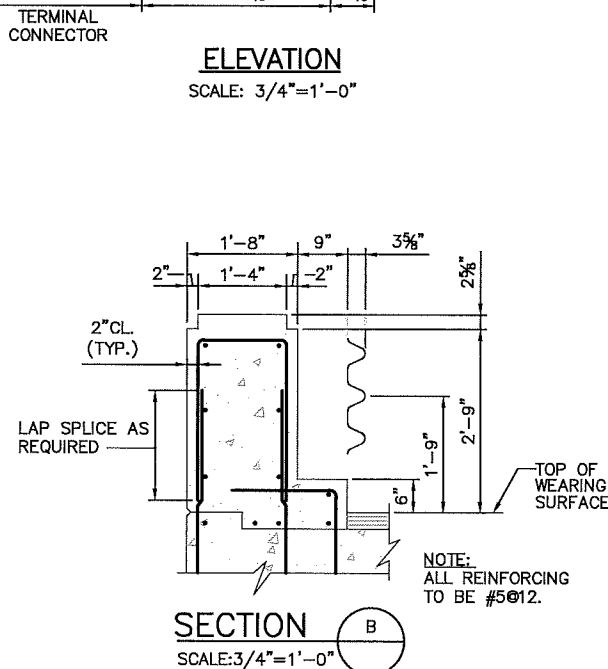
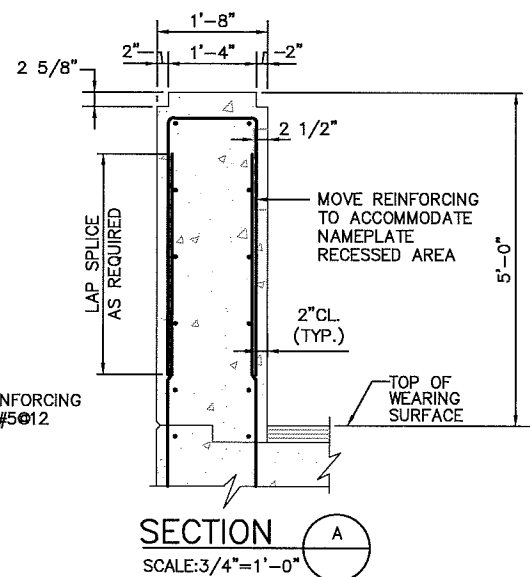
NOTE:
ALL FONT STYLES ARE TO BE NEW TIMES ROMAN, UNLESS NOTED OTHERWISE.

GRANITE IDENTIFICATION TABLETS (NAMEPLATES)

SCALE: 3"=1'-0"

NOTES:

- TO INSURE PROPER GUARD RAIL ANCHORAGE, THE GUARD RAIL INSTALLATION SHALL BEGIN AT EACH END OF THE BRIDGE AND WORK INTO THE APPROACHES.
- THE COST OF THE GUARD RAIL TRANSITIONS TO BRIDGE END POSTS ARE HIGHWAY ITEMS. APPROACH SECTIONS AND TRAILING SECTIONS ARE SEPARATE ITEMS IN THE PROPOSAL.
- THE COST OF BRIDGE RAIL ANCHORAGE (PLATES, ANCHOR BOLTS, WASHERS AND PLATE SLEEVES) IS INCLUDED IN THE COST OF END POST CONCRETE.
- ALL STEEL SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M270, GRADE 36.
- ANCHOR BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION A 307.



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ADDENDUM NO. 2



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IMPROVEMENTS TO I-95
REPLACEMENT OF BRIDGE 653
OVER OXFORD STREET
PROVIDENCE, RHODE ISLAND

END POST DETAILS
FOR TL-5 RAIL

CHECKED BY PNF DATE 5/17/17 SCALE

ADDENDUM NO. 2