

January 17, 2014

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATION
DEPARTMENT OF TRANSPORTATION
RHODE ISLAND CONTRACT NO. 2014-CB-004

FEDERAL AID PROJECT NO. FAP Nos: BRO-0465(001)

Improvements to I-195
Accelerated Bridge Construction (ABC) of
Bridge No. 465 Replacement
I-195 Ramp (DR-2) over Warren Avenue

CITY/TOWN OF East Providence, Rhode Island

COUNTY OF PROVIDENCE

NOTICE TO PROSPECTIVE BIDDERS

ADDENDUM NO. 3:

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. General Provisions – Contract Specific

1. INDEX

Delete page CS-1 (R1) in its entirety and replace it with page CS-1 (R2) attached to this Addendum No. 3. The Index has been revised.

2. NOTICE TO CONTRACTORS

Delete page CS-7 (R1) in its entirety and replace it with page CS-7 (R2) attached to this Addendum No. 3. Delete page CS-8 in its entirety and replace it with page CS-8 (R1) attached to this Addendum No. 3. Add page CS-8A to this Addendum No. 3. The Notice to Contractors has been revised.

B. General Provisions – Job Specific

1. INDEX

Delete page JS-1 (R1) in its entirety and replace it with page JS-1 (R2) attached to this Addendum No. 3. Delete page JS-2 (R1) in its entirety and replace it with page JS-2 (R2) attached to this Addendum No. 3. The Index has been revised.

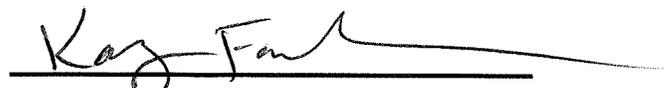
ADDENDUM NO. 3

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2. CODE 800.9910 WARREN AVENUE BRIDGE NO. 465 SUPERSTRUCTURE
Delete page JS-55 (R1) in its entirety and replace it with page JS-55 (R2) attached to this Addendum No. 3. Delete page JS-58 in its entirety and replace it with page JS-58 (R1) attached to this Addendum No. 3. This specification has been revised.
3. CODE 800.9920 WARREN AVENUE BRIDGE NO. 465 SUBSTRUCTURE
Delete page JS-61 (R1) in its entirety and replace it with page JS-61 (R2) attached to this Addendum No. 3. Delete page JS-62 in its entirety and replace it with page JS-62 (R1) attached to this Addendum No. 3. Delete page JS-65 in its entirety and replace it with page JS-65 (R1) attached to this Addendum No. 3. This specification has been revised.
4. CODE T12.9901 MOBILE CAMERA SURVEILLANCE SYSTEM
Delete pages JS-118A, JS-118D, and JS-118E in their entirety and replace them with pages JS-118A (R1), JS-118D (R1), and JS-118E (R1) attached to this Addendum No. 3. This specification has been revised.

C. Plans

1. VOLUME 2 SHEET 5 OF 42 – GENERAL BRIDGE NOTES SHEET 3 OF 3
Delete Sheet 5 (R1) in its entirety and replace it with Sheet 5 (R2) attached to this Addendum No. 3. This sheet has been revised.
2. VOLUME 2 SHEET 21 OF 42 – WINGWALL SECTIONS
Delete Sheet 21 in its entirety and replace it with Sheet 21 (R1) attached to this Addendum No. 3. This sheet has been revised.



RI Department of Transportation
Chief Engineer

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RIC No. 2014-CB-004

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Contractor shall be notified that any reference to Division I, Part 100 General Requirements and Covenants shall refer to the applicable section of Rhode Island Department of Administration Procurement Regulations Section 12 (e.g. reference to 105.02 shall refer to 12.105.02).

5:00 AM the following Monday to at a minimum complete all the erection of the two modular units as well as forming of the closure pour.

4. The Contractor shall furnish the Engineer with time-lapse high end imaging documenting all of the construction activities starting with Weekend Closure #1, Weekend Closures #2, and ending with the completion of Milestone #4.
5. The Contractor must provide all of the required detours in accordance with the TMP during the two weekend closures of Warren Avenue.
6. The contractor's attention is directed to the following contract milestones;

Milestone
#1 - Interim Completion Date #1 – Completion of Weekend Closure #1
#2 - Interim Completion Date #2 – Completion of Weekend Closure #2
#3 - Interim Completion Date #3 - Bridge Open to Traffic
#4 - Substantial Completion

- Milestone #3 is defined as the completed bridge structure and ramp, open to all traffic, less final striping. Temporary striping will be allowed until the roadway pavement has reached the required curing period of 14 days.
 - Milestone #4 is defined as Substantial Completion per specification 12.101.71 and including all of the Works of the Bridge, final striping as well as Warren Avenue.
7. Due to the nature of the ABC project delivery method, NO winter shutdown is allowed.
 8. The Contractor is reminded of the ABC nature of this contract and shall note specification “12.105.02 Plans and Shop Drawings”. The Contractor shall submit duplicate Shop Drawings (two copies per submittal) directly to the attention of the Consulting Engineer (The Louis Berger Group, Inc., 117 Kendrick Street, Suite #400, Needham, Mass 02494, Attn: Phineas Fowler, PE) simultaneously with each of his official submittals to the Department.
 9. The Contractor shall submit Requests for Information (RFI) through the RIDOT's Project Management Portal (PMP).
 10. Strict adherence to the regulatory agencies' permit requirements is mandatory.
 11. The Department has obtained all necessary permits to build the job as shown in the contract documents. Proposals by the Contractor which require modifications to the permits shall be at the Contractor's expense.
 12. The Contractor shall coordinate through RIDOT to modify any permit that is included in this Contract.
 13. The Contractor will not be permitted to close the existing bridge to traffic or start any demolition activities prior to the start of Weekend Closure #1 requirements. Contract drawings designated onsite construction laydown areas. If the contractor requires more storage/laydown areas or elects to use other areas these additional areas must be at the contractor's own expense.

14. The Contractor shall note that in addition to the night time work allowed for the two (2) weekend closures, the contractor may work 24 hours a day, 7 days per week as long as they are within the General Restrictions shown in the TMP for lane closures and as approved by the Engineer. For night time construction activities in addition to the two (2) weekend closures, the Contractor shall obtain approval from the City of East Providence and must comply with local noise ordinance.
15. The construction operations of this Project must be coordinated with the local community public officials. Upon award of the Contract and approval of the schedule, but prior to the commencement of construction, the Contractor shall coordinate the requirements for Uniformed Traffic Control Persons with the Engineer who will coordinate with state and local police departments.
16. The Contractor shall maintain power to the Interstate Route 195 lighting system located within the areas in which vehicular traffic is maintained during each construction phase.
17. The Contractor is advised that the signs and other traffic control devices shown on the Maintenance and Protection of Traffic Plans and Details are minimum requirements. The Contractor shall be responsible to supplement these as required to ensure the public's safety. Prior to beginning work that affects traffic; the Contractor shall furnish and install the required signs and other traffic control devices.
18. In cases of emergency and/or as directed by the Engineer, the Contractor shall move equipment to allow for the passage of emergency vehicles and/or open closed lanes to maintain traffic flow.
19. All work must be performed in a manner that causes the least disruption to existing vehicular and pedestrian traffic for as short a period of time as possible. When work commences in such areas, it shall be expeditiously completed without unnecessary interruptions. Unless otherwise permitted in writing by the Engineer, and except for the two (2) weekend closures, Warren Avenue Eastbound and Westbound Lane Closures will not occur simultaneously.
20. The Contractor shall backfill or shall place steel plates, as approved by the Engineer, capable of supporting HS-25 wheel loading over all trenches and excavations that are not protected by barrier at the end of work each day except when otherwise directed by the Engineer. There shall be no additional compensation for backfilling, re-excavating and/or plating these trenches. Use of steel plates is restricted to local roads.
21. All temporary construction signs shall be removed, covered or otherwise concealed when they are not needed to properly warn drivers and/or pedestrians. This includes the periods between erecting the signs and the start of operations, as well as when a phase is completed or suspended. The Contractor shall be compensated for this under Item Code 937.0200, "Maintenance and Movement Traffic Protection".

22. The measurement and payment for all traffic control devices and for the maintenance and movement of traffic protective devices will be made under the appropriate bid items at the Contract unit bid prices.
23. Temporary construction signs shall not be placed so they encroach on open

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Contractor shall be notified that any reference to Division I, Part 100 General Requirements and Covenants shall refer to the applicable section of Rhode Island Department of Administration Procurement Regulations Section 12 (e.g. reference 105.02 shall refer to 12.105.02).

11. Placing the cast-in-place end of deck closure pour at the backwalls including steel reinforcement assembly and any and all embedded or attached components.
12. Placing cast-in-place concrete safety barrier closure pours for superstructure as shown on the plans including steel reinforcing, electrical conduit, couplings, pull boxes, junction boxes, concrete surface rubbed regular, concrete surface treatment protective coating, block-out for bent sliding plate, block out for strip seal frame and any and all embedded or attached components as shown on the plans.
13. Placing cold applied liquid membrane waterproofing on the bridge deck, wearing surface and subpavement deck drain.
14. Furnishing and installing the roadway joints at the abutments, including the strip seal hardware and joints, and any and all embedded or attached components.

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

MATERIALS:

The materials used shall be in accordance with the applicable sections of the RI Standard Specifications, Special Provisions, and plans for each respective item included in the construction of the superstructure.

Fabricator Qualification

The fabrication and pre-assembly of the SMU's shall be the sole responsibility of the Contractor.

1. If the Contractor elects to fabricate and pre-assemble the SMU's, the Contractor shall provide the fabrication and pre-assembly shop/site for doing this work. The Contractor shall submit the location of the shop/site for review and approval to the Department prior to the commencement of work. Compensation for out of state inspection service shall be in accordance with RI Standard Specifications Section 809.
2. If the Contractor elects to subcontract the SMU's fabrication and pre-assembly to a precast concrete plant, it shall be to a precast concrete plant listed on the latest RIDOT approved plant list "Approved Asphalt, Ready Mix Concrete, and Precast Concrete Plants". Precast concrete plants that are not on the list must be approved by RIDOT's material section prior to submission of shop drawings for the SMU's.

The following submittals are required in addition to those required by relevant RI Standard Specifications. The Contractor shall conform to all submittal requirements of the Contract (Special Provision 105.02), including submitting the information specified herein to the Engineer.

Shop Drawings for Prefabricated Superstructure Modular Units.

Shop Drawings for the components of the SMU's shall be as required by the applicable specifications of the various work items. Shop Drawings for the prefabricated SMU's shall be made by the Contractor for review and final approval by the Engineer prior to ordering materials and prior to the performance of work for the prefabricated SMU's.

- b. Full depth cracking of concrete and concrete breakage that is not repairable to 100% conformance to the actual product.
 - c. Camber that does not meet the requirements required by the plans or shop drawings.
 - d. Honeycombed texture.
 - e. Dimensions not within the allowable tolerances specified in the contract documents.
 - f. Separation of the concrete deck from the steel beams.
 - g. Defects that indicate concrete proportioning, mixing and molding not conforming to the contract documents.
 - h. Damaged ends, where such damage would prevent making satisfactory joint.
 - i. Damage during storage, transportation, erection, or construction determined to be significant by the Engineer.
5. Construct SMU's to the following tolerances:
- a. Deck surfaces must meet a 1/8 inch in 10-foot straightedge requirement in longitudinal and transverse directions.
 - b. Control of camber during fabrication is required to achieve ride quality. Differences in camber between adjacent SMU's shall not exceed 1/4 inch before shipping to the site. Establish the differential camber by pre-assembling the SMU's as required herein.
6. The Contractors concrete quality/process control shall conform to the applicable requirements of Sections 601, 808 and 814 of the RI Standard Specifications including all applicable compilations of approved specifications. Acceptance of material or construction shall be in accordance with Section 601 and shall be based on the specified 28 day compressive strength. Additional sampling and testing to confirm interim compressive strength will be required earlier than the specified 28 day compressive strength and/or at 48 hours as determined by the Engineer, as a prerequisite to subsequent construction activities shall be the Contractors responsibility as part of the Contractor's quality/process control system.

B. Pre-assembly Fabrication

1. The SMU's shall be pre-assembled to assure proper match between SMU's to the satisfaction of the Engineer before shipping to the job site.
2. The concrete deck shall be cast-in-place at the Contractors shop/site directly onto the structural steel as part of the pre-assembly of the SMU's. The shop/site cast concrete for the deck and safety barrier shall conform to the applicable requirements of Sections 808, 809 and 814; of the RI Standard Specifications including all applicable compilations of approved specifications. The portions of Section 809 for pre-tensioning and post-tensioning do not have any application to this project.
3. The procedure for leveling any differential camber shall be established during the pre-assembly and approved by the Engineer. The SMU's shall be matched as closely as possible for camber, and match-marked.
4. The SMU's should be measured for sweep and the bearing anchor bolt locations reconfigured as needed.

CODE 800.9920

WARREN AVENUE BRIDGE NO. 465 SUBSTRUCTURE

DESCRIPTION:

The work under this item shall consist of constructing the substructure of the Warren Avenue Bridge No. 465 in its entirety. These Special Provisions shall supplement the relevant sections of the State of Rhode Island Standard Specifications for Road and Bridge Construction, Amended December 2010, including all applicable compilations of approved specifications (hereinafter referred to as the RI Standard Specifications), not replace them. All work shall be performed in accordance with the contract drawings, the RI Standard Specifications as modified by this Special Provision, and as directed by the Engineer. Where no specific requirement is directed for a component part of this item, the RI Standard Specifications shall apply, except for payment.

The work included for this item shall comprise all work pertaining to the construction of all substructure components consisting of fabricating, pre-assembly, furnishing, erecting, and installing all reinforced Precast Concrete Elements (PCE), including but not limited to, the precast abutment footings, precast abutment stems, precast wingwall footings, precast wingwall stems, precast footing steps, precast parapets, precast endposts, precast approach slabs, concrete closure pours, slope paving, paved waterway, shear keys, flowable concrete bedding, non-shrink grout, grouted splice couplers, concrete surface rubbed regular, bituminous damp-proofing, concrete surface treatment (protective coating), weep drain, neoprene sheet seal, backer rod, protection board, leveling bolt assembly, granite identification tablets, rigid steel conduit in structure, couplings, flexible fittings, expansion fittings, pull boxes, junction boxes, block-out for bent sliding plate, miscellaneous metals, lifting anchors, temporary bracing, hardware, and any and all embedded or attached components including all necessary materials and equipment to complete the work as shown on the plans.

The temporary earth retaining system is included as part of this work. Refer to Section 805.9900 of these special provisions.

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

MATERIALS:

The materials used shall be in accordance with the applicable sections of the RI Standard Specifications, Special Provisions, and plans for each respective item included in the construction of the superstructure.

Fabricator Qualification

The fabrication and pre-assembly of the PCE's shall be the sole responsibility of the Contractor.

1. If the Contractor elects to fabricate and pre-assemble the PCE's, the Contractor shall provide the precast concrete fabrication shop/site for doing this work. The Contractor shall submit the location of the fabrication shop/site for review and approval to the

- Department prior to the commencement of work. Compensation for out of state inspection service shall be in accordance with RI Standard Specifications Section 809.
2. If the Contractor elects to subcontract the PCE fabrication and pre-assembly to a precast concrete plant, it shall be to a precast concrete plant listed on the latest RIDOT approved plant list "Approved Asphalt, Ready Mix Concrete, and Precast Concrete Plants". Precast concrete plants that are not on the list must be approved by RIDOT's material section prior to submission of shop drawings for the PCE's.

The following submittals are required in addition to those required by the applicable requirements of PARTS 600 and 800 of the RI Standard Specifications, these special provisions, together with the additional provisions set forth below. The Contractor shall conform to all submittal requirements of the Contract (Special Provision 105.02), including submitting the information specified herein to the Engineer.

Shop Drawings for Precast Concrete Elements.

Shop Drawings for the components of the PCE's shall be as required by the applicable specifications of the various work items. Shop Drawings for the PCE's shall be made by the Contractor for review and final approval by the Engineer prior to ordering materials and prior to the performance of work for the precast elements.

All shop drawings and design computations of the PCE's, shall be stamped by a Registered Professional Engineer in the State of Rhode Island and shall include, but not necessarily be limited to, the following:

1. Show all lifting inserts, hardware, or devices and locations on the shop drawings for the Engineer's approval.
2. Show locations and details of the lifting devices and lifting holes including supporting calculations, type, and amount of any additional precast concrete reinforcing required for lifting.
3. Show required minimum compressive strength for stripping of forms, required minimum compressive strength for handling, required minimum compressive strength for shipping, and class of precast concrete..
4. The Contractor is responsible for handling stresses in the PCE at every stage of handling, including but not limited to dis-assembly, transporting, and erecting the PCE's, and shall include all required concrete modifications to resist handling stresses on the shop drawings
5. Details of vertical adjusting hardware.
6. Do not order materials or begin work until receiving final approval of the shop drawings.
7. The Engineer will reject any element fabricated before receiving written approval, or any element that deviate from the approved drawings. The Contractor shall be responsible for costs incurred due to faulty detailing or fabrication.

PCE Erection Plan.

For the PCE's, the contractor shall submit an Erection Plan for review and approval to the Department prior to the commencement of work. The erection plan shall include the requirements specified in the Erection of Bridge Components notes shown on the plans and also, but not necessarily be limited to, the following:

4. Provide the Engineer a tentative casting schedule at least two weeks in advance to make inspection and testing arrangements. A similar notification is required for the shipment of units to the project site.
5. Finish the precast elements according to Section 809 of the RI Standard Specifications.
6. The PCE's shall be pre-assembled to assure proper match between members to the satisfaction of the Engineer before shipping to the project site.
7. The bituminous damp-proofing can be applied before shipping the PCE's to the project site.

C. Handling, Storing, and Transportation.

1. Handling and erection bracing requirements shall be in accordance with the contract documents and Chapter 5 of the PCI Design Handbook, latest edition.
2. Dis-assembly of the pre-assembled PCE's shall be in accordance with the applicable sections of the PCE Erection Plan.
3. PCE's damaged during handling and storage will be repaired or replaced at the Engineer's direction at no cost to the Department.
4. PCE's shall be lifted at the designated points by approved lifting devices properly attached to the element and proper hoisting procedures.
5. PCE's shall be protected from freezing temperatures (32°F) for 5 days or until precast concrete attains design compressive strength detailed on the plans, whichever comes first. Do not remove protection any time before the elements attain the specified compressive strength when the surrounding air temperature is below 20°F.

D. Transportation.

1. It shall be the Contractors responsibility to obtain all necessary permits for any oversize/overweight travel per all applicable State regulations. This is in addition to the stipulations and submissions required in this specification.
2. A PCE shall not be transported from the casting yard until the precast concrete attains the minimum 28 day compressive strength specified in accordance with Section 809.
3. A 72-hour notice of the loading and shipping schedule shall be provided to the Department.
4. The Department will inspect for material, quality and condition after delivery to the project site, with this and any previous inspections constituting only partial acceptance.

E. General Procedure for Installation of PCE's.

1. PCE's shall be dry fit pre-assembled prior to transporting to the project site.
2. Establish working points, working lines, benchmark elevations, and survey data at the top of each supporting placement level before placement of all elements. Survey data shall match data provided in the approved PCE shop drawings.
3. Check the condition of the receiving bonding surface before connecting elements and take any necessary measures to remove items such as dust, rust, and debris to provide the satisfactory bonding required between the protruding reinforcing bars element and the grouted couplers.
4. Place PCE's in the sequence and according to the methods outlined in the PCE Erection Plan. Adjust the height of each element by means of leveling devices or shims.

F. Connection Procedure Using Grouted Splice Couplers

1. Refer to Section 810 Reinforcing.

CODE T12.9901

MOBILE CAMERA SURVEILLANCE SYSTEM

DESCRIPTION: This work shall consist of furnishing and installing a mobile camera surveillance system to view and record the project construction. The system shall include two (2) self-powered, rugged, wind-resistant trailers with pressure-sealed cameras for traffic management and work zone monitoring. The dome cameras shall mount to a 42 foot telescoping mast to provide a strategic overview of site.

- A. The outdoor camera system shall consist of two (2) separate weather resistant cameras, constructed of black powdered coated aluminum housing integrated on mobile solar powered trailer platform.
- B. The cameras shall have the ability to take digital still images every 5 minutes as well as provide live video.
- C. The camera shall upload both images and video over a wireless cellular modem.
- D. The content shall be sent to a secure, password protected website with an interface and online software features provided by the vendor as a managed service.
- E. The system shall operate on 12 VDC.

MATERIALS: This work shall consist of furnishing, installing, and testing a mobile camera surveillance system that meets the following requirements:

EQUIPMENT:

- A. The dome camera shall consist of a thermoplastic dome and acrylic bubble with pan, tilt, and zoom motion with 360° rotation, live streaming video and lens assembly consisting of a charge coupled device (CCD) camera with a remotely controlled focal lens with the following features:
 - 1. Image sensor 1/4-inch
 - 2. Scanning system 2:1 interlaced output
 - 3. Effective pixels NTSC: 768 x 494, PAL: 752 x 582
 - 4. Horizontal resolution NTSC: 540 TVL, PAL: 540 TVL
 - 5. Lens f/1.4 (focal length, 3.4~119 mm; 35X optical zoom, 12X digital zoom)
 - 6. Programmable zoom speeds 3.2, 4.6, or 6.6 seconds
 - 7. Horizontal angle of view 55.8° at 3.4 mm wide zoom, 1.7° at 119mm telephoto zoom
 - 8. Focus Automatic with manual override

11. Graphical weather applet displaying ten points of local weather data and 48-hour forecast.
12. Remote solar monitoring screen displaying the DC amperage output of the solar panels.
13. Remote battery monitoring screen displaying battery voltage, temperature and status.
14. Remote cellular monitoring screen displaying connectivity, network traffic and modem temperature.
15. Remote wireless radio monitoring screen displaying connectivity, network traffic and Google Map features including wireless radio locations.
16. Share image tools: save, print, email and post to message board or mobile devices.
17. Automated progress reports in Power Point, Open Office and PDF formats.
18. Map, aerial and satellite view by Google.
19. Time lapse feature shall include – Instant time lapse play back by day, week, month or year.
20. Machine to machine self-healing technology that automates maintenance of camera up to 288 times daily.
21. Account security features shall include – Four levels of password protection, IP address block/ permission and SSL protection of the user login password.

All equipment and software including but not limited to the portable trailer, solar panels, batteries, camera, communications systems, video webcaster, software and online interface shall be provided by the same vendor as a complete unit.

CONSTRUCTION METHODS: The Contractor in coordination with the Engineer shall determine the mounting location for each mobile traffic camera trailer. The trailers shall be installed outside of the roadway clear zone or behind protective barrier or guardrail. If the trailers cannot be located outside the clear zone or behind protective devices, the contractor shall provide temporary protective devices in accordance with the latest edition of the AASHTO Roadside Design Guide. The Contractor may be requested to move the trailers up to two times during the construction period by RIDOT. If the trailer needs to be relocated due to Contractor construction activities, it shall not count towards a requested relocation.

The Contractor shall be responsible for all negotiations, fees and agreements with private land owners.

The trailers shall be installed at the agreed locations and made operational and tested 7 days prior to the start of construction. The contractor shall utilize vendor support as needed and perform initial installation and set-up procedures per the vendor's instructions.

INSTALLATION:

A. General:

1. Install camera system in accordance with manufacturer's printed instructions, State and Municipality codes and requirements and approved submittals.
 2. Install units plumb and level and at proper angle to provide maximum field of view of on-site operations.
 3. Securely and rigidly anchor products in place.
 4. Connect cameras to power.
- B. Position camera so that field of view of approximately 58° horizontal and 44° vertical covers intended area of site.
1. Locate the trailer so that the solar panels have an unobstructed view of the Southern sky.
 2. Locate the trailer so the camera will provide uncompromised visual coverage.
 3. Locate the trailer so that position of sun or man-made light sources will not come into direct contact with field of view of camera at any time during construction.

MAINTENANCE:

The Contractor shall clean and maintain the units and equipment for the life of the project for 24 hour operation per the vendor's recommended schedule.

The Contractor shall be responsible for all aspects of maintaining a fully operational mobile camera surveillance system from 7 days prior to beginning construction to 30 days after written notification of final acceptance.

PROJECT COMPLETION:

Within 30 days after final project completion, the Contractor shall demonstrate to the Engineer that each camera and trailer unit is fully operational and the two mobile camera surveillance system trailers shall be delivered to the RIDOT at the following location with all original literature, instruction, operation, and maintenance manuals:

RIDOT Maintenance Headquarters
360 Lincoln Avenue
Warwick RI 02888-3030
Telephone - 401 222-2378

The Contractor shall contact the RIDOT Maintenance Headquarters a minimum of 7 calendar days in advance to arrange a specific date and time for delivery of the trailers.

STRUCTURAL STEEL NOTES

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

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

THE FABRICATOR MUST SUBMIT PROOF OF CURRENT CERTIFICATION AS SPECIFIED.

- THE STEEL ERECTOR/CONTRACTOR FOR THIS PROJECT SHALL BE CERTIFIED FOR "ADVANCED CERTIFIED STEEL ERECTOR (ACSE)" 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. THE ACSE CERTIFICATION IS REQUIRED FOR THE PREASSEMBLY/DISASSEMBLY OF THE SMU'S, THE ONSITE ERECTION OF THE SMU'S AND DIAPHRAGMS AS WELL AS ALL INSTANCES OF HANDLING THE SMU'S.
- SHOP DRAWINGS FOR ALL FABRICATED STEEL INCLUDING BEARINGS, EXPANSION JOINTS 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
- 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.
- ALL STRUCTURAL STEEL SHALL BE PREPARED AND PAINTED IN ACCORDANCE WITH SECTION 825 OF THE RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION "PAINTING STRUCTURAL STEEL". THE COLOR OF THE SURFACES SHALL BE GREEN (SEMI-GLOSS) TO MATCH FEDERAL STANDARD 595 COLOR 24272. ALL DAMAGES DUE TO HANDLING, SHIPPING, ERECTION, AND VISUAL IMPERFECTIONS WHEN VIEWED FROM A DISTANCE OF 30 FEET SHALL BE FIELD SURFACE PREPARATION, FIELD TOUCH-UP AND REPAIRED TO BLEND WITH THE FINISH COATS EQUIVALENT TO THE ORIGINAL SYSTEMS, IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS AND THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.
- 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.

ADDENDUM NO. 3

- 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.
- BEARING STIFFENERS SHALL BE FABRICATED AS SHOWN ON THE PLANS AND SHALL BE PLACED ON BOTH SIDES OF ALL BEAM WEBS.
- CONNECTION PLATES SHALL BE SET PERPENDICULAR TO THE FLANGES OF THE BEAMS.
- END BEARING STIFFENERS AT BEAM ENDS SHALL BE VERTICAL AFTER ALL DEAD LOADS HAVE BEEN PLACED.
- 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: $-0, +\frac{1}{4}" \times (\text{TOTAL LENGTH, IN FEET, FROM THE NEAREST SUPPORT})/10$. THE MAXIMUM DEVIATION IS $1\frac{1}{2}"$ BETWEEN SUPPORTS.
- NO SHOP FILLET WELD SHALL BE LESS THAN $\frac{1}{4}"$.
- 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.

GENERAL NOTES REGARDING TEMPORARY CONSTRUCTION CONDITIONS:

- DESIGN WIND PRESSURES FOR CONSTRUCTION:

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

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

TABLE NOTES:

- APPLICATION OF THE TABULAR PRESSURE:

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

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

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

- 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 125 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 PBE SYSTEM IS PLACED INTO SERVICE.
- 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 RELEVANT COST APPLICABLE TO THE LUMP SUM PAY ITEM CODES 8000.9910 AND 8000.9920 OF THE SPECIAL PROVISIONS.

- VIBRATION CONTROL AND MONITORING NOTES

- THE CONTRACTOR SHALL CONTROL HIS OPERATIONS TO PREVENT DAMAGE TO THE EXISTING BRIDGE 465 WHILE IN SERVICE, THE ADJACENT BRIDGE 464, AND NEARBY BUILDING STRUCTURES.
- PREVENTIVE MEASURES SHALL INCLUDE SELECTING CONSTRUCTION METHODS AND PROCEDURES THAT WILL PREVENT DAMAGE, DISTRESS, OR SETTLEMENT TO ANY OF THE ABOVE BY CONTROLLING AND MONITORING THE VIBRATIONS FROM CONSTRUCTION ACTIVITIES.
- THE CONTRACTOR IS REQUIRED TO ENGAGE THE SERVICES OF A RHODE ISLAND REGISTERED PROFESSIONAL ENGINEER WHO IS AN EXPERIENCED VIBRATION MONITORING CONSULTANT TO MEASURE FREQUENCY RANGE AND PEAK PARTICLE VELOCITIES PRIOR TO, AND DURING CONSTRUCTION OPERATIONS.

SEE TABLE FOR VIBRATION SOURCES TO BE MONITORED DURING CONSTRUCTION OPERATIONS.

SEE TABLE FOR FREQUENCY RANGE AND LIMITING VALUE OF PEAK PARTICLE VELOCITIES.

TYPE	SOURCE M (SEE NOTE A)			SOURCE S (SEE NOTE B)		
	FREQUENCY (HZ)	PEAK PARTICLE VELOCITIES (PPV)		FREQUENCY (HZ)	PEAK PARTICLE VELOCITIES (PPV)	
		THRESHOLD VALUE (IN/SEC)	LIMITING VALUE (IN/SEC) (SEE NOTE C)		THRESHOLD VALUE (IN/SEC)	LIMITING VALUE (IN/SEC) (SEE NOTE C)
EXISTING BRIDGE	1-30	0.37	0.5	10-60	0.90	1.2
	30-60	0.37	0.5 - 0.7	60-90	0.90	1.2 - 1.6
COMMERCIAL BUILDING	1-30	0.23	0.3	10-60	0.53	0.7
	30-60	0.23	0.3 - 0.5	60-90	0.53	0.7 - 1.0
RESIDENTIAL BUILDING	1-30	0.15	0.2	10-60	0.37	0.5
	30-60	0.15	0.2 - 0.3	60-90	0.37	0.5 - 0.7

TABLE NOTES:

- SOURCE M - CONTINUOUS OR STEADY STATE VIBRATIONS SUCH AS: HYDROMILLS, LARGE PUMPS AND COMPRESSORS, BULLDOZERS, TRUCKS, CRANES, SCRAPERS, AND OTHER LARGE MACHINERY, JACKHAMMERS, RECIPROCATING PAVEMENT BREAKERS AND COMPACTORS. VIBRATORY AND IMPACT PILE/SHEET PILE DRIVERS ARE NOT PERMITTED FOR THIS PROJECT.
- SOURCES S - TRANSIENT OR IMPACT VIBRATIONS SUCH AS: BLASTING WITH EXPLOSIVES, DROP CHISELS FOR ROCK BREAKING, BUCKETS, IMPACT PILE DRIVERS, WRECKING BALLS AND BRIDGE DEMOLITION, GRAVITY DROP GROUND COMPACTORS AND PAVEMENT BREAKERS. BLASTING WITH EXPLOSIVES IS NOT PERMITTED FOR THIS PROJECT.
- FREQUENCY RANGE AND LIMITING VALUE OF PPV VARY PROPORTIONALLY.

R-2

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0465(001)	2014	5	42

REVISIONS		
NO.	DATE	BY
1	1/10/14	LBG
2	1/16/14	LBG

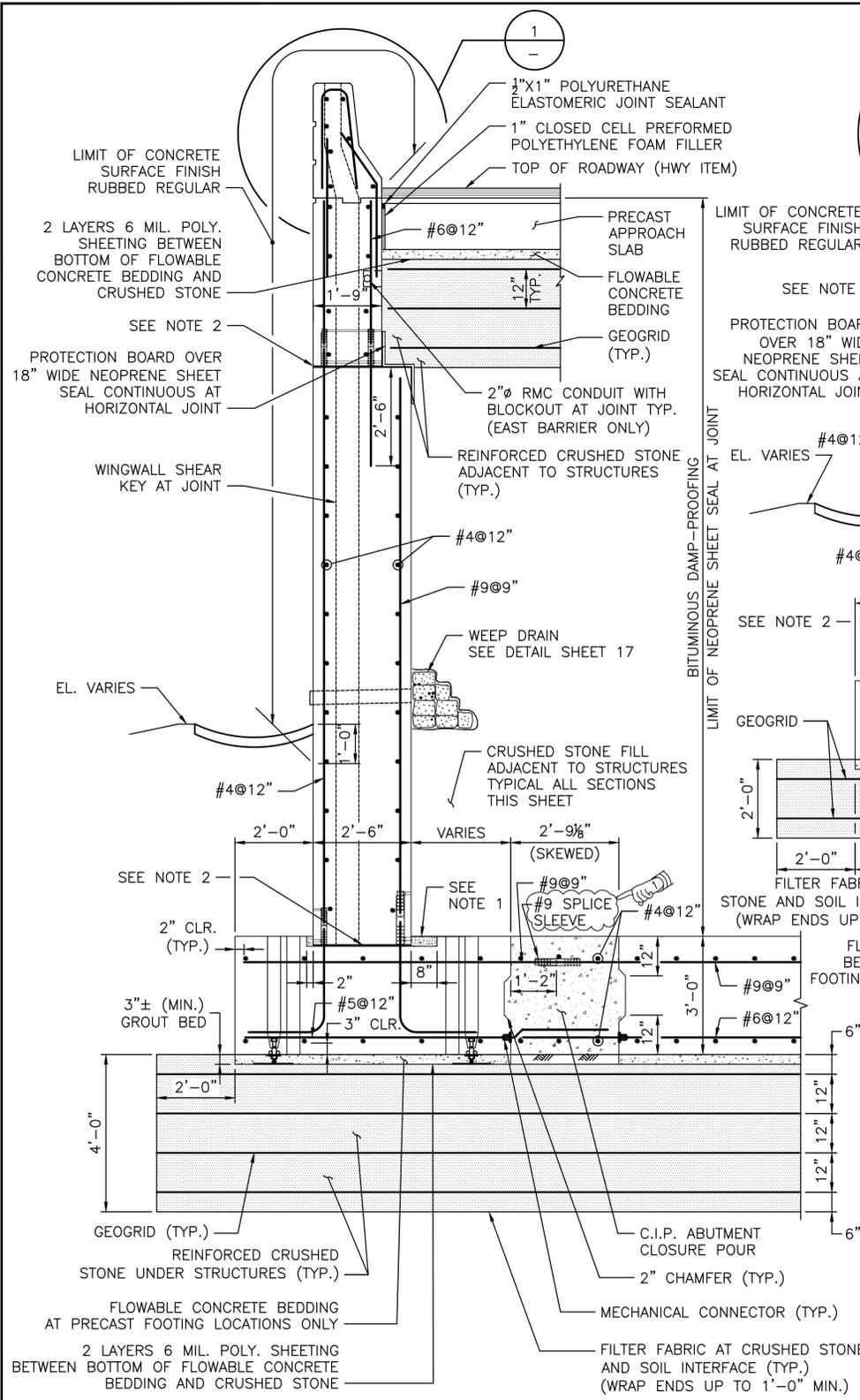
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-195 ABC BRIDGE NO. 465 REPLACEMENT RAMP (DR-2) OVER WARREN AVENUE EAST PROVIDENCE, RHODE ISLAND

GENERAL BRIDGE NOTES SHEET 3 OF 3

THE Louis Berger Group, INC.
 295 PROMENADE STREET
 PROVIDENCE, RI 02908
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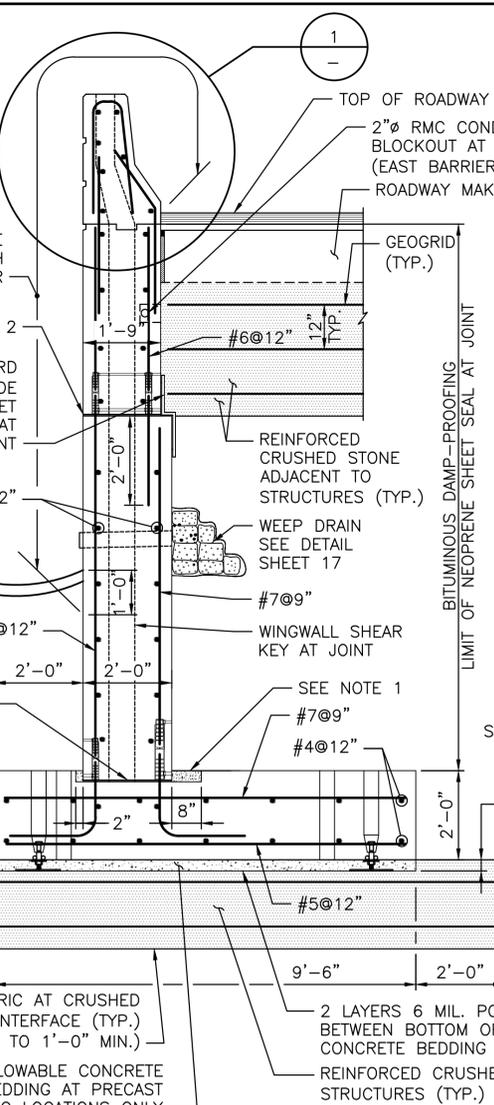
CHECKED BY PNF DATE 10/22/13 SCALE AS NOTED



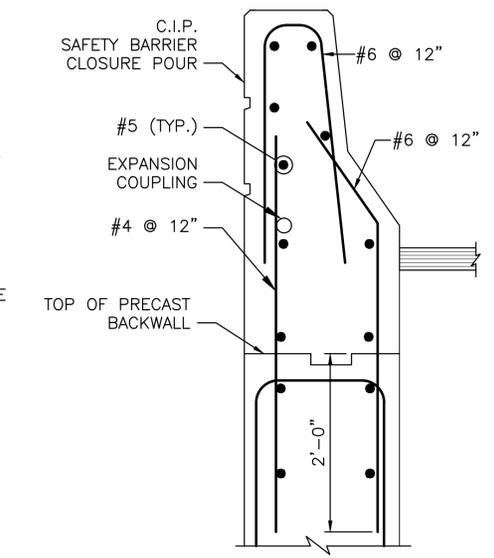
SECTION A
SCALE: 1/2"=1'-0" 19,20

- NOTES:**
- PROVIDE RECESSED SEAT TO FACILITATE INSTALLATION OF GROUDED SPLICE COUPLER. FILL GAP WITH NON-SHRINK GROUT AFTER INSTALLATION OF WALL STEM.
 - PRE-BED SEAT WITH NON-SHRINK GROUT WITH THICKNESS SLIGHTLY (1/8" MIN.) MORE THAN SHIM STACK.

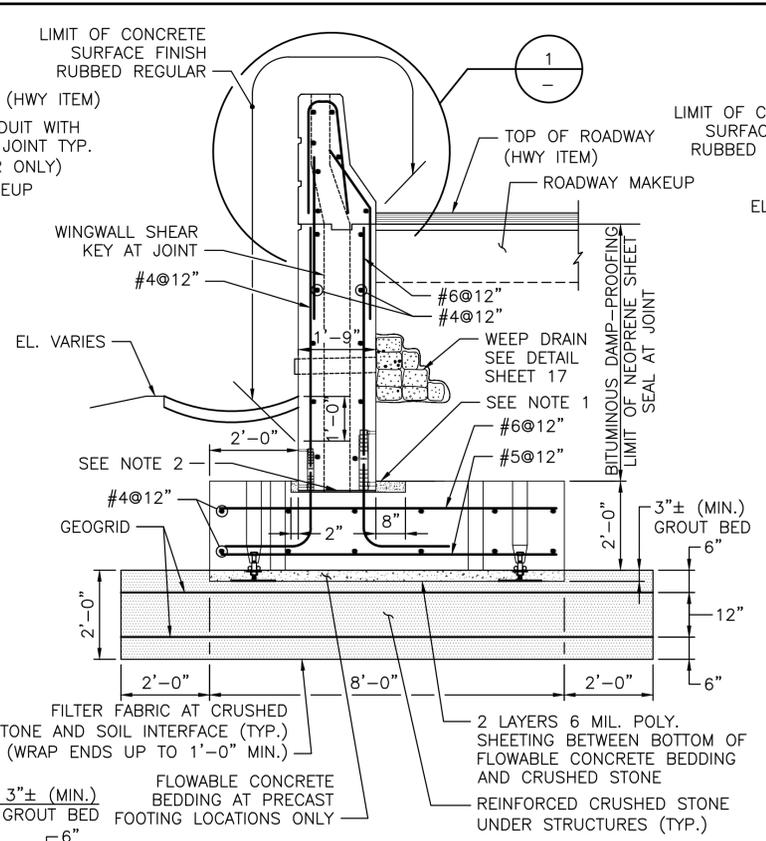
ADDENDUM NO. 3



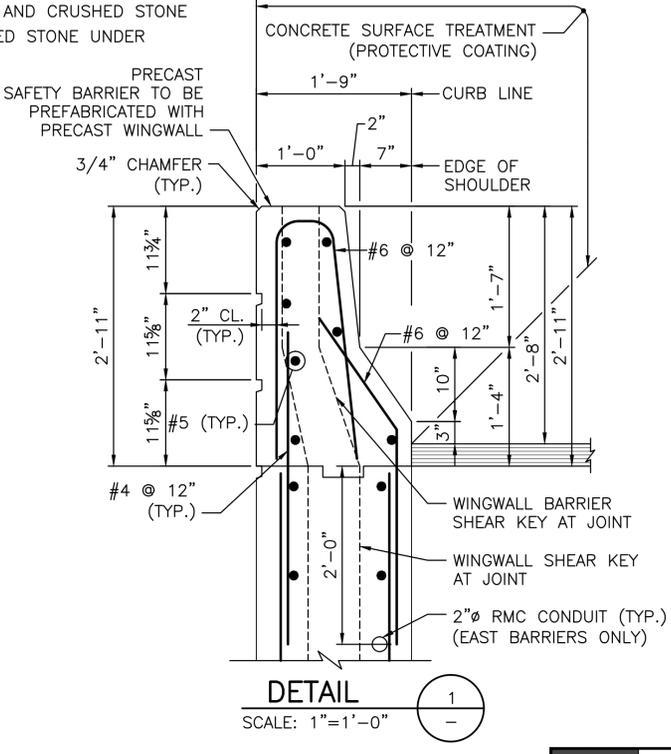
SECTION B
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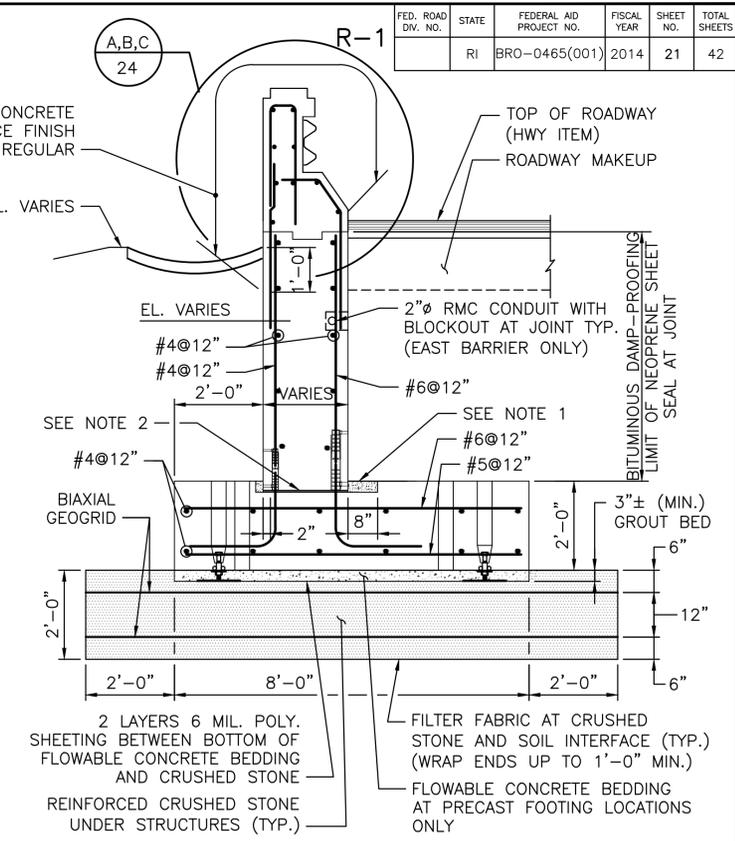
SECTION C
SCALE: 1"=1'-0" 19,20



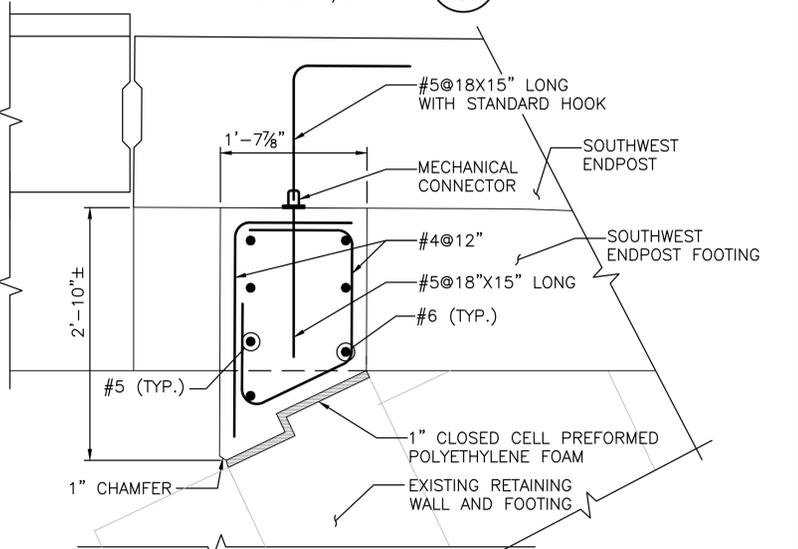
SECTION D
SCALE: 1/2"=1'-0" 19



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



SECTION E
SCALE: 1/2"=1'-0" 19,20



EXTENSION WALL PART PLAN
SCALE: 1"=1'-0"

REVISIONS		
NO.	DATE	BY
1	1/15/14	LBG

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
IMPROVEMENTS TO I-195
ABC BRIDGE NO. 465 REPLACEMENT
RAMP (DR-2) OVER WARREN AVENUE
EAST PROVIDENCE, RHODE ISLAND

WINGWALL SECTIONS

CHECKED BY PNF DATE 10/22/13 SCALE AS NOTED

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