

SPECIFICATIONS – JOB SPECIFIC

INDEX
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RIC No. 2018 – CB-098

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
105.02	Plans and Shop Drawings	JS-4
105.14	Open Sections of Project to Traffic	JS-6
105.22	Request for Information	JS-7
108.03	Prosecution and Progress	JS-9
108.1000	Prosecution and Progress	JS-12
109.06	Payment of Work	JS-14
109.07	Partial Payment of Lump Sum Items	JS-15
109.09	Acceptance and Final Payment	JS-16
212.2000	Cleaning And Maintenance of Erosion and Pollution Controls	JS-17
800.9901	Temporary Deck Underside and Side Protection Shielding	JS-18
803.9901	Remove and Replace Existing Deck Joint	JS-22
817.9901	Repairs to Structural Concrete Masonry (Patching Mortar)	JS-25
817.9902	Repairs to Structural Concrete Masonry (Form and Cast-in-Place Concrete)	JS-26
820.9901	Concrete Surface Treatment (Protective Coating)	JS-28
820.9902 - 820.9905	High Pressure Water Cleaning – Bridge No. 709, 712, 713, and 849	JS-30
824.9901	Steel Girder Repairs Bridge No. 712	JS-33
825.9901 – 825.9902	Repainting Existing Structural Steel – Bridge No. 712 (Full) and 849 (Zone)	JS-36
826.9903	Management of Pigeon Guano and Mixed Debris	JS-38

900.9921	Repair of Bridge Rail on Bridge 084901 Ramp BD	JS-40
907.1000	Dust Control	JS-43
928.9901	Truck Mounted Attenuator (TMA) With Truck Mounted Flashing Arrow Board (TMFAB)	JS-44
929.0110	Field Office	JS-47
937.1000	Maintenance and Movement of Traffic Protective Devices	JS-48
938.1000	Price Adjustments	JS-49
943.0200	On-The-Job Training	JS-50
L09.9901	Selective Clearing	JS-54

CODE 105.02

PLANS AND SHOP DRAWINGS

105.02 PLANS AND SHOP DRAWINGS. Plans will show details of all structures, lines, grades, typical cross sections of the roadway, location and design of all structures and a summary of items appearing on the Proposal. Bridge plans will either show all dimensions and details necessary for complete construction or such information that when supplemented by additional field data gathered by the Contractor will enable the Contractor to prepare complete shop drawings.

The Contractor shall keep one set of Plans available at the site at all times, and shall provide approved shop drawings to the Engineer upon request.

All shop drawings will be submitted in a timely fashion such that the Contractor's approved schedule will not be adversely impacted by the submittal process. Shop drawings shall consist of such detailed plans required to control the work that are not included in the Plans furnished by the Department. They shall include, but not be limited to, stress sheets, erection plans, false work plans, sheeting plans, cofferdam plans, bending diagrams for reinforcing steel or any other supplementary plans or similar data required of the Contractor. All shop drawings submittals shall be complete, incorporating all associated components of work so affecting the item for which the shop drawing is submitted. The Contractor is solely responsible for the completeness of all submissions. Incomplete shop drawings will be returned to the Contractor for resubmission.

The Contractor shall submit shop drawings to the Engineer and simultaneously to the design consultant of record. Shop drawings shall be accompanied by design computations, cuts from manufacturers' catalogs, and/or supporting technical bulletins. The submission to the engineer Design Consultant shall be electronically by email in PDF format. The Design Consultant for this project is:

The Louis Berger Group, Inc.
117 Kendrick Street, Suite 400
Attn: John Fitzgerald, PE
jfitzgerald@louisberger.com
Needham, MA 02494
781-707-7485
Office Hours: 8:30 AM – 5:00 PM

Engineering shop drawings and design computations shall be stamped **only** by a Rhode Island Registered Professional Engineer. The stamping of Plans for professional design shall be in accordance with the applicable requirements of the Rhode Island Board of Registration for Professional Engineers, or other Boards of Professional Registration, as applicable. Within forty-five (45) calendar days of submission with the exception of critical submittals that are flagged as structural steel fabrication and erection shop drawings, reinforcing steel, concrete mix, as well as bearing assemblies as provided in Section 5 of the General Provisions/Contract Specific pages, all shop drawings shall be reviewed by the Engineer and returned to the Contractor for appropriate action. The forty-five (45) calendar day time frame starts with the

submission of the shop drawings by email to the Engineer. The Engineer shall review critical submittals within twenty eight (28) calendar days.

Shop drawings that are found to be erroneous, lacking information necessary to control construction, or not in conformance with accepted design criteria will be disapproved and returned to the Contractor. The Contractor shall address the Engineer's comments and resubmit revised shop drawings and/or design computations.

Shop drawings must be approved by the Engineer prior to commencement of the work involved. Such review and approval does not relieve the Contractor of any responsibility under the Contract for the successful completion of the work to the satisfaction of the Engineer. The Engineer's responsibility is solely for the limited purpose of reviewing and approving the shop drawings for general conformance with the design intent of the project and general compliance with the information given in the Contract Documents. The Contractor retains sole responsibility for the accuracy of calculations; for confirming and correlating all quantities and dimensions; for selecting fabrication processes and techniques of construction; for means and methods of construction; for coordinating work with all other work; and for performing all work in a safe and satisfactory manner. There shall be no claims for additional payment by the Contractor nor will there be an extension of the project Completion Dates for any corrective actions necessary as a result of shop drawing errors and omissions.

Each and every copy of the shop drawings and data shall bear the Contractor's stamp showing that they have been checked and that the Contractor has determined and verified all materials, field measurements and field construction criteria related thereto, and has checked and coordinated the information contained within this submittal with the requirements of the Contract Documents and as required with all trades and all public agencies involved. Sole responsibility for the shop drawings shall remain with the Contractor. Each of the Contractor's stamp shall be signed by the responsible authorized representative of the Contractor. Shop drawings submitted to the Engineer without the Contractor's stamp and signature will be considered incomplete and returned to the Contractor for conformance with this requirement.

There shall be no claims for additional payment by the Contractor, nor will there be an extension of the project Completion Dates for delays resulting from resubmissions due to incomplete shop drawings; for the time taken by the Contractor to submit revised shop drawings caused by an erroneous submission; or by a previous submission either lacking the information necessary to control construction; or for not conforming to accepted design criteria. In addition, the time taken by the Engineer to review the revised shop drawings will not constitute justification for an extension of the project Completion Dates.

The Contract price will include the cost of furnishing all shop drawings.

CODE 105.14

OPEN SECTIONS OF PROJECT TO TRAFFIC

The Contractor shall schedule pavement removal by milling and/or cold planing such that no location within the limits of the project over which traffic flow is to be maintained shall remain without the surface course for longer than 5 working days, unless otherwise approved in writing by the Engineer.

CODE 105.22

REQUEST FOR INFORMATION

•Add the following Subsection 105.22.

105.22 REQUEST FOR INFORMATION (RFI). An RFI is a document submitted by the Contractor requesting clarification of a portion of the Contract Documents or a field condition. All such requests shall include a detailed written statement indicating the specific Drawings or Specifications to be clarified and the clarification requested. In addition, the Contractor shall:

1. Clearly state the item to be clarified, provide background information as appropriate, and explain why a response is needed.
2. Identify Drawings by Drawing number and location on the sheet.
3. Identify Specifications by Section number, page and paragraph.
4. Provide description of the field condition requiring clarification.
5. Present Contractor's interpretation or understanding of the requirement.
6. Include possible solution by text and/or drawings.
7. Improper RFIs are defined as:
 - RFIs that are not complete.
 - RFIs that request information that is clearly shown on the Contract Documents.
 - RFIs that do not comply with the definition of an RFI as indicated above.
8. Improper RFIs will be returned unanswered.

Delays caused by improper RFIs are the sole responsibility of the Contractor. The Contractor is not entitled to additional time or monetary compensation as a result of such delays.

a. RFI Submission. RFIs are to be entered by the Contractor into the Department's web-based Project Management Portal system (PMP). The Contractor shall ensure all attachments are fully legible after download. Each page of attachments to RFIs shall bear the RFI number.

RFIs shall be originated by the Contractor. RFIs from subcontractors or material suppliers shall be submitted through, reviewed by, commented on, numbered, logged, and signed by the Contractor prior to submission to the Department.

The Contractor shall carefully study the Contract Documents to determine that the requested information is not available therein. RFIs which request information available in the Contract Documents will be deemed improper, as defined above.

RFIs shall be identified and submitted by the Contractor in a timely fashion in order to not cause delay to the Project. Any delays due to the untimely submission of RFIs will be the responsibility of the Contractor.

RFIs shall not be used for the following purposes:

1. To request approval of submittals.
2. To request approval of substitutions.
3. To request different methods of performing work than those drawn and specified.
4. To request changes to the Contract Documents.
5. To request additional cost or credit.
6. As routine written communications between the Department and the Contractor.
7. To reply to notices issued by the Department.
8. To clarify subcontract bid questions.
9. For any other purpose not listed in this Specification.

b. RFI Response. RFIs do not automatically justify a cost increase in the work or a change in the Project Schedule. Answered RFIs shall not be construed as approval to perform extra work.

Responses from the Department will not change any requirement of the Contract Documents. If the Contractor believes that a response to an RFI will cause a change to the requirements of the Contract Documents, the Contractor shall immediately give written notice to the Engineer stating that the Contractor considers the response to require a Change Order. Failure to give such written notice immediately shall waive the Contractor's right to seek additional time or compensation.

The Contractor shall allow the Engineer 30 days review and response time for RFIs.

CODE 108.03

PROSECUTION AND PROGRESS

GENERAL REQUIREMENTS:

Project Schedule Program: The Contractor shall develop and maintain an integrated schedule management and controls program, i.e. Critical Path Method Schedule (CPM Schedule), through Completion of the Project. The Special Provisions of the Contract shall modify the schedule requirements.

- a) The Contractor's Schedule shall include all Contract requirements, including Work performed by the Contractor, subcontractors, vendors, suppliers, utility companies, regulatory agencies, the State and any other third parties.
- b) The following Schedule Submittals are required:
 - i) Preliminary Schedule
 - ii) Baseline Schedule
 - iii) Schedule Updates
 - iv) Recovery Schedule as requested by the Department.
- c) If the Contractor fails to provide an acceptable Project Baseline Schedule and Project Schedule Update in accordance with the requirements of the Contract, the Contractor shall be responsible for all delays and resulting costs to the Project.
- d) The Department may withhold progress payments if the Contractor fails to submit required Schedule Submissions.
- e) Software. The software used to generate the CPM Schedule shall be capable of producing schedules in accordance with the requirements of the Contract and fully compatible with the current software utilized by the Department, or designee. Unless otherwise specified in the Contract, the Contractor shall use terminology defined by Department's, or designee's software.

SCHEDULE REQUIREMENTS:

The Department will provide the Contractor with templates during Schedule Development. The Schedules shall be developed and maintained in accordance with the following requirements and as approved by the Department, or designee:

- a) Schedule Narrative: A description of the sequence of events summarizing the detailed Milestone Status, Critical Path, and all changes made to the Schedule, including Actual Dates, logic revisions, and Calendar and Duration changes.
- b) CPM Schedule. All CPM Schedules shall utilize a Work-Breakdown Structure (WBS) developed by the Contractor. The WBS shall be used as the primary code for displaying and organizing the graphical output schedules utilized for the Project, unless otherwise

directed by the Department, or designee. The basic dictionary for the WBS shall be approved by the Department, or designee in Schedule Development.

REVIEW AND APPROVAL OF SUBMITTALS:

The Department, or designee will review Schedule Submittals for conformance with the requirements of the Contract Documents. The planning, scheduling, and execution of the Work and the accuracy of any Project Schedule is the responsibility of the Contractor. The Contractor remains responsible for errors in any previously accepted Project Schedule, including but not limited to omitted activities, activity durations, relationships between activities, resource allocation, or any float suppression techniques. The Department, or designee may direct the Contractor to address and adjust schedules that do not accurately reflect the Work at any time, with no additional cost to the State. Approval or acceptance of any Project Schedule does not relieve the Contractor of any responsibility for the completion of the work in conformance with all Contract.

SCHEDULE DEVELOPMENT:

- a) The Schedule Development process shall commence on the date that the Apparent Low Bidder letter is mailed to the Contractor, which will be considered Day 1 for all Schedule Submittals.
- b) Within 30 days of the Apparent Low Bidder Letter, the Contractor will submit a Preliminary Schedule which will contain all activity data, including all logic, for all Work required to be performed within the first 120 days after the NTP.
- c) Within 90 days of the Apparent Low Bidder Letter, the Contractor will submit a Baseline Schedule which will show all Work activities and logic for the complete Contract and include a Narrative Report.

SCHEDULE UPDATES:

Meetings shall be held as directed by the Department, or designee from Notice to Proceed to the substantial completion. The Contractor shall furnish a complete and accurate Schedule Update once a month detailing of the current progress, a printed Critical Path report, a report of the days gained or lost relative to the Substantial Completion date and any other completion dates and a depiction of how future Work plans shall meet the Contract completion dates. The Contractor shall provide sufficient copies of the Schedule Updates in the format acceptable by the Department, or designee.

The Contractor shall submit three copies (paper and electronic) of the Schedule Update. Schedule Updates shall be submitted once a month even in the absence of a Schedule Update Meeting. The Department, or designee shall have 10 working days to review the Schedule Update Submittal.

The Schedule Updates shall contain the following components:

- (i) Schedule Narrative;
- (ii) Schedule Activity Report –Past Month and Remaining;

- (iii) Schedule Activity Report Longest Path (per completion date);
- (iv) Two week Look Ahead Schedule;
- (v) Predecessor/Successor Report;
- (vi) Data File and;
- (vii) Other reports requested by the Department, or designee.

All Schedule data, logic and duration changes, and any modifications to the Schedule shall be addressed and discussed with the Department, or designee at the Project Schedule Update Meeting. This shall be done prior to the Contractor submitting their final Schedule Updates.

Changes to the accepted Baseline Schedule shall be detailed in the Schedule Update Narrative. The acceptance and inclusion of these changes will not be the sole basis of acceptance or entitlement to any time extension(s) or monetary compensation(s).

Schedule Update Submittals will not be used as the sole basis for any adjustment in the Contract Time(s), regardless of their approval by the Department, or designee. Any approval of the Schedule Update Submittal by the Department, or designee, either expressed or implied, will only apply to the issue of progress.

RECOVERY SCHEDULE SUBMITTAL:

The Contractor shall identify all schedule and progress delays during the prosecution of the Work. At the Department's, or designee's request, the Contractor shall develop and submit a Recovery Schedule.

The Contractor is not relieved from the submission of Schedule Updates during the development of a Recovery Schedule.

The Recovery Schedule shall illustrate a clear process and procedure for eliminating or mitigating said delays to the Contract Time(s).

The Recovery Schedule shall be submitted within 30 calendar days of the corresponding Schedule Update and is subject to approval by the Department, or designee.

Non-Excusable Delays: The development and submission of the Recovery Schedule shall be at no additional cost to the State.

Excusable Delays: The State may reimburse the Contractor for the costs of the development the Recovery Schedule.

CODE 108.1000

PROSECUTION AND PROGRESS

In accordance with Section **108.08, Failure to Complete on Time, Para. A., Phased Completion, Interim Completion, and Substantial Completion** the following defines the Phased and Interim Completion Dates and Associated Incentive/Disincentive Payment.

Interim Completion Date: June 7, 2019

All repair work shall be completed for Bridge No. 849 by the date listed above.

Liquidated Damages: \$1,200.00 per calendar day.

Substantial Completion: October 11, 2019

All Contract work shall be completed, as defined by Section 101.71.

Liquidated Damages: \$1,200.00 per calendar day.

Replace **Subsection 109.06, Partial Payments**, pages 1-83 to 1-84 of the RI Standard Specifications for Road and Bridge Construction in its entirety with the following.

CODE 109.06

PAYMENT FOR WORK

109.06 PAYMENT FOR WORK.

a. General. The Department will make payment for Work before the Project is accepted and final payment is made. These payments for Work will be processed via progress payments. In order to receive a payment for Work, the Contractor shall prepare an invoice in accordance with **Subsection 109.06** paragraph (c.), Invoice for Payment for Work. The Department may suspend progress payments if the Contractor does not comply with the Engineer's directions or written orders. The Department will notify the Contractor, whenever progress payments will be suspended.

Processing of progress payments for Work prior to the Department's acceptance and final payment of the Work does not constitute the Department's acceptance of the Work, and does not relieve the Contractor of responsibility for the Work which includes but is not limited to:

1. Protecting, repairing, correcting, maintaining, or renewing the Work where necessary to meet Contract requirements before acceptance.
2. Replacing or repairing all defective Work or materials used in the construction of the Work and repairing all damage to other work or materials whose damage is attributable to such defective Work or materials.
3. All defects or damage that the Engineer may discover on or before the engineer's acceptance and final payment of the Work. The Engineer is the sole judge of these defects or damage.

b. Frequency. The Department will make periodic progress payments in accordance with established Department procedures. Progress payments will be subject to a 5 percent retainage.

Retainage will be released incrementally in accordance with Subsection 105.17 and the Department's Release of Retainage Procedures.

c. Invoice for Payment for Work. The Contractor shall submit a weekly invoice for payment of Work completed. The Contractor shall utilize invoice forms supplied by the Department and shall complete the forms including a certification for payment in accordance with the instructions contained thereon.

d. Invoice for Partial Payment for Materials, Supplies, and Equipment. The Engineer may allow invoicing as provided above and permit partial payments for those materials, supplies, and equipment delivered to an approved location but not yet

incorporated into the
Work.

Payment for materials, supplies and equipment furnished at an approved site but not yet incorporated into the Work will not exceed the lesser of the following amounts.

1. 100 percent of the cost incurred by the Contractor, or
2. 80 percent of the value calculated by multiplying the quantity of the item delivered by the unit price for the corresponding item in the Bid Schedule.

For verification of costs, the Contractor shall provide the Engineer with an original paid invoice for the furnished materials, supplies or equipment within thirty (30) days after receiving the partial payment. Otherwise, the amount of the partial payment will be deducted from subsequent invoices.

The Engineer will not approve any payment for perishable plant materials until such plant materials are planted as specified in the Contract

e. Engineer's Review of Contractor's Request for Payment for Work and Request for Partial Payment for Materials, Supplies, and Equipment. Upon receipt of the Contractor's invoice, the Engineer will review the invoice and may approve or reject payment or portions thereof. The Engineer will notify the Contractor in writing of any modifications and/or rejection of the invoice. Modifications and reasons for the change will be made to the Excel spreadsheet in the columns provided. In the case of a rejection, the Engineer will request that the invoice be resubmitted.

f. Release of Retainage. Upon partial acceptance of work performed under a completed subcontract, the State, within 30 days, will pay the Contractor the relevant portion of retainage due for all Work covered by the acceptance. Within 30 days of receipt of such payment, the Contractor shall pay all retainage owed the subcontractor for accepted Work.

CODE 109.07

PARTIAL PAYMENT OF LUMP SUM ITEMS

Section 109.07 of the Standard Specifications for Road and Bridge Construction is replaced in its entirety with the following:

109.07 PARTIAL PAYMENT OF LUMP SUM ITEMS. Each bi-weekly period the Engineer and the Contractor will consult and subsequently agree on the progress of work performed under those lump sum items indicated in the Bid Schedule. Partial payments for the completed and accepted portions of such work will be made to the Contractor based on the Engineer's estimate of the value of said completed work.

Prior to award of the Contract, or in any case within ten (10) calendar days after the date of the Notice of Award, the Contractor shall submit to the Engineer for approval two copies of the breakdown of each lump sum bid item that appears in the Bid Schedule, (excluding the Mobilization item). The breakdown Lump Sum-Superstructure and Lump Sum-Substructure items shall include only those items listed on the Plans, and shall include the Contractor's verified quantities it used in preparing its bid. All other additional costs (such as engineering, shop drawings, formwork, equipment, etc.) to complete those items of work shall be included and distributed in the breakdown of those listed items. For other lump sum items not identified on the Plans, the Contractor shall provide a breakdown of the various items that constitute the respective lump sum work items.

The Engineer will use the Lump Sum breakdowns submitted by the Contractor if they fairly represent the cost of the various items of work. If, in the opinion of the Engineer, the prices submitted by the Contractor do not fairly represent the cost of the various items of work, the Engineer may substitute other prices that do fairly represent the cost of such work.

Replace **Subsection 109.09; Acceptance and Final Payment**, page 1-84 and 1-85 of the Standard Specifications for Road and Bridge Construction (Amended 2013) in its entirety with the following

CODE 109.09

ACCEPTANCE AND FINAL PAYMENT

109.09 ACCEPTANCE AND FINAL PAYMENT. When the project has been accepted as provided in **Subsection 105.17**, the Engineer will prepare the final estimate of work performed. If the Contractor approves the final estimate or files no claim or objection to the quantities therein within 30 days of receiving the final estimate, the Department will process the estimate for final payment. With approval of the final estimate by the Contractor, payment will be made for the entire sum found to be due after deducting all previous payments and all amounts deducted under the provisions of the Contract.

If the Contractor files a claim in accordance with Contract requirements, it shall be submitted in writing in sufficient detail to enable the Engineer to ascertain the basis and amount of such claim. Upon final adjudication of the claim, any additional payment determined to be due the Contractor will be placed on a supplemental estimate and processed for payment.

All prior partial estimates and payments will be subject to correction in the final estimate and payment.

CODE 212.2000

CLEANING AND MAINTENANCE OF EROSION AND POLLUTION CONTROLS

The respective subsections of Section 212 of the Standard Specifications for Road and Bridge Construction are amended as follows:

212.01 DESCRIPTION. [Add to end of section]

The work also consists of street sweeping as required to clean paved roadways inside and adjacent to the project. The street sweeping shall contain debris from construction vehicles before the solids can reach the drainage system.

212.01.1 Applicable Controls. [Add to end of section]

f. Street sweeping

212.03.2 Other Requirements. [Add to end of section]

c. Street sweeping. The roadways will be swept when directed by the Engineer, before a rainstorm and when debris is visible on the roadway.

212.03.3; Failure to Maintain Erosion and Pollution Controls. [Section is revised as follows]

A daily charge shall be deducted from monies due the Contractor in the event the Engineer decides that erosion and pollution controls are not in place or have not been adequately maintained. This shall include the failure to comply with the Storm Water Pollution Prevention Plan (SWPPP) provisions. The contractor shall be held responsible for any and all cost associated with fines and cleanup activities, over and above the penalty assessed herein resulting from contractor failure in this regard

For the first violation the charge for this Contract will be \$1,000.00 per day. The charge of \$1000.00 per day shall continue each consecutive calendar day thereafter until the deficiencies noted have been corrected to the complete satisfaction of the Engineer.

CODE 800.9901

**TEMPORARY DECK UNDERSIDE
AND SIDE PROTECTIVE SHIELDING**

DESCRIPTION: This work shall consist of designing, furnishing, fabricating, erecting, maintaining, removing, and disposing of temporary deck underside and deck side protective shielding at locations shown on the Plans and/or as directed by the Engineer.

The temporary deck underside and deck side protective shielding shall provide for the safe passage of vehicles, pedestrians, and shall provide protection for utilities. The use of the protective shielding is to insure that no debris falls to the roadway or sidewalks below the structure. This protective shielding is to be used for or in conjunction with deck demolition. It shall also be capable of serving as a full protection barrier for construction personnel.

All work shall be performed in accordance with the contract drawings, the Rhode Island Standard Specifications for Road and Bridge Construction, Amended December 2013, all applicable compilations of approved specifications, as modified by this special provision, and as directed by the Engineer.

MATERIALS: The temporary protective shield shall consist of platform hangers, timber plank system, debris net system or a combination of these or other systems that will effectively protect the ground surfaces or any body of water below from construction debris during demolition and construction activities. It shall be the Contractor's responsibility to design the Temporary Protective Shield System for this project. Shield shall be designed as a combined personnel/debris net.

At the discretion of the Contractor and as called for in the Contractor's design, deck underside and side protective shielding may be constructed from timber, steel, aluminum, debris net system or a combination of these or other systems that will effectively protect the ground surfaces below from construction. It shall be the Contractor's responsibility to design the Temporary Protective Shield System for this project. Shield shall be designed as a combined personnel/debris net.

Steel and aluminum shall conform to the requirements of SECTION M.05; METALS of the Rhode Island Standard Specifications for Road and Bridge Construction, 2013 Edition, with all latest revisions.

Timber and hardware shall conform to the requirements of SECTIONS M.11 and M.05, respectively, of the Rhode Island Standard Specifications for Road and Bridge Construction, 2013 Edition, with all latest revisions. The material shall be structural lumber in accordance with the National Design Specifications for stress graded lumber recommended by the National Forest Products Association (NFPA). The grade shall be Fb=1200 psi minimum. Minimum lumber size for underside shielding shall be 3" x 8".

The materials and installation shall conform to CFT 1926.500 (OSHA Rules) and with ANSI A.10.11, "American National Standard for Construction and Demolition Operations – Personnel

and Debris Nets. The combined-use nets shall have a minimum working rating of not less than 10,000 ft-lb. The Contractor shall determine the size, weight and height-of-fall of anticipated debris. The debris netting shall have a mesh of the size and strength sufficient to contain the expected debris without penetration when properly supported by the personnel net. The debris net shall not compromise the design, construction or performance of personnel nets.

SUBMITTALS:

1. Shop drawings.
2. Netting Qualifications Test per ANSI A 10.11, Part 8.2, if applicable.

CONSTRUCTION METHODS: The deck underside and side protective shielding shall be erected at the locations and to the limits indicated on the contract drawings and/or as directed by the Engineer. All work shall be performed in accordance with the Maintenance and Protection of Traffic Plans, and in accordance with the demolition and construction sequences shown on the Plans and as specified in the Contract Documents.

All shielding shall meet or exceed the following requirements:

1. It shall be the Contractor's responsibility, as part of this item of work, to design and detail the protective shielding to conform to all Federal, State, and Local laws and regulations, as well as to the requirements contained here in this Specification.
2. The shielding shall extend under all areas of concrete decks, safety walks, and safety barriers to be removed. It shall extend horizontally a minimum of 3 feet beyond the bridge railings or parapets, and it shall extend vertically to a point 2 feet above the top of the bridge parapet, or to a point 4 feet above the top of bridge safety walks or decks, whichever is higher.
3. The various components of the deck underside protective shielding system shall be designed for the anticipated weight of all material and debris to be supported, based on the Contractor's method and sequence of removal, but in no case shall it be designed for less than 150 pounds per square foot. Vertical shielding shall be designed for anticipated loads, or a minimum of 30 pounds per square foot, whichever is higher.
4. The shielding shall be placed and secured in a manner as to prevent it from being blown out by wind. If, in the opinion of the Engineer, the shielding is not secure, then the Contractor shall make corrections to secure the shielding in place or remove and reinstall it to the Engineer's satisfaction. The Contractor's Engineer shall provide written approval that the corrected measures have secured the shielding before the Engineers final acceptance.
5. Shielding shall be placed so as to maintain the existing vertical clearance under the bridges.
6. The Contractor may utilize the existing beams as supports. However, the Contractor will not be permitted to drill or weld to any existing beam, unless otherwise noted in this section or on the Construction Drawings.
7. The Protective Shield is intended to act as a barrier against construction materials falling below the work area. The shielding shall not contain any gaps or openings that would allow debris to pass through, and shall be sufficiently strong to support any debris or section of demolished concrete from falling onto the roadway or walkway below.
8. If the Contractor's operations damage any existing portions of the bridges that are not within the scope of the contract, such damage shall be repaired at the Contractor's expense, and to the satisfaction of the Engineer.
9. The Protective Shield shall be in place prior to commencing any removal work.

10. The protective shield shall be erected at a level below the construction area so as not to exceed the shield rating under the shield design load.
11. For the debris net system selected, the care, maintenance and storage of protective shielding shall be in accordance with the manufacturer's recommendations if prefabricated. Due attention shall be given to factors affecting net life. Nets shall be inspected weekly. Nets shall be tested immediately following installation, relocation or major repair and when left in one location, at six-month intervals in accordance with ANSI A.10.11 Part 9.
12. The debris nets shall not carry more than 5 psf of ice, snow or other weather-related material. Debris shall be removed daily to prevent potential overload of shielding.
13. Protective shield shall be designed to safely withstand all loads that it will be subjected to. The allowable design stresses shall be in accordance with AASHTO Standard Specifications for Highway Bridges. The design shall also include a complete description of the equipment and construction methods proposed.
14. In the event debris falls onto the roads or rivers below, the Contractor shall promptly remove the debris. The Contractor shall be liable for any consequences as a result of falling debris and shall correct any deficiencies in the shield as required. The Contractor shall correct the deficiencies in place or remove and reinstall it to the Engineer's satisfaction. The Contractor's Engineer shall provide written approval that the corrected measures have secured the shielding before the Engineer's final acceptance.
15. All locations of work shall have Temporary Protective Shield. Temporary Protective Shield shall be installed or removed only on approval of the Engineer.
16. Temporary Protective Shield may be anchored to portions of the existing structures exhibiting sound concrete. Drilling through existing rebar to anchor the shield will not be permitted. The Contractor shall use a Pachometer or other suitable non-destructive means to locate existing rebar. Cost of locating rebar shall be included in the cost of Temporary Protective Shield.

Use of existing shielding is at the discretion of the Contractor. The requirements and design specifications shall apply to the suitability of the existing shielding. It will be the Contractor's responsibility to verify the suitability of the existing shielding.

All materials used in the shielding system shall become the property of the Contractor and shall be removed from the site at the completion of the Project.

All work shall be performed in accordance with the phased construction, as designated on the Plans.

SUBMISSIONS: The Contractor shall submit shop drawings and design calculations stamped by Professional Engineer registered in Rhode Island, in accordance with Subsection 105.2 "Plans and Shop Drawings". The Contractor shall also submit the design calculations for the system to be employed including an analysis of the load which will be added to the structure by the protective shield. The analysis shall assure that the system will not induce a load on the bridge that will create an overstress condition or compromise the structural integrity of the bridge. The shop drawings and calculations shall be submitted in sufficient time to allow for review and approval by the Engineer. In no case shall the protective shield encroach upon minimum bridge clearance.

METHOD OF MEASUREMENT: This work will be measured for payment by the numbers of square foot” of “Temporary Deck Underside And Side Protective Shielding” complete and accepted in place within the limits shown on the plans or as directed by the Engineer.

BASIS OF PAYMENT: The quantity determined under “Method of Measurement” section will be paid for at the contract unit price bid per square foot” of “Temporary Deck Underside And Side Protective Shielding” as listed in the proposal. The price so stated shall constitute full compensation for all labor, materials, equipment, tools, design and installation, and removal and disposal of the Temporary Deck Underside And Side Protective Shielding and all other incidentals required to finish the work, complete and accepted by the Engineer

CODE 803.9901

REMOVE AND REPLACE EXISTING DECK JOINT

DESCRIPTION: The work included under this item shall consist of removing and disposing of the existing bridge deck joint systems and furnishing and installing new bridge deck joint systems in accordance with the plans and the requirements of these specifications. The work shall be performed in accordance with the contract drawings, the Rhode Island Standard Specifications for Road and Bridge Construction, Amended 2013, all applicable compilations of approved specifications, as modified by this special provision, and as directed by the Engineer. This item shall also include the necessary surface preparation as described herein, as shown on the plans, or as directed by the Engineer.

REMOVAL OF EXISTING JOINTS: The removal of the existing molded rubber segmental expansion joint system shall be completed with care to avoid damaging the anchor rods and any hardware anchored to the bridge deck and/or approach slab. The Contractor shall survey and document the existing joints and review existing plans to avoid damaging the bridge deck or anchor rods. Any damage caused to the bridge deck, anchor rods, or other anchor materials during the removal of the joint membrane shall be repaired or replaced at the contractor's sole expense.

REPLACEMENT PRODUCT: Provide a watertight joint sealing system that is capable of accommodating the structures movement and is approved by the State of Rhode Island Department of Transportation Materials Division. The joint sealing system shall consist of elastomeric molded neoprene panels that are reinforced with structural steel angles and imbedded wear plates. The system shall be capable of reusing the existing anchor bolts. No modifications to the anchor rods, bridge deck, and approach slab shall be permitted without prior written approval from the Engineer. Approved modifications shall be at no additional cost to the State. The elastomeric panels shall be designed to withstand traffic loads. Provide panel size that satisfies project requirements including movement and watertightness. Install all components utilizing manufacturer's recommended sealants for complete installation.

COMPONENT AND MATERIALS: The Contractor shall furnish a manufacturer's certification that the materials proposed have been pre-tested and will meet the requirements as set forth in the specification.

1. Elastomeric Molded Panels

The elastomeric molded panels shall be comprised of a formed steel shape suspended in an elastomeric material. The profile-riding surface shall have imbedded wear plates to ensure skid resistance and shall be capable of accommodating traffic loads. Each elastomeric molded panel shall be supplied with integrated bolt hole cavities and tongue and groove end connections.

The elastomer used to mold the panels shall be manufactured of a neoprene compound exhibiting the physical properties listed in the table below:

PHYSICAL PROPERTIES	TEST METHOD	REQUIREMENT
Hardness, Type A Durometer	ASTM D2240 modified	45 +/- 5 points
Tensile Elongation	ASTM D412	1800 psi, min.
Elongation @ break	ASTM D412	400%, min.
Compression Set, 22 hrs @ 158°F	ASTM D395 Method B	20%, max
Low Temperature @ -40°F	ASTM D746	not brittle
Ozone Resistance, 70 hrs @ 100°F 20% strain, 100 pphm	ASTM D1149 Method B	No Cracks
Oil deterioration 70 hrs @ 212 F After immersion in ASTM Oil #3	ASTM D471	120% volume increase max

2. Wear Plate

Wear plate material utilized for skid-resistant surface shall be from alloy 6061-T6 (ASTM B 221-73).

3. Steel Angle

The steel angles imbedded in the molded neoprene panels shall conform to formed ASTM A-36.

4. Bolt Cavity Sealant

Bolt hole cavities shall be filled using a two part polyurethane sealant that meets Federal Specification TT-S-00227E. Contractors to ensure that the anchor blocks are dry from moisture prior to placement of material.

5. Edge Void Sealant

Edge voids shall be filled with a one part polysulfide base synthetic rubber sealant conforming to Federal Specification TT-S-00230C Type II Non-Sag. Contractor shall ensure that the anchor blocks are dry from moisture prior to placement of material.

6. Bedding Compound

Apply edge void sealant as a bedding material to the blackout base prior to placement of the elastomeric gland. Material shall be a one part polysulfide base synthetic rubber sealant conforming to Federal Specification TT-S-00230C Type II Non-Sag.

SUBMITTALS: The contractor shall submit product information and necessary shop drawings as defined in Item 105.02 “Plans and Shop Drawings” prior to the start of work. Installation instructions provided by the manufacturer shall be included with the shop drawings.

CONSTRUCTION REQUIREMENTS: Upon final installation, the replaced deck joint shall match the adjacent bridge deck and/approach pavement to the satisfaction of the Engineer. Any modifications required to match the existing grade shall be at no additional cost to the State.

METHOD OF MEASUREMENT: This work will be measured for payment by the numbers of linear feet of “Remove and Replace Bridge Deck Joint” complete and accepted in place within the limits shown on the plans or as directed by the Engineer.

BASIS OF PAYMENT: The quantity determined under “Method of Measurement” section will be paid for at the contract unit price per linear feet of “Remove and Replace Bridge Deck Joint” complete in place including all surface preparation, cutting of existing membrane, removal of existing membrane and/or joint materials, required modifications to bridge deck and/or approach slab, grinding of existing anchor plates or concrete, materials, equipment, tools, labor, and incidental expenses associated with this work.

CODE 817.9901

REPAIRS TO STRUCTURAL CONCRETE MASONRY (PATCHING MORTAR)

DESCRIPTION: The work under this item shall conform to the requirements of Section 817 of the Rhode Island Standard Specification for Road and Bridge Construction, Amended 2013 including the latest revisions and supplements and shall consist of making repairs to bridge superstructure, including reinforced concrete beams and prestressed concrete beams, and substructure at locations indicated on the Plans or as directed by the Engineer.

Patching mortar shall be integrally colored to match the existing concrete and must be submitted for approval to the Engineer 30 days before intended use.

Replace Section 817.04 and 817.05 with the following:

817.04 METHOD OF MEASUREMENT: This work will be measured for payment by the numbers of square feet of “Repairs to Structural Concrete Masonry (Patching Mortar)” complete and accepted in place within the lines shown on the plans or as directed by the Engineer.

817.05 BASIS OF PAYMENT: The quantity determined under “Method of Measurement” section will be paid for at the contract unit price per square feet of “Repairs to Structural Concrete Masonry (Patching Mortar)” complete in place including all surface preparation, material, equipment, tools labor and incidental expense.

CODE 817.9902

REPAIRS TO STRUCTURAL CONCRETE MASONRY (FORM AND CAST IN PLACE CONCRETE)

DESCRIPTION: The work under this item shall consist of making structural concrete masonry repairs to the bridge superstructure, including reinforced concrete beams and prestressed concrete beams, and substructure at locations indicated on the Plans or as directed by the Engineer. Work shall consist of saw cutting; removing and disposing deteriorated concrete; furnishing and installing welded wired fabric, anchors, and supplemental reinforcement as required; preparing bonding surfaces of concrete; preparing and installing bonding agent; replacing the deteriorated concrete with new concrete; and finishing and curing to the lines and grades specified at the locations indicated on the Plans, all in accordance with these Specifications and as directed by the Engineer.

This Special Provision is intended to apply to spalled concrete areas where the depth of the repair extends beyond the reinforcing steel. The engineer shall be the sole judge in determining the repair locations. All repairs shall be performed only as directed by the Engineer.

Except as modified by this Special Provision, all work under this item shall be performed in accordance with Section 817 of the Rhode Island Standard Specifications for Road and Bridge Construction, amended 2013, including all revisions and supplements.

MATERIALS: Concrete shall conform to Class HP 3/8” concrete in accordance with the applicable provisions of Section 601 and Section 604 of the RI Standard Specifications. Concrete shall be integrally colored to match the existing concrete.

Reinforcement:

Bar Reinforcement: All bar reinforcement shall meet the requirements of Section M.05.01 of the RI Standard Specifications. All bar reinforcement shall be galvanized in accordance with AASHTO M111.

Weld Wire Fabric: Welded wire fabric shall meet the requirements of Section M.05.02 of the RI Standard Specifications. All welded wire fabric shall be galvanized in accordance with AASHTO M111.

CONSTRUCTION METHODS: Construction shall be in accordance with the relevant provisions of Section 817.03 of the RI Standard Specifications.

METHOD OF MEASUREMENT: This work will be measured for payment by the numbers of cubic feet of “Repairs to Structural Concrete Masonry (Form and Cast in Place)” complete and accepted in place within the lines shown on the plans or as directed by the Engineer.

BASIS OF PAYMENT: The quantity determined under “Method of Measurement” section will be paid for at the contract unit price per square feet of “Repairs to Structural Concrete Masonry (Form and Cast in Place)” complete in place including all surface preparation, material, equipment, tools labor and incidental expense.

Costs for furnishing and installing supplemental steel reinforcement bars and welded wire fabric shall be included for payment under this item and will not be paid separately.

CODE 820.9901

CONCRETE SURFACE TREATMENT (PROTECTIVE COATING)

DESCRIPTION: The work under this item shall consist of furnishing, applying, and curing clear concrete penetrating sealant to all concrete surfaces below the decks, traffic side face of concrete parapets, and as designated on the Plans. The work shall be performed in accordance with the contract drawings, the Rhode Island Standard Specifications for Road and Bridge Construction, Amended December 2013, all applicable compilations of approved specifications, as modified by this special provision, and as directed by the Engineer. This item shall also include the necessary surface preparation as described herein, as shown on the plans, or as directed by the Engineer.

MATERIALS: All materials shall be submitted to the Engineer for review and approval. The concrete surface treatment (protective coating) shall be an approved alkyltrialkoxo silane having met the following performance criteria, based on application of the solution in accordance with the manufacturer's recommended procedures and rates.

A. Performance Specification

7. A water miscible, colorless, penetrating salt and liquid water repellent treatment that will provide internal steel corrosion protection as follows:
 - a. Treatment shall not stain, discolor or darken the substrate when cured.
 - b. Treatment shall not affect surface texture.
 - c. Treatment shall penetrate a minimum of one-tenth (1/10) of an inch in concrete or masonry and render the treated surfaces hydrophobic.
 - d. Treatment shall not affect the normal vapor permeability of the substrate as measured by the method listed on Section M.12.03, part d of the R.I. Standard Specifications.
 - e. Treated concrete surfaces submitted to an ASTM C-642 moisture absorption test of two percent (2%) in fifty (50) days shall not absorb more than one percent (1%) moisture in forty-eight (48) hours.
 - f. The sealer shall protect against chloride ion intrusion. Treated concrete surfaces subjected to ninety (90) day chloride ion penetration test (AASHTO T-259,T-260) shall not permit the penetration of more than one and one-half (1.5) pounds of chlorides per cubic yard of concrete at the one-sixteenth (1/16) to one-half (1/2) inch depth and no more than three quarters (3/4) of a pound of chloride per cubic yard at the one-half (1/2) to one (1) inch depth.

CONSTRUCTION METHODS:

Surface Preparation – The surfaces to receive the concrete surface treatment shall be pressure washed in accordance with Item Code 820.0200 “High Pressure Cleaning of Concrete Surfaces”.

Sufficient water pressure shall be used to remove all curing compounds, laitance, dirt, dust, salt, oil, asphalt, paint or other foreign materials. The cleaned surface to which the sealant is to be applied shall meet the requirements of the manufacturer of the sealant. If necessary, hand tools shall be used as required to remove bonded materials detrimental to treatment of the concrete surface. The pressure required to remove some materials may be sufficient to damage the concrete. Tests shall be conducted prior to production, to determine the maximum acceptable pressure. The results of the test shall be approved in writing the Contractor's Professional Engineer before submitting to the Engineer for acceptance.

The cleaning shall be performed in such a manner as to provide a reasonably uniform surface color appearance.

Concrete surfaces prepared for treatment shall be approved by the Engineer. The cost of all surface preparation shall be included in the price bid for this item of work.

Weather Limitations - The water-clear concrete penetrating sealant shall not applied when the air or concrete surface temperature is less than 40 degree F or above 100 degree F or otherwise below or above manufacturer's recommended application temperature range. The solution shall not be sprayed when blowing winds of other conditions prevent proper application. The humidity shall be limited to 85% maximum or as recommended by the manufacturer, whichever is lower.

Application - The water-clear concrete penetrating sealant treatment solution shall be used as supplied by the manufacturer and not diluted or altered in any way. Application of sealer shall conform to manufacture's requirements. The solution shall be sprayed onto the concrete at the manufacturer's recommended rate of coverage and number of coats. Spray equipment shall be approved by the manufacturer.

Curing of the applied sealer shall be in accordance with the manufacturer's recommendations.

METHOD OF MEASUREMENT: This work will be measured for payment by the numbers of square feet of "Concrete Surface Treatment (Protective Coating)" complete and accepted in place within the lines shown on the plans or as directed by the Engineer.

BASIS OF PAYMENT: The quantity determined under "Method of Measurement" section will be paid for at the contract unit price per square feet of "Concrete Surface Treatment (Protective Coating)" complete in place including all surface preparation, application of Surface Treatment, applicable high pressure water washing, materials, equipment, tools, labor and incidental expense.

CODE 820.9902
HIGH PRESSURE WATER CLEANING – BRIDGE NO. 709
CODE 820.9903
HIGH PRESSURE WATER CLEANING – BRIDGE NO. 712
CODE 820.9904
HIGH PRESSURE WATER CLEANING – BRIDGE NO. 713
CODE 820.9905
HIGH PRESSURE WATER CLEANING – BRIDGE NO. 849

DESCRIPTION: This work shall consist of the removal of all organic matter, bird droppings, efflorescence, and all other foreign particles, including but not limited to sand, salt, and debris accumulated on all specified bridge surfaces. Bridge surfaces to be cleaned through the application of a high pressure water spray shall include but not limited to:

- Roadway surface, from face of curb/barrier to shoulder line or 4'-0" from face of curb/barrier, whichever is greater;
 - Roadway surfaces that are indicated in the plans to receive new wearing surface shall be exempt from bridge washing
- Barriers, parapets, sidewalks, curbing;
- Structural steel, including bearing devices;
- Concrete beams and diaphragms;
- Backwalls, beam seats, abutment and wingwall faces, piers in their entirety;
- Slope paving, drainage features, and other bridge components

The limits of this work are as shown on the plans as described above, and as directed by the Engineer.

The contractor should not attempt to remove paint, sealant, or any other weatherproof or waterproof coating during high pressure washing operations.

MATERIALS AND EQUIPMENT: The cleaning equipment shall include the necessary high pressure water cleaning equipment and all ancillary equipment necessary to flush, clean and remove all foreign material from the bridge, including hand tools, compressors, water tanks and water pumps. The contractor shall determine the method and equipment, subject to the approval of the Engineer, which is best suited to complete the cleaning operation.

The high-pressure water cleaning equipment shall have sufficient controls to vary the water pressure such that it can be adjusted to clean the bridge surfaces without damaging the structure. The equipment shall be capable of producing a water pressure of up to 5000 psi, and shall have a functional pressure gage incremented in a manner such that pressure can be adjusted and maintained consistently. A sufficient variety of nozzle tips and accessories shall be available to ensure that the spray can be applied uniformly to all applicable parts of the structure. The tip shall not concentrate the spray at less than 25 degrees to the surface.

The Contractor shall provide a supply of clean water for the operation. No additives such as degreasers, chemical cleaners, detergents, or abrasives shall be combined with the water for cleaning.

CONSTRUCTION METHODS: The equipment shall be operated by qualified and experienced personnel.

The Contractor shall notify the Department a minimum of five (5) working days prior to the start of cleaning operations at each bridge.

The Contractor is hereby notified that existing paint systems on all bridges may contain toxic substances, such as lead. It has been identified that Bridge 849 existing paint system contains lead. The Contractor shall adjust the water pressure such that no paint is removed from the surface during high pressure washing operations. Any areas of loose or flaking paint on Bridge 849 shall be avoided as directed by the Engineer. Any bridges scheduled for field painting or concrete coatings shall receive high pressure washing prior to the commencement of the painting/coating operations.

Prior to pressure washing operations, the contractor shall clean out bridge scuppers, troughs, and downspouts to the first cleanout above ground level or their outlet if above ground using high pressure water, vacuum, or other techniques satisfactory to the engineer. Cleaned scuppers, troughs, and downspouts shall allow unimpeded flow of water. Any damage to the drainage system that occurs as a result of the Contractor's shall be repaired by the Contractor to the satisfaction of the Engineer at no additional cost to the State. Also, all loose trash and debris shall be collected and disposed of from bridge decks prior to high pressure washing by sweeping, shoveling, vacuuming or other suitable methods. This work shall be considered incidental to pressure washing operations and shall be performed at no additional cost to the State.

The Contractor, in the presence of the Engineer, shall perform a test cleaning in an inconspicuous area designated by the Engineer at the beginning of work at each bridge. The initial pressure for the test should start between 300 and 500 psi, and be gradually increased as necessary until the surface has been cleaned to the satisfaction of the Engineer. When the desired cleaning level is attained, the Contractor shall record the pressure, nozzle used, angle of impingement of the water stream, approximate cleaning rate per square foot, and other pertinent information for future reference. The Contractor shall provide the Engineer with a copy of the recorded data for reference during inspection of the cleaning operations. If during the cleaning operation the Engineer determines that the existing conditions have changed, the Contractor shall perform a new test to accommodate the changed condition, make adjustments as needed and provide the Engineer with a copy of the recorded data for the new test.

The cleaning shall proceed in an orderly manner, subject to the limitations of the traffic control. No residue from the cleaning operation shall be left on the surfaces to be cleaned at the completion of the operation. Cleaning of concrete surfaces shall be accomplished by moving the wand in a smooth stroke to achieve uniform and thorough cleaning over the entire surface without pitting or marring.

Catch basins that receive runoff from high pressure water cleaning operations shall have positive protection installed to contain suspended sediment and debris. These measures shall be considered incidental to the cleaning operation.

All solid material removed from the bridge prior to or upon completion of the cleaning operation shall be collected and disposed of at approved waste sites in accordance with all applicable Federal,

State, and local laws and regulations. These measures shall be considered incidental to the cleaning operation.

All cleaning operations on bridges crossing any waterbody shall be performed from the roadway above.

The Contractor shall exercise due caution and take all necessary precautions to prevent property damage, damage to existing utilities, and to protect the general public from exposure to spray, debris, and any other potentially hazardous conditions. No work shall be allowed over live traffic. The Contractor shall be responsible for protecting passing pedestrians and vehicles from being in contact with the wash water and residue from the high pressure water cleaning operations through the use of shields, temporary drip edges or stop dams along the top and bottom surfaces of flanges or other suitable means. The Contractor shall also provide temporary sheathing as required by the utility companies to prevent damage to their facilities. In cases where the plans and/or contract documents specify the use of temporary shielding or other similar measures to protect property and/or the general public, the Contractor shall install, at all designated locations the required temporary protective measures as indicated. The installation of temporary protection shall be considered incidental to the cleaning operation.

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

BASIS OF PAYMENT: Item Codes 820.9902 through 820.9905 will be paid for at their respective contract “Lump Sum” prices as listed in the Proposal. The prices so stated shall constitute full and complete compensation for all labor, materials, tools, equipment, testing, and all other incidentals, including but not limited to water disposal, installation and maintenance of positive protection of catch basins, positive protection systems for catch basins, scupper cleaning, drainage pipe cleaning, debris removal and disposal, required to complete the high pressure water cleaning of the bridges as described above and elsewhere in the Contract Documents, complete in place and accepted by the Engineer.

Partial payments for this Lump Sum item will be made in accordance with Special Provision Code 109.07.

CODE 824.9901

STEEL GIRDER REPAIRS BRIDGE NO. 712

DESCRIPTION:

The work under this item shall consist of supplementing and/or strengthening corroded portions of the existing steel girders of Branch Avenue Bridge No. 712 with additional new structural elements, and in some cases removal and replacement of indicated portions of existing structural steel as indicated on the Contract Drawings and as specified in this Special Provision. These Special Provisions shall supplement the relevant sections of the State of Rhode Island Standard Specifications for Road and Bridge Construction, Amended December 2013, 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 under this item shall include removing and disposing portions of existing structural steel; furnishing, fabricating, erecting, and painting new structural elements; local deleading (including proper personnel protection and collection & disposal of paint removed); surface preparation; any miscellaneous shields, staging, access, scaffolding; field drilling; field bolting; temporary protective shielding for utilities; field measurements; shop drawings; and any other incidental items required to finish this work, complete in place and accepted by the Engineer, in accordance with the Contract Documents and as specified in these Special Provisions.

MATERIALS:

All work shall be in accordance with the relevant provisions of Section 824 of the RI Standard Specifications and shall conform to the following:

- All structural steel shall conform to AASHTO Description M270 Grade 50 with Charpy V-Notch testing certification.
- All bolts shall be high strength bolts AASHTO Designation M164 (ASTM A325). • All washers shall conform to the requirements of AASHTO M293 (ASTM F436). Nuts (unless designated otherwise) shall be heavy hexagonal nuts conforming to ASTM Designation A563.
- Epoxy resin paste shall be a high modulus, high strength, structural epoxy paste adhesive conforming to ASTM C-881 Types I, II, & IV, Grade 3, Classes B&C.

STEEL REPAIR METHODS:

The Contractor's operation shall be in accordance with the Maintenance and Protection of Traffic Plan sheets included in the Contract Drawings. The Contractor shall assure that no debris or any other foreign materials falls onto the ground or roadway beneath the structure. Should any debris fall to the ground or into the roadway despite this assurance, all work shall stop until such time as the debris has been recovered to the satisfaction of the Engineer, and a revised procedure of operation has been submitted by the Contractor to the Engineer for review and approval. Any damage or injury resulting from falling debris shall be the sole responsibility of the Contractor. Any delay caused as a result of cessation of work and approval of the revised procedure of operation shall not relieve the Contractor of any of his responsibilities under this Contract, including the timely completion of work. Any additional costs incurred as a result of debris falling shall be borne solely by the Contractor.

Existing dimensions, material types, and member sizes, were obtained from the original Contract Drawings. Prior to fabrication of any steel component, the Contractor shall obtain field measurements of all dimensions and layout information which may affect his fabrication work. No separate payment will be made for these field measurements. This is considered incidental to this item.

The methods of procedures, including disconnecting, supporting or adjusting of steel which is to remain; materials, equipment, or anchorage proposed by the Contractor shall be submitted on a standard shop drawing for approval by the Engineer prior to fabrication and the beginning of work. The Contractor's proposals shall be approved prior to the actual commencement of any disconnecting, supporting or adjusting of steel. Approval shall not relieve the Contractor of responsibility for the successful completion of the work. The State will not be responsible for any additional time or cost to the Contractor as a result of the Contractor's errors in taking field measurements

The existing steel surfaces shall be cleaned of all scale, rust, loose paint, and other loosely adherent foreign matter detrimental to achieving a level and uniform faying surface. The steel surface preparation shall be performed only in the general area of repair. The contact surfaces between the existing steel and new steel shall be cleaned, surface prepared and painted, as a minimum, with the primer coat prior to the installation of the supplemental steel. All new structural steel shall be shop primed prior to use. All repaired areas shall be repainted with an approved top coat system after the repairs have been made. The cost of any localized de-leading to prepare the area shall be included under this item of work. The removal and disposal of paint including the protection of personnel and the environment shall be in accordance with the latest Environmental Protection Agency and the RI Department of Environmental Managements Regulations and considered incidental to this work. All work shall be in accordance with the relevant sections of the State of Rhode Island Standard Specifications for Road and Bridge Construction.

The Contractor shall exercise due caution and take all necessary precautions to prevent damage to the existing 12-inch gas pipe carried by Bridge No. 712. All temporary protection shall be submitted to the Engineer prior to the start of work to allow for coordination with applicable utility companies and shall be considered incidental to this item of work. In the event that the existing steel to remain is damaged during any of the Contractors operations, the Contractor shall replace, repair, or reinforce the damaged area as may be necessary to restore the damage to pre-existing

conditions. This work shall be performed by the Contractor as ordered by the Engineer at no additional cost to the State, including the design necessary to restore the steel to its original structural integrity. The design must be submitted to the State for review and approval and be stamped by a RI Professional Engineer.

New structural steel shall be painted in accordance with Code 825, but shall be included for payment under this item of work. Paint color shall match existing color of surrounding steel. All work shall be in accordance with the relevant sections of the State of Rhode Island Standard Specifications for Road and Bridge Construction.

If, in the opinion of the Engineer, the Contractor's operations damage other members of the structure being repaired, he shall be required to change his methods of operations and make all necessary repairs as ordered by the Engineer at no extra cost to the State.

METHOD OF MEASUREMENT:

Work under this Item 824.9901 will be measured and paid for at the Contract unit price per Pound, installed in place.

BASIS OF PAYMENT:

The quantity determined under "Method of Measurement" section will be paid at the contract unit price per Pound as listed in the Proposal. The price so stated will constitute full and complete compensation for all materials, labor, equipment, bolted connections and all else necessary, including but not removing and disposing portions of existing structural steel; furnishing, fabricating, erecting, and painting new structural elements; local deleading (including proper personnel protection and collection & disposal of paint removed); surface preparation; any miscellaneous shields, staging, access, scaffolding; field drilling; field bolting; temporary protective shielding for utilities; field measurements; shop drawings to complete the work in accordance with these specifications and as required by the Engineer.

CODE 825.9901

REPAINTING EXISTING STRUCTURAL STEEL - BRIDGE NO. 712 (FULL)

CODE 825.9902

REPAINTING EXISTING STRUCTURAL STEEL - BRIDGE NO. 849 (ZONE)

DESCRIPTION:

The work under these items shall conform to Section 825 of the RI Standard Specifications for Road and Bridge Construction, amended August 2013, with all revisions (RI Standard Specifications), and shall consist of: thorough cleaning; preparation of surfaces; and full repainting of existing superstructure structural steel of Bridge No. 712; zone painting of existing superstructure structural steel of Bridge No. 849; and full painting of related steel components of both Bridge Nos. 712 and 849 to the limits indicated on the Contract Plans or as directed by the Engineer, all in accordance with these Special Provisions.

This work shall include Personnel and Environmental Protection and Containment, Collection, Storage and Disposal of Debris and Spent Materials as described under Section 826 of the RI Standard Specifications, including all revisions.

MATERIALS:

All materials shall conform to the RI Standard Specifications.

Paint color for Bridge No. 712 shall be Federal Standard Color No. 25183.

Paint color for Bridge No. 849 shall match existing paint system.

CONSTRUCTION METHODS:

Construction methods shall conform to the RI Standard Specifications.

The Contractor shall exercise due caution and take all necessary precautions to prevent damage to existing utilities during cleaning, surface preparation, and painting operations. Where specified on the Contract Plans and/or Contract Documents, the Contractor shall design, furnish, fabricate, erect and remove temporary protective shielding to protect the existing utilities to the satisfaction of the Utility Company. The installation of temporary protection shall be in accordance with the Utility Company standard procedures and specifications, and shall be considered incidental to this item of work.

METHOD OF MEASUREMENT:

These items will not be measured for payment.

BASIS OF PAYMENT:

“ITEM CODE 825.9901 REPAINTING EXISTING STRUCTURAL STEEL – BRIDGE NO. 712 (FULL)”, and “ITEM CODE 825.9902 REPAINTING EXISTING STRUCTURAL STEEL – BRIDGE NO. 849 (ZONE)” will be paid for at the contract unit price per “Lump Sum” as listed in the Proposal. The price so stated will constitute full and complete compensation for all labor, materials, tools, equipment, and all incidentals required to finish the work as described in these Special Provisions and elsewhere in the Contract Documents, complete in place and accepted by the Engineer.

CODE 826.9903

MANAGEMENT OF PIGEON GUANO AND MIXED DEBRIS

DESCRIPTION: The work included under this item shall consist of detoxification, removal, containerization, transportation and removal of pigeon guano and mixed debris located on the bridge piers and abutments. Mixed debris that shall be removed with guano may include asphalt, concrete, sand/soil, and any other materials that may have fallen or been disposed of on the surface of the structure prior to bridge demolition work. Materials anticipated to be removed from bridge piers and abutments which shall be detoxified, removed, transported and disposed as part of this Contract. No demolition debris shall be commingled with mixed waste debris being detoxified.

PERSONAL PROTECTIVE EQUIPMENT: During management of pigeon guano and mixed debris, the minimum personal protective equipment in the form of disposable coveralls with head and boot covers, full-face negative pressure air purifying respirators equipped with dual organic vapor cartridges in conjunction with HEPA cartridges, hard hats, boots with steel toe and shank, and nitrile gloves is required for all workers including RIDOT personnel, as needed for inspection purposes.

The Contractor shall supply each worker with a minimum of two (2) complete disposable full-body coveralls and two pair of nitrile gloves every day. Removal workers shall not be limited to two (2) full-body coveralls, and Contractor shall be required to supply additional full-body coveralls and/or gloves, as necessary. Under no circumstances will anyone entering the removal area be allowed to reuse contaminated full-body coveralls. The Contractor shall have on-site sanitary facilities for worker decontamination, including hot and cold water, soap, and towels. All workers shall remove personal protective equipment prior to exiting the building or the portable sanitary facility. Respirators shall be thoroughly washed prior to reuse.

DISINFECTANT SOLUTION: The Contractor shall use a sodium hypochlorite (bleach) or equivalent and water solution (approximately 1 part bleach to 10 parts water) to be thoroughly spray-applied on the pigeon guano and mixed debris prior to disturbance.

EXECUTION: The Contractor shall remove and legally dispose solid materials and debris such as metal, wood, plastic, household items.

The Contractor shall adequately saturate pigeon guano with disinfectant solution prior to disturbance. No demolition debris shall be commingled with mixed waste debris being detoxified.

MANAGEMENT OF WASTE: Following detoxification, the pigeon guano and mixed debris shall be removed, containerized, and disposed of in an appropriately permitted landfill. Contractor shall perform any required analytical testing to meet the requirements of the landfill. Fugitive dust emissions shall not be permitted during removal activities. Contractor shall control dust with a 10% bleach solution during disturbance.

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

BASIS OF PAYMENT: No separate payment will be made for this item. Costs for this item shall be included in the bid prices of the appropriate items as listed in the Proposal.

CODE 900.9921

REPAIR OF BRIDGE RAIL ON BR. 084901 RAMP BD

DESCRIPTION: Approximately 79'-9" of the bridge railing is damaged due to an impact with a tractor trailer truck. As an immediate measure, RIDOT installed standard 40.5.0 concrete (double-faced) barrier up against the granite curb and placed a few sand barrels at the leading end. The work under this item consists of the removal and repair of the damaged section of the bridge railing. These Special Provisions shall supplement the relevant sections of the State of Rhode Island Standard Specifications for Road and Bridge Construction, Amended August 2013, 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 repair of the damaged railing consisting of:

1. Remove and relocate existing precast concrete median barriers for temporary traffic control as shown on plans. At the end of all work, the existing 40.5.0 traffic barriers shall be delivered to the RIDOT Maintenance Facility in East Providence. All other barrier work regarding existing barriers shall be done according to Section 927 of the RI Standard Specifications.
2. Install additional precast concrete median barriers to facilitate repair work and allow for a minimum 12'-0" travel lane as shown on plans and according to Section 926 of the RI Standard Specifications.
3. Remove the nuts, washers, base plates, posts, and damaged section of the rails as indicated on the plans and according to Section 201 of the RI Standard Specifications.
4. Perform the pullout test setup. This work consists of setting up the pullout test procedure. Anchor bolts at locations of posts to be replaced shall be tested using a pullout test procedure to determine the adequacy for reusing the bolts. Tests shall be setup as indicated on the Plans or as directed by the Engineer, all in accordance with these Specifications.
5. Perform pullout test procedure. Anchor bolts at locations of posts to be replaced shall be tested using a pullout test procedure to determine the adequacy for reusing the bolts. Tests shall be performed as indicated on the Plans or as directed by the Engineer, all in accordance with these Special Provisions.
6. If existing anchor bolts are determined to be adequate (i.e. meets the criteria listed in the Plans), the Steel Two-Pipe rail shall be installed according to Section 830 of the RI Standard Specifications or as modified by these Special Provisions.
7. If the existing anchor bolts are determined to be inadequate (i.e. does not meet the criteria listed in the Plans), new anchor bolts shall be set in the existing concrete at the locations indicated on the Plans or as directed by the Engineer, all in accordance with Section 819 of the RI Standard Specifications or as modified by these Special Provisions.
8. The railing shall be hot-dip galvanized and provided with a factory-applied color finish in accordance with JS 827.9901 as noted in the Plans. The color of the top coat shall match Federal Standard 595 Color 24272. Surfaces within 2" of field welds shall receive a light coat of rust

prohibitive coating and be masked in accordance with Section 825.03.1 C of the RI Standard Specifications.

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 Item CODE 900.9921 "REPAIR OF BRIDGE RAIL ON BR. 084901 RAMP BD."

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 except as modified below:

1. Materials for the Pullout Test shall conform to both the applicable provisions of SECTION M.05; METALS, of the RI Standard Specifications and the following additional requirements.
 - a. *Steel Plates shall conform to the requirements of AASHTO M270, Grade 36.*
 - b. Fasteners.
 - i. Nuts, and washers shall conform to the requirements of AASHTO M164.
 - ii. Threaded rod shall be SAE J429-Grade 5.
2. Materials for Metal Bridge Railing shall conform to both the applicable provisions of SECTION M.05; METALS, of Section 830 of the RI Standard Specifications and the following additional requirements.
 - a. Steel Posts for Steel Two-Pipe Rail shall be wide flange sections which conform to the requirements of AASHTO M 270, Grade 36.
 - b. Steel Rails for Steel Two-Pipe Rail shall be either standard or extra strong steel pipe which conforms to the requirements of ASTM A53, Grade B.
3. If Alternative 2 is used, Anchor Bolts shall conform to the requirements of ASTM A307.

CONSTRUCTION METHODS: 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 except as modified below:

1. When performing the pullout test, only two bolts per post (the pair located closest to the curb) need to be tested. See plans for additional testing notes.
2. If Alternative 2 is used, when drilling, holes for the dowels shall be drilled at the designated locations. The diameter of the holes shall be 1-7/16". Countersink diameter and depth shall be limited to a reasonable and practical dimension to provide enough working space to install the leveling nut as per Plans.

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

BASIS OF PAYMENT: Item 900.9921 REPAIR OF BRIDGE RAIL ON BR. 084901 RAMP BD will be paid for at the contract "Lump Sum" price as listed in the Proposal. The price so stated shall constitute full and complete compensation for all labor, materials, tools, equipment, and all other incidentals required to

complete the construction of the superstructure as described above under “DESCRIPTION”, and elsewhere in the Contract Documents, complete in place and accepted by the Engineer.

CODE 907.1000

DUST CONTROL

DESCRIPTION: Subsection 907.05.3: Failure to Comply, of the Standard Specifications requires that a daily charge be deducted from monies due the Contractor in the event the Engineer decides that dust has not been adequately controlled.

The Charge for this Contract will be **\$1000.00** per day.

CODE 928.9901

TRUCK MOUNTED ATTENUATOR (TMA)
WITH TRUCK MOUNTED FLASHING ARROW BOARD (TMFAB)

928.01 DESCRIPTION. This work consists of providing, operating, and maintaining truck mounted energy absorbing impact attenuators, replacement attenuator cartridges, and truck mounted flashing arrow boards, as directed by the Engineer, all in accordance with these Specifications and applicable state statutes.

928.02 MATERIALS.

928.02.1 Truck Mounted Attenuator (TMA). The TMA is a lightweight attenuation system designed for installation at the back of traffic control trucks. It consists of three basic component sections - a crushable module, a lightweight steel backup, and a support frame for attaching the backup to the truck.

The complete TMA shall be designed to make attachment or detachment from the truck simple and fast and shall be installed in accordance with the manufacturer's recommendations.

a. Module Materials. Light fixtures shall consist of combination run, turn, brake, and side clearance lights with ICC identification lights on the rear of the TMA. All light fixtures shall have rubber grommet seals. A standard SAE/AT/TTMA interchangeable 7-way trailer light wire connector shall be installed and wired to SAE standards.

All standard modules shall have a chevron pattern painted on the rear of the module. The standard chevron pattern shall have 4-inch wide stripes, alternating black and yellow, slanted at 45 degrees in an inverted "V" form with the "V" located at the center of the module.

All standard modules assembly shall be covered for debris containment during an impact and for environmental protection.

b. Crushable Frame. The crushable frame which supports the TMA assembly shall be fabricated from standard steel shapes. The module shall be fastened to the internal frame.

c. Steel Backup. The steel backup shall be special lightweight assembly which shall support the TMA cartridge during normal use and shall resist the loads applied to it during impacts. This backup shall be capable of tilting upward toward the truck 90 degrees for travel or storage. Positions will be either 90 degrees or horizontal.

d. Attachment to the Truck. The TMA shall be designed to interface with a truck as specified herein. Engineers from the TMA manufacturers shall be supplied with a dimensional layout sheet of the truck to which the TMA will be attached. The interface structure between the TMA and the truck will then be custom fabricated by TMA manufacturers.

e. Metal Work-Fasteners. All metal work shall be fabricated from ASTM A36 or M1020 merchant quality steel. After fabrication, all metal work shall be coated with metal primer and painted black. All welding shall be done by, or under the direction of, a certified welder. All bolts, nuts, and washers shall be corrosion resistant American National Standard.

f. Wire Rope. All wire ropes shall be 3/8-inch diameter galvanized, 7 x 19 aircraft cable manufactured to Military Specifications.

g. Weight. The TMA with 90-degree tilt shall weigh approximately 1200 pounds.

h. Hydraulics. The TMA with 90-degree tilt shall have a 12 volt D.C. hydraulic pump and cylinder which will be used to tilt the Hex-Foam module 90 degrees up from horizontal position. The hydraulic pump shall be supplied with a remote activation switch.

i. Wheel Jacks. The TMA with 90-degree tilt shall be capable of accepting two hand crank swivel jacks and two swing jacks at the rear to assist in the removal of the module and backup from the truck. These jacks shall have wheels to provide portability of the TMA once it is removed from the truck.

j. Testing Criteria. The TMA until shall have been tested to the criteria as listed in the National Cooperative Highway Research Program No. 350, dated 1993. A copy of the results of such testing must be available upon request and have been written by a Registered Professional Engineer. The TMA shall be capable of passing the following tests:

1. **Vibration.** Eight hours of constant vibration with a frequency of 5 HZ and a minimum amplitude of .5-inch, input at the base of the backup. The intent of this test is to simulate worst case road vibrations.
2. **Moisture.** Twenty-four hours of simulated rain on the top of the unit at the rate of 10 inches per hour. Twenty-four hours of simulated rain on the bottom of the unit at 10 inches per hour. The test should result in no water accumulation or moisture absorption by the module material.
3. **Corrosion.** When subjected to 50 hours of salt spray (fog), in accordance with ASTM B117, the energy absorbing material shall show no signs of corrosion or decrease in the energy absorbing capacity of the material.

928.02.2 Replacement Cartridges. The Contractor shall have a replacement cartridge available at all times. In the event that the original TMA is damaged due to a crash of an oncoming vehicle during construction the replacement cartridge will be used. The replacement cartridge shall include the module, internal support system, and hydraulic jacks. If the original TMA is damaged, the replacement cartridge will be used and a third cartridge will be ordered and paid for on a Force Account basis as set forth in Subsection 109.04, Para. a.4 of these Specifications.

928.02.3 Truck Mounted Flashing Arrow Board (TMFAB). Attached to the traffic control truck, as described herein, shall be an illuminated truck mounted flashing arrow board. The TMFAB shall be a 4 foot by 8 foot board mounted at the rear of the truck. The TMFAB shall contain at least 12 #4412A (or equivalent) amber lights each of which shall have approximately 6,000 initial maximum candle power with a flash rate of approximately 30 per minute and which shall indicate an arrow to the left, an arrow to the right or an arrow to both sides simultaneously to warn approaching traffic. The center of the arrow shall be mounted a minimum of 9 feet above the roadway. For nighttime use the unit shall be equipped for lamp intensity reduction to eliminate glare.

The TMFAB shall be powered by a diesel-fueled generator equipped with backup batteries.

928.02.4 Traffic Control Truck. The Contractor shall provide a truck weighing between 10,000 pounds to 24,000 pounds or one specified by the manufacturer and approved by the Engineer. The truck shall be adaptable to mounting the TMA and TMFAB to the rear of the truck.

928.03 CONSTRUCTION METHODS. The TMA and TMFAB shall be available for use throughout the duration of the Contract. It shall be positioned and repositioned at the direction of the Engineer.

The Contractor shall supply three (3) copies of the certification of the truck driver. No attenuator truck shall be left unattended while work is being actively performed. The Contractor shall have an employee(s) remain on site with the attenuator truck(s) at all times; the attendant(s) shall not work as laborers or laborer foreman or perform other contractual work while attenuator trucks are on an active work site.

The Contractor shall properly maintain the TMA and TMFAB throughout the Contract period.

928.04 METHOD OF MEASUREMENT. “Truck Mounted Attenuator with Truck Mounted Flashing Arrow Board” will be measured by the number of hours each such assembly is actually employed in the work or as directed by the Engineer.

928.05 BASIS OF PAYMENT.

The accepted quantity of “Truck Mounted Attenuator with Truck Mounted Flashing Arrow Board” will be paid at the contract unit price per hour listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, and equipment, including TMA module, steel backup, TMA support frame, hydraulic pumps, wheel jacks, the continuous repositioning thereof, the first replacement TMA cartridge, TMAFAB, TMAFAB support frame for attachment to the truck, generator, and all incidentals required to finish the work, complete and accepted by the Engineer.

No additional payment will be made for provision of the TMA.

CODE 929.0110

FIELD OFFICE

929.01 DESCRIPTION. This work consists of providing, operating, and maintaining field office for the duration of the contract.

929.02 REQUIREMENTS. The field office shall meet the requirements set forth in the RI Standard Specification for Road and Bridge Construction, latest edition with all applicable amendments, for **Tier I: Small Sized Projects**.

CODE 937.1000

MAINTENANCE AND MOVEMENT OF TRAFFIC PROTECTIVE DEVICES

DESCRIPTION. Subsection 937.05.2; Failure to Comply, part a. Maintenance, of the Standard Specifications, requires that a daily charge be deducted from monies due the Contractor for failure to adequately and safely maintain traffic control devices along any portion of the project.

The charge for this Contract will be **\$7,500.00 per day**.

Subsection 937.05.2; Failure to Comply, part b. Movement, of the Standard Specifications, requires that an appropriate charge be deducted from monies due the Contractor for failure to remove and/or relocate traffic control devices for compliance with the traffic-related work restrictions included in the Transportation Management Plan or to otherwise meet changes in traffic conditions, construction operations, or other conditions affecting the safety and/or mobility of the traveling public. Failure to comply with this requirement will result in a charge of **\$2,000.00 per half hour per lane** (paved shoulders will be counted as lanes) per direction of travel.

CODE 938.1000

PRICE ADJUSTMENTS

DESCRIPTION:

- a. **Liquid Asphalt Cement.** The Base Price of Liquid Asphalt Cement as required to implement **Subsection 938.03.1** of the Standard Specifications is \$550.00 per ton.
- b. **Diesel Fuel.** The Base Price of Diesel Fuel as required to implement **Subsection 938.03.2** of the Standard Specifications is \$2.3452 per gallon.

CODE 943.0200

ON-THE-JOB TRAINING

This On-the-Job Training Specification conforms to the requirements of 23 U.S.C. 140(a). As part of the contractor's equal employment opportunity and affirmative action programs, training shall be provided as follows:

A. The contractor shall provide on-the-job training aimed at developing full journey worker status in the type of trade or job classification involved.

B. The number of training hours assigned to this contract per this specification will be 4,000 hours. The specific number of trainees shall be determined by the Contractor during the post qualification process.

C. In the event that a contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided, however, that the contractor shall retain the primary responsibility for meeting the training requirements of this specification. The contractor shall also insure that this specification is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

D. The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journey workers in the various classifications within a reasonable area of recruitment. Prior to commencing construction, the contractor shall submit to RIDOT for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work that is currently enrolled or becomes enrolled in an approved program, and will be reimbursed for such trainees as provided hereinafter.

GOOD FAITH EFFORTS

Training and upgrading of minorities and women toward journey worker status is a primary objective of this Specification. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent that such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Specification. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journey worker status, or in which he/she has been employed as a journey worker. The contractor may satisfy this requirement by including

appropriate questions in the employee application, or by other suitable means. Regardless of the method used, the contractor's records shall document the findings in each case.

ACCEPTABLE TRAINING

The minimum length and type of training for each classification shall be as established in the training program selected by the contractor and approved by RIDOT and the Federal Highway Administration. RIDOT and the Federal Highway Administration will approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the trainee(s) for journey worker status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with the Rhode Island apprenticeship agency recognized by the Bureau, and training programs approved but not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, and Bureau of Apprenticeship are acceptable for the purposes of this specification.

Training will be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from RIDOT prior to commencing work on the classification covered by the program. It is the intention of this specification that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification will be permitted provided that significant and meaningful training is provided and is approved by the division office of the FHWA. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

REIMBURSEMENT

Except as otherwise noted below, the contractor will be reimbursed at a rate of \$6.00 per hour of training provided to each trainee in accordance with an approved training program. This Reimbursement will be made even if the contractor receives additional training program funds from other sources, provided such other does not specifically prohibit the contractor from receiving other reimbursement.

Reimbursement for offsite training will not be made to the contractor. However credit for offsite training will be granted if the contractor; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period, or the trainees are concurrently employed on another Federal-aid project. No payment will be made to the contractor if either the failure to provide the required training, or the failure to hire the trainee as a journey worker, is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirements of this Specification. It is normally expected that a trainee will begin training on the project as soon as feasible after start of work, utilizing the skill(s) involved, and remain on the project as long as training opportunities exist in the work classification or until the trainee has completed the training program. It is not required that all trainees be employed as such for the entire length of the contract. A contractor will have fulfilled his responsibilities under this Specification if he has provided acceptable training to the number

of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid the appropriate rates approved by the Departments of Labor or Transportation.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification covered by this Specification.

The contractor shall furnish the trainee a copy of the program he will follow in providing the training. The contractor shall provide each trainee with a certification showing the type and length of training satisfactorily completed.

The contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Specification.

CONTRACTORS' PROCEDURES

Pre-award:

A. Before beginning any federal aid project, the Contractor must have his or her Affirmative Action Plan in place and on file with the Department of Administration/EEO Office.

B. Prior to any award, the Contractor must submit to the Office of Business and Community Resources' (OBCR) OJT Compliance Officer for review and approval, a specific plan that includes the following: the RIDOT OJT ANNUAL Training PLAN, which includes a listing of all current projects (FAP and Non-FAP), Trainee Registration Form and the OJT Acknowledgment and Statement of Intent.

C. The Contractor must either use a US or RI DOL approved program or an approved training program of a recognized labor organization or trades council.

Post-award:

A. Proposed On-the-Job trainees are to be listed on the Trainee Registration enrollment form for each trainee to be employed and submitted to OBCR's OJT Compliance Officer for approval. Trainees may not begin training until the Trainee Plan is approved by RIDOT.

B. The Contractor orients the training foreman, superintendent and the On-the-Job Training trainee(s) to their respective responsibilities in the program and provides copies of the training guidelines for the training job classification being used.

C. The Contractor shall provide a certified payroll weekly to the Resident Engineer. This payroll should distinguish clearly the trainee's training hours from regular hours worked for each On-the-Job trainee.

D. The Contractor will monitor and submit monthly reports (called Monthly Report) for all trainees in the program, for progress, any problems or training issues to the OJT Compliance Officer.

E. The Contractor must notify the Resident Engineer and the OJT Compliance Officer verbally within 5 working days of any trainee termination or trainee resignations. The Contractor must also submit termination forms/documentation to the Resident Engineer and the OJT Compliance Officer within 10 working days after the termination. Subsequent to any trainee's termination or resignation, the OJT Compliance Officer will make a good faith effort determination (regarding the contractor's best efforts to replace the trainee as to whether this training position needs to be filled.

F. Contractors who assign training position(s) to subcontractors must be sure the subcontractor has an approved On-The-Job Training Plan on file with the OBCR. The Prime Contractor shall retain the responsibility for full compliance with OJT training requirements of the project.

G. The contractor shall furnish the trainee a copy of the program he will follow in providing the training. The contractor shall provide each trainee with a certification showing the type and length of training satisfactorily completed.

H. The contractor will provide for the maintenance of record and furnish periodic reports documenting his performance under this Specification.

CODE L09.9901

SELECTIVE CLEARING

DESCRIPTION:

The work consists of clearing designated areas by the removal and disposal of trees, logs, stumps, shrubs, brush, and rubbish, and the shaping of the channel within the limits indicated on the plans and as directed by the Engineer.

PROTECTION OF EXISTING VEGETATION

Trees and other vegetation designated to remain undisturbed shall be protected from damage throughout the duration of the construction period. Any damages resulting from the Contractor's operations or neglect shall be trimmed or replaced by the Contractor at no additional cost to the State. Earthfill, stockpiling of materials, vehicle or equipment parking, and excessive foot or vehicle traffic shall not be allowed within the drip line of vegetation designated to remain in place. Vegetation damaged by any of these or similar actions shall be replaced with viable vegetation of the same species, similar condition, and like size unless otherwise approved by the contracting officer. Any cuts, skins, scrapes, or bruises to the bark of the vegetation shall be carefully trimmed and local nursery accepted procedures used to seal damaged bark. Any limbs or branches 0.5 inch or larger in diameter that are broken, severed, or otherwise seriously damaged during construction shall be cut off at the base of the damaged limb or branch flush with the adjacent limb or tree trunk.

MARKING:

Limits of the area(s) to be cleared shall be marked by stakes, flags, paint, tree markings, or other suitable methods as shown on the Contract Drawings. Trees to remain standing, undisturbed, and uninjured are designated by special markings.

CLEARING:

Trees and other vegetation marked for clearing shall be cut off as near the ground surface as conventional tools and equipment normally permit. All trees not marked for preservation and all snags, logs, brush, shrubs, stumps, and rubbish shall be cleared from within the area limits identified.

DISPOSAL:

All woody material, vegetation, and rubbish resulting from clearing from designated areas shall be disposed of at the locations and in a manner shown on the drawings, or as specified in section 8 of this specification.

METHOD OF MEASUREMENT:

This item will not be measured for payment.

BASIS OF PAYMENT:

“ITEM CODE L09.9901 Selective Clearing” will be paid for at the contract unit price per “Lump Sum” as listed in the Proposal. The price so stated will constitute full and complete compensation for clearing designated areas by the removal and disposal of trees, logs, stumps, shrubs, brush, and rubbish, and the shaping of the channel and all labor, materials, tools, equipment, and all incidentals required to finish the work as described in these Special Provisions and elsewhere in the Contract Documents, complete in place and accepted by the Engineer.