Reviewers: Delete all sections that do not apply to your project.

* Section 2.0 - Accept the revision marks when the project has no new structure(s). Reject the revision marks when the project does have new structure(s).
* Section 2.1 - Accept the revision marks when the structure is to be closed during construction. Reject the revision marks when traffic is to be maintained during construction.
* Section 2.3 - Always use on rehabs.
* Section 2.4 - Modify for redecks (composite or non-composite).
* Section 2.6 - Accept the revision marks for stream or lake crossings. Reject the revision marks for grade separations.
* Section 2.9 - Should be included when no temporary barrier curbs are to be used. SEE BRYAN OR DENNIS BEFORE USING A PLATE ON A PROJECT. Using a steel plate requires Traffic Division approval and a design exception. SPM/Liaison is responsible for making sure the roadway plans have addressed all of the requirements of EPG 616.6.46.
* Sections 2.11 & 3.0 thru 3.3 are required when SSPC-SP2 and SSPC-SP3, SSPC-SP6, SSPC-SP10 or SSPC-SP11 surface preparation is used or when “Strengthening Existing Beams”, “Structural Steel Requirements” or “Existing Diaphragm Connection to Flange” BSPs are used.
* Section 2.12 - Use for bridges where FRP wrap is to be installed for shear strengthening beam caps and substructure repair is also required (reference section 3.3 of FRP Wrap BSP for concrete beams, piles and columns).
* Section 3.6 - 1/4 span length requirement is by design.
* Section 4.0 - Accept the revision marks when the US Coast Guard is not involved. Reject the revision marks when US Coast Guard is involved.

 CONSTRUCTION REQUIREMENTS 8/6/20

**1.0 Description.** This provision contains general construction requirements for this project.

**2.0 Construction Requirements.** The plans and the asbestos and lead inspection report for the existing structure(s) are included in the contract in the bridge electronic deliverables zip file for informational purposes only.

**2.1** In order to assure the least traffic interference, the work shall be scheduled so that the bridge closure is for the absolute minimum amount of time required to complete the work. The bridge shall not be closed until material is available for continuous construction and the contractor is prepared to diligently pursue the work until the closed bridge is opened to traffic.

**2.2** Bridge work by contractor forces, including erection, rehabilitation or demolition, shall not be allowed over traffic unless a bridge platform protection system is installed below the work area except for work performed above a deck that is intact. The protection system shall be capable of catching all falling objects such as tools, overhang brackets or materials. Lifting of objects that are heavier than the capacity of the bridge protection system shall not be permitted.

**2.3** Qualified special mortar shall be a qualified rapid set concrete patching material in accordance with Sec 704. A qualified rapid set concrete patching material will not be permitted for half-sole repair, deck repair with void tube replacement, full depth repair, modified deck repair and substructure repair (formed) unless a note on the bridge plans specifies that a qualified special mortar may be used.

**2.4** The existing slab for the bridge(s) to be redecked was constructed as composite or non-composite as shown in the table below.

| **Bridge No.** | **Type of deck** |
| --- | --- |
| Axxxxx | Non-composite |

**2.5** The bridge substructure for the widened portion of stage one construction shall be constructed as near to completion as feasible before removing the adjacent portions of existing superstructure.

**2.6** Provisions shall be made to prevent any debris and material from falling into the waterway. If determined necessary by the engineer, any debris and material that falls below the bridge outside the previously specified limits shall be removed as approved by the engineer at the contractor's expense.

**2.7** Any damage sustained to the remaining structure as a result of the contractor's operations shall be repaired or the material replaced as approved by the engineer at the contractor's expense.

**2.8** Provisions shall be made to prevent damage to any existing utilities. Any damage sustained to the utilities as a result of the contractor's operations shall be the responsibility of the contractor. All costs of repair and disruption of service shall be as determined by the utility owners and as approved by the engineer.

**2.9** The contractor shall provide steel plates over any unprotected open excavation in the bridge deck during non-working hours and in areas where work is not active. The plates shall be 3/4 inch thick. The plates shall extend 12 to 18 inches each side of the opening and cover the full width of work. The contractor shall bevel all edges to a slope no steeper than 3H:1V. The driving surface shall be treated for skid resistance either by surface deformation or direct application of a friction course and delineated as shown in the plans. The plates shall be securely affixed to the deck using concrete anchors or through bolts. The contractor may also secure the plate by attaching it to the superstructure or substructure. However, nothing shall be welded or bolted to these elements. The method of attachment shall be approved by the engineer. Any damage to the deck, superstructure, or substructure as a result of this work shall be repaired as approved by the engineer at the contractor's expense.

**2.10** A washer shall be required under head and nut when any reaming is performed for bolt installation.

**2.11** SSPC-SP2 and SSPC-SP3 surface preparation shall be in accordance with the environmental regulations in Sec 1081 and collection of residue shall be in accordance with Sec 1081 for collection of blast residue. SSPC-SP6, SSPC-SP10 and SSPC-SP11 surface preparation shall be in accordance with the approved blast media and environmental regulations in Sec 1081 and collection of blast residue shall be in accordance with Sec 1081.

**2.12** The contractor shall schedule the substructure repairs as one of the first orders of work so that the fiber reinforced polymer wrap for shear strengthening can be installed as required by job special provision Fiber Reinforced Polymer (FRP) Wrap for Concrete Beams.

**3.0 Coating Information.**

**3.1 Straps Removal.** Exposed portions of straps for stay-in-place forms shall be removed prior to surface preparation. Straps need not be removed in areas that are not being painted. Flame cutting will not be permitted. The contractor shall exercise care not to damage the existing structure during removal. Any damage sustained to the remaining structure as a result of the contractor's operations shall be repaired or the material replaced as approved by the engineer at the contractor's expense.

**3.2 Slab Drains and Stay-In-Place Forms.** The stay-in-place forms, slab drains and slab drain brackets shall not be recoated, overcoated or damaged during the painting operation. Any portion of the slab drain bracket that is blast cleaned shall be recoated with System G. Any damage sustained as a result of the contractor's operations shall be repaired or the material replaced as approved by the engineer at the contractor's expense.

**3.3 Existing Bridge Information.** The informational plans may be used by bidders in determining the amount of steel to be cleaned and painted/coated with the full understanding that the State accepts no responsibility for accuracy of the estimated tons of existing steel shown in the table below. The bidder's acceptance and use of the estimate shown below shall be no cause for claim for any final adjustment in the contract unit price for the work involved in repainting. Each bidder is expected to carefully examine the structure(s), investigate the condition of existing paint and prepare their own estimate of quantities involved before submitting a bid. Surface preparation and applying field coatings to the structural steel shall be based on the contract plan quantities. No final measurements will be made.

| **Bridge No.** | **Estimated Tons** | **Existing Paint System** | **Lead Based** |
| --- | --- | --- | --- |
| **Coating System** | **Total** |
| **System G** | **Calcium Sulfonate** |
| Axxxxx | 83 | 1535 | 1618 | A | (Yes/No) |

**3.4 Environmental Contact.** Environmental Section may be contacted at the below address or phone number. The Missouri Department of Health may be contacted at (573) 751-6102.

 MoDOT - Design Division - Environmental Section

 P.O. Box 270

 105 W. Capitol Ave., Jefferson City, MO 65102

 Telephone: (573) 526-4778

**3.5 Approved Smelter and Hazardous Waste Treatment, Storage and Disposal Facility.** The following is the approved smelter and hazardous waste treatment, storage and disposal facility:

 Doe Run Company - Resource Recycling Division - Buick Facility

 Highway KK

 Boss, MO 65440

 Telephone: (573) 626-4813

**3.6 Impermeable Surface Limits.** For the duration of cleaning and recoating or overcoating the truss spans, the truss span superstructure in any span shall not be draped with an impermeable surface subject to wind loads for a length any longer than 1/4 the span length at any one time regardless of height of coverage. Simultaneous work in adjacent spans is permissible using the specified limits in each span.

**4.0 Navigation Requirements.**

**4.1** All work shall be performed so that the free flow of navigation is not unreasonably interfered with, the navigable depths are not impaired and navigation lighting is visible at all times. Any floating equipment or vessels working in the channel shall display lights and signals as required by the current “Handbook of Missouri Boating Laws and Responsibilities” available on the Missouri Water Patrol web site. If scaffolding or nets are suspended below low steel in the navigation span, the engineer shall be advised so that the temporary reductions in clearance for river traffic can be checked for reasonableness and appropriate notices can be published. Positive precautions shall be taken to prevent the accidental dropping of spark producing, flame producing, lighted or damaging objects onto barges or vessels passing beneath the bridge. All flame cutting, welding or other similar spark producing operations shall be ceased over the channel when vessels are passing beneath the bridge.

**4.2** The contractor shall be responsible for submitting a work plan to the engineer for review. When the engineer is in concurrence with the work plan, the engineer will forward the material to the appropriate agency or agencies for approval.

**5.0 Method of Measurement.** No measurement will be made.

**6.0 Basis of Payment.** Payment for the above described work will be considered completely covered by the contract unit price for other items included in the contract.