REVISION OF SECTION 202
REMOVAL OF PORTIONS OF PRESENT STRUCTURE

Section 202 of the Standard Specifications is hereby revised for this project to include the following:

DESCRIPTION

This work consists of removal of the existing bridge approach slabs and sleeper slabs as shown in the plans.

This work consists of saw cutting, removal and disposal of existing deteriorated, spalled and unsound concrete as shown in the plans.

It also consists of removing corroded steel, sandblasting reinforcing steel or welded wire fabric that remains, and sandblasting the newly exposed concrete surfaces at the removal locations.

CONSTRUCTION REQUIREMENTS

At least 10 working days before beginning removal, the Contractor shall submit a Method Statement to the Engineer with details of the removal operations including the means, methods, sequence of removal, tools, and equipment to be used. All removal operations, methods, and equipment must be approved by the Engineer before the work begins.

The Contractor’s Method Statement shall include proposed methods used to:
1. Determine the locations, and limits, of deteriorating concrete,
2. Prevent debris from falling to the ground below the structure,
3. Protect the traveling public using the structure, and adjacent to the structure, from airborne debris generated by the removal operations.

Removal operations shall be conducted so that the traveling public is protected, and so there will be minimal interference with the railroad or the traveling public on or below the structure. Removal operations shall also be coordinated with the Railroad so as to not interfere with daily train operations.

The work shall be done in accordance with these Special Provisions and Revision of Section 202 Sandblasting and in conformity with the plans, or as directed by the Engineer.

The existing bridge rail and guardrail to remain shall be prepared to fit the new construction, and shall be protected from damage. Any damage caused by the Contractor to any portion of the structure not intended for repair shall be repaired in kind by the Contractor at the Contractor’s expense using means and methods approved by the Engineer with no allowance for contract time extension.

The existing concrete shall be removed as shown on the plans or as directed by the Engineer, but to a minimum depth to provide 1 inch clear around all existing reinforcing steel projecting into the removal area, or to sound concrete, whichever is deeper. Removal operations shall not occur prior to approval of the Engineer. The Contractor shall saw cut along the removal limits prior to removal. The sawing of concrete shall be done to a true line, with a vertical face, unless otherwise specified. Feathered edges will not be acceptable. The depth of the saw cut shall be approximately ¾-inch.

The Contractor shall take all steps necessary to minimize spalling on the face of the existing concrete adjacent to the removal boundaries. Removals adjacent to the removal boundaries shall not use pneumatic hammers heavier than nominal 15-pound class. Hand tools such as hammers and chisels shall be used for removal of particles of loose, unbonded concrete. Exposed concrete surfaces within the removal limits shall be sandblasted to remove all final fractured or loose particles. Any damage caused by the Contractor to any portion of the structure not
intended for repair shall be repaired in kind by the Contractor at the Contractor’s expense using means and methods approved by the Engineer with no allowance for contract time extension.

The Contractor shall take all steps necessary to prevent cutting or otherwise damaging reinforcing steel or welded wire fabric intended to remain in place. Any reinforcing damaged by the Contractor’s operation shall be repaired or replaced at the Contractor’s expense using means and methods approved by the Engineer with no allowance for contract time extension.

Following the removal of the concrete, all exposed non-epoxy reinforcing steel to remain in place shall be straightened as required and thoroughly cleaned to sound metal by sandblasting per Revision of Section 202 Sandblasting. Epoxy coated reinforcing steel, if present, shall not be sandblasted but shall be cleaned with hand tools. Epoxy coating on reinforcing steel, if damaged, shall be repainted with epoxy paint prior to placement of the concrete.

Following sandblasting, the condition of all exposed reinforcing bars will be inspected by the Engineer. If, in the opinion of the Engineer, the loss of original cross-sectional area of the bar due to deterioration is 25 percent or more, the Contractor shall add additional bars as approved by the Engineer. New added bars shall be lap spliced as shown in the plans. If the required lap splice length cannot be utilized, a mechanical splice shall be used. The mechanical splice shall develop at least 125 percent of the specified yield strength of the bar. The mechanical splice shall be selected from CDOT’s Approved Products List (APL). All minimum clearances shall be maintained as defined in the plans. Payment for the mechanical splice will be as the weight of reinforcing steel for the designated lap splice for that bar size. As an alternative, the Contractor may remove additional sound concrete to achieve the required lap length. Payment for additional removals and repairs will be based on the unit price for the appropriate class of removal and repair method.

All reinforcing steel shall be secured to adjacent bars as provided in subsection 602.

All areas of the prepared surface contaminated by oil or other materials detrimental to bonding shall be thoroughly cleaned by a method approved by the Engineer.

The Contractor is responsible for the disposal of all removed material and debris.

All materials removed from the existing structure shall become the property of the Contractor and shall be disposed of properly off-site at the Contractor’s expense.

**METHOD OF MEASUREMENT**

Removal of Portions of Present Structure will be measured by the area completed and accepted.

Removal and repairs beyond the minimum required lap length of reinforcing steel will not be measured or paid for, but will be at the contractor’s expense.

Cleaning of prepared surfaces contaminated by oil or other materials detrimental to bonding will not be measured and paid for separately, but shall be included in the work.

**BASIS OF PAYMENT**

Planned rehabilitation quantities are approximate. The accepted quantities will be paid for at the contract unit price.
REVISION OF SECTION 202
REMOVAL OF PORTIONS OF PRESENT STRUCTURE

Payment will be made under:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
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<tbody>
<tr>
<td>Removal of Portions of Present Structure</td>
<td>Square Foot ■</td>
</tr>
<tr>
<td>Removal of Portions of Present Structure</td>
<td>Square Yard ■</td>
</tr>
</tbody>
</table>

Payment for Removal of Portions of Present Structure will be full compensation for all labor, materials, tools, equipment and incidentals required to perform the neat line removals to the required depth, methods to prevent debris from falling from the structure, and methods to protect the traveling public using the structure, or adjacent to the structure, from airborne debris.

Payment for the new reinforcement steel will be made in accordance with Section 602. Payment for the Mechanical splice will be as the weight of reinforcing steel for the designated lap splice for that bar size.

Cleaning, straightening, and repairing epoxy coating of existing reinforcing steel will not be paid for separately, but shall be included in the work.

Saw cutting will not be paid for separately, but shall be included in the work.

Sounding and marking repair areas will not be paid for separately, but shall be included in the work.

Sandblasting will not be paid for separately, but shall be included in the work.

Disposal of removed materials and debris will not be paid for separately, but shall be included in the work.

INSTRUCTIONS TO DESIGNERS (delete instructions and symbols from final draft):

Use this project special provision for concrete repairs on structures (except for deck rehabilitation). Designer to consider safety critical structural implications and possible falsework requirements. Do not use for Class 1, 2, or 3 deck repairs or Hydrodemolition, which have separate specifications.

Use Concrete (Patching) for the corresponding repair/replacement portion of concrete repairs. Pair the Pay units (Square Foot to Cubic Foot and Square Yard to Cubic Yard).

● Use if approach or sleeper slabs are being removed. Revise to include all components to be replaced with Concrete Class D (Bridge), or Concrete Class (Patching).

♦ Use for abutment, pier cap, edge of deck, girder bearing pedestal, slope paving, or other similar repairs.

♣ Use if railroads are below this structure.

♠ Replace/substitute, as appropriate, the existing components to remain.

■ Match the removal pay unit area to the pay unit volume of the corresponding repair material (Square Foot to Cubic Foot and Square Yard to Cubic Yard).
Designer to provide estimated quantity of removal area in the Summary of Quantities. The estimated depth of removal is to be provided in the Summary of Quantities Worksheet note and is to be used to calculate the patching quantity.

Include Revision of Section 202 Sandblasting Reinforcing Steel in specification package.

## PERMANENT CHANGES TO PROJECT DATED SPECIAL PROVISIONS

### REVISION OF SECTION 202 REMOVAL OF PORTIONS OF PRESENT STRUCTURE

<table>
<thead>
<tr>
<th>DATE</th>
<th>AUTHOR</th>
<th>DESCRIPTION OF CHANGE</th>
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<tbody>
<tr>
<td>12/12/91</td>
<td>M. Dodson</td>
<td>Minor Format Changes</td>
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<tr>
<td></td>
<td></td>
<td>Revised the specification references to conform with the 1999 Colorado DOT Standard Specifications for Road and Bridge Construction as follows:</td>
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<tr>
<td></td>
<td></td>
<td>On page two, changed the subsection reference from 202.07 to 202.12. The changes referenced are related to Basis of Payment.</td>
</tr>
<tr>
<td>1/14/19</td>
<td>BPM Cons.</td>
<td>Revised to match current usage and formatting</td>
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