EXISTING ROAD SECTION ON TANGENT
TYPICAL SECTION RTE. 19
STA. 551+13.34 TO 6+05.32 (EXCLUDING BRIDGE)

PROPOSED ROAD SECTION ON TANGENT
TYPICAL SECTION RTE. 19
STA. 551+13.34 TO 6+05.32 (EXCLUDING BRIDGE)
EXISTING BRIDGE SECTION
STA. 051+13.34 TO 6+06.32

BRIDGE SECTION - PHASE 1
LOOKING UPSTAGE (SOUTH)

BRIDGE SECTION - PHASE 2
LOOKING UPSTAGE (SOUTH)

BRIDGE SECTION - PHASE 3
LOOKING UPSTAGE (SOUTH)

CENTERLINE ORI. OF BRIDGE
60'-0"
### Erosion Control

<table>
<thead>
<tr>
<th>Location (Station)</th>
<th>Quantity (Each)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>551+13 to 551+27</td>
<td>1</td>
<td>Includes cleanout of drop inlet and culvert</td>
</tr>
<tr>
<td>551+27 to 551+31.2</td>
<td>1</td>
<td>Includes cleanout of drop inlet and culvert</td>
</tr>
<tr>
<td>551+31.2 to 551+36</td>
<td>1</td>
<td>Includes cleanout of drop inlet and culvert</td>
</tr>
<tr>
<td>551+36 to 551+40</td>
<td>1</td>
<td>Includes cleanout of drop inlet and culvert</td>
</tr>
<tr>
<td>551+40 to 551+44</td>
<td>1</td>
<td>Includes cleanout of drop inlet and culvert</td>
</tr>
<tr>
<td>551+44 to 551+53</td>
<td>1</td>
<td>Includes cleanout of drop inlet and culvert</td>
</tr>
<tr>
<td>551+53 to 551+61</td>
<td>1</td>
<td>Includes cleanout of drop inlet and culvert</td>
</tr>
</tbody>
</table>

**Total** 426.0

---

### Culvert Cleanout

<table>
<thead>
<tr>
<th>Location (Station)</th>
<th>Quantity (Each)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>551+62 to 551+66</td>
<td>1</td>
<td>Includes cleanout of drop inlet and culvert</td>
</tr>
<tr>
<td>551+65 to 551+70</td>
<td>1</td>
<td>Includes cleanout of drop inlet and culvert</td>
</tr>
<tr>
<td>551+70 to 551+75</td>
<td>1</td>
<td>Includes cleanout of drop inlet and culvert</td>
</tr>
<tr>
<td>551+75 to 551+80</td>
<td>1</td>
<td>Includes cleanout of drop inlet and culvert</td>
</tr>
</tbody>
</table>

**Total** 4

---

### Bridge Approach Transition Section (Regular/No curb)

<table>
<thead>
<tr>
<th>Location (Station)</th>
<th>Quantity (Each)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>551+81 to 551+82</td>
<td>2</td>
<td>Modified Length = 25'</td>
</tr>
<tr>
<td>551+89 to 551+94</td>
<td>2</td>
<td>Modified Length = 12'</td>
</tr>
<tr>
<td>552+05 to 552+10</td>
<td>2</td>
<td>Modified Length = 22'</td>
</tr>
</tbody>
</table>

**Total** 3

---

### Shaping Slopes - Class III

<table>
<thead>
<tr>
<th>Location (Station)</th>
<th>Quantity (Each)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>551+33 to 551+36</td>
<td>1</td>
<td>REMOVE EXISTING GUARDRAIL (WEST SIDE ONLY)</td>
</tr>
<tr>
<td>551+36 to 551+40</td>
<td>1</td>
<td>REMOVE EXISTING GUARDRAIL (WEST SIDE ONLY)</td>
</tr>
<tr>
<td>551+40 to 551+44</td>
<td>1</td>
<td>REMOVE EXISTING GUARDRAIL (WEST SIDE ONLY)</td>
</tr>
<tr>
<td>551+44 to 551+48</td>
<td>1</td>
<td>REMOVE EXISTING GUARDRAIL (WEST SIDE ONLY)</td>
</tr>
<tr>
<td>551+48 to 551+53</td>
<td>1</td>
<td>REMOVE EXISTING GUARDRAIL (WEST SIDE ONLY)</td>
</tr>
<tr>
<td>551+53 to 551+60</td>
<td>1</td>
<td>REMOVE EXISTING GUARDRAIL (WEST SIDE ONLY)</td>
</tr>
<tr>
<td>551+60 to 551+65</td>
<td>1</td>
<td>REMOVE EXISTING GUARDRAIL (WEST SIDE ONLY)</td>
</tr>
<tr>
<td>551+65 to 551+70</td>
<td>1</td>
<td>REMOVE EXISTING GUARDRAIL (WEST SIDE ONLY)</td>
</tr>
<tr>
<td>551+70 to 551+75</td>
<td>1</td>
<td>REMOVE EXISTING GUARDRAIL (WEST SIDE ONLY)</td>
</tr>
</tbody>
</table>

**Total** 9

---

### Pavement Marking Removal

<table>
<thead>
<tr>
<th>Location (Station)</th>
<th>Quantity (Each)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>551+20 to 551+24</td>
<td>1</td>
<td>EXIST EGGLES (CENTER LINES, STOP BARS, AND TURN LINES)</td>
</tr>
</tbody>
</table>

**Total** 1

---

### Permanent Pavement Marking

<table>
<thead>
<tr>
<th>Location (Station)</th>
<th>Quantity (Each)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>551+39 to 551+43</td>
<td>400</td>
<td>DOUBLE SOLID CENTERLINE</td>
</tr>
</tbody>
</table>

**Total** 2030

---

### Temporary Pavement Marking

<table>
<thead>
<tr>
<th>Location (Station)</th>
<th>Quantity (Each)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>551+31</td>
<td>22</td>
<td>PHASE 1 STOP BAR</td>
</tr>
<tr>
<td>551+31</td>
<td>22</td>
<td>PHASE 1 SOLID EGGLE</td>
</tr>
<tr>
<td>551+31</td>
<td>22</td>
<td>PHASE 2 SOLID CENTERLINE</td>
</tr>
<tr>
<td>551+31</td>
<td>22</td>
<td>PHASE 2 STOP BAR</td>
</tr>
<tr>
<td>551+31</td>
<td>22</td>
<td>PHASE 3 SOLID EGGLE</td>
</tr>
</tbody>
</table>

**Total** 88

---

### Mobilization

<table>
<thead>
<tr>
<th>Location (Station)</th>
<th>Quantity (Each)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>551+00 to 551+05</td>
<td>61913, 61927</td>
<td>INCLUDES出行ゲート</td>
</tr>
</tbody>
</table>

**Total** 1
NOT TO SCALE. FOLLOW DIMENSIONS.
NOT TO SCALE. FOLLOW DIMENSIONS.
NOT TO SCALE. FOLLOW DIMENSIONS.
Completed as Promised

ROAD CLOSED

ALL LOCATIONS
TRAFFIC CONTROL SHEETS
SHEET 10 OF 10
NOTE:
ALL EXISTING PAVEMENT MARKINGS ON BRIDGE TO BE REMOVED OR COVERED BEFORE PLACING TEMPORARY PAVEMENT MARKINGS.
NOTE:
ALL EXISTING PAVEMENT MARKINGS ON BRIDGE TO BE REMOVED OR COVERED BEFORE PLACING
TEMPORARY PAVEMENT MARKINGS.

LANE
PARTIAL
CLOSED

TEMPORARY 24" WHITE
STOP BAR (UP)

TEMPORARY 24" WHITE
STOP BAR (UP)

ADJUST EXISTING
EDGE LINES AND STOP BAR

WEST LANE CLOSED
WEST SHOULDER CLOSED

EXISTING MARKER CURB

temporary marking paint,
4 IN. SOLID YELLOW EDGE LINES

temporary marking paint,
4 IN. SOLID WHITE CENTERLINE.

ROUTE 19
PHASE 3
BRIDGE A11913
PAVEMENT MARKING
SHEET 3 OF 6
Deck Repair Notes:

Order of Repair:
1. Remove existing wearing surface plus 1/2" of existing deck.
2. Power wash deck to identify sound and unsound existing deck.
3. Inside special repair zones, complete the following
   a. Half-depth repair
   b. Deck repair with void tube replacement
   c. Full-depth repair
4. Outside special repair zones, remove existing dead repair.
5. Complete total surface hydro demolition, removing 1/2" minimum of sound concrete. Inside special repair zones and removing 1/2" of un-reinforced sound concrete and all deteriorated concrete outside special repair zones.
6. Sound deck and if needed complete frictional concrete removal.
7. Outside special repair zones, complete the following repair.
   a. Deck repair with void tube replacement
   b. Full-depth repair
8. Place new wearing surface and additional material for areas of monolithic deck repairs.

Special Repair Zones:
Deck repair required in the areas designated as special repair zones should be completed before total surface hydro demolition. In alphabetical sequence beginning with Zone A, Zones with the same letter designation may be repaired at the same time. Each zone shall not be made longer or wider than the special repair zone. Any deck repair in areas not designated as a special repair zone shall be completed after hydro demolition.
Removal of dead repair shall be completed in each special repair zone and concrete shall not have a temperature of 70°F or higher. Cold joint shall not be started in the next special repair zone.

Fiber Void Tube Replacement:
Fiber tubes for producing voids shall have an approximate outside diameter of 1 inch and shall be encased into concrete. The fiber tube shall be placed at not more than 4 feet centers. The 3/4 inch void hole shall be provided at 2 inches from each end of each new void, if required.

Note: This drawing is not to scale. Follow dimensions.
**General Notes:**

Open cell foam joint seal size (width and depth) shall be determined by the manufacturer. Manufacturer recommended seal size shall meet the movement and installation gap requirements and show effect.

The open cell foam joint seal shall be installed according to the manufacturer’s recommendations.

The installation temperature shall be taken as the actual air temperature averaged over the hour period immediately preceding installation.

(c) Allowable installation gap (g) normal to joint at roadway surface (see table)

Any repairs necessary and anything incidental to install Open Cell Foam Joint Seal will be considered completely covered by the contract unit price for Open Cell Foam Joint Seal.

**SECTION THRU JOINT AT EN BENTS NO. 1 & 5**

* Manufacturer’s recommended size

Extend seal 3" past edges of slab.

<table>
<thead>
<tr>
<th>Movement of Joint (in)</th>
<th>Movement Normal to Joint (in)</th>
<th>Max. Installation Gap (in)</th>
<th>Allowable Installation Gap (in)</th>
<th>Manufacturer</th>
<th>Seal Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1/4</td>
<td>1/4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WSDOT construction personnel will record the manufacturer and seal name that was used.

**OPEN CELL FOAM JOINT SEAL**

*Note: This drawing is not to scale, follow dimensions.*
U.I.P. AND REHABILITATE EXISTING (52'-58'-58'-52') CONTINUOUS CONCRETE VOIDED SLAB SPANS

SECTION 12 TIP 39N AGE 4N

Asbestos (Pfund Category II-B) has been detected in the insulation contained between the top of the concrete piers and the base of the construction. The insulation is a potential source of asbestos. The Contractor shall follow the guidelines in the Contractor's action plan. The Contractor is responsible for the safe and proper handling and disposal of asbestos materials. The Contractor shall be required to use an asbestos contractor during the removal. The project will pay for removal of the asbestos and costs for asbestos abatement. Should the Contractor's action plan be exceeded, the Contractor will be responsible for the cost. All asbestos shall be removed from the project site and processed according to EPA and OSHA guidelines.

General Notes:

Design Specifications:
2002 ASH Dare LB 1755-1255 RD Standard Specifications
Bridge Deck Rating = 10

Design Loading:
H-20-44 (1964) 2000 lb

Design live stresses:
Class 1-6 Concrete (Curb Blockout, Half-Sole and Full Depth Repair)

Miscellaneous:
Roadway surfacing adjacent to bridge ends shall match new bridge wearing surface (snow plow item).

all concrete repairs shall be in accordance with Sec 30b, unless otherwise noted.

haul of existing material is indicated by light dashed lines. Heavy lines indicate new work.

Contractor shall verify all dimensions in field before ordering new materials.

in order to maintain grade and a minimum thickness of wearing surface as shown on plans it may be necessary to use additional quantities of wearing surface at various locations throughout the structure. The cost of furnishing and installing the wearing surface will be considered as part of the total cost of the project. Additional wearing surface materials or equipment will be charged to the contractor.

Traffic Handling:
Structure to be closed during construction. Traffic to be maintained on other routes during construction. See traffic plans for traffic control.

REPAIRS TO BRIDGE: ROUTE H
OVER ROUTE 1-44
ROUTE H FROM ROUTE 1-144 GUTRA ROAD TO ROUTE 144
ABOUT 1.1 MILES SOUTH OF ROUTE 1-44 GUTRA ROAD
BEGINNING STATION @ 38+00.72 (March 2023)

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 5
**Deck Repair Notes:**

**Order of Repairs:**
1. Remove existing wearing surface plus 1/2" of existing deck.
2. Power wash deck to identify sound and unsound existing deck repairs.
3. Inside special repair zones, complete the following repairs:
   a. Deck repair with void tube replacement
   b. Full-depth repair
4. Outside special repair zones, remove existing deck repairs.
5. Complete instill surface hydro demolition, removing 1/2" minimum of sound concrete. Inside special repair zones and removing 1/2"-3/4" minimum of sound concrete and all deteriorated concrete outside special repair zones.
6. Sound deck and if needed, complete frictional concrete removal.
7. Outside special repair zones, complete the following repairs:
   a. Deck repair with void tube replacement
   b. Full-depth repair
8. Place new wearing surface including additional material for areas of monotonic deck repair.

**Special Repair Zones:**
- Deck repair required in the areas designated as special repair zones shall be completed before hydro demolition in alphabetical sequence beginning with Zone A. Zones with the same letter designation may be completed at the same time. Hydro demolition shall not be started to the special repair zones are complete and properly cured.
- Any deck repair in areas not designated as special repair zones shall be completed after hydro demolition. Removal and repair shall be completed in one special repair zone and concrete shall be bonded to a compressive strength of 2000 psi before work can be started in the special repair zone.
- If any single repair area does not exceed 4 square feet in size and the total repair area within a special repair zone does not exceed 12 square feet, the special repair zone may be repaired at the same time as an adjacent zone.

**Warp Repair:**
- Any damage sustained to the void tube shall be replaced as a result of the void tube's continuous operation shall be replaced or reduced as required by the engineer at the contractor's expense.
- An exposed void for the repair shall be patched as approved by the engineer for the current work phase.
- Side Repairs: Inside special repair zones and outside special repair zones.
- Deck Repair: outside special repair zones.

**Fiber Void Tube Replacement:**
- Fiber tubes shall be provided with an approximate outside diameter of 1/8" and shall be pre-wound to form a full circular tube as at not more than 2" centers.
- The 3/4" void shall be provided at 2" centers from each end. New void shall be placed inside the existing void along the length of the tube at each 3/4" void.

---

**Detail A**

**Detail B**

---

**Deck Repair Details**

*Note: This drawing is not to scale. Follow dimensions.*
ELEVATION OF LEFT CURB BLOCKOUT

Longitudinal dimensions are along grade and are taken at top outside edge of parapet.

SECTION THRU SAW CUT JOINT

Details of Resin Anchors

(3) use manufacturer's embedment length

H1 Resin Anchors System A

H2 Resin Anchors System B

C Resin Anchor System (2)

A Resin Anchor System (2)

Top of Curb

Top of Curb

Top of Curb

Top of Curb

@ 2.25" x 2.25" x 2.25"

@ 2.25" x 2.25" x 2.25"

Saw cut to inside line (Typ.)

Highway face of parapet

Top of Curb

Top of Curb

Top of Curb

SECTION A-A

SECTION B-B

Curb Blockout

PART ELEVATION OF CURB BLOCKOUT

Notes:

1. Sloped formed option only.

2. Conventional forming or sloped forming may be used, saw cut joints may be used with conventional forming.

3. Rake rail not shown for clarity.

Concrete in curb blockout shall be Class B-2-1.

Measurement of curb blockout to be the nearest linear foot, measured at the top outside edge of parapet, (match existing curb and parapet).

4. All exposed edges of curb blockout shall have a 1/2" radius to 3/4" radius bead unless otherwise noted.

5. Payment for concrete, reinforcement, and anchor systems and any other work encroaching to the curb blockout, complete in place, will be considered completely covered by the contract unit price for Curb Blockout per linear foot.

6. Cost of any concrete curb or parapet repair shall be considered completely covered by the contract unit price for Curb Blockout.

7. All curb blockout reinforcement shall be epoxy coated.

8. Shift existing anchors where necessary to clear existing anchor units for parapet return (4 present) and clear existing reinforcement.

Use a minimum top of 3.5" for all horizontal curb blockout bars.

Concrete traffic barrier delineators shall be placed on top of the curb blockout, similarly as shown on Missouri Standard Plan 627.2D and in accordance with Sec. 601, demarcators on or tops with two-tone, two-way traffic shall have reflective sheeting on top of curb blockout. Concrete traffic barriers delineators will be considered completely covered by the contract unit price for Curb Blockout.

The contractor shall use one of the qualified anchor systems in accordance with Sec. 3339.

The minimum embedment depth in concrete with f'c = 4,000 psi for the parapet anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec. 1031 and shall not be less than 9 inches.

An epoxy coated #5 Grade 60 reinforcing bar shall be substituted for the #10/12 threaded rod.

For sloped formed options, both sides of the curb blockout shall have a vertically tiered finish and the top shall have a transversely broomed finish.
BILL OF REINFORCING STEEL

<table>
<thead>
<tr>
<th>No.</th>
<th>REV</th>
<th>LOCATION</th>
<th>DIMENSIONS</th>
<th>TOL.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

BILL OF REINFORCING STEEL

<table>
<thead>
<tr>
<th>No.</th>
<th>REV</th>
<th>LOCATION</th>
<th>DIMENSIONS</th>
<th>TOL.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: This drawing is not to scale. Follow dimensions.
General Notes:

Contractor shall have the option to construct either steel or FRP slab drains. All drains shall be of the same type.

Steel drain assembly shall be ASTM A305 Grade 30 steel.

The bracket assembly shall be galvanized in accordance with ASTM A123.

All bolts, hardened washers and nuts shall be galvanized in accordance with ASME 20.13 (ASTM A193, Class C). All 1/2" diameter bolts shall be ASTM A567, except as noted.

Shop drawings will not be required for the slab drain and the bracket assembly. Cost of core slab drains, complete in place, shall be considered completely covered by the contract unit price for Cored Slab Drains per each.

Notes for slab drains shall be core.

Percussion drilling will not be permitted.

Slab drain locations will be designated on the plans. (Same location as existing drains).

Slab drain locations may be shifted to the minimum extent necessary to avoid local reinforcement and fiber tubes.

Cored slab drains shall be placed vertically.

Notes for Steel Drain:

Slab drains shall be manufactured from 1/4" structural steel tubing ASTM A305 or A500.

The drain shall be galvanized in accordance with ASTM A123.

Drains shall be positioned through slab such that drainage to galvanized coating is minimized.

Notes for FRP Drain:

Drains shall be machined filament-wound thermosetting resin tubes meeting the requirements of ASTM D4968 with the following exceptions:

Metal reinforced wall thickness shall be 1/4 inch.

The cloth used shall be ultraviolet (UV) resistant and/or have UV inhibitors mixed throughout. Drains may be an exterior finish in order to increase acceptability. GRP shall be compatible with exterior finishes such as brick and stucco.

The color of the slab drain shall be gray (Federal Standard 24520). The color shall be uniform throughout the drain and any coating.

The composition of materials used in the manufacture of the drain shall be tested for UV resistance in accordance with ASTM D4968. The finished drain shall withstand at least 500 hours of testing with only minor degradation and without any physical deterioration.

The contractor shall furnish the results of the testing to the owner prior to acceptance of the slab drains.

AASHTO G210.2.5.0 shall be filled as per the manufacturer's guidelines. The method of cutting FRP slab drains shall be as recommended by the manufacturer to ensure a smooth (no-free cut) edge.