Notes:
1. Conduit runs marked with "*" include the bridge height in their total length.
2. Type MC cable shall be rated for 600 V. Cable shall contain 2 insulated #12 AWG conductors and 1 insulated #12 ground. Cable shall be listed for wet locations. PVC jacket shall be UL listed as sunlight resistant. MC cable is subsidiary to other items.
3. Conceal MC cable inside structural members when possible. Run cable nearly to follow lines of bridge. Use stainless steel bands or straps to attach cable to structure. Do not weld or drill holes in structure to support cables.

<table>
<thead>
<tr>
<th>RUN</th>
<th>GROUND NO.</th>
<th>GROUND LENGTH (FEET)</th>
<th>TYPE MC 12-2 CABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO.</td>
<td>6B</td>
<td>BARE</td>
<td>6B SCH 10 BLACK</td>
</tr>
<tr>
<td>1</td>
<td>65</td>
<td>130 (B)</td>
<td>65</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>60 (B)</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>60</td>
<td>120 (B)</td>
<td>25</td>
</tr>
<tr>
<td>4</td>
<td>45</td>
<td>90 (B)</td>
<td>45</td>
</tr>
<tr>
<td>5</td>
<td>80</td>
<td>190 (B)</td>
<td>80</td>
</tr>
<tr>
<td>6</td>
<td>35</td>
<td>70 (B)</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>70</td>
<td>20 (B)</td>
<td>70</td>
</tr>
<tr>
<td>8</td>
<td>40</td>
<td>80 (B)</td>
<td>40</td>
</tr>
<tr>
<td>9</td>
<td>35</td>
<td>70 (B)</td>
<td>35</td>
</tr>
<tr>
<td>10</td>
<td>70</td>
<td>140 (B)</td>
<td>70</td>
</tr>
<tr>
<td>11</td>
<td>70</td>
<td>140 (B)</td>
<td>70</td>
</tr>
<tr>
<td>12</td>
<td>75</td>
<td>150 (B)</td>
<td>75</td>
</tr>
<tr>
<td>13+</td>
<td>35</td>
<td>70 (B)</td>
<td>35</td>
</tr>
<tr>
<td>14+</td>
<td>35</td>
<td>70 (B)</td>
<td>35</td>
</tr>
<tr>
<td>15+</td>
<td>35</td>
<td>70 (B)</td>
<td>35</td>
</tr>
<tr>
<td>16+</td>
<td>70</td>
<td>140 (B)</td>
<td>70</td>
</tr>
<tr>
<td>17+</td>
<td>70</td>
<td>140 (B)</td>
<td>70</td>
</tr>
<tr>
<td>18+</td>
<td>70</td>
<td>140 (B)</td>
<td>70</td>
</tr>
<tr>
<td>TOTALS</td>
<td>755</td>
<td>1510</td>
<td>29C</td>
</tr>
</tbody>
</table>
P.L. SEAL
REQUIDRED
PRELIMINARY
SUBJECT TO REVISION
This drawing is subject to change due to the ongoing project.

PLAN

OVERALL LENGTH OF BRIDGE = 585'-5"
216'-5" CONCRETE PEDESTRIAN RAIL (C10-6 SPL)
7'-31'-5" REINFORCED CONCRETE GIRDERS SPANS = 217'-0"
METAL PEDESTRIAN RAIL
STEEL TRUSS SPAN

ELEVATION

Texas Department of Transportation
Bridge Division
LONE WOLF BRIDGE

SHEET 1 OF 3
## Summary of Estimated Quantities

**Bridges Element**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Class</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Abutments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Interior Rents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Concrete Beam Spans (Existing)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Concrete Beam Spans (Stage 1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Concrete Beam Spans (Stage 2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Utility Enclosure Extensions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Quantities

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>200</td>
</tr>
<tr>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>14</td>
</tr>
</tbody>
</table>

### Notes

- This document is intended for internal purposes only. It is not for regulatory, design, bidding, or fabrication purposes.
- Subject to revision.

---

**Preliminary**

This document is intended for internal purposes only. It is not to be used for regulatory, design, bidding or fabrication purposes.
217'-0" (7 - 31'-0") REINFORCED CONCRETE GIRDERS SPANS

EXISTING SIDEWALK
Existing 6" Sewer Line & Sidewalk

P.C. SEAL REQUIRED
PRELIMINARY SUBJECT TO REVISION
This Schedule is released for information purposes only and is not to be used for bidding or construction purposes.

SEQUENCE OF WORK:
1. Remove overlay, reseal joints, and cast utility enclosure on north side of trusses. (Stage 1)
2. Demolish and reconstruct north side of reinforced concrete girder spans. (Stage 1)
3. Construct new concrete railing on north side of approach spans. (Stage 1)
4. Install utility enclosure extension at ends of approach spans. (Stage 1)
5. Install new sewer line on north side of bridge. (Stage 1)
6. Remove existing metal railings from sidewalk and cast utility enclosure on north side of trusses. (Stage 1)
7. Complete repairs and painting on truss spans. (Stage 2)
8. Demolish and reconstruct south side of reinforced concrete girder spans. (Stage 2)
9. Construct new concrete railing on south side of approach spans. (Stage 2)
10. Repair remaining concrete and substructure. (Stage 2)
11. Install lighting. (Stage 2)
12. Reheat joints on approach spans, and install new ACP overlay. (Stage 2)
UTILITY ENCLOSURE

**EXISTING TRUSS SIDEWALK**

- Remove angle and bolts
- Remove steel channel
- Grind smooth
- Cut post and grind smooth
- Remove existing utility line

**UTILITY ENCLOSURE**

- Adhesive anchor (two)
- 5" of 12" at 12"
- Enclosure Cover Plate

**CURB DETAIL ~ STAGE 1**

- **CURB DETAIL ~ STAGE 2**

**COVER PLATE DETAIL**

**TABLE OF ESTIMATED QUANTITIES**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>UNIT QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>420</td>
<td>CL &quot;C&quot; CONCRETE</td>
<td>CY 7.9</td>
</tr>
<tr>
<td>438</td>
<td>CLEAN AND SEAL EXIST JOINTS</td>
<td>LF 152</td>
</tr>
<tr>
<td>442</td>
<td>STR STL SCAFFOLDING</td>
<td>LB 8,294</td>
</tr>
<tr>
<td>450</td>
<td>RAIL (EXISTING RAIL MOD)</td>
<td>LF 305</td>
</tr>
<tr>
<td>452</td>
<td>REPAIR RAIL</td>
<td>LB 305</td>
</tr>
<tr>
<td>784</td>
<td>SIDEWALK &amp; METAL ELEMENTS</td>
<td>EA 152</td>
</tr>
<tr>
<td>786</td>
<td>REPAIR STL. BRG MEMBERS (GUSSET PLATE CONNECTION)</td>
<td>EA 2</td>
</tr>
</tbody>
</table>

**GENERAL NOTES:**

- Remove existing traffic railing. Leave intermediate traffic rail posts in place for reinstallation of pedestrian rail.
- Remove existing pedestrian rail from the truss span sidewalks and set aside for reinstallation as shown in the plans.
- Payment for removal of existing is traffic rail is subsidiary to the cost of new rail.
- Payment for all work and materials to remove and re-install metal Pedestrian Rail will be at the unit price bid for Item 450 “Rail (Existing Rail Modification).”

**TABLE OF TRUSS MEMBERS**

- END POSTS
  - Top Chords: 2 x 12 x 2.5 x 18.4 x 18.4
  - Bottom Chords: 2 x 12 x 2.5 x 18.4 x 18.4
- TOP CHORDS
  - 2 x 12 x 2.5 x 18.4 x 18.4
- BOTTOM CHORDS
  - 2 x 12 x 2.5 x 18.4 x 18.4
- DIAGONALS
  - U1 - U2 - U3 - U4 - U3' - U2' - U1'
  - U1 - U2 - U3 - U4 - U3' - U2' - U1'
- VERTICALS
  - U1 - U2 - U3 - U4 - U3' - U2' - U1'
- FLOOR BEAMS
  - ENDS 8 x 90
  - INTERIORS 8 x 90

**SCHEMATIC OF TRUSS MEMBERS**

- WEST PIER
- EAST PIER

**SHEET 1 OF 3**
Remove Existing North Outside Girder and Deck

See "Concrete Repair Details" sheets for repairs to existing interior girders.

Reseal Existing Joints.

Quantities shown are for information only.

Use Class "S" aggregates size. 

Use Class "5" Concrete with 3/8" maximum aggregate size. Class "5" Concrete strength, f'c = 4,000 psi. 

See Bridge Layout sheets and "Bridge Lighting Details" sheet for lighting bracket locations and reinforcing.

See Concrete Pedestrian Rail Detail sheet for rail reinforcing.

See Bridge Layout for location of Deck Drains. PVC pipes and fittings conforming to ASTM D2466 and D1785 Deck Drains. Where Deck Drains are not recessed into curbs, provide steel grated drain covers with 1" max drain slots.

Payment for Deck Drains is subsidiary to the price bid for Item 430 "Extend Concrete Structure."

General Notes:

Use Class "5" Concrete with 3/8" maximum aggregate size. Class "5" Concrete strength, f'c = 4,000 psi. 

Use Grade 60 reinforcing steel. 

Quantities shown are for information only.

General Notes:

Use Class "S" Concrete with 3/8" maximum aggregate size. Class "5" Concrete strength, f'c = 4,000 psi.

Use Grade 60 reinforcing steel. 

See "Concrete Repair Details" sheets for repairs to existing concrete.

Quantities shown are for information only.

General Notes:

Use Class "S" Concrete with 3/8" maximum aggregate size. Class "5" Concrete strength, f'c = 4,000 psi.

Use Grade 60 reinforcing steel.

Quantities shown are for information only.

General Notes:

Use Class "S" Concrete with 3/8" maximum aggregate size. Class "5" Concrete strength, f'c = 4,000 psi.

Use Grade 60 reinforcing steel. 

Quantities shown are for information only.
31'-0" REINFORCED CONCRETE GIRDER SPAN RECONSTRUCTION
LONE WOLF BRIDGE

STAGE 1 RECONSTRUCTION (North Side)

Texas Department of Transportation
Bridge Division

31'-0" REINFORCED CONCRETE GIRDER SPAN RECONSTRUCTION

DIAGRAM OF ENDS OF SLAB:

PLAN

TRANSVERSE SECTION (Showing Dimensions)

TRANSVERSE SECTION (Showing Reinforcement)

SECTION B-B

P.E. SEAL REQUIRED
SUBJECT TO REVISION

This document is released for informational purposes under the authority of TxDOT.
P.E. SEALS ARE EXCEPTED.
IT IS NOT TO BE USED FOR LEGAL, CONTRACT, BIDDING, OR CONSTRUCTION PURPOSES.

SHEET 2 OF 3
PLAN

Breakback Line

SECTION B-B

TRANSVERSE SECTION
(Showing Dimensions)

31'-0"

B.C. Spa = 2" 41.6" Spa = 30'-8"

Top of Slab

P.E. SEAL REQUIRED

PRELIMINARY SUBJECT TO REVISION

Roughened outside of PVC with coarse rasps or equivalent to ensure bond with cast-in-place concrete.

DECK DRAIN DETAILS

See "Concrete Pedestrian Rail Details" for dimensions.

STAGE 2 RECONSTRUCTION

(South Side)
### Table of Estimated Quantities

<table>
<thead>
<tr>
<th>Bar No.</th>
<th>Size</th>
<th>Length</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>24</td>
<td>2'-0&quot;</td>
<td>.75</td>
</tr>
<tr>
<td>B</td>
<td>24</td>
<td>5'-0&quot;</td>
<td>9.1</td>
</tr>
<tr>
<td>C</td>
<td>24</td>
<td>7'-0&quot;</td>
<td>11.4</td>
</tr>
</tbody>
</table>

- **Reinforcing Steel:** 10' 284
  - Class "S" Concrete CY 14.6

Quantities shown are for typical 3'0" panel. Adjust end panel quantities as needed. All other quantities are for information only.

### GENERAL NOTES:
- Concrete Pedestrian Rail is based on District PE standards (Typ). Concrete Pedestrian Rail is sold by the foot (per LF) under Item 450 "Rail (Typ)".
- Use Class "S" Concrete with a maximum aggregate size of 256. Class "S" Concrete is based on historic THD Standard TR 106-66. (Typ)
- Use Grade 60 reinforcing steel. Do not splicereinforcing steel.
- Do not splice reinforcing.

---

**SECTION B-B**

- Cut Bar C as needed to maintain 2" end clear cover.

---

**SECTION A-A**

- Showing Dimensions
- Showing Reinforcing Steel

---

**SECTION B-B**

- Typical 3'-0" Panel
- 30'-0" End Panel
- Typical Panel
- End Panel at Truss

---

**PARTIAL PLAN**

- 3'6" Embedment
- 3'6" Embedment

---

**PARTIAL ELEVATION**

---

**ELEVATION**

---

**RAIL DETAIL**

---

**END PANEL AT TRUSS**

---

**GENERAL NOTES:**
- Concrete Pedestrian Rail is based on District PE standards (Typ). Concrete Pedestrian Rail is sold by the foot (per LF) under Item 450 "Rail (Typ)".
- Use Class "S" Concrete with a maximum aggregate size of 256. Class "S" Concrete is based on historic THD Standard TR 106-66. (Typ)
- Use Grade 60 reinforcing steel. Do not splice reinforcing steel.

---

**PARTIAL ELEVATION**

---

**SECTION A-A**

- Showing Dimensions
- Showing Reinforcing Steel

---

**SECTION A-A**

- Showing Dimensions
- Showing Reinforcing Steel

---

**SECTION B-B**

- Typical 3'-0" Panel
- 30'-0" End Panel
- Typical Panel
- End Panel at Truss

---

**PARTIAL PLAN**

- 3'6" Embedment
- 3'6" Embedment

---

**PARTIAL ELEVATION**

---

**ELEVATION**

---

**RAIL DETAIL**

---

**END PANEL AT TRUSS**

---

**GENERAL NOTES:**
- Concrete Pedestrian Rail is based on District PE standards (Typ). Concrete Pedestrian Rail is sold by the foot (per LF) under Item 450 "Rail (Typ)".
- Use Class "S" Concrete with a maximum aggregate size of 256. Class "S" Concrete is based on historic THD Standard TR 106-66. (Typ)
- Use Grade 60 reinforcing steel. Do not splice reinforcing steel.

---

**PARTIAL ELEVATION**

---

**SECTION A-A**

- Showing Dimensions
- Showing Reinforcing Steel

---

**SECTION A-A**

- Showing Dimensions
- Showing Reinforcing Steel

---

**SECTION B-B**

- Typical 3'-0" Panel
- 30'-0" End Panel
- Typical Panel
- End Panel at Truss

---

**PARTIAL PLAN**

- 3'6" Embedment
- 3'6" Embedment

---

**PARTIAL ELEVATION**

---

**ELEVATION**

---

**RAIL DETAIL**

---

**END PANEL AT TRUSS**

---

**GENERAL NOTES:**
- Concrete Pedestrian Rail is based on District PE standards (Typ). Concrete Pedestrian Rail is sold by the foot (per LF) under Item 450 "Rail (Typ)".
- Use Class "S" Concrete with a maximum aggregate size of 256. Class "S" Concrete is based on historic THD Standard TR 106-66. (Typ)
- Use Grade 60 reinforcing steel. Do not splice reinforcing steel.
TABLE OF ESTIMATED QUANTITIES

<table>
<thead>
<tr>
<th>Bar</th>
<th>No.</th>
<th>Size</th>
<th>Length</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>1</td>
<td>4</td>
<td>6'-3&quot;</td>
<td>4</td>
</tr>
<tr>
<td>H</td>
<td>9</td>
<td>4</td>
<td>6'-3&quot;</td>
<td>38</td>
</tr>
<tr>
<td>S</td>
<td>7</td>
<td>4</td>
<td>6'-6&quot;</td>
<td>26</td>
</tr>
<tr>
<td>U</td>
<td>3</td>
<td>4</td>
<td>6'-6&quot;</td>
<td>15</td>
</tr>
<tr>
<td>V</td>
<td>12</td>
<td>4</td>
<td>6'-6&quot;</td>
<td>12</td>
</tr>
<tr>
<td>W</td>
<td>10</td>
<td>4</td>
<td>4'-0&quot;</td>
<td>27</td>
</tr>
</tbody>
</table>

Reinforcing Steel (2) Lb 127
Class "5" Concrete CT C.1

Quantities shown are for one enclosure unit.
Reinforcing steel subsidiary to price bid for Class "5" Concrete.

GENERAL NOTES:
Use Class "5" Concrete with 3/8" max aggregate size for Enclosure Extension.
Use Grade 60 reinforcing steel.
Use 2 TRF's per enclosure. Length of each TRF is 7'-3".
Use Class "C" Concrete for TRF. Contractor has the option to use Class "5" as specified for Enclosure Extension.

10/21/09
C.W. WALKER P.C. 25898

Preliminary
SUBJECT TO REVISION
This document is intended for informational purposes only and is not to be used for regulatory, survey, bidding, or construction purposes.

Texas Department of Transportation
Bridge Division

UTILITY ENCLOSURE EXTENSION

LONE WOLF BRIDGE

(Showing Dimensions)
TRAFFIC RAIL FOUNDATION WITH T221, C221, T223, C223, T401, T402, C402, T551, T552 & SSTR RAILS

TABLE OF DEVELOPED SURFACES

<table>
<thead>
<tr>
<th>Reference</th>
<th>Radius Rn (ft)</th>
<th>Arc Length</th>
<th>Radius Lt (ft)</th>
<th>Arc Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>T551 Type Rails</td>
<td>L1</td>
<td>L2</td>
<td>L3</td>
<td>L4</td>
</tr>
<tr>
<td>SSTR Rail</td>
<td>L1</td>
<td>L2</td>
<td>L3</td>
<td>L4</td>
</tr>
<tr>
<td>10</td>
<td>95.76</td>
<td>16.99</td>
<td>17.31</td>
<td>19.63</td>
</tr>
<tr>
<td>15</td>
<td>140.04</td>
<td>24.84</td>
<td>25.17</td>
<td>28.54</td>
</tr>
<tr>
<td>20</td>
<td>184.32</td>
<td>32.69</td>
<td>33.02</td>
<td>37.44</td>
</tr>
<tr>
<td>25</td>
<td>228.60</td>
<td>40.50</td>
<td>40.87</td>
<td>46.35</td>
</tr>
<tr>
<td>30</td>
<td>272.88</td>
<td>48.40</td>
<td>48.75</td>
<td>55.25</td>
</tr>
</tbody>
</table>

DEVELOPED SURFACE-A

(T551 Type Rail)

DEVELOPED SURFACE-B

(T551 Type Rail)

DEVELOPED SURFACE-C

(SSTR Rail)

DESIGN GUIDELINES:
The use of curved rail sections at bridge ends shall be appropriate for the design speed and site conditions.

MATERIAL NOTES:
Use Class "C" concrete. Use Class "C" (IIPC) if required elsewhere.
All reinforcing shall be Grade 60.

GENERAL NOTES:
The foundations indicated are suitable for mounting typical concrete bridge parapet type railings. The railings shall be designed and detailed on the current AASHTO bridge railing requirements. All railings shall be designed to the standards of the current AASHTO bridge railing requirements for their design load conditions. The railings shall be designed to the standards of the current AASHTO bridge railing requirements for their design load conditions. The railings shall be designed to the standards of the current AASHTO bridge railing requirements for their design load conditions.

CURVED T551 & SSTR TYPE RAILING AT BRIDGE ENDS