**NOTES:**

1. **CONSTRUCTION REQUIREMENTS:** Construct the Spread Footing level transversely and expansion joints plumb; do not construct the spread footing perpendicular to the roadway surface.

2. **CONCRETE:** Use Class II concrete for slightly aggressive environments. Use Class IV concrete for moderately or extremely aggressive environments. Concrete will be in accordance with Specification Section 346.

3. **DOWELS:** Dowel Load Transfer Devices will be ASTM A 36 smooth round bar and hot-dip galvanized in accordance with Specification Section 962. Install Dowel Load Transfer Devices in accordance with Specification Section 350.

4. Construct 1/2" Expansion Joints plumb and perpendicular or radial to Gutter Line. Provide at 90'-0" maximum intervals as shown.

5. Provide and install Preformed Expansion Joint Filler in accordance with Specification Section 932.

6. Construct 1/4" V-Grooves plumb and provide at 30'-0" maximum intervals as shown. Space V-Grooves equally between 1/2" Expansion Joints and/or Begin or End Spread Footing. V-Groove locations are to coincide with V-Groove locations in the Concrete Barrier/Noise Wall.

7. **FILL REQUIREMENTS:** Shoulder or Roadway Pavement and Fill is required on the traffic side of the spread footing for Option A. Fill is required for a distance of 4'-0" on the backside of the spread footing for Option A. Fill is required for a distance of 4'-0" on the backside of the spread footing and the full length of the spread footing (3'-0" minimum depth) on the traffic side of the spread footing for Option B. See Typical Sections on Sheets 2 and 3 for details.

8. Spacing shown is along the Gutter Line.

9. Work this Index with one or both of the following:
   a. Index 521-510 - Concrete Barrier/Noise Wall (8'-0"
   b. Index 521-511 - Concrete Barrier/Noise Wall (14'-0"

**CROSS REFERENCE:**

For Detail "A", see Sheet 3.

For Section A-A and Estimated Quantities, see Sheet 4.
TYPICAL SECTION THRU SPREAD FOOTING - OPTION A
(Bars 5R and 5S1 in Concrete Barrier/Noise Wall not shown for clarity)

NOTES:
1. Match Cross Slope of Travel Lane or Shoulder.
2. Place 10 ~ Bars (8 ~ Bars 5B and 2 ~ Bars 5S1) inside Bars 5U1 as shown, (2 ~ 5S1 Bars are included in 521-510 or 521-511 quantities)
3. For Reinforcing Steel spacing, see Typical Section Thru
   Spread Footing - Option A this Sheet.
4. Provide 3" lip when optional construction joint is used.
**Notes:**
1. Match Cross Slope of Travel Lane or Shoulder.
2. Place 10 ~ Bars (8 ~ Bars 5B and 2 ~ Bars 5S1) inside Bars 5U1 as shown.
3. Provide 3" lip when optional construction joint is used.

**Typical Section Thru Spread Footing - Option B**

(Bars 5P, 5R and 5S1 in Concrete Barrier/Noise Wall not shown for clarity)
REINFORCING STEEL BENDING DIAGRAMS

BILL OF REINFORCING STEEL

<table>
<thead>
<tr>
<th>MARK</th>
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<tbody>
<tr>
<td>B</td>
<td>5</td>
<td>AS REQD.</td>
</tr>
<tr>
<td>F</td>
<td>5</td>
<td>5'-6&quot;</td>
</tr>
<tr>
<td>S3</td>
<td>5</td>
<td>3'-7&quot;</td>
</tr>
<tr>
<td>S4</td>
<td>5</td>
<td>2'-10&quot;</td>
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<tr>
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<td>5</td>
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<tr>
<td>U2</td>
<td>5</td>
<td>17'-10&quot;</td>
</tr>
<tr>
<td>U3</td>
<td>5</td>
<td>12'-10&quot;</td>
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</table>

DOWEL 1" Ø Smooth Bar 2'-0"

SECTION A-A
TYPICAL SECTION THRU SPREAD FOOTING AND BARRIER WALL INLET - OPTION B
(Bars 5P, 5R and 5S1 in Concrete Barrier/Noise Wall not shown for clarity)

NOTES:
1. Place 8 ~ Bars 5B and 2 Bars 5S1 inside Bars 5U1 as shown.
2. For Reinforcing Steel spacing, see Typical Section Thru Spread Footing - Option B on Sheet 3.
3. Provide 3" lip when optional construction joint is used.

REINFORCING STEEL NOTES:
1. All bar dimensions in the bending diagrams are out to out.
2. All reinforcing steel at the open joints will have a 2" minimum cover.
3. Lap splices for Bars 5B will be a minimum of 2'-2".
4. Lap splices Bars 5F and 5V with 5U1 will be a minimum of 2'-2".
5. The Contractor may use Welded Wire Reinforcement (WWR) when approved by the Engineer. WWR must consist of Deformed wire meeting the requirements of Specification Section 931.

CONCRETE BARRIER/NOISE WALL
L-SHAPED SPREAD FOOTING

INDEX
521-514

Sheet 4 of 4

FY 2018-19
STANDARD PLANS

REV 01/17
CONCRETE BARRIER/NOISE WALL
L-SHAPED SPREAD FOOTING

DESCRIPTION:

CROSS REFERENCE: For location of Section A-A, see Sheet 1.

ESTIMATED L-SHAPED SPREAD FOOTING QUANTITIES

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<thead>
<tr>
<th>ITEM</th>
<th>UNIT</th>
<th>QUANTITY</th>
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<tbody>
<tr>
<td>Concrete (Footings)</td>
<td>CY/FT</td>
<td>0.398</td>
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<tr>
<td>Reinforcing Steel (Typical)*</td>
<td>LB/FT</td>
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<tr>
<td>Additional Rein. @ Expansion Joint</td>
<td>LB</td>
<td>48.06</td>
</tr>
</tbody>
</table>

* Bars 5V and 5S1 are included in Index 521-510 or 521-511 quantities.

Reinforcing Steel Notes:
1. All bar dimensions in the bending diagrams are out to out.
2. All reinforcing steel at the open joints will have a 2" minimum cover.
3. Lap splices for Bars 5B will be a minimum of 2'-2".
4. Lap splices Bars 5F and 5V with 5U1 will be a minimum of 2'-2".
5. The Contractor may use Welded Wire Reinforcement (WWR) when approved by the Engineer. WWR must consist of Deformed wire meeting the requirements of Specification Section 931.