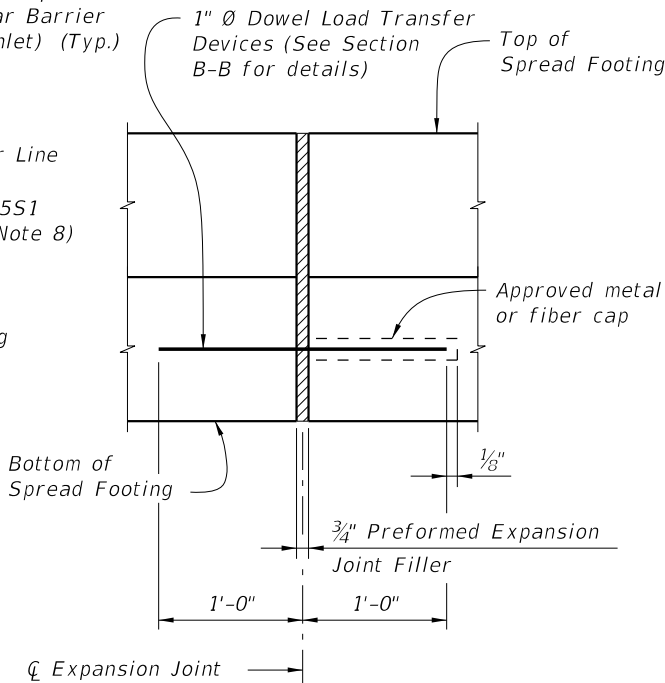
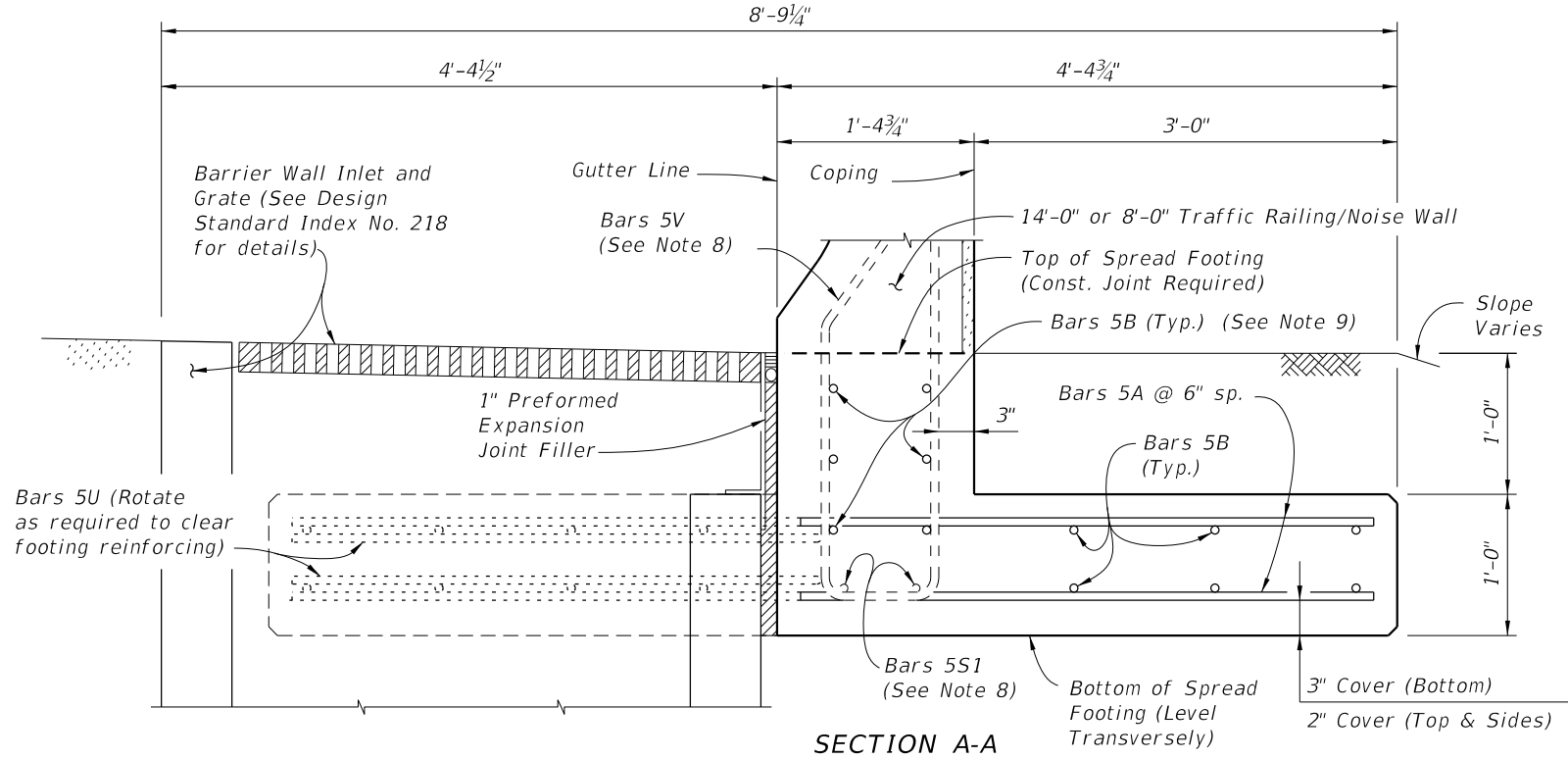


**PLAN**  
**SPREAD FOOTING ADJACENT TO SKEWED APPROACH SLAB AND WITH BARRIER WALL INLET**



**EXPANSION JOINT DETAIL**  
 (Spread Footing expansion joints are required at 3/4" open joints in Traffic Railing/Noise Wall)



**SECTION A-A**  
**SECTION THRU SPREAD FOOTING AND BARRIER WALL INLET**  
 (Bars 5P, 5R and 5S1 in Traffic Railing/Noise Wall not shown for clarity)

- NOTES**
- CONSTRUCTION REQUIREMENTS:** Construct the Spread Footing level transversely and expansion joints plumb; do not construct the spread footing perpendicular to the roadway surface. Slip forming is not permitted.
  - 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.
  - 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.
  - Construct 3/4" Expansion Joints plumb and perpendicular or radial to Gutter Line. Provide at 90'-0" maximum intervals as shown.
  - Provide and install Preformed Expansion Joint Filler in accordance with Specification Section 932.
  - Construct 1/2" V-Grooves plumb and provide at 30'-0" maximum intervals as shown. Space V-Grooves equally between 3/4" Expansion Joints and/or Begin or End Spread Footing. V-Groove locations are to coincide with V-Groove locations in the Railing/Noise Wall.
  - FILL REQUIREMENTS:** Shoulder or Roadway Pavement or Fill is required on top (1'-0" minimum depth) for the entire length of the spread footing on both sides of the Railing/Noise Wall. See Section B-B for details.
  - See Index No. 5210 for Bars 5V and 5S1.
  - Place 6 ~ Bars 5B inside Stirrup Bars 5V as shown.
  - Spacing shown is along the Gutter Line.
  - Work this Standard Drawing with one or both of the following:
    - Index No. 5210 - Traffic Railing/Noise Wall (8'-0").
    - Index No. 5211 - Traffic Railing/Noise Wall (14'-0").

**CROSS REFERENCE:**  
 For Section B-B and Detail "A", see Sheet No. 2.

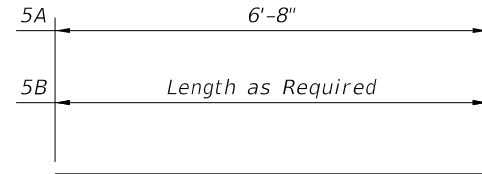
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LAST REVISION 07/01/13	DESCRIPTION:	 <b>FY 2016-17</b> <b>DESIGN STANDARDS</b>	<b>TRAFFIC RAILING/NOISE WALL</b> <b>T-SHAPED SPREAD FOOTING</b>	<b>INDEX NO.</b> <b>5213</b>	<b>SHEET NO.</b> <b>1 of 2</b>
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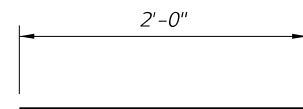
**REINFORCING STEEL BENDING DIAGRAMS**

**BILL OF REINFORCING STEEL**

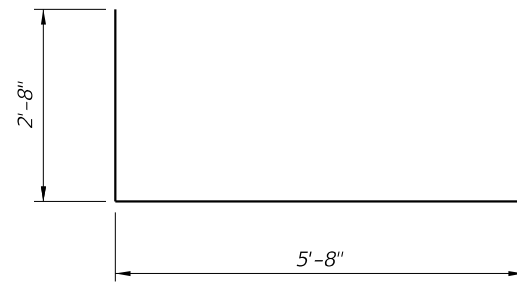
MARK	SIZE	LENGTH
A	5	6'-8"
B	5	AS REQD.
U	5	11'-0"
DOWEL	1" Ø Smooth Bar	2'-0"



**BARS 5A & 5B**



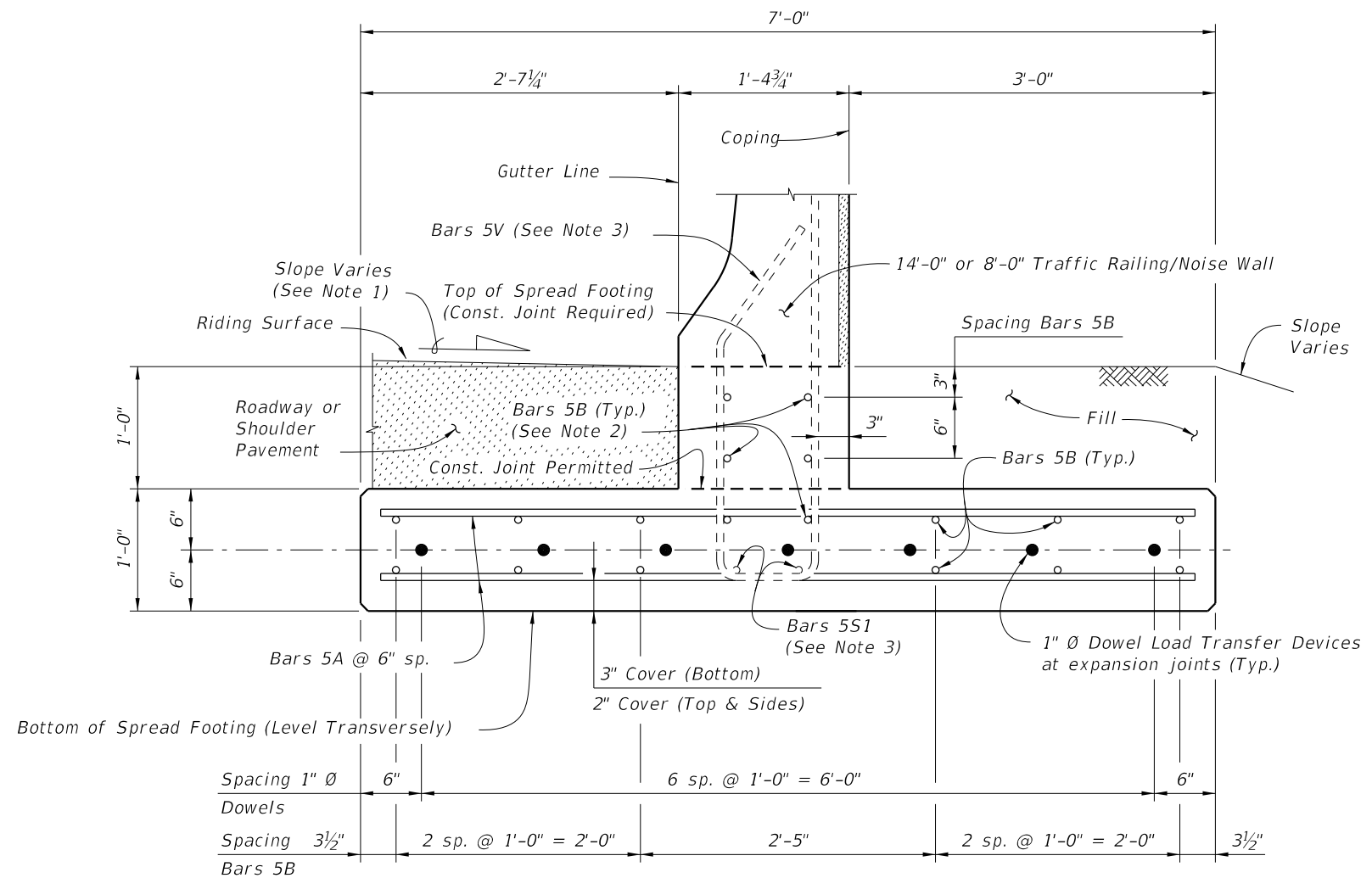
**1" Ø DOWEL**



**BAR 5U**

**REINFORCING STEEL NOTES:**

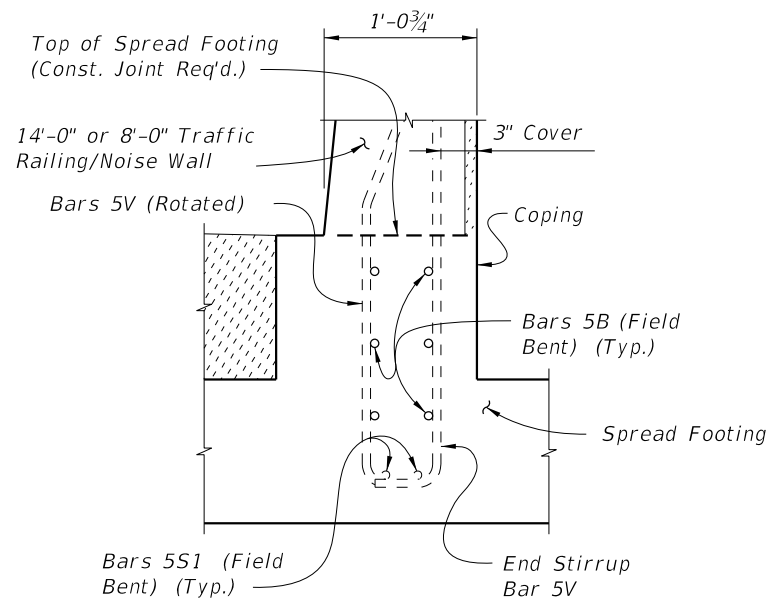
- All bar dimensions in the bending diagrams are out to out.
- All reinforcing steel at the open joints will have a 2" minimum cover.
- Lap splices for Bars 5B will be a minimum of 2'-2".
- The Contractor may use Welded Wire Reinforcement (WWR) when approved by the Engineer. WWR must consist of Deformed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



**SECTION B-B  
TYPICAL SECTION THRU SPREAD FOOTING  
(Bars 5P, 5R and 5S1 in Traffic Railing/Noise Wall not shown for clarity)**

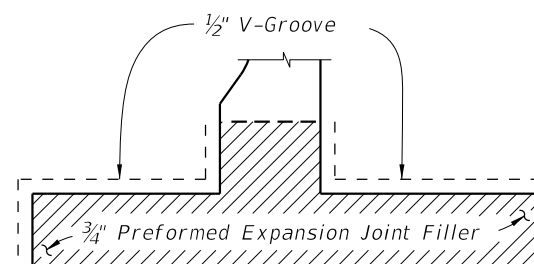
**NOTES:**

- Match Cross Slope of Travel Lane or Shoulder.
- Place 6 ~ Bars 5B inside Stirrup Bars 5V as shown.
- See Index No. 5210 for Bars 5V and Bars 5S1.



**PARTIAL END VIEW OF RAILING END TRANSITION FOR GUARDRAIL ATTACHMENT  
(Showing Bars 5V, Bars 5S1 and Bars 5B inside of Stirrup Bars 5V)**

NOTE: See Index No. 5210, Detail "A" for details.



**DETAIL "A"**

(Showing Locations of 1/2" V-Grooves and 3/4" Preformed Expansion Joint Filler)

<b>ESTIMATED T-SHAPED SPREAD FOOTING QUANTITIES</b>		
ITEM	UNIT	QUANTITY
Concrete (Footing)	CY/FT	0.311
Reinforcing Steel (Typical)	LB/FT	51.80
Additional Reinf. @ Expansion Joint	LB	37.38

Note: The reinforcing steel quantity accounts for the difference between the shorter Stirrup Bars 5V for junction slabs or bridges and the longer Stirrup Bars 5V for spread footings.

**CROSS REFERENCE:**

For location of Section B-B, see Sheet 1.

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LAST REVISION	DESCRIPTION:
07/01/13	