

PLAN - OPTION B
SPREAD FOOTING ADJACENT TO SKEWED APPROACH SLAB AND WITH BARRIER WALL INLET
 (Option A Similar)

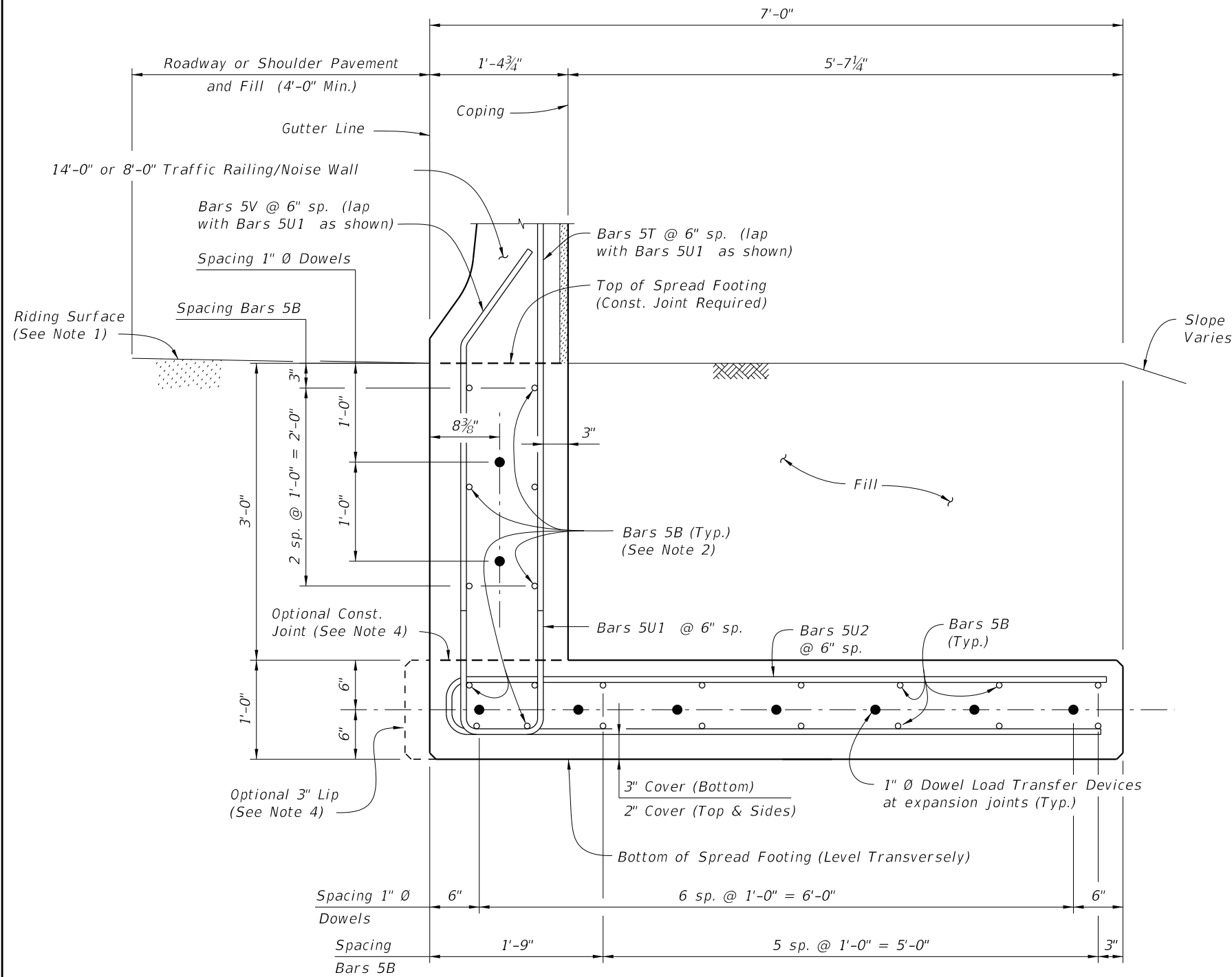
NOTES

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 $\frac{3}{4}$ " 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 $\frac{1}{2}$ " V-Grooves plumb and provide at 30'-0" maximum intervals as shown. Space V-Grooves equally between $\frac{3}{4}$ " Expansion Joints and/or Begin or End Spread Footing. V-Groove locations are to coincide with V-Groove locations in the Railing/Noise Wall.
7. **FILL REQUIREMENTS:** Shoulder or Roadway Pavement and Fill is required on the traffic side of the spread footing for a distance of 4'-0" and the full length of the spread footing (3'-0" minimum depth) 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 Sheet Nos. 2 and 3 for details.
8. Spacing shown is along the Gutter Line.
9. Work this Standard Drawing with one or both of the following:
 - a. Index 5210 - Traffic Railing/Noise Wall (8'-0").
 - b. Index 5211 - Traffic Railing/Noise Wall (14'-0").

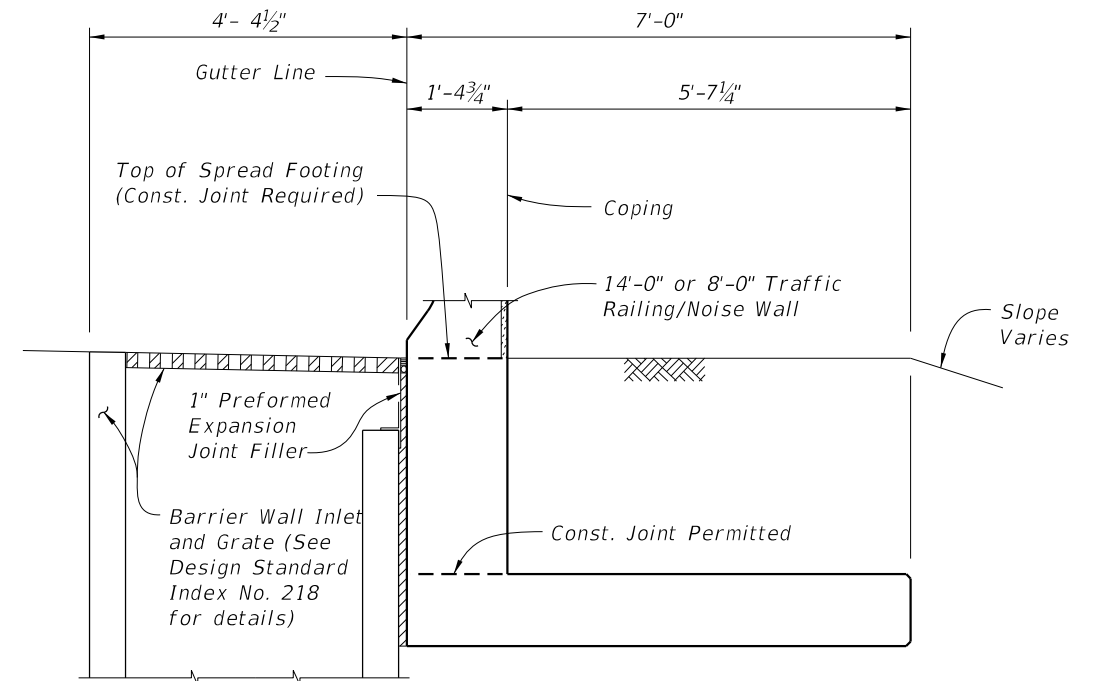
CROSS REFERENCE:
 For Detail "A", see Sheet 3.
 For Section A-A and Estimated Quantities, see Sheet 4.

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LAST REVISION 11/01/16	REVISION	DESCRIPTION:	FY 2017-18 DESIGN STANDARDS	TRAFFIC RAILING/NOISE WALL L-SHAPED SPREAD FOOTING	INDEX NO. 5214	SHEET NO. 1 of 4
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TYPICAL SECTION THRU SPREAD FOOTING - OPTION A
 (Bars 5P, 5R and 5S1 in Traffic Railing/Noise Wall not shown for clarity)

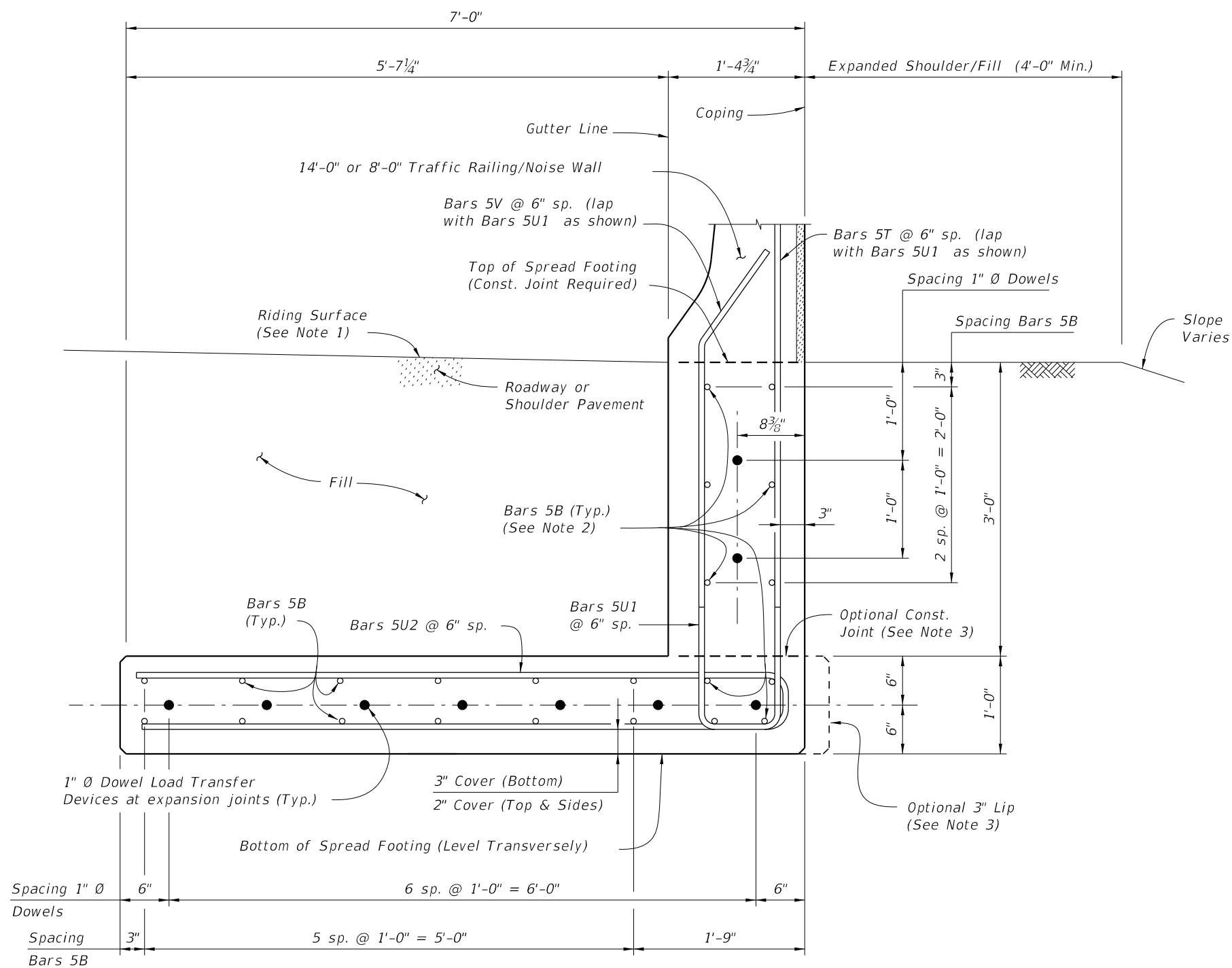


TYPICAL SECTION THRU SPREAD FOOTING AND BARRIER WALL INLET - OPTION A
 (Reinforcing Steel not shown for clarity (See Note 3))

- NOTES:
1. Match Cross Slope of Travel Lane or Shoulder.
 2. Place 10 ~ Bars 5B inside Bars 5U1 as shown.
 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.

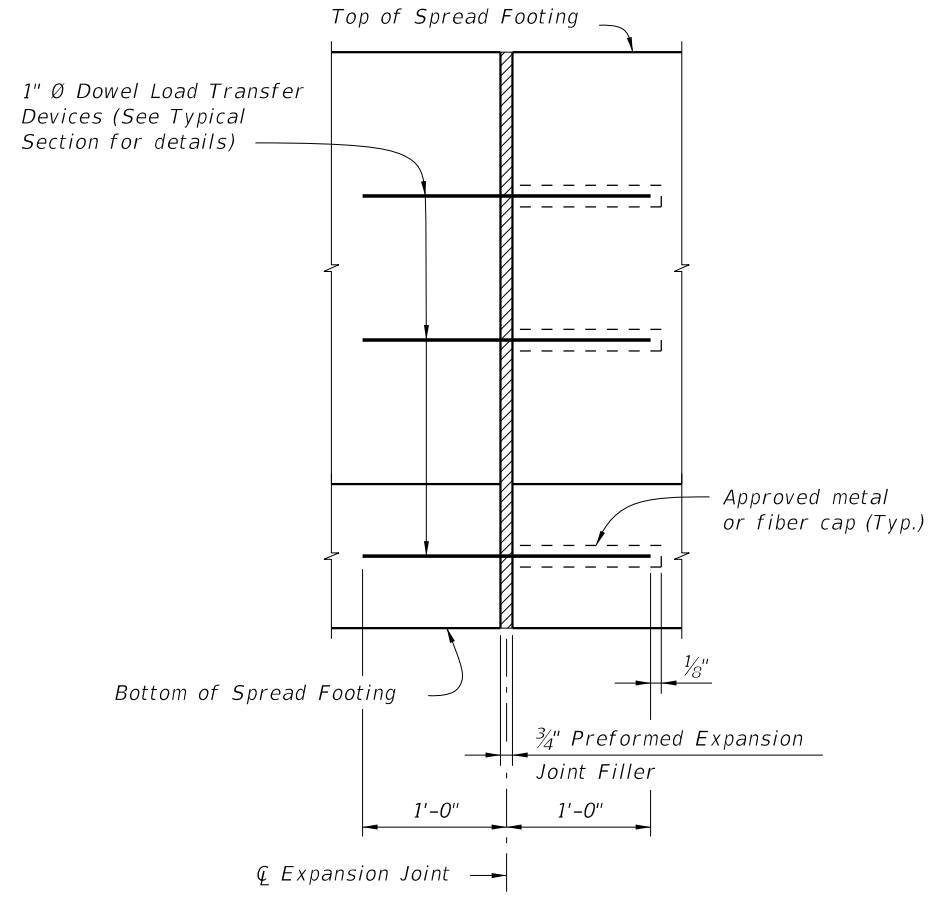
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LAST REVISION 07/01/13	REVISION	DESCRIPTION:	 FY 2017-18 DESIGN STANDARDS	TRAFFIC RAILING/NOISE WALL L-SHAPED SPREAD FOOTING	INDEX NO. 5214	SHEET NO. 2 of 4
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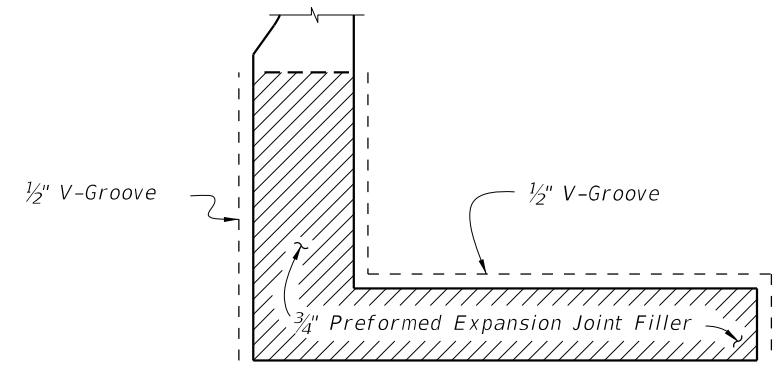


TYPICAL SECTION THRU SPREAD FOOTING - OPTION B
 (Bars 5P, 5R and 5S1 in Traffic Railing/Noise Wall not shown for clarity)

- NOTES:**
- Match Cross Slope of Travel Lane or Shoulder.
 - Place 10 ~ Bars 5B inside Bars 5U1 as shown.
 - Provide 3" lip when optional construction joint is used.



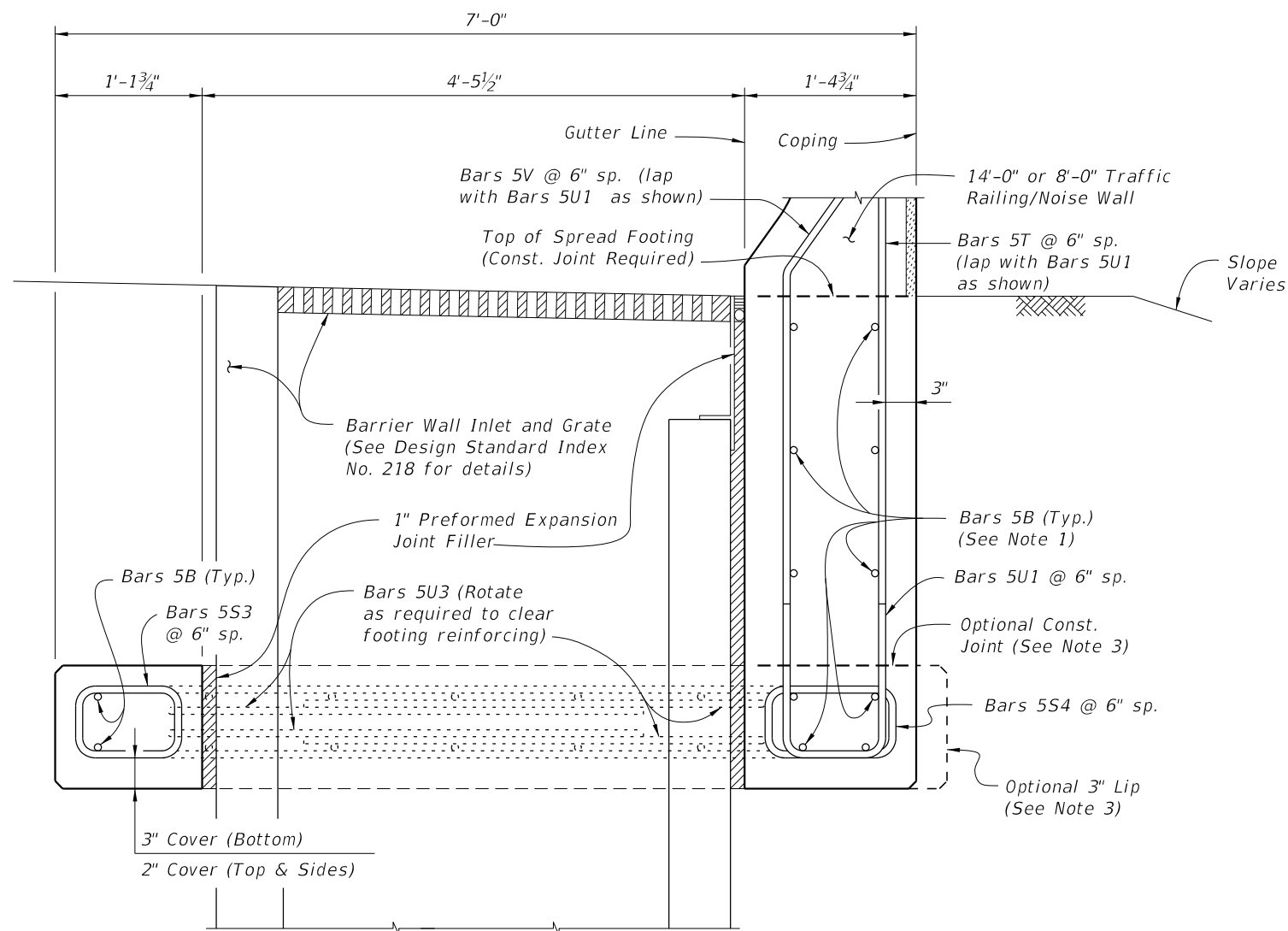
EXPANSION JOINT DETAIL
 (Spread Footing expansion joints are required at 3/4" open joints in Traffic Railing/Noise Wall)



DETAIL "A"
 (Option A Shown, Option B Similar)
 (Showing Locations of 1/2" V-Grooves and 3/4" Preformed Expansion Joint Filler)

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LAST REVISION 07/01/13	REVISION	DESCRIPTION:	 FY 2017-18 DESIGN STANDARDS	TRAFFIC RAILING/NOISE WALL L-SHAPED SPREAD FOOTING	INDEX NO. 5214	SHEET NO. 3 of 4
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SECTION A-A
TYPICAL SECTION THRU SPREAD FOOTING AND BARRIER WALL INLET - OPTION B
 (Bars 5P, 5R and 5S1 in Traffic Railing/Noise Wall not shown for clarity)

NOTES:

1. Place 10 ~ Bars 5B 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.

ESTIMATED L-SHAPED SPREAD FOOTING QUANTITIES

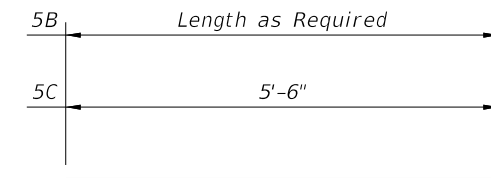
ITEM	UNIT	QUANTITY
Concrete (Footing)	CY/FT	0.414
Reinforcing Steel (Typical)	LB/FT	85.53
Additional Reinf. @ Expansion Joint	LB	48.06

(Subtract 12.69 lb/ft from typical reinforcing steel quantity shown on Index No. 5210 to account for the absence of Stirrup Bars 5V and 5S1 in L-Shaped Spread Footings.)

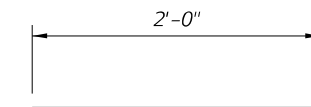
CROSS REFERENCE:
 For location of Section A-A, see Sheet 1.

REINFORCING STEEL BENDING DIAGRAMS

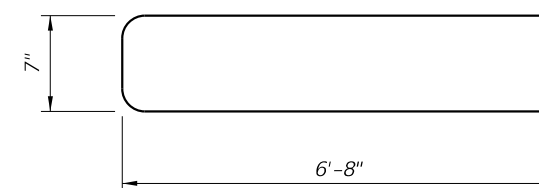
BILL OF REINFORCING STEEL		
MARK	SIZE	LENGTH
B	5	AS REQD.
C	5	5'-6"
S3	5	3'-10"
S4	5	4'-3"
T	5	4'-3"
U1	5	8'-0"
U2	5	13'-11"
U3	5	12'-10"
V	5	3'-10"
DOWEL	1" Ø Smooth Bar	2'-0"



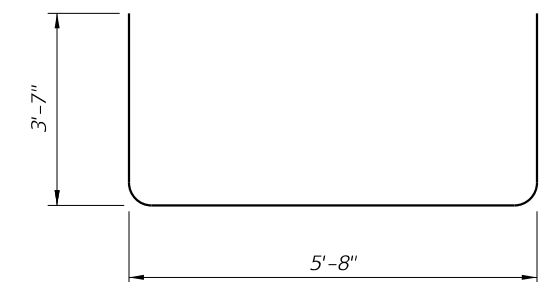
BARS 5B & 5C



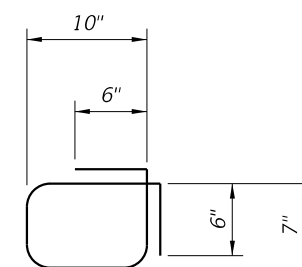
1" Ø DOWEL



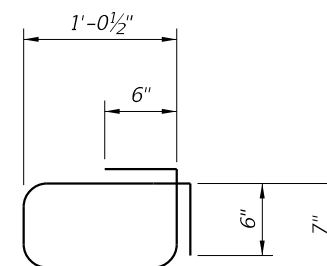
BAR 5U2



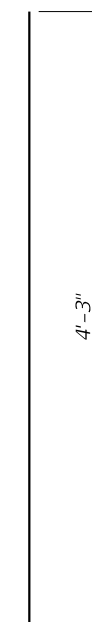
BAR 5U3



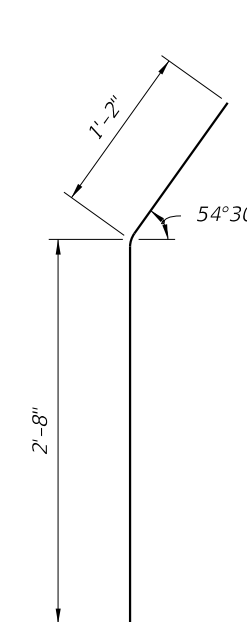
BAR 5S3



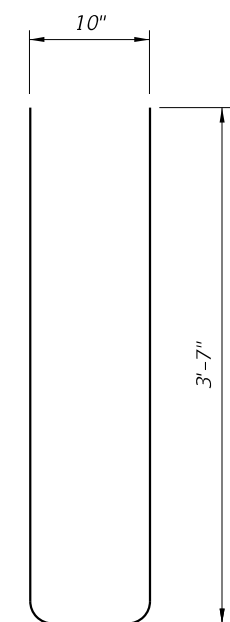
BAR 5S4



BAR 5T



BAR 5V



BAR 5U1

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 5T 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.

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LAST REVISION	DESCRIPTION:
07/01/13	