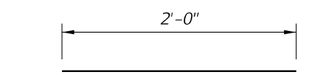
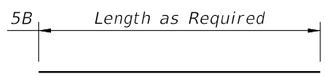
REINFORCING STEEL BENDING DIAGRAMS

BILL OF REINFORCING STEEL

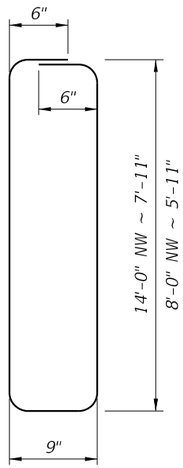
MARK	SIZE	LENGTH
B	5	AS REQD.
T	5	13'-7"
DOWEL	1" Ø Smooth Bar	2'-0"



1" Ø DOWEL



BAR 5B



BAR 5T

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. The Contractor may use Deformed Welded Wire Reinforcement (WWR) meeting the requirements of Specification Section 931 when approved by the Engineer.

NOTES

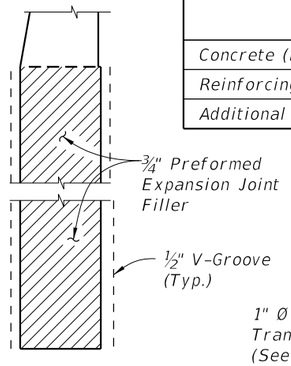
1. Construct the Trench Footing plumb, do not construct the Trench Footing perpendicular to the roadway surface.
2. Concrete will be in accordance with Specification Section 346.
   A. Class II concrete for slightly aggressive environments.
   B. Class VI concrete for moderately or extremely aggressive environments.
3. Dowel Load Transfer Devices will be hot-dip galvanized ASTM A36 smooth round bar or GFRP smooth round bars with a minimum shear strength of 22 ksi in accordance with ASTM D7617.
   Install Dowel Load Transfer Devices in accordance with Specification Section 350.
4. Shear Keys in footing are required when GFRP bars are used for Dowel Transfer Devices and are optional with steel dowel bars. Tongue Slope on Shear Key must be constant and between 5° to 45° from the transverse vertical plane.
5. Construct ¾" Expansion Joints plumb and perpendicular or radial to Gutter Line. Provide at 90'-0" maximum intervals as shown.
6. Construct ½" V-Grooves plumb and provide at 30'-0" maximum intervals as shown. Space V-Grooves equally between ¾" Expansion Joints and/or Begin or End Trench Footing. V-Groove locations are to coincide with V-Groove locations in the Barrier/Noise Wall.
7. Fill is required a distance of 4'-0" on both sides for the entire depth of the trench footing. See Typical Section for details.
8. Match Cross Slope of travel lane or shoulder.
9. Spacing shown is along the Gutter Line.
10. 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").

LEGEND: NW = Concrete Barrier
Barrier/Noise Wall

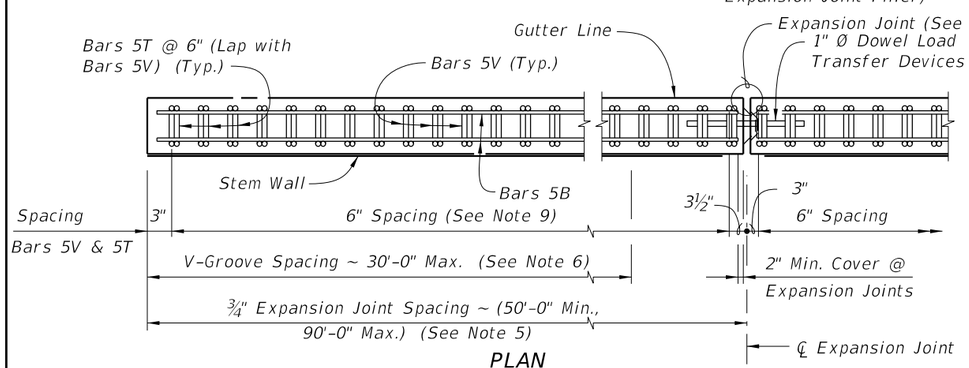
ESTIMATED TRENCH FOOTING QUANTITIES

ITEM	UNIT	QUANTITY	
		8'-0" NW	14'-0" NW
Concrete (Footing)	CY/FT	0.341	0.446
Reinforcing Steel (Typical) *	LB/FT	38.76	49.19
Additional Reinf. @ Expansion Joint	LB	21.36	21.36

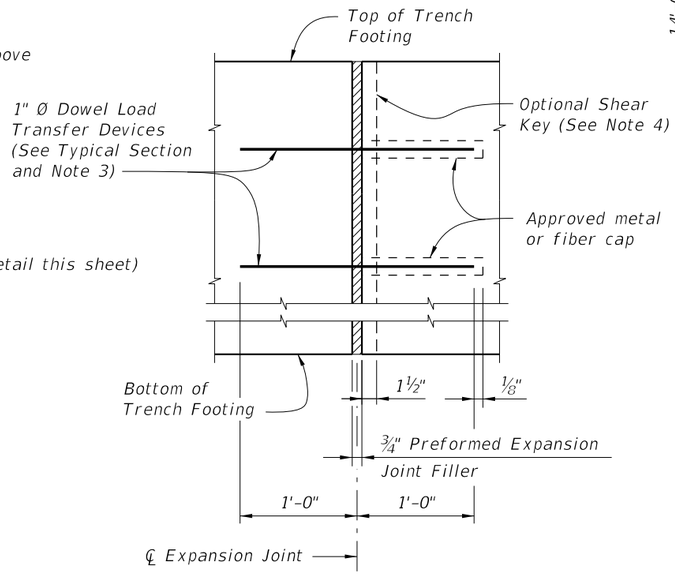
* Bars 5V and 5S1 are included in Index 521-510 or 521-511 quantities.



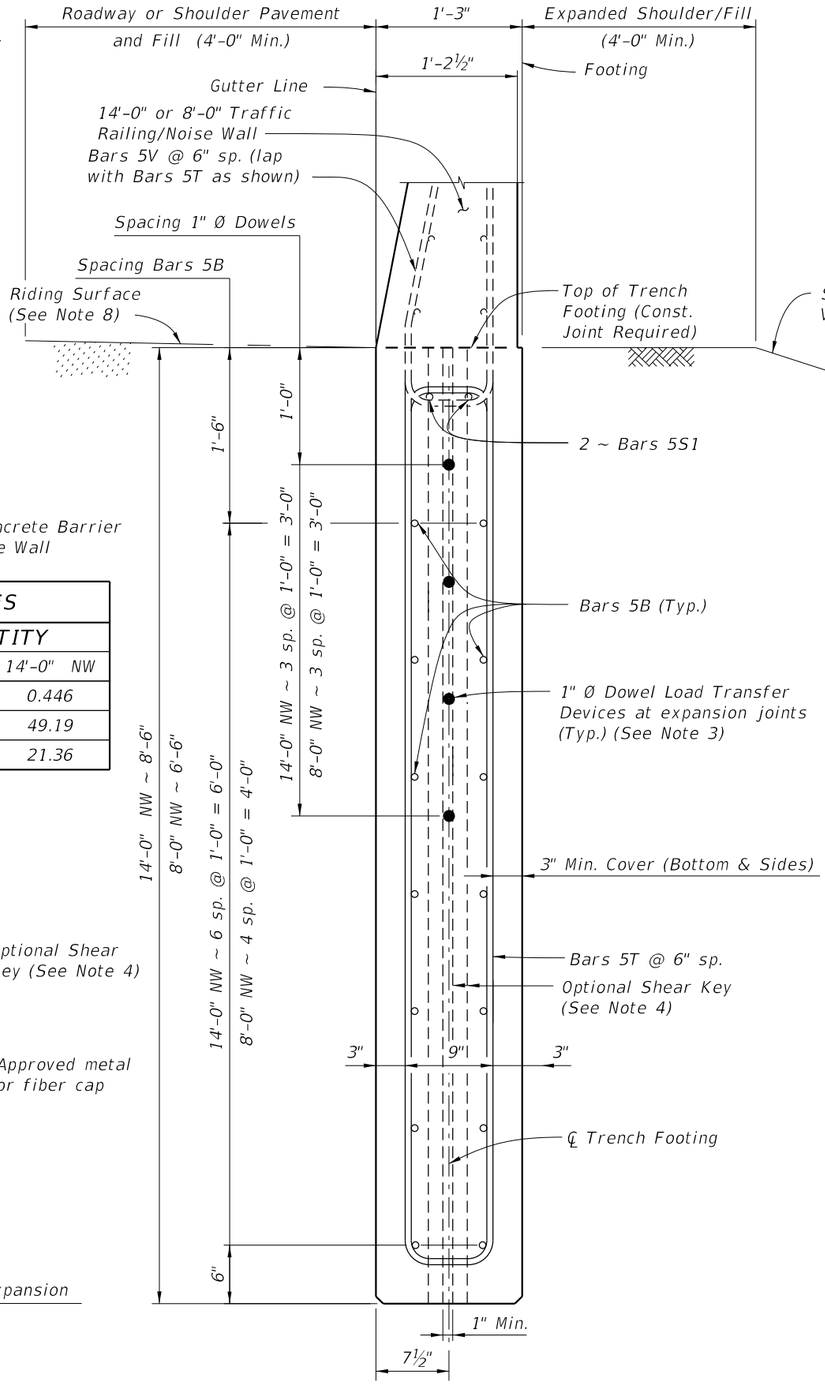
DETAIL "A"
(Showing Locations of ½" V-Grooves and ¾" Preformed Expansion Joint Filler)



PLAN
(Bars 5S1 Not Shown)



EXPANSION JOINT DETAIL
(Trench Footing expansion joints are required at ¾" open joints in Concrete Barrier/Noise Wall)



TYPICAL SECTION THRU TRENCH FOOTING
(Bars 5R and 5S1 in Concrete Barrier /Noise Wall not shown for clarity)

9/10/2024 1:33:38 PM

LAST REVISION	REVISION	DESCRIPTION:
11/01/18		

FDOT FY 2025-26 STANDARD PLANS

CONCRETE BARRIER/NOISE WALL TRENCH FOOTING

INDEX 521-515

SHEET 1 of 1