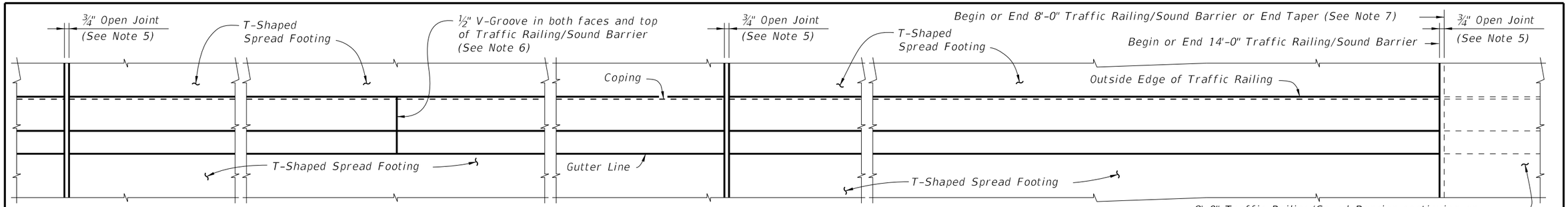
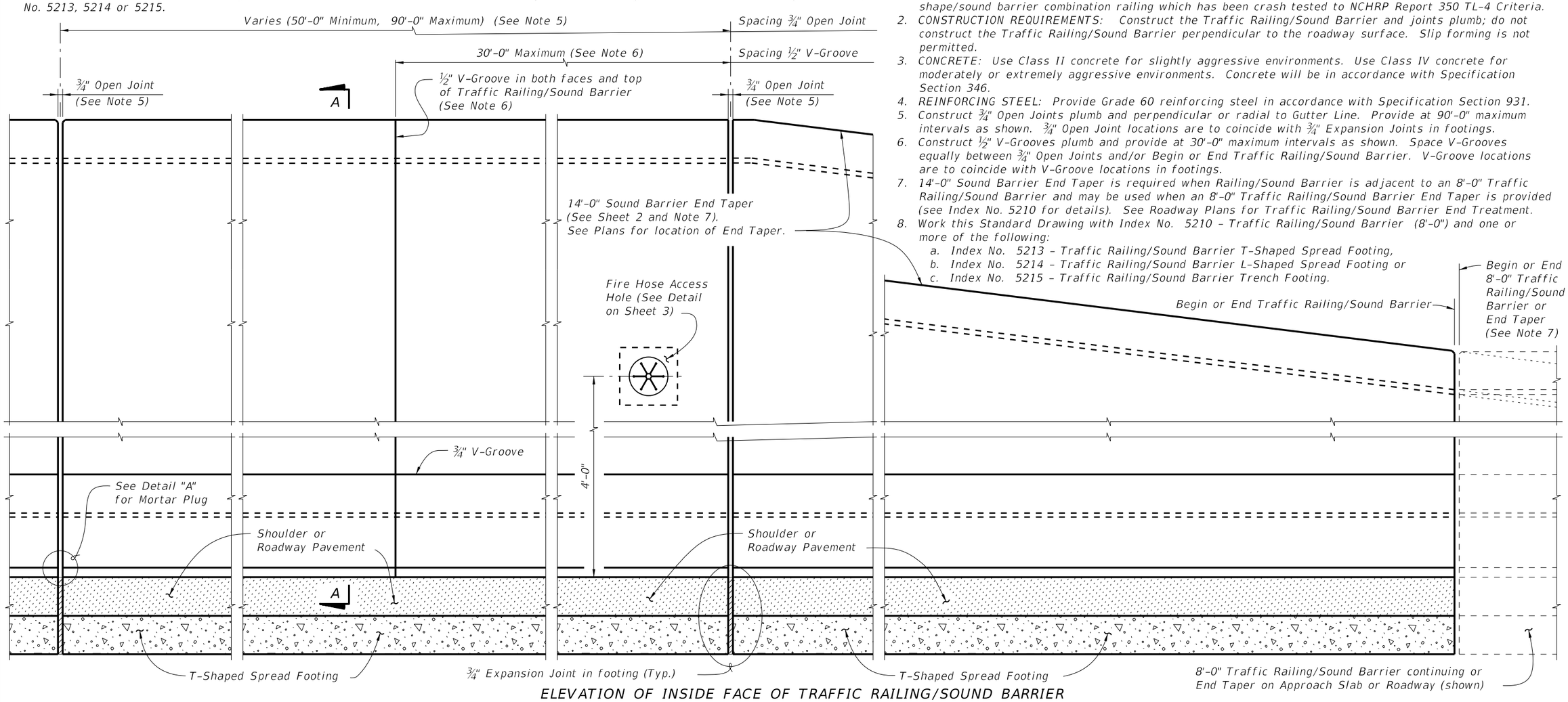


CROSS REFERENCE:
For Section A-A, Detail "A" and Estimated Quantities, see Sheet 3.
For Expansion Joint Detail in Footing, see Index No. 5213, 5214 or 5215.

PLAN (Reinforcing Steel not shown for clarity)
(T-Shaped Spread Footing Shown, L-Shaped Spread Footing and Trench Footing Similar)



ELEVATION OF INSIDE FACE OF TRAFFIC RAILING/SOUND BARRIER
(Reinforcing Steel not shown for clarity)
(T-Shaped Spread Footing Shown, L-Shaped Spread Footing and Trench Footing Similar)

TRAFFIC RAILING/SOUND BARRIER NOTES

1. This railing has been structurally evaluated to be equivalent or greater in strength to a safety shape/sound barrier combination railing which has been crash tested to NCHRP Report 350 TL-4 Criteria.
2. CONSTRUCTION REQUIREMENTS: Construct the Traffic Railing/Sound Barrier and joints plumb; do not construct the Traffic Railing/Sound Barrier perpendicular to the roadway surface. Slip forming is not permitted.
3. 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.
4. REINFORCING STEEL: Provide Grade 60 reinforcing steel in accordance with Specification Section 931.
5. Construct ¾" Open Joints plumb and perpendicular or radial to Gutter Line. Provide at 90'-0" maximum intervals as shown. ¾" Open Joint locations are to coincide with ¾" Expansion Joints in footings.
6. Construct ½" V-Grooves plumb and provide at 30'-0" maximum intervals as shown. Space V-Grooves equally between ¾" Open Joints and/or Begin or End Traffic Railing/Sound Barrier. V-Groove locations are to coincide with V-Groove locations in footings.
7. 14'-0" Sound Barrier End Taper is required when Railing/Sound Barrier is adjacent to an 8'-0" Traffic Railing/Sound Barrier and may be used when an 8'-0" Traffic Railing/Sound Barrier End Taper is provided (see Index No. 5210 for details). See Roadway Plans for Traffic Railing/Sound Barrier End Treatment.
8. Work this Standard Drawing with Index No. 5210 - Traffic Railing/Sound Barrier (8'-0") and one or more of the following:
   a. Index No. 5213 - Traffic Railing/Sound Barrier T-Shaped Spread Footing,
   b. Index No. 5214 - Traffic Railing/Sound Barrier L-Shaped Spread Footing or
   c. Index No. 5215 - Traffic Railing/Sound Barrier Trench Footing.

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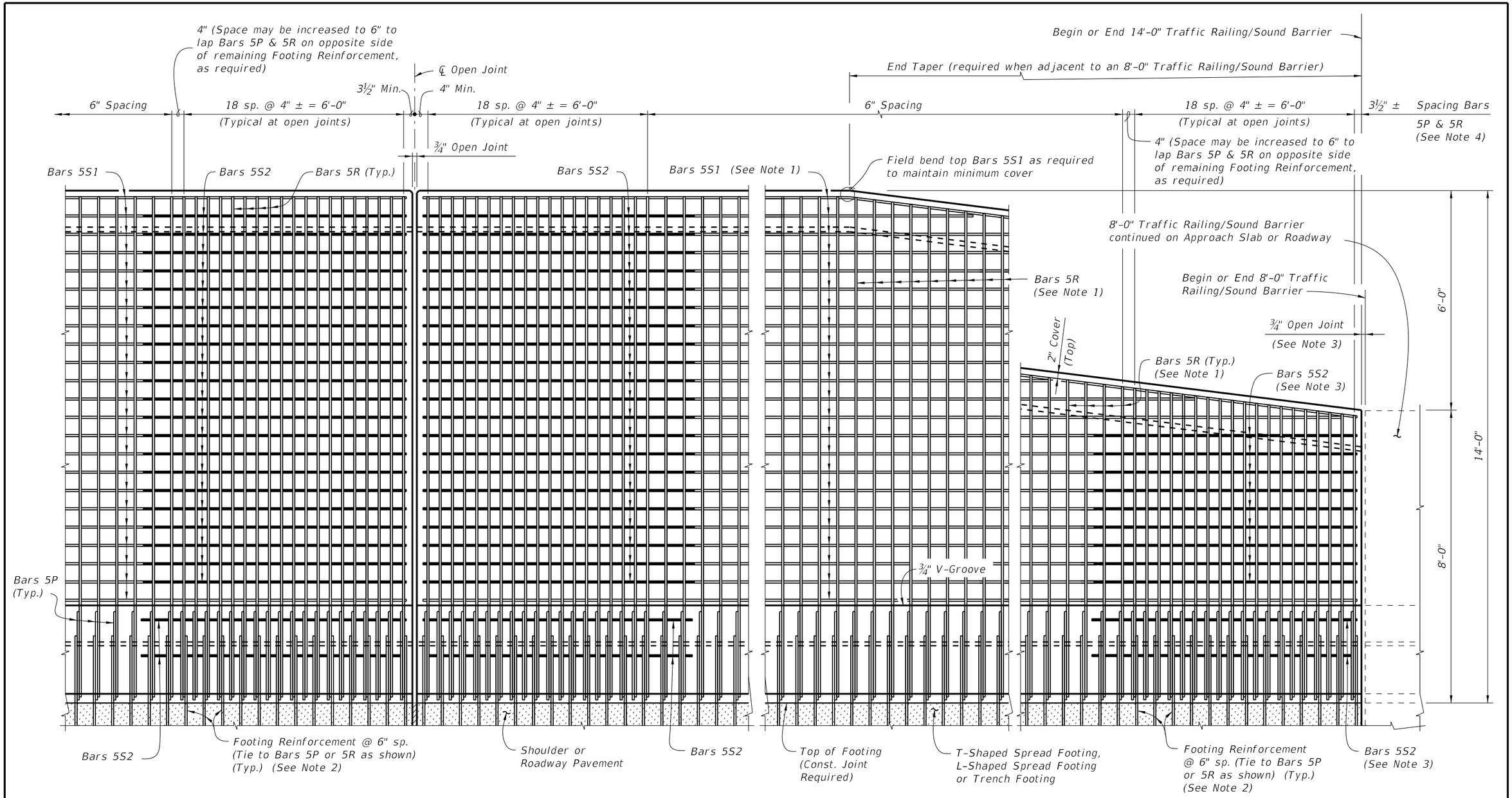
LAST REVISION	REVISION	DESCRIPTION:		FDOT DESIGN STANDARDS 2013	TRAFFIC RAILING/SOUND BARRIER (14'-0")	INDEX NO.	SHEET NO.
07/01/07						5211	1



ELEVATION OF TRAFFIC RAILING/SOUND BARRIER REINFORCING STEEL
(Bars 5S1 in Railing not shown for clarity)

ELEVATION OF TRAFFIC RAILING/SOUND BARRIER END TAPER
(Bars 5S1 in Railing not shown for clarity)

NOTES:

1. *Field Cut Bars 5R & 5S1 in Sound Barrier End Taper as required to maintain minimum cover.*
2. *See Index Nos. 5213, 5214 and 5215 for footing reinforcement.*
3. *¾" Open Joint may be omitted when 8'-0" Railing/Sound Barrier End Taper is adjacent to a 14'-0" Traffic Railing/Sound Barrier End Taper as shown on Sheet 1. See Index No. 5210 for reinforcement details and spacing. Bars 5S2 are not required when ¾" Open Joint is omitted.*
4. *Bar spacing shown is along the Gutter Line.*

LAST REVISION	REVISION	DESCRIPTION:				
07/01/05			FDOT DESIGN STANDARDS 2013	TRAFFIC RAILING/SOUND BARRIER (14'-0")	INDEX NO. 5211	SHEET NO. 2

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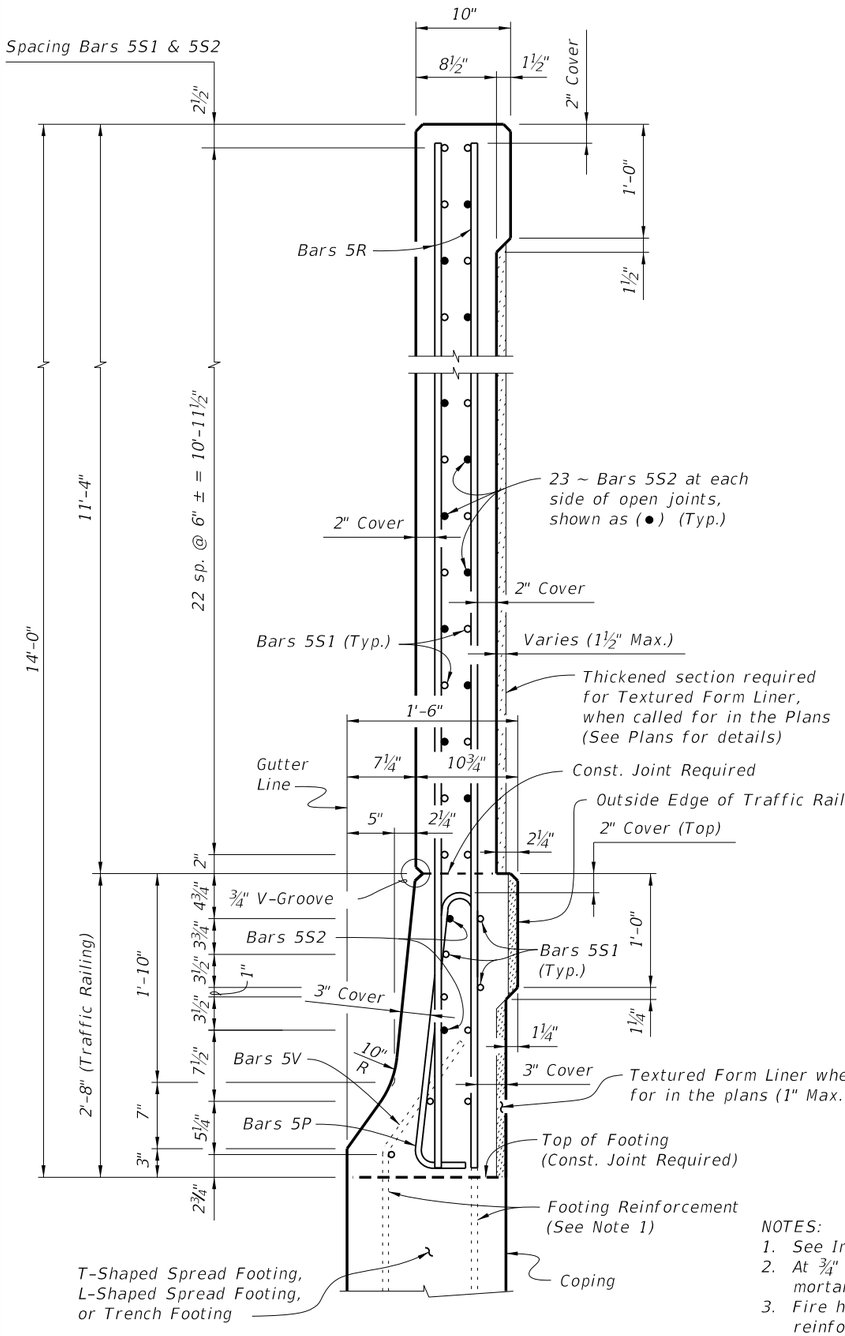
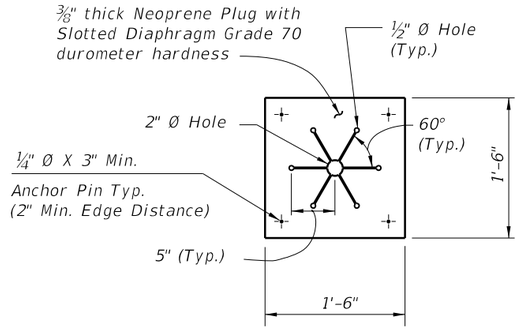
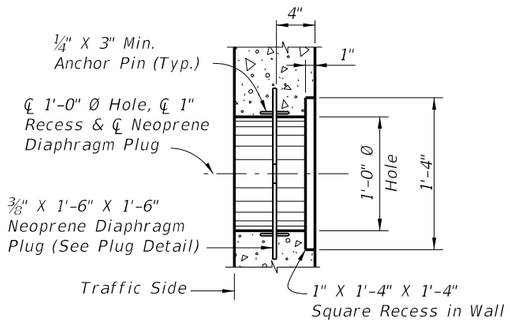


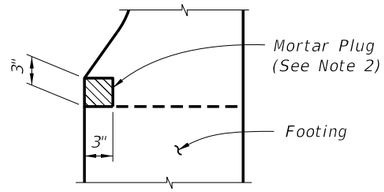
SECTION A-A
TYPICAL SECTION THRU TRAFFIC RAILING/SOUND BARRIER



NEOPRENE DIAPHRAGM PLUG DETAIL



TYPICAL SECTION
FIRE HOSE ACCESS DETAIL



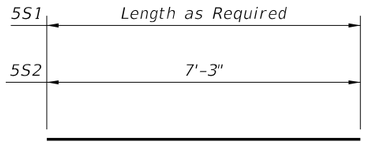
DETAIL "A" -
SECTION AT OPEN JOINT

NOTES:
1. See Index Nos. 5213, 5214 and 5215 for footing reinforcement.
2. At ¾" Open Joints, plug the lower 3" portion of the open joint by filling it with mortar in accordance with Specification Section 400.
3. Fire hose access holes are required at or near fire hydrant locations. Field cut reinforcement as required to maintain 2" minimum cover at access holes. Locate fire hose access holes at least 10'-0" from ¾" open joints when possible.

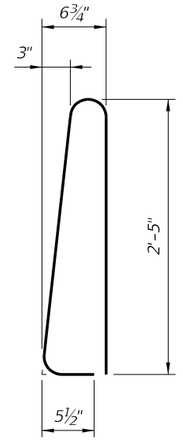
REINFORCING STEEL BENDING DIAGRAMS

BILL OF REINFORCING STEEL

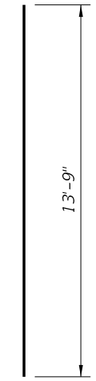
MARK	SIZE	LENGTH
P	5	5'-7"
R	5	13'-9"
S1	5	AS REQD.
S2	5	7'-3"



BARS 5S1 & 5S2



STIRRUP
BAR 5P



BAR 5R
(Field Cut for End Taper)

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. Bars 5R may be continuous or spliced at construction joints. Lap splices for Bars 5R and 5S1 will be a minimum of 2'-2".
4. The Contractor may use Welded Wire Reinforcement when approved by the Engineer. Welded Wire Reinforcement will conform to ASTM A 497.

ESTIMATED TRAFFIC RAILING BARRIER/SOUNDWALL QUANTITIES

ITEM	UNIT	QUANTITY
Concrete (Traffic Railing)	CY/FT	0.104
Concrete (Sound Barrier, excluding any thickening)	CY/FT	0.302
Reinforcing Steel (Railing/Sound Barrier) (Typical, excluding Footing Reinforcement)	LB/FT	103.43
Additional Reinf. @ Open Joint (Railing/Sound Barrier)	LB	761.91

CROSS REFERENCE:
For locations of Section A-A and Detail "A", see Sheet 1.

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LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
07/01/09			FDOT DESIGN STANDARDS 2013	TRAFFIC RAILING/SOUND BARRIER (14'-0")	5211	3