

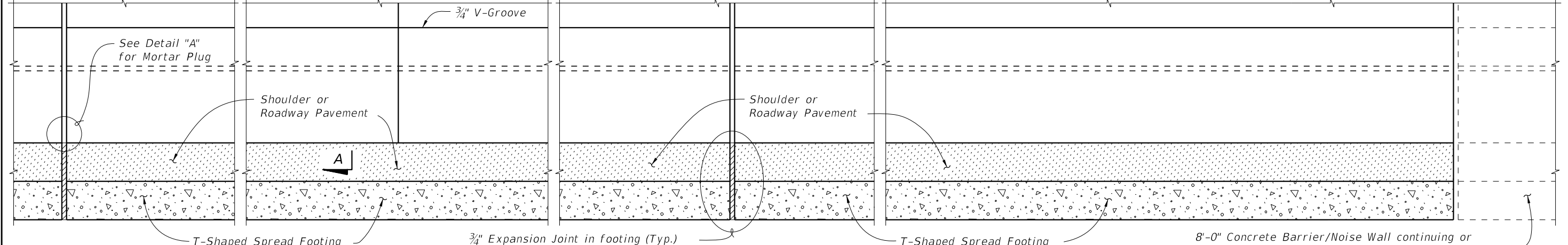
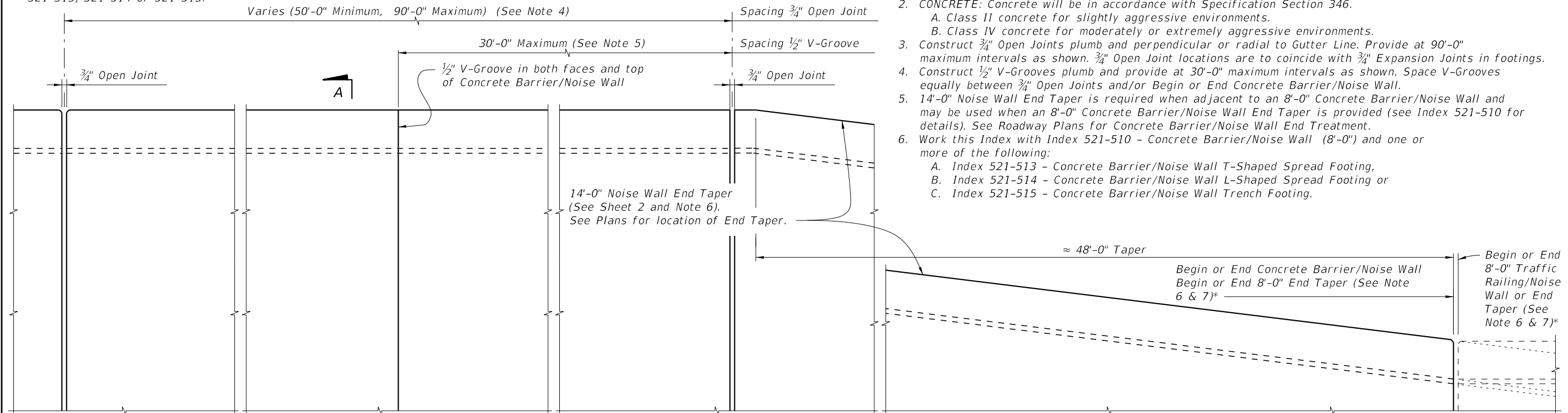
**CROSS REFERENCE:**  
 For Section A-A, Detail "A" and Estimated Quantities, see Sheet 3.  
 For Expansion Joint Detail in Footing, see Index 521-513, 521-514 or 521-515.

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

**Concrete Barrier/NOISE WALL NOTES**

8'-0" Concrete Barrier/Noise Wall continuing or End Taper on Approach Slab or Roadway (shown)

1. Construct the Concrete Barrier/Noise Wall and joints plumb; do not construct the Concrete Barrier/Noise Wall perpendicular to the roadway surface.
2. CONCRETE: Concrete will be in accordance with Specification Section 346.
  - A. Class II concrete for slightly aggressive environments.
  - B. Class IV concrete for moderately or extremely aggressive environments.
3. Construct  $\frac{3}{4}$ " Open Joints plumb and perpendicular or radial to Gutter Line. Provide at 90'-0" maximum intervals as shown.  $\frac{3}{4}$ " Open Joint locations are to coincide with  $\frac{3}{4}$ " Expansion Joints in footings.
4. Construct  $\frac{1}{2}$ " V-Grooves plumb and provide at 30'-0" maximum intervals as shown. Space V-Grooves equally between  $\frac{3}{4}$ " Open Joints and/or Begin or End Concrete Barrier/Noise Wall.
5. 14'-0" Noise Wall End Taper is required when adjacent to an 8'-0" Concrete Barrier/Noise Wall and may be used when an 8'-0" Concrete Barrier/Noise Wall End Taper is provided (see Index 521-510 for details). See Roadway Plans for Concrete Barrier/Noise Wall End Treatment.
6. Work this Index with Index 521-510 - Concrete Barrier/Noise Wall (8'-0") and one or more of the following:
  - A. Index 521-513 - Concrete Barrier/Noise Wall T-Shaped Spread Footing,
  - B. Index 521-514 - Concrete Barrier/Noise Wall L-Shaped Spread Footing or
  - C. Index 521-515 - Concrete Barrier/Noise Wall Trench Footing.



**ELEVATION OF INSIDE FACE OF CONCRETE BARRIER/NOISE WALL**  
**(Reinforcing Steel not shown for clarity)**  
**(T-Shaped Spread Footing Shown, L-Shaped Spread Footing and Trench Footing Similar)**

8'-0" Concrete Barrier/Noise Wall continuing or End Taper on Approach Slab or Roadway (shown)  
 \*  $\frac{3}{4}$ " Open Joint may be omitted when 8'-0" Railing/Noise Wall End Taper is adjacent to a 14'-0" Concrete Barrier/Noise Wall End Taper

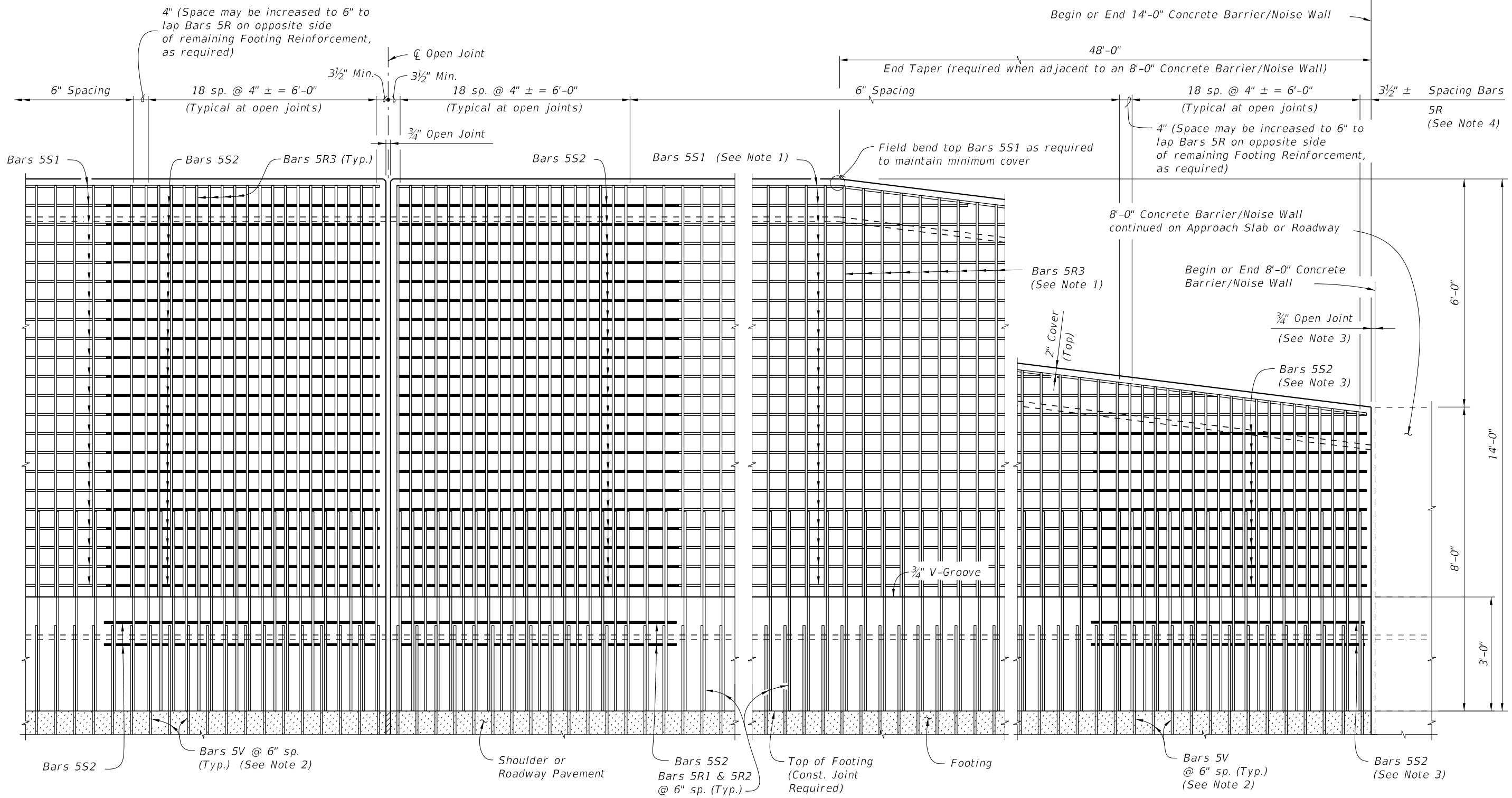
10/12/2020 7:52:40 AM

LAST REVISION	DESCRIPTION:
11/01/18	

**FY 2021-22**  
**STANDARD PLANS**

**CONCRETE BARRIER/NOISE WALL (14'-0")**

INDEX	SHEET
521-511	1 of 3



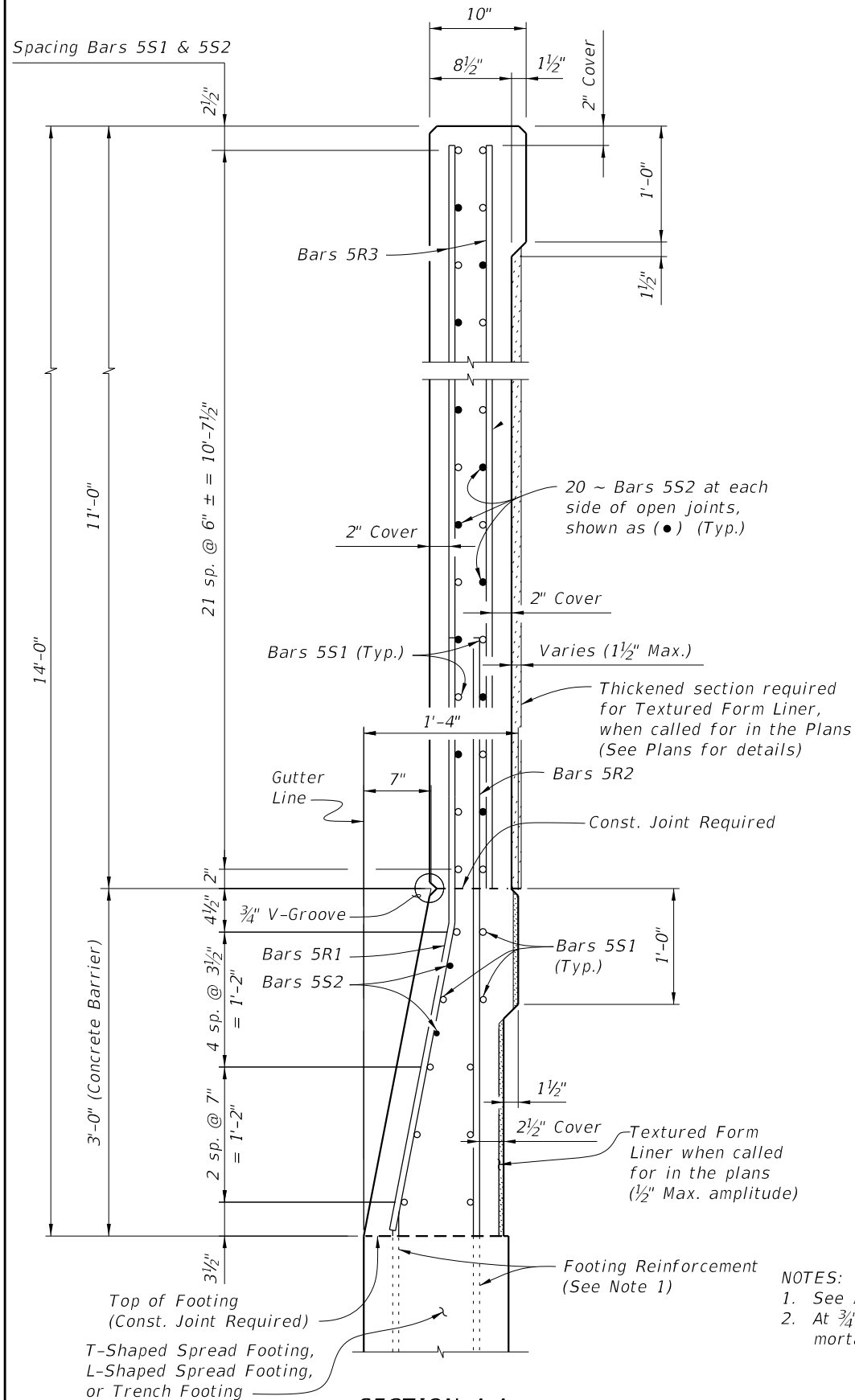
ELEVATION OF CONCRETE BARRIER/NOISE WALL REINFORCING STEEL  
(Bars 5S1 in Railing not shown for clarity)

ELEVATION OF CONCRETE BARRIER/NOISE WALL END TAPER  
(Bars 5S1 in Railing not shown for clarity)

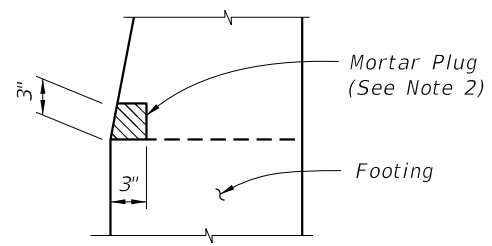
- NOTES:
1. Field Cut Bars 5R & 5S1 in Noise Wall End Taper as required to maintain minimum cover.
  2. See Index 521-513, 521-514 and 521-515 for footing reinforcement.
  3. 3/4" Open Joint may be omitted when 8'-0" Railing/Noise Wall End Taper is adjacent to a 14'-0" Concrete Barrier/Noise Wall End Taper as shown on Sheet 1. See Index 521-510 for reinforcement details and spacing. Bars 5S2 are not required when 3/4" Open Joint is omitted.
  4. Bar spacing shown is along the Gutter Line.

10/12/2020 7:52:48 AM

LAST REVISION 11/01/18	REVISION	DESCRIPTION:	 FY 2021-22 STANDARD PLANS	CONCRETE BARRIER/NOISE WALL (14'-0")	INDEX 521-511	SHEET 2 of 3
---------------------------	----------	--------------	--	--------------------------------------	------------------	-----------------



**SECTION A-A**  
TYPICAL SECTION THRU CONCRETE BARRIER/NOISE WALL

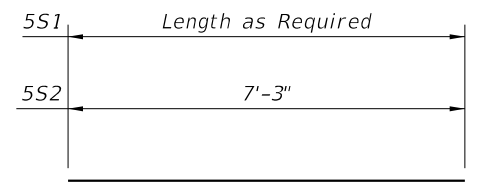


**DETAIL "A" -**  
SECTION AT OPEN JOINT

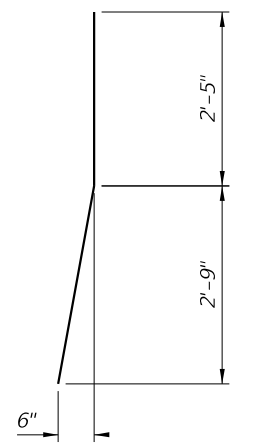
- NOTES:**
- See Index 521-513, 521-514 or 521-515 for footing reinforcement.
  - At 3/4" Open Joints, plug the lower 3" portion of the open joint by filling it with mortar in accordance with Specification Section 400.

**REINFORCING STEEL BENDING DIAGRAMS**

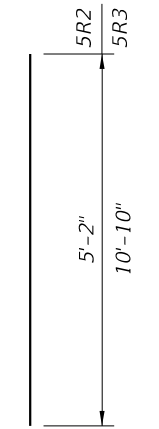
BILL OF REINFORCING STEEL		
MARK	SIZE	LENGTH
R1	5	5'-2"
R2	5	5'-2 1/2"
R3	5	10'-10"
S1	5	AS REQD.
S2	5	7'-3"



**BARS 5S1 & 5S2**



**BAR 5R1 (FF)**



**BAR 5R2 & BAR 5R3**

**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.
- Bars 5R may be continuous or spliced at construction joints. Lap splices for Bars 5R, and 5S1 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.

**ESTIMATED CONCRETE BARRIER/NOISE WALL QUANTITIES**

ITEM	UNIT	QUANTITY
Concrete (Concrete Barrier)	CY/FT	0.107
Concrete (Noise Wall, excluding any thickening)	CY/FT	0.293
Reinforcing Steel (Railing/Noise Wall) (Bars R1, R2, R3, S1 & V)	LB/FT	100.31
Additional Reinf. @ Open Joint (Railing/Noise Wall)	LB	397.38

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

10/12/2020 7:52:51 AM

LAST REVISION 11/01/18	DESCRIPTION:
---------------------------	--------------