FY 2024-25 Standard Plans Update Training

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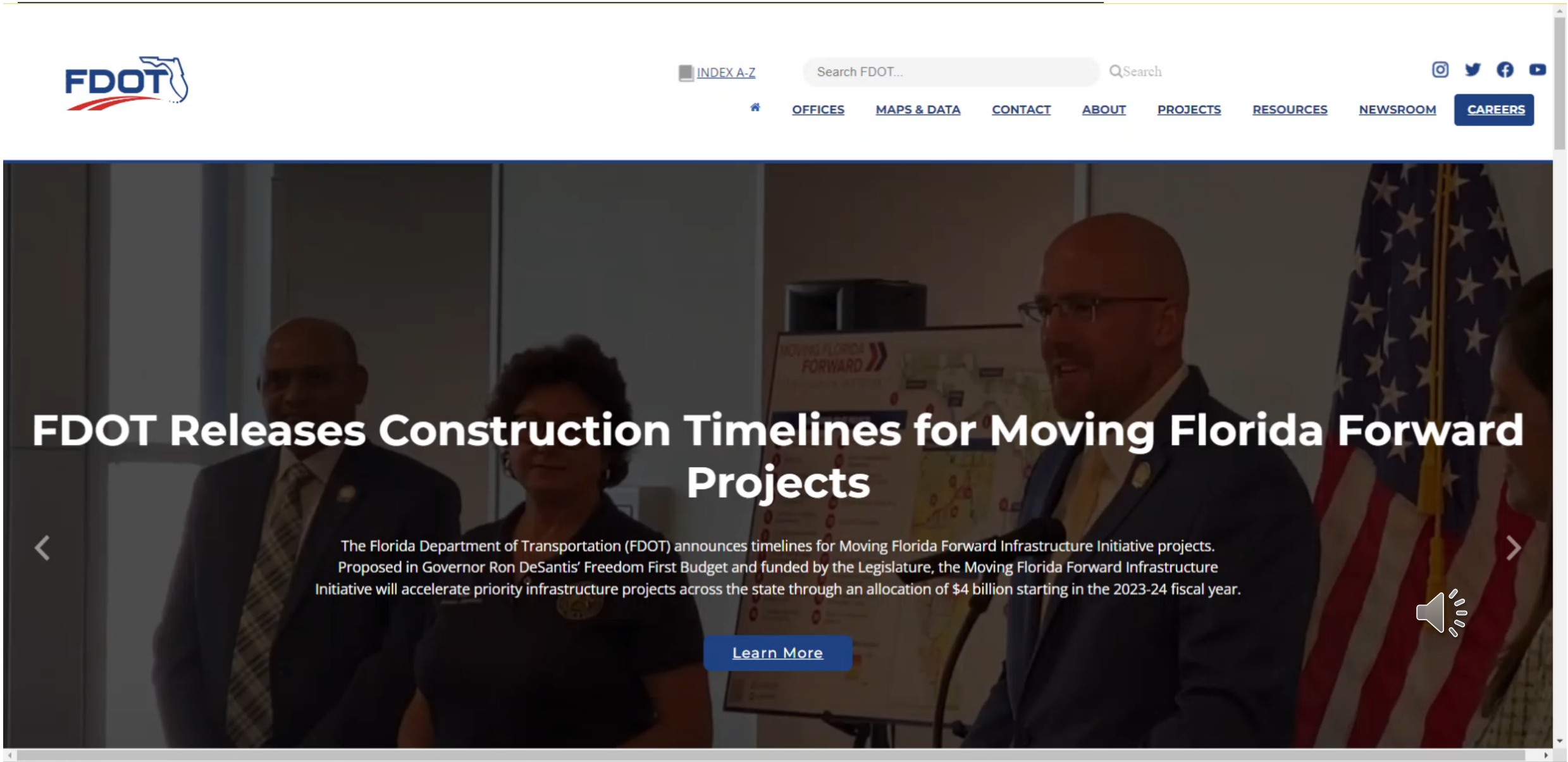
Standard Plans – Update Training Agenda:

- **General Overview**
  - **Rick Jenkins**
    - Website Updates (http://www.fdot.gov/design/standardplans/)
- **Standard Plans Updates**
  - **Rick Jenkins**
    - Miscellaneous Roadway Updates
  - **Shae Gibbs**
    - Miscellaneous Roadway Updates
  - **Richard Stepp**
    - Lighting and Barrier Updates
  - **Victor Johnson**
    - Index 695-001
  - **Joshua Turley**
    - Structures and Bridge Related Updates

New RDO Website

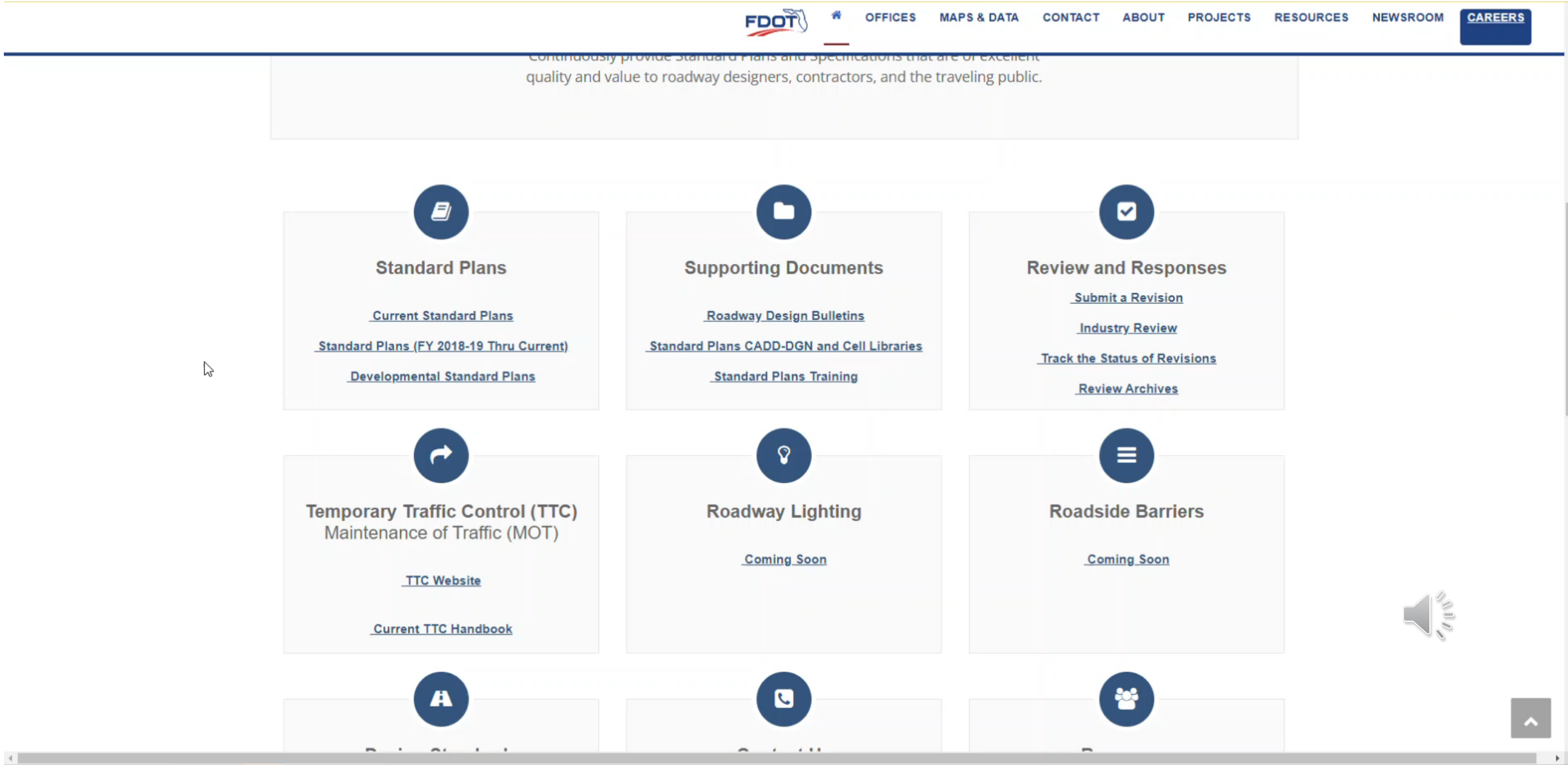


Revision Log

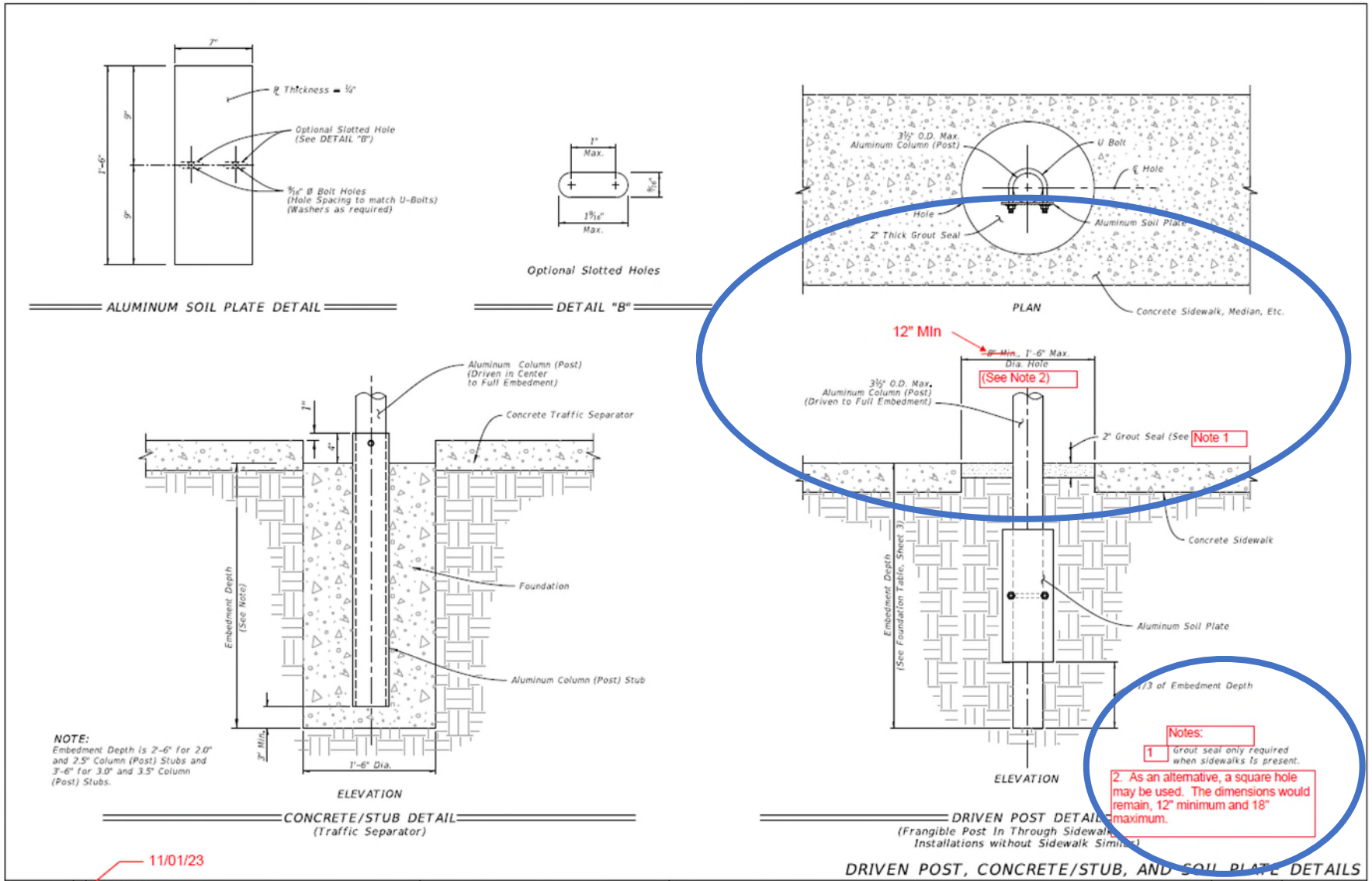
Standard Plans for Road Construction

Standard Plans Index	Interim Revision, Errata, or Developmental (Dev)	Index Title	Design Standards Index	Standard Plans Instructions	Design Tools/ 3D Exhibits
Support Detail					
eBook		Standard Plans for Road Construction - Complete eBook			
Cover/Certification Statement		Cover Sheet / Certification Statement			
Abbrev.		Abbreviations Sheet			
TOC Road		Table of Contents - Road Construction			
Revisions		Revision History Log		SPI	
Miscellaneous					
000-510		Superelevation Transitions - High Speed Roadways	510	SPI	
000-511		Superelevation Transitions - Low Speed Roadways	511		
000-525		Ramp Terminals	525	SPI	
General Construction Operations-Roadway					
Maintenance of Traffic					

Standard Plans Staff

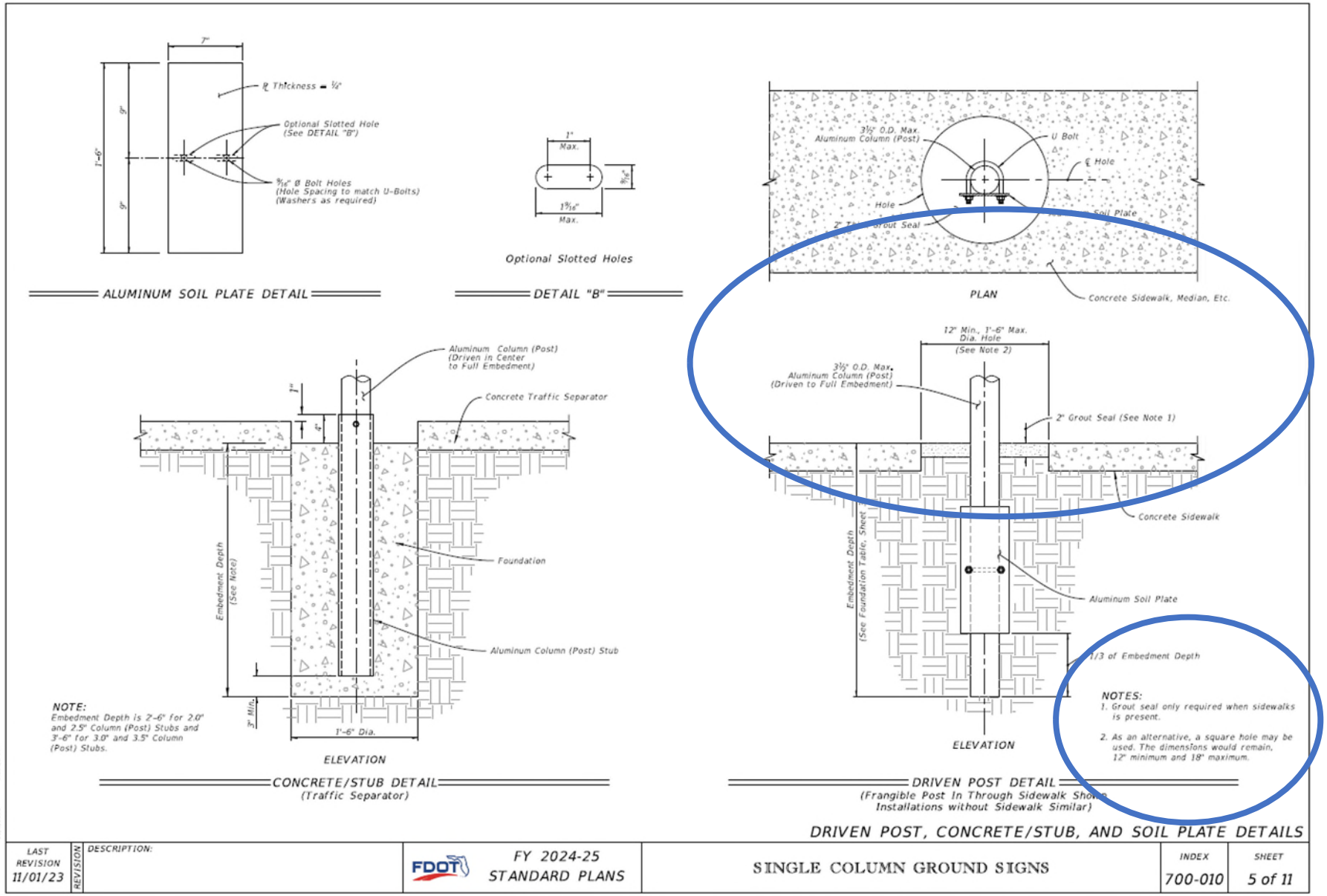


Redline Sheet 5: Driven Post Hole



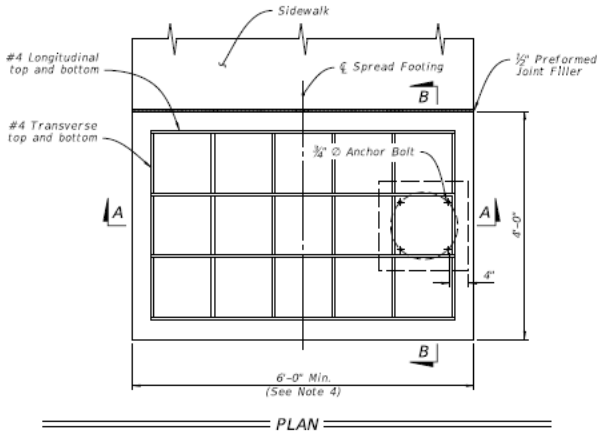
- *Minimum Driven Post Hole Diameter now 12”*
- *Alternate Square Hole Option Added*

Updated Sheet 5: Driven Post Hole



- *Updated Driven Post*
- *New Note 2*

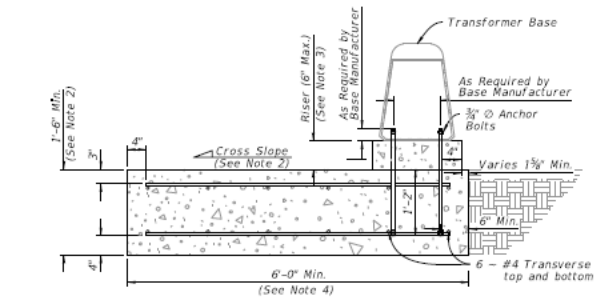
Sheet 3: NEW SHEET – Spread Footing Foundation



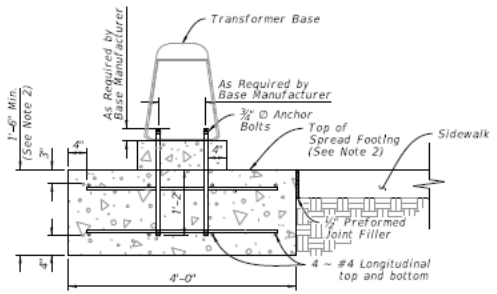
PLAN

NOTES:

1. Install the Spread Footing Foundation only where called for in the Plans.
2. SIDEWALK:
   a. When abutting sidewalk, match the cross slope of the adjacent sidewalk or curb ramp where applicable. Maintain the minimum depth of footing.
   b. ½" expansion preformed joint filler required between sidewalk and spread footing.
   c. Apply concrete surface finish to the top of the spread footing in accordance with Specification 522-7.
   d. Sidewalk placed on the other side or both sides of the spread footing is permitted where shown in the Plans.
3. Only use concrete riser when installed in-line with sidewalk curb that results in a drop off to the adjacent sidewalk.
4. For sidewalks greater than 6', match sidewalk width. Add one #4 transverse bar, top and bottom, per additional foot of spread footing to maintain at minimum the same reinforcement area per foot.
5. Base location can vary on spread footing. Location shown in Plans.



SECTION A-A



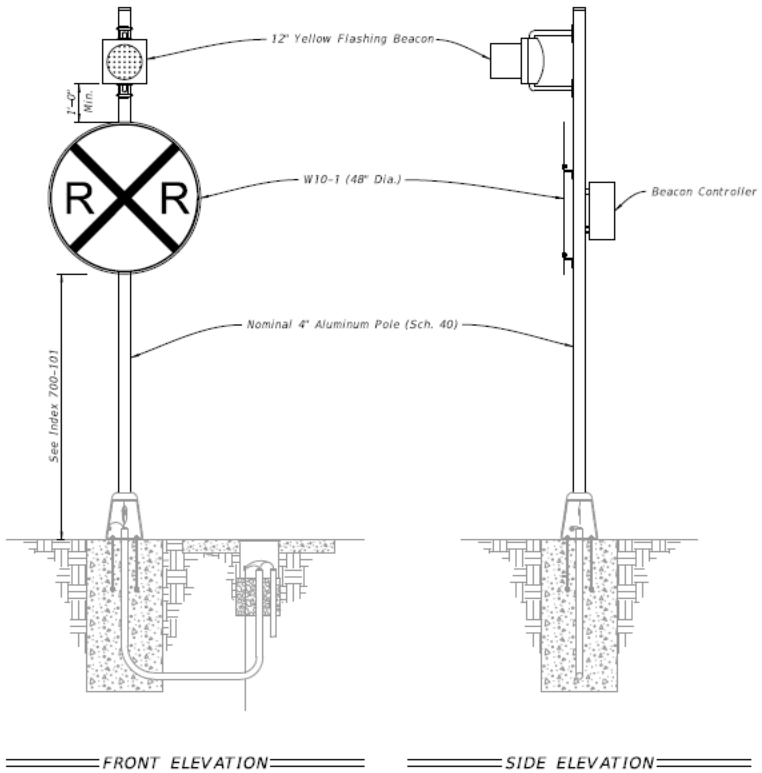
SECTION B-B

SPREAD FOOTING FOUNDATION

LAST REVISION 11/01/23	REVISION	DESCRIPTION:	FDOT FY 2024-25 STANDARD PLANS	ENHANCED HIGHWAY SIGNING ASSEMBLIES	INDEX 700-120	SHEET 3 of 15

- *Spread Footing Option*
- *Worked with District Staff, Structures Office and TERL*
- *Allows for Placement in Tight Areas*

Sheet 12: NEW SHEET – Roadside Signing Assembly 9



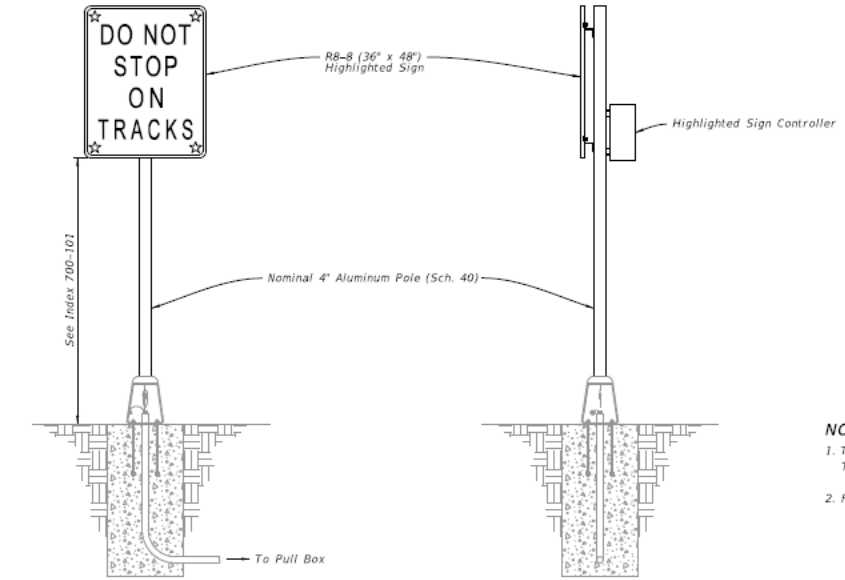
NOTES:
1. Type A9 Assembly (conventionally powered) is shown. Type B9 Assemblies (solar powered) similar.
2. Foundation reinforcement not shown.

ROADSIDE SIGN ASSEMBLY-9

LAST REVISION 11/01/23	REVISION	DESCRIPTION:	FDOT FY 2024-25 STANDARD PLANS	ENHANCED HIGHWAY SIGNING ASSEMBLIES	INDEX 700-120	SHEET 12 of 15

- *New Enhanced version of Railroad Warning Sign*

Sheet 13: NEW SHEET – Roadside Signing Assembly 10



NOTES:
1. Type A10 Assembly (conventionally powered) is shown. Type B10 Assemblies (solar powered) similar.
2. Foundation reinforcement not shown.

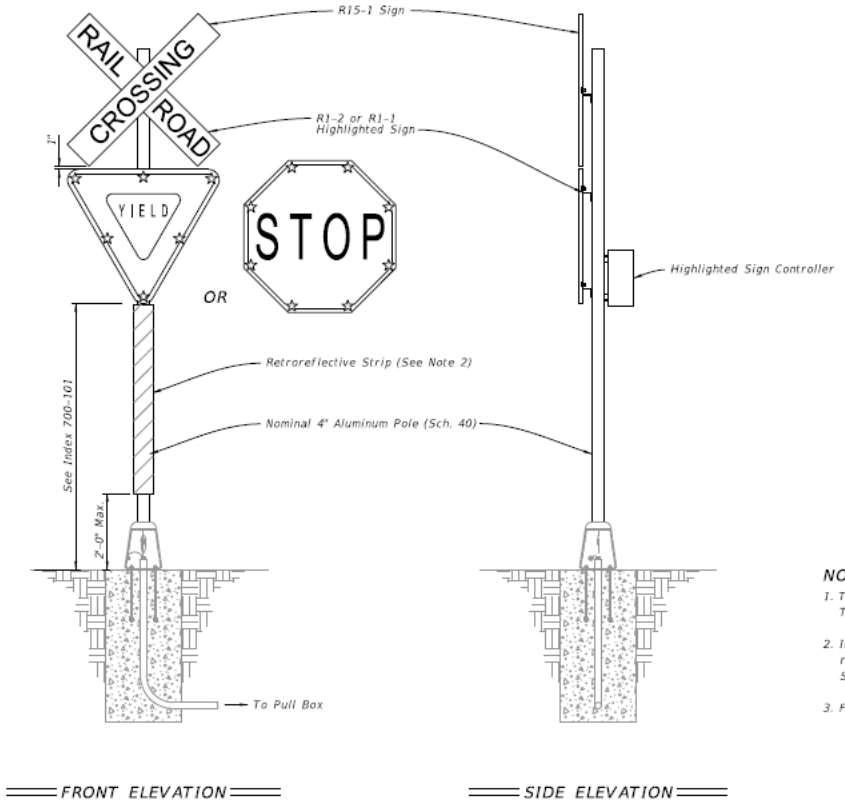
Index 700-120 Enhanced High...

ROADSIDE SIGN ASSEMBLY-10

LAST REVISION 11/01/23	REVISION	DESCRIPTION:	FDOT FY 2024-25 STANDARD PLANS	ENHANCED HIGHWAY SIGNING ASSEMBLIES	INDEX 700-120	SHEET 13 of 15

- *New Highlighted version of "Do Not Stop on Tracks" Sign*

Sheet 14: NEW SHEET – Roadside Signing Assembly 11



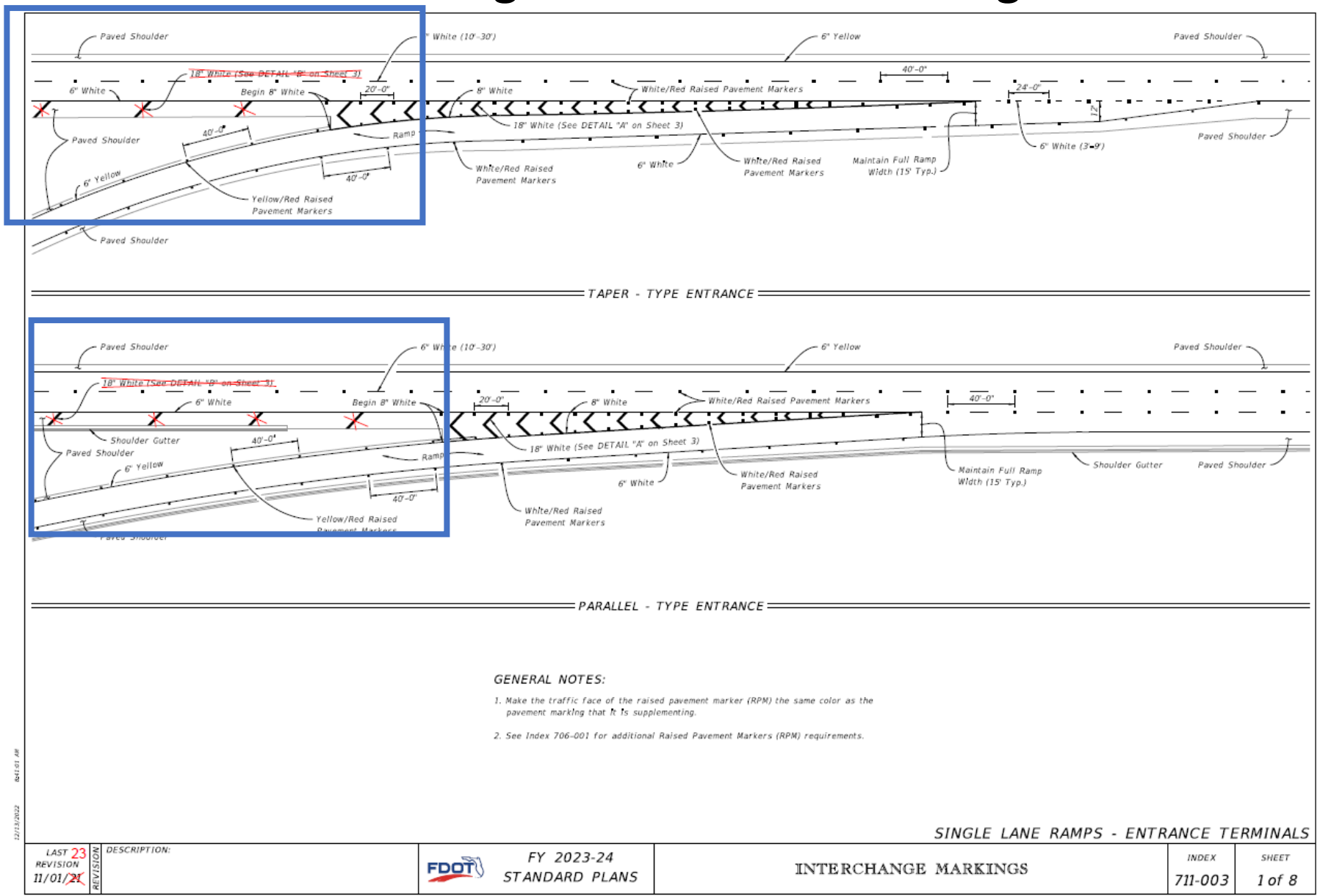
NOTES:
1. Type A11 Assembly (conventionally powered) is shown. Type B11 Assemblies (solar powered) similar.
2. Install red retroreflective strip on front and white retroreflective strip on back in accordance with Specification 700.
3. Foundation reinforcement not shown.

ROADSIDE SIGN ASSEMBLY-11

LAST REVISION 11/01/23	REVISION	DESCRIPTION:	FDOT FY 2024-25 STANDARD PLANS	ENHANCED HIGHWAY SIGNING ASSEMBLIES	INDEX 700-120	SHEET 14 of 15

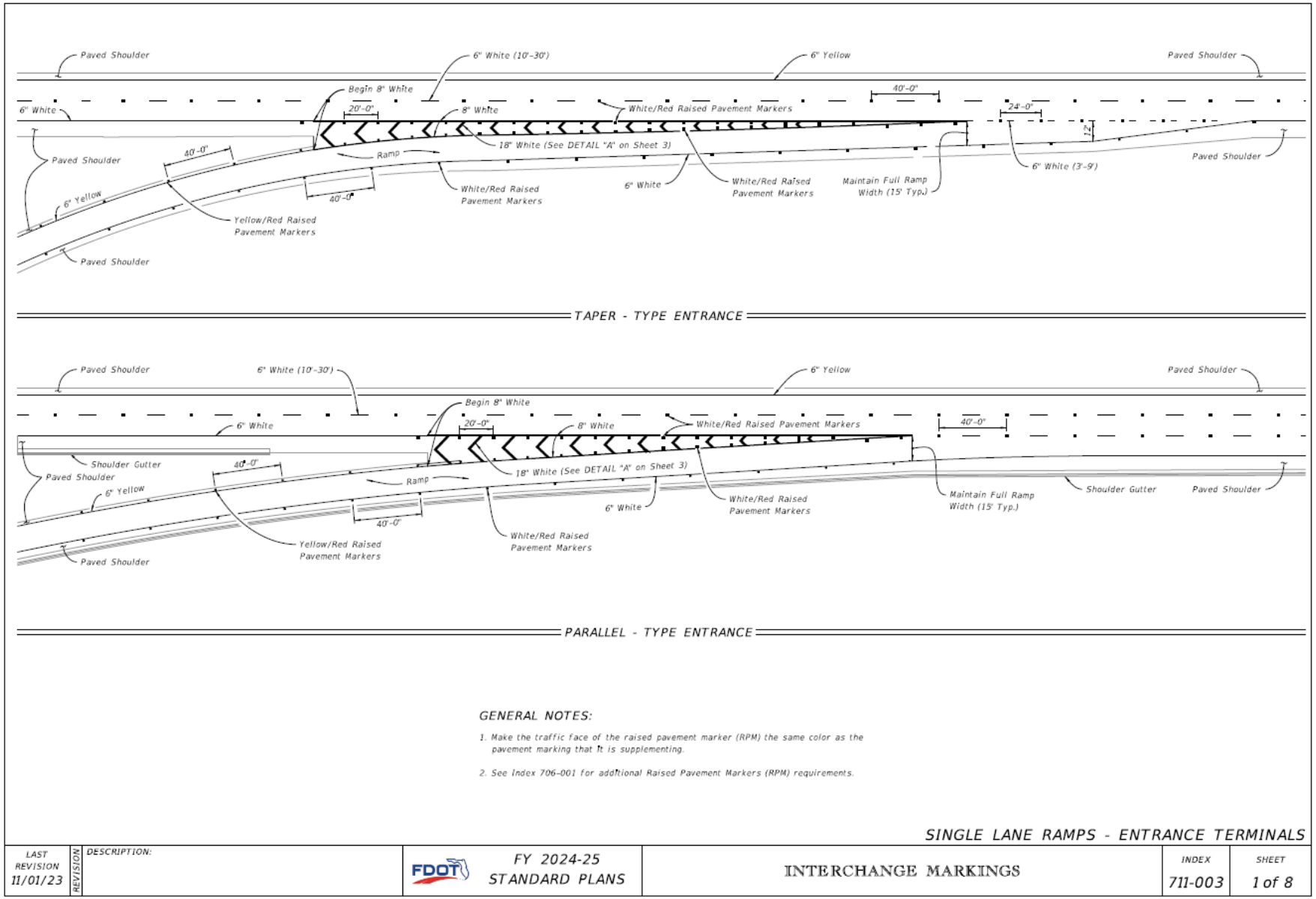
- *New Highlighted version of Yield and Stop Signs at Railroad Crossings*

Redlined Sheet 1: Diagonal Pavement Markings



- *Deleted Diagonal Pavement Marking*
- *Interchange Entrances ONLY*
- *Not Required per AASHTO Greenbook*
- *Same Update to Sheet 2*

Updated Sheet 1: Diagonal Pavement Markings



- *Updated Sheet 1*

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FY 2024-25 Standard Plans Update Training

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Standard Plans – Primary Updates:

1) *Index 102-110 – Type K Temporary Concrete Barrier System*
2) *Index 102-200 – Temporary Acrow 300 Series Detour Bridge General Notes and Details*
3) *Index 400-010 – Cantilever Retaining Wall (C-I-P)*
4) *Index 400-011 – Gravity Wall*
5) *Index 400-289 – Concrete Box Culvert Details*
6) *Index 400-291 – Precast Concrete Box Culverts-Supplemental Details*
7) *Index 400-292 – Standard Precast Concrete Box Culverts*
8) *Index 425-001 – Supplementary Details for Drainage Structures*
9) *Index 430-001 – Miscellaneous Drainage Details*

Standard Plans – Primary Updates:

10) *Index 430-012 – U-Type Concrete Endwall Energy Dissipator 30” to 72” Pipe*
11) *Index 440-001 – Underdrain*
12) *Index 443-001 – French Drain*
13) *Index 446-001 – Concrete Pavement Subdrainage*
14) *Index 455-400 – Precast Concrete Sheet Pile Wall (C-I-P)*
15) *Index 455-440 – Precast Concrete Sheet Pile Wall (CFRP/GFRP & HSSS/GFRP)*
16) *Index 524-001 – Ditch Pavement and Sodding*

GEOSYNTHETIC FOR DRAINAGE APPLICATIONS ~~FILTER FABRIC (GEOTEXTILE)~~

(REV 6-1-23)

SECTION 514 is deleted and the following substituted:

514-1 Description.

This Section specifies the construction requirements for geosynthetics used in drainage, slope protection, and material separation applications.~~Install a filter fabric.~~

514-2 Material.

~~Meet the filter fabric requirements as specified in~~ Use geosynthetic materials meeting the requirements of Section 985 and listed on the Approved Product List (APL). Ensure the geosynthetic materials received at the job site are in unopened shipping packages and the packages are clearly labeled with the manufacturer's name, product name, style number, roll dimension and LOT number, otherwise, the Engineer will reject the material. Store geosynthetic materials in accordance with the manufacturer's instructions ensuring to protect the geosynthetic material from physical damage, debris, and temperatures greater than 140° F. Prevent mud, fluid concrete, asphalt, or other deleterious materials from coming in contact with the geosynthetic materials that could impact the performance of the geosynthetic material. Replace geosynthetic materials with defects, tears, punctures, flaws, deterioration, or other damage at no additional cost to the Department.

514-3 Construction Methods.

514-3.1 Geosynthetic Materials for Drainage Applications~~General~~: Select a geosynthetic material meeting the appropriate application as specified in 985-3. Place and install the geosynthetic material at the proper elevation, location and orientation ~~filter fabric (fabric) in the manner and locations~~ as shown in the Contract Documents~~Plans,~~ and in accordance with the manufacturer's instructions~~directions, and as specified in these Specifications~~. Place the geosynthetic material ~~fabric~~ on areas with a uniform slope that are reasonably smooth, free from mounds, windrows, and any debris or projections which might damage the geosynthetic material~~fabric~~.

~~Loosely lay the material. Do not stretch the material. Replace or repair any fabric damaged or displaced before or during placement of overlying layers to the satisfaction of the Engineer and at no expense to the Department.~~

When overlapping is necessary, the Contractor may sew the seams to reduce overlaps as specified in 985-2.6~~3~~.

After placement of the geosynthetic material,~~Schedule work so that covering the fabric with the specified material~~ does not exceed the manufacturer's recommendations for exposure to ultraviolet light or five days, whichever is less. If the exposure time is ~~the Engineer determines the exposure time was~~ exceeded, ~~the Contractor shall~~ remove and replace the geosynthetic material~~fabric at no expense to the Department~~.

514-3.2 Subsurface Drainage Applications: When indicated in the Plans, place the geosynthetic material~~fabric~~ with the long dimension parallel to the trench. Place and install the geosynthetic material~~fabric~~ to provide a minimum 12-inch overlap for each joint or in accordance with the manufacturer's recommendation, whichever is greater. Do not drop ~~the~~ coarse aggregate ~~filter~~ materials from heights greater than 3 feet.

~~514-3.3 Stabilization and Reinforcement: Overlap adjacent strips of fabric a minimum of 36 inches.~~

514-3.~~3~~4 ~~Riprap~~ Revetment System Applications~~Filter~~: Overlap adjacent strips of geosynthetic material~~fabric~~ at a minimum of 24 inches and in accordance with the manufacturer's recommendations, whichever is greater. A~~, and a~~nchor the geosynthetic ~~them~~ materials with securing pins ~~(as recommended by the manufacturer)~~ inserted through both strips of geosynthetic material~~fabric~~ along a line through the midpoint of the overlap and to the extent necessary to prevent movement~~displacement~~ of the geosynthetic material.~~fabric~~

Place the geosynthetic material~~fabric~~ so that the upstream (upper) strip of geosynthetic material~~fabric~~ overlaps the downstream (lower) strip.

Stagger vertical laps a minimum of 5 feet. Use full rolls of geosynthetic material ~~fabric~~ whenever possible ~~in order~~ to reduce the number of vertical laps.

Do not drop bedding stone or riprap from heights greater than 3 feet onto the geosynthetic material~~fabric~~.

514-3.4 Repairs: Replace geosynthetic material damaged during or after installation at no cost to the Department. Repair geosynthetics damaged during or after installation only after the manufacturer establishes that the intended use and stability is not affected and after obtaining the Engineer's approval. Make such repairs as follows:

Remove materials placed within the damaged geosynthetic area plus an additional 4 feet in all directions beyond the limits of the damage. Place a patch consisting of the same material as the geosynthetic material over the damaged area in accordance with the manufacturer's recommendation. Overlap the undamaged geosynthetic material with the patch at a minimum of 3 feet in all directions. Place backfill material on the geosynthetic material in accordance with the Contract Documents after repairs have been completed.

For repairs of Geosynthetic material placed on slopes adjacent to water, place geosynthetic material so that the upstream (upper) strip of geosynthetic material overlaps the downstream (lower) strip.

514-4 ~~Basis of Payment.~~Acceptance Criteria.

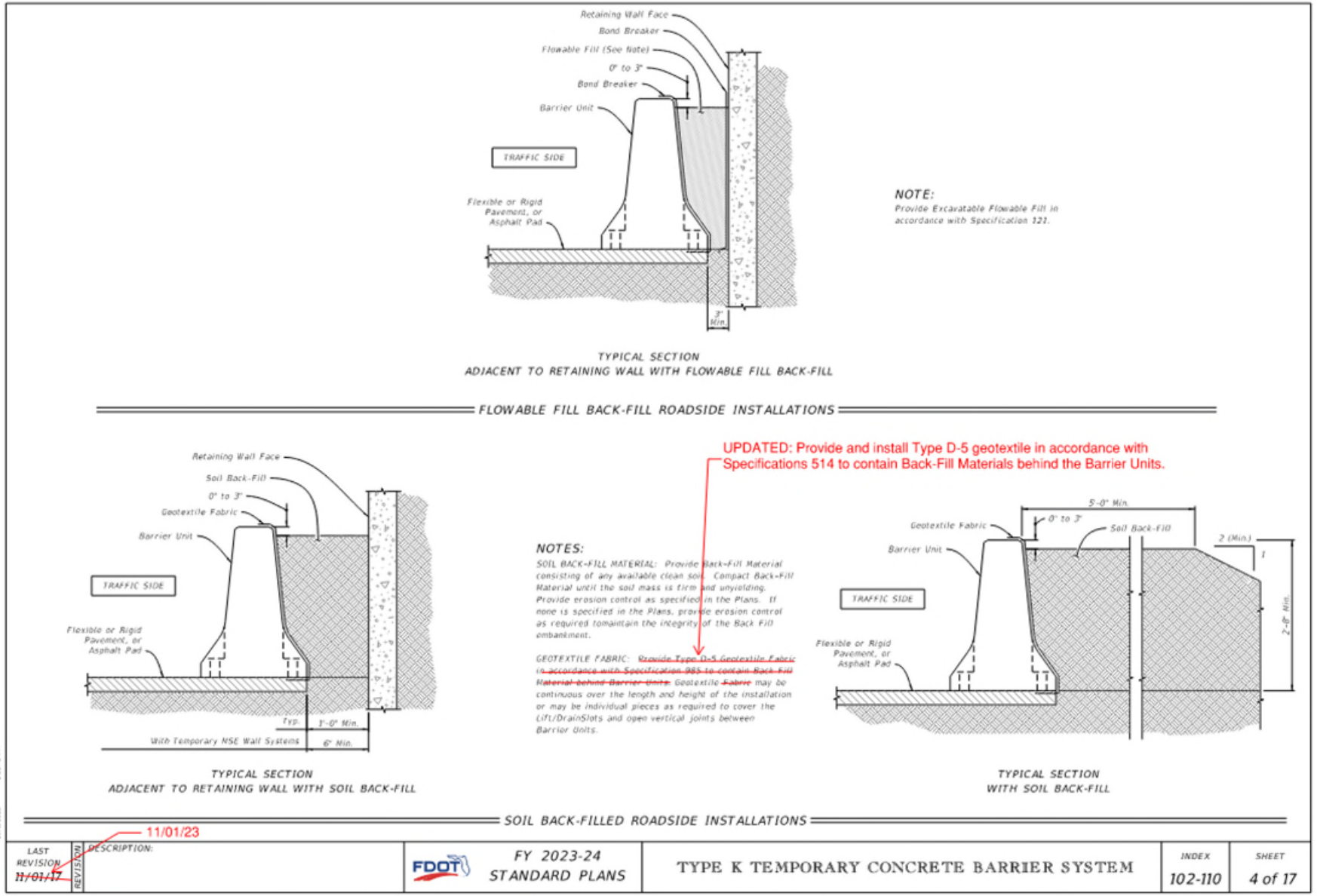
~~No separate payment will be made for the work specified in this Section. The cost of furnishing, placing, and sewing or overlapping the fabric will be included in the Contract price for the items to which it is incidental.~~

Submit to the Engineer the product label with the manufacturer's name, product name, style number, roll dimension and LOT number at least fourteen days prior to placement. In addition, provide two 8-inch by 10-inch samples of geosynthetic materials for product identification to the Engineer. The acceptance of the geosynthetic material is subject to the approval of the State Materials Office (SMO).

514-5 Basis of Payment.

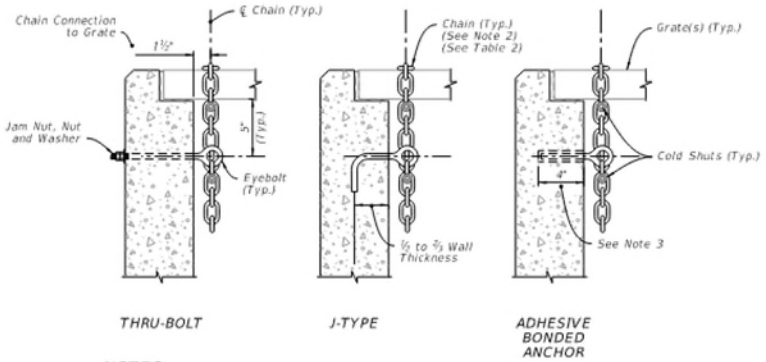
No separate payment will be made for the work specified in this Section. The cost of furnishing, placing, and sewing or overlapping the fabric will be included in the Contract price for the items to which it is incidental.

Sheet 4: Update Filter Fabric to Geotextile



- *Updated all references of Filter Fabric to Geotextile.*
- *Updates references pointing to Specification 985 to instead point to Specification 514.*
- *Add clarification in notes for types of Geotextile.*

Sheet 3: Update Filter Fabric to Geotextile



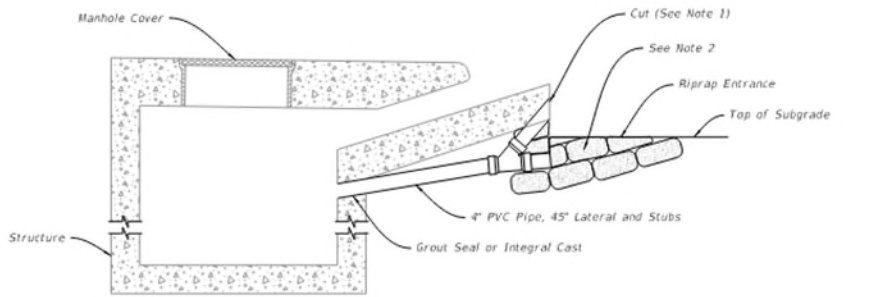
NOTES:

1. Install either a ½" Ø x 1" Diameter Threaded Straight (Thru-Bolt), a J-Type, or an adhesive Bonded Anchor Eyebolt.
2. Install a 5/16" Chain and 5/16" Cold Shuts. When chaining two grates together provide adequate loop for easy handling.
3. Install adhesive bonded anchor option with a minimum of 4" embedment, and in accordance with Specification 416.

TABLE 2
EYEBOLT AND CHAIN REQUIREMENTS

Index Number	Inlet Type	Eye-Bolts	Length of Chain	Handling & Remarks
425-030	1	1	4'-0"	Slide & Spin
	2	2	2 @ 4'-0"	Slide & Spin
425-031	N/A	1	3'-8"	Slide or Slide & Spin
425-032	N/A	1	4'-0"	Slide & Spin
425-040	S	1	4'-0"	Slide & Spin
425-041	V	1	4'-0"	Slide & Spin
425-050	A	1	3'-0"	Slide
425-051	B	1	5'-0"	Slide & Spin
425-052	C	1	2'-6"	Slide & Spin
	D	1	2'-6"	Slide & Spin
	E	2	2 @ 2'-6"	Slide & Spin
	H	2	2 @ 2'-6"	Flip Ctr. Grate and Slide & Spin Single Free Grate
			1 or 2 @ 1'-6"	Center Grate(s) Chained to One End Grate
425-053	F	1	3'-6"	Flip or Slide & Spin
	G	1	6'-0"	Slide
			2'-0"	Lifting Loop
425-054	J	1	4'-0"	Slide & Spin

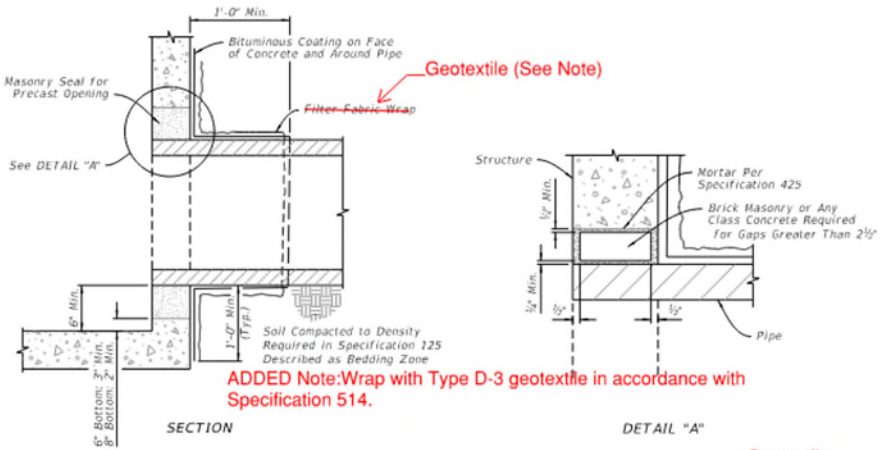
LOCKING GRATES TO INLETS



NOTES:

1. Bevel cut upper stub to match forming for apron face. Capping or plugging of upper stub is not required. Remove friable base material at stub opening to permit covering of opening with structural course material.
2. Remove riprap, cement PVC cap on lower stub, and place compacted fill in entrance prior to placing base material.

SUBGRADE AND BASE TEMPORARY DRAINS



PIPE TO STRUCTURE FILTER FABRIC WRAP

Geotextile

LOCKING GRATES, SUBGRADE AND BASE TEMPORARY DRAINS, AND PIPE TO STRUCTURE FILTER FABRIC WRAP

LAST REVISION 11/01/20	REVISION DESCRIPTION:	FDOT FY 2023-24 STANDARD PLANS	SUPPLEMENTARY DETAILS FOR DRAINAGE STRUCTURES	INDEX 425-001	SHEET 3 of 8

11/01/23

- *Updated all references of Filter Fabric to Geotextile.*
- *Updates references pointing to Specification 985 to instead point to Specification 514.*
- *Add clarification in notes for types of Geotextile.*

Index 430-012 U-Type Concrete Endwalls Energy Dissipator 30” to 72” Pipe

Sheet 1: Update Filter Fabric to Geotextile

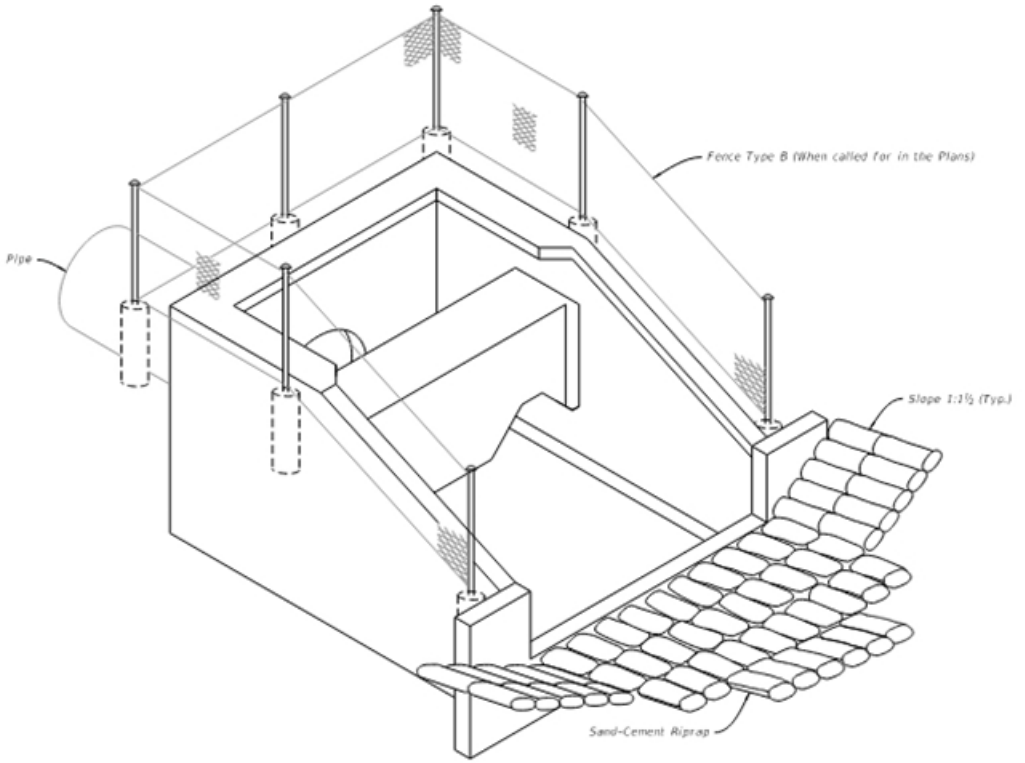
GENERAL NOTES:

1. Use Class II concrete.
2. Chamfer all exposed edges ¾".
3. See Index 550-002 for details of Type B fencing.
4. Quantities shown are for estimating purposes only.

Note 5 - Install Type D-2 geotextile in accordance with Specification 514.

TABLE OF CONTENTS:

Sheet	Description
1	General Notes and Contents
2	Dimensional Details
3	Reinforcing Details and Bending Diagram



U-TYPE CONCRETE ENDWALLS

11/01/23

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	U-TYPE CONCRETE ENDWALLS ENERGY DISSIPATOR 30" TO 72" PIPE	INDEX 430-012	SHEET 1 of 3

- *Updated all references of Filter Fabric to Geotextile.*
- *Updates references pointing to Specification 985 to instead point to Specification 514.*
- *Add clarification in notes for types of Geotextile.*

Sheet 1: Update Filter Fabric to Geotextile

GENERAL NOTES:

1. Install underdrain pipe that is either 4" smooth or 5" corrugated tubing unless otherwise shown in the Plans. The size to be furnished will be based on the nominal internal diameter of a pipe with a smooth interior wall. Except when prohibited by the Plans, the special provisions or this standard, pipe with a corrugated interior wall may be provided based on the following size equivalency.

   4" smooth interior equivalent to 5" corrugated interior
   5" smooth interior equivalent to 6" corrugated interior
   6" smooth interior equivalent to 8" corrugated interior
   8" smooth interior equivalent to 10" corrugated interior

2. Fine aggregate is quartz sand meeting the requirements of Specifications 902-4.

3. Coarse aggregate is gravel or stone meeting the requirements of Specification 901-2 or 901-3. The gradation is in accordance with Specifications 901, Grades 4, 467, 5, 56 or 57 stone unless otherwise shown restricted in the Plans.

4. Install Underdrain Type I, II, III and V in accordance with Specification 440.

5. ~~Install filter fabric Type D-3 in accordance with Specifications 985.~~ The internal ~~filter fabric~~ of Type V underdrain has a permittivity of 0.7 /sec. and an AOS of #40 sieve.

6. When Type I is used, use a ~~filter fabric~~ sock in accordance with Specification 948.

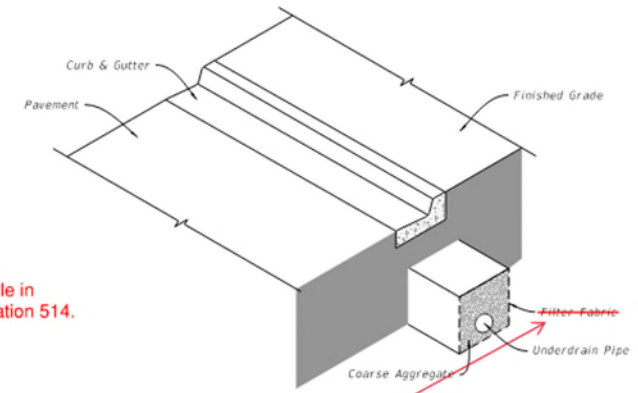
7. See Index 120-002 for the standard location of Type I, II, and III underdrain. The location of Type V underdrain and nonstandard locations of Type I, II, and III underdrain will be as detailed in the plans.

8. Install ~~filter fabric~~ joints with a overlap a minimum of 1". Install the internal ~~filter fabric~~ of Type V underdrain with an overlap into the coarse aggregate or the fine aggregate a minimum of 1".

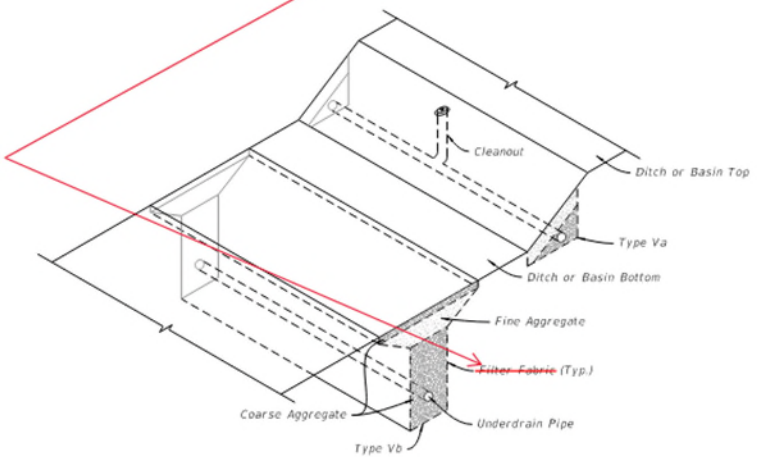
9. Use nonperforated pipes for underdrain outlet and make all bends using ⅛ (45 deg.) elbows. Construct 90 deg. bends with two ⅛ elbows separated by at least 1' of straight pipe. Outlet pipes stubbed into inlets or other drainage structures must be a minimum 6" above the structure flow line. Install concrete aprons, hardware cloth, and sod for outlet pipes discharging to grassed areas as shown in Index 446-001 for Edgedrain Outlets.

UPDATED Note 5 : Install Type D-3 geotextile in accordance with Specification 514.

CHANGED: Geotextile



UNDERDRAIN TYPE I, II, AND III ASSEMBLY
(Type II Shown, Others Similar)



UNDERDRAIN TYPE Va AND Vb ASSEMBLY

TABLE OF CONTENTS:

Sheet	Description
1	General Notes and Contents
2	Type I, II, and III Underdrains
3	Type Va, Vb, and Cleanout

11/01/23

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	UNDERDRAIN	INDEX	SHEET
~~11/01/19~~						440-001	1 of 3

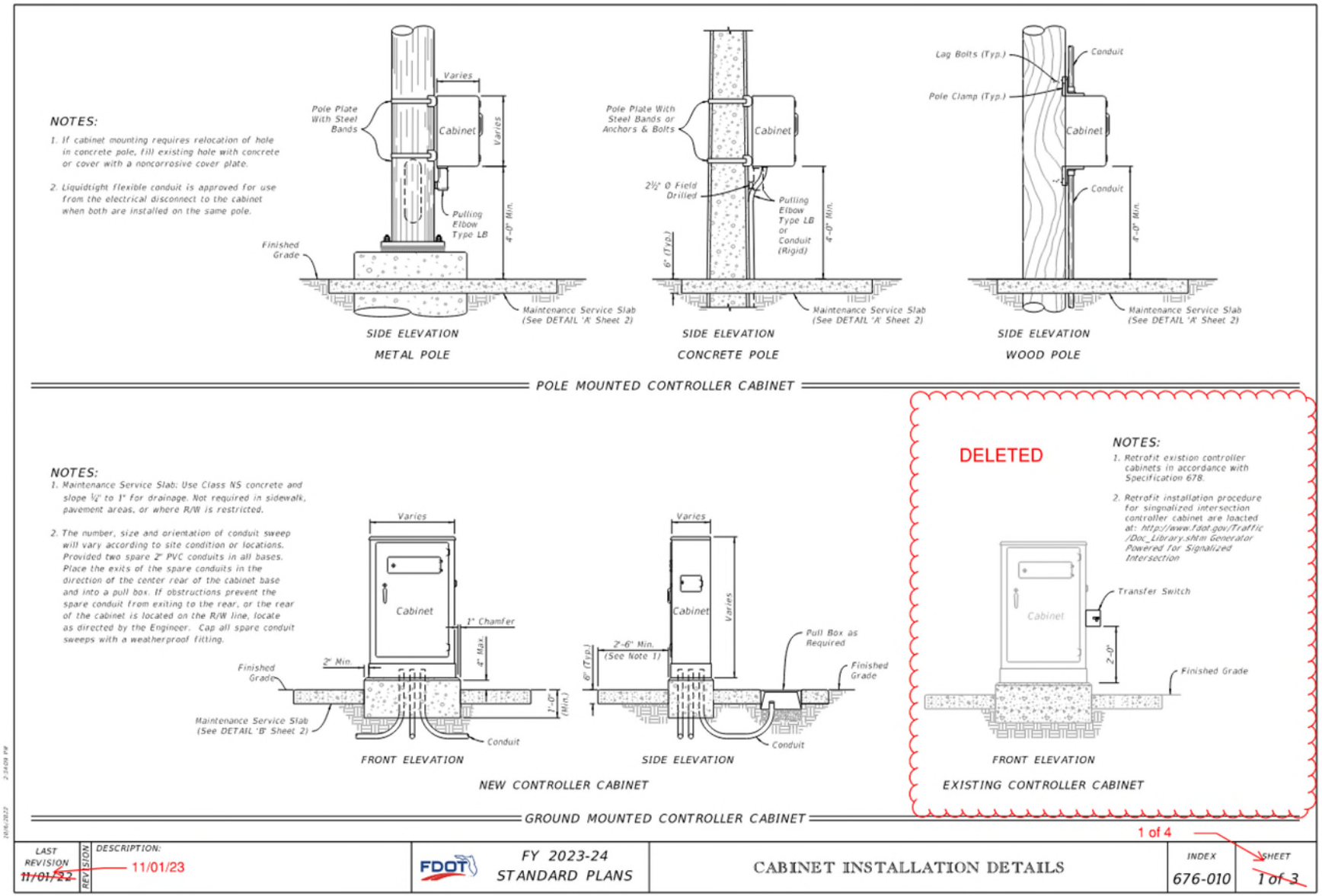
- *Updated all references of Filter Fabric to Geotextile.*
- *Updates references pointing to Specification 985 to instead point to Specification 514.*
- *Add clarification in notes for types of Geotextile.*

Standard Plans – Primary Updates:

1) ***Index 676-010 – Cabinet Installation Details***
   - *Deleted Existing Controller Cabinet details*
   - *Updated ITS Cabinet*
   - ***New** - Sheet 4 Ground Mounted Controller Cabinet Riser*

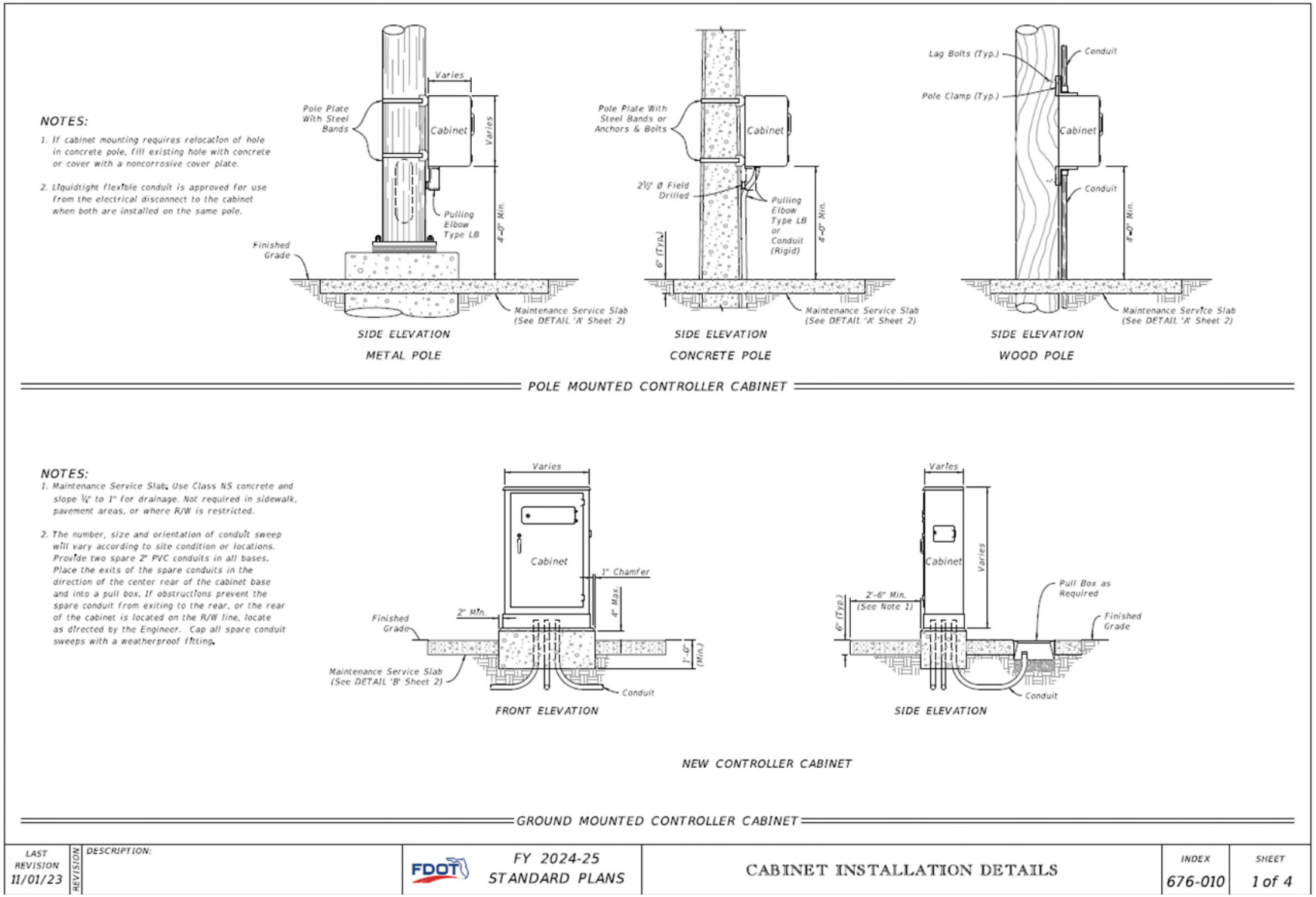
2) ***Index 700-101 – Typical Sections for Placement of Single and Multi-Column Signs***
   - *Added retroreflective strip to Wrong Way Driving Sign*

Redlined Sheet 1: Deleted Existing Controller Cabinet



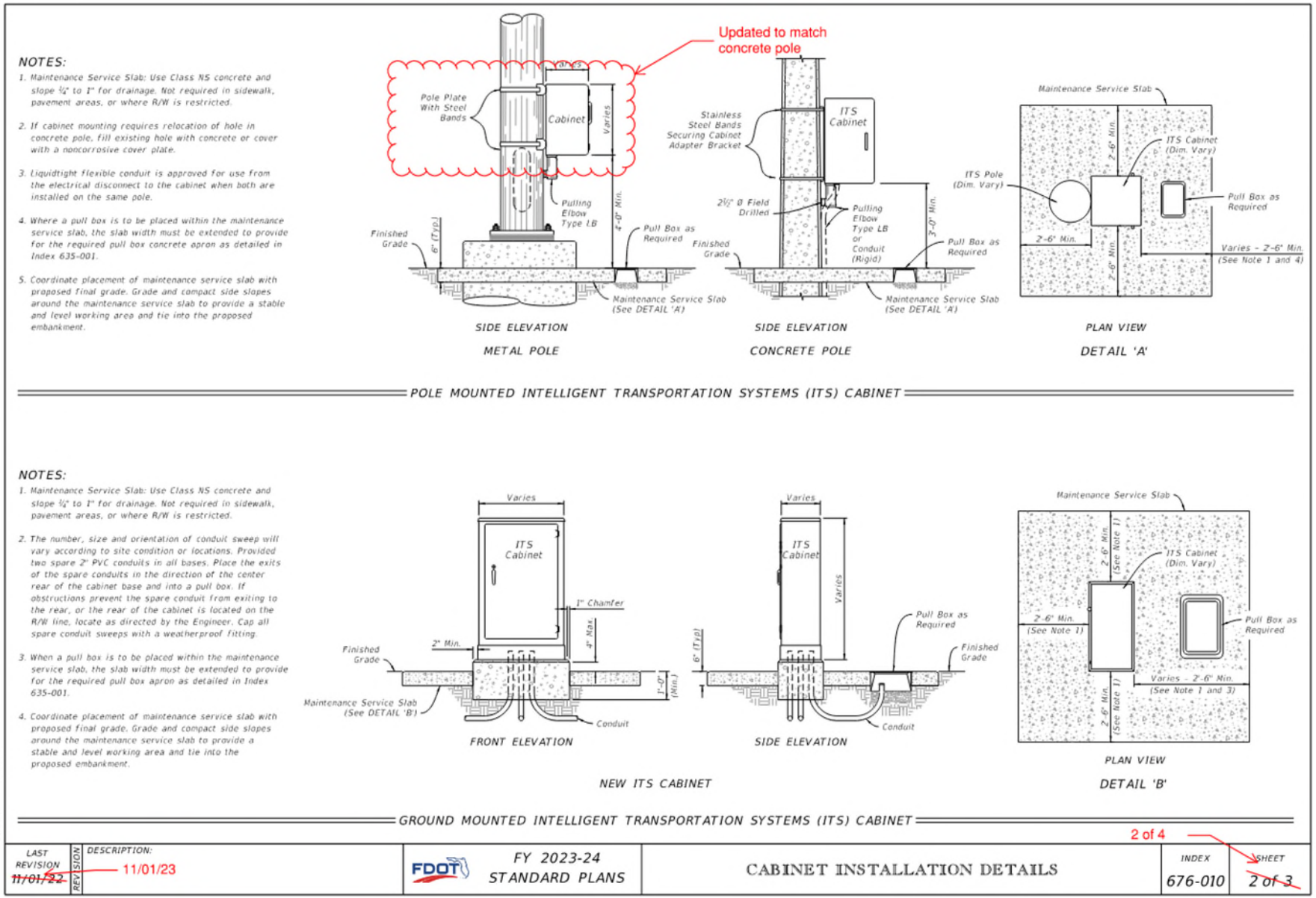
- *Deleted Existing Controller Cabinet Detail*
- *TERL Requested Deletion*

Updated Sheet 1: Deleted Existing Controller Cabinet Details



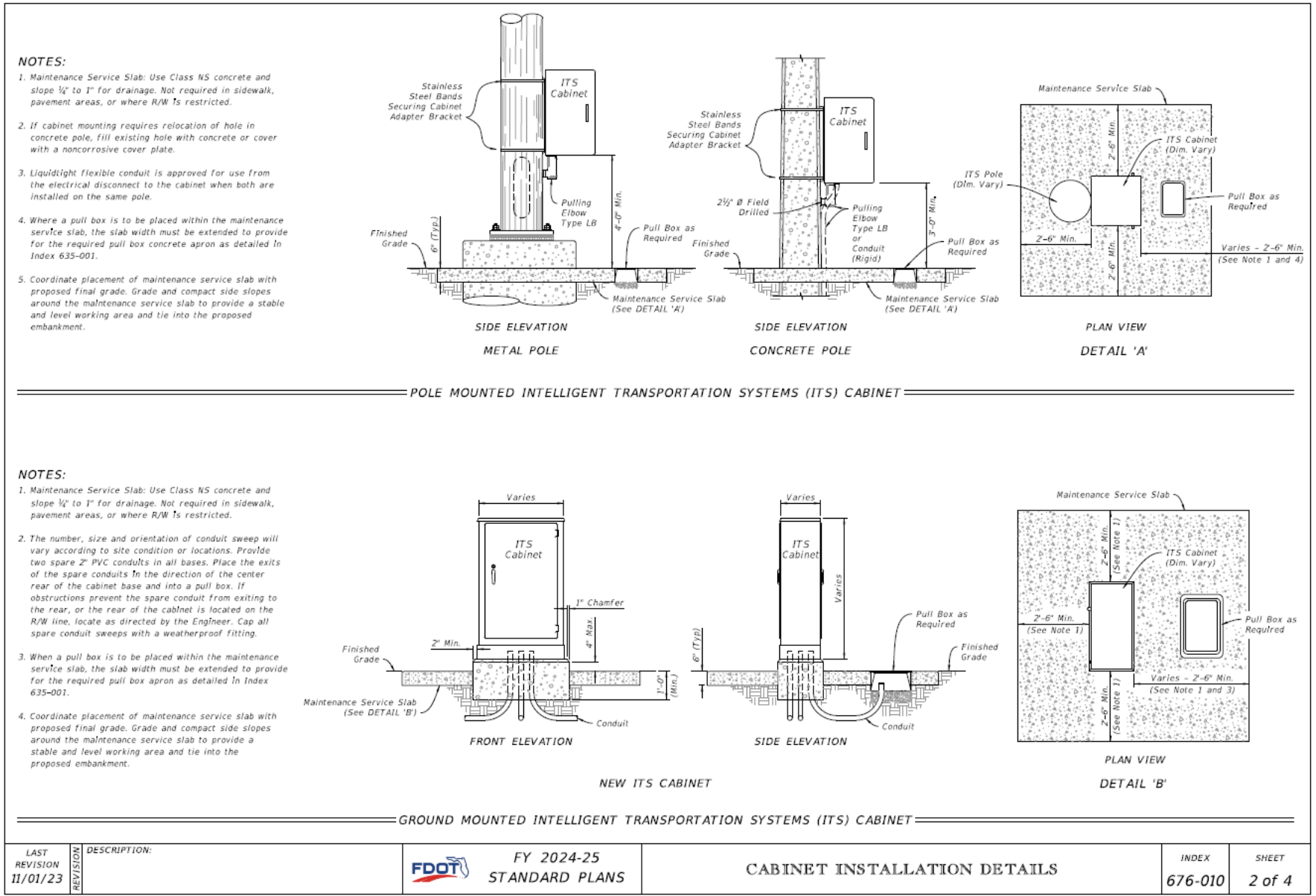
- *Deleted Existing Controller Cabinet Detail*
- *TERL Requested Deletion*

Redlined Sheet 2: Updated ITS Cabinet Detail



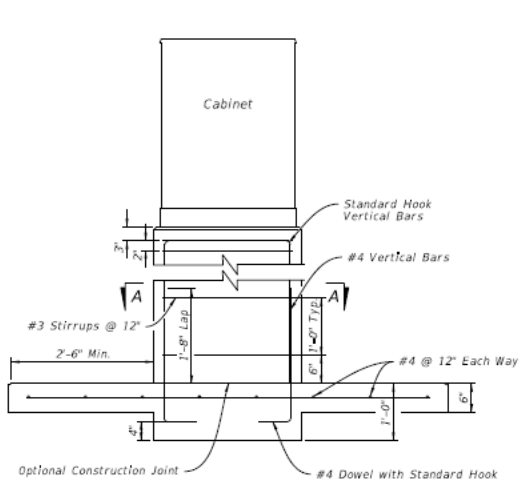
- *Update Metal Pole Cabinet Brackets*

Updated Sheet 2: Updated ITS Cabinet Detail

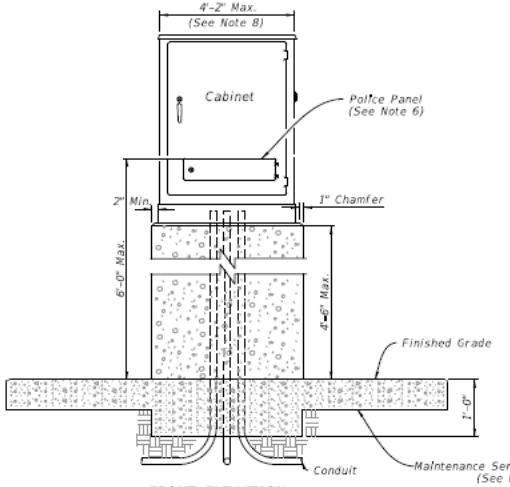


- *Update Metal Pole Cabinet Brackets*

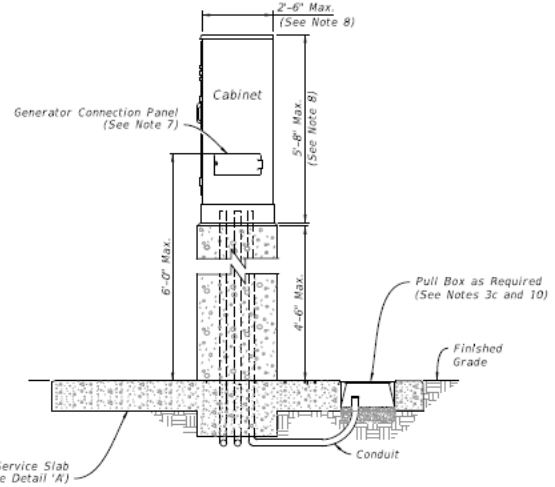
Sheet 4: NEW SHEET – Ground Mounted Controller Cabinet Riser



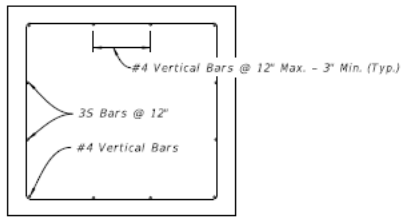
FRONT ELEVATION



FRONT ELEVATION



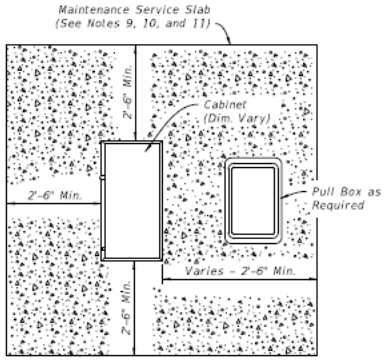
SIDE ELEVATION



SECTION A-A

NOTES

1. Install cabinet riser as called for in the Plans. Concrete riser shown, for other options, see Specification 676.
2. Concrete:
   a. Concrete will be in accordance with Specification 346.
   b. Concrete will be Class IV.
3. Reinforcing:
   a. Reinforcing will be in accordance with Specification 415.
   b. All reinforcing steel will have a 2" minimum cover unless noted otherwise.
   c. Adjust reinforcing to facilitate Pull Box. Add equal number of bars to to either side for each bar interrupted by Pull Box.
4. Generator connection cables will be extended by the same length as the riser's height.
5. Controller cabinet depicted. ITS cabinet similar.
6. Locate Police Panel at bottom of cabinet assembly.
7. Locate generator connection panel at bottom of cabinet assembly.
8. Riser dimensions shown are based on maximum cabinet dimensions per the APL.
9. Slope maintenance slab ¼" to 1" for drainage. Not required in sidewalk, pavement areas, or where R/W is restricted.
10. When a pull box is to be placed within the maintenance service slab, the slab width must be extended to provide for the required pull box apron as detailed in Index 635-001.
11. Coordinate placement of maintenance service slab with proposed final grade. Grade and compact side slopes around the maintenance service slab to provide a stable and level working area and tie into the proposed embankment.
12. The number, size and orientation of conduit sweep will vary according to site condition or location. Provide two spare 2" PVC conduits in all bases. Place the exits of the two spare conduits in the direction of the center rear of the cabinet base and into a pull box. If obstructions prevent the spare conduit from existing to the rear, or the rear of the cabinet is located on the R/W line, locate as directed by the Engineer. Cap all spare conduit sweeps with a weatherproof fitting.



PLAN VIEW

DETAIL 'A'

GROUND MOUNTED CONTROLLER CABINET RISER

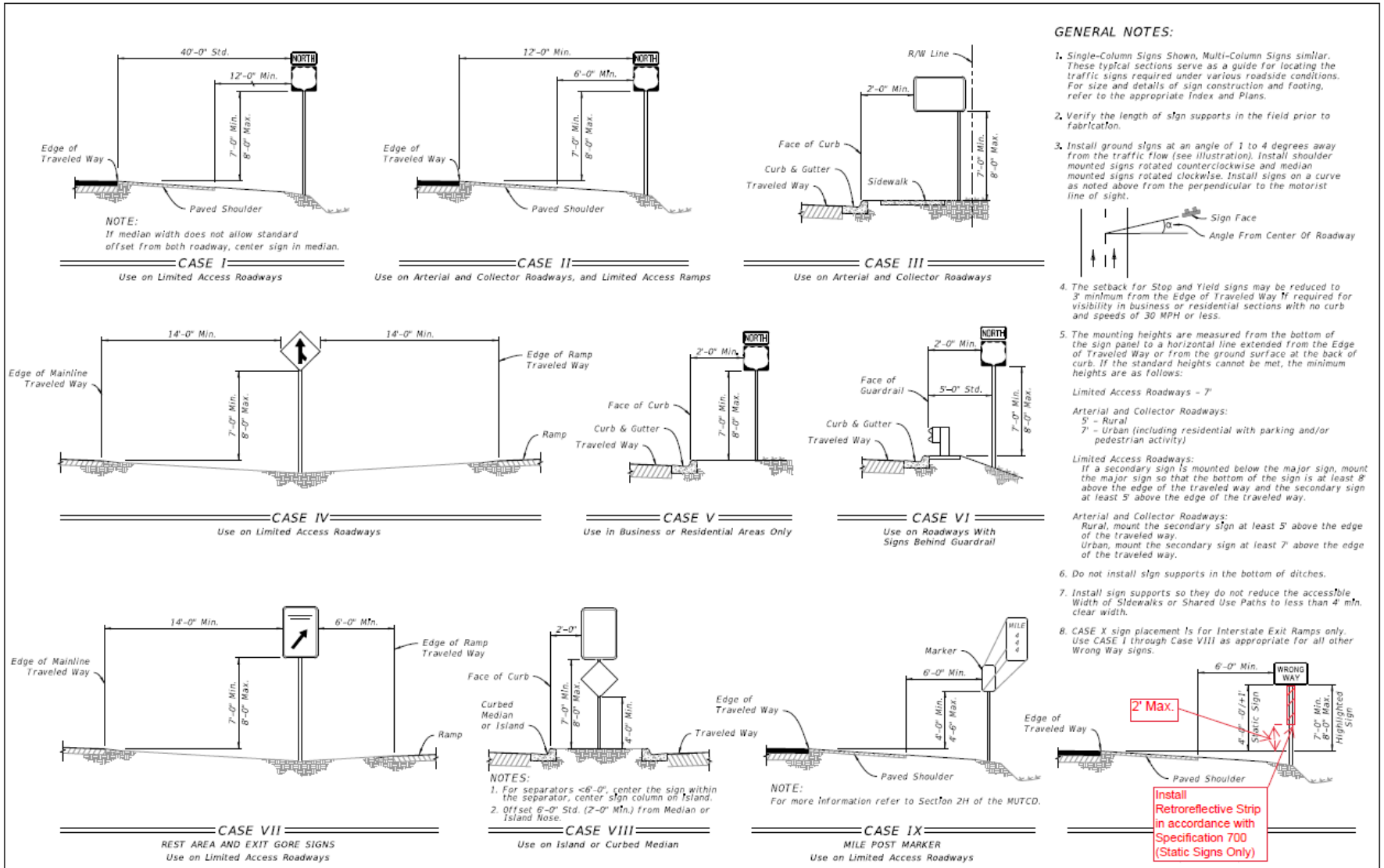
LAST REVISION	REVISION	DESCRIPTION:	FDOT		INDEX	SHEET
11/01/23			FY 2024-25 STANDARD PLANS	CABINET INSTALLATION DETAILS	676-010	4 of 4

10/3/2023 2:30:52 PM

- *New Cabinet Risers*
- *Districts Requested Standard Detail for Riser*
- *Associated Specification 676 Revision*

Index 700-101 Typ Sect for Placement of Single and Multi-Column Signs

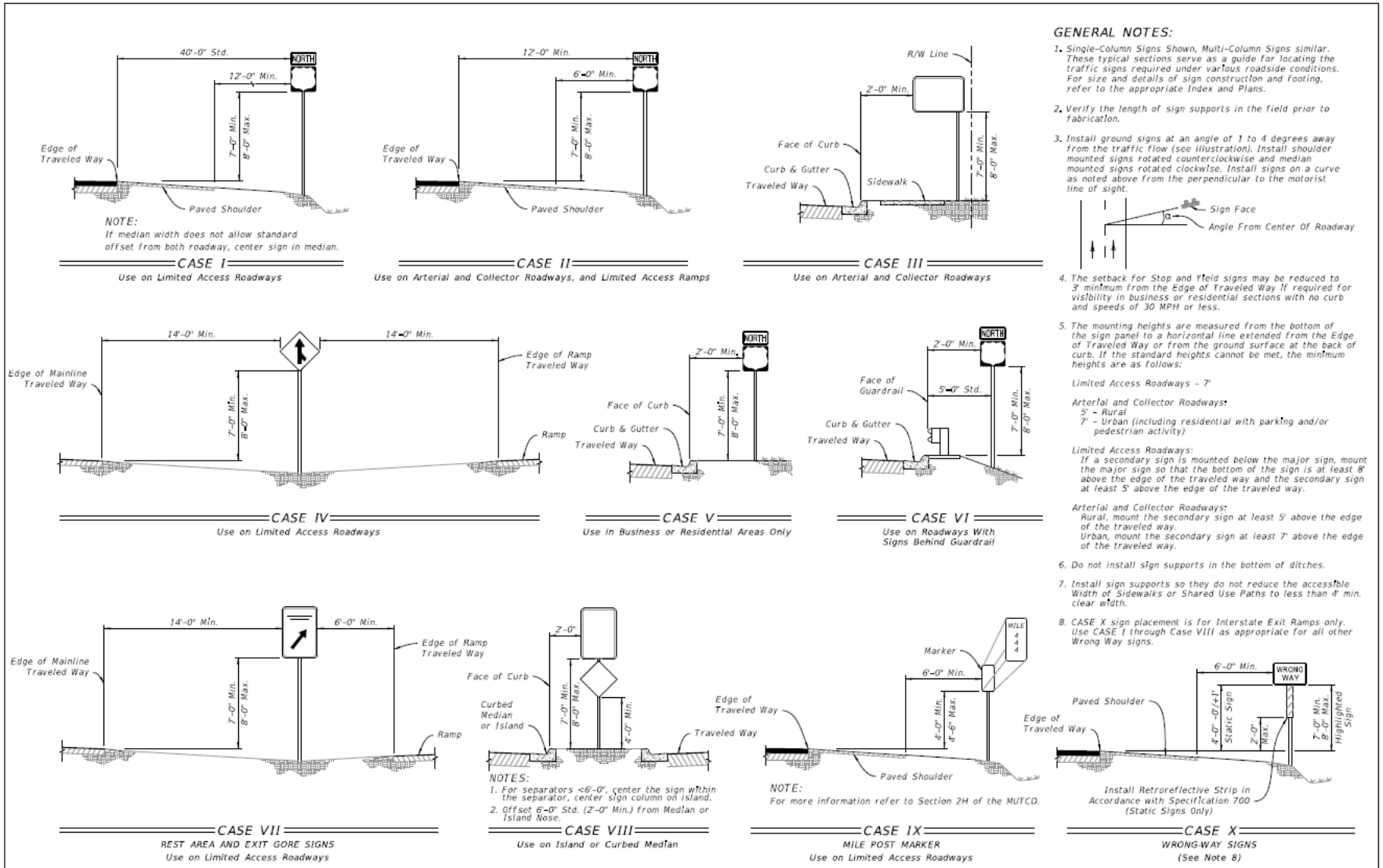
Redline Sheet 1: Retroreflective Strip Case X



- *Updated Case X*
- *Retroreflective Strip required per FDM 230.4*
- *Static WWD Sign ONLY*
- *Standard Specification 700 updated*

Index 700-101 Typ Sect for Placement of Single and Multi-Column Signs

Updated Sheet 1: Retroreflective Strip Case X



- *Updated Case X*
- *Retroreflective Strip required per FDM 230.4*
- *Static WWD Sign ONLY*
- *Standard Specification 700 updated*

Contact Us:

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FY 2024-25 Standard Plans Update Training

Richard Stepp, P.E.
Standard Plans Engineer
Central Office, Roadway Design Office
richard.stepp@dot.state.fl.us

Standard Plans – Primary Updates:

1) ***Index 521-001 – Concrete Barrier***
   - *Added "Shoulder Rocking" compatibility*

2) ***Index 536-001 – Guardrail***
   - ***New*** *Sheet 21 - Bridge trailing curb options*
   - *Revised washer usage – new exclusions*

3) ***Index 639-001 – Service Point Details***
   - ***New*** *taller concrete service pole option*

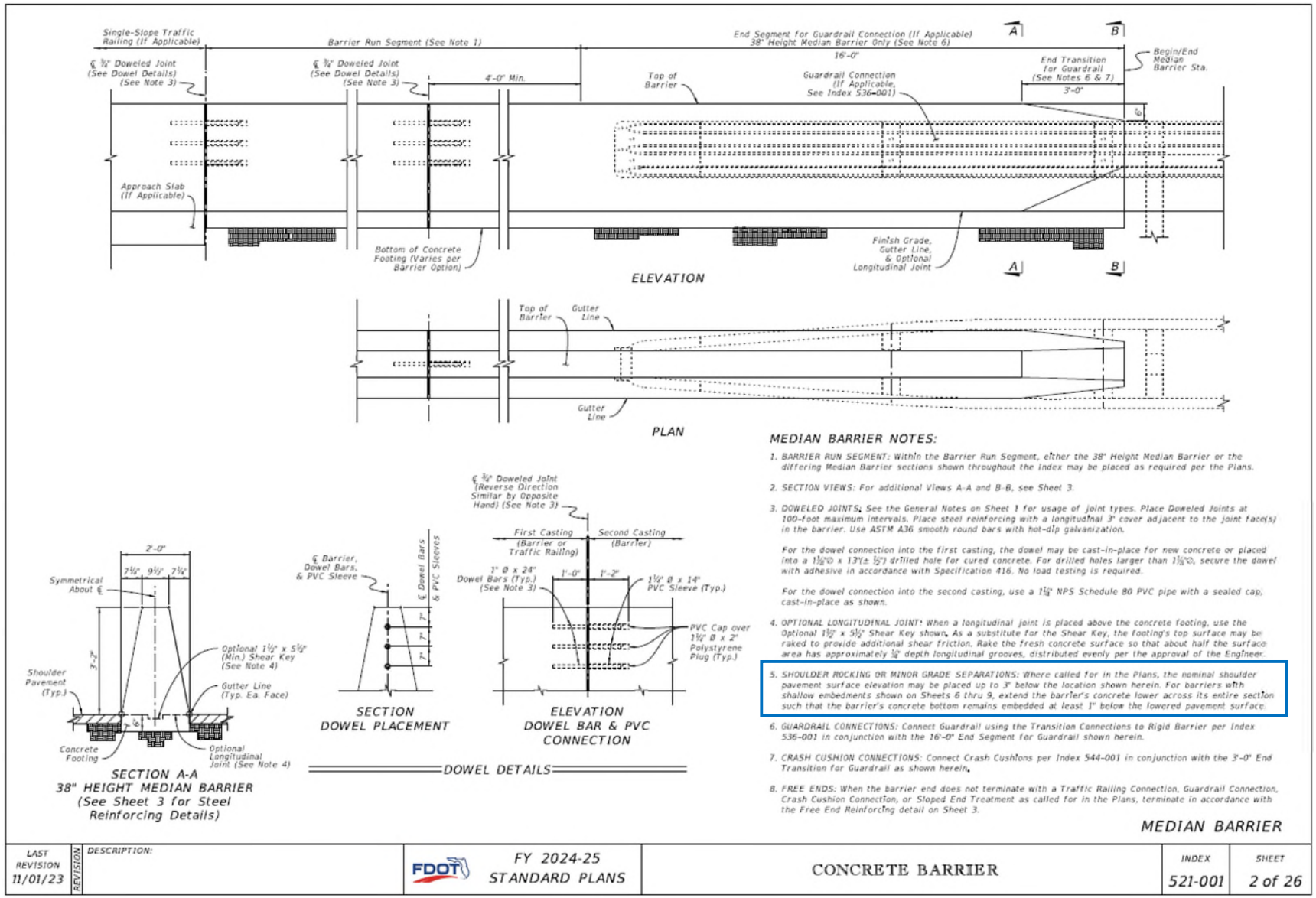
4) ***Index 715 Series - Lighting***
   - *Revised access door location in pole base*
   - ***New*** *precast shaft foundation option*
   - *Added structural grout pad details for spread footing option*

5) ***Index D635-005 – Fiber Optic Splice Vault***
   - ***New*** *– Standardized for Turnpike Usage*

Standard Plans – Primary Updates:

1) ***Index 521-001 – Concrete Barrier***
   - *Added "Shoulder Rocking" compatibility*

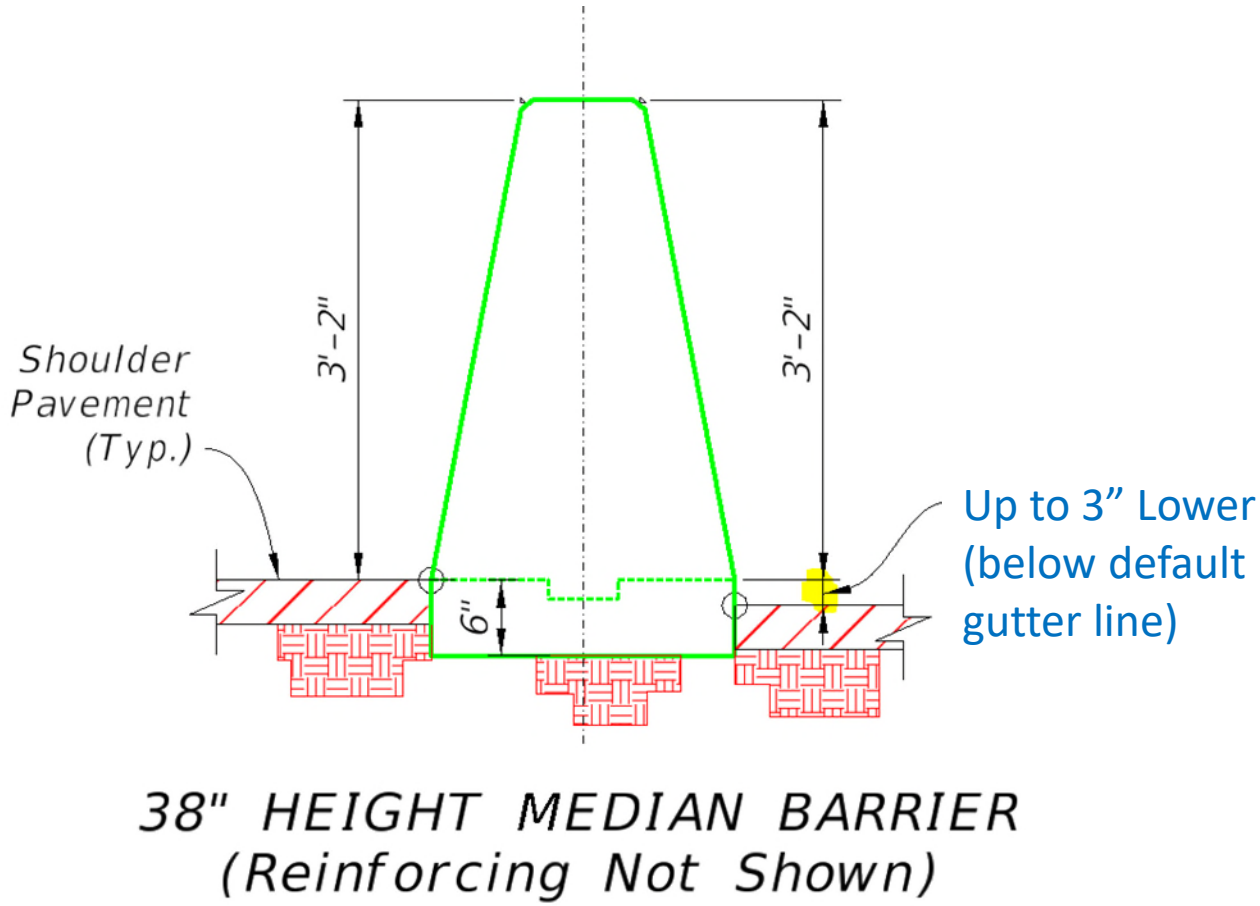
Sheet 2: Median Barrier – Added Shoulder Rocking



- ***Revised Note 5:***
  <u>Shoulder Rocking</u> or Minor Grade Separations

- Pavement surface elevation may be placed up to 3” below what is shown in the Standard Plans

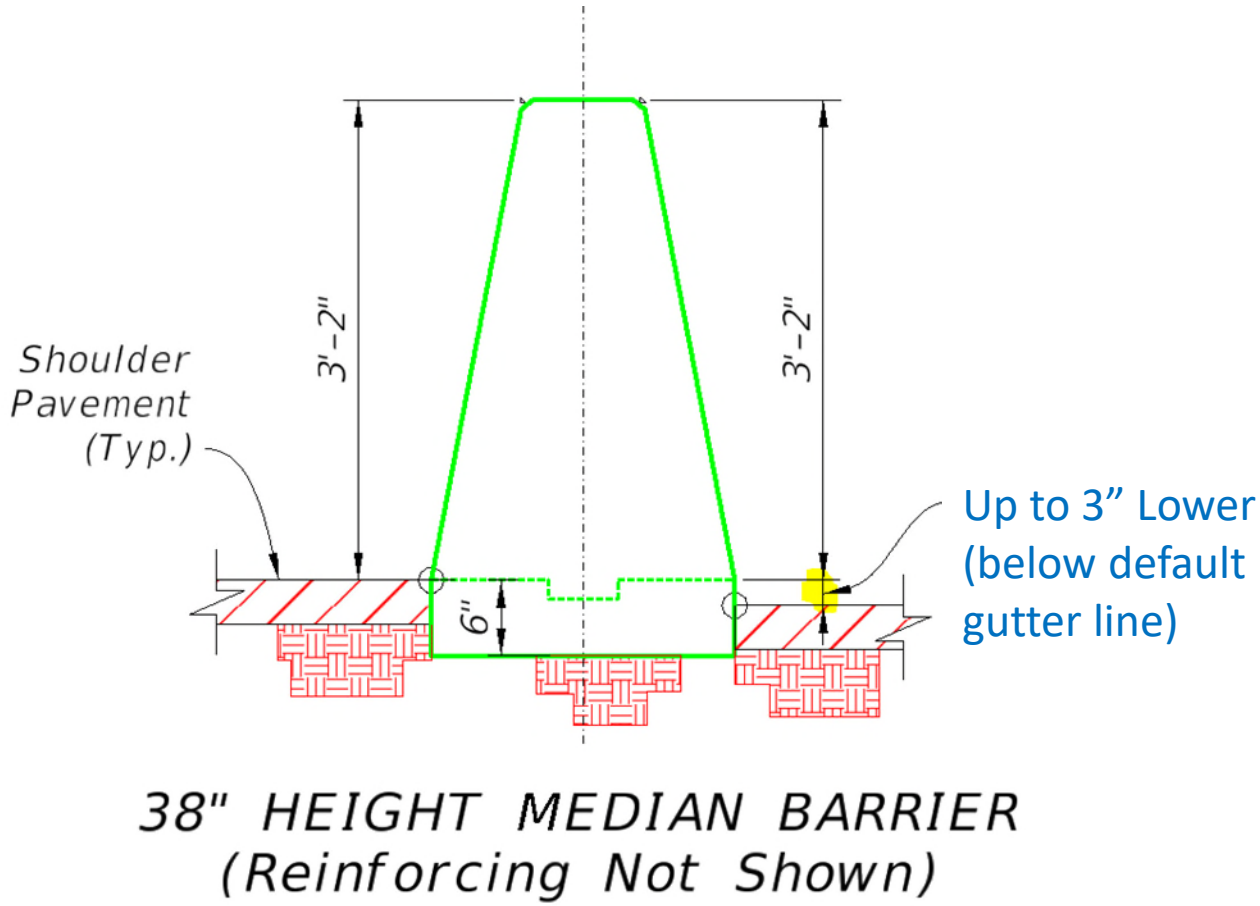
Sheet 2: Median Barrier – Added Shoulder Rocking



- ***Revised Note 5:***
  <u>Shoulder Rocking</u> or
  Minor Grade Separations

- Pavement surface elevation may be placed up to 3" below what is shown in the Standard Plans

Sheet 2: Median Barrier – Added Shoulder Rocking



- ***Revised Note 5:***
  <u>Shoulder Rocking</u> or
  Minor Grade Separations

- ***New*** Shoulder Rocking Policy and Plans Content Requirements Shown in:
  - **FDM 211.4.2.1**
  - **FDM 915.3.5.1**
  - **SPI 521-001, Part J**

Standard Plans – Primary Updates:

1) ***Index 521-001 – Concrete Barrier***
   - *Added "Shoulder Rocking" compatibility*

2) ***Index 536-001 – Guardrail***
   - ***New** - Sheet 21 - Bridge trailing curb options*
   - *Revised washer usage – new exclusions*

Sheet 1: Contents and General Notes

SHEET	CONTENTS
1	General Notes; Index Contents
2	General, TL-3 Guardrail - Installed Plan and Elevation
3	Low-Speed, TL-2 Guardrail - Installed Plan and Elevation
4	W-Beam and Thrie-Beam Panel Details
5	Post and Offset Block Details
6	Guardrail Sections - Heights and Adjacent Slopes
7	End Treatment - Approach Terminal Geometry, Parallel
8	End Treatment - Approach Terminal Geometry, Curbed and Double Faced
9	End Treatment - Trailing Anchorage
10	End Treatment - Component Details
11	End Treatment - Controlled Release Terminal (CRT) System
12	Layout for CRT System - Side Roads and Driveways
13	Approach Transition Connection to Rigid Barrier - General, TL-3
14	Approach Transition Connection to Rigid Barrier - General, TL-3 - Curb Connections
15	Approach Transition Connection to Rigid Barrier - Low-Speed, TL-2
16	Approach Transition Connection to Rigid Barrier - Low-Speed, TL-2 - Curb Connections
17	Approach Transition Connection to Rigid Barrier - Details
18	Approach Transition Connection to Rigid Barrier - Double Faced Guardrail
19	Layout to Rigid Barrier - Approach Ends
20	Layout to Rigid Barrier - Approach Ends with Double Faced Guardrail Layout to Rigid Barrier - Trailing Ends Trailing End Transition Connection to Rigid Barrier
21	Trailing End Transition Connection to Rigid Barrier - Curb Connections
22	Rub Rail Details
23	Pedestrian Safety Treatment - Pipe Rail
24	Modified Mount - Special Steel Post for Concrete Structure Mount; Modified Mount - Encased Post for Shallow Mount; Modified Mount - Frangible Leave-Out for Concrete Surface Mount
25	Barrier Delineators - Post Mounted; Clear Space - Reduced Post Spacing for Hazards; ⅝" Button-Head Bolt System

GENERAL NOTES:

1. INSTALLATION: Construct guardrail in accordance with Specification 536.

   This Index, along with the plans and the manufacturers' drawings on the Approved Products List (APL), is sufficiently detailed for installation of General Guardrail, Low-Speed Guardrail, End Treatment assemblies, and their connecting options shown herein. This precludes requirements for shop drawing submittals unless otherwise specified in the plans.

2. COMPATIBILITY: The General Guardrail in this Index is based on the Midwest Guardrail System (MGS) design, with an approximate height of 31" at the top of the Panel (2'-1" mounting height at vertical ℄ of Panel) and a midspan panel splice as shown on Sheet 2. Guardrail components included on the APL, which are compatible with this Index, may also be identified as 31" or MGS Guardrail.

3. STANDARD COMPONENTS: Standard guardrail components, including posts, panels, and bolt systems, are based on the Task Force 13 Publication: Guide to Roadside Hardware Components (http://tf13.org/Guides/componentGuide/).

4. BUTTON-HEAD BOLTS: Install Button-Head Bolts where indicated using bolts, nuts, and washers as defined on Sheet 25. Place washers under nuts against timber posts. Washers are not required at steel post flanges and panel lap splices. Do not place washers between bolt heads and panels, except where otherwise shown in this Index.

5. HEX-HEAD BOLTS: Install Hex-Head Bolts where indicated using bolts, nuts, and washers in accordance with material properties of Specification 967. Place washers under nuts.

6. MISCELLANEOUS ASPHALT PAVEMENT: Install Miscellaneous Asphalt Pavement where indicated with a tolerance of ± ½" depth and in accordance with Specification 339.

7. ADJACENT SIDEWALKS & SHARED USE PATHS: When guardrail posts are placed within 4'-0" of a sidewalk or shared use path, use timber posts, or use steel posts only if treated with Pipe Rail as shown on Sheet 23.

   When timber posts are used, one of the following safety treatments is required for the bolt(s) protruding from the back face of the posts:
   a. After tightening the nut, trim the protruding post bolt flush with the nut and galvanize per Specification 562.
   b. Use post bolts 15" in length and countersink the washer and nut between 1" and 1½" deep into the back face of the post.
   c. Use 15" post bolts with sleeve nuts and washers.

   When End Treatment posts are within 4'-0" of a sidewalk or shared use path, steel posts are not permitted within the End Treatment segment. Terminate the Pipe Rail outside of End Treatment segments, as noted per Sheet 23.

8. NESTED W-BEAM: Where called for in the plans, install two W-Beam Panels mounted flush per location, securing all panels with Button-Head Bolts threaded through aligned slots and holes. 2" Button-Head Bolts are permitted for panel splice locations.

9. CONNECTION TO RIGID BARRIER: The connections to Rigid Barrier in this Index only apply to newly constructed bridge Traffic Railing and Concrete Barrier or where the complete Approach Transition Connection to Rigid Barrier shown herein can be installed without conflicting with existing Traffic Railings, structures, or approach slabs.

   For connecting guardrail to existing bridge Traffic Railings, see Indexes 536-002, 521-404, and 521-405.

10. CONNECTION TO EXISTING GUARDRAIL: Where a transition to existing guardrail at 27" height is required, linearly transition the new guardrail height over a distance ranging from 25'-0" to 31'-3". Height transitions must occur outside of End Treatment and Approach Transition segments.

    Provide an immediate transition to the required midspan panel splice using the available panel options on Sheet 4 (9'-4½" or 15'-7½" panel). Alternatively, this transition to midspan panel splice may be achieved by installing a single reduced post spacing of 3'- 1½" within the new guardrail, immediately adjacent to the connection location.

11. PLANS CALLOUTS: Begin/End Station labels are shown throughout this Index as they correspond to the station and offset callouts specified in the plans.

    In the plans, Begin/End Guardrail Station refers to the General TL-3 Guardrail Pay Item, and it may be abbreviated as Begin/End GR. Station. Where the Low-Speed TL-2 Guardrail Pay Item is specifically required, the callout in the plans will then specify Begin/End TL-2 GR. Station.

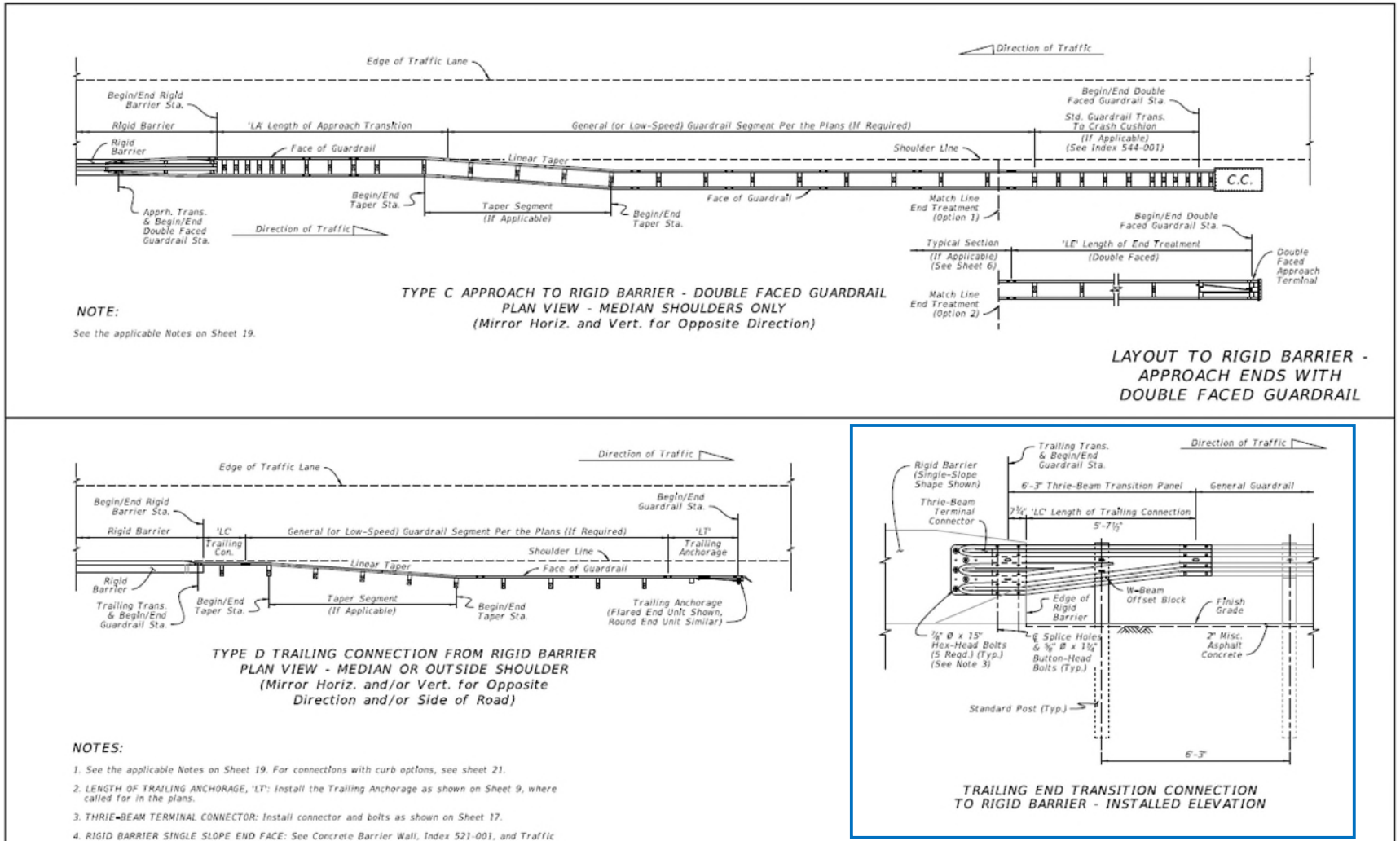
12. QUANTITY MEASUREMENT: Measure guardrail and corresponding components as defined in Specification 536. The Guardrail length is measured along the centerline of installed Panels, between the points labeled Begin/End Guardrail Station shown on the following Index Sheets and defined in the plans (typically measured from the ℄ of the panel's post bolt slots at the approach/trailing ends).

LAST REVISION 11/01/23	REVISION DESCRIPTION:	FDOT FY 2024-25 STANDARD PLANS	GUARDRAIL	INDEX 536-001	SHEET 1 of 25

- ***Revised Note 4:***
  Washer Requirements
  Washers now optional against steel flanges. Also, not used a panel splices (Big Contractor Ask!)

- ***New Sheet 21:***
  Trailing End Transition Connection to Rigid Barrier: Curb Connection Options

Sheet 20: Layout to Rigid Barriers, Trailing Ends



NOTES:

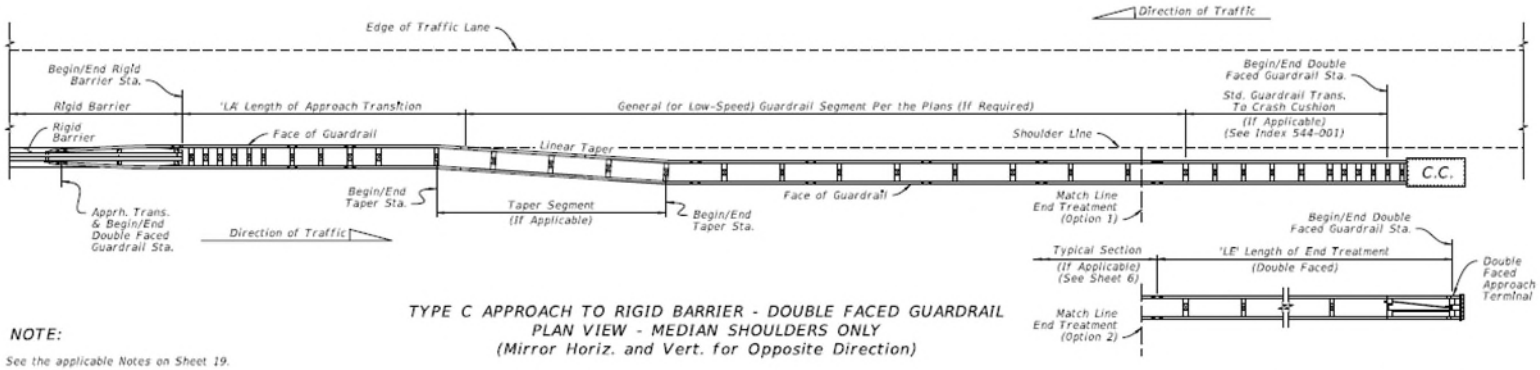
1. See the applicable Notes on Sheet 19. For connections with curb options, see sheet 21.
2. LENGTH OF TRAILING ANCHORAGE, 'LT': Install the Trailing Anchorage as shown on Sheet 9, where called for in the plans.
3. THRIE-BEAM TERMINAL CONNECTOR: Install connector and bolts as shown on Sheet 17.
4. RIGID BARRIER SINGLE SLOPE END FACE: See Concrete Barrier Wall, Index 521-001, and Traffic Railing, Indexes 521-422 and 521-423, for details.

LAYOUT TO RIGID BARRIER - TRAILING ENDS

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2024-25 STANDARD PLANS	GUARDRAIL	INDEX	SHEET
11/01/23						536-001	20 of 25

- ***Previously,*** *Only Sheet 20* shows basic guardrail connection on trailing end of bridge, with no curb connection
- Note that curb is not required for crashworthiness (unlike on approach end)…
- BUT, designers have requested curb drawings for water conveyance or compatibility with curbed roads

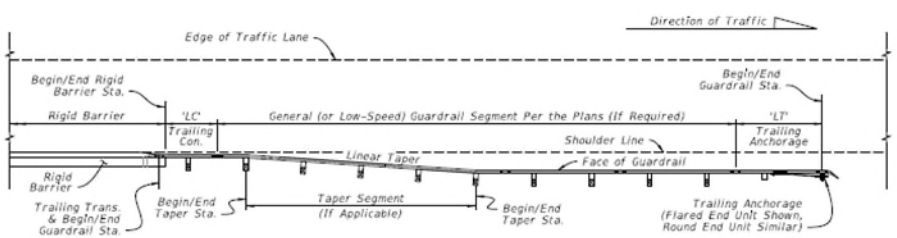
Sheet 20: Layout to Rigid Barriers, Trailing Ends



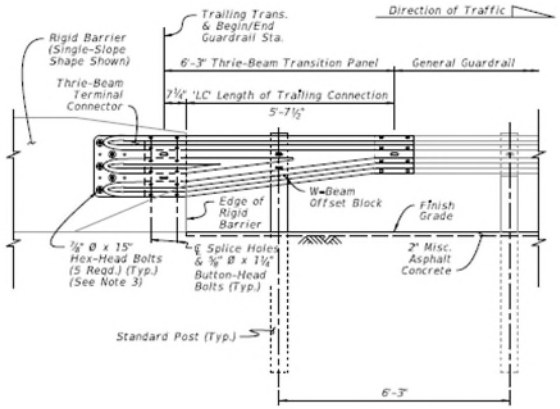
TYPE C APPROACH TO RIGID BARRIER - DOUBLE FACED GUARDRAIL
PLAN VIEW - MEDIAN SHOULDERS ONLY
(Mirror Horiz. and Vert. for Opposite Direction)

NOTE:
See the applicable Notes on Sheet 19.

LAYOUT TO RIGID BARRIER - APPROACH ENDS WITH DOUBLE FACED GUARDRAIL



TYPE D TRAILING CONNECTION FROM RIGID BARRIER
PLAN VIEW - MEDIAN OR OUTSIDE SHOULDER
(Mirror Horiz. and/or Vert. for Opposite Direction and/or Side of Road)



TRAILING END TRANSITION CONNECTION
TO RIGID BARRIER - INSTALLED ELEVATION

NOTES:

1. See the applicable Notes on Sheet 19. For connections with curb options, see sheet 21.
2. LENGTH OF TRAILING ANCHORAGE, 'LT': Install the Trailing Anchorage as shown on Sheet 9, where called for in the plans.
3. THRIE-BEAM TERMINAL CONNECTOR: Install connector and bolts as shown on Sheet 17.
4. RIGID BARRIER SINGLE SLOPE END FACE: See Concrete Barrier Wall, Index 521-001, and Traffic Railing, Indexes 521-422 and 521-423, for details.

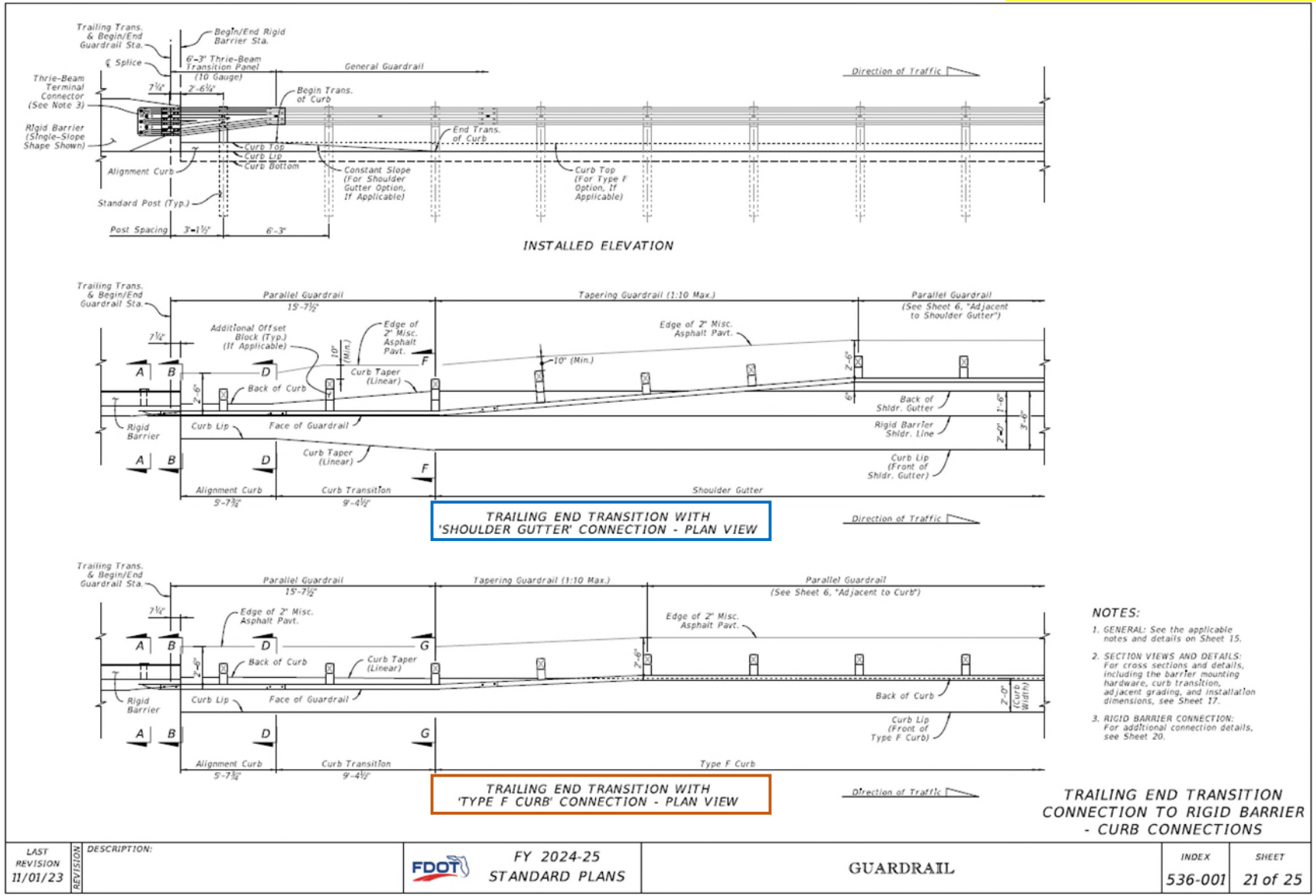
LAYOUT TO RIGID BARRIER - TRAILING ENDS

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2024-25 STANDARD PLANS	GUARDRAIL	INDEX	SHEET
11/01/23						536-001	20 of 25

- ***Revised Note 1*** *Refers to Sheet 21 for:*

New *trailing curb connection options*

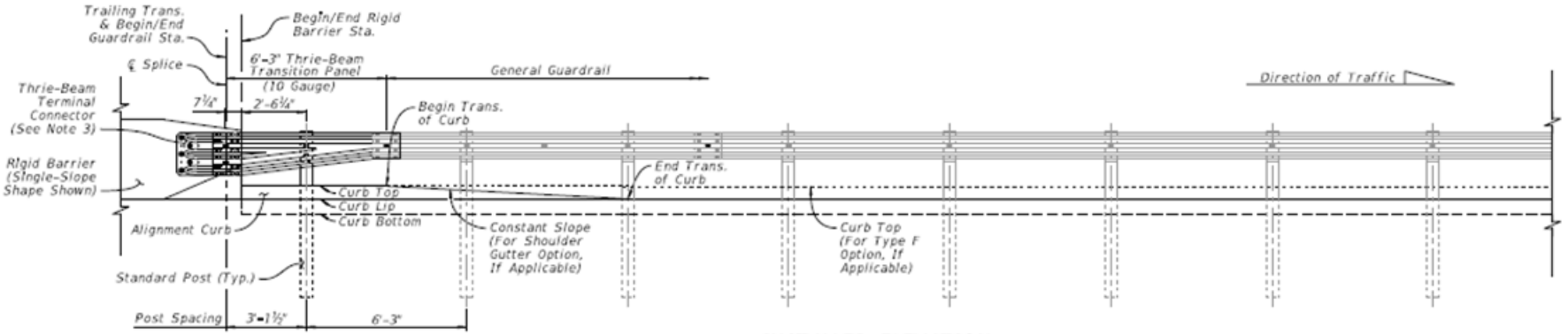
New Sheet 21: Trailing End Bridge Connections – Curb Connection Options



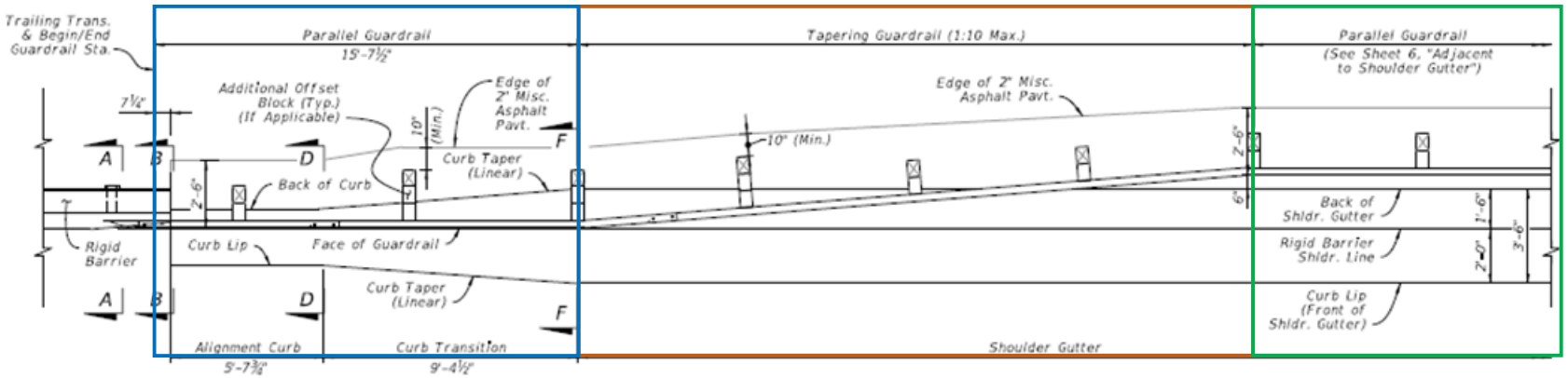
- *New trailing end options for:*
  - ***Shoulder Gutter Connection***
  - ***Type F Curb Option***

- *NOTE: Similar to the Approach End, but shorter with less posts and panels (cost savings)*

New Sheet 21: Trailing End Bridge Connections – Shoulder Gutter Example



INSTALLED ELEVATION

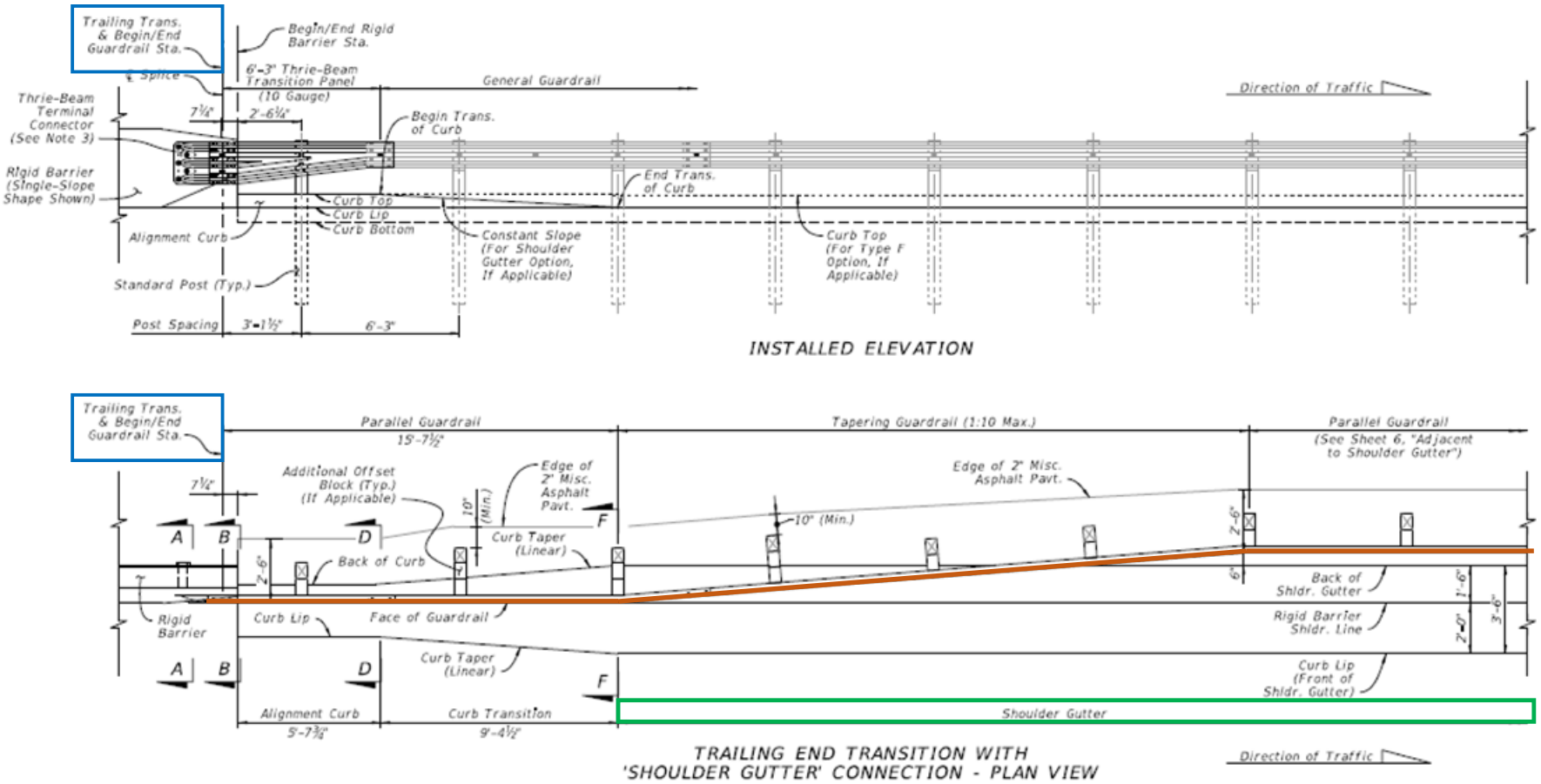


TRAILING END TRANSITION WITH 'SHOULDER GUTTER' CONNECTION - PLAN VIEW

Section views on Sheet 17!
(same as Approach Transition)

- ***Parallel Guardrail –*** *Connection, includes:*
  - *Alignment Curb*
  - *Curb Transition*
- ***Tapering Guardrail –*** *(Shoulder Gutter is Established)*
- ***Parallel Guardrail –*** *Typical Section, See:*
  - *Sheet 6 Shoulder Gutter*
  - *FDM 210.4 and… Figure 215.4.6*

New Sheet 21: Trailing End Bridge Connections – Curb Connection Options



Roadway Plan View Needs:

- *Call out "Trailing Transition…" Station*
- *Trailing Transition Pay Item: 536-8-113*
- *Draw guardrail closely matching the Standard Plans*
- *Call out shoulder gutter limits and tabulate*

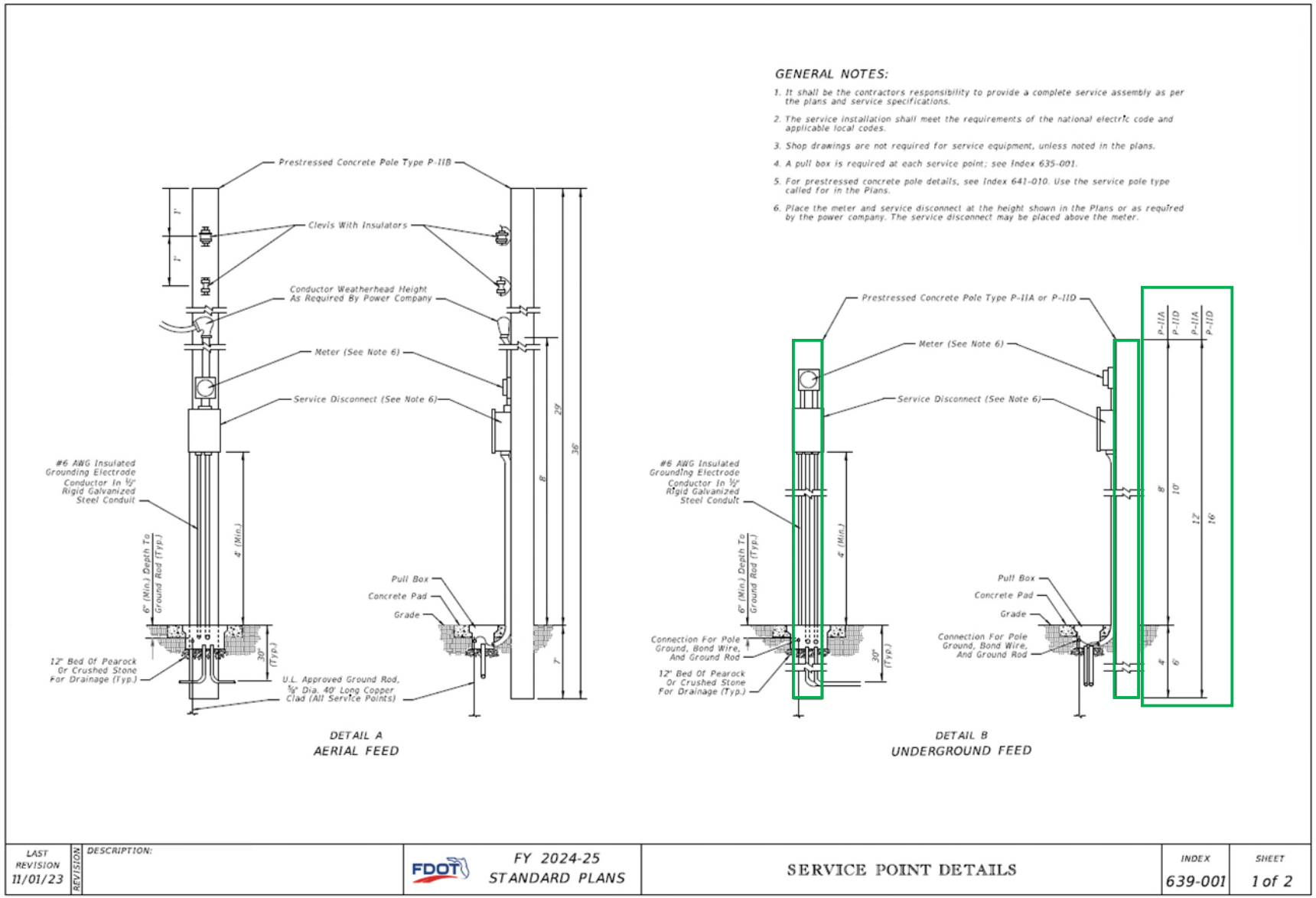
Standard Plans – Primary Updates:

1) ***Index 521-001 – Concrete Barrier***
   - *Added "Shoulder Rocking" compatibility*

2) ***Index 536-001 – Guardrail***
   - ***New** - Sheet 21 - Bridge trailing curb options*
   - *Revised washer usage – new exclusions*

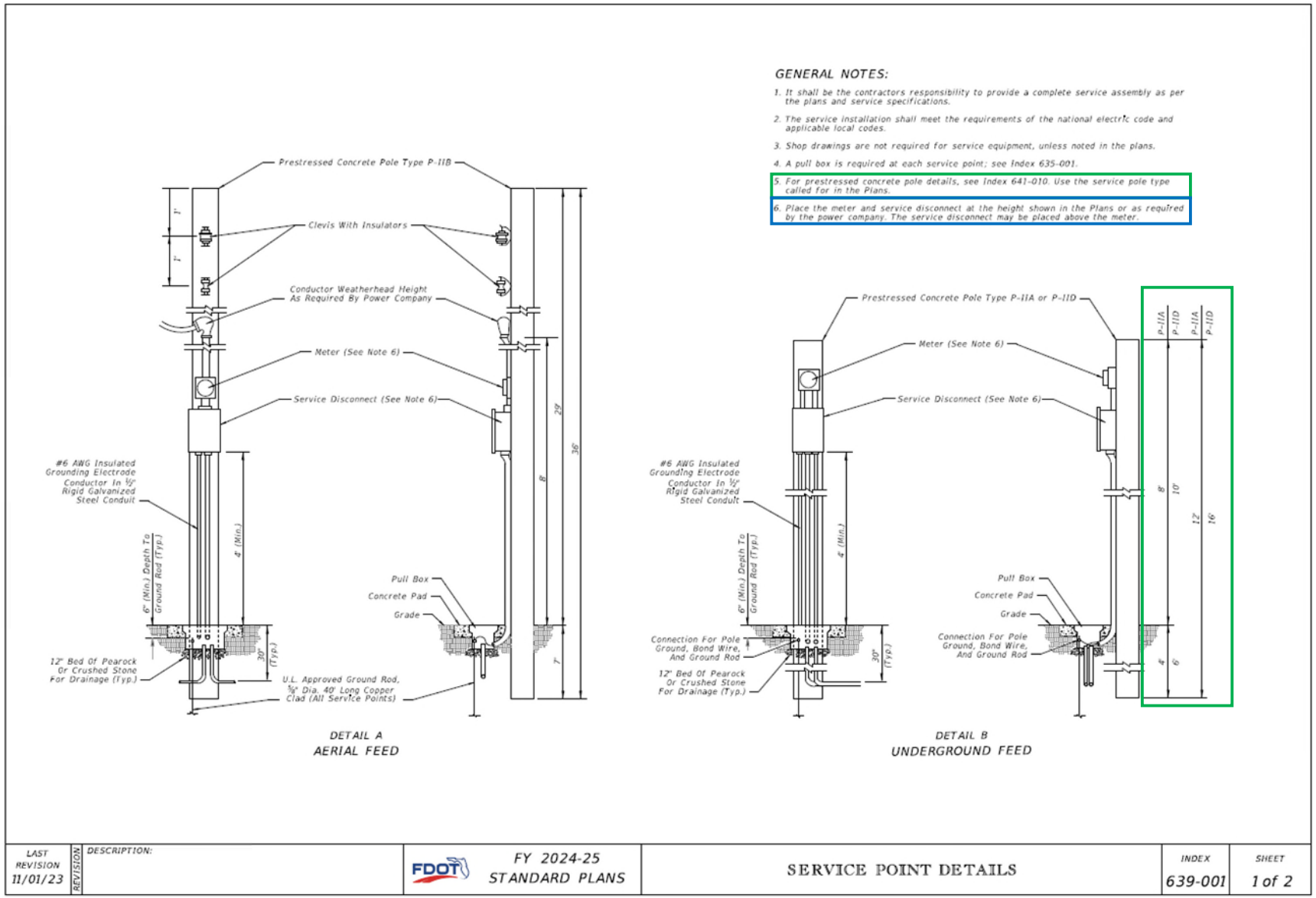
3) ***Index 639-001 – Service Point Details***
   - ***New** taller concrete service pole option*

Sheet 1: Detail B – Underground Feed – Service Poles



- ***New*** *16-foot service pole option*
- *Service Pole Type PIID (16-foot) was recently added to Index 641-010, Sheet 5*
- *Options to Differentiate Poles:*
  - *Type P-IIA – 12-foot*
  - *Type P-IID – 16-foot*

Sheet 1: Detail B – Underground Feed – Service Poles



- *Note 5, Pole Types: Added to reference Index 641-010*
- *Note 6, Device Heights: Added to explain that Meter and Service Pole disconnect height are defined by the EOR in the Plans or by the Power Company.*
  - *Meter can be placed below Service Disconnect if needed.*

Standard Plans – Primary Updates:

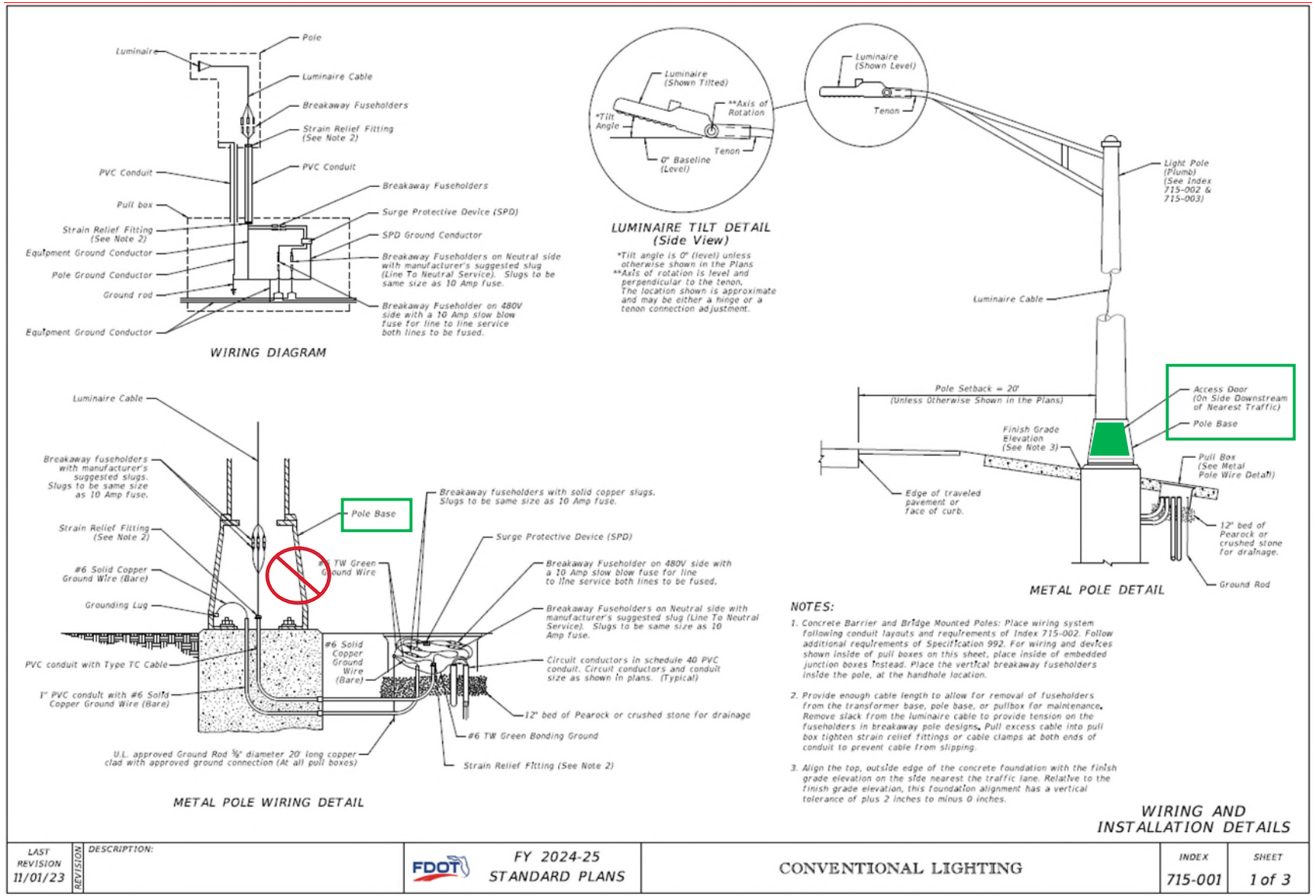
1) ***Index 521-001 – Concrete Barrier***
   - *Added "Shoulder Rocking" compatibility*

2) ***Index 536-001 – Guardrail***
   - ***New** - Sheet 21 - Bridge trailing curb options*
   - *Revised washer usage – new exclusions*

3) ***Index 639-001 – Service Point Details***
   - ***New** taller concrete service pole option*

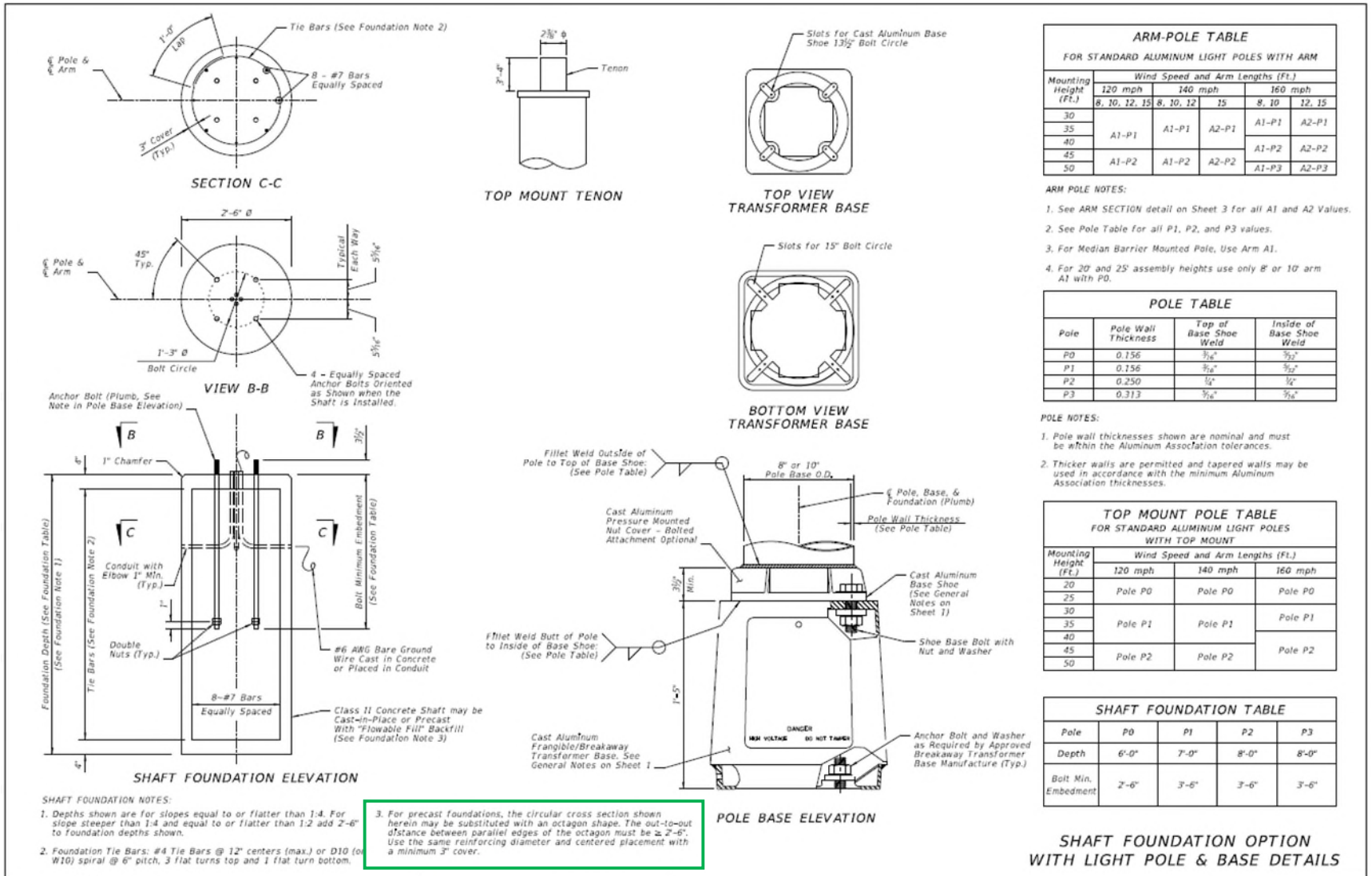
4) ***Index 715 Series - Lighting***
   - *Revised access door location in pole base*
   - ***New** precast shaft foundation option*
   - *Added structural grout pad details for spread footing option*

Sheet 1: Details updated for Access Door Orientation



- *Removed 'Access Door' from metal pole wiring detail (may misinterpret orientation)*
- *Added 'Access Door' detail to the Metal Pole Detail (orientation clearly established)*
  - *Place on downstream side of nearest traffic*
  - *Matches Standard Specifications 715-3*

Sheet 4: Foundation Details – New Option Added



ARM-POLE TABLE
FOR STANDARD ALUMINUM LIGHT POLES WITH ARM

Mounting Height (Ft.)	Wind Speed and Arm Lengths (Ft.)					
	120 mph	140 mph		160 mph		
	8, 10, 12, 15	8, 10, 12	15	8, 10	12, 15	
30	A1-P1	A1-P1	A2-P1	A1-P1	A2-P1	
35						
40				A1-P2	A2-P2	
45	A1-P2	A1-P2	A2-P2			
50				A1-P3	A2-P3	

ARM POLE NOTES:
1. See ARM SECTION detail on Sheet 3 for all A1 and A2 Values.
2. See Pole Table for all P1, P2, and P3 values.
3. For Median Barrier Mounted Pole, Use Arm A1.
4. For 20' and 25' assembly heights use only 8' or 10' arm A1 with P0.

POLE TABLE

Pole	Pole Wall Thickness	Top of Base Shoe Weld	Inside of Base Shoe Weld
P0	0.156	3/16"	5/32"
P1	0.156	3/16"	5/32"
P2	0.250	1/4"	1/4"
P3	0.313	5/16"	5/16"

POLE NOTES:
1. Pole wall thicknesses shown are nominal and must be within the Aluminum Association tolerances.
2. Thicker walls are permitted and tapered walls may be used in accordance with the minimum Aluminum Association thicknesses.

TOP MOUNT POLE TABLE
FOR STANDARD ALUMINUM LIGHT POLES WITH TOP MOUNT

Mounting Height (Ft.)	Wind Speed and Arm Lengths (Ft.)		
	120 mph	140 mph	160 mph
20	Pole P0	Pole P0	Pole P0
25			
30	Pole P1	Pole P1	Pole P1
35			
40			
45	Pole P2	Pole P2	Pole P2
50			

SHAFT FOUNDATION TABLE

Pole	P0	P1	P2	P3
Depth	6'-0"	7'-0"	8'-0"	8'-0"
Bolt Min. Embedment	2'-6"	3'-6"	3'-6"	3'-6"

SHAFT FOUNDATION NOTES:
1. Depths shown are for slopes equal to or flatter than 1:4. For slope steeper than 1:4 and equal to or flatter than 1:2 add 2'-6" to foundation depths shown.
2. Foundation Tie Bars: #4 Tie Bars @ 12" centers (max.) or D10 (or W10) spiral @ 6" pitch, 3 flat turns top and 1 flat turn bottom.
3. For precast foundations, the circular cross section shown herein may be substituted with an octagon shape. The out-to-out distance between parallel edges of the octagon must be ≥ 2'-6". Use the same reinforcing diameter and centered placement with a minimum 3" cover.

SHAFT FOUNDATION OPTION WITH LIGHT POLE & BASE DETAILS

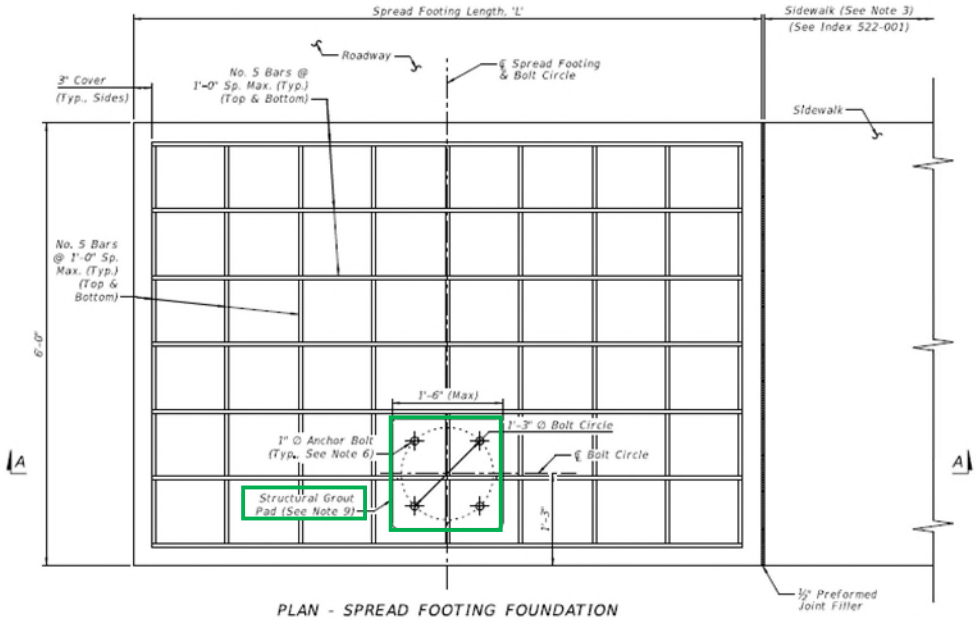
LAST REVISION	REVISION DESCRIPTION:	FDOT	FY 2024-25 STANDARD PLANS	STANDARD ALUMINUM LIGHTING	INDEX	SHEET
11/01/23					715-002	4 of 9

- *New Note 3: New option for <u>precast</u> foundations:*

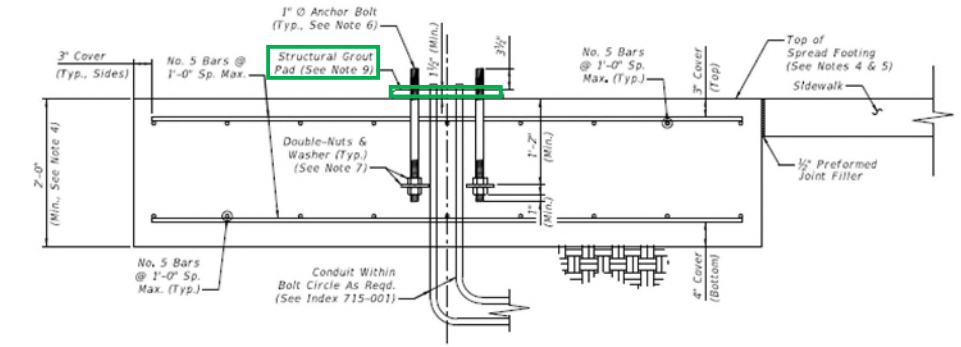
"For precast foundations, the circular cross section shown here may be substituted with an octagon shape. The out-to-out distance between parallel edges of the octagon must be ≥ 2'-6"…"

***NOTE:** This option was also added to:*
***715-003** Utility Conflict Pole*
***700-020** Multi-Column Ground Sign*

Sheet 5: Spread Footing Foundation Option



PLAN - SPREAD FOOTING FOUNDATION



SECTION A-A - SPREAD FOOTING FOUNDATION ELEVATION

SPREAD FOOTING LENGTH, 'L'			
Mounting Height (Ft.)	Wind Speed (All Arm Lengths)		
	120 mph	140 mph	160 mph
20	4'-6"	5'-0"	6'-0"
25	4'-6"	5'-0"	6'-0"
30	7'-0"	7'-0"	7'-0"
35	7'-0"	7'-0"	7'-0"
40	7'-0"	7'-0"	10'-0"
45	8'-6"	10'-0"	10'-0"
50	8'-6"	10'-0"	11'-6"

NOTES:

1. Install the Spread Footing Foundation Option only where called for in the Plans.
2. The Spread Footing Foundation Option is only permitted for use with single arm or top mount light poles. Where applicable, the pole arm must be oriented towards the roadway side of the footing as shown. Double arm configurations are not permitted.
3. Sidewalk placed on the other side or both sides of the spread footing is permitted where shown in the Plans. The sidewalk connection to spread footing requires the ½" expansion joint shown regardless of the side.
4. The top of the spread footing must match the cross slope of the adjacent sidewalk where applicable per the Plans. The nominal bottom of the spread footing must remain level.
5. Apply concrete surface finish to the top of the spread footing in accordance with Specification 522-7.
6. Mount the anchor bolts plumb. For the corresponding pole base details, see Sheet 4.
7. Place galvanized or zinc-plated steel washers with a minimum thickness of ¼". Use washers with a minimum size of 3½" ∅ round or 3"x3" square.
8. Where raised curb is called for in the Plans, provide a tooled cold joint with bond breaker between the foundation and back of raised curb. See Sheet 2 and the connection between concrete sidewalk and raised curb per Index 522-001.
9. Place a structural grout pad in accordance with Specification 934. The grout pad is square and centered on the bolt circle centerlines. Level the top of the grout pad and smooth the edges and corners per the approval of the Engineer. Install the transformer base in accordance with Sheet 4 and the manufacturer's specifications.

SPREAD FOOTING FOUNDATION OPTION

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2024-25 STANDARD PLANS	STANDARD ALUMINUM LIGHTING	INDEX	SHEET
11/01/23						715-002	5 of 9

- *New Structural Grout Pad*
  - *Assists with constructability*
  - *Supplements Spec 715-3.1 process*
  - *Grout in Spec 934*
- *Updated Note 7 – Revised washer requirements for anchorage*
- *NOTE: Spread Footing Compatibility with Utility Conflict Poles is planned. Leeway given in meantime. Contact CO if needed.*

Training Announcement:

FLORIDA LTAP CENTER

U.S. Department of Transportation
Federal Highway Administration

1) FDOT Roadside Barrier Design (Est. 12 hours)

- *FDM 215 - Roadside Safety (Usage Needs, Length of Need, General Requirements, etc.)*
- *Standard Plans 536-001 Guardrail, 521-001 Concrete Barrier, 521-002 Pier Protection Barrier*

2) FDOT Basic Lighting Design (Est. 9 hours)

- *FDM 231 - Lighting (Usage Needs, Warranting, Photometric, Voltage Drop, LDAR, etc.)*
- *Standard Plans 715 Series, Conventional Lighting and High Mast Lighting*

Expected for 2024

https://floridaltap.org/

Standard Plans – Primary Updates:

1) ***Index 521-001 – Concrete Barrier***
   - *Added "Shoulder Rocking" compatibility*

2) ***Index 536-001 – Guardrail***
   - ***New** - Sheet 21 - Bridge trailing curb options*
   - *Revised washer usage – new exclusions*

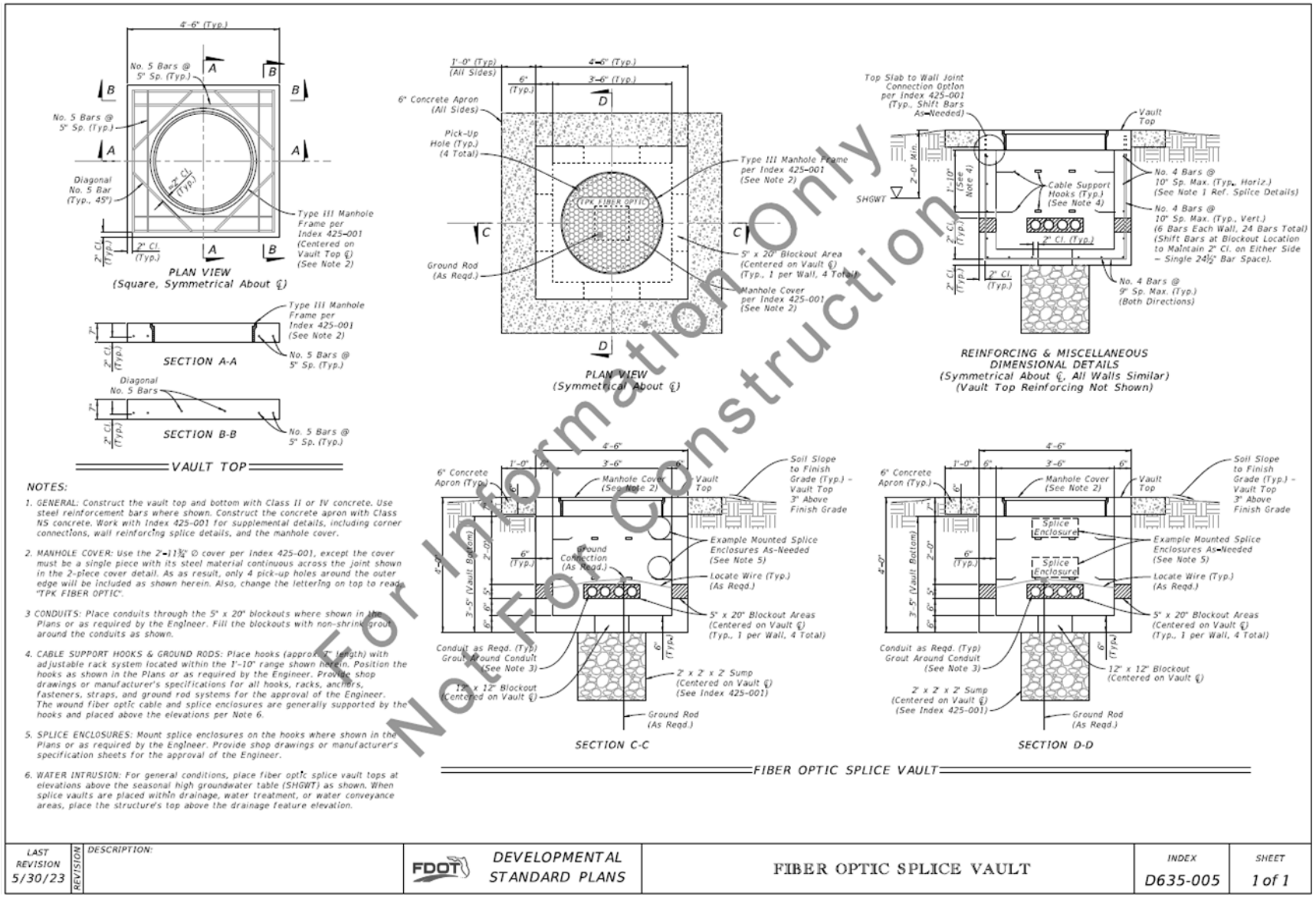
3) ***Index 639-001 – Service Point Details***
   - ***New** taller concrete service pole option*

4) ***Index 715 Series - Lighting***
   - *Revised access door location in pole base*
   - ***New** precast shaft foundation option*
   - *Added structural grout pad details for spread footing option*

5) ***Index D635-005 – Fiber Optic Splice Vault***
   - ***New** – Standardized for Turnpike Usage*

Index D635-005: Fiber Optic Splice Vault

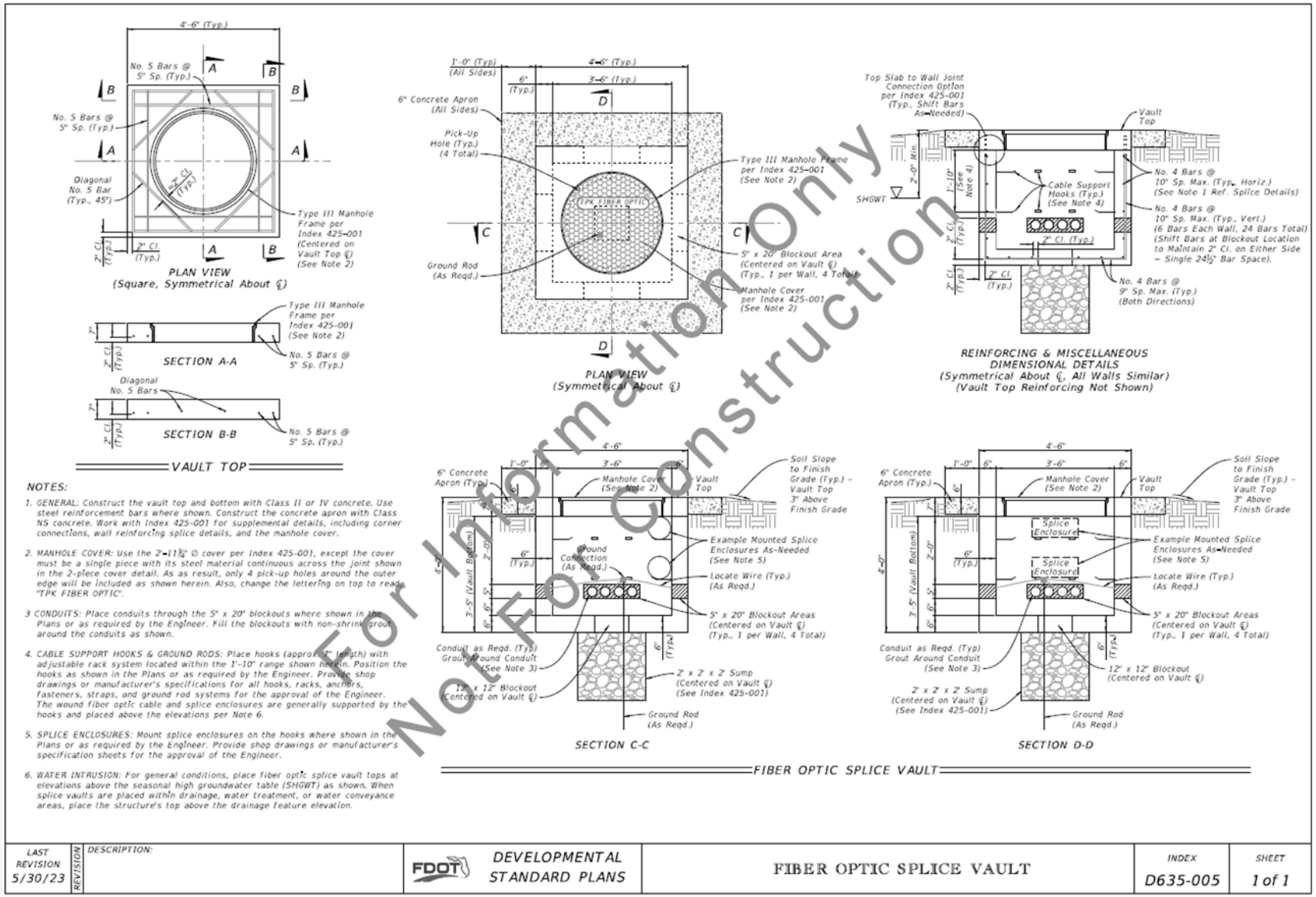
Sheet 1: *All-New* Developmental Standard Plans



- ***Added at the request of the Florida Turnpike Enterprise***
- *"Vaults" are typically placed in medians to facilitate fiber optic access points and connections*
- *Standardization removes the need for project-specific structural design and shop drawings*
- *SDO designed for H-20 load*
- *Uses Type III Manhole frame per Index 425-001*

Index D635-005: Fiber Optic Splice Vault

Sheet 1: *All-New* Developmental Standard Plans



- *Plan is to publish with "regular" Standard Plans next year*
- ***For this year…***
  - *Request approval for usage from CO Monitor per FDM 115.2.4*
  - *For supporting Specs, use with Blanket MSP for 635 & 996 (See Specs on the Web)*
  - ***Pay Item is 635-4***
  - ***I'll guide you!***

Contact Us:

Richard Stepp, P.E.

FDOT Roadway Design Office
605 Suwannee Street MS 32
Tallahassee, Florida 32399-0450

✉: richard.stepp@dot.state.fl.us

Live questions answered in chat box!

FY 2024-25 Standard Plans Update Training

Victor Johnson

Traffic Data Collections Supervisor

Transportation Data and Analytics Office

850-921-7300

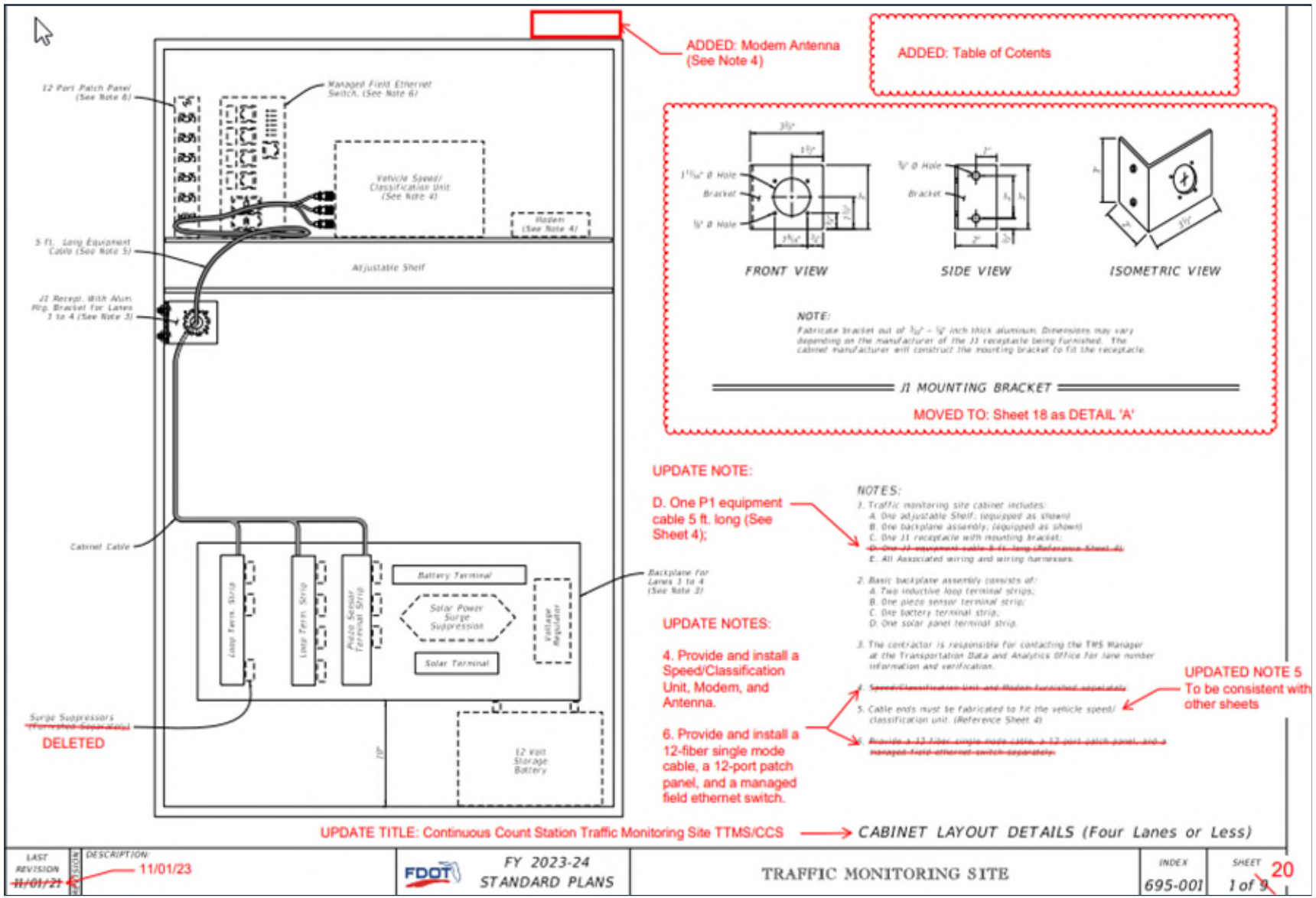
Victor.Johnson@dot.state.fl.us

Standard Plans – Primary Updates:

Index 695-001 – Traffic Monitoring Site Overview

- *Updated from 15 to 20 sheets to include Weigh-In-Motion (WIM) and Non-Motorized data collection layouts, infrastructure, and equipment requirements.*
- *Additional sheets were also provided to differentiate the Continuous Count Station (CCS/TTMS) from the Short-Term Monitoring Stations (STMS/PTMS).*
- *All sheet titles were updated, and a Table of Contents was provided for the Index.*
- *There will be additional updates and changes in the next iteration taking input from the Industry Review.*

Sheet 1: Continuous Count Stations (TTMS/CCS)



Sheet 1: Continuous Count Stations (TTMS/CCS)

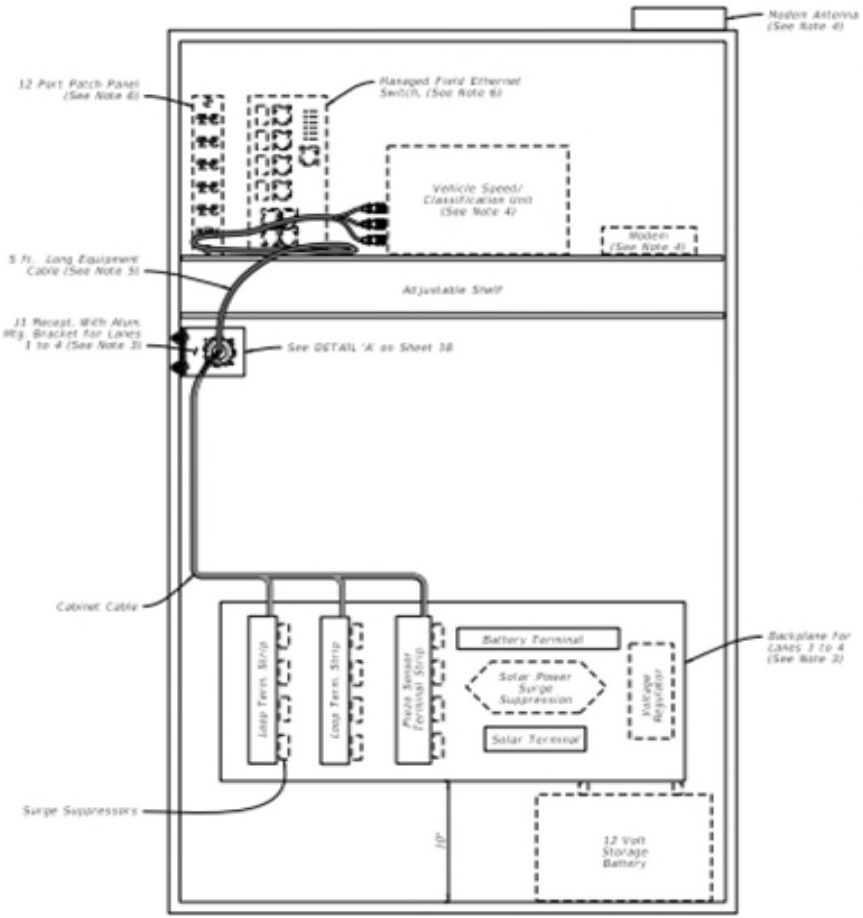


TABLE OF CONTENTS:

NOTES:

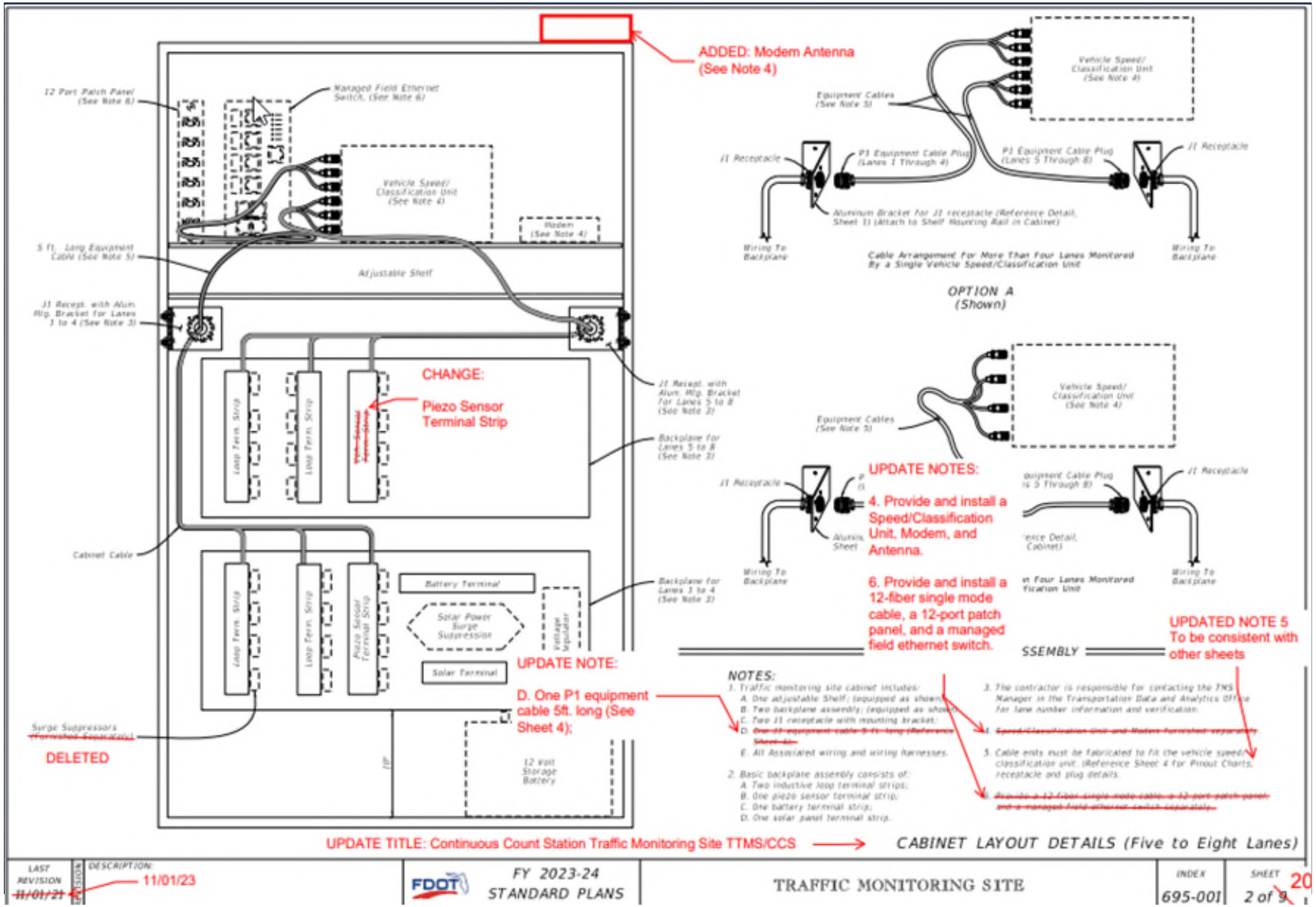
1. Traffic monitoring site cabinet includes:
   A. One adjustable shelf; (equipped as shown)
   B. One backplane assembly; (equipped as shown)
   C. One J1 receptacle with mounting bracket;
   D. One P1 equipment cable 5 ft. long (See Sheet 4);
   E. All associated wiring and wiring harnesses.
2. Basic backplane assembly consists of:
   A. Two inductive loop terminal strips;
   B. One piezo sensor terminal strip;
   C. One battery terminal strip;
   D. One solar panel terminal strip.
3. The contractor is responsible for contacting the TMS Manager at the Transportation Data and Analytics Office for lane number information and verification.
4. Provide and install a Speed/Classification Unit, Modem, and Antenna.
5. Cable ends must be fabricated to fit the vehicle speed/classification unit. See Sheet 4 for Pinout Charts, receptacle and plug details.
6. Provide and install a 12-fiber single mode cable, a 12-port patch panel, and a managed field ethernet switch.

CABINET LAYOUT DETAILS
(Four Lanes or Less)

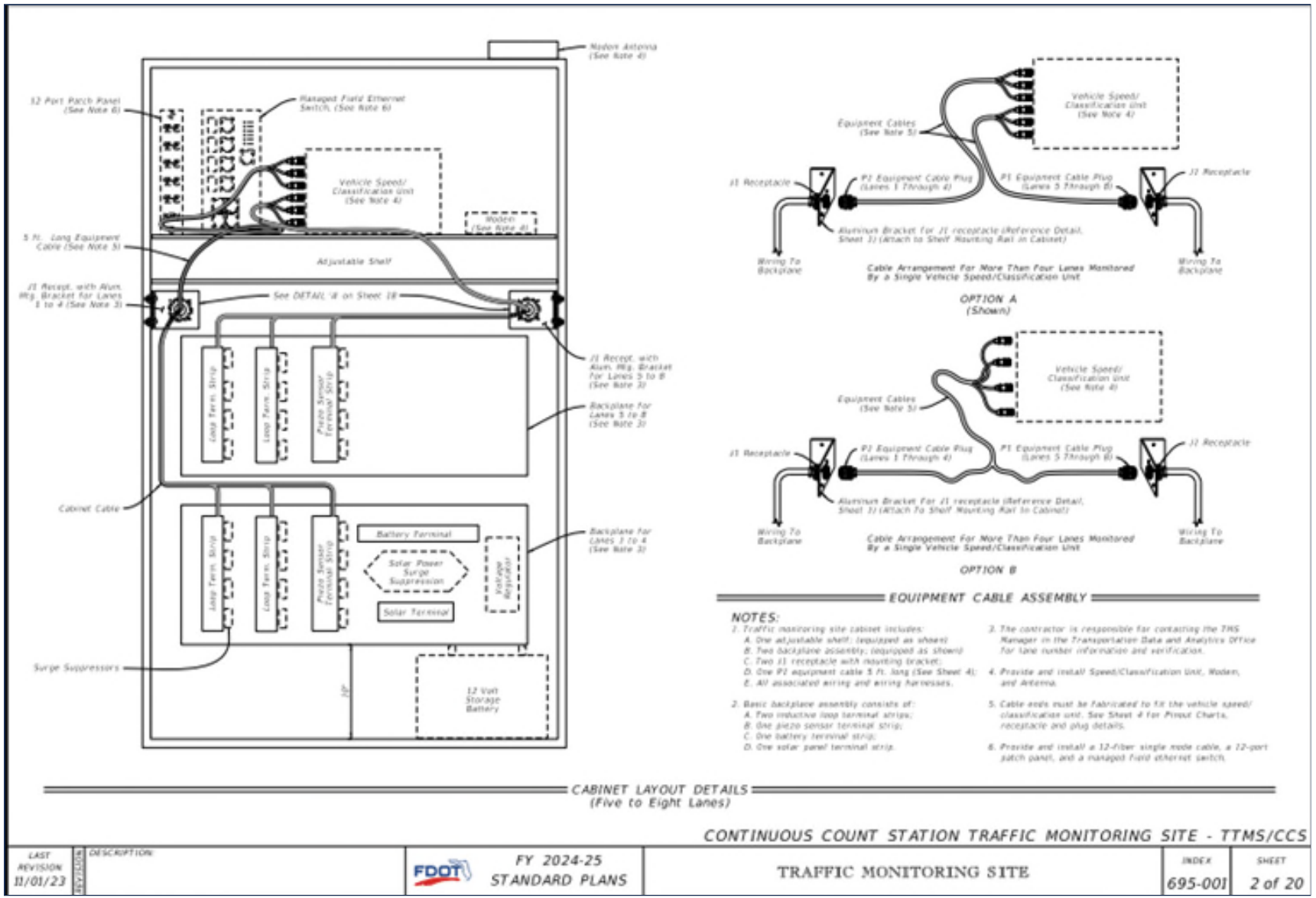
CONTINUOUS COUNT STATION TRAFFIC MONITORING SITE - TTMS/CCS

LAST REVISION	DESCRIPTION:			INDEX	SHEET
11/01/23		FY 2024-25 STANDARD PLANS	TRAFFIC MONITORING SITE	695-001	1 of 20

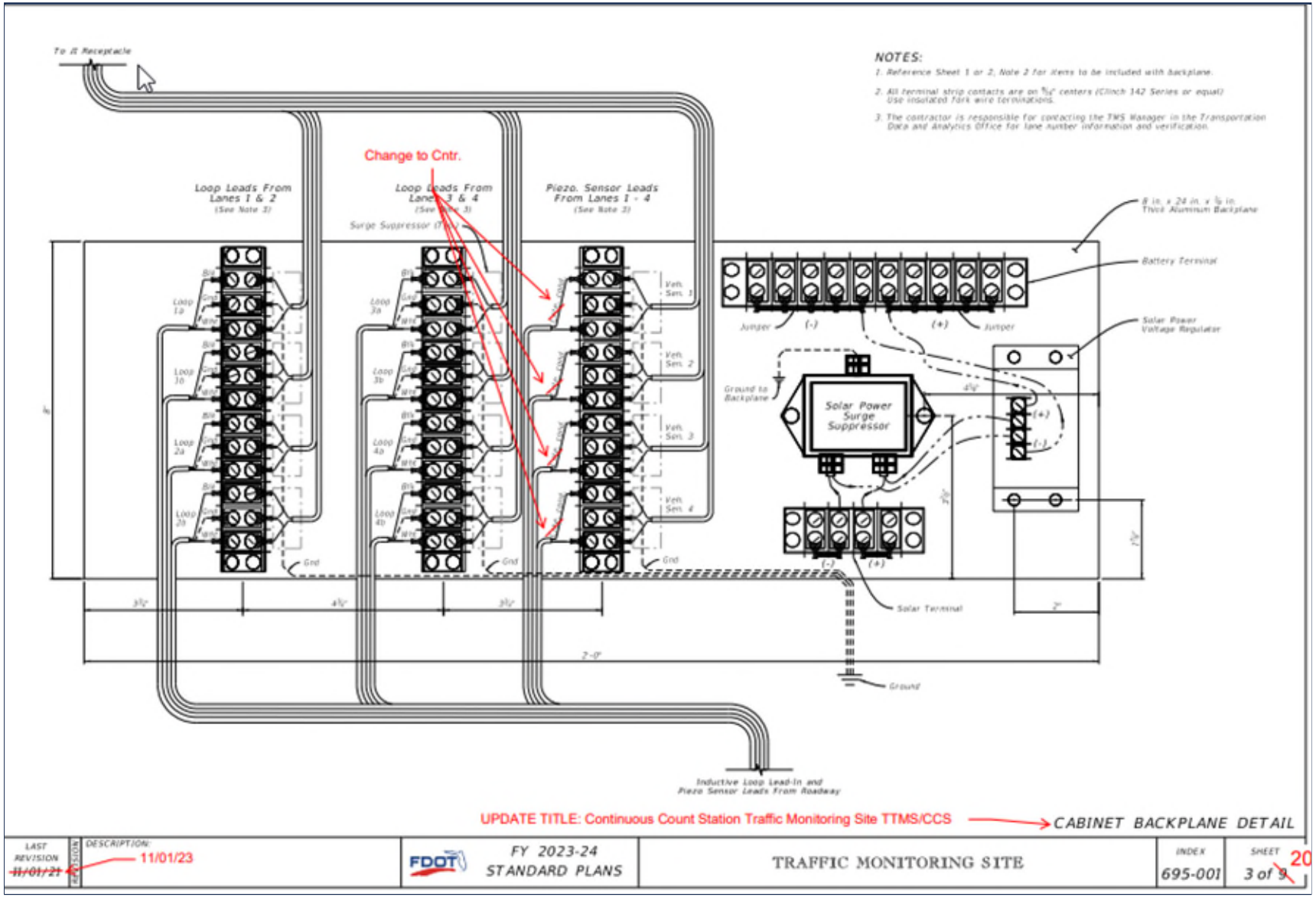
Sheet 2: Continuous Count Stations Cabinet Layout



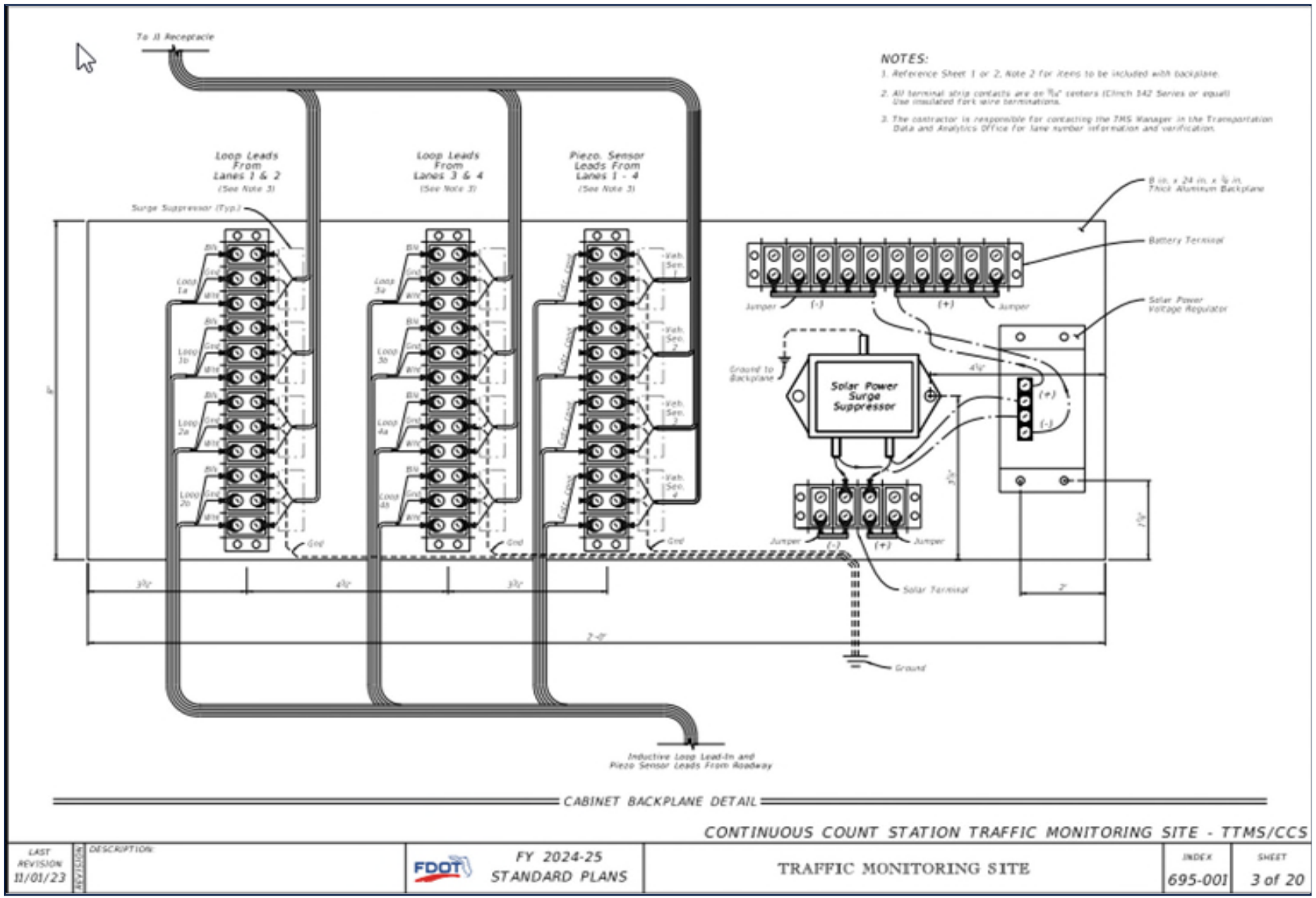
Sheet 2: Continuous Count Stations Cabinet Layout



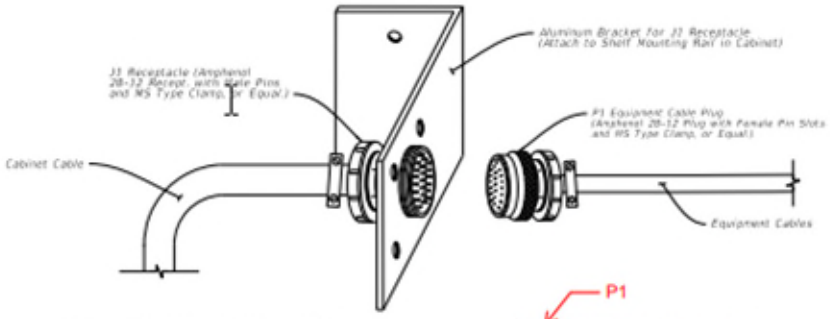
Sheet 3: Continuous Count Stations Cabinet Backplane



Sheet 3: Continuous Count Stations Cabinet Backplane



Sheet 4: Continuous Count Stations J1 and P1 pinouts

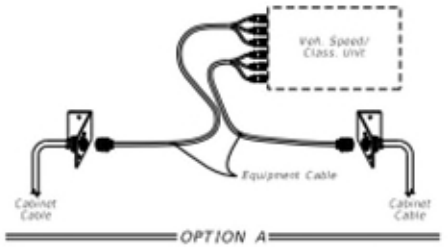


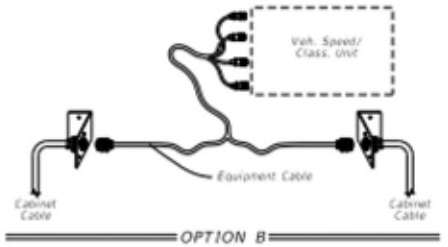
P1

J1 RECEPTACLE PINOUT	
26 Recessed Male Pins	
A	Loop 1a (5a) white
B	Loop 1a (5a) black
C	Loop 1b (5b) red
D	Loop 1b (5b) black
E	Loop 2a (6a) green
F	Loop 2a (6a) blue
G	Loop 2b (6b) orange
H	Loop 2b (6b) tan
J	Loop 3a (7a) white
K	Loop 3a (7a) green
L	Loop 3b (7b) red
M	Loop 3b (7b) black
N	Gnd
P	Loop 4a (8a) w/white
R	Loop 4a (8a) w/black
S	Loop 4b (8b) w/red
T	Loop 4b (8b) w/green
U	Piezo 1 (5) (+) w/blue
V	Piezo 1 (5) sh w/orange
W	Piezo 2 (6) (+) w/green
X	Piezo 2 (6) sh w/red
Y	Piezo 3 (7) (+) w/black
Z	Piezo 3 (7) sh w/red/blk
a	Piezo 4 (8) (+) red/ green

J1 EQUIPMENT CABLE PLUG		
26 Female Pin Slots		
A	Loop 1a (5a)	Connect To Electronics Unit
B	Loop 1a (5a)	
C	Loop 1b (5b)	
D	Loop 1b (5b)	
E	Loop 2a (6a)	
F	Loop 2a (6a)	
G	Loop 2b (6b)	
H	Loop 2b (6b)	
N	Gnd	
J	Loop 3a (7a)	Connect To Electronics Unit
K	Loop 3b (7b)	
L	Loop 3b (7b)	
M	Loop 3b (7b)	
P	Loop 4a (8a)	
R	Loop 4a (8a)	
S	Loop 4b (8b)	
T	Loop 4b (8b)	
U	Gnd	
V	Piezo 1 (5) (+)	Connect To Electronics Unit
W	Piezo 1 sh	
X	Piezo 2 (6) (+)	
Y	Piezo 2 sh	
Z	Piezo 3 (7) (+)	
a	Piezo 3 sh	
b	Piezo 4 (8) (+)	
c	Piezo 4 sh	

ADDED: Title:
Pinout Chart, Receptacle, and Plug Details





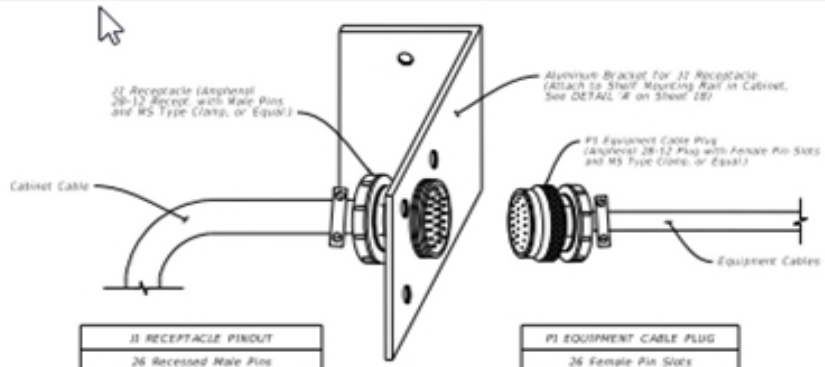
NOTES:

1. The contractor is responsible for contacting the TMS Manager in the Transportation Data and Analytics Office for lane number information and verification.
2. The equipment cable can accommodate up to four lanes of inductive loop and piezo sensor inputs. (Reference Sheet 1 for cabinet layout)
3. For more than four lanes and up to eight lanes of inputs, the following options are available:
   A. Second Vehicle Speed/Class. Unit and separate equipment cable connecting to a second J1 receptacle; or
   B. Single Vehicle Speed/Class. Unit capable of up to eight lanes of inputs and a single equipment cable with split ends to fit two J1 receptacles. (Reference Sheet 2 detail)
4. Numbers in parenthesis in the pinout chart identify lane numbers when a second backplane for lanes 5 through 8 is required.
5. Cable Ends must be fabricated to fit the vehicle Speed/Classification Unit.

UPDATE TITLE: Continuous Count Station Traffic Monitoring Site TTMS/CCS

LAST REVISION	DESCRIPTION:	FDOT			INDEX	SHEET
~~11/01/21~~	11/01/23	FDOT	FY 2023-24 STANDARD PLANS	TRAFFIC MONITORING SITE	695-001	4 of ~~9~~ 20

Sheet 4: Continuous Count Stations J1 and P1 pinouts



J1 RECEPTACLE PINOUT	
26 Recessed Male Pins	
A	Loop 1a (5a) white
B	Loop 1a (5a) black
C	Loop 1b (5b) red
D	Loop 1b (5b) black
E	Loop 2a (6a) green
F	Loop 2a (6a) blue
G	Loop 2b (6b) orange
H	Loop 2b (6b) tan
J	Loop 3a (7a) white
K	Loop 3a (7a) green
L	Loop 3b (7b) red
M	Loop 3b (7b) black
N	Gnd
P	Loop 4a (8a) w/white
R	Loop 4a (8a) w/black
S	Loop 4b (8b) w/red
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U	Piezo 1 (5) (+) w/blue
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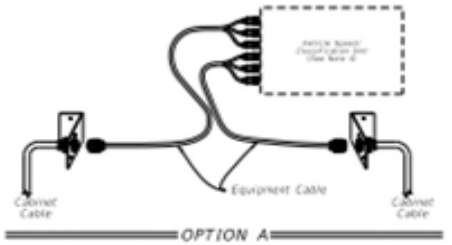
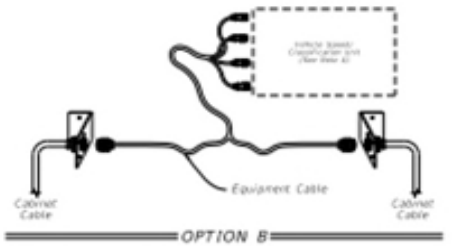
W	Piezo 2 (6) (+) w/green
X	Piezo 2 (6) sh w/red
Y	Piezo 3 (7) (+) w/black
Z	Piezo 3 (7) sh w/red/blk
a	Piezo 4 (8) (+) red/ green
b	Piezo 4 (8) sh red/white
c	Gnd green

P1 EQUIPMENT CABLE PLUG		
26 Female Pin Slots		
A	Loop 1a (5a)	Connect To Electronics Unit
B	Loop 1a (5a)	
C	Loop 1b (5b)	
D	Loop 1b (5b)	
E	Loop 2a (6a)	
F	Loop 2a (6a)	
G	Loop 2b (6b)	
H	Loop 2b (6b)	
R	Gnd	
J	Loop 3a (7a)	Connect To Electronics Unit
K	Loop 3b (7b)	
L	Loop 3b (7b)	
M	Loop 3b (7b)	
P	Loop 4a (8a)	
R	Loop 4b (8b)	
S	Loop 4b (8b)	
T	Loop 4b (8b)	
d	Gnd	
U	Piezo 1 (5) (+)	Connect To Electronics Unit
V	Piezo 1 sh	
W	Piezo 2 (6) (+)	
X	Piezo 2 sh	
Y	Piezo 3 (7) (+)	
Z	Piezo 3 sh	
a	Piezo 4 (8) (+)	
b	Piezo 4 sh	

PINOUT, RECEPTACLE, AND PLUG DETAILS



OPTION A



OPTION B

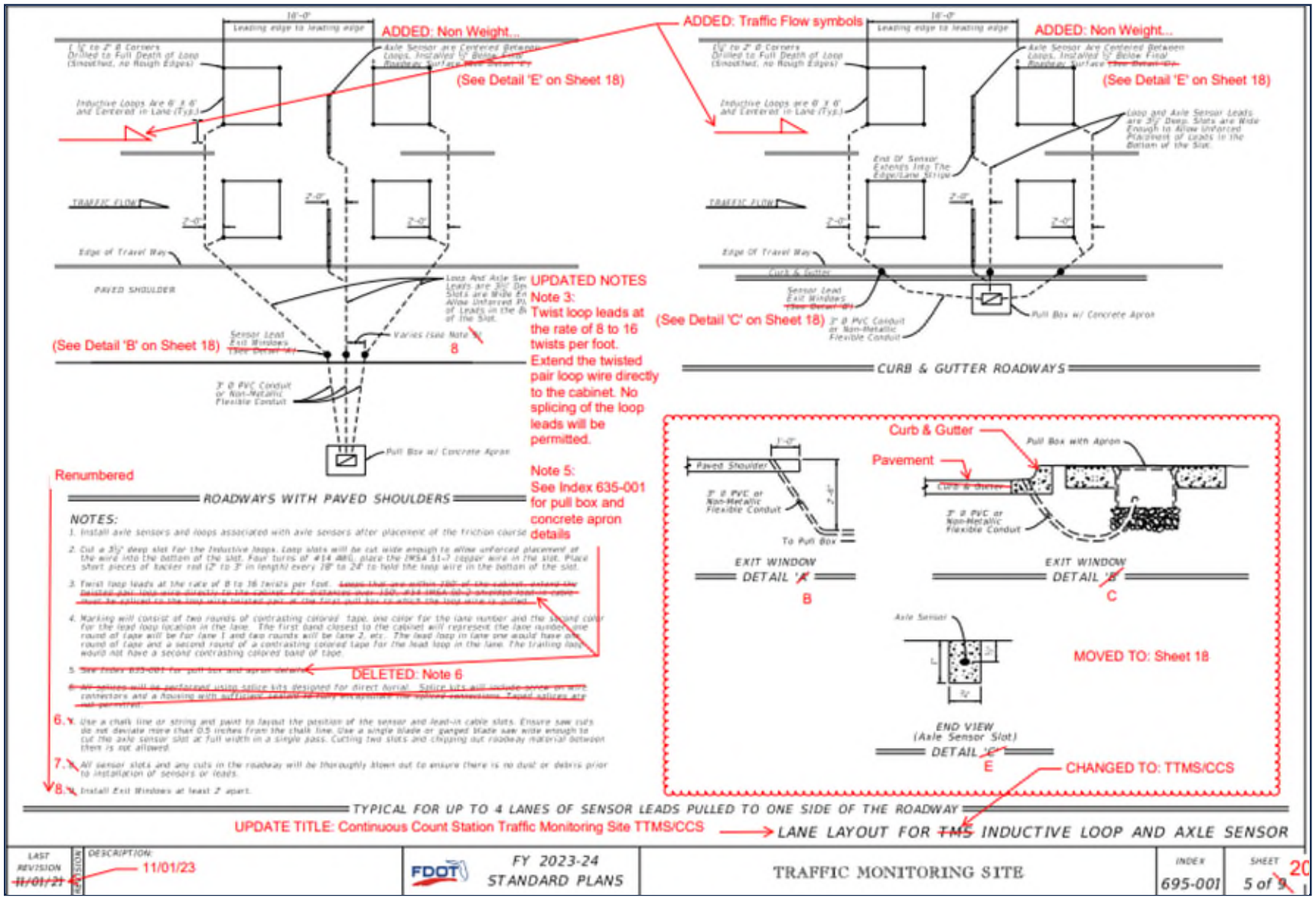
NOTES:

1. The contractor is responsible for contacting the TMS Manager in the Transportation Data and Analytics Office for lane number information and verification.
2. The equipment cable can accommodate up to four lanes of inductive loop and piezo sensor inputs. (See Sheet 2 for cabinet layout)
3. For more than four lanes and up to eight lanes of inputs, the following options are available:
   A. Second Vehicle Speed/Classification Unit and separate equipment cable connecting to a second J1 receptacle; or
   B. Single Vehicle Speed/Classification Unit capable of up to eight lanes of inputs and a single equipment cable with split ends to fit two J1 receptacles. (See Sheet 2 detail)
4. Numbers in parenthesis in the pinout chart identify lane numbers when a second backplane for lanes 5 through 8 is required.
5. Cable Ends must be fabricated to fit the vehicle Speed/Classification Unit.

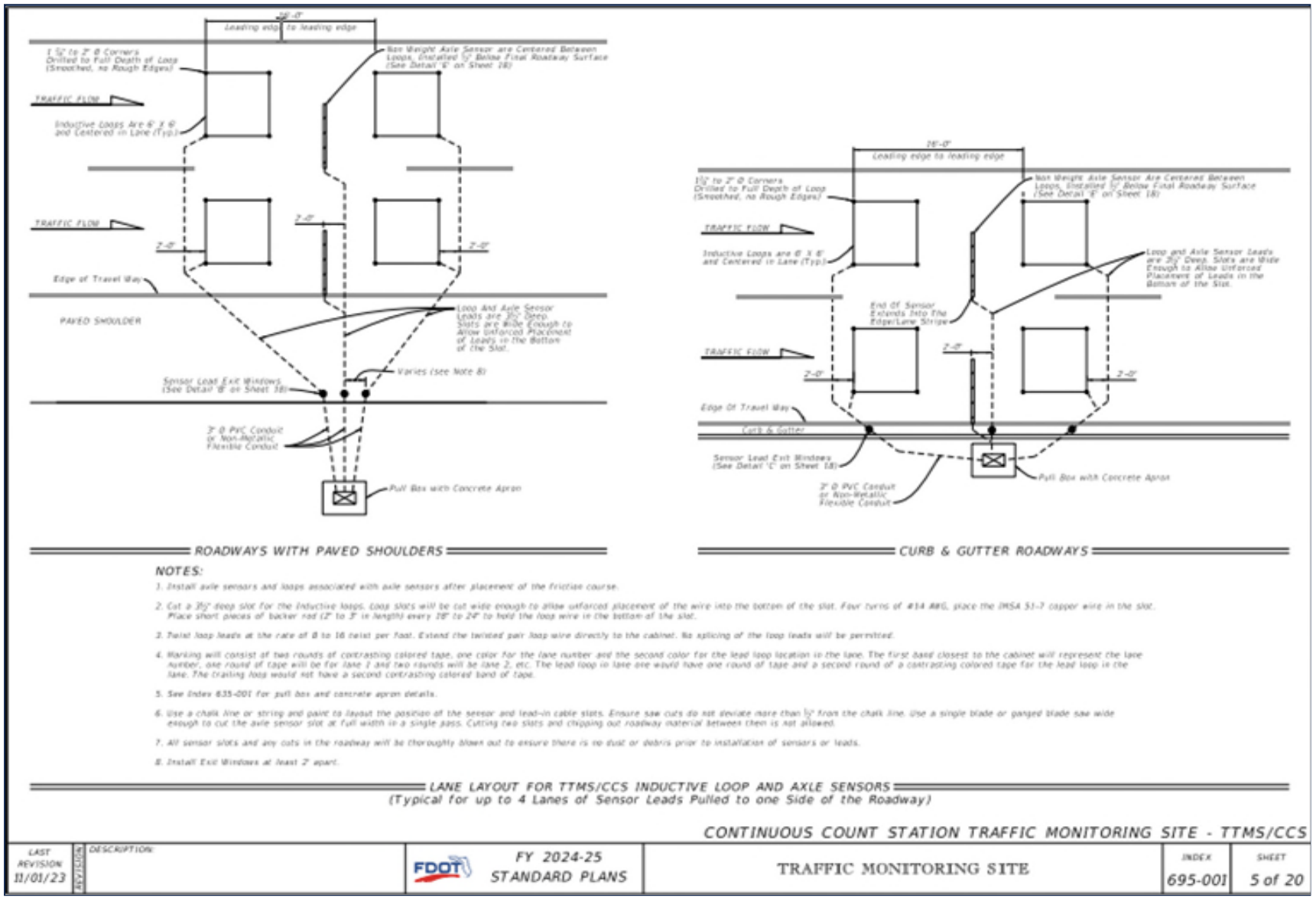
CONTINUOUS COUNT STATION TRAFFIC MONITORING SITE - TTMS/CCS

LAST REVISION 11/01/23	DESCRIPTION:	FDOT FY 2024-25 STANDARD PLANS	TRAFFIC MONITORING SITE	INDEX 695-001	SHEET 4 of 20

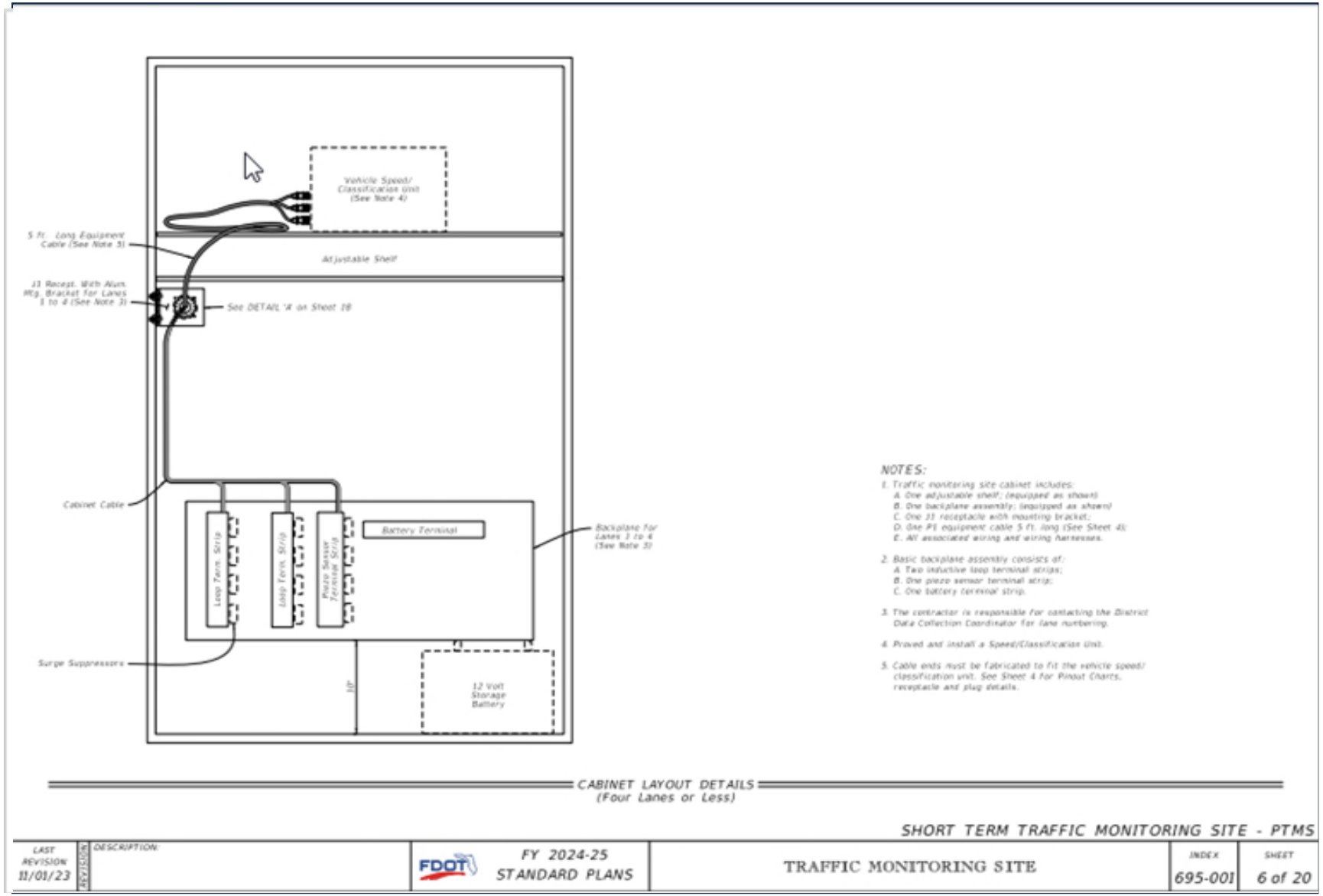
Sheet 5: Continuous Count Stations Lane Layout



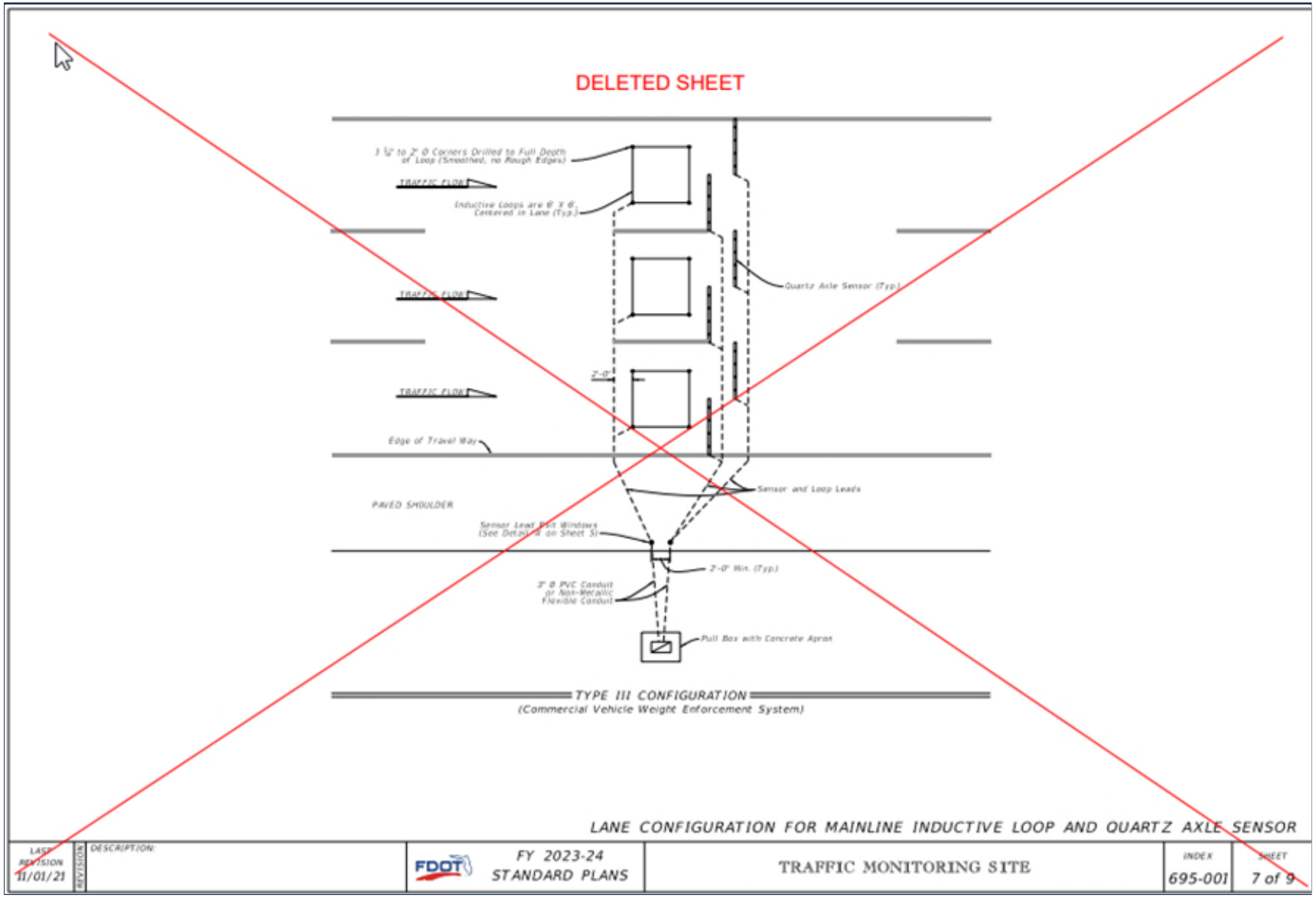
Sheet 5: Continuous Count Stations Lane Layout: 1 to 4 lanes



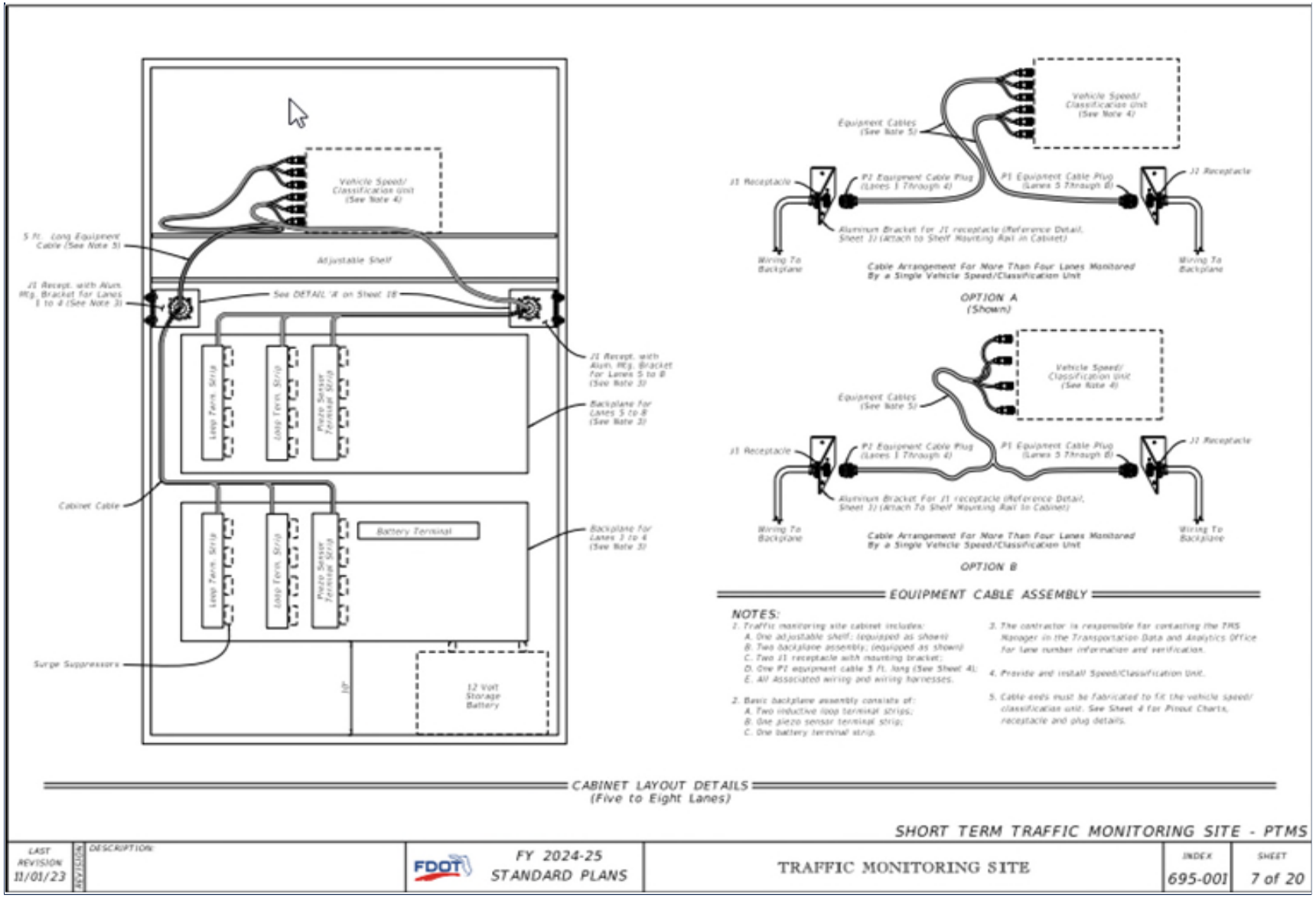
Sheet 6: *New* Sheet - Short Term Count Stations (STMS/PTMS)



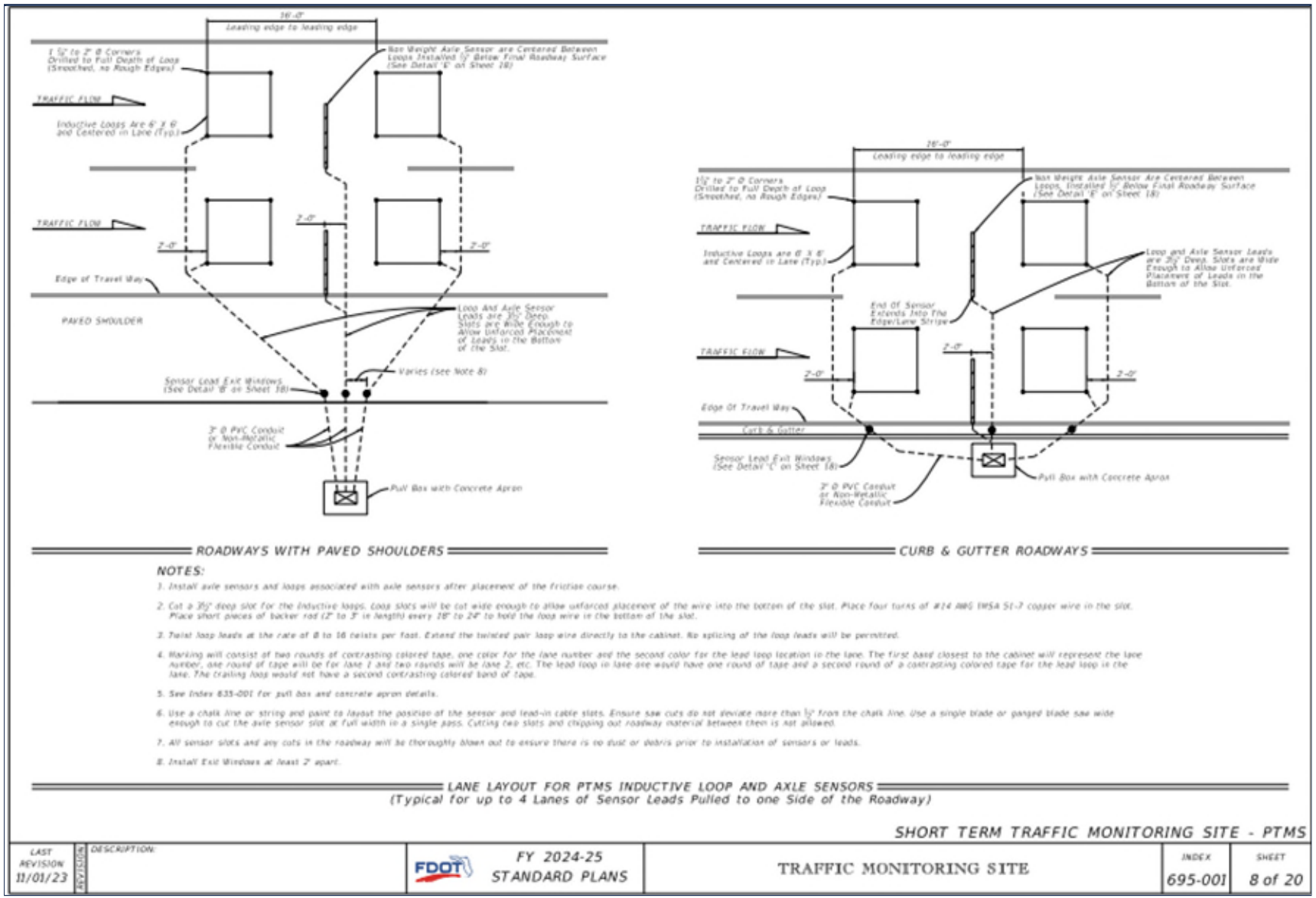
Sheet 7: Sheet Deletion



Sheet 7: *New* Sheet: Short Term Cabinet Layout – 5 to 8



Sheet 8: *New* Sheet – Short Term Lane Layout (1- 4 lanes)



NOTES:

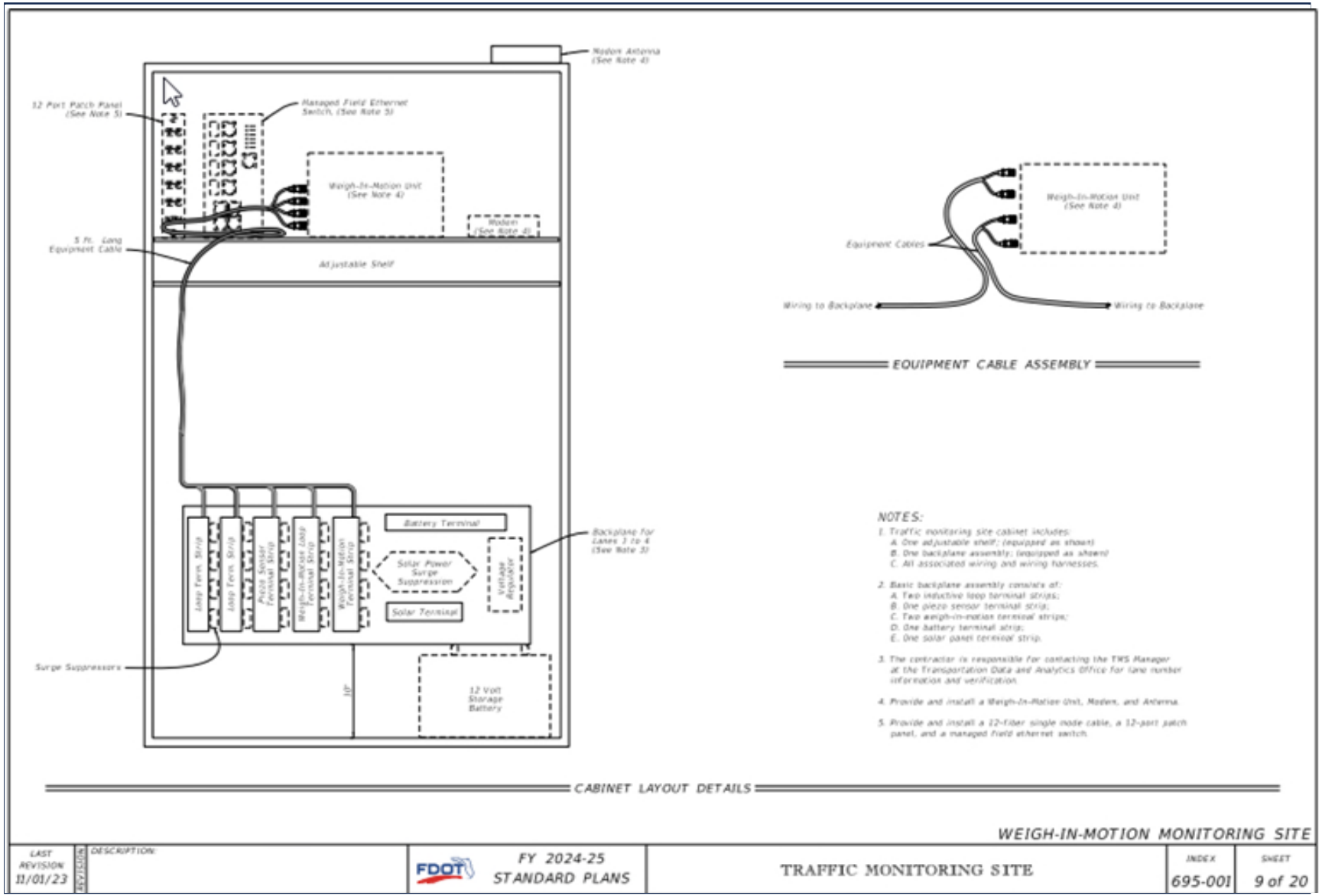
1. Install axle sensors and loops associated with axle sensors after placement of the friction course.
2. Cut a 3½" deep slot for the inductive loops. Loop slots will be cut wide enough to allow unforced placement of the wire into the bottom of the slot. Place four turns of #14 AWG (WSA 51-7 copper wire in the slot. Place short pieces of backer rod (2" to 3" in length) every 18" to 24" to hold the loop wire in the bottom of the slot.
3. Twist loop leads at the rate of 8 to 16 twists per foot. Extend the twisted pair loop wire directly to the cabinet. No splicing of the loop leads will be permitted.
4. Marking will consist of two rounds of contrasting colored tape, one color for the lane number and the second color for the lead loop location in the lane. The first band closest to the cabinet will represent the lane number, one round of tape will be for lane 1 and two rounds will be lane 2, etc. The lead loop in lane one would have one round of tape and a second round of a contrasting colored tape for the lead loop in the lane. The trailing loop would not have a second contrasting colored band of tape.
5. See Index 635-001 for pull box and concrete apron details.
6. Use a chalk line or string and paint to layout the position of the sensor and lead-in cable slots. Ensure saw cuts do not deviate more than ½" from the chalk line. Use a single blade or ganged blade saw wide enough to cut the axle sensor slot at full width in a single pass. Cutting two slots and chipping out roadway material between them is not allowed.
7. All sensor slots and any cuts in the roadway will be thoroughly blown out to ensure there is no dust or debris prior to installation of sensors or leads.
8. Install Exit Windows at least 2' apart.

LANE LAYOUT FOR PTMS INDUCTIVE LOOP AND AXLE SENSORS
(Typical for up to 4 Lanes of Sensor Leads Pulled to one Side of the Roadway)

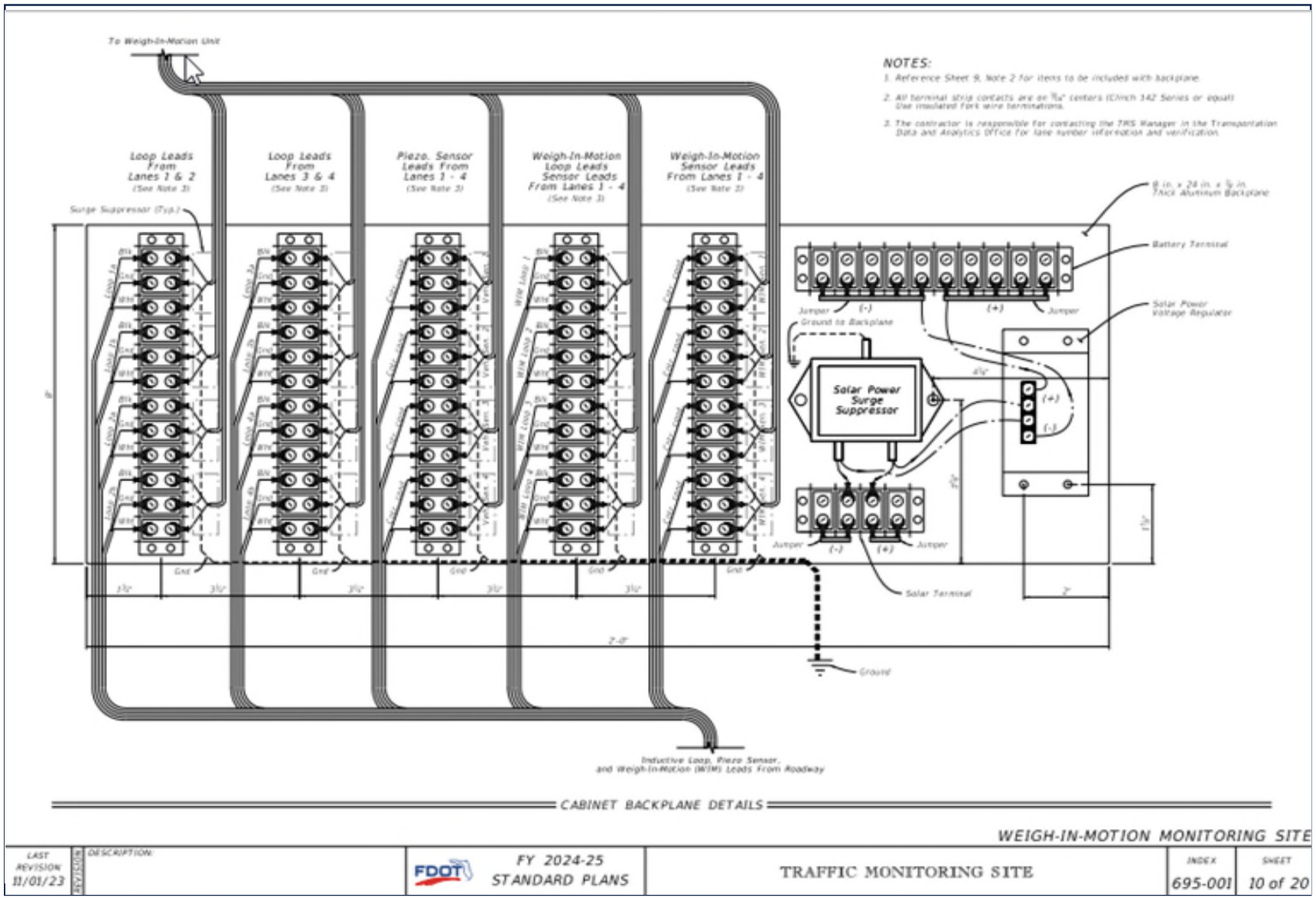
SHORT TERM TRAFFIC MONITORING SITE - PTMS

LAST REVISION 11/01/23	REVISIONS DESCRIPTION:	FDOT FY 2024-25 STANDARD PLANS	TRAFFIC MONITORING SITE	INDEX 695-001	SHEET 8 of 20

Sheet 9: *New* Sheet – Weigh-in-Motion Site Cabinet Layout



Sheet 10: *New* Sheet – WIM Station Cabinet Backplane

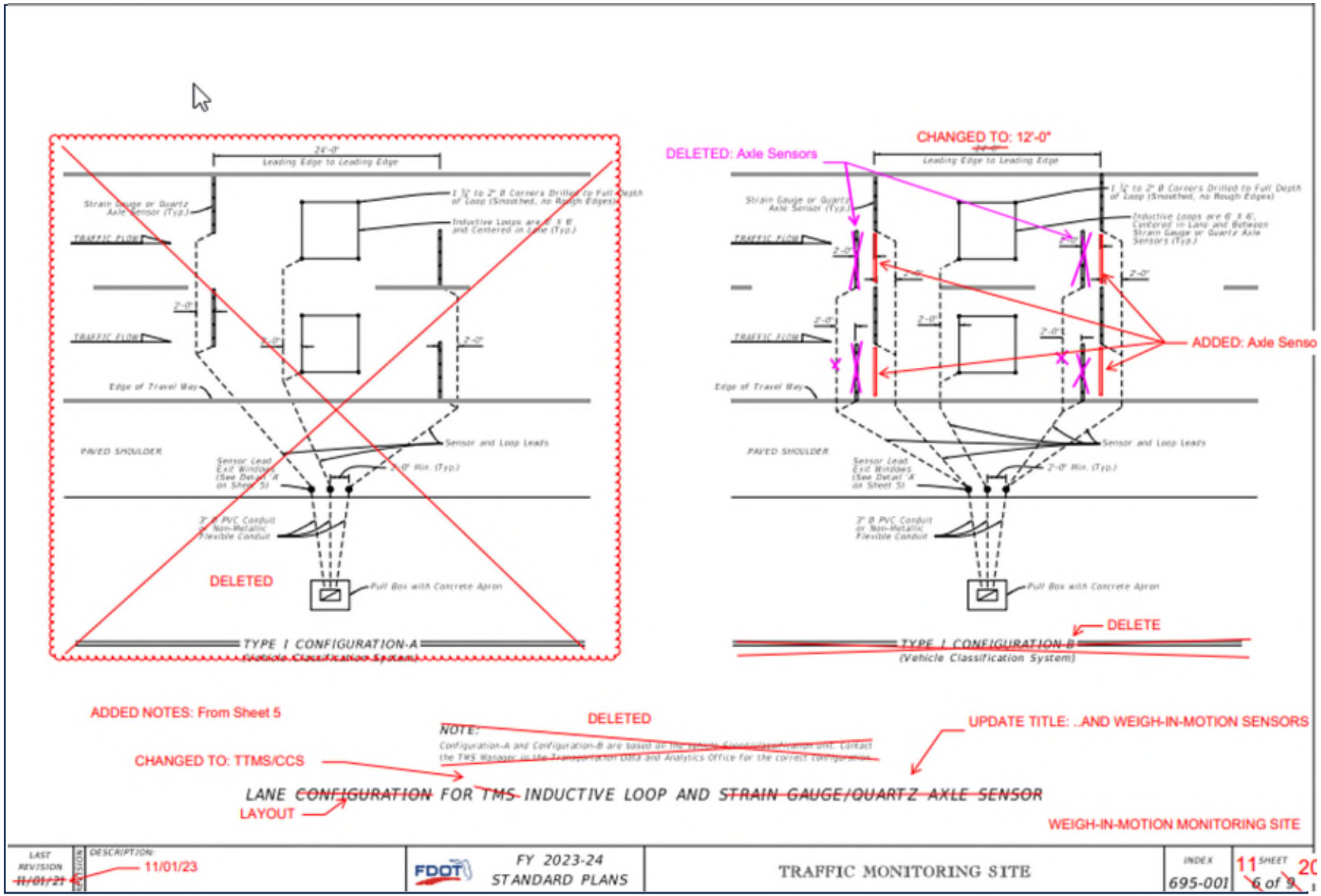


CABINET BACKPLANE DETAILS

WEIGH-IN-MOTION MONITORING SITE

LAST REVISION 11/01/23	DESCRIPTION:	FDOT FY 2024-25 STANDARD PLANS	TRAFFIC MONITORING SITE	INDEX 695-001	SHEET 10 of 20

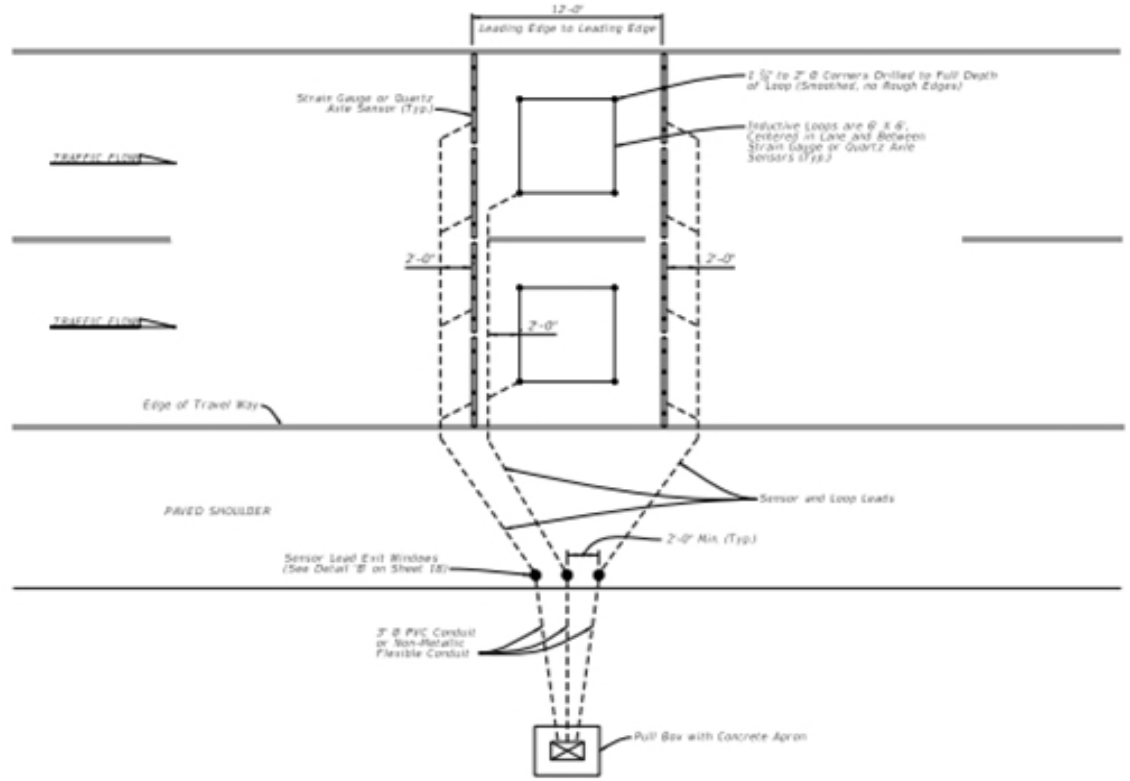
Sheet 11: WIM Continuous Count Stations Lane Layout



Sheet 11: WIM Continuous Count Stations Lane Layout

NOTES:

1. Install axle sensors and loops associated with axle sensors after placement of the friction course.
2. Cut a 3½" deep slot for the inductive loops. Loop slots will be cut wide enough to allow unforced placement of the wire into the bottom of the slot. Place four turns of #14 AWG IMSA 51-7 copper wire in the slot. Place short pieces of backer rod (2" to 3" in length) every 18" to 24" to hold the loop wire in the bottom of the slot.
3. Twist loop leads at the rate of 8 to 16 twists per foot. Extend the twisted pair loop wire directly to the cabinet. No splicing of the loop leads will be permitted.
4. Marking will consist of two rounds of contrasting colored tape, one color for the lane number and the second color for the lead loop location in the lane. The first band closest to the cabinet will represent the lane number; one round of tape will be for lane 1 and two rounds will be lane 2, etc. The lead loop in lane one would have one round of tape and a second round of a contrasting colored tape for the lead loop in the lane. The trailing loop would not have a second contrasting colored band of tape.
5. See Index 635-001 for pull box and concrete apron details.
6. Use a chalk line or string and paint to layout the position of the sensor and lead-in cable slots. Ensure saw cuts do not deviate more than ½" from the chalk line. Install the sensor according to manufacturer's recommendations.
7. All sensor slots and any cuts in the roadway will be thoroughly blown out to ensure there is no dust or debris prior to installation of sensors or leads.
8. Install Exit Windows at least 2' apart.

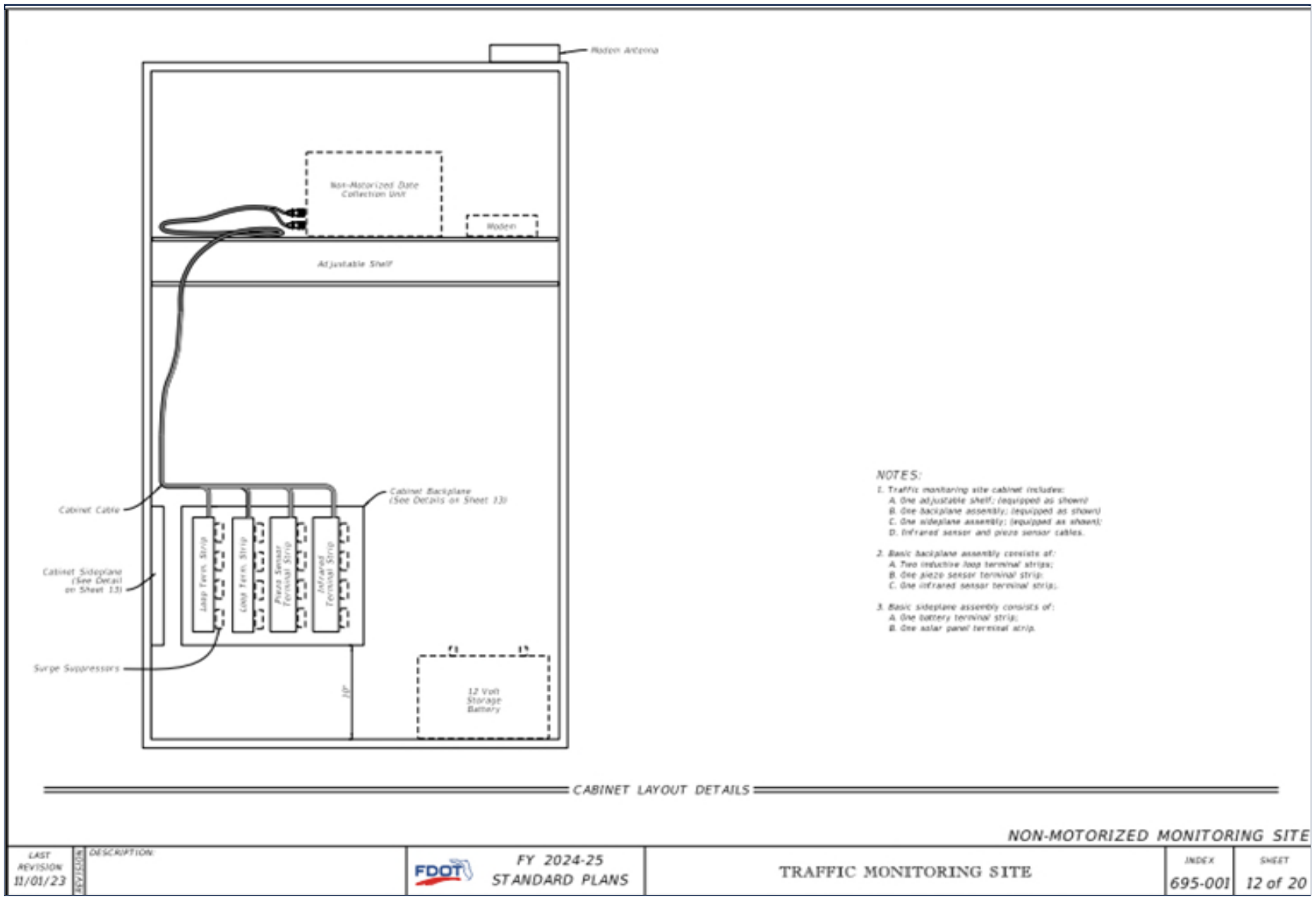


LANE LAYOUT FOR TTMS/CCS INDUCTIVE LOOP AND WEIGH-IN-MOTION SENSORS

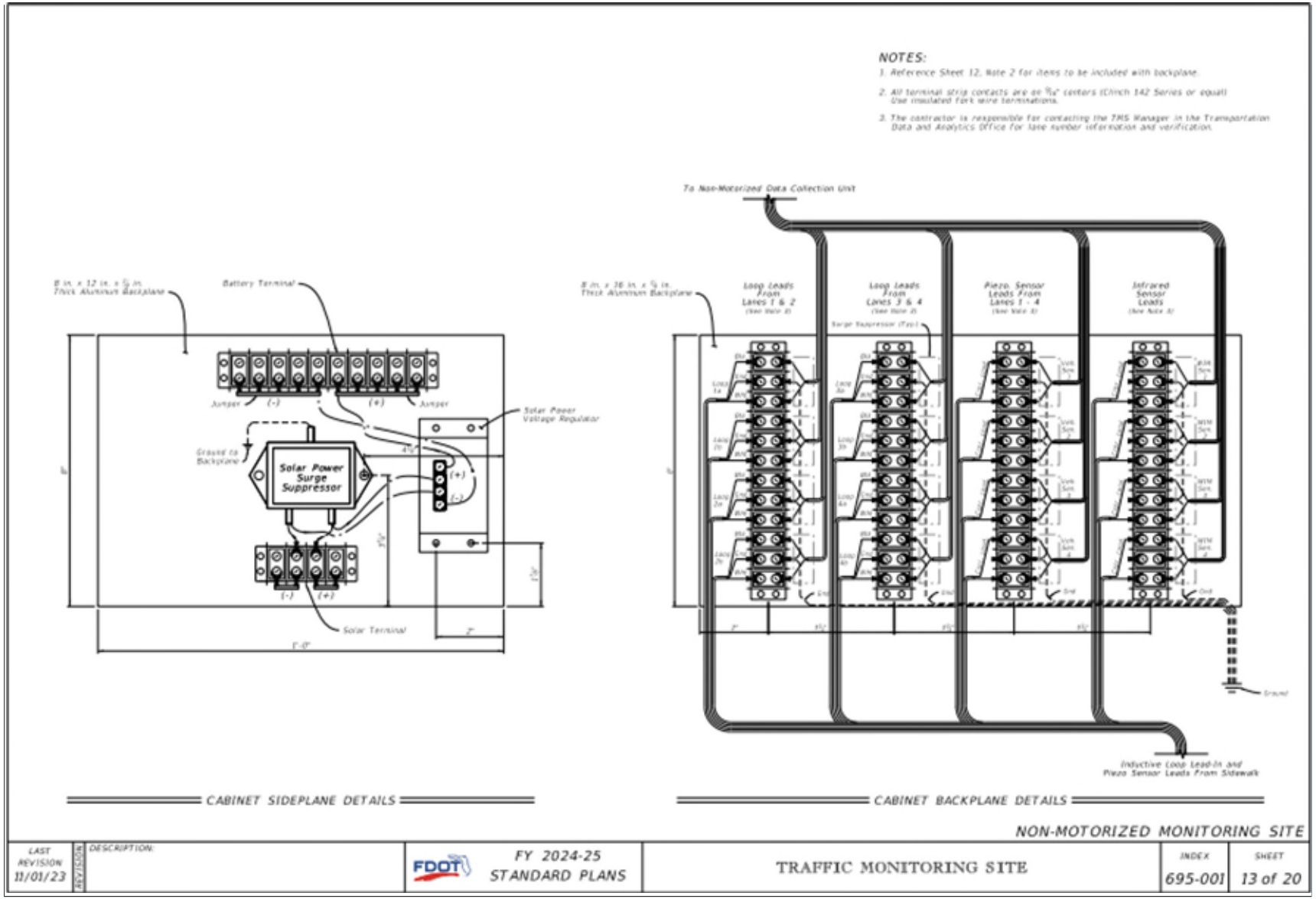
WEIGH-IN-MOTION MONITORING SITE

LAST REVISION	DESCRIPTION				
11/01/23		FY 2024-25 STANDARD PLANS	TRAFFIC MONITORING SITE	INDEX 695-001	SHEET 11 of 20

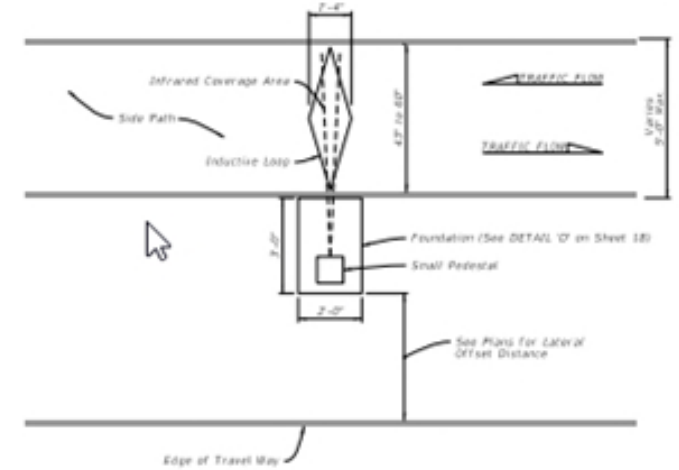
Sheet 12: *New* Sheet – Non-Motorized Continuous Count Cabinet



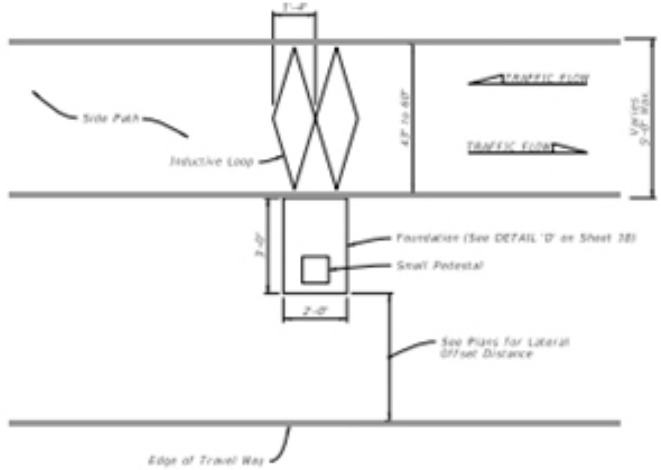
Sheet 13: *New* Sheet – Nonmotorized Continuous Side and Backplane



Sheet 14: *New* Sheet – Nonmotorized Sensor Layout (Narrow Side Path)



SINGLE LOOP ASSEMBLY
(Directional Recognition With Infrared)



DUAL LOOP ASSEMBLY
(Directional Recognition Without Infrared)

NON-MOTORIZED MONITORING SITE NOTES:

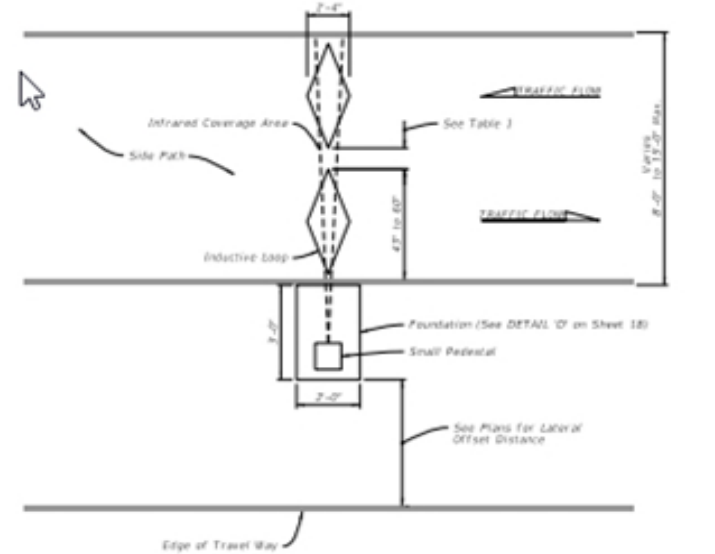
1. Use a chalk line or string and paint to layout the position of the sensor and lead-in cable slots. Ensure saw cuts do not deviate more than 0.5 inches from the chalk line. Use a single blade or ganged blade saw wide enough to cut the axle sensor at full width in a single pass. Cutting two slots and chipping out roadway material between them is not allowed.
2. Cut a ¼" to ½" wide slot.
3. All sensor slots and any cuts in the pathway will be thoroughly blown out to ensure there is no dust or debris prior to installation of the loops and leads.
4. Place eight turns of loop wire in each slot.
5. Twist loop leads at the rate of 10 twists per foot.
6. Extend the twisted pair loop wire directly to the termination point with no splices.
7. For the side-by-side configuration, install the farthest loop lead through the near side loop slot.
8. At the termination point, for north-south pathways, mark the north piezometer and inductive loop sensor lead(s) with one tape. For east-west pathways, mark the east piezometer and inductive loop sensor lead(s) with one tape. Mark the south and west sensor lead(s) with two tapes.
9. Do not point infrared sensors towards a path where motor vehicles pass, a metallic or reflective surface, surfaces exposed to sunlight or vegetation that are likely to move.
10. Avoid placing infrared sensors near heat sources, steep surfaces, high voltage power cables, and telecommunications equipment.
11. If crossing pavement joints see DETAIL 'F' on Sheet 18.

NARROW SIDE PATH CONFIGURATIONS

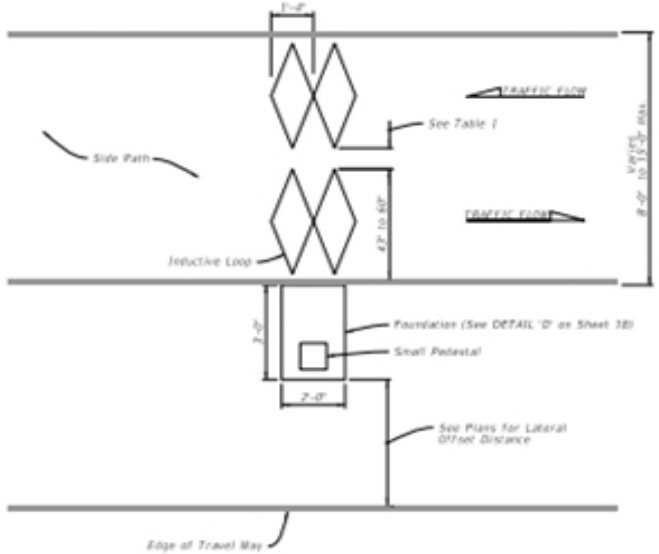
NON-MOTORIZED MONITORING SITE

LAST REVISION 11/01/23	DESCRIPTION:	FDOT FY 2024-25 STANDARD PLANS	TRAFFIC MONITORING SITE	INDEX 695-001	SHEET 14 of 20

Sheet 15: *New* Sheet – Nonmotorized Sensor Layout (Large Shared Use Path)



DUAL LOOP ASSEMBLY
(Directional Recognition With Infrared)



QUAD LOOP ASSEMBLY
(Directional Recognition Without Infrared)

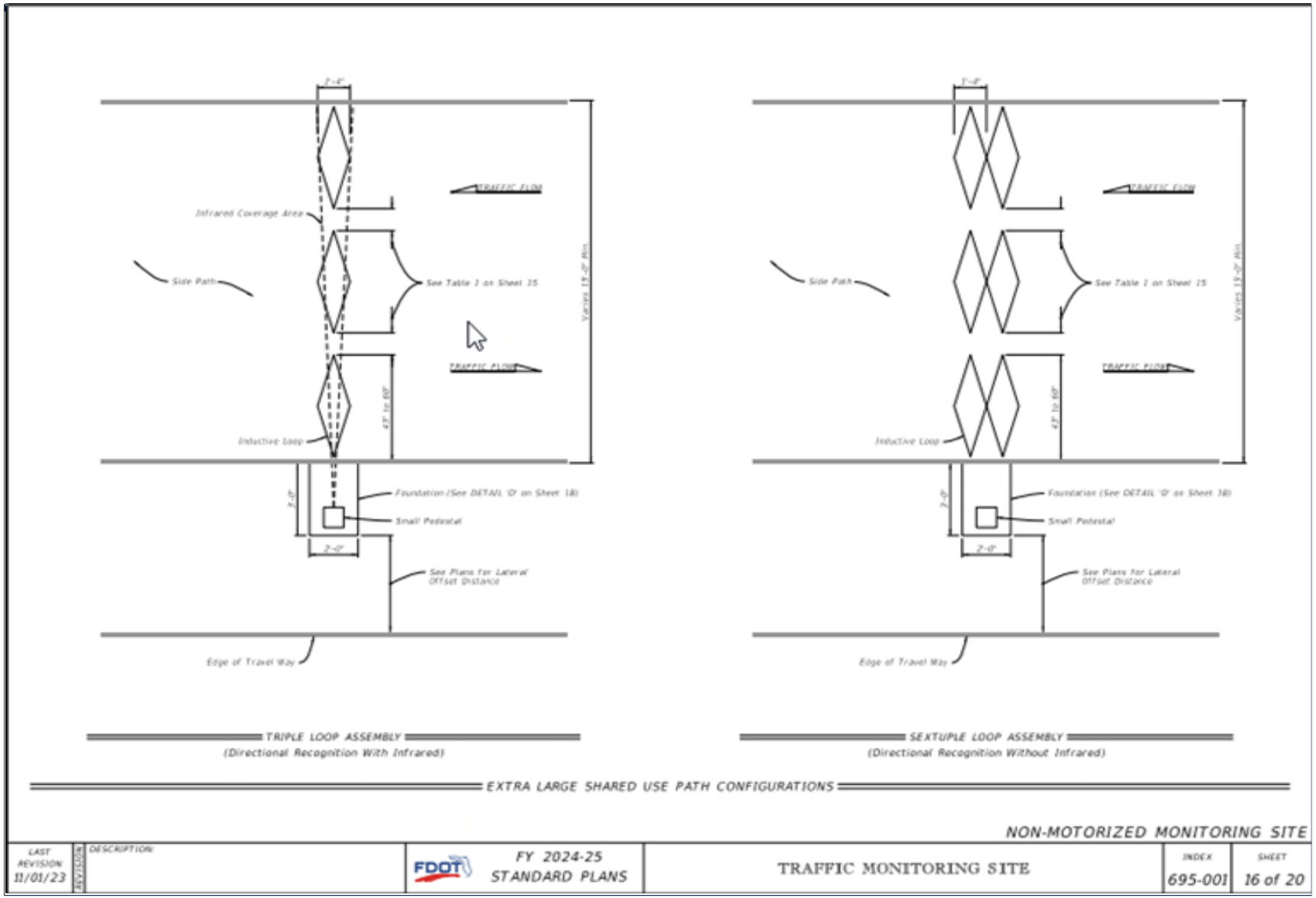
TABLE 1	
Loop Length	Distance
Greater than 59'	Contact Manufacturer to evaluate the feasibility
59'	3.00'
55'	4.00'
51'	4.75'
47'	5.50'
43'	6.25'
Less than 43'	Contact Manufacturer to evaluate the feasibility

LARGE SHARED USE PATH CONFIGURATIONS

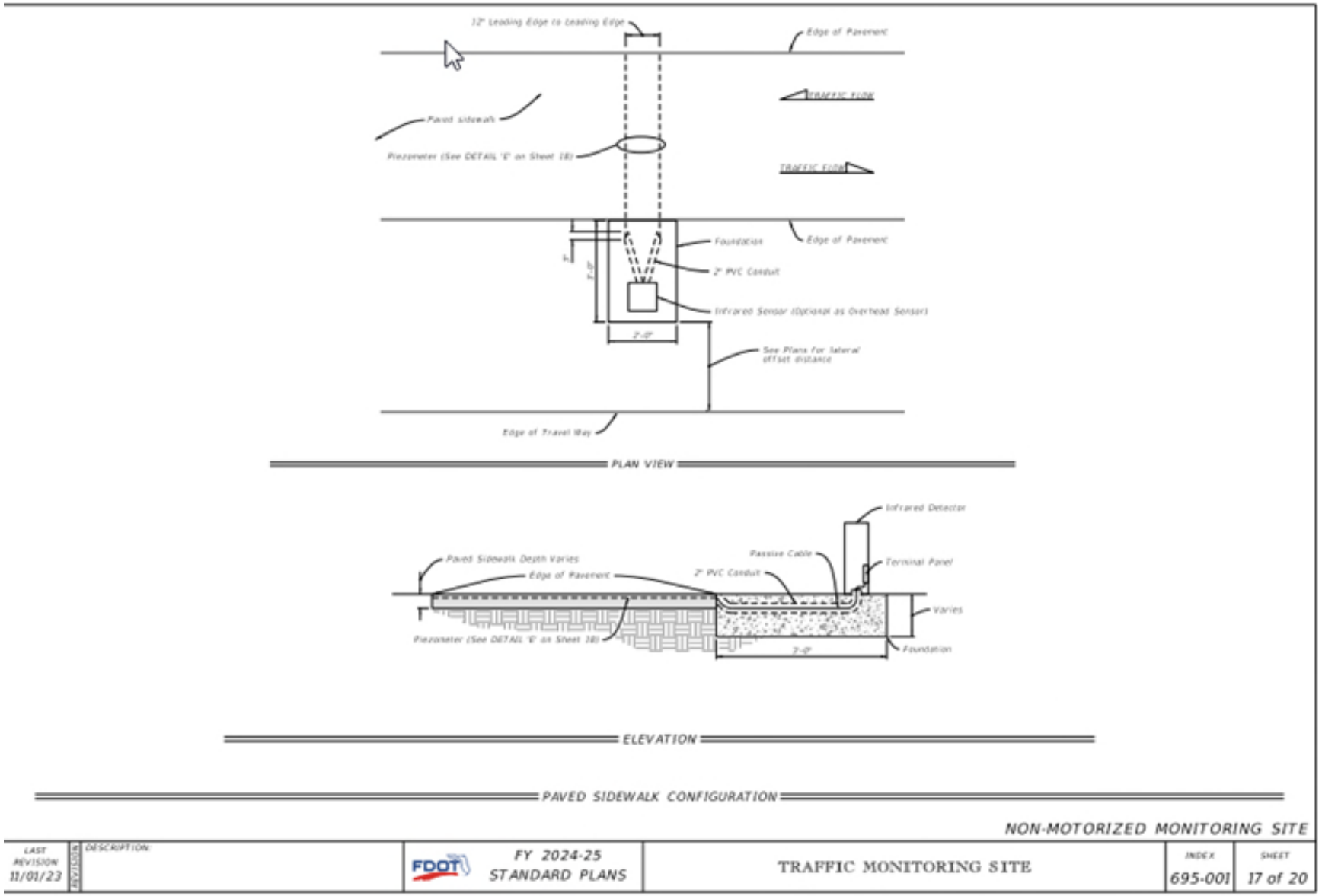
NON-MOTORIZED MONITORING SITE

LAST REVISION 11/01/23	DESCRIPTION:	FDOT FY 2024-25 STANDARD PLANS	TRAFFIC MONITORING SITE	INDEX 695-001	SHEET 15 of 20

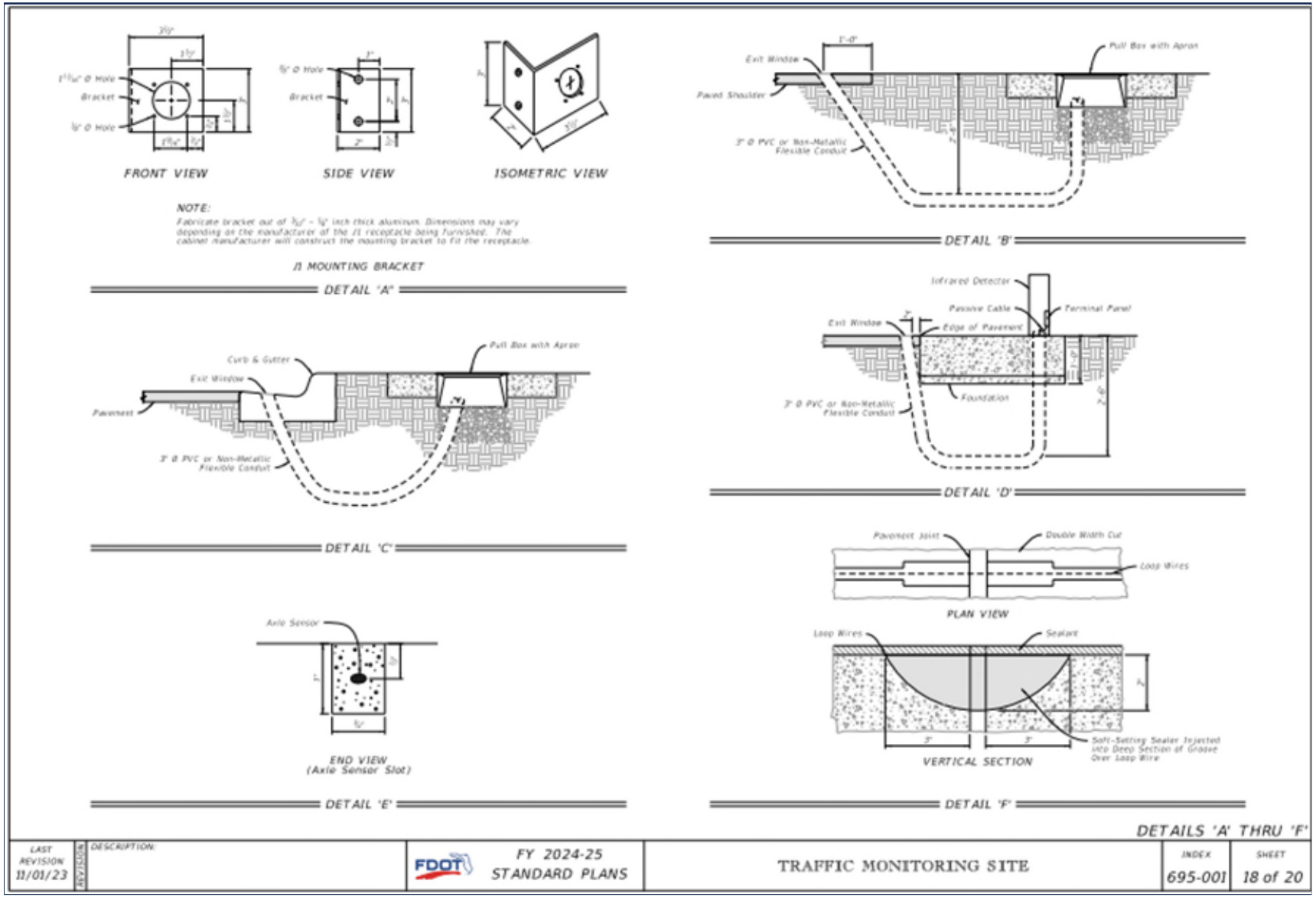
Sheet 16: *New* Sheet – Non-Motorized Extra Large Shared Use Path Layout



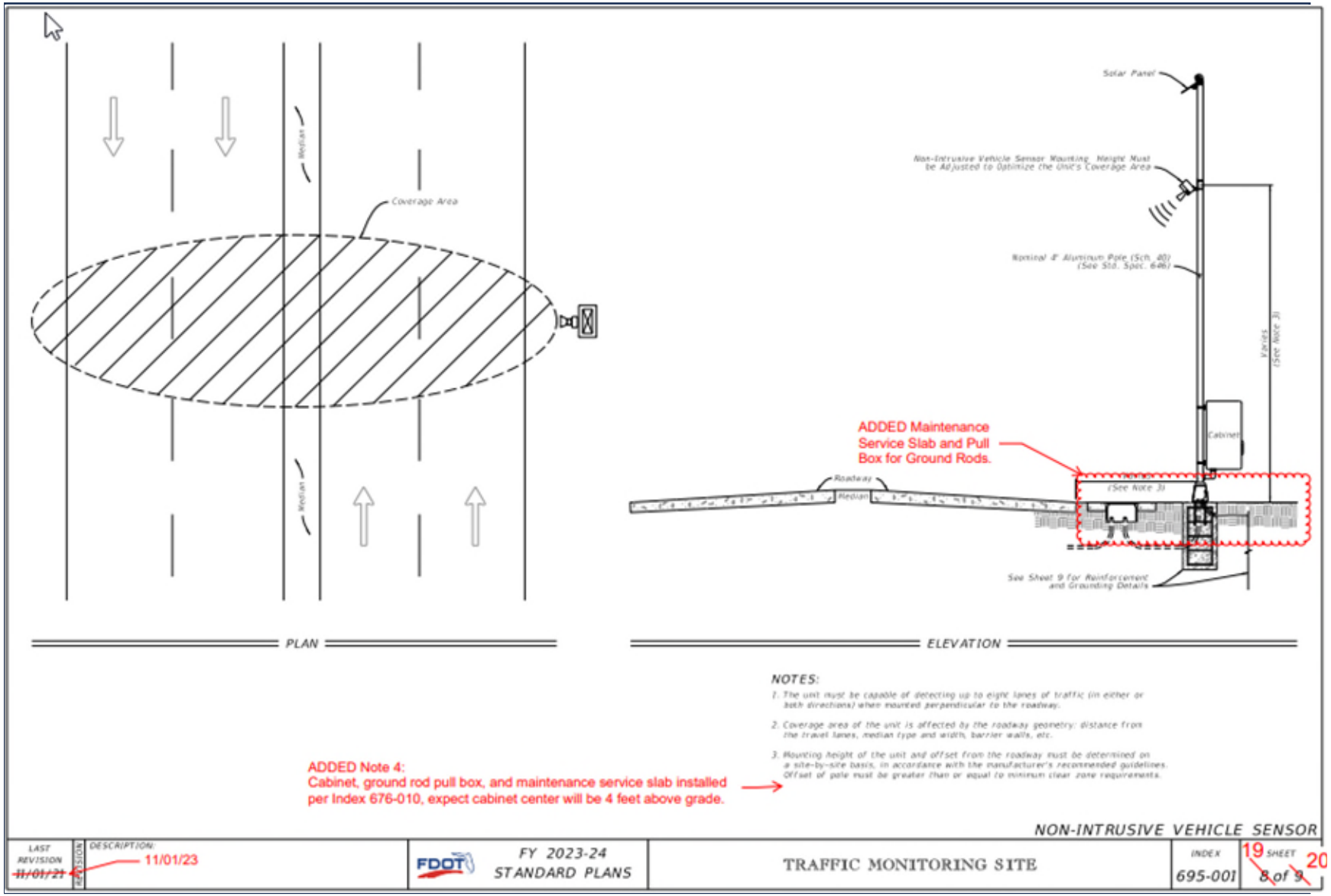
Sheet 17: *New* Sheet - Non-Motorized Paved Sidewalk Layout



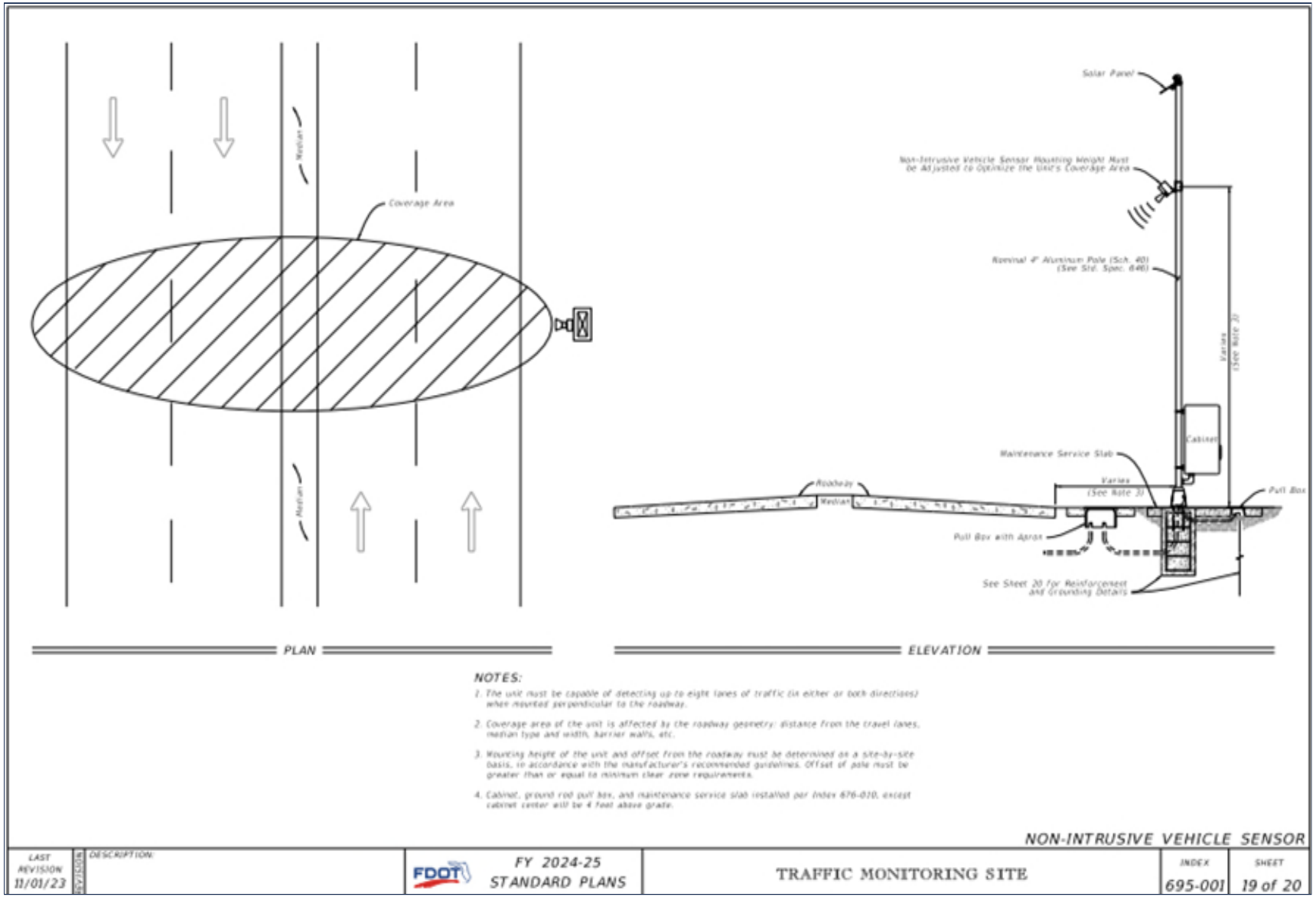
Sheet 18: *New* Sheet – Document Details A-F



Sheet 19: Non-Intrusive Vehicle Sensor Layout



Sheet 19: Non-Intrusive Vehicle Sensor Layout



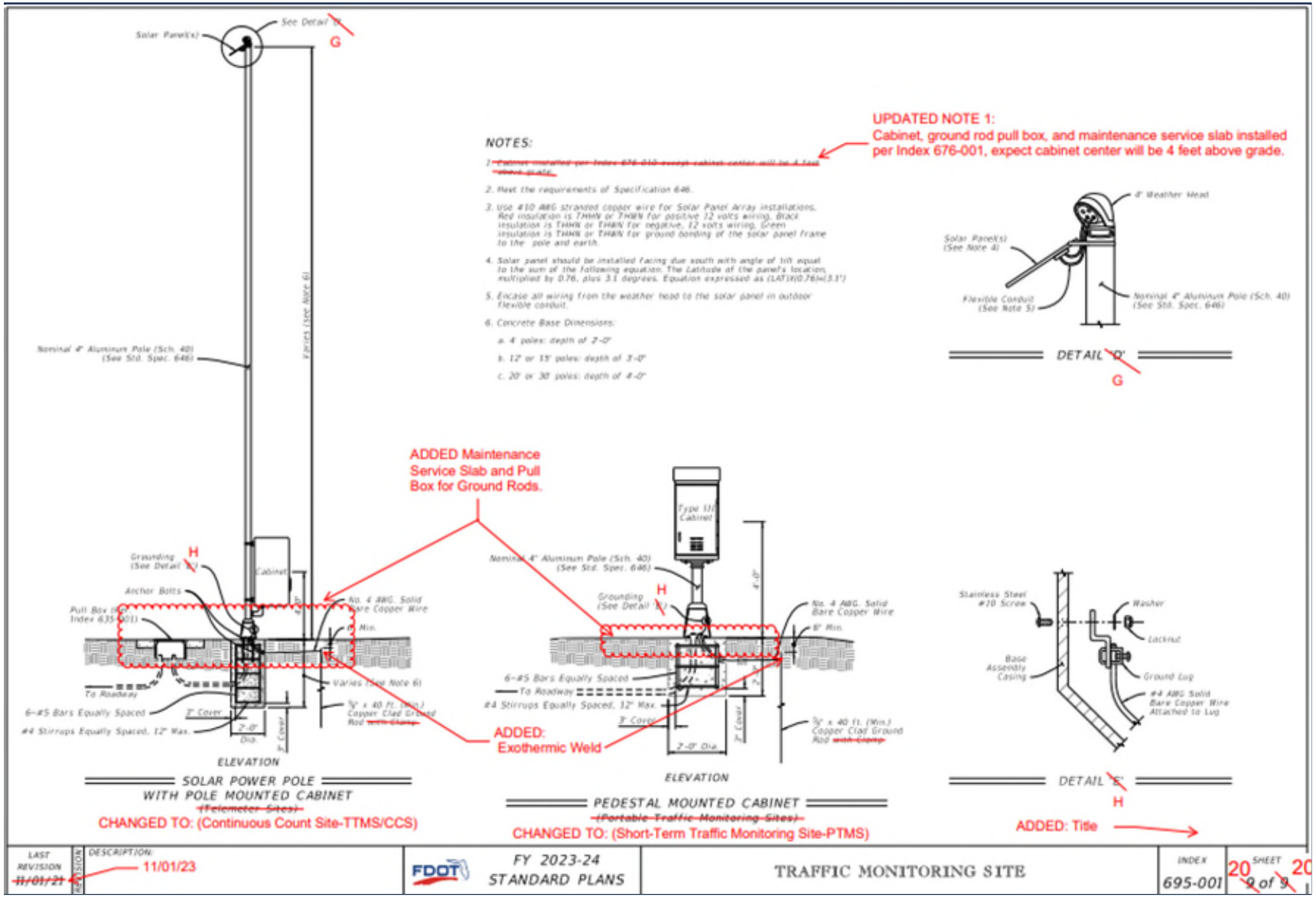
NOTES:

1. The unit must be capable of detecting up to eight lanes of traffic (in either or both directions) when mounted perpendicular to the roadway.
2. Coverage area of the unit is affected by the roadway geometry: distance from the travel lanes, median type and width, barrier walls, etc.
3. Mounting height of the unit and offset from the roadway must be determined on a site-by-site basis, in accordance with the manufacturer's recommended guidelines. Offset of pole must be greater than or equal to minimum clear zone requirements.
4. Cabinet, ground rod pull box, and maintenance service slab installed per Index 676-010, except cabinet center will be 4 feet above grade.

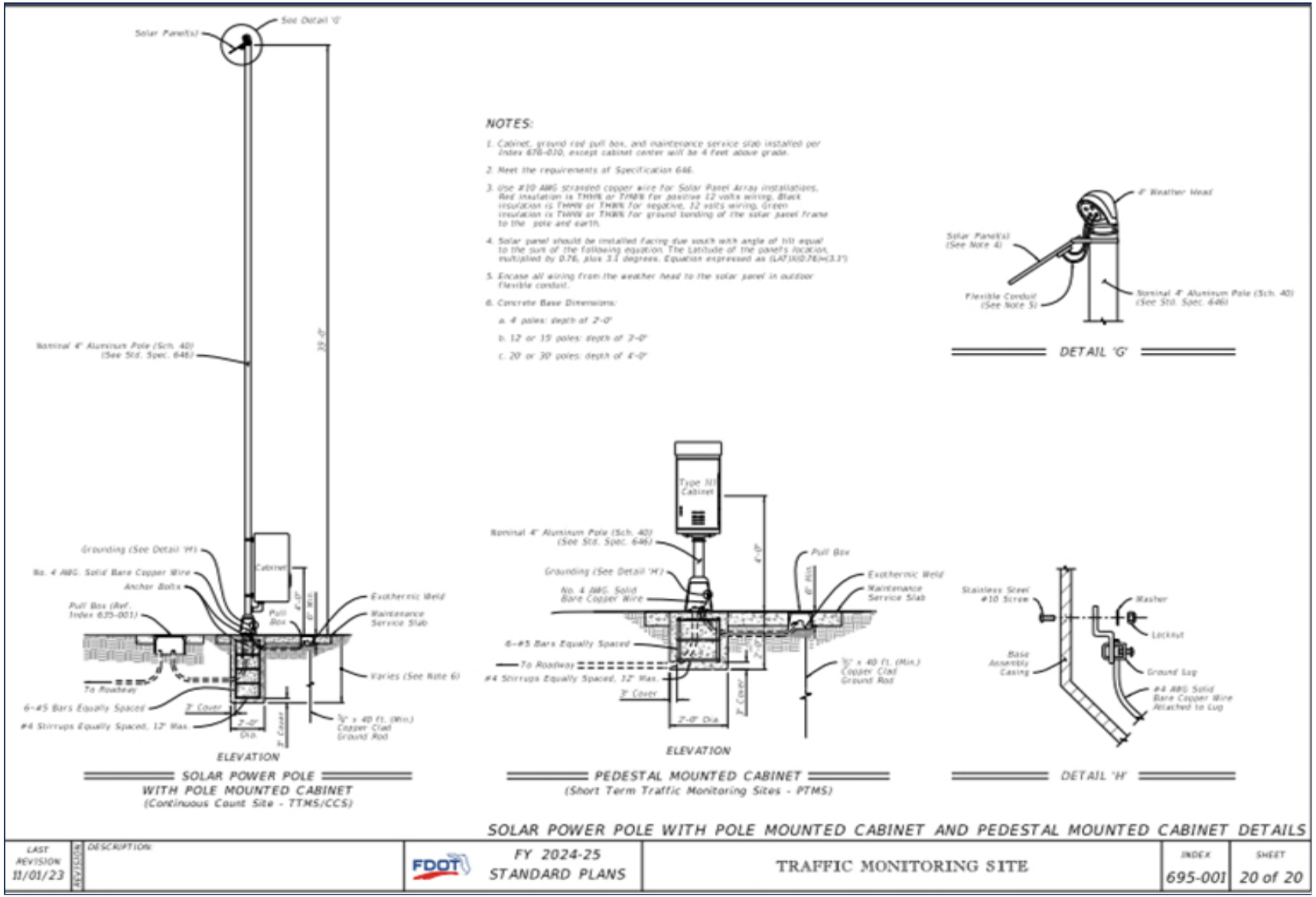
NON-INTRUSIVE VEHICLE SENSOR

LAST REVISION	DESCRIPTION:			INDEX	SHEET
11/01/23		FY 2024-25 STANDARD PLANS	TRAFFIC MONITORING SITE	695-001	19 of 20

Sheet 20: Continuous and Short-Term Cabinet Setup



Sheet 20: Solar Power Setup and Cabinet Details



Contact Us:

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Transportation Data and Analytics Office
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Victor.Johnson@dot.state.fl.us

Structures Design Office Standard Plans Training

Presenter: Joshua Turley P.E.

Standard Plans – Primary Updates:

1) ***Index 450-511 – BEARING PLATES (TYPE 1) - PRESTRESSED FLORIDA-I AND AASHTO TYPE II BEAM***
   - *Revised Sheet 1*

2) ***Index 455-031 – 30" SQUARE PRESTRESSED CONCRETE PILE – HIGH MOMENT CAPACITY***
   - *Revised Sheet 1*

3) ***Index 458-110 – EXPANSION JOINT SYSTEM - POURED JOINT WITH BACKER ROD***
   - *Revised Sheet 1*

4) ***Index 550-011 – BRIDGE FENCING (CURVED TOP)***
   - *Revised all sheets*

5) ***Index 550-012 – BRIDGE FENCING (ENCLOSED)***
   - *Revised Sheet 1 and 2*

Standard Plans – Primary Updates:

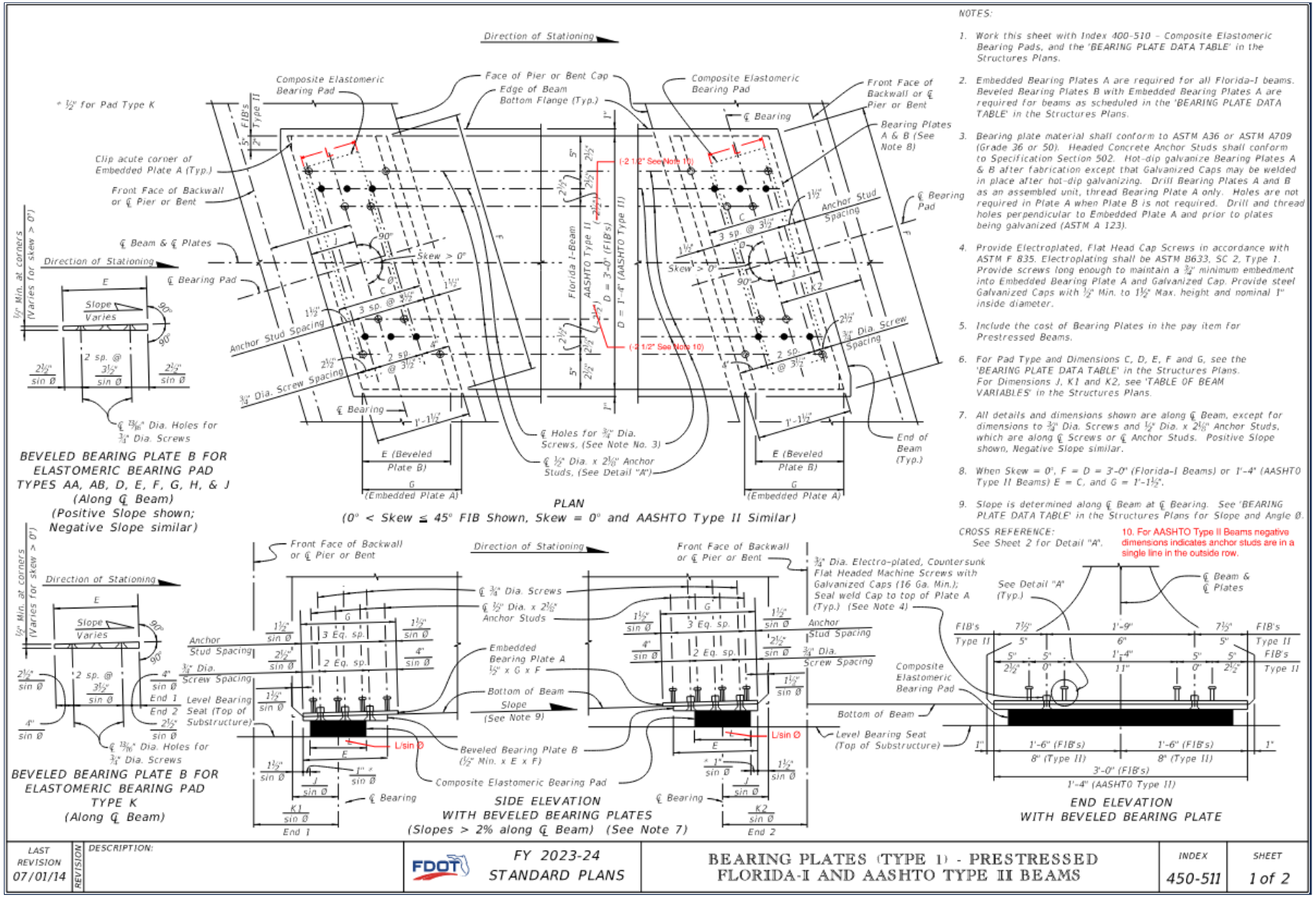
6) ***Index 550-013 – BRIDGE FENCING (OVER RAILROAD)***
   - *Revised all sheets*

7) ***Index 630-010 – CONDUIT DETAILS - EMBEDDED***
   - *Revised Sheet 1*

8) ***Index 641-020 – CONCRETE CCTV POLE***
   - *Revised Sheet 2 and 3*

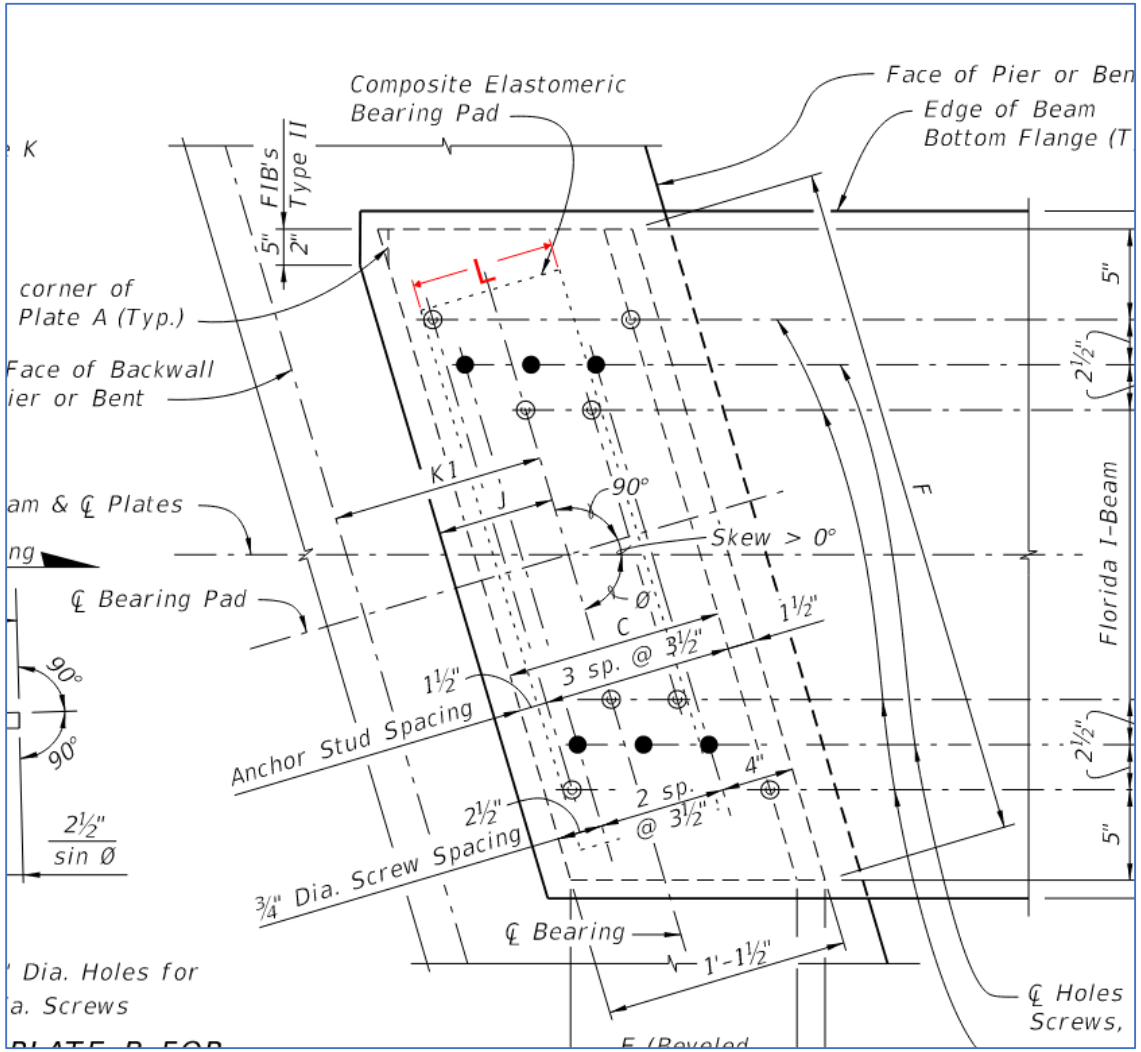
Index 450-511 – BEARING PLATES (TYPE 1) - PRESTRESSED FLORIDA-I AND AASHTO TYPE II BEAM

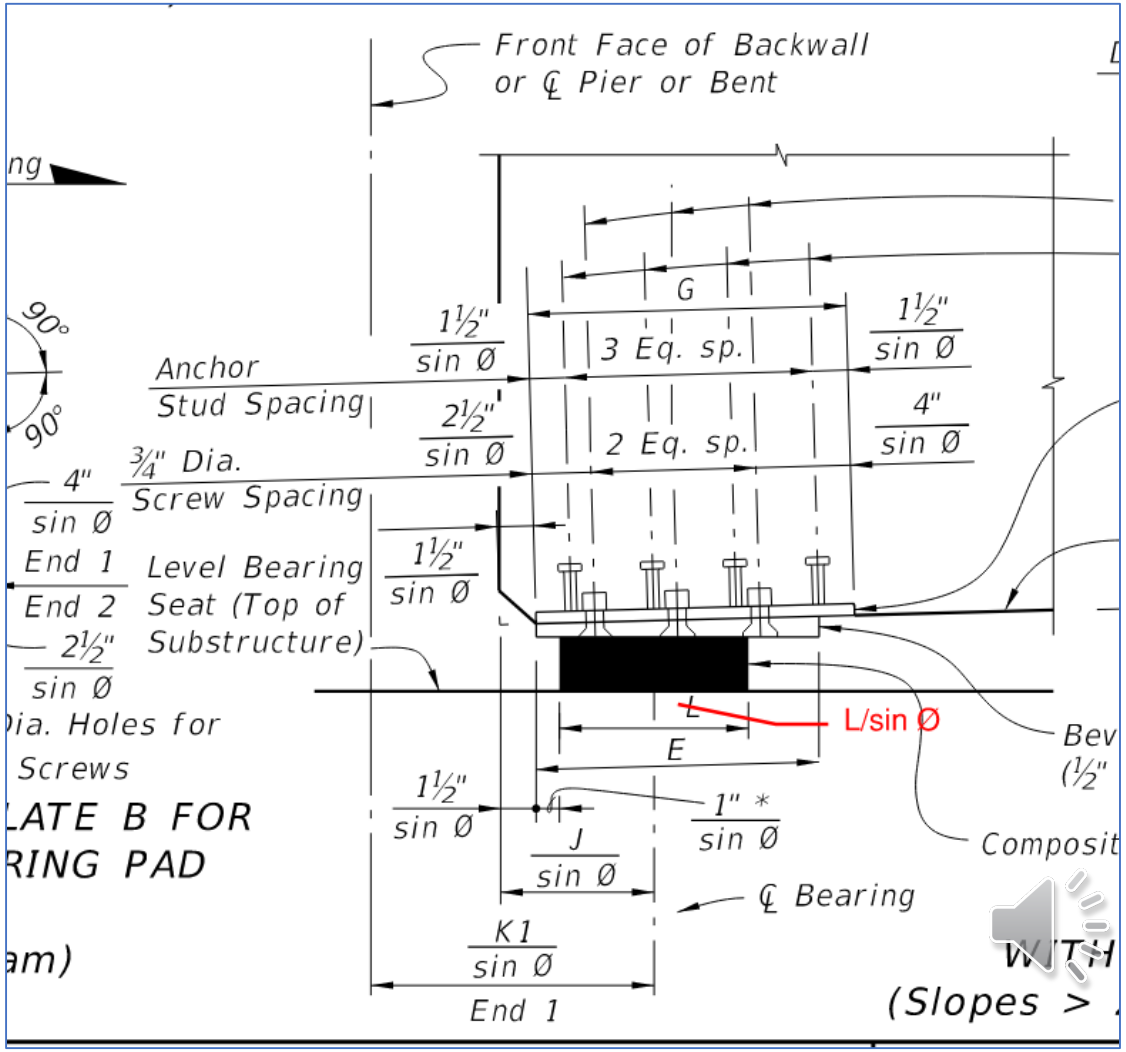
Sheet 1:



- ***Modified dim L for skew angle***
- ***Added note to clarify negative dimension***

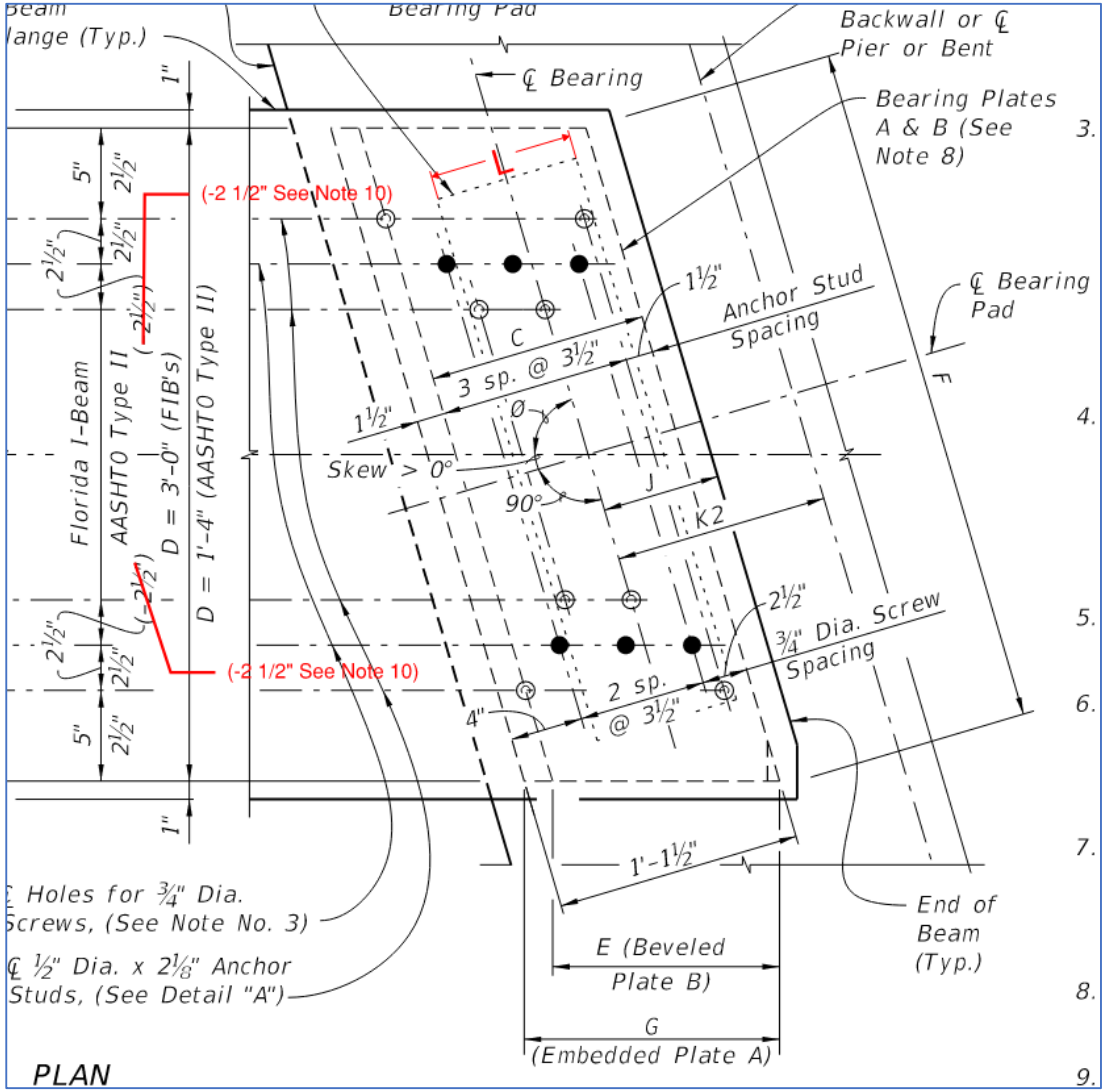
Sheet 1: *Modified dim L for skew angle*





Index 450-511 – BEARING PLATES (TYPE 1) - PRESTRESSED FLORIDA-I AND AASHTO TYPE II BEAM

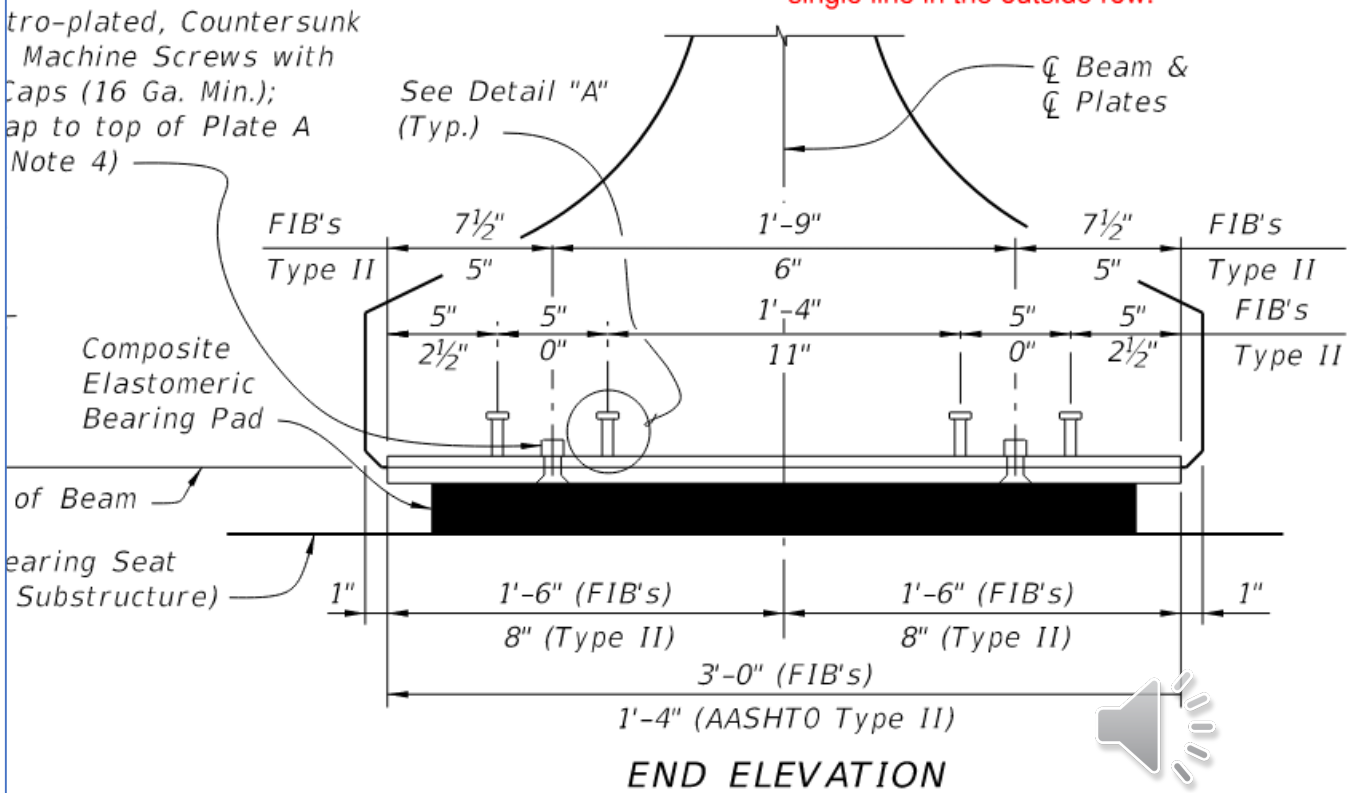
Sheet 1: *Note 10*



9. Slope is determined along ℄ Beam at ℄ Bearing. See 'BEARING PLATE DATA TABLE' in the Structures Plans for Slope and Angle Ø.

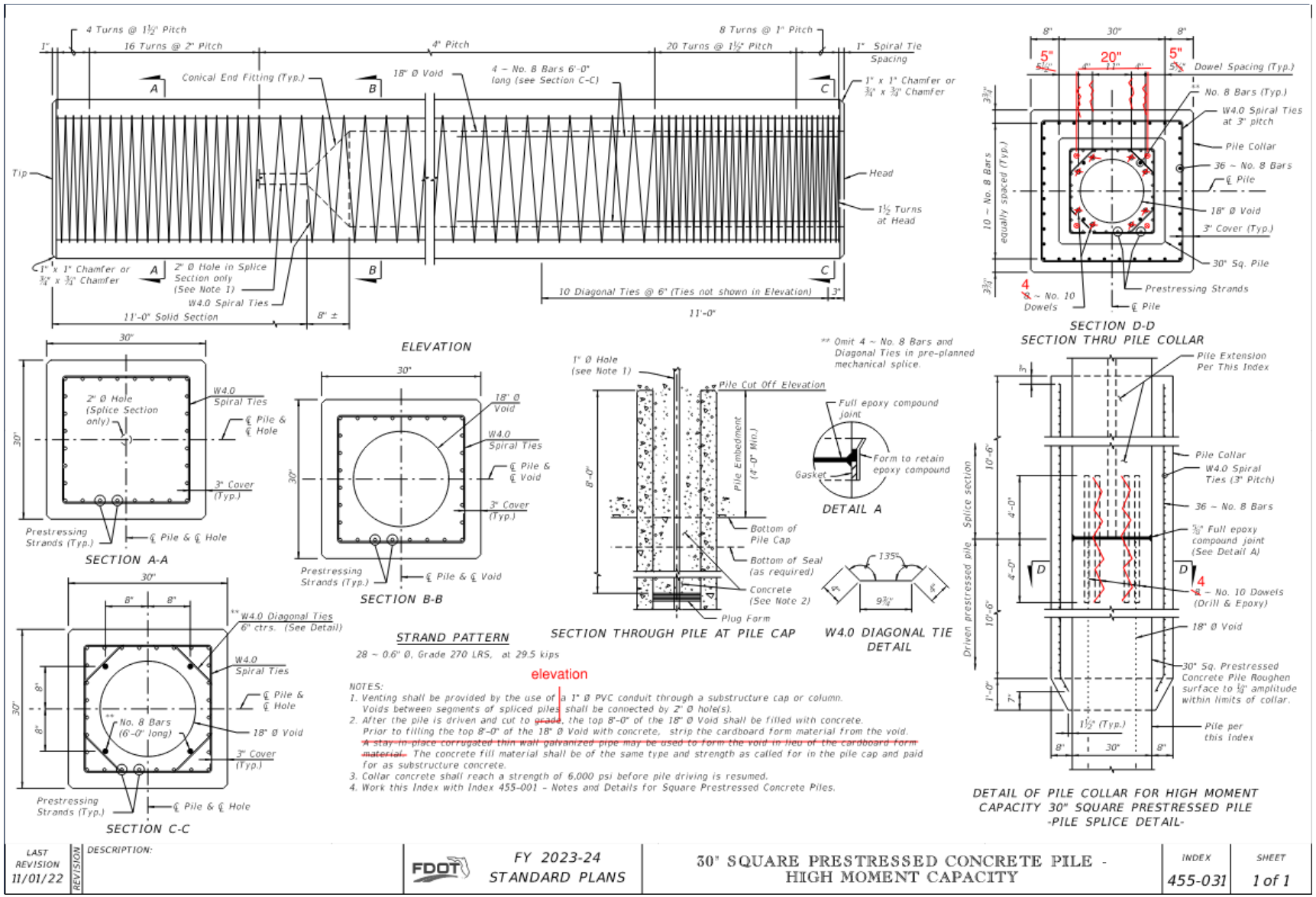
CROSS REFERENCE:
See Sheet 2 for Detail "A".

10. For AASHTO Type II Beams negative dimensions indicates anchor studs are in a single line in the outside row.



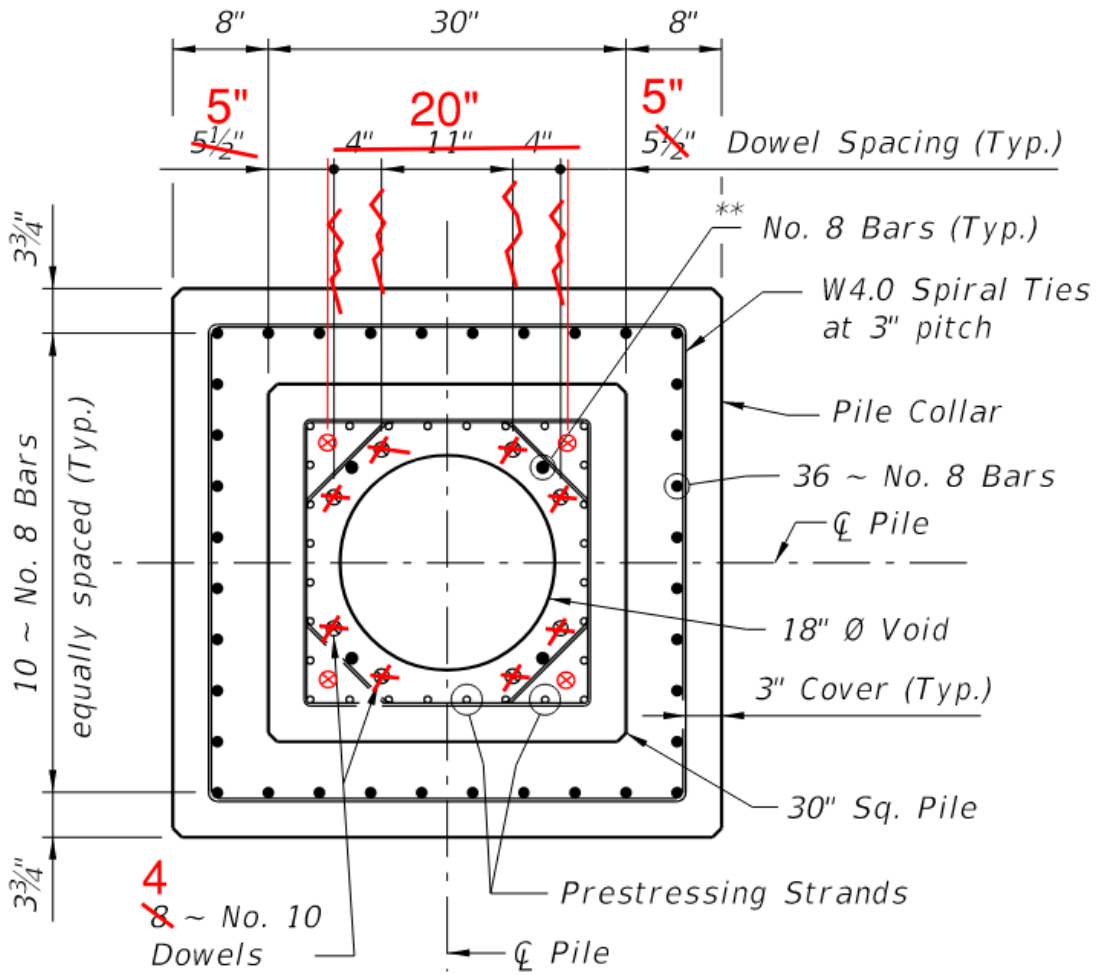
Index 455-031 – 30” SQUARE PRESTRESSED CONCRETE PILE – HIGH MOMENT CAPACITY

Sheet 1:



- ***Revised splice***
- ***Removed corrugated galvanized pipe***

Sheet 1: Splice

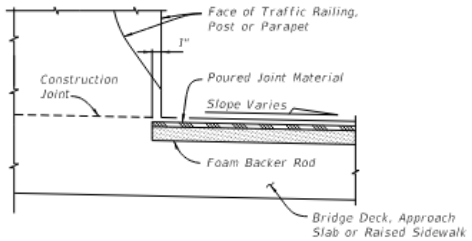


SECTION D-D
SECTION THRU PILE COLLAR

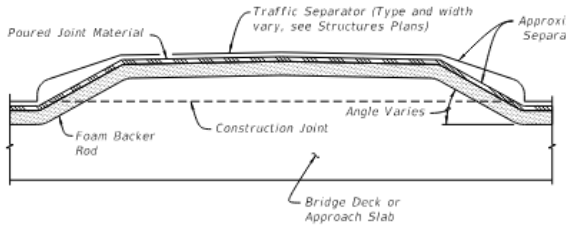
- ***Revised splice***
- ***Removed corrugated galvanized pipe***

Index 458-110 – EXPANSION JOINT SYSTEM - POURED JOINT WITH BACKER ROD

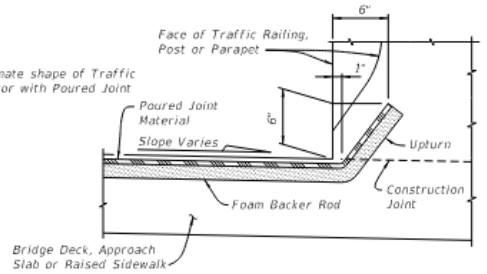
Sheet 1:



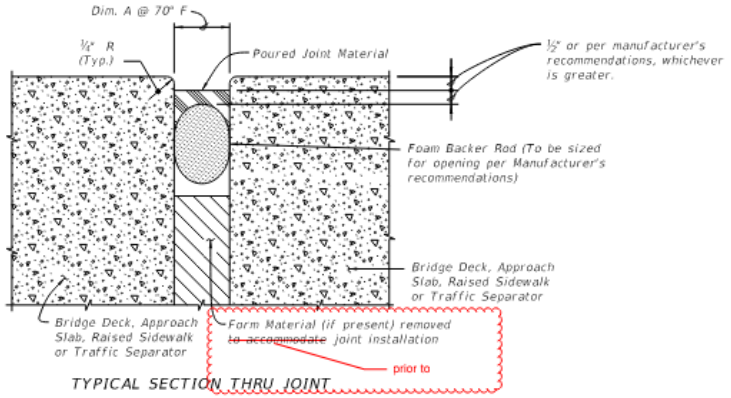
PARTIAL SECTION ALONG ℄ JOINT
JOINT TREATMENT AT HIGH SIDE OF DECK WITH SLOPES 1% OR GREATER



PARTIAL SECTION ALONG ℄ JOINT,
JOINT TREATMENT AT TRAFFIC SEPARATOR



PARTIAL SECTION ALONG ℄ JOINT
JOINT TREATMENT AT LOW SIDE OF DECK OR HIGH SIDE OF DECK WITH SLOPES < 1%



TYPICAL SECTION THRU JOINT

GENERAL NOTES:

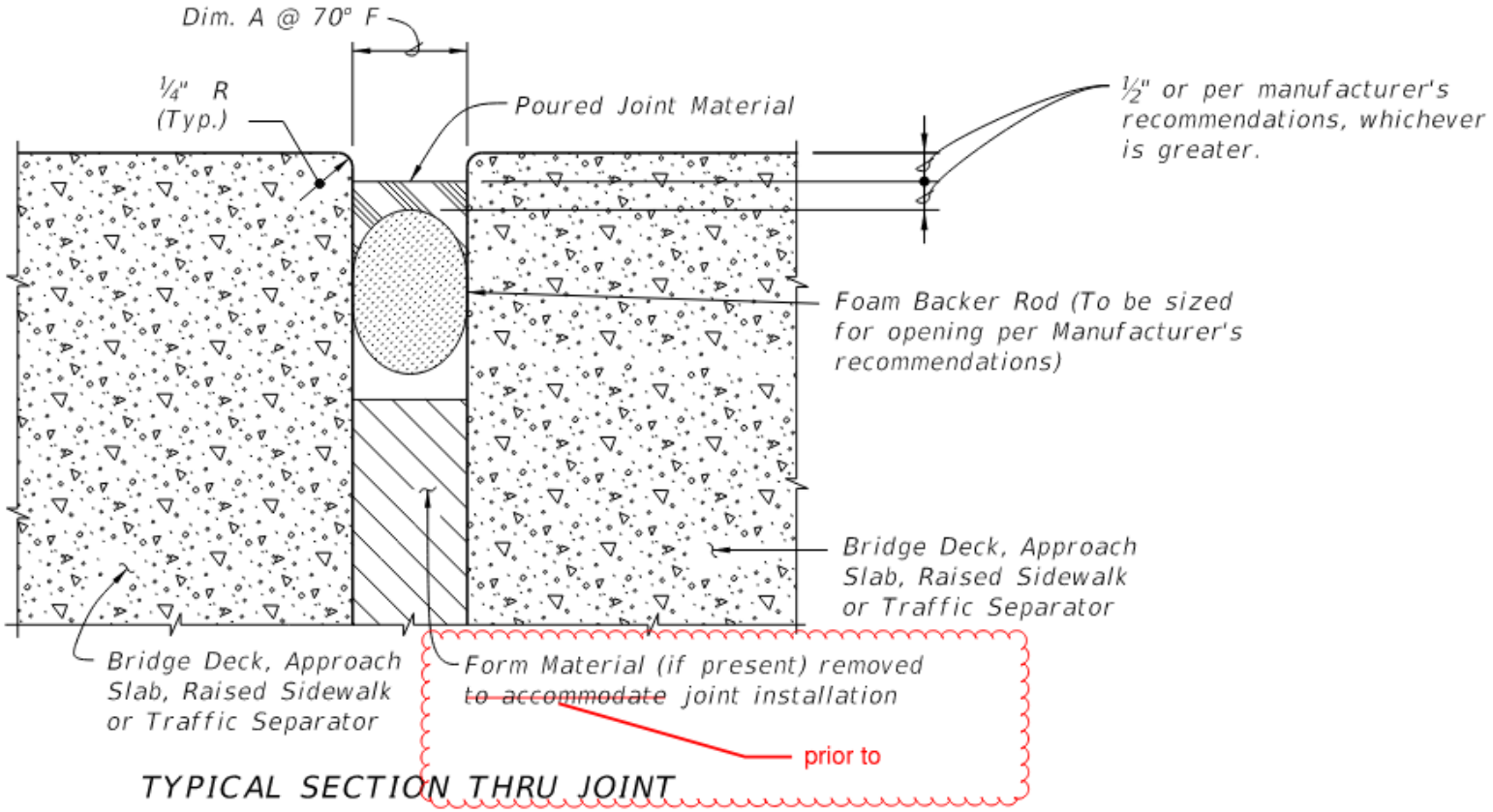
1. Furnish and install Poured Joint With Backer Rod Expansion Joint Systems in accordance with Specification Sections 458 and 932 using Type D silicone sealant material.
2. Refer to the Structures Plans, Poured Expansion Joint Data Table for Dim. A @ 70° F.

LAST REVISION	DESCRIPTION:	FDOT	EXPANSION JOINT SYSTEM - POURED JOINT WITH BACKER ROD	INDEX	SHEET
07/01/14		FY 2023-24 STANDARD PLANS		458-110	1 of 2

- ***Modified note for Form Material Removal***

Index 458-110 – EXPANSION JOINT SYSTEM - POURED JOINT WITH BACKER ROD

Sheet 1:

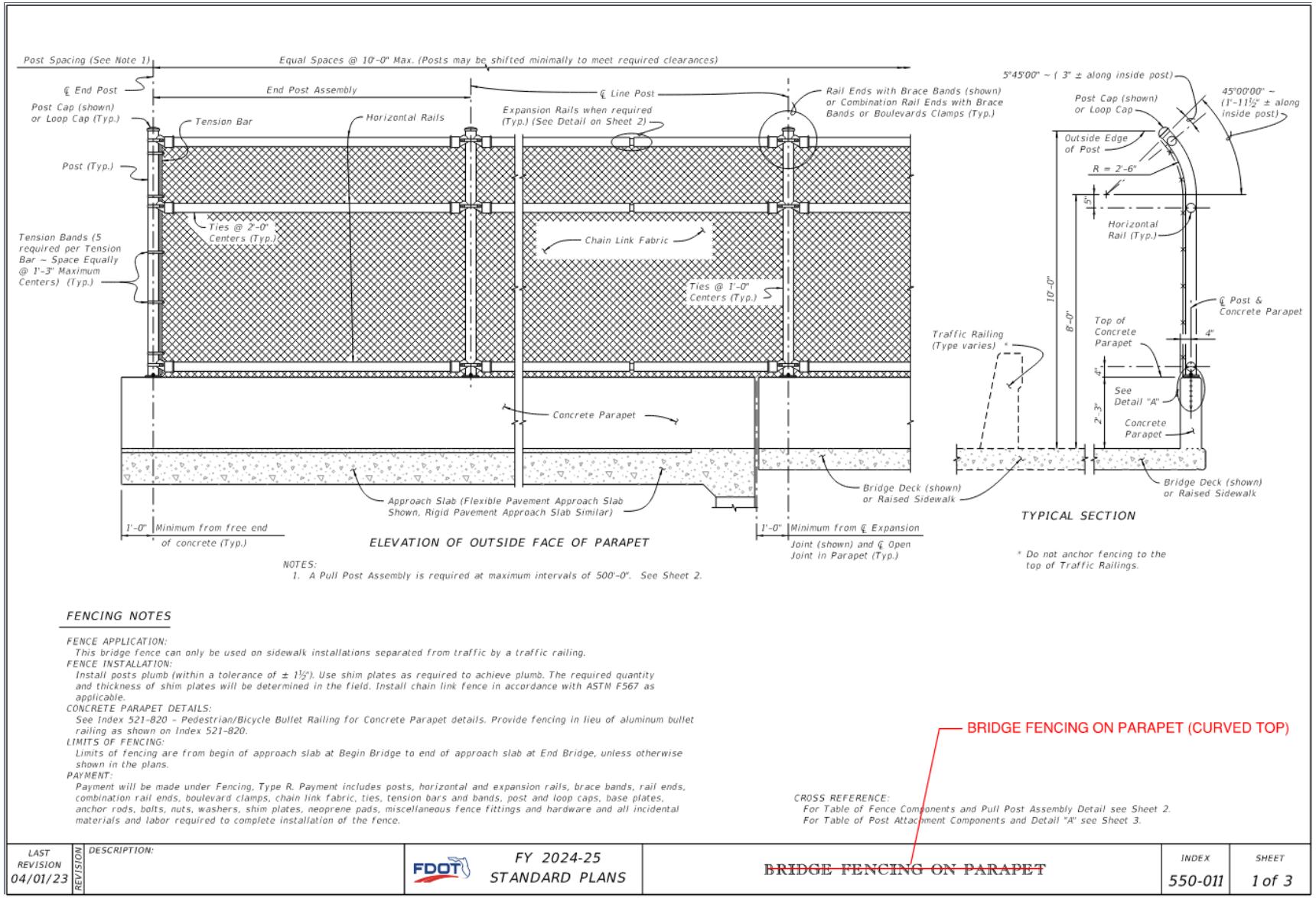


TYPICAL SECTION THRU JOINT

- ***Modified note for Form Material Removal***

Index 550-011 – BRIDGE FENCING (CURVED TOP)

Sheet 1:



NOTES:
1. A Pull Post Assembly is required at maximum intervals of 500'-0". See Sheet 2.

FENCING NOTES

FENCE APPLICATION:
This bridge fence can only be used on sidewalk installations separated from traffic by a traffic railing.

FENCE INSTALLATION:
Install posts plumb (within a tolerance of ± 1½°). Use shim plates as required to achieve plumb. The required quantity and thickness of shim plates will be determined in the field. Install chain link fence in accordance with ASTM F567 as applicable.

CONCRETE PARAPET DETAILS:
See Index 521-820 – Pedestrian/Bicycle Bullet Railing for Concrete Parapet details. Provide fencing in lieu of aluminum bullet railing as shown on Index 521-820.

LIMITS OF FENCING:
Limits of fencing are from begin of approach slab at Begin Bridge to end of approach slab at End Bridge, unless otherwise shown in the plans.

PAYMENT:
Payment will be made under Fencing, Type R. Payment includes posts, horizontal and expansion rails, brace bands, rail ends, combination rail ends, boulevard clamps, chain link fabric, ties, tension bars and bands, post and loop caps, base plates, anchor rods, bolts, nuts, washers, shim plates, neoprene pads, miscellaneous fence fittings and hardware and all incidental materials and labor required to complete installation of the fence.

CROSS REFERENCE:
For Table of Fence Components and Pull Post Assembly Detail see Sheet 2.
For Table of Post Attachment Components and Detail "A" see Sheet 3.

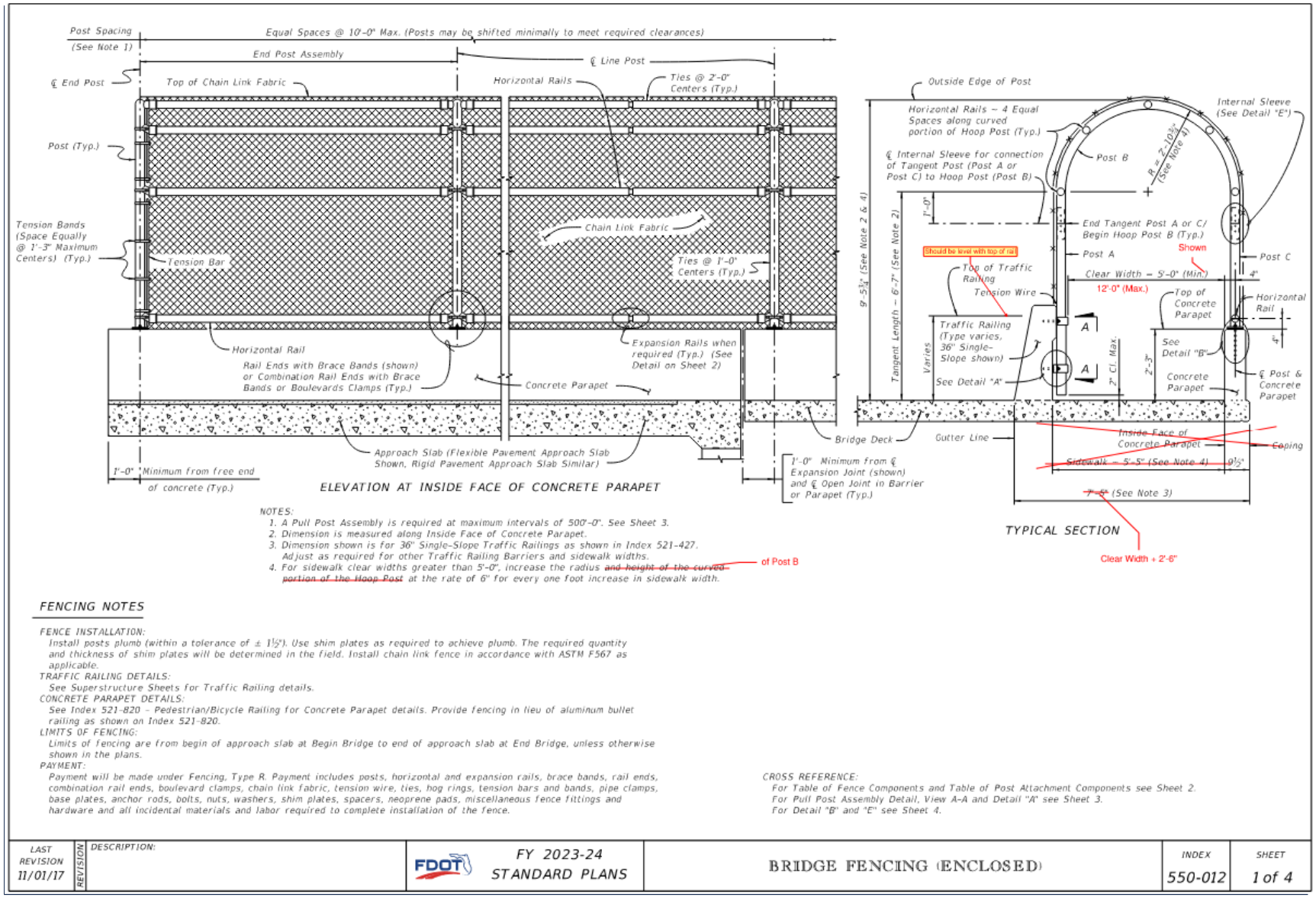
BRIDGE FENCING ON PARAPET (CURVED TOP)

LAST REVISION	DESCRIPTION:			INDEX	SHEET
04/01/23		FY 2024-25 STANDARD PLANS	~~BRIDGE FENCING ON PARAPET~~	550-011	1 of 3

- ***Revised Title***

Index 550-012 – BRIDGE FENCING (ENCLOSED)

Sheet 1:



NOTES:
1. A Pull Post Assembly is required at maximum intervals of 500'-0". See Sheet 3.
2. Dimension is measured along Inside Face of Concrete Parapet.
3. Dimension shown is for 36" Single-Slope Traffic Railings as shown in Index 521-427. Adjust as required for other Traffic Railing Barriers and sidewalk widths.
4. For sidewalk clear widths greater than 5'-0", increase the radius ~~and height of the curved portion of the Hoop Post~~ of Post B at the rate of 6" for every one foot increase in sidewalk width.

FENCING NOTES

FENCE INSTALLATION:
Install posts plumb (within a tolerance of ± 1½"). Use shim plates as required to achieve plumb. The required quantity and thickness of shim plates will be determined in the field. Install chain link fence in accordance with ASTM F567 as applicable.

TRAFFIC RAILING DETAILS:
See Superstructure Sheets for Traffic Railing details.

CONCRETE PARAPET DETAILS:
See Index 521-820 – Pedestrian/Bicycle Railing for Concrete Parapet details. Provide fencing in lieu of aluminum bullet railing as shown on Index 521-820.

LIMITS OF FENCING:
Limits of fencing are from begin of approach slab at Begin Bridge to end of approach slab at End Bridge, unless otherwise shown in the plans.

PAYMENT:
Payment will be made under Fencing, Type R. Payment includes posts, horizontal and expansion rails, brace bands, rail ends, combination rail ends, boulevard clamps, chain link fabric, tension wire, ties, hog rings, tension bars and bands, pipe clamps, base plates, anchor rods, bolts, nuts, washers, shim plates, spacers, neoprene pads, miscellaneous fence fittings and hardware and all incidental materials and labor required to complete installation of the fence.

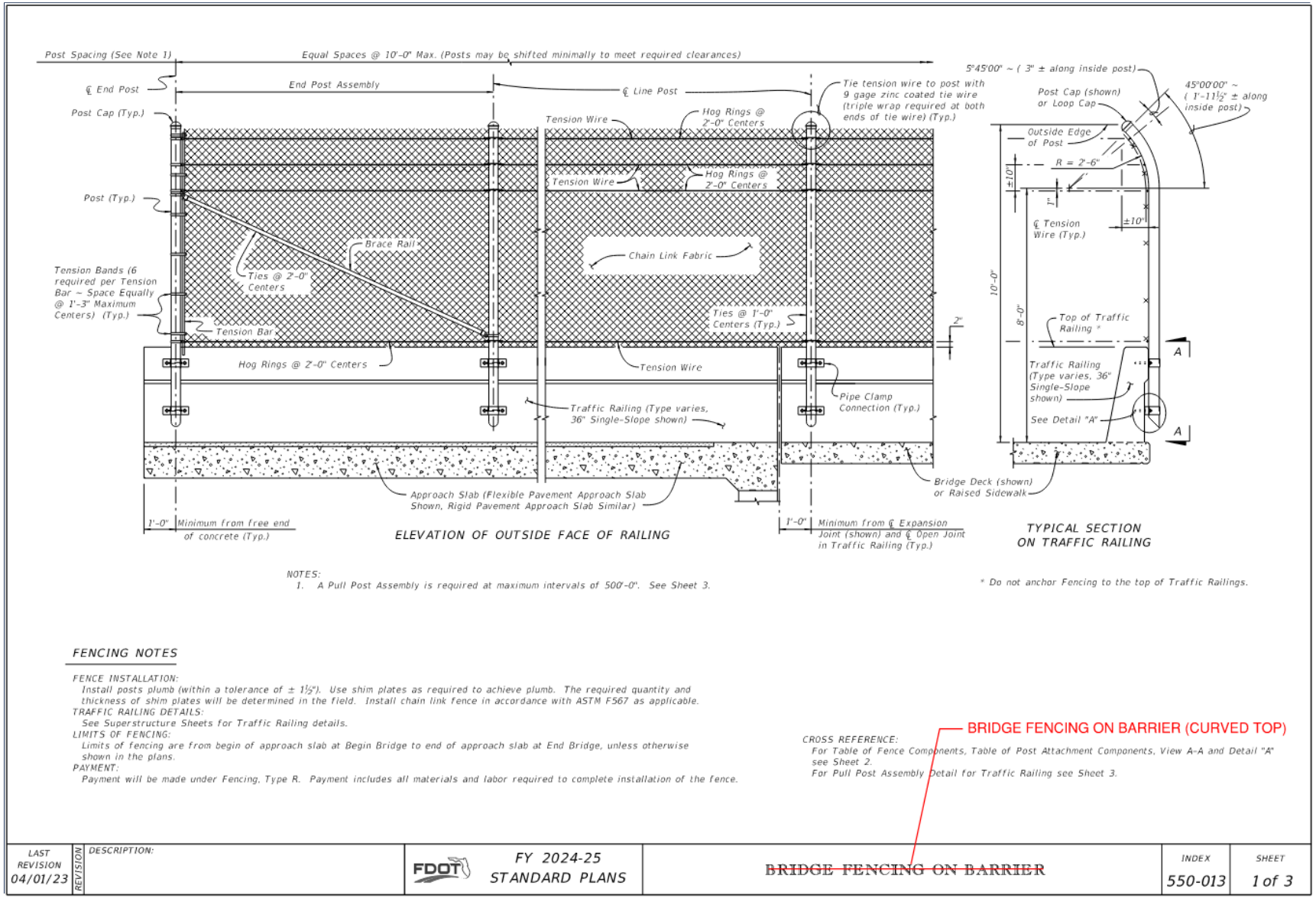
CROSS REFERENCE:
For Table of Fence Components and Table of Post Attachment Components see Sheet 2.
For Pull Post Assembly Detail, View A-A and Detail "A" see Sheet 3.
For Detail "B" and "E" see Sheet 4.

LAST REVISION	REVISION	DESCRIPTION:	FDOT		INDEX	SHEET
11/01/17			FY 2023-24 STANDARD PLANS	BRIDGE FENCING (ENCLOSED)	550-012	1 of 4

- ***Revised Dimensions***

Index 550-013 – BRIDGE FENCING (OVER RAILROAD)

Sheet 1:



NOTES:
1. A Pull Post Assembly is required at maximum intervals of 500'-0". See Sheet 3.

* Do not anchor Fencing to the top of Traffic Railings.

FENCING NOTES

FENCE INSTALLATION:
Install posts plumb (within a tolerance of ± 1½"). Use shim plates as required to achieve plumb. The required quantity and thickness of shim plates will be determined in the field. Install chain link fence in accordance with ASTM F567 as applicable.

TRAFFIC RAILING DETAILS:
See Superstructure Sheets for Traffic Railing details.

LIMITS OF FENCING:
Limits of fencing are from begin of approach slab at Begin Bridge to end of approach slab at End Bridge, unless otherwise shown in the plans.

PAYMENT:
Payment will be made under Fencing, Type R. Payment includes all materials and labor required to complete installation of the fence.

CROSS REFERENCE:
For Table of Fence Components, Table of Post Attachment Components, View A-A and Detail "A" see Sheet 2.
For Pull Post Assembly Detail for Traffic Railing see Sheet 3.

BRIDGE FENCING ON BARRIER (CURVED TOP)

LAST REVISION	DESCRIPTION:				
04/01/23		FY 2024-25 STANDARD PLANS	~~BRIDGE FENCING ON BARRIER~~	INDEX 550-013	SHEET 1 of 3

- ***Revised Title***

Index 630-010 – CONDUIT DETAILS - EMBEDDED

Sheet 1:

CONDUIT GENERAL NOTES:

1. Furnish and install approved Conduits, Fittings and Embedded Junction Boxes (EBJ's) in accordance with Specification Sections 630 and 635, this Standard, the National Electric Code (NEC) and as directed by the Engineer.

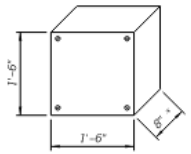
2. Furnish and install Embedded Junction Boxes (EJB) with weatherproof covers sized in accordance with NEC requirements and the maximum size limits shown. Install EJB adjacent to the Begin and End of Bridges, Begin and End of Retaining Walls, (except omit EJB adjacent to the Bridge unless a precast Traffic Railing with junction slab is used), and at other locations as necessary to maintain 300 foot maximum spacing. See Plans for additional locations and details.

3. For Conduit not designated for future use, see Plans for details. For Conduit designated for future use, stub out and cap the Conduit. Drive a 3'-0"± long ¾" (min.) diameter Steel Pipe flush with the ground line adjacent to the end of the Conduit as shown on Sheets 2, 3 or 4. Provide the location of the stub out with Steel Pipe to the Engineer for inclusion on the As-Built Plans.

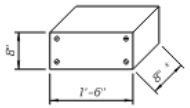
4. Shift vertical Railing reinforcement symmetrically to provide 2" clearance to EJB. Space shifted vertical reinforcement at minimum 3" centers. Cut horizontal Railing reinforcement to provide 2" clearance to EJB and provide supplemental reinforcement as shown. To facilitate placement of Conduit, Expansion Fittings, and Expansion/Deflection Fittings, shift reinforcing a maximum of 1" but do not cut railing reinforcing to facilitate Conduit or Fittings. Do not bundle Conduits, or Conduit and horizontal reinforcement.

5. Place conduits as indicated in this Standard unless Structures Plans indicate fewer.

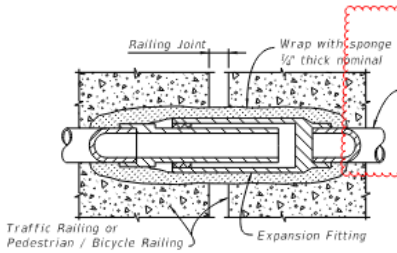
* Reduce to 6" maximum when installed in Pedestrian/ Bicycle Railings.



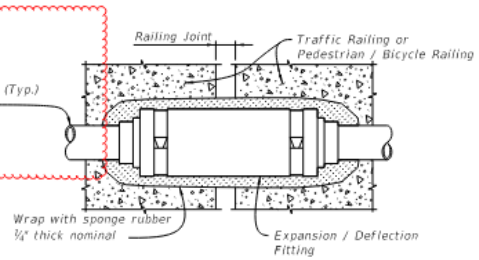
EJB "A"
Double or Triple Conduit
(Maximum Dimensions)



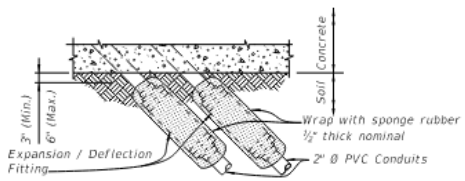
EJB "B"
Single Conduit
(Maximum Dimensions)



DETAIL "A"
EXPANSION FITTING DETAIL



DETAIL "B" EXPANSION / DEFLECTION
FITTING DETAIL (CONCRETE / CONCRETE)



DETAIL "C" EXPANSION / DEFLECTION
FITTING DETAIL (CONCRETE / SOIL)

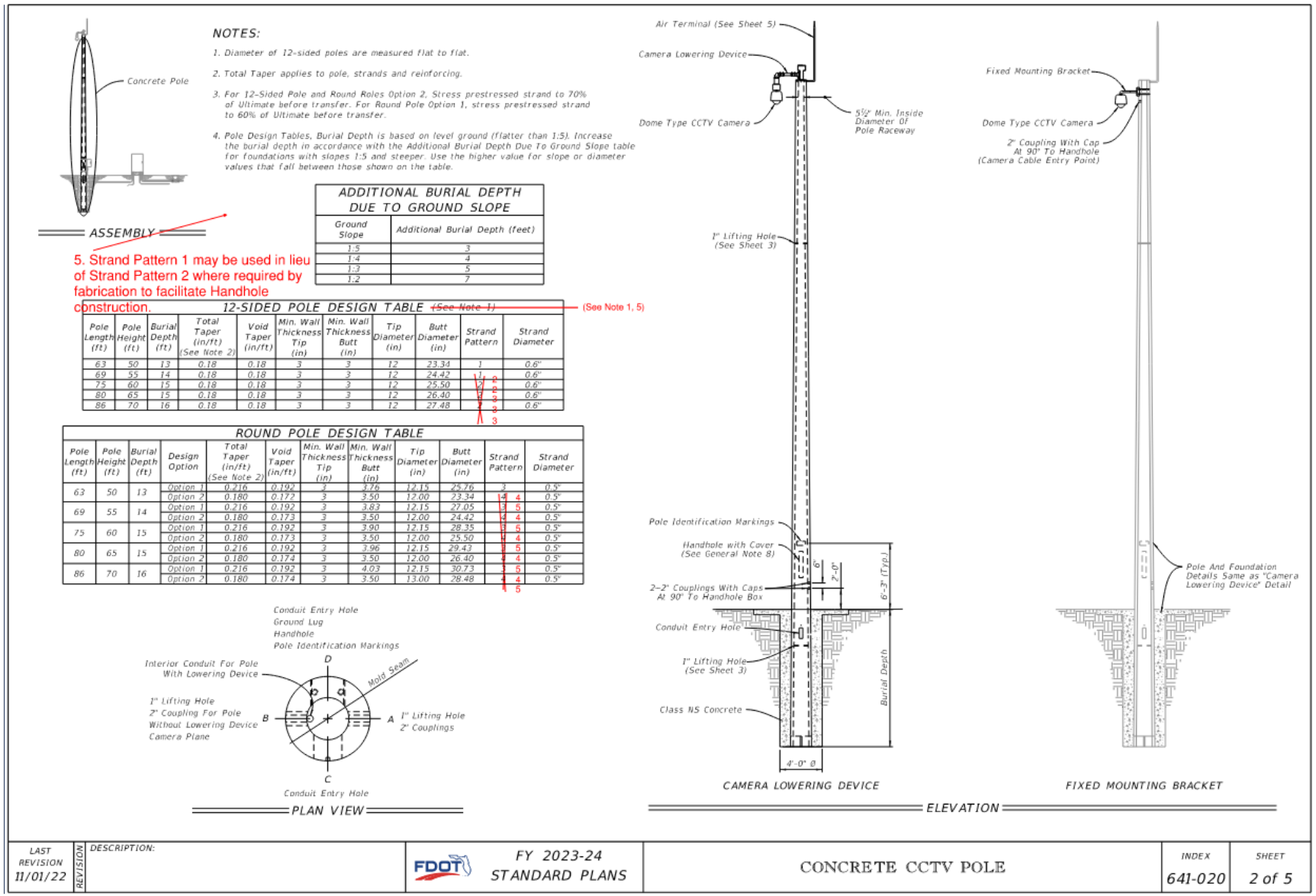
GENERAL

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	CONDUIT DETAILS - EMBEDDED	INDEX	SHEET
11/01/20						630-010	1 of 4

- ***Revised for Sch 40 pipe***

Index 641-020 – CONCRETE CCTV POLE

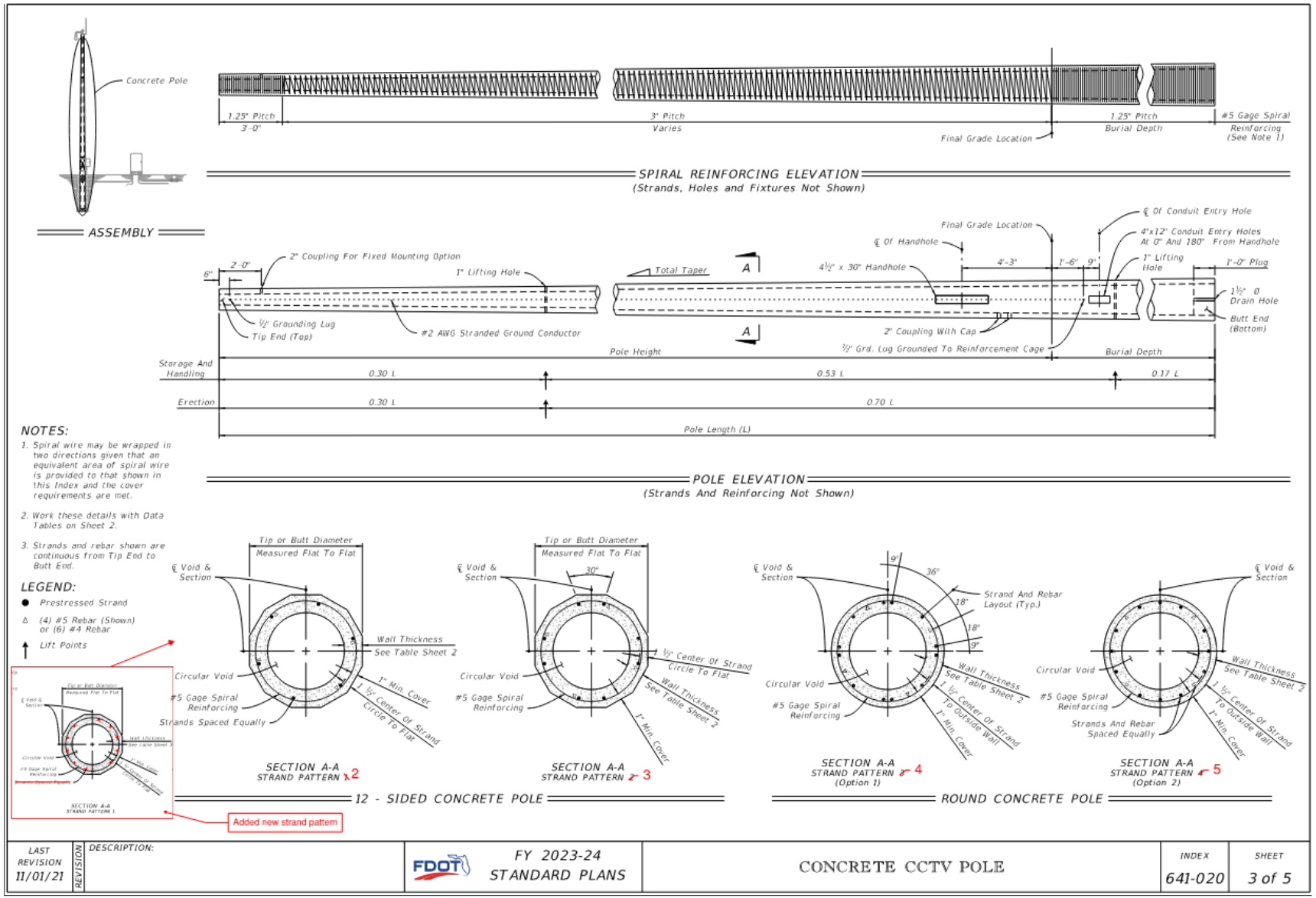
Sheet 1:



- ***Added new strand pattern***

Index 641-020 – CONCRETE CCTV POLE

Sheet 2:



- ***Added new strand pattern***

Contact Us:

For Questions or Suggestions:

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