## GENERAL NOTES:

1. Verify Column lengths in the field prior to fabrication.

2. Shop drawings:

A. Column/Sign Posts: Sign Support Shop drawings are not required when fabricated in accordance with this Index and support posts do not exceed the length shown in the plans by more than 2'-0".

B. Sign Panels: Horizontal panel splices are allowed at interior wind beams for sign panels with a depth ("D") greater than 10 feet. Shop drawings required for panel splice details.

C. When shop drawings are required; obtain approval prior to fabrication.

3. Materials:

A. Sign Panel Mounting Materials:
   a. Aluminum Bars, and Extruded Shapes: ASTM B221, Alloy 6061-T6 or Alloy 6351-T5
   b. Aluminum Structural Shapes: ASTM B308, Alloy 6061-T6
B. Sign Support Structure Materials:
   a. Steel Plates and Structural Shapes: ASTM A36 or ASTM A709, Grade 36
   b. Steel Weld Metal: E70XX
   c. Brass Shims: ASTM B36
C. Aluminum Bolts, Nuts and Washers:
   a. Flat Head and Button Head Bolts: ASTM F 468, Alloy 2024-T4
   b. Hex Nuts: ASTM F467, 2024-T4
   c. Washers: ASTM B221, Alloy 7075-T6
D. Stainless Steel Bolts, Nuts and Washers Alloy Group 2, Condition A, may be substituted for the Aluminum bolts as follows:
   a. Bolts: ASTM F593, CW1 or SH1
   b. Nuts: ASTM F594,
E. High Strength (H.S.) Steel Bolts, Nuts and Washers:
   a. Galvanized Hex Head Bolts: ASTM F3125, Grade A325, Type 1
   b. Galvanized Nuts: ASTM A563 Hex, Grade DH
   c. Galvanized Washers: ASTM F436
F. Concrete: Class I.
G. Reinforcing Bars or Welded Wire Reinforcement (WWR): Specification Section 415

4. Coatings:

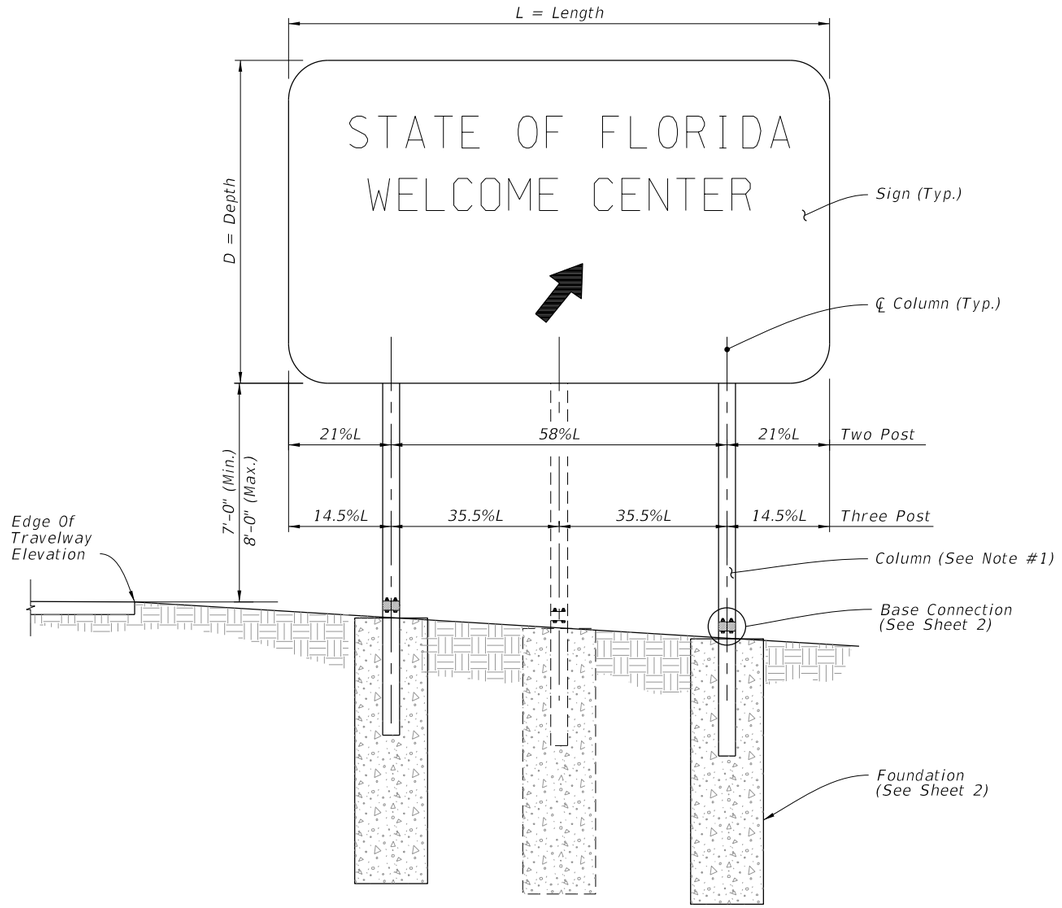
A. Aluminum Fasteners: Anodic coating (0.0002 inches min.) and chromate sealed
B. Galvanize High Strength Steel Bolts Nuts and Washers: ASTM F2329
C. Galvanize all other steel items (excluding stainless steel): Hot-dip ASTM A123
D. Treat damaged galvanizing in accordance with Specification Section 562

5. Fabrication:

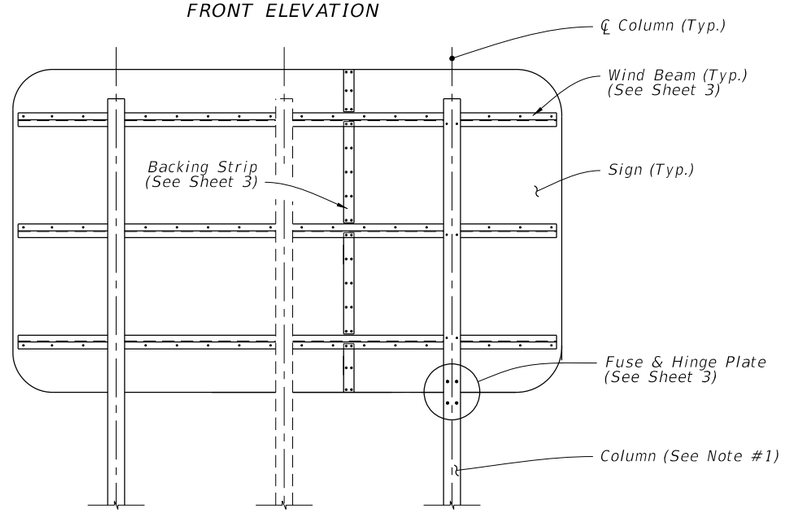
A. All Base Connections and Stub Column materials are steel unless otherwise specified.
B. Drill or sub-punch and ream holes in Fuse Plates and Hinge Plates
C. Weld Base Plate to Post & Stub or if using the Alternate Connection Detail weld Base Plate and Stiffeners to Post and Stub (Sheet 2)
D. Hot dip galvanize after fabrication; Remove all drips, runs or beads on base plate within washer contact areas (Including saw cuts)

6. Construction:

A. Install the Sign Structure foundation in accordance with Specification Section 455. Orient Stub Post according to direction of traffic (Sheet 2)
B. Tighten all high strength bolts except Base Bolts in accordance with Specification Section 700.
C. Assemble Post to Stub with Base Bolts and three flat washers per bolt (See Base Connection Details, Sheet 2). Tighten Base Bolts in accordance with Instructions Notes on Sheet 2.




FRONT ELEVATION

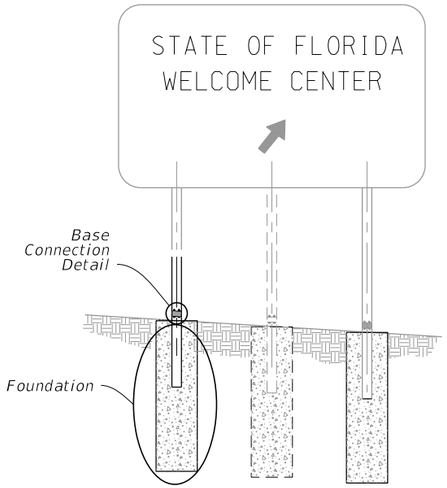



BACK ELEVATION

MULTI-COLUMN SIGN ASSEMBLY

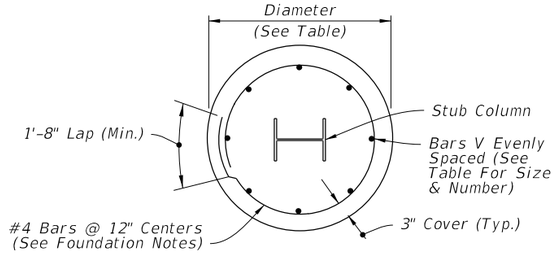
4/17/2017 9:20:28 AM

| LAST REVISION | REVISION | DESCRIPTION: | FY 2017-18 DESIGN STANDARDS | MULTI-COLUMN GROUND SIGN | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FDOT | | 11200 | 1 of 3 |

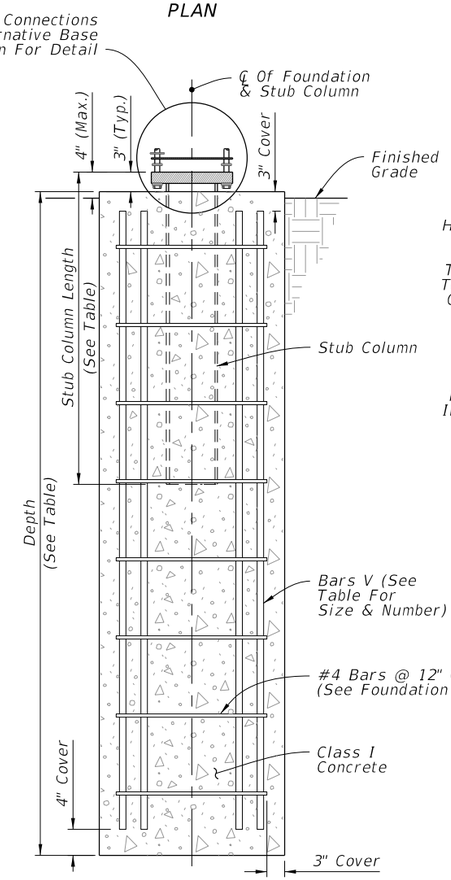



## MULTI-COLUMN SIGN ASSEMBLY

| FOUNDATION DATA | | | | |
|---|---|---|---|---|
| Post & Stub Section* | Dia. | Depth | Stub Column Length | Reinf. Bars V |
| S 3x5.7 | 2'-0" | 4'-0" | 3'-0" | 10-#6 |
| W 6x12 | 2'-0" | 6'-0" | 3'-0" | 10-#6 |
| W 8x18 | 2'-4" | 7'-6" | 4'-0" | 8-#8 |
| W 8x24 | 2'-4" | 8'-6" | 4'-0" | 8-#8 |
| W 10x33 | 2'-4" | 10'-3" | 4'-0" | 8-#8 |
| W 12x45 | 2'-8" | 11'-3" | 5'-0" | 10-#8 |




PLAN




ELEVATION

### FOUNDATION NOTES:

*The Contractor may use Welded Wire Reinforcement (WWR) for foundation reinforcing.*

*At the Contractors option, the #4 tie bars at 12" o.c. may be replaced by D10 Spiral Wire @ 6" pitch, with three flat turns at the top and one flat turn at the bottom in accordance with Specification Section 415.*

### INSTRUCTIONS NOTES:

1. Assembly of Base Instructions:

   A. Place one washer on each Base Bolt between the Bottom Base Plate and the head of high strength Base Bolt; place the next washer between the Bottom Base Plate and the Bolt Keeper Plate; add the Top Base Plate section and place the third washer between the Top Base Plate and the Nut.

   B. Shim as required to plumb column. Provide 2-0.0149" thick (28 gauge) and 2-0.0329" thick (21 gauge) brass shims per column.

2. H.S. Base Bolt $L_2$ Tightening Instructions:

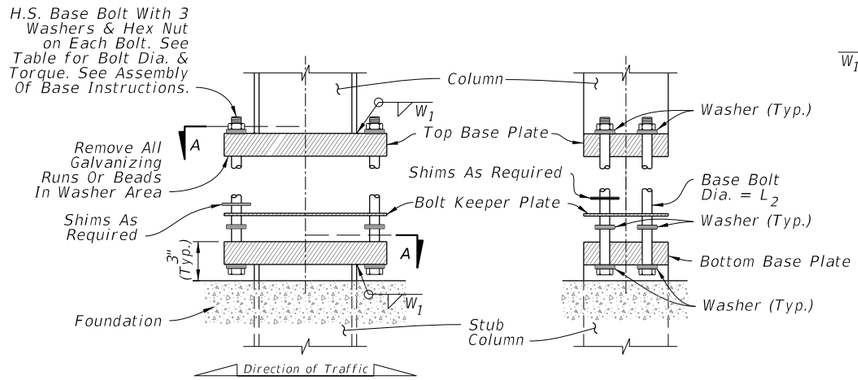
   A. Tighten Base Bolts to the maximum possible with a 12" to 15" wrench (this will bed the washers and shims and clear the bolt threads).

   B. Loosen each Base Bolt one turn.

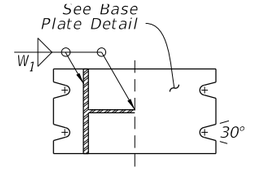
   C. Under the supervision of the Engineer, use a calibrated wrench to tighten bolts to the torque prescribed in the Table. Over tightened Base Bolts will not be permitted.

   D. Burr threads at junction with nut to prevent nut loosening. Treat damaged galvanizing.

## FOUNDATION




SIDE ELEVATION — FRONT ELEVATION




SECTION A-A

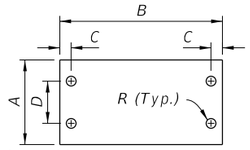
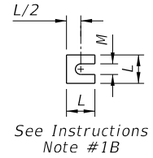


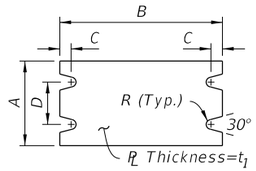

Plate Thickness=0.0149" (28 Guage)

BOLT KEEPER PLATE DETAIL




See Instructions Note #1B

SHIM DETAIL (Brass)

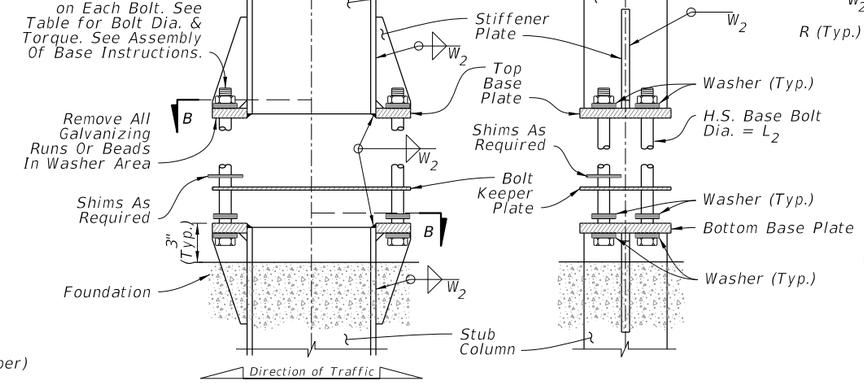



BASE PLATE DETAIL

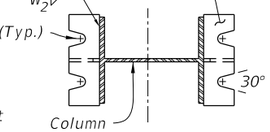
| | BASE CONNECTION DATA | | | | | | | | | SHIM | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Post & Stub Section* | A | B | C | D | R | $t_1$ | $L_2$ | $W_1$ | Torque (lbf*in) | L | M |
| S 3x5.7 | 4" | 7" | 3/4" | 2" | 5/16" | 1" | 1/2" | 1/4" | 90 ± 20 | 1-1/4" | 9/16" |
| W 6x12 | 4" | 10" | 3/4" | 2" | 3/8" | 1-5/8" | 5/8" | 1/4" | 270 ± 45 | 1-3/8" | 11/16" |
| W 8x18 | 5-1/4" | 12-1/2" | 7/8" | 2-3/4" | 7/16" | 1-3/4" | 3/4" | 3/8" | 445 ± 75 | 1-3/4" | 13/16" |
| W 8x24 | 6-1/2" | 12-1/2" | 7/8" | 3-1/4" | 7/16" | 1-3/4" | 3/4" | 3/8" | 445 ± 75 | 2-1/8" | 13/16" |
| W 10x33 | 8" | 16" | 1-1/4" | 4-3/4" | 9/16" | 2" | 1" | 1/2" | 580 ± 90 | 2-3/8" | 1-1/16" |
| W 12x45 | 10" | 18" | 1-1/4" | 6" | 9/16" | 2" | 1" | 1/2" | 580 ± 90 | 2-3/4" | 1-1/16" |

* Designations: (Normal Depth in inches) x (weight in pounds per linear foot).

## BASE CONNECTION




SIDE ELEVATION — FRONT ELEVATION




SECTION B-B

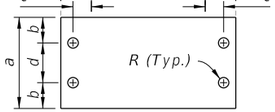
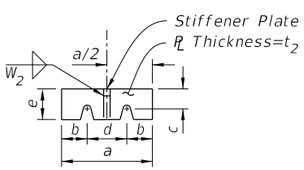
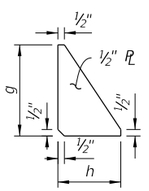



Plate Thickness=0.0149" (28 Guage)

BOLT KEEPER PLATE DETAIL




BASE PLATE DETAIL




STIFFENER PLATE DETAIL

| ALTERNATIVE BASE CONNECTION DATA | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Section* | a | b | c | d | e | $t_2$ | $L_2$ | R | Torque (lbf*in) | g | h | $W_2$ |
| W 6x12 | 4-3/4" | 1-1/8" | 1-3/16" | 2-1/2" | 2" | 1/2" | 5/8" | 3/8" | 270±45 | 5-1/8" | 2" | 1/4" |
| W 8x18 | 5-3/4" | 1-1/2" | 1-3/8" | 2-3/4" | 2-3/16" | 5/8" | 3/4" | 7/16" | 445±75 | 6-1/4" | 2-3/16" | 1/4" |
| W 8x24 | 7" | 1-3/4" | 1-3/8" | 3-1/2" | 2-3/8" | 3/4" | 3/4" | 7/16" | 445±75 | 8" | 2-3/8" | 5/16" |
| W 10x33 | 8" | 2" | 1-9/16" | 4" | 2-3/4" | 3/4" | 1" | 9/16" | 580±90 | 8" | 2-3/4" | 5/16" |
| W 12x45 | 8" | 2" | 1-9/16" | 4" | 3" | 3/4" | 1" | 9/16" | 580±90 | 8" | 3" | 5/16" |

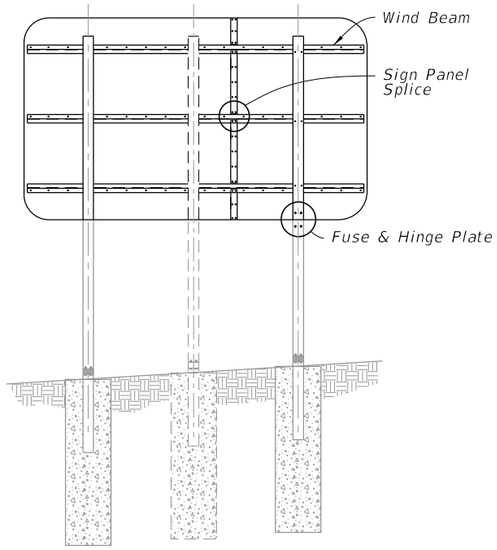
* Designations: (Normal Depth in inches) x (weight in pounds per linear foot).

## ALTERNATIVE BASE CONNECTION

# FOUNDATION AND BASE CONNECTION DETAILS

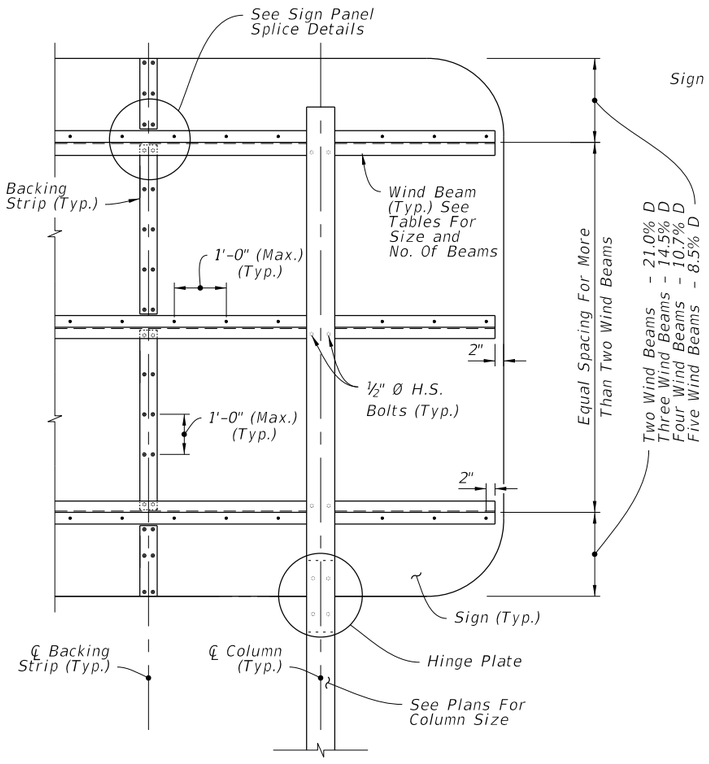
10/14/2016 7:55:02 AM

| LAST REVISION | REVISION | DESCRIPTION: | | | |
|---|---|---|---|---|---|
| 11/01/16 | | | FY 2017-18 DESIGN STANDARDS | MULTI-COLUMN GROUND SIGN | INDEX NO. 11200 / SHEET NO. 2 of 3 |

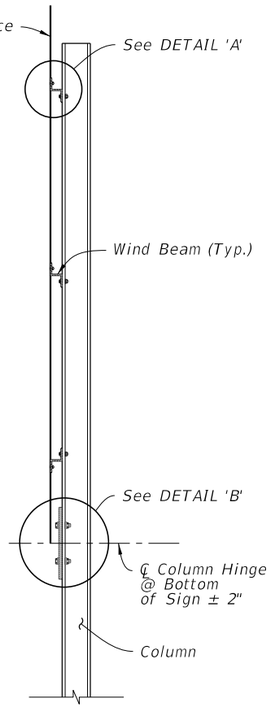



BACK ELEVATION

## MULTI-COLUMN SIGN ASSEMBLY

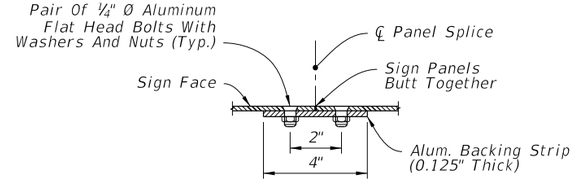



BACK ELEVATION

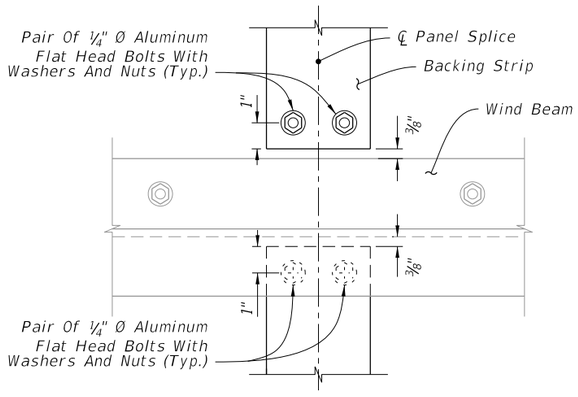



SIDE ELEVATION

## MULTI-COLUMN SIGN BACK PANEL




PLAN VIEW




ELEVATION

## SIGN PANEL SPLICE

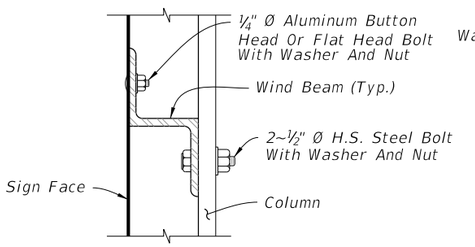
### NUMBER OF WIND BEAMS FOR GIVEN DEPTH

| No. Beams | Max. Depth |
|---|---|
| 2 | 7'-0" |
| 3 | 12'-0" |
| 4 | 16'-4" |
| 5 | 20'-8" |

### SIZE OF WIND BEAMS

| Size Of Zee** | Length Of Sign (Feet) | |
|---|---|---|
| | 2 Posts | 3 Posts |
| Zee 1¾" x 1¾" x 1.09 | 0 to 11'-0" | 0 to 17'-4" |
| Zee 3 x 2 11/16" x 2.33 | 11'-1" to 19'-0" | 17'-5" to 29'-6" |
| Zee 3 x 2 11/16" x 3.38 | 19'-1" to 31'-0" | 29'-7" to 40'-0" |

** Zee Beams are aluminum. No steel equivalent available
Designation gives (Member Depth) x (Flange Width) x (lb/ft)

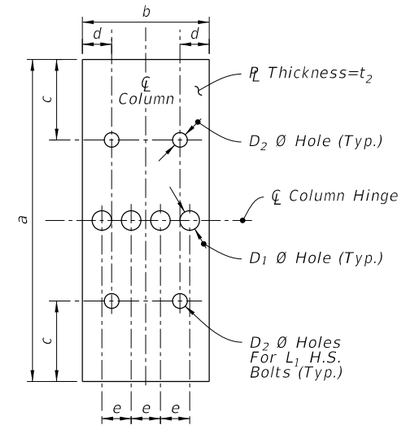



## DETAIL 'A'

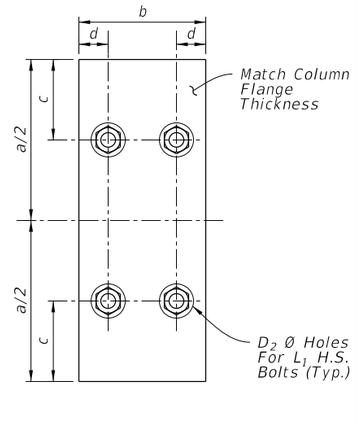
### FUSE (HINGE) PLATE DATA

| Section* | a | b | c | d | e | $t_2$ | $D_1$ | $D_2$ | $L_1$ |
|---|---|---|---|---|---|---|---|---|---|
| S 3x5.7 | 7-1/4" | 2-3/8" | 1-1/4" | 1/2" | 9/16" | 3/8" | 7/16" | 9/16" | 1/2" |
| W 6x12 | 7-1/4" | 4" | 1-1/4" | 7/8" | 15/16" | 3/8" | 13/16" | 11/16" | 5/8" |
| W 8x18 | 8-1/4" | 5-1/4" | 1-3/8" | 1-1/8" | 1-1/4" | 3/8" | 1" | 13/16" | 3/4" |
| W 8x24 | 8-1/4" | 6-1/2" | 1-3/8" | 1-1/2" | 1-1/2" | 1/2" | 1" | 13/16" | 3/4" |
| W 10x33 | 9-1/4" | 8" | 2" | 1-3/4" | 1-3/4" | 5/8" | 1-1/8" | 1-1/16" | 1" |
| W 12x45 | 11" | 8" | 2" | 1-3/4" | 1-3/4" | 3/4" | 1-5/16" | 1-1/16" | 1" |

* Designations: Normal Depth in inches.

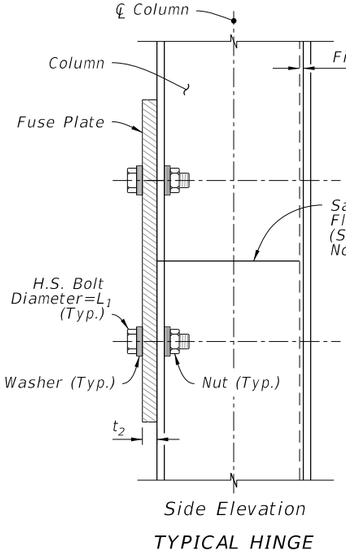



FUSE PLATE



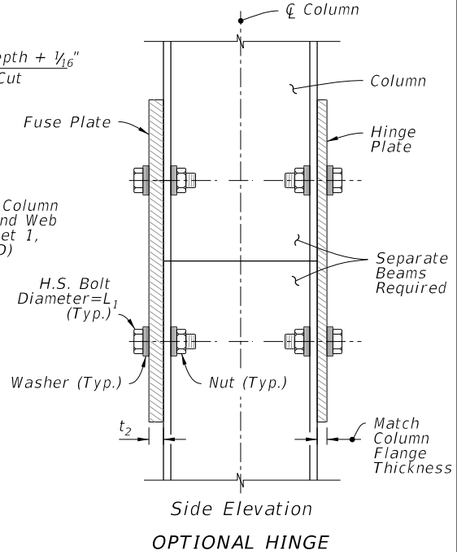

HINGE PLATE

## FUSE & HINGE PLATE




Side Elevation

TYPICAL HINGE




Side Elevation

OPTIONAL HINGE

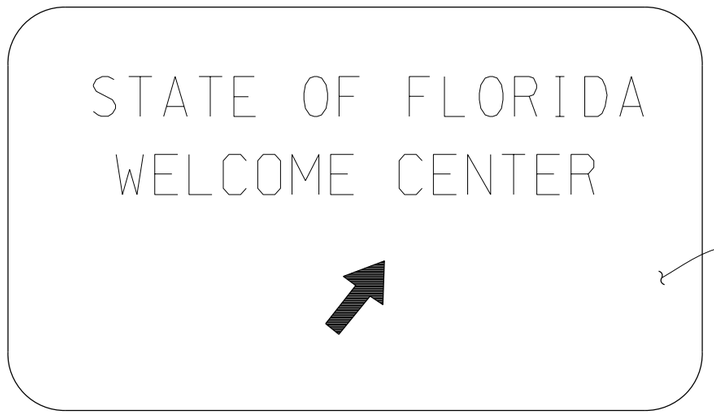
(See Fabrication Notes on Sheet 1)

## DETAIL 'B'

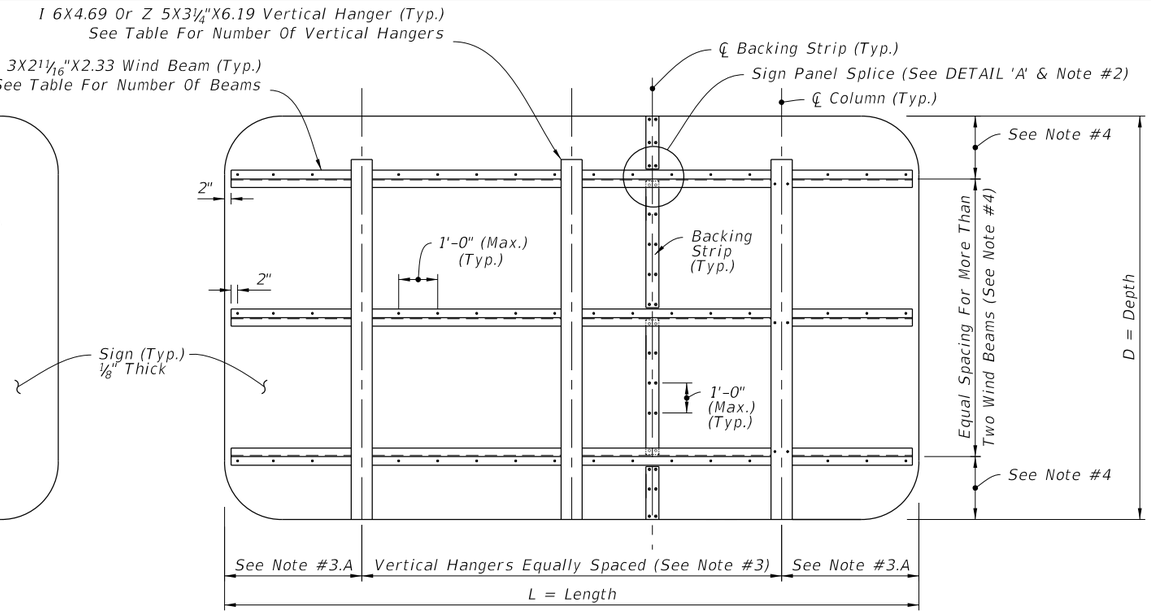
# WIND BEAM, BACKING STRIP & FUSE/HINGE PLATE DETAILS

4/17/2017 9:20:29 AM

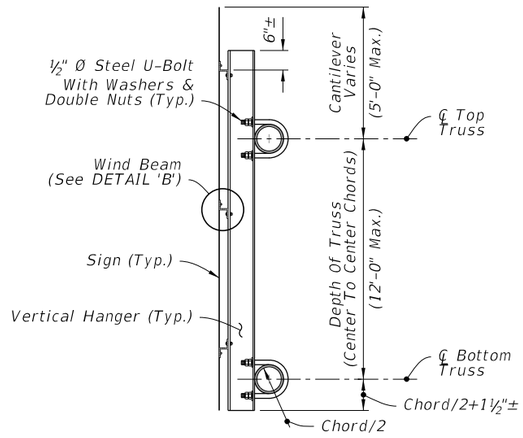
| LAST REVISION | REVISION | DESCRIPTION: | | | |
|---|---|---|---|---|---|
| 11/01/16 | | | FY 2017-18 DESIGN STANDARDS | MULTI-COLUMN GROUND SIGN | INDEX NO. 11200 / SHEET NO. 3 of 3 |




FRONT ELEVATION

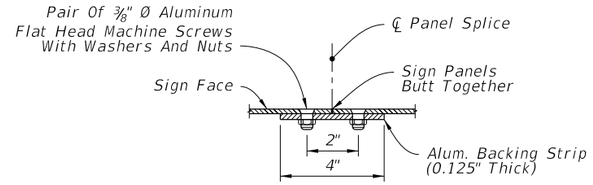



BACK ELEVATION

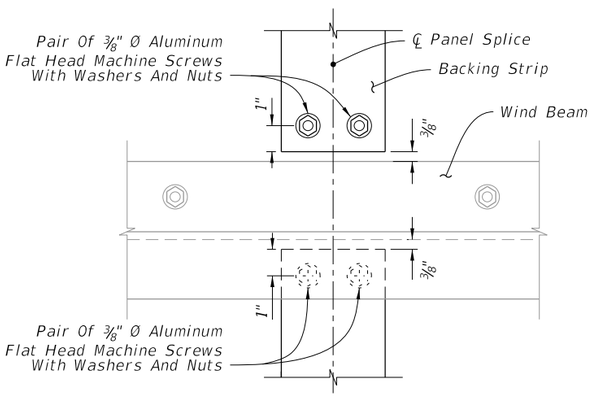



SIDE ELEVATION

## TYPICAL SIGN FOR OVERHEAD TRUSS




PLAN VIEW

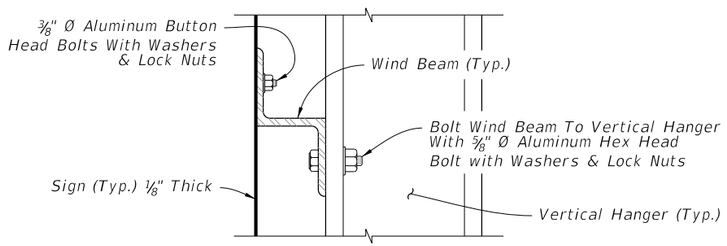



ELEVATION

SIGN PANEL SPLICE

DETAIL 'A'

| WIND BEAMS AND VERTICAL HANGERS | | | | | | | |
|---|---|---|---|---|---|---|---|
| Number Of Z 3x2 1/16 x2.33 Horiz. Wind Beams For Sign Depth And Wind | | | Number Of I6x4.69 or Z 5x3¼x6.19 Vertical Hanger Beams For Sign Length | | | | |
| Wind M.P.H. | No. Beams | Max. Depth | 2 Hangers Max Length | 3 Hangers Max Length | 4 Hangers Max Length | 5 Hangers Max Length | 6 Hangers Max Length |
| 170 | 2 | 5' | 20' | 30' | 40' | 45' | X |
| 170 | 3 | 9' | 20' | 30' | 40' | 45' | X |
| 170 | 4 | 12' | 15' | 22' | 30' | 38' | 45' |
| 170 | 5 | 15' | 15' | 22' | 30' | 38' | 45' |
| 170 | 6 | 18' | 15' | 22' | 30' | 38' | 45' |
| 150 | 2 | 5' | 25' | 38' | 45' | X | X |
| 150 | 3 | 9' | 25' | 38' | 45' | X | X |
| 150 | 4 | 12' | 20' | 25' | 38' | 45' | X |
| 150 | 5 | 15' | 20' | 25' | 38' | 45' | X |
| 150 | 6 | 18' | 20' | 25' | 38' | 45' | X |
| 130 | 2 | 5' | 35' | 45' | X | X | X |
| 130 | 3 | 9' | 35' | 45' | X | X | X |
| 130 | 4 | 12' | 25' | 35' | 45' | X | X |
| 130 | 5 | 15' | 25' | 35' | 45' | X | X |
| 130 | 6 | 18' | 25' | 35' | 45' | X | X |




DETAIL 'B'

## GENERAL NOTES

1. Work this Index with Index 11310 and 11320.
2. The number and location of the Panel Splices are determined by the Sign Face supplier.
3. Spacing of Vertical Hangers:
   A. Two Vertical Hanger = 21.0% L
      Three Vertical Hanger = 14.5% L
      Four Vertical Hanger = 10.7% L
      Five Vertical Hanger = 8.5% L
      Six Vertical Hanger = 7.0% L
   B. Spacing of vertical hanges may be varied slightly as necessary to clear the truss struts and diagonals at panel points
4. Spacing of Wind Beams:
   Two Wind Beams = 21.0% D
   Three Wind Beams = 14.5% D
   Four Wind Beams = 10.7% D
   Five Wind Beams = 8.5% D
   Six Wind Beems = 7.0% D
5. Shop Drawings:
   A. Required for Sign Panels deeper than 10'-0" with a horizontal panel splice.
   B. Splice must be located in between interior Zee Supports and only allowed on signs greater than 10'-0".
6. Materials:
   A. Aluminum:
      a. Bars, and Extruded Shapes: ASTM B 221, Alloy 6061-T6 or Alloy 6351-T5
      b. Structural Shapes: ASTM B308, Alloy 6061-T6
      c. Flat Head and Hex Head Machine Bolts: ASTM F468, Alloy 2024-T4
      d. Hex Nuts: ASTM F467, Alloy 6061-T6 or Alloy 6262-T9
      e. Lock Washers: ASTM B221, Alclad 2024-T4
   B. Steel Materials:
      a. U-Bolts: ASTM A449 or ASTM A193 B7
      b. Nuts: ASTM F563, 2 per leg
      c. Washers: ASTM F436, (Flat Washers)
7. Coatings:
   A. Aluminum Bolts, Nuts and Washers: Anodic (0.0002 inches min) and chromate sealed.
   B. Galvanized Steel Bolts, Nuts and Washers: ASTM F2329

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| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FY 2017-18 DESIGN STANDARDS | STEEL OVERHEAD SIGN STRUCTURES | 11300 | 1 of 1 |

## NOTES:

1. Work this Index in conjunction with CANTILEVER SIGN STRUCTURE DATA TABLES in the Plans and Index 11300.

2. Handholes are required at pole base for DMS Structures. Refer to Index 18300 for Handhole Details.

3. Shop Drawings are required.

   Obtain Shop Drawing approval prior to fabrication. Include the following:
   A. Upright Pipe height ('A') and Foundation elevations: Verify dimension in the field prior to submittal to ensure minimum vertical clearances of the sign panel over the roadway.
   B. Height of the foundation above adjacent ground.
   C. Anchor bolt orientation with respect to centerline of truss and the direction of traffic.
   D. Chord Splices
   E. Handholes at pole base (when required).

4. Materials:

   A. Sign Structure:
      a. Upright and Chords (Steel Pipe): API-5L-X42, 42 ksi yield or ASTM A500, Grade B (Min.)
      b. Steel Angles and Structural Plates and Bars: ASTM A709 Grade 36
      c. Weld Material: E70XX
   B. Bolts, Nuts and Washers:
      a. High Strength Bolts: ASTM F3125, Grade A325 Type 1
      b. Nuts: ASTM A563 Grade DH Heavy-Hex
      c. Washers: ASTM F436 Type 1, one under turned element
   C. Anchor Bolts, Nuts and Washers
      a. Anchor Bolts: ASTM F1554 Grade 55
      b. Nuts: ASTM A563 Grade A Heavy-Hex (5 per bolt)
      c. Plate Washers: ASTM A36 (2 per bolt)
   D. Concrete:
      a. Spread Footing Concrete: Class IV
      b. Drilled Shaft concrete: Class IV (Drilled Shaft)
   E. Reinforcing Steel: Specification Section 415

5. Fabrication:

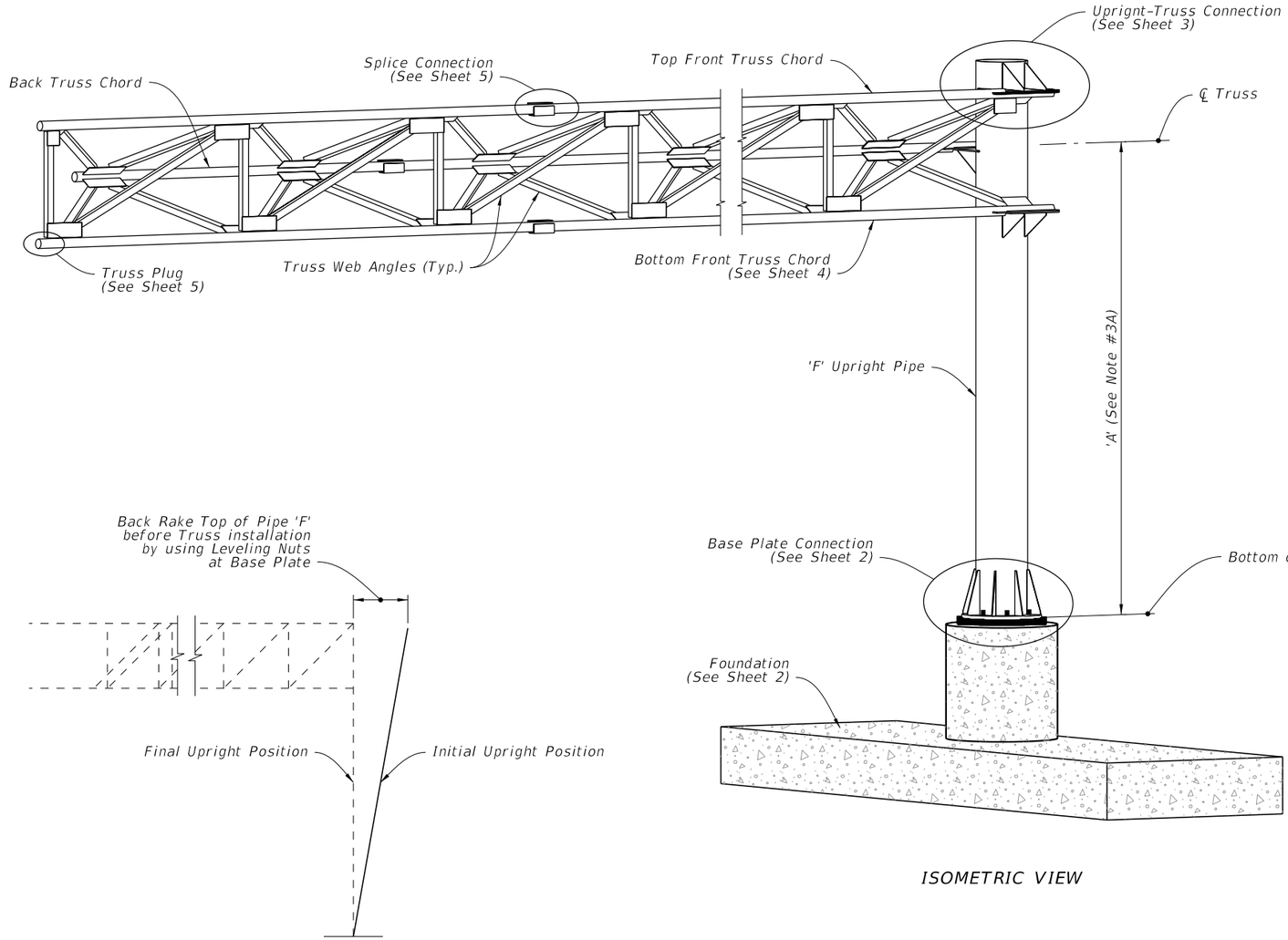
   A. Welding: Specification Section 460-6.4
   B. Chord Splices: "SD" Panel from upright is the closest panel in which a chord splice may be used. See Plans for CANTILEVER SIGN STRUCTURE DATA TABLE. Minimum splice spacing is two truss panel lengths apart.
   C. Upright splices: Not allowed
   D. Structural bolt hole diameters: Bolt diameter plus $\frac{1}{16}$"
   E. Anchor bolt hole diameters: Bolt diameter plus $\frac{1}{2}$"
   F. Hot Dip Galvanize after fabrication.
   G. Shop assemble the entire structure after galvanizing to validate/document alignment and clearance for bolted connections as well as contact between connecting plates. Take remedial action, if necessary, prior to shipment.
   H. Disassemble, as necessary, and secure components for shipment.

6. Coatings:

   A. Bolts, Nuts and Washers: ASTM F2329
   B. All other steel, including Plate Washers, hot dip galvanize: ASTM A123

7. Construction:

   A. Construct foundation in accordance with Specification Section 455, except payment is included in the cost of the structure.
   B. Prior to erection, record the as-built anchor locations and submit to the Engineer.
   C. Place backfill above spread footings prior to installation of the sign panels. Do not remove or reduce backfill without prior approval of the Engineer.
   D. Tighten nuts and bolts in accordance with Specification Section 700. Split-Lock Washers are not permitted.
   E. Install Aluminum Sign Panels as shown in Production Plans.
   F. Place structural grout pad with drain between top of foundation and bottom of baseplate in accordance with Specification Section 649-7.




CAMBER DIAGRAM

ISOMETRIC VIEW

CANTILEVER SIGN ASSEMBLY

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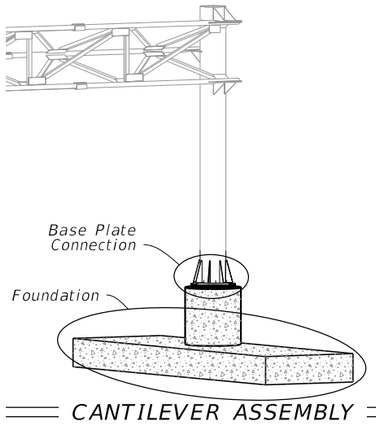
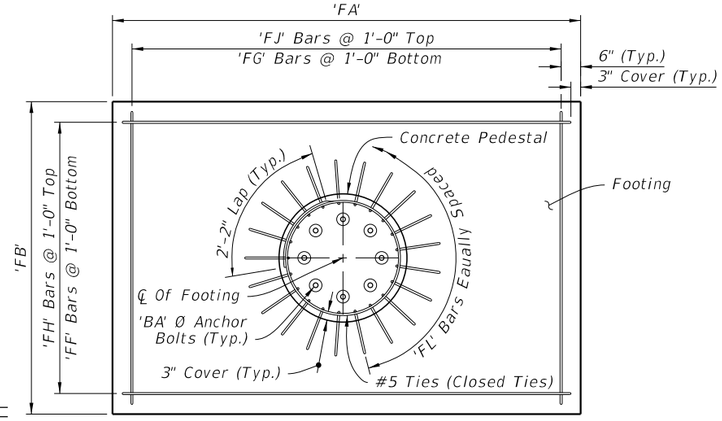
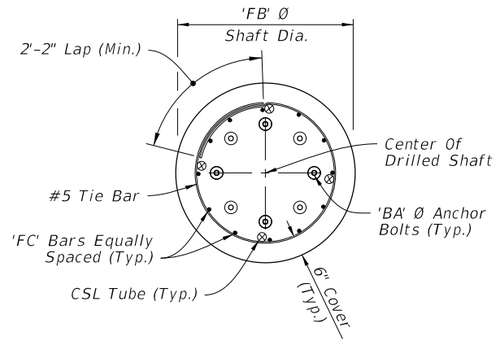
| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | CANTILEVER SIGN STRUCTURE | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | | | 11310 | 1 of 5 |



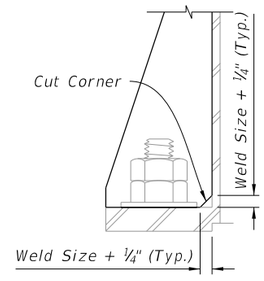

CANTILEVER ASSEMBLY



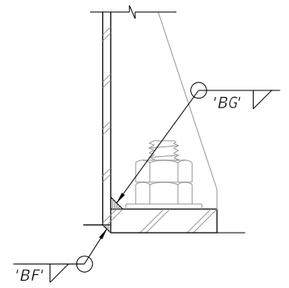

PLAN



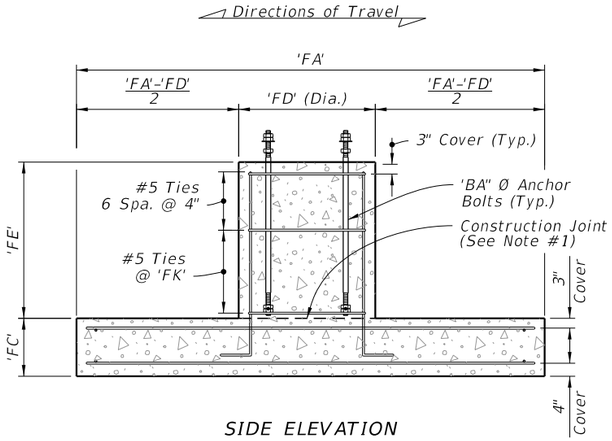

PLAN



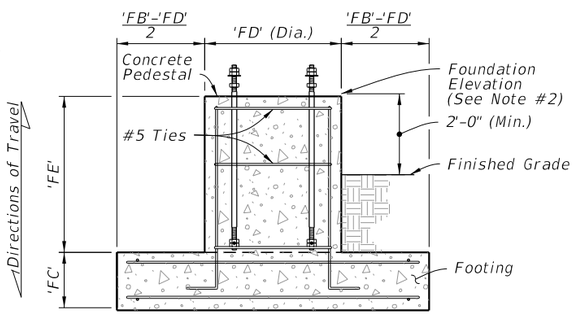

DETAIL 'A'




DETAIL 'B'

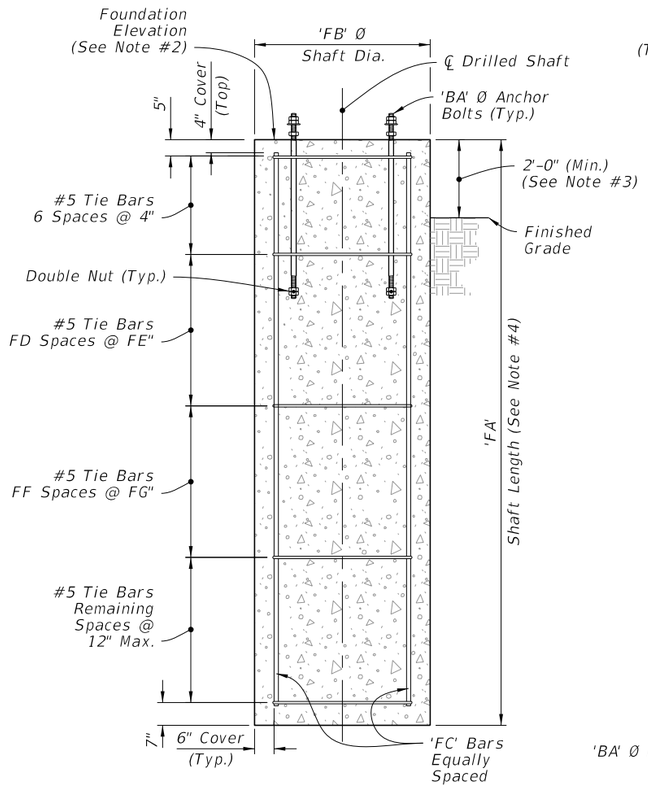



SIDE ELEVATION



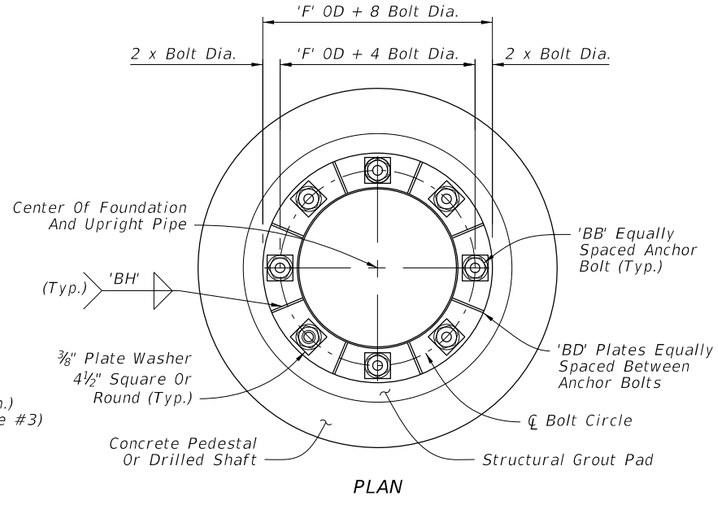

FRONT ELEVATION

FOOTING AND PEDESTAL

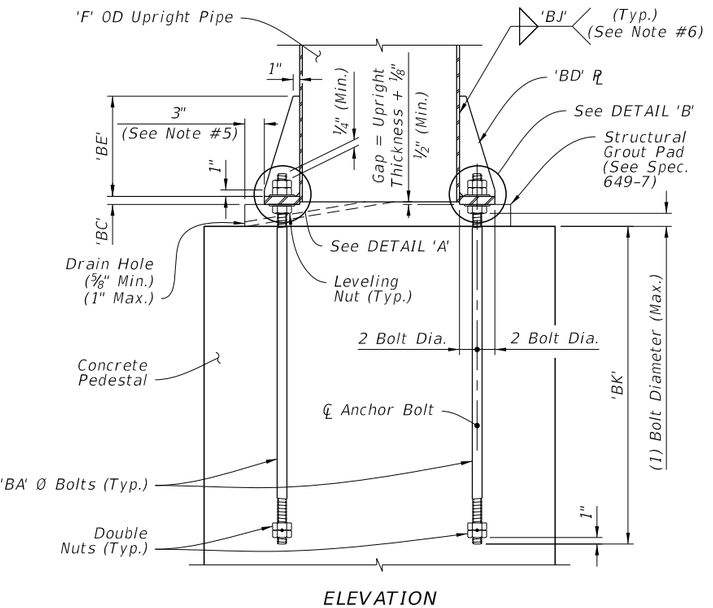



ELEVATION

DRILLED SHAFT
(Alternate Foundation)




PLAN




ELEVATION

## NOTES:

1. Construction joint allowed, roughen surface to ¼" minimum amplitude prior to pour.
2. See Traffic Plans for elevation at top of Foundation.
3. Install Drilled Shaft with a 2'-0" minimum from top elevation of the drill shaft to the finished grade, unless specified otherwise in the plans.
4. The shaft length is based on 2'-0" height above finished grade.
5. Structural Grout Pad dimension may be modified to be less than 3" where the footprint of the Structural Grout Pad does not provide adequate clearance for accessibility considerations.
6. Wrap fillet weld around the stiffner termination on the tube wall.

FOUNDATION

BASE PLATE CONNECTION

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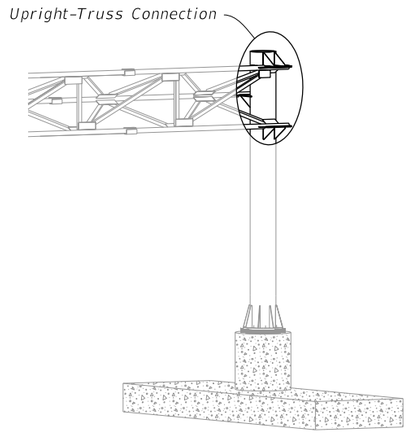
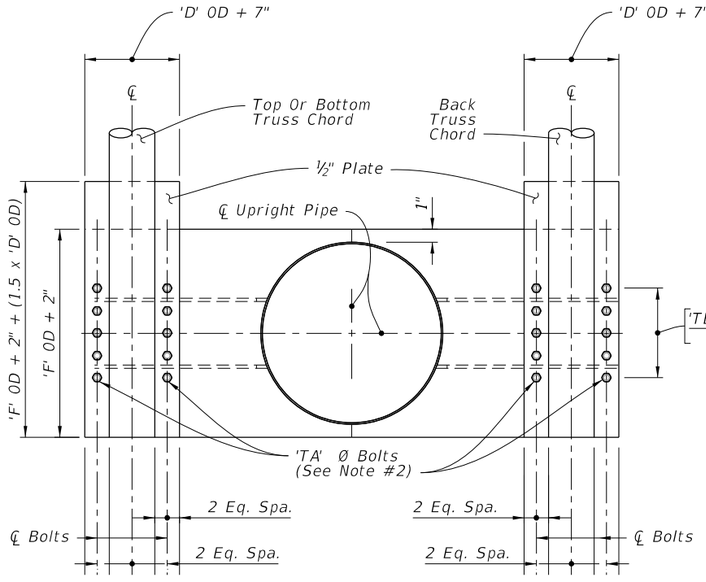
|---|---|---|---|---|---|---|
| 11/01/16 | | | FY 2017-18 DESIGN STANDARDS | CANTILEVER SIGN STRUCTURE | 11310 | 2 of 5 |

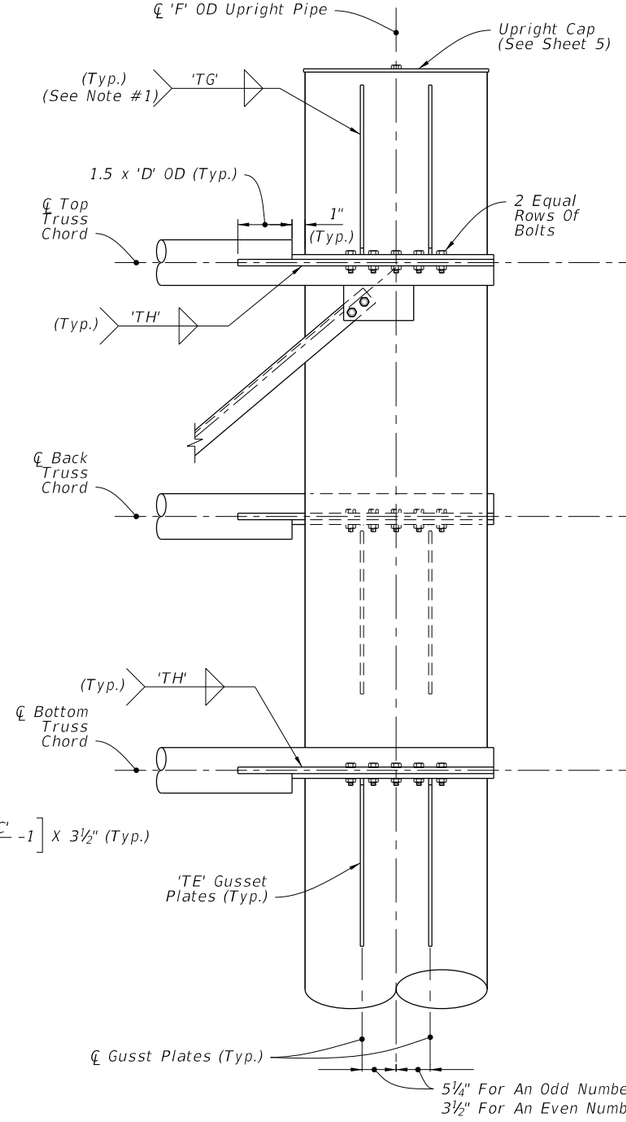



## CANTILEVER ASSEMBLY

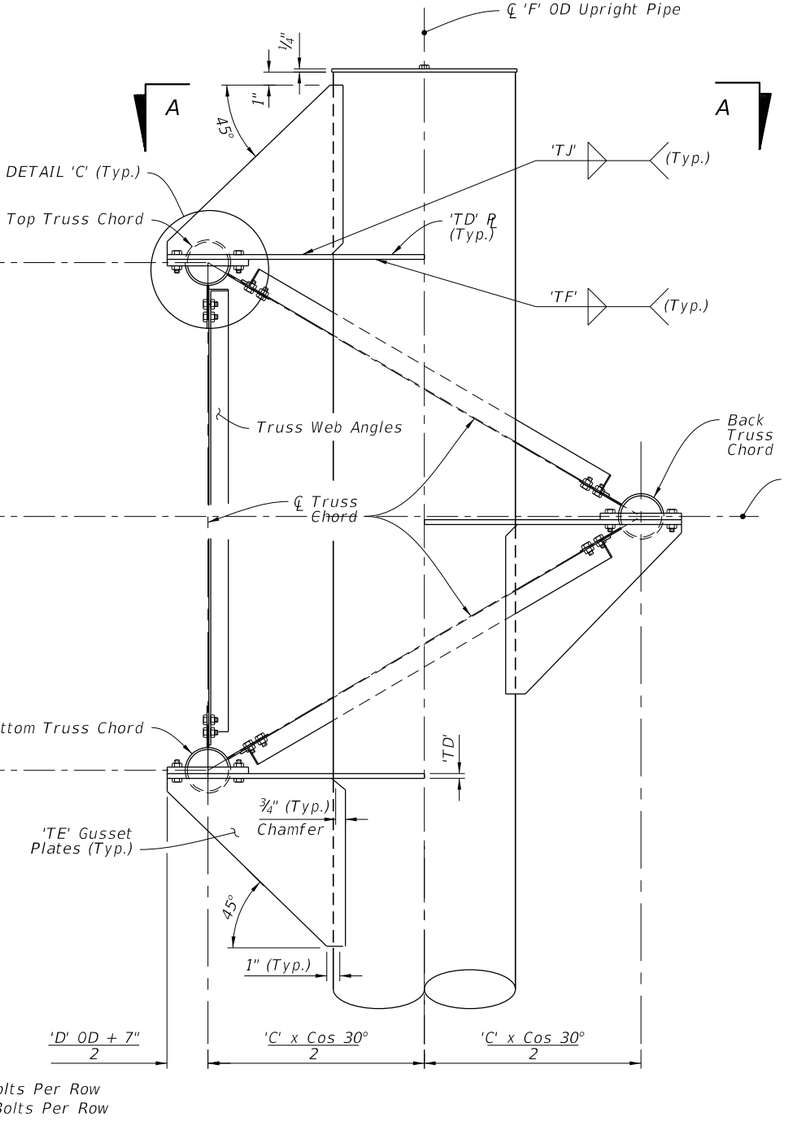



## SECTION A-A

(With Gusset Plates And Web Angles Omitted For Clarity)



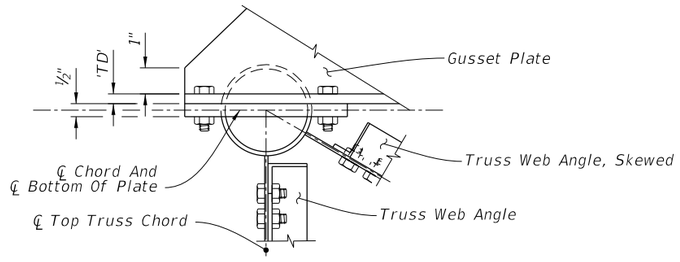

FRONT ELEVATION




SIDE ELEVATION

## UPRIGHT-TRUSS CONNECTION DETAIL

(Web Members From Back Truss Chord Omitted For Clarity)




## DETAIL 'C'

### NOTE:

1. Wrap fillet weld around the stiffner termination on the tube wall.

2. Truss Chord Bolts:
   A. Top and Bottom: Install 'TC' hex head bolts.
   B. Back: Install 'TB' hex head bolts.

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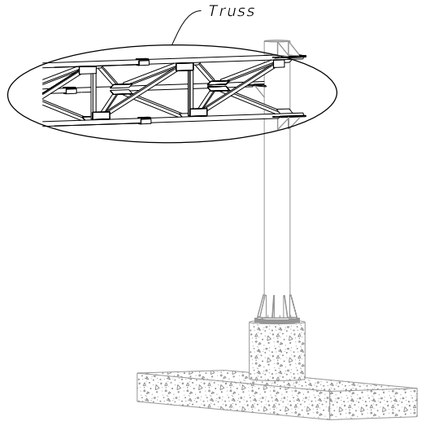
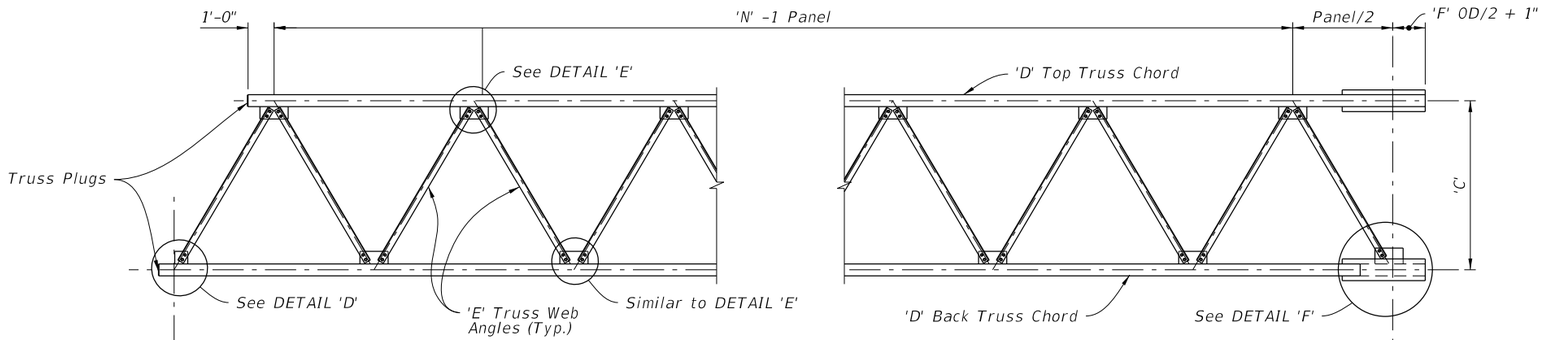
| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FDOT FY 2017-18 DESIGN STANDARDS | CANTILEVER SIGN STRUCTURE | 11310 | 3 of 5 |




CANTILEVER ASSEMBLY




Section B-B (Section C-C Similar)
(See Note #1 & 3)

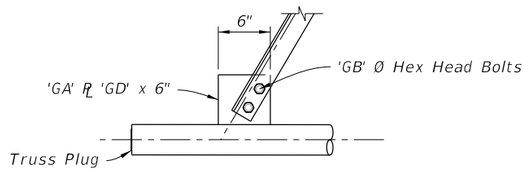
FRONT ELEVATION
(See Note #1 & 3)

SIDE ELEVATION

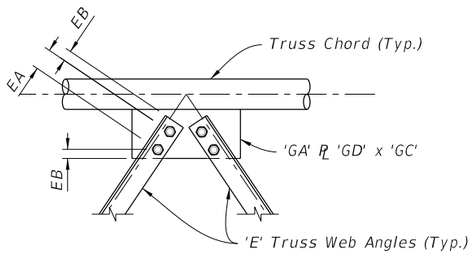
TRUSS

## TRUSS NOTES:

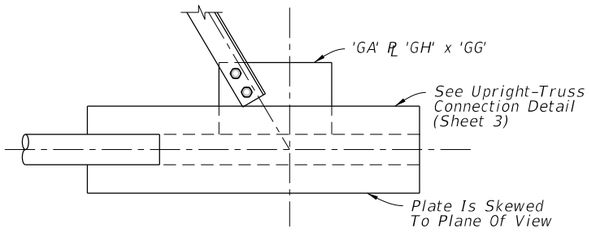
1. Out-of-plane members are not shown for clarity.
2. Wrap fillet weld around plate termination on the tube wall.
3. Chord Splices not shown.




DETAIL 'D'

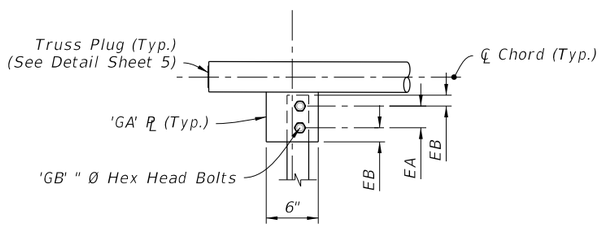



DETAIL 'E'

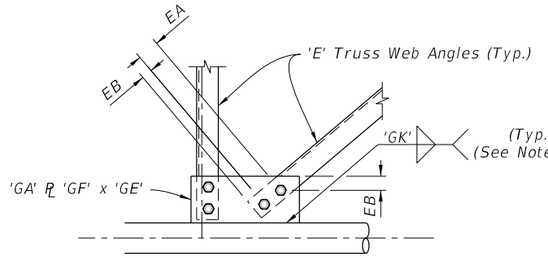



DETAIL 'F'

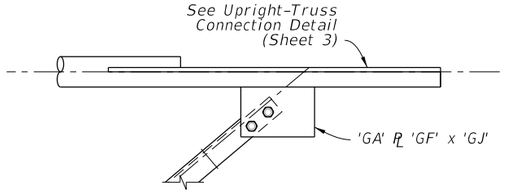
| Bolt Size | Distance | |
|---|---|---|
| | EA | EB |
| 1¼" Ø | 4⅜" | 2¼" |
| 1" Ø | 3½" | 1¾" |
| ⅞" Ø | 3" | 1½" |
| ¾" Ø | 2½" | 1¼" |
| ⅝" Ø | 2¼" | 1⅛" |




DETAIL 'G'




DETAIL 'H'




DETAIL 'I'

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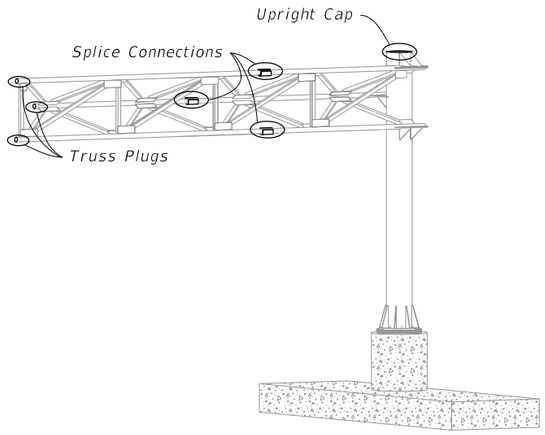
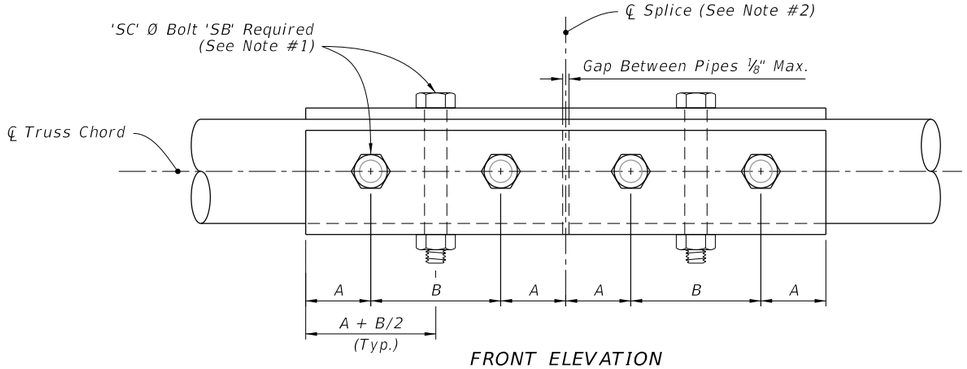
| LAST REVISION | REVISION | DESCRIPTION: | | | |
|---|---|---|---|---|---|
| 11/01/16 | | | FY 2017-18 DESIGN STANDARDS | CANTILEVER SIGN STRUCTURE | INDEX NO. 11310 / SHEET NO. 4 of 5 |

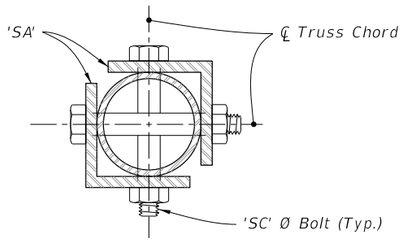



## CANTILEVER ASSEMBLY

| Bolt Size | Distance | |
|---|---|---|
| | A | B |
| 1" Ø | 1¾" | 3½" |
| ⅞" Ø | 1½" | 3" |
| ¾" Ø | 1¼" | 2½" |




FRONT ELEVATION



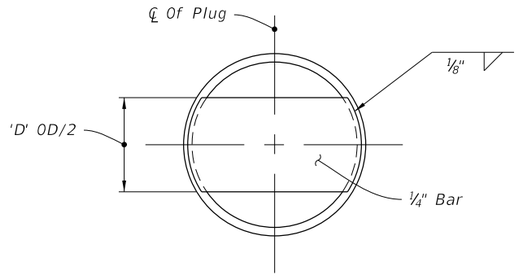

SIDE ELEVATION

## SPLICE CONNECTION DETAIL

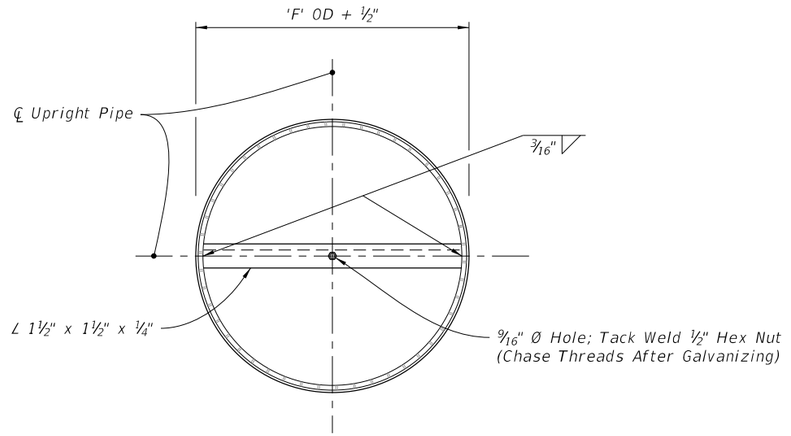
### SPLICE CONNECTION NOTES:

1. Only 6 bolts are shown in detail for clarity. (One Half Each Side Of Splice)

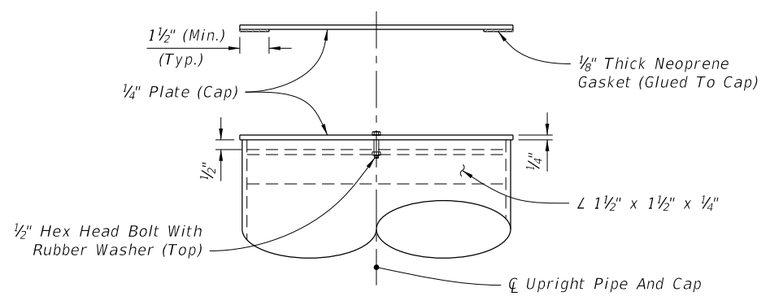
2. Splices are not permitted for truses less than or equal to 40', Splice optional for trusses greater than 40'.




## TRUSS PLUG DETAIL




PLAN




ELEVATION

## UPRIGHT CAP DETAIL

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| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FDOT FY 2017-18 DESIGN STANDARDS | CANTILEVER SIGN STRUCTURE | 11310 | 5 of 5 |

## NOTES:

1. Work this Index in conjunction with SPAN SIGN STRUCTURE DATA TABLES in the Plans and Index 11300.

2. Handholes at the pole base are required for DMS Structures. Refer to Index 18300 for Handhole Details.

3. Shop Drawings are required.

   Obtain Shop Drawing approval prior to fabrication. Include the following:
   A. Upright Pipe height ('C' & 'B') and foundation elevations: Verify dimensions in the field prior to submittal to ensure minimum vertical clearances of the sign panel over the roadway.
   B. Height of the foundation above adjacent ground.
   C. Anchor bolt orientation with respect to centerline of truss and the direction of traffic.
   D. Method to be used to provide the required parabolic camber (see Camber Diagram).
   E. Handholes at pole base (when required).

4. Materials:

   A. Sign Structure:
      a. Upright and Chords (Steel Pipe): API-5L-X42, 42 ksi yield or ASTM A500, Grade B (Min.)
      b. Steel Angles and Plates: ASTM A709 grade 36
      c. Weld Material: E70XX
   B. Bolts, Nuts and Washers:
      a. High Strength Bolts: ASTM F3125, Grade A325, Type 1
      b. Nuts: ASTM A563, Grade DH Heavy-Hex
      c. Washers: ASTM F436, Type 1, one under turned element
   C. Anchor Bolts, Nuts and Washers
      a. Anchor Bolts: ASTM F1554 Grade 55, threaded full length
      b. Nuts: ASTM A563 Grade A Heavy-Hex (5 per bolt)
      c. Plate Washers: ASTM A36 (2 per bolt)
   D. Concrete: Class IV (Drilled Shaft)
   E. Reinforcing Steel: Specification Section 415

5. Fabrication:

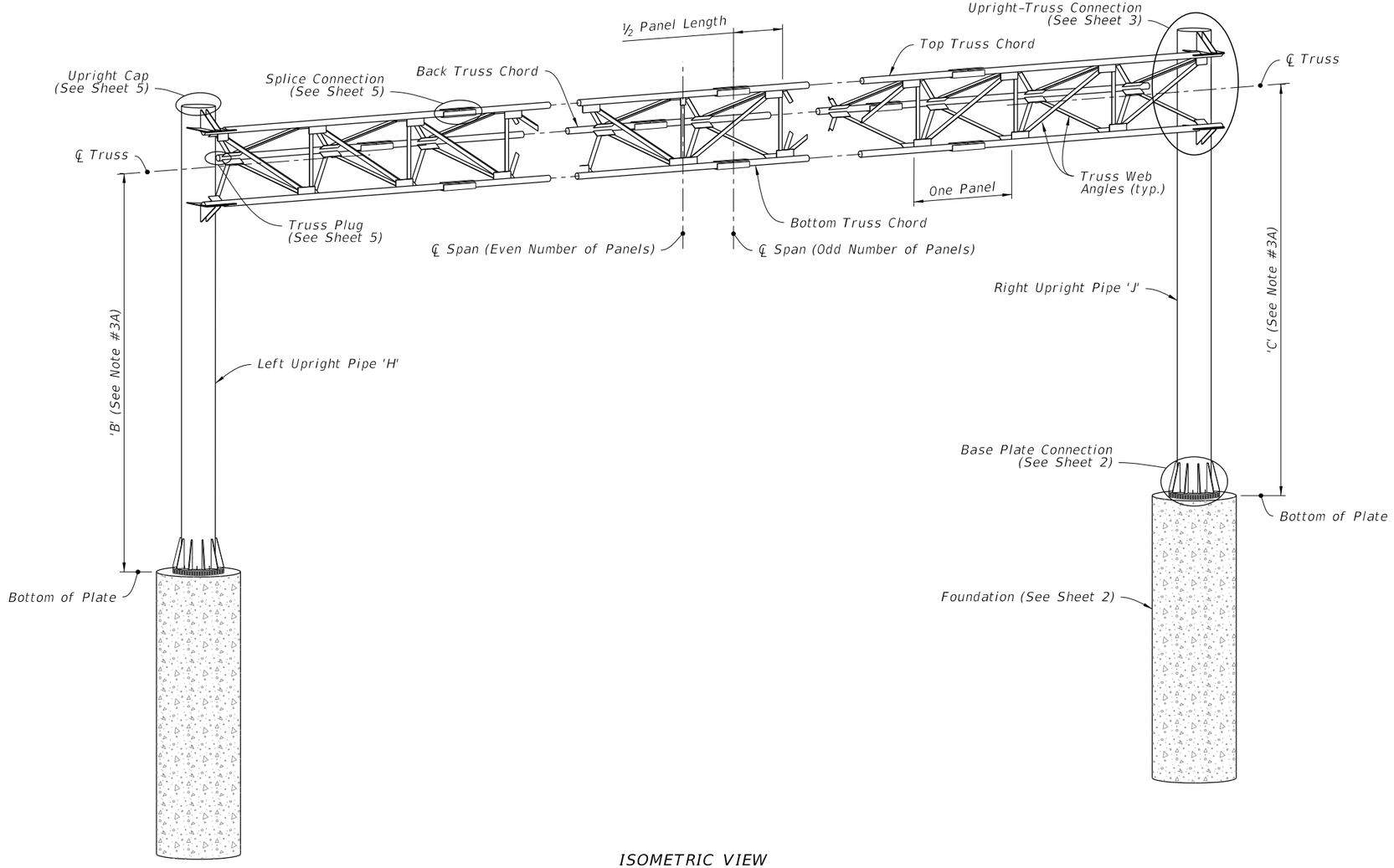
   A. Welding: Specification Section 460-6.4
   B. Chord Splices: Minimum splice spacing is three truss panel lengths apart and three truss panel lengths from the uprights. Chord Splices may be either the Standard Splice or the Alternate Splice but not both on the same structure.
   C. Upright splice: Not allowed
   D. Structural bolt hole diameters: Bolt diameter plus $\frac{1}{16}$".
   E. Anchor bolt hole diameters: Bolt diameter plus $\frac{1}{2}$".
   F. Hot Dip Galvanize after fabrication.
   G. Shop assemble the entire structure after galvanizing to validate/document alignment and clearance for bolted connections as well as contact between connecting plates. Take remedial action, if necessary, prior to shipment.
   H. Disassemble as necessary and secure components for shipment.

6. Coatings:

   A. Bolts, Nuts and Washers: ASTM F2329
   B. All other steel, including Plate Washers, hot dip galvanize: ASTM A123

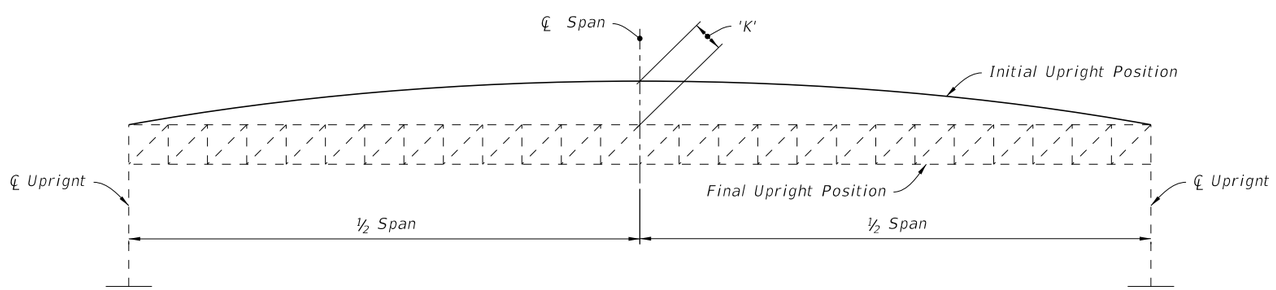
7. Construction:

   A. Construct foundation in accordance with Specification Section 455 Drilled Shaft, except payment is included in the cost of the structure.
   B. Prior to erection, record the as-built anchor locations and submit to the Engineer.
   C. Provide a parabolic camber with the required upward deflection as shown on the Camber Diagram.
   D. Tighten nuts and bolts in accordance with Specification Section 700. Split-Lock Washers are not permitted.
   E. Install Aluminum Sign Panels as shown on the Elevation drawing per Production Plan.
   F. After installation, place wire screen between top of foundation and bottom of baseplate in accordance with Specification Section 649-6.




ISOMETRIC VIEW

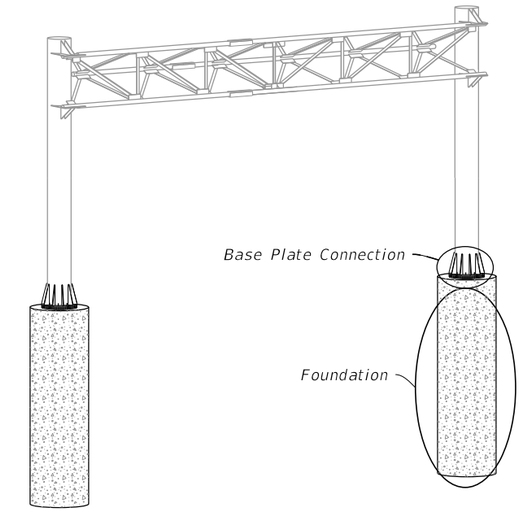
## SPAN SIGN ASSEMBLY



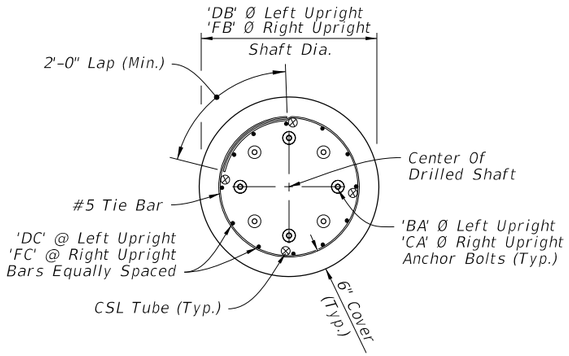

## CAMBER DIAGRAM

10/14/2016 7:56:48 AM

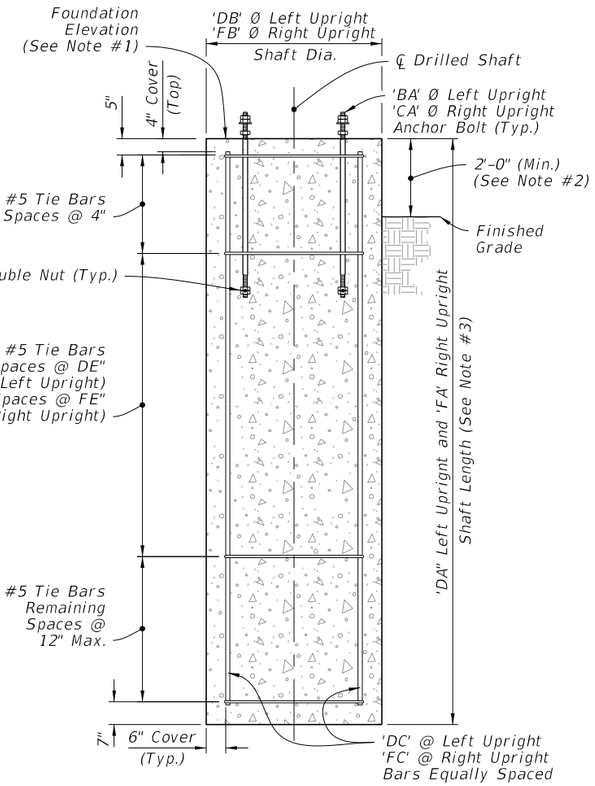
| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FY 2017-18 DESIGN STANDARDS | SPAN SIGN STRUCTURE | 11320 | 1 of 5 |




SPAN SIGN ASSEMBLY




PLAN



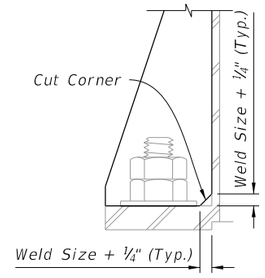

ELEVATION

DRILLED SHAFT

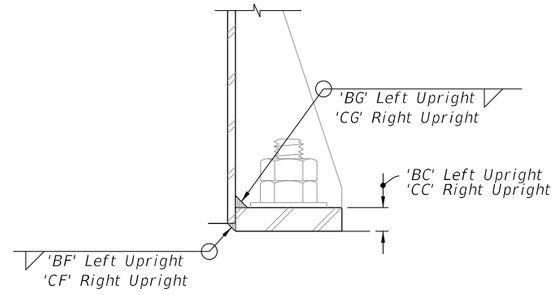
FOUNDATION

## NOTES:

1. See Traffic Plans for elevation at top of Foundation.
2. Install Drilled Shaft with a 2'-0" minimum from top elevation of the drill shaft to the finished grade, unless specified otherwise in the plans.
3. The shaft length is based on 2'-0" height above finished grade.
4. Wrap fillet weld around the stiffner termination on the tube wall (Typ).




DETAIL "A"

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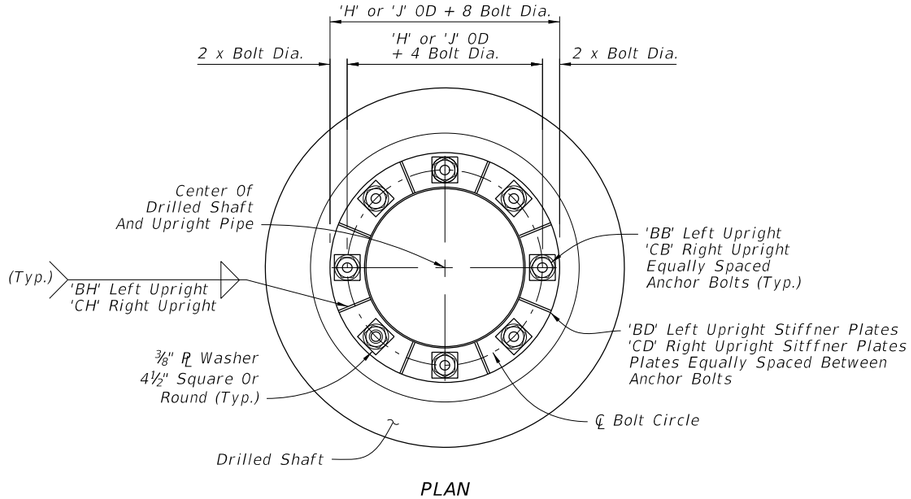
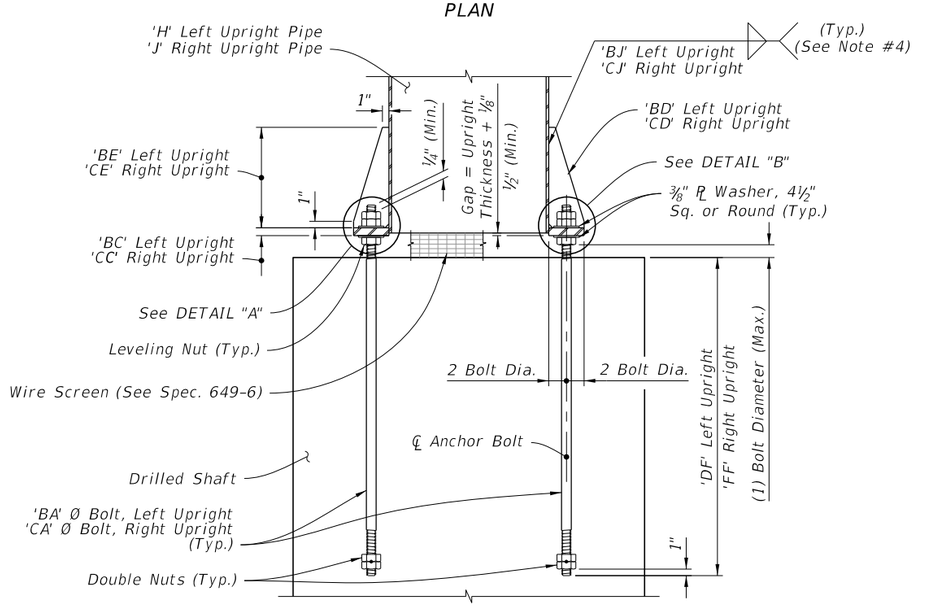



PLAN




ELEVATION

BASE PLATE CONNECTION

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| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | SPAN SIGN STRUCTURE | INDEX NO. | SHEET NO. |
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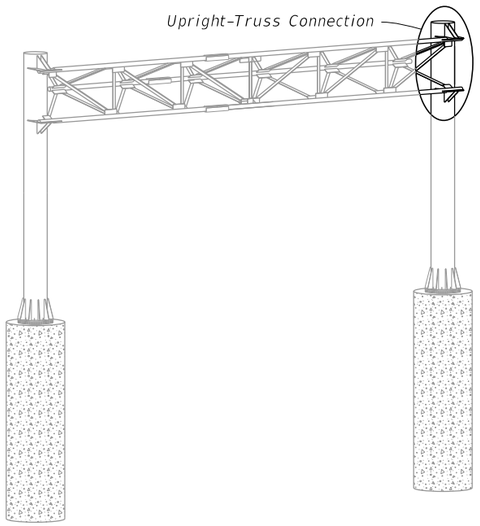
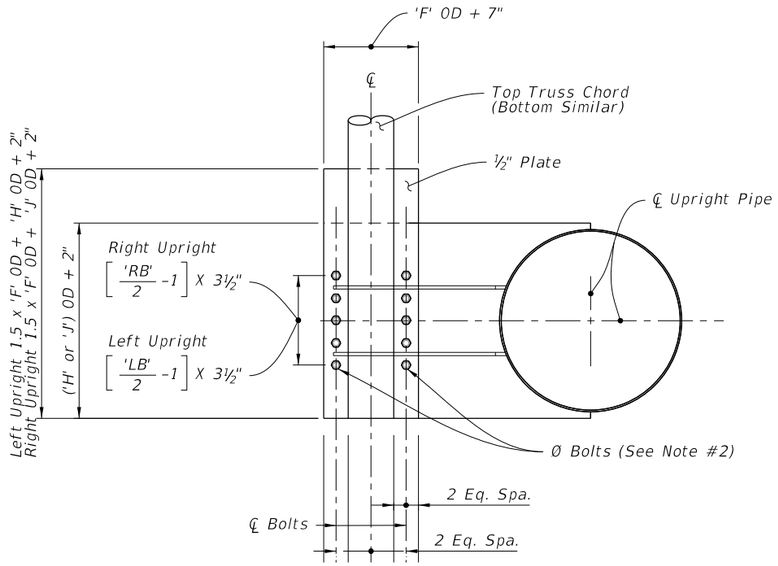
| 11/01/16 | | | | | 11320 | 2 of 5 |

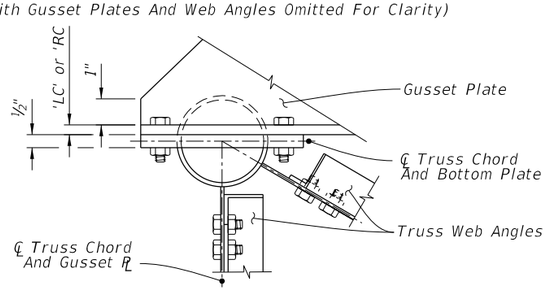



## SPAN SIGN ASSEMBLY

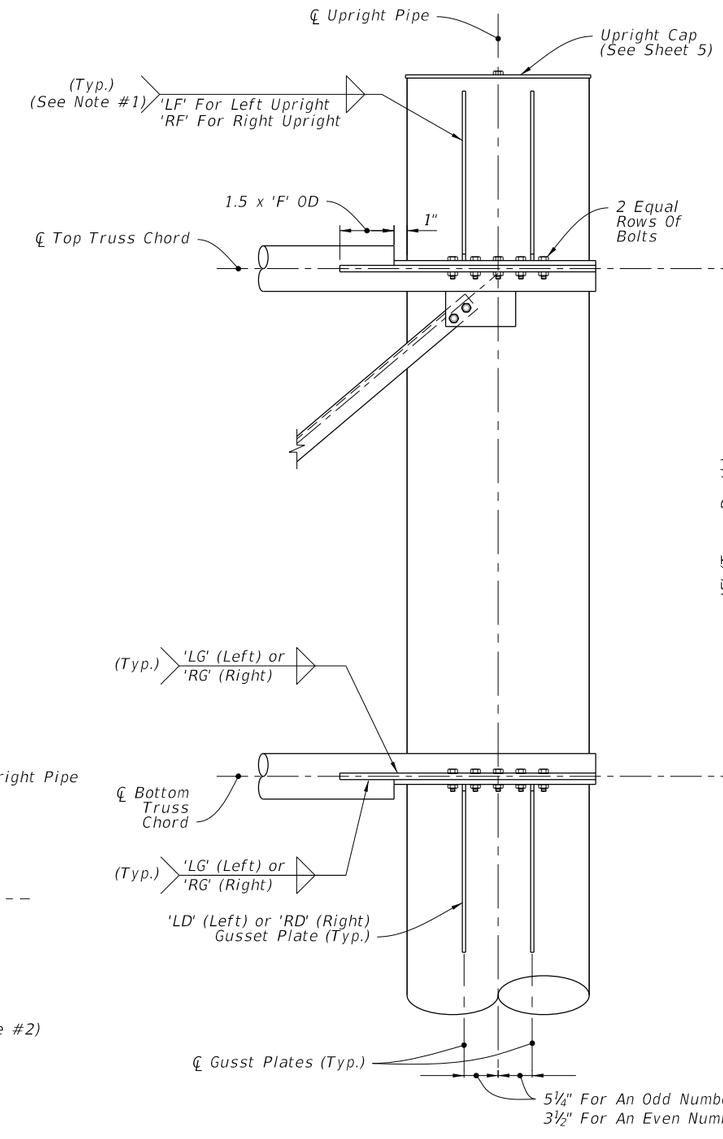



## SECTION A-A

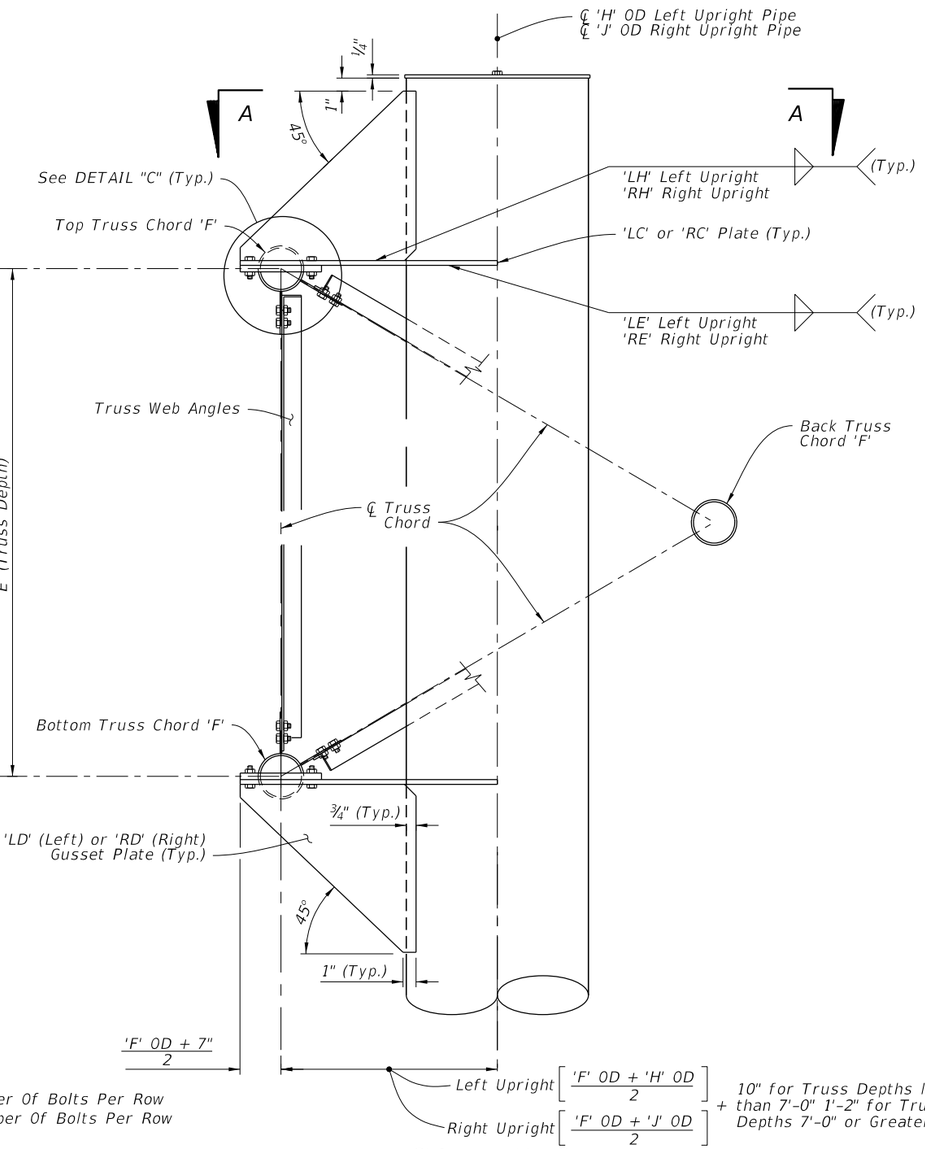
(With Gusset Plates And Web Angles Omitted For Clarity)




## DETAIL "C"




## FRONT ELEVATION




## SIDE ELEVATION

## UPRIGHT-TRUSS CONNECTION DETAIL

(Web Members From Back Truss Chord Omitted For Clarity, See Note #3)

### NOTES:

1. Wrap fillet weld around the stiffner termination on the tube wall.
2. Truss Chord Bolts: 'LB' or 'RB' Hex Head Bolts 'LA' or RA' Ø.
3. Right Upright Truss connection shown, Left Upright Truss connection similar.

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| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | SPAN SIGN STRUCTURE | INDEX NO. | SHEET NO. |
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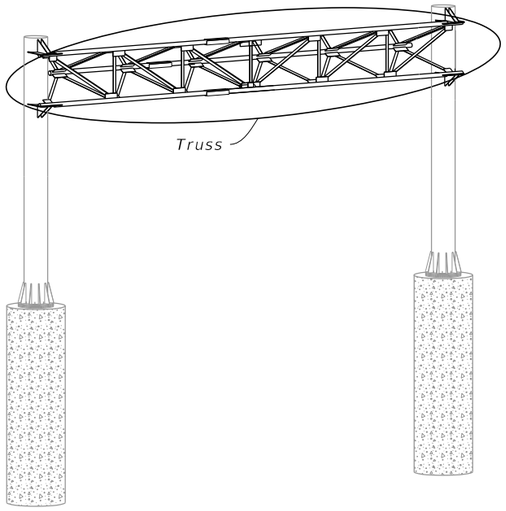
| 11/01/16 | | | | | 11320 | 3 of 5 |

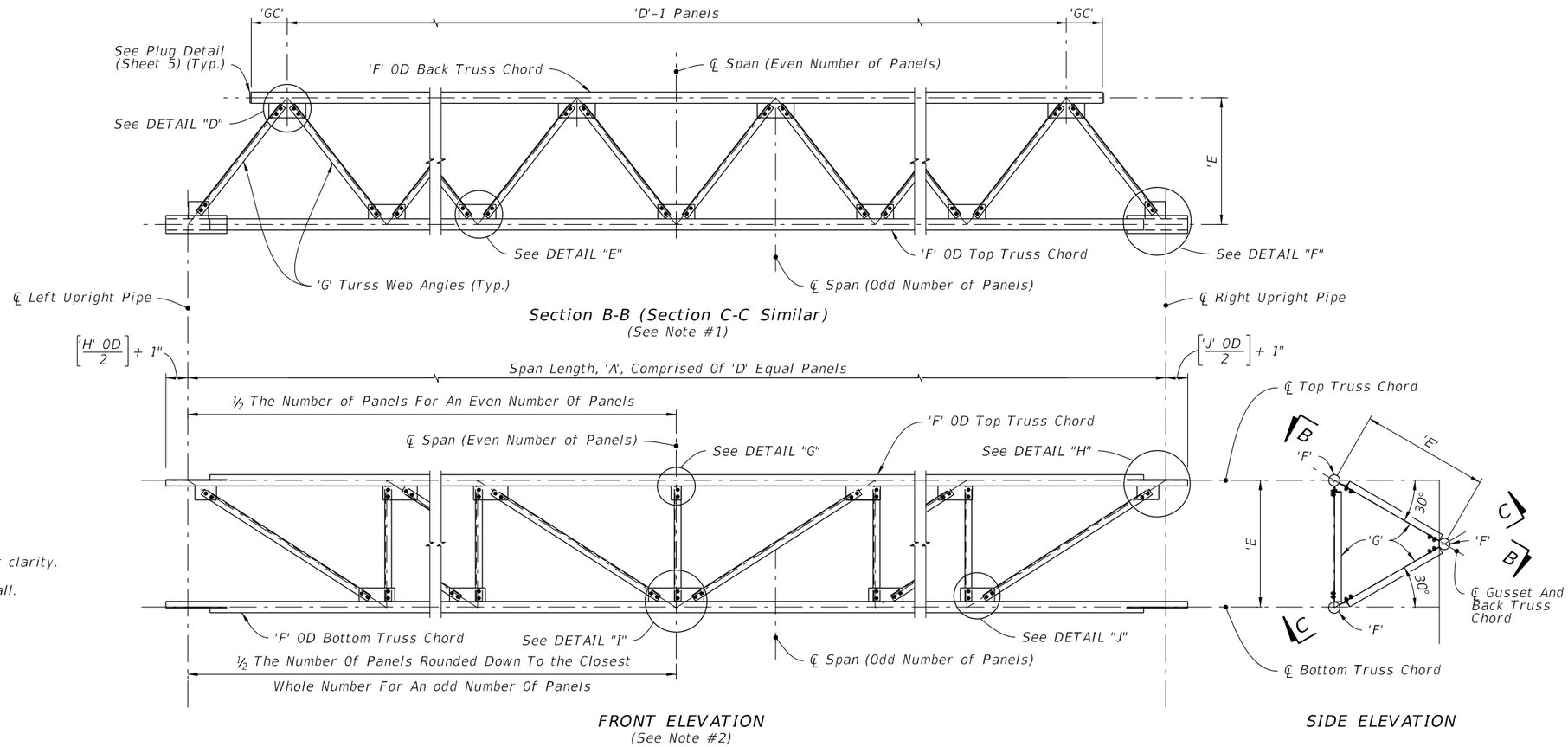



## SPAN SIGN ASSEMBLY

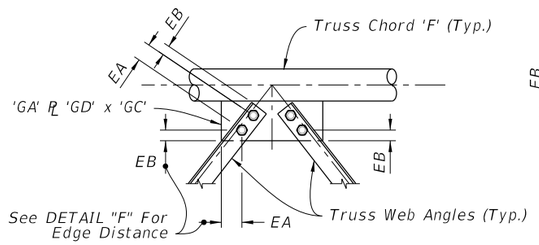
NOTES:

1. Out-of-plane members are not shown for clarity.
2. Back truss chord and attached angles are not shown for clarity.
3. Wrap fillet weld around plate termination on the tube wall.

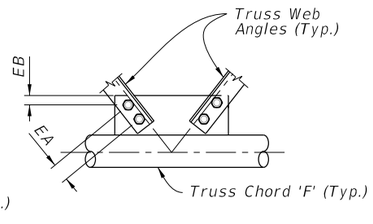
| Bolt Diameter (in.) | Distance (in.) | |
|---|---|---|
| | EA | EB |
| 1¼ | 4⅜ | 2¼" |
| 1 | 3½ | 1¾ |
| ⅞ | 3 | 1½ |
| ¾ | 2½ | 1¼ |
| ⅝ | 2¼ | 1⅛ |



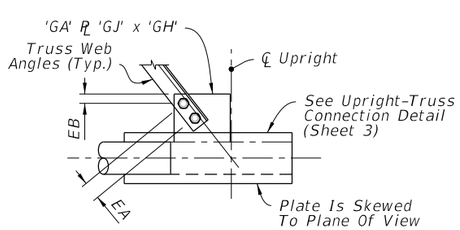

## TRUSS



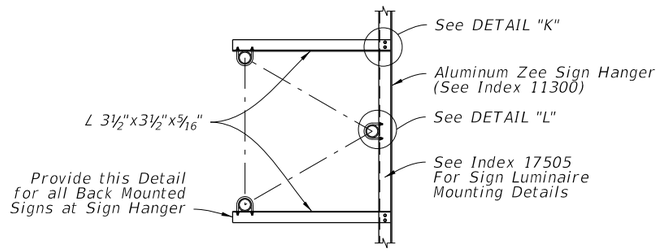

DETAIL "D"



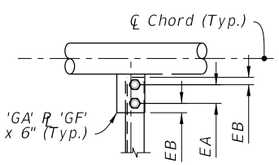

DETAIL "E"




DETAIL "F"




BACK-SIDE SIGN MOUNTING

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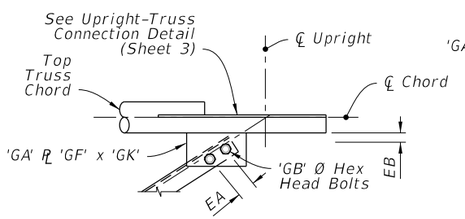
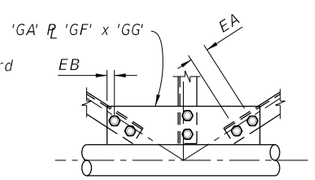
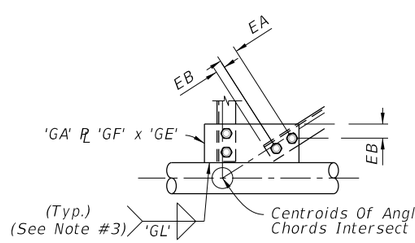


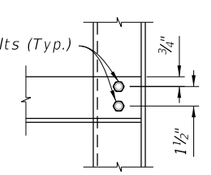

DETAIL "H"



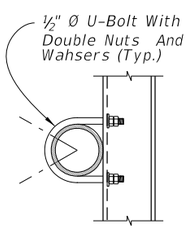

DETAIL "I"




DETAIL "J"




DETAIL "K"




DETAIL "L"

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| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | SPAN SIGN STRUCTURE | INDEX NO. | SHEET NO. |
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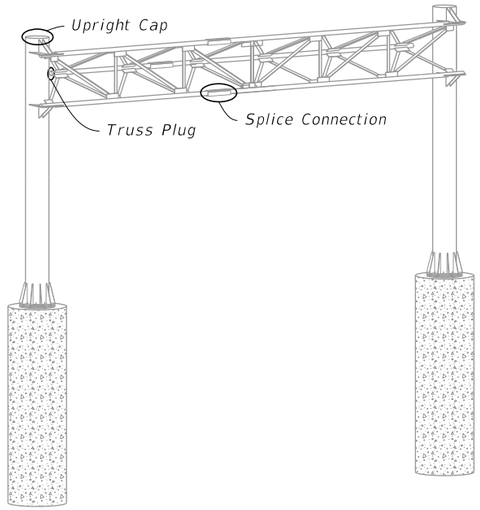
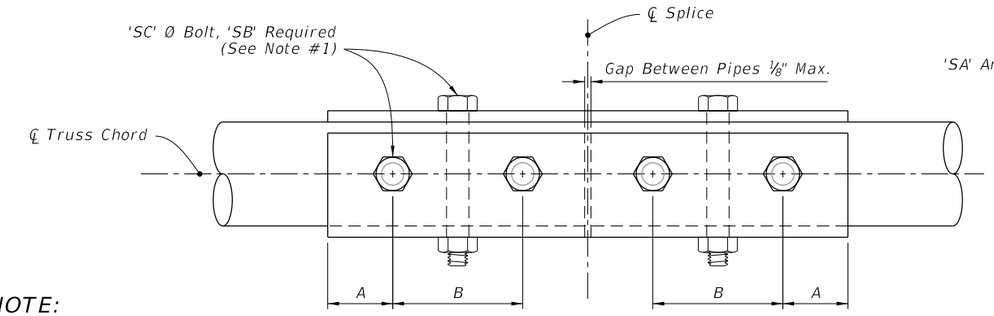



## SPAN SIGN ASSEMBLY

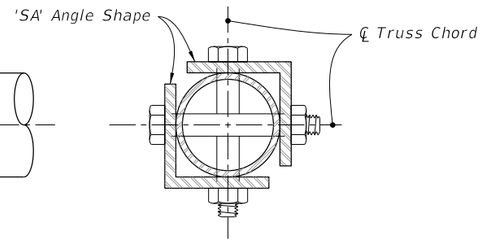
| Bolt Diameter (in.) | Distance (in.) | |
|---|---|---|
| | A | B |
| 1 | 1¾ | 3½ |
| ⅞ | 1½ | 3 |
| ¾ | 1¼ | 2½ |

### SPLICE CONNECTION NOTE:

1. Only 6 bolts are shown in detail for clarity. (One Half Each End Of Splice)

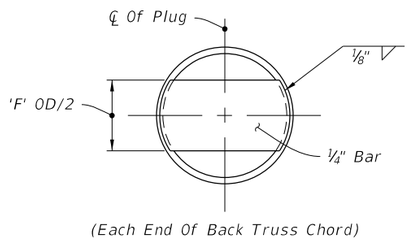



FRONT ELEVATION



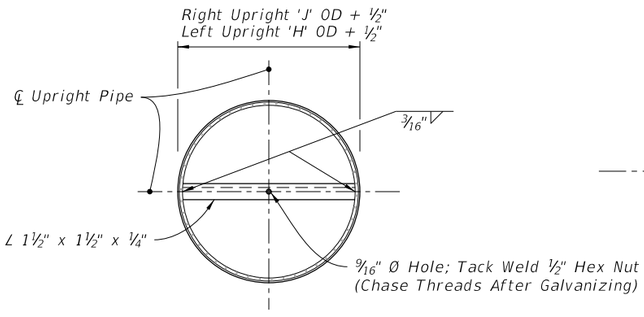

SIDE ELEVATION

## SPLICE CONNECTION DETAIL

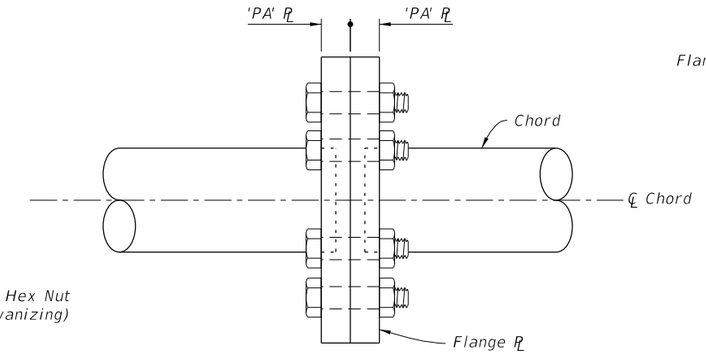



(Each End Of Back Truss Chord)

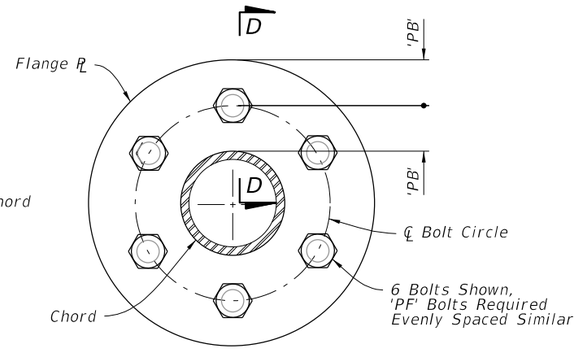
## TRUSS PLUG DETAIL



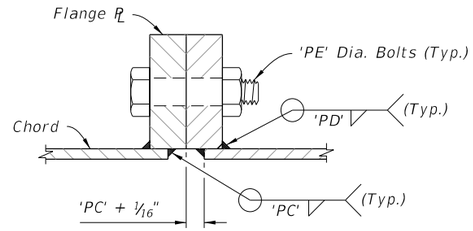

PLAN



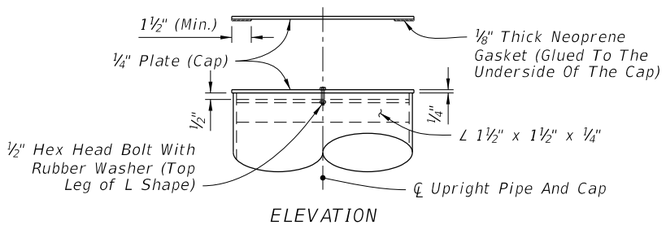

FRONT ELEVATION




SIDE ELEVATION




SECTION D-D

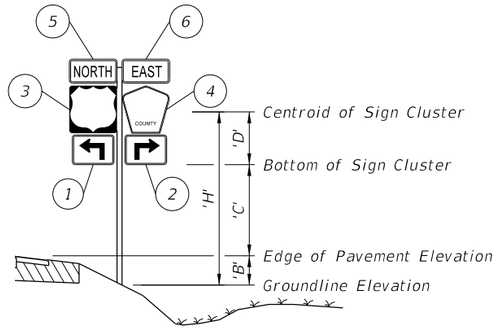



ELEVATION

## UPRIGHT CAP DETAIL

## ALTERNATE SPLICE CONNECTION DETAIL

**STEP 1:** *Calculate the area and the centroid for an individual sign or a sign cluster. Note that the centroid and areas have been calculated for frequently used signs. These are shown on Sheets 6, 7, 8 and 9.*




| | Size H x V | Centroid: Local $'Y_n'$ | Centroid: Global $'X_n'$ | Centroid: Global $'Y_n'$ | $'A_n'$ | $'X_n'$ x $'A_n'$ | $'Y_n'$ x $'A_n'$ |
|---|---|---|---|---|---|---|---|
| | (in. x in.) | (in.) | (in.) | | (in.²) | (in.³) | (in.³) |
| 1 | 21 x 15 | 7.5 | –10.5–1.5–1.5 = –13.5 | 7.5 | 315 | –4,252.5 | 2,362.5 |
| 2 | 21 x 15 | 7.5 | 10.5+1.5+1.5 = 13.5 | 7.5 | 315 | +4,252.5 | 2,362.5 |
| 3 | 24 x 24 | 12 | –12–1.5 = –13.5 | 15+1+12 = 28 | 576 | –7,776 | 16,128 |
| 4 | 24 x 24 | 12 | 12+1.5 = 13.5 | 15+1+12 = 28 | 436 | 5,886 | 12,208 |
| 5 | 24 x 12 | 6 | –12–1.5 = –13.5 | 15+1+24+1+6 = 47 | 288 | –3,888 | 13,536 |
| 6 | 24 x 12 | 6 | 12+1.5 = 13.5 | 15+1+24+1+6 = 47 | 288 | 3,888 | 13,536 |
| | | | | TOTALS | 2,218 | –1,890 | 60,133 |

$\Sigma\ ('A_n')$ = 2,218 in.² = 15.4 ft.² $\quad \Sigma\ ('X_n' \times 'A_n')$ = –1,890 in.³ = –1.09 ft.³ $\quad \Sigma\ ('Y_n' \times 'A_n')$ = 60,133 in.³ = 34.8 ft.³

$$'X_c' = \frac{\Sigma\ ('X_n' \times 'A_n')}{\Sigma\ 'A_n'} = -0.1 \text{ ft.} \qquad 'Y_c' = \frac{\Sigma\ ('Y_n' \times 'A_n')}{\Sigma\ 'A_n'} = 2.26 \text{ ft.}$$

**STEP 2:** *Determine the height 'H' from groundline to the centroid of the individual sign or sign cluster.*

*Assume: 'B' = 1 ft., 'C' = 7 ft.*

*Calculated: $X_c'$ = –0.1 ft., $'Y_c'$ = 'D' 2.26 ft.*

*Since $X_c'$ = –0.1 < 6", it is not a cantilever sign, only dark-bold lines in the table will be referenced to.*

*'H' = 'B' + 'C' + 'D' = 10.26 ft. ==>* USE 11 ft. $\quad \Sigma\ ('A_n')$ = 15.4 ft.² ==> USE 16 ft.²

**STEP 3:** *Refer to the Aluminum Column (Post) Selection Tables and find the intersection point. See Sheet 3.*

ALUMINUM COLUMN (POST) SELECTION TABLE

| TOTAL PANEL AREA (SF) \ 'H' (FT) | 8 ft | 9 ft | 10 ft | 11 ft | 12 ft | 13 ft | 14 ft | 15 ft | 16 ft | 17 ft | 18 ft | 19 ft | 20 ft |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 sf | 2 | 2.5 | 2.5 | 2.5 | 3 | 3 | 3 | 3 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 4 sf | 2.5 | 2.5 | 3 | 3 | 3 | 3 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 5 sf | 2.5 | 3 | 3 | 3 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 4 | 4 |
| 6 sf | 3 | 3 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 4 | 4 | 4 |
| 7 sf | 3 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 |
| 8 sf | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 | 4 |
| 9 sf | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 10 sf | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 |
| 11 sf | 3.5 | 3.5 | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 |
| 12 sf | 3.5 | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 |
| 13 sf | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 | 5 |
| 14 sf | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 |
| 15 sf | 3.5 | 4 | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 | 5 |
| 16 sf | 3.5 | 4 | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 5 | 5 | 5 | 6 |
| 17 sf | 4 | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 | 6 | 6 |
| 18 sf | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 | 5 | 6 | 6 |
| 19 sf | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 | 6 | 6 | 6 |
| 20 sf | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 | 5 | 6 | 6 | 6 |
| 21 sf | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 |
| 22 sf | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 |
| 23 sf | 4 | 4 | 4 | 4.5 | 4.5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 |
| 24 sf | 4 | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 |
| 25 sf | 4 | 4 | 4.5 | 4.5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 8 |
| 26 sf | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 8 | 8 |
| 27 sf | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 8 | 8 |
| 28 sf | 4 | 4.5 | 4.5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 8 | 8 |
| 29 sf | 4.5 | 4.5 | 4.5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 8 | 8 | 8 |
| 30 sf | 4.5 | 4.5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 8 | 8 | 8 |

*For 'H' = 11 ft., Area = 16 ft.²*

- *Refer to the Aluminum Column (Post) Selection Table, as copied from Sheet 3 and shown here.*
- *To determine the required post size, find the intersection of the row labeled "16 SF" and the column labeled "11 FT". For the example the intersection value is "4" (4" OD).*
- *In the Column (Post) and Foundation Table, the value "4" concludes that the design requires a 4.0" diameter and ¼" thick Aluminum Column (Post) and a 2.0' diameter and 3.5' deep Concrete Foundation and 3.0' Stub.*

**STEP 4:** *For sign assemblies with signs oriented in two directions, only the sign with the largest area should be analyzed to determine the Column (Post) requirements.*

## GUIDE TO USE THIS STANDARD

| SHEET NO. | CONTENTS |
|---|---|
| 1 | General Notes and Example |
| 2 | Centroid and Height |
| 3 | Column and Foundation Tables |
| 4 | Slip Base and Foundation Details |
| 5 | Driven Post and Soil Plate Details |
| 6 | Connection and Wind Beam |
| 7, 8 & 9 | Frequently Used Sign Clusters |

## GENERAL NOTES:

1. *Shop Drawings:*
   *This Index is considered fully detailed. Submit Shop Drawings for minor modifications not detailed in the Plans.*

2. *Aluminum Sign, Wind Beams and Column (Post) Materials:*
   a. *Aluminum Plates: ASTM B209, Alloy 6061-T6*
   b. *Aluminum Bars and Extruded Shapes: ASTM B221, Alloy 6061-T6*
   c. *Aluminum Structural Shapes: ASTM B308 Alloy 6061-T6*
   d. *Cast Aluminum: ASTM B26 Alloy A356-T6*
   e. *Aluminum Weld Material: ER 5556 or 5356*

3. *Sign Mounting Bolts (Screws), Nuts and Washers:*
   a. *Aluminum Button Head and Flat Head Bolts (Screws): ASTM F468 Alloy 2024-T4*
   b. *Aluminum Hex Nuts: ASTM F467 Alloy 6061-T6 or 6262-T9*
   c. *Aluminum Washers: ASTM B221, Alloy 7075-T6*

7. *Stainless Steel Bolts, Nuts and Washers may be used in lieu of the Aluminum button head bolts and flat head Screws as follows:*
   a. *Stainless Steel Bolts (Screws): ASTM F 593 Alloy Group 2, Condition A, CW1 or SH1*
   b. *Stainless Steel Nuts: ASTM F594*

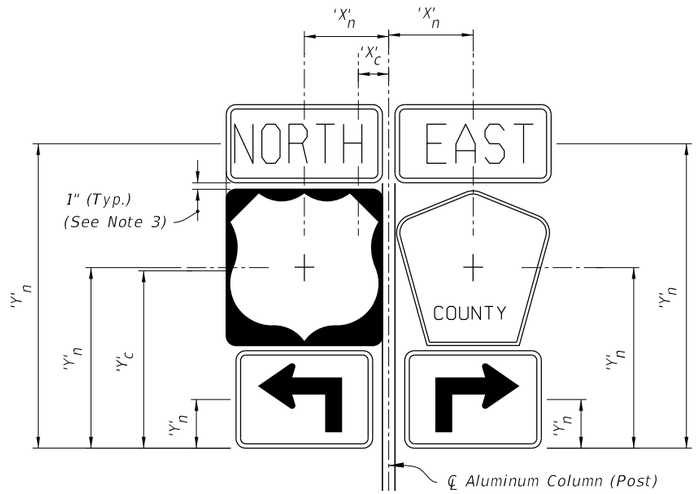
8. *Sign Column (Post) Bolts, Nuts and Washers:*
   a. *Galvanized U-Bolt (Column): ASTM A449 or ASTM A193 B7 according to ASTM F2329 with nuts and washers*
   b. *Aluminum Bolts (Sleeve): ASTM F468, Alloy 6061-T6 or 2024-T4 with Hex Nuts F467 6061-T6 or 6262-T9 and Washers B221, Alclad 2024-T4*
   c. *Galvanized High Strength Hex Head Bolts (Base Bolts): ASTM F3125, Grade A325, Type 1*
   d. *Galvanized Hex Nuts: ASTM A563 Grade DH*
   e. *Galvanized Washers: ASTM F436*
   f. *Galvanized Bolts (Sleeve): ASTM A307 with Galvanized Hex Nuts and Washers*

9. *Coatings:*
   a. *Aluminum Fasteners: Anodic coating (0.0002 inches min.) and chromate sealed*
   b. *High Strength Steel Bolts Nuts and Washers: ASTM F2329*
   c. *All other steel items (excluding stainless steel): Hot-dip Galvanize – ASTM A123*
   d. *Repair damaged galvanizing in accordance with Specification Section 562*

10. *BREAKAWAY SUPPORTS REQUIREMENTS: Install non-frangible aluminum column (post) (larger than 3½") with breakaway supports as shown on Sheet 5. Signs shielded by barrier wall or guardrail do not require breakaway support.*

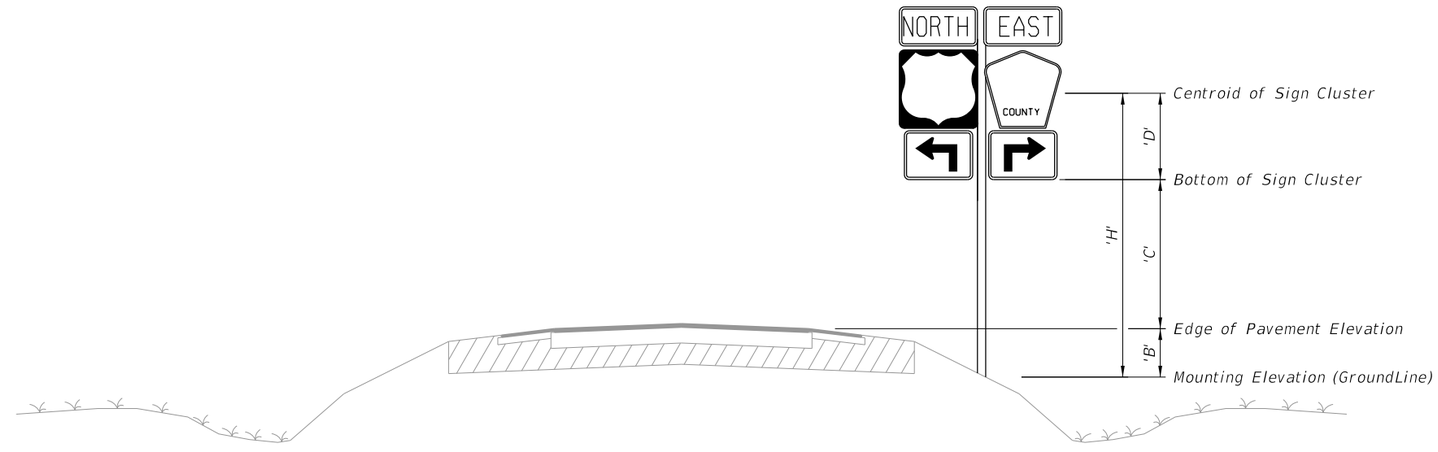
## NOTES AND EXAMPLE

10/14/2016 7:57:43 AM




## SIGN CLUSTER

$$'X'_c = \frac{\Sigma\ (\ 'X'_n \times 'A'_n\ )}{\Sigma\ 'A'_n} \qquad 'C' = 'Y'_c = \frac{\Sigma\ (\ 'Y'_n \times 'A'_n\ )}{\Sigma\ 'A'_n}$$




## TYPICAL SECTION

'A'n = Area of individual sign

'B' = Height of the edge of pavement from the mounting elevation

'C' = Height of the the bottom of the sign or cluster from the edge of pavement elevation

'D' = Height of the centroid of the sign or cluster from the bottom of the sign or cluster

h = Individual sign height

'H' = Height of sign or cluster centroid from groundline

a = Individual sign width

'X'c = Centroid horizontal location of sign or cluster from ℄ Aluminum Column (Post)

'Y'c = Centroid height of sign or cluster from bottom of sign cluster

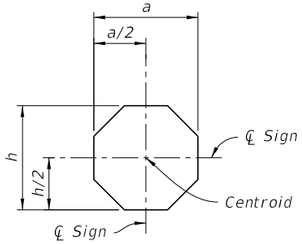
'X'n = Individual sign centroid horizontal location from ℄ Aluminum Column (Post)

'Y'n = Individual Sign centroid height from bottom of sign cluster

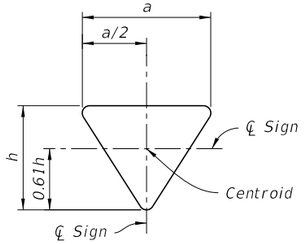
NOTES:

1. For 'B' & 'C' see Index No. 17302 and Roadway Plans.
2. Do not exceed an area of 30 SF or a width of 60 inches for a sign or a sign cluster, including rotated sign panels.
3. Vertical sign spacing (1" shown on Sign Cluster detail) also applies to rotated signs.

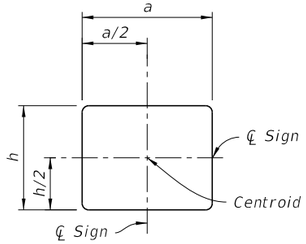
## CALCULATION OF SIGN CLUSTER CENTROID



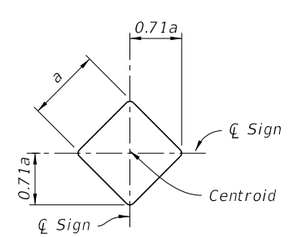

## STOP



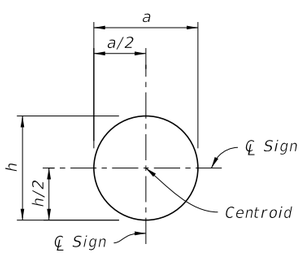

## YIELD



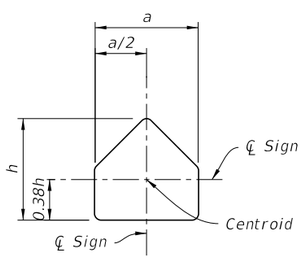

## RECTANGLE



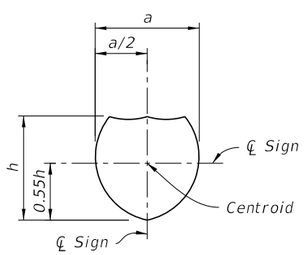

## DIAMOND



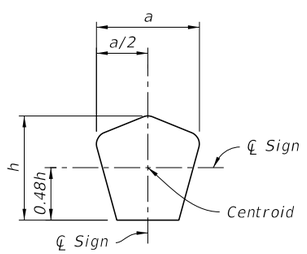

## RAILROAD




## SCHOOL




## SHIELD




## COUNTY

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## CENTROID AND HEIGHT

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FDOT FY 2017-18 DESIGN STANDARDS | SINGLE COLUMN GROUND SIGNS | 11860 | 2 of 9 |

## ALUMINUM COLUMN (POST) SELECTION TABLE (O.D. in.)

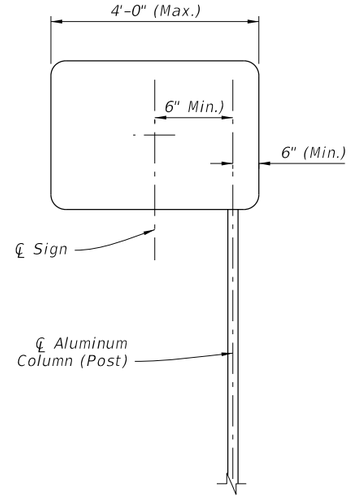
| TOTAL PANEL AREA (SF) | 'H' (FT) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 8 ft | 9 ft | 10 ft | 11 ft | 12 ft | 13 ft | 14 ft | 15 ft | 16 ft | 17 ft | 18 ft | 19 ft | 20 ft |
| 3 sf | 2 | 2.5 | 2.5 | 2.5 | 3 | 3 | 3 | 3 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 4 sf | 2.5 | 2.5 | 3 | 3 | 3 | 3 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 5 sf | 2.5 | 3 | 3 | 3 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 4 | 4 |
| 6 sf | 3 | 3 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 4 | 4 | 4 |
| 7 sf | 3 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 |
| 8 sf | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 | 4 |
| 9 sf | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 10 sf | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 |
| 11 sf | 3.5 | 3.5 | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 |
| 12 sf | 3.5 | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 |
| 13 sf | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 | 5 |
| 14 sf | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 |
| 15 sf | 3.5 | 4 | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 | 5 |
| 16 sf | 3.5 | 4 | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 5 | 5 | 5 | 6 |
| 17 sf | 4 | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 | 6 | 6 |
| 18 sf | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 | 5 | 6 | 6 |
| 19 sf | 4 | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 | 6 | 6 | 6 |
| 20 sf | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 | 5 | 6 | 6 | 6 |
| 21 sf | 4 | 4 | 4 | 4 | 4.5 | 4.5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 |
| 22 sf | 4 | 4 | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 |
| 23 sf | 4 | 4 | 4 | 4.5 | 4.5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 |
| 24 sf | 4 | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 |
| 25 sf | 4 | 4 | 4.5 | 4.5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 8 |
| 26 sf | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 8 | 8 |
| 27 sf | 4 | 4.5 | 4.5 | 4.5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 8 | 8 |
| 28 sf | 4 | 4.5 | 4.5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 8 | 8 |
| 29 sf | 4.5 | 4.5 | 4.5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 8 | 8 | 8 |
| 30 sf | 4.5 | 4.5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 8 | 8 | 8 |

## COLUMN (POST) AND FOUNDATION TABLE

| Column (Post) Size | | Foundation Alternatives | | | | |
|---|---|---|---|---|---|---|
| | | Driven Post * | | Concrete (Class I) | | |
| Outside Diameter (in) | Wall Thk. (in) | Embedment Depth (ft) | | Diameter (ft) | Embedment Depth (ft) | Stub Length (ft) |
| | | without Soil Plate | with Soil Plate | | | |
| 2.0 | 1/8 | 4.5 | 2.5 | 2.0 | 2.0 | 2.0 |
| 2.5 | 1/8 | 5.0 | 3.0 | 2.0 | 2.5 | 2.0 |
| 3.0 | 1/8 | 5.0 | 3.5 | 2.0 | 2.5 | 2.5 |
| 3.5 | 3/16 | 6.0 | 4.5 | 2.0 | 3.0 | 3.0 |
| 4.0 | 1/4 | --- | --- | 2.0 | 3.5 | 3.0 |
| 4.5 | 1/4 | --- | --- | 2.0 | 4.0 | 3.0 |
| 5.0 | 1/4 | --- | --- | 2.0 | 4.5 | 3.0 |
| 6.0 | 1/4 | --- | --- | 2.0 | 5.0 | 3.0 |
| 8.0 | 5/16 | --- | --- | 2.0 | 5.5 | 3.0 |

* *INSTALLING FRANGIBLE COLUMN SUPPORTS:*

*Columns (posts) 3½" O.D. and less are frangible. Frangible columns may be installed by driving the post or the posts may be set in preformed holes. Backfill preformed holes with suitable material tamped in layers not thicker than 6" (to provide adequate compaction) or filled with flowable fill or bagged concrete.*




CANTILEVER SIGN

NOTE:

1. For cantilever sign installations see Index 17302.
2. For cantilever signs with widths greater than 4' see Index 11861.
3. Use of driven post for cantilever sign in not permitted.

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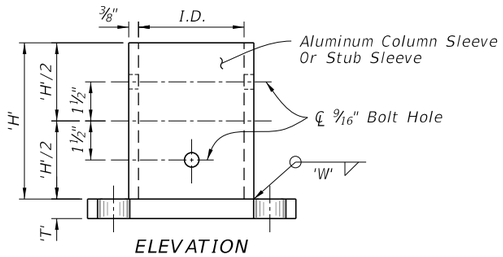
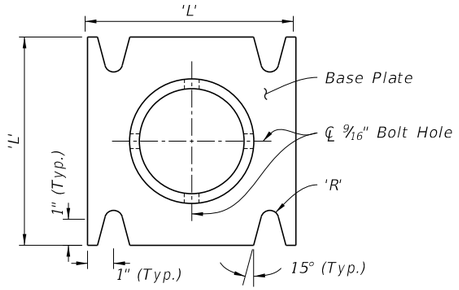
COLUMN AND FOUNDATION TABLES



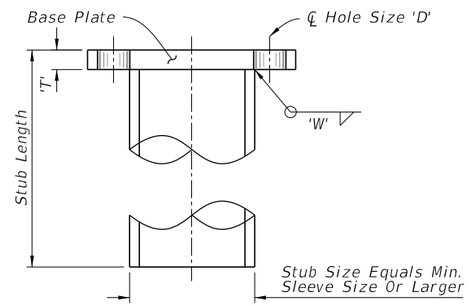

ELEVATION



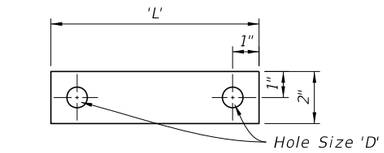

PLAN

(Welded Or Sandcast)

## STUB/SLEEVE & BASE PLATE DETAILS

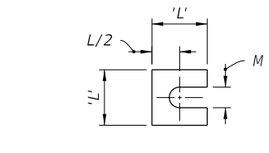



(Welded)



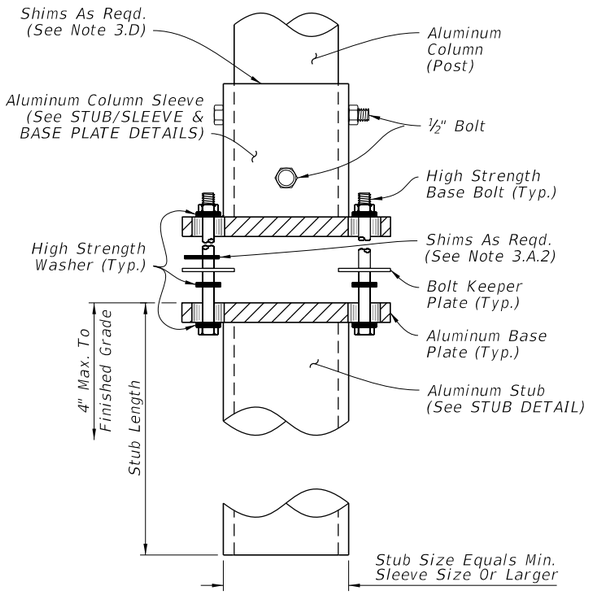

28 Ga. Thick Aluminum Strip
2 Reqd. Per Base

## BOLT KEEPER PLATE DETAIL

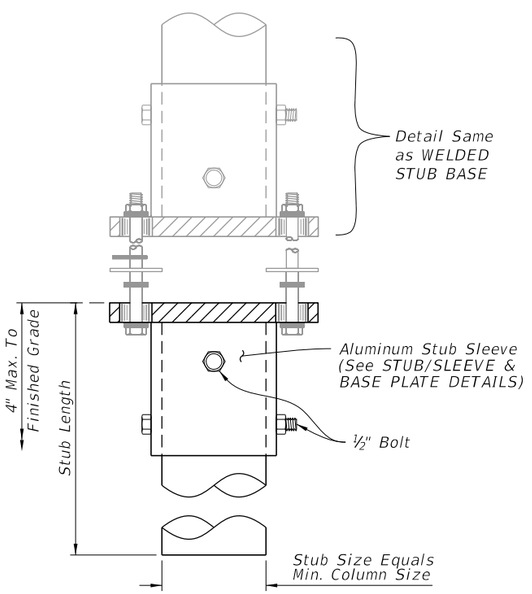



Provide 2~0.0149" Thick (28 guage)
and 2~0.0329" Thick (21 guage)
Brass Shims Per Post

## SHIM DETAIL

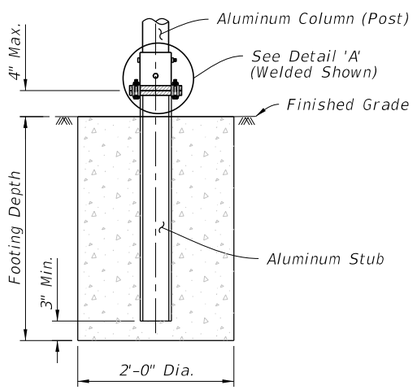



WELDED STUB BASE

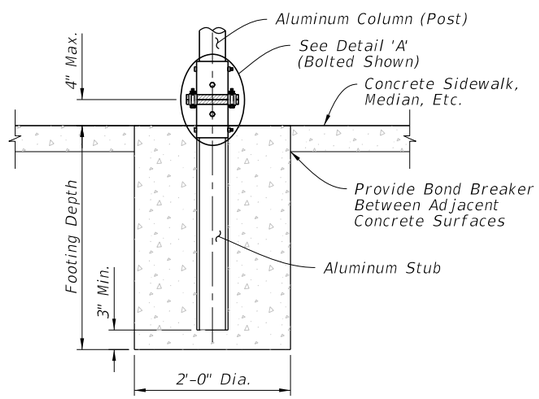



BOLTED STUB/SLEEVE BASE

## STUB DETAIL




## DETAIL 'A'




## NOTES:

1. Foundation Notes for Frangible Slip Base:

   A. Place Stub into concrete to diameter and depth shown in POST AND FOUNDATION TABLE using Class I Concrete.

2. Slip Base Fabrication Notes:

   A. The difference between the O.D. of the post and I.D. of the Sleeve must be 1/16" or less.

   B. Either a Welded Stub Base or Bolted Stub/Sleeve Base may be used to fabricate the Slip Base.

   C. For cast base plates bolted to foundation stubs, use a foundation stub the same size as the sign column (Post).

3. Slip-Base Assembly Instructions:

   A. Assemble Slip Base connections in the following manner:
      1. Insert Post into Sleeve and connect using 2 ~ ½" diameter Sleeve Bolts.
      2. Assemble top base plate to bottom Base Plate using Base Bolts (High strength) with 3 washers per bolt. (See Detail 'A'):
         a. Place one washer on each Base Bolt between the bottom Base Plate and the Base Bolt head.
         b. Place the next washer between the Bottom Base Plate and the Bolt Keeper Plate.
         c. Use brass shims to plumb the post.
         d. Add the top base plate section.
         e. Place the third washer between the Top Base Plate and the Nut.

   B. Orient the Bolt Keeper Plates in the Direction of Traffic.

   C. Tighten Base Bolts as follows:
      1. Tighten Base Bolts to the maximum possible with a 12" to 15" wrench (this will bed the washers and shims and clear the bolt threads).
      2. Loosen each Base Bolt one turn.
      3. Under the supervision of the Engineer, use a calibrated wrench to tighten bolts to the torque prescribed in the SLIP BASE DETAILS Table. Over tightened Base Bolts are not permitted.
      4. Distort bolt threads at the junction with nuts to prevent loosening. Repair damaged galvanizing.

   D. Obtain a tight sleeve connection by placing 4 galvanized steel shims between the column (post) and sleeve. Space the shims evenly around the perimeter of the column (1 between each bolt hole, 4 total). Use shims that are 1" shorter than the height of the sleeve.

| Column (Post) Size | SLIP BASE DETAILS | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Outside Dia. | Wall Thickness | Sleeve I.D. (Max.) | Sleeve Height 'H' | Weld 'W' | Base Plate 'L' | Base Plate 'T' | Radius 'R' | Base Bolt Size | Base Bolt Length | Base Plate Torque ft-lbs | Base Plate Torque in.-lbs | Hole Size 'D' | SHIM L | SHIM M |
| 4" | ¼" | 4 1/16" | 6" | 5/8" | 8" | 3/4" | 1 11/32" | 5/8" | 3" | 29 | 345 | 1 1/16" | 1 3/8" | 1 1/16" |
| 4½" | ¼" | 4 9/16" | 6" | 5/8" | 8" | 7/8" | 1 11/32" | 5/8" | 3 1/4" | 29 | 345 | 1 1/16" | 1 3/8" | 1 1/16" |
| 5" | ¼" | 5 1/16" | 7" | 5/8" | 8" | 7/8" | 1 11/32" | 5/8" | 3 1/4" | 29 | 345 | 1 1/16" | 1 3/8" | 1 1/16" |
| 6" | ¼" | 6 1/16" | 8" | 3/4" | 9" | 1" | 1 13/32" | 3/4" | 3 1/2" | 46 | 554 | 1 3/16" | 1 3/4" | 1 3/16" |
| 8" | 5/16" | 8 1/16" | 10" | 3/4" | 11" | 1" | 1 15/32" | 7/8" | 3 3/4" | 53 | 640 | 1 5/16" | 2 3/8" | 1 1/16" |

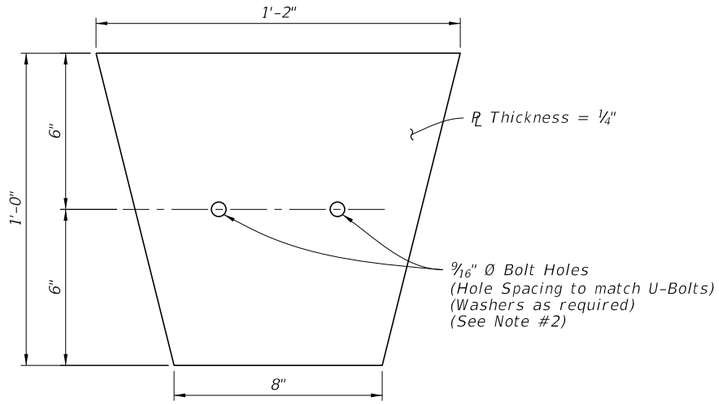
## SLIP BASE AND FOUNDATION DETAIL
(Non-Frangible Column, Typ.)

## SLIP BASE AND FOUNDATION DETAIL IN CONCRETE
(Non-Frangible Column In Crossovers, Medians & Sidewalks)

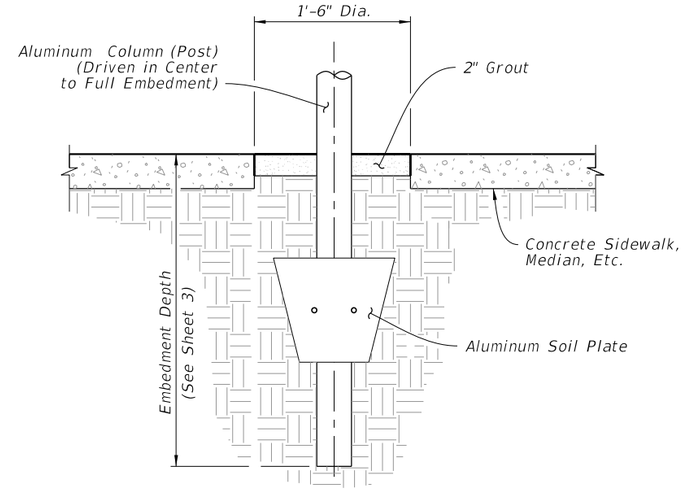
# SLIP BASE AND FOUNDATION DETAILS

## NOTES:

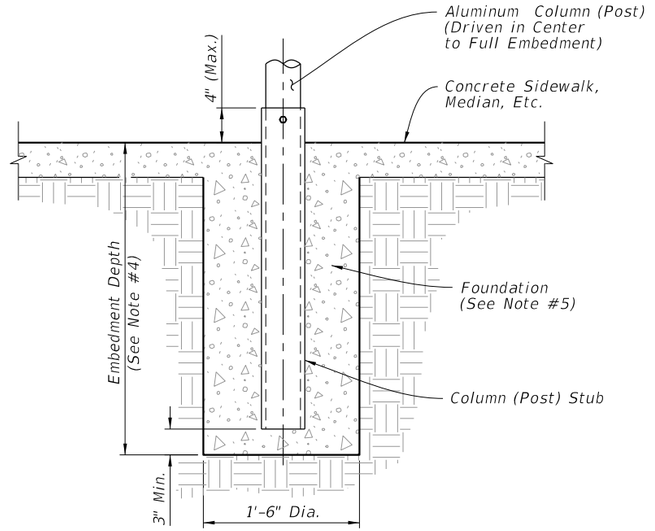
1. Align Soil Plate bottom at $\frac{2}{3}$ of embedment depth.
2. Slot up to 1" long is allowed to accommodate various Column (Post) sizes.
3. Rectangular soil plate of size 1'–2" x 1'–0" may be used as an alternative.
4. Embedment Depth is 2'–6" for 2.0" and 2.5" Column (Post) Stubs and 3'–6" for 3.0" and 3.5" Column (Post) Stubs.
5. Concrete foundation may be Class Non Structural if poured monolithically with sidewalk or separator.




ALUMINUM SOIL PLATE DETAIL




DRIVEN POST DETAIL
(Frangible Post In Crossovers, Medians & Sidewalks)




CONCRETE/STUB DETAIL
(Frangible Post In Crossovers, Medians & Sidewalks)

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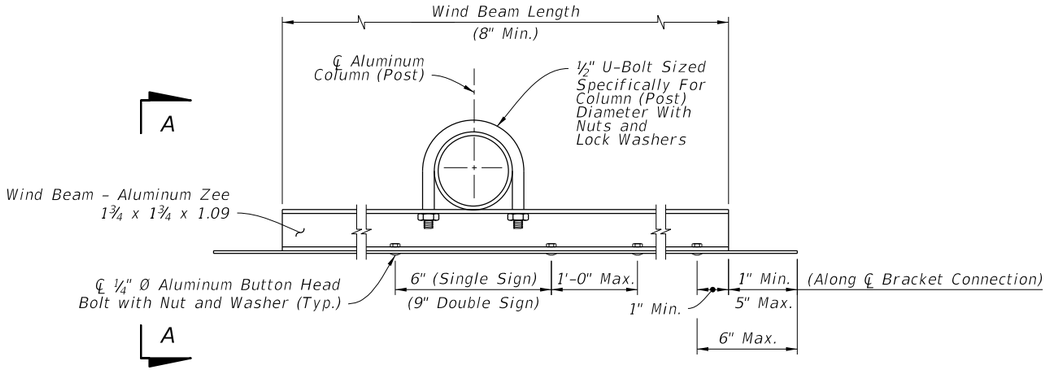
DRIVEN POST AND SOIL PLATE DETAIL

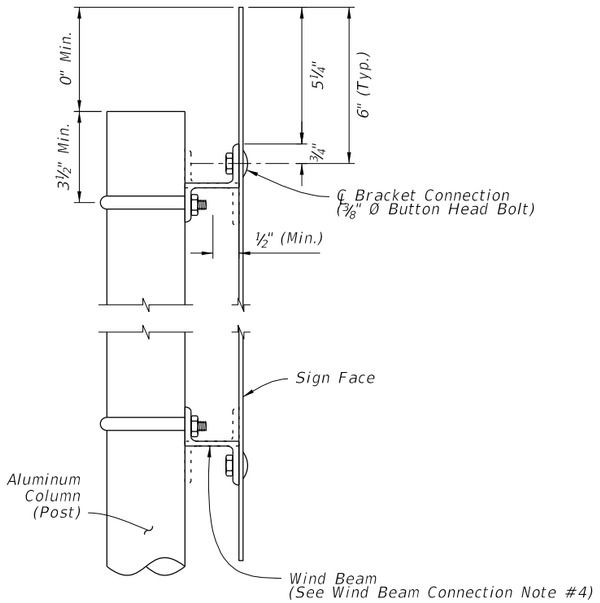
| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | SINGLE COLUMN GROUND SIGNS | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | | | 11860 | 5 of 9 |




### WIND BEAM CONNECTION NOTES:

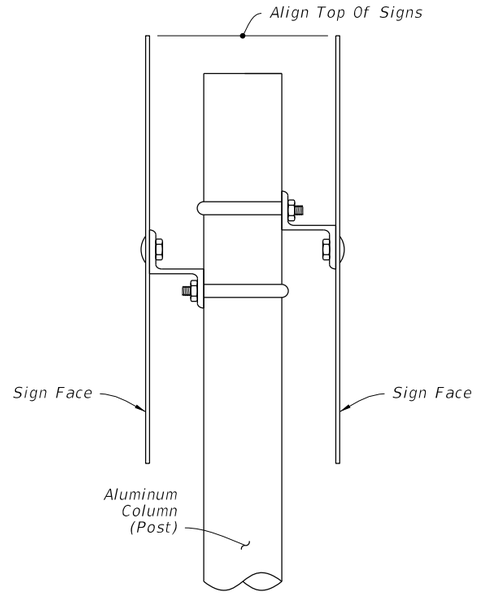
1. 5⁄16" Ø Stainless Steel Hex Head Bolts with Flat Washer under Head and Lockwasher under Nut may be used in lieu of ¼" Ø Aluminum Button Head Bolts.
2. Use Nylon washers (provided by the sheeting supplier) under the button bolt heads to protect sign sheeting.
3. Slots up to 2" long are allowed in wind beams to accommodate U-Bolts for varying Column (Post) diameters.
4. Wind beams may be oriented in either direction.

## BRACKET DETAIL




WIND BEAM CONNECTIONS DETAILS

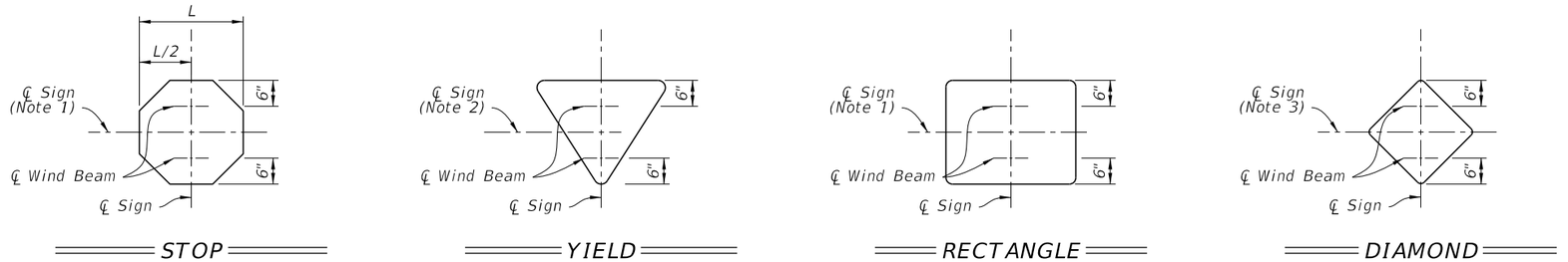
## SECTION A-A




### BACK-TO-BACK SIGN NOTE:

Use the area and the centroid location of the largest sign to determine aluminum column (post) size.

## BACK-TO-BACK SIGN DETAIL




### WIND BEAM PLACEMENT NOTES:

1. Install an additional third wind beam along the ℄ for signs with heights greater than 30" and less than 72". For rectangular signs greater than 72" maintain a maximum wind beam spacing of 2'-6", with the additional wind beams spaced evenly between the top and bottom wind beams. For rectangular signs up to 12" in height, use only one wind beam at ℄ Sign.
2. Install an additional third wind beam along the ℄ for Yield and School signs greater than 36".
3. Install an additional third wind beam along the ℄ for Diamond signs 30" or greater.

## WIND BEAM PLACEMENT DETAILS

## CONNECTION AND WIND BEAMS

8/14/2017 11:09:54 AM

| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | SINGLE COLUMN GROUND SIGNS | INDEX | SHEET |
|---|---|---|---|---|---|---|
| 11/01/17 | | | | | 11860 | 6 of 9 |


| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 36x12 | 3.00 SF | 6.31 SF | 1.75 Ft. |
| 24x24 | 3.31 SF | | |

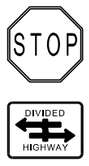

| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 36x12 | 3.00 SF | 8.18 SF | 1.92 Ft. |
| 30x30 | 5.18 SF | | |


| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 36x12 | 3.00 SF | 10.46 SF | 2.10 Ft. |
| 36x36 | 7.46 SF | | |


| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 36x12 | 3.00 SF | 16.25 SF | 2.48 Ft. |
| 48x48 | 13.25 SF | | |


| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 24x24 | 3.31 SF | 6.31 SF | 1.71 Ft. |
| 24x18 | 3.00 SF | | |


| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 30x30 | 5.18 SF | 10.18 SF | 2.19 Ft. |
| 30x24 | 5.00 SF | | |




| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 36x36 | 7.46 SF | 12.46 SF | 2.55 Ft. |
| 30x24 | 5.00 SF | | |


| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 36x12 | 3.00 SF | 13.18 SF | 2.87 Ft. |
| 30x30 | 5.18 SF | | |

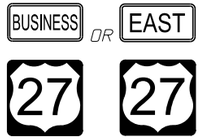

| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 30x24 | 5.00 SF | | |


| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 36x12 | 3.00 SF | 15.46 SF | 3.15 Ft. |
| 36x36 | 7.46 SF | | |

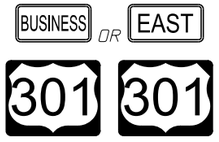

| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 30x24 | 5.00 SF | | |


| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 21x15 | 2.19 SF | 6.19 SF | 1.60 Ft. |
| 24x24 | 4.00 SF | | |

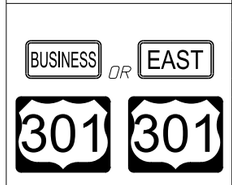

| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 21x15 | 2.19 SF | 7.19 SF | 1.52 Ft. |
| 30x24 | 5.00 SF | | |




| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 24x12 | 2.00 SF | 6.00 SF | 1.53 Ft. |
| 24x24 | 4.00 SF | | |




| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 24x12 | 2.00 SF | 7.00 SF | 1.45 Ft. |
| 30x24 | 5.00 SF | | |

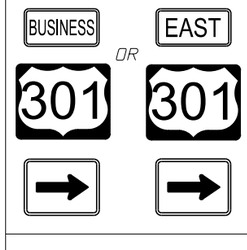



| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 30x15 | 3.13 SF | 8.13 SF | 1.66 Ft. |
| 30x24 | 5.00 SF | | |

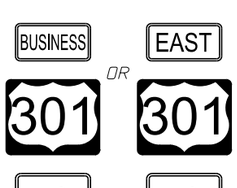
| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 24x24 | 4.00 SF | 6.19 SF | 1.73 Ft. |
| 21x15 | 2.19 SF | | |

| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 30x24 | 5.00 SF | 7.19 SF | 1.81 Ft. |
| 21x15 | 2.19 SF | | |


| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 24x12 | 2.00 SF | 8.19 SF | 2.26 Ft. |
| 24x24 | 4.00 SF | | |
| 21x15 | 2.19 SF | | |




| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 24x12 | 2.00 SF | 9.19 SF | 2.27 Ft. |
| 30x24 | 5.00 SF | | |
| 21x15 | 2.19 SF | | |




| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 30x15 | 3.13 SF | 10.32 SF | 2.49 Ft. |
| 30x24 | 5.00 SF | | |
| 21x15 | 2.19 SF | | |


| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 24x12 | 2.00 SF | 10.19 SF | 2.80 Ft. |
| 24x12 | 2.00 SF | | |
| 24x24 | 4.00 SF | | |
| 21x15 | 2.19 SF | | |

10/14/2016 7:58:00 AM

| LAST REVISION | REVISION | DESCRIPTION: | | | |
|---|---|---|---|---|---|
| 07/01/15 | | | FY 2017-18 DESIGN STANDARDS | SINGLE COLUMN GROUND SIGNS | INDEX NO. 11860 / SHEET NO. 7 of 9 |

| | Size | Area | Total Area | Centroid |
|---|---|---|---|---|
| EAST | 24x12 | 2.00 SF | 11.19 SF | 2.76 Ft. |
| BUSINESS | 24x12 | 2.00 SF | | |
| 301 | 30x24 | 5.00 SF | | |
| → | 21x15 | 2.19 SF | | |

| | Size | Area | Total Area | Centroid |
|---|---|---|---|---|
| EAST | 30x15 | 3.13 SF | 13.45 SF | 3.16 Ft. |
| BUSINESS | 30x15 | 3.13 SF | | |
| 301 | 30x24 | 5.00 SF | | |
| → | 21x15 | 2.19 SF | | |

| | Size | Area | Total Area | Centroid |
|---|---|---|---|---|
| JCT | 21x15 | 2.19 SF | 3.90 SF | 1.57 Ft. |
| LEON 56 COUNTY | 18x18 | 1.71 SF | | |

| | Size | Area | Total Area | Centroid |
|---|---|---|---|---|
| JCT | 21x15 | 2.19 SF | 5.22 SF | 1.72 Ft. |
| LEON 56 COUNTY | 24x24 | 3.03 SF | | |

| | Size | Area | Total Area | Centroid |
|---|---|---|---|---|
| JCT | 21x15 | 2.19 SF | 6.95 SF | 1.87 Ft. |
| LEON 56 COUNTY | 30x30 | 4.76 SF | | |

| | Size | Area | Total Area | Centroid |
|---|---|---|---|---|
| LEON 56 COUNTY | 18x18 | 1.71 SF | 3.90 SF | 1.26 Ft. |
| → | 21x15 | 2.19 SF | | |

| | Size | Area | Total Area | Centroid |
|---|---|---|---|---|
| LEON 56 COUNTY | 24x24 | 3.03 SF | 5.22 SF | 1.62 Ft. |
| → | 21x15 | 2.19 SF | | |

| | Size | Area | Total Area | Centroid |
|---|---|---|---|---|
| LEON 56 COUNTY | 30x30 | 4.76 SF | 6.95 SF | 1.97 Ft. |
| → | 21x15 | 2.19 SF | | |

| | Size | Area | Total Area | Centroid |
|---|---|---|---|---|
| TO | 24x12 | 2.00 SF | 9.39 SF | 2.87 Ft. |
| EAST | 24x12 | 2.00 SF | | |
| INTERSTATE 75 | 24x24 | 3.20 SF | | |
| → | 21x15 | 2.19 SF | | |

| | Size | Area | Total Area | Centroid |
|---|---|---|---|---|
| TO | 24x12 | 2.00 SF | 10.18 SF | 2.84 Ft. |
| EAST | 24x12 | 2.00 SF | | |
| INTERSTATE 295 | 30x24 | 3.99 SF | | |
| → | 21x15 | 2.19 SF | | |

| | Size | Area | Total Area | Centroid |
|---|---|---|---|---|
| TO | 30x15 | 3.13 SF | 12.44 SF | 3.26 Ft. |
| EAST | 30x15 | 3.13 SF | | |
| INTERSTATE 295 | 30x24 | 3.99 SF | | |
| → | 21x15 | 2.19 SF | | |

| | Size | Area | Total Area | Centroid |
|---|---|---|---|---|
| JCT | 21x15 | 2.19 SF | 5.39 SF | 1.75 Ft. |
| INTERSTATE 75 | 24x24 | 3.20 SF | | |

| | Size | Area | Total Area | Centroid |
|---|---|---|---|---|
| JCT | 21x15 | 2.19 SF | 6.18 SF | 1.67 Ft. |
| INTERSTATE 295 | 30x24 | 3.99 SF | | |

| | Size | Area | Total Area | Centroid |
|---|---|---|---|---|
| EAST TO OR INTERSTATE 75 INTERSTATE 75 | 24x12 | 2.00 SF | 5.20 SF | 1.67 Ft. |
| | 24x24 | 3.20 SF | | |

| | Size | Area | Total Area | Centroid |
|---|---|---|---|---|
| EAST TO OR INTERSTATE 295 INTERSTATE 295 | 24x12 | 2.00 SF | 5.99 SF | 1.60 Ft. |
| | 30x24 | 3.99 SF | | |

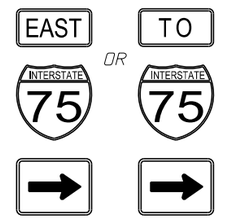
| | Size | Area | Total Area | Centroid |
|---|---|---|---|---|
| EAST TO OR INTERSTATE 295 INTERSTATE 295 | 30x15 | 3.13 SF | 7.12 SF | 1.81 Ft. |
| | 30x24 | 3.99 SF | | |

| | Size | Area | Total Area | Centroid |
|---|---|---|---|---|
| EAST TO OR INTERSTATE 75 INTERSTATE 75 | 30x15 | 3.13 SF | 10.33 SF | 2.27 Ft. |
| | 36x36 | 7.20 SF | | |

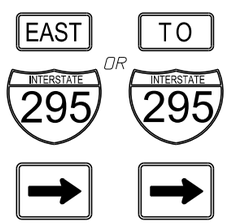
10/14/2016 7:58:02 AM

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/15 | | | FDOT FY 2017-18 DESIGN STANDARDS | SINGLE COLUMN GROUND SIGNS | 11860 | 8 of 9 |

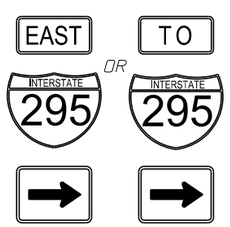

| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 30x15 | 3.13 SF | 12.12 SF | 2.18 Ft. |
| 45x36 | 8.99 SF | | |



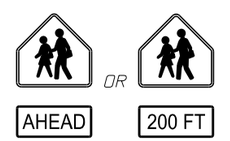

| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 24x12 | 2.00 SF | 7.39 SF | 2.30 Ft. |
| 24x24 | 3.20 SF | | |
| 21x15 | 2.19 SF | | |



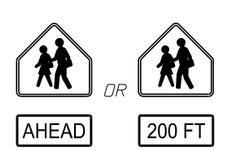

| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 24x12 | 2.00 SF | 8.18 SF | 2.31 Ft. |
| 30x24 | 3.99 SF | | |
| 21x15 | 2.19 SF | | |



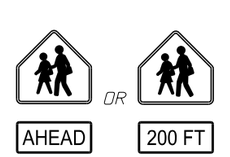

| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 30x15 | 3.13 SF | 9.31 SF | 2.55 Ft. |
| 30x24 | 3.99 SF | | |
| 21x15 | 2.19 SF | | |




| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 30x30 | 4.69 SF | 6.69 SF | 1.61 Ft. |
| 24x12 | 2.00 SF | | |




| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 30x30 | 4.69 SF | 8.44 SF | 1.77 Ft. |
| 30x18 | 3.75 SF | | |




| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 36x36 | 6.75 SF | 10.50 SF | 2.06 Ft. |
| 30x18 | 3.75 SF | | |

| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 30X30 | 4.69 SF | 6.69 SF | 1.61 Ft. |
| 24X12 | 2.00 SF | | |

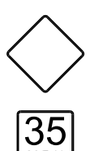
| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 30X30 | 4.69 SF | 8.44 SF | 1.77 Ft. |
| 30X18 | 3.75 SF | | |

| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 36X36 | 6.75 SF | 10.50 SF | 2.06 Ft. |
| 30X18 | 3.75 SF | | |

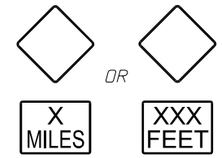

| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 30X30 | 6.25 SF | 8.25 SF | 2.28 Ft. |
| 24X12 | 2.00 SF | | |


| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 36X36 | 9.00 SF | 12.75 SF | 2.84 Ft. |
| 30X18 | 3.75 SF | | |

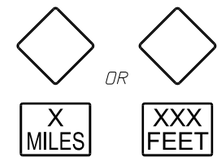

| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 30X30 | 6.25 SF | 10.25 SF | 2.74 Ft. |
| 24X24 | 4.00 SF | | |




| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 36X36 | 9.00 SF | 15.25 SF | 3.29 Ft. |
| 30X30 | 6.25 SF | | |



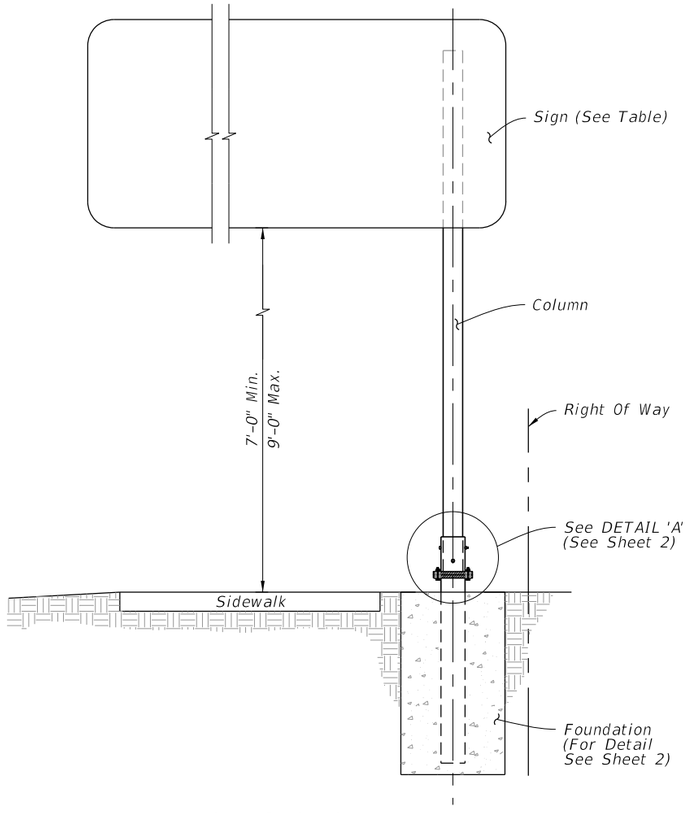

| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 30X30 | 6.25 SF | 9.25 SF | 2.51 Ft. |
| 24X18 | 3.00 SF | | |




| Size | Area | Total Area | Centroid |
|---|---|---|---|
| 36X36 | 9.00 SF | 14.00 SF | 3.06 Ft. |
| 30X24 | 5.00 SF | | |

10/14/2016 7:58:04 AM

| LAST REVISION | REVISION | DESCRIPTION: | | | | |
|---|---|---|---|---|---|---|
| 07/01/15 | | | FDOT FY 2017-18 DESIGN STANDARDS | SINGLE COLUMN GROUND SIGNS | INDEX NO. 11860 | SHEET NO. 9 of 9 |



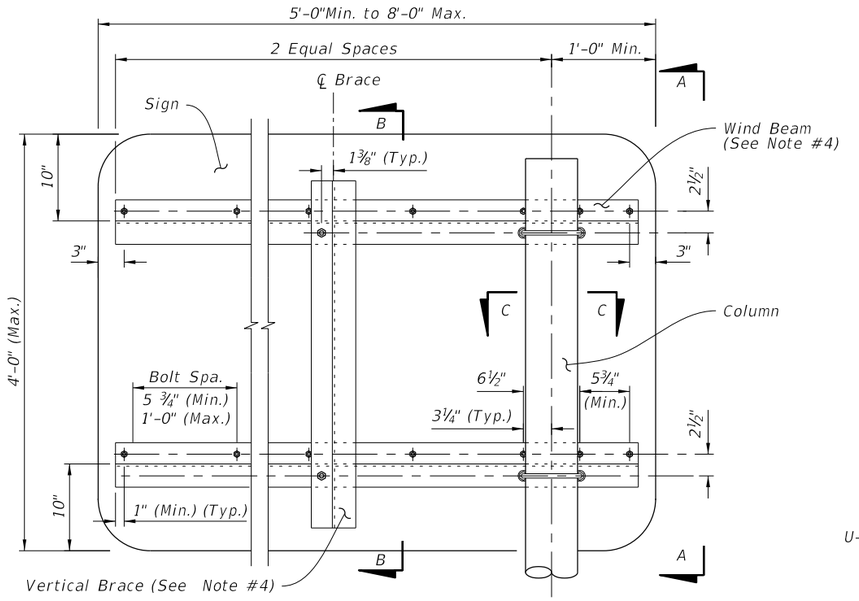

TYPICAL SECTION

## GENERAL NOTES:

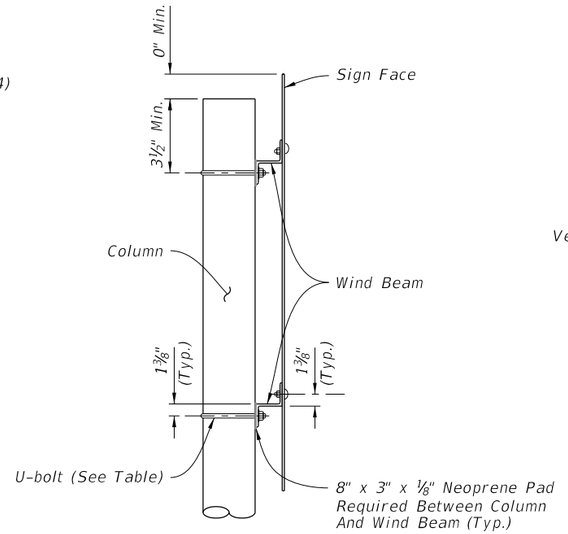
1. Refer to FDOT Design Standards Index No. 11860 for additional notes, assembly of base connection and material specifications not given in this Index.
2. Sleeve Bolts: ASTM A-307, ½" Ø galvanized steel bolt (with lock nuts) or ASTM B-211 Alloy 2024-T4 or 6061-T6.
3. Place galvanized steel shims between the Sleeve and Post to obtain a tight fit between the Post and Sleeve.
4. Wind Beam and Vertical Brace: Aluminum Z 3" x $2^{11}/_{16}$" x 3.38. Install Vertical Brace on 7'-0" to 8'-0" signs only.
5. Provide 2- 0.0149" Thick (28 guage) and 2- 0.0329" Thick (21 guage) Brass Shims Per Post. Used brass shims to plumb the post.

COLUMN SELECTION AND FOOTING SIZE TABLE

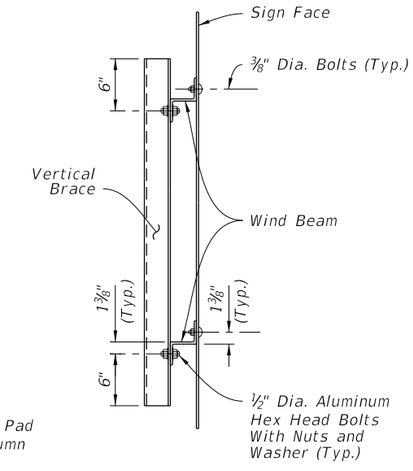
| Sign Size Height x Length | Column Size Diameter x Thickness | Sleeve Size Diameter x Thickness | U-bolt Diameter | Base Bolt Diameter x Length | Torque lbs./in | Base Plate Thickness | Footing Depth |
|---|---|---|---|---|---|---|---|
| 4'-0" x 5'-0" | 4.5" x 0.337" (Schedule 80) | 5.563" x 0.5" (Schedule 120) | ½" | ⅝" x 3½" | 270 +/- 45 | 1" | 6'-0" |
| 4'-0" x 6'-0" | | | | | | | |
| 4'-0" x 7'-0" | 5.563" x 0.375" (Schedule 80) | 6.625" x 0.432" (Schedule 80) | ⅝" | ¾" x 4" | 445 +/- 75 | 1⅛" | 6'-6" |
| 4'-0" x 8'-0" | | | | | | | 7'-0" |



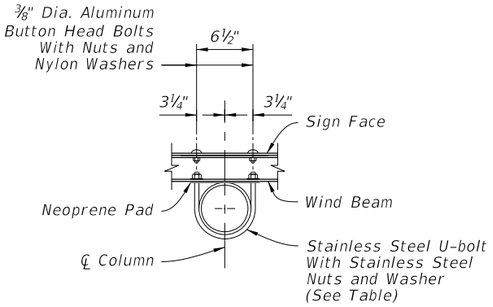

SIGN DETAIL




SECTION A-A



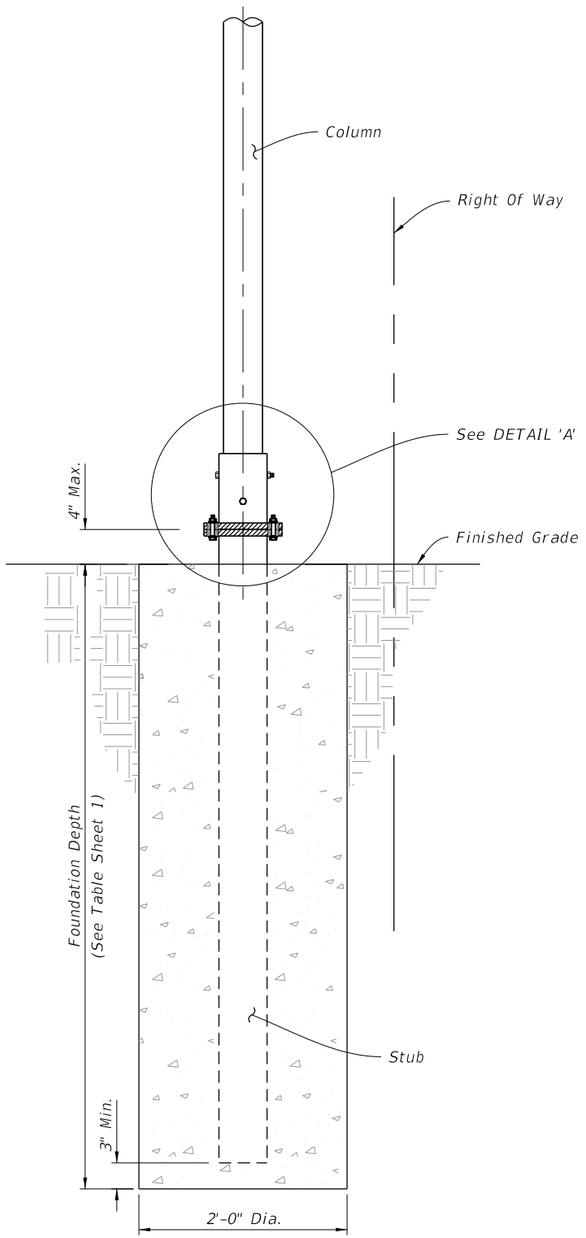

SECTION B-B



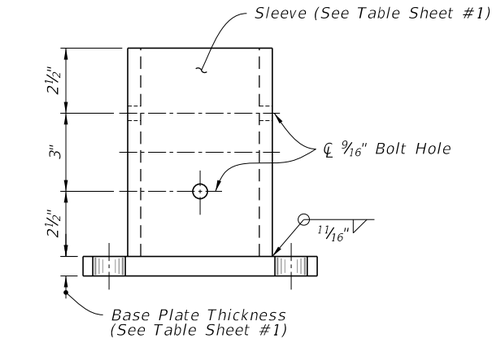

SECTION C-C

10/14/2016 8:02:05 AM

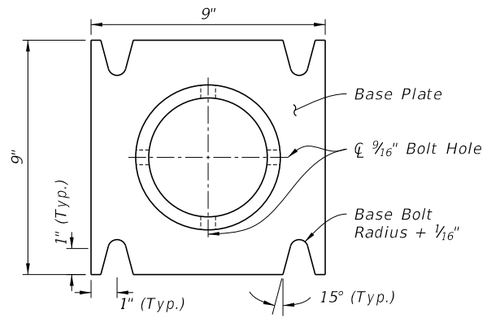
| LAST REVISION 07/01/15 | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | SINGLE COLUMN CANTILEVER GROUND MOUNTED SIGN | INDEX NO. 11861 | SHEET NO. 1 of 2 |
|---|---|---|---|---|---|---|




BASE AND FOUNDATION DETAIL

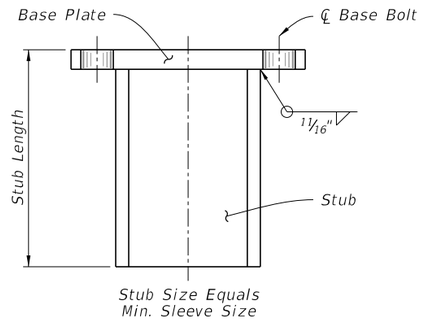



ELEVATION

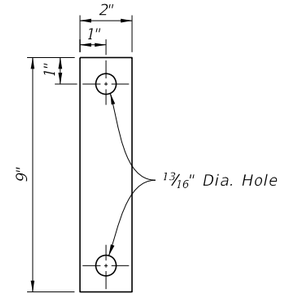



PLAN

SLEEVE & BASE PLATE DETAILS



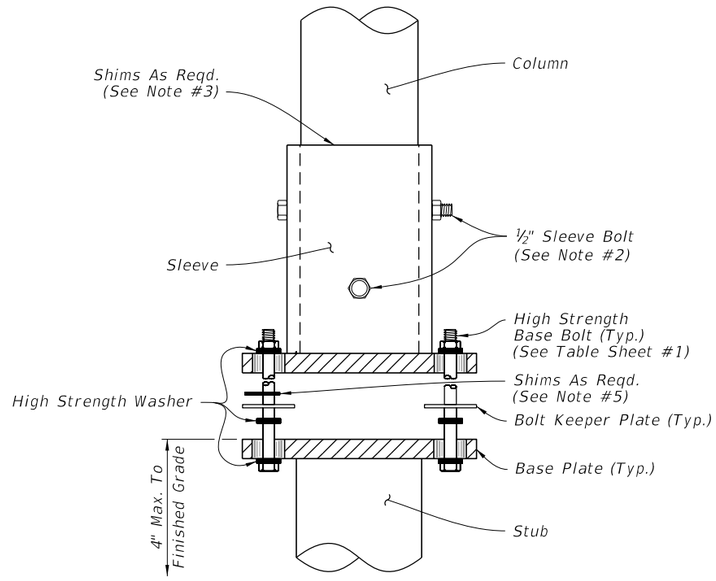

STUB DETAIL




28 Ga. Thick Aluminum Strip
2 Required Per Base

BOLT KEEPER PLATE DETAIL

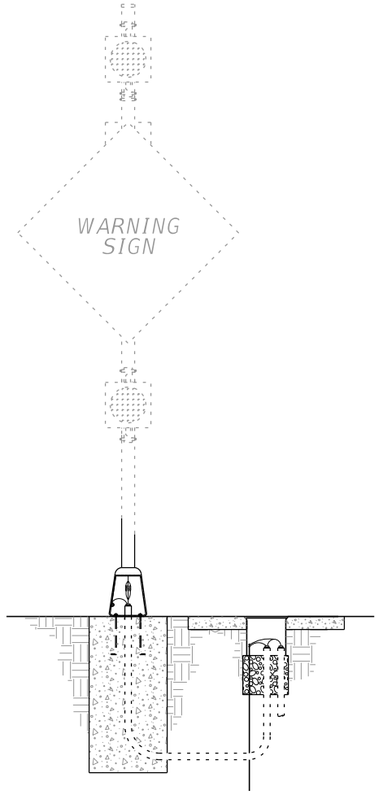
Direction of Traffic



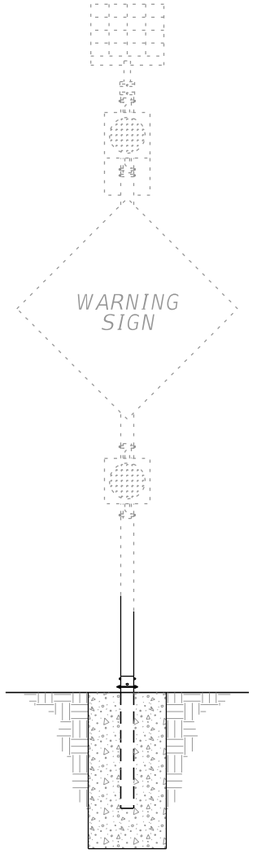

DETAIL 'A'

10/14/2016 8:02:07 AM

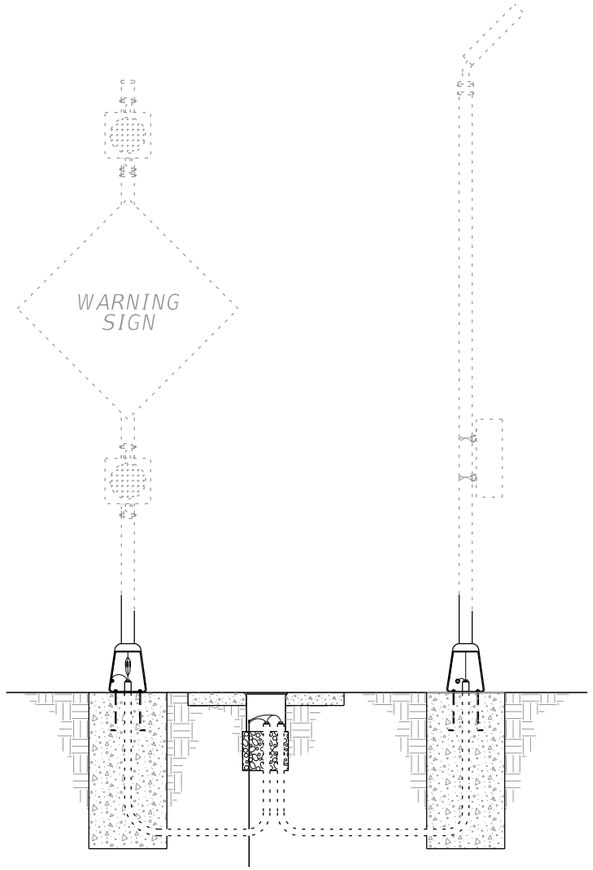
| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/15 | | | FDOT FY 2017-18 DESIGN STANDARDS | SINGLE COLUMN CANTILEVER GROUND MOUNTED SIGN | 11861 | 2 of 2 |




CONVENTIONAL POWERED BEACON
(With Transformer Base & Pull Box)




SOLAR POWERED BEACON
(With Slip Base)



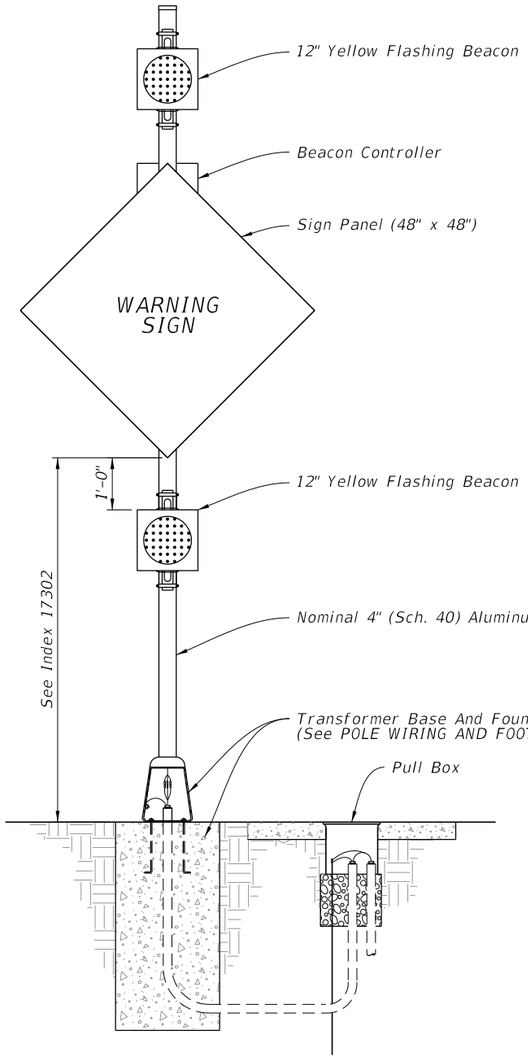

SOLAR POWERED BEACON WITH AUXILIARY POLE
(With Transformer Base & Pull Box)

## GENERAL NOTES:

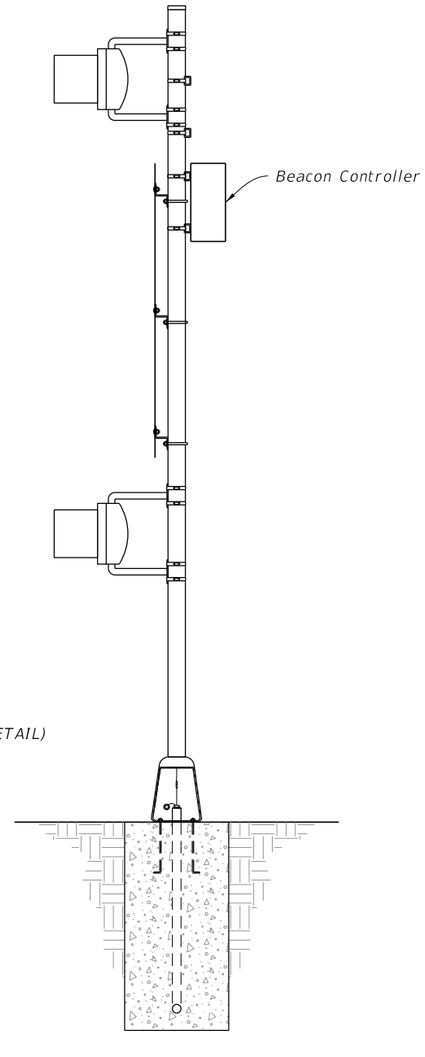
1. Use aluminum materials that meets the requirements of Aluminum Association Alloy 6061-T6 (ASTM B209, B221, B308 or B429), except as noted in the Plans.
2. Install sign panel, wind beam and columns in accordance with Index 11860 and Specifications 700.
3. Install sign column so that the height and offset are in accordance with Index 17302.
4. When aluminum column (post) are installed with a frangible transformer bases, engage all threads on the transformer base and post unless the aluminum post is fully seated into base.
5. Meet the requirements of Specifications 646 for aluminum poles and transformer bases.
6. Install a concrete slab around all flashing beacon assemblies on slopes 6:1 or greater. The minimum slab dimension is 4'-0" by 5'-0".
7. Install a concrete slab around all pull boxes. The minimum slab dimension is 4'-0" by 4'-0". In urban areas where space is limited slab dimensions may be adjusted as shown in the plans.
8. For beacon assemblies connected to conventional power, provide single pole non-fused watertight breakaway electrical connectors in the frangible transformer base.
9. Install the connection of controller cabinet and solar panel to the column in accordance with manufacturer's recommendations.
10. When wire entry holes are drilled in the sign column, use a bushing or rubber grommet to protect conductors.
11. Orient solar panel to face South for optimal exposure to sunlight.

10/14/2016 8:04:10 AM

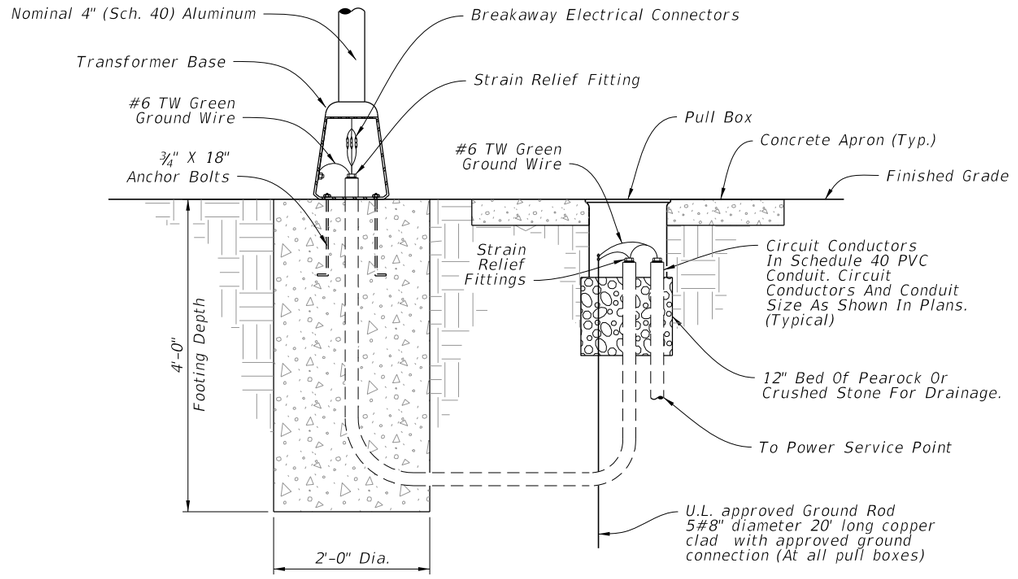
| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | ROADSIDE FLASHING BEACON ASSEMBLY | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | | | 11862 | 1 of 8 |




FRONT VIEW




SIDE VIEW

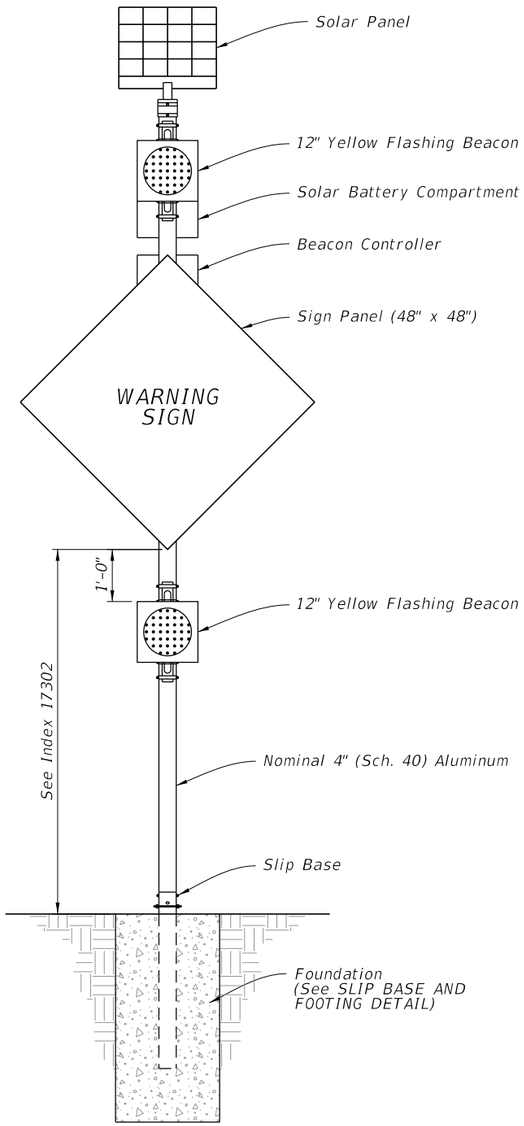



POLE WIRING AND FOOTING DETAIL

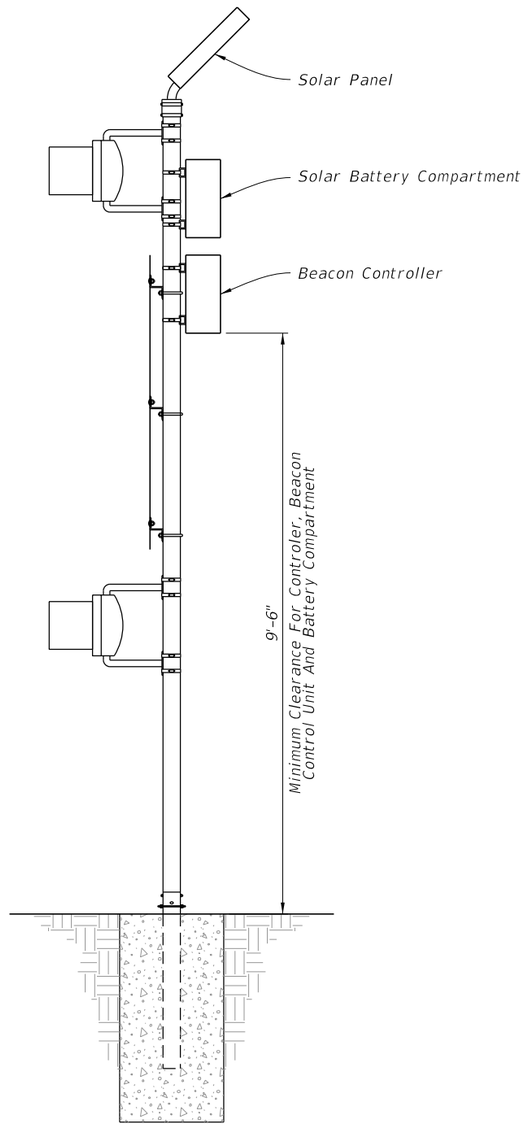
10/14/2016 8:04:13 AM

## CONVENTIONAL POWERED WARNING SIGN DETAILS

| LAST REVISION | REVISION | DESCRIPTION: | FDOT | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|---|
| 11/01/16 | | | FY 2017-18 DESIGN STANDARDS | ROADSIDE FLASHING BEACON ASSEMBLY | | 11862 | 2 of 8 |




FRONT VIEW

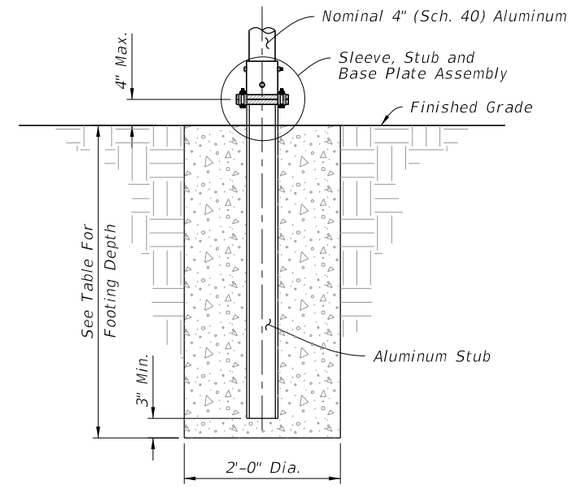



SIDE VIEW

| TABLE 1 | | | |
|---|---|---|---|
| STANDARD WARNING SIGN COLUMN SIZE | | | |
| Wind Speed | Sign Height | Column Size | Footing Depth |
| 110 | 7' | 4" | 4' |
| 130 | 7' | 4.5" | 4' |
| 150 | 7' | 5" | 4.5' |
| 110 | 8.5' | 4.5" | 4' |
| 130 | 8.5' | 5" | 4.5' |
| 150 | 8.5' | 6" | 5' |

## NOTES:

1. Install the sign column slip base in accordance with Index 11860.
2. Use beacon and beacon controllers that are listed on the Approved Products List (APL).
3. Details show a typical warning sign with two flashing beacon heads. When only one beacon is required, install upper beacon.




SLIP BASE AND FOOTING DETAIL

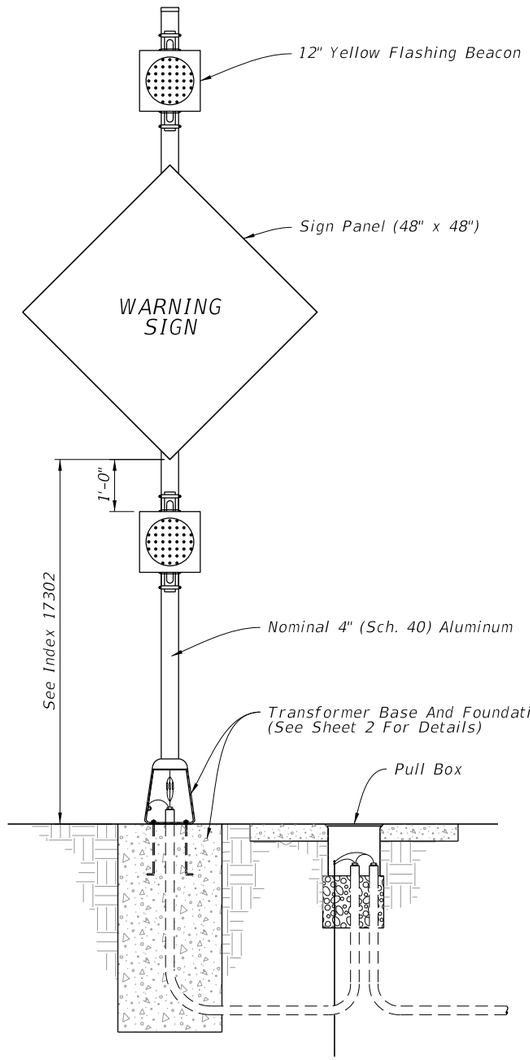
SOLAR POWERED WARNING SIGN DETAILS

| LAST REVISION | REVISION | DESCRIPTION: | | | | |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FDOT FY 2017-18 DESIGN STANDARDS | ROADSIDE FLASHING BEACON ASSEMBLY | INDEX NO. 11862 | SHEET NO. 3 of 8 |

10/14/2016 8:04:15 AM

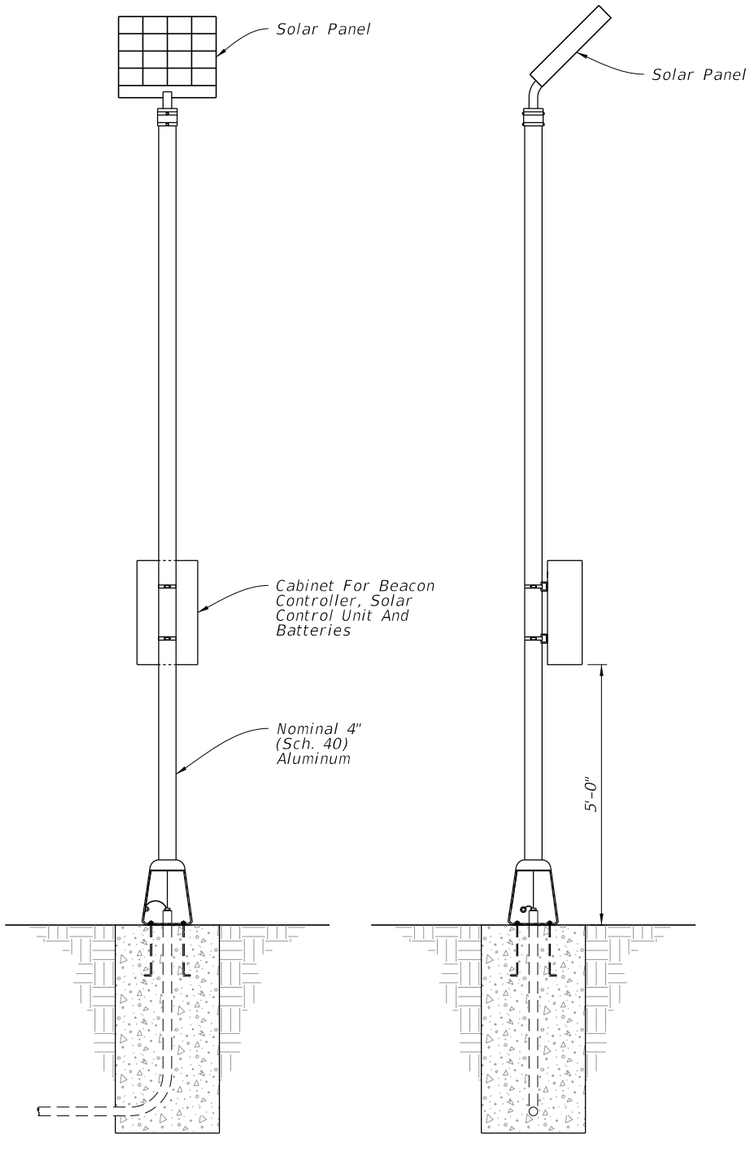
## NOTES:

1. Install a separate pole for mounting the solar panel, controller and batteries for all flashing beacon assemblies with solar panels, controllers and batteries weighing more than 170 lbs.
2. Install the auxiliary pole as close to the right of way as possible.
3. Install the auxiliary pole so that the height is the same as the column for the beacon assembly.
4. Payment for the separate pole, foundation, conduit and wiring are included in the cost of the electronic warning sign with flashing beacon.




FRONT VIEW

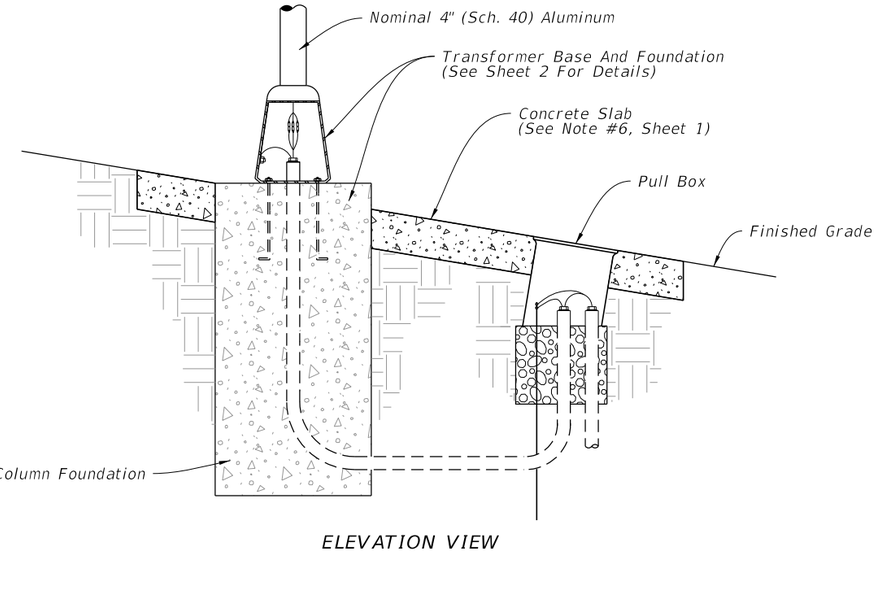
BEACON



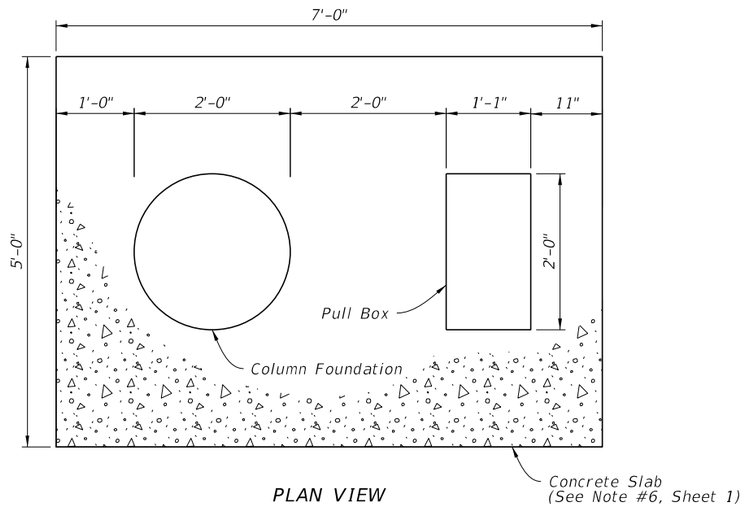

FRONT VIEW

SIDE VIEW

AUXILIARY POLE




ELEVATION VIEW



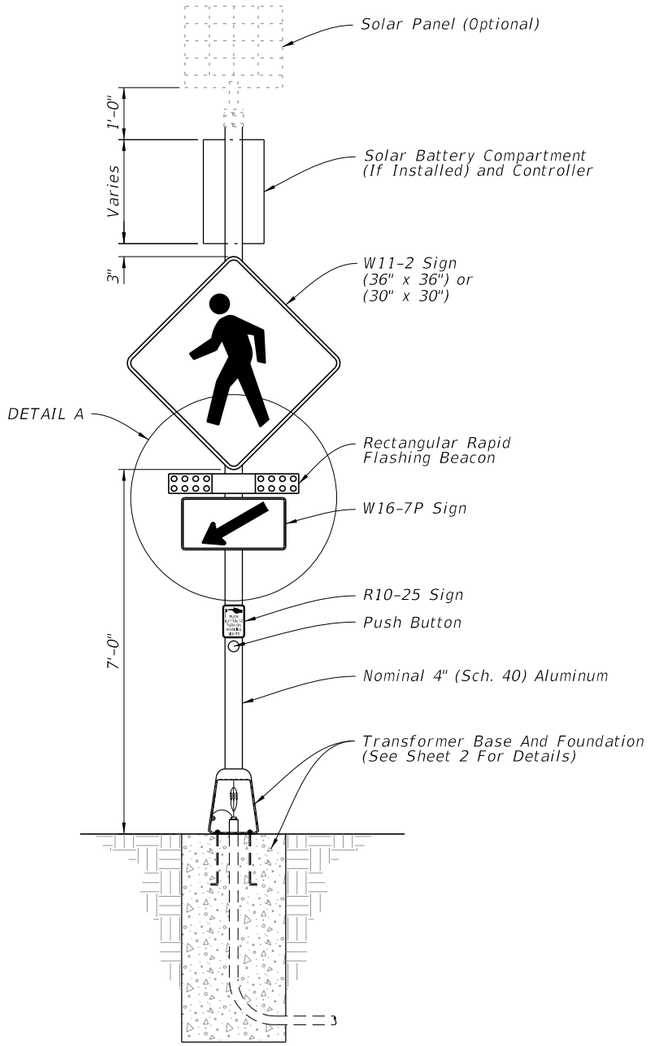

PLAN VIEW

CONCRETE SLAB DETAIL FOR POLES ON SLOPES

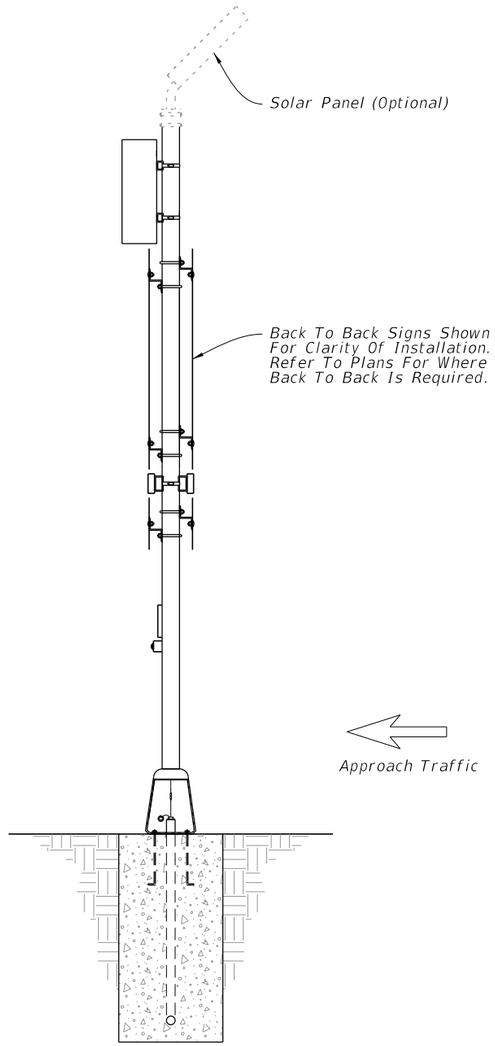
# SOLAR POWERED BEACON WITH AUXILIARY POLE AND CONCRETE SLAB DETAIL

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FY 2017-18 DESIGN STANDARDS | ROADSIDE FLASHING BEACON ASSEMBLY | 11862 | 4 of 8 |

10/14/2016 8:04:17 AM



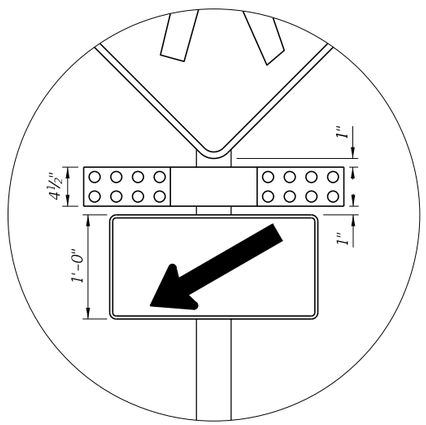

FRONT VIEW




SIDE VIEW

## NOTES:

1. A transformer base is required for both conventional powered and solar powered applications. (Conventional Power Shown)
2. Use Rectangular Rapid Flashing Beacon (RRFB) equipment and hardware that are listed on the Approved Products List (APL).
3. Install the RRFB in pairs, one on either side of approach traffic.
4. Install controller on the backside of post from approach traffic.
5. Install a 30" X 30" W11-2 sign on single lane facilities and a 36" X 36" W11-2 sign for multi-lane facilities.
6. Install push button and R10-25 sign in accordance with Index 17784.

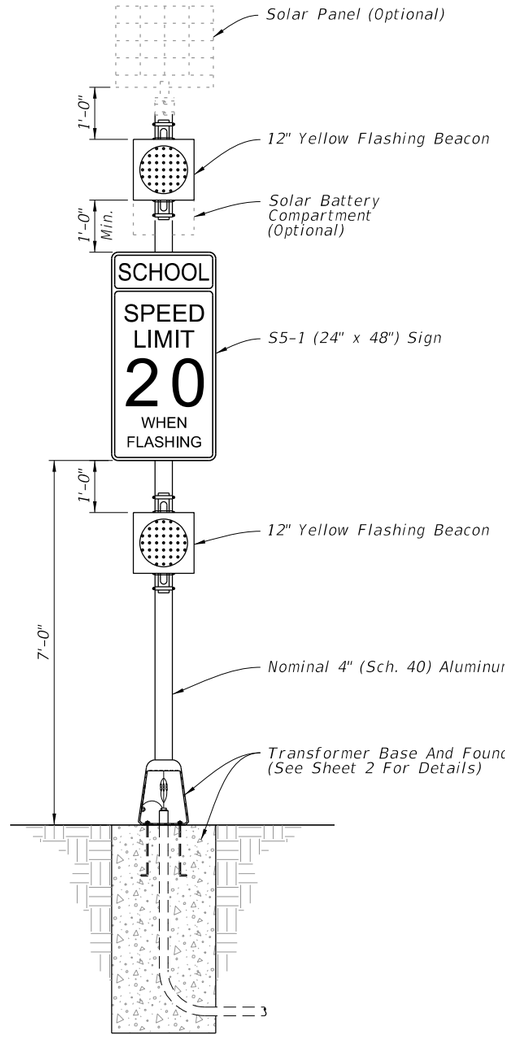



DETAIL A

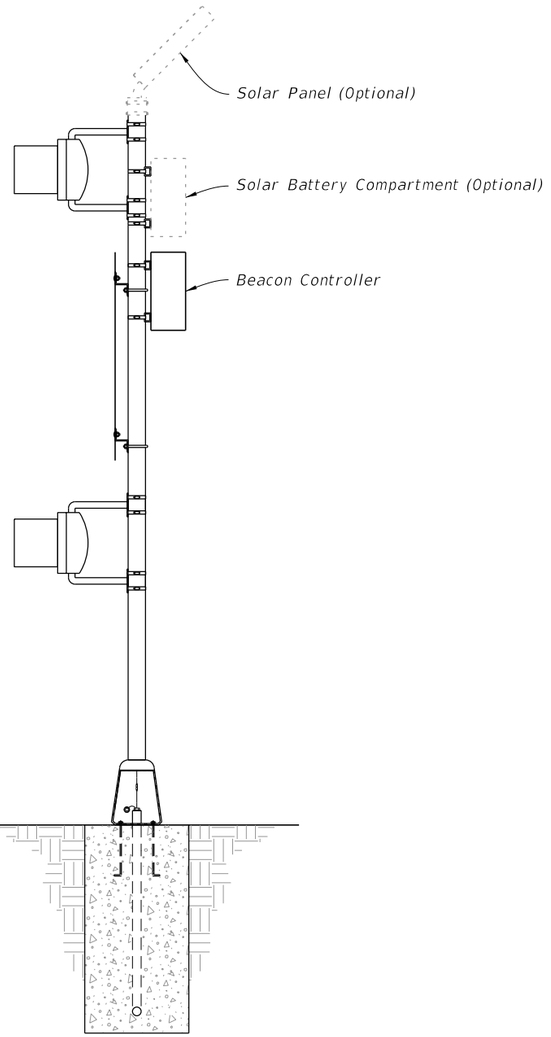
10/14/2016 8:04:19 AM

# RECTANGULAR RAPID FLASHING BEACON (RRFB) DETAILS

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FDOT FY 2017-18 DESIGN STANDARDS | ROADSIDE FLASHING BEACON ASSEMBLY | 11862 | 5 of 8 |




FRONT VIEW




SIDE VIEW

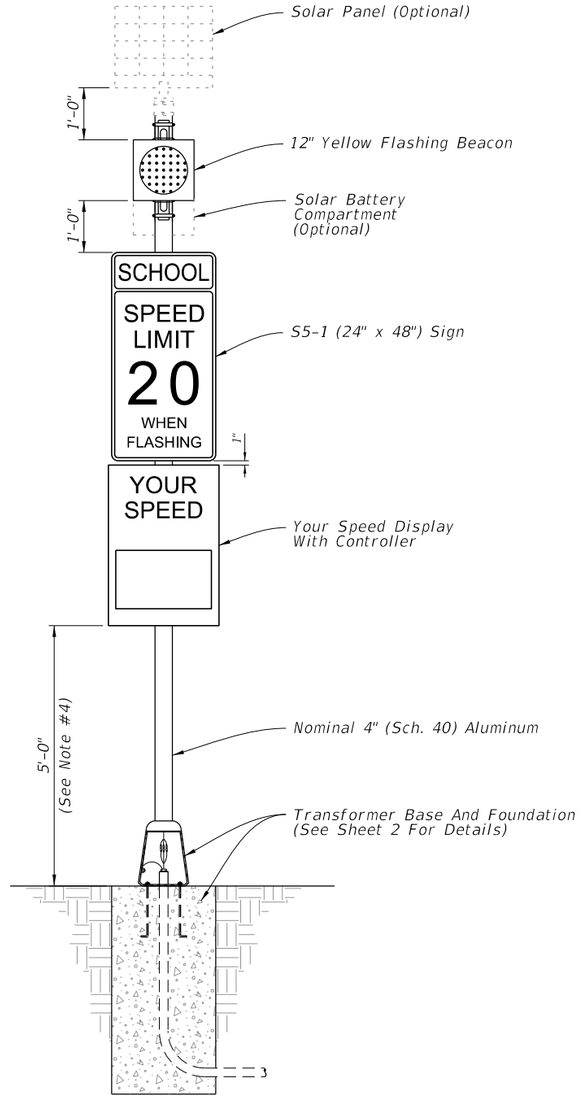
## NOTES:

1. A transformer base is required for both conventional powered and solar powered applications. (Conventional Power Shown)
2. Use beacons and beacon controllers that are on the Approved Products List (APL).
3. Details show a typical school zone sign with two flashing beacon heads. When only one beacon is required, install upper beacon.

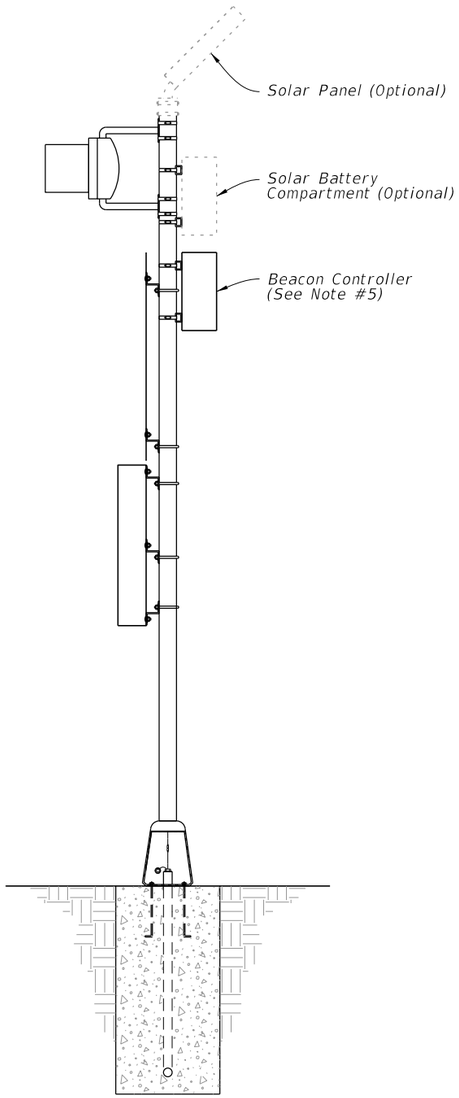
10/14/2016 8:04:21 AM

SCHOOL REGULATORY SIGN DETAILS

| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | ROADSIDE FLASHING BEACON ASSEMBLY | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | | | 11862 | 6 of 8 |




FRONT VIEW




SIDE VIEW

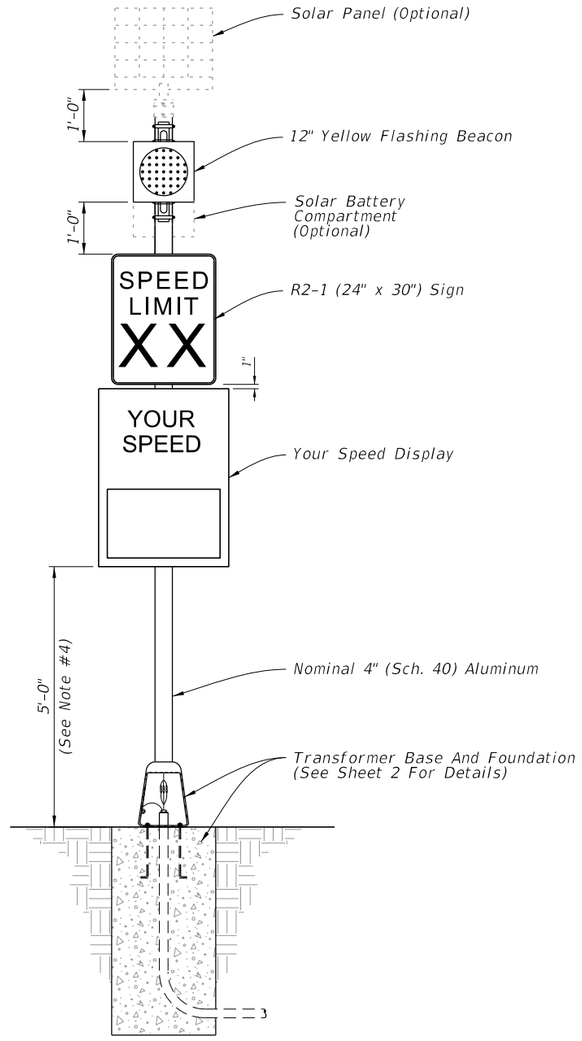
## NOTES:

1. A transformer base is required for both conventional powered and solar powered applications. (Conventional Power Shown)
2. Use speed feedback display, beacons, beacon controllers and installation hardware that are on the Approved Products List (APL).
3. For posted speeds less than 45 mph, install a speed feedback display with numeral heights of 15" and for posted speeds 45 mph or greater, install a speed feedback display with numeral heights of 18"
4. Only speed display units weighing 62 lbs. or less may be mounted with a 5'-0" clearance. Mount speed display units that weigh more than 62 lbs. with a 7'-0" clearance.
5. The beacon controller and solar batteries may be in the same compartment.

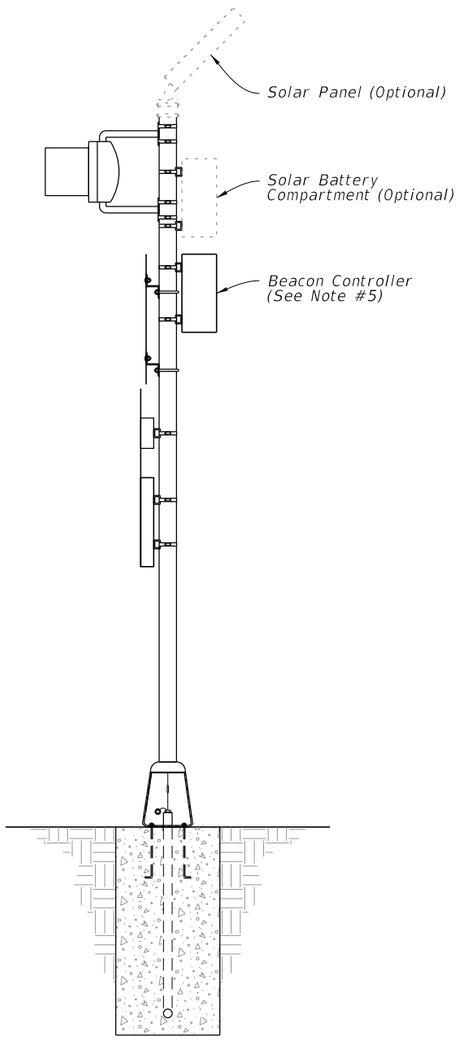
10/14/2016 8:04:23 AM

SCHOOL REGULATORY WITH SPEED FEEDBACK DETAILS

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FDOT FY 2017-18 DESIGN STANDARDS | ROADSIDE FLASHING BEACON ASSEMBLY | 11862 | 7 of 8 |




FRONT VIEW




SIDE VIEW

## NOTES:

1. A transformer base is required for both conventional powered and solar powered applications. (Conventional Power Shown)
2. Use speed feedback display, beacons, beacon controllers and installation hardware that are on the Approved Products List (APL).
3. For posted speeds less than 45 mph, install a speed feedback display with numeral heights of 15" and for posted speeds 45 mph or greater, install a speed feedback display with numeral heights of 18"
4. Only speed display units weighing 62 lbs. or less may be mounted with a 5'-0" clearance. Mount speed display units that weigh more than 62 lbs. with a 7'-0" clearance.
5. The beacon controller and solar batteries may be in the same compartment.

10/14/2016 8:04:26 AM

REGULATORY SIGN WITH SPEED FEEDBACK DETAILS

| LAST REVISION | REVISION | DESCRIPTION: | FY 2017-18 DESIGN STANDARDS | ROADSIDE FLASHING BEACON ASSEMBLY | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FDOT | | 11862 | 8 of 8 |

## NOTES:

1. Work with Index 11860.

2. Shop Drawings: Not required.

3. Materials:

   A. Steel Plate: ASTM A36 or ASTM A709 Grade 36
   B. Steel Pipe (Support Post): ASTM A501 Schedule 40
   C. Aluminum Pipe: ASTM B210 Alloy 6061-T6
   D. Galvanized U-Bolts, Nuts and Plate Washer
      a. U-Bolts: ASTM A449
      b. Hex Nuts: ASTM A 536 Lock Nuts
      c. Plate Washer: ASTM A 36 or ASTM A709 Grade 36 or 50
   E. Galvanized Anchor bolts, Nuts and Washers:
      a. Anchor Rod: ASTM F1554 Grade 55 fully threaded (for Adhesive Anchors)
      b. Anchor Bolts: ASTM F1554 Grade 55 Grade A Hex
      c. Nuts: ASTM A563 Heavy Hex Locking
      d. Washers: ASTM F436
   F. Adhesive Anchor Bonding Material: Specification Section 931 Type HV Adhesive.
   G. Weld Material: E70XX
   H. Snap-In Post Cap: UV and weather-resistant glass-filled polyester cap

4. Coating:

   A. U-Bolts, Threaded Rods, Nuts and Washers: ASTM F2329
   B. Other Steel: ASTM A123

5. Fabrication:

   A. Weld: Specification Section 460-6.4
   B. Hot dip galvanize after fabrication

6. Construction:

   A. Locate Sign Support a minimum of 5 feet from an open joint or transition (sign stationing may be adjusted to accommodate this requirement.
   B. Base plate must be flush with back of Traffic Railing
   C. Anchors in Traffic Railings:
      a. Install Adhesive Anchors in accordance with Specification section 416 except perform field test on one anchor per sign support location.
      b. Use templates and tie anchors as necessary to maintain correct placement of C-I-P Embedded Anchors
      c. Do not drill into existing conduit
   D. Temporary Signs on Permanent Traffic Railings: Same as Permanent except Field testing of anchors is not required

7. Removal of Temporary Signs on Permanent Traffic Railings:

   A. Cut anchor rods flush with the top of the traffic railing
   B. Coat anchors with Type F-1 epoxy to prevent corrosion
      a. Extend coating 2 inches beyond edge of cut anchor rods
      b. Epoxy coating 1/16" thick minimum

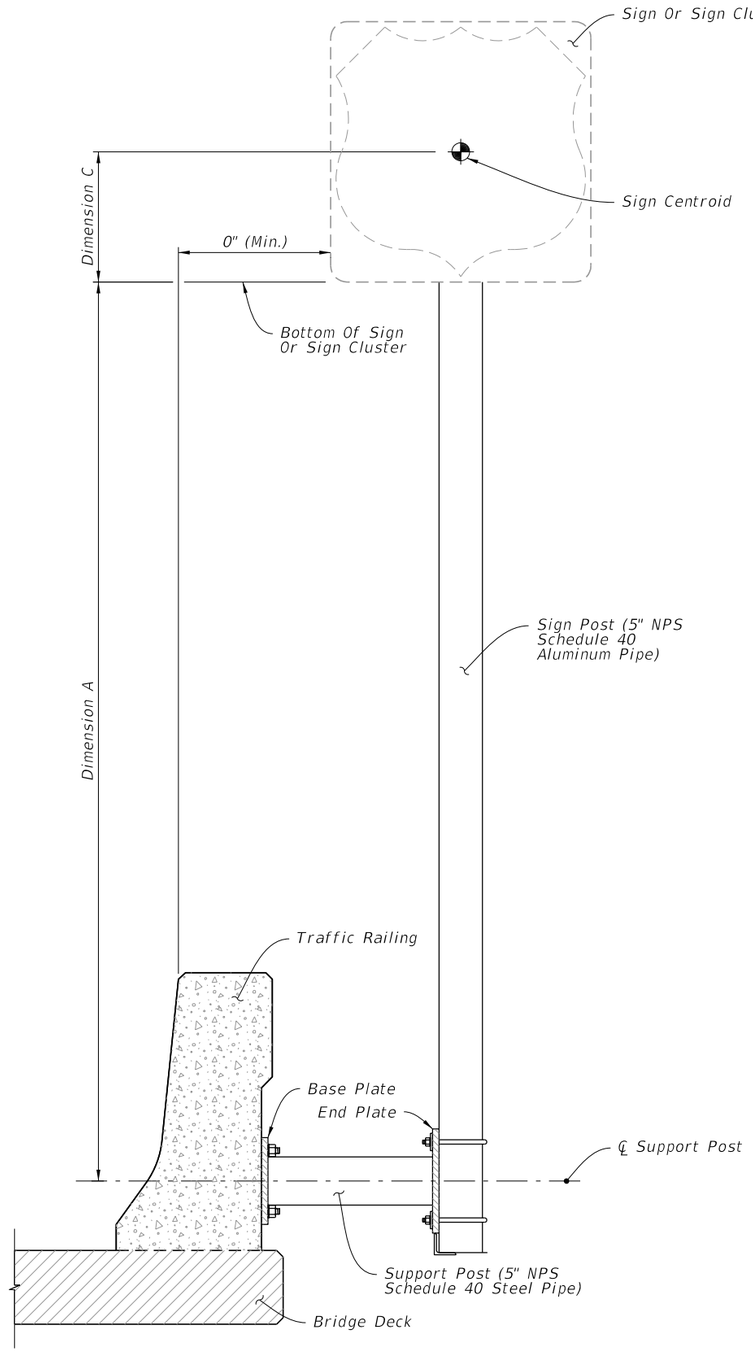
8. Payment:

   Include the cost of all materials and labor in the cost of the single post sign assembly.

| SIGN LIMITATIONS TABLE | |
|---|---|
| MAX. SIGN AREA (SF) | MAX. SIGN CENTROID HEIGHT (DIM. A + DIM. C) |
| 25 | 9'-7" |

Dimension A = Distance from centerline of the Support Post to the bottom of the sign or sign cluster.

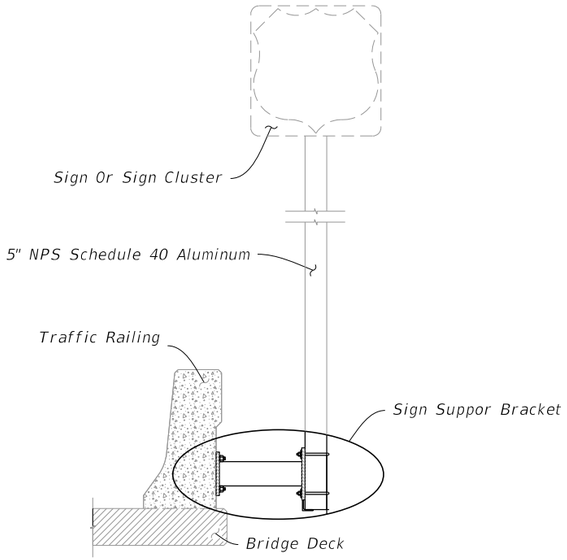
Dimension C = Vertical distance from the bottom of the sign or sign cluster to the Centroid of the sign or sign cluster.



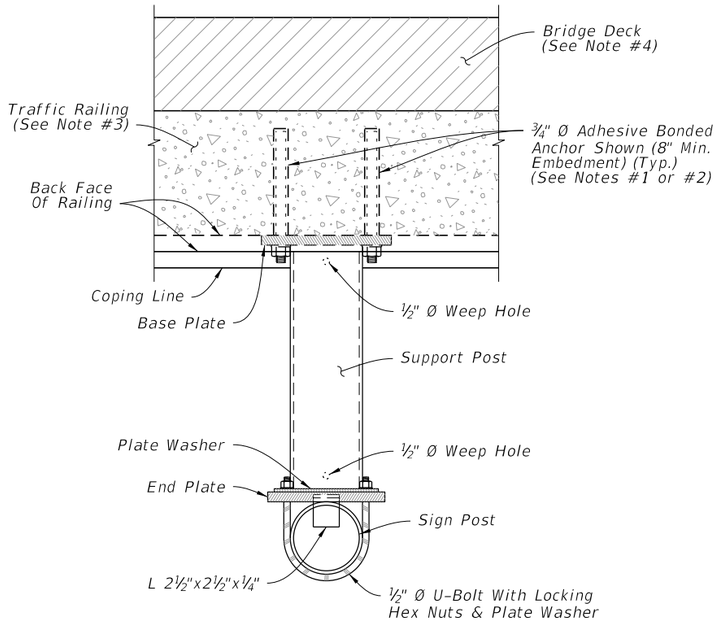

SIGN SUPPORT ASSEMBLY

10/2/2017 9:16:18 AM

| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | SINGLE POST BRIDGE MOUNTED SIGN SUPPORT | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | | | 11870 | 1 of 3 |




SIGN SUPPORT ASSEMBLY

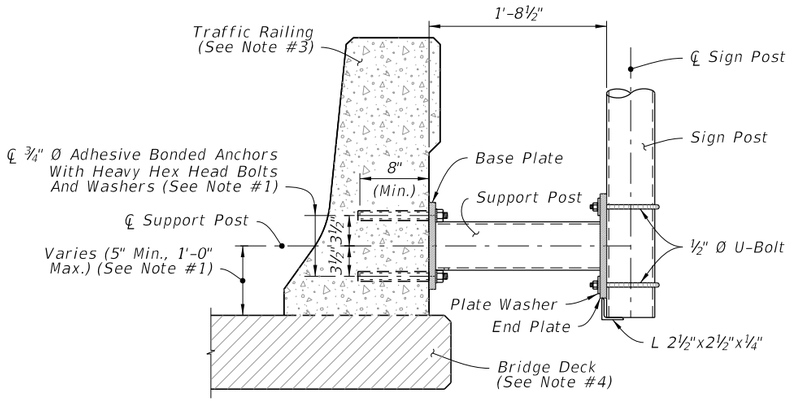



PLAN

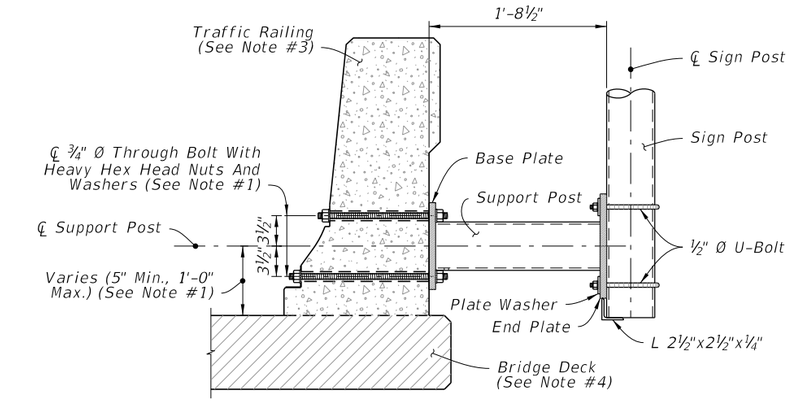



ELEVATION

SIGN SUPPORT BRACKET

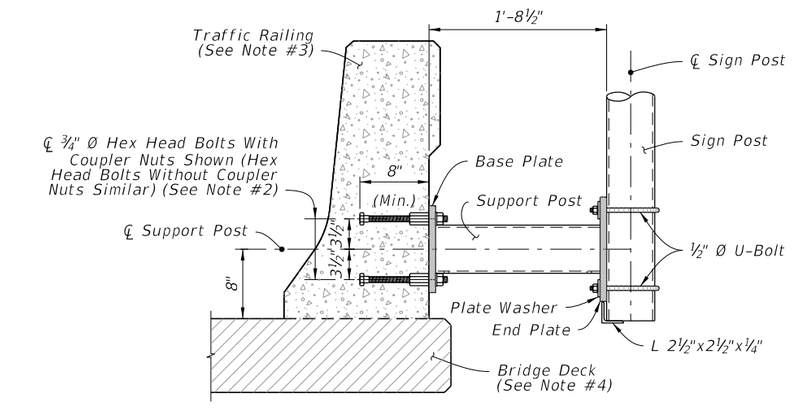



ADHESIVE BOND




THROUGH BOLTING

TYPICAL SECTION - EXISTING RAILING




TYPICAL SECTION - NEW CONSTRUCTION

## NOTES:

1. Existing Traffic Railings:

   A. Locate existing conduit prior to drilling and adjust placement of base plate as necessary to avoid damaging existing conduit. Base plate must be flush with back of traffic railing. Maintain a minimum cover 2" from face of traffic railing to tip of Adhesive Anchor.

   B. For concrete parapets less than 10" thick, through bolt ¾" Ø Heavy Hex Head Bolts with Nuts and Washers in lieu of Adhesive Bonded Anchors. Bolt heads shall not protrude more than 1½" beyond traffic face of railing.

   C. For through bolting, cut front face of the traffic railing so that washer is flush with the concrete.

2. New Traffic Railings:

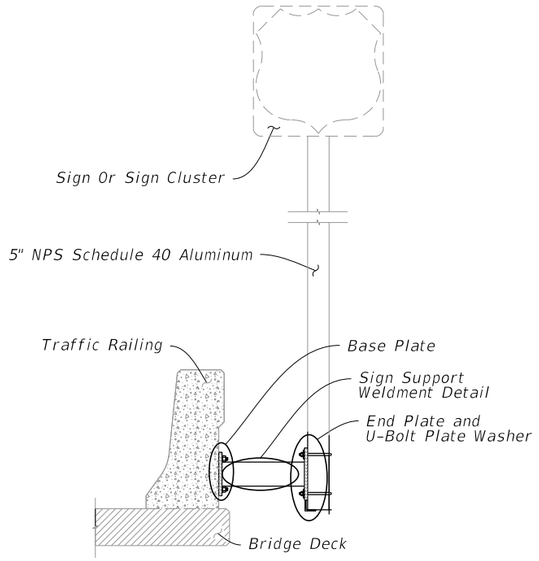
   A. Optional Couplers are shown for slipforming; keep Anchor Bolt coupler threads free of concrete.

3. 32" F-Shape Traffice Railing shown, other Traffic Ralings and Parapets are similar.

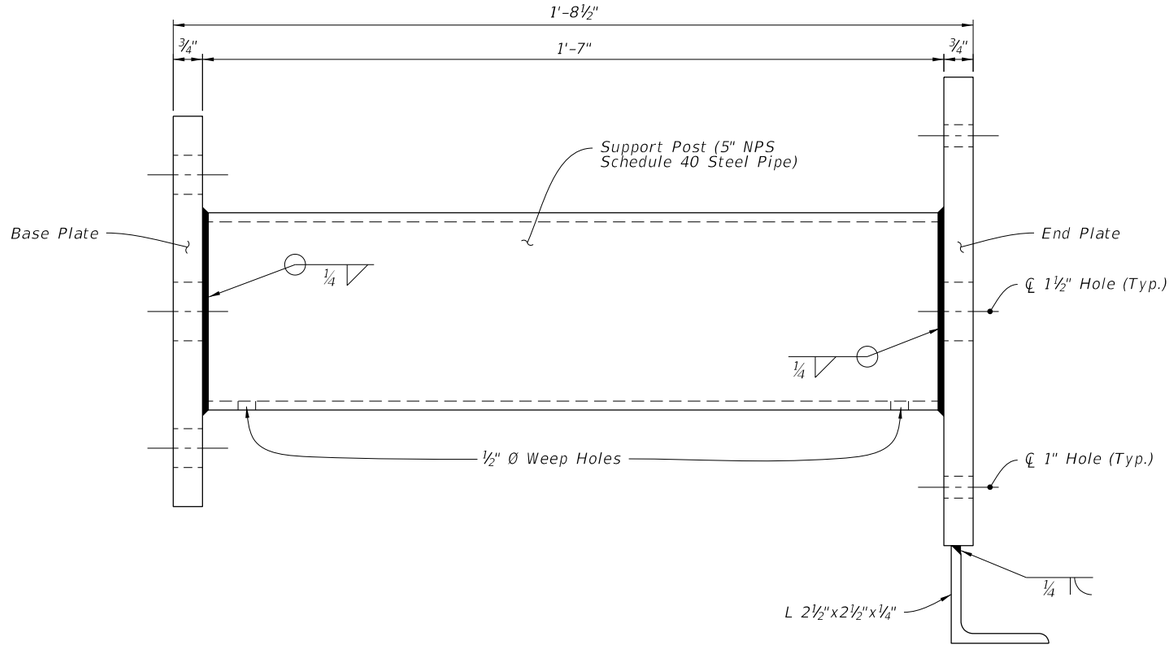
4. Bridge Deck shown, Approach Slab and Retaining Wall are similar.

10/20/2016 8:15:54 AM

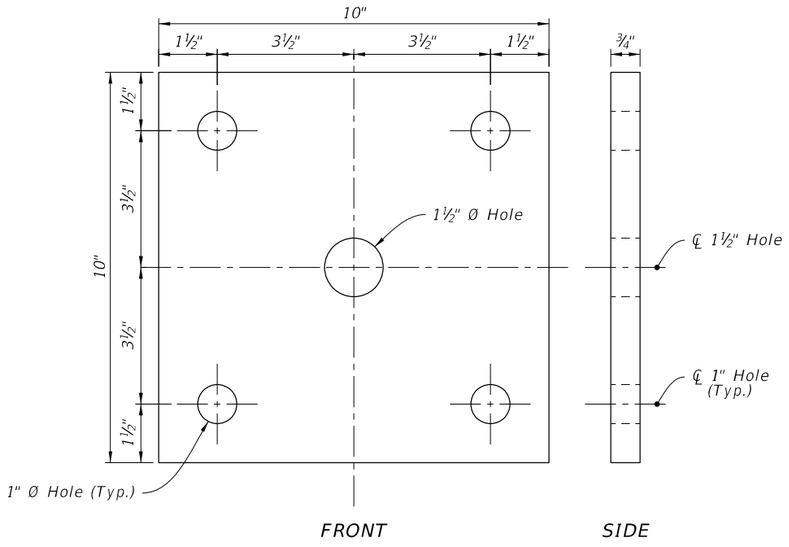
| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | SINGLE POST BRIDGE MOUNTED SIGN SUPPORT | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | | | 11870 | 2 of 3 |



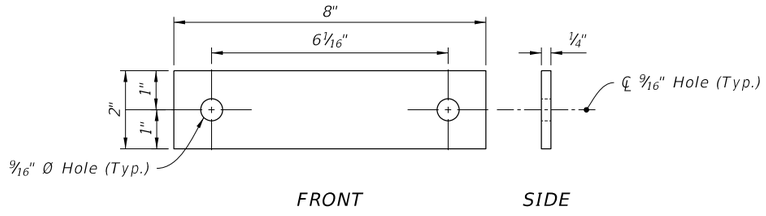

## SIGN SUPPORT ASSEMBLY



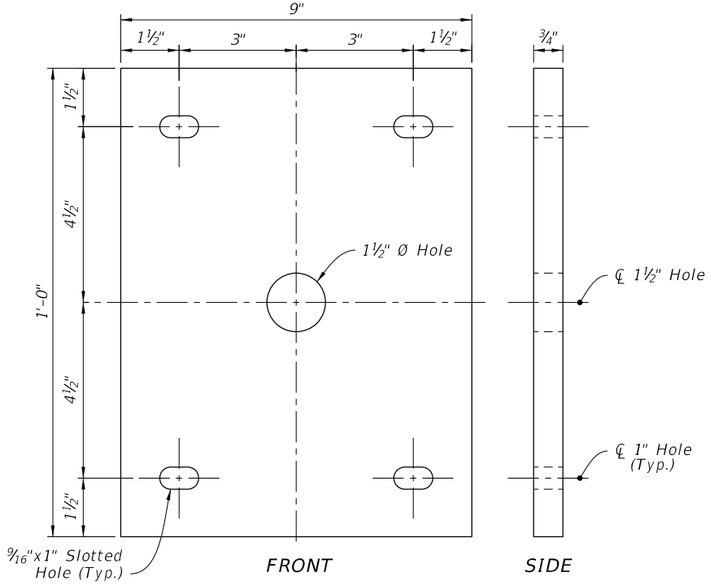

## SIGN SUPPORT WELDMENT DETAIL




## BASE PLATE




## U-BOLT PLATE WASHER




## END PLATE

1:19:50 PM

11/1/2016

| LAST REVISION | REVISION | DESCRIPTION: | | | | |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FDOT FY 2017-18 DESIGN STANDARDS | SINGLE POST BRIDGE MOUNTED SIGN SUPPORT | INDEX NO. 11870 | SHEET NO. 3 of 3 |

## NOTES:

1. Work with Index 11860.

2. Shop Drawings: Not required.

3. Materials:

   A. Steel Plate: ASTM A36 or ASTM A709 Grade 36
   B. Steel Pipe (Support Post): ASTM A501 Schedule 40
   C. Galvanized U-Bolts, Nuts and Plate Washer
      a. U-Bolts: ASTM A449
      b. Hex Nuts: ASTM A 536 Lock Nuts
      c. Plate Washer: ASTM A 36 or ASTM A709 Grade 36 or 50
   D. Galvanized Anchor Bolts, Nuts and Washers:
      a. Anchor Rod: ASTM F1554 Grade 55 fully threaded (for Adhesive Anchors)
      b. Anchor Bolts: ASTM F1554 Grade 55 Grade A Hex
      c. Nuts: ASTM A563 Heavy Hex Locking
      d. Washers: ASTM F436
   E. Adhesive Anchor Bonding Material: Specification Section 931 Type HV Adhesive
   F. Weld Material: E70XX
   G. Snap-In Post Cap: UV and weather-resistant glass-filled polyester cap

4. Coating:

   A. U-Bolts, Threaded Rods, Nuts and Washers: ASTM F2329
   B. Other Steel: ASTM A123

5. Fabrication:

   A. Weld: Specification Section 460-6.4
   B. Hot dip galvanize after fabrication

6. Construction:

   A. Locate Sign Support a minimum of 5 feet from an open joint or transition (sign stationing may be adjusted to accommodate this requirement
   B. Base plate must be flush with top of Railing
   C. Anchors in Traffic Railings:
      a. Install Adhesive Anchors in accordance with Specification section 416 except perform field test on one anchor per sign support location
      b. Use template and tie anchors as necessary to maintain correct placement of C-I-P Embedded Anchors
      c. Do not drill into existing reinforcing
   D. Temporary Signs on Permanent Traffic Railings, Same as Permanent except field testing of anchors is not required
   E. Temporary Signs on Temporary Railings/Barriers:
      a. Install Sign Supports at the midpoint along the length of a single segment
      b. Avoid drilling through existing reinforcement; use of metal detector not required.
      c. Field testing of anchors is not required

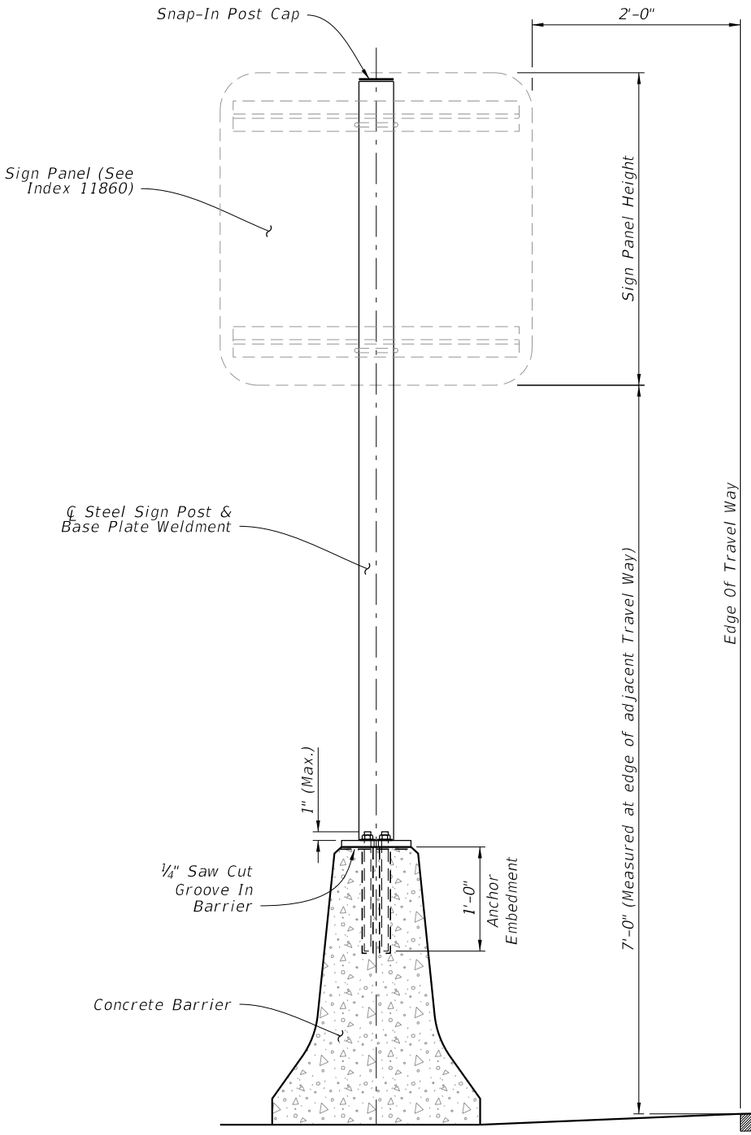
7. Removal of Temporary Signs on Permanent Traffic Railings:

   A. Cut anchor rods flush with the top of the railing
   B. Coat anchors with Type F-1 epoxy to prevent corrosion
      a. Extend coating 2 inches beyond edge of cut anchor rods
      b. Epoxy coating 1/16"thick minimum

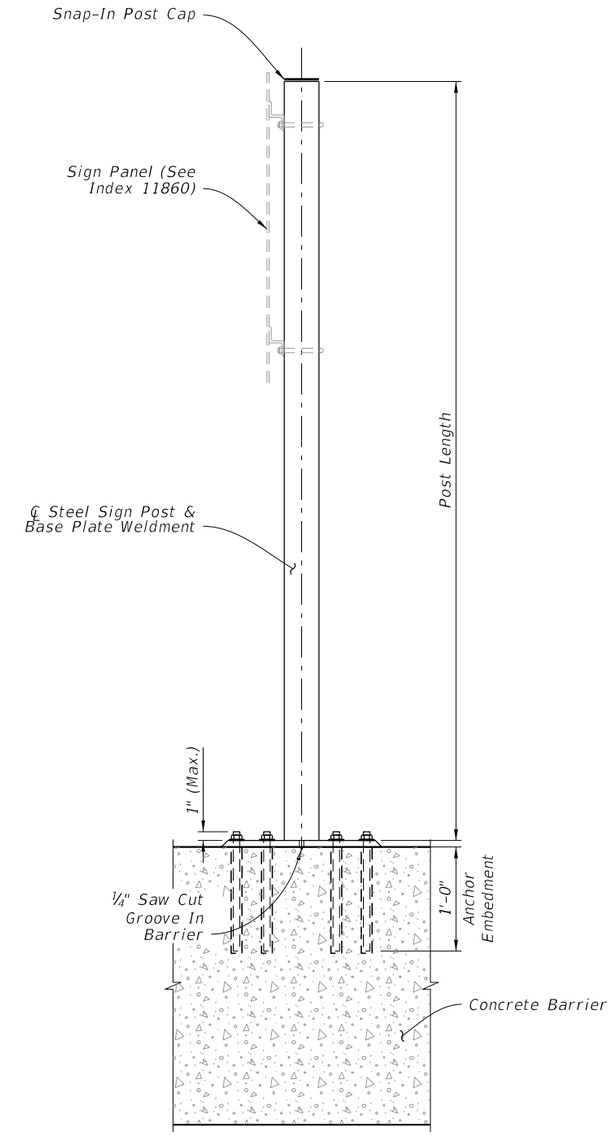
8. Payment:

   Include the cost of all materials and labor in the cost of the single post sign assembly.

| TABLE 1 - SIGN PANEL AND POST SIZING | | |
|---|---|---|
| | Max. Sign Area (SF) | Post Ø (NPS) |
| Temporary Signs | ≤ 24 | 3.0" |
| Permanent Signs | < 13.5 | 3.0" |
| | 13.5 < Sign < 20 | 3.5" |




PARALLEL TO DIRECTION OF TRAFFIC



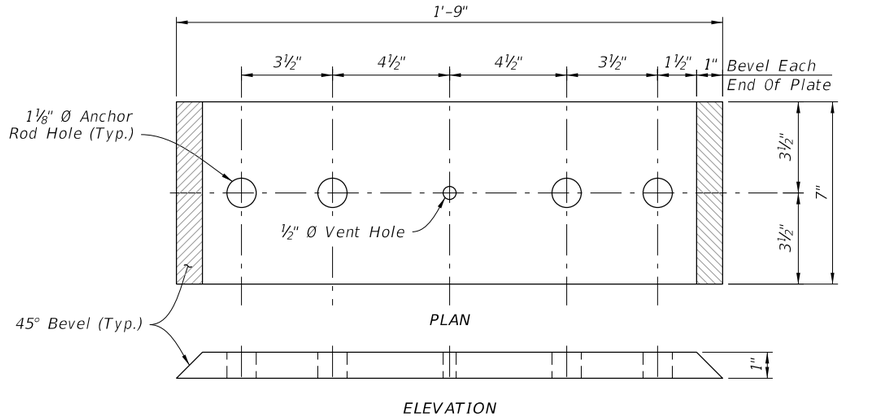

PERPENDICULAR TO DIRECTION OF TRAFFIC

(Index 410 Standard "Full Wall" Median Barrier shown; others similar)

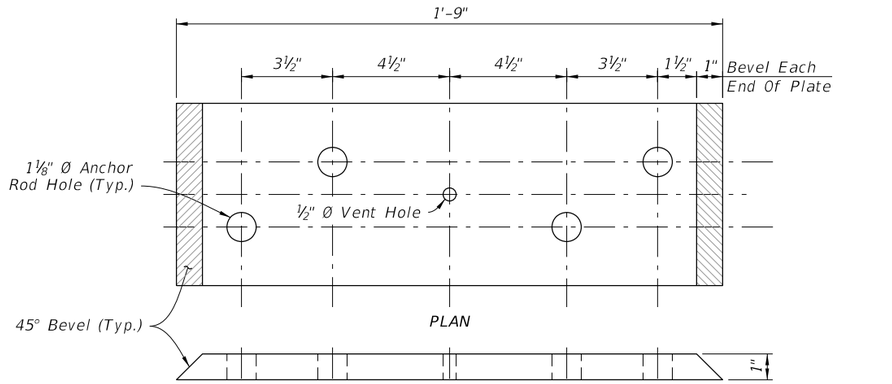
ELEVATION

10/14/2016 8:06:28 AM

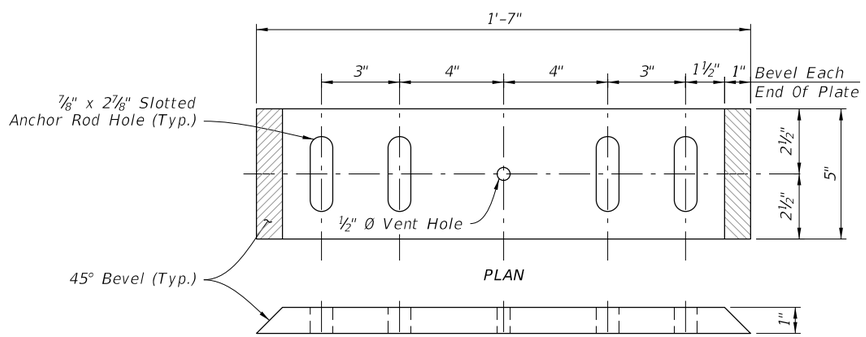
| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FDOT FY 2017-18 DESIGN STANDARDS | SINGLE POST MEDIAN BARRIER MOUNTED SIGN SUPPORT | 11871 | 1 of 2 |




## BASE PLATE TYPE A
(Linear Anchor Rod Pattern)




## BASE PLATE TYPE B
(Staggered Anchor Rod Pattern)

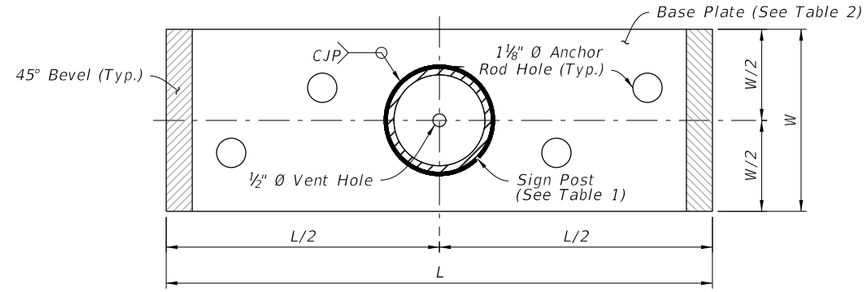



## BASE PLATE TYPE C

### NOTES:
1. Place anchor rods in a staggered or linear pattern as necessary to avoid reinforcing.
2. Use a staggered pattern for all temporary barriers.

**TABLE 2 - BASE PLATE TYPE AND ANCHOR ROD SIZING**

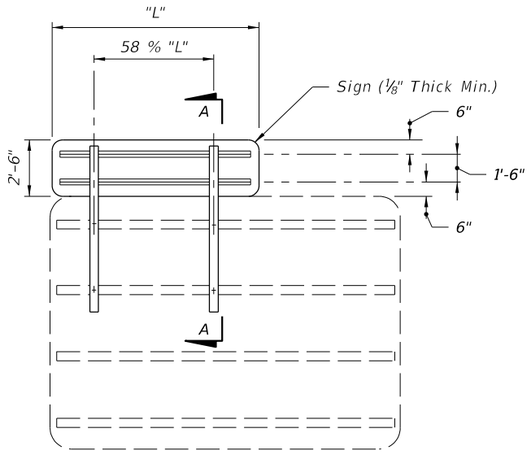
| Index No. | Type/Application | Base Plate Type | Anchor Rod Ø |
|---|---|---|---|
| 410 | Full Wall | B | 1" |
| 410 | Cantilever or L-Wall | A | |
| 420 & 425 | When Clear Space between Dual Bridge Traffic Railing is ≤ 4'-0" | A | |
| 421 | All Applications | A | |
| All listed above Plus 414 & 415 | Temporary Signs | C | ¾" |




## SIGN SUPPORT WELDMENT DETAIL
(Staggered Anchor Rod Pattern shown)

10/20/2016 8:16:26 AM

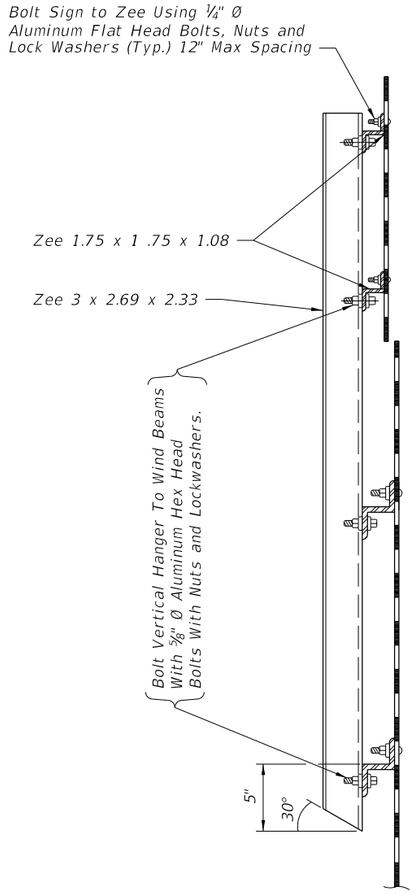
| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | SINGLE POST MEDIAN BARRIER MOUNTED SIGN SUPPORT | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | | | 11871 | 2 of 2 |




NOTE: Exit numbering panel shall be located to the right side for right exit and to the left for left exit.

Mounting of Exit Numbering Panels To Highway Signs

ELEVATION




SECTION AA

## GENERAL NOTES

MATERIALS:
All aluminum materials shall meet the requirements of the Aluminum Association Alloy 6061-T6 and also the following ASTM specifications for the following: Sheets and plates B209; extruded shapes B221 and standard structural shapes B308.

ALUMINUM BOLTS, NUTS & LOCK WASHERS:
Aluminum bolts shall meet the requirements of the Aluminum Association Alloy 2024-T4 (ASTM F468). The bolts shall have an anodic coating of at least .0002" thick and be chromate sealed. Lockwashers shall meet the requirement of Aluminum Association Alloy 7075-T6 (ASTM B221). Nuts shall meet the requirement of Aluminum Association Alloy 6262-T9 (ASTM F467) or 6061-T6.

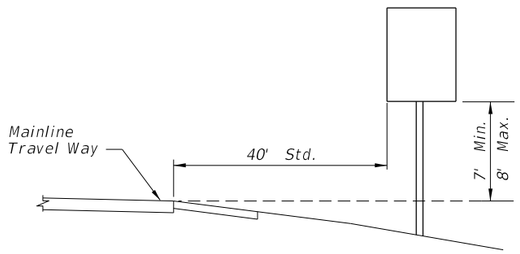
SIGN FACE:
All sign face corners shall be rounded. See sign layout sheet for dimension "L" and sign face details. For mounting details refer to Index No. 11300.

10/14/2016 8:17:21 AM

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 10/09/14 | | | FDOT FY 2017-18 DESIGN STANDARDS | MOUNTING EXIT NUMBER PANELS TO HIGHWAY SIGNS | 13417 | 1 of 1 |

CASE I

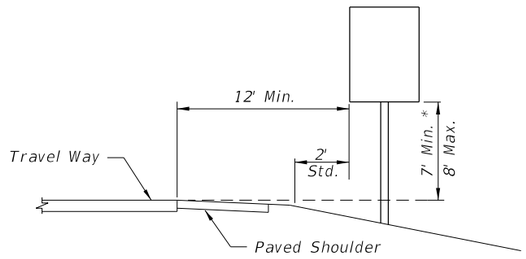
For Use On Freeway And
Expressway Systems For Signs On Mainline.




For Median Installation:
If Median Width Does Not Allow Std. Offset
From Both Roadways, Center Sign In Median.

CASE II

For Use In All Rural Roads And
On Freeway And Expressway Ramps.

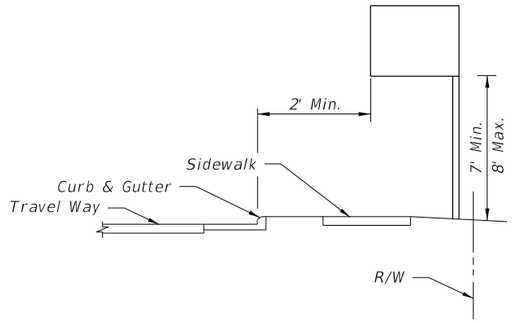



14' Horizontal Clearance Standard On All Freeway And
Expressway Ramps.

* 4' For Wrong Way Signs
On Interstate Exit Ramps

CASE III

For Use On All Roads With
Signs Mounted Behind Sidewalk.

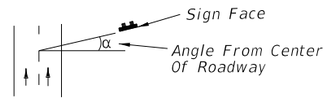



GENERAL NOTES:

1. The typical sections shown hereon serve as a guide for locating the traffic signs required under various roadside conditions. For size and details of sign construction and footing, refer to the appropriate standard index drawing for roadside sign.

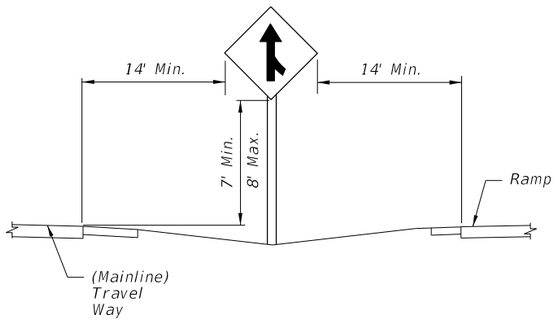
2. It shall be the CONTRACTORS responsibility to verify the length of sign supports in the field prior to fabrication.

3. Ground signs shall be installed at an angle of 1 to 4 degrees away from the traffic flow (see illustration). Shoulder mounted signs shall be rotated counterclockwise and median mounted signs rotated clockwise. Signs on curves shall be mounted as noted above from the perpendicular to the motorist line of sight.



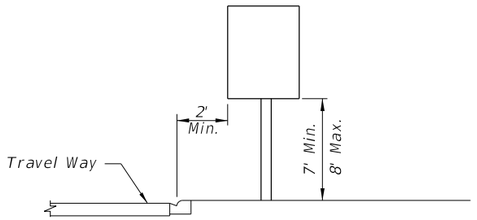

CASE IV (MERGE SIGN)

For Use On All Rural, Freeway And Expressway Systems.



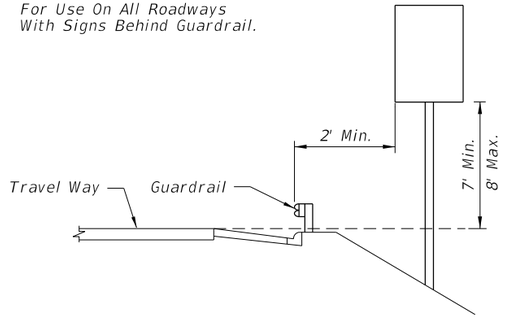

CASE V

For Use In Business Or Residential Areas Only.




CASE VI

For Use On All Roadways
With Signs Behind Guardrail.




4. The setback for stop and yield signs may be reduced to 3' minimum from the driving lane if required for visibility in business or residential sections with no curb and speeds of 30 MPH or less.

5. The mounting heights are measured from the bottom of the sign panel to a horizontal line extended from the edge of the driving lane. If the standard heights cannot be met, the minimum heights are as follows:

| | |
|---|---|
| Expressway & Freeway Systems | 7' |
| Other Roadway Systems | |
| Rural | 5' |
| Urban (including residential with parking and /or pedestrian activity) | 7' |

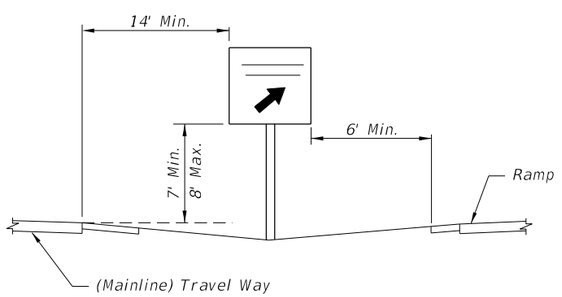
If a secondary sign is mounted below the major sign, the major sign shall be at least 8' and the secondary sign at least 5' for expressway & freeway systems and for other systems the height to the secondary sign shall be at least 5' for rural and 7' for urban sections.

6. Sign supports should never be placed in the bottom of ditches where erosion might affect the proper operation of the breakaway feature.

7. Sign supports shall not reduce the accessible route /continuous passage to less than 4' min. clear width as required by the Americans with Disabilities Act (ADA) Accessibility Guidelines.

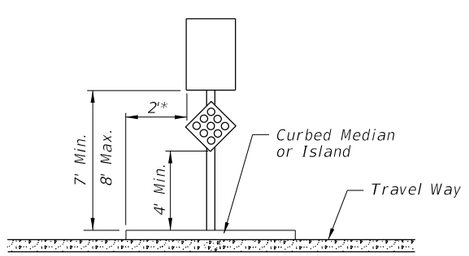
CASE VII (REST AREA & EXIT GORE SIGNS)

For Use On All Freeway And Expressway Systems




CASE VIII

Sign On Island or Curbed Median

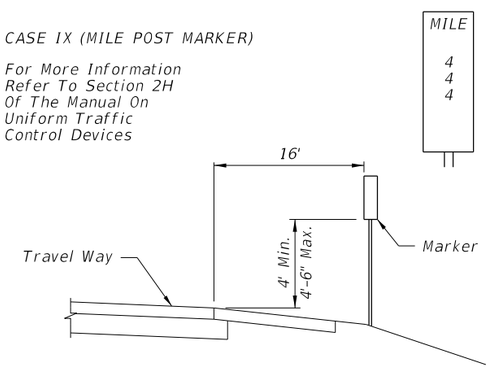



* For Separators < 6', Center The Sign Within The Separator.

Center Sign Column On Island

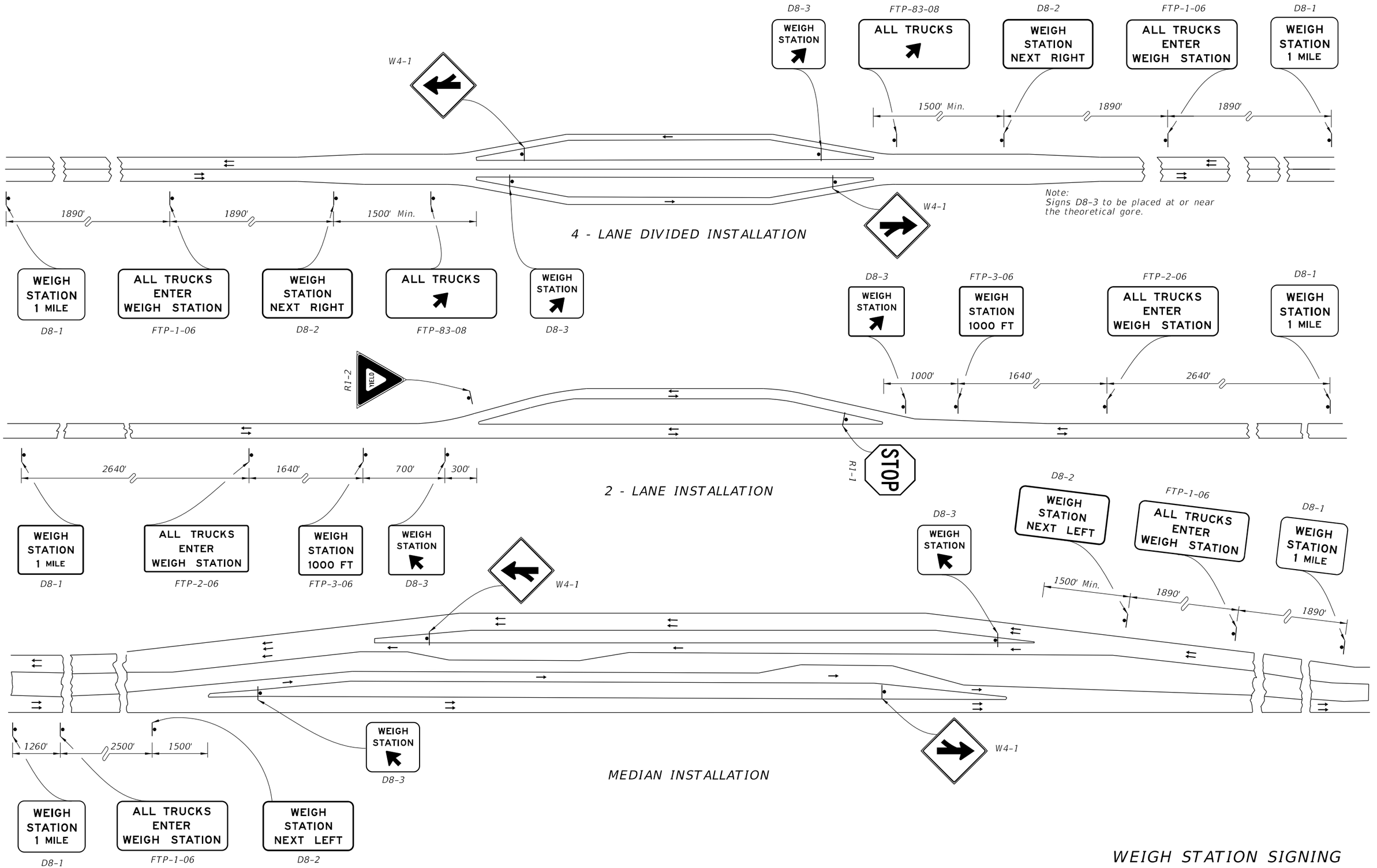
CASE IX (MILE POST MARKER)

For More Information
Refer To Section 2H
Of The Manual On
Uniform Traffic
Control Devices



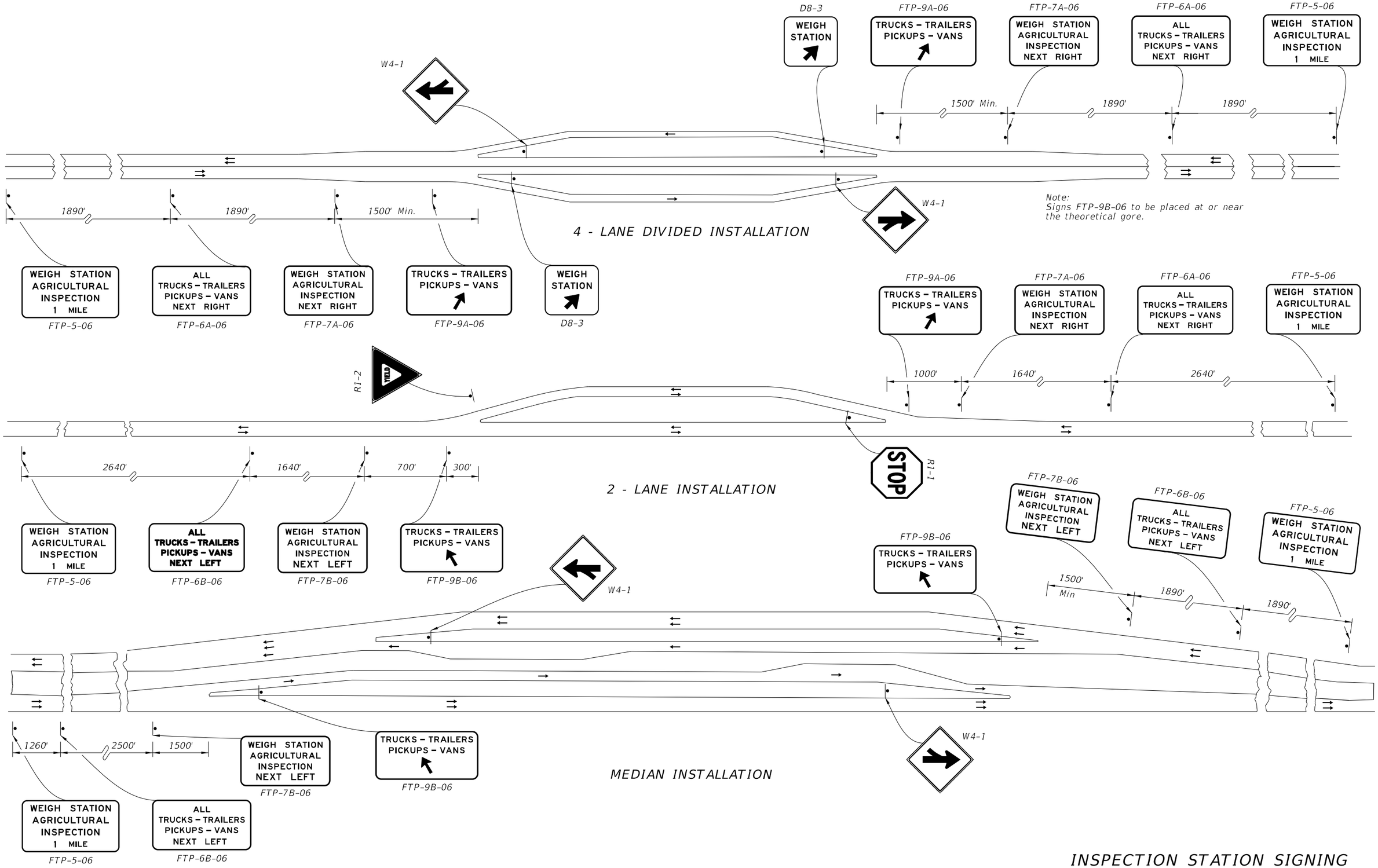

10/14/2016 8:23:24 AM

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FY 2017-18 DESIGN STANDARDS | TYPICAL SECTIONS FOR PLACEMENT OF SINGLE & MULTI-COLUMN SIGNS | 17302 | 1 of 1 |




10/14/2016 8:23:52 AM

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/09 | | | FDOT FY 2017-18 DESIGN STANDARDS | TYPICAL SIGNING FOR TRUCK WEIGH & INSPECTION STATIONS | 17328 | 1 of 2 |

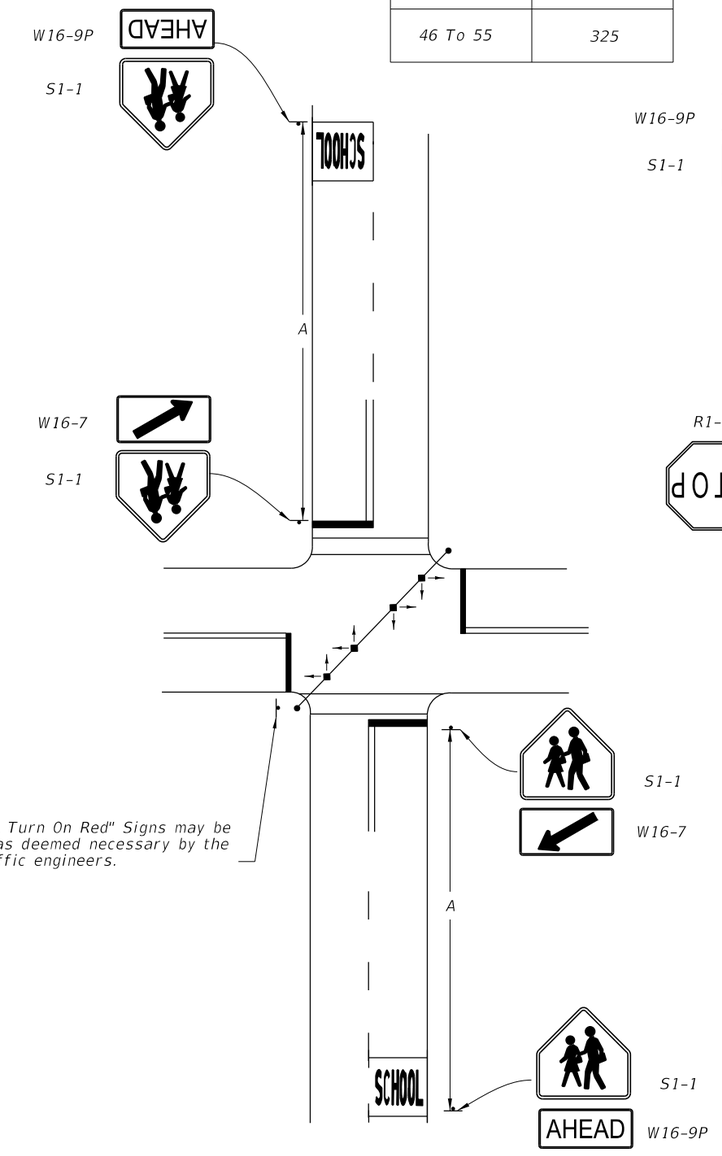



# INSPECTION STATION SIGNING

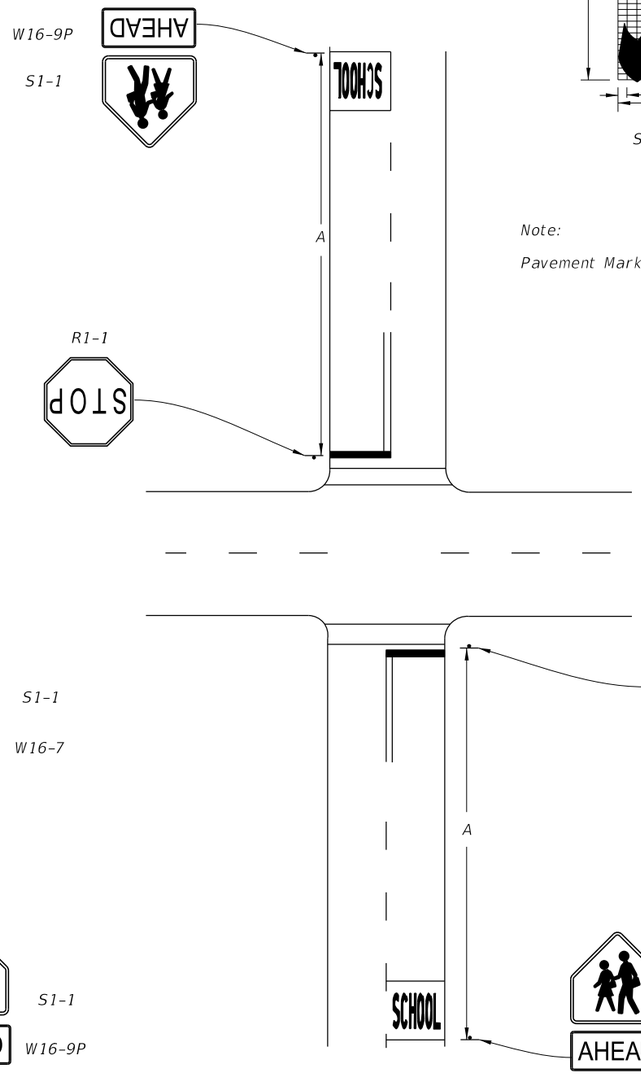
10/14/2016 8:23:54 AM

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/09 | | | FDOT FY 2017-18 DESIGN STANDARDS | TYPICAL SIGNING FOR TRUCK WEIGH & INSPECTION STATIONS | 17328 | 2 of 2 |

| Approach Speed (MPH) | Distance A (FT.) |
|---|---|
| 25 or Less | 200 |
| 26 To 35 | 250 |
| 36 To 45 | 300 |
| 46 To 55 | 325 |

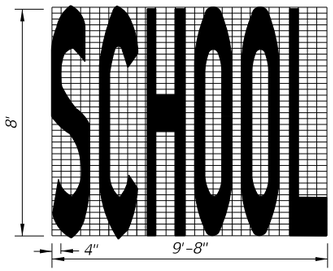



1. TRAFFIC CONTROL DEVICES FOR A SCHOOL CROSSWALK AT A SIGNALIZED INTERSECTION




2. TRAFFIC CONTROL DEVICES FOR A SCHOOL CROSSWALK AT A STOP CONTROLLED INTERSECTION

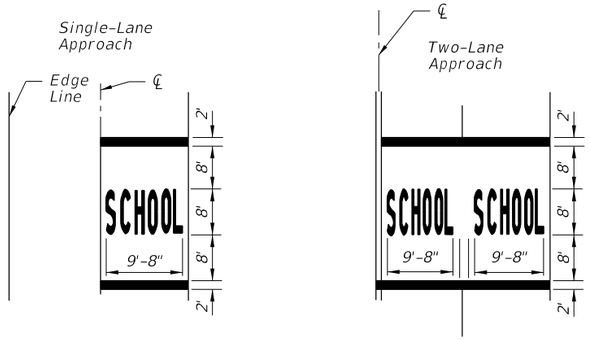
Note:
Special speed restrictions are not normally applicable to these two cases.



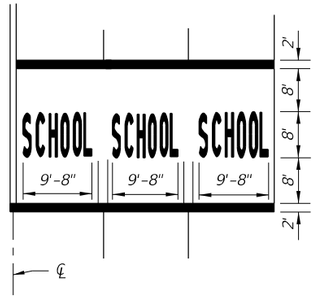

Single-Lane Pavement Marking
33 s.f.

Note:

Pavement Marking Should Not Extend Into Opposing Lane.




Multi-Lane Approch (Three or More)




## PAVEMENT MARKINGS

Notes:

Signs shall be erected in accordance with index No. 17302.

When computing pavement messages quantities do not include transverse lines.

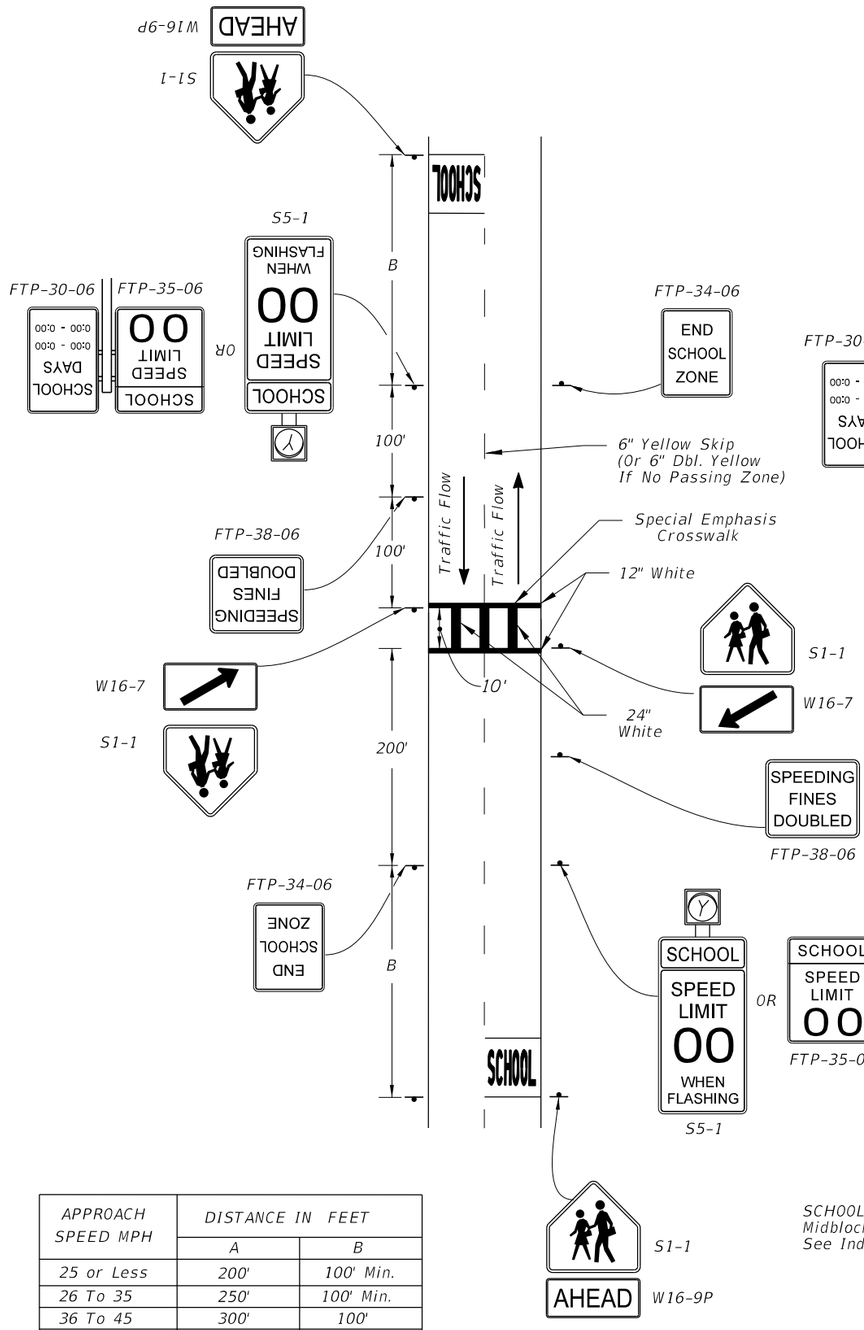
School crosswalk widths at intersections shall be 6' minimum 10' standard without public sidewalk curb ramps 10' minimum with public sidewalk curb ramps. The width is measured from inside of line to inside of line,

For additional marking information, see Index 17346, Sheet 2.

10/14/2016 8:24:17 AM

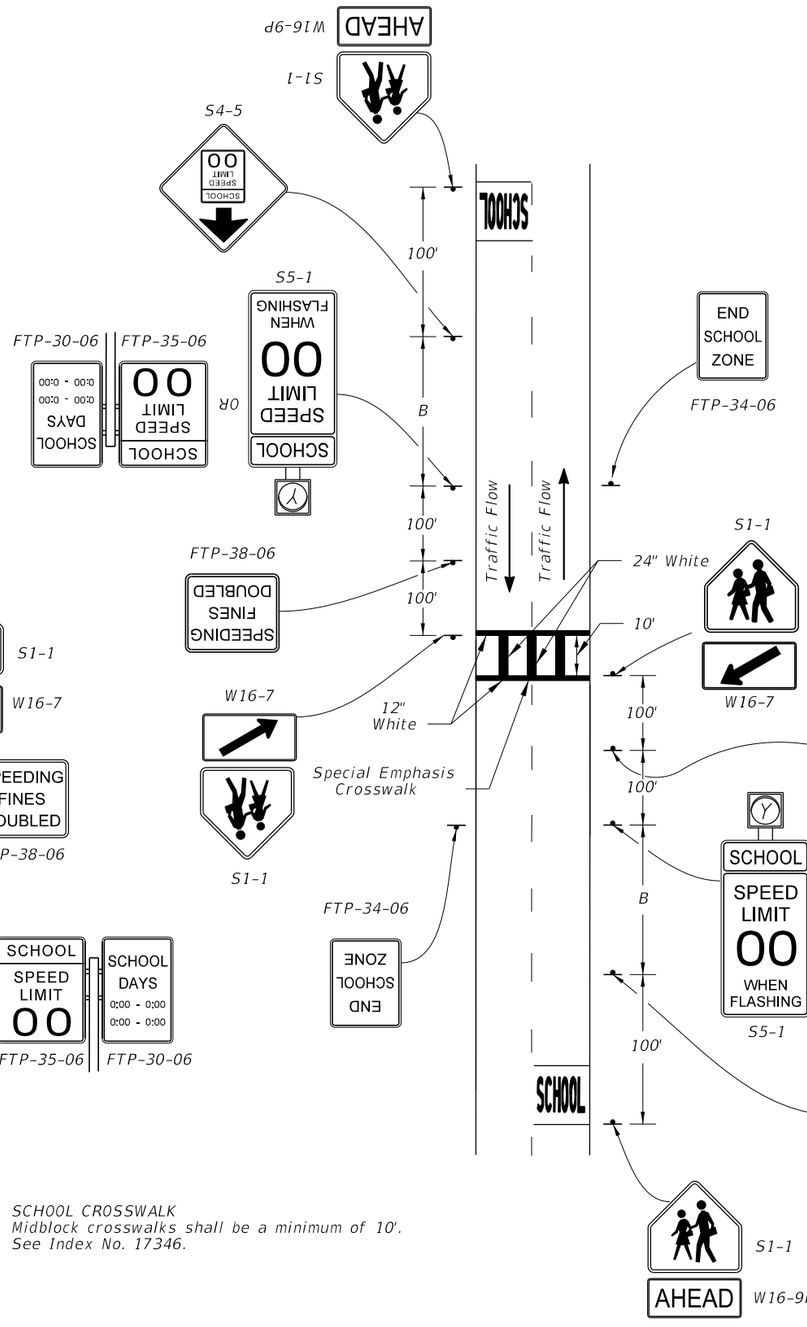
| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | SCHOOL SIGNS & MARKINGS | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 01/01/12 | | | | | 17344 | 1 of 6 |

## 3. TRAFFIC CONTROL DEVICES FOR REDUCED SPEED ZONE AT A SCHOOL CROSSWALK 2 LANES-2 WAY TRAFFIC (40 MPH OR LESS) (MIDBLOCK OR ON THRU STREET AT AN INTERSECTION)



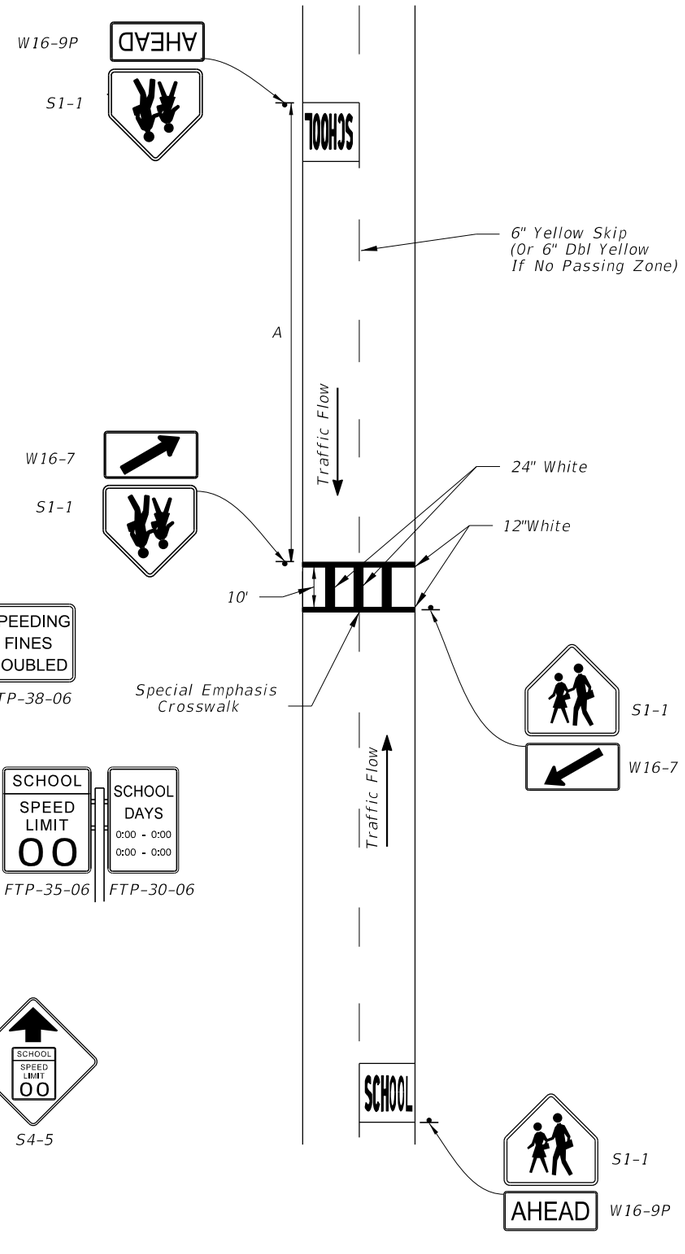

| APPROACH SPEED MPH | DISTANCE IN FEET | |
|---|---|---|
| | A | B |
| 25 or Less | 200' | 100' Min. |
| 26 To 35 | 250' | 100' Min. |
| 36 To 45 | 300' | 100' |
| 46 To 55 | 325' | 125' |

## 4. TRAFFIC CONTROL DEVICES FOR REDUCED SPEED ZONE AT A SCHOOL CROSSWALK 2 LANES-2 WAY TRAFFIC (45 MPH OR GREATER) (MIDBLOCK OR ON THRU STREET AT AN INTERSECTION)




SCHOOL CROSSWALK
Midblock crosswalks shall be a minimum of 10'.
See Index No. 17346.

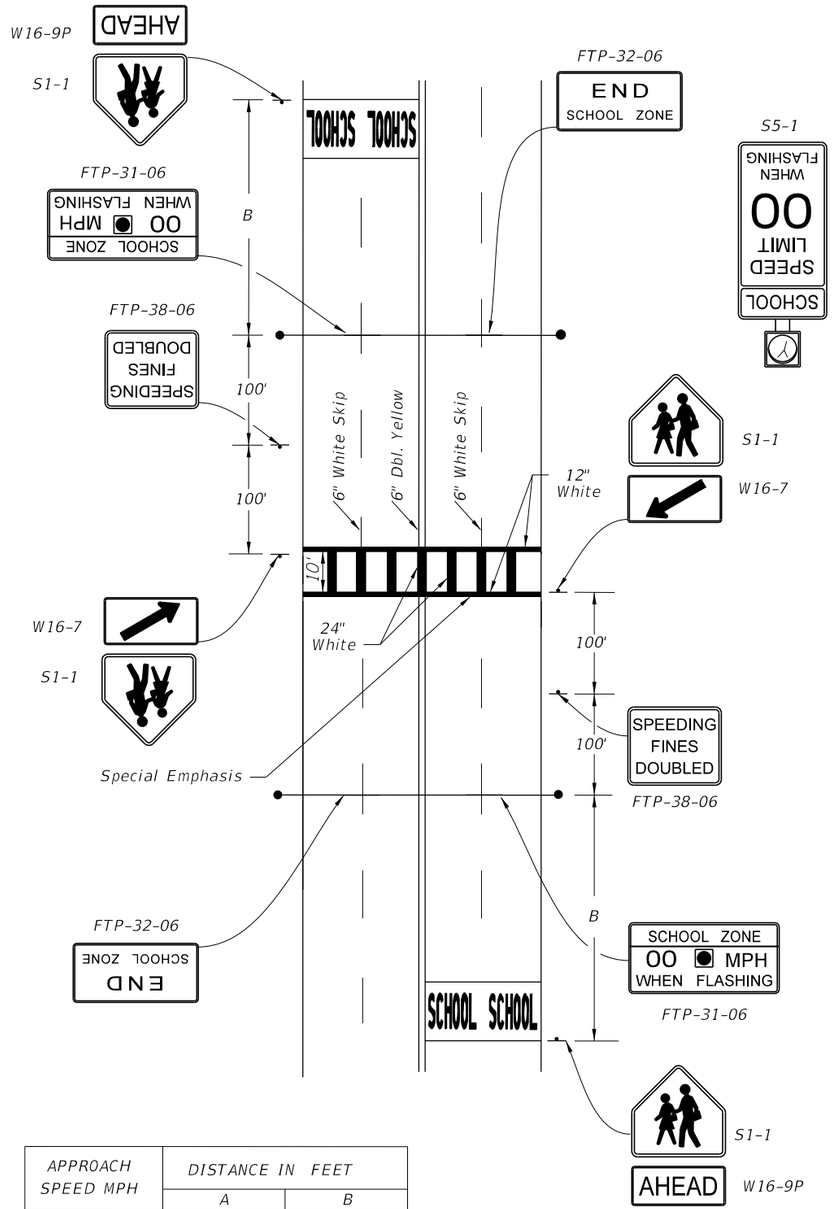
## 5. TRAFFIC CONTROL DEVICES FOR A SCHOOL CROSSWALK WITHOUT A SPEED REDUCTION (2 LANE-2 WAY TRAFFIC)




10/14/2016 8:24:19 AM

| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | SCHOOL SIGNS & MARKINGS | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 01/01/12 | | | | | 17344 | 2 of 6 |

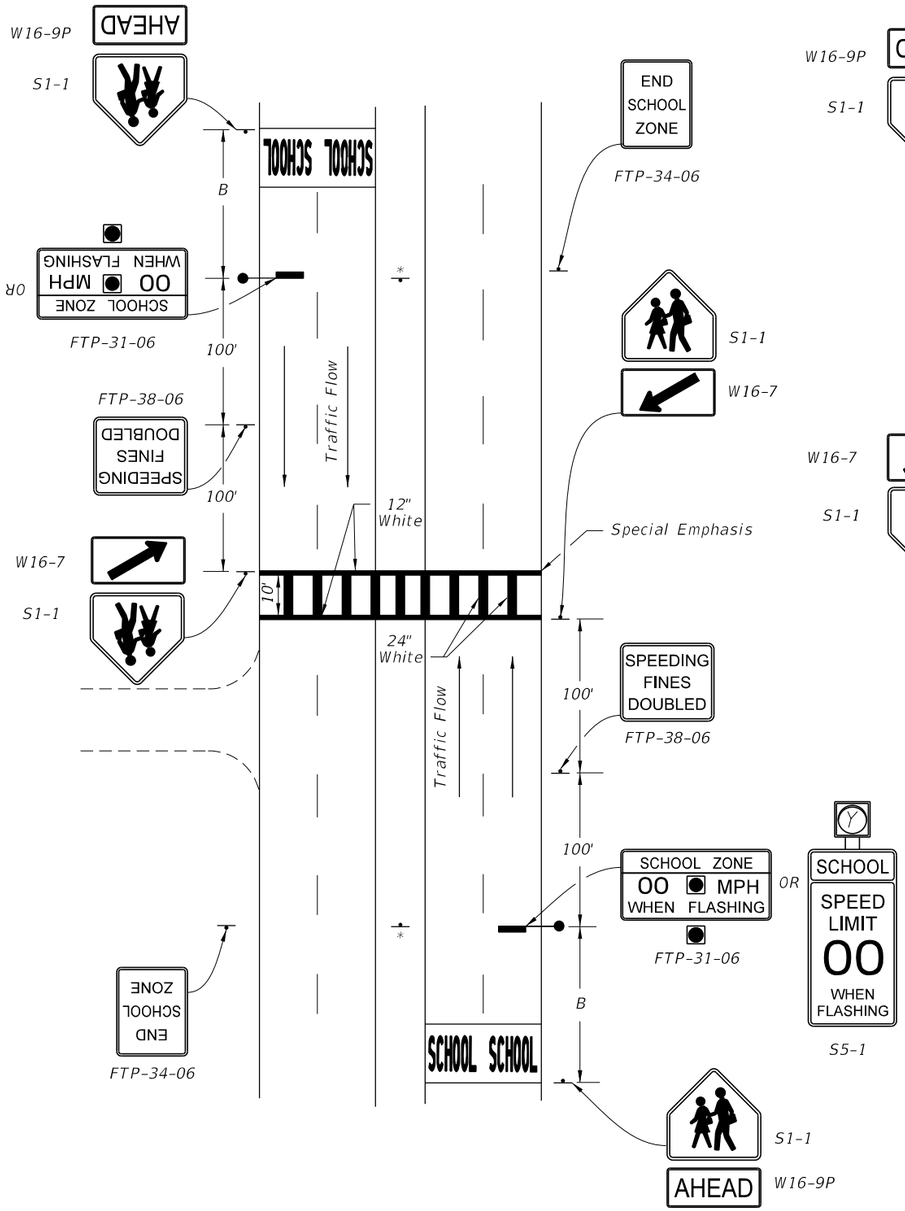
## 6. TRAFFIC CONTROL DEVICES FOR A REDUCED SPEED ZONE AT A SCHOOL CROSSWALK WITH OVERHEAD FLASHING BEACON SPEED LIMIT SIGNS (4 LANES UNDIVIDED-2 WAY TRAFFIC) (MIDBLOCK OR ON THRU STREET AT AN INTERSECTION)




| APPROACH SPEED MPH | DISTANCE IN FEET | |
|---|---|---|
| | A | B |
| 25 or Less | 200' | 100' Min. |
| 26 To 35 | 250' | 100' Min. |
| 36 To 45 | 300' | 100' |
| 46 To 55 | 325' | 125' |

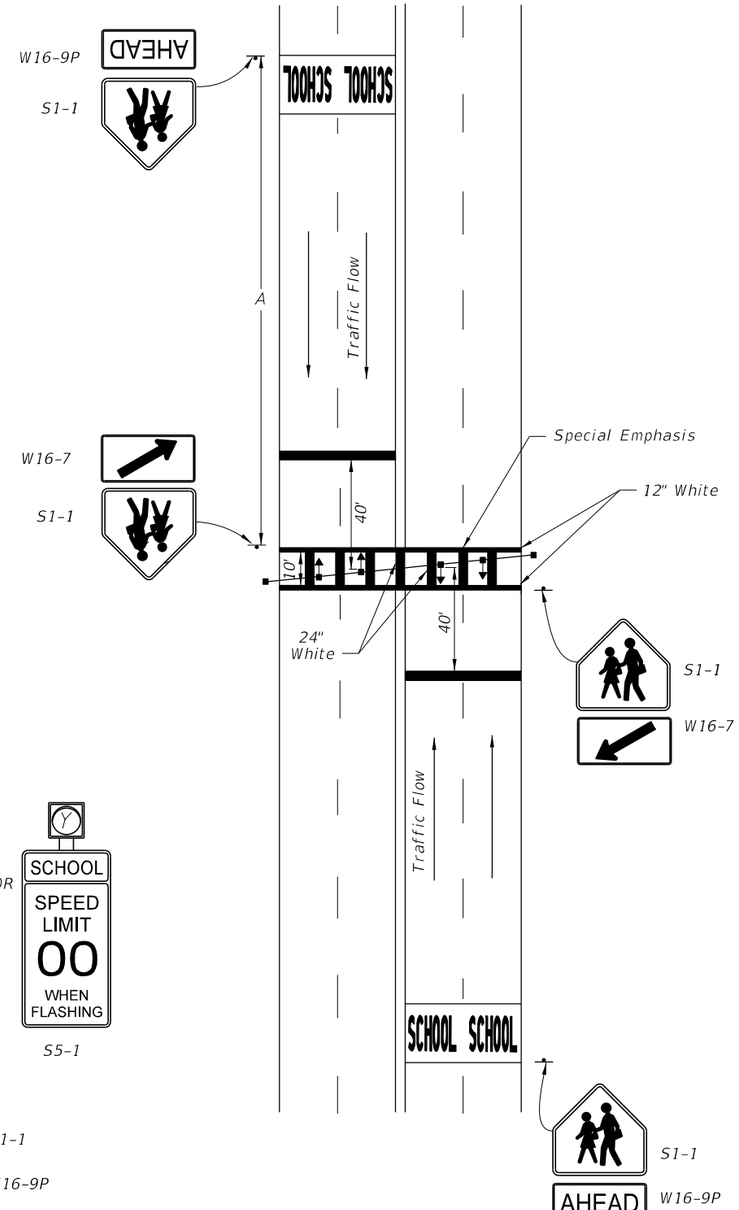
SCHOOL CROSSWALK
Midblock crosswalk shall be a minimum of 10'.
See Index No. 17346.

## 7. TRAFFIC CONTROL DEVICES FOR A REDUCED SPEED ZONE AT A SCHOOL CROSSWALK WITH OVERHEAD OR GROUND MOUNTED FLASHING BEACON SPEED LIMIT SIGNS (4 LANES DIVIDED-2 WAY TRAFFIC)




* NOTE- CONDITION 7:
Where engineering judgement determines the overhead structure is not suitable or cannot be installed due to site restrictions, S5-1 with flashing beacons on each side of the road may be substituted for the overhead structure.

## 8. TRAFFIC CONTROL DEVICES FOR SIGNALIZED MIDBLOCK SCHOOL CROSSWALK

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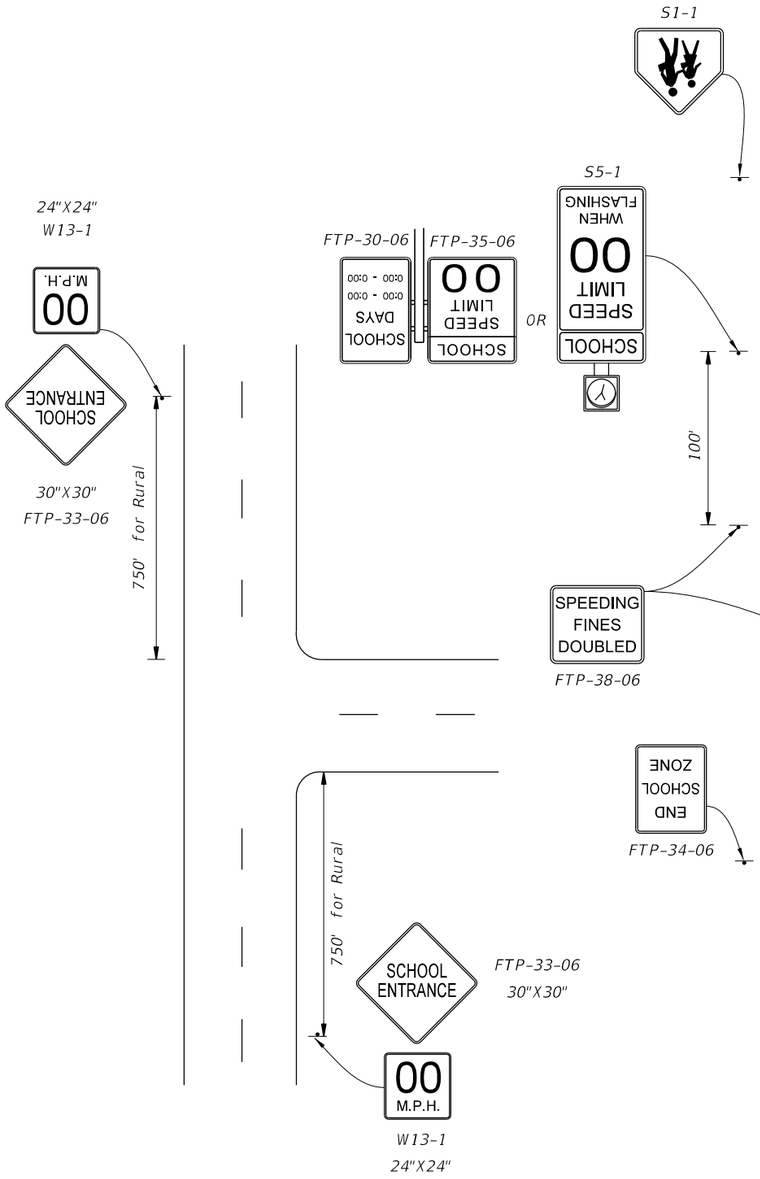
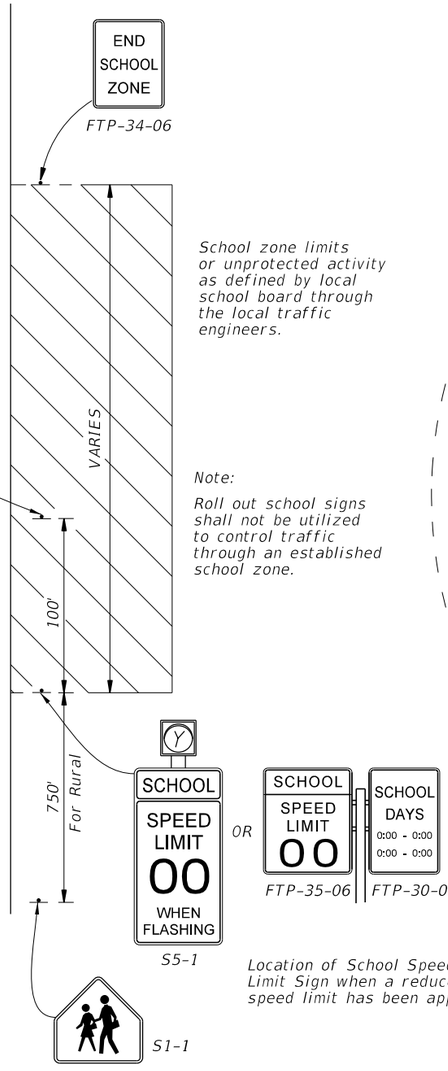
| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | SCHOOL SIGNS & MARKINGS | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 01/01/12 | | | | | 17344 | 3 of 6 |

## 9. TRAFFIC CONTROL DEVICES AT SCHOOL ENTRANCES WITH LOW VOLUMES OF WALKING STUDENTS







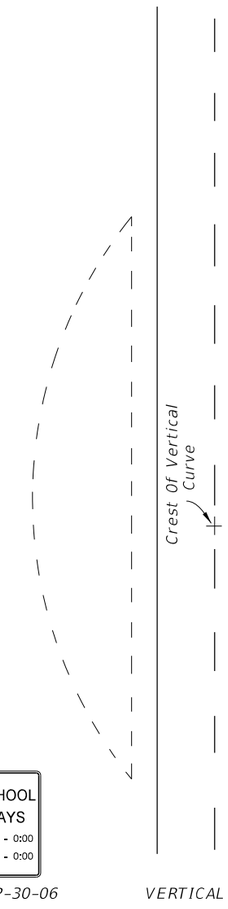



School zone limits or unprotected activity as defined by local school board through the local traffic engineers.

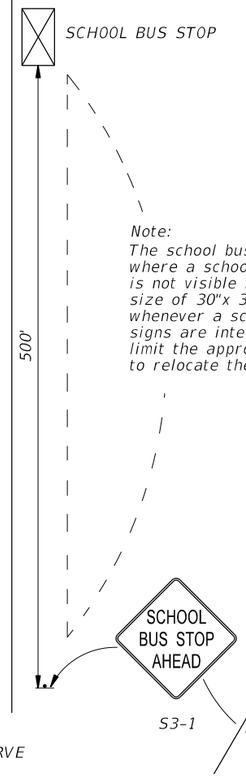
Note:

Roll out school signs shall not be utilized to control traffic through an established school zone.

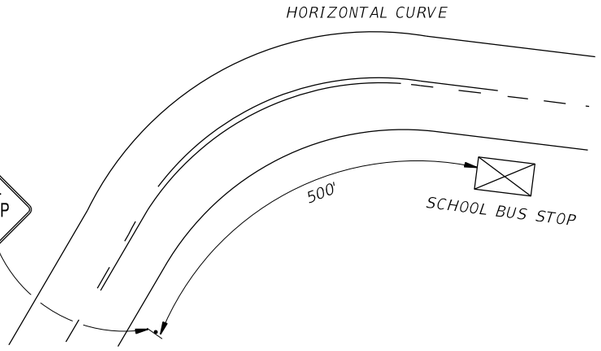
Location of School Speed Limit Sign when a reduced speed limit has been approved.




## 11. SCHOOL BUS STOP



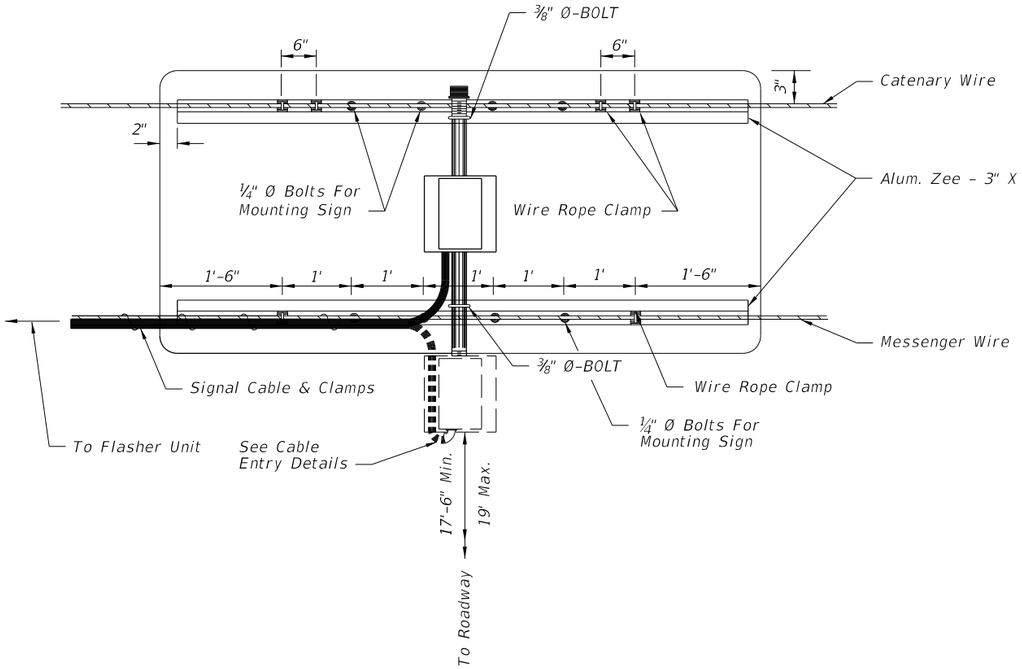

Note:
The school bus stop ahead sign is to be used in advance of locations where a school bus, when stopped to pick up or discharge passengers, is not visible for a distance of 500' in advance. It shall have a min. size of 30"x 30". It is not intended that these signs be used whenever a school bus stops to pick up or discharge passengers. These signs are intended for use only where terrain and roadway features limit the approach sight distance and where there is no opportunity to relocate the stop to another location with adequate visibility.



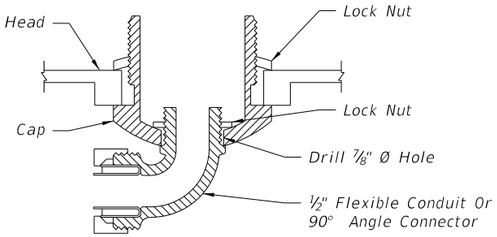

These signs are intended for use only at those few locations where the school entrance is not evident to the motorist, and must be approved in advance by the responsible traffic engineering authority.

10/14/2016 8:24:26 AM

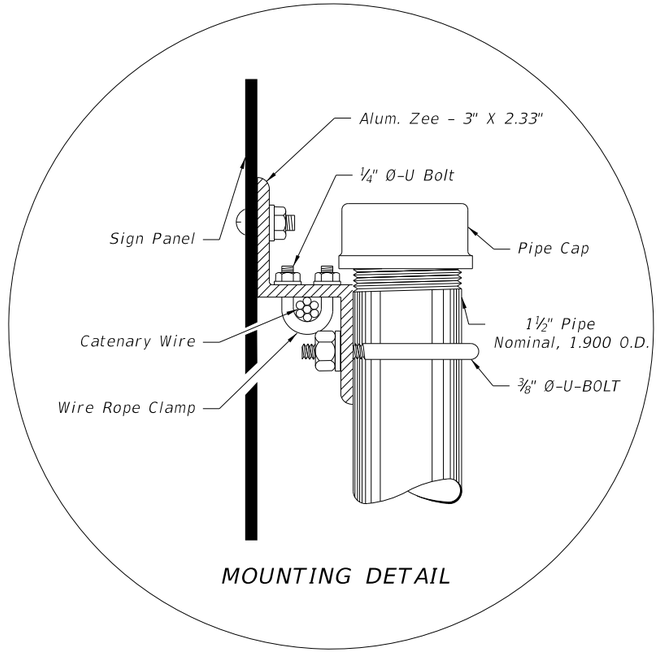
| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | SCHOOL SIGNS & MARKINGS | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/09 | | | | | 17344 | 4 of 6 |



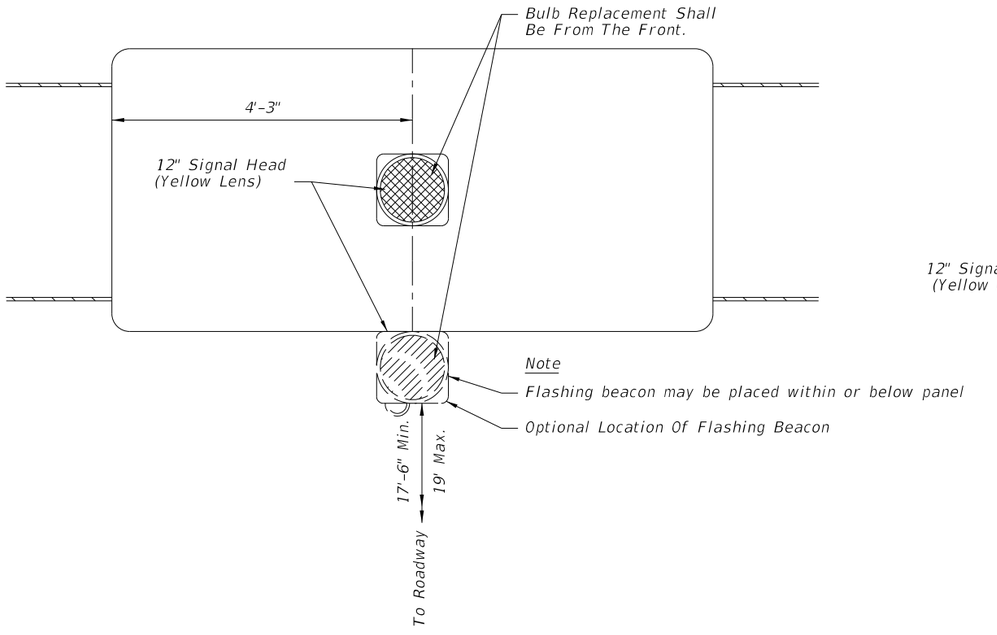

REAR VIEW



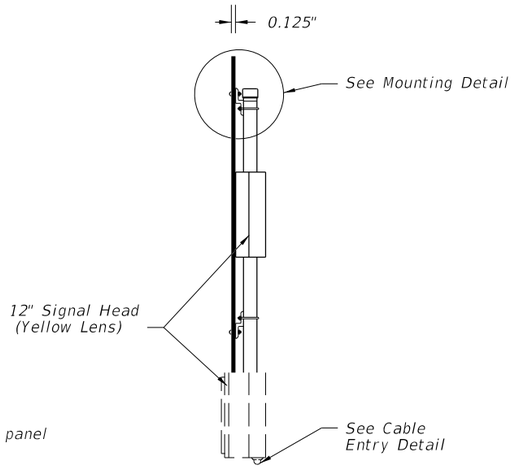

CABLE ENTRY DETAIL



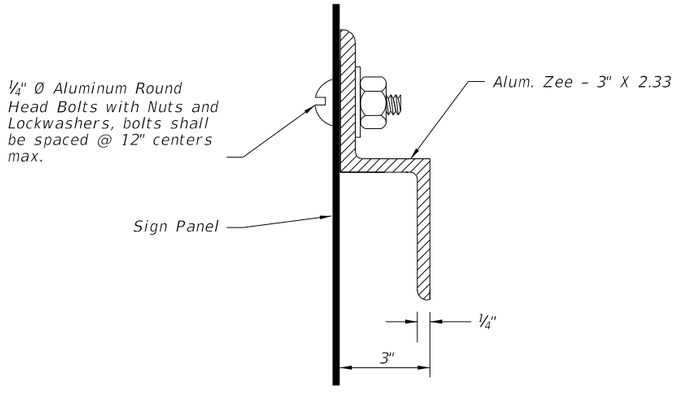

MOUNTING DETAIL




FRONT VIEW




SIDE VIEW




ZEE SECTION DETAIL

*Flasher unit and cabinet to be placed on the strain pole supporting overhead sign assembly or on service pole. The flasher unit not to overhang private property or sidewalk.*

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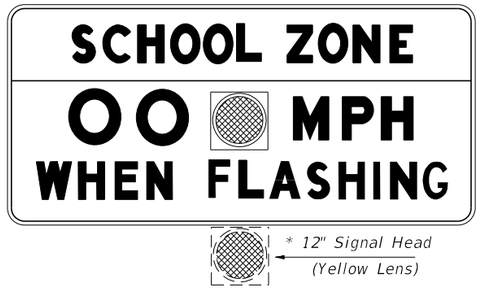



FTP-31-06

OVERHEAD STANDARD

* Flashing Beacon May Be Placed Within Or Below Panel

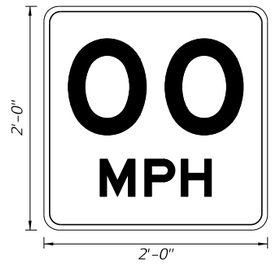

FTP-32-06


FTP-38-06

Notes:

1. Standard size signs should be used whenever possible. Minimum sizes may be used only on low volume, low speed (less than 35 mph) streets. Special sizes should be used on expressway facilities where special emphasis is needed.
2. The value of the actual school zone speed limit shall be determined by the District Traffic Operations Engineer in cooperation with local school superintendents. In no case shall it be less than the 15 mph min. as set by law.
3. See Index No. 17355 for sign details.
4. When fluorescent yellow-green background color is used, a systematic approach featuring one background color within a zone or area should be used. The mixing of standard yellow and fluorescent yellow green background within a zone should be avoided.

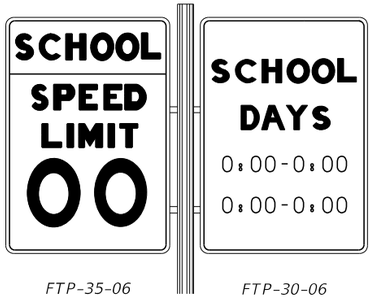

FTP-33-06




W13-1

SPEED LIMIT ASSEMBLY

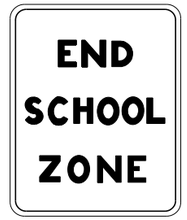

S4-5



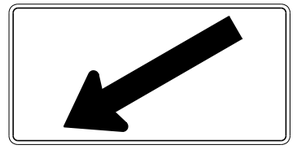

FTP-35-06 FTP-30-06

S1-1


S3-1

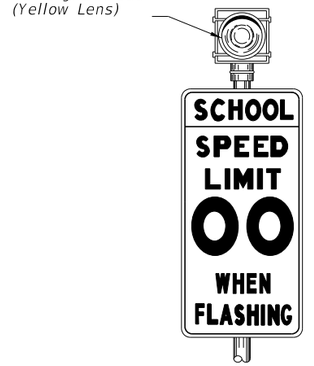



FTP-34-06



W16-7


W16-9P




S5-1

Ground Mount Standard

Note:
Existing ground mount school speed limit signs utilizing a single 8" min. size beacon or two 6" min. size beacons inside the sign border are considered meeting the standard. However, replacement or upgrading of these school speed limit signs shall conform to the above standard. Numerical speed limit displayed shall be established by appropriate regulatory authorities.

10/14/2016 8:24:30 AM

| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | SCHOOL SIGNS & MARKINGS | INDEX NO. | SHEET NO. |
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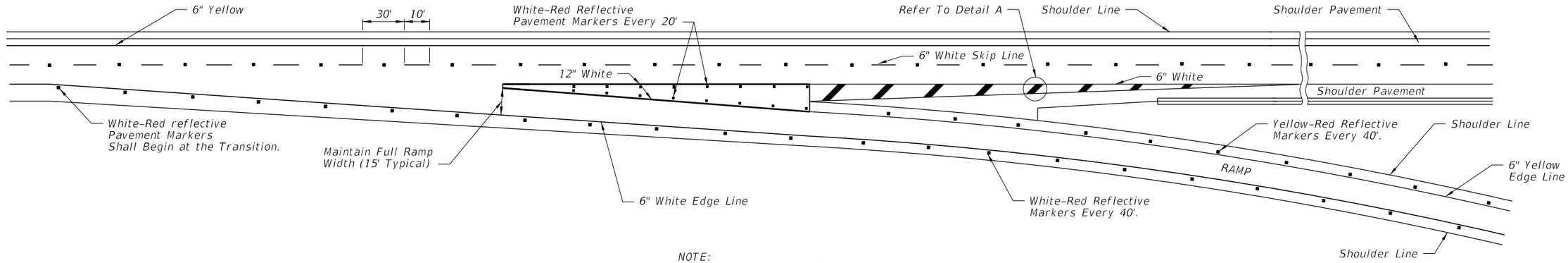
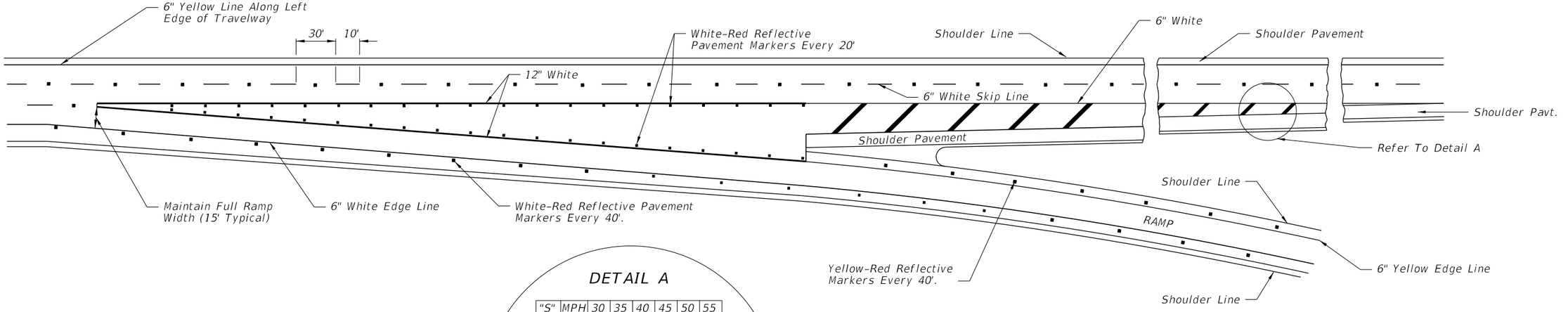
| 07/01/09 | | | | | 17344 | 6 of 6 |




NOTE:
Reflective pavement markers are installed adjacent to the edge line.

## NORMAL TAPERED EXIT

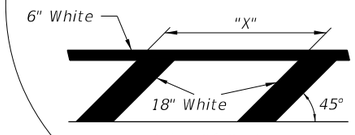
(TWO THRU LANES)




### DETAIL A

| "S" | MPH | 30 | 35 | 40 | 45 | 50 | 55 |
|---|---|---|---|---|---|---|---|
| "X" | Ft. | 20 | 20 | 40 | 40 | 60 | 60 |

Passenger Car, Daytime, Posted Speeds
Or 85th Percentile (Use Higher Value)

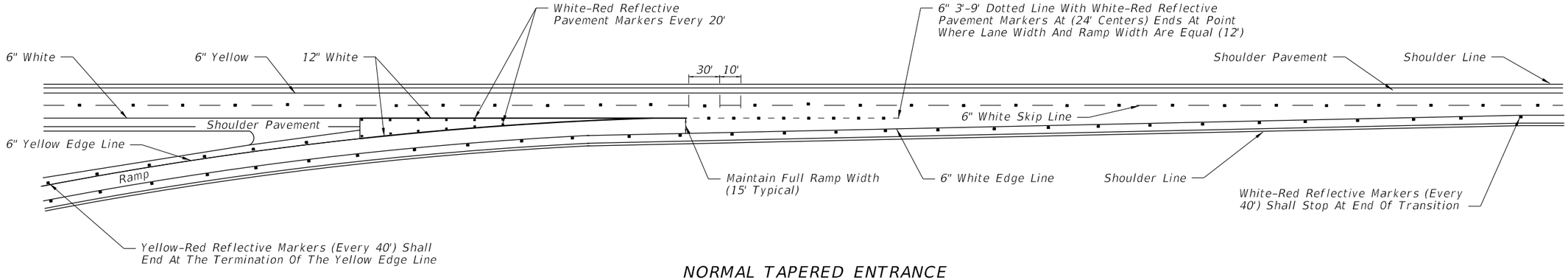



## NORMAL TAPERED EXIT ONLY

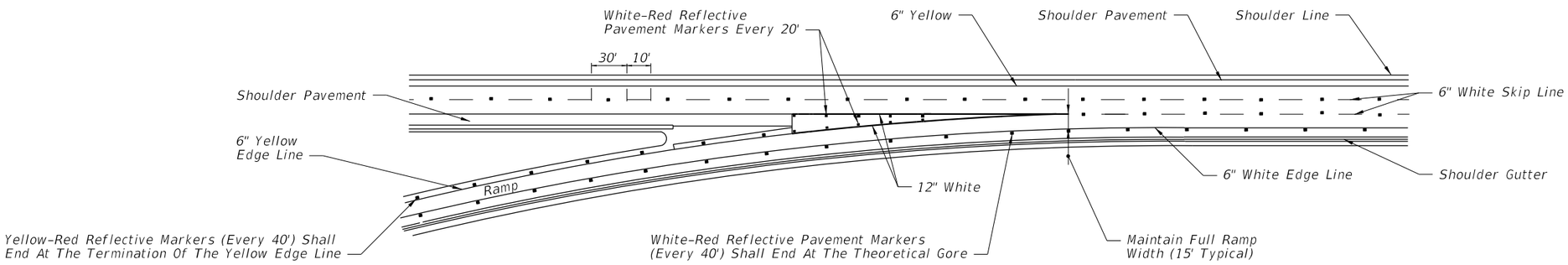
(TWO THRU LANES – THREE APPROACH LANES)

10/14/2016 8:25:01 AM

| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | INTERCHANGE MARKINGS | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/14 | | | | | 17345 | 1 of 4 |



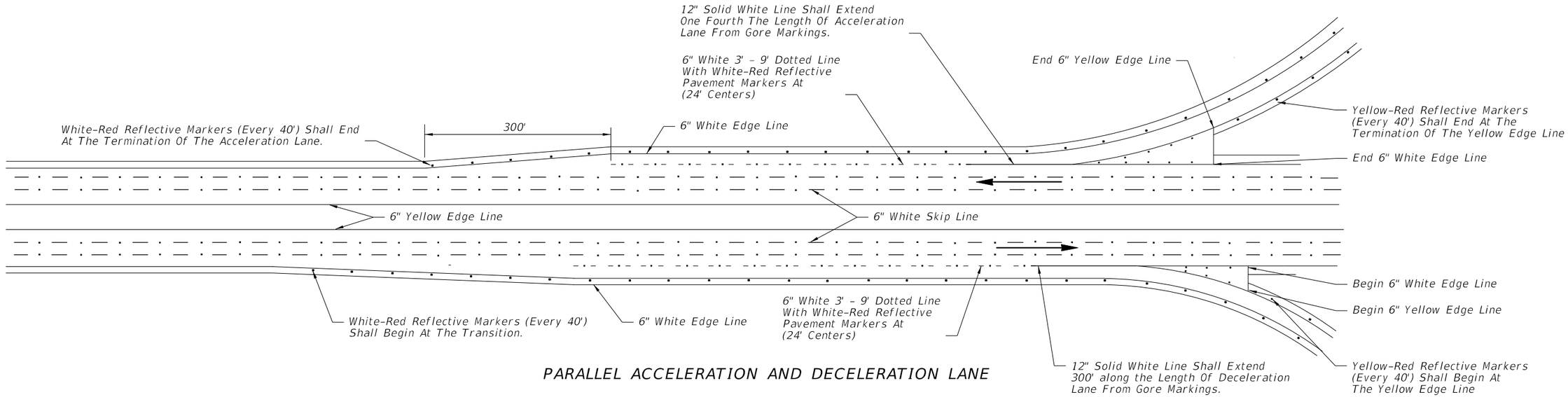

NORMAL TAPERED ENTRANCE



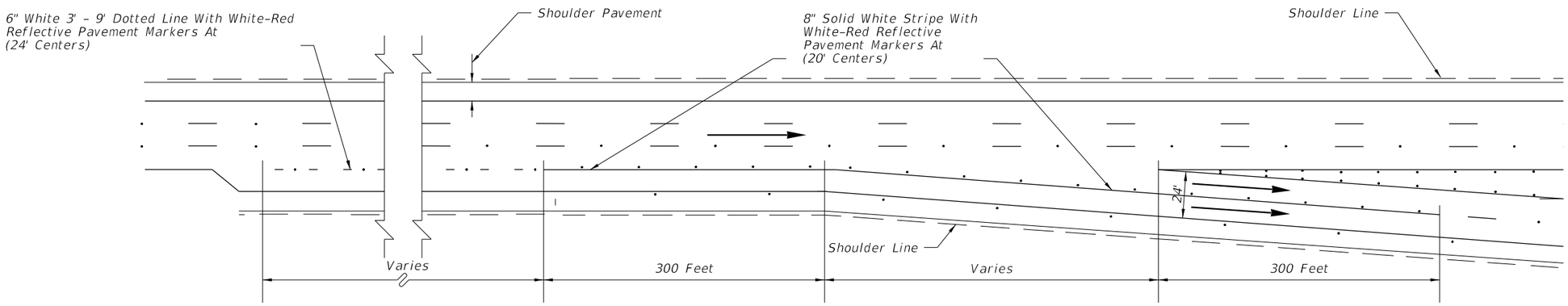

NORMAL TAPERED ENTRANCE
WITH ADDED LANE

10/14/2016 8:25:04 AM

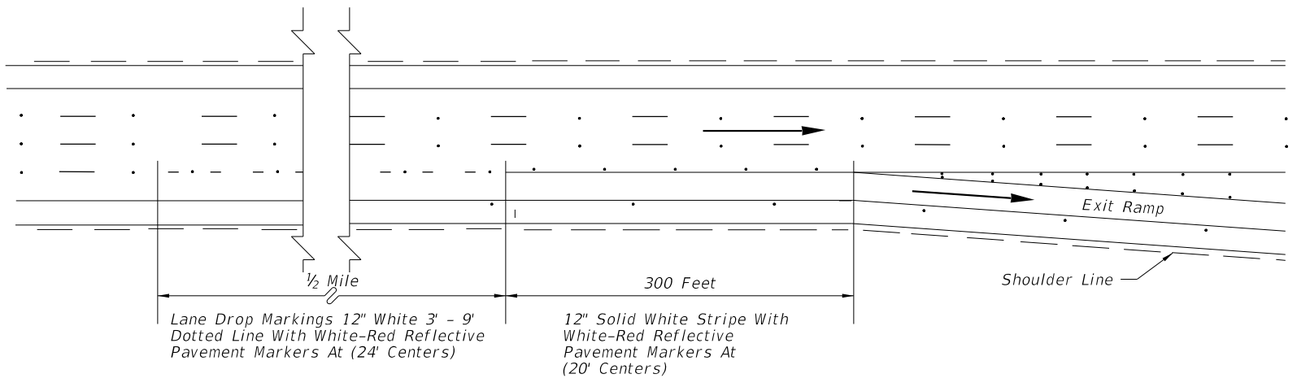
| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/14 | | | FDOT FY 2017-18 DESIGN STANDARDS | INTERCHANGE MARKINGS | 17345 | 2 of 4 |




PARALLEL ACCELERATION AND DECELERATION LANE




TYPICAL MARKINGS AT DUAL LANE EXITS




TYPICAL LANE DROP MARKINGS AT EXIT RAMPS

→ Note: Arrows indicate direction of travel and are not shown for pavement marking.

10/14/2016 8:25:07 AM

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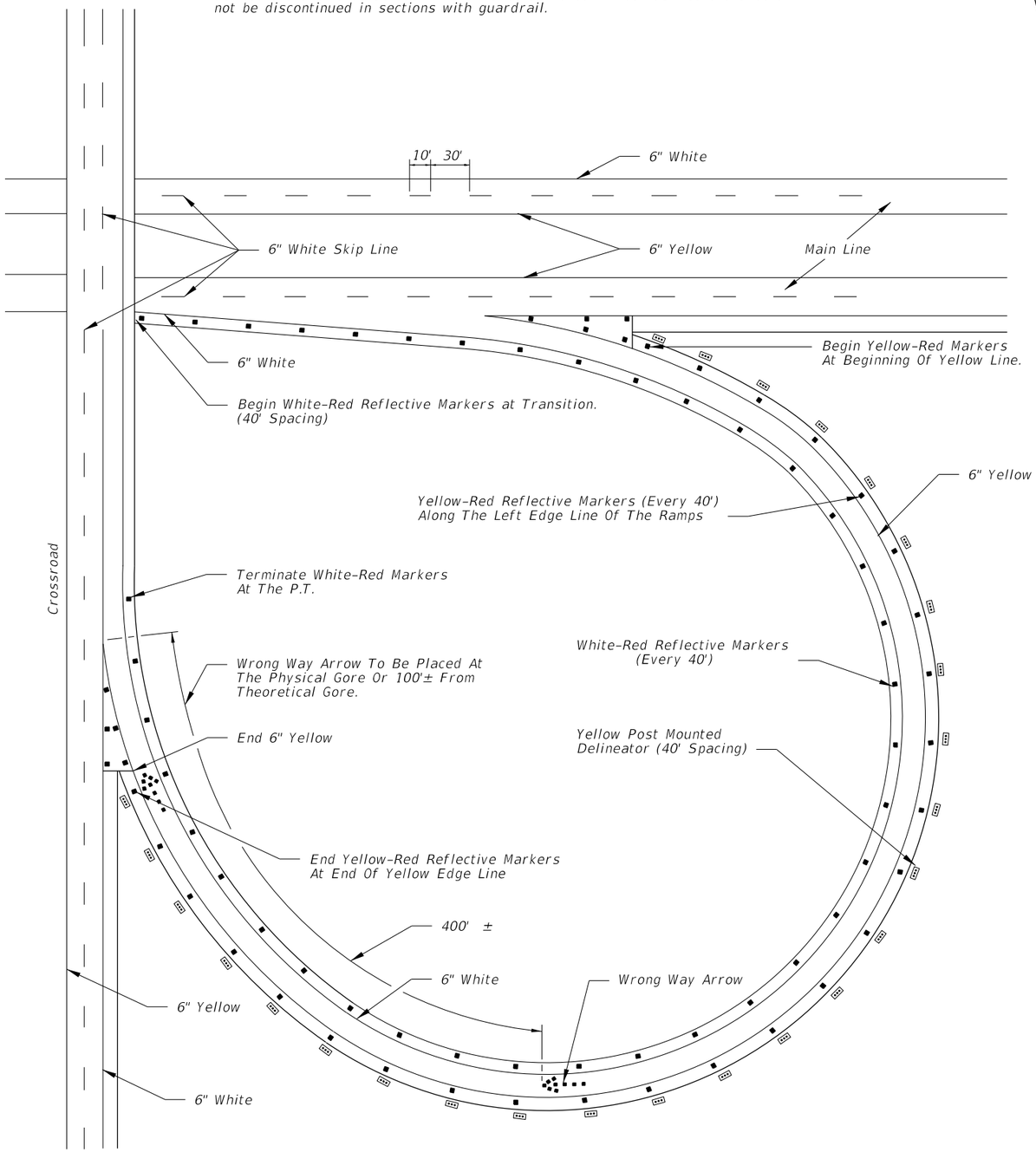
|---|---|---|---|---|---|---|
| 07/01/15 | | | FDOT FY 2017-18 DESIGN STANDARDS | INTERCHANGE MARKINGS | 17345 | 3 of 4 |

Notes:

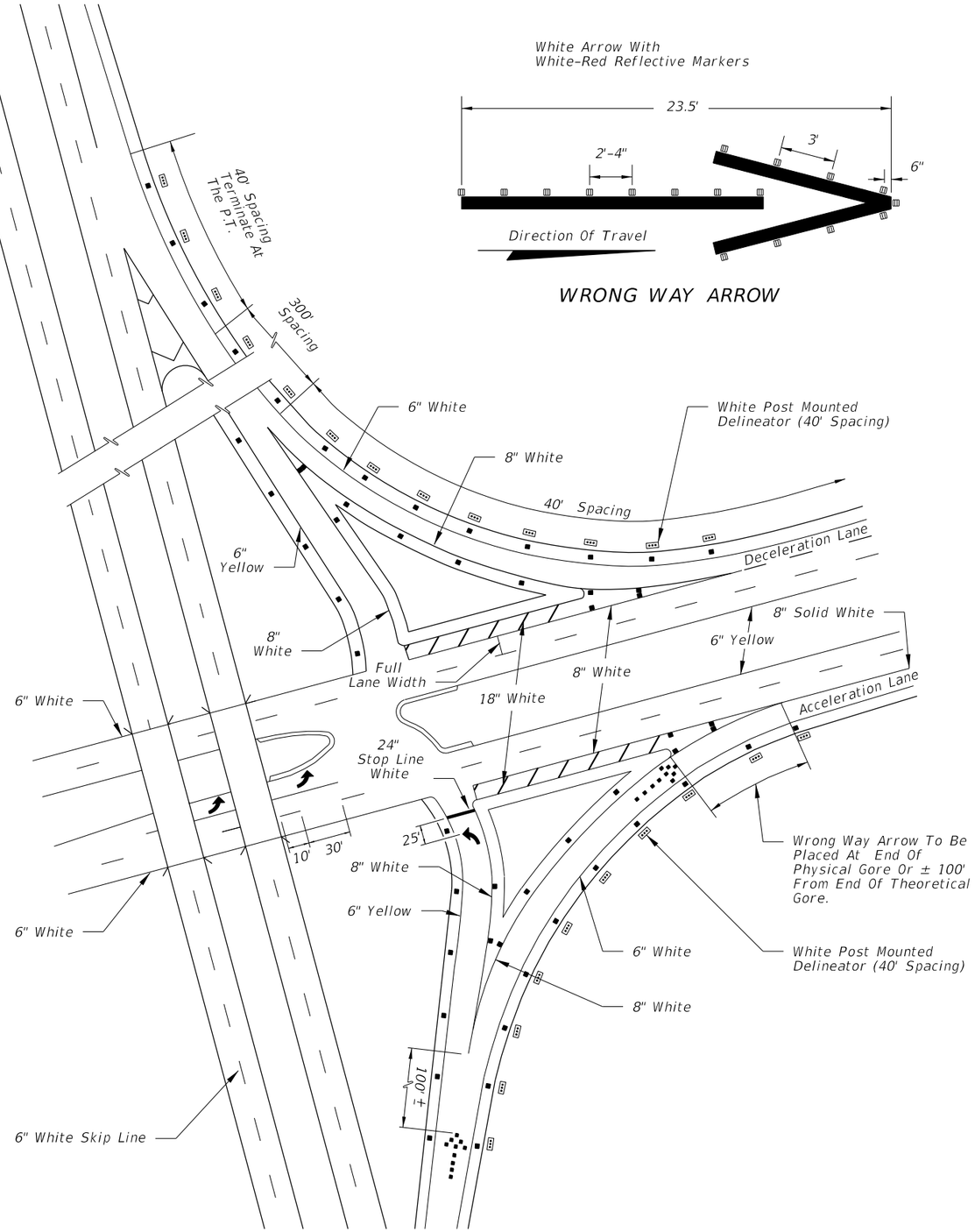
1. Post delineators spaced at 40' on curves of the entrance and exit of ramps. The spacing on the tangent portion of the ramp section shall be 300'. All delineators are to be setback 4' from shoulder break. Post delineators should not be discontinued in sections with guardrail.




White Arrow With
White-Red Reflective Markers



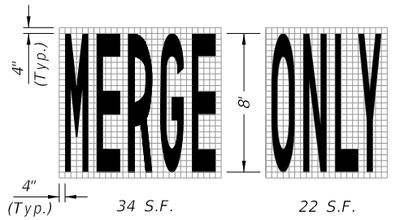

WRONG WAY ARROW



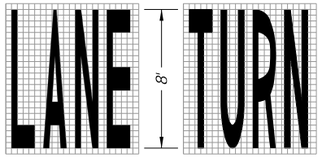

Wrong Way Arrow To Be Placed At End Of Physical Gore Or ± 100' From End Of Theoretical Gore.

10/14/2016 8:25:09 AM

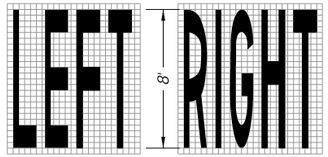
| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | INTERCHANGE MARKINGS | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/15 | | | | | 17345 | 4 of 4 |



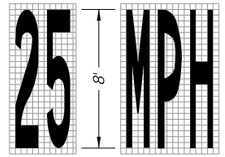

34 S.F. 22 S.F.



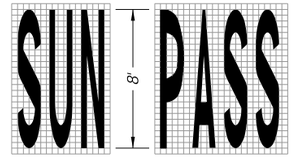

23 S.F. 24 S.F.



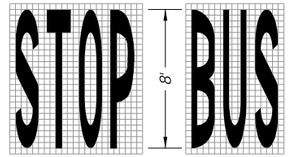

20 S.F. 26 S.F.



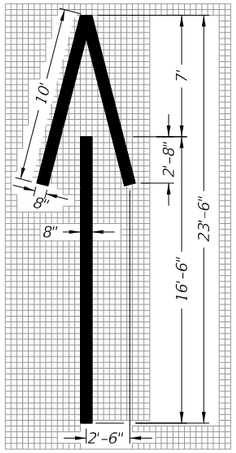

13 S.F. 20 S.F.




20 S.F. 23 S.F.

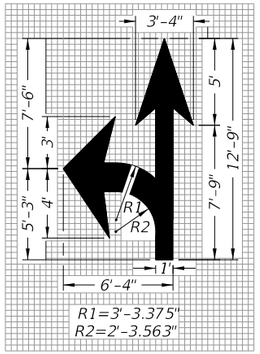



22 S.F. 20 S.F.



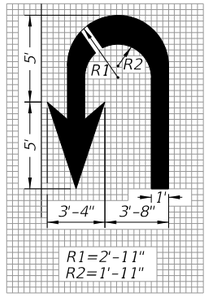

Wrong-Way Arrow

24 S.F.



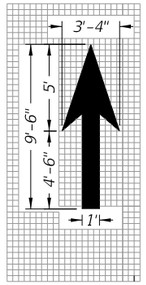

Turn and Through Lane-Use Arrow

29 S.F.



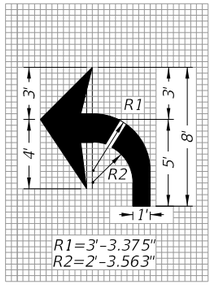

U Turn Lane-Use Arrow

27 S.F.



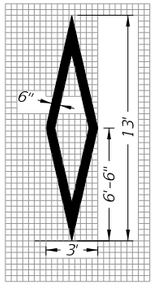

Through Lane-Use Arrow

12 S.F.




Turn Lane-Use Arrow (Left Turn Shown - Right Turn Similar by Opposite Hand)

17 S.F.




Preferential Lane Symbol

11 S.F.

## NOTES:

1. When an arrow and a pavement message are used together, locate the arrow 25' downstream from the pavement message. Measure the distance from the base of the arrow to the base of the pavement message.
2. Place stop message 25' back from the stop line.
3. Dimensions are within 1" ±.
4. All grids are 4" x 4".

## PAVEMENT ARROW AND MESSAGE DETAILS

10/14/2016 8:37:55 AM

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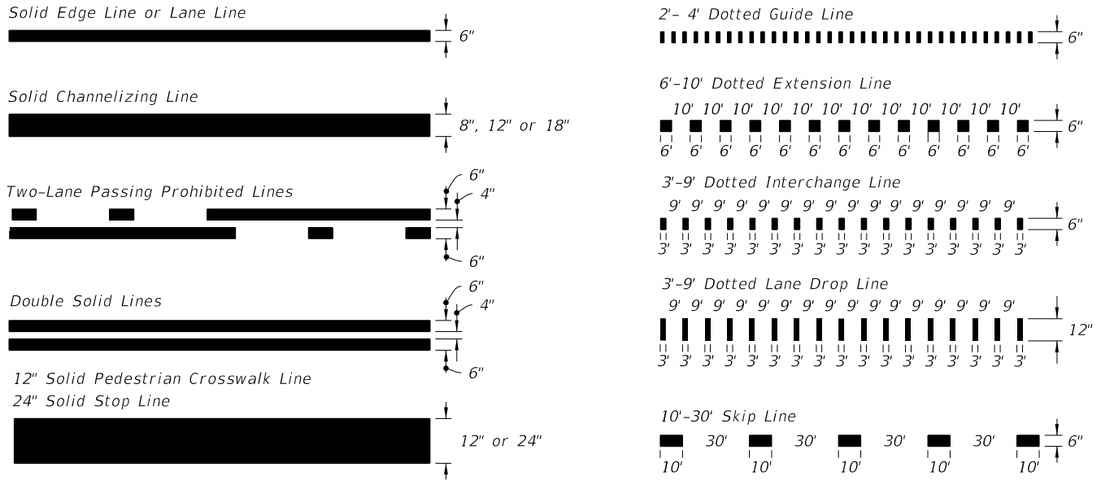
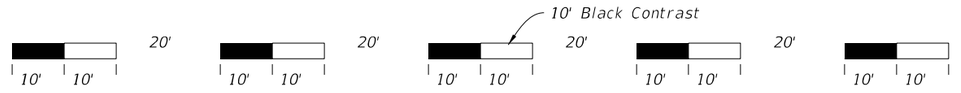
|---|---|---|---|---|---|---|
| 11/01/16 | | | FY 2017-18 DESIGN STANDARDS | PAVEMENT MARKINGS | 17346 | 1 of 17 |

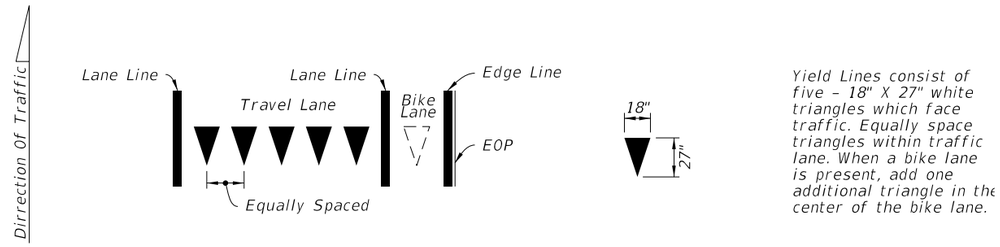



## PAVEMENT MARKING LINES




10' White Skip With 10' Black Contrast and 20' Gaps

## CONTRAST MARKINGS

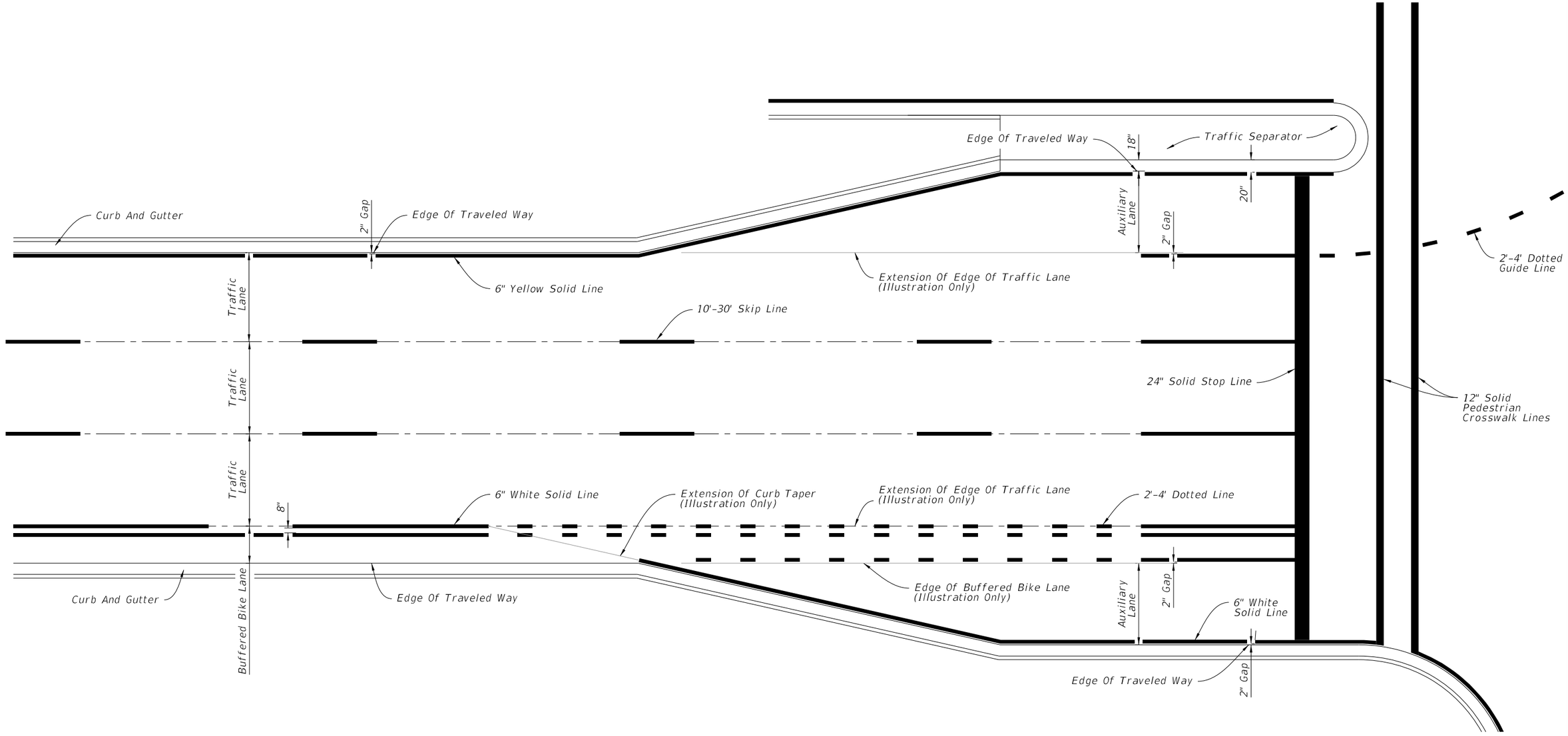



Yield Lines consist of five – 18" X 27" white triangles which face traffic. Equally space triangles within traffic lane. When a bike lane is present, add one additional triangle in the center of the bike lane.

## YIELD LINES

10/14/2016 8:37:57 AM

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FDOT FY 2017-18 DESIGN STANDARDS | PAVEMENT MARKINGS | 17346 | 2 of 17 |




CURB AND GUTTER SHOWN

11/9/2016 8:59:05 AM

## PLACEMENT OF LONGITUDINAL PAVEMENT MARKINGS

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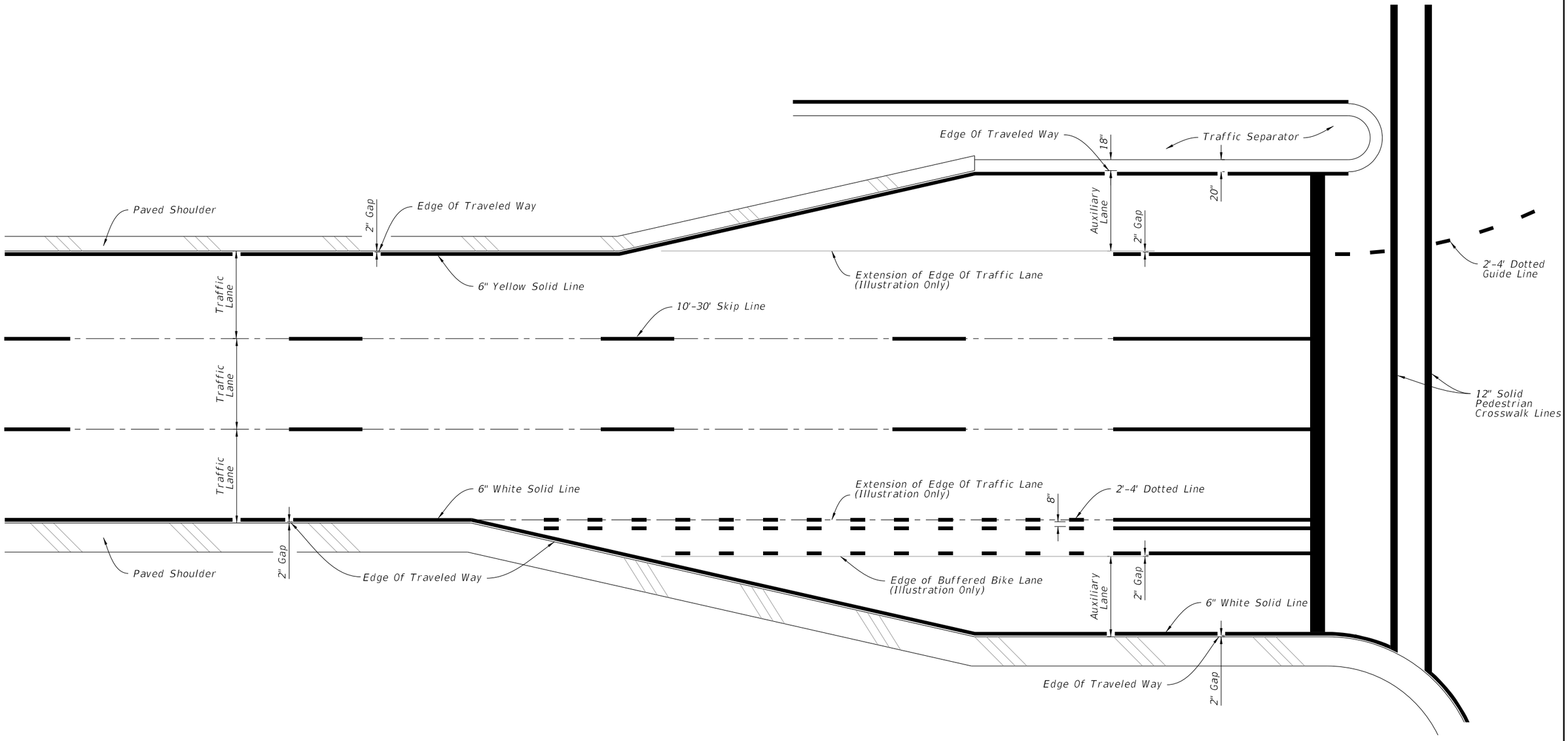
|---|---|---|---|---|---|---|
| 11/01/16 | | | | | 17346 | 3 of 17 |

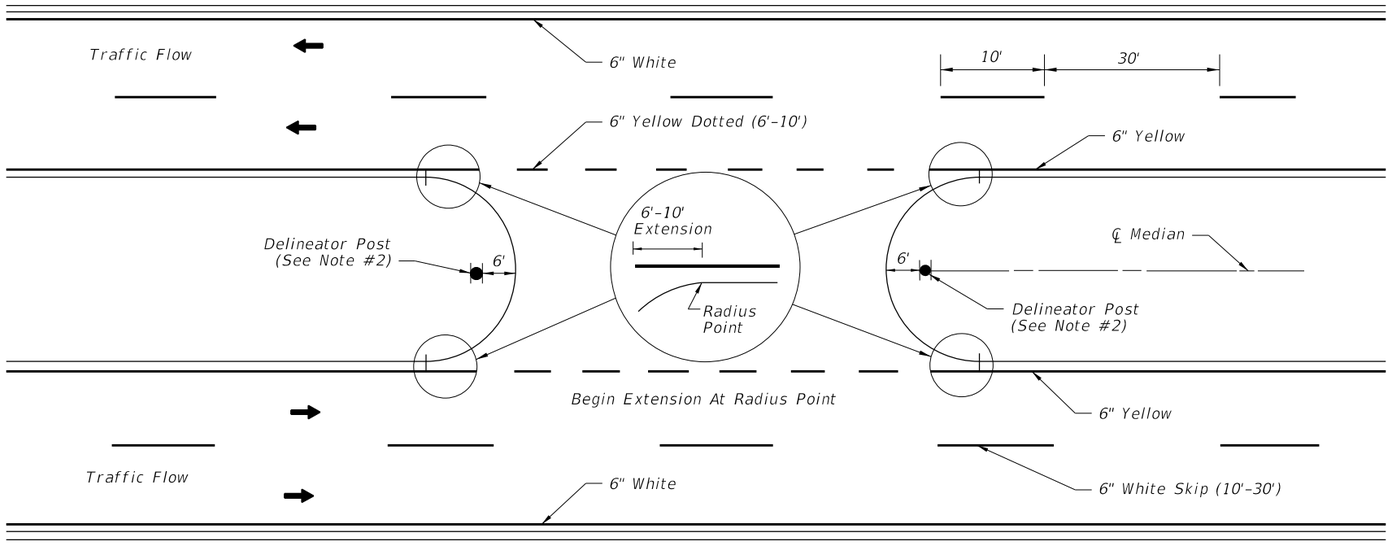



FLUSH SHOULDER SHOWN

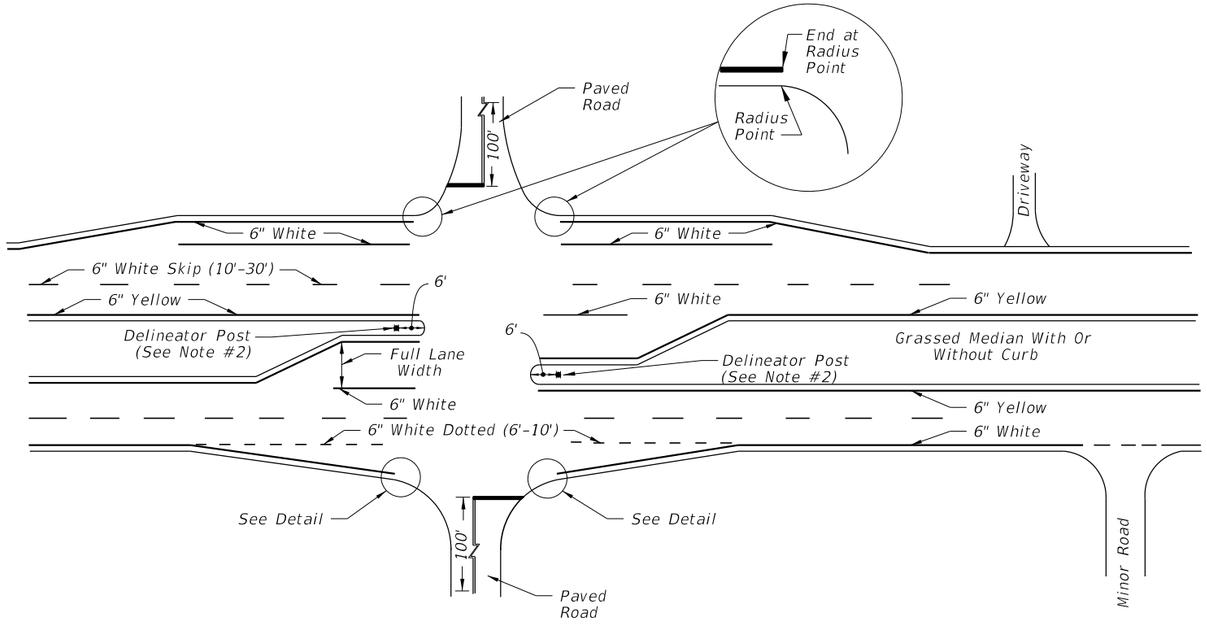
# PLACEMENT OF LONGITUDINAL PAVEMENT MARKINGS

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FY 2017-18 DESIGN STANDARDS | PAVEMENT MARKINGS | 17346 | 4 of 17 |

11/9/2016 8:59:07 AM




PAVEMENT MARKINGS AND DELINEATORS FOR MEDIAN CROSS-OVER

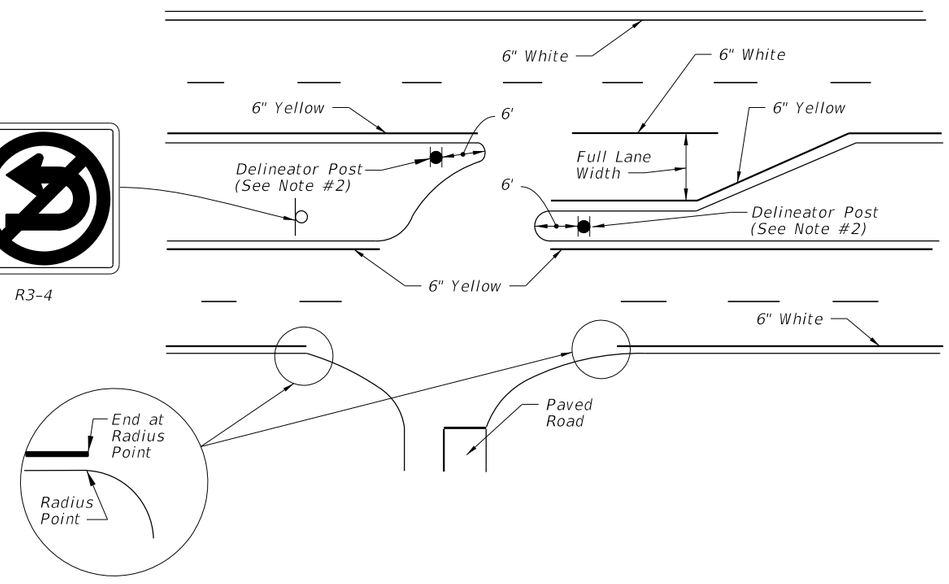



PAVEMENT MARKINGS FOR INTERSECTIONS WITH MAJOR AND MINOR ROADS

NOTE:

1. Apply yellow markings to the median noses.
2. Use yellow retro-reflective sheeting on both sides of the delineator. Install the post so that the top is 4' above the grade at the edge of the pavement.

R3-4

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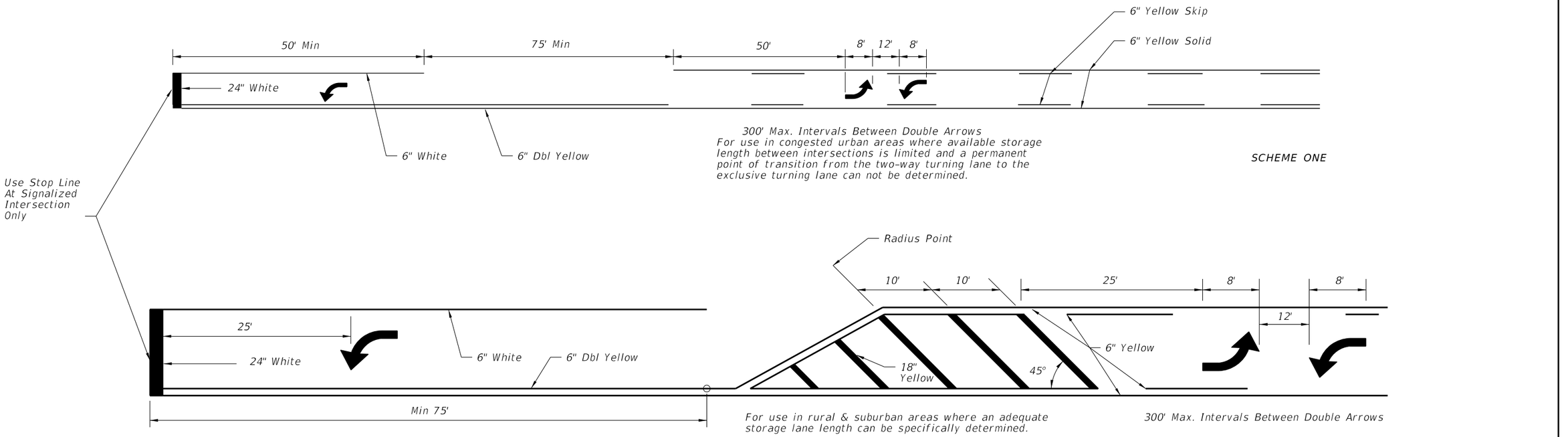
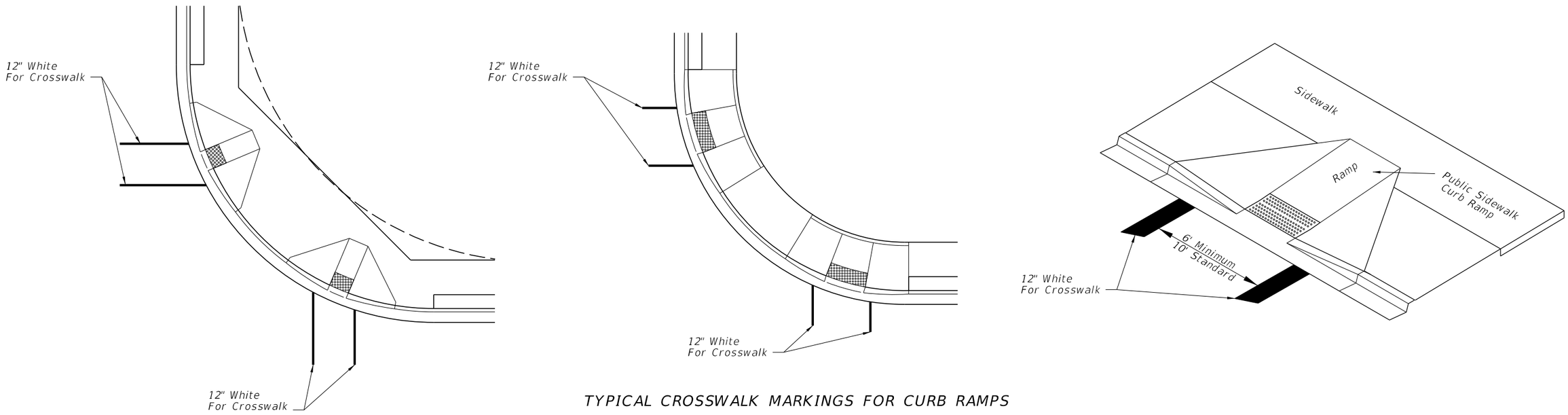



## (WITH SINGLE LANE LEFT TURN CHANNELIZATION)
## TWO WAY LEFT TURN LANE




## TYPICAL CROSSWALK MARKINGS FOR CURB RAMPS

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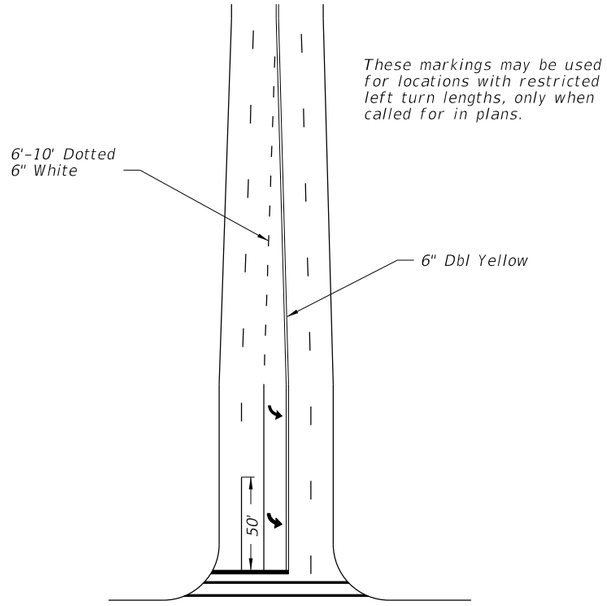
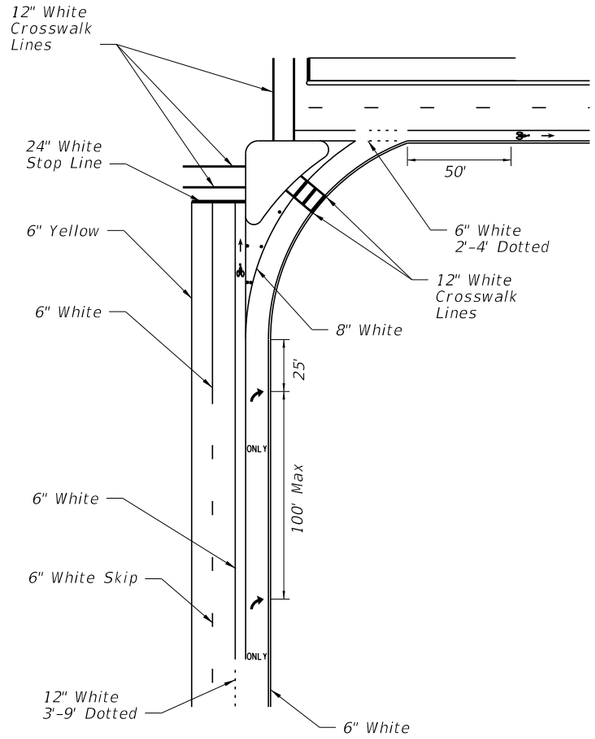
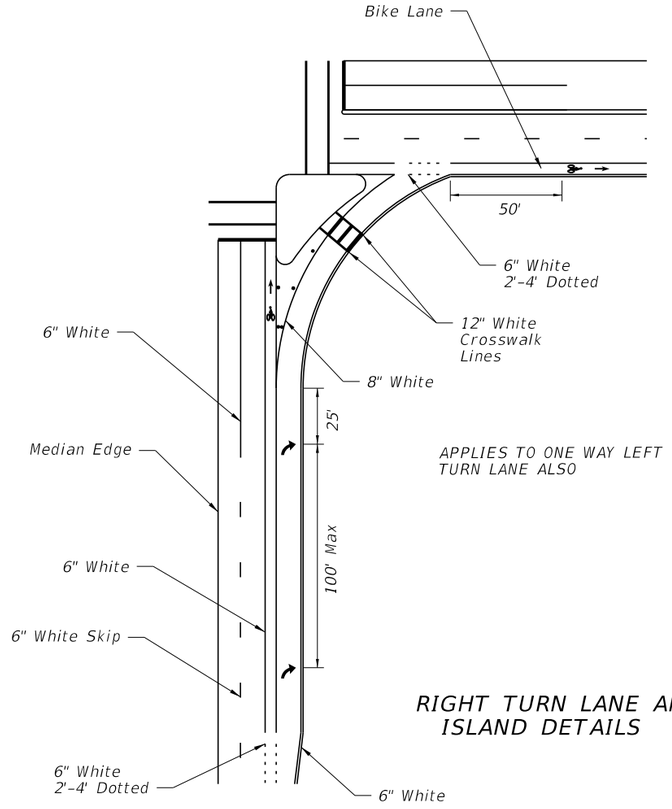


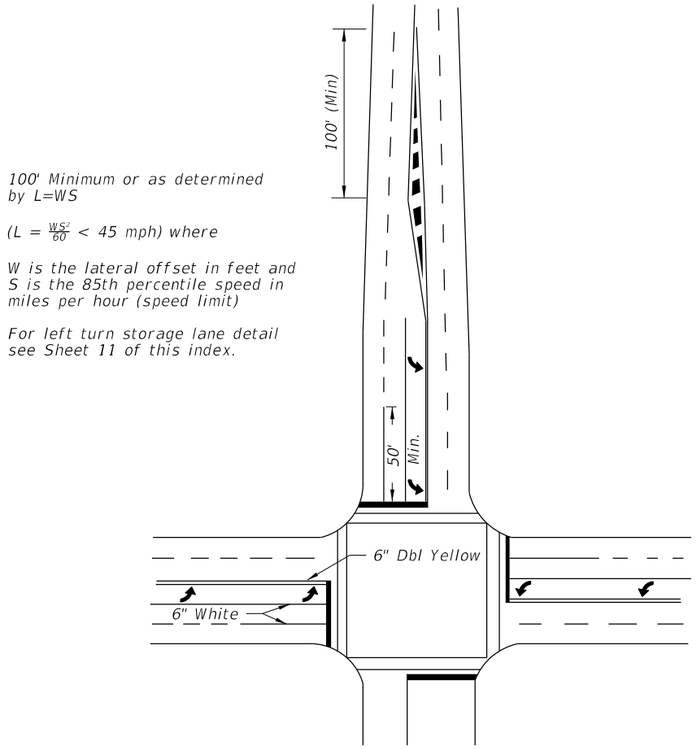

RESTRICTED LEFT TURN MARKING



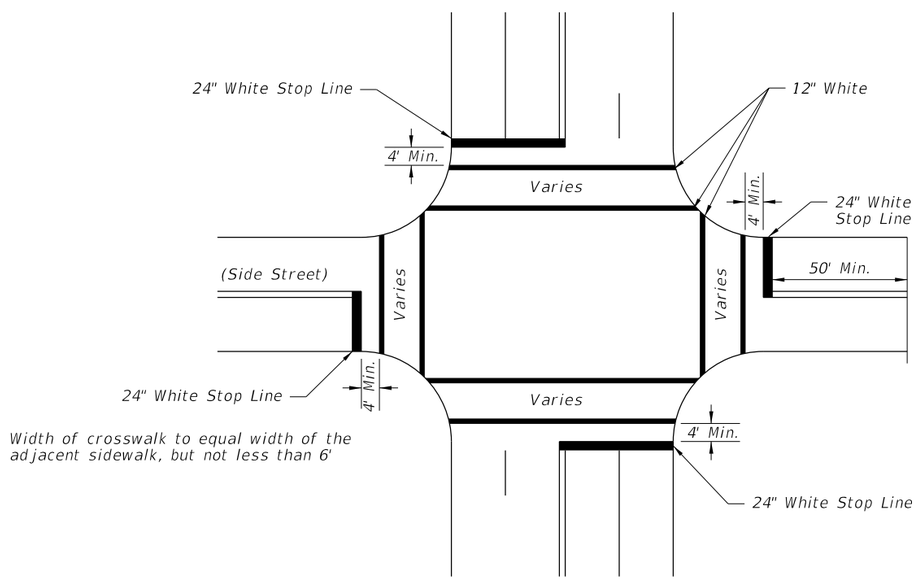

RIGHT TURN LANE DROP AND ISLAND DETAILS
LEFT TURN LANE DROP IS MIRROR IMAGE




RIGHT TURN LANE AND ISLAND DETAILS




TYPICAL INTERSECTION 2 THRU LANES
PLUS LEFT TURN LANE, WITH CROSSWALK




NOTES:

1. When public sidewalk curb ramps are present, refer Index No. 17344 and Index No. 304 for crosswalk widths.
2. Double yellow longitudinal center lines on all roadway approaches shall be extended back 100' for projects involving intersection improvements only.
3. When specified, "stop" message shall be placed 25' back of stop lines.

STOP BARS, CROSSWALKS AND DOUBLE CENTER LINE DETAILS

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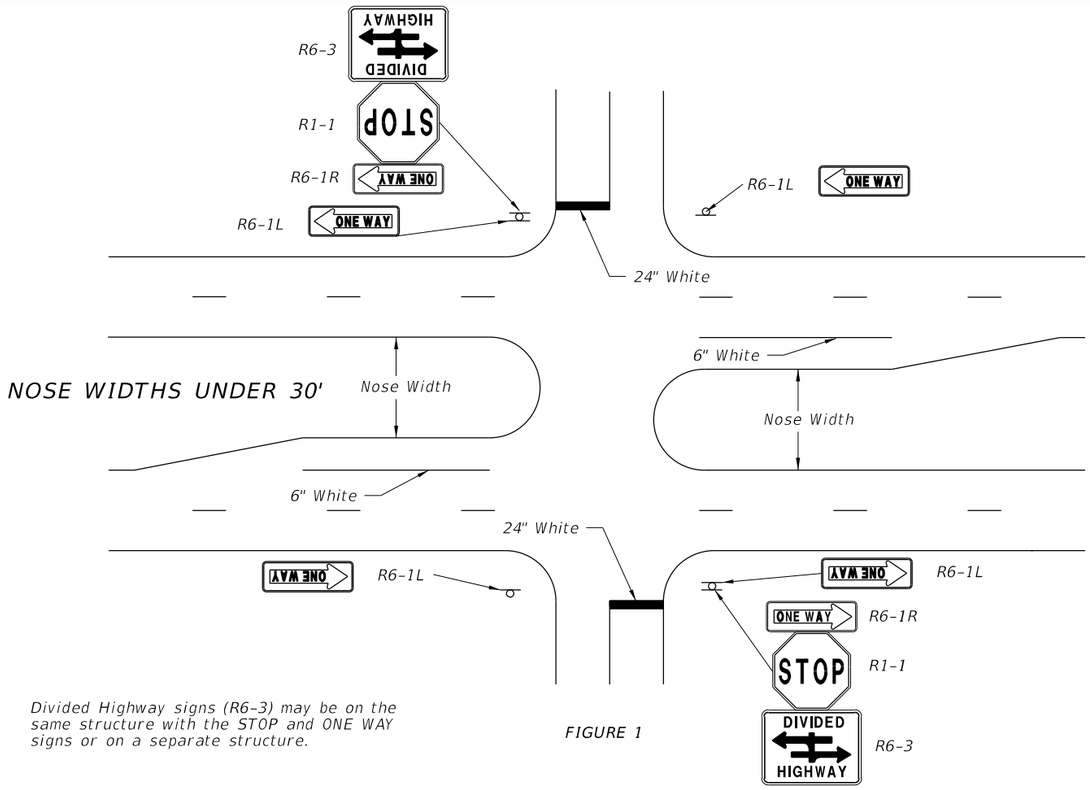



*Divided Highway signs (R6-3) may be on the same structure with the STOP and ONE WAY signs or on a separate structure.*

FIGURE 1

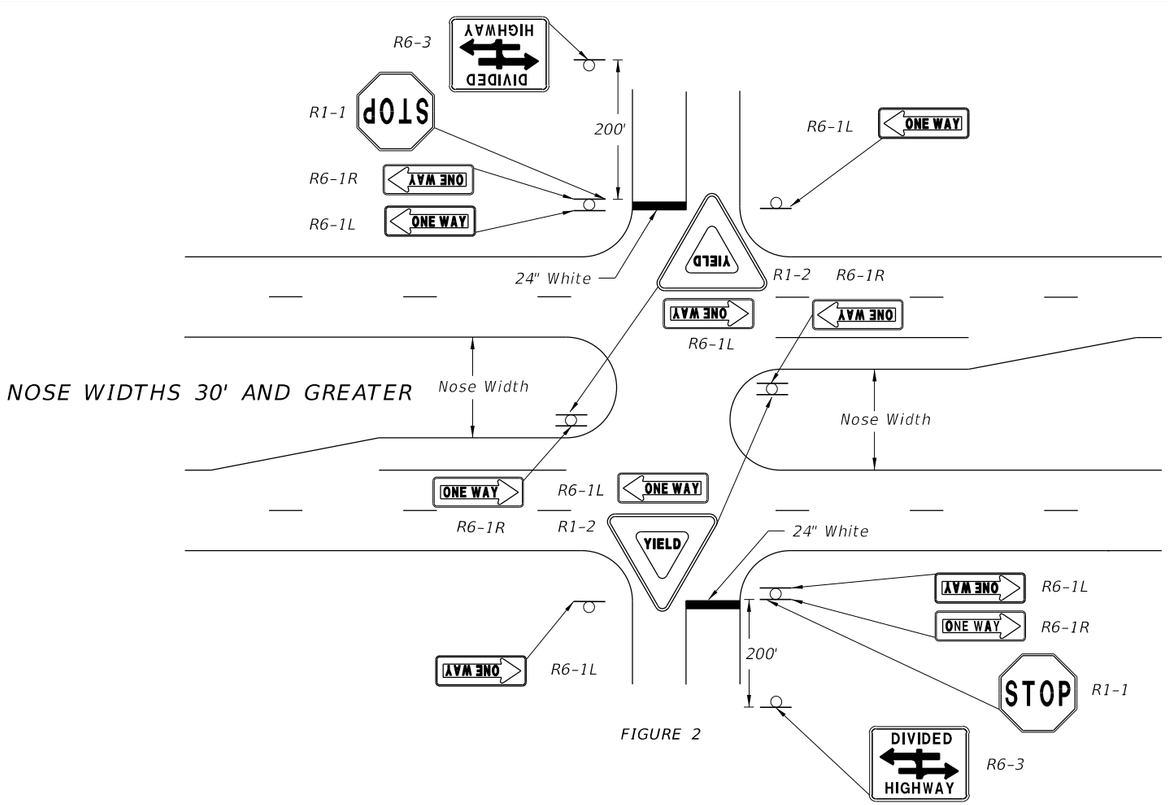
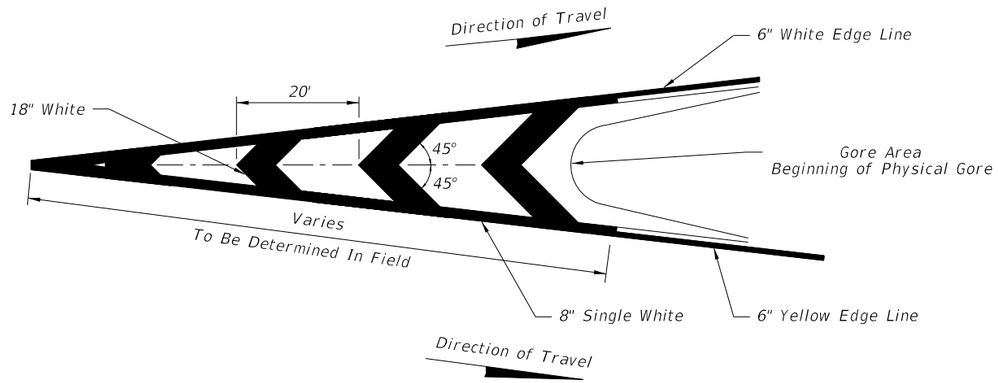


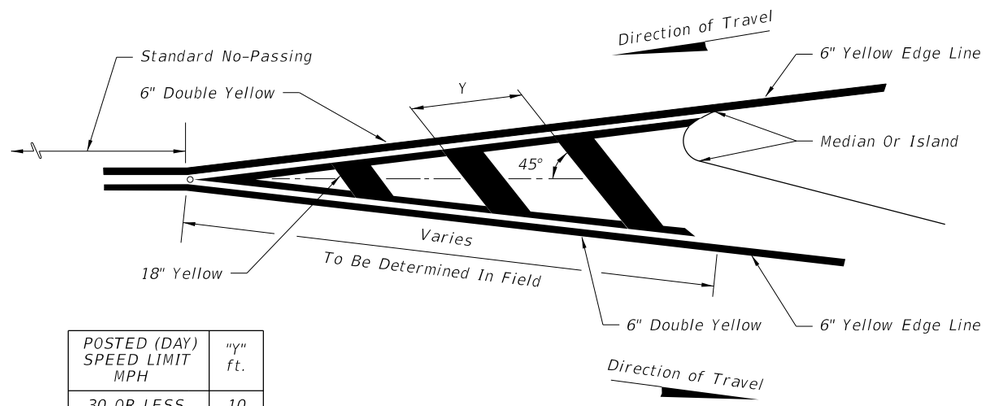

FIGURE 2

## ONE-WAY SIGNS 0N DIVIDED HIGHWAY INTERSECTIONS




## PAVEMENT MARKINGS FOR TRAFFIC CHANNELIZATION AT GORE

## (TRAFFIC FLOWS IN SAME DIRECTION)




| POSTED (DAY) SPEED LIMIT MPH | "Y" ft. |
|---|---|
| 30 OR LESS | 10 |
| 35 | 20 |
| 40 | 20 |
| 45 | 30 |
| 50 OR MORE | 40 |

## PAVEMENT MARKING FOR TRAFFIC SEPARATION

## (TRAFFIC FLOWS IN OPPOSING DIRECTIONS)

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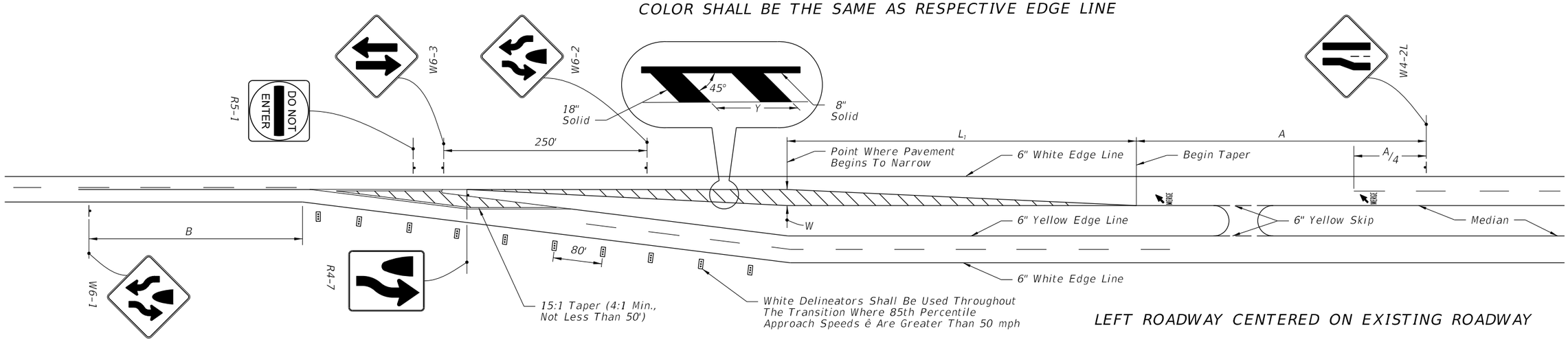
## TYPICAL TRANSITION MARKING
## COLOR SHALL BE THE SAME AS RESPECTIVE EDGE LINE




LEFT ROADWAY CENTERED ON EXISTING ROADWAY

| *S \ **W | TRANSITION DISTANCE $L_1$ (FEET) | | | | | | |
|---|---|---|---|---|---|---|---|
| MPH | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 30 | 120 | 135 | 150 | 165 | 180 | 195 | 210 |
| 35 | 165 | 185 | 205 | 225 | 245 | 265 | 285 |
| 40 | 215 | 240 | 270 | 295 | 320 | 350 | 375 |
| 45 | 360 | 405 | 450 | 495 | 540 | 585 | 630 |
| 50 | 400 | 450 | 500 | 550 | 600 | 650 | 700 |
| 55 | 440 | 495 | 550 | 605 | 660 | 715 | 770 |
| 60 | 480 | 540 | 600 | 660 | 720 | 780 | 840 |
| 65 | 520 | 585 | 650 | 715 | 780 | 845 | 910 |

$L_1 = WS$ (45 MPH or Greater)

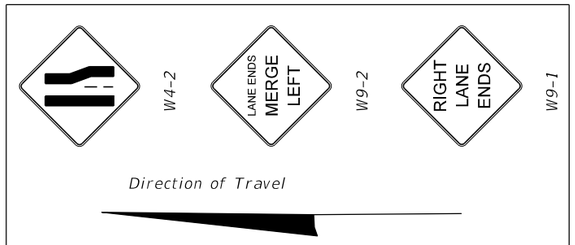
$L_1 = \frac{WS^2}{60}$ ($\leq$40 MPH)

*Design Speed

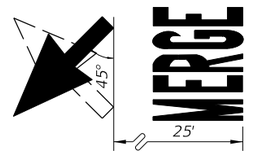
**Lateral offset

| SPEED* MPH | "A" (FT.) | "B" (FT.) |
|---|---|---|
| 60 | --- | 640 |
| 55 | 950 | 595 |
| 50 | 850 | 550 |
| 45 | 750 | 500 |
| 40 | 650 | 455 |
| 30 | 450 | 365 |

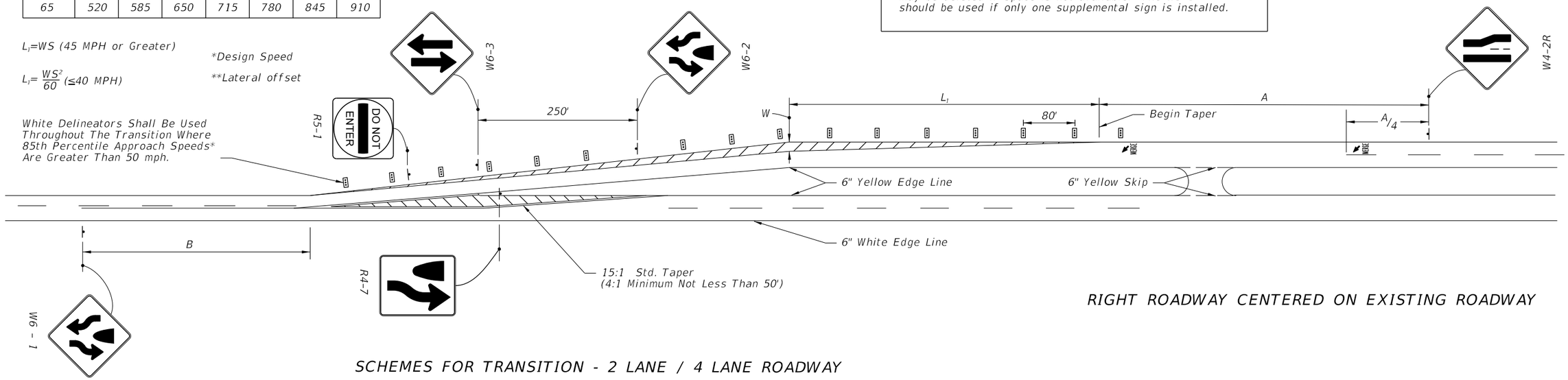
| POSTED (DAY) SPEED LIMIT MPH | "Y" (FT.) |
|---|---|
| 30 OR LESS | 10 |
| 35 | 20 |
| 40 | 20 |
| 45 | 30 |
| 50 OR MORE | 40 |




NOTE:
W9-1 & W9-2 are supplemental to the W4-2 sign and may be deleted if space is not available. The W9-1 should be used if only one supplemental sign is installed.




PAVEMENT MARKING DETAIL




RIGHT ROADWAY CENTERED ON EXISTING ROADWAY

SCHEMES FOR TRANSITION - 2 LANE / 4 LANE ROADWAY

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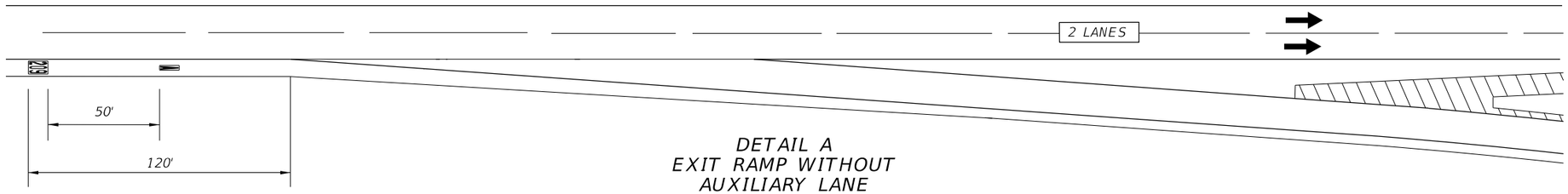
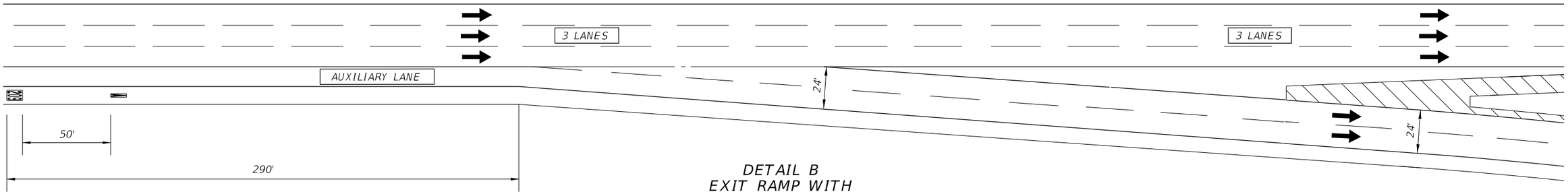
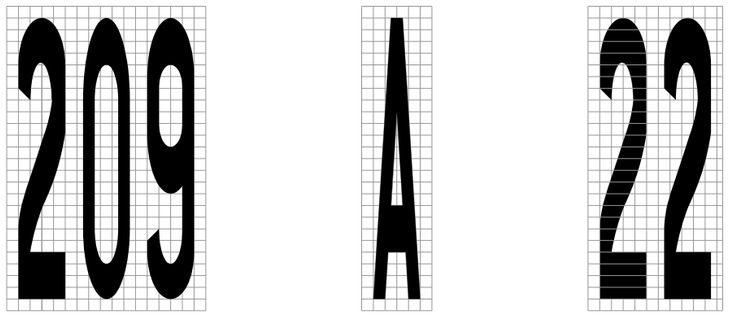



DETAIL A
EXIT RAMP WITHOUT
AUXILIARY LANE

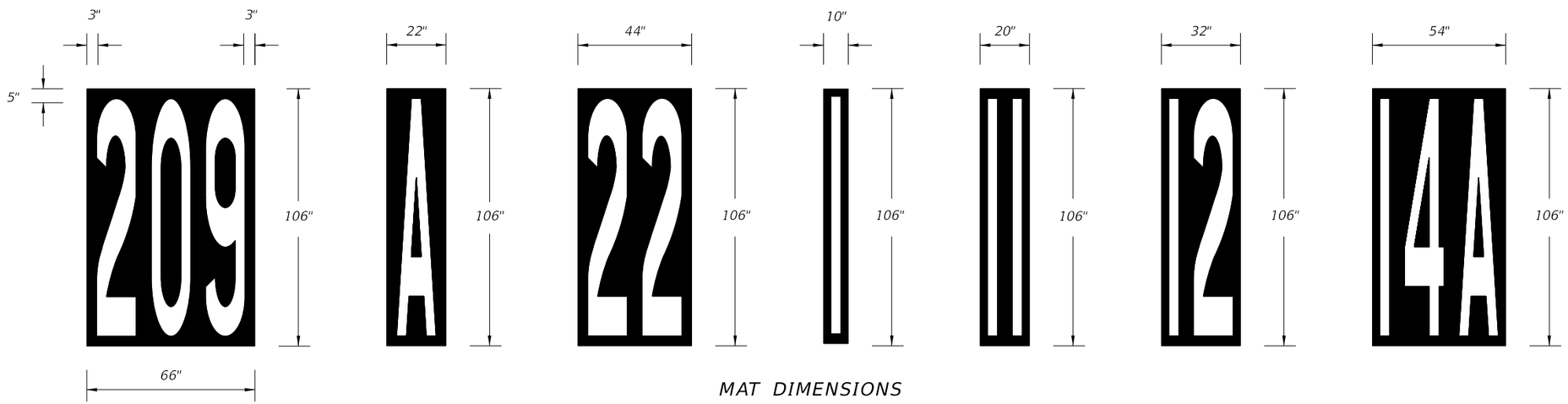
LAYOUT FOR 1, 2 AND 3 DIGIT NUMBERS AND LETTERS




DETAIL B
EXIT RAMP WITH
AUXILIARY LANE




MESSAGE SIZE AND SPACING
4" X 4" squares




MAT DIMENSIONS

NOTES:

1. Messages shall meet requirements of Specification Section 971-6 and Section 711.
2. The thickness of the preformed message shall be 125 mils.
3. The message shall consist of white letters and numbers with black contrasting material. The black material shall meet the mat dimensions shown and have a minimum skid resistance value of 55 BPN.
4. The "EXIT NUMBER" position remains the same distance from the beginning of taper regardless of the number of lines of information.

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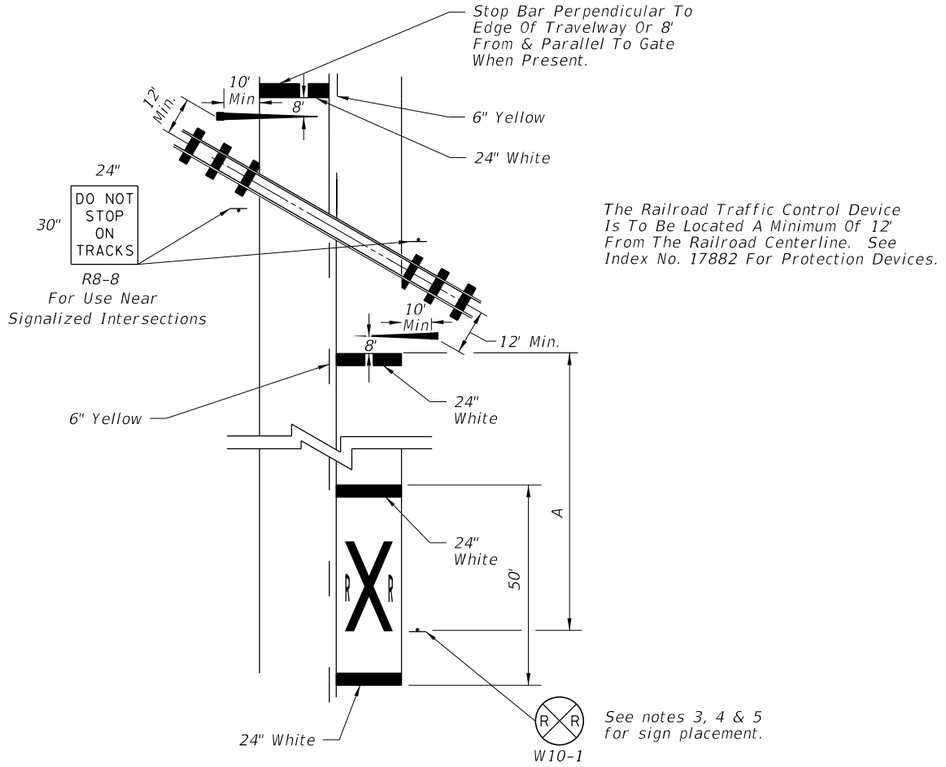
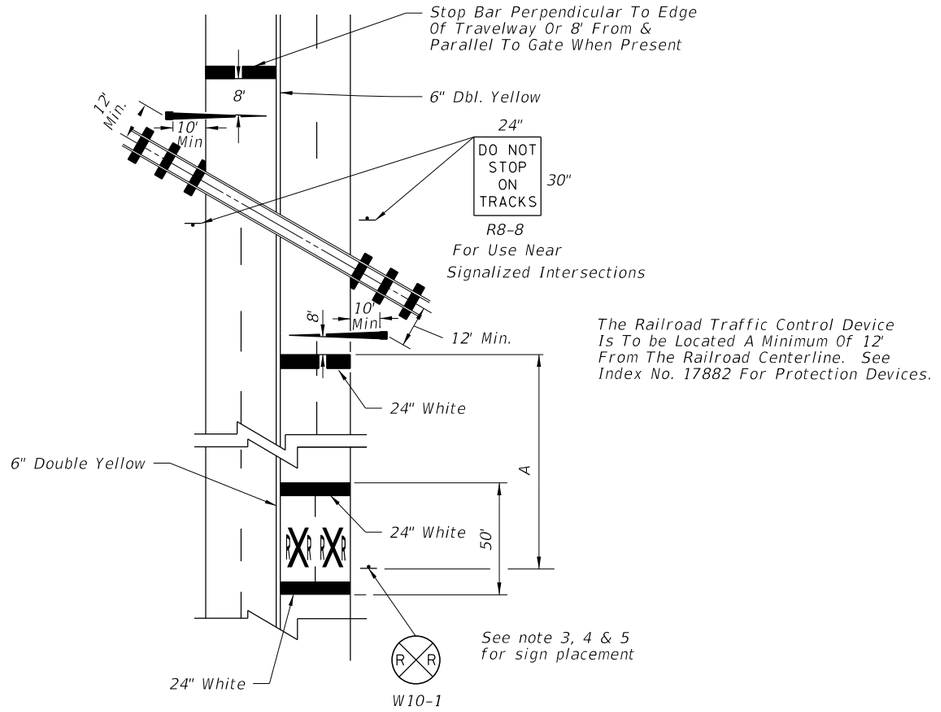
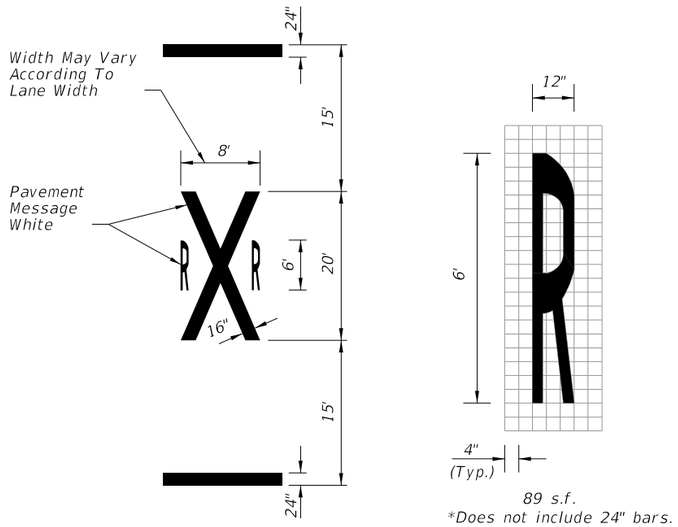


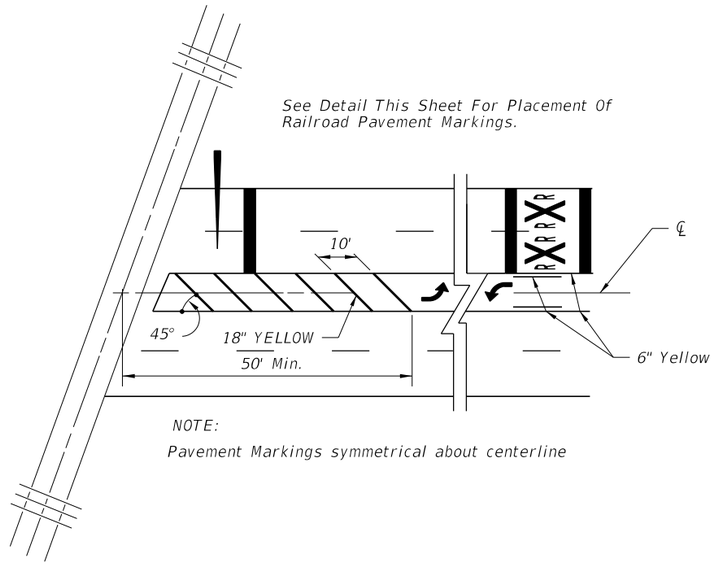

RAILROAD CROSSING AT 2-LANE ROADWAY




RAILROAD CROSSING AT 4-LANE ROADWAY




TYPICAL PAVEMENT MARKINGS FOR R/R CROSSING




PAVEMENT MARKINGS FOR TERMINATION OF TWO WAY LEFT TURN AT R/R CROSSINGS

NOTES:

1. When computing pavement messages, quantities do not include transverse lines.
2. When dynamic devices are not present or are to be installed, the crossbuck shall be located at the future location of the RR gate or signal and gate in accordance with Index No. 17882.
3. Placement of sign W10-1 in a residential or business district, where low speeds are prevalent. The W10-1 sign may be placed a minimum distance of 100' from the crossing. Where street intersections occur between the RR pavement message and the tracks an additional W10-1 sign & additional Pavement message should be used.
4. Recommended location for FTP-61-06 or FTP-62-06 sign, 100' urban & 300' rural in advance of the crossing.
5. A portion of the pavement marking symbol should be directly opposite the W10-1 sign.

| SPEED MPH | " A " IN FT. |
|---|---|
| 60 | 400 |
| 55 | 325 |
| 50 | 250 |
| 45 | 175 |
| 40 | 125 |
| 35 | 100 |
| URBAN | 85 MIN. |

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PAVEMENT MARKINGS

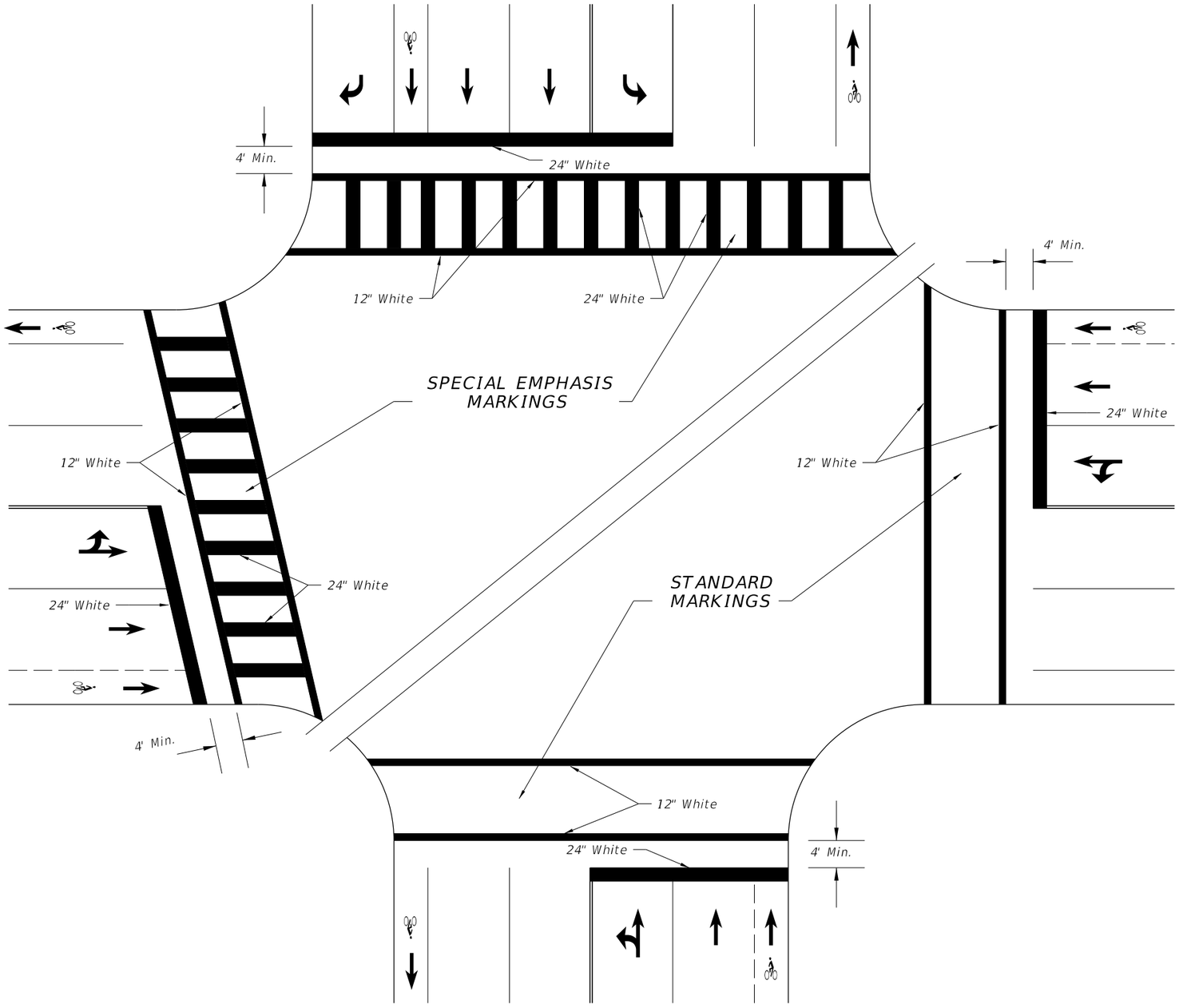
## GENERAL NOTES

1. For traffic and pedestrian signal installation, refer to Index No. 17721 through 17890.
2. For public sidewalk curb ramps, refer to Index No. 304.
3. For pavement marking and sign installation, refer to Indexes 11200 through 17356.
4. Crosswalk minimum widths: Intersection Crosswalk 6'. Midblock Crosswalk 10'.
5. All crosswalk marking must be white.
6. Longitudinal markings in Special Emphasis Crosswalk must be 24" wide and spaced to avoid the wheel path of vehicles (see detail). Center the longitudinal markings at each lane line. Place additional longitudinal markings at the center of each lane (1/2W). The maximum spacing allowed between longitudinal markings is 60".

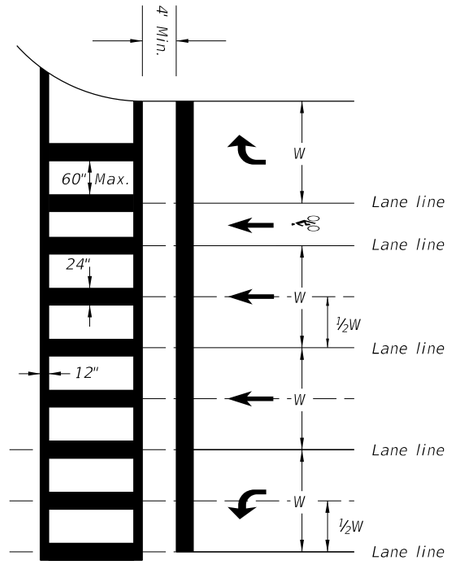
   When the Crosswalk is skewed to the lane lines, the longitudinal markings should be parallel to the lane lines.

   24" Longitudinal Bars in Special Emphasis Crosswalk must be preformed thermoplastic.

   12" Transverse lines in the Special Emphasis Crosswalk may be standard thermoplastic or preformed thermoplastic.




SPECIAL EMPHASIS AND STANDARD CROSSWALKS
SIGNALIZED OR STOP SIGN CONTROLLED INTERSECTION




SPECIAL EMPHASIS
CROSSWALK MARKING
DETAIL

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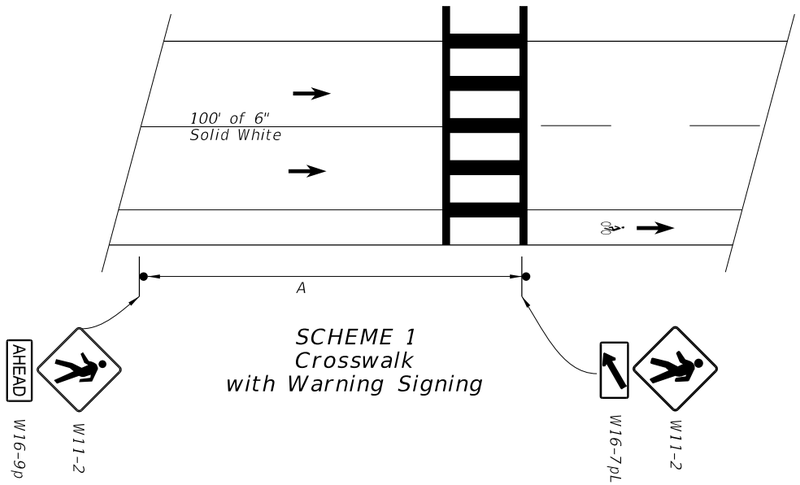
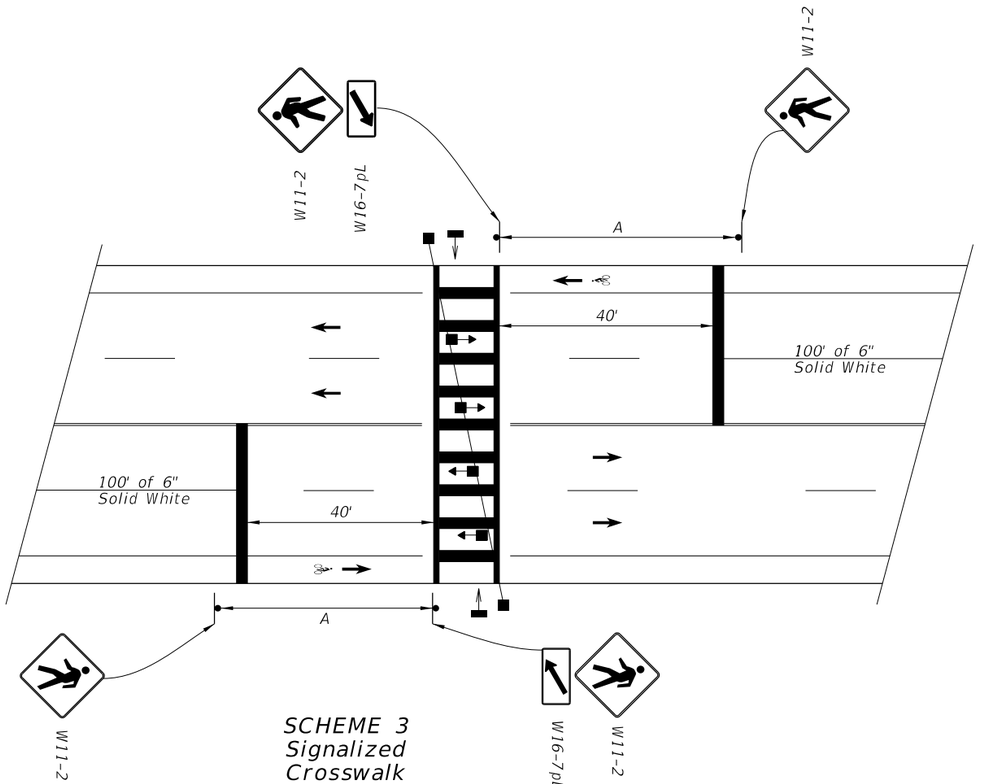
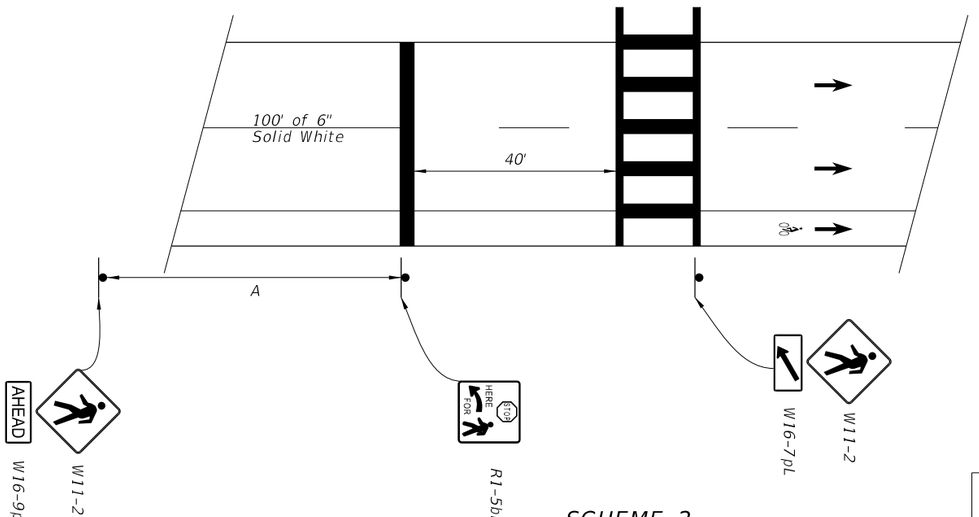



SCHEME 1
Crosswalk
with Warning Signing




SCHEME 3
Signalized
Crosswalk




SCHEME 2
Crosswalk
with Stop Signing

| APPROACH SPEED MPH | A-SUGGESTED DISTANCE (Ft.) |
|---|---|
| 25 Or Less | 200 |
| 26 To 35 | 250 |
| 36 To 45 | 300 |

1. Plans shall indicate which crosswalk scheme is to be used.
2. The details shown do not depict the signing and markings for multi-lane roadways with divided medians. For these applications, additional signs shall be installed on the median side. Minimum width of Mid-Block Crosswalks is 10'.
3. All mid-block crosswalks shall use special emphasis crosswalk markings.
4. Crosswalk marking shall be preformed marking materials.

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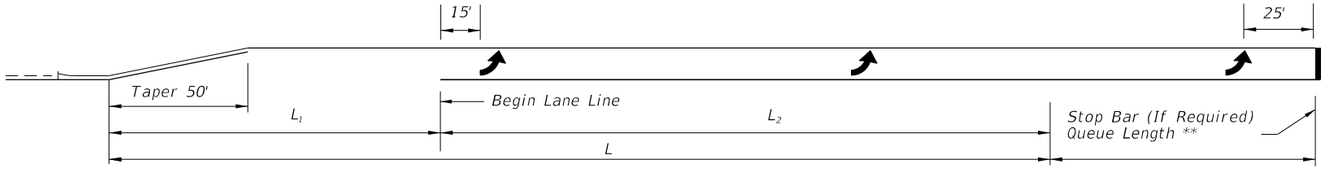
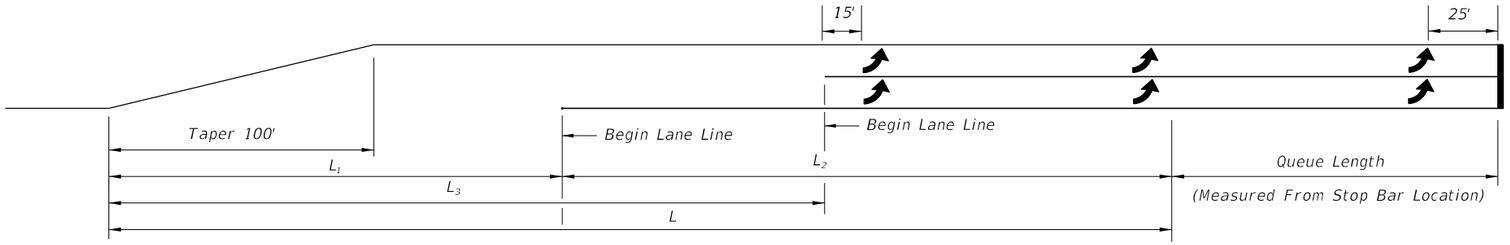
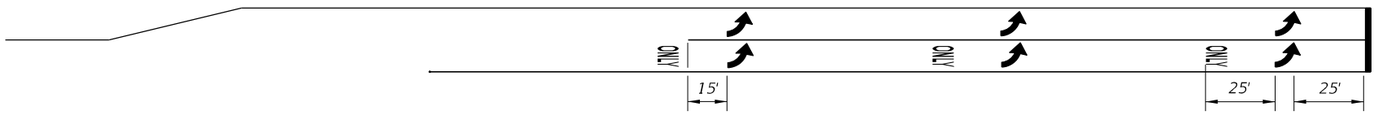



SINGLE LEFT TURNS

** Queue Length Is Measured From The Median Nose Radial Point Or, When A Stop Bar Is Required, From The Stop Bar.

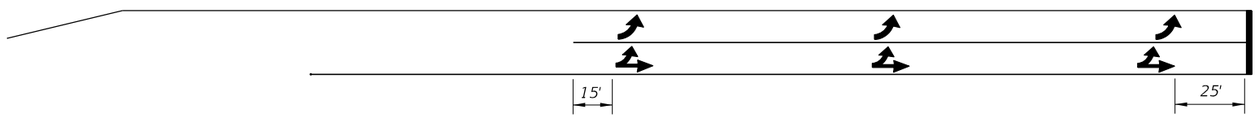



DOUBLE LEFT TURNS




The ONLY pavement message is required for turn lanes, where the thru lane becomes turn lane.

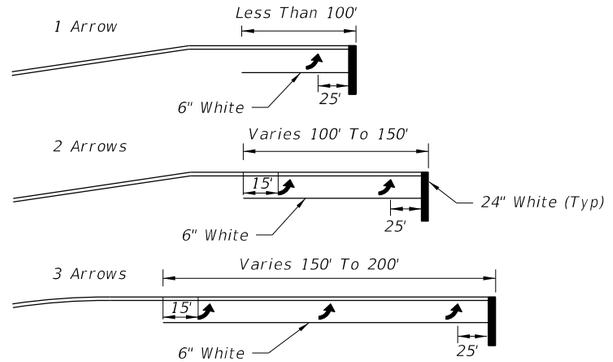
Through Lane Becomes Exclusive Left Turn




Through Lane Becomes Optional Left Turn

DOUBLE LEFT TURN MARKINGS

| | TURN LANES ◦ CURBED AND UNCURBED MEDIANS | | | | | | |
|---|---|---|---|---|---|---|---|
| | | URBAN CONDITIONS | | | RURAL CONDITIONS | | |
| Design Speed (mph) | Clearance Distance $L_1$ | Brake To Stop Distance $L_2$ | Total Decel. Distance L | Clearance Distance $L_3$ | Brake To Stop Distance $L_2$ | Total Decel. Distance L | Clearance Distance $L_3$ |
| 35 | 70' | 75' | 145' | 110' | — — | — — | — — |
| 40 | 80' | 75' | 155' | 120' | — — | — — | — — |
| 45 | 85' | 100' | 185' | 135' | — — | — — | — — |
| 50 | 105' | 135' | 240' | 160' | 185' | 290' | 160' |
| 55 | 125' | — — | — — | — — | 225' | 350' | 195' |
| 60 | 145' | — — | — — | — — | 260' | 405' | 230' |
| 65 | 170' | — — | — — | — — | 290' | 460' | 270' |




Arrow should be evenly spaced between first and last arrow. Turn lanes longer than 200' add one arrow for each 100' additional length.

ARROW SPACING

NOTES:

1. The "Begin Lane Line" locations are based on the standard lengths shown in Design Standard 301. These locations must be adjusted on a case by case basis for turn lanes not meeting the standard lengths.
2. Yellow left turn edge marking may be used adjacent to raised curb or grass medians if lane use is not readily apparent to drivers approaching a left turn storage lane.
3. Refer to Design Standard Index 301 for Roadway Details.
4. This Index also applies to right turn lanes.

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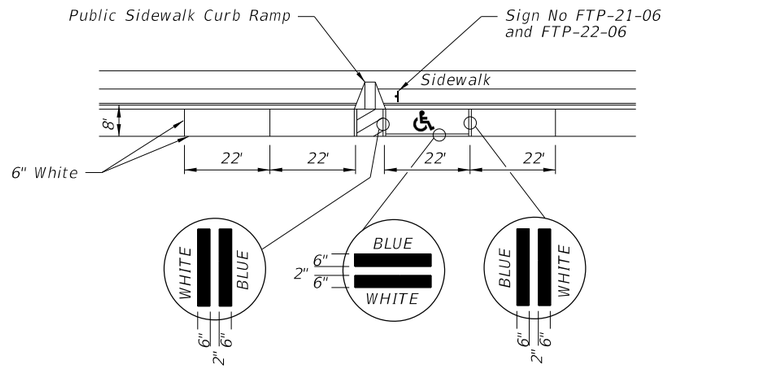
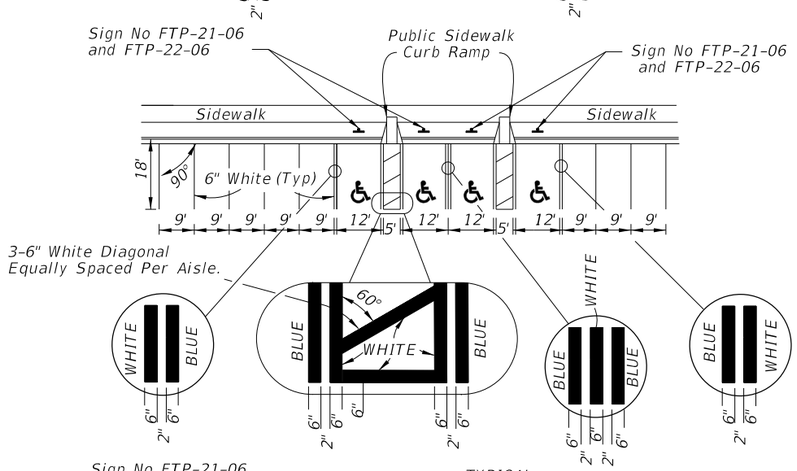
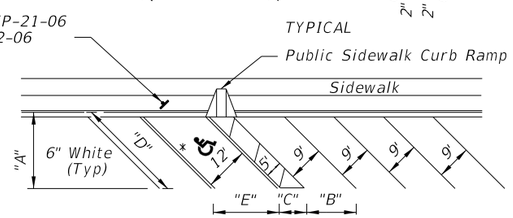


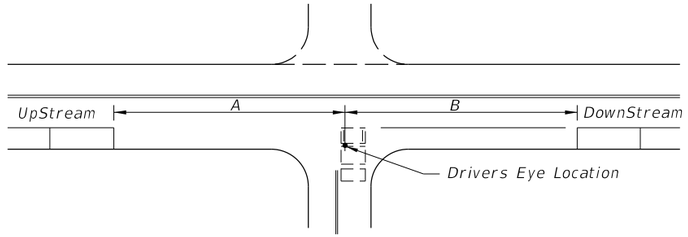

* FOR ACCESSIBLE MARKINGS – SEE ABOVE

| | "DIMENSIONS" | | | | |
|---|---|---|---|---|---|
| ∠ θ | "A" | "B" | "C" | "D" | "E" |
| 45° | 19'-1" | 12'-9" | 7'-0" | 27'-0" | 17'-0" |
| 60° | 20'-1" | 10'-5" | 5'-9" | 23'-2" | 13'-10" |

NOTES:

1. Dimensions are to the centerline of markings.
2. An Access Aisle is required for each accessible space when angle parking is used.
3. Criteria for pavement markings only, not public sidewalk curb ramp locations. For ramp locations refer to plans.
4. Blue pavement markings shall be tinted to match shade 15180 of Federal Standards 595a.
5. The FTP-22-06 panal shall be mounted below the FTP-21-06 sign.

## PAVEMENT MARKING FOR PUBLIC SIDEWALK CURB RAMPS IN REST AREAS

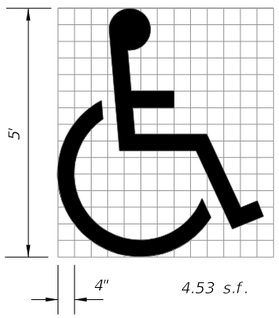


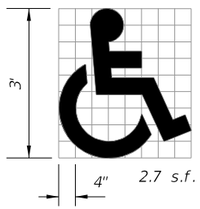

| SPEED MPH | UP STREAM (A) | DOWN STREAM (B) | |
|---|---|---|---|
| | | 2 LANE | 4 LANE |
| 0-30 | 85' | 60' | 45' |
| 35 | 100' | 70' | 50' |

NOTES

1. Distances measured longitudinally along the street from driver location of entering vehicle to end of parking restriction.
2. Distances applicable to intersecting street, major driveways and other driveways to the extent practical.
3. For nonsignalized intersections, the values above shall be compared with the values for signalized intersections and the maximum restrictions implemented. These restrictions apply to both accessible and nonaccessible parking.

## MINIMUM PARKING RESTRICTION FOR NONSIGNALIZED INTERSECTIONS



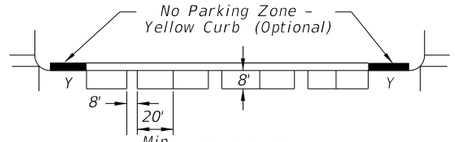

Use of pavement symbol in accessible parking spaces is optional, when used the symbol shall be 3' or 5' high and white in color.

## UNIVERSAL SYMBOL OF ACCESSIBILITY

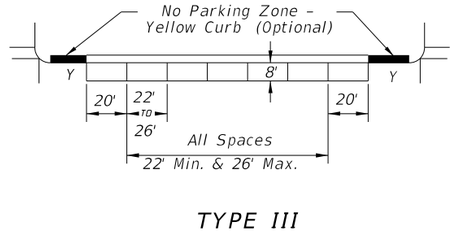
## GENERAL NOTES (Signalized & Nonsignalized)

1. For entrances to a one-way street, the downstream restriction may be reduced to 20'.
2. Parking shall not be allowed within 20' of a crosswalk.
3. All parking lane markings shall be 6" white.
4. Parking lane lines shall be broken at driveways.
5. Refer to Chapter 316, Fla. Statutes, for laws governing parking spaces.
6. Where curb and gutter is used, the gutter pan width may be included as part of the minimum width of parking lane, but desirably the lane width should be in addition to that of the gutter pan.

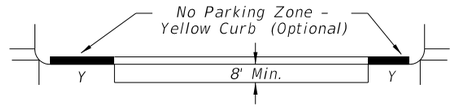
### TYPE I




### TYPE II




### TYPE III




| SPEED LIMIT MPH | SIGNALIZED INTERSECTIONS |
|---|---|
| 0-30 | 30' |
| 35 | 50' |

DISTANCE FROM CURB RADIUS (Y)

PARKING RESTRICTION (FT.) FOR SIGNALIZED INTERSECTION

NOTES:

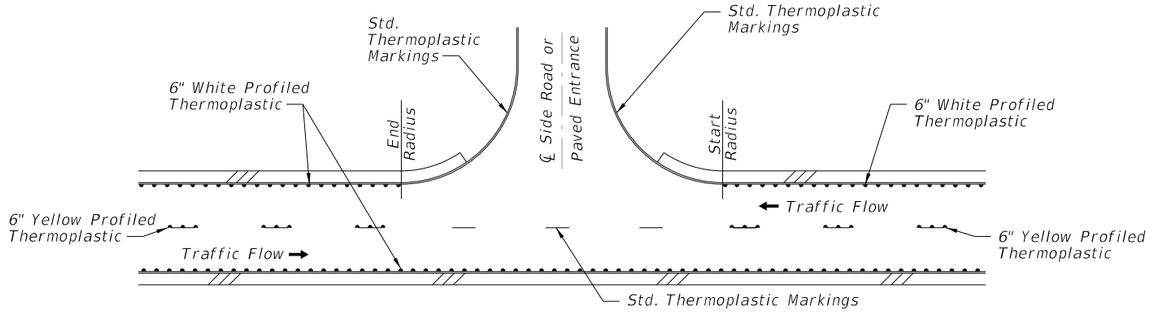
1. Parking restrictions measured from curb radius point.
2. Restrictions for accessible parking are the same as those applied to nonsignalized intersections.

## MINIMUM PARKING RESTRICTION FOR SIGNALIZED INTERSECTION

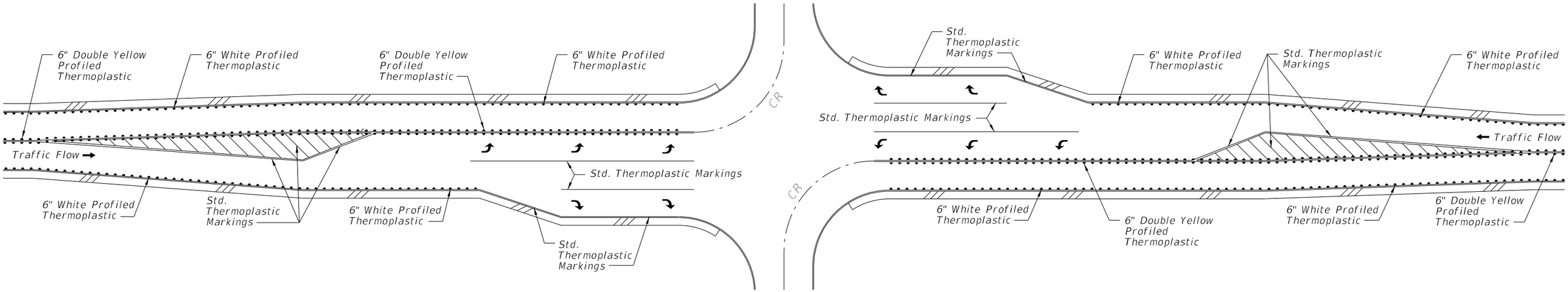
10/14/2016 8:38:24 AM

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FDOT | FY 2017-18 DESIGN STANDARDS | 17346 | 15 of 17 |

PAVEMENT MARKINGS




TYPICAL RURAL INTERSECTION WITHOUT TURN LANES




TYPICAL RURAL INTERSECTION WITH TURN LANES

## GENERAL NOTES:

1. Remove raised retroreflective pavement markers when in conflict with the installation of the centerline profiled thermoplastic pavement markings. The cost of removal is included in the cost of the profiled thermoplastic pavement marking.

2. Replacement of retroreflective pavement markers removed during the installation of the centerline profiled thermoplastic pavement markings will be paid for under Pay Item 706.

# PROFILED THERMOPLASTIC MARKINGS 2 LANE ROADWAYS

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FDOT FY 2017-18 DESIGN STANDARDS | PAVEMENT MARKINGS | 17346 | 16 of 17 |

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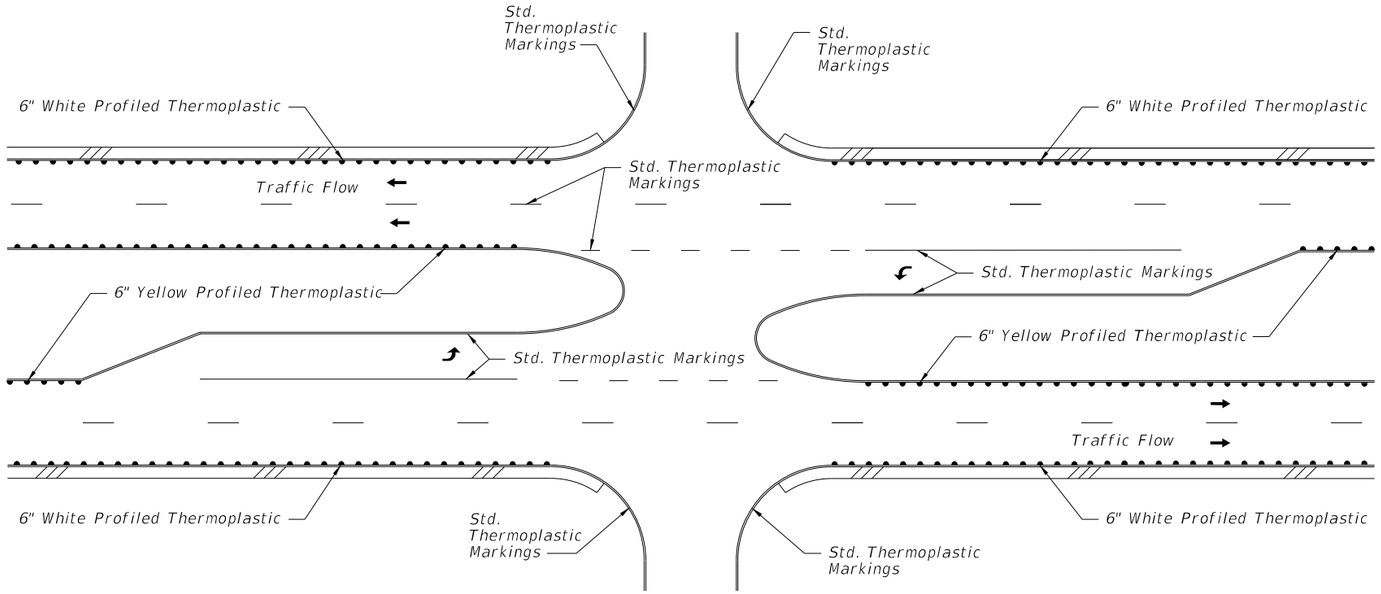
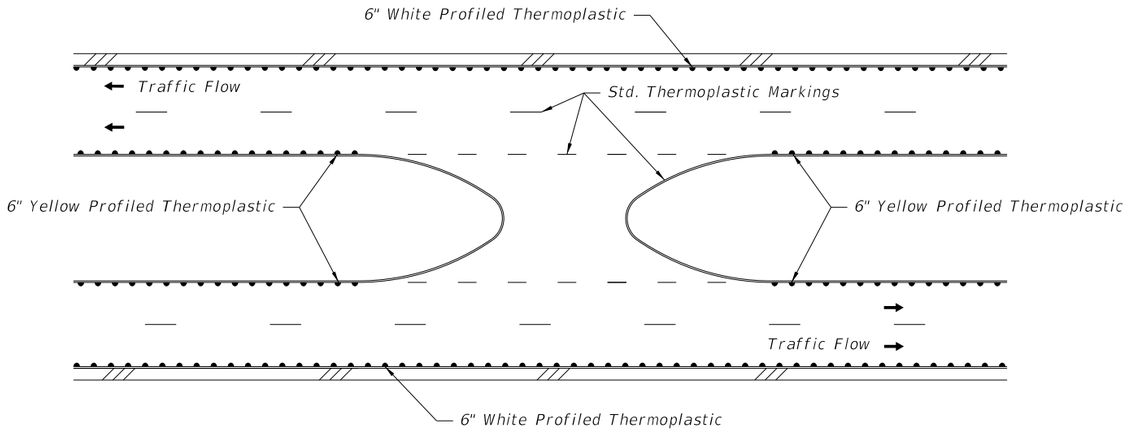
REFERENCE:

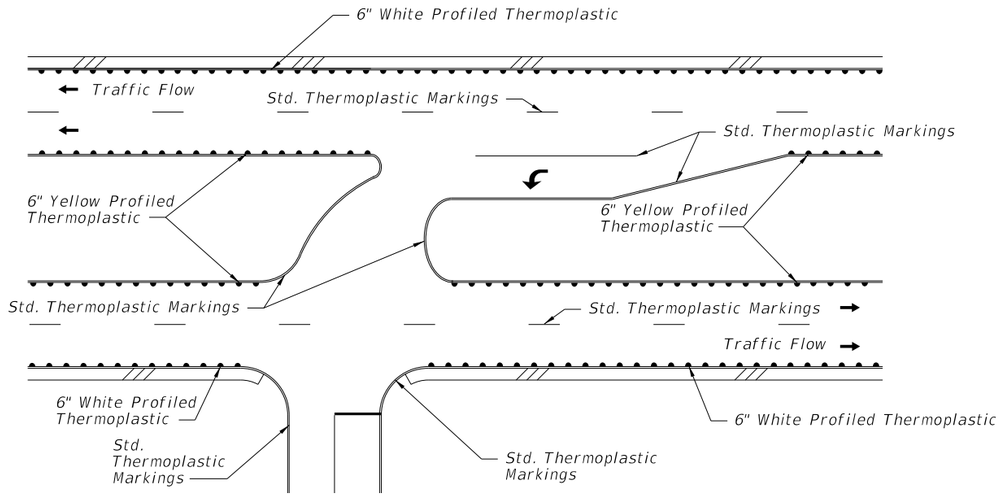
See Profiled Thermoplastic Markings General Notes on Sheet 13.




TYPICAL RURAL INTERSECTION




TYPICAL RURAL MEDIAN OPENING



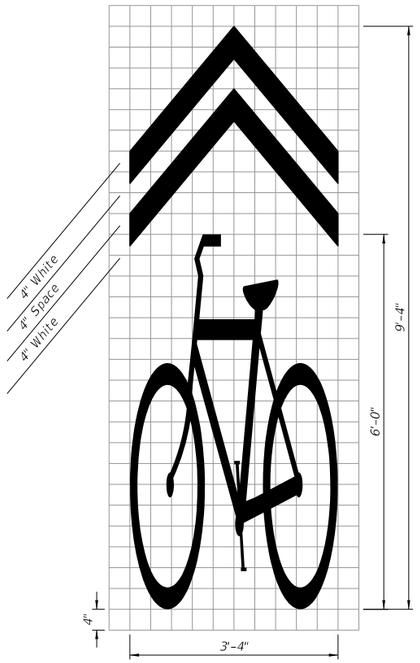

TYPICAL RURAL DIRECTIONAL INTERSECTION

10/14/2016 8:38:29 AM

PROFILED THERMOPLASTIC MARKINGS MULTI-LANE ROADWAYS

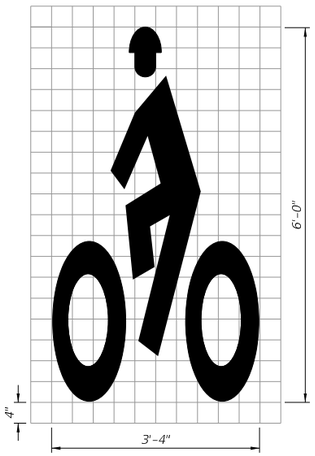
| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | PAVEMENT MARKINGS | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | | | 17346 | 17 of 17 |

8.1 S.F.



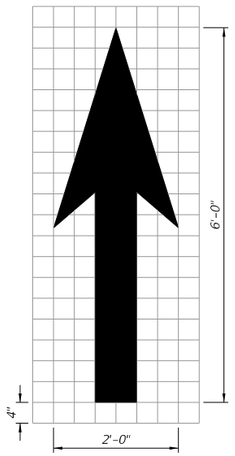

Shared Lane Marking (SLM)

6.3 S.F.



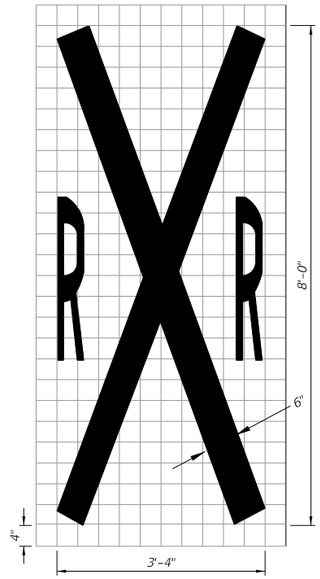

Helmeted Bicyclist Symbol

4.2 S.F.




Bike Lane Arrow

9.0 S.F.




Railroad Crossing
(For Shared Use Path Only)

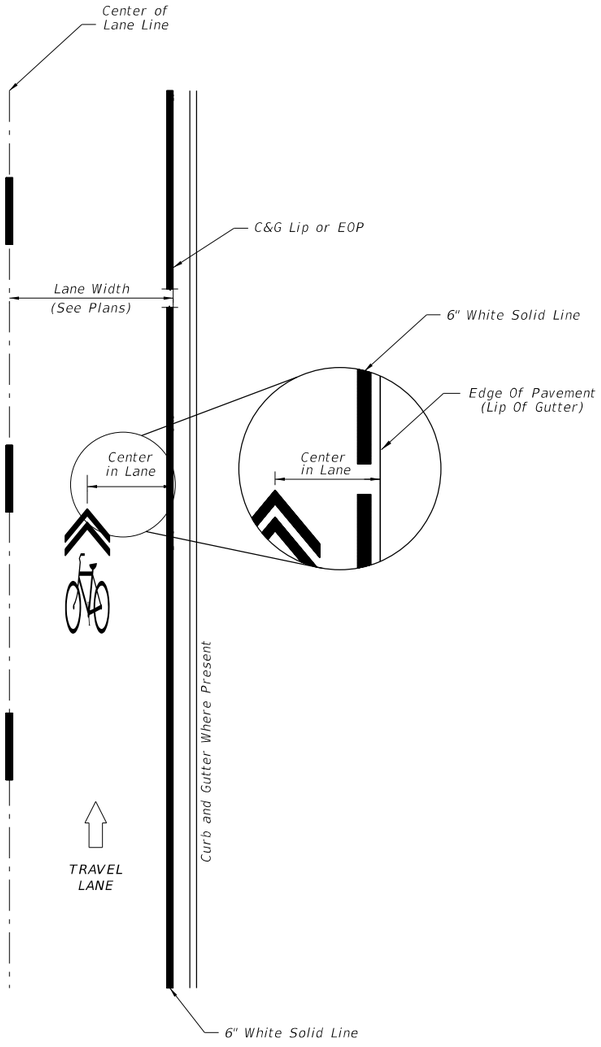
NOTES:

1. All bicycle markings and pavement messages shall be White.
2. All bicycle markings shall be preformed thermoplastic.
3. Recommended placement of bicycle lane markings:
   a) At the beginning of a bicycle lane, on the far side of major intersections, and prior to and within the bicycle lane keyhole.
   b) Along the roadway as needed to provide a maximum spacing of 1,320 feet for posted speeds less than or equal to45 mph, 2,640 feet for a posted speed of 50 mph or greater.
4. Recommended spacing for shared lane marking (SLM): Immediately after intersections and at a maximum spacing of 500 feet.

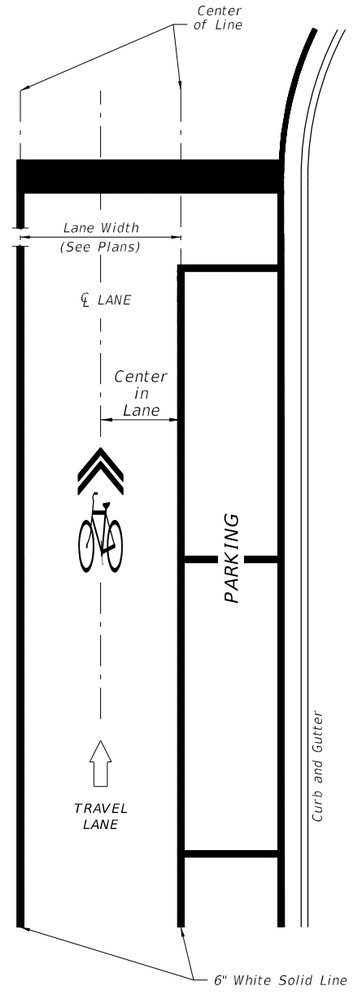
STANDARD PAVEMENT MARKING
MESSAGE LAYOUTS

10/14/2016 8:39:42 AM

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/15 | | | FDOT FY 2017-18 DESIGN STANDARDS | BICYCLE MARKINGS | 17347 | 1 of 5 |




SCENARIO #1
LANE WIDTH ≤ 14'

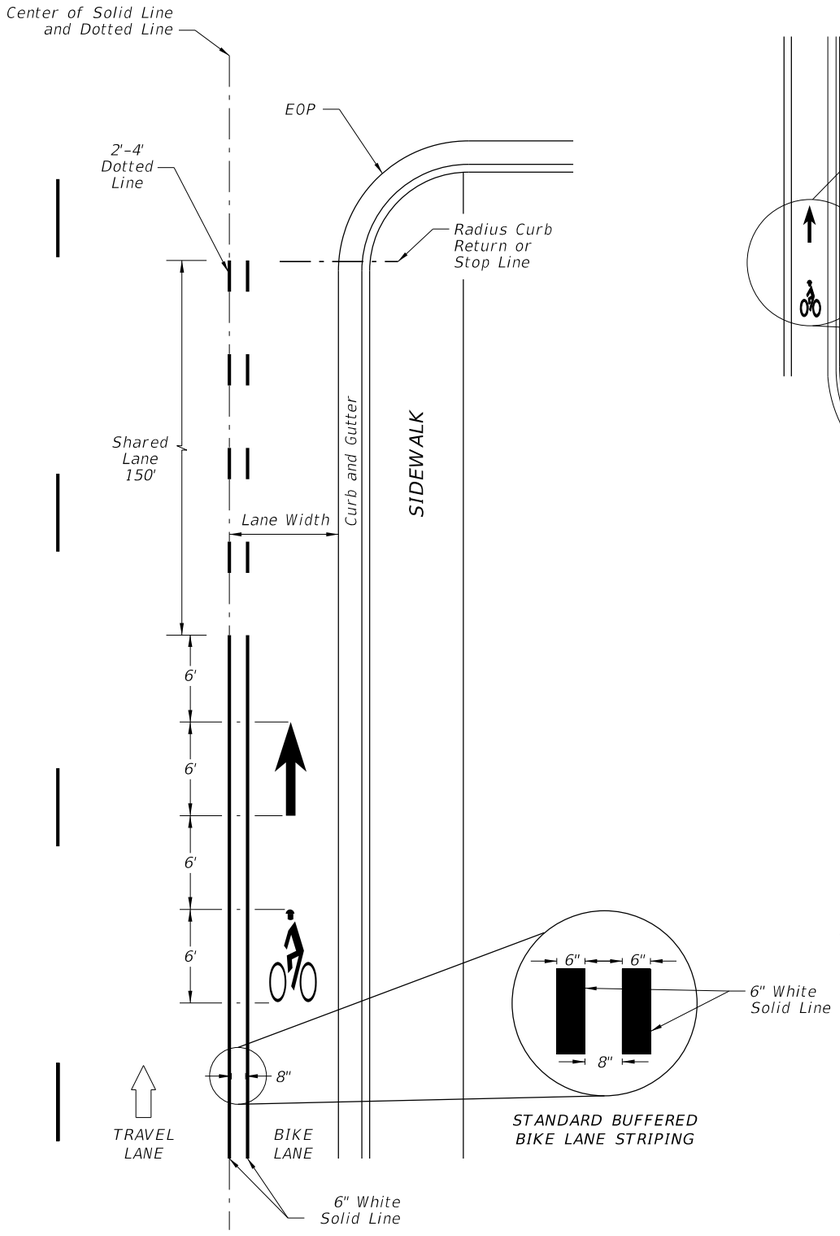



SCENARIO #2
ADJACENT TO PARKING

SHARED LANE MARKINGS

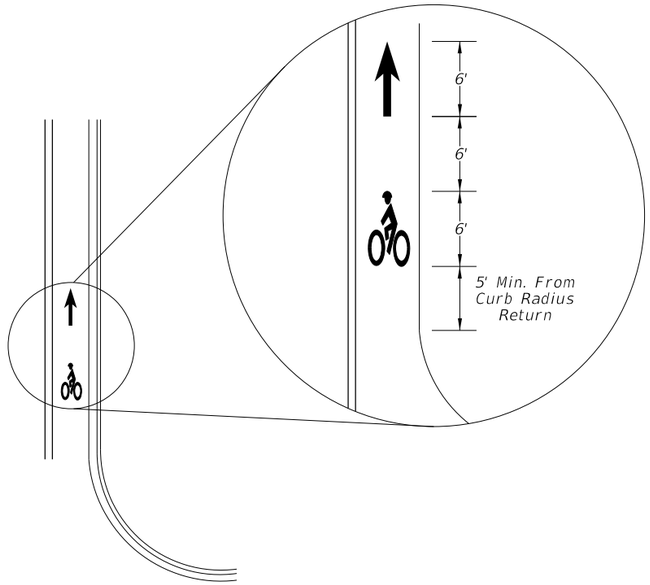
10/14/2016 8:39:44 AM

| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | BICYCLE MARKINGS | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/18/14 | | | | | 17347 | 2 of 5 |




APPROACH TO INTERSECTIONS DETAILS

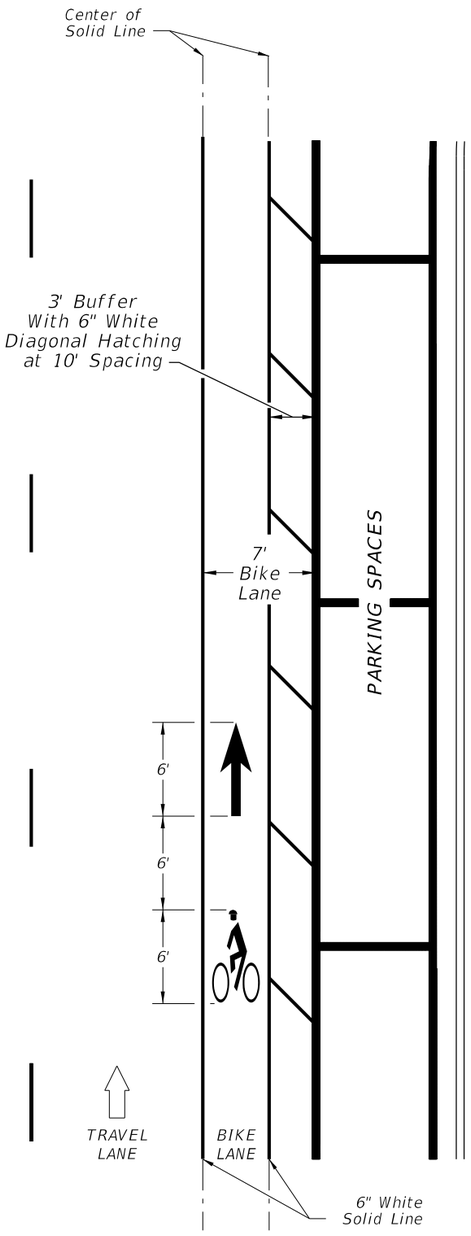
STANDARD BUFFERED BIKE LANE STRIPING




FAR SIDE OF INTERSECTION DETAIL




BUS BAY DETAIL
CURB AND GUTTER TYPICAL SECTION

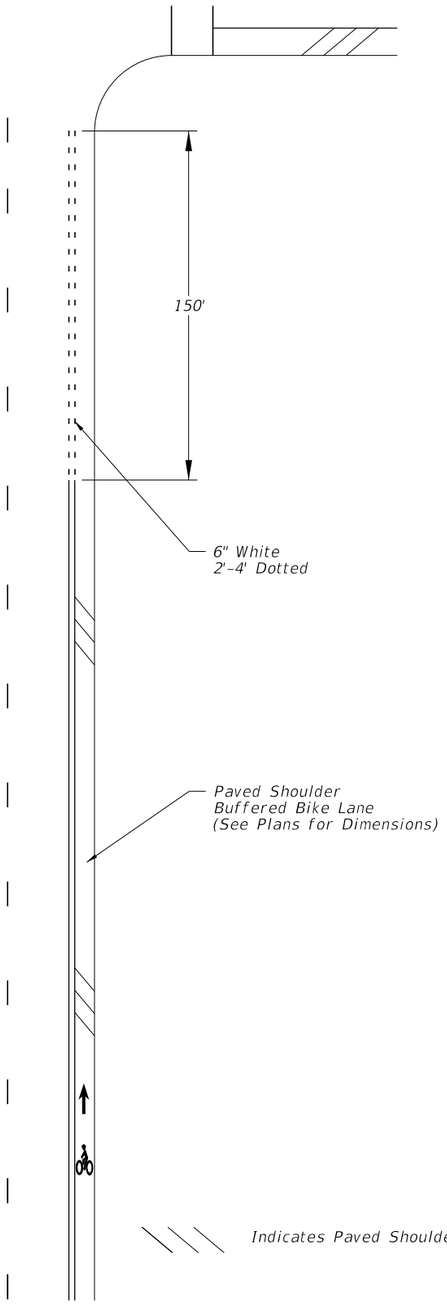



ADJACENT TO PARKING

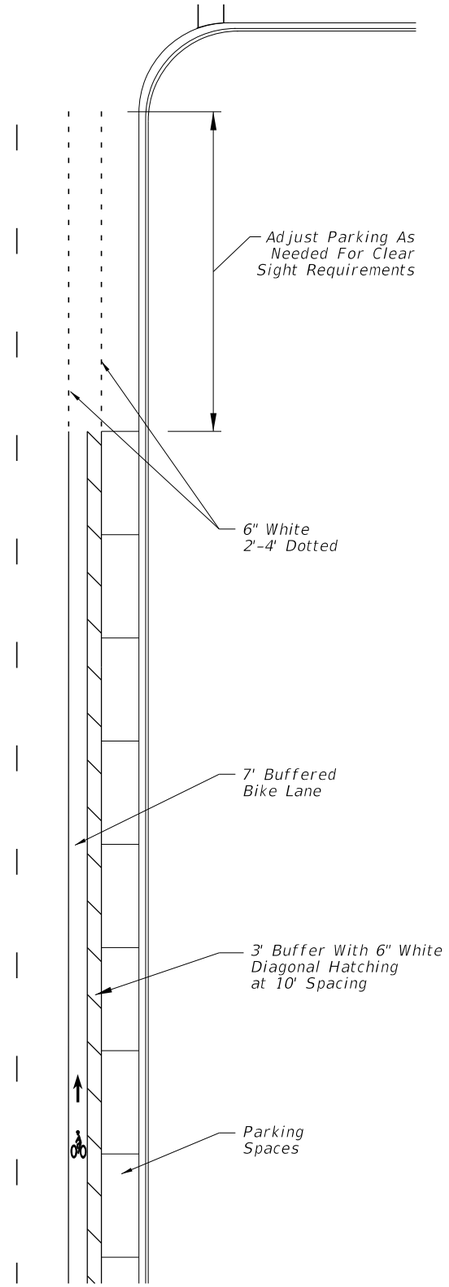
BUFFERED BIKE LANES

10/14/2016 8:39:50 AM

| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | BICYCLE MARKINGS | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/18/14 | | | | | 17347 | 3 of 5 |




INTERSECTION WITH NO RIGHT TURN LANE,
FLUSH SHOULDER WITH BUFFERED
BIKE LANE TYPICAL SECTION

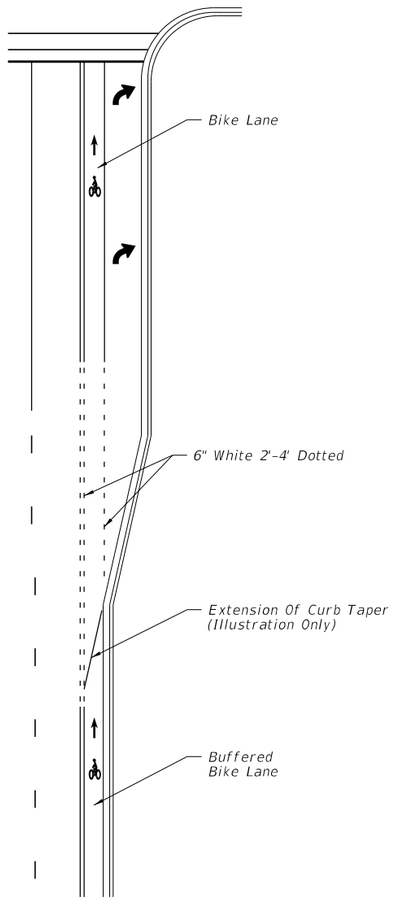



BIKE LANE ADJACENT TO ON STREET PARKING
NO RIGHT TURN LANE,
CURB AND GUTTER TYPICAL SECTION

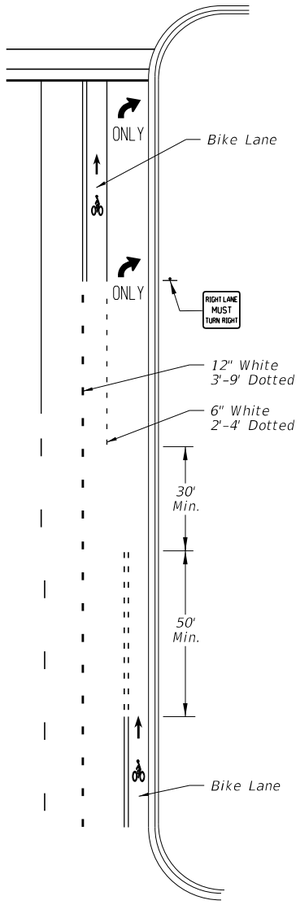
BIKE LANE MARKINGS

10/14/2016 8:39:52 AM

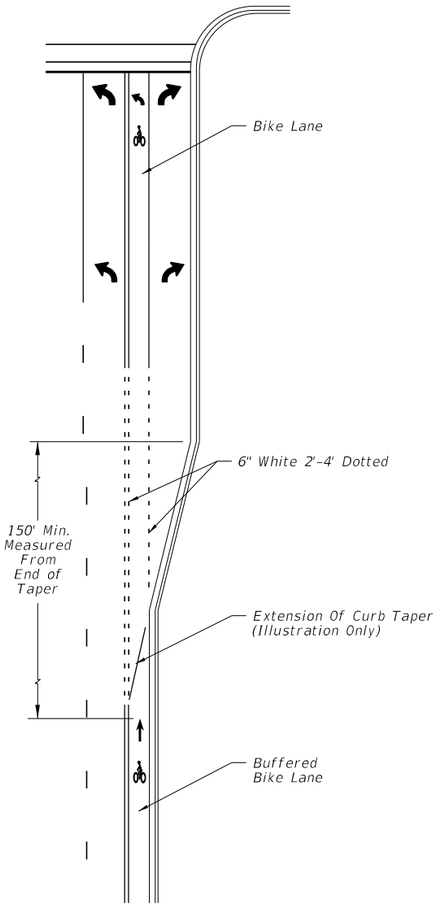
| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | BICYCLE MARKINGS | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/18/14 | | | | | 17347 | 4 of 5 |



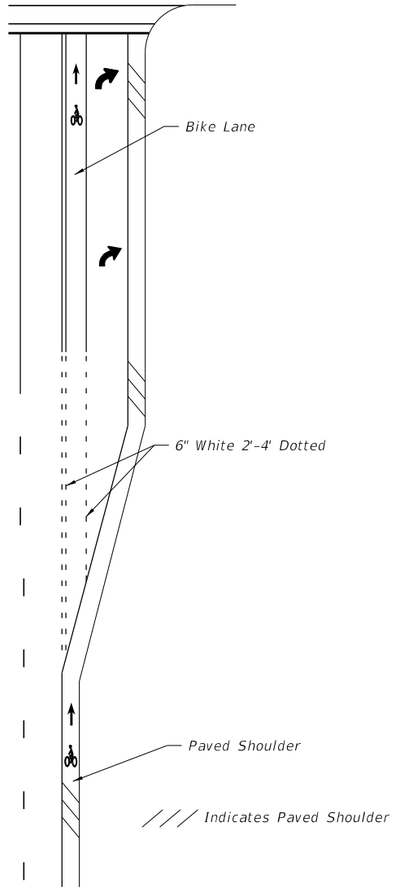

KH-1
INTERSECTION WITH
SEPARATE RIGHT TURN LANE,
CURB AND GUTTER TYPICAL SECTION



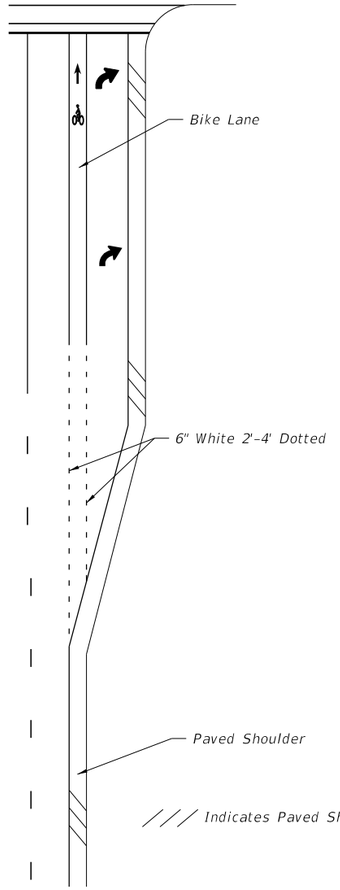

KH-2
INTERSECTION WITH
RIGHT TURN DROP LANE,
CURB AND GUTTER TYPICAL SECTION




KH-3
"TEE" INTERSECTION WITH
SEPARATE RIGHT TURN LANE,
CURB & GUTTER TYPICAL SECTION




KH-4
INTERSECTION WITH
SEPARATE RIGHT TURN LANE,
IN OR WITHIN ONE MILE OF AN URBAN AREA
FLUSH SHOULDER TYPICAL SECTION




KH-5
INTERSECTION WITH
SEPARATE RIGHT TURN LANE, IN RURAL AREA
FLUSH SHOULDER TYPICAL SECTION

KEYHOLE MARKINGS

10/14/2016 8:39:54 AM

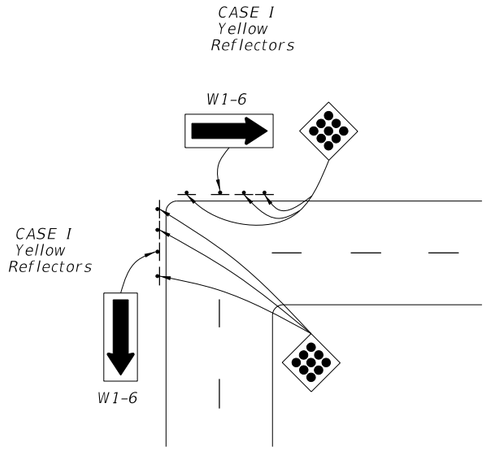
| LAST REVISION | REVISION | DESCRIPTION: | FY 2017-18 DESIGN STANDARDS | BICYCLE MARKINGS | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/15 | | | | | 17347 | 5 of 5 |

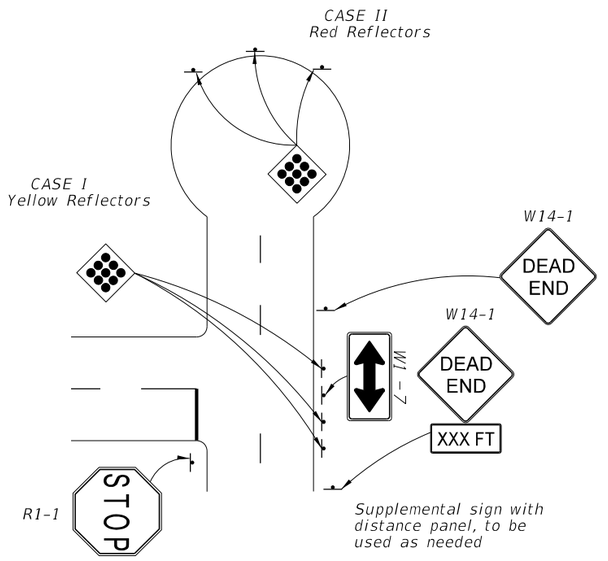
CASE I  Type 1 Object Markers shall consist of nine yellow reflectors mounted on a yellow reflective background or consist of a retroreflective panel of the same size.

CASE II  End of Road Markers shall consist of nine red reflectors mounted on a red reflective background or consist of a retroreflective panel of the same size.

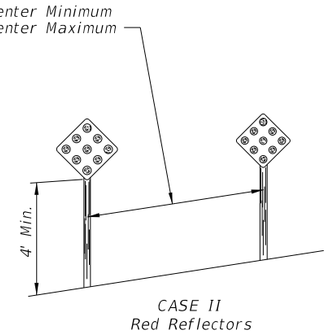
NOTES:

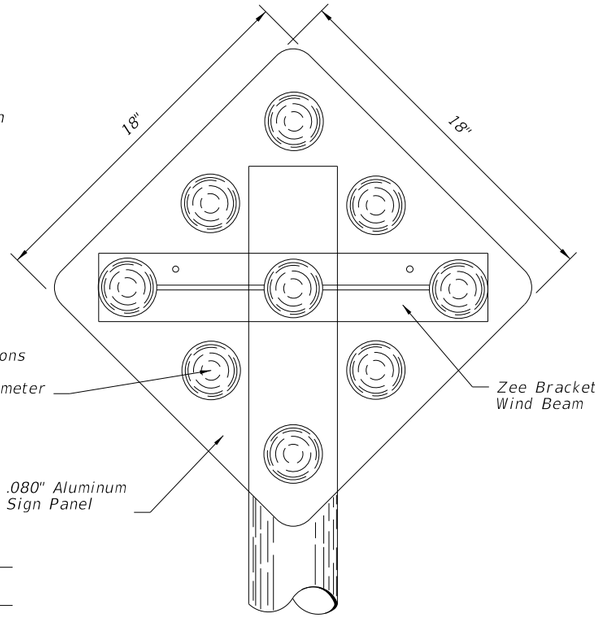
1. This index applicable to residential and minor streets only. Major streets to be evaluated on a case by case basis.
2. "T"-intersection-Two-Way arrows and reflectors are optional. The need should be based on a review of each location.
3. For additional details on aluminum round post, sign panel material and bolts, nuts and washers see Index Nos. 11860.
4. Case I Installation - The arrow panels and object markers shall be located approximately 20', but not less than 12' from the edge of the travel lane.
5. Dead end sign shall be posted a sufficient advance distance to permit the vehicle operator to avoid the dead end by turning off, if possible, at the nearest intersecting street.
6. For pavement marking see Index No. 17346
7. No guardrail is required unless special field conditions require its use.

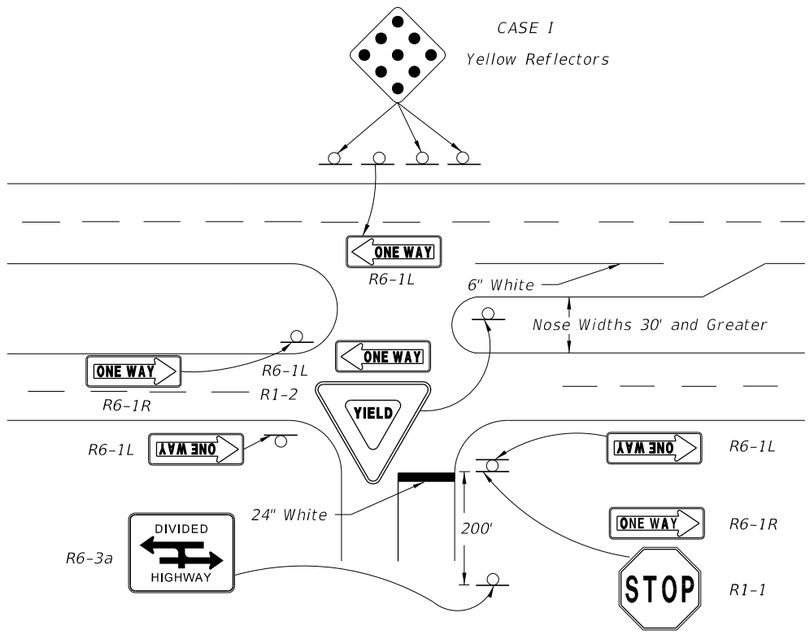


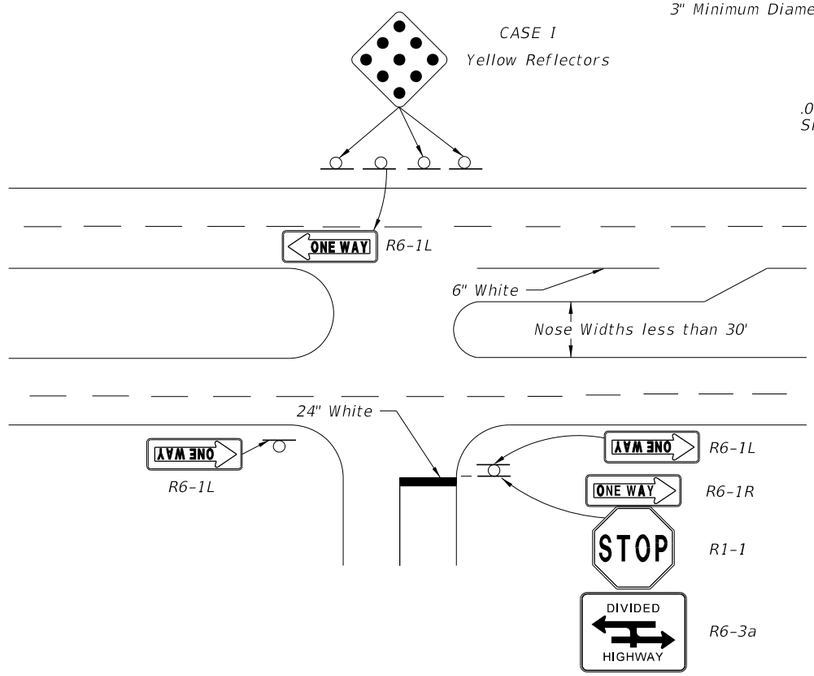




Supplemental sign with distance panel, to be used as needed




Object markers shall be installed on 2" Ø x ⅛" Aluminum Round Post.
⅜" Ø Aluminum Button Head Bolt with Nut and Lockwasher or $^{15}/_{16}$" Ø Stainless Steel Hex Head Bolt with Flat Washer under Head and Lockwasher under Nut. Post foundation shall be installed in accordance with Index No. 11860.

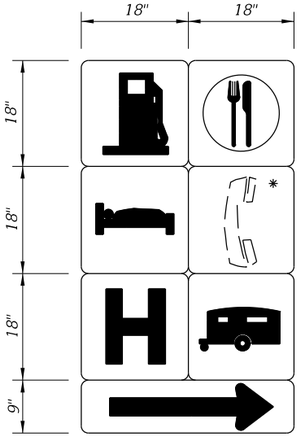
10/14/2016 8:40:44 AM

| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | TRAFFIC CONTROLS FOR STREET TERMINATIONS | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | | | 17349 | 1 of 1 |

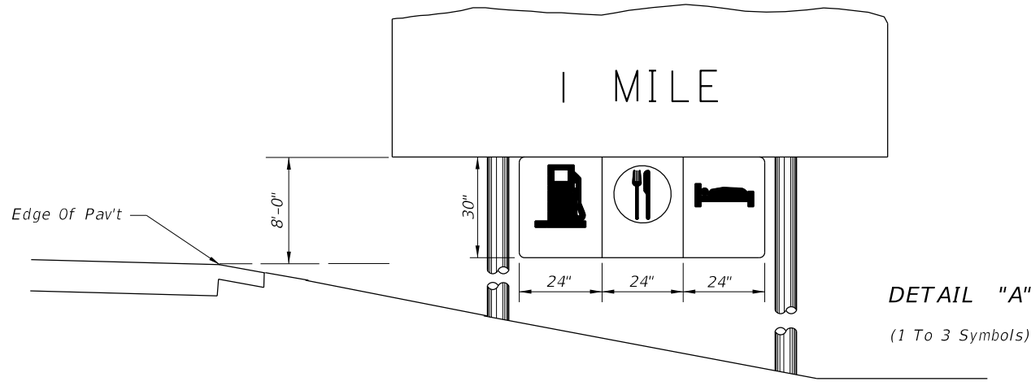
** Note:

Two assemblies are required; one for each side of the ramp, showing those services in each particular direction from the ramp terminal.

Ramp mounted signs shall be installed to avoid conflict with existing signs and in no case should they be placed within 100' of another sign.

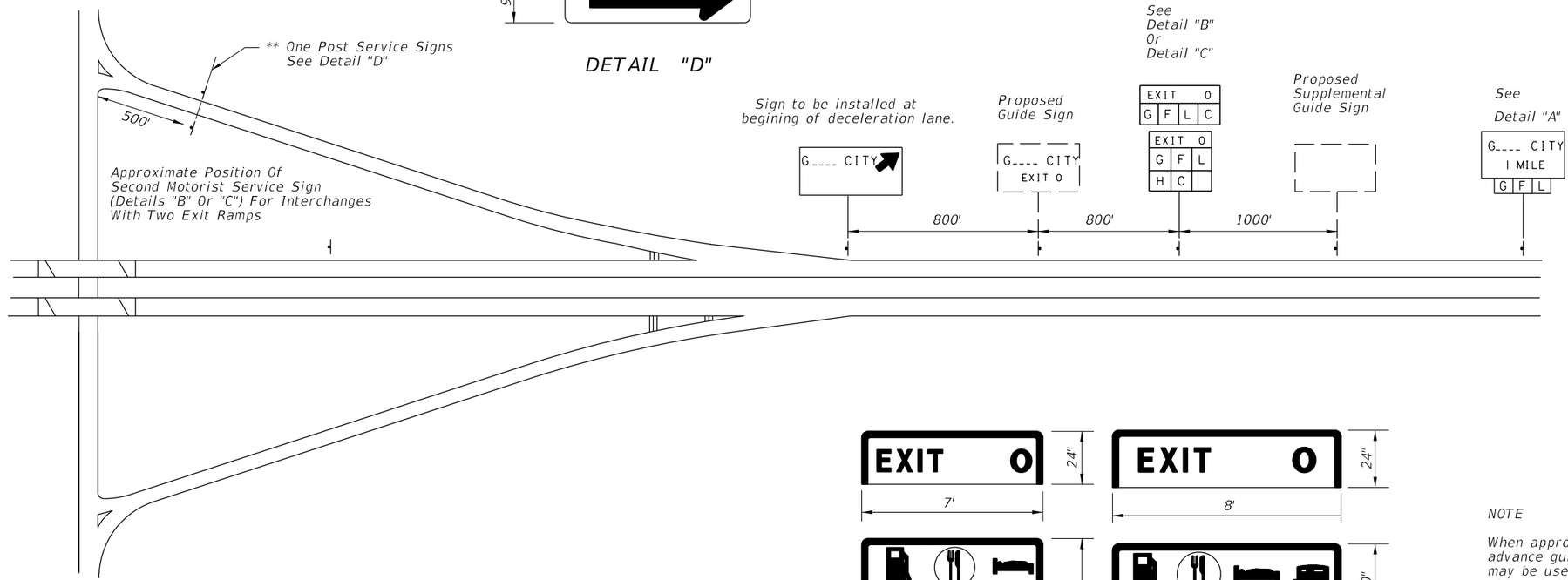


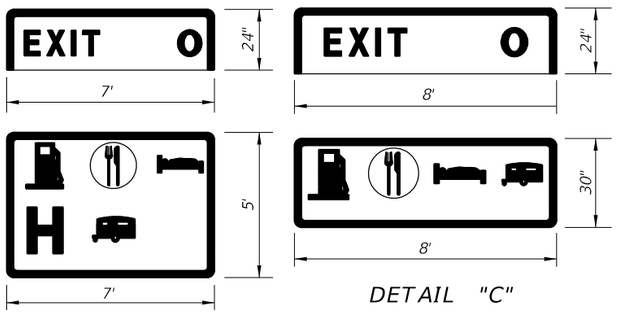

DETAIL "D"




DETAIL "A"

(1 To 3 Symbols)




DETAIL "B"

(4 To 6 Symbols)

DETAIL "C"

(4 Symbols)

## GENERAL NOTES

1. Only those services meeting criteria established by the Department and approved by the State Traffic Operations Engineer for each interchange shall be shown. Symbol signs for motorist services shall always appear in the following order reading from left to right and top to bottom: Gas, Food, Lodging, Phone * , Hospital, Camping.

   * The phone symbol shall not be shown whenever any Gas, Food, Lodging or Camping symbol appears.

2. Symbols shall appear consecutively on the sign with no positions left blank or reserved for intermediate symbols not currently approved for a particular interchange.

3. All motorist service signs to have White Legend and Border with Blue Background.

4. For mounting details see Index 11200 for Type "A" breakaway or Index 11860 for Type "C" Frangibility.

NOTE

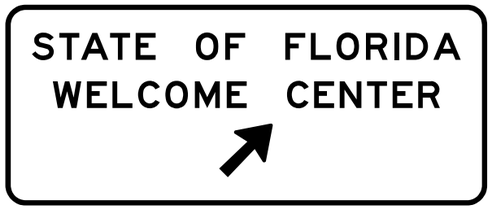
When approved for attachment to the advance guide signs, up to 3 services may be used for an exit. The symbol signs shall be suspended from the guide sign panel or existing wind beams. Symbol signs are not to be connected to existing sign posts.

The mounting height of the advance guide sign shall be increased, where necessary, to provide 8' between the level of the pavement edge and the bottom of the guide sign, prior to mounting the supplementary panel.

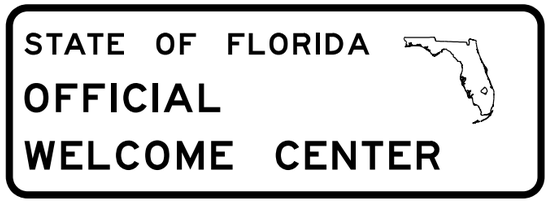
10/14/2016 8:41:05 AM

| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | SIGNING FOR MOTORIST SERVICES | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/09 | | | | | 17350 | 1 of 1 |


Sign No. FTP-10-06

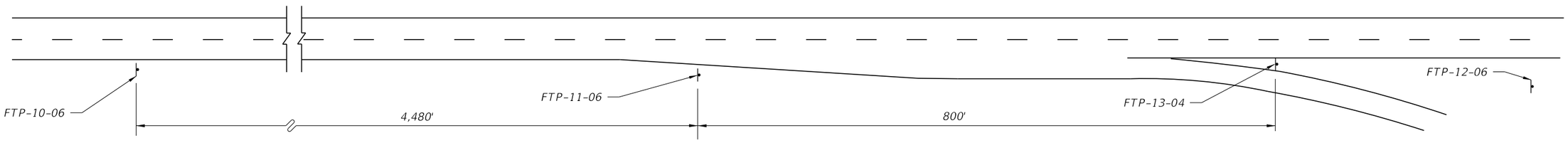



Sign No. FTP-11-06




Sign No. FTP-12-06


Sign No. FTP-13-06




Note: Roadway not drawn to scale
Distances shown are adequate for driver communication but may be altered slightly if conditions require.


Sign No. FTP-14-06

Note: Sign FTP-14-06 shall be used as a supplemental guide sign at interchanges which have a Tourist Information Center approved for such signing (locate half-way between normal guide signs)

Notes:

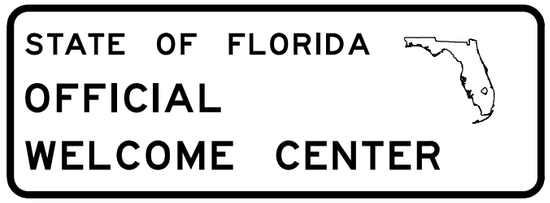
1. Signs and sign structures shall be erected in accordance with the details shown on Index No. 11200.
2. Sign FTP-12-06 shall be located on the Welcome Center grounds in proximity to the building and as far from the main line roadway as possible (2 signs back to back).
3. Sign FTP-10-06, 11-06, 12-06 shall be located as limited access highways only.
4. All legend to be Series E.
5. See Index No. 17355 for sign details.

FOR LIMITED ACCESS HIGHWAYS

10/14/2016 8:41:27 AM

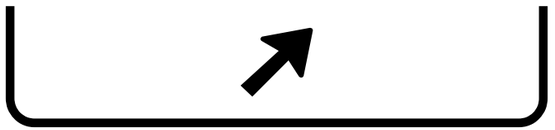
| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | WELCOME CENTER SIGNING | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/07 | | | | | 17351 | 1 of 2 |


SIGN NO. FTP-15A-06

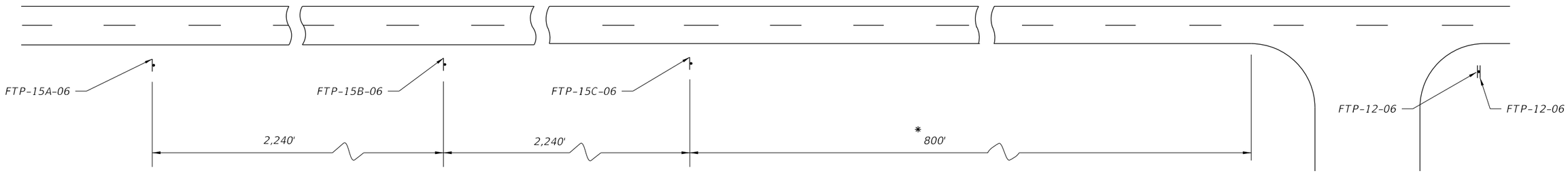



SIGN NO. FTP-12-06


SIGN NO. FTP-15B-06



SIGN NO. FTP-15C-06




* 800' Maximum For Rural Conditions
50' Minimum For Rural Conditions

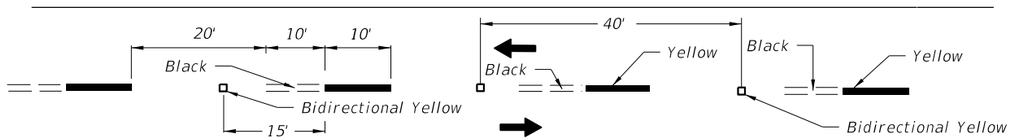
Notes:

1. Signs and sign structures shall be erected in accordance with the details shown on Index 11200.
2. Sign FTP-12-06 shall be located on the Welcome Center grounds in proximity to the building and as far from the Main Line Roadway as possible (2 signs back to back).
3. All legend to be Series E.
4. One sign FTP-15A-06 or 15B-06 should be used depending on speed, roadside development & geometric conditions.

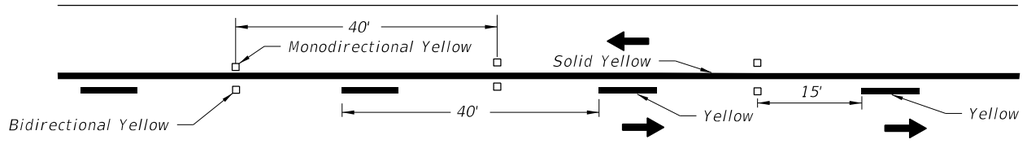
10/14/2016 8:41:29 AM

FOR PRIMARY HIGHWAYS

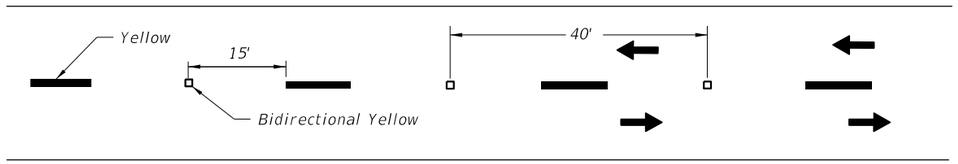
| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | WELCOME CENTER SIGNING | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/15 | | | | | 17351 | 2 of 2 |



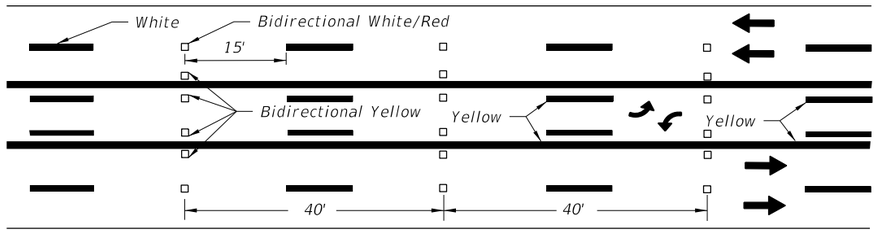

ALTERNATING SKIP LINE



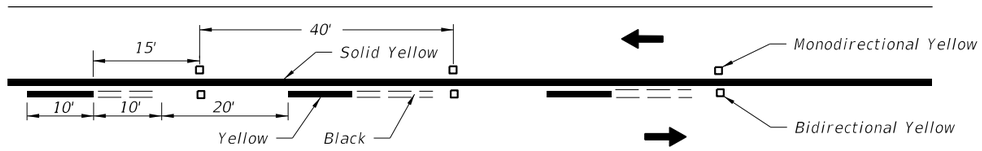

SOLID LINE WITH SKIP



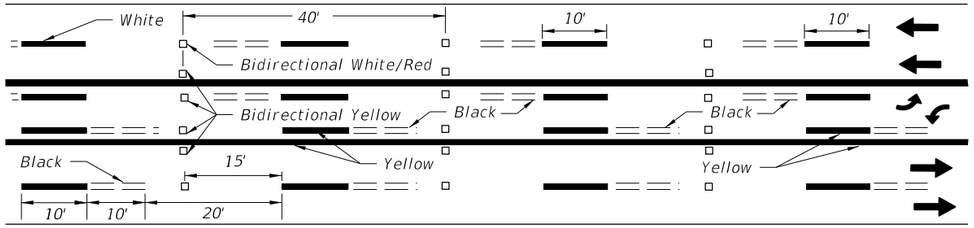

SKIP LINE



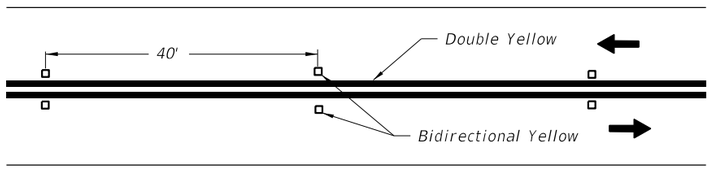

SKIP LINE WITH TWO-WAY LEFT TURN LANE



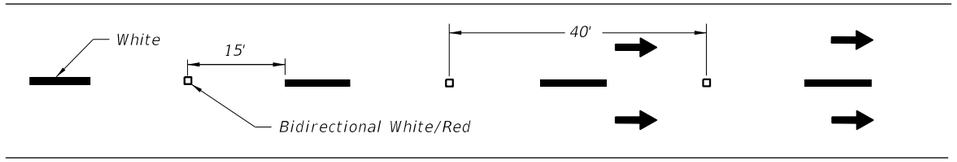

SOLID LINE WITH ALTERNATING SKIP




ALTERNATING SKIP LINE WITH TWO-WAY LEFT TURN LANE




DOUBLE SOLID LINE




MULTILANE

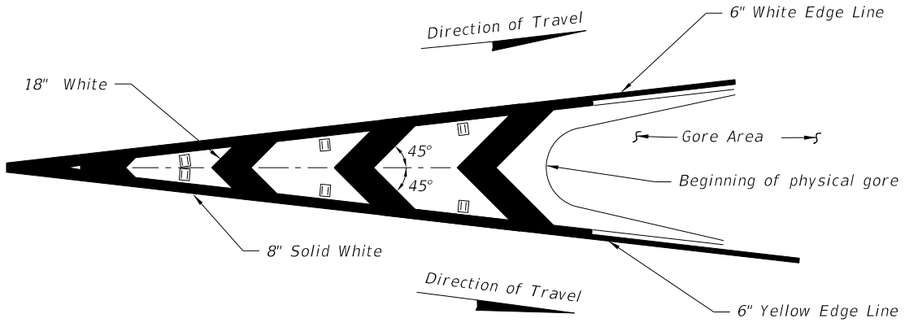
1. Reflective Pavement Markers shall be spaced at 40' on all skip lane lines and skip center lines. This spacing may be reduced to 20' if specifically called for in the plans.
2. The spacing on solid lines and solid/skip combination lines shall be 40'.
3. All RPM's shall be offset 1" from solid longitudinal lines.
4. These spacings may be reduced for sharp curves if required.
5. All RPM's shall be class "B".

10/14/2016 8:41:51 AM

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 01/01/10 | | | FDOT FY 2017-18 DESIGN STANDARDS | TYPICAL PLACEMENT OF REFLECTIVE PAVEMENT MARKERS | 17352 | 1 of 2 |

NOTES

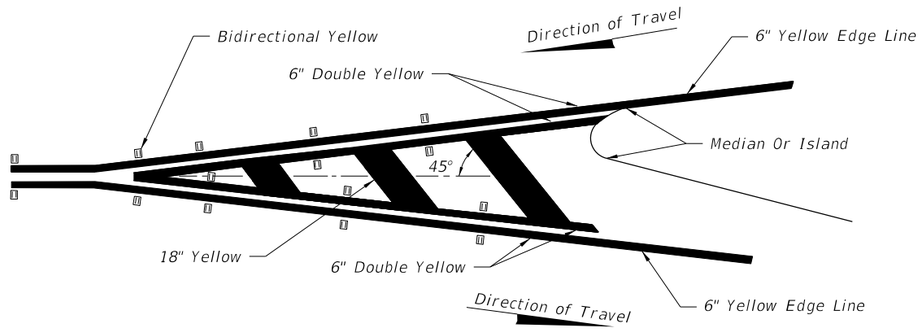
1. Set Raised Pavement Markers 1" from line.
2. Center the Raised Pavement Markers between chevrons.



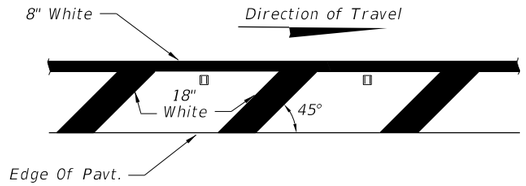

## RPM PLACEMENT FOR TRAFFIC CHANNELIZATION AT GORE (TRAFFIC FLOWS IN SAME DIRECTION)

NOTE

Raised pavement markers (Bidirectional White/Red) should be used in all gores of this type



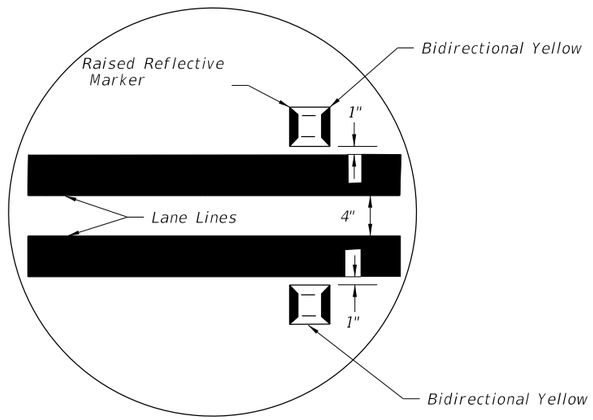

## RPM PLACEMENT FOR TRAFFIC SEPARATION (TRAFFIC FLOWS IN OPPOSITE DIRECTION)

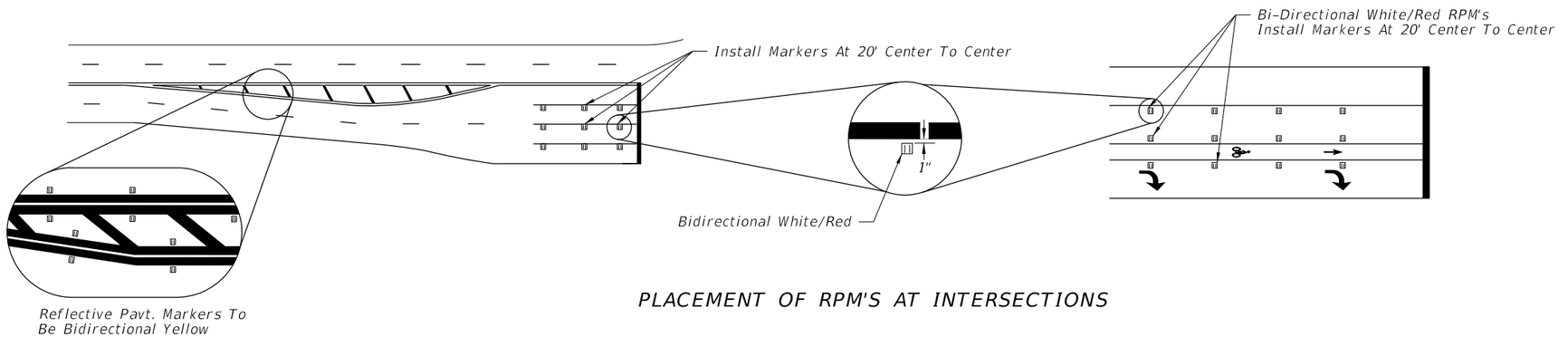



## PLACEMENT OF RPM'S ON SHOULDER MARKINGS

Right side of the roadway shown. For the left side of roadway, the pavement marking is yellow and oriented opposite hand.

For Placement Of RPM's On Ramps See Index 17345.

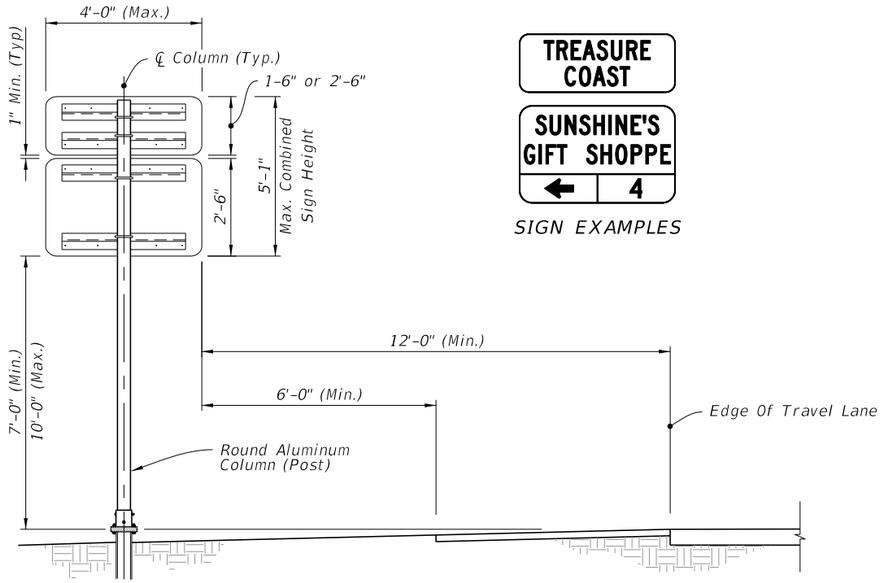



## PLACEMENT OF RPM'S AT INTERSECTIONS

10/14/2016 8:41:53 AM

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/15 | | | FDOT FY 2017-18 DESIGN STANDARDS | TYPICAL PLACEMENT OF REFLECTIVE PAVEMENT MARKERS | 17352 | 2 of 2 |

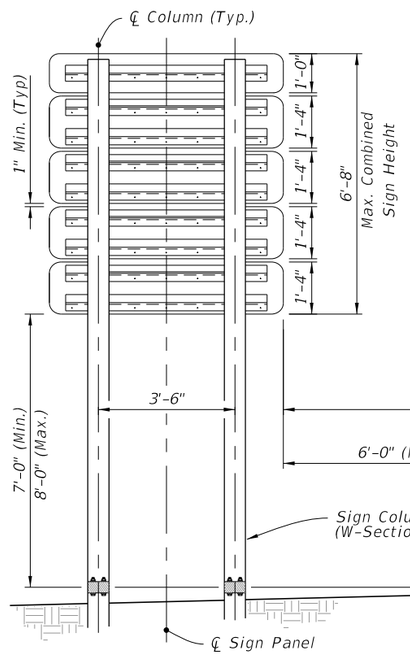






SIGN EXAMPLES

SINGLE COLUMN GROUND SIGN





SIGN EXAMPLES

MULTI-COLUMN GROUND SIGN

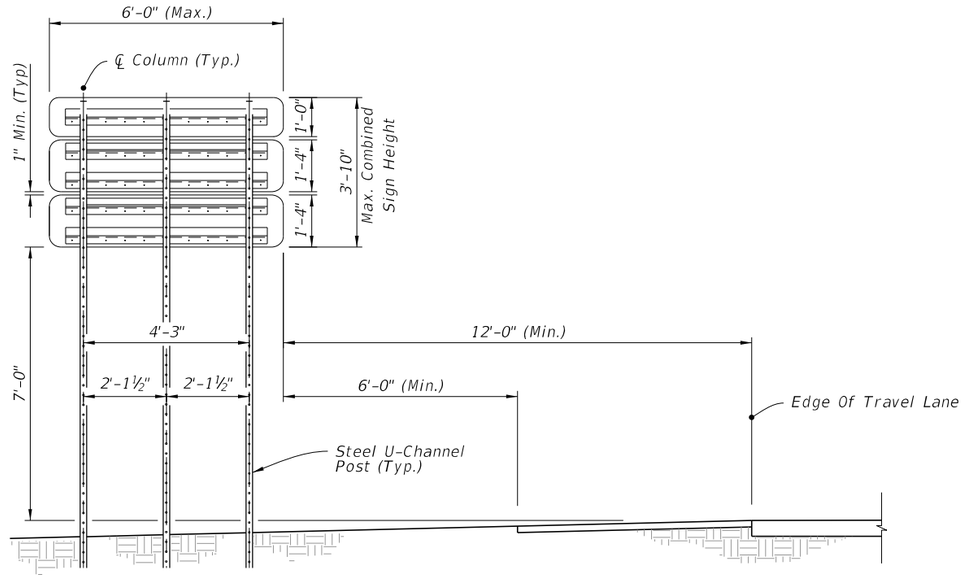
## NOTES:

1. Signs must comply with Rule 14-51, Florida Administrative Code.
2. Use 6" Type C lettering.
3. See index 11860 for Single Column Ground Sign for foundation and conection details.
4. See Index 11200 for Multi-Coulmn Ground Sign for foundation and connection details.
5. See Index 600, Work Zone Sign Supports, for Temporary 3-Post Sign Support assembly and foundation details. Galvanize Steel U-Channel in accordance with ASTM 123.

### DESIGN FOR TOURIST ORIENTED DIRECTIONAL SIGNS
(Options for Aluminum Round Tube, Steel I Beam and Steel U-Channel.)

| Total Area (SF) | Single Post Configuration | | Two Post Configuration | | Three Post Configuration | |
|---|---|---|---|---|---|---|
| | 3-1/2" X 0.125" Aluminum Tube Direct Burial | 4" X 0.125" Aluminum Tube Slip Base | S3X5.7 Steel I Beam Slip Base | W6X12 Steel I Beam Slip Base | 3 lb/ft Steel U-Channel Direct Burial | 4 lb/ft Steel U-Channel Lap Splice |
| 6-10 | OK | OK | N/A | N/A | N/A | N/A |
| 16-20 | N/A | OK | N/A | N/A | N/A | N/A |
| 14-16 | N/A | N/A | OK | OK | OK | OK |
| 22-24 | N/A | N/A | OK | OK | N/A | OK * |
| 30-32 | N/A | N/A | N/A | OK | N/A | N/A |
| 38 | N/A | N/A | N/A | OK | N/A | N/A |

* Limited to 22 SF Total Sign Area.

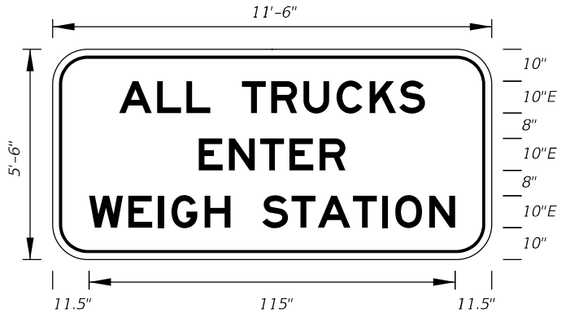



TEMPORARY 3 POST SIGN SUPPORT

10/14/2016 8:42:45 AM

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | FDOT FY 2017-18 DESIGN STANDARDS | TOURIST ORIENTED DIRECTIONAL SIGNS | 17354 | 1 of 1 |

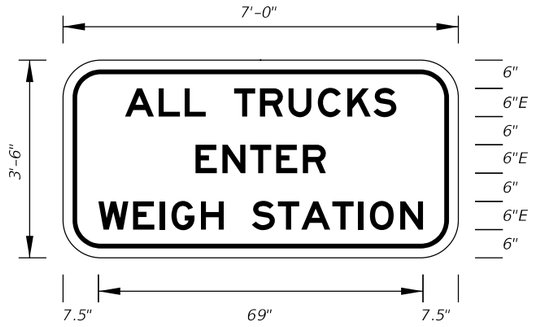
FREEWAY USE




FTP-1-06
11'-6" X 5'-6"
9" Radii 2" Border

10" Series E Legend
White Background
Black Legend and Border

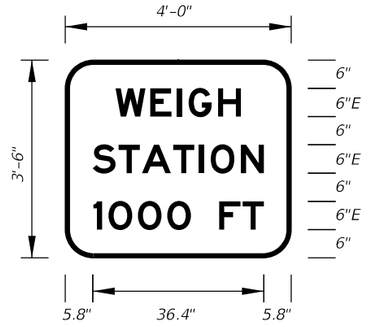
OTHER THAN FREEWAY USE




FTP-2-06
7' X 3'-6"
6" Radii 2" Border

6" Series E Legend
White Background
Black Legend and Border

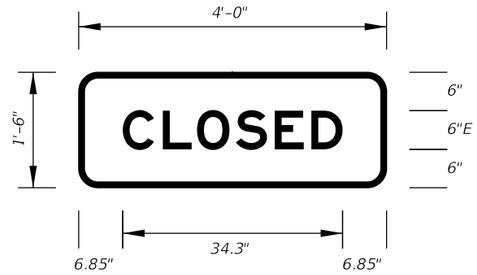
OTHER THAN FREEWAY USE




FTP-3-06
4' X 3'-6"
6" Radii 2" Border

6" Series E Legend
Green Background
White Legend and Border

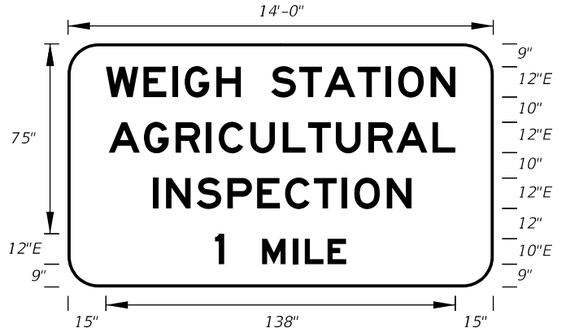
OTHER THAN FREEWAY USE




FTP-4-06
4' X 1'-6"
3" Radii 2" Border

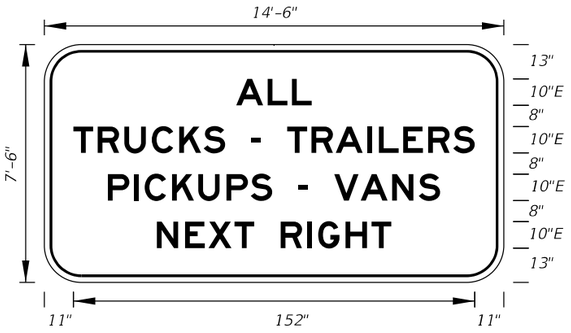
6" Series E Legend
Green Background
White Legend and Border

Note:
FTP-4-06 to be
used with FTP-3-06




FTP-5-06
14' X 8'
12" Radii 2" Border

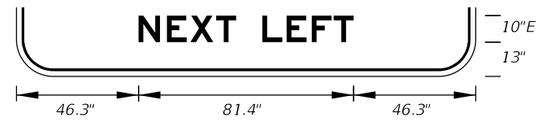
12" and 10" Series E Legend
Green Background
White Legend and Border




FTP-6A-06
14'-6" X 7'-6"
12" Radii 2" Border

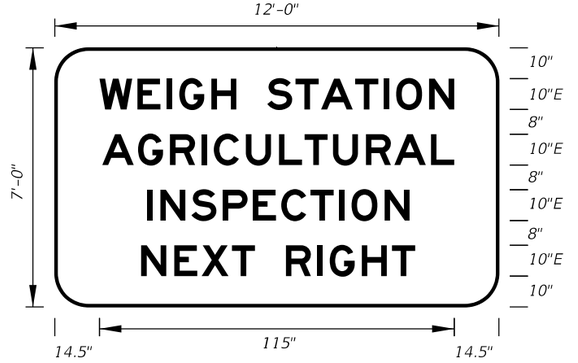
10" Series E Legend
White Background
Black Legend and Border

On Interstate Station
Delete Pickups-Vans,
and reduce Sign height
accordingly.




FTP-6B-06
14'-6" X 7'-6"
12" Radii 2" Border

10" Series E Legend
White Background
Black Legend and Border

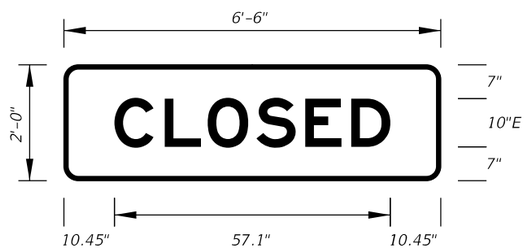



FTP-7A-06
12' X 7'
11" Radii 2" Border

10" Series E Legend
Green Background
White Legend and Border


FTP-7B-06
12' X 7'
11" Radii 2" Border
10" Series E Legend
Green Background
White Legend and Border

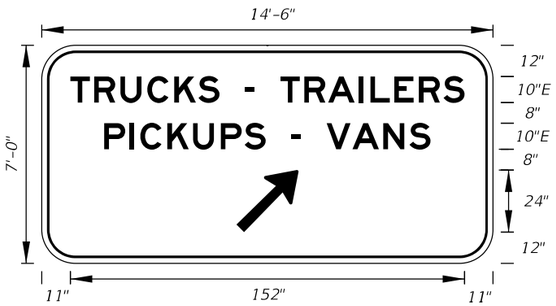
FREEWAY USE




FTP-8-06
6'-6"X 2'
3" Radii 2" Border
10" Series E Legend
Green Background
White Legend and Border

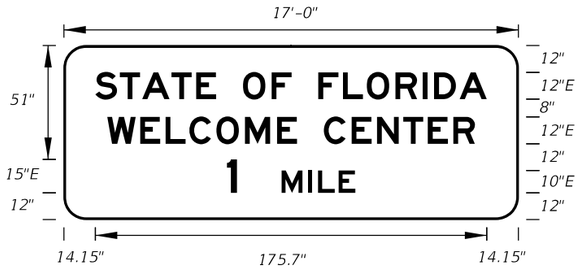
Note:
FTP-8-06 to be
used with FTP-7A-06
& FTP-7B-06.

FTP-9B-06-LEFT ARROW




FTP-9A-06
14'-6" X 7'
11" Radii 2" Border

10" Series E Legend
Green Background
White Legend and Border

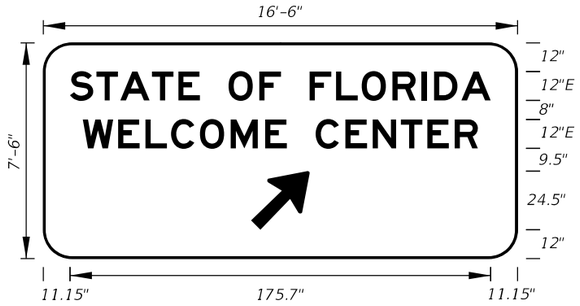



FTP-10-06
17' X 6'-6"
10" Radii 2" Border

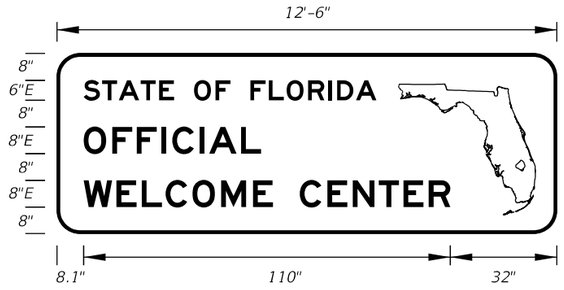
12", 10" and 15" Series E Legend
Blue Background
White Legend and Border

10/14/2016 8:43:14 AM

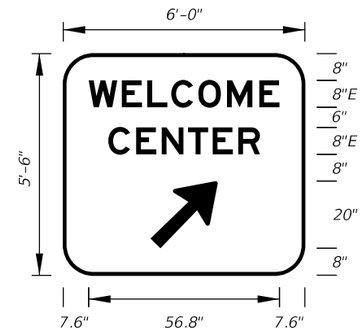
| LAST REVISION | REVISION | DESCRIPTION: | | | |
|---|---|---|---|---|---|
| 07/01/14 | | | FY 2017-18 DESIGN STANDARDS | SPECIAL SIGN DETAILS | INDEX NO. 17355 / SHEET NO. 1 of 11 |



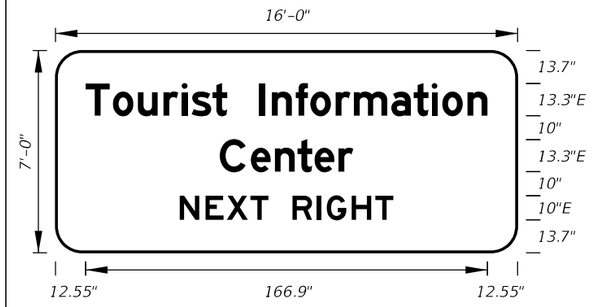

FTP-11-06
16'-6" X 7'-6"
12" Radii 2" Border
12" Series E Legend
Blue Background
White Legend and Border



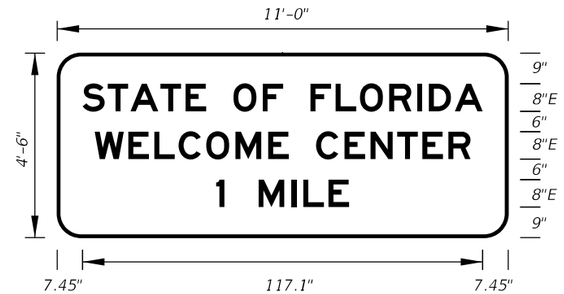

FTP-12-06
12'-6" X 4'-6"
7" Radii 2" Border
6" and 8" Series E Legend
Blue Background
White Legend and Border



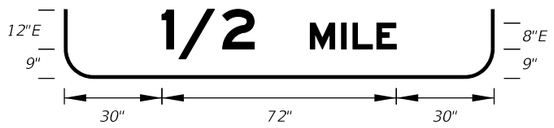

FTP-13-06
6' 0" X 5'-6"
9" Radii 2" Border
8" Series E Legend
Blue Background
White Legend and Border



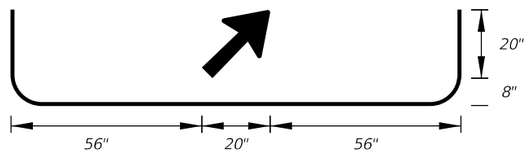

FTP-14-06
16'-0" X 7'-0"
11" Radii 2" Border
13.3 and 10" Series E Legend
Blue Background
White Legend and Border




FTP-15A-06
11'-0" X 4'-6"
7" Radii 2" Border
8" Series E Legend
Blue Background
White Legend and Border



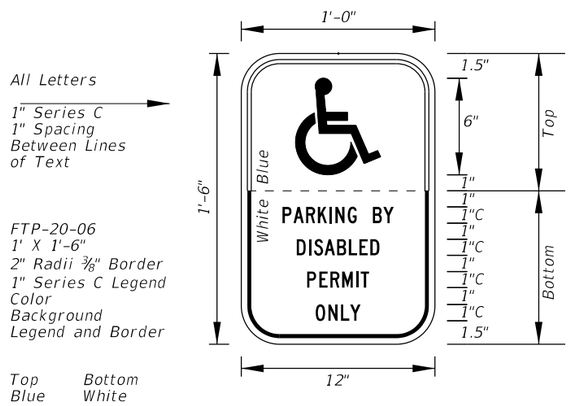

FTP-15B-06
11'-0" X 5'-0"
8" Radii 2" Border
8" and 12" Series E Legend
Blue Background
White Legend and Border




FTP-15C-06
11'-0" X 5'-6"
9" Radii 2" Border
8" Series E Legend
Blue Background
White Legend and Border

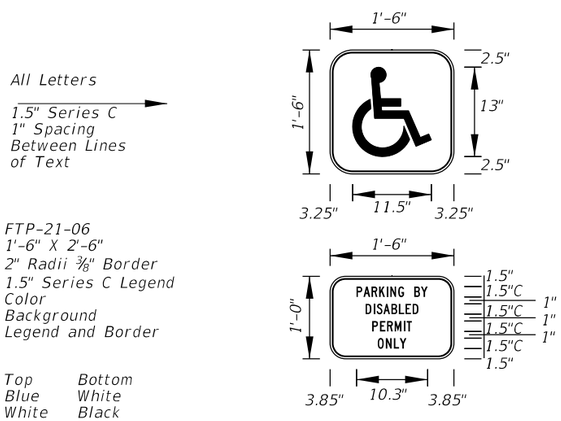

FTP-16-10
2'-6" X 3'-0"
1.5" Radii 3/4" Border
5" Series B Legend
Green Background
White Legend, Border, and Florida Symbol


FTP-19-06
1' X 1'-6"
4" Radii 3/8" Border
Top 4" Series D
Bottom 2" Series C
White Background
Green Legend and Border



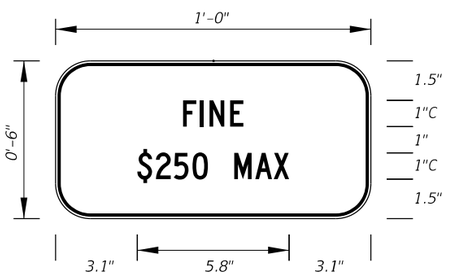

FTP-20-06
1' X 1'-6"
2" Radii 3/8" Border
1" Series C Legend
Color
Background
Legend and Border

| Top | Bottom |
|---|---|
| Blue | White |
| White | Black |




FTP-21-06
1'-6" X 2'-6"
2" Radii 3/8" Border
1.5" Series C Legend
Color
Background
Legend and Border

| Top | Bottom |
|---|---|
| Blue | White |
| White | Black |




FTP-22-06
1' X 6"
1" Radii 3/8" Border
1" Series C Legend
White Background
Black Legend and Border

Supplemental Panel
for the FTP-20-06
and FTP-21-06 signs

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| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | SPECIAL SIGN DETAILS | INDEX NO. | SHEET NO. |
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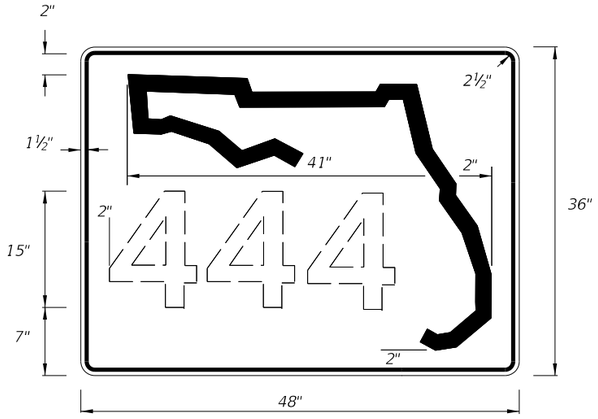
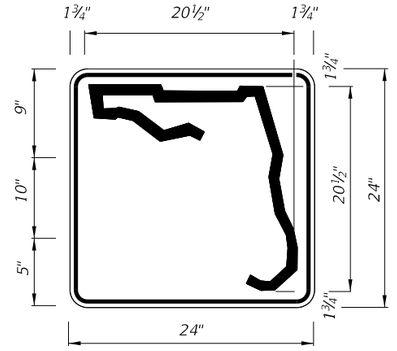



INDEPENDENT USE FOR FREEWAY

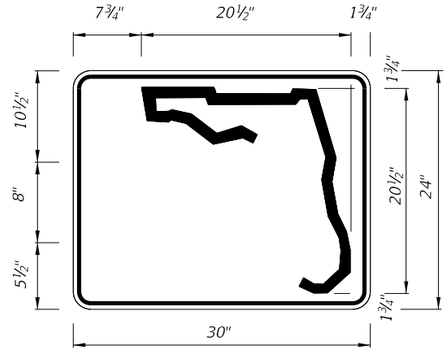
| DIGITS | NUMERAL SIZE | SERIES | PANEL SIZE |
|---|---|---|---|
| 1-2 | 10" | D | 24" x 24" |
| 3 | 8" | D | 24" x 24" |
| 3 | 8" | D | 30" x 24" |
| 4 | 8" | C | 30" x 24" |
| 1-3 | 15" | C | 48" x 36" |
| 4 | 12" | C | 48" x 36" |

Note:

1. The 24" X 24" panel shall only be used for a 3 digit route when the panel is to be used on a sign cluster with other 24" X 24" panels.
2. Florida Route Marker shall have Black Legend with White Background.
3. Stroke width of State Outline shall be 1".
4. 2" Radii, ⅝" Border.

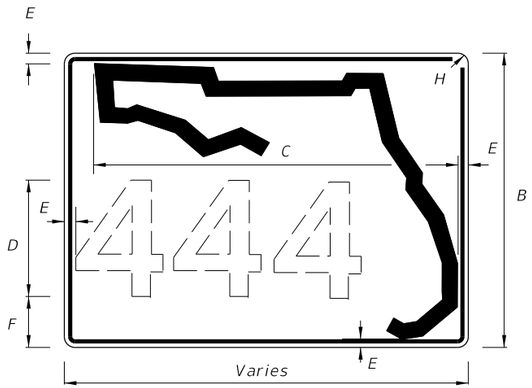



1 or 2 DIGITS

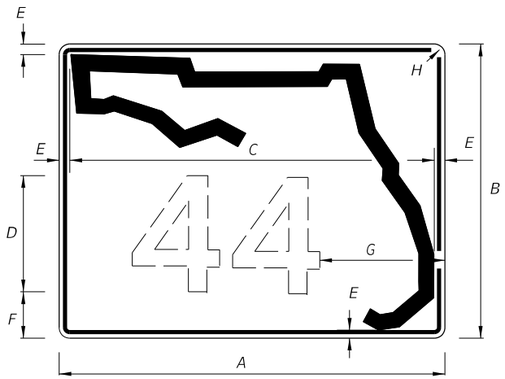



3 or 4 DIGITS

INDEPENDENT USE OTHER THAN FREEWAY




3 OR MORE DIGITS



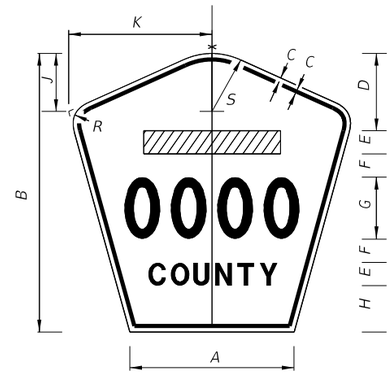

1 OR 2 DIGITS

| A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|
| 30" | 24" | 26" | 12" | 1¼" | 2¾" | 8¼" | 1¼" |
| 36" | 30" | 32" | 15" | 1¼" | 3¼" | 8¾" | 1¼" |
| 42" | 36" | 38" | 15" | 1¼" | 6¼" | 11" | 1¼" |

GUIDE SIGN USE

Notes:
1. Florida marker shall have Black Legend with White Background.
2. Stroke width of State outline to be 1¼" for Guide Sign.
3. Numbers are series D.

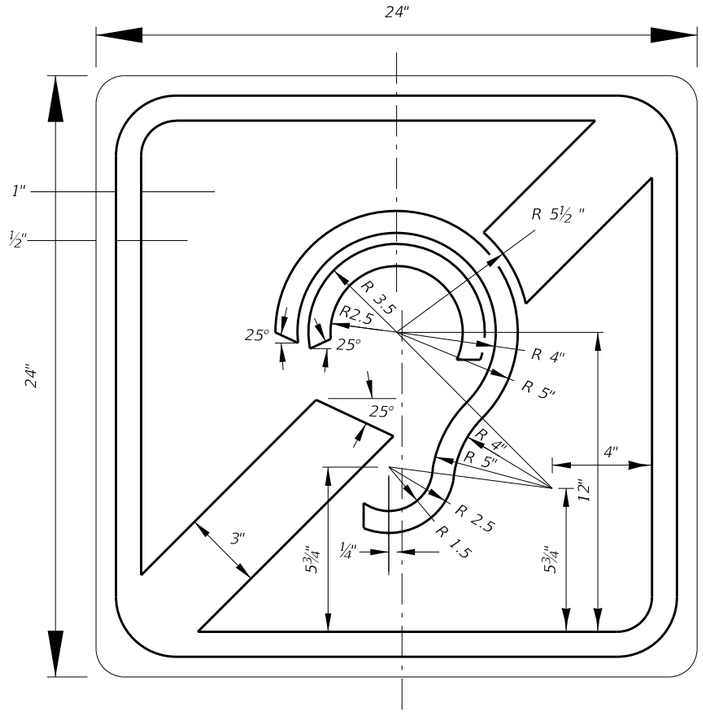
FLORIDA ROUTE MARKER
FTP-17-06




Notes :
1. All Legend Series "D".
2. Color: Yellow Legend and Border on Blue Background.
3. When used on a guide sign, marker must be overlaid on a rectangular Yellow Background as shown in chart.

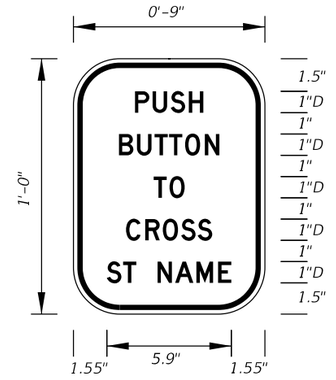
| SIGN | DIMENSIONS | | | | | | | | | | | | ** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | J | K | R | S | |
| 4 DIGIT POST MOUNTED | 25⅛" | 42" | ¾" | 10" | 4" | 4" | 8" | 8" | 8⅜" | 22" | 5" | 8¾" | |
| 2 DIGIT OVERHEAD | 21½" | 36" | ½" | 7½" | 3" | 3" | 12" | 4½" | 7⅛" | 18⅞" | 4¼" | 7½" | 42"x 42" |
| 3 DIGIT OVERHEAD | 25⅛" | 42" | ¾" | 8" | 4" | 4" | 12" | 6" | 8⅜" | 22" | 5" | 8¾" | 48"x 48" |
| 4 DIGIT OVERHEAD | 29⅞" | 48" | ¾" | 8" | 5" | 5" | 12" | 8" | 9¾" | 25⅝" | 5¾" | 10¼" | 52"x 52" |

M1-6 COUNTY ROUTE MARKER DETAIL
FTP-18-06

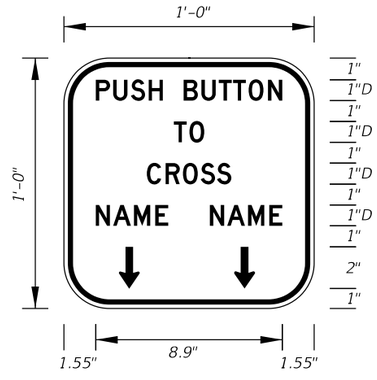



FTP-23-06
2' X 2'
1.5" Radii ⅝" Border
Blue Background
White Legend and Border

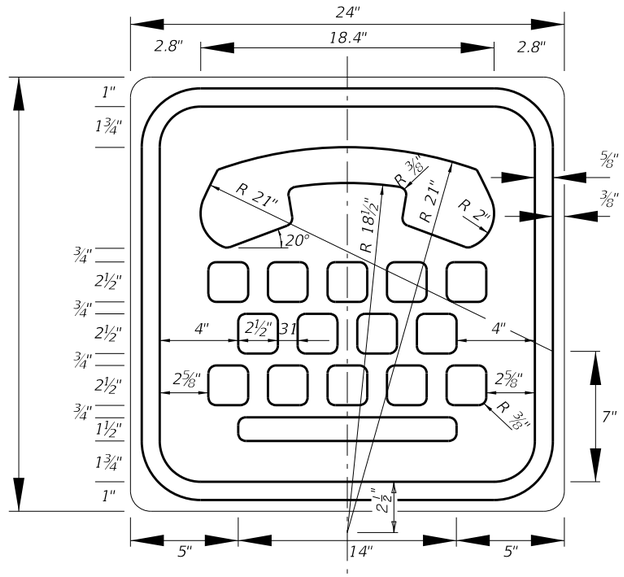
INTERNATIONAL SYMBOL OF ACCESS FOR HEARING LOSS




FTP-25-06
9" X 1'-0"
2" Radii ⅜" Border
1" Series D Legend
White Background
Black Legend and Border

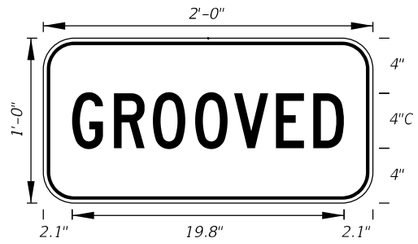



FTP-26-06
1' X 1'
2" Radii ⅜" Border
1" Series D Legend
White Background
Black Legend and Border

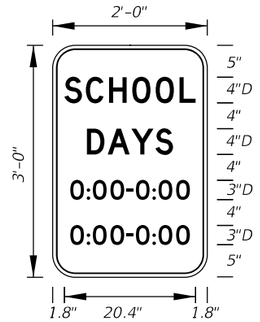



FTP-24-06
2' X 2'
1.5" Radii ⅝" Border
Blue Background
White Legend and Border

INTERNATIONAL TDD SYMBOL




FTP-29-06
2'-0" X 1'-0"
2" Radii ⅝" Border
4" Series C Legend
Yellow Background
Black Legend and Border




FTP-30-06
2'-0" X 3'-0"
3" Radii ⅝" Border
White Background
Black Legend and Border

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| LAST REVISION | REVISION | DESCRIPTION: | | | | |
|---|---|---|---|---|---|---|
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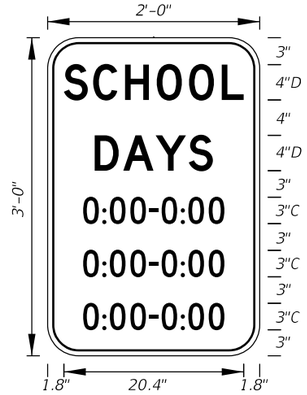
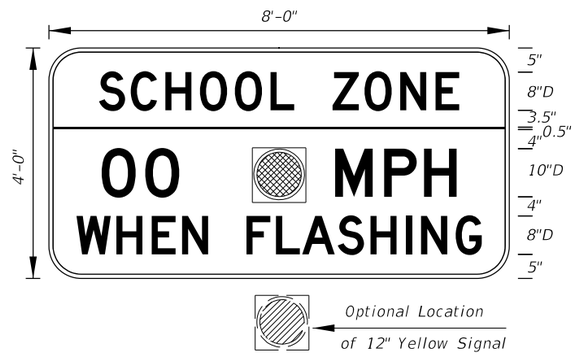
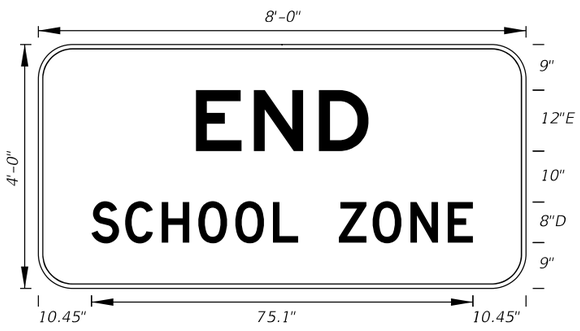


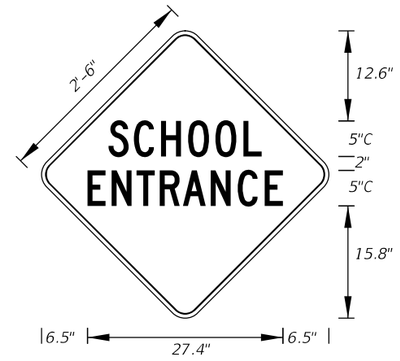

FTP-30A-06
2' X 3'
3" Radii 5/8" Border
Top 4" Series D Legend
Bottom 3" Series C Legend
White Background
Black Legend and Border



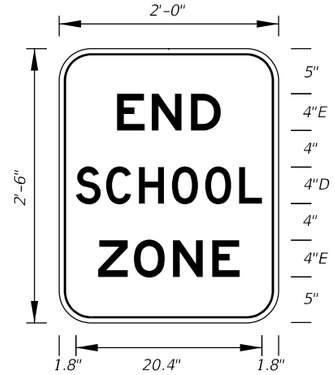

FTP-31-06
8' X 4'
6" Radii 3/4" Border
Series D Legend
Yellow Background Top
White Background Bottom
Black Legend and Border



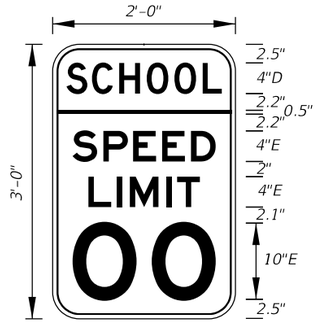

FTP-32-06
8' X 4'
6" Radii 3/4" Border
12" Series E and 8" Series D Legend
White Background
Black Legend and Border



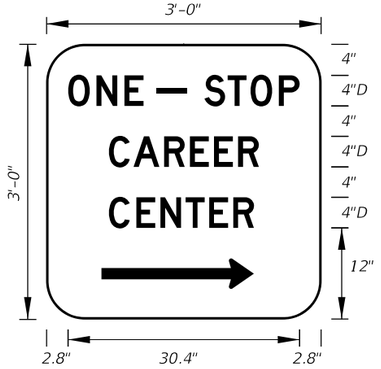

FTP-33-06
2'-6" X 2'-6"
2" Radii 3/4" Border
5" Series C Legend
Yellow Background
Black Legend and Border



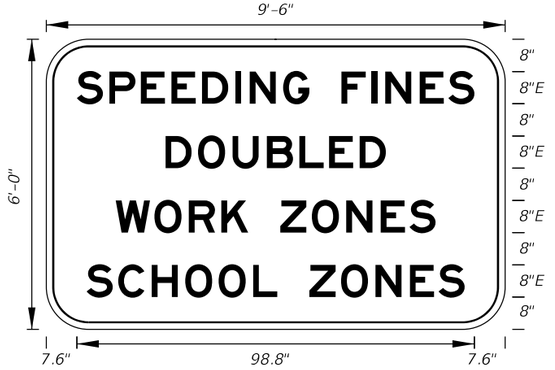

FTP-34-06
2' X 2'-6"
3" Radii 5/8" Border
4"Series D and E Legend
White Background
Black Legend and Border



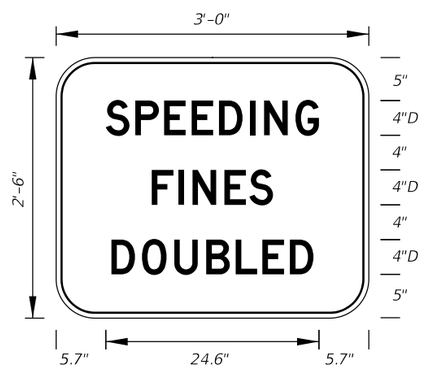

FTP-35-06
2' X 3'
3" Radii 5/8" Border
Top 4" Series D Legend
Bottom 4" and 10" Series E Legend
Yellow Background Top
White Background Bottom
Black Legend and Border



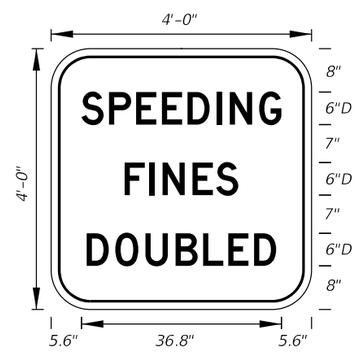

FTP-36-06
3' X 3'
5" Radii
4" Series D Legend
Green Background
White Legend and Border




FTP-37-06
9'-6"X 6'
9" Radii 2" Border
8" Series E Legend
White Background
Black Legend and Border
State Line Sign




FTP-38-06
3' X 2'-6"
4" Radii 3/4" Border
4" Series D Legend
White Background
Black Legend and Border




FTP-39-06
4' X 4'
6" Radii 3/4" Border
6" Series D Legend
White Background
Black Legend and Border
Freeway Sign


FTP-40-06
3'-6" X 4'
6" Radii 3/4" Border
3" and 6" Series C Legend
White Background
Black Legend and Border


FTP-41-06
2'-6"X 3'
4" Radii 3/4" Border
2" and 4" Series C Legend
White Background
Black Legend and Border

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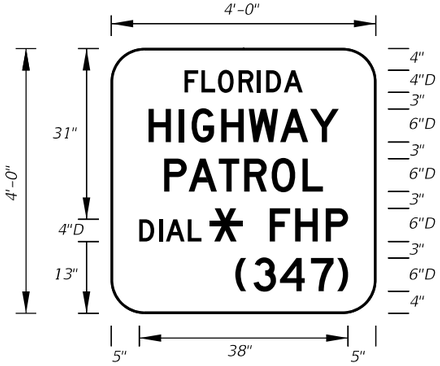
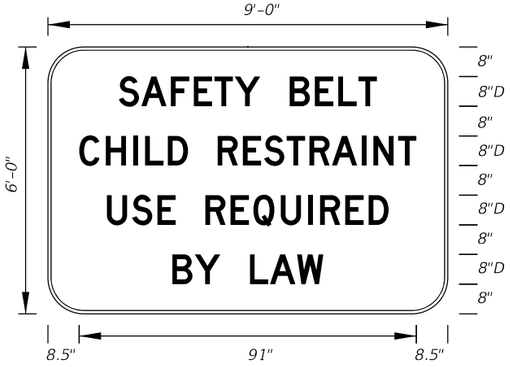
FTP-42-06
4'X 2'-6"
3" Radii
Top 4" Series C Legend

Bottom 2" Series EM Legend
White Background
Blue Legend and Border




FTP-43-06
4' X 4'
6" Radii 1" Border
Top 4" Series D Legend

Bottom 6" Series D Legend
Blue Background
White Legend and Border

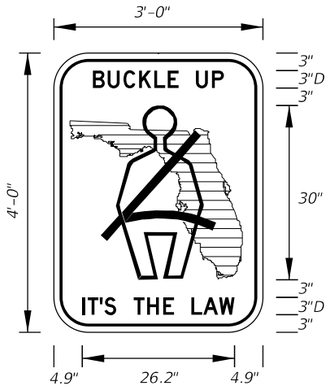



FTP-44-06
9' X 6'
9" Radii ¾" Border

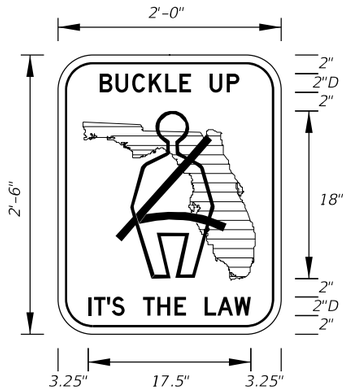
8" Series D Legend
White Background
Black Legend and Border


FTP-45-06
4' X 3'
5" Radii ¾" Border

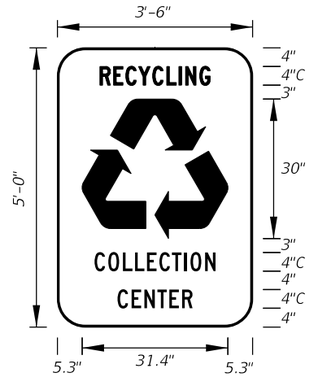
4" Series C Legend
White Background
Black Legend and Border



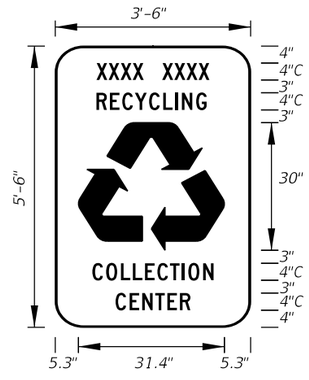

FTP-46-06
3' X 4'
5" Radii ¾" Border
3" Series D Legend
White Background Green Florida Symbol
Black Legend, Border and Man Belt Symbol



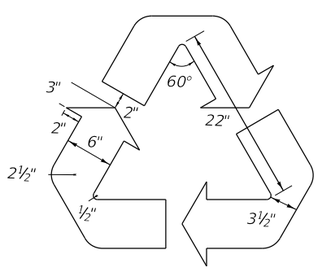

FTP-47-06
2' X 2'-6"
3" Radii ⅝" Border
2" Series D Legend
White Background Green Florida Symbol
Black Legend, Border and Man Belt Symbol



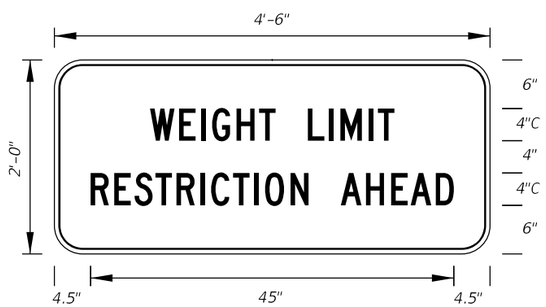

FTP-48-06
3'-6" X 5'
6" Radii
4" Series C Legend
Green Background
White Legend, Border and Symbol



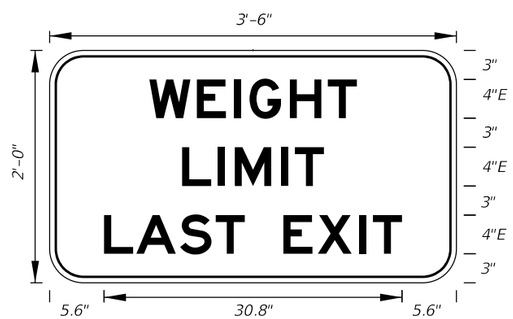

FTP-49-06
3'-6" X 5'-6"
6" Radii
4" Series C Legend
Green Background Municipality Name Optional
White Legend, Border and Symbol




Detail for FTP-48-06 and FTP-49-06

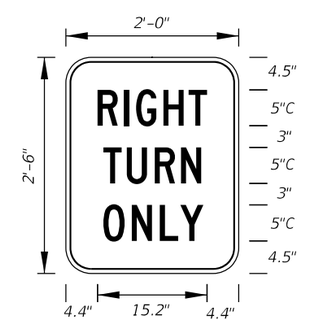



FTP-50-06
4'-6" X 2'
3" Radii ¾" Border
4" Series C Legend
Yellow Background
Black Legend and Border




FTP-51-06
3' X 2'
3" Radii ¾" Border

4" Series E Legend
White Background
Black Legend and Border




FTP-52-06
2' X 2'-6"
3" Radii ⅝" Border

5" Series C Legend
White Background
Black Legend and Border

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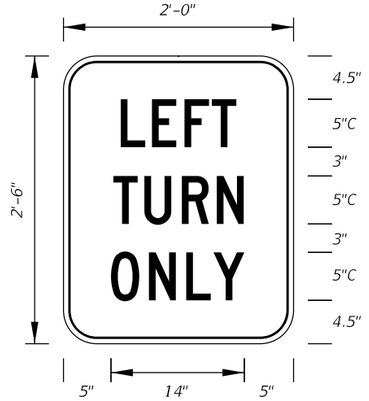
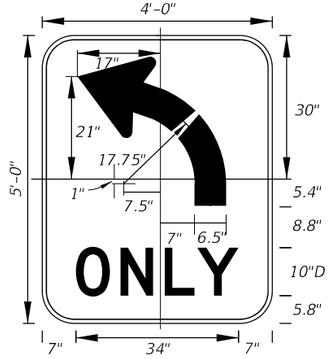
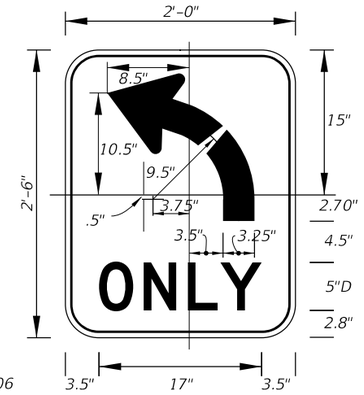



FTP-53-06
2' X 2'-6"
3" Radii 5/8" Border
5" Series C Legend
White Background
Black Legend and Border



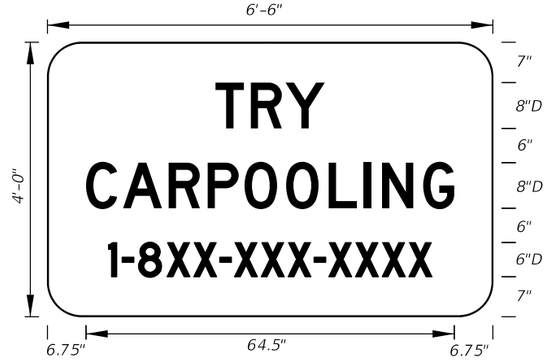

FTP-54L-06
4' X 5'
6" Radii 3/4" Border
10" Series D Legend
White Background
Black Legend and Border

FTP-54R-06 for
(Right Turn Arrow)



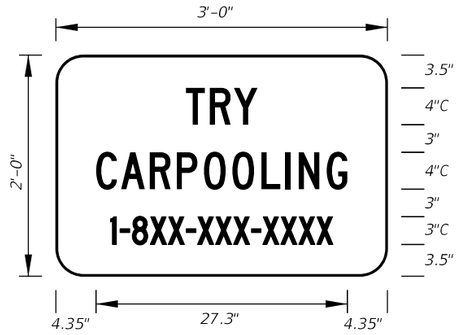

FTP-55L-06
2' X 2'-6"
3" Radii 3/8" Border
5" Series D Legend
White Background
Black Legend and Border

FTP-55R-06 for
(Right Turn Arrow)



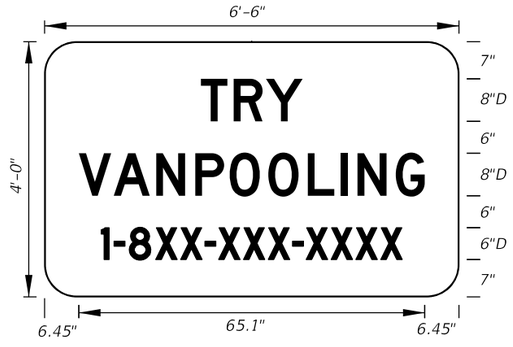

FTP-56-06
6'-6"X 4'
6" Radii 3/4" Border
8" and 6" Series D Legend
Blue Background
White Legend and Border

Design Project Manager
or Transit Administrator
will supply correct 1-8XX
number.



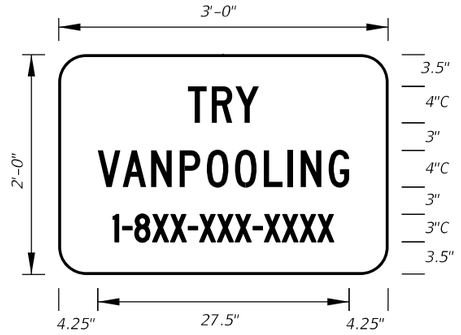

FTP-56A-06
3' X 2'
3" Radii
4" and 3" Series C Legend
Blue Background
White Legend and Border

Design Project Manager
or Transit Administrator
will supply correct 1-8XX
number.



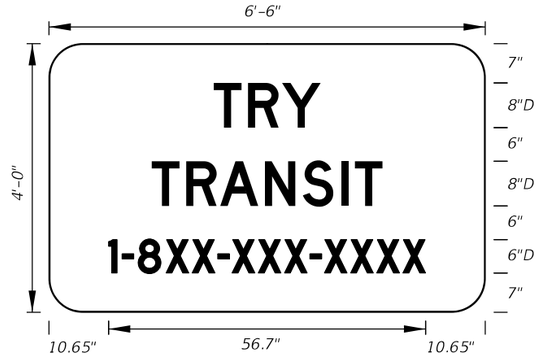

FTP-57-06
6'-6" X 4'
6" Radii
8"and 6" Series D Legend
Blue Background
White Legend and Border

Design Project Manager
or Transit Administrator
will supply correct 1-8XX
number.



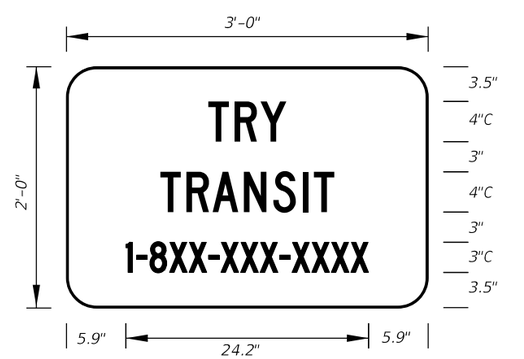

FTP-58-06
3' X 2'
3" Radii
4" and 3" Series C Legend
Blue Background
White Legend and Border

Design Project Manager
or Transit Administrator
will supply correct 1-8XX
number.




FTP-59-06
6'-6" X 4'
6" Radii
8" and 6" Series D Legend
Blue Background
White Legend and Border

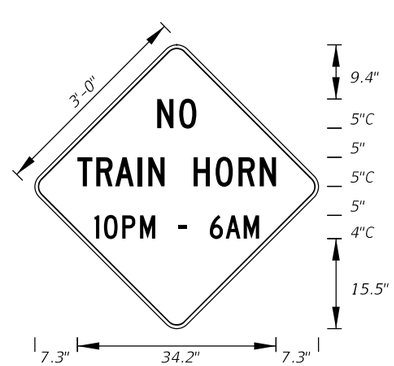
Design Project Manager
or Transit Administrator
will supply correct 1-8XX
number.



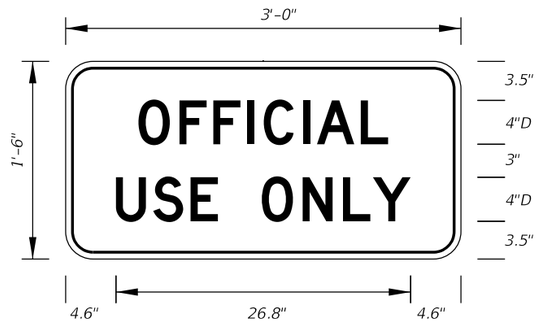

FTP-60-06
3' X 2'
3" Radii
4"and 3" Series C Legend
Blue Background
White Legend and Border

Design Project Manager
or Transit Administrator
will supply correct 1-8XX
number.


FTP-61-06
3' X 2'
3" Radii 3/4" Border
4" and 3" Series C Legend
Yellow Background
Black Legend and Border




FTP-62-06
3' X 3'
2" Radii 3/4" Border 4"and 5" Series C Legend
Yellow Background Black Legend and Border




FTP-65-06
3' X 1'-6"
2" Radii 3/4" Border
4" Series D Legend
White Background
Black Legend and Border

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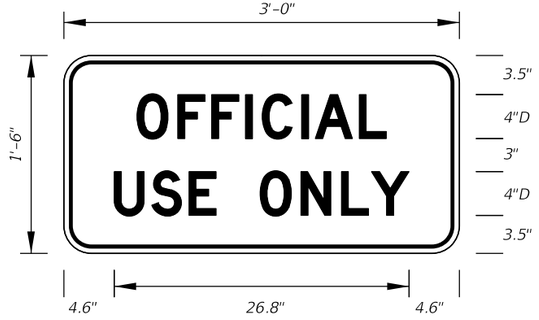
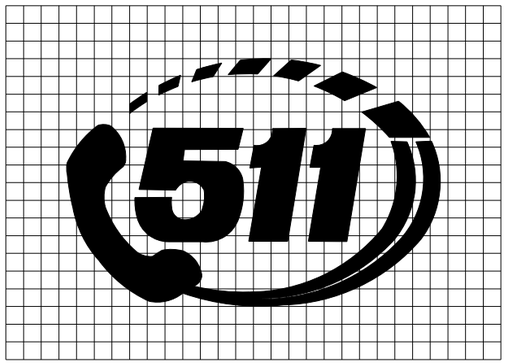
SPECIAL SIGN DETAILS




FTP-65-06
3' X 1'-6"
2" Radii ¾" Border
4" Series D Legend
White Background
Black Legend and Border

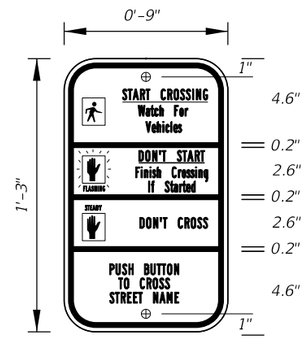

FTP-66-06
4'X 5'
2" Radii ¾" Border
7" Series D Legend
Blue Background
White Legend and Border


FTP-67-06
3' X 4'
2" Radii ¾" Border
5" Series D Legend
Blue Background
White Legend and Border




DETAIL for FTP-66 AND FTP-67

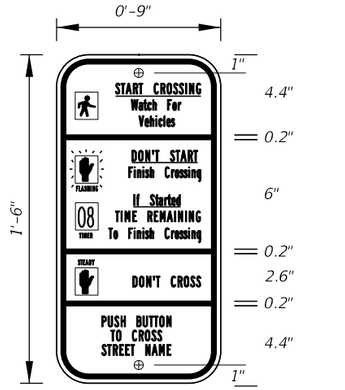
Sign Mounting Holes Can Be Punched Or Field Drilled With No Obstruction To Text Or Symbols From Holes Or Bolts.




FTP-68A-06
9" X 1'-3"
1.5" Radii ¾" Border
Series B Legend
White Background
Black Legend and Border

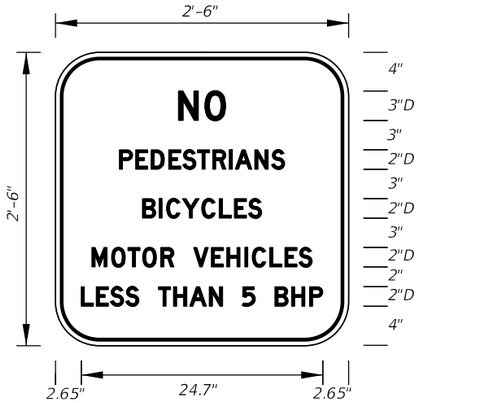
See Standard Highway Signs Manual, Sign R10-3b For Letter Size Spacing And Symbol Sizes.

Sign Mounting Holes Can Be Punched Or Field Drilled With No Obstruction To Text Or Symbols From Holes Or Bolts.




FTP-68B-06
9" X 1'-6"
1.5" Radii ¾" Border
Series B Legend
White Background
Black Legend and Border

See Standard Highway Signs Manual, Sign R10-3b For Letter Size Spacing And Symbol Sizes.




FTP-69-06
2'-6" X 2'-6"
4" Radii ¾" Border

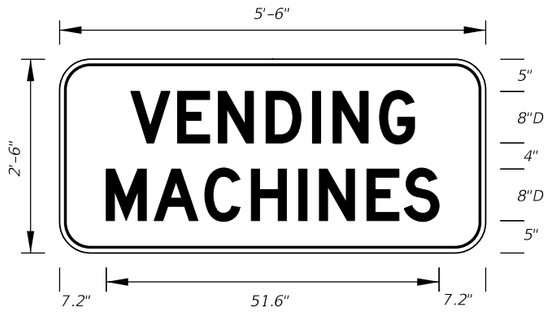
2" and 3" Series D Legend
White Background
Black Legend and Border


FTP-70-06
3'-6" X 2'-6"
2.25" Radii ¾" Border
5" Series C and 7" Series C Legend
Blue Background
White Legend and Border


FTP-71-06
4' X 4'
2" Radii ¾" Border
8" Series C Legend
Yellow Background
Black Legend and Border


FTP-72-06
3' X 3'
2" Radii ¾" Border

6" Series C Legend
Yellow Background
Black Legend and Border




FTP-73-06
5'-6" X 2'-6"
4" Radii ¾" Border

8" Series D Legend
Blue Background
White Legend and Border


FTP-74-06
5'-6" X 2'-6"
4" Radii ¾" Border
6" Series D Legend
Blue Background
White Legend and Border

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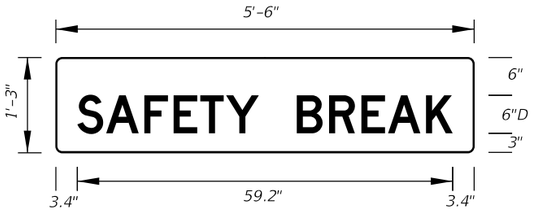
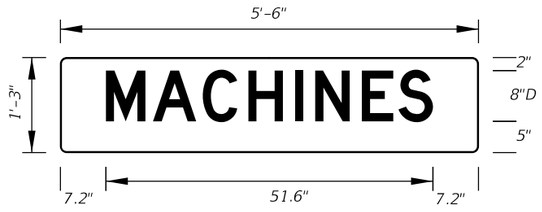
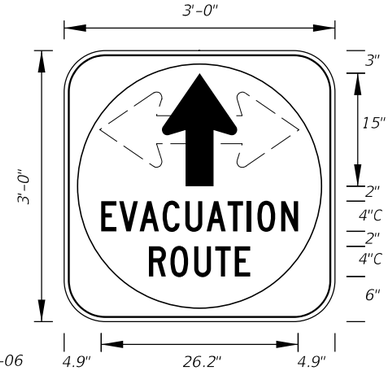


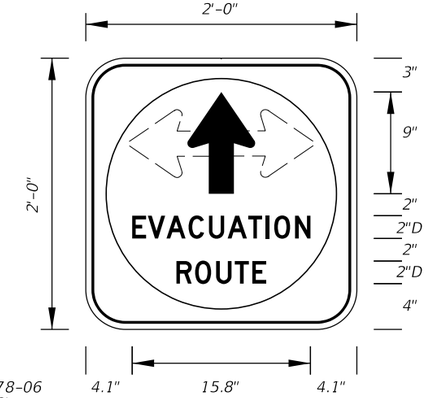

FTP-75-06
5'-6" X 1'-3"
1" Radii
6" Series D Legend
Blue Background
White Legend



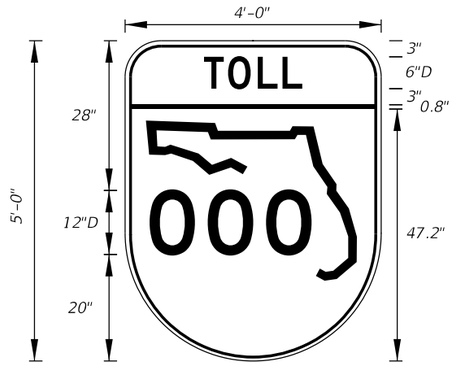

FTP-76-06
5'-6" X 1'-3"
1" Radii
8" Series D Legend
Blue Background
White Legend



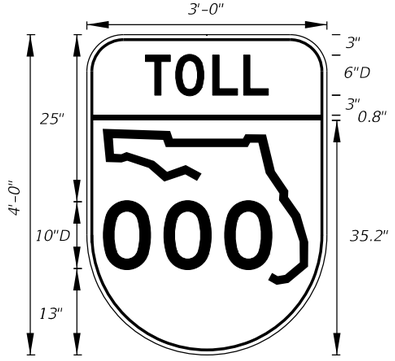

FTP-77-06
3' X 3'
5" Radii ¾" Border
4" Series C Legend
White Background with Blue Circle Background
White Legend and Black Border



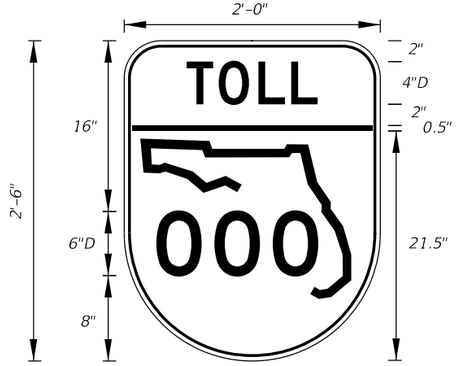

FTP-78-06
2' X 2'
3" Radii ¾" Border
2" Series D Legend
White Background with Blue Circle Background
White Legend and Black Border



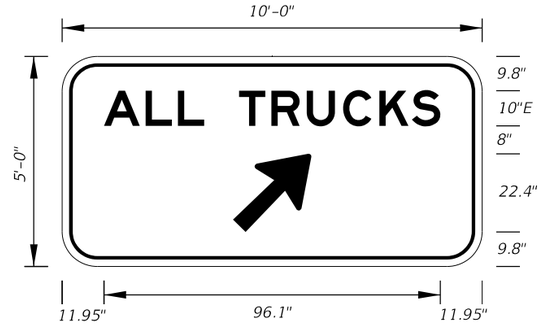

FTP-79-06
4' X 5'
6" Radii ¾" Border
6" and 12" Series D Legend
Top Yellow Background with Black Legend and Black Border
Bottom White Background with Black Legend and Border




FTP-80-06
3' X 4'
5" Radii ¾" Border
6"and 10" Series D Legend
Top Yellow Background with Black Legend and Black Border
Bottom White Background with Black Legend and Border

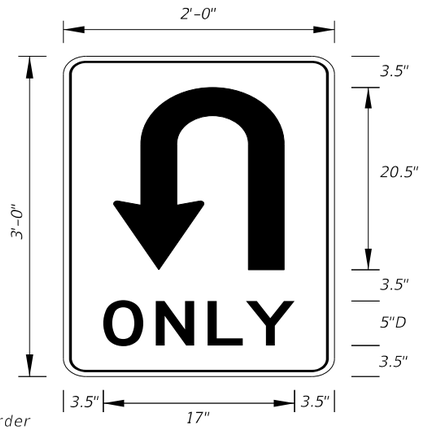



FTP-81-06
2' X 2'-6"
3" Radii ¾" Border
4" and 6" Series D Legend
Top Yellow Background with Black Legend and Black Border
Bottom White Background with Black Legend and Border




FTP-83-08
10'-0" X 5'-0"
8" Radii

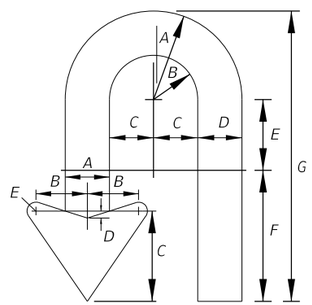
10" Series E Legend
Green Background
White Legend




FTP-82-08
2' X 3'
1.5" Radii
5" Series D Legend
White Background
Black Legend and Border

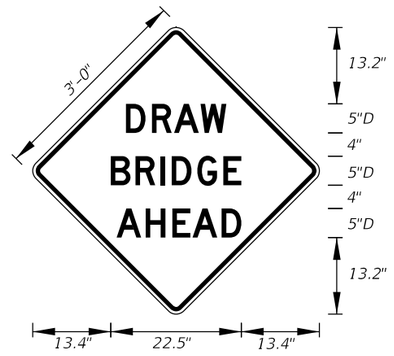
ARROW HEAD

| | |
|---|---|
| A | 3.125 |
| B | 3.625 |
| C | 6.375 |
| D | .5 |
| E | .625 |



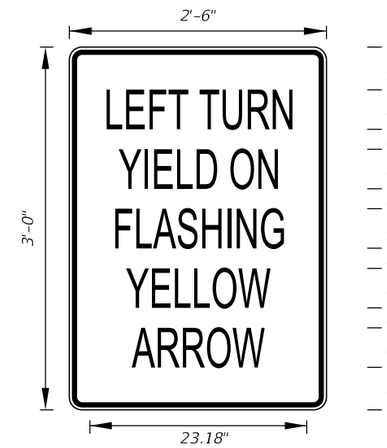

ARROW BODY

| A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|
| 6.25 | 3.125 | 3.125 | 3.125 | 5 | 9.25 | 20.5 |




FTP-84-09
3' X 3'
1.5" Radii

5" Series D Legend
Yellow Background
Black Legend




FTP-85-13
3' X 2'-6"
1.875" Radii ¾" Border

3.5" Series C Legend
White Background
Black Legend and Border

10/14/2016 8:43:36 AM

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|---|---|---|---|---|---|
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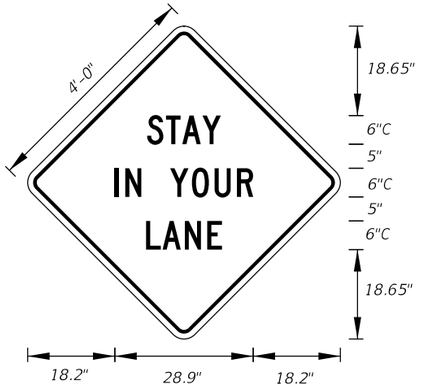
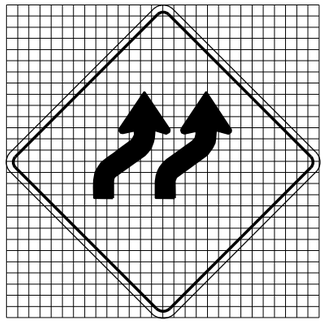


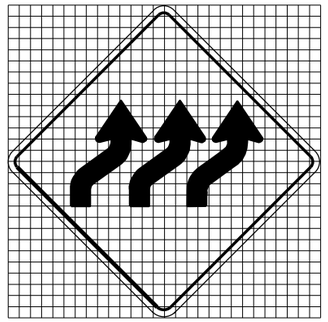

MOT-1-06
4' X 4'
2" Radii ¾" Border

6" Series C Legend
Orange Background
Black Legend and Border



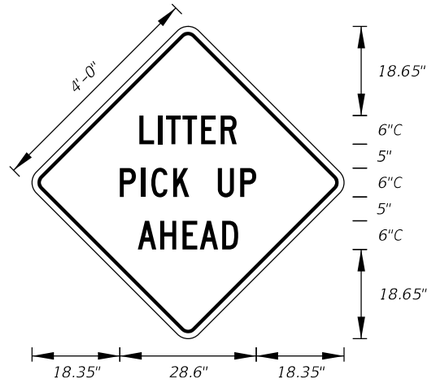
MOT-2-06
4' X 4'
2" Radii ¾" Border

Orange Background
Black Arrows and Border



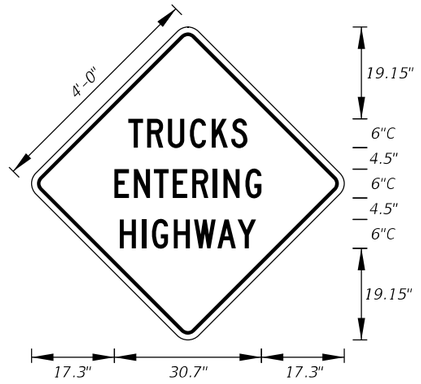
MOT-3-06
4' X 4'
2" Radii ¾" Border

Orange Background
Black Arrows and Border



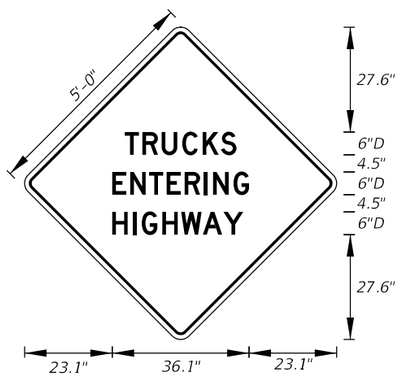

MOT-4-06
4' X 4'
2" Radii ¾" Border

6" Series C Legend
Orange Background
Black Legend and Border



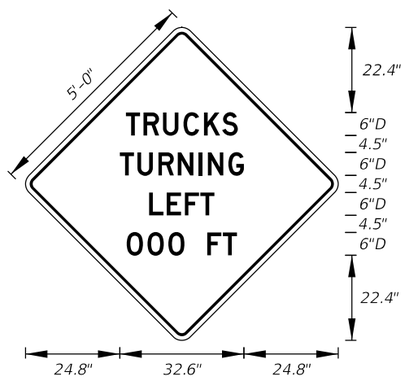

MOT-5-06
4' X 4'
2" Radii ¾" Border

6" Series C Legend
Orange Background
Black Legend and Border



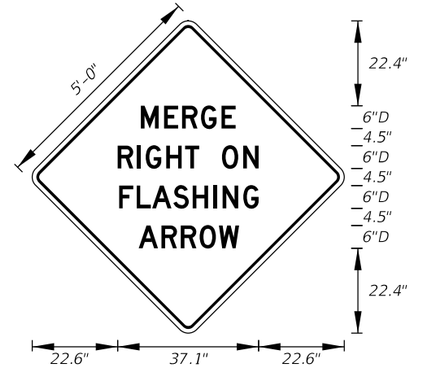

MOT-6-06
5' X 5'
2" Radii ¾" Border

6" Series D Legend
Orange Background
Black Legend and Border



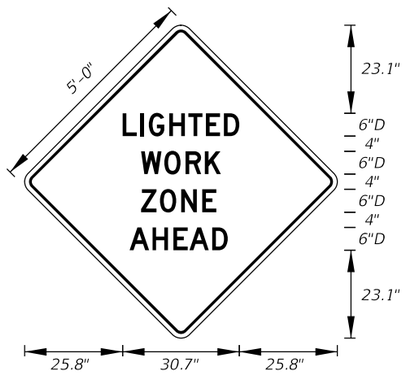

MOT-7-06
5' X 5'
2" Radii ¾" Border

6" Series D Legend
Orange Background
Black Legend and Border



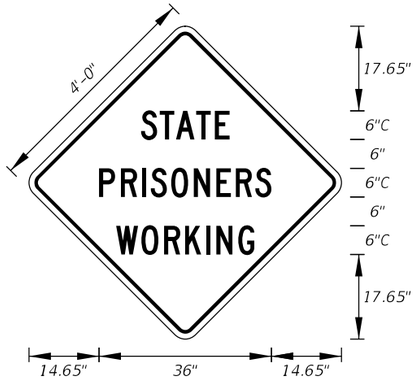

MOT-8-06
5' X 5'
2" Radii ¾" Border

6" Series D Legend
Orange Background
Black Legend and Border



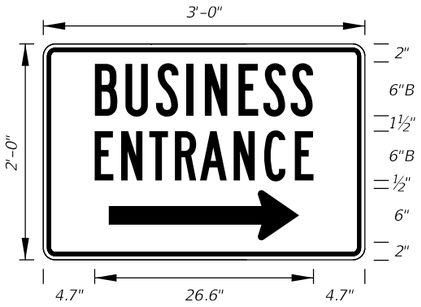

MOT-9-06
5' X 5'
2" Radii ¾" Border

6" Series D Legend
Orange Background
Black Legend and Border



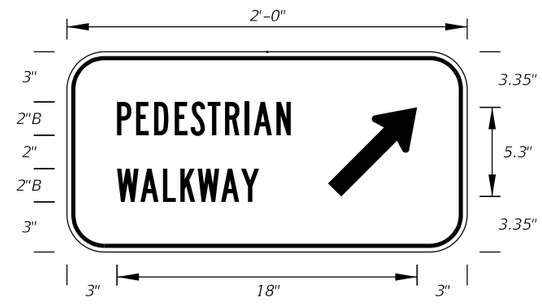

MOT-10-06
4' X 4'
2" Radii ¾" Border

6" Series C Legend
Orange Background
Black Legend and Border




MOT-11-06
3' X 2'
2" Radii ¾" Border

6" Series B Legend
Blue Background
White Legend and Border




MOT-12-06
2' X 1'
2" Radii ¾" Border

2" Series B Legend
White Background
Black Legend and Border

10/14/2016 8:43:38 AM

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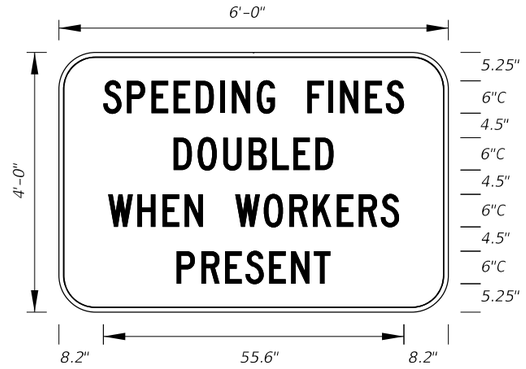
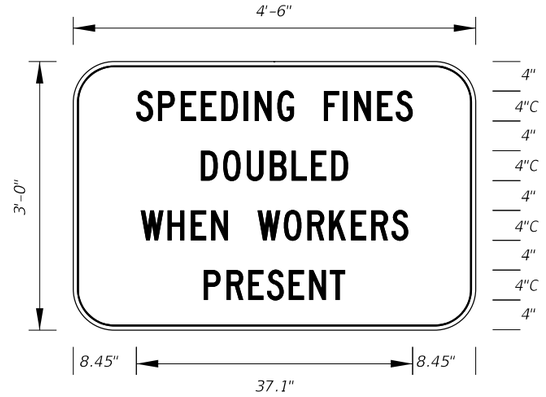


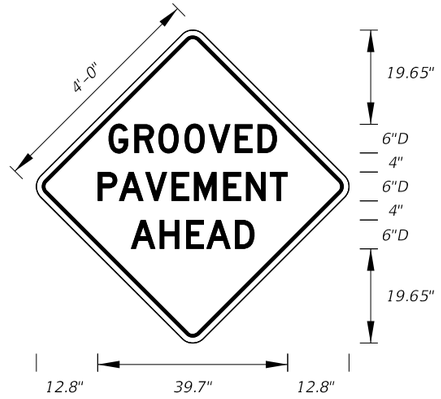

MOT-13-06 Freeway Sign
6' X 4'
6" Radii ¾" Border

6" Series C Legend
White Background
Black Legend and Border



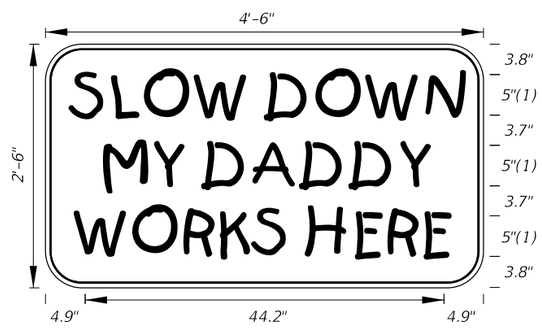

MOT-14-06 Arterial Sign
4'-6" X 3'
5" Radii ¾" Border

4" Series C Legend
White Background
Black Legend and Border



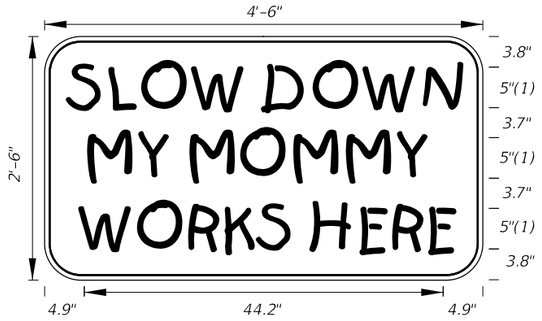

MOT-15-06
4' X 4'
2" Radii ¾" Border

6" Series D Legend
Orange Background
Black Legend and Border



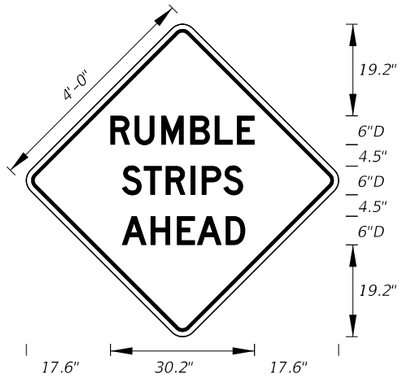

MOT-16-06
4'-6" X 2'-6"
4" Radii ¾" Border

5" Kids Series Legend
Orange Background
Black Legend and Border



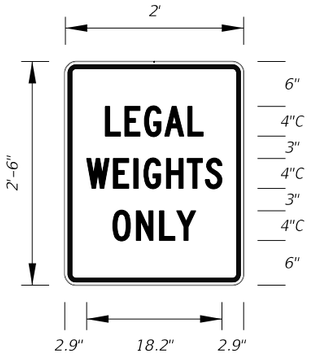

MOT-17-06
4'-6" X 2'-6"
4" Radii ¾" Border

5" Kids Series Legend
Orange Background
Black Legend and Border



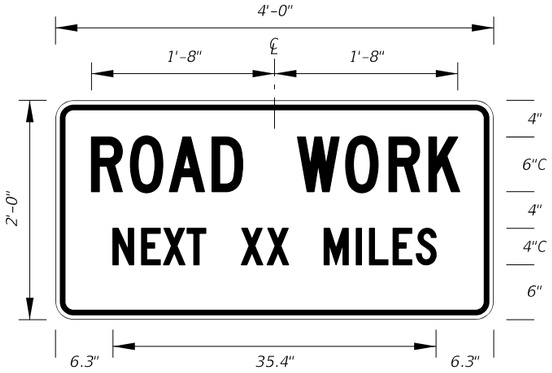

MOT-18-10
4' X 4'
2" Radii ¾" Border

6" Series D Legend
Orange Background
Black Legend and Border



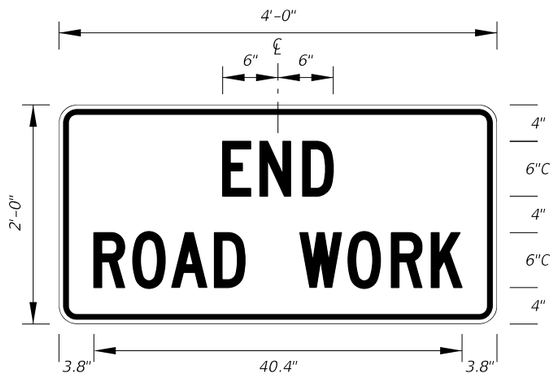

MOT-19-11
2' X 2'-6"
1.13" Radii ¾" Border

4" Series C Legend
White Background
Red Legend and Border




G20-1
2' X 4'
1.5" Radii ¾" Border

Orange Background
Black Legend and Border

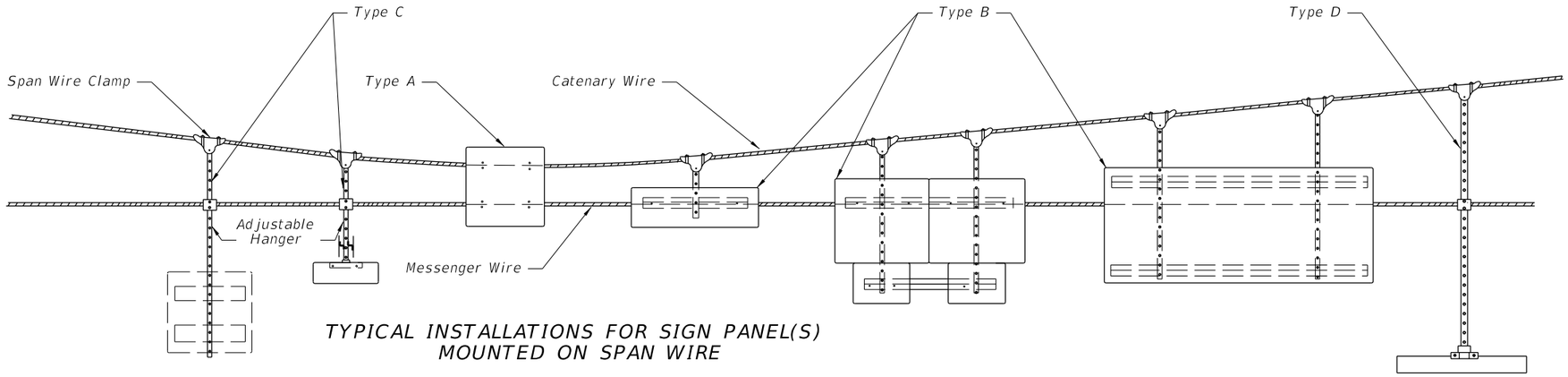



G20-2
2' X 4'
1.5" Radii ¾" Border

Orange Background
Black Legend and Border

10/14/2016 8:43:41 AM

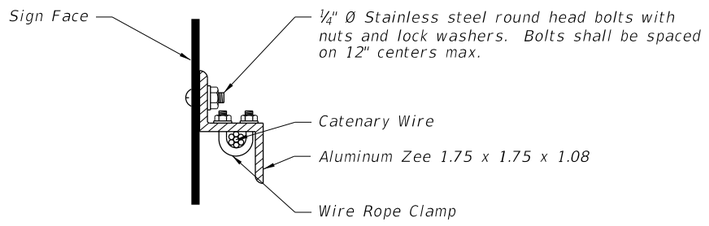
| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | SPECIAL SIGN DETAILS | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/14 | | | | | 17355 | 11 of 11 |



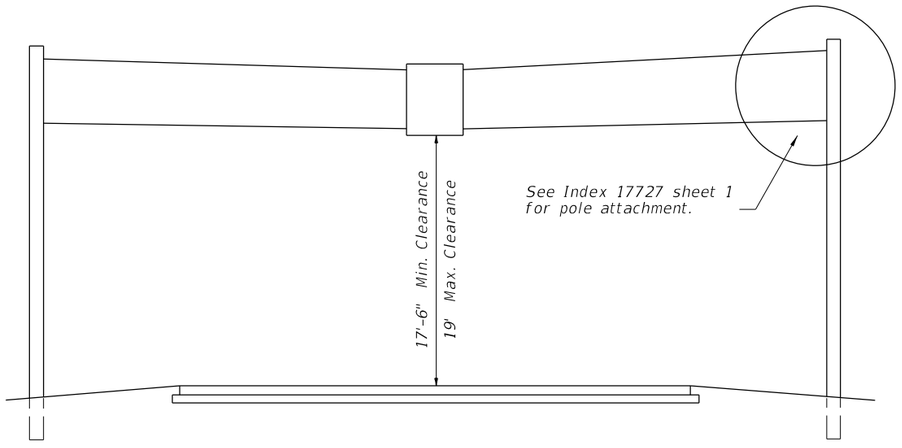

TYPICAL INSTALLATIONS FOR SIGN PANEL(S) MOUNTED ON SPAN WIRE

Notes:

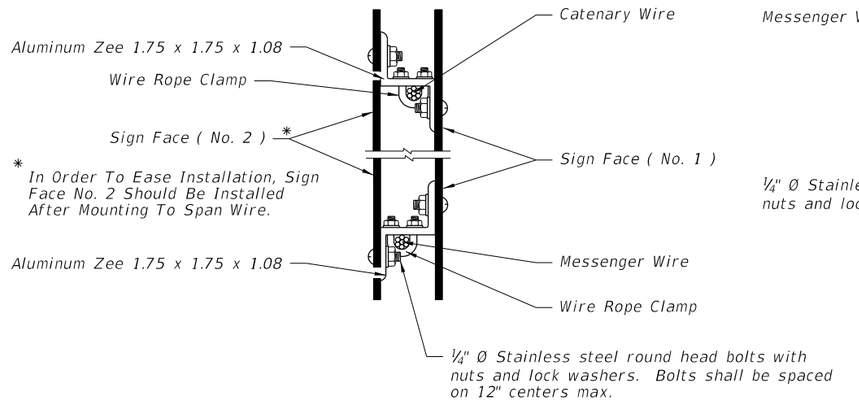
1. Bottom edge of signs shall be approximately at the same elevation.
2. Type B & C attachments with one hanger shall have wind beams for signs wider than 3½'. The beams shall extend to within 6" of the sign edge.
3. Type B & C attachments for signs 4' and wider shall have 2 hangers. Signs 7' and wider shall have wind beams that extend to within 6" of the sign edge.
4. Type D attachments shall be for signs 3½' wide or less.
5. Sign panels shall meet the requirements of Index 11200.
6. Refer to section 634 of the Standard Specifications For Road And Bridge Construction.
7. All bolts, nuts, and washers shall be passivated stainless steel, AISI 300 series, commercial grade, type 316.




SIGN MOUNTING DETAIL

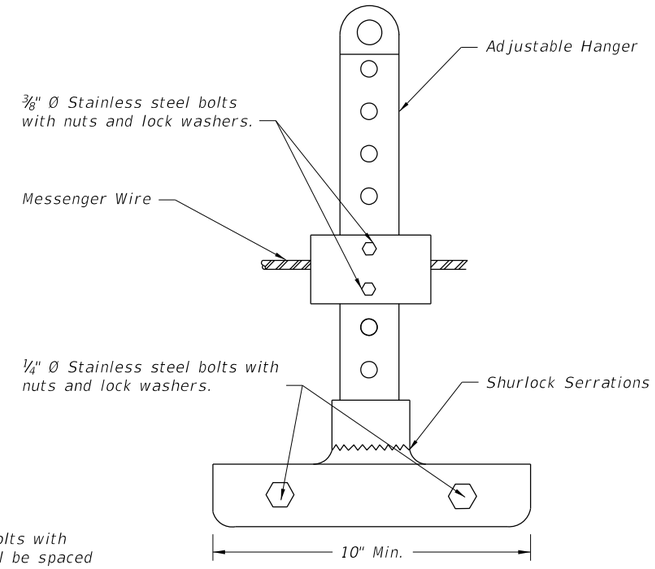



TYPICAL SPAN WIRE INSTALLATION




The overlapped connection of adjustable hangers shall use a minimum of 2 bolts with a minimum spaceing between bolts of 2".

DETAIL OF OPPOSING SIGNS SPAN WIRE MOUNTED

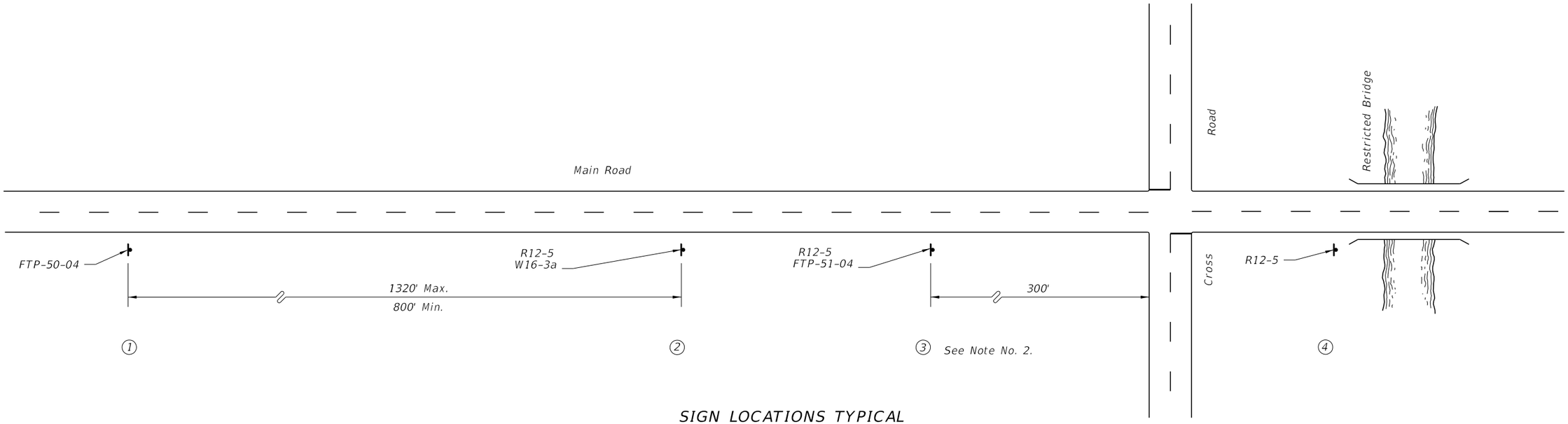



ADJUSTABLE HANGER FOR SIGN MOUNTING

TWO POINT ATTACHMENT

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/09 | | | FY 2017-18 DESIGN STANDARDS | SPAN WIRE MOUNTED SIGN DETAILS | 17356 | 1 of 1 |

10/14/2016 8:44:05 AM




## SIGN LOCATIONS TYPICAL

① WEIGHT LIMIT RESTRICTION AHEAD

FTP-50-06

② WEIGHT LIMIT 8T 12T 16T

R12-5 (24" X 36")

X MILES

W 16-3A

③ WEIGHT LIMIT 8T 12T 16T

R12-5 (24" X 36")

WEIGHT LIMIT LAST EXIT

FTP-51-06

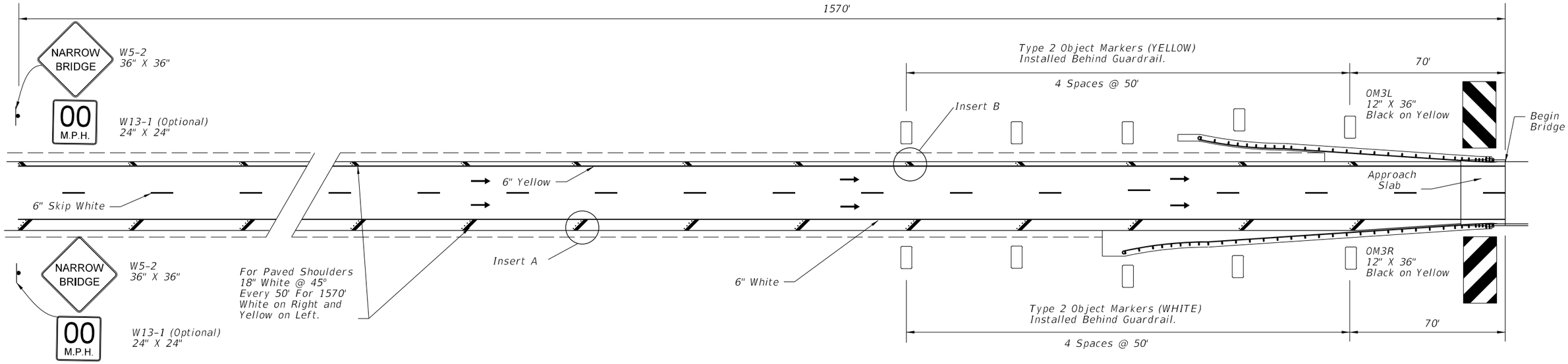
④ WEIGHT LIMIT 8T 12T 16T

R12-5 (24" X 36")

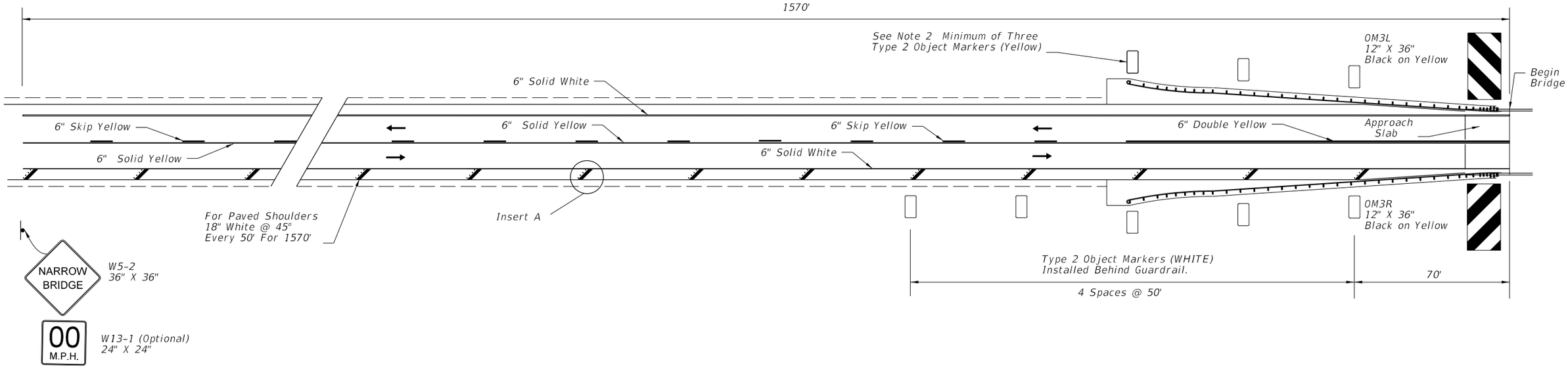
1. See Standard Highway Signs for sign R12-5 and W16-3 details.
2. Location of Sign No. 3 may require some field adjustment.
3. The Cross Road is the last detour to route around the restricted bridge.
4. Location of Sign No. 2 should be established from the Cross Road the following approximate distances; Interstate-1 Mile Non- Interstate-1/2 Mile.
5. See Index 17355 for sign details.

10/14/2016 8:44:35 AM

| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | BRIDGE WEIGHT RESTRICTIONS | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 01/01/12 | | | | | 17357 | 1 of 1 |



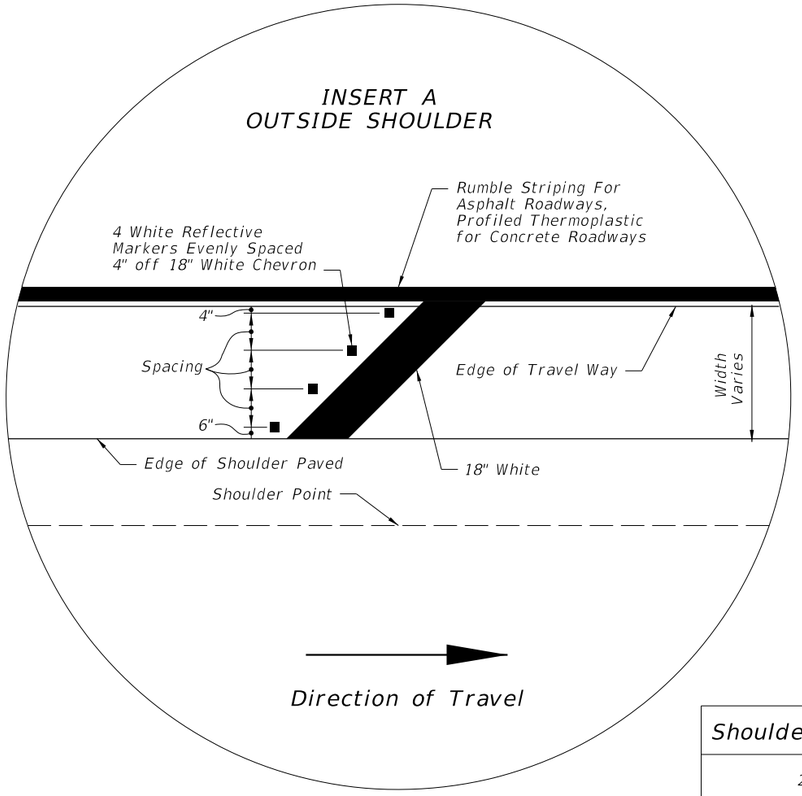

*One-Way Traffic*

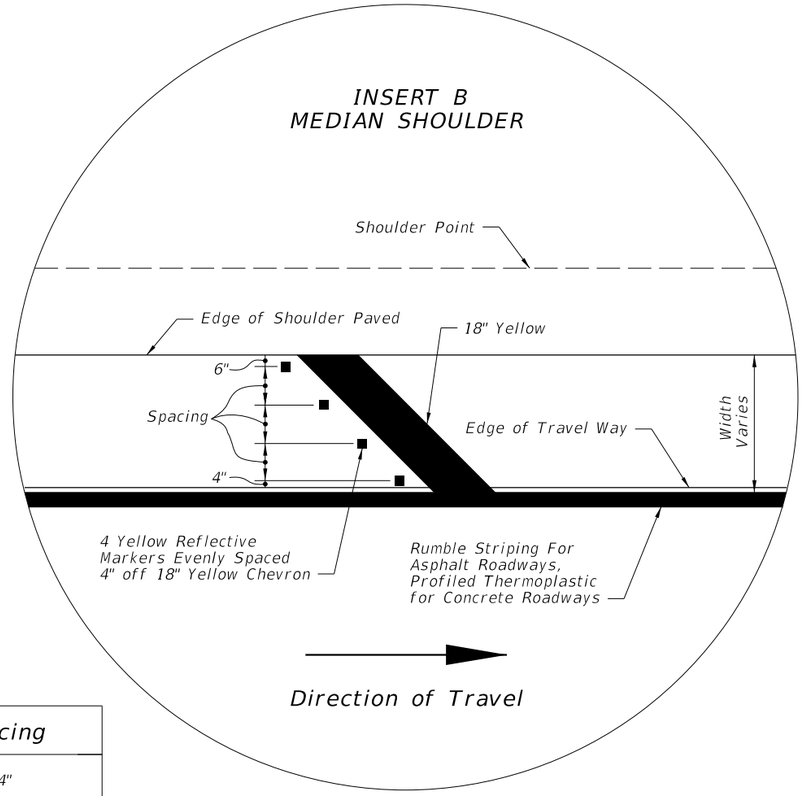



*2-Way Traffic*

10/14/2016 8:44:57 AM

| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/13 | | | FDOT FY 2017-18 DESIGN STANDARDS | RURAL NARROW BRIDGE TREATMENT | 17359 | 1 of 2 |




| Shoulder Width | No. of RPM's | Spacing |
|---|---|---|
| 2' | 2 | 14" |
| 3' | 3 | 13" |
| 4' | 3 | 19" |
| 5' | 4 | 16.67" |

NOTES:

1. Roadways with Two-Way Traffic:
   No passing zone should be extended 1570' in advance of narrow bridge.
2. If the bridge or the approach is on a curve, delineators shall be installed for a distance of 1570' in advance of narrow bridge on the outside portion of the roadway. Spacing shall be 100' between delineators. Delineators are to be placed not less than 2' or not more than 8' outside the outer edge of pavement.
3. Object markers and delineators on both sides of roadway shall face traffic approaching bridge
4. The OM-3R & OM-3L object markers shall be installed 4' above the roadway edge. The panels may be post mounted at the bridges.

10/14/2016 8:44:59 AM

| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | RURAL NARROW BRIDGE TREATMENT | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/15 | | | | | 17359 | 2 of 2 |