GENERAL NOTES

ALUMINUM MATERIALS: All aluminum materials shall meet the requirements of the Aluminum Association Alloy 6061-T6 and also the following ASTM specifications: Sheets and plates, B209, extruded bars, B221, and T9. Aluminum material shall be cleaned before fabrication. Aluminum material shall be of Aluminum Association Alloy No. 5556 filler wire.

STEEL BOLTS, NUTS, & WASHERS: All steel bolts, nuts, and washers shall meet the requirements of ASTM A325 and shall be galvanized in accordance with ASTM A252. Steel shall not be used.

BASE CONNECTION: High strength bolts L2 in the base connection shall be tightened only to the torque shown in the table on sheet 2 and 3. Overtightened base connections will not be permitted.

SIDE VIEW

MULTI-COLUMN GROUND SIGN


ALUMINUM MATERIALS: All aluminum materials shall meet the requirements of the Aluminum Association Alloy 6061-T6 and also the following ASTM specifications: Sheets and plates, B209, extruded bars, B221, and T9. Aluminum material shall be cleaned before fabrication. Aluminum material shall be of Aluminum Association Alloy No. 5556 filler wire.

STEEL BOLTS, NUTS, & LOCK WASHERS: All steel bolts, nuts, and washers shall meet the requirements of ASTM A325 and shall be galvanized in accordance with ASTM A252. Steel shall not be used.

BASE CONNECTION: High strength bolts L2 in the base connection shall be tightened only to the torque shown in the table on sheet 3. Overtightened base connections will not be permitted.
### PROCEDURE FOR ASSEMBLY OF BASE CONNECTION

1. Assemble post to stub with bolts and flat washers as shown.
2. Shim as required to plumb post (see shim detail).
3. Tighten all bolts the maximum possible with 1"-0" to 1'-3" wrench to bed washers and shims and to clean bolt threads.
4. Burr threads at junction with nut using a center punch to prevent nut loosening.

### FOUNDATION ELEVATION

**NOTE:** All reinforcing to be Grade 60.

1. The reinforcing bars shall conform to ASTM Specification A615/A615M.
2. The transverse wires conform to ASTM Specification A806.
3. The shop welding is performed by machines under a continuous, controlled process, approved by the Engineer.
4. A Shop report shall be available upon request, to the Engineer.

**Shop-Weld Assemblies of Foundation stirrups shall be welded to reinforced concrete foundation provided that:**

- The reinforcing bars shall conform to ASTM Specification A615/A615M.
- The transverse wires shall conform to ASTM Specification A806.
- The shop welding shall be performed by machines under a continuous, controlled process, approved by the Engineer.

**NOTE:** All reinforcing to be Grade 60.
**BASE CONNECTION DATA**

<table>
<thead>
<tr>
<th>Section*</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>L</th>
<th>Torque (lbf-ft)</th>
<th>R</th>
<th>b</th>
<th>t</th>
<th>S</th>
<th>b</th>
<th>w</th>
<th>L</th>
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<td>7&quot;</td>
<td>5-1/8&quot;</td>
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<td>5/8&quot;</td>
<td>270 ± 45</td>
<td>3/8&quot;</td>
<td>1-1/8&quot;</td>
<td>1-1/16&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/4&quot;</td>
<td>1-3/8&quot;</td>
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<td>7/16&quot;</td>
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<td>1/2&quot;</td>
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<td>1/4&quot;</td>
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<tr>
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<td>9&quot;</td>
<td>3-1/4&quot;</td>
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<td>1-1/8&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/4&quot;</td>
<td>1-3/4&quot;</td>
</tr>
<tr>
<td>W 10x33</td>
<td>8&quot;</td>
<td>2-1/4&quot;</td>
<td>8&quot;</td>
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<td>1&quot;</td>
<td>580 ± 90</td>
<td>9/16&quot;</td>
<td>2&quot;</td>
<td>1-9/16&quot;</td>
<td>1/2&quot;</td>
<td>3/4&quot;</td>
<td>3/16&quot;</td>
<td>2-3/8&quot;</td>
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<tr>
<td>W 12x45</td>
<td>8&quot;</td>
<td>3&quot;</td>
<td>2-1/4&quot;</td>
<td>8&quot;</td>
<td>3&quot;</td>
<td>580 ± 90</td>
<td>9/16&quot;</td>
<td>2&quot;</td>
<td>1-9/16&quot;</td>
<td>1/2&quot;</td>
<td>3/4&quot;</td>
<td>3/16&quot;</td>
<td>2-3/8&quot;</td>
</tr>
</tbody>
</table>

* Designations: Normal Depth in inches and weight in pounds per linear foot.

---

**STEEL POST & ALTERNATIVE BASE DETAILS**

**MULTI-COLUMN GROUND SIGN**

FDOT 2014
DESIGN STANDARDS

MULTI-COLUMN GROUND SIGN

INDEX NO. 11200

SHEET NO. 3 of 3
1. For 'General Notes' covering Material Specifications see Index 11200.
2. Design based on 32 ft. maximum height to centroid of sign panel.
3. The Design Wind Speed shall conform to Wind Speed by County shown on Index 11200, Sheet 1.

**GENERAL NOTES**

**TYPICAL FACE ELEVATION FOR OVERHEAD TRUSS**

**SECTION C-C**

**BACKING STRIP DETAIL**

**TYPICAL DETAIL OF SIGN & TRUSS CONNECTION**

**DETAIL A**

**DETAILED OF SIGN FACE & TRUSS CONNECTION**
CANTILEVER SIGN STRUCTURE NOTES

1. Design according to FDOT Structures Manual. Alternate Designs are not allowed.
2. Submit shop drawings for all work include:
   a. Field verification of all upright heights.
   b. Foundation elevations necessary to ensure minimum vertical clearances as per traffic plans.
   c. Anchor bolt orientation with respect to centerline of truss and the direction of traffic.
   d. Upright splices a minimum distance of 2 truss panel lengths apart.

3. Shop Fabrication, Assembly, Handling and Shipping:
   a. Do not begin fabrication before receiving shop drawing approval.
   c. Shop assemble the entire structure after galvanizing and prior to shipment.
   d. If necessary, disassemble and secure components for shipment.

4. Sign Structure Materials:
   a. Upright and Chords (Steel Pipe): API -XI-X42, 42 ksi yield or ASTM A500, Grade B (min).
   b. Steel Angles: ASTM A 709, Grade 36.
   c. Steel Plates: ASTM A 709, Grade 36.
   d. Weld Metal: E70XX.
   e. Bolts: ASTM A 325 Type 1 (install per Specification Section 700) with single, self-locking nuts.
   f. Anchor Bolts: ASTM F1554, Grade 5 with ASTM A363 Grade A heavy-hex double nuts.
   g. Install all nuts per manufacturer's instructions.
   h. Bolt hole diameters: equal to the bolt diameter plus 1/16".
   i. Anchor bolt hole diameters: equal to the bolt diameter plus 1/16".
   j. Use of split lock washers is not permitted.

5. Galvanization: Nuts, bolts and washers: ASTM F2329. Other steel items: ASTM A123


7. Foundation Materials:
   a. Reinforcing Steel: ASTM A615, Grade 60.
   b. Concrete: Class IV, minimum 5.5 ksi compressive strength at 28-days for all environmental classifications for Spread Footing.
   c. Concrete: Class IV (Drilled Shaft), minimum 4.6 ksi compressive strength at 28-days for all environmental classifications for Drilled Shaft.

8. Construct the Sign Structure foundation in accordance with FDOT Specification Section 455.

9. Prior to erection, record the as-built anchor locations and provide to the Engineer.

10. After placement of the upright and prior to installation of the truss, adjust the leveling nuts beneath the base plate to achieve the back rake shown in the Camber Diagram.

11. Place backfill above the footing prior to installation of the sign panels. Do not remove or reduce in height without prior approval of the Engineer.

12. Install sign panels as shown on the Elevation drawing.

13. Verify CSL access tubes will not interfere with anchor bolt installation before excavating the shaft. When CSL access tube locations conflict with anchor bolt locations, move the CSL access tube location a two inches along the inner circumference of the reinforcing cage. Notify the Engineer before excavating the shaft if the CSL access tube locations cannot be moved out of conflict with anchor bolt locations.


NOTE: See Plans for Cantilever Sign Structure Data Table.
CANTILEVER SIGN STRUCTURE

#5 Ties (closed ties)

Amplitude prior to pour.

" minimum

Roughen to

Construction Joint allowed.

#5 Ties

Splice (Typ.)

2'-2" Lap

2'-0" Min.

Grade

Finished

See Section B-B

Anchor Bolts, (Typ.)

CSL Tube (Typ.)

2'-2" Lap

#5 Ties

See Section B-B

Anchor Bolts, (Typ.)

Grade

Finished

Shaft

Drilled

and Upright

Footing Pedestal

Center of

Footing Pedestal

and Upright

See Detail C

See Spec. 649-6

Wire Screen

'BD'

'BA' Ø Bolts

(Typ.)

Nuts

Double

陟" Plate Washer (Typ.)

2" Plate Washer (Typ.)

Wrap Fillet Weld Around

the Stiffner Termination

on the Tube Wall. (Typ.)

Elev. Top of Foundation

See Traffic Plans

Elev. Top of Foundation

See Traffic Plans

Directions of Travel

E

e

F

e

A

e

L

e

K

e

Directions of Travel
**CANTILEVER SIGN STRUCTURE**

**UPRIGHT-TRUSS CONNECTION DETAIL**

(Web Members from back Truss Chord omitted for clarity)

**SECTION F-F, SECTION G-G SIMILAR**

(Note with Gusset Plate & Angles omitted for clarity)

**SECTION D-D**

---

**NOTE:** Only 6 Bolts Shown for clarity

3/8" for 1" Ø Bolts
3/8" for 5/8" Ø Bolts
3/8" for 3/8" Ø Bolts

Maximum Gap Between Pipes is 1/4"

**VIEW E-E**

---

**DETAIL H**

---

**NOTE:**

Abbreviation
OD = Outside Diameter

---

**FDOT 2014 DESIGN STANDARDS**

**INDEX NO.**

11310

**SHEET NO.**

3 of 5
SPAN SIGN STRUCTURE NOTES

1. Design according to FDOT Structures Manual. Alternate Designs are not allowed.
2. Submit shop drawings for all work. Include:
   a. Field verification of all upright heights.
   b. Foundation elevations necessary to insure minimum vertical clearances as per traffic plans.
   c. Anchor bolt orientation with respect to centerline of truss and the direction of traffic.
   d. The method to be used to provide the required parabolic camber. (See Camber Diagram)
3. Shop Fabrication, Assembly, Handling and Shipping:
   a. Do not begin fabrication before receiving shop drawing approval.
   b. Do not begin assembling or painting until shop drawings have been reviewed and approved.
   c. Shop assemble the entire structure after galvanizing and prior to shipment.
   d. If necessary, disassemble and secure components for shipment.
4. Sign Structure Materials:
   a. Upright and Chords (Steel Pipe): API-5L X42, 42 ksi yield or ASTM A500, Grade B (min).
   b. Steel Plates: ASTM A709, Grade 36.
   c. Steel Angles: ASTM A 709, Grade 36.
   d. Weld Metal: E70XX.
   e. Bolts: ASTM A490 Type 1, (install per Specification Section 700) with single, self-locking nuts.
   f. Anchor Bolts: ASTM F1384, Grade 55 with ASTM A563 Grade A heavy-hex double nuts.
   g. Install all nuts per manufacturer’s instructions.
   h. Bolt hole diameters: equal to the bolt diameter plus \( \frac{1}{6} \)", anchor bolt hole diameters: equal to the bolt diameter plus \( \frac{1}{6} \)".
   i. Use of split lock washers is not permitted.
   j. Use of split lock washers is not permitted.
5. Galvanization: Nuts, bolts and washers: ASTM F2329. Other steel items: ASTM A123
7. Foundation Material:
   a. reinforcing Steel: ASTM A615, Grade 60.
   b. concrete: Class IV (Drilled Shaft), minimum 4.0 ksi compressive strength at 28-days for all environmental classifications.
   c. Steel Plates: ASTM A 709, Grade 36.
   d. Weld Metal: E70XX.
8. Construct the Sign Structure foundation in accordance with FDOT Specification Section 455.
9. Prior to erection, record the as-built anchor locations and provide to the Engineer.
10. Provide a parabolic camber with the maximum upward deflection as shown on the Camber Diagram.
11. Locate Chord splices a minimum of 3 truss panel lengths apart. Chord splices may be either the standard splice or the alternate splice.
12. Do not begin fabrication before receiving shop drawing approval.
13. Shop assemble the entire structure after galvanizing and prior to shipment.
14. If necessary, disassemble and secure components for shipment.

NOTE: See Plans for Span Sign Structure Data Table.

CAMBER DIAGRAM

14. Handhole at pole base is required for DMS structures. See Index 18300 for details.
Anchor Bolts
Equally Spaced between 'BD' Stiffner Plates
For Left Upright and Upright Center of Drilled Shaft
Equally Spaced
Anchor Bolts
'CB' For Right Upright
'BH' For Left Upright
See Upright Cap Detail

1.5 x 'F' OD
(1) Bolt Dia.
2 Bolt Dia.

Corrosion Protection
Drilled Shaft
Double Nuts
(Colp. 22)

'CH' For Right Upright
'BH' For Left Upright
See Detail D

'LA' or 'RA' Ø Bolts
w/ Self-Locking Nuts
'LB' or 'RB' Hex Head Bolts

10" for Truss Depths less than 7'-0" 1"-2" for Truss Depths 7'-0" or Greater

NOTE:
Abbreviation

'F' OD + 7"
Bottom Truss Chord

1.5 x 'F' OD + ('H' or 'J') OD + 2"
(1) Bolt Dia.
2 Bolt Dia.

2 x Bolt Diameter

Center of Drilled Shaft and Upright
For Left Upright 'BD' Stiffner Plates Equally Spaced between Anchor Bolts
For Right Upright 'CD' Stiffner Plates Equally Spaced between Anchor Bolts

Gusset Plate Washer (Typ.)

Wire Screen see Spec. 649-6

LEVELING NUTS

SECTION A-A

SECTION C-C

(Wire Mesh Plate and Angles omitted for clarity)

NOTE:
Abbreviation
OD = Outside Diameter

FDOT 2014 DESIGN STANDARDS
SPAN SIGN STRUCTURE

INDEX NO. 11320 SHEET NO. 2 of 5

LAST REVISION 07/01/13
DESCRIPTION FDOT 2014 DESIGN STANDARDS
**VIEW F-F**

**VIEW S-S** Similar
(Out-of-Plane Members not shown for clarity)

Span Length, \( A \), comprised of \( D \) Equal Panels

\( \frac{1}{2} \) The Number Of Panels For An Even Number Of Panels

\( \frac{1}{2} \) The Number Of Panels Rounded Down To The Closest Whole Number For An Odd Number Of Panels

**FRONT OF TRUSS ELEVATION**

(Back Truss Chord and attached Angles not shown for clarity)

<table>
<thead>
<tr>
<th>2 - 1/4&quot; Ø Bolts (Typ.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - 1/4&quot; U-Bolt w/ Self-Locking Nuts (Typ.)</td>
</tr>
<tr>
<td># Aluminum Zee Sign Hanger</td>
</tr>
<tr>
<td># U-Bolt (For attachment of Luminaire Support)</td>
</tr>
</tbody>
</table>

**NOTE:** See Index No. 11300.

**SECTION E-E**

**BACK-SIDE SIGN MOUNTING DETAIL**

<table>
<thead>
<tr>
<th>2 - 1/4&quot; Ø Bolts (Typ.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - 1/4&quot; U-Bolt w/ Self-Locking Nuts (Typ.)</td>
</tr>
<tr>
<td># Aluminum Zee Sign Hanger</td>
</tr>
<tr>
<td># U-Bolt (For attachment of Luminaire Support)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NOTE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbreviation</td>
</tr>
<tr>
<td>OD — Outside Diameter</td>
</tr>
</tbody>
</table>
ELEVATION
ALTERNATE SPLICE CONNECTION

NOTE: Only 6 Bolts shown for clarity.

'SC' Ø Bolts 'SP' Required
(The Half Each Side of Splice)

Maximum Gap Between Pipes ¼

6" for 1" Ø Bolts
1½" for ⅝" Ø Bolts
1¾" for ⅝" Ø Bolts

'PE' Dia. Bolts (Typ.)

'SA' @ Left Upright
'FA' @ Right Upright

6" Cover (Typ.)

See Traffic Plans

Elev. Top of Foundation

Finished Grade

PLAN VIEW
DRILLED SHAFT

SECTION P-P

'E' Cond. (Typ.)
CSL Tube (Typ.)

Anchor Bolts, (Typ.)
See Section A-A

SECTION Q-Q

'DC' @ Left Upright
'FC' @ Right Upright

12" Max.
Spaces @ Remaining @ 4"
6 Spaces @ 8"

SECTION R-R

'SR' Ø Bolts

'E' Cond. (Typ.)
CSL Tube (Typ.)

Anchor Bolts, (Typ.)
See Section A-A

ELEVATION
SPLICE CONNECTION

SPICE CONNECTION

6" C o v e r
(T yp .)
GUIDE TO USE THIS STANDARD:

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 sign clusters. These are shown on Sheet No. 6, 7, & 8 of 8.

2. Determine the height 'H' from groundline for the individual sign or the cluster.

3. Select the appropriate Column (Post) Selection Tables by Wind Speed and find the intersection point.

4. Design the post and the foundation according to the dark-bold lines or shaded area (if cantilever sign) in the Column (Post) Selection Tables and Post and Foundation Table. For sign posts with signs oriented in two directions, only the sign with the largest area should be analyzed to determine the post requirements.

EXAMPLE:

ASSUMPTIONS:
- Assume: Bay County, 'A' = 1 ft., 'B' = 7 ft.
- Since 

\[ c = \frac{2.218 \text{ in.}^2}{15.4 \text{ ft.}} = -0.1 \text{ ft.} \]

\[ s = \frac{-0.999 \text{ ft.}^3}{10.26 \text{ ft.}} = -0.1 \text{ ft.} \]

\[ x' = \frac{1.890 \text{ in.}^3}{2.26 \text{ ft.}} = -1.09 \text{ ft.} \]

Assume: Bay County, 'A' = 1 ft., 'B' = 7 ft. (larger than 3 ft.) with breakaway supports as shown on Sheet 5. Signs shielded by barrier wall or guardrail do not require breakaway support.

Since \[ x' < 0 \], it is not a cantilever sign, only dark-bold lines in the table will be referenced to.

\[ h' = h - w' - c = 10.26 \text{ ft.} - 0.999 \text{ ft.} - 0.1 \text{ ft.} = 8.36 \text{ ft.} \]

\[ 1.890 \text{ in.}^3 \times 10.26 \text{ ft.} = 2,362.5 \text{ ft.}^2 \text{ ft.} \]

Since \[ x' > 0 \], the design requires a 4.0" diameter for WIND SPEED = 130 MPH, \[ h = 11 \text{ ft.}, \text{ Area} = 12.208 \text{ ft.} \]

- Refer to the 130 mph Column (Post) Selection Table, as copied from Sheet 3 and shown here.
- Using the 16 ft² area on the left hand side of the table, go across to the 11 ft. height and find the cell marked with X.
- Find the symbol [ ] which the dark bold line under the cell marked with X.
- In the Post and Foundation Table, the symbol [ ] concludes that the design requires a 4.0" diameter and a 2.0 diameter and 4.0" deep concrete foundation.

- Use next larger post size than that indicated.
NOTE:
No sign or sign cluster area shall exceed 30 SF nor shall any sign or sign cluster have a total width exceeding 60 inches.

For 'A' & 'B' see Index No. 17302 and Roadway Plans.
ALUMINUM COLUMN (POST) SELECTION TABLE
(WIND SPEED = 110 MPH)

ALUMINUM COLUMN (POST) SELECTION TABLE
(WIND SPEED = 130 MPH)

ALUMINUM COLUMN (POST) SELECTION TABLE
(WIND SPEED = 150 MPH)

POST AND FOUNDATION TABLE

Foundation Alternatives

Post Size | Driven Post * | Concrete (Class I)
--- | --- | ---

<table>
<thead>
<tr>
<th>Diameter (IN)</th>
<th>Depth (FT)</th>
<th>Depth (FT)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

* INSTALLING FRAGIBLE COLUMN SUPPORTS:

Columns (posts) may be installed by driving the columns in accordance with this Index, or as an alternate method, the columns (posts) may be set to the depth indicated in preformed holes backfilled with suitable material tamped in layers not thicker than 6" to provide adequate compaction or filled with flowable fill or bagged concrete.

NOTES:
1. Ring Soil Plate bottom at 2/3 of foundation depth.
2. Soil up to 3" long is allowed to accommodate various post sizes.
3. Rectangular soil plate of size 1'-2" x 1'-0" may be used as an alternative.

NOTES:

CANTILEVER SIGN

NOTE:

All cantilever sign installations shall comply with Standard Index 17902.
**SINGLE COLUMN GROUND SIGNS**

**DESCRIPTION:**

1. **Aluminum Column**
   - [Image of column diagram]
   - As needed

2. **Aluminum Zee Bracket**
   - [Image of bracket diagram]
   - As needed

3. **Aluminum U-bolt**
   - For sign height up to 12"

4. **Aluminum Head Bolts**
   - For sign height greater than 12" and for signs with an edge distance greater than 30"

**NOTES:**

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

2. Nylon washers provided by the sheeting supplier shall be used on all ground mounted signs. The washers shall be installed under the sign bolt head to protect the sheeting.

3. Zee brackets spaced according to the sign height and sign size. Use additional brackets, spaced evenly, to maintain maximum spacing.

4. Zee Bracket Wind Beam Length:
   - 8" Min.
   - 6" Max.
   - 1" Min. (Along Bracket Connection)

**VIEW A-A**

**POSITION**

- **SING WIND BEAM**
  - For signs with either dimension of sign size greater than 30" a third zee bracket wind beam shall be installed along the L.

**SIGN AT 90°**

- **YIELD**
  - For Yield signs greater than 36" a third zee bracket wind beam shall be installed along the L.

- **STOP**
  - Use only one Wind Beam at L Sign for sign height up to LP.

- **RECTANGLE**
  - Use only one Wind Beam at L Sign for sign height up to LP.

- **DIAMOND**
  - Use only one Wind Beam at L Sign for sign height up to LP.

- **RAILROAD**
  - Use only one Wind Beam at L Sign for sign height up to LP.

- **SCHOOL**
  - Use only one Wind Beam at L Sign for sign height up to LP.

- **SHIELD**
  - Use only one Wind Beam at L Sign for sign height up to LP.

**CONNECTION AND WIND BEAM**

- **NOTES:**
  - Use the area and the centroid location of the largest sign to determine column (post) size.

- **VIEW A-A**
  - Use the area and the centroid location of the largest sign to determine column (post) size.
SLIP BASE NOTES:
1. Use sleeves with an inside diameter (I.D.) no more than 9/16" larger than the outside diameter (O.D.) of the column.
2. Sleeve Bolts: ASTM A-307, 60°Ø galvanized steel bolt (with lock nuts) or Alloy 2024-T4 or 6061-T6 (ASTM B-211).
4. Base plates may have either single or double beveled slots.
5. An alternate cast base plate of aluminum alloy 356 and T6 temper in lieu of the fabricated base plate may be submitted for approval. If a cast base plate is used, the stub will be the same size as the column and will be bored in the casting.

Assemble the slip base connection in the following manner:

a. Remove all bolts to the maximum possible with a 12" to 15" wrench. (This will bed the washers and shims and clear the bolt threads.)

Assemble top base plate to stub base plate using high strength bolts with three hardened washers per bolt. One of the three washers must be a high strength washer. Orient the bolt keeper plates in the Directions of Traffic. Burr threads at junction with nut using a center punch to prevent nut loosening.

b. Use galvanized steel shims to obtain a tight fit between the column face and the sleeve. Place shims in all quadrants between the column and the sleeve. Use sleeves with an inside diameter (I.D.) no more than 9/16" larger than the sleeve.

c. Use shim stock as required to plumb the column.

d. Assemble the slip base connection in the following manner:
   a. Connect column to sleeve using two 9/16"Ø machine bolts.
   b. Assemble top base plate to stub base plate using high strength bolts with three hardened washers per bolt. One of the three washers must be a high strength washer.
   c. Orient the bolt keeper plates in the Directions of Traffic. Burr threads at junction with nut using a center punch to prevent nut loosening.

Assemble top base plate to stub base plate using high strength bolts with three hardened washers per bolt. One of the three washers must be a high strength washer.

SLIP BASE AND FOOTING DETAIL IN CONCRETE
(non-frangible post in crossovers, medians, & sidewalks)

SLIP BASE DETAILS

<table>
<thead>
<tr>
<th>Column Size</th>
<th>Sleeve (O.D. )</th>
<th>Sleeve (height)</th>
<th>Weld Height</th>
<th>Base Plate</th>
<th>Radius</th>
<th>Base Bolt</th>
<th>Base Plate Torque</th>
<th>Hole Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 x 1/8</td>
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NOTES:


WIND SPEEDS: See Index 11860, "Wind Speeds by County" note.

GEOMETRY: Install signs with bottom edge of the lower sign panel at 7' above the gutter line. Edge of sign panels must not extend beyond the inside face of the top of the traffic railing. Install sign posts plumb.

APPLICABILITY: Mount only to concrete traffic barriers in locations where ground mounting is not possible. Work this Index in conjunction with Index No. 11860.

SHOP DRAWINGS: Shop drawings are not required.

PAYMENT: Include payment for sign support bracket in the cost of the single post sign.

MATERIALS:

Coatings: Not dip galvanize all steel and fasteners in accordance with Specification Section 962. Galvanize Sign Support Weldments after fabrication. Paint sign support brackets and posts when shown in the plans in accordance with Specification Section 894.


Sign Post: Aluminum Association Alloy 6061-T6 (ASTM B209, B221 or B308) 5" NPS Schedule 40 Aluminum Pipe.

Steel Plates: ASTM A36 or A709 Grade 36.

Anchor Rods & Bolts: ASTM F1554 Grade 59 with a single self-locking hex nut and washers. Install anchor rods or bolts perpendicular to the base plates on back of traffic railing. See Anchorage Notes, Sheet 2 of 2.

Adhesive Bonded Anchors: Fully threaded Anchor Rods with Type HV Adhesive Bonding Material System in accordance with Specification Section 416 & 927. In lieu of the number of anchors specified to be tested in Specification Section 416-6, field test all adhesive bonded anchors installed per this Design Standard.

U-Bolts: ASTM A449 sized for sign post, with flat washers and locking hex nuts.

Welding: Weld in accordance with American Welding Society Structural Welding Code (Steel), ANSI/AWS D1.1 (current edition). Required weld material is E70XX.

Nondestructive testing is not required.

SIGN LIMITATIONS TABLE

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<th>MAX. SIGN CENTROID HEIGHT (DIM. A + DIM. C)</th>
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Dim. A = Distance from centerline of the Support Post to the bottom of the sign or sign cluster.

Dim. C = Vertical distance from the bottom of the sign or sign cluster to the Centroid of the sign or sign cluster.
TYPICAL SECTION THRU EXISTING TRAFFIC RAILING AT SIGN SUPPORT BRACKET
(32" F-Shape Traffic Railing shown, other Traffic Railings & Parapet similar)
(Bridge Deck shown, Approach Slab and Retaining Wall Similar)

TYPICAL SECTION THRU TRAFFIC RAILING AT SIGN SUPPORT BRACKET (NEW CONSTRUCTION)
(32" F-Shape Traffic Railing shown, other Traffic Railings & Parapet similar)
(Bridge Deck shown, Approach Slab and Retaining Wall Similar)

ANCHORAGE NOTES:
1. Existing Traffic Railings:
   - Locate existing conduit prior to drilling. Adjust placement as necessary to avoid 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.
   - For concrete parapets less than 10" thick, through bolt ¾" Heavy Hex Head Bolts with Nuts and Washers in lieu of Adhesive Bonded Anchors. Bolt heads shall not protrude more than ½" beyond traffic face of railing.

2. New Traffic Railings:
   - Tie Anchor Bolts securely and use templates as necessary to maintain bolt spacing.
   - Optional Couplers are shown for slipforming; keep Anchor Bolt threaders free of concrete.

CROSS REFERENCES:
For Base Plate, End Plate & U-Bolt Plate Washer Details see Sheet 1.
**NOTES:**

**DESIGN SPECIFICATIONS:**


**WIND SPEEDS:**

See Index 11860, "Wind speeds by County" note.

**GEOMETRY:**

- Maximum Sign Panel Height is 6'-0".
- Edges of Sign Panels must be a minimum of 2'-0" clear from edge of adjacent Travel Way.

**APPLICABILITY:**

Work this Index in conjunction with Index No 11860.

**SHOP DRAWINGS:**

Shop drawings are not required.

**PAYMENT:**

Include payment for sign support in the cost of the single post sign assembly.

**MATERIALS:**

- **Sign Post:** ASTM A53 Grade B, NPS Schedule 40 Steel Pipe, sized per Table 1. Maximum post length is 10'-0".
- **Snap-In Pole Cap:** Provide UV and weather-resistant glass-filled polyester cap.
- **Steel Plates:** ASTM A572 Grade 50 or A709 Grade 50.

- **Welding:** Weld in accordance with American Welding Society Structural Welding Code (Steel), ANSI/DWS D1.1 (current edition). Required weld material is E70XX. Nondestructive testing is not required.
- **Coatings:** Hot dip galvanize all steel, including fasteners, in accordance with Section 962. Galvanize Weldment after fabrication.

**INSTALLATION:**

- **Placement:** For installations on permanent Median Barriers, locate Sign Support a minimum of 5'-0" away from open joints or transitions. For installations on Temporary Barriers, locate Sign Support at the midpoint along the length of a single segment. In all cases, shift locations as needed to avoid conflicts with reinforcement.
- **Bearing Surface:** Surface of the railing must be structurally sound and free of cracks and spalls. Base plate must be flush with the concrete surface; grind any high spots to obtain a flat, smooth surface.
- **Saw Cut:** For permanent installations only, saw cut a 1" deep groove transversely across the top of railing at the centerline of base plate vent hole location.
- **Anchor Rods:** Use ASTM F1554 Grade 36, fully threaded rods with A563 or A194 single self-locking hex nuts and F436 washers. Size anchor rods per Table 2.
- **Adhesive Bonding Material:** Install anchor rods using Type HSHV Adhesive Bonding Material System in accordance with Specification Sections 416 & 937. Required weld material is E70XX. Nondestructive testing is not required.

**TABLE 1 - SIGN PANEL AND POST SIZING**

<table>
<thead>
<tr>
<th>Wind Speed (MPH)</th>
<th>Max. Sign Area (SF)</th>
<th>Post Ø (NPS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 20 (All)</td>
<td>≥ 20</td>
<td>3.0&quot;</td>
</tr>
<tr>
<td>110 &amp; 130</td>
<td>&lt; 13.5</td>
<td>3.5&quot;</td>
</tr>
<tr>
<td>13.5 &lt; Signs &lt; 20</td>
<td>≥ 13.5</td>
<td>3.5&quot;</td>
</tr>
<tr>
<td>150</td>
<td>13.5 &lt; Signs &lt; 20</td>
<td>4.0&quot;</td>
</tr>
</tbody>
</table>

**Geometry:**

- **Edges of Sign Panels:** Must be a minimum of 2'-0" clear from edge of adjacent Travel Way.
- **Sign Posts:** Minimum thickness of epoxy is 0.062 extending 2" beyond the location of steel.

**Construction:**

- **Welding:** Weld in accordance with AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals.
- **Coatings:** Hot dip galvanize all steel, including fasteners, in accordance with Section 962. Galvanize Weldment after fabrication.
- **Installation:** For installations on permanent Median Barriers, locate Sign Support a minimum of 5'-0" away from open joints or transitions. For installations on Temporary Barriers, locate Sign Support at the midpoint along the length of a single segment. In all cases, shift locations as needed to avoid conflicts with reinforcement.
- **Bearing Surface:** Surface of the railing must be structurally sound and free of cracks and spalls. Base plate must be flush with the concrete surface; grind any high spots to obtain a flat, smooth surface.
- **Saw Cut:** For permanent installations only, saw cut a 1" deep groove transversely across the top of railing at the centerline of base plate vent hole location.

**MATERIALS:**

- **Steel Plates:** ASTM A572 Grade 50 or A709 Grade 50.
- **Snap-In Pole Cap:** Provide UV and weather-resistant glass-filled polyester cap.
- **Anchor Rods:** Use ASTM F1554 Grade 36, fully threaded rods with A563 or A194 single self-locking hex nuts and F436 washers. Size anchor rods per Table 2.
- **Adhesive Bonding Material:** Install anchor rods using Type HSHV Adhesive Bonding Material System in accordance with Specification Sections 416 & 937. Required weld material is E70XX. Nondestructive testing is not required.

**Coatings:**

Hot dip galvanize all steel, including fasteners, in accordance with Section 962. Galvanize Weldment after fabrication.

**INSTALLATION:**

- **Placement:** For installations on permanent Median Barriers, locate Sign Support a minimum of 5'-0" away from open joints or transitions. For installations on Temporary Barriers, locate Sign Support at the midpoint along the length of a single segment. In all cases, shift locations as needed to avoid conflicts with reinforcement.
- **Bearing Surface:** Surface of the railing must be structurally sound and free of cracks and spalls. Base plate must be flush with the concrete surface; grind any high spots to obtain a flat, smooth surface.
- **Saw Cut:** For permanent installations only, saw cut a 1" deep groove transversely across the top of railing at the centerline of base plate vent hole location.
- **Anchor Rods:** Use ASTM F1554 Grade 36, fully threaded rods with A563 or A194 single self-locking hex nuts and F436 washers. Size anchor rods per Table 2.
- **Adhesive Bonding Material:** Install anchor rods using Type HSHV Adhesive Bonding Material System in accordance with Specification Sections 416 & 937. For temporary sign support installations, the use of a metal detector specifically designed for locating steel in concrete is not required to locate existing reinforcement as stated within Specification Section 416-6. For temporary sign support installations, Specification Section 416-6 is not required. For permanent sign support installations, Specification Section 416-6 applies with the exception of the following: Perform field test on only one anchor per sign support location.
- **Removal of Signs:** Cut anchor rods flush with top of railing and coat surface with Type F-1 epoxy.
- **Minimum thickness of epoxy is 0.062 extending 2" beyond the location of steel.**
TABLE 2 - BASE PLATE TYPE AND ANCHOR ROD SIZING

<table>
<thead>
<tr>
<th>Index No.</th>
<th>Type/Application</th>
<th>Base Plate Type</th>
<th>Anchor Rod Ø</th>
</tr>
</thead>
<tbody>
<tr>
<td>410</td>
<td>Full Wall</td>
<td>B</td>
<td>1&quot;</td>
</tr>
<tr>
<td>410</td>
<td>Cantilever or L-Wall</td>
<td>A</td>
<td>1&quot;</td>
</tr>
<tr>
<td>420 &amp; 425</td>
<td>Traffic Railing is ≥ 4'-0&quot;</td>
<td>A</td>
<td>1&quot;</td>
</tr>
<tr>
<td>421</td>
<td>All Applications</td>
<td>A</td>
<td>1&quot;</td>
</tr>
<tr>
<td>All listed above (plus 414 &amp; 415)</td>
<td>Temporary Signs</td>
<td>C</td>
<td>1&quot;</td>
</tr>
</tbody>
</table>

* Place anchor rods in a staggered or linear pattern as necessary to avoid reinforcing. Use a staggered pattern for all temporary barriers.

INDEX NO. 11871

SINGLE POST MEDIAN BARRIER MOUNTED SIGN SUPPORT

FDOT 2014 DESIGN STANDARDS

CJP

CJP

SINGLE POST MEDIAN BARRIER MOUNTED SIGN SUPPORT

07/01/12

2/2
GENERAL NOTES

DESIGN SPECIFICATION

SHEETS AND PLATES:
Material used shall meet the requirements of Aluminum Association Alloy 6061-T6 and ASTM B209.

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 B827). Nuts shall meet the requirement of Aluminum Association Alloy 6061-T6 (ASTM F487) 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.
**TYPICAL SECTIONS FOR PLACEMENT OF SINGLE & MULTI-COLUMN SIGNS**

**GENERAL NOTES:**
1. The typical sections shown herein serve as a guide for locating the traffic signs required under various roadside conditions. For size and details of sign construction and mounting, refer to the appropriate standard index drawing for roadside signs.
2. It shall be the Contractor's 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 deep 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 material line of sight.

**CASE I**
For Use On Freeway And Expressway Systems For Signs On Mainline.

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

**CASE III**
For Use On All Roads With Signs Mounted Behind Sidewalk.

**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.

**CASE VII (REST AREA & EXIT GORE SIGNS)**
For Use On All Freeway And Expressway Systems.

**CASE VIII**
Sign On Island or Curbed Median

**CASE IX (MILE POST MARKERS)**
For More Information Refer To Section 2H Of The Manual On Uniform Traffic Control Devices

**INDEX NO.**
17302

**SHEET NO.**
1 of 1
TYPICAL SIGNING FOR TRUCK WEIGH & INSPECTION STATIONS

4 - LANE DIVIDED INSTALLATION

2 - LANE INSTALLATION

MEDIAN INSTALLATION

WEIGH STATION SIGNING

FDOT 2014 DESIGN STANDARDS

TYPICAL SIGNING FOR TRUCK WEIGH & INSPECTION STATIONS

INDEX NO. 17328

SHEET NO. 1 of 2
### 1. TRAFFIC CONTROL DEVICES FOR A SCHOOL CROSSWALK AT A SIGNALIZED INTERSECTION

- **Notes:** Special speed restrictions are not normally applicable to these two cases.

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

- **Notes:** Special speed restrictions are not normally applicable to these two cases.

---

**Pavement Markings**

- **Notes:**
  - Signs shall be erected in accordance with Index No. 17302.
  - When computing pavement message 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.

<table>
<thead>
<tr>
<th>Approach Speed (MPH)</th>
<th>Distance A (FT.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 or Less</td>
<td>290</td>
</tr>
<tr>
<td>26 To 35</td>
<td>250</td>
</tr>
<tr>
<td>36 To 45</td>
<td>300</td>
</tr>
<tr>
<td>46 To 55</td>
<td>325</td>
</tr>
</tbody>
</table>
SCHOOL SIGNS & MARKINGS

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)

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)

8. TRAFFIC CONTROL DEVICES FOR SIGNALIZED MIDBLOCK SCHOOL CROSSWALK

<table>
<thead>
<tr>
<th>APPROACH SPEED MPH</th>
<th>DISTANCE IN FEET</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 or Less</td>
<td>200</td>
<td>100 Mn.</td>
<td></td>
</tr>
<tr>
<td>26 To 35</td>
<td>250</td>
<td>100 Mn.</td>
<td></td>
</tr>
<tr>
<td>36 To 45</td>
<td>325</td>
<td>125</td>
<td></td>
</tr>
</tbody>
</table>

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

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

10. TRAFFIC CONTROL DEVICES FOR A TYPICAL SCHOOL ZONE FRONTING THE SCHOOL PROPERTY

11. SCHOOL BUS STOP

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.

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

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

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

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.
**SCHOOL SIGNS & MARKINGS**

**FDOT 2014 DESIGN STANDARDS**

**REVISION**

- **CABLE ENTRY DETAIL**
  - Signal Head
  - Lock Nut
  - Ø-U-Bolt
  - Wire Rope Clamp

- **MOUNTING DETAIL**
  - Sign Panel
  - Pipe Cap
  - Catenary Wire
  - Ø-U-Bolt

- **SIDE VIEW**
  - 0.125"
  - See Mounting Detail

- **ZEE SECTION DETAIL**
  - 1/2" Ø-U-Bolt
  - Sign Panel
  - Ø-Bolt

**Note**

- Flushing beacon may be placed within or below panel.
- Optional location of flashing beacon.

**Flashing Beacome and cabinet to be placed on the strain pole supporting overhead sign assembly or on service pole. The flashing unit not to overhang private property or sidewalk.**
NOTE: Reflective pavement markers are installed adjacent to the edge line.

NOTE: In advance of lane drops at exit ramps a special marking pattern may be used to distinguish the lane drop situation from a normal exiting ramp or auxiliary lane. A typical special marking for lane drops consist of 6" wide by 3' long white stripes separated by 9' gaps. If used, this special marking should begin 50' in advance of the theoretical gore point. Where lane changes may cause conflicts, an 8" wide solid white channelizing line may be extended 200' upstream from the theoretical gore. (MUTCD Section 3B.05).

DETAIL A

NORMAL TAPERED EXIT ONLY
(TWO THRU LANES - THREE APPROACH LANES)

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

6" White

18" White

7°

Edge of Pavt.
Shoulder Pavement
6" Yellow
6" White
12" White
6" Yellow Edge Line

NORMAL TAPERED ENTRANCE

White-Red Reflective Pavement Markers Every 20'
6" Yellow
6" White

6' 3'-9' Dotted Line With White-Red Reflective Pavement Markers M' (15' Centers) Ends At Point Where Lane Width And Ramp Width Are Equal (12')

Maintain Full Ramp Width (15' Typical)
6" White Edge Line

White-Red Reflective Markers (Every 40') Shall Stop At End Of Transition

Shoulder Gutter
12" White

NORMAL TAPERED ENTRANCE

WITH ADDED LANE

Yellow-Red Reflective Markers (Every 40') Shall End At The Termination Of The Yellow Edge Line

White-Red Reflective Pavement Markers Every 20'

Maintain Full Ramp Width (15' Typical)
PARALLEL ACCELERATION AND DECELERATION LANE

TYPICAL LANE DROP MARKINGS AT EXIT RAMPS

TYPICAL MARKINGS AT DUAL LANE EXITS

INTERCHANGE MARKINGS

FDOT 2014 DESIGN STANDARDS
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.

Begin Yellow-Red Reflective Markers at Transition (40' Spacing)

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

End Yellow-Red Reflective Markers At End Of Yellow Edge Line

Wrong Way Arrow To Be Placed At End Of Physical Gore Or ± 100' From End Of Theoretical Gore.
**Types of Permanent Longitudinal Lines**

- **Solid Yellow Edge Line**
- **2' Skip 4' Gap Dotted Line** (Turning Guide Line)
- **Two-Lane Passing Prohibited (Yellow)**
- **Double Solid Yellow (or White)**
- **Solid White Edge Line or Lane Line**
- **6' Skip 10' Gap Extension of Edge Line**
  - Through Cross-OVER Area
  - White or Yellow
- **Solid White Channelizing Line**
- **6' & 8'**
- **3' Skip 9' Gap Lane Drop Markings**
  - At Interstate Ramps
  - 6' & 12'
- **10' Skip 30' Gap White or Yellow Centerline**

**Contrast Markings**

- **10' White Skip With Black Contrast**
  - 30' Gaps
  - 10'

**Yield Lines** 5'-18' x 27' White Triangles Facing Traffic

- **Equal spacing within travel lane with 1 additional triangle**
  - Using same spacing when a bike lane is present.
SCHEME ONE

300' Max. Intervals Between Double Arrows
For use in congested urban areas where available storage length between intersections is limited and a permanent point of transition from the two-way turning lane to the exclusive turning lane can not be determined.

SCHEME TWO

300' Max. Intervals Between Double Arrows

TYPICAL CROSSWALK MARKINGS FOR CURB RAMPS

12" White
For Crosswalk

12" White
For Crosswalk

12" White
For Crosswalk
These markings may be used for locations with restricted left turn lengths, only when called for in plans.

**RESTRICTED LEFT TURN MARKING**

- 6'-10' Skip
- 6" White
- 6" Dbl Yellow

**TYPICAL INTERSECTION 2 THRU Lanes, PLUS LEFT TURN LANE, WITH CROSSWALK**

- 6" Dbl Yellow

**RIGHT TURN LANE DROP AND ISLAND DETAILS**

LEFT TURN LANE DROP IS MIRROR IMAGE

100' Minimum or as determined by L=WS

\[ L = \frac{W}{S} < 45 \text{ mph} \]

Where:
- \( L \) is the lateral offset in feet
- \( W \) is the 85th percentile speed in miles per hour (speed limit)
- \( S \) is the 85th percentile speed in miles per hour (speed limit)

For left turn storage lane detail see sheet 3 of this index.

**RIGHT TURN LANE AND ISLAND DETAILS**

- 6" White
- 6" White Skip
- 2'-4' Skip
- 6" White
- 6" White
- 6" White

**STOP BARS, CROSSWALKS AND DOUBLE CENTER LINE DETAILS**

- 12" White Crosswalk Lines
- 6" White Stop Line
- 6" Yellow
- 6" White
- 6" Dbl Yellow
- 6" White Skip

- 24" White Stop Line

- 12" White Crosswalk Lines

Notes:

1. When public sidewalk curb ramps are present, refer to 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 BAR, CROSSWALKS AND DOUBLE CENTER LINE DETAILS**

- 24" White Stop Line

- 12" White

- 24" White Stop Line

**NOTES:**

1. Where appropriate, left turn storage lane detail shall be extended back 100' max.

2. 60 mph maximum speed limit.

3. Double yellow longitudinal center lines on all roadway approaches shall be extended back 100' max. for projects involving intersection improvements only.

4. When specified, "stop" message shall be placed 25' back of stop lines.
SPECIAL MARKING AREAS

PAVEMENT MARKINGS FOR TRAFFIC SEPARATION
(Traffic flows in opposing directions)

PAVEMENT MARKINGS FOR TRAFFIC CHANNELIZATION AT GORE
(Traffic flows in same direction)

One-Way Signs on Divided Highway Intersections

Divided Highway signs (R6.3) may be on the same structure with the STOP and ONE WAY signs or on a separate structure.
TYPICAL TRANSITION MARKING
COLOR SHALL BE THE SAME AS RESPECTIVE EDGE LINE

SPECIAL MARKING AREAS

LEFT ROADWAY CENTERED ON EXISTING ROADWAY

RIGHT ROADWAY CENTERED ON EXISTING ROADWAY

SCHEMES FOR TRANSITION - 2 LANE / 4 LANE ROADWAY
MAT DIMENSIONS

4" X 4" squares

MESSAGE SIZE AND SPACING

4" X 4" squares

NOTE:

1. Messages shall meet requirements of Specification Section 911-6 and Section 712.

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 50 BPN.

4. The "EXIT NUMBER" position remains the same distance from the beginning of taper regardless of the number of lines of information.
**SPECIAL MARKING AREAS**

**RAILROAD CROSSING AT 2-LANE ROADWAY**

**RAILROAD CROSSING AT 4-LANE ROADWAY**

**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 crossbars 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.

**TYPICAL PAVEMENT MARKINGS FOR R/R CROSSING**

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

1. For traffic and pedestrian signal installation, refer to Index No. 37231 through 17489.

2. For public sidewalk curb ramps, refer to Index No. 394.

3. For pavement marking and sign installation, refer to Indexes 11200 through 17336.

4. Crosswalk minimum widths: Intersection Crosswalk 6', Midblock Crosswalk 10'.

5. All crosswalk marking shall be white.

6. Longitudinal lines in Special Emphasis Crosswalk shall be 24" wide and spaced to avoid the wheel path of vehicles as shown in detail. The maximum space between markings shall not exceed 60". A longitudinal marking shall be centered at each lane line. Additional longitudinal markings shall be placed at the center of each lane (1/2W). Emphasis longitudinal lines should be parallel to the lane line.

Where the Crosswalk is viewed to the lane lane lines, the Special Emphasis longitudinal lines should be parallel to the lane line.
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 should utilize preformed marking materials.

### TABLE: SUGGESTED DISTANCE AT 25 MPH

<table>
<thead>
<tr>
<th>APPROACH SPEED MPH</th>
<th>A-SUGGESTED DISTANCE FT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 or less</td>
<td>200</td>
</tr>
<tr>
<td>26 to 35</td>
<td>250</td>
</tr>
<tr>
<td>36 to 45</td>
<td>300</td>
</tr>
</tbody>
</table>
SPECIAL MARKING AREAS

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

** Queue Length Is Measured From

SINGLE LEFT TURNS

DOUBLE LEFT TURNS

ARROW SPACING

NOTES:
1. The "Begin Lane Line" locations are based on the standard lengths shown in Design Standard 201. 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.
PUBLIC SIDEWALK CURB RAMPS IN REST AREAS

- **Sign No FTP-21-06 and FTP-22-06**
- **Public Sidewalk Curb Ramp**

**DIMENSIONS**

<table>
<thead>
<tr>
<th>Width</th>
<th>4'</th>
<th>5'</th>
<th>6'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>12'</td>
<td>18'</td>
<td>24'</td>
</tr>
</tbody>
</table>

NOTES:

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

**TYPICAL**

- Public Sidewalk Curb Ramp
- 6" White

**MINIMUM PARKING RESTRICTION FOR NONSIGNALIZED INTERSECTIONS**

**SPEED LIMIT (MPH)**

<table>
<thead>
<tr>
<th>Width</th>
<th>0-30</th>
<th>35</th>
<th>45</th>
<th>60</th>
<th>70</th>
<th>85</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.P.</td>
<td>2 LANE</td>
<td>4 LANE</td>
<td>4 LANE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTES**

1. Use of pavement symbol in accessible parking spaces is optional. When used, the symbol shall be 3' or 5' high and white in color.
2. Parking restrictions measured from curb radius point.
3. Parking shall not be allowed within 20' of a crosswalk.
4. All parking lane markings shall be 6" white.
5. Parking lane lines shall be broken at driveways.
6. Refer to Chapter 316, Fla. Statutes, for laws governing parking spaces.

**SPECIAL MARKING AREAS**

- **Drivers Eye Location**
- **Yellow Curb (Optional)**
- **No Parking Zone**

**REV ISIO N**

C:\data\projects\standards\roadway\17300-s\17346-12.png

**DESCRIPTION:**

**REV ISIO N**

NO.

SHEET

INDEX

**SPECIAL MARKING AREAS**

- **Type I**
- **Type II**
- **Type III**

**MINIMUM PARKING RESTRICTION FOR SIGNALIZED INTERSECTIONS**

**SPEED LIMIT (MPH)**

<table>
<thead>
<tr>
<th>Width</th>
<th>0-30</th>
<th>35</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.P.</td>
<td>2 LANE</td>
<td>4 LANE</td>
<td></td>
</tr>
</tbody>
</table>

**NOTES**

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

**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.
TYPICAL CITY CONNECTING LINK OR URBANIZED AREA

TYPICAL RURAL INTERSECTION WITH TURN LANES

TYPICAL RURAL INTERSECTION WITHOUT TURN LANES

AUDIBLE AND VIBRATORY MARKINGS

2 LANE ROADWAYS
1. The Contractor Shall Adjust The Maintenance Of Traffic During Installation To Provide Sufficient Time For The Markings To Bear Traffic.

2. The Height Of The Transverse Bar For Markings Shall Be A Minimum Of 0.45 Inches Above The Pavement Surface At The Edge Of The Marking.

3. Transverse Bars Shall Be Evenly Spaced In The Marking At Intervals Of 30 Inches Center To Center.

4. The Transverse Bar May Have A Drainage Channel On Each Bar. The Width Of The Drainage Channel May Not Exceed 0.25 Inches At The Bottom Of The Channel.

5. Audible And Vibratory Markings Shall Only Be Installed On Centerline Markings Of Two Lane Roads When Shown In The Plans.

6. When Raised Pavement Markers Conflict With The Installation Of The Centerline Markings, The Contractor Shall Be Responsible For Removing And Replacing The Raised Pavement Markings. The Additional Expenses Associated With The Raised Pavement Markings Shall Be Included In The Cost Of The Markings.


8. The Specifications Allow The Audible Markings To Utilize A Flat Base Line Or An Inverted Rib Profile Base Line.

AUDIBLE AND VIBRATORY MARKINGS

MULTI-LANE ROADWAYS
1. 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 45 mph, 2,640 feet for a posted speed of 45 mph or greater.
2. Recommended spacing for shared lane marking symbols: Immediately after intersections and at a maximum spacing of 250 feet.
3. All pavement markings and pavement messages shall be White.
4. All pavement messages shall be preformed thermoplastic.
5. Bike lane signs (R3-17, R3-17a, R3-17b) are not required.

**Table:**

<table>
<thead>
<tr>
<th>Lane Width (w)</th>
<th>Sharrow w (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13' or Greater</td>
<td>8 m</td>
</tr>
<tr>
<td>Less Than 13'</td>
<td><strong>8'</strong></td>
</tr>
</tbody>
</table>

**Note:** For lane widths less than 13' in width, the symbol shall be centered in the lane.

*When used in bike lane, markings shall be placed adjacent to markings in travel lane and W10-1 sign shall be deleted.*
INTERSECTION WITH BUS BAY, NO RIGHT TURN LANE, CURB AND GUTTER TYPICAL SECTION

INTERSECTION WITH ON STREET PARKING, NO RIGHT TURN LANE, CURB AND GUTTER TYPICAL SECTION

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

BICYCLE MARKINGS
INTERSECTION WITH SEPARATE RIGHT TURN LANE. FLUSH SHOULDER TYPICAL SECTION
CASE I Type I Object Markers shall consist of nine yellow reflectors mounted on a yellow reflective panel 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.

Reflective Buttons:
- Yellow Reflectors (CASE I)
- Red Reflectors (CASE II)

Object markers shall be installed on 2" Ø x 1/2" Aluminum Round Post.
- Ø Stainless Steel Hex Head Bolt with Nut and Lockwasher or 1/4" 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.
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.

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:

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.

** One Post Service Signs
See Detail "D"

SIGNING FOR MOTORIST SERVICES

DETAIL "A"

(1 To 3 Symbols)

DETAIL "D"

Approximate Position Of
Second Motorist Service Sign
(Deatils "B" To "C") For Interchanges
With Two Exit Ramps

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 poles.

The mounting height of the advance guide sign shall be increased where necessary, to provide at least 16" between the level of the pavement edge and the bottom of the guide sign, prior to mounting the supplementary panel.

DETAIL "B"

(4 To 6 Symbols)

MARY

DETAIL "C"

(4 Symbols)
Tourist Information Center
NEXT RIGHT

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

STATE OF FLORIDA
WELCOME CENTER
1 MILE

Sign No. FTP-10-06

STATE OF FLORIDA
WELCOME CENTER

Sign No. FTP-11-06

STATE OF FLORIDA
OFFICIAL
WELCOME CENTER

Sign No. FTP-12-06

WELCOME CENTER

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.

DESCRIPTION: WELCOME CENTER SIGNING
INDEX NO. 17351
SHEET NO. 1 of 2

FDOT 2014 DESIGN STANDARDS

5. All legend to be Series E.
6. See Index No. 17355 for sign details.

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

DESCRIPTION: WELCOME CENTER SIGNING
INDEX NO. 17351
SHEET NO. 1 of 2

FDOT 2014 DESIGN STANDARDS
STATE OF FLORIDA
WELCOME CENTER
1 MILE

STATE OF FLORIDA
OFFICIAL
WELCOME CENTER

SIGN NO. FTP-15A-04
SIGN NO. FTP-12-04
SIGN NO. FTP-15B-04
SIGN NO. FTP-15C-04

FTP-15A-06
FTP-15B-06
FTP-15C-06
FTP-12-06

2,240'
2,240'
2,240'
2,240'

800'

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 11000.
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.

FOR PRIMARY HIGHWAYS

WELCOME CENTER SIGNING

FDOT 2014
DESIGN STANDARDS

INDEX NO. 17351
SHEET NO. 2 of 2
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".
NOTES

1. Raised pavement markers shall be set 1" from line.
2. Raised pavement markers shall be centered between chevrons or gore lines.

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

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

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

PLACEMENT OF RPM'S ON SHOULDER MARKINGS

For left side of roadway the plan is opposite hand and markings shall be yellow.

For placement of RPM's on ramps see Index 17345.

PLACEMENT OF RPM'S AT INTERSECTIONS

Bidirectional White/Red RPM's Install markers at 20' center to center

Bidirectional Yellow

Install markers at 20' center to center

Reflective Pavement Markers To Be Bidirectional Yellow
General Notes:
2. Text for Signs Shall Be 6" Type C Lettering.
3. For Aluminum Round Tube Assembly and Foundation Detail, see Index 11860.
4. For Steel I Beam Assembly and Foundation Detail, see Index 11200.
5. For Steel-U-Channel Assembly and Foundation Detail, See Index 600 Sheet 6 of 12: Galvanized Steel U-Channel in accordance with ASTM 123.

Tourist Oriented Directional Signs

<table>
<thead>
<tr>
<th>No. of Signs (Total Area)</th>
<th>Single Post Configuration</th>
<th>Two Post Configuration</th>
<th>Three Post Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3-1/2&quot; x 0.125&quot; Aluminum Tube Direct Burial</td>
<td>#363.7 Aluminum Tube Slip Base</td>
<td>06012 Steel I Beam Slip Base</td>
</tr>
<tr>
<td>10</td>
<td>OK</td>
<td>OK</td>
<td>NA</td>
</tr>
<tr>
<td>16-20</td>
<td>NA</td>
<td>NA</td>
<td>OK</td>
</tr>
<tr>
<td>18-24</td>
<td>NA</td>
<td>NA</td>
<td>OK</td>
</tr>
<tr>
<td>22-34</td>
<td>NA</td>
<td>NA</td>
<td>OK</td>
</tr>
<tr>
<td>30-30</td>
<td>NA</td>
<td>NA</td>
<td>OK</td>
</tr>
<tr>
<td>30</td>
<td>NA</td>
<td>NA</td>
<td>OK</td>
</tr>
</tbody>
</table>

* Limited to 22 s.f. total sign area.
3 or 4 DIGITS
1 or 2 DIGITS

INDEPENDENT USE OTHER THAN FREEWAY

3 OR MORE DIGITS
1 OR 2 DIGITS

GUIDE SIGN USE

FLORIDA ROUTE MARKER
FTP-17-06

1-3 DIGITS 15" SERIES C
4 DIGITS 12" SERIES C
INDEPENDENT USE FOR FREEWAY

SPECIAL SIGN DETAILS
INDEX NO. 17355 SHEET NO. 3 of 12
SPECIAL SIGN DETAILS

1. ISM 970 Rev

DESCRIPTION:

FDOT 2014 DESIGN STANDARDS

INDEX NO.
SHEET NO.

17355 4 of 12
SPECIAL SIGN DETAILS

07/01/01

REV ISIO N

C:\projects\standards\roadway\17300-s\17355-06.dgn

DESCRIPTION:

REVISION

LAST

INDEX

NO.

NO.

FOR DESIGN STANDARDS

FDOT 2014

SPECIAL SIGN DETAILS

17355

6 of 12
No Obstruction To Text Or Symbols From Holes Or Bolts.
Sign Mounting Holes Can Be Punched Or Field Drilled With No Obstruction To Text Or Symbols From Holes Or Bolts.

SPECIAL SIGN DETAILS

1.01.01 DESCRIPTION:

**EMERGENCY INFO XX.X FM**
- FTP-70-06
  - 3'-0" x 2'-0"
  - 2.25 Radii, ½" Border
  - 5" Series C and 7" Series C Legend
  - Blue Background
  - White Legend and Border

**FIRE SMOKE AREA**
- FTP-71-06
  - 3' x 3'
  - 3 Radii, ½" Border
  - 5" Series C Legend
  - Yellow Background
  - Black Legend and Border

**VENDING MACHINES**
- FTP-73-06
  - 5'-0" x 7'-0"
  - 5 Radii, ½" Border
  - 8" Series D Legend
  - Blue Background
  - White Legend and Border

**CALL BOX MILE XXX.X**
- FTP-64-06
  - 2'-0" x 2'-0"
  - 2.25 Radii
  - Top 6" Series E and 8" Series EM Legend
  - Blue Background
  - White Legend and Border
  - Bottom 6" Series E and 8" Series EM Legend
  - Green Background
  - White Legend and Border

**OFFICIAL USE ONLY**
- FTP-65-06
  - 3' x 1'-6"
  - 3 Radii
  - ½" Border
  - 6" Series D Legend
  - White Background
  - Black Legend and Border

**TRAVEL INFO CALL 511**
- FTP-66-06
  - 4'-0" x 2'-0"
  - 2 Radii
  - ½" Border
  - 7" Series D Legend
  - Blue Background
  - White Legend and Border

**NO PEDESTRIANS BICYCLES MOTOR VEHICLES LESS THAN 5 MPH**
- FTP-67-06
  - 3'-0"
  - 4 Radii
  - ½" Border
  - 8" Series D Legend
  - White Background
  - Blue Legend and Border

LEFT TURN YIELD ON FLASHING YELLOW ARROW

FPY-65.13
3' X 7'-6"
1.875" Radii "C" Border
3.5" Series C Legend
Yellow Background
Black Legend and Border
TYPICAL INSTALLATIONS FOR SIGN PANEL(S) MOUNTED ON SPAN WIRE

SIGN MOUNTING DETAIL

TYPICAL SPAN WIRE INSTALLATION

ADJUSTABLE HANGER FOR SIGN MOUNTING

DETAIL OF OPPOSING SIGNS SPAN WIRE MOUNTED

TWO POINT ATTACHMENT

DESCRIPTION

INDEX No.

17356

1 of 1
WEIGHT LIMIT
8T
12T
16T
WEIGHT LIMIT
8T
12T
16T
WEIGHT LIMIT
8T
12T
16T
WEIGHT LIMIT
8T
12T
16T

WEIGHT LIMIT RESTRICTION AHEAD

SIGN LOCATIONS TYPICAL

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.
RURAL NARROW BRIDGE TREATMENT

**One-Way Traffic**

- Type 2 Object Markers (Yellow)
  - Installed Behind Guardrail
  - 4 Spaces @ 50’
  - CM3L 12” X 36” Black on Yellow

- Type 2 Object Markers (White)
  - Installed Behind Guardrail
  - 4 Spaces @ 50’
  - Black on Yellow

- 6” White
- Black on Yellow
- 12” X 36”
- OM3L

- **For Paved Shoulders**
  - 18” White @ 45°
  - Every 50’ For 1570’
  - White on Right and Yellow on Left

- **Every 50’ For 1570’**
  - 18” White @ 45°
  - For Paved Shoulders

- **6” Yellow**
- **6” Solid White**
- **6” Double Yellow**
- **6” Solid Yellow**
- **6” Skip Yellow**

- **Insert A**
- **Insert B**
- **Approach Slab**

**2-Way Traffic**

- Type 2 Object Markers (White)
  - Installed Behind Guardrail
  - 4 Spaces @ 50’
  - Black on Yellow

- **For Paved Shoulders**
  - 18” White @ 45°
  - Every 50’ For 1570’

- **Every 50’ For 1570’**
  - 18” White @ 45°
  - For Paved Shoulders

- **6” Yellow**
- **6” Solid White**
- **6” Double Yellow**
- **6” Solid Yellow**
- **6” Skip Yellow**

- **Insert A**
- **Approach Slab**

**Notes:**
- Minimum of Three

**Description:**
- See Note 2
- Type 2 Object Markers (Yellow)
- Type 2 Object Markers (White)
### Shoulder Width

<table>
<thead>
<tr>
<th>Shoulder Width</th>
<th>No. of RPM's</th>
<th>Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
<td>14'</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>13'</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>12'</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>16.67'</td>
</tr>
</tbody>
</table>

### Design 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 6' 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.**

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**RURAL NARROW BRIDGE TREATMENT**

**FDOT 2014 DESIGN STANDARDS**

**INDEX NO. 17359**

**SHEET NO. 2 of 2**