**DESCRIPTION:**

**REVISION**

**LAST**

**REVISION**

**INDEX**

**F Y 2018-19**

**STANDARD PLANS**

**PAVEMENT MARKINGS**

**711-001**

**SHEET** 2 of 14

---

**CONTRAST MARKINGS WITH ALTERNATING SKIP PATTERN**

(10'-30' Skip Line Shown, Dotted Lines Similar)

**YIELD LINES**
**DESCRIPTION:**

**REVISION**

**LAST REVISION**

**INDEX**

**11/01/17**

**FY 2018-19**

**STANDARD PLANS**

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**PLACEMENT OF LONGITUDINAL PAVEMENT MARKINGS**

---

**Curb and Gutter**

**Flush Shoulder**

\[ X = \text{LANE WIDTH (FT.)} \]

\[ Y = \text{BUFFERED BIKE LANE WIDTH (FT.)} \]

**Striping for Buffered Bike Lane**

**Striping with Shoulder or Non-Buffered Bike Lane**

**Striping with No Shoulder or Bike Lane**

---

**NOTES:**

1. Lane widths \( X \) may not be same for each lane in the section.

2. For placement of RPMs, see Index 706-001.
NOTES:
1. Lane widths (X) may not be same for each lane in the section.
2. For placement of RPMs, see Index 706-001.
3. For placement of Express Lane markers and associated RPMs, see the Plans.

PLACEMENT OF LONGITUDINAL PAVEMENT MARKINGS

BUFFERED EXPRESS LANE STRIPING
PLACEMENT OF LONGITUDINAL PAVEMENT MARKINGS

CURB AND GUTTER SHOWN

DESCRIPTION:

LAST REVISION: 11/01/17

FY 2018-19 STANDARD PLANS

PAVEMENT MARKINGS

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711-001

5 of 14
Pavement Markings and Delineators for Median Cross-over

Details:

- Use 6" white pavement markings on both sides of the delineator post.
- Install delineator posts 4' above the grade at the edge of the pavement.
- Begin extension at radius point (typ).
- End at radius point (typ).
- Use yellow retro-reflective sheeting on both sides of the delineator post.
- When applying yellow reflective paint in conjunction with raised pavement markers, see Index 706-001.

NOTE:

1. Apply yellow reflective paint to the noses of curbed medians, traffic separators, and raised islands. When applying yellow reflective paint in conjunction with raised pavement markers, see Index 706-001.
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.
**REV IS IO N DESCRIPTION:**

**LAST REVISION:** 01/01/17

**INDEX:** 711-001

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**PAVEMENT MARKINGS**

**STANDARD PLANS**

**TWO WAY LEFT TURN LANE**
(With Single Lane Left Turn Channelization)

**SCHEME ONE**

- 24" White
- 6" White
- 6" Double Yellow

**SCHEME TWO**

- 24" White

**USE STOP LINE**
At Signalized Intersection Only

**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 cannot be determined.

- For use in rural & suburban areas where an adequate storage lane length can be specifically determined.

**DETAIL "C"**

- 10' Yellow
- 45°
- 20'
- 6" White

**TRAFFIC CHANNELIZATION AT GORE**

**RIGHT TURN LANE DROP AND ISLAND DETAILS**

- 12" White (3-9')
- 6" White

**LEFT TURN LANE DROP IS MIRROR IMAGE**

- 24" White
- 6" White (2'-4')
- 8" White

**RIGHT TURN LANE AND ISLAND DETAILS**

- 24" White
- 6" White (2'-4')
- 8" White

**PAVEMENT MARKINGS FOR USE IN**: rural & suburban areas where an adequate storage lane length can be specifically determined.

**PAVEMENT MARKINGS 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 cannot be determined.

**FOR USE IN**: rural & suburban areas where an adequate storage lane length can be specifically determined.

**LOCATIONS**:
- SCHEME ONE
- SCHEME TWO

**MINIMUM STORAGE LANE LENGTHS**:
- 50' Min
- 75' Min
- 100' Max

**MINIMUM CURB SETBACKS**:
- 8'
- 12'
- 25'
- 50'

**MINIMUM INTERVALS BETWEEN DOUBLE ARROWS**:
- 300'

**AVAILABILITY**:
- Single Lane Left Turn Channelization

**DIRECTION OF TRAFFIC**:

- See DETAIL "C"
**DESCRIPTION:**

**REVISED OF STANDARD PLANS**

**SHEET INDEX**

**PAVEMENT MARKINGS**

**MARKINGS FOR TRAFFIC SEPARATION**

**NOTE:**

Make pavement markings yellow for left roadway centered on existing roadway. Right roadway centered on existing roadway is similar with white pavement markings.

**DETAIL "D"**

**DETAIL "E"**

**SCHEMES FOR TRANSITION - 2 LANE / 4 LANE ROADWAY**

**LEFT ROADWAY CENTERED ON EXISTING ROADWAY**

**RIGHT ROADWAY CENTERED ON EXISTING ROADWAY**

**DESIGN SPEED (MPH)**

<table>
<thead>
<tr>
<th>Speed</th>
<th>L</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>70</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>80</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>90</td>
<td>10</td>
<td>30</td>
</tr>
</tbody>
</table>

**POSTED SPEED LIMIT (MPH)**

<table>
<thead>
<tr>
<th>Speed</th>
<th>L</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>40</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>50</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>60</td>
<td>10</td>
<td>30</td>
</tr>
</tbody>
</table>

**DESIGN SPEED 'S' (MPH)**

<table>
<thead>
<tr>
<th>Speed</th>
<th>L</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>40</td>
<td>10</td>
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<td>10</td>
<td>30</td>
</tr>
<tr>
<td>60</td>
<td>10</td>
<td>30</td>
</tr>
</tbody>
</table>

See DETAIL "D"
NOTES:
1. For crosswalk width, exceed width of the adjacent sidewalk, but do not make width less than 4' for intersection crosswalks and 10' for midblock crosswalks. Measure width from the inside of the transverse crosswalk markings.

2. When the Special Emphasis Crosswalk is not perpendicular to the lane lines, make the longitudinal markings parallel to the lane lines.

3. Extend double yellow centerlines 100' back from intersection on all approaches or 50' for unmarked cross roads.

4. Refer to Index 522-002 when Curb Ramps are present.
### Single Left Turns

**Queue Length** is measured from the median nose radial point or, when a stop bar is required, from the stop bar.

**Through Lane Becomes Exclusive Left Turn**

**Through Lane Becomes Optional Left Turn**

### Double Left Turns

**Turn Lane Markings**

<table>
<thead>
<tr>
<th>Design Speed (mph)</th>
<th>Clearance Distance</th>
<th>Brake To Stop Distance</th>
<th>Total Decel. Distance</th>
<th>Clearance Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>70'</td>
<td>75'</td>
<td>145'</td>
<td>110'</td>
</tr>
<tr>
<td>40</td>
<td>80'</td>
<td>75'</td>
<td>155'</td>
<td>120'</td>
</tr>
<tr>
<td>45</td>
<td>85'</td>
<td>75'</td>
<td>180'</td>
<td>135'</td>
</tr>
<tr>
<td>50</td>
<td>100'</td>
<td>135'</td>
<td>240'</td>
<td>160'</td>
</tr>
<tr>
<td>55</td>
<td>120'</td>
<td>225'</td>
<td>320'</td>
<td>225'</td>
</tr>
<tr>
<td>60</td>
<td>145'</td>
<td>260'</td>
<td>405'</td>
<td>260'</td>
</tr>
<tr>
<td>65</td>
<td>170'</td>
<td>290'</td>
<td>460'</td>
<td>290'</td>
</tr>
</tbody>
</table>

### Notes:
1. This Index also applies to right turn lanes.
2. Make pavement marking yellow for left-turn lanes and white for right-turn lanes.

**Arrow Spacing**

Arrow should be evenly spaced between first and last arrow. Turn lanes longer than 200' add one arrow for each 100' additional length.
RAILROAD CROSSING AT 2-LANE ROADWAY

RAILROAD CROSSING AT 4-LANE ROADWAY

NOTES:
1. Do not include transverse markings in pavement message quantities.
2. When dynamic devices are not present or are to be installed, place the crossbuck at the future location of the RR gate or signal and gate in accordance with Index 509-070.
3. Place an additional W10-1 sign where street intersections occur between the R/R pavement message and the tracks.
4. Place FTP-61-05 sign or FTP-62-06 sign 100 in advance of the crossing for urban locations and 300 in advance of the crossing for rural locations.

NOTE: Pavement Markings symmetrical about centerline of Railroad.

TYPICAL MARKINGS FOR R/R CROSSING

TERMINATION OF TWO WAY LEFT TURN AT R/R CROSSINGS

<table>
<thead>
<tr>
<th>DESIGN SPEED MPH</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>400</td>
</tr>
<tr>
<td>55</td>
<td>325</td>
</tr>
<tr>
<td>50</td>
<td>250</td>
</tr>
<tr>
<td>45</td>
<td>175</td>
</tr>
<tr>
<td>40</td>
<td>125</td>
</tr>
<tr>
<td>35</td>
<td>100</td>
</tr>
<tr>
<td>URBAN</td>
<td>89</td>
</tr>
<tr>
<td></td>
<td>MILE</td>
</tr>
</tbody>
</table>
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, no public sidewalk curb ramp locations. For ramp locations refer to plans.
4. Tint blue pavement markings to match color 15180 of Federal Standards 595a.
5. Mount FTP-22-06 sign below the FTP-21-06 sign.

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

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

<table>
<thead>
<tr>
<th>DIMENSIONS</th>
<th>45°</th>
<th>90°</th>
<th>135°</th>
<th>180°</th>
</tr>
</thead>
<tbody>
<tr>
<td>12'-9&quot;</td>
<td>22'</td>
<td>22'</td>
<td>22'</td>
<td>22'</td>
</tr>
<tr>
<td>18'-0&quot;</td>
<td>22'</td>
<td>22'</td>
<td>22'</td>
<td>22'</td>
</tr>
</tbody>
</table>

TYPICAL

PAVEMENT MARKING FOR PARKING

UNIVERSAL SYMBOL OF ACCESSIBILITY
NOTES:
1. All grids are 4" x 4".
2. Pavement Marking Should Not Extend Into Opposing Lane.

SCHOOL PAVEMENT MARKING

MARKINGS FOR SCHOOL ZONES

SINGLE-LANE APPROACH

TWO-LANE APPROACH

MULTI-LANE APPROACH
(Three or More)