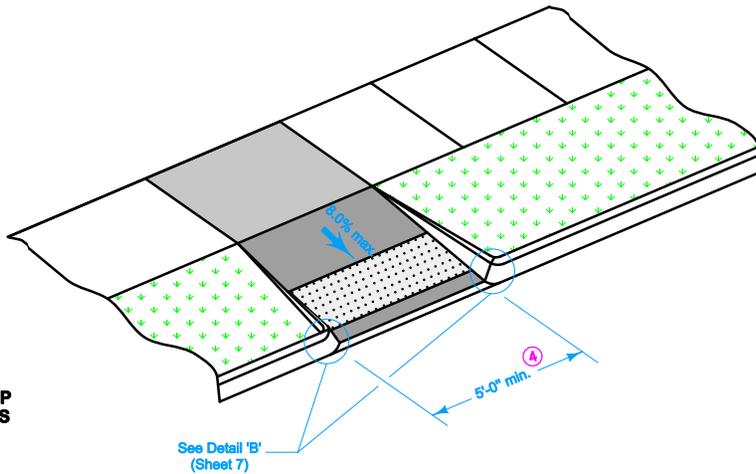
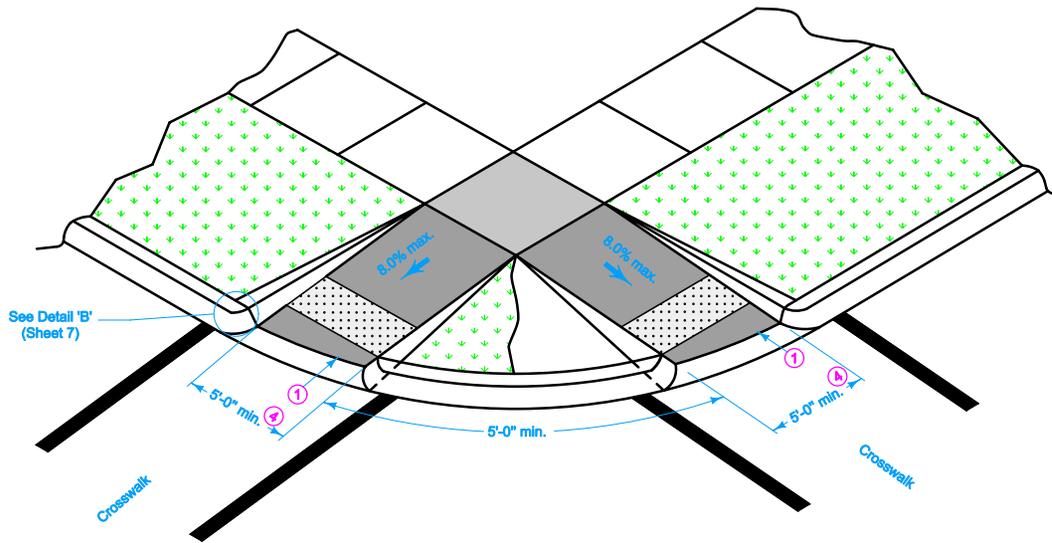


**TYPE 1-R
PERPENDICULAR RAMP
WITH RETURNED SIDES**



See Detail 'B'
(Sheet 7)



See Detail 'B'
(Sheet 7)

**TYPICAL APPLICATION
OF TYPE 1-R RAMPS
AT A CORNER**

LEGEND	
	Curb Ramp ②
	Landing Area ③
	Detectable Warnings
	Vegetation

Install ramps perpendicular to radius.

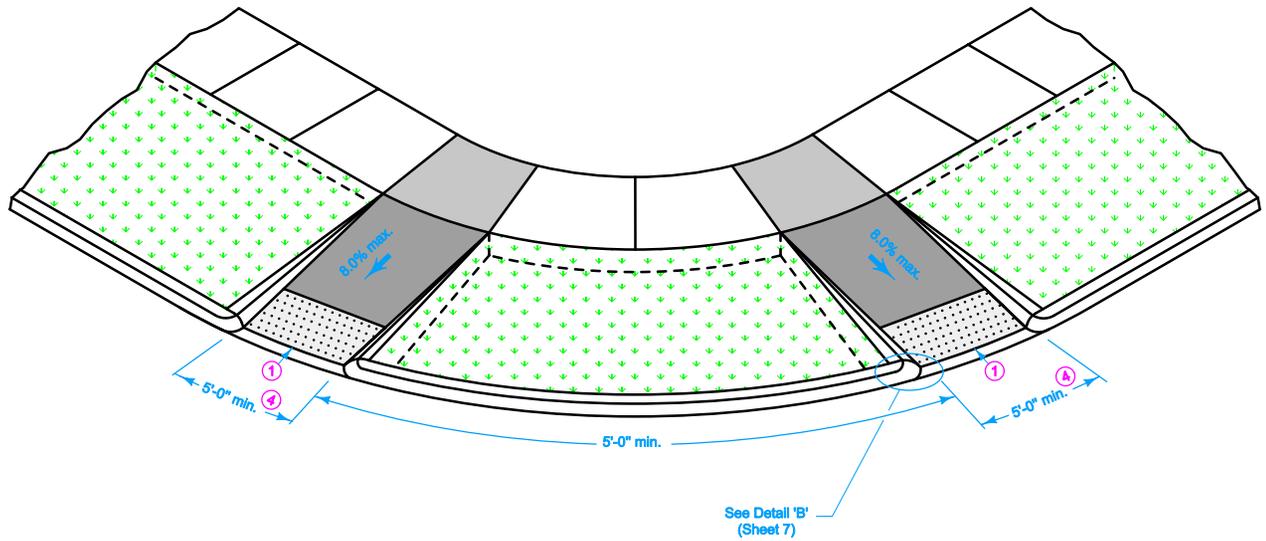
Installation of curb along sidewalk is considered incidental to sidewalk.

- ① Unless curb ramp is aligned perpendicular to the street radius, provide an area of special shaping at the bottom of the ramp. This area allows the grade break at the bottom of the ramp to be perpendicular to the ramp and provides a smooth transition to gutterline for wheelchair access. No curb lip allowed in this area. Maximum cross slope shall be 2%.
- ② Maximum cross slope on all ramps is 2%.
- ③ Provide a 5' min. x 5' min. landing area at all curb ramps. Maximum slope in any direction is 2%.
- ④ Distance measured from face of curb to face of curb.

Possible Contract Items:
 Detectable Warnings for Curb Ramps
 Removal of Curb
 Removal of Sidewalk
 Sidewalk, P.C. Concrete, 6 in.

Possible Tabulation:
 112-4

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 APPROVED BY DESIGN METHODS ENGINEER	
PEDESTRIAN CURB RAMPS	

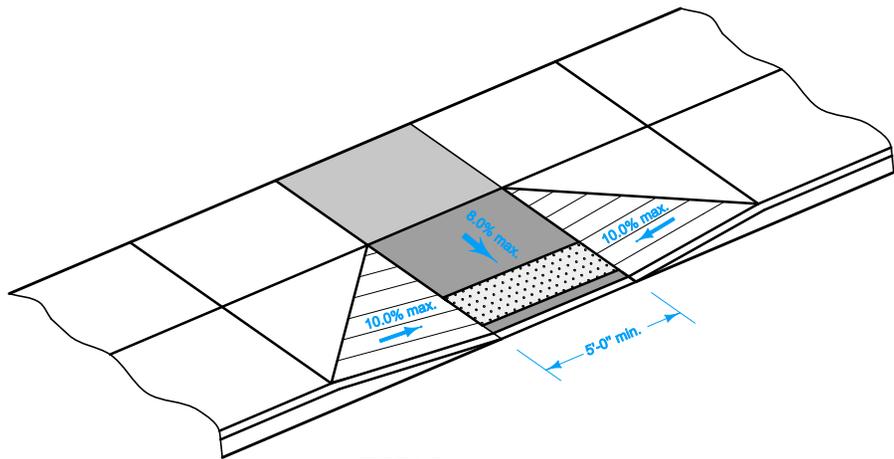


TYPICAL LARGE RADIUS APPLICATION
OF TYPE 1-R

LEGEND	
	Curb Ramp ②
	Landing Area ③
	Detectable Warnings
	Vegetation

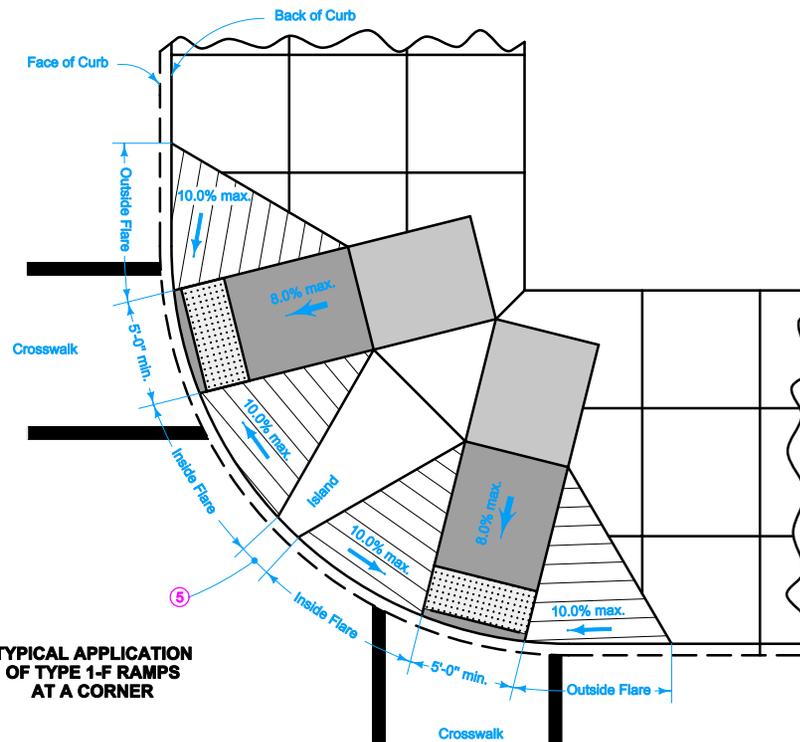
- ① Unless curb ramp is aligned perpendicular to the street radius, provide an area of special shaping at the bottom of the ramp. This area allows the grade break at the bottom of the ramp to be perpendicular to the ramp and provides a smooth transition to gutterline for wheelchair access. No curb lip allowed in this area. Maximum cross slope shall be 2%.
- ② Maximum cross slope on all ramps is 2%.
- ③ Provide a 5' min. x 5' min. landing area at all curb ramps. Maximum slope in any direction is 2%.
- ④ Distance measured from face of curb to face of curb.

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PEDESTRIAN CURB RAMPS	



**TYPE 1-F
PERPENDICULAR RAMP
WITH FLARED SIDES**

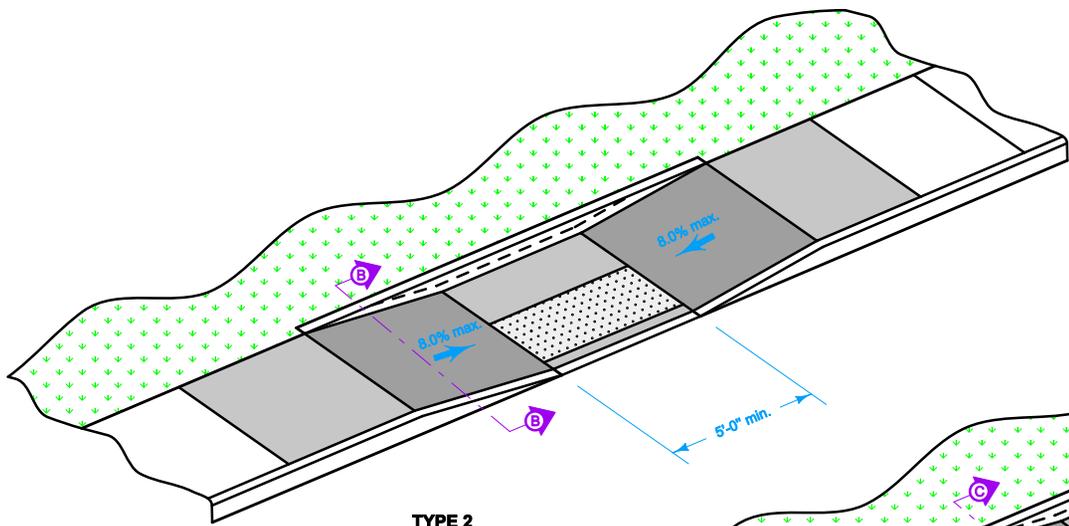
- ② Maximum cross slope on all ramps is 2%.
- ③ Provide a 5' min. x 5' min. landing area at all curb ramps. Maximum slope in any direction in 2%.
- ⑤ Width varies; if center island cannot be constructed at a minimum width of 2 feet and height of 3 inches by reducing the width of the island flares, refer to Type 5.



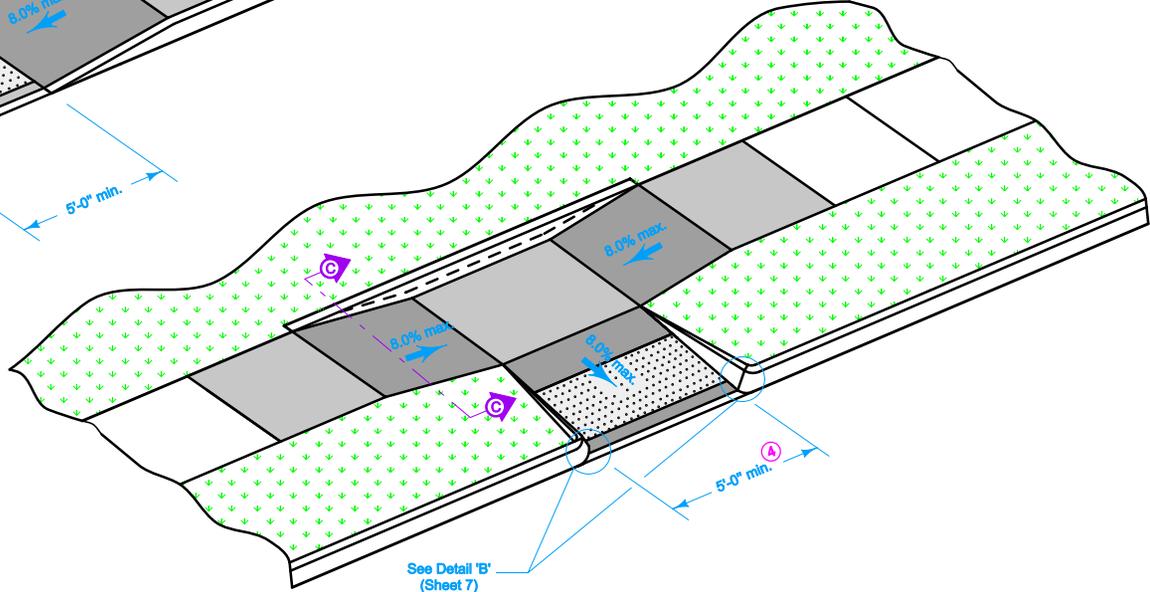
**TYPICAL APPLICATION
OF TYPE 1-F RAMP
AT A CORNER**

LEGEND	
	Curb Ramp ②
	Landing Area ③
	Detectable Warnings
	Flared Sides

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PEDESTRIAN CURB RAMPS	



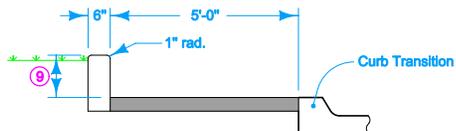
**TYPE 2
PARALLEL RAMP**



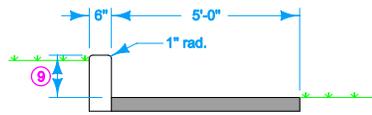
**TYPE 3
COMBINATION RAMP**

- ② Maximum cross slope on all ramps is 2%.
- ③ Provide a 5' min. x 5' min. landing area at all curb ramps. Maximum slope in any direction is 2%.
- ④ Distance measured from face of curb to face of curb.
- ⑤ Maximum height above sidewalk is 12 inches. If more than 12 inches, refer to MI-221 for wall reinforcement details. Payment is included in sidewalk quantities as 6 inch width.

LEGEND	
	Curb Ramp ②
	Landing Area ③
	Detectable Warnings
	Vegetation



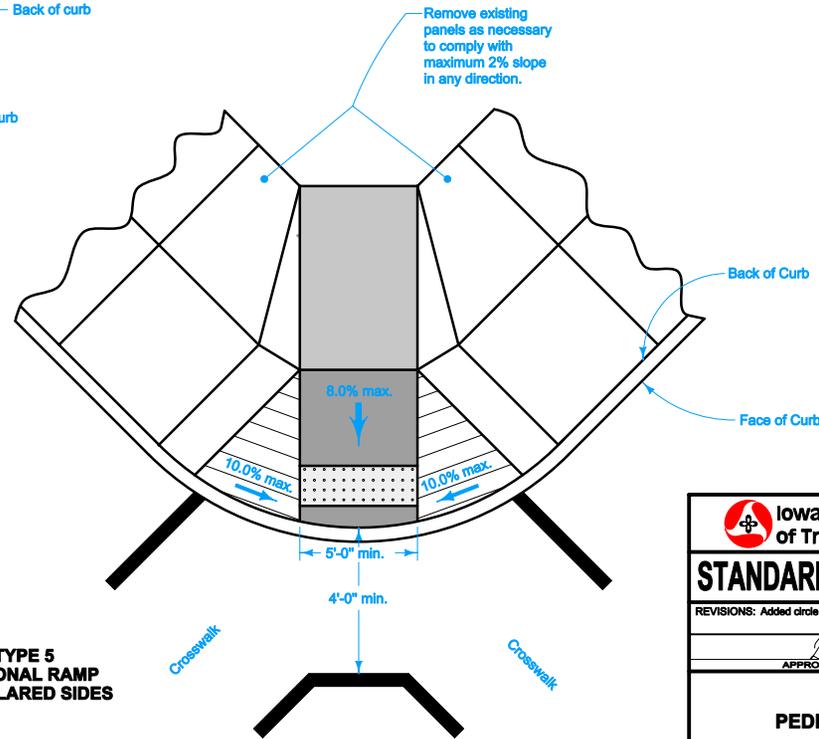
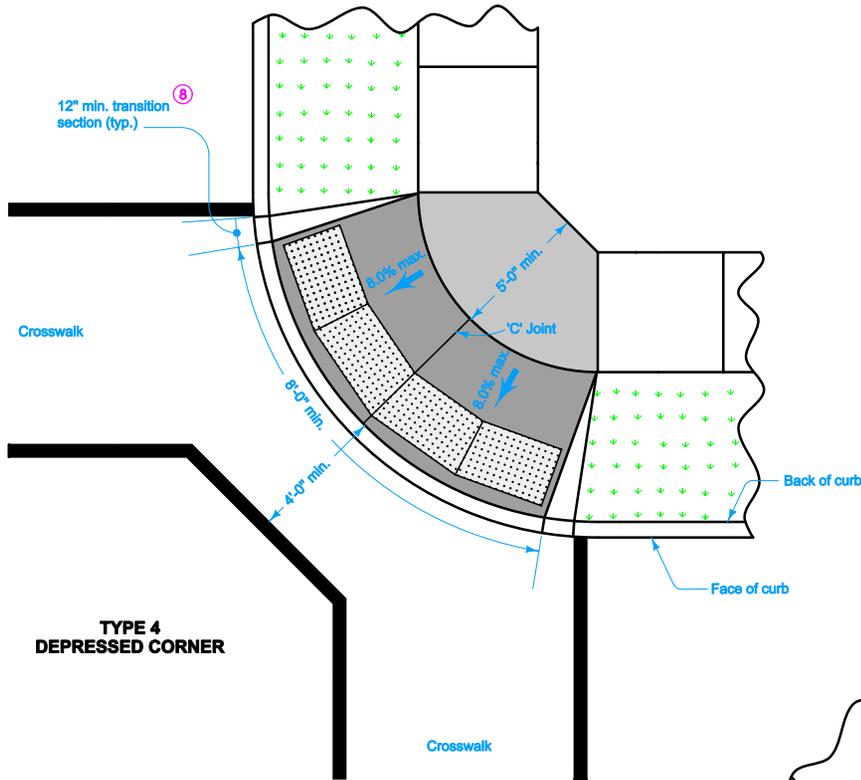
SECTION B-B



SECTION C-C

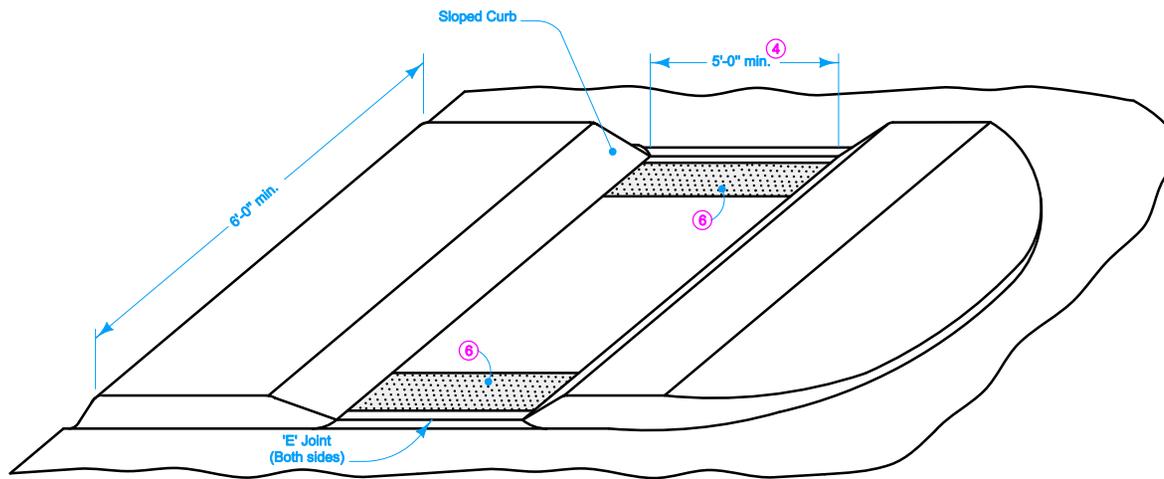
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PEDESTRIAN CURB RAMPS	

- ② Maximum cross slope on all ramps is 2%.
- ③ Provide a 5' min. x 5' min. landing area at all curb ramps. Maximum slope in any direction is 2%.
- ⑧ At existing curb and gutter locations, remove curb and build transition section.



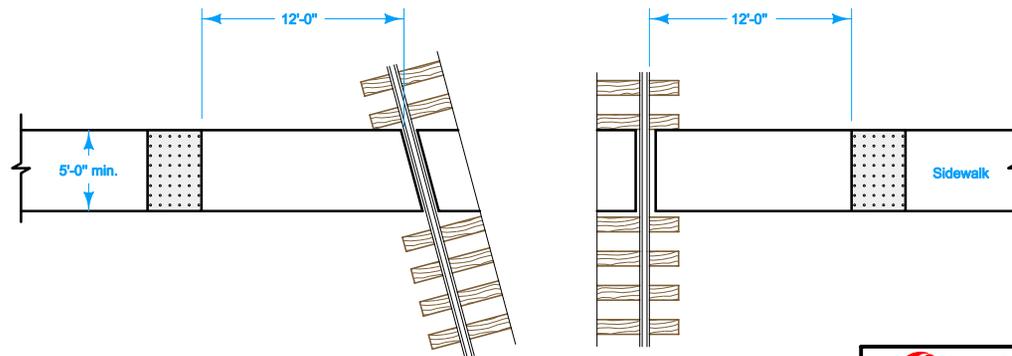
LEGEND	
	Curb Ramp ②
	Landing Area ③
	Detectable Warnings
	Vegetation
	Flared Sides

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PEDESTRIAN CURB RAMPS	



**TYPE 6
ACCESS AT CURBED MEDIANS**

- ④ Distance measured from face of curb to face of curb.
- ⑥ For medians at signal-controlled crossing:
Where signal timing is such that most pedestrians are likely to cross the entire roadway within one crossing phase, omit detectable warnings.

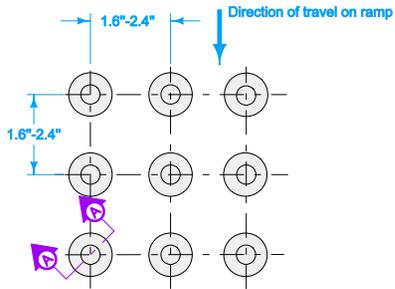


**TYPE 7
RAILROAD CROSSING**

LEGEND

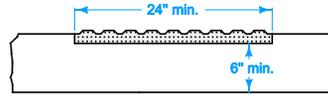
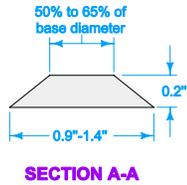
 Detectable Warnings

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PEDESTRIAN CURB RAMPS		



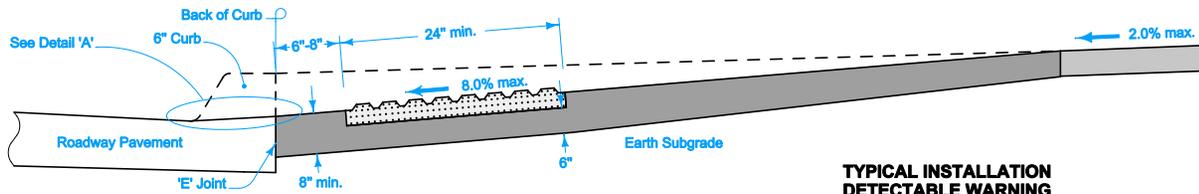
SQUARE PATTERN
(Parallel alignment)

DETECTABLE WARNINGS



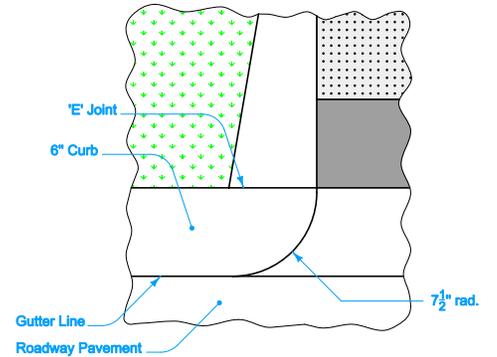
**DETECTABLE WARNING
FLAT SURFACE INSTALLATION**

- ② Maximum cross slope on all ramps is 2%.
- ③ Provide a 5' min. x 5' min. landing area at all curb ramps. Maximum slope in any direction is 2%.
- ⑦ At points where a change in slope occurs, the algebraic grade difference shall not exceed 11%.

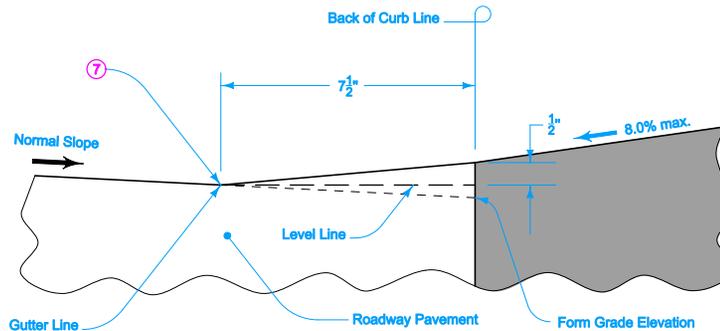
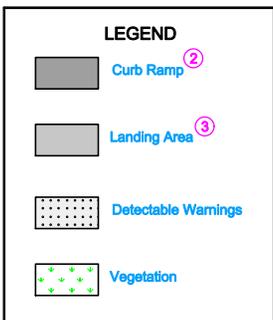


**TYPICAL INSTALLATION
DETECTABLE WARNING**

(All ramp types except 2, 6, and 7)



DETAIL 'B'



DETAIL 'A'

<p>Iowa Department of Transportation</p> <p>STANDARD ROAD PLAN</p> <p>REVISIONS: Added circle note 8.</p> <p><i>Deanna McFalls</i> APPROVED BY DESIGN METHODS ENGINEER</p>	<p>REVISION</p> <table border="1"> <tr> <td>1</td> <td>10-19-10</td> </tr> </table>	1	10-19-10
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<p>MI-220</p> <p>SHEET 7 of 7</p>			
<p>PEDESTRIAN CURB RAMPS</p>			