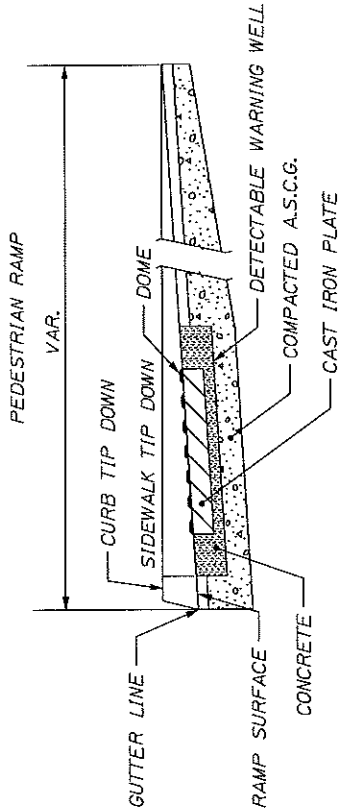


1. *Maximums and minimums do not have tolerances and are not to be exceeded or unmet.*
2. *The standard turning space (level landing) is 4'-0" x 4'-0" sloping no more than 2.0%. Where the turning space is constrained, the turning space shall be 4'-0" minimum by 5'-0" minimum. The 5'-0" dimension shall be provided in the direction of the ramp run.*
3. *Detectable warnings shall be installed at all signed or signalized intersections. They shall have a truncated dome surface. The domes shall be in a square pattern and aligned with pedestrian traffic where possible.*
4. *Detectable warnings shall span the width of the pedestrian ramp. See Standard Detail 608(02).*
5. *All detectable warning fields placed at the same intersection shall be made up of the same uniform material type. Detectable warnings shall be contrasting in color to the adjacent walkway.*
6. *A ramp with a running slope less than 5.0% is defined as a "Blended Transition". Blended transitions do not require a level landing at the top of the ramp. See 80(26) for details.*
7. *The ramp length shall not exceed 15 feet. Adjust ramp length or slope as needed to provide access to the maximum extent feasible. See 80(03) for details.*
8. *All curb ramp joints and grade breaks shall be flush.*
9. *Ramp grade breaks shall be perpendicular to the running slope.*
10. *There shall be a minimum of 12" Aggregate Subbase Course - Gravel under the sidewalk surface on pedestrian ramps.*
11. *Drainage structures, traffic signal equipment, or other obstructions shall not be installed in the curb ramp or turning space areas.*
12. *Before retrofitting ramps, the contractor shall verify removal limits are sufficient to provide positive drainage, maintain existing drainage patterns, and avoid ponding in the final configuration.*
13. *A temporary pedestrian access route shall be provided whenever the existing pedestrian access route in the public right of way is blocked by construction, alteration, maintenance, or other temporary conditions. Refer to MUTCD for guidance.*

PEDESTRIAN RAMP NOTES
80(11)

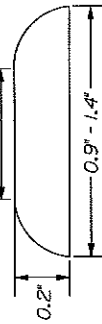
VIEWS AND DETAILS OF THE DETECTABLE WARNING

(NOT TO SCALE)



SIDE SECTION VIEW OF
DETECTABLE WARNING, WELL, CURB AND GUTTER

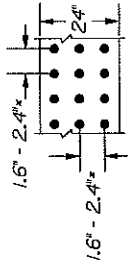
THE TOP DIAMETER OF THE TRUNCATED DOMES SHALL BE 50% TO 65% OF THE BASE DIAMETER.



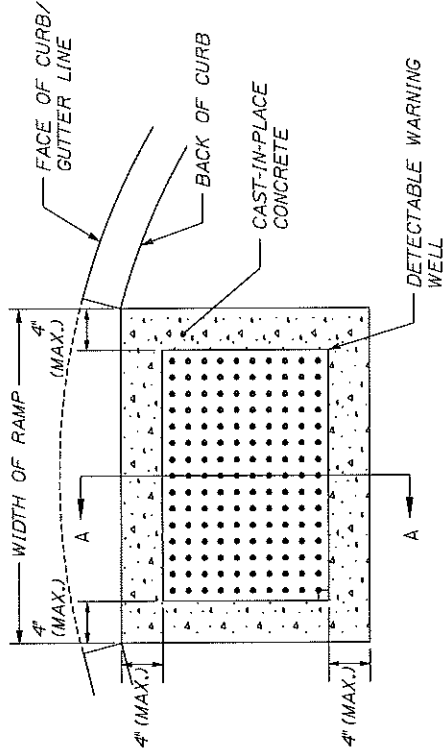
ELEVATION VIEW

DOMES AND DETECTABLE WARNING DETAILS

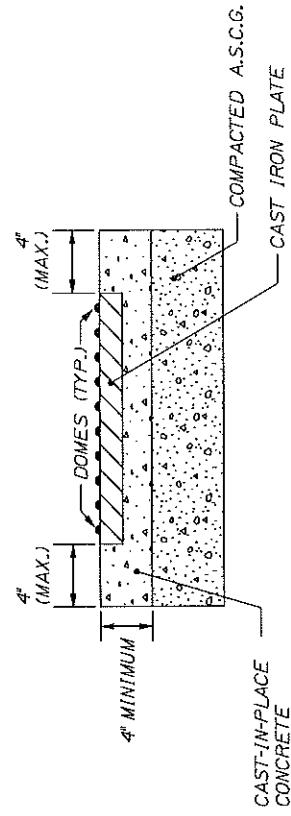
* SHALL BE EQUAL IN BOTH DIRECTIONS



PLAN VIEW



PLAN VIEW OF
DETECTABLE WARNING AND WELL

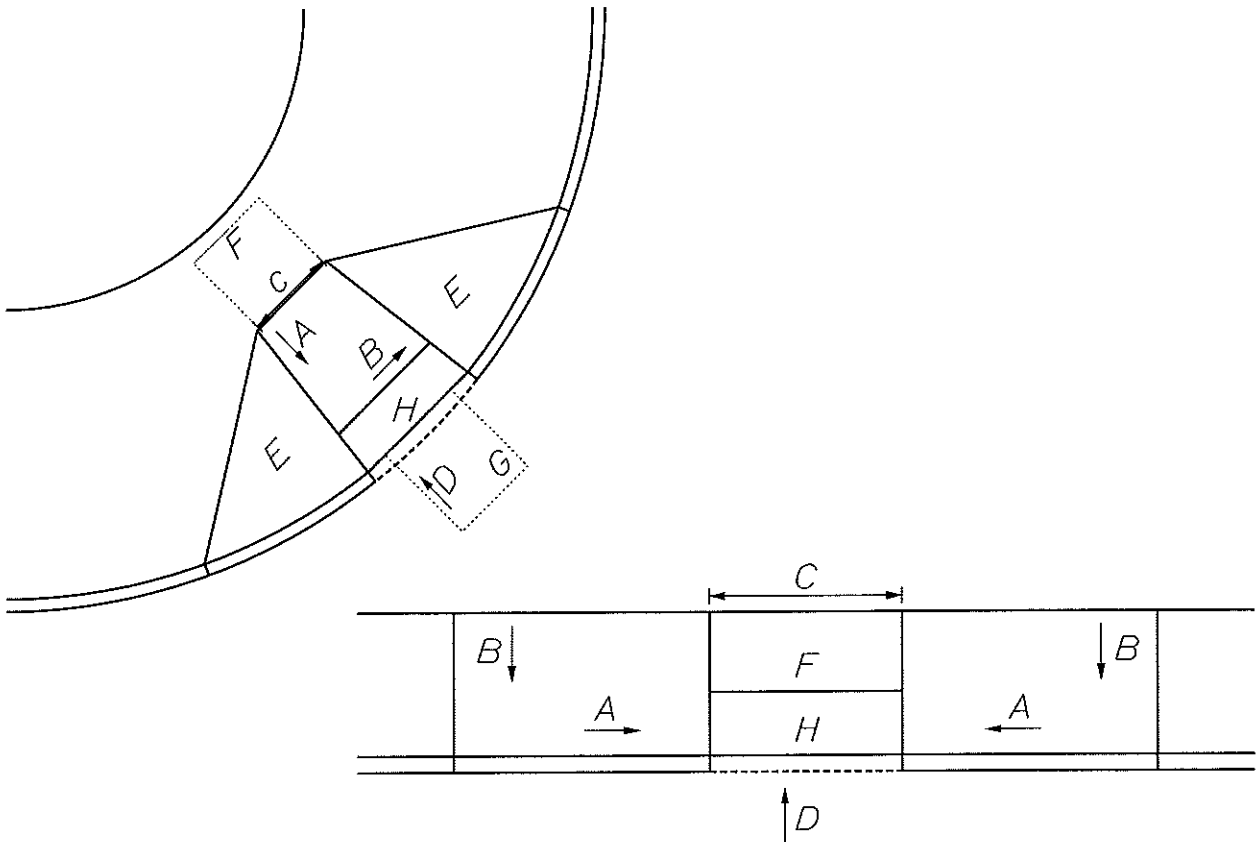


SECTION A-A

DETECTABLE WARNINGS
Supersedes 608(02)



CURB RAMP REQUIREMENTS		
Running Slope	A	Max. 8.33% (1:12) <i>Applies up to a maximum ramp length of 15 feet.</i>
Cross Slope	B	1.5% (1:67) (standard) 2% (1:50) (maximum) <i>Ramp cross slope at street crossings without stop or signal control may match roadway profile.</i>
Clear Width	C	Min. 4' – 8" <i>Provide 5'-8" clear width when feasible. Existing ramp width may remain 4 feet.</i>
Counter Slope	D	Max. 5% (1:20) <i>Adjacent surface must be flush with the ramp.</i>
Flared Sides	E	Max. 10% (1:10)
Turning Space	F	4 feet by 4 feet <i>Maximum slope of 2% in any direction. May include Detectable Warnings.</i>
Clear Space	G	4 feet by 4 feet <i>Located at the bottom of perpendicular ramps outside active travel lanes.</i>
Detectable Warnings	H	<i>Required at traffic-controlled intersections and mid-block crossings. Extend the full width of curb opening except for a 4" maximum border.</i>

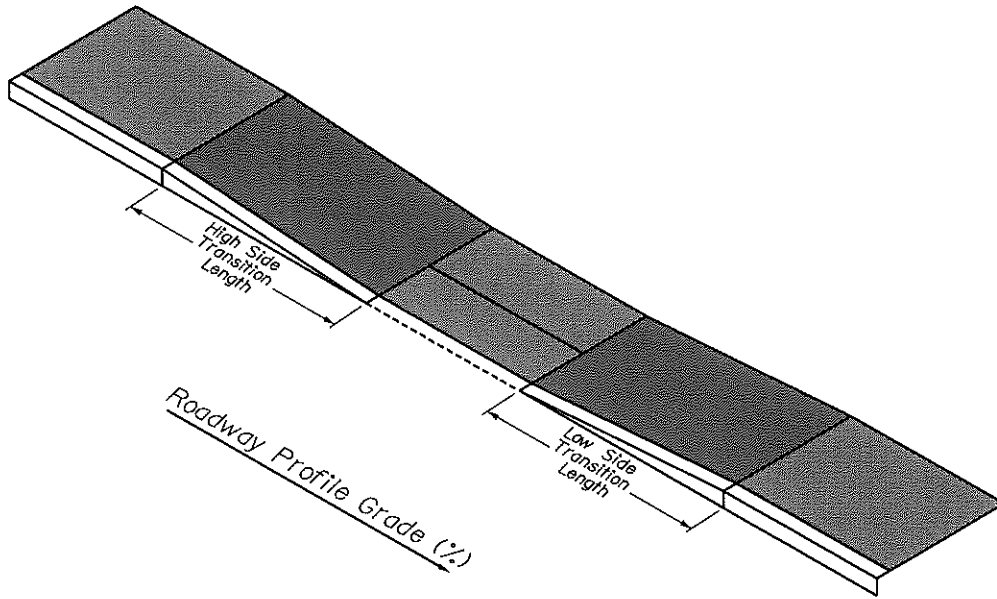


▲ CURB RAMP REQUIREMENTS

Supplemental
Standard Detail

Supersedes 80I(12)

▲ 9-28-2023



Curb Ramp Length Table						
Curb Reveal (Inches)		7	6	5	4	3
	Roadway Profile Grade	Minimum Transition Length Required (Feet)				
Low Side Transition Length	-7% and Lower	4.0	4.0	4.0	4.0	4.0
	-6%	8.0	4.0	4.0	4.0	4.0
	-5%	8.0	4.0	4.0	4.0	4.0
	-4%	8.0	8.0	4.0	4.0	4.0
	-3%	8.0	8.0	4.0	4.0	4.0
	-2%	8.0	8.0	8.0	4.0	4.0
	-1%	8.0	8.0	8.0	4.0	4.0
	-0.5% to 0.5%	8.0	8.0	8.0	8.0	4.0
High Side Transition Length	1%	10.0	8.0	8.0	8.0	4.0
	2%	10.0	10.0	8.0	8.0	8.0
	3%	12.0	10.0	10.0	8.0	8.0
	4%	15.0	12.0	12.0	10.0	8.0
	5%	15.0	15.0	15.0	12.0	10.0
	6%	15.0	15.0	15.0	15.0	12.0
	7% and Higher	15.0	15.0	15.0	15.0	15.0

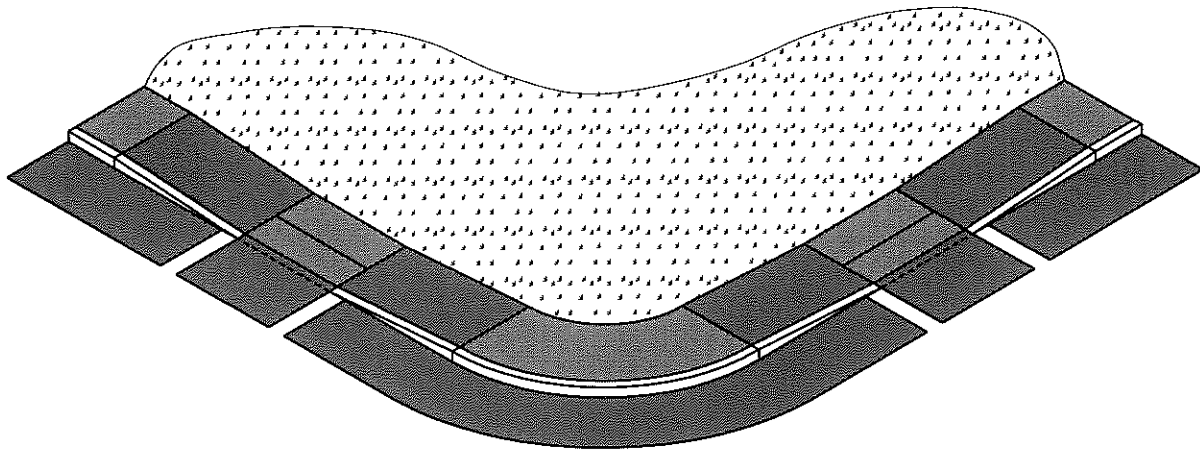
Length is measured at curbline and is not required to exceed 15 feet regardless of ramp running slope.

Choose roadway profile grade by rounding up for positive grades and down for negative grades. Round to the nearest whole integer. If constraints prevent placement of the ramp length required by the table, place the maximum length possible and check the slope. If above the maximum allowable slope, consider design modifications before considering technical infeasibility.

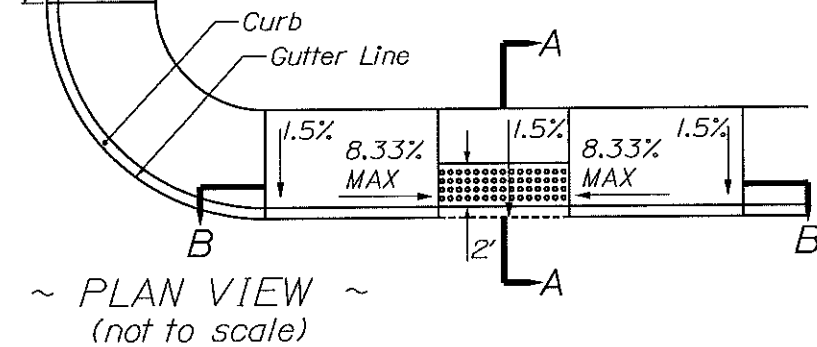
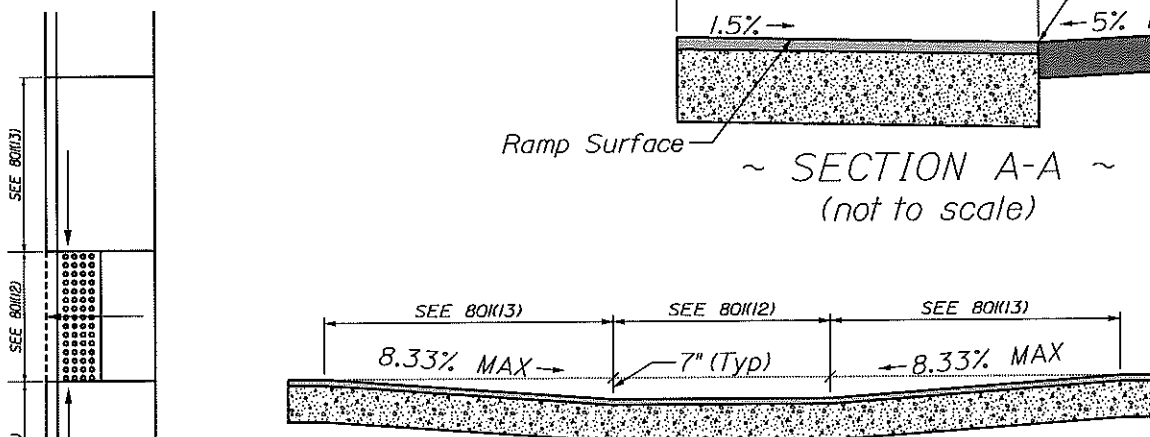
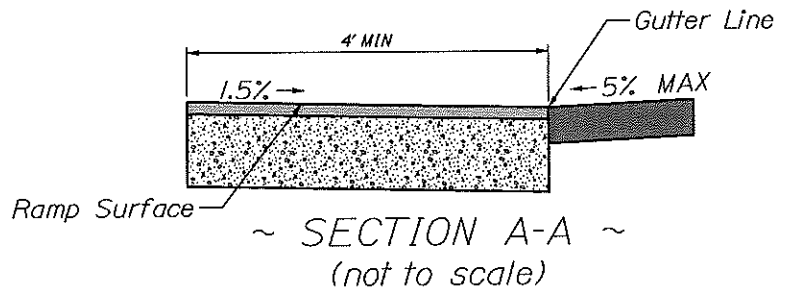
CURB RAMP LENGTH TABLE

Supersedes 80I(13)





~ ISOMETRIC VIEW ~
(not to scale)

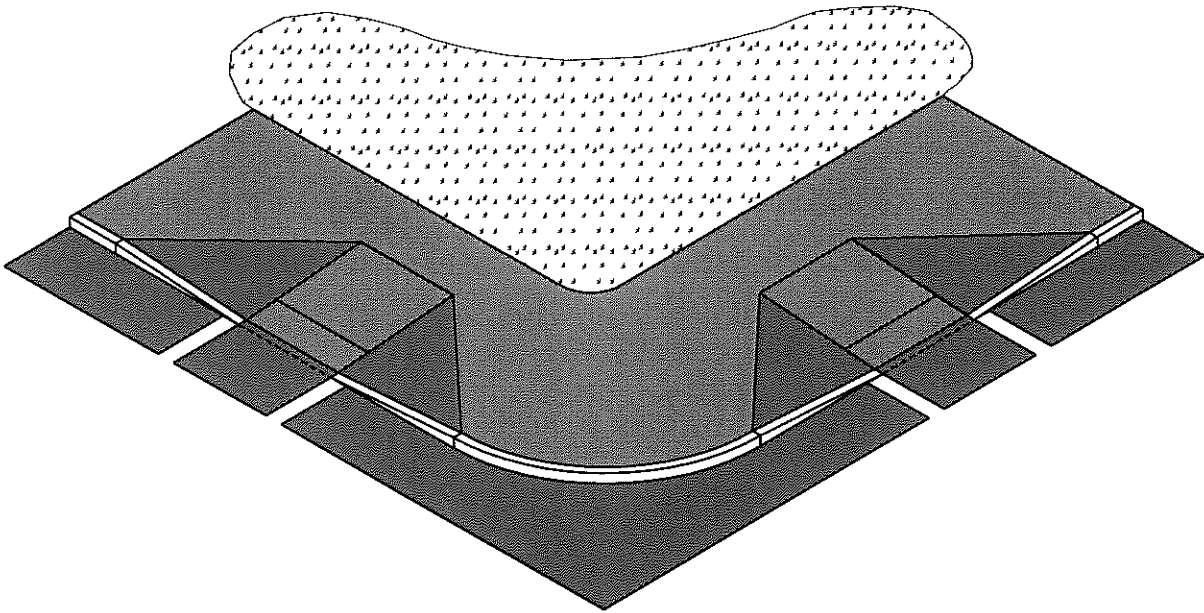


Note:

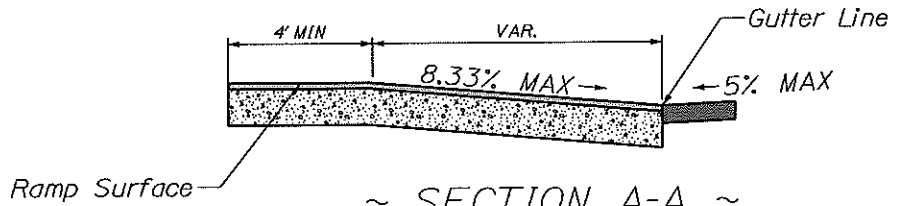
- This desirable design is the preferred option. Use other options only when required by design constraints.
- To achieve 8.33% running slope, the pedestrian ramp may need to be extended. If the ramp length has been extended to a maximum of 15 feet and other design modifications have been considered, running slope may exceed 8.33%.

PARALLEL CURB RAMP - OPTION 1

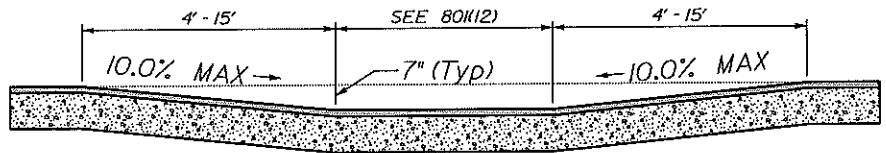
Supersedes 80I(14)



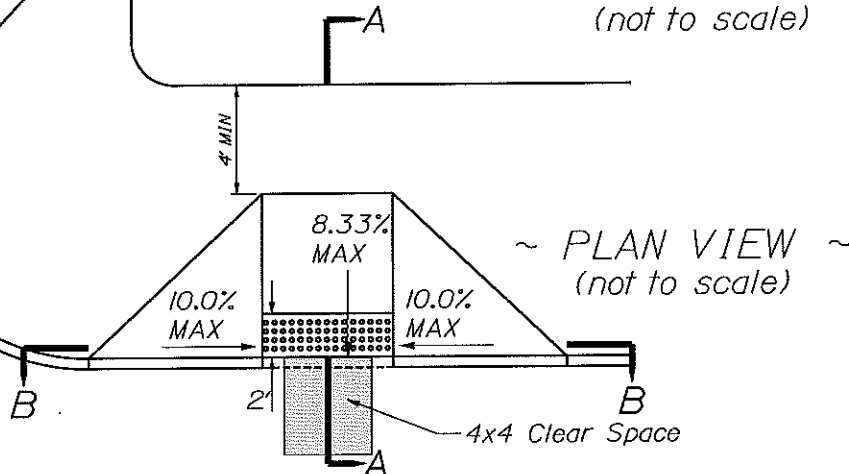
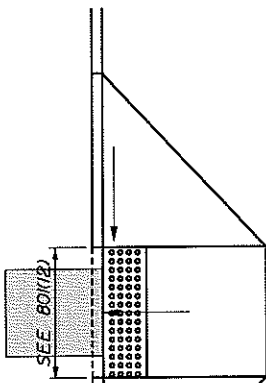
~ ISOMETRIC VIEW ~
(not to scale)



~ SECTION A-A ~
(not to scale)



~ SECTION B-B ~
(not to scale)



~ PLAN VIEW ~
(not to scale)

Note:

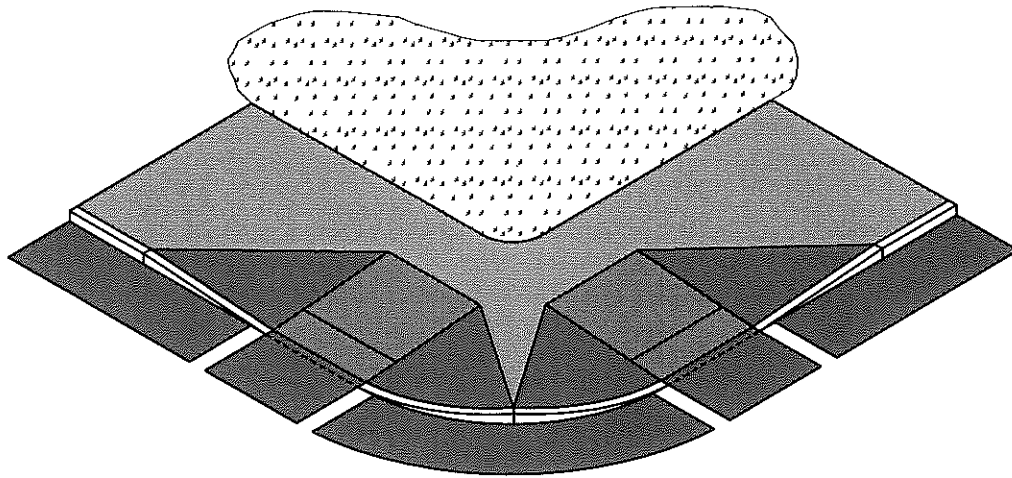
- This desirable design is the preferred option. Use other options only when required by design constraints.

PERPENDICULAR CURB RAMP - OPTION 1

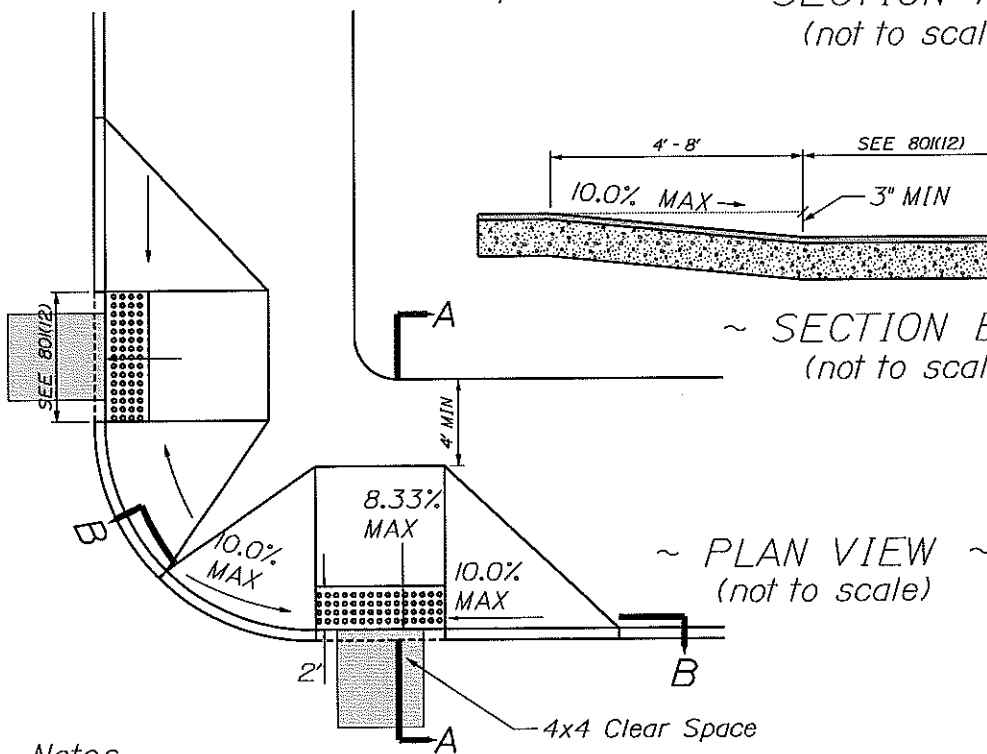
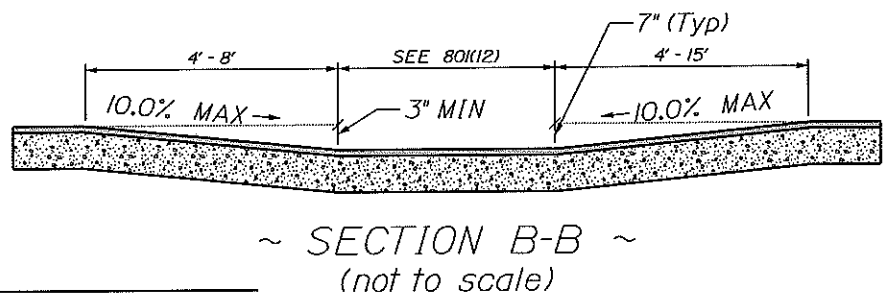
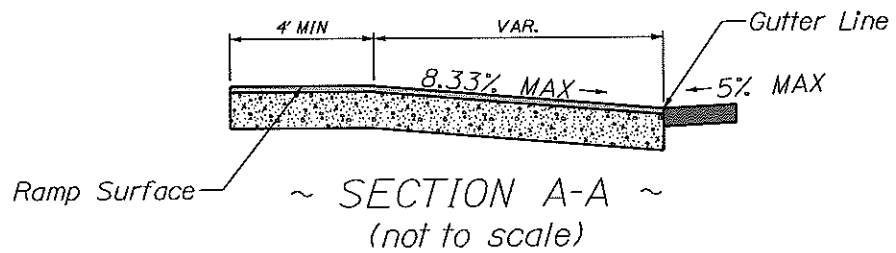
Supplemental
Standard Detail

Supersedes 80K(15)

9-28-2023



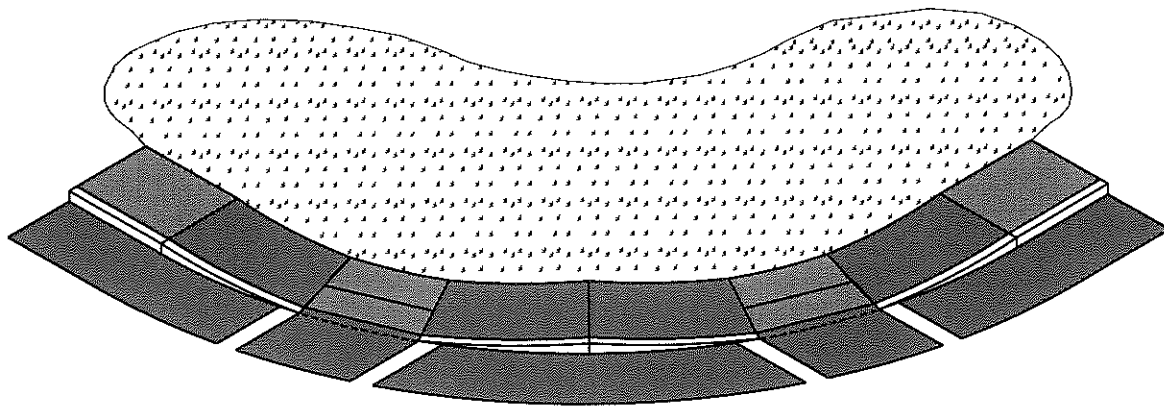
~ ISOMETRIC VIEW ~
(not to scale)



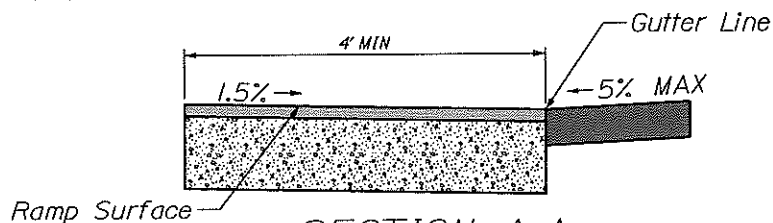
Notes:

- This less desirable design should not be used unless required by design constraints. It may not provide adequate curb reveal. Use Option 1 when possible.
- No vehicular access shall be permitted through the radius curb.
- A minimum curb reveal of 3" is required at the apex of the curb radius.
- Minimum terminal curb length shall be 4ft.

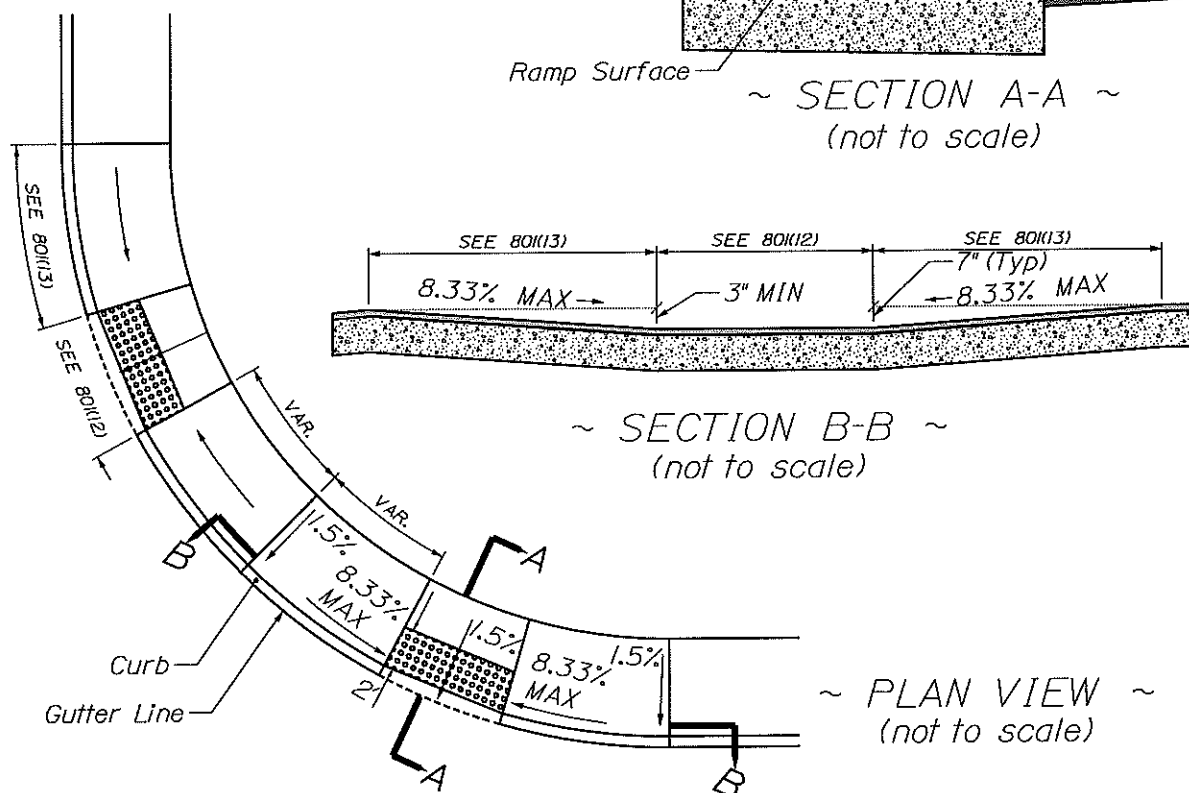
PERPENDICULAR CURB RAMP - OPTION 2A



~ ISOMETRIC VIEW ~
(not to scale)



~ SECTION A-A ~
(not to scale)



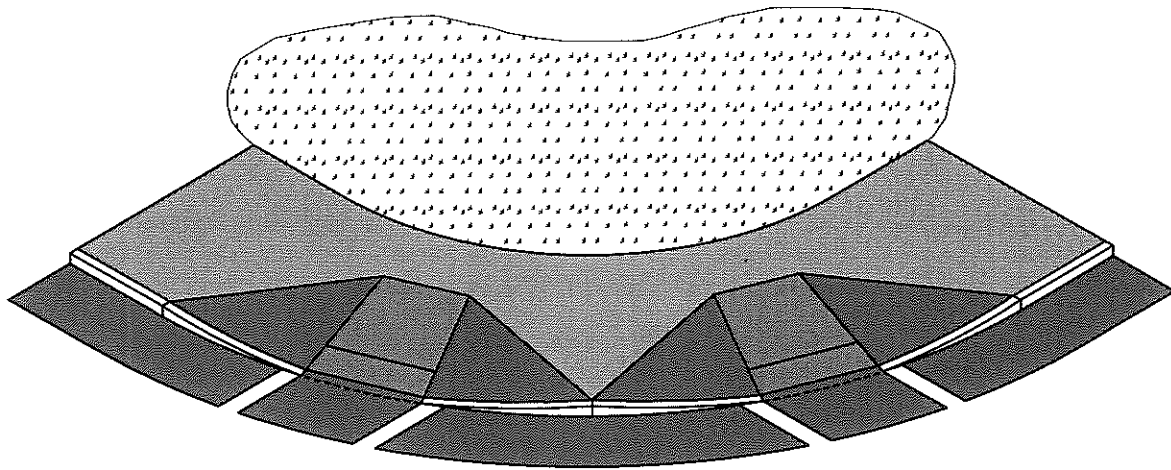
~ SECTION B-B ~
(not to scale)

~ PLAN VIEW ~
(not to scale)

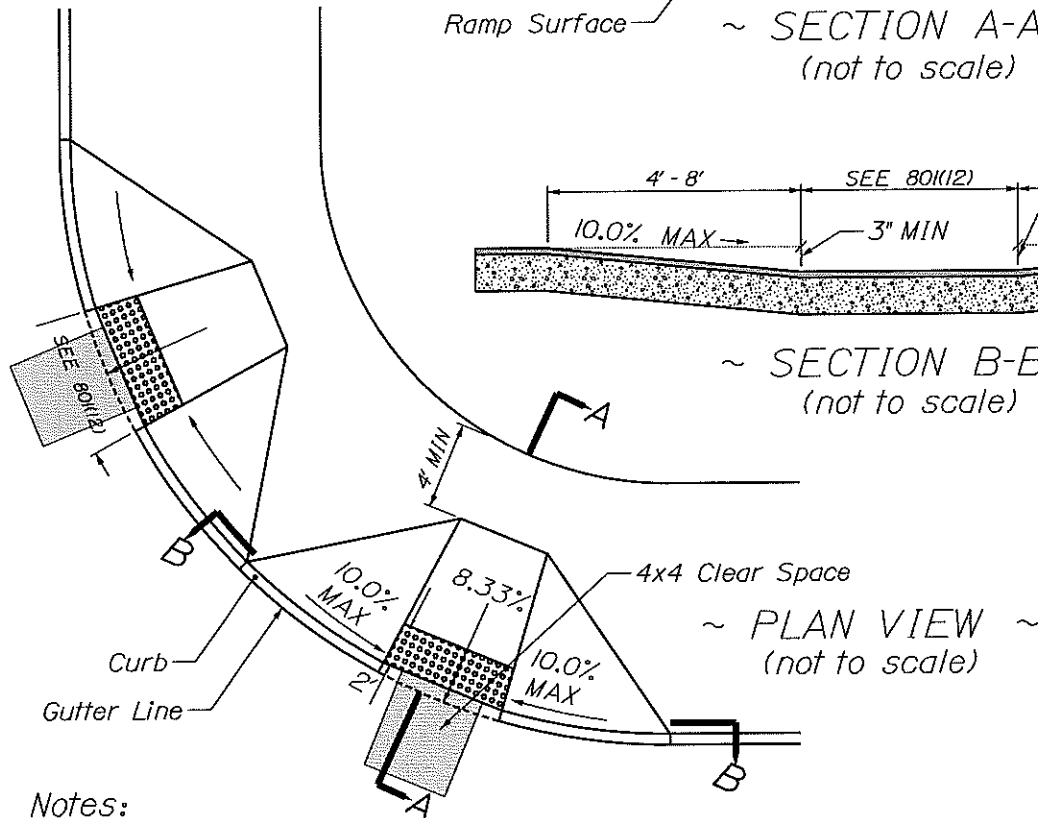
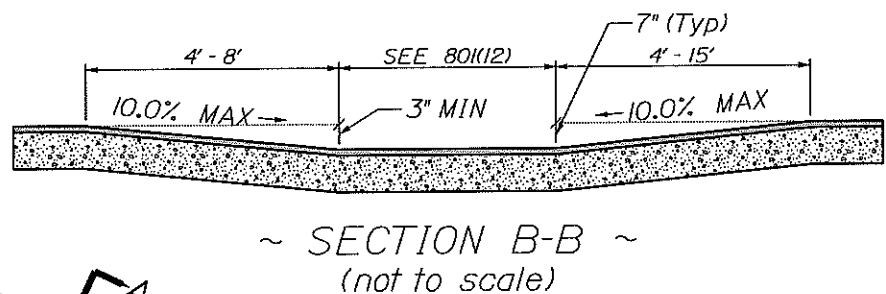
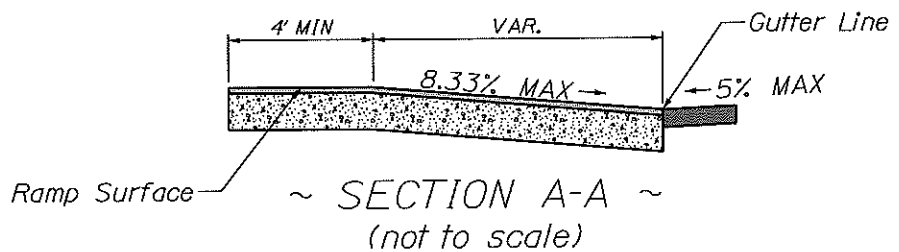
Notes:

- This less desirable design should not be used unless required by design constraints. It may not provide adequate curb reveal. Use Option 1 when possible.
- No vehicular access shall be permitted through the radius curb.
- A minimum curb reveal of 3" is required at the apex of the curb radius.
- Minimum terminal curb length shall be 4ft.
- To achieve 8.33% running slope, the pedestrian ramp may need to be extended. If the ramp length has been extended to a maximum of 15 feet and other design modifications have been considered, running slope may exceed 8.33%.

PARALLEL CURB RAMP - OPTION 2B



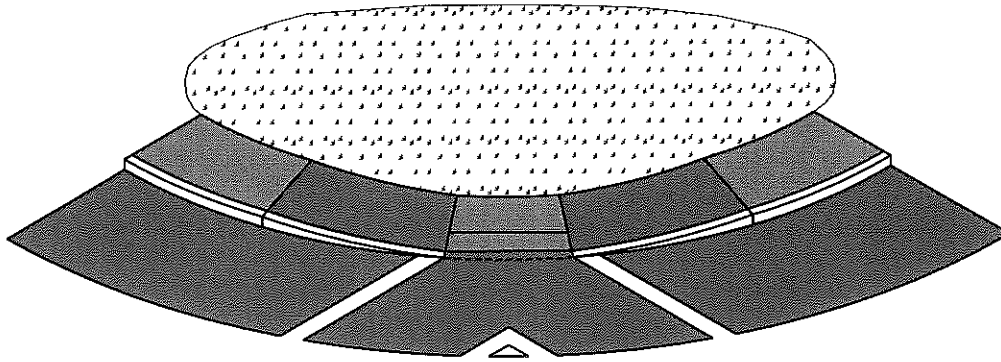
~ ISOMETRIC VIEW ~
(not to scale)



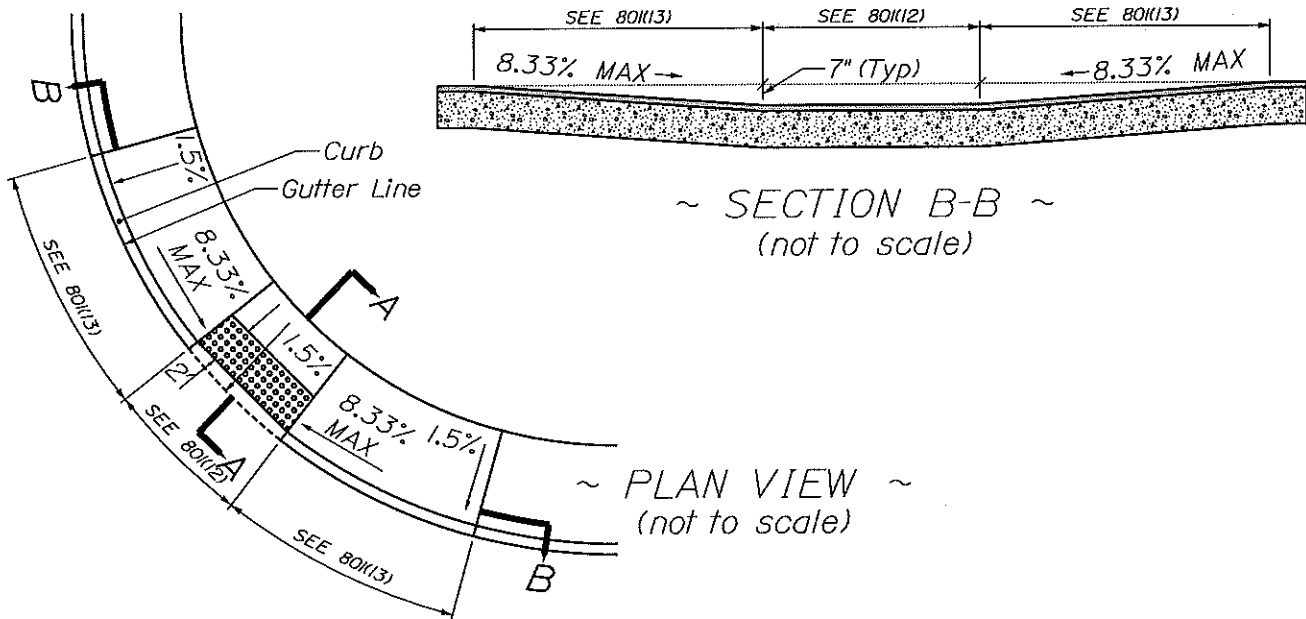
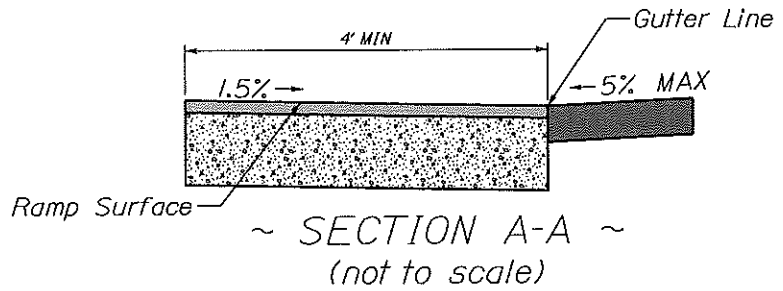
Notes:

- This less desirable design should not be used unless required by design constraints. It may not provide adequate curb reveal. Use Option 1 when possible.
- No vehicular access shall be permitted through the radius curb.
- A minimum curb reveal of 3" is required at the apex of the curb radius.
- Minimum terminal curb length shall be 4ft.

PERPENDICULAR CURB RAMP - OPTION 2B



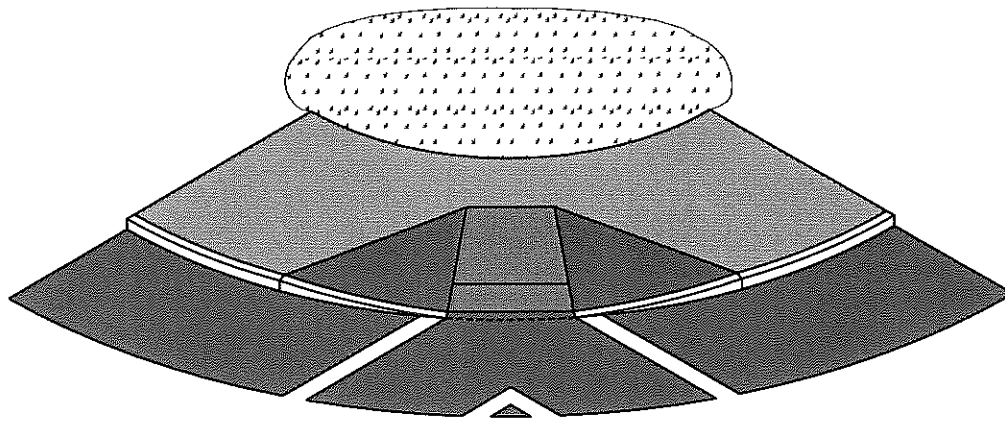
~ ISOMETRIC VIEW ~
(not to scale)



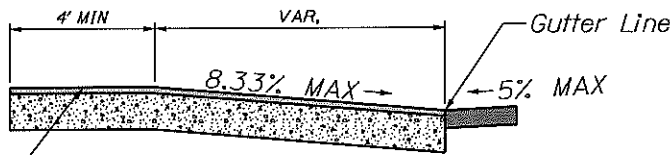
Notes:

- This less desirable design should not be used unless required by design constraints. It does not provide directional cues. Use Option 1 or Option 2 when possible.
- No vehicular access shall be permitted through the curb radius.
- To achieve 8.33% running slope, the pedestrian ramp may need to be extended. If the ramp length has been extended to a maximum of 15 feet and other design modifications have been considered, running slope may exceed 8.33%.

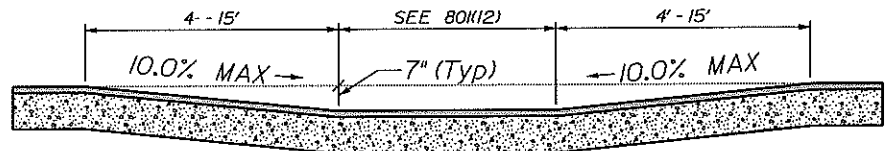
PARALLEL CURB RAMP - OPTION 3



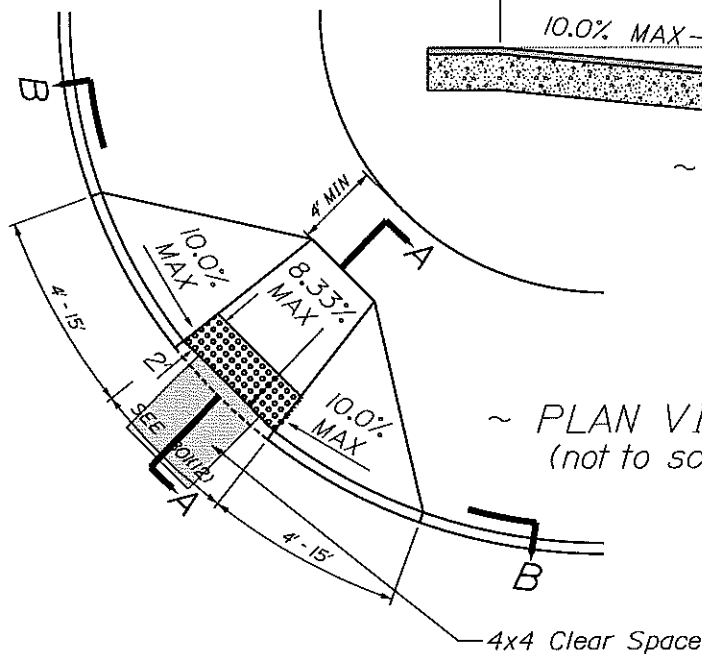
~ ISOMETRIC VIEW ~
(not to scale)



Ramp Surface ~ SECTION A-A ~
(not to scale)



~ SECTION B-B ~
(not to scale)



~ PLAN VIEW ~
(not to scale)

Notes:

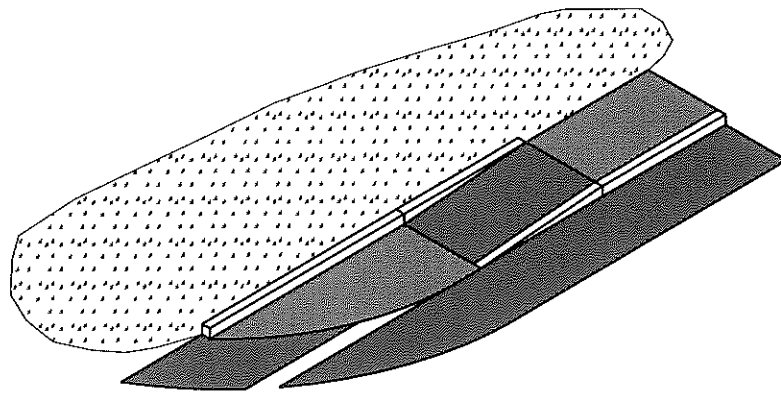
- This less desirable design should not be used unless required by design constraints. It does not provide directional cues. Use Option 1 or Option 2 when possible.
- No vehicular access shall be permitted through the curb radius.

PERPENDICULAR CURB RAMP - OPTION 3

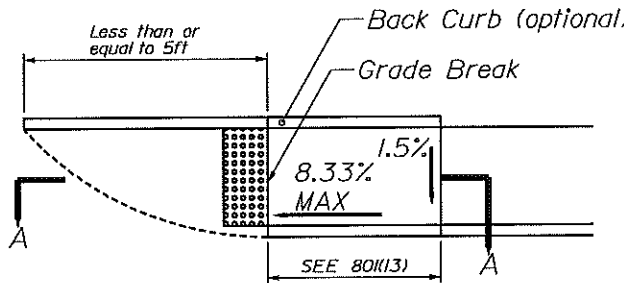
Supplemental
Standard Detail

Supersedes 80(21)

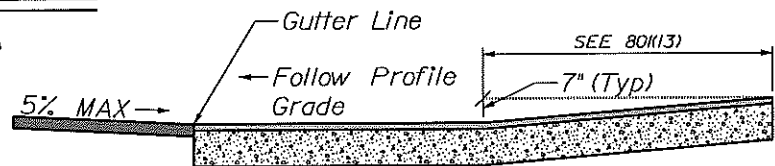
9-28-2023



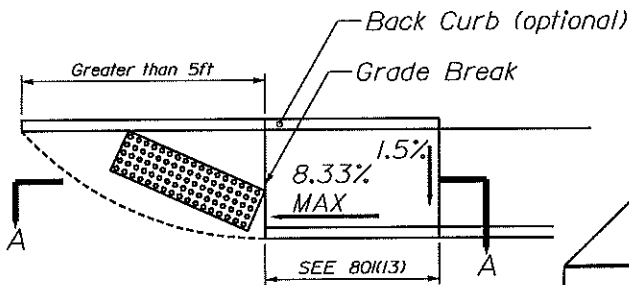
~ PERSPECTIVE VIEW ~
(not to scale)



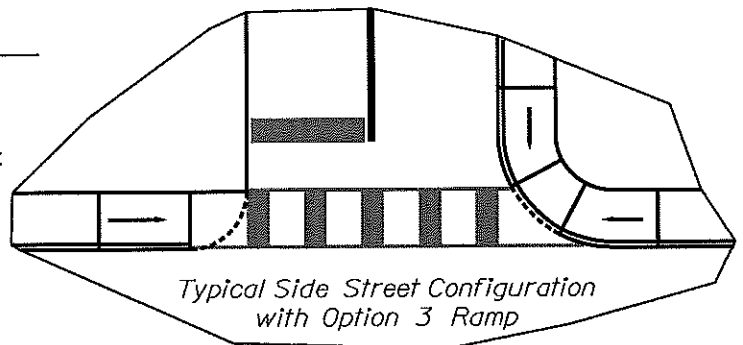
~ *PLAN VIEW* ~
(not to scale)



~ SECTION A-A ~
(not to scale)



~ **PLAN VIEW** ~
(not to scale)

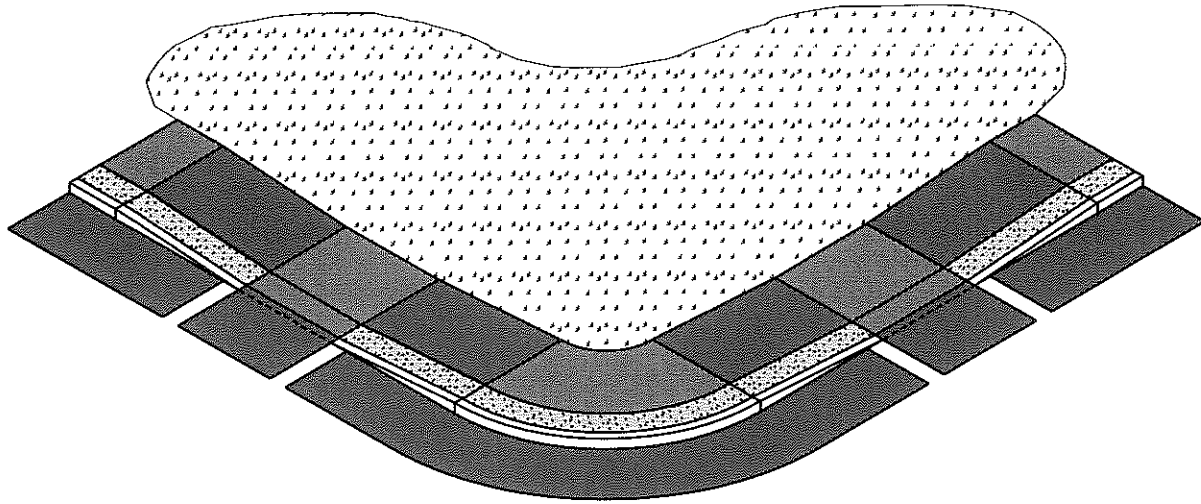


Note:

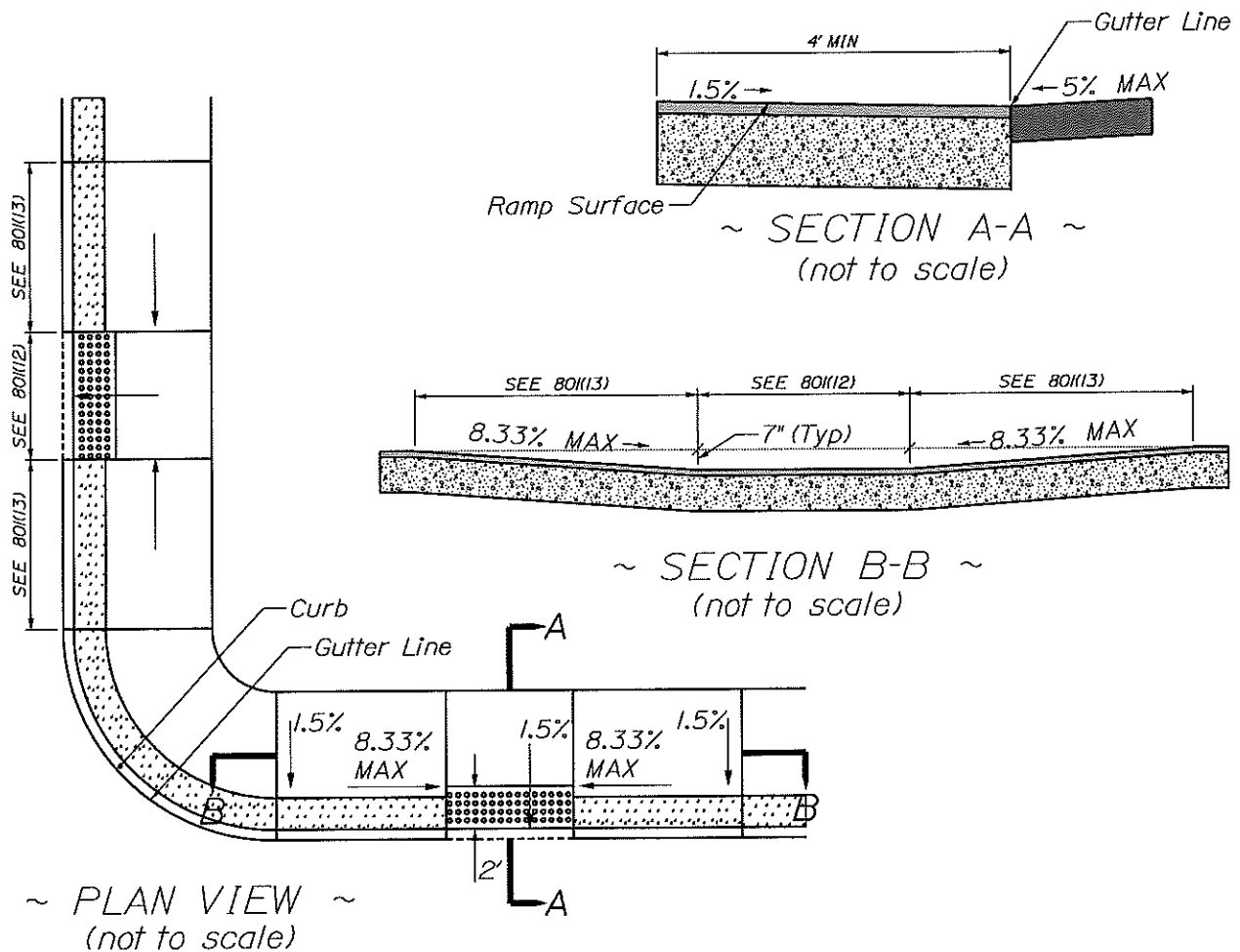
- No vehicular access shall be permitted through the curb radius.
- For use only when no sidewalk is present on the side road.
- * Use this detectable placement if the distance from the grade break to the gutterline is less than or equal to 5ft.
- ** Use this detectable placement if the distance from the grade break to the gutterline is greater than 5ft.
- To achieve 8.33% running slope, the pedestrian ramp may need to be extended. If the ramp length has been extended to a maximum of 15 feet and other design modifications have been considered, running slope may exceed 8.33%.

SIDE STREET CURB RAMP

Supersedes 80(22)

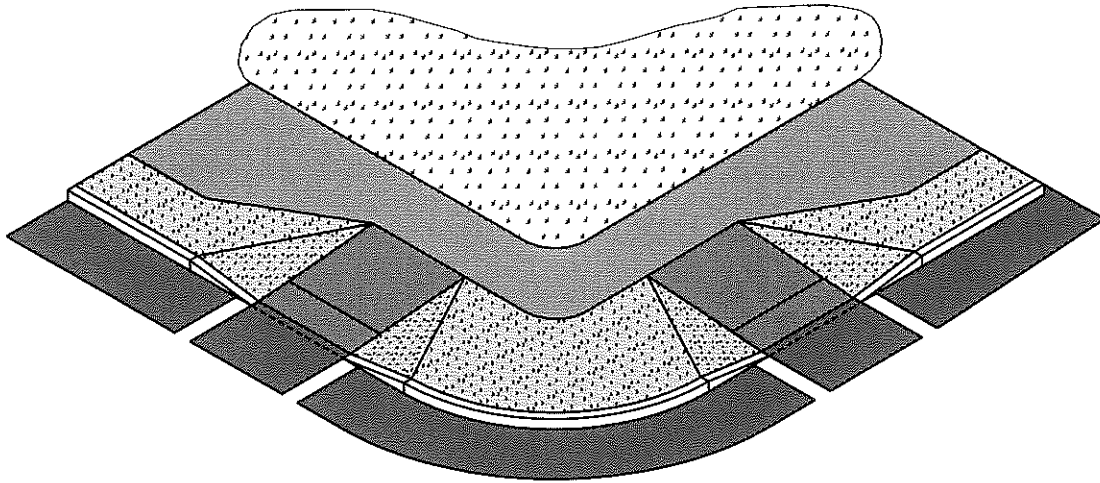


~ ISOMETRIC VIEW ~
(not to scale)

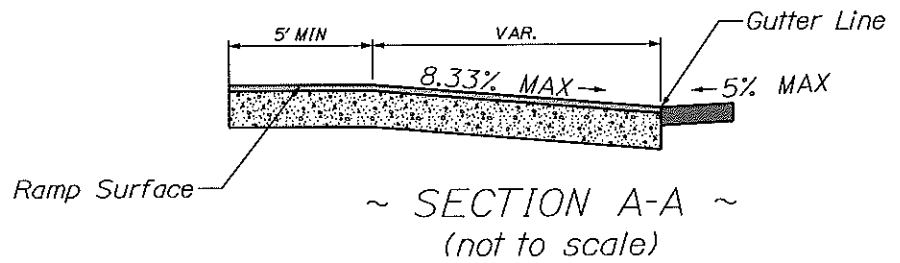


- To achieve 8.33% running slope, the pedestrian ramp may need to be extended. If the ramp length has been extended to a maximum of 15 feet and other design modifications have been considered, running slope may exceed 8.33%.

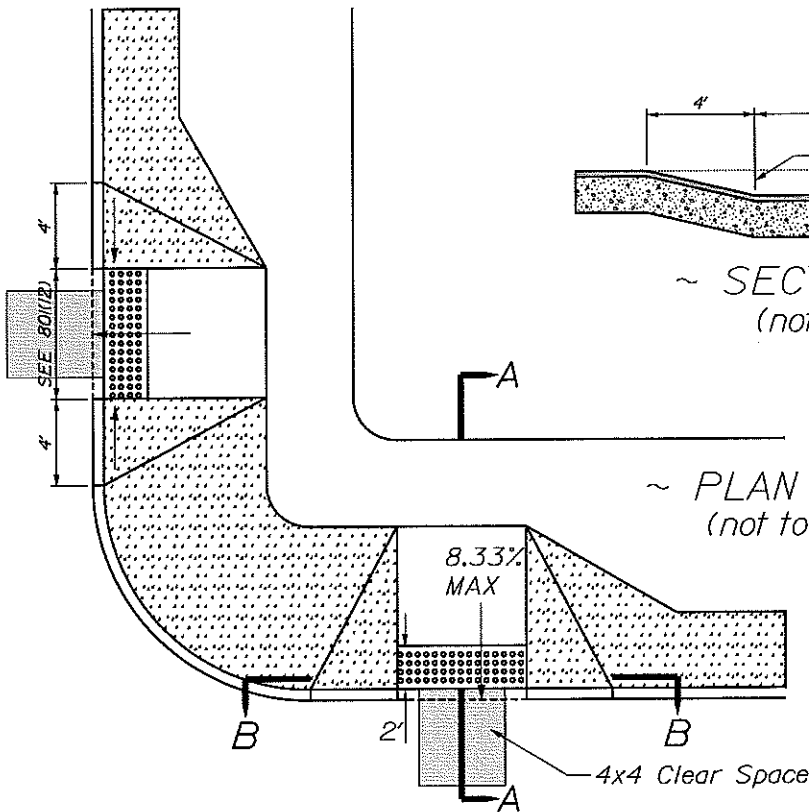
PARALLEL CURB RAMP - ESPLANADE



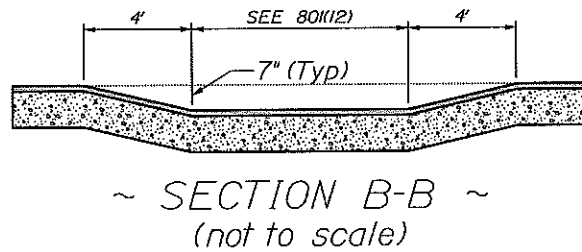
~ ISOMETRIC VIEW ~
(not to scale)



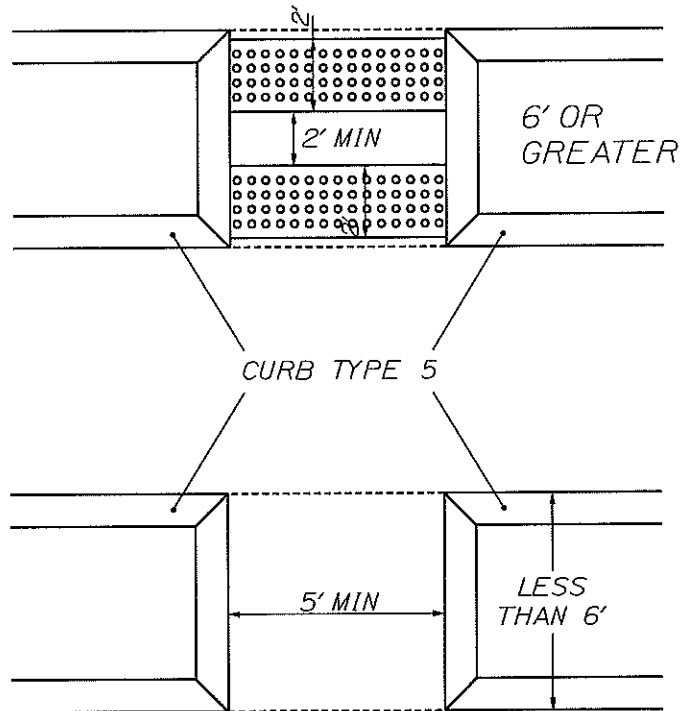
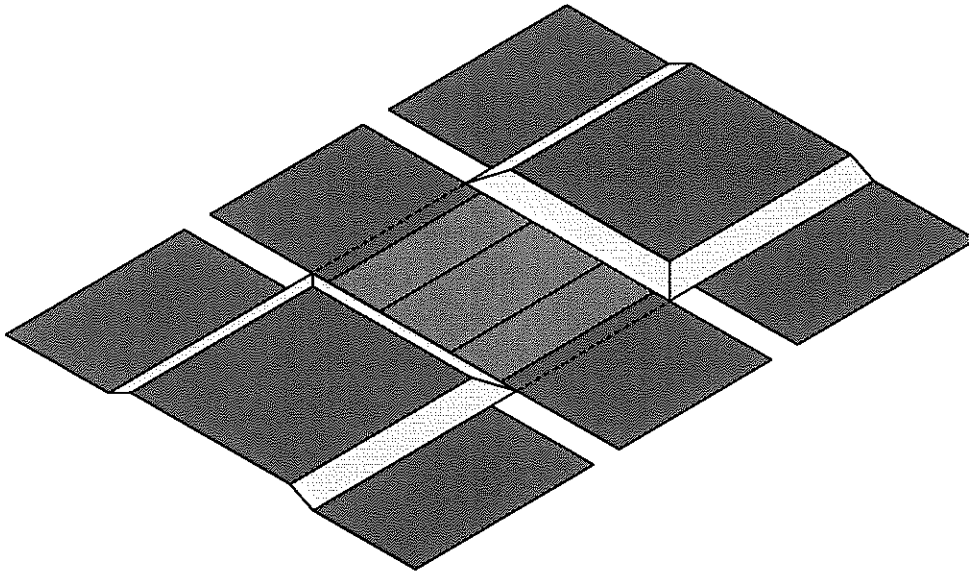
~ SECTION A-A ~
(not to scale)



~ PLAN VIEW ~
(not to scale)

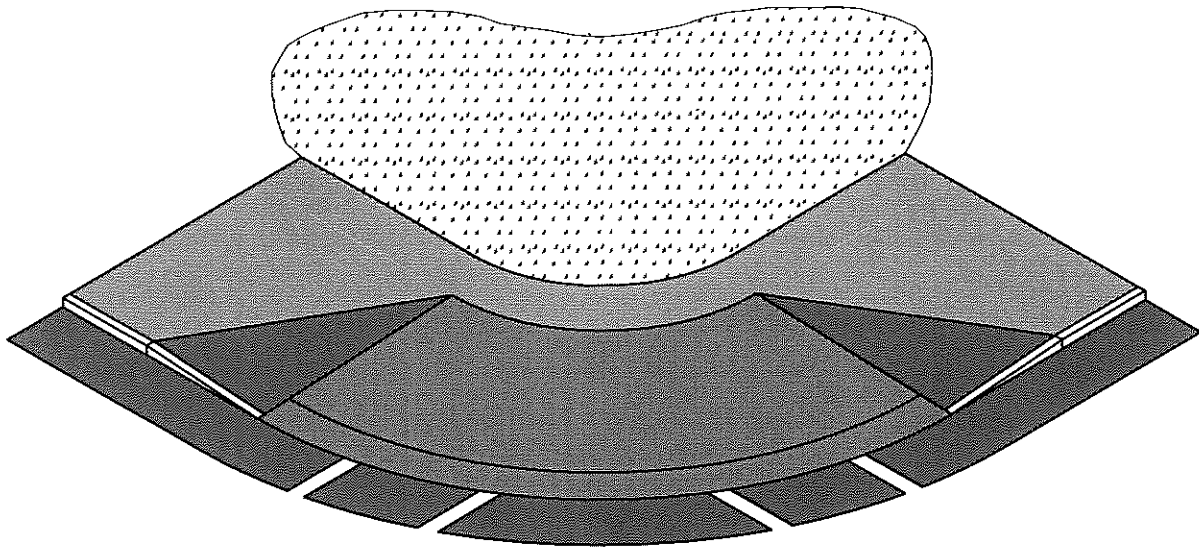


~ SECTION B-B ~
(not to scale)

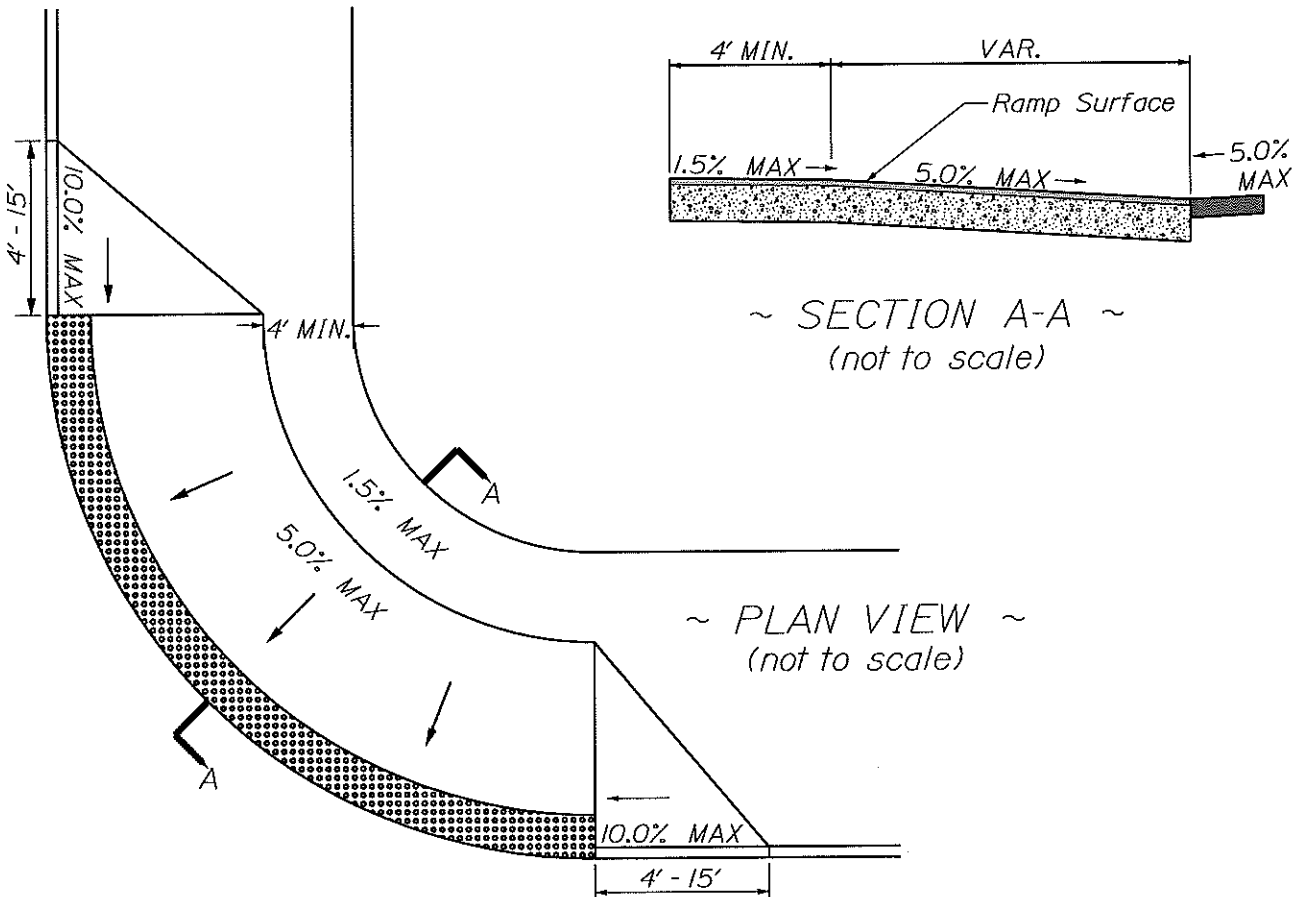


Note:
 - Omit Detectable Warnings if minimum of 2'-0" between Detectable Warnings cannot be met.

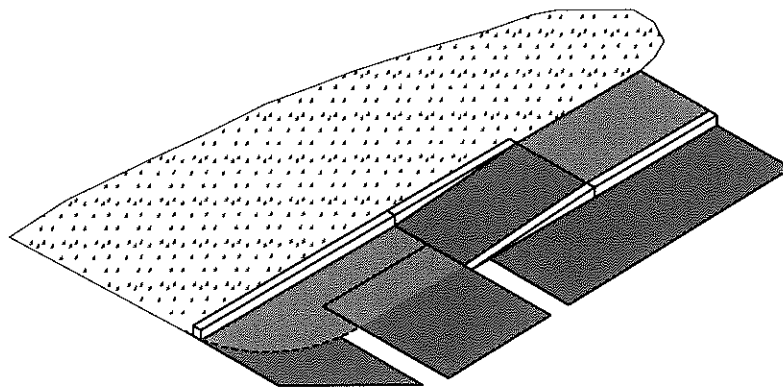
ISLAND CROSSINGS
 Supersedes 80(25)



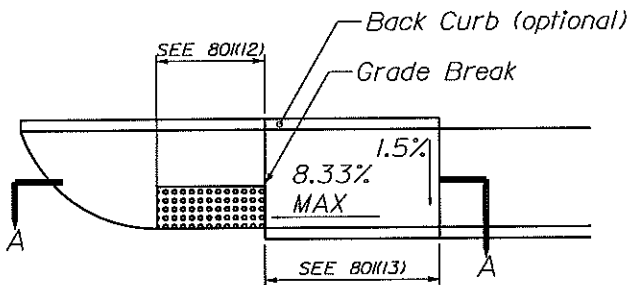
~ ISOMETRIC VIEW ~
(not to scale)



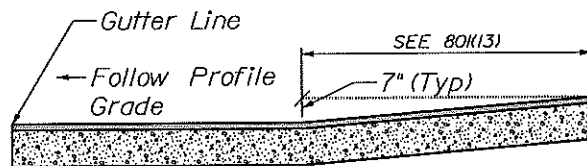
Note:
This option should only be used after all other options have been considered and deemed infeasible.



~ PERSPECTIVE VIEW ~
(not to scale)



~ PLAN VIEW* ~
(not to scale)



~ SECTION A-A ~
(not to scale)

Note:

- This less desirable design should be used only when all other options have been considered and exhausted.
- For use only when no sidewalk is present at driveway/non-signalized intersection.
- To achieve 8.33% running slope, the pedestrian ramp may need to be extended. If the ramp length has been extended to a maximum of 15 feet and other design modifications have been considered, running slope may extend 8.33%.

CURB RAMP ADJACENT TO DRIVEWAY OR ENTRANCE

Supplemental
Standard Detail

Supersedes 80K(27)

9-28-2023