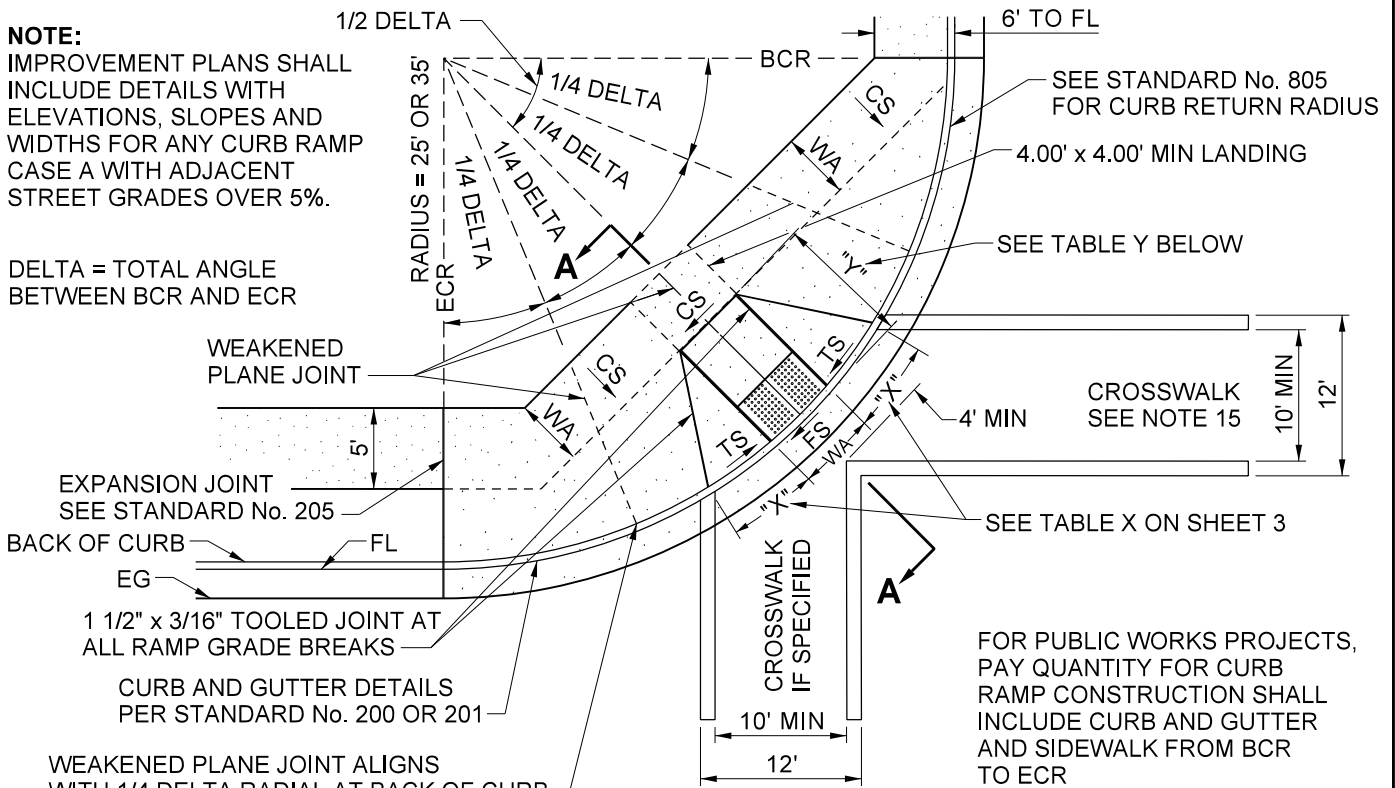


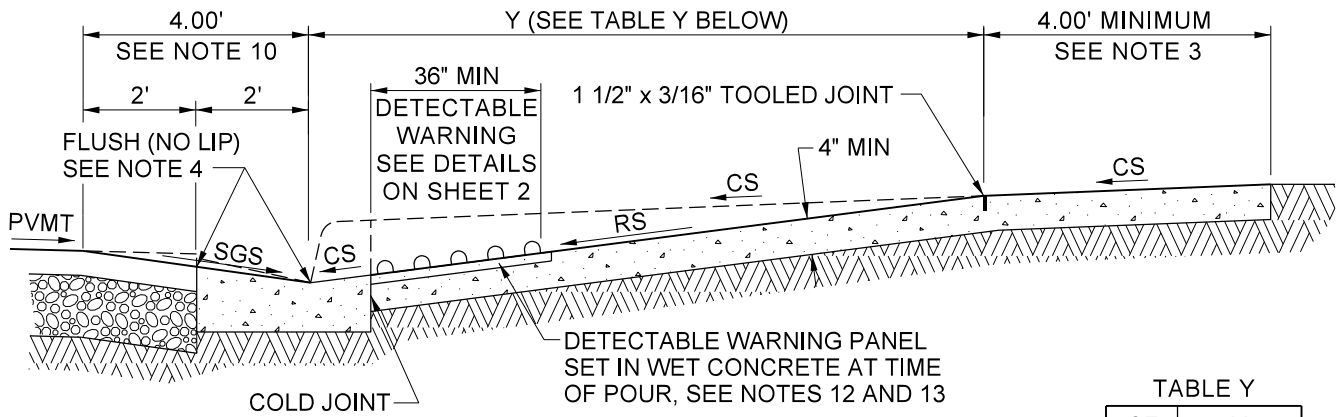
**NOTE:**

IMPROVEMENT PLANS SHALL INCLUDE DETAILS WITH ELEVATIONS, SLOPES AND WIDTHS FOR ANY CURB RAMP CASE A WITH ADJACENT STREET GRADES OVER 5%.

DELTA = TOTAL ANGLE BETWEEN BCR AND ECR



**PLAN**



**SECTION "A-A"**

TABLE Y	
CF	Y
6"	8.93'
8"	11.74'

**ABBREVIATIONS AND VALUES:**

- RS = RAMP SLOPE: 7.5% (8.33% MAX AS-BUILT)
- CS = CROSS SLOPE: 1.5% (2.00% MAX AS-BUILT)
- TS = TRANSITION SLOPE: 9.0% (10.00% MAX AS-BUILT)
- SGS = STREET & GUTTER SLOPE: 5.00% MAX AS-BUILT
- WA = WIDTH A: 4.00' MIN AS-BUILT
- FS = FLOWLINE SLOPE AT CURB OPENING:
  - 1.50% (2.00% MAX AS-BUILT) FOR LEGS WITH STOP OR YIELD CONTROL.
  - 4.50% (5.00% MAX AS-BUILT) FOR LEGS WITHOUT STOP, YIELD, OR GREEN LIGHT SIGNALIZATION.
  - STREET % FOR MID-BLOCK CROSSINGS.

MOTOR VEHICLES ARE PROHIBITED FROM USING CURB RAMPS AS ACCESS ONTO PRIVATE PROPERTY.

NOT TO SCALE

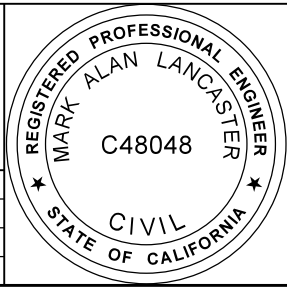
SEE ALL NOTES ON SHEET 7

PREPARED UNDER THE SUPERVISION OF:

*Mark Lancaster*

11/30/22  
DATE

DIRECTOR OF TRANSPORTATION  
MARK LANCASTER, P.E.



COUNTY OF RIVERSIDE

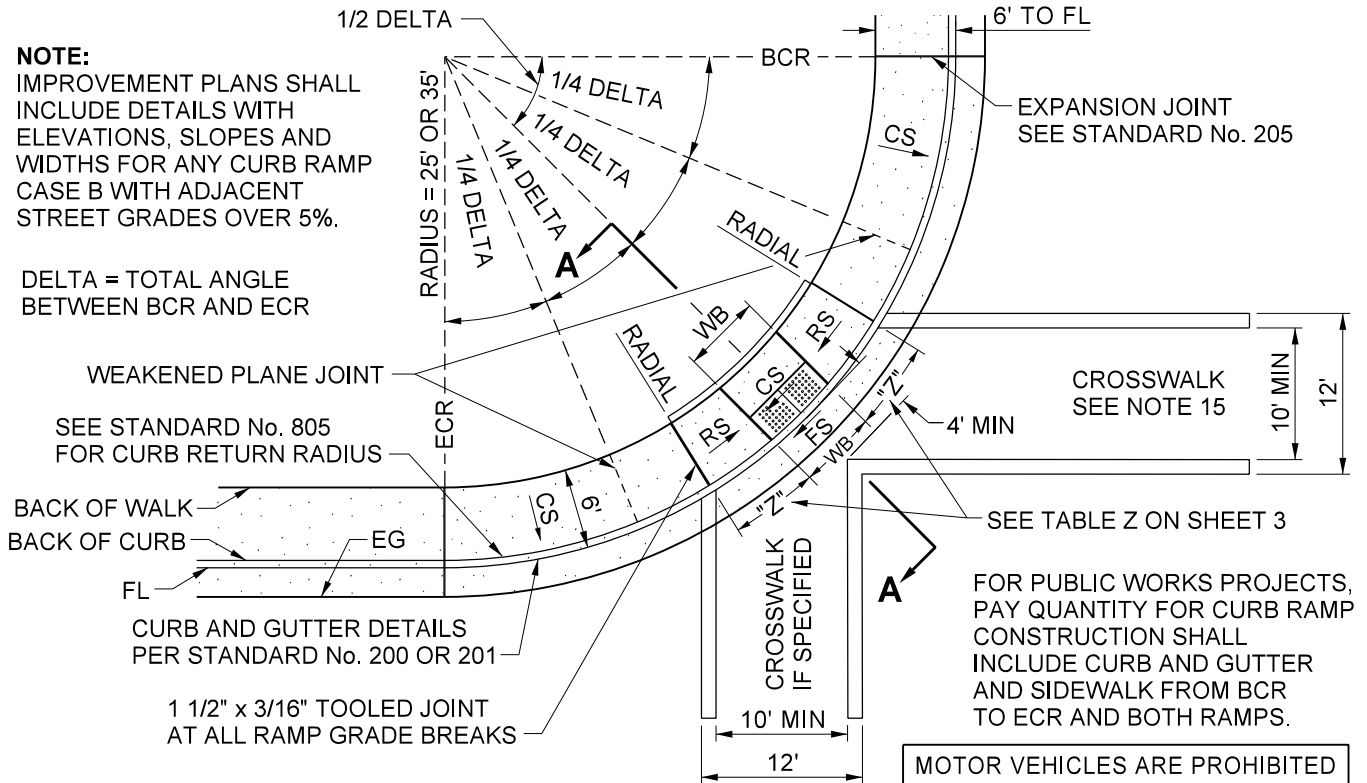
**CURB RAMP CASE A**

REVISION DESCRIPTION	MARK	DATE	APPROVED

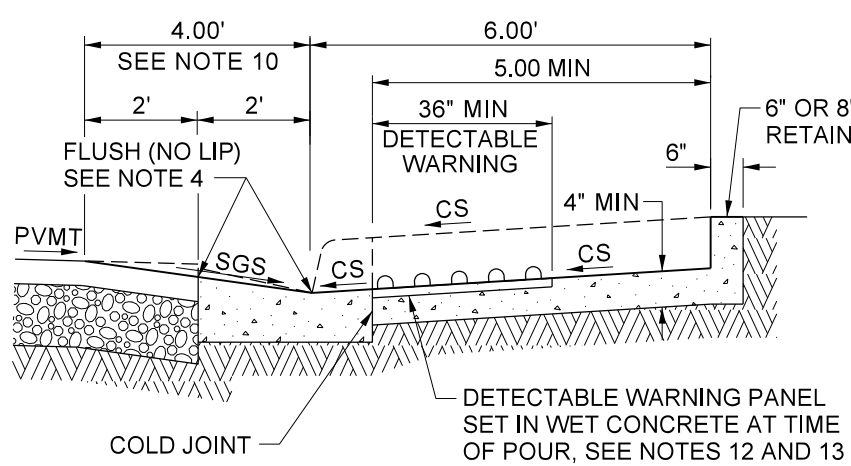
**STANDARD No. 403 (1 OF 7)**

**NOTE:**  
IMPROVEMENT PLANS SHALL INCLUDE DETAILS WITH ELEVATIONS, SLOPES AND WIDTHS FOR ANY CURB RAMP CASE B WITH ADJACENT STREET GRADES OVER 5%.

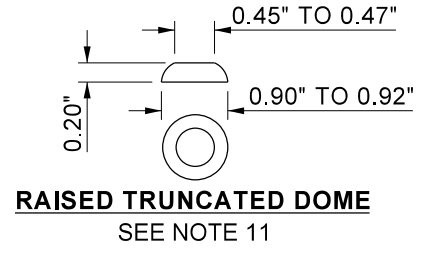
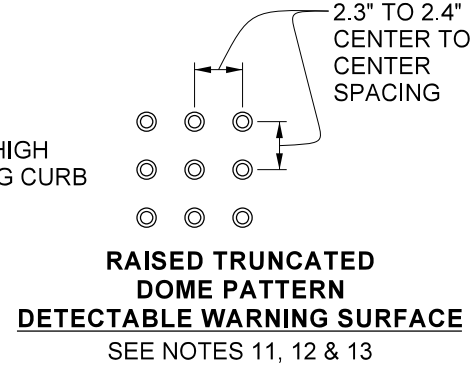
DELTA = TOTAL ANGLE BETWEEN BCR AND ECR



**PLAN**



**SECTION "A-A"**

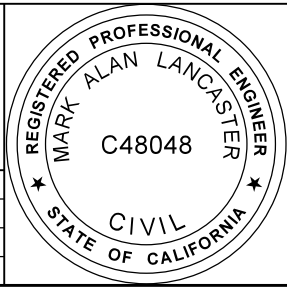


**ABBREVIATIONS AND VALUES:**  
WB = WIDTH B: 5.00' MIN AS-BUILT (SEE NOTE 16)  
SEE SHEET 1 FOR ADDITIONAL ABBREVIATIONS AND VALUES

NOT TO SCALE

SEE ALL NOTES ON SHEET 7

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*Mark Lancaster*  
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DATE  
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MARK LANCASTER, P.E.

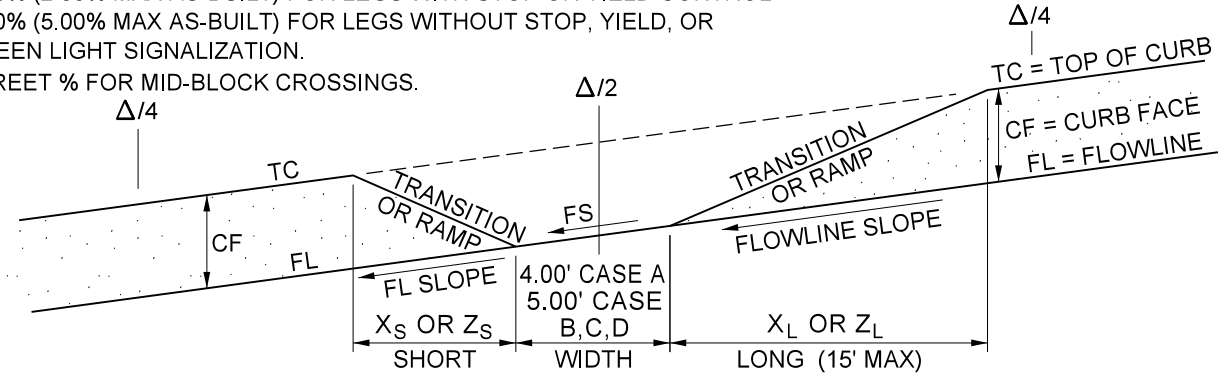


COUNTY OF RIVERSIDE  
**CURB RAMP CASE B**  
STANDARD No. 403 (2 OF 7)

REVISION	DESCRIPTION	MARK	DATE	APPROVED

RS = RAMP SLOPE: 7.5% (8.33% MAX AS-BUILT)  
 TS = TRANSITION SLOPE: 9.0% (10.00% MAX AS-BUILT)  
 FS = FLOWLINE SLOPE AT CURB OPENING:

- 1.50% (2.00% MAX AS-BUILT) FOR LEGS WITH STOP OR YIELD CONTROL.
- 4.50% (5.00% MAX AS-BUILT) FOR LEGS WITHOUT STOP, YIELD, OR GREEN LIGHT SIGNALIZATION.
- STREET % FOR MID-BLOCK CROSSINGS.



**PROFILE**

**TABLE X - CASE "A" TRANSITION LENGTH ALONG CURB RETURN (FEET)**

CF	TRANSITION SLOPE	X	FLOWLINE SLOPE (ALONG CURB RETURN)					
			1%	2%	3%	4%	5%	6%
6"	9.0%	X <sub>S</sub>	5.00	4.55	4.17	3.85	3.57	3.33
		X <sub>L</sub>	6.25	7.14	8.33	10.11	12.50	16.67
8"	9.0%	X <sub>S</sub>	6.67	6.06	5.56	5.13	4.76	4.44
		X <sub>L</sub>	8.33	9.52	11.11	13.33	16.67	22.22

NOTE: THE TRANSITION LENGTH IS NOT REQUIRED TO GO BEYOND THE BCR OR ECR, NOR EXCEED 15' IN LENGTH.

**TABLE Z - CASE "B", "C" AND "D" RAMP LENGTH ALONG BACK OF WALK (FEET)**

CF	RAMP SLOPE	Z	FLOWLINE SLOPE (ALONG CURB)					
			1%	2%	3%	4%	5%	6%
6"	7.5%	Z <sub>S</sub>	5.88	5.26	4.76	4.35	4.00	3.70
		Z <sub>L</sub>	7.69	9.09	11.11	14.29	15.0*	15.0*
8"	7.5%	Z <sub>S</sub>	7.84	7.02	6.35	5.80	5.33	4.94
		Z <sub>L</sub>	10.26	12.12	14.81	15.0*	15.0*	15.0*

\* NOTE: RAMP LENGTH IS NOT REQUIRED TO EXCEED 15.0' ALONG THE BACK OF WALK.

**TO CALCULATE "X" OR "Z" LENGTH:**

SHORT SIDE (DOWN SLOPE):  

$$X_S \text{ OR } Z_S (\text{FT}) = \frac{\text{CURB FACE (FEET)}}{\text{TRANS OR RAMP SLOPE} + \text{FL SLOPE}}$$

LONG SIDE (UP SLOPE):  

$$X_L \text{ OR } Z_L (\text{FT}) = \frac{\text{CURB FACE (FEET)}}{\text{TRANS OR RAMP SLOPE} - \text{FL SLOPE}}$$

ENGINEER TO SHOW X<sub>S</sub>, X<sub>L</sub>, Z<sub>S</sub>, AND Z<sub>L</sub> ON IMPROVEMENT PLANS

NOT TO SCALE

SEE ALL NOTES ON SHEET 7

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*Mark Lancaster*

11/30/22  
DATE

DIRECTOR OF TRANSPORTATION  
MARK LANCASTER, P.E.

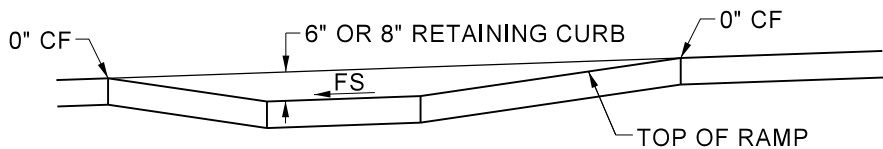


COUNTY OF RIVERSIDE

**CURB RAMP  
PROFILE**

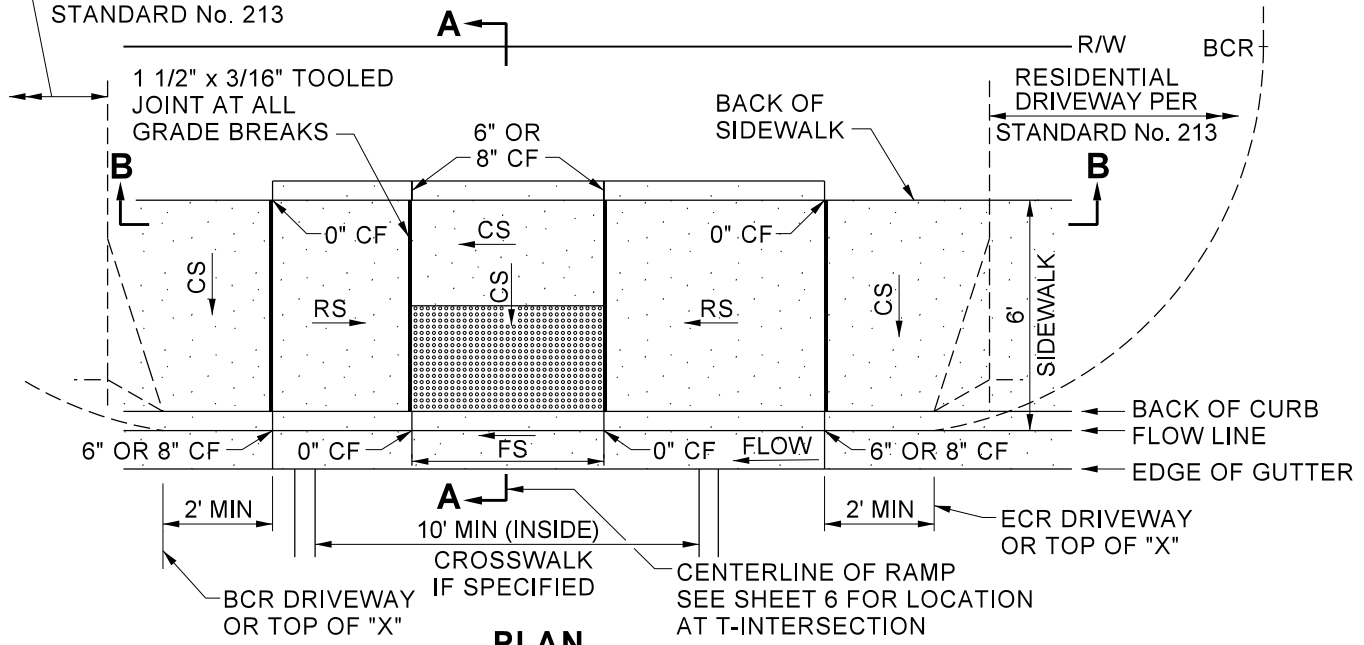
STANDARD No. 403 (3 OF 7)

REVISION	DESCRIPTION	MARK	DATE	APPROVED

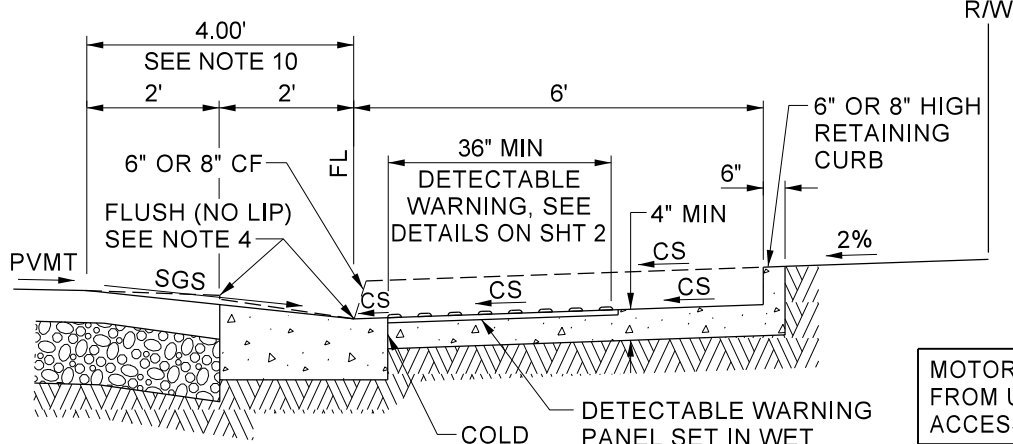


COMMERCIAL DRIVEWAY PER STANDARD No. 207A (1 OF 4)

RESIDENTIAL DRIVEWAY PER STANDARD No. 213



**PLAN**



**SECTION "A-A"**

FOR PUBLIC WORKS PROJECTS PAY QUANTITY FOR CURB RAMP CONSTRUCTION SHALL INCLUDE CURB AND GUTTER FROM TOP OF RAMP TO TOP OF RAMP AND BOTH RAMPS.

MOTOR VEHICLES ARE PROHIBITED FROM USING CURB RAMPS AS ACCESS ONTO PRIVATE PROPERTY.

**NOTE:** IMPROVEMENT PLANS SHALL INCLUDE DETAILS WITH ELEVATIONS, SLOPES AND WIDTHS FOR ANY CURB RAMP CASE C WITH STREET GRADES OVER 5%.

ABBREVIATIONS AND VALUES: SEE SHEET 1

NOT TO SCALE

SEE ALL NOTES ON SHEET 7

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*Mark Lancaster* 11/30/22  
 DIRECTOR OF TRANSPORTATION DATE  
 MARK LANCASTER, P.E.

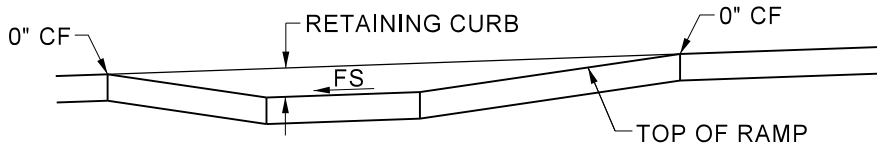
REVISION	DESCRIPTION	MARK	DATE	APPROVED



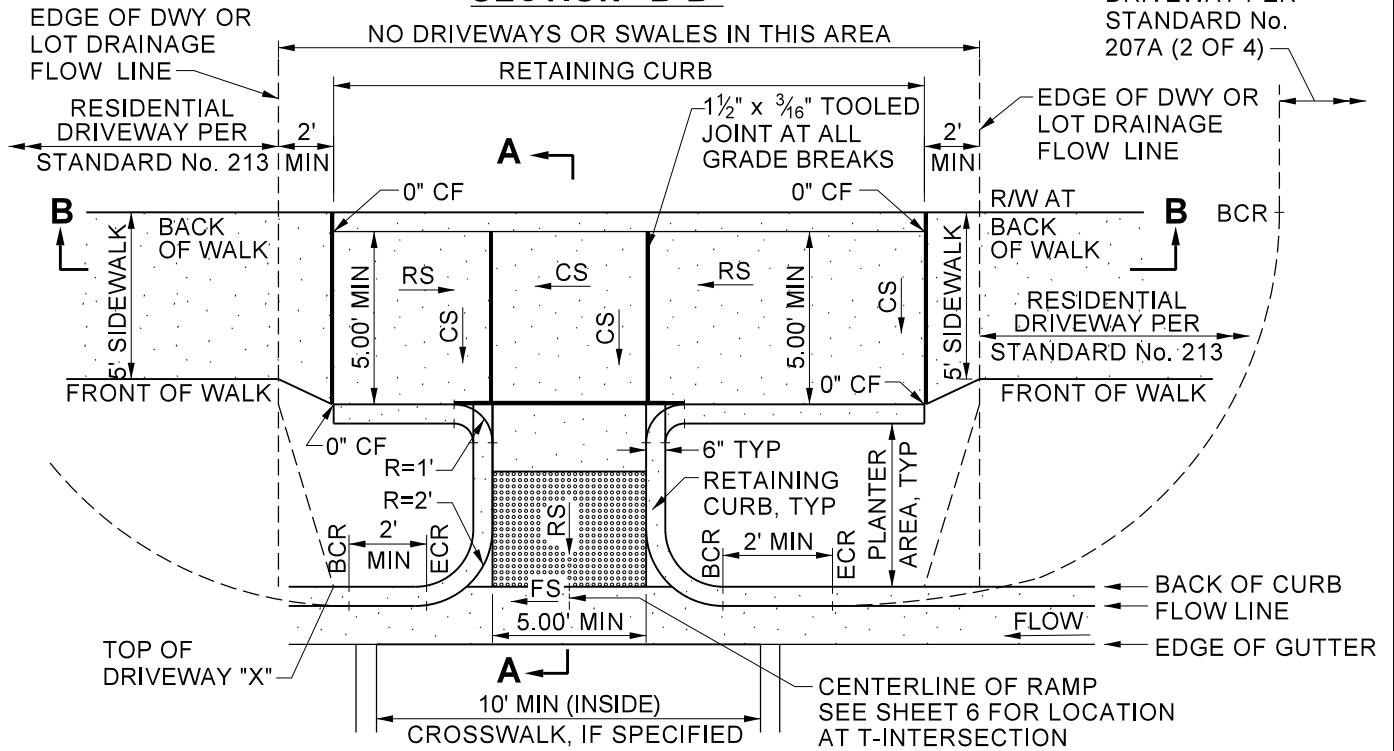
COUNTY OF RIVERSIDE

**CURB RAMP - CASE C  
 "T" INTERSECTION  
 WITH SIDEWALK AT CURB**

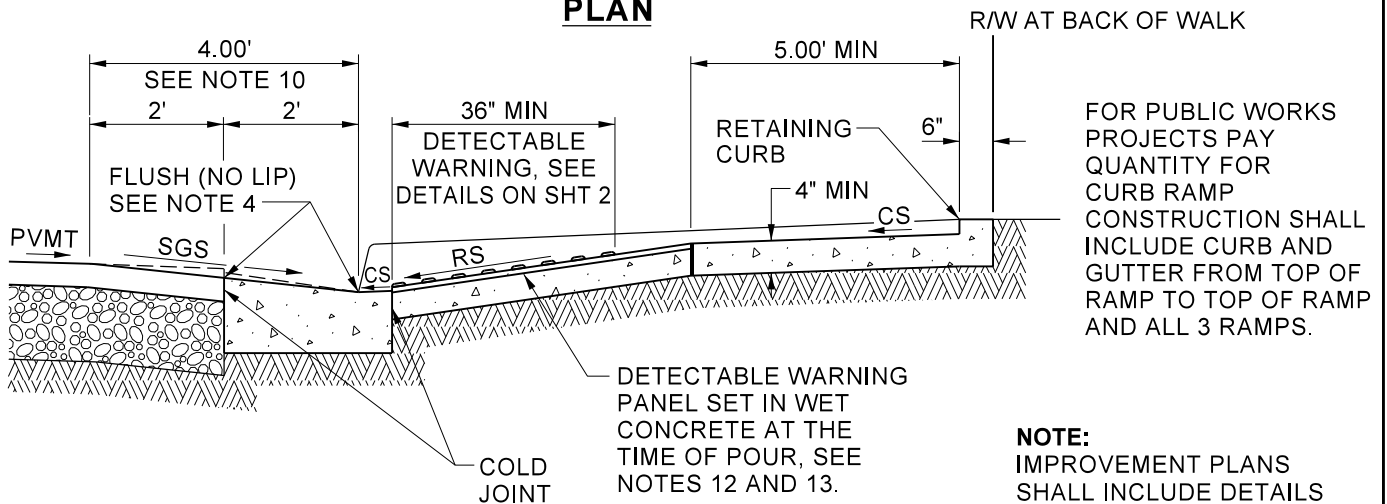
STANDARD No. 403 (4 OF 7)



**SECTION "B-B"**



**PLAN**



**SECTION "A-A"**

**NOTE:**  
IMPROVEMENT PLANS SHALL INCLUDE DETAILS WITH ELEVATIONS, SLOPES AND WIDTHS FOR ANY CURB RAMP CASE D.

**ABBREVIATIONS AND VALUES:** SEE SHEET 1

NOT TO SCALE

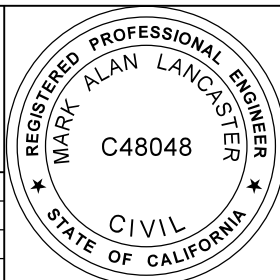
SEE ALL NOTES ON SHEET 7

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11/30/22  
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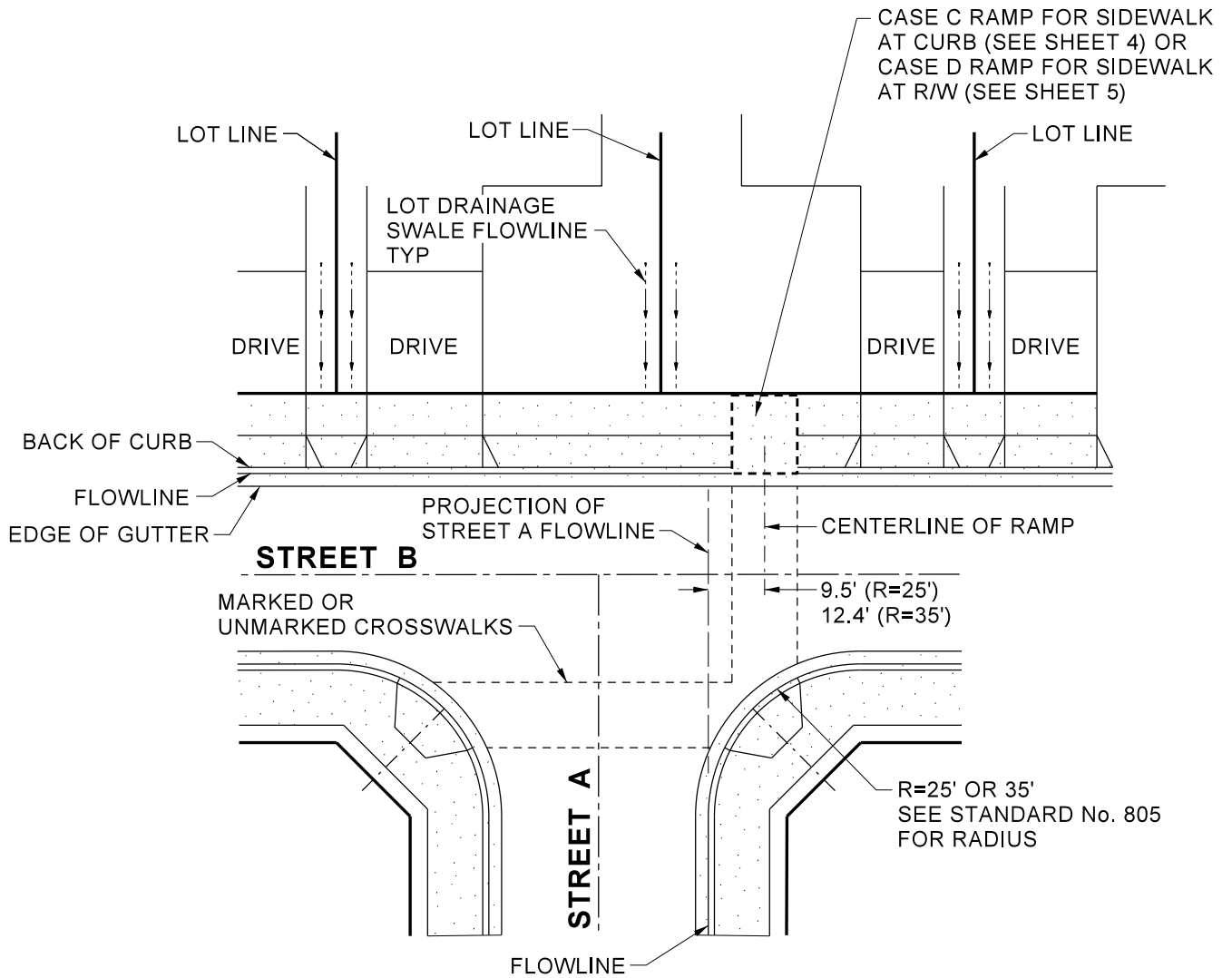


COUNTY OF RIVERSIDE

**CURB RAMP - CASE D**  
**"T" INTERSECTION**  
**WITH SIDEWALK AT R/W**

**STANDARD No. 403 (5 OF 7)**

REVISION	DESCRIPTION	MARK	DATE	APPROVED



**RAMP LOCATION AT "T" INTERSECTION  
(RIGHT TURN SIDE OF STREET A)**

**CASES "C" AND "D"**

**NOTE:**  
DRIVEWAYS TO BE LOCATED SO THAT THEY DO NOT CONFLICT WITH REQUIRED RAMP LOCATION. AVOID LOCATING DRIVEWAYS WITHIN INTERSECTION.

NOT TO SCALE

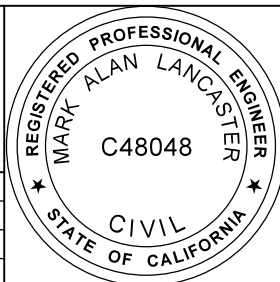
SEE ALL NOTES ON SHEET 7

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11/30/22  
DATE

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COUNTY OF RIVERSIDE

**CURB RAMP  
CASE C AND D  
LOCATION AT  
"T" INTERSECTIONS**

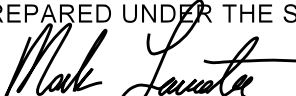
**STANDARD No. 403 (6 OF 7)**

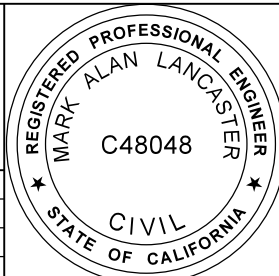
REVISION	DESCRIPTION	MARK	DATE	APPROVED

**NOTES:**

1. TO MEET AMERICAN WITH DISABILITIES ACT STANDARDS, MAXIMUM STATED SLOPES AND MINIMUM STATED DISTANCES ARE ABSOLUTE AND NO CONSTRUCTION TOLERANCES WILL BE PERMITTED.
2. IF THE DISTANCE FROM CENTER OF CURB RETURN TO EXISTING RIGHT-OF-WAY LINE IS INSUFFICIENT TO ACCOMMODATE THE CASE A CURB RAMP AND TOP LANDING, THEN USE THE CASE B CURB RAMP.
3. THE MINIMUM SIDEWALK WIDTH IS 5.00' WHERE A VERTICAL OBJECT (SUCH AS A CURB OR WALL) IS ADJACENT TO THE PEDESTRIAN ACCESS ROUTE.
4. TRANSITIONS FROM CURB RAMPS TO SIDEWALKS, GUTTERS, AND STREETS SHALL BE FLUSH AND FREE FROM ABRUPT LEVEL CHANGES. NO LIPS ARE PERMITTED AT THE GUTTER FLOWLINE OR EDGE OF PAVEMENT.
5. THE TOP OF CURB WIDTH IS NOT INCLUDED IN THE MEASUREMENT OF MINIMUM SIDEWALK WIDTH.
6. THE TRANSITION SLOPE OF THE FLARED WINGS OF THE CASE A CURB RAMP IS MEASURED ALONG THE BACK OF CURB.
7. FOR CASE B CURB RAMPS, CONSTRUCT WEAKENED PLANE JOINTS AT 1/4 DELTAS WHEN THE RADIUS EQUALS 35' AND AT TOPS OF RAMPS WHEN THE RADIUS EQUALS 25'.
8. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.
9. CONCRETE SHALL HAVE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD.
10. THE ROAD SURFACE AND GUTTER SURFACE SHALL NOT EXCEED 5.00% WITHIN 4' OF THE CURB RAMP EDGE (FLOW LINE).
11. DETECTABLE WARNING SURFACES ARE REQUIRED WHEREVER AT-GRADE PEDESTRIAN SURFACES ENTER INTO A VEHICULAR TRAVEL WAY (EXCEPT NOT REQUIRED AT DRIVEWAY APPROACHES).
12. CURB RAMPS SHALL INCLUDE A YELLOW DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL CURB OPEN WIDTH AND 3'-0" DEPTH OF THE RAMP. DETECTABLE WARNING SURFACES SHALL CONSIST OF A PANEL SET INTO WET CONCRETE AND CONFORM TO THE DETAILS ON SHEET 2 OF THIS STANDARD. NO BOLT DOWN OR GLUE DOWN PANELS WILL BE ALLOWED FOR NEW RAMP CONSTRUCTION.
13. THE EDGE OF THE DETECTABLE WARNING SURFACE NEAREST THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FLOWLINE.
14. UTILITY PULL BOXES, MANHOLES, VAULTS AND ALL OTHER UTILITY FACILITIES ARE NOT TO BE LOCATED WITHIN THE BOUNDARIES OF THE CURB RAMP. EXISTING STRUCTURES WILL BE RELOCATED OR ADJUSTED TO GRADE BY THE OWNER PRIOR TO, OR IN CONJUNCTION WITH, CURB RAMP CONSTRUCTION.
15. CROSSWALK STRIPING IS ONLY APPLIED IF SHOWN ON IMPROVEMENT PLANS. CROSSWALK STRIPING, WHEN CALLED FOR, SHALL BE PER STANDARD No. 1211.
16. FOR NEW CASE B, CASE C, AND CASE D CURB RAMPS THE LEVEL LANDING AT THE BOTTOM OF THE RAMPS SHALL BE A MINIMUM OF 5.00' WIDE. FOR INVENTORYING EXISTING CASE B AND CASE C RAMPS, A CURB OPENING WIDTH OF 4.00' MIN IS ACCEPTABLE.
17. FOR PUBLIC WORKS PROJECTS, THE CONTRACT UNIT PRICE FOR CURB RAMP SHALL INCLUDE RAMP, SIDEWALK, CURB AND GUTTER (OR SPANDREL) FROM BCR TO ECR.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:			
			11/30/22
DIRECTOR OF TRANSPORTATION			DATE
MARK LANCASTER, P.E.			
REVISION	DESCRIPTION	MARK	DATE



COUNTY OF RIVERSIDE
<b>CURB RAMP NOTES</b>
<b>STANDARD No. 403 (7 OF 7)</b>