

**NOTE:**

FOR DETAILS NOT SHOWN, SEE REVISED STANDARD PLAN A88A.

In this example, the roadway alignments were utilized instead of a flow line alignment. For some remove/replace situations, a flow line alignment may be the best practice to follow.

Construction details of curb ramps are to show all the information needed by the contractor to construct the curb ramp from only the project plans. The standard plans shows the design guidance and criteria each curb ramp is based on. Layout sheets only have room to show the location of the curb ramp with its identifying number.

Elevation difference (in feet) between two points for a given distance at percent slopes used when designing to design standards.

SLOPE RUN	ELEVATION DIFFERENCE			
	PERCENT SLOPE			
	1.5%	5.0%	7.5%	9.0%
2'	0.03	0.10	0.15	0.18
4'	0.06	0.20	0.30	0.36
6'	0.09	0.30	0.45	0.54
8'	0.12	0.40	0.60	0.72
10'	0.15	0.50	0.75	0.90
12'	0.18	0.60	0.90	1.08
15'	0.22	0.75	1.12	1.35

DIS#	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

In this example the cross slope of the bottom landing is 3%, which exceeds the design standard shown on RSP A88A. However, DIB 82 Section 4.3.8 (8) allows the cross slope of the curb ramp to match roadway grade in certain situations. The application of DIB 82 Section 4.1.2 will determine the necessary scope and design standards that are involved.

In this example, the design running slope on one side is 8.1%. This example strove to meet the 8.3% constructed slope by not having the design slope exceed 8.1%. To achieve the 8.1% design slope in this example, the length of the parallel curb ramp was lengthened to 16 feet. However, per DIB 82 Section 4.3.8 (1), the ramp length shall not be required to exceed 15 feet. But lengthening the ramp a few feet (to 16' or 18') is okay if it allows the constructed slope to be less than or equal to the Max 8.3%.

If a curb ramp length is less than or equal to 15', the controlling factor is the 8.3% Max slope. But when a ramp length is greater than 15', the controlling factor is the length and the running slope may exceed 8.3%. This situation occurs when the existing grades are steep and the ramp run will not intercept the sidewalk surface, or will be excessively long before obtaining a slope less than or equal to 8.3%.

If there are questions about what "Best Practice" to apply when the ramp length reaches 15', contact the Project Delivery Coordinator, or ADA coordinator in HQ Division of Design.

**MANDATORY AT EXISTING CURB & GUTTER AND SIDEWALK**

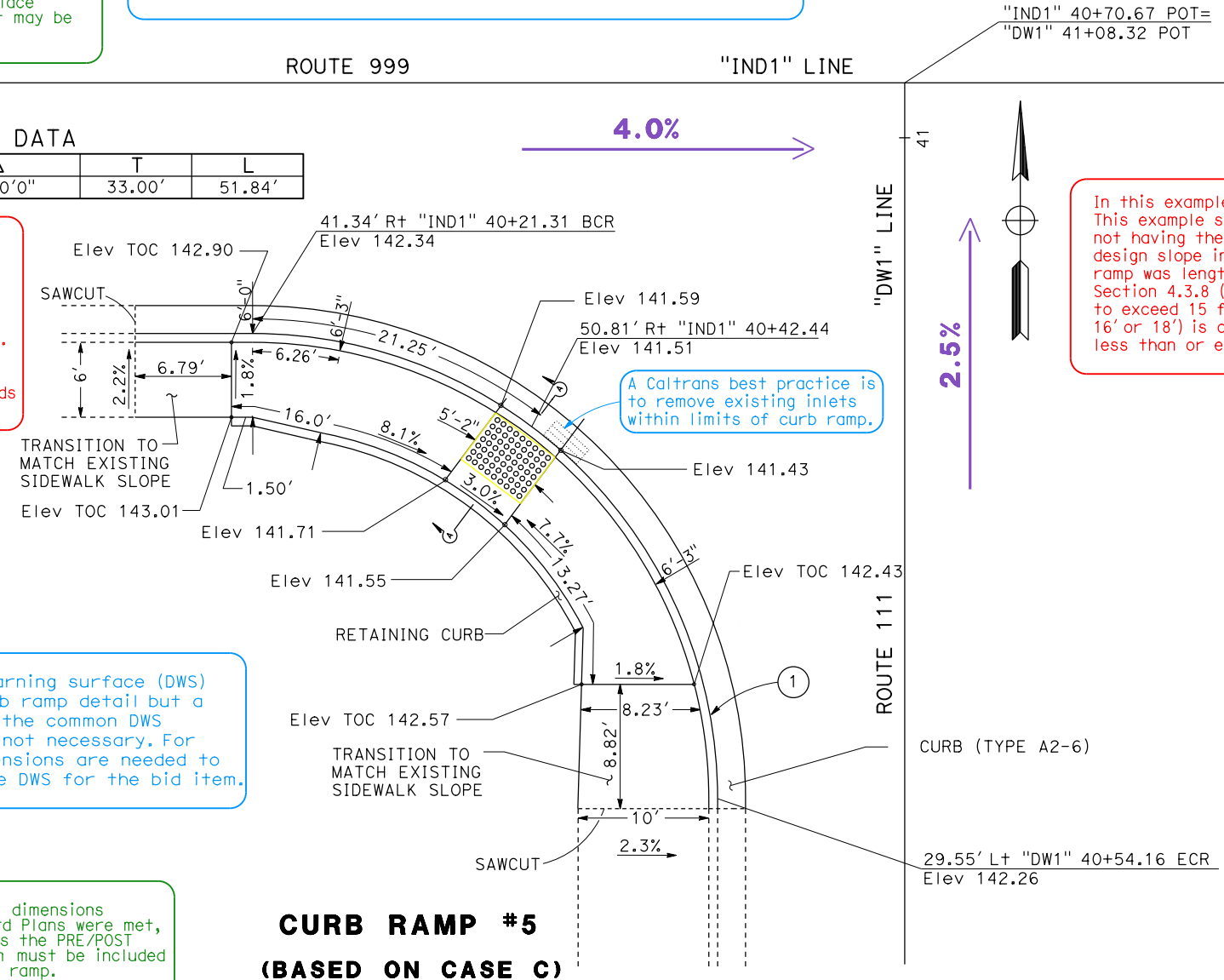
- For Case C, elevations along flowline at both sides of landing, tops of ramps, and conform points. For Case A, elevations along flowline at both sides of ramp, tops of flares and conform points.
- For replacing curb ramps at locations where one already exists, developing an alignment and profile at the flow line may be the best practice. The elevations along the flow line are the basis for designing and constructing curb ramps.
- Elevations at conform at back of sidewalk, at begin/end of retaining curb, both sides back of landing or a constraint such as a fixed object.
- Length of curb ramp running slope(s), at inner radius as its the controlling factor on a radial configuration.
- Length from sawcut (conform) to the begin or end of curb ramp.
- Width of curb ramp, landing (turning space) and adjacent sidewalk.
- Cross slope and width of existing sidewalk at the sawcut (conform point).
- Running slope and cross slope of curb ramp. Running slope and cross slope of bottom landing. Cross slope of sidewalk. Gutter pan slope (counter slope) within width of landing or ramp.
- Label BCR and ECR of curb return with stationing so length can easily be determined. Identify the radius so curb return can be reconstructed. When construction staking is requested BCR and ECR is to be provided per chapter 12 of the survey manual.
- Show detectable warning surface (DWS) but don't label. Only dimension DWS when it is not the common 3' x 4' size.
- Transitions and conform areas

**RECOMMENDED FOR CONSTRUCTION OF CURB RAMPS**

- If the gutter flowline is not a constant grade, then additional elevations may need to be shown in addition to the conform points and both sides of the bottom landing. Elevation at top of curb (TOC) at both ends of the curb and gutter.
- A section view may be included to show slopes and additional elevations needed to meet ADA compliance. Additional elevations may include the lip of gutter and the top of curb along "section break."
- Length of curb ramp running slope(s) at outer radius.
- Existing drainage inlets within the limits of the curb ramp should be relocated outside the curb ramp accessible pathway.
- If any existing survey monumentation is obliterated by the construction of the curb ramp, contact Right of Way Engineering.
- Provide only those pavement elevations that are directly related to the slopes affecting the construction of the curb ramps and crosswalks
- Label the type of curb and the retaining curb.
- Show a sidewalk conform slab if necessary, with elevations and slopes at the sawcut line and begin and end curb ramp/landing.
- Locate pedestrian push buttons, and refer to Electrical Systems plan sheets for further details.
- Utility features (poles and covers) should not be located within the limits of the curb ramp, and should not restrict the pedestrian route.
- In addition to the flow line alignment, roadway alignment lines can be shown for establishing control and offsets to existing known locations.

**CURVE DATA**

No.	R	Δ	T	L
1	33.00'	90°0'0"	33.00'	51.84'



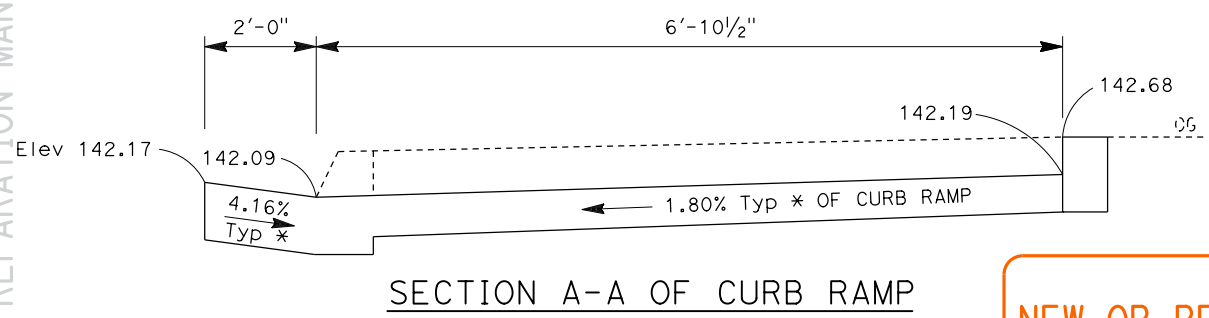
Representative detectable warning surface (DWS) shall be drawn with each curb ramp detail but a label is not necessary. For the common DWS size 3' x 4', dimensioning is not necessary. For other shapes and sizes, dimensions are needed to substantiate the area of the DWS for the bid item.

In this example, the minimum dimensions shown in the Revised Standard Plans were met, but the slopes were not, thus the PRE/POST CONSTRUCTION SURVEYS bid item must be included in the project for this curb ramp.

The profile of the flowline controls most of the elevations associated with the curb ramp.

The length and running slope of each ramp on a Case C ramp and of each flare of a Case A ramp are not likely to be identical.

The flow line slope for this example is moderately steep, approximately 4.0% slope from BCR to centerline and 2.5% slope from ECR to centerline. This creates a low point near the centerline. Consideration where best to place inlets must occur during design.



**NEW OR REPLACEMENT CURB RAMP WITHIN EXISTING CURB, GUTTER AND SIDEWALK**

\* Typical for the width of the bottom landing (accessible pathway). For additional information on Counter Slopes, see Revised Standard Plan A88A (Note 8 and 9), or DIB 82 including Section 4.3.8-(4).

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 EtGalt  
 PLANS PREPARATION MANUAL  
 REVISIONS: 00-00-00  
 BORDER LAST REVISED 7/2/2010  
 USERNAME => s111271  
 DGN FILE => NewCR\_within\_Exist\_Sidewalk.dgn  
 RELATIVE BORDER SCALE IS IN INCHES  
 UNIT 0000  
 PROJECT NUMBER & PHASE  
 0000000001

NEW CURB RAMP WITHIN EXISTING SIDEWALK, RELEASED 08/30/2017  
 DATE PLOTTED => 18-NOV-2019  
 TIME PLOTTED => 16:12