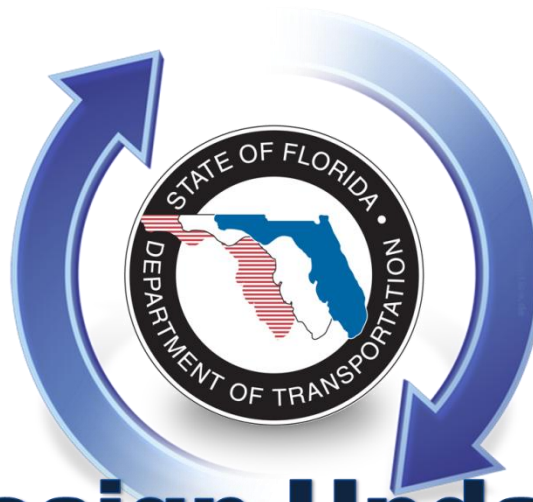


Design Standards Update



Design Update Training

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2014 Design Standards eBooklet

- ◆ Index 304 – Detectable Warnings and Sidewalk Curb Ramps
- ◆ Index 310 – Concrete Sidewalks
- ◆ Index 515 – Turnouts
- ◆ Index 17346 – Special Marking Areas
- ◆ Index 400 – Guardrail
- ◆ Index 430 – Crash Cushion Details



Index 304 – Detectable Warnings and Sidewalk Curb Ramps



Need - Redevelopment of Index 304

◆ BACKGROUND:

- ✓ Roadway Designer Calls on Index 304;
 - Curb Returns are not Buildable,
 - Curb Returns Lack Sufficient Detail.
- ✓ Construction Office Requests;
 - Curb Returns cannot be Constructed to meet ADA Standards,
 - Difficult to Adequately Estimate Quantities of Detectable Warnings (DW),
 - DW Quantity Payment is not Consistent.



Proposed Design

- ◆ Survey Monkeys Results:
 - ✓ Eliminated 15 of 25 Existing Curb Ramps.
- ◆ Redeveloped Design Standards:
 - ✓ Index 304.
- ◆ Instructions to the Design Standard:
 - ✓ IDS-304.



Survey Monkey Results

- ◆ The Survey Monkey aided in identifying curb ramps that were either;



- 1) Non-complaint to ADA,
- 2) Rarely Used and/or
- 3) Could not be Constructed.



Redeveloped Design Standard

- ◆ Revised General Notes:
- ◆ 10 Proposed Curb Ramps (Urban):
 - ✓ Meet ADA Requirements,
 - ✓ Buildable/Constructible.
- ◆ 2 Flush Shoulder Options (Suburban):
 - ✓ Option A – DW @ Radial Return,
 - ✓ Option B – DW @ 5' Max from Radial Return.



Instructions to the Design Standards

- ◆ Design Criteria,
- ◆ Design Assumptions and Limitations,
- ◆ Plan Content Requirements,
- ◆ Payment.
 - ✓ 520-1, Concrete Curb-n-Gutter (LF)
 - ✓ 522-1, Concrete Sidewalks-n-Driveways (SY)
 - ✓ 527-2, Detectable Warnings (SF)



Other Affected Documents

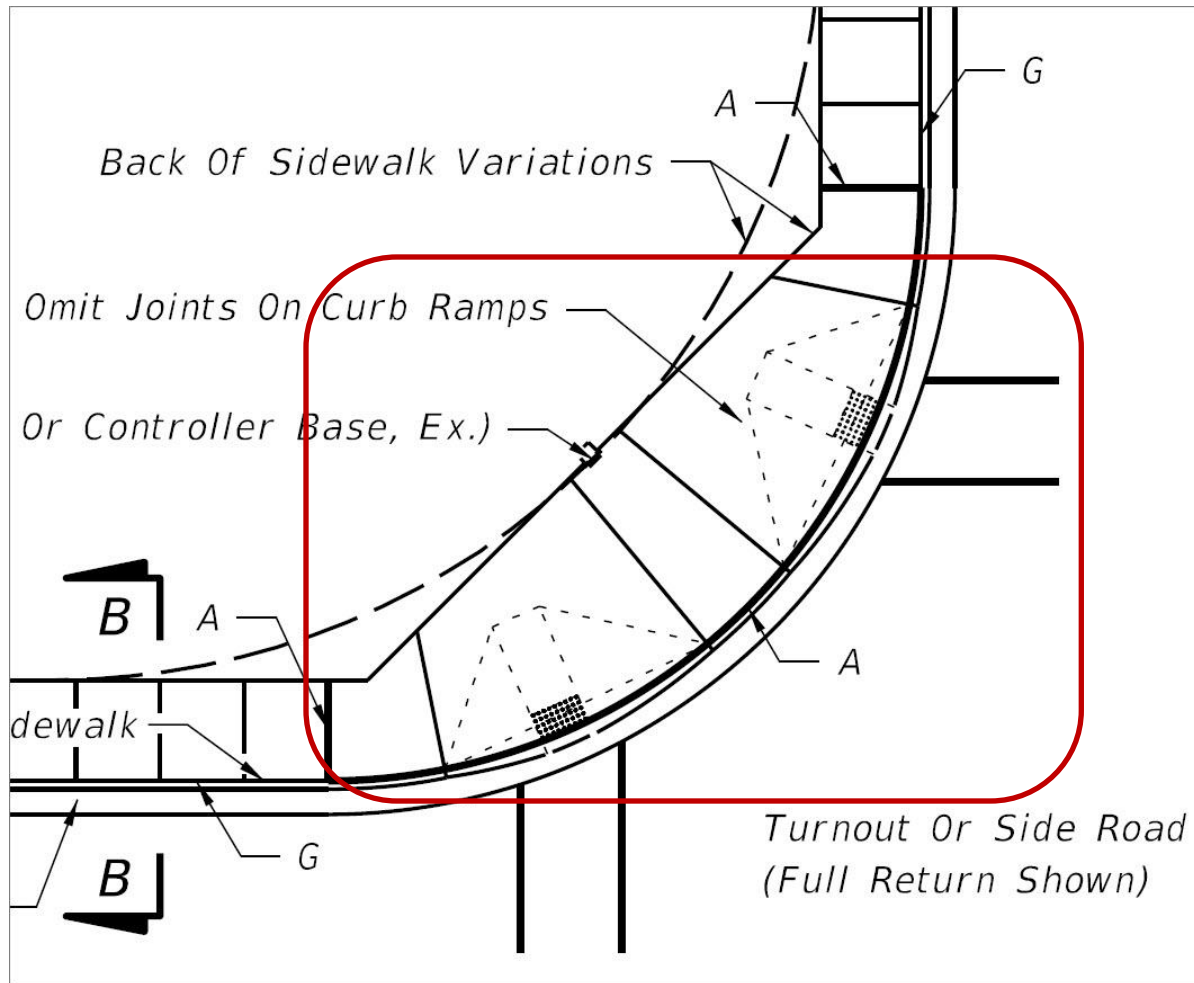
- ◆ Other Design Standards:
 - ✓ Index 310, Index 515, and Index 17346.

- ◆ Specifications Revisions:
 - ✓ Sections 520, 522, and 527.

- ◆ Basis Of Estimates (BOE) Revisions:
 - ✓ Pay Item 522 and Pay Item 527.



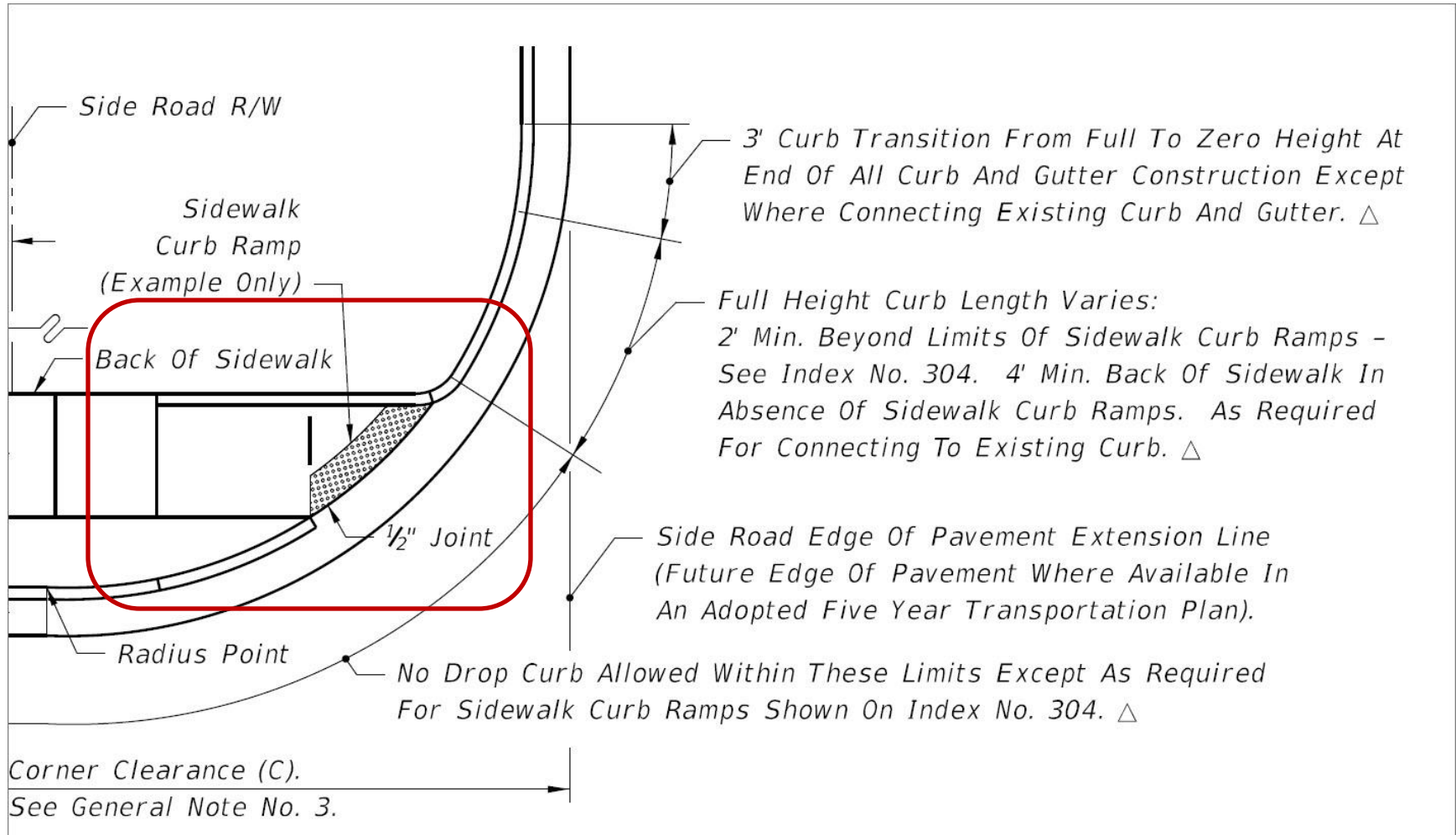
Index 310 – Concrete Sidewalks



Sheet 1 of 2



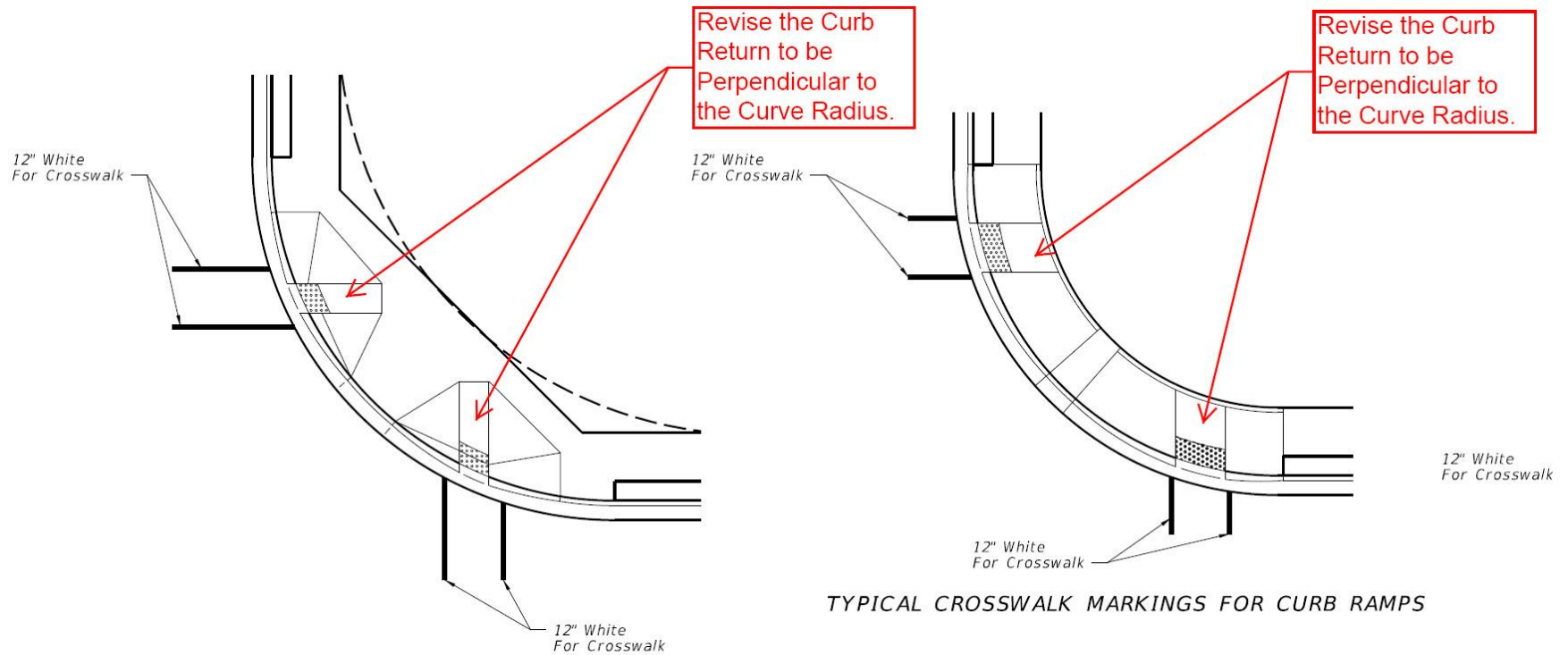
Index 515 - Turnouts



Sheet 2 of 7



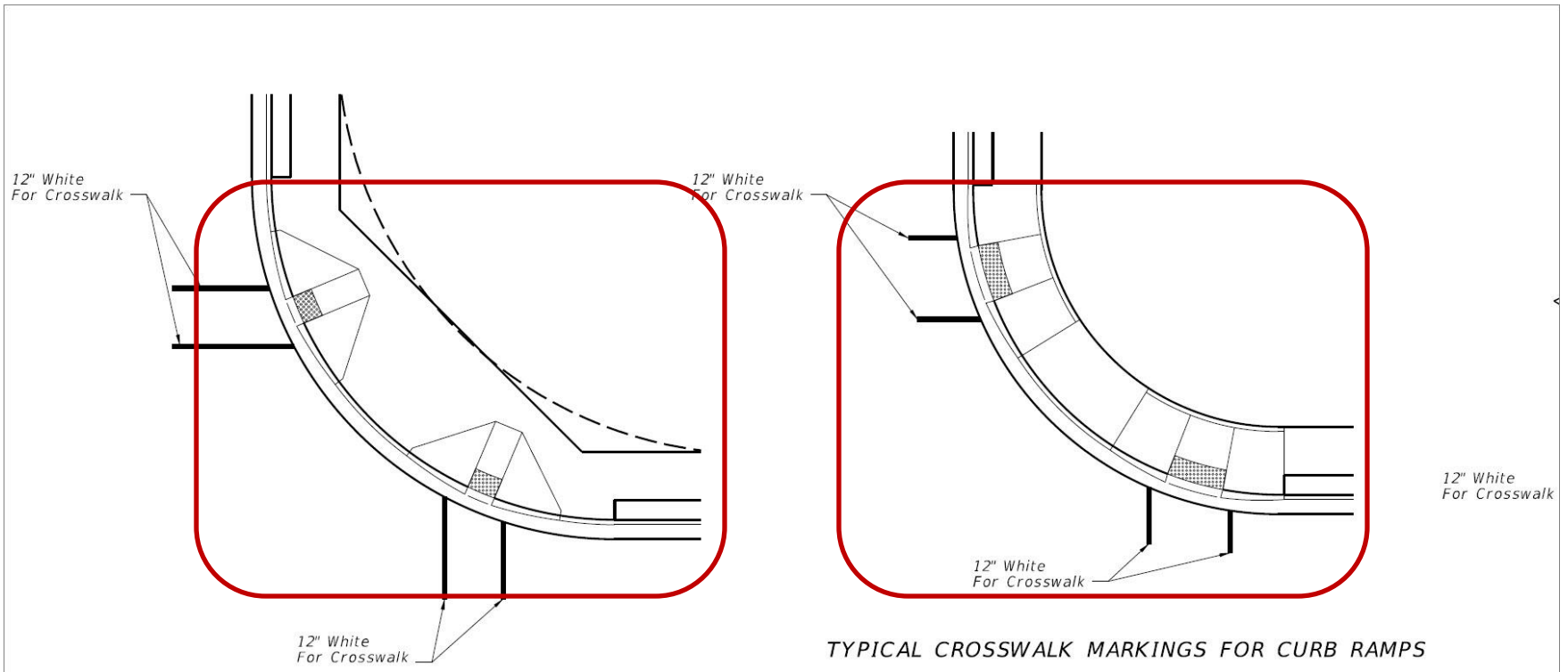
Index 17346 – Special Marking Areas



Sheet 3



Index 17346 – Special Marking Areas



Sheet 3 of 14



Specifications Revisions

◆ Section 520:

- ✓ 520-1, Added to Description;
 - “curb for sidewalk curb ramps and driveways,”
- ✓ 520-11, Added to Method of Measurement;
 - “Curb for sidewalk curb ramps or driveways will be paid at the contract unit price for the parent curb.”
- ✓ 520-12.3, Inserted Removal of Existing Curb;
 - “For repairs and replacements, removal of the existing curb will be included in the cost of the new curb.”



Specifications Revisions

◆ Section 522:

- ✓ SECTION 522, Added to Title;
 - **“AND DRIVEWAYS”**
- ✓ 522-9, Added to Method of Measurement;
 - “Ramps, reconstructed sidewalks, walk around sidewalks, sidewalk landings, sidewalk curb, and driveways will be included in the area to be paid.”
- ✓ 522-10, Added to Basis of Payment;
 - “For repairs and replacements, removal of the existing sidewalk or driveway will be included in the cost of the new sidewalk and driveway.”
 - Pay Item Description, Added “and Driveways”



Specifications Revisions

◆ Section 527:

- ✓ SECTION 527, Deleted from Title;
 - **“ON WALKING SURFACES”**
- ✓ 527-4, Revised Method of Measurement;
 - “Detectable warnings will be paid per square foot, furnished, installed and accepted.”
- ✓ 527-5, Basis of Payment;
 - Deleted Item No. 527-1, “Detectable Warnings on Existing Walking Surfaces - each.”
 - Added Item No. 527-2, “Detectable Warnings - square foot.”



Basis Of Estimates (BOE) Revisions

Estimates Bulletin 13-07:

- ◆ Pay Item 522-1,
 - ✓ Concrete Sidewalks and Driveways (SY),
- ◆ Pay Item 527-2,
 - ✓ Detectable Warnings (SF).

Note:

Inconsistency in the Use of these Pay Items between Construction, Pushbutton, and Maintenance Projects.



Table of Detectable Warnings

TABLE OF DETECTABLE WARNINGS		
CURB RAMP TYPE	CURB RADIUS (FT)	TOTAL AREA (SF)
CR-A	N/A	8
CR-B	N/A	8
CR-C	N/A	8
CR-D	25	11
CR-E	N/A	8
CR-F	10	9
	20	11
	25	13
	30	14
CR-G	10	10
	20	11
	25	12
	30	14

Sheet 7 of 7



IDS-304 (Design Aid for CR-F)

CR-F:

25' Radius,

13 SF

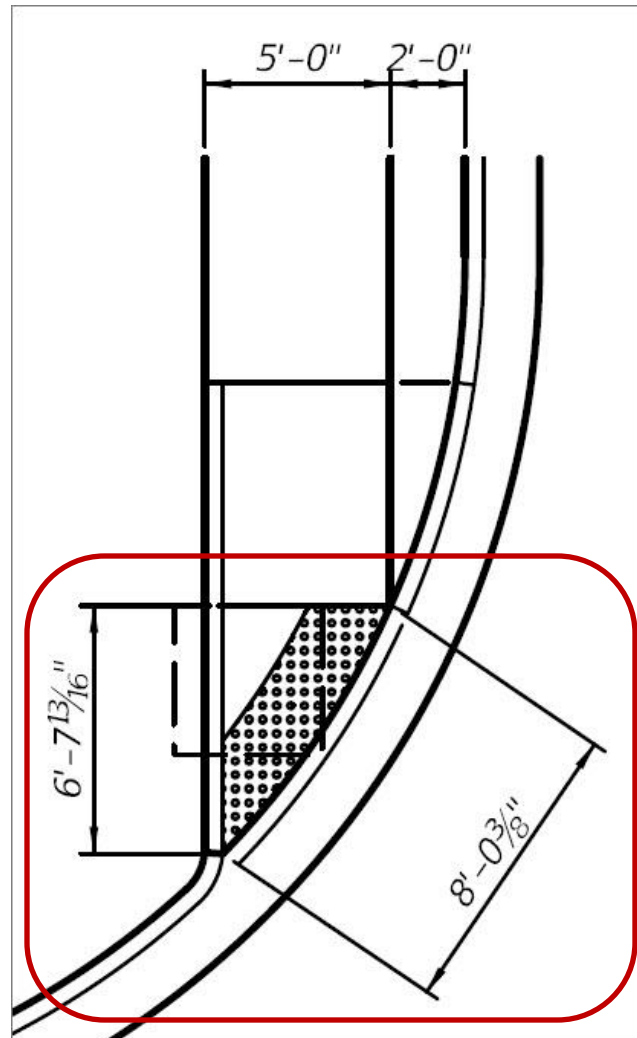


Figure 2 of 7



Index 400 - Guardrail

- ◆ Sheet 3 Mark-up of Figure 1:

*Clear Zone Limit Or Horizontal Clearance
Limit In Accordance With The Criteria In
Volume I Chapters 2, 4 And 25 Of The "Plans
Preparation Manual", and Index No. 700.*

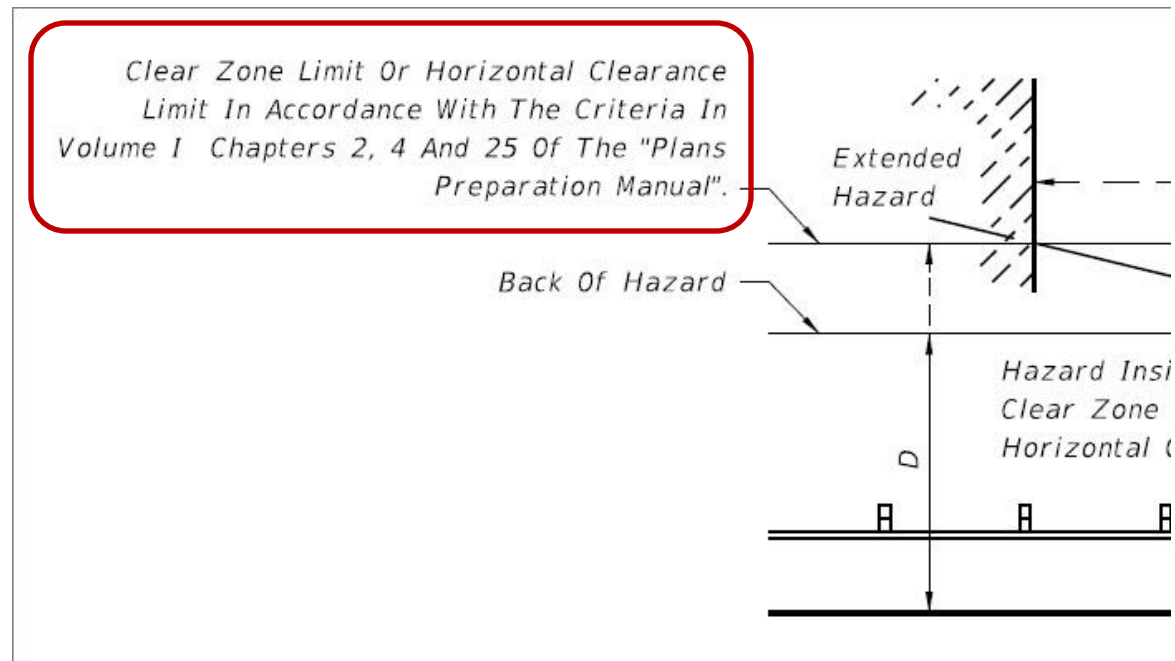
mph	
≤ 45	= 16 (D-d)
≥ 50	= 13 (D-d)

Sheet 3



Index 400 - Guardrail

- ◆ Proposed Sheet 3 of 26 – Figure 1:

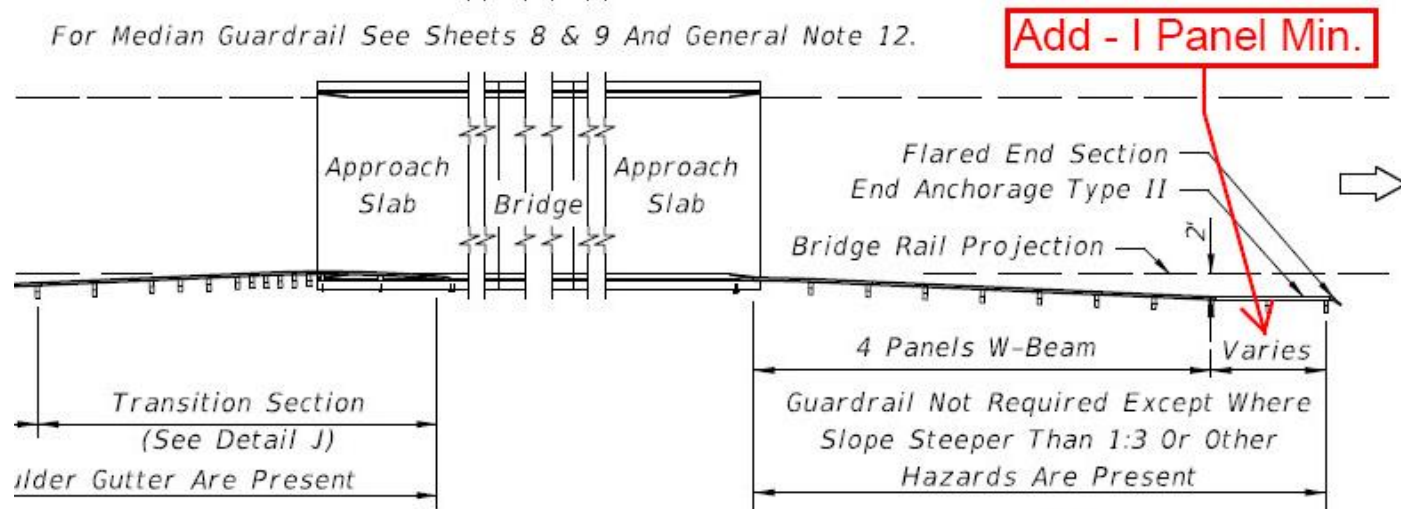


Sheet 3 of 26



Index 400 - Guardrail

◆ Sheet 6 Mark-up of Detail P:



DIVIDED ROADWAY - DETAIL P

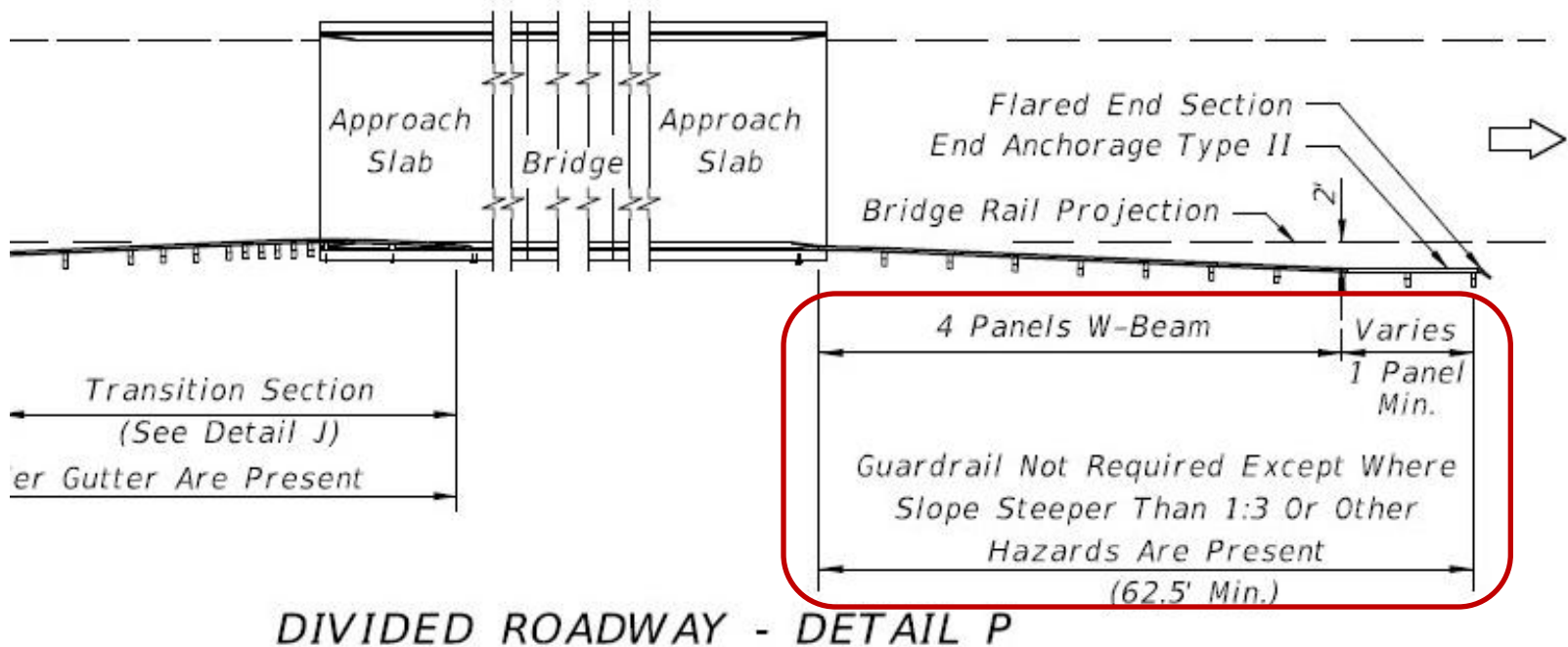
Sheet 6



Index 400 - Guardrail

◆ Proposed Sheet 6 of 26 – Detail P:

For Median Guardrail See Sheets 8 & 9 And General Note 12.

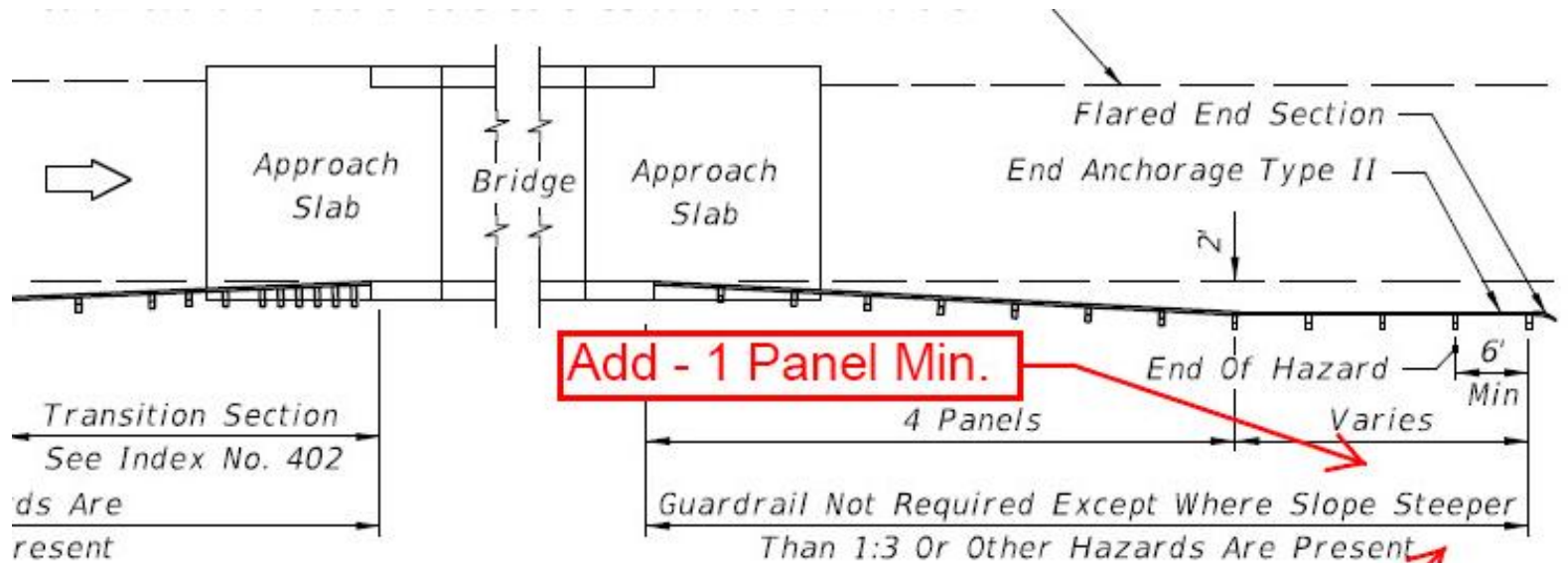


Sheet 6 of 26



Index 400 - Guardrail

◆ Sheet 7 Mark-up of Detail I:



DIVIDED ROADWAY - DETAIL I

LDERS AND

12.5'

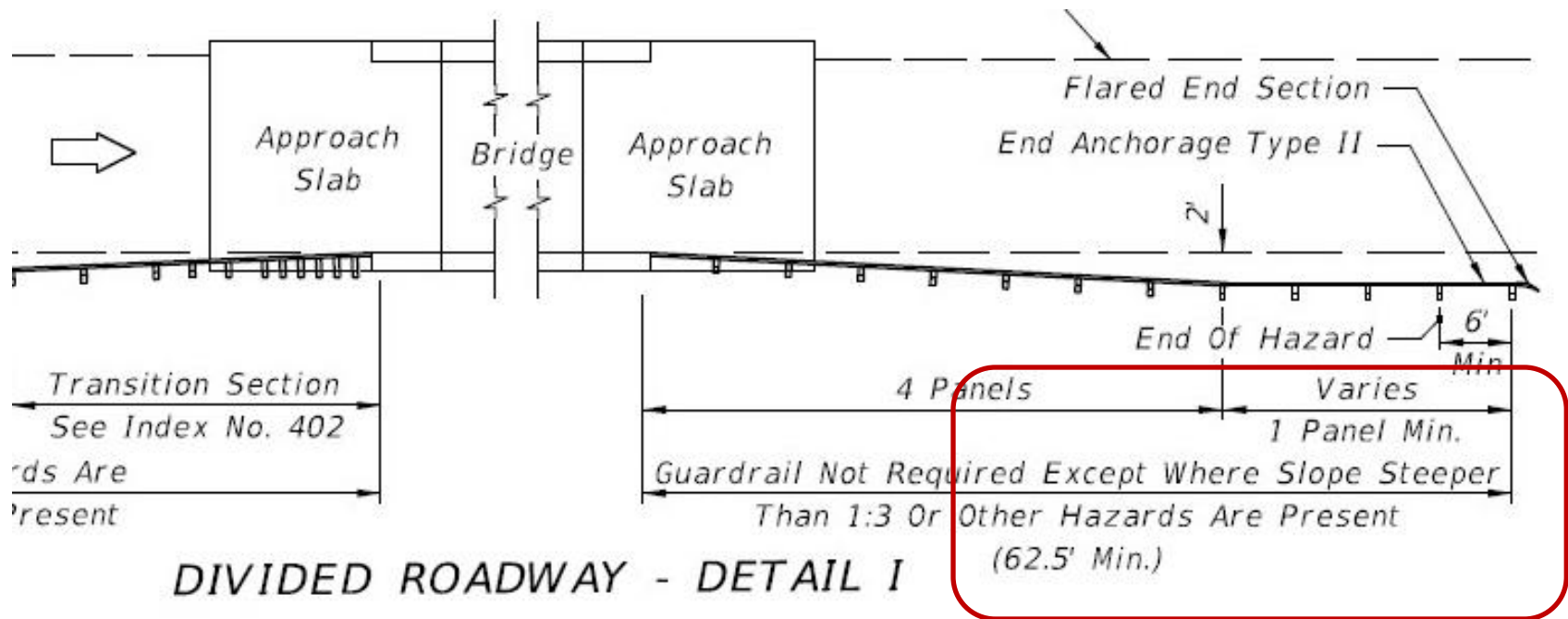
Add - (62.5' Min.)

Sheet 7



Index 400 - Guardrail

- ◆ Proposed Sheet 7 of 26 – Detail I:



Sheet 7 of 26



Index 430 – Crash Cushion Details

- ◆ Roadway Design Bulletin 13-05:
 - ✓ Requirements.

<i>Guardrail Applications</i>		
<i>Design Length (ft.)</i>	<i>Design Speed (mph)</i>	<i>Crash Test Level</i>
8.75	35	TL-2
11.50	40	
11.50	45	
14.25	50	TL-3
18.75	55	
18.75	≥ 60	

R2013-05 Revised Design Lengths



Questions or Comments



Thanks!



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Design Standards Update 2014 eBooklet

THE END

Please visit us at:

<http://www.dot.state.fl.us/rddesign/cs/cs.shtm>

or

contact me

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