



Florida Department of Transportation

RICK SCOTT
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

JIM BOXOLD
SECRETARY

ROADWAY DESIGN BULLETIN 16-04

(FHWA Approved: 06/17/2016)

DATE: June 20, 2016

TO: District Directors of Transportation Operations, District Directors of Transportation Development, District Design Engineers, District Consultant Project Management Engineers, District Construction Engineers, District Geotechnical Engineers, District Structures Design Engineers, District Maintenance Engineers, District Roadway Design Engineers, District Traffic Operations Engineers, District Program Management Engineers, District Materials Engineers

FROM: Michael Shepard, P.E., State Roadway Design Engineer *Kevin J. McDaniel for*

COPIES: Brian Blanchard, Phillip Gainer, Tim Lattner, David Sadler, Rudy Powell, Trey Tillander, Amy Tootle, Dan Hurtado, Mark Wilson, Robert Robertson, Greg Davis, Bruce Dana, John Krause, Dan Scheer, Gregory Schiess, Nicholas Finch (FHWA), Phillip Bello (FHWA), Kevin Burgess (FHWA), Chad Thompson (FHWA)

SUBJECT: **Single-Slope Concrete Barriers**

This bulletin supplements [Roadway Design Bulletin 16-02](#) MASH-16 Implementation Plan.

REQUIREMENTS

Use the Single-Slope Concrete Barriers shown in Attachment 'A' in lieu of the F-Shape Concrete Barriers shown in the current *Design Standards*, Indexes 410 and 411.

The 10-foot-long vertical transition end treatments shown on the *FY 2016-17 Design Standards* Index 410, Sheet 12 (Section EE to FF) and Sheet 13 (Section EE to GG), are not permitted within the clear zone of approaching traffic lanes unless site-specific justification and approval is obtained from the District Design Engineer.

COMMENTARY

A redeveloped version of *Design Standards* Indexes 410 and 411 will be released with the *FY 2018-19 Design Standards eBook*, where the Single-Slope Concrete Barrier shapes shown in Attachment ‘A’ will replace F-Shape Concrete Barriers, and all reinforcing details, foundation details, and other miscellaneous details will be included to continue the similar functionality of the current Indexes. The 38”, 44”, and 56” inch height Single-Slope Barriers shown in Attachment ‘A’ will replace the 32”, 42”, and 54” height F-Shape Barriers, respectively.

The 10-foot-long vertical transition end treatment should be used only where a more crashworthy solution is not available. See the *2016 Plans Preparations Manual*, Volume 1, Section 4.4.2.2.

The details in Attachment ‘A’ show the new Single-Slope Concrete Barrier dimensions and are only intended to enable the planning of roadway cross sections. Generally follow the vertical and horizontal taper rates and transition lengths for each of the conditions shown in the *FY 2016-17 Design Standards* Indexes 410 and 411, except as noted in the Requirements above.

The Table in Attachment ‘B’ shows additional anticipated changes to other *Design Standards* Indexes associated with Concrete Barrier.

Updated Standard Specifications and new Pay Items will be released along with these revised Indexes.

For structures related traffic railing *Design Standards*, see [Structures Design Bulletin 16-04](#).

BACKGROUND

See [Roadway Design Bulletin 16-02](#).

IMPLEMENTATION

These requirements are effective on all projects with a letting date of July 1, 2018 or later.

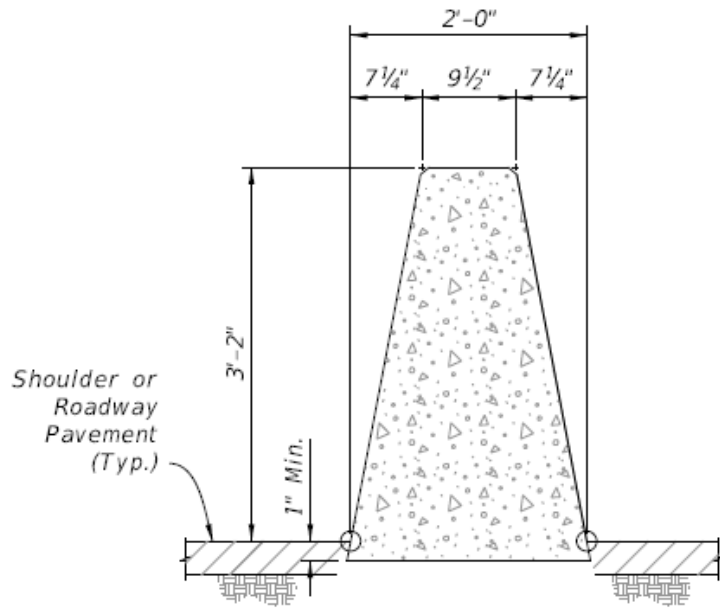
CONTACT

Gevin McDaniel, P.E.
Roadway Design Standards Administrator
Florida Department of Transportation
605 Suwannee Street, MS 32
Tallahassee, FL 32399-0450
Phone (850)-414-4284
gevin.mcdaniel@dot.state.fl.us

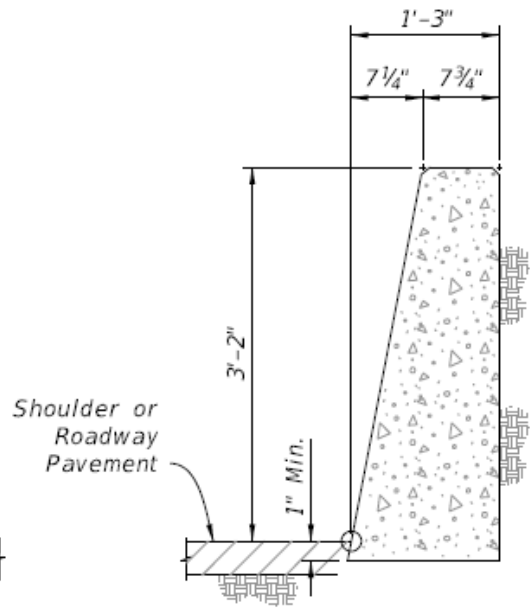
MAS/gjm/rms

Attachment ‘A’

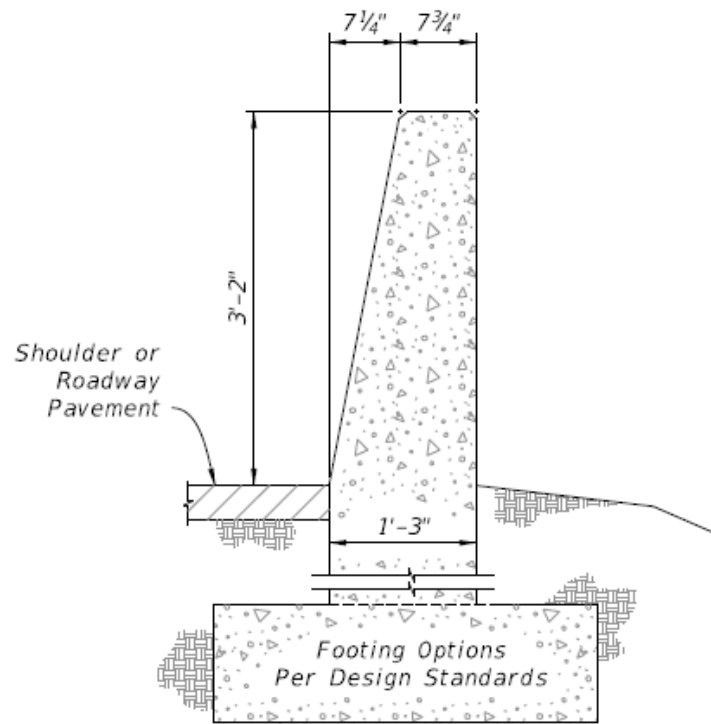
Single-Slope Concrete Barrier Sections per Condition



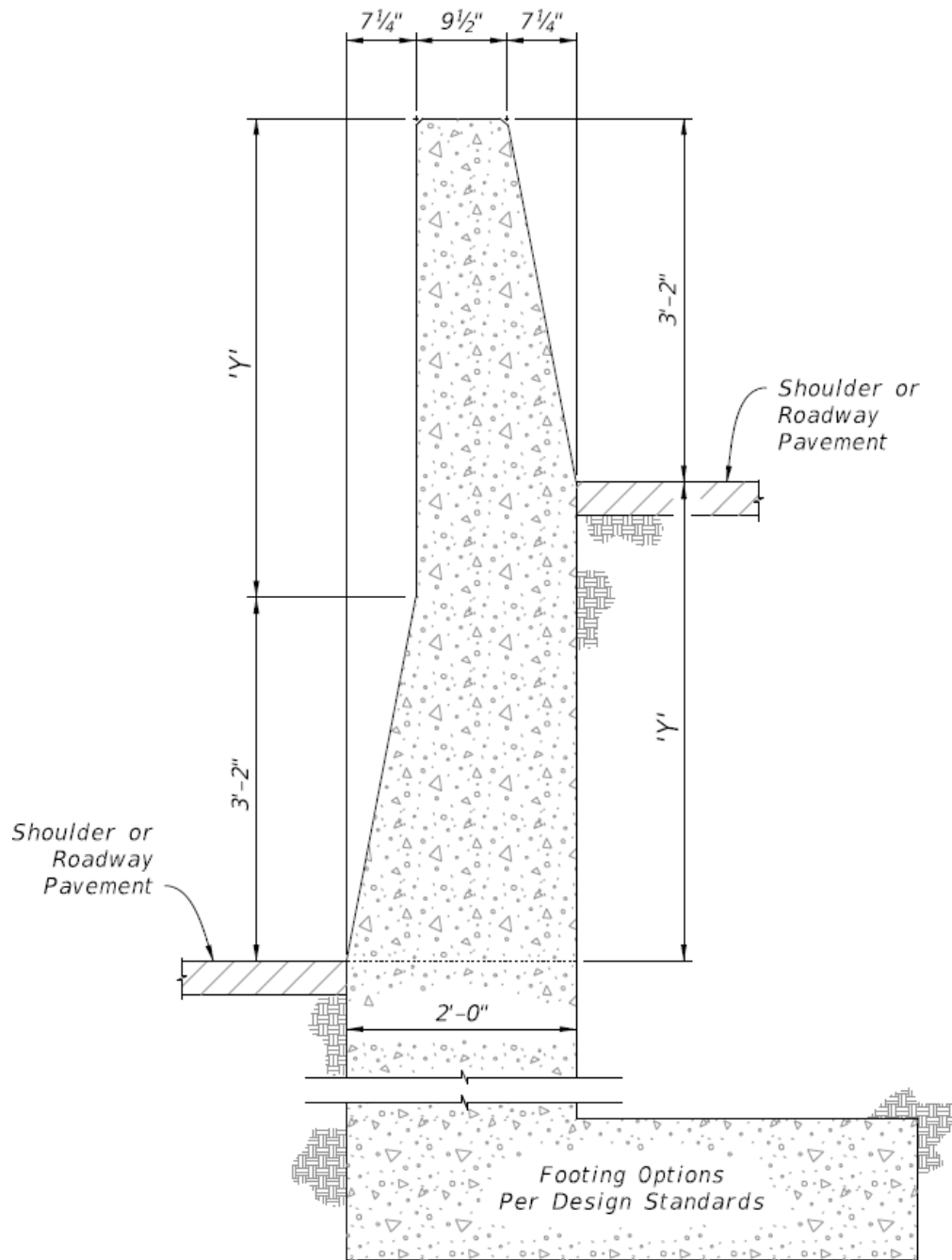
**38" FULL
 MEDIAN BARRIER**



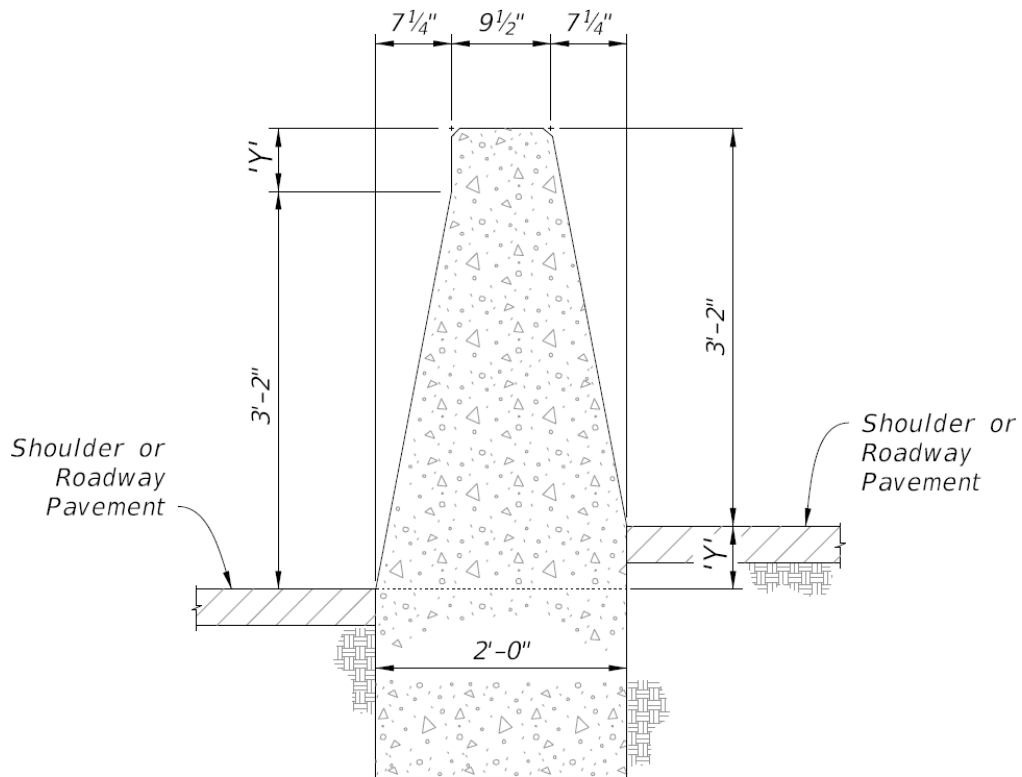
**38" HALF
 MEDIAN BARRIER**



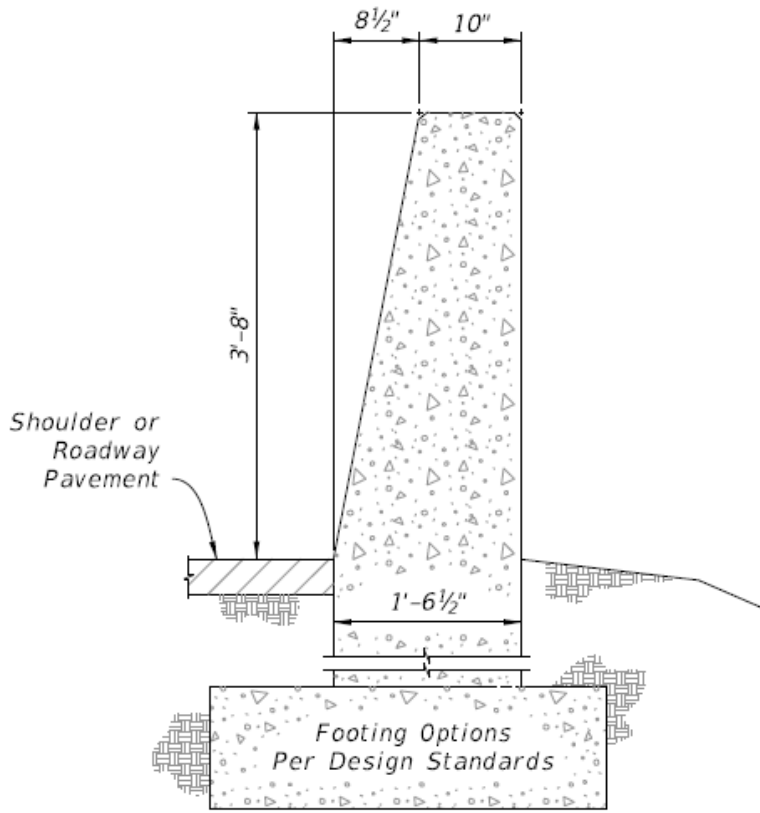
38" SHOULDER BARRIER



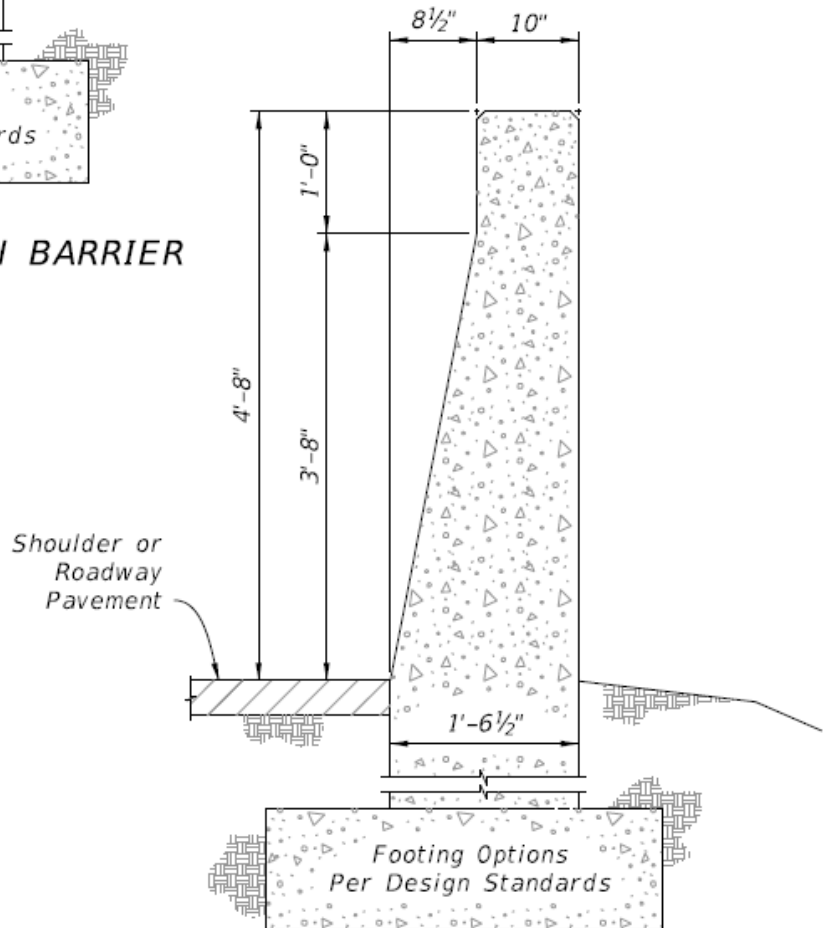
**GRADE-SEPARATED
MEDIAN BARRIER
($Y \leq 4'-0"$)**



**GRADE-SEPARATED
MEDIAN BARRIER
($Y \leq 6''$)**



44" PIER PROTECTION BARRIER



56" PIER PROTECTION BARRIER

Attachment ‘B’

Anticipated Changes to Design Standards Indexes with Concrete Barriers

Index Number	Index Title	Anticipated Change	Effective Date
217	Median Barrier Inlets Types 1, 2, 3, 4 and 5	Replace F-Shape Barrier with Single-Slope Barrier	Jul-18
218	Barrier Wall Inlet	Replace F-Shape Barrier with Single-Slope Barrier	Jul-18
219	Concrete Barrier Wall Inlet	Replace F-Shape Barrier with Single-Slope Barrier	Jul-18
400	Guardrail	Replace F-Shape Barrier with Single-Slope Barrier	Jul-18
402	Guardrail Transitions and Connections for Existing Bridges	No Changes Required for Existing Conditions	NA
410	Concrete Barrier Wall	Replace F-Shape Barrier with Single-Slope Barrier; Redevelop and Reorganize Index	Jul-18
411	Pier Protection Barrier	Replace F-Shape Barrier with Single-Slope Barrier	Jul-18
414	Type K Temporary Concrete Barrier System	No Changes Required for Temporary Condition	NA
415	Temporary Concrete Barrier	No Changes Required for Temporary Conditions	NA
461	Opaque Visual Barrier	Delete	Jul-18
11870	Single Post Bridge Mounted Sign Support	Replace F-Shape Barrier with Single-Slope Barrier	Jul-18
11871	Single Post Median Barrier Mounted Sign Support	Replace F-Shape Barrier with Single-Slope Barrier	Jul-18
17515	Standard Aluminum Lighting	Replace F-Shape Barrier with Single-Slope Barrier	Jul-18