



Florida Department of Transportation

**RICK SCOTT
GOVERNOR**

605 Suwannee Street
Tallahassee, FL 32399-0450

**MIKE DEW
SECRETARY**

ROADWAY DESIGN BULLETIN 18-05
TRAFFIC ENGINEERING AND OPERATIONS BULLETIN 18-01
(FHWA Approved: April 9, 2018)

DATE: April 26, 2018

TO: District Directors of Transportation Operations, District Directors of Transportation Development, District Design Engineers, District Construction Engineers, District Maintenance Engineers, District Consultant Project Manager 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

DocuSigned by:
Michael Shepard
E6B6BEAEB9A54B0...

V.Y. "Trey" Tillander III, P.E., State Traffic Operations Engineer

DocuSigned by:
Trey Tillander
D749973004EE41F...

COPIES: Brian Blanchard, Tom Byron, Courtney Drummond, Tim Lattner, Rudy Powell, David Sadler, Amy Tootle, Dan Scheer, Vern Danforth, Gregory Schiess, Stefanie Maxwell, Dan Hurtado, Robert Robertson, Lora Hollingsworth, Kevin Burgess (FHWA), Nick Finch (FHWA), Chad Thompson (FHWA), Bren George (FHWA)

SUBJECT: **Emergency Shoulder Use (ESU)**

This bulletin implements a new policy on Emergency Shoulder Use for Limited Access Facilities. **This policy affects the Plans Preparation Manual (PPM) and the FDOT Design Manual (FDM).**

REQUIREMENTS FOR FDOT DESIGN MANUAL (FDM)

1. Replace *FDM 211.4.6* with the following:

211.4.6 Emergency Shoulder Use (ESU)

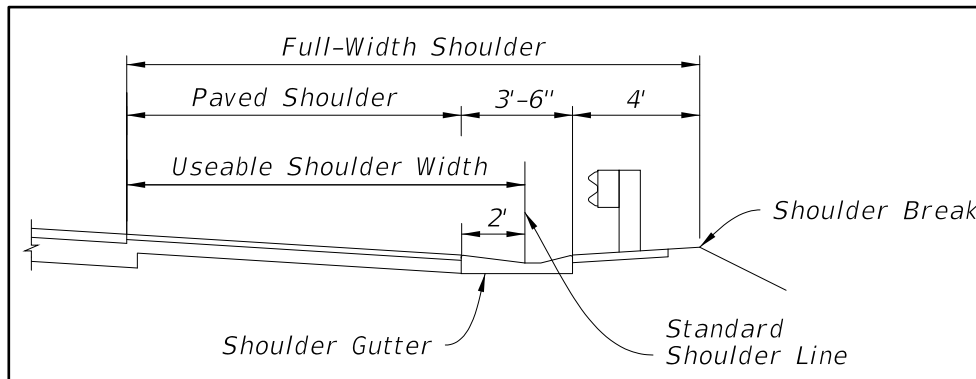
Emergency Shoulder Use (ESU) increases traffic capacity for hurricane evacuations by using existing paved shoulders as temporary travel lanes. ESU is typically implemented on evacuation routes as follows:

- On median shoulder when median paved shoulder width is at least 10 feet, or
- On outside shoulder when median paved shoulder is less than 10 feet.

ESU evacuation routes are listed at: <http://www.fdot.gov/emergencymanagement/esu/>

Provide a minimum 10-foot paved shoulder that is useable for travel on ESU routes identified on the Department's Emergency Management website. A portion of the shoulder gutter (when present) may be included in the useable 10-foot width; see **Figure 211.4.5**.

Figure 211.4.5 Useable Shoulder Width with Shoulder Gutter



On resurfacing projects where paved or usable shoulder widths are less than 10 feet, do one of the following:

- Provide shoulder modifications to allow for acceptable ESU usage, or
- Identify future project that will provide required shoulder modifications.

Locate median barrier in accordance with **FDM 215**. When possible, do not locate median barrier adjacent to the shoulder identified for ESU evacuation.

See **FDM 240.1.1** for ESU requirements during construction.

2. Replace **FDM 240.1.1** with the following:

240.1.1 Emergency Shoulder Use (ESU)

The requirements for Emergency Shoulder Use (ESU) outlined in **FDM 211.4.6** must be maintained during all phases of construction. A Design Variation to omit ESU evacuation requirements for any phase of construction must be approved by the Chief Engineer.

3. Add the following to **FDM 122.7.4** after item (2) under Chief Engineer:

- (3) Design Variations for omission of Emergency Shoulder Use (ESU) evacuation requirements for any phase of construction.

4. Add the following row to *Table 122.7.1* in *FDM 122*.

Table 122.7.1 Central Office Approvals

Design Element	State Roadway Design Engineer	State Structures Design Engineer	Chief Planner	Chief Engineer
	Approval	Approval	Review	Approval
Design Variation: ESU Omission during Construction				X

REQUIREMENTS FOR PLANS PREPARATION MANUAL (PPM)

1. Add the following to *PPM Volume 1, Chapter 2* after *Section 2.3.3*:

2.3.4 Emergency Shoulder Use (ESU)

Emergency Shoulder Use (ESU) increases traffic capacity for hurricane evacuations by using existing paved shoulders as temporary travel lanes. ESU is typically implemented on evacuation routes as follows:

- On median shoulder when median paved shoulder width is at least 10 feet, or
- On outside shoulder when median paved shoulder is less than 10 feet.

ESU evacuation routes are listed at: <http://www.fdot.gov/emergencymanagement/esu/>

Provide a minimum 10-foot paved shoulder that is useable for travel on ESU routes identified on the Department's Emergency Management website. A portion of the shoulder gutter (when present) may be included in the required 10-foot usable width.

On resurfacing projects where paved shoulder widths are less than 10 feet, do one of the following:

- Provide shoulder modifications to allow for acceptable ESU usage, or
- Identify future project that will provide required shoulder modifications.

Locate median barrier in accordance with *PPM Volume 1, Chapter 4*. When possible, do not locate median barrier adjacent to the shoulder identified for ESU evacuation.

See *PPM Volume 1, Chapter 10, Section 10.1.1* for ESU requirements during construction.

2. Add the following to *PPM Volume 1, Chapter 10* after *Section 10.1*:

10.1.1 Emergency Shoulder Use (ESU)

The requirements for Emergency Shoulder Use (ESU) outlined in *PPM Volume 1, Chapter 2, Section 2.3.4* must be maintained during all phases of construction. A Design Variation to omit ESU evacuation requirements for any phase of construction must be approved by the Chief Engineer.

3. Add the following to *PPM Volume 1, Chapter 23, Section 23.7.4* under Chief Engineer:

- Design Variations for omission of Emergency Shoulder Use (ESU) evacuation requirements for any phase of construction.

4. Add the following row to *PPM Volume 1, Chapter 23, Table 23.7.1*:

Table 23.7.1 Central Office Approvals

Design Element	State Roadway Design Engineer	State Structures Design Engineer	State Transportation Planner	Chief Engineer
	Approval	Approval	Review	Approval
Design Variation: ESU Omission during Construction				X

COMMENTARY

Emergency Shoulder Use (ESU) is Florida's innovative strategy to replace the former one-way plans, also known as contraflow and reverse laning. Emergency Shoulder Use (ESU) was successfully implemented on key corridors for evacuation during Hurricane Irma. Additional information on FDOT Emergency Shoulder Use is presented in a public information video at the following link: <https://www.youtube.com/watch?v=mXne9V1tXiI>

IMPLEMENTATION

The requirements of this bulletin are effective on all projects with lettings on or after January 1, 2019. These requirements may be implemented immediately at the discretion of the Districts.

CONTACT

V.Y. "Trey" Tillander III, P.E.
 State Traffic Operations Engineer
Trey.Tillander@dot.state.fl.us

Paul Hiers, P.E.
 Roadway Design Criteria Administrator
Paul.Hiers@dot.state.fl.us