

STATE OF CALIFORNIA

Memorandum

Date: May 1, 2014

From: CPUC Rail Crossings Engineering Section

Subject: *CPUC Overview of Emergency Notification System (ENS) Sign Requirements at Crossings*

Introduction

Federal and state regulations require that Emergency Notification System (ENS) signs with identifying information must be posted conspicuously at rail crossings (crossings). These signs provide information to road users so that they can notify the railroad company about emergencies or malfunctioning traffic control devices at crossings.



Example of ENS Sign I-13

These ENS signs are required at crossings. These signs should also be used at light rail transit crossings along semi-exclusive alignments and pathway crossings.

ENS signs should be placed on the warning device mast or on separate posts. Information posted only on a signal bungalow does not comply with the requirements.

Federal rulemaking

A [final rule](#) was issued on June 12, 2012, by the Federal Railroad Administration (FRA) regarding Telephonic Notification of Unsafe Conditions at Highway-rail and Pathway Grade Crossings. The final rule was [amended](#) on May 14, 2013. This rule establishes new requirements in the Code of Federal Regulations (CFR).

ENS signs must be posted in compliance with CFR Part 49. In particular, see:

- **49 CFR 234.309** regarding **general specifications** for the sign, and
- **49 CFR 234.311** regarding **placement** of the signs.

ENS Sign Requirements

This section is a simplified summary of the federal requirements; see the CFR excerpts for exact details.

Key information:

- (1) telephone number
- (2) "Report emergency or problem to ___", or similar text
- (3) Crossing identification number (DOT#)

Minimum design requirements:

- (1) 12 inches wide by 9 inches high
- (2) retroreflective
- (3) legible text with minimum character height of 1 inch
- (4) white text, blue background, white border
 - a. DOT# may be black text on a white background

Minimum placement requirements:

- (1) Conspicuous
- (2) Doesn't obstruct other signs or signals
- (3) Doesn't limit view of an approaching train
- (4) If mounted separately, use breakaway post

Orientation of ENS Sign

California Public Utilities Commission (CPUC) staff recommends the following for typical installations:

- An ENS sign should be placed on a warning device mast along the right side of each roadway approach to the track;
- An ENS sign should be oriented to face the same direction as other signs on the warning device mast.

This orientation will provide visibility for both vehicles and pedestrians in a wide variety of situations and complies with the federal rule. Minor variations may be justified in certain situations.

Additional Applicable Rules in State of California

CPUC General Order (GO) 75-D includes related requirements regarding identification of crossings in Section 5.1.

The California Manual on Uniform Traffic Control Devices (CA MUTCD), 2012 Edition, includes related requirements in [Section 8B.18](#). ENS signs are identified as I-13 signs.

Light Rail Transit (LRT) Crossings

The ENS signs should be placed at all LRT crossings along semi-exclusive alignments, as defined in CA MUTCD Section 8B.18: an LRT alignment that is in a separate right-of-way or along a street or railroad right-of-way where motor vehicles, pedestrians, and bicycles have limited access and cross at designated locations only.

GO 75-D requires identifying information at public at-grade crossings of light rail transit systems, except those not equipped with standard automatic warning devices (see GO 75-D Section 5). The I-13 sign should be used to meet this requirement.

Multiple Railroads and Rail Transit Agencies

If the at-grade crossing is jointly used by multiple railroads or rail transit agencies, the same federal DOT# and telephone number must be posted on all ENS signs at the crossing. For crossings with only light rail transit operations, the CPUC assigned identification number may be used.

Compliance Date Summary

2014

Most railroads must establish the telephonic notification system and associated recordkeeping by **March 1, 2014**. At the hundreds of crossings in California where multiple railroads or rail transit agencies have dispatching responsibility, the telephonic notification system must use the same posted phone number and be able to identify the crossing using the same DOT#.

2015

For crossings which do not have ENS signs posted at specified sizes, ENS signs must conform by **September 1, 2015**.

For the few railroads which do NOT have an Emergency Notification System of any kind, it must be established by **September 1, 2015**.

2017

For the few crossings in California that already had ENS signs posted at specified sizes as of August 2012, placement shall conform no later than **September 1, 2017**.

Exceptions

Under limited conditions specified in the rule, the railroad may maintain non-conforming ENS signs for its useful life. However, information painted or stenciled on a signal bungalow is NOT considered an ENS sign.

49 CFR 234.317 provides the exact requirements regarding compliance dates (see below).

Cites of Specific Regulations applicable to Emergency Notification Sign Installations are included to this guidance document below.

REGULATIONS APPLICABLE TO ENS INSTALLATIONS

49 CFR 234.309

§ 234.309 ENS signs in general.

(a) Provision of information. If the dispatching railroad and the maintaining railroad(s) are not the same entity, the dispatching railroad for a highway-rail or pathway grade crossing shall provide to the maintaining railroad the telephone number that is to be displayed on the ENS sign at the crossing, not later than 180 calendar days before the date that implementation of an ENS is required.

(b) Information to be displayed. Each ENS sign located at each highway-rail or pathway grade crossing as required by §234.311 shall display the necessary information for the dispatching railroad to receive reports of unsafe conditions at the crossing. This information, at a minimum, includes the following:

(1) The toll-free telephone number (or non-toll-free telephone number as provided for in §234.303(e)) established to receive reports pursuant to §234.303(a);

(2) An explanation of the purpose of the sign (e.g., “Report emergency or problem to ___”); and

(3) The U.S. DOT National Crossing Inventory number assigned to that crossing.

(c) Sign size and other physical features. Each ENS sign shall—

(1) Measure at least 12 inches wide by 9 inches high;

(2) Be retroreflective;

(3) Have legible text (i.e., letters and numerals) with a minimum character height of 1 inch for the information required in paragraph (b) of this section; and

(4) Have white text set on a blue background with a white border, except that the U.S. DOT National Crossing Inventory number may be black text set on a white rectangular background.

49 CFR 234.311

§ 234.311 ENS sign placement and maintenance.

(a) *Number of signs at highway-rail or pathway grade crossing.*

(1) *In general.* The maintaining railroad, or the railroad appointed pursuant to §234.306(b), for a highway-rail or pathway grade crossing shall place and

maintain a sign on each approach to the crossing that conforms to §234.309, except as provided in paragraph (a)(2) of this section.

(2) *Exceptions.*

(i) At a farm grade crossing, the responsible railroad shall place and maintain a minimum of one sign that conforms to §234.309 at the crossing.

(ii) At a railroad yard, or a port or dock facility that does not meet the definition of “plant railroad” in § 234.5, the responsible railroad shall place and maintain a minimum of one sign at each vehicular entrance to the yard, or the port or dock facility in accordance with § 234.309, in lieu of placing signs at each crossing within the yard, or the port or dock facility. Each sign must be placed so that it is clearly visible to a driver of a motor vehicle located at the vehicular entrance to the yard, or the port or dock facility.

(b) *Placement of sign(s).*

(1) Each sign required by paragraph (a) of this section must be located at the crossing, except as provided in paragraph (a)(2)(ii) of this section, and maintained by the responsible railroad so that the sign—

(i) Is conspicuous to users of the roadway or pathway by day and night;

(ii) Does not obstruct any other sign or traffic control device at the crossing;

(iii) Does not limit the view of a train approaching the highway-rail or pathway grade crossing; and

(iv) If mounted on a post, has supports that are crashworthy (i.e., breakaway or yielding).

(2) A sign placed on the signal bungalow does not comply with paragraph (b)(1)(i) of this section.

(c) *Repair or replacement of ENS sign.* If an ENS sign required by this subpart is discovered by the responsible railroad to be missing, damaged, or in any other way unusable to vehicular or pedestrian traffic, the responsible railroad shall repair or replace the sign no later than 30 calendar days from the time of detection.

49 CFR 234.317

*Bold formatting has been added for emphasis only

§ 234.317 Compliance dates.

(a) *Railroads without an ENS of any kind.* If a railroad subject to this subpart does not have an ENS of any kind in place on August 13, 2012, the railroad shall implement an ENS that conforms to this subpart no later than **September 1, 2015**.

(b) *Railroads with nonconforming ENS telephone service.* If a railroad subject to this subpart already has its own ENS telephone service or is using a third-party ENS telephone service, and that telephone service does not conform to the requirements in § 234.303 or § 234.307, respectively, on August 13, 2012, the railroad shall comply with this subpart no later than **March 1, 2014**, pursuant to the exceptions in paragraphs (c), (d), and (e) of § 234.317.

(c) *Railroads with ENS signs of nonconforming size.*

(1) If a railroad subject to this subpart already has ENS signs in place, and those signs do not conform to the requirements in § 234.309 on August 13, 2012, the railroad's ENS signs shall conform to § 234.309 no later than as required below:

(i) If the railroad's sign size is **greater than or equal to 60 square inches** and the height of the lettering on the sign is **greater than or equal to 3/4 inch** for the information required in **§ 234.309(b)(1) and (b)(3)**, and **greater than or equal to 3/8 inch** for the information required in **§ 234.309(b)(2)** on August 13, 2012, the railroad **may maintain the sign for its useful life**.

(ii) If the railroad's sign size is **greater than or equal to 60 square inches** but the height of the lettering is either **less than 3/4 inch** for the information required in **§ 234.309(b)(1) and (b)(3)**, or **less than 3/8 inch** for the information required in **§ 234.309(b)(2)** on August 13, 2012, the railroad's sign must conform to § 234.309 no later than **September 1, 2017**.

(iii) If the railroad's sign size is **less than 60 square inches**, regardless of the height of the lettering for the information required in § 234.309(b), on August 13, 2012, the railroad's sign must conform to § 234.309 no later than **September 1, 2015**.

(2) If the railroad chooses to replace an ENS sign of non-conforming size before the applicable compliance date stated, the railroad shall replace that sign with a sign that conforms to § 234.309.

(d) *Railroads with ENS signs having nonconforming placement.* If a railroad subject to this subpart **already has ENS signs in place**, and the **placement of those signs does not conform** to the requirements in § 234.311 on August 13, 2012, the placement of the railroad's ENS signs shall conform to § 234.311 no later than **September 1, 2017**. If a railroad changes the placement of the sign before September 1, 2017, the placement of the sign must conform to § 234.311. If a railroad replaces a sign before September 1, 2017, so that the sign conforms to § 234.309, and the placement of that sign does not

conform to § 234.311, the railroad shall also change the placement of the sign so that it conforms to § 234.311.

(e) *Railroads with nonconforming ENS recordkeeping.* If a railroad subject to this subpart **already conducts recordkeeping** as part of its ENS, and that **recordkeeping does not conform** to § 234.313 or § 234.315, the railroad's recordkeeping shall conform to § 234.313 or § 234.315 no later than **March 1, 2014**.

California Manual on Uniform Traffic Control Devices 2012 Section 8B.18

*Bold formatting indicates an MUTCD "Standard"

Section 8B.18 Emergency Notification Sign (I-13)

Guidance:

01 Emergency Notification (I-13) signs (see Figure 8B-5) should be installed at all highway-rail grade crossings, and at all highway-LRT grade crossings on semi-exclusive alignments, to provide information to road users so that they can notify the railroad company or LRT agency about emergencies or malfunctioning traffic control devices.

Standard:

01a The emergency notification information including the USDOT or CPUC grade crossing inventory number and an emergency contact telephone number shall be installed and maintained by the railroad or LRT agency at each public grade crossing. Refer to CPUC General Order 75, as amended.

Option:

01b The emergency notification information may be omitted at a highway-LRT grade crossing not equipped with automatic warning devices such as automatic flashing light signals and gates.

Standard:

02 When Emergency Notification signs are used at a highway-rail grade crossing, they shall, at a minimum, include the USDOT grade crossing inventory number and the emergency contact telephone number.

03 When Emergency Notification signs are used at a highway-LRT grade crossing, they shall, at a minimum, include a unique crossing identifier, either the CPUC or USDOT grade crossing inventory number, and the emergency contact telephone number.

04 Emergency Notification Signs shall have a white legend and border on a blue background.

05 The Emergency Notification signs shall be positioned so as to not obstruct any traffic control devices or limit the view of rail traffic approaching the grade crossing.

Guidance:

06 Emergency Notification signs should be retroreflective.

07 Emergency Notification signs should be oriented so as to face highway vehicles stopped on or at the grade crossing or on the traveled way near the grade crossing.

08 At station crossings, Emergency Notification signs or information should be posted in a conspicuous location.

09 Emergency Notification signs mounted on Crossbuck Assemblies or signal masts should only be large enough to provide the necessary contact information. Use of larger signs that might obstruct the view of rail traffic or other highway vehicles should be avoided.

CPUC General Order 75-D Section 5

5 IDENTIFICATION OF PUBLIC AT-GRADE CROSSINGS

5.1 Each public at-grade crossing, or publicly used private at-grade crossing (as determined by the Commission or a court of competent jurisdiction), except those listed in Section 5.2, shall have the following information posted conspicuously and legibly at the crossing by the entity responsible for its maintenance:

- a) The Commission and/or U.S. Department of Transportation assigned number that uniquely identifies the at-grade crossing; and
- b) Emergency notification telephone number.

5.2 *Exceptions to posting requirements.* Compliance with Section 5.1 is not required at at-grade crossings of light rail transit systems not equipped with Standard automatic warning devices as defined in Section 6.