

STATE OF CALIFORNIA

Memorandum

Date: May 3, 2022

To: Local Agencies, Dispatching Railroads, and Transit Agencies

From: CPUC Rail Safety Division, Rail Crossings and Engineering Branch

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

Introduction

The purpose of this memorandum is to identify requirements and guidelines for the design and placement of Emergency Notification System (ENS) signs.¹ ENS signs provide information to road users so that they can notify the railroad company about emergencies or malfunctioning traffic control devices at highway-rail crossings.



Example of ENS Sign I-13

Federal Requirements

49 Code of Federal Regulations (CFR) Part 234.309 identifies the information that must be displayed and the sign size and other physical features.

The information for the sign, at a minimum, shall include:

- A toll-free telephone number established to receive reports.
- An explanation of the purpose of the sign (e.g., "Report emergency or problem to _____").

¹ This memorandum is provided to the public on the Commission's website for guidance and as a reference to relevant regulatory provisions. However, the public, including local agencies, railroads, and transit agencies, should not rely on the memorandum to demonstrate compliance and must seek their own legal counsel.

- The U.S. Department of Transportation National Crossing Inventory Number (DOT number) assigned to that crossing.

The sign size and other physical features shall:

- Measure at least 12 inches wide by 9 inches high.
- Be retroreflective.
- Have legible text with minimum character height of 1 inch.
- Have a white text, blue background, white border, except that the U.S. DOT National Crossing Inventory may be black text on a white background.

49 CFR Part 234.311 requires the dispatching railroad to place and maintain a sign on each approach to a highway-rail or pathway grade crossing,² with some exceptions, such as a farm grade crossing or at a certain rail yard, port, or dock facility. Federal law also requires the responsible railroad to maintain the sign so that the sign:

- Is conspicuous to users of the roadway or pathway by day and night.
- Does not obstruct any other signs or traffic control devices.
- Does not limit the view of a train approaching the highway-rail or pathway grade crossing.
- If mounted on a post, has supports that are crashworthy, such as a breakaway or yielding post.
- Be installed on each vehicular approach to the crossing.

In addition, 49 CFR Part 234.311 requires the responsible railroad to repair or replace a sign no later than 30 calendar days from the time of detection when it is discovered by the responsible railroad to be missing, damaged, or in any other way unusable to vehicular or pedestrian traffic.

49 CFR Part 234.317 provides specific compliance dates:

- By September 1, 2015, for railroads without an ENS of any kind in place on August 13, 2012.
- By March 1, 2014, for railroads with nonconforming ENS telephone service.

² 49 CFR Part 234.5 defines a pathway grade crossing as a pathway that crosses one or more railroad tracks at-grade and is: (1) explicitly authorized by a public authority or a railroad; (2) dedicated for the use of non-vehicular traffic; and (3) not associated with a public highway, road, or street, or a private roadway.

- By September 1, 2015, and September 1, 2017, depending on the size of the sign and lettering.

A Federal Railroad Administration guide³ notes that pathways that are contiguous with, or separate but adjacent to, highway-rail crossings are presumed to be part of the highway-rail crossing and are not considered separate crossings. However, pathways that are located more than 25 feet from the location where a highway, road, or street intersects with one or more railroad tracks are generally considered to be separate pathway crossings and would require a separate DOT number and ENS sign.

State Requirements

CPUC General Order (GO) 75-D, Section 5.1, requires each public at-grade crossing, or publicly used private at-grade crossing (except at at-grade crossings of light-rail transit (LRT) systems not equipped with standard automatic warning devices), to have the following information posted conspicuously and legibly at the crossing by the entity responsible for its maintenance:

- The CPUC identification number and/or DOT number that uniquely identifies the at-grade crossing.
- An emergency notification telephone number.

The California Manual on Uniform Traffic Control Devices (CA MUTCD), 2014 Revision 6 Edition, identifies an ENS sign as an “I-13” sign and requires the signs to conform to the following:

- 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.
- Include the CPUC identification number and/or DOT number and an emergency contact telephone number.
- Be installed and maintained by the railroad or LRT agency at each public grade crossing and permits the emergency notification information to be omitted at a highway-LRT grade crossing not equipped with automatic warning devices such as automatic flashing light signals and gates.
- Have a white legend and border on a blue background.

³ [FRA Guide for Preparing U.S. DOT Crossing Inventory Forms, July 2016.](#)

- Be positioned to not obstruct any traffic control devices or limit the view of rail traffic approaching the grade crossing.
- Be retroreflective.
- Be oriented to face highway vehicles stopped on or at the grade crossing or on the traveled way near the grade crossing.
- Be posted in a conspicuous location at station crossings.
- If mounted on crossbuck assemblies or signal masts, be large enough to provide the necessary contact information, and not so large that it might obstruct the view of rail traffic or other highway vehicles.
- Be placed at all LRT crossings along semi-exclusive alignments and at designated locations only when the LRT alignment 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.⁴

CPUC Rail Safety Division Guidelines

To provide visibility for both vehicles and pedestrians in a variety of situations, ENS signs, for typical installations, should:

- Be placed on a warning device mast along the right side of each roadway approach to the track.
- Be oriented to face the same direction as other signs on the warning device mast.
- Include additional signs at for pedestrians approaching the crossing from the sidewalk or at off-quadrants, to maintain conspicuity of signs.
- Permit exclusive LRT crossings to use only the CPUC identification number.
- Include ENS signs on both sides of a one-way road in certain situations.
- Include the same federal DOT# and telephone number on all ENS signs for crossings jointly used by multiple railroads or rail transit agencies.

For additional information or questions, contact your assigned territory Utilities Engineer, at [Rail Crossings Contact Information](#) or <https://www.cpuc.ca.gov/industries-and-topics/rail-safety/rail-crossings-and-engineering/rail-crossings-contact-information>.

⁴ CA MUTCD Section 8B.18.

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 2014 Revision 6 Section 8B.18

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 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.

CPUC General Order 143-B Section 9.04(b) Alignment Classification

b. Semi-Exclusive:

- (1) Fully exclusive right-of-way with at-grade crossings, protected between crossings by a fence or substantial barrier, if appropriate to the location.
- (2) Within street right-of-way but protected by six-inch high curbs and safety fences between crossings. The safety fences should be located outside the tracks.

(3) Within street right-of-way but protected by six-inch high curbs between crossings. A safety fence may be located between tracks.

(4) Within street right-of-way, but protected by mountable curbs, striping, or lane designation.