



# Federal Aviation Administration

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## Memorandum

Date: September 24, 2015

To: Manager, Boeing Aviation Safety Oversight Office, ANM-100B

From: Manager, Transport Airplane Directorate, ANM-100

Prepared by: Rene Buendia, ANM-106B

Subject: INFORMATION: Equivalent Level of Safety (ELOS) Finding for Emergency Exit Locator and Marking Signs on Models 737-600, 737-700, and 737-800 airplanes, FAA Project No. AT0328SE-T

ELOS Memo #: AT0328SE-T-C-3

Regulatory Ref: §§ 21.21(b)(1) and 25.812(b)(1)(i)

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This memorandum informs the certificate management aircraft certification office of an evaluation made by the Transport Airplane Directorate (TAD) on the establishment of an equivalent level of safety (ELOS) finding for Models 737-600, 737-700, and 737-800 airplanes.

### Background

Title 14, Code of Federal Regulations (14 CFR) 25.812(b)(1)(i) requires that the letters on the emergency exit locator signs have a height to stroke-width ratio of not more than 7:1 nor less than 6:1. The Boeing Company has submitted exit signs that do not comply with the required stroke width.

The emergency exit locator and exit marking signs are installed on the cabin ceiling along the main aisle and next to each exit to aid passengers in locating the emergency exits. The height to stroke-width ration varies on portions of the exit sign letters with some strokes wider and others narrower than the requirements of § 25.812. On the signs with widely spaced letters (e.g., BAC27NPA0368 "Exit") the ratio varies from 6.9:1 to 5.6:1. The other proposed signs have the same lettering as the above example but are of different dimensions or contain arrows.

### Applicable regulation(s)

§ 25.812(b)(1)(i)

**Regulation(s) requiring an ELOS finding**

§ 25.812(b)(1)(i)

**Description of compensating design features or alternative standards which allow the granting of the ELOS finding (including design changes, limitations or equipment need for equivalency)**

The compensating factor that provides an equivalent level of safety for the regulations not met is as follows:

The readability of the emergency exit locator and exit markings signs by passengers is not affected by the slight variation in stroke-width. Section 25.812 does not take letter spacing into account. Varying stroke-width prevents crowding of the letters in the case of narrow spacing.

**Explanation of how design features or alternative standards provide an ELOS to that intended by the regulation**

The proposed signs have a legibility equivalent to that required by the regulations.

**FAA approval and documentation of the ELOS finding**

The FAA has approved the aforementioned ELOS finding in project Issue Paper C-3, titled Emergency Exit Locator and Marking Signs. This memorandum provides standardized documentation of the ELOS finding that is non-proprietary and can be made available to the public. The TAD has assigned a unique ELOS memorandum number (see front page) to facilitate archiving and retrieval of this ELOS finding. This ELOS memorandum number should be listed in the type certificate data sheet under the Certification Basis section in accordance with the statement below:

Equivalent Level of Safety Findings have been made for the following regulation(s):

§ 25.812(b)(1)(i) Emergency Exit Signs  
(documented in TAD ELOS Memorandum AT0328SE-T-C-3 )]

Original Signed by

*Suzanne Masterson*

September 25, 2015

Transport Airplane Directorate,  
Aircraft Certification Service

Date

ELOS Originated by Boeing Aviation Safety Oversight Office:	Rene Buendia	ANM-106B
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