

ENGINEERING DIRECTIVE

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CHIEF ENGINEER

October 2017 Construction Standard Details

The purpose of this Engineering Directive is to formally issue the October 2017 online edition of the [MassDOT Highway Division Construction Standard Details](#) for use on MassDOT Highway Division projects. This edition includes the new standard details for W-Beam Guardrail and Guardrail End Terminals as described in E-17-001, as well as other changes listed below.

The *October 2017 Construction Standard Details* supersede and replace the *December 2016 Construction Standard Details* previously issued under Engineering Directive E-16-005.

The *October 2017 Construction Standard Details* shall be referenced in the plans and other contract documents of all projects advertised after October 21, 2017.

In continuance of the procedure established in 2012, the *October 2017 Construction Standard Details* is available in electronic format (PDF) on MassDOT's public website and on MassDOT's internal TransNET. MassDOT will not distribute printed copies of the *October 2017 Construction Standard Details*. MassDOT will also handle all future updates to the *Construction Standard Details* by posting complete, current, online PDF versions of the document for use until further notice. In addition, MassDOT will post superseded PDF versions of the *Construction Standard Details* online for public reference. The Highway Design Engineer will retain printed copies of each superseded version of the document for archiving purposes.

New Standard Details

- 400.1.0 General Notes
- 400.1.1 Guardrail, TL-3
- 400.1.2 Guardrail, TL-2
- 400.1.3 W-Beam & Thrie Beam Panel Details
- 400.1.4 Post & Offset Block Details
- 400.1.5 Guardrail Mounting Heights and Post Depths
- 400.1.6 Guardrail Sections
- 400.2.1 Approach Geometry: Single Faced
- 400.2.2 Approach Geometry: Adjacent to Curb & Double Faced
- 400.2.3 Layout to Single Faced Rigid Barrier or Bridge Rail
- 400.2.4 Layout to Double Faced Rigid Barrier – Trailing Ends
- 400.3.1 Transition to NCHRP 350 Guardrail
- 400.3.2 Transition to Rigid Barrier (Single Faced)

- 400.3.3 Transition to Rigid Barrier (Double Faced)
- 400.3.4 Transition to Rigid Barrier Details
- 400.3.5 Transition to Bridge Rail (Back of Sidewalk)
- 400.3.6 Transition to Bridge Rail (Face of Curb)
- 400.3.7 Transition to Bridge Rail Details
- 400.4.1 Trailing Anchorage
- 400.4.2 Trailing Anchorage Component Details
- 400.5.1 Special Post Designs

Superseded Standard Details

- E 401.1.0 Steel W Beam Highway Guard
- E 401.1.1 Steel W Beam Highway Guard Sections
- E 401.2.0 Installation for Steel W Beam Highway Guard for Sign Protection
- E 401.2.1a Steel W Beam Highway Guard Buried in Back-Slope Plan View
- E 401.2.1b Steel W Beam Highway Guard Buried in Back-Slope Post Location
- E 401.2.1c Steel W Beam Highway Guard Buried in Back-Slope Post Location
- E 401.2.1d Steel W Beam Highway Guard Buried in Back-Slope Anchorage Details
- E 401.2.1e Steel W Beam Highway Guard Buried in Back-Slope End Anchorage Details for Posts 1, 2, and 3
- E 401.3.0 Table of Offsets for Highway Guard Flared Ends
- E 401.5.0 Steel Thrie Beam Highway Guard Rail Details
- E 401.5.1 Bridge Rail to Highway Guard Transition
- E 401.5.2 Bridge Rail to Highway Guard Transition – Details
- E 401.5.3 Steel Thrie Beam Highway Terminal Connector
- E 401.5.4 Bridge Rail to Highway Guard Collapsing Tube
- E 401.5.5 Bridge Rail to Highway Guard Transition at Sidewalk
- E 401.5.6 Bridge Rail to Highway Guard Transition at Sidewalk – Sections
- E 401.6.0 Steel Thrie Beam Highway Guard Details
- E 401.6.1 Steel Highway Guard Transition Beam
- E 401.7.0 Steel W Beam Highway Guard Rail Details
- E 401.8.0 Steel W Beam Highway Guard Posts and Terminal Section Details
- E 401.10.0 Steel Beam Highway Guard with Wood Post
- E 401.11.0 Special Base Anchor for Highway Guard Installation on Concrete
- E 401.12.0 Modified Highway Guard Post Installation Where Standard Embedment is Not Feasible
- E 401.16.0 Steel Thrie Beam Highway Guard Median – Barrier
- E401.20.0 Offset Blocks for Steel W Beam Highway Guard
- E 401.21.0 Offset Blocks for Steel Thrie Beam Highway Guard
- E 402.2.0 Steel W Beam Highway Guard Terminal Connections on Existing Bridge W-Rail Leading End at Abutments and End Posts
- E 402.3.0 Installation of Steel W Beam Highway Guard (Trailing End) at Existing Bridge Abutments and End Posts (W-Rail)
- E 402.4.0 Masonry Bracket for Steel W Beam Highway Guard on Abutments and End Posts (Trailing End)
- E 402.5.0 Masonry Bracket for Steel W Beam Highway Guard on Abutments and End

- E 402.7.0 Posts (Trailing End)
Steel Thrie Beam Highway Guard Terminal Connectors on an Existing Bridge Leading End at Abutment and End Post
- E 402.8.0 Steel Thrie Beam Highway Guard (Trailing End) at Existing Bridge Abutments and End Posts
- E 402.9.0 Masonry Bracket for Steel Thrie Beam Highway Guard on Abutments and End Posts (Trailing End)
- E 402.9.1 Guardrail Retrofit on Bridges (Plan View)
- E 402.9.2 Guardrail Retrofit on Bridges (Details)
- E 402.9.3 Guardrail Retrofit on Bridges (Notes)