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 In addition, MassDOT will post superseded PDF versions of the Construction Standard Details online for public reference. The Highway Design Engineer will retain printed copies of each superseded version of the document for archiving purposes.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Superseded Standard Details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
- E 401.20.0 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 Posts (Trailing End)
Posts (Trailing End)

• E 402.7.0  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)