



To: <p style="text-align: center;">SUPERSEDED BY EB 10-021 EFFECTIVE 1/6/11</p>		<i>New York State</i> <i>Department of</i> <i>Transportation</i> ENGINEERING INSTRUCTION	EI 03-036
Title: TYPE 0 DESIGNATION FOR 'BURIED BOX BEAM TERMINALS'			
Distribution: <input type="checkbox"/> Manufacturers (18) <input type="checkbox"/> Surveyors (33) <input checked="" type="checkbox"/> Main Office (30) <input checked="" type="checkbox"/> Consultants (34) <input type="checkbox"/> Local Govt. (31) <input type="checkbox"/> Contractors (39) <input checked="" type="checkbox"/> Regions/Agencies (32) <input type="checkbox"/> _____ ()	Approved: <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  <hr/> P. J. Clark, Deputy Chief Engineer, Design Division </div> <div style="text-align: right;"> <u>10/14/03</u> Date </div> </div>		

ADMINISTRATIVE INFORMATION:

- This EI is effective with projects submitted for the letting of May 6, 2004.
- No issuances are superseded.
- The new designation will appear in the next revision of Standard Sheet M606-3. This designation will also be identified in the next revision of Chapter 10 of the Highway Design Manual.

PURPOSE: The purpose of this EI is to designate the terminal arrangement depicted on M606-3 currently called out as "Typical Treatment for Buried Ends - Rock or Soil" as the Type 0 End Terminal.

TECHNICAL INFORMATION: There is no change to policy or construction details as a result of this action. The "buried" end option of terminating the box beam guide rail (detailed in the middle of Standard Sheet M606-3R1) is now designated as the Type 0 End Terminal. Design Guidance for Box Beam End Sections appears in §10.2.5.4 of the Highway Design Manual.

In reviewing project designs, it was noticed that Type I terminals were sometimes used in situations where a buried end would have been a more appropriate choice. This can lead to situations, such as when crossing a ditchline, where, in order to accommodate the turned-down portion as it contacts the backslope, the rail is placed at too great a height, potentially leading to a 'clotheslining' configuration wherein an errant vehicle in the ditchline might have the guide rail come over its hood and strike the windshield. Alternately, the inappropriate selection of a Type I terminal has, on rare occasions, resulted in some or most of the turned-down portions of a Type I terminal being buried into the slope. Depending on the amount of flare, the burial of portions of a Type I terminal may provide too much fixity to the flared-back portion of the guide rail.

The Type 0 designation is intended to make it easier for designers to specify that particular terminal arrangement when it is appropriate to do so. In general, the Type 0 End Terminal should be the selection when box beam guide rail is carried to a backslope.

There is no separate item provided for the Type 0 End Terminal, as it has no significant special fabrication requirements or installation differences to distinguish it from the rest of the run of guide rail.

A Type 0 terminal may be flared away from the road at any angle up to the angle indicated for Type I terminals. The angle and curvature should be selected to accommodate field conditions. However, flatter flare rates are preferred as they will minimize impact angles.

IMPLEMENTATION:

DQAB will include the designation in a future revision to Standard Sheet M606-3 Box Beam Guide Rail and the next revision to Chapter 10 of the Highway Design Manual.

Designers now may specify the "buried" end terminal for box beam guide rail by including the Type 0 End Terminal designation on the plans and including a copy of this instruction in the project files for documentation purposes until an EB issuing a revision to Standard Sheet M606-3 is effected. Designers should mark their copies of Standard Sheet M606-3 to indicate the Type 0 designation.

TRANSMITTED MATERIALS: Nothing is transmitted with this instruction.

BACKGROUND: The only change to Standard Sheet M606-3 is the addition of the "Type 0 End Terminal" to the title of "buried end" detail. Given the very limited nature of this change and the potential safety implications of inappropriate terminal selection, it was decided to issue this Instruction without a concurrent reissuing of the target documents.

REFERENCES: Highway Design Manual 10.2.5.4

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