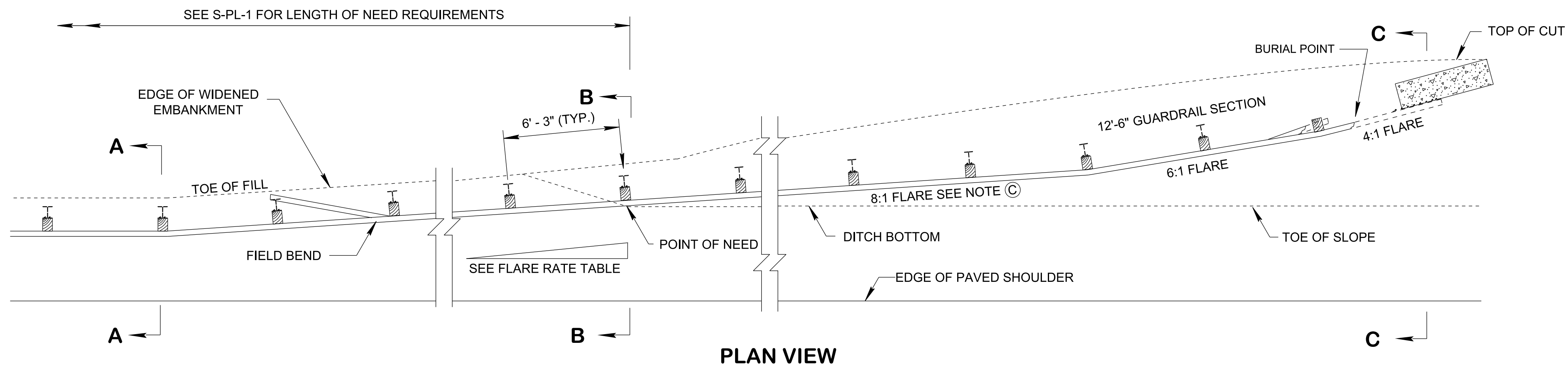
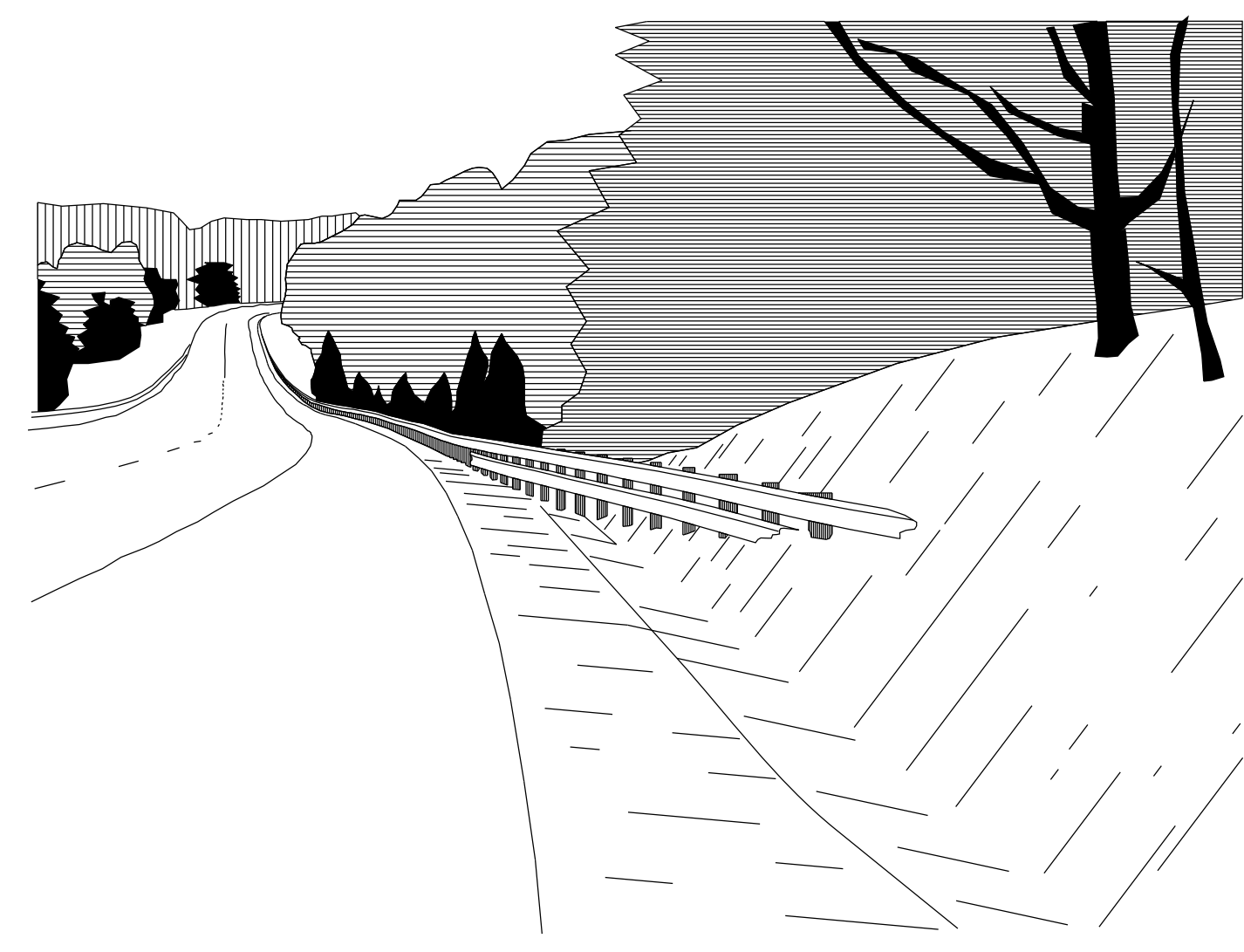


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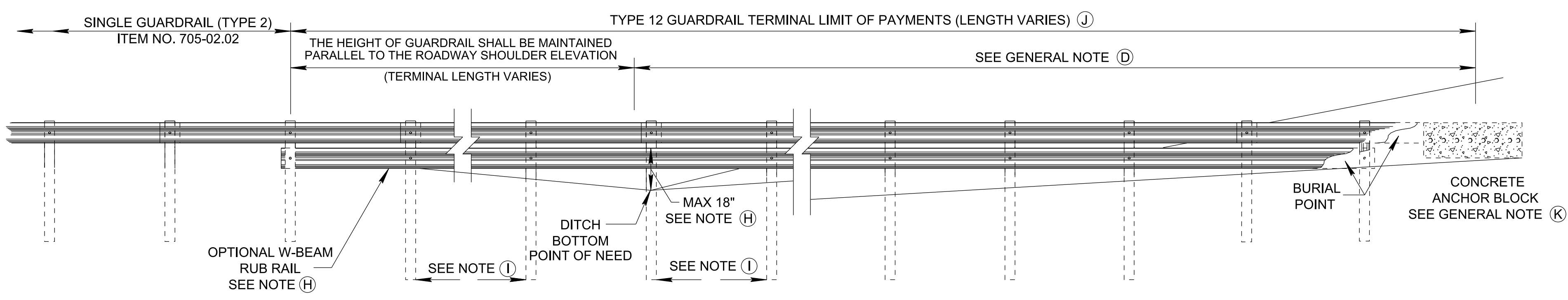
REV. 03-16-17: UPDATED REFERENCE TO STD. DWG. FROM "S-GRP-1" TO "S-PL-1". CORRECTED REF. TO STD. DWG. FROM "RD-S-11" TO "RD01-S-11" AND "RD-S-11A" TO "RD01-S-11A".  
 REV. 06-28-19: REVISED FLARE RATES, NOTE (C) AND RUB RAIL LIMITS. MOVED NOTE TO DESIGNER TO GENERAL NOTE NO. (L). REDREW SHEET.



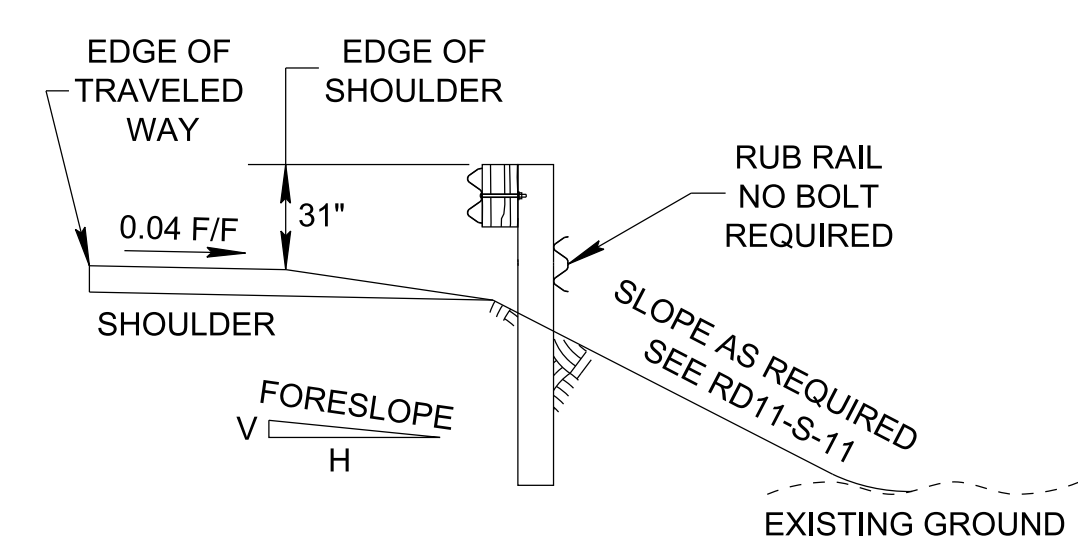
PLAN VIEW



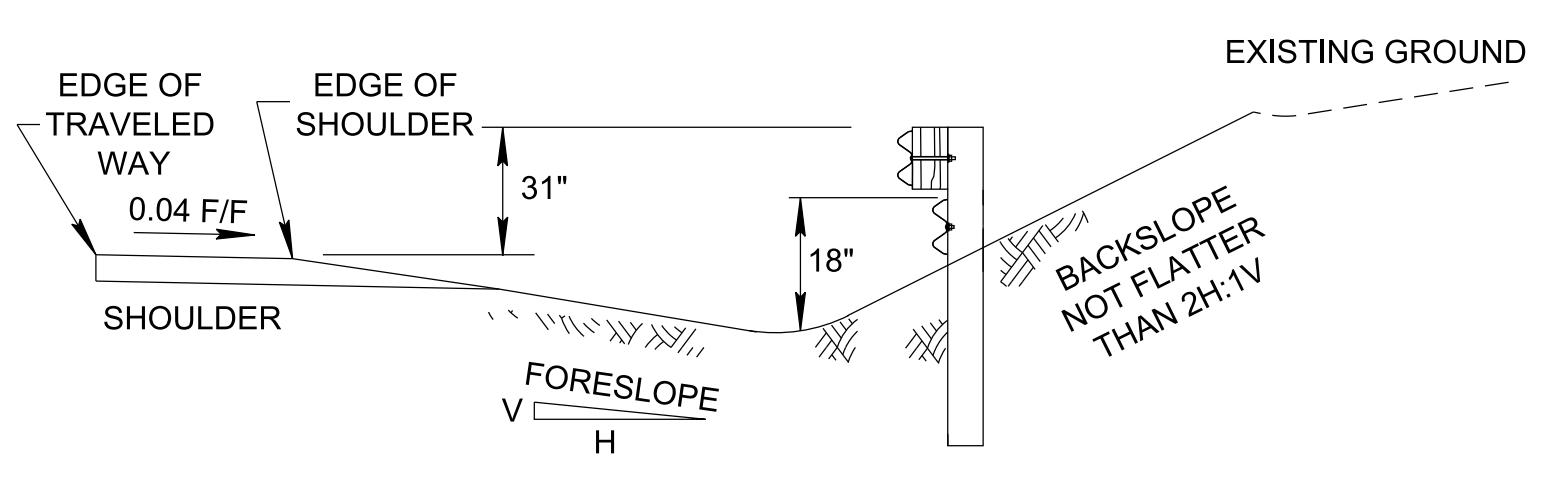
PERSPECTIVE VIEW



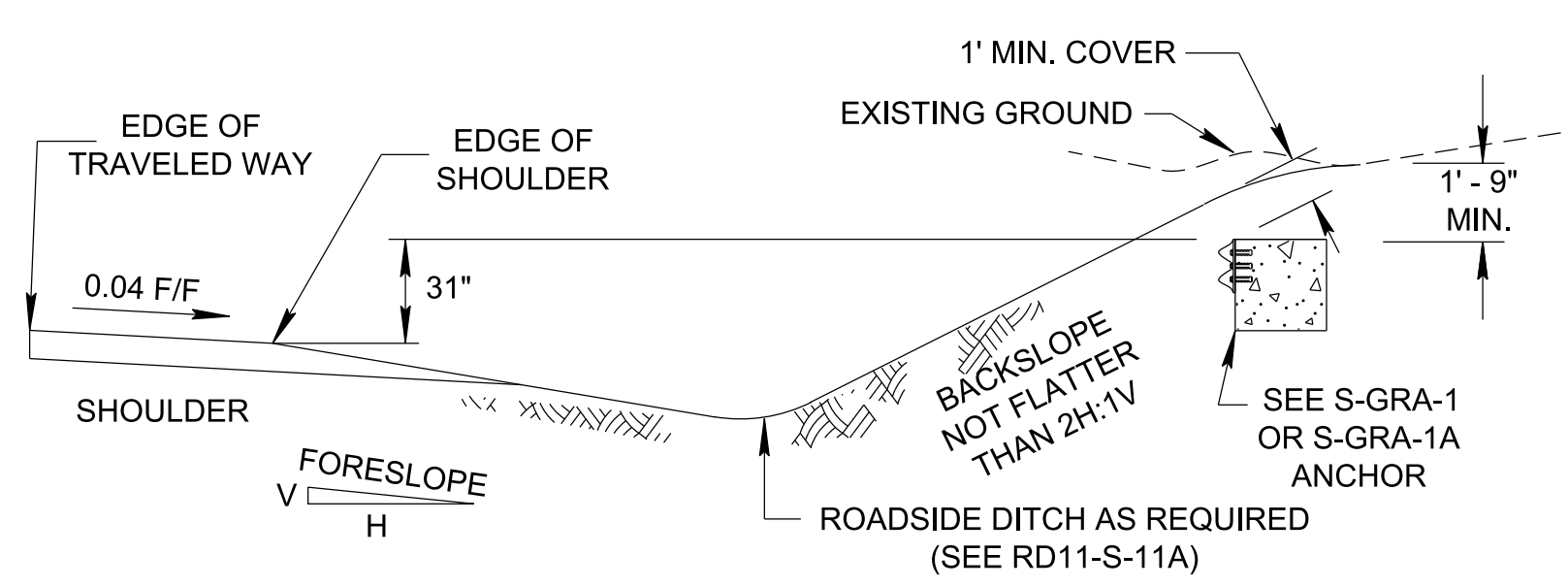
ELEVATION VIEW (ALONG GUARDRAIL)



SECTION A-A



SECTION B-B



SECTION C-C

FLARE RATE TABLE	
RATE	POSTED SPEED (mph)
15:1	70
14:1	60
11:1	50
8:1	40
7:1	30

**GENERAL NOTES**

- (A) THE TYPE 12 GUARDRAIL TERMINAL SHOULD BE USED ONLY WITH 2:1 OR STEEPER BACKSLOPE. IF BACKSLOPE IS FLATTER, THE FULL DESIGN LENGTH OF NEED OF THE BARRIER MUST BE PROVIDED.
  - (B) THE FILL SLOPE MUST NOT BE ALLOWED TO SPILL UNDER THE RAIL THROUGHOUT THE LENGTH OF NEED BECAUSE THIS EFFECTIVELY DECREASES THE RAIL HEIGHT AND ALLOWS VEHICLE OVERRIDE RATHER THAN CONTAINMENT AND REDIRECTION.
  - (C) THE FLARE RATE OF THE GUARDRAIL IS STEEPENED TO 8:1 AFTER CROSSING THE BOTTOM OF DITCH.
  - (D) IF MIN. 1' COVER OVER THE CONCRETE BLOCK CANNOT BE ACHIEVED, THE ELEVATION OF GUARDRAIL MAY BE LOWERED AT A 10:1 SLOPE RATE AFTER CROSSING THE DITCH BOTTOM.
  - (E) THE CONTRACTOR SHALL CONSTRUCT FORESLOPES AS PART OF THE INITIAL GRADING OPERATIONS AS SHOWN ON THIS STANDARD DRAWING AFTER FIELD VERIFICATION OF HAZARD LOCATION AND ENGINEER'S APPROVAL.
  - (F) ONLY USE TYPE 38 OR TYPE 21 (WHERE APPROPRIATE) IF SUITABLE BACKSLOPE IS NOT AVAILABLE.
  - (G) THE DESIGNER SHALL INCORPORATE THE DETAILS SHOWN ON THIS DRAWING IN THE RIGHT-OF-WAY AND CONSTRUCTION PLANS AS WELL AS THE ROADWAY CROSS-SECTION SHEETS.
  - (H) ADD W-BEAM RUB RAIL WHENEVER THE CLEARANCE FROM THE BOTTOM OF THE W-BEAM TO THE GROUND LINE EXCEEDS 18 INCHES.
  - (I) FOR THE RUB RAIL SECTION USE 8' LONG POSTS.
  - (J) UNIT PRICE FOR ITEM NO. 705-04.02 GUARDRAIL TERMINAL (TYPE 12) PER EACH SHALL INCLUDE COSTS OF FURNISHING AND INSTALLING ALL COMPONENTS AS SHOWN.
  - (K) SEE S-GRA-1 FOR DETAILS OR S-GRA-1A ALTERNATE INSTALLATION.
- NOTE TO DESIGNER**
- (L) DO NOT USE WITHOUT REFERENCING S-GRA-1 OR S-GRA-1A.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED

STATE OF TENNESSEE  
 STANDARD DRAWING  
 DEPARTMENT OF TRANSPORTATION

**TYPE 12 GUARDRAIL TERMINAL BURIED-IN-BACKSLOPE**

NOT TO SCALE

07-11-2013

S-GRT-1