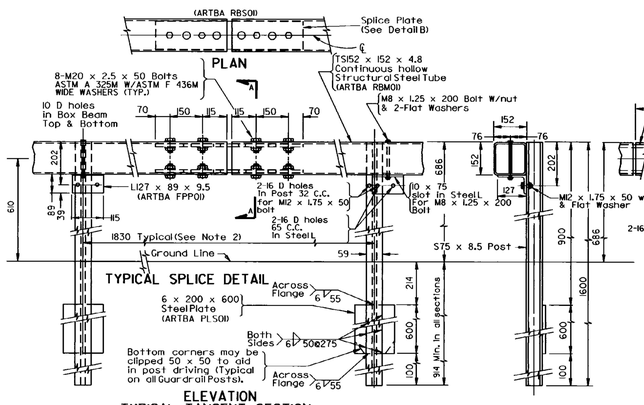
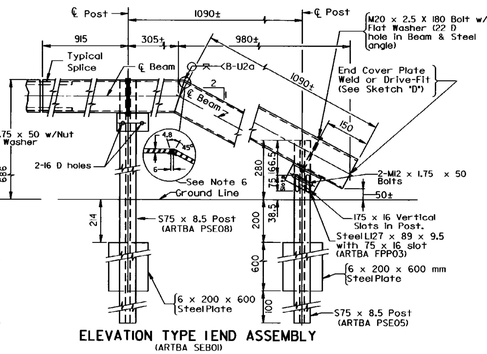
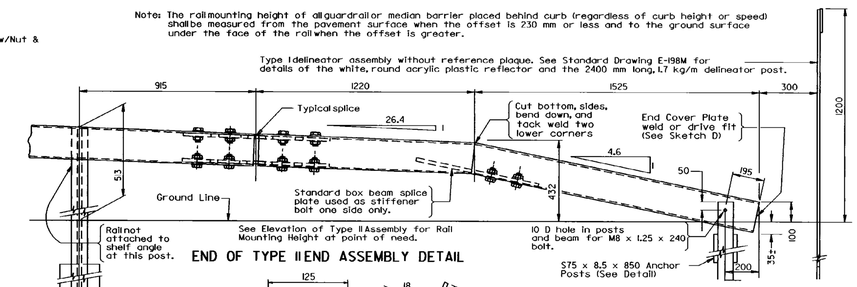
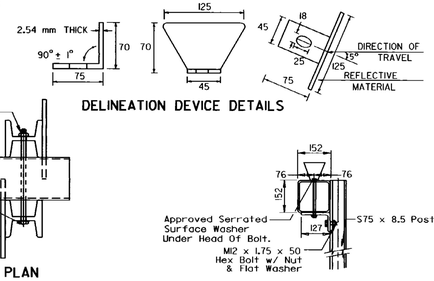


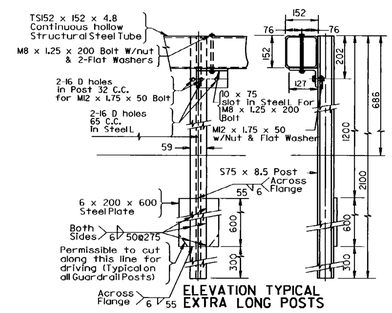


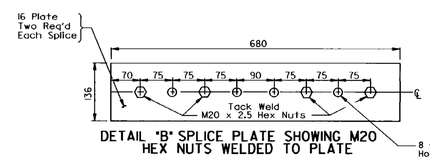
Note: The rail mounting height of all guardrail or median barrier placed behind curb (regardless of curb height or speed) shall be measured from the pavement surface when the offset is 230 mm or less and to the ground surface under the face of the rail when the offset is greater.

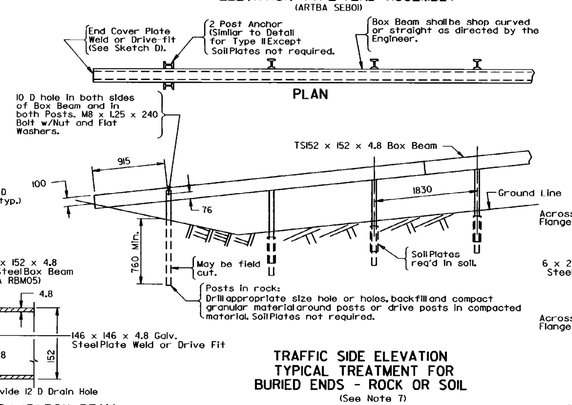
Type I delineator assembly without reference plaque. See Standard Drawing E-198M for details of the white, round acrylic plastic reflector and the 2400 mm long, 1.7 kg/m delineator post.

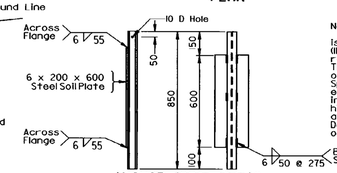


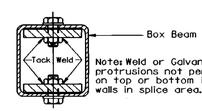


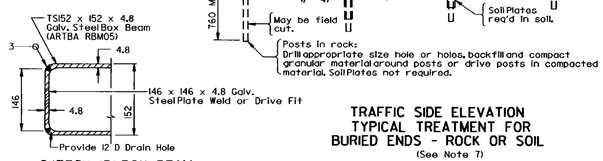


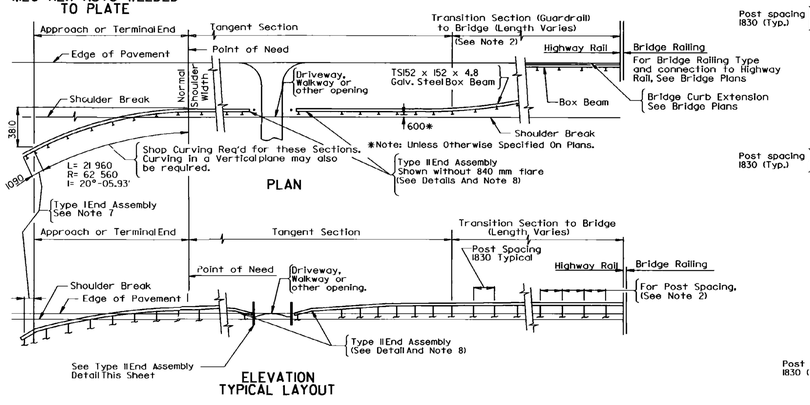


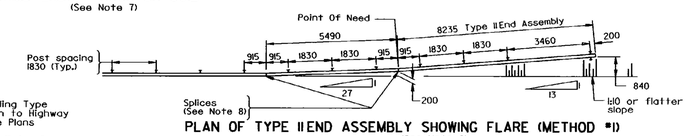


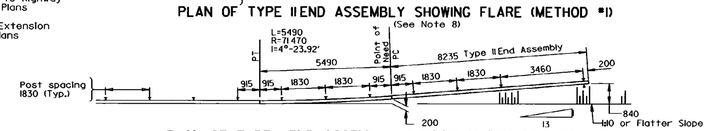


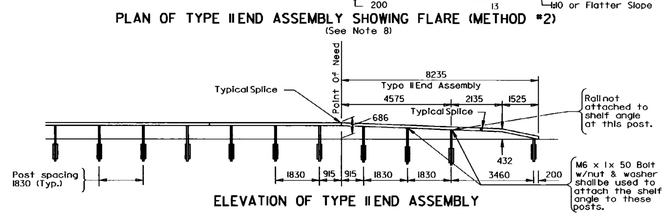












GENERAL NOTES

1. POST SPACING SHALL BE 1830 mm EXCEPT AS OTHERWISE NOTED ON PLANS. PAYMENT FOR BOX BEAM GUARDRAIL AND ANCHORAGE TERMINAL WILL BE MADE IN ACCORDANCE WITH SECTION 621OF THE VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
2. SEE BRIDGE PLANS FOR GUARDRAIL TO BRIDGE RAIL TRANSITION DETAILS, REDUCED POST SPACING CRITERIA AND PAY ITEMS FOR TRANSITIONS AND CONNECTIONS TO BRIDGE RAIL.
3. FOR MATERIAL REQUIREMENTS AND CONSTRUCTION DETAILS, SEE SECTION 728 OF THE VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
4. THE LINE OF BOX BEAM GUARDRAIL, WHEN COMPLETED, SHALL PRESENT A SMOOTH AND PLEASING GRADE LINE IN BOTH HORIZONTAL AND VERTICAL PLANES.
5. RAIL ALIGNMENT SHALL BE STRAIGHT AT SPLICES. NO LATERAL BENDS PERMITTED WITHIN THE SPLICE. THIS DOES NOT PRECLUDE THE SHOP FABRICATION OF BENT SPLICES, CURVED BOX BEAM GUARDRAIL WITH A RADIUS OF 220 m OR LESS SHALL BE SHOP WORKED TO THE REQUIRED CURVATURE.
6. STEEL BACKUP BAR THAT IS USED TO CONTROL WELD PENETRATION AT JOINT MAY REMAIN IN PLACE.
7. THE 21 960-mm TERMINAL ENDS SHOULD BE TERMINATED WITH A TYPE I END ASSEMBLY EXCEPT WHERE TERMINATED IN A BACK SLOPE. THE TYPICAL TREATMENT FOR BURIED ENDS SHOULD BE USED TO TERMINATE IN A BACK SLOPE AND MAY BE INCLUDED AS PART OF THE 21 960-mm APPROACH AND TERMINAL ENDS. THE TYPE I APPROACH END OFFSET SHOULD BE AT LEAST EQUAL TO THE CLEAR ZONE (AS MEASURED FROM THE EDGE OF TRAVELED WAY). IN NO CASE, HOWEVER, WILL THE END OFFSET BE LESS THAN THAT SHOWN ON THE PLANS.
8. THE TYPE II END ASSEMBLY SHALL BE USED AT DRIVEWAYS, SIDEWALKS AND OTHER RESTRICTED AREAS WHERE THE 21 960-mm APPROACH OR TERMINAL END CANNOT BE ACCOMMODATED. LOCATIONS OF THE TYPE II END ASSEMBLY SHALL BE GIVEN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE TYPE II END ASSEMBLY SHALL BE FLARED BACK AS SHOWN IN THE DETAILS. THE CONTRACTOR HAS THE OPTION OF USING EITHER METHOD #1 OR METHOD #2 TO ACHIEVE THE FLARE. WHEN METHOD #2 IS SELECTED, THERE WILL BE NO ADDITIONAL PAYMENT FOR THE RAIL CURVATURE. WHEN RESTRICTIVE CONDITIONS DO NOT PERMIT THE STANDARD SET BACK OF 840 mm, THE FLARE RATE SHALL BE FLATTENED TO ACCOMMODATE THE REDUCED SET BACK. TO REDUCE THE FLARE USING METHOD #1 FIRST FLATTEN THE FLARE RATE OF THE 8235-mm END ASSEMBLY. ONCE THE 8235-mm END ASSEMBLY AND THE ADJACENT 5490-mm BOX BEAM ELEMENT IS IN A STRAIGHT LINE FURTHER REDUCTION OF THE SET BACK IS ACHIEVED BY FLATTENING THE FLARE OF THE ENTIRE 5490-mm SECTION. TO REDUCE THE FLARE RATE AND SET BACK USING METHOD #2 REDUCE THE CURVE RATE IN THE CURVED 5490-mm RAIL ELEMENT. FLARE AND SET BACK FOR METHOD #1 IS ACCOMPLISHED BY UTILIZING PLAY IN THE SPLICE PLATES. IF SPLICE PLATES WILL NOT ACCOMMODATE THE DESIRED FLARE AND OFFSET, THE CORNERS AND/OR WIDTH OF THE PLATE SHALL BE REDUCED BY GRINDING AND THE GALVANIZING FIELD REPAIRED PER THE VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
9. FOR DESCRIPTION AND SPECIFICATION OF PART IDENTIFIED "ARTBA..." SEE LATEST REPORT PREPARED AND APPROVED BY THE AASHTO-AGC-ARTBA JOINT COOPERATIVE COMMITTEE "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE".
10. ALL POSTS IN A GIVEN RUN TO BE OF THE SAME TYPE.

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS (mm) EXCEPT WHERE NOTED.

REVISIONS AND CORRECTIONS	APPROVED		
JUNE 13, 1997 - ORIGINAL APPROVAL DATE	DIRECTOR OF ENGINEERING DESIGN ENGINEER	BOX BEAM GUARD RAIL	VERMONT AGENCY OF TRANSPORTATION Metric STANDARD G-1bM