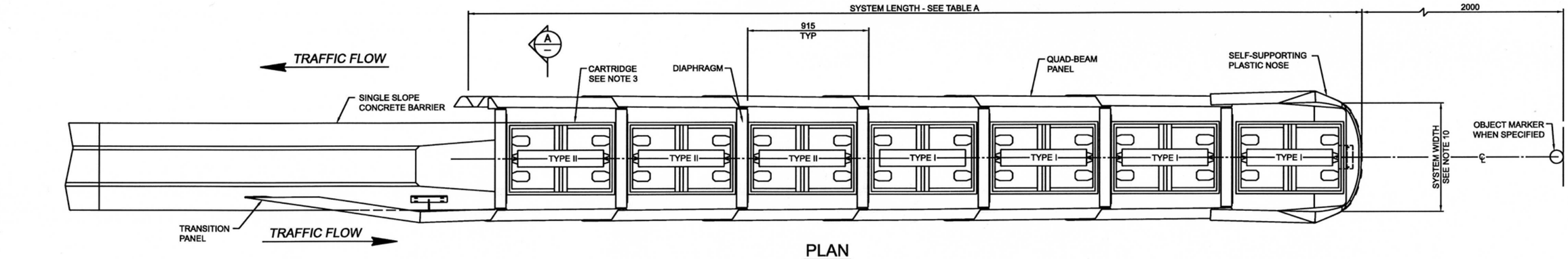
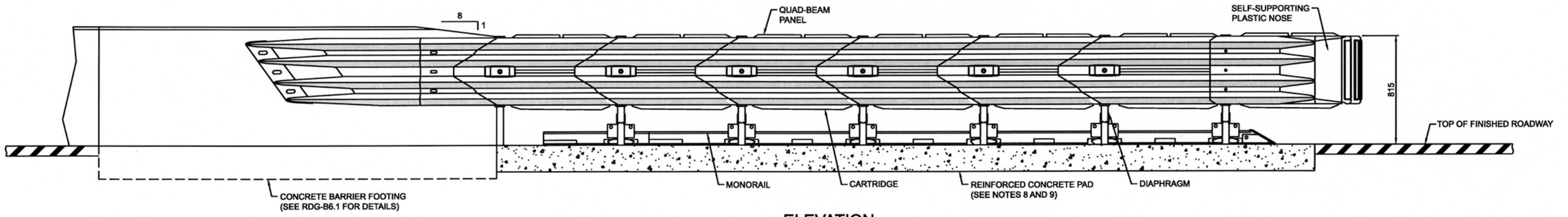
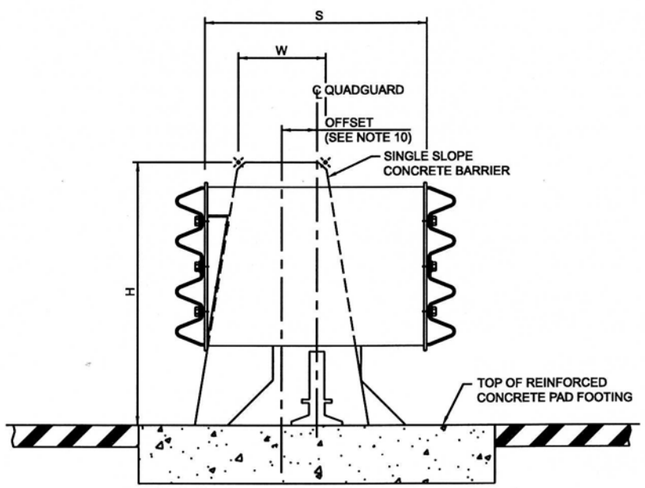


PLAN



ELEVATION



SECTION A

NOTES:

1. THE QUADGUARD SYSTEM DEPICTED ON THIS DRAWING IS PROPRIETARY TO ENERGY ABSORPTION SYSTEMS, INC. THE SYSTEM SHOWN IS FOR A PERMANENT APPLICATION WITH THE SINGLE SLOPE CONCRETE BARRIER PROVIDING BACK-UP.
2. A TENSION STRUT BACKUP MAY BE USED AS PER THE MANUFACTURER'S INSTRUCTIONS WHEN A CONCRETE BACK-UP IS NOT PROVIDED DIRECTLY BEHIND THE QUADGUARD SYSTEM. FOR EXAMPLE, WHEN THE END OF THE CONCRETE BARRIER IS TRANSITIONED USING THRIE BEAM AND/OR W-BEAM BEFORE TERMINATING WITH THE QUADGUARD SYSTEM.
3. SEE TABLE A FOR NUMBER OF CARTRIDGE TYPES REQUIRED BASED ON POSTED SPEED.
4. THE QUADGUARD SYSTEM SHALL NOT BE PLACED DIRECTLY BEHIND A RAISED CURB.
5. THE APPROACH AREA IN FRONT OF THE INSTALLED SYSTEM SHALL BE GRADED TO A SLOPE NOT EXCEEDING 10:1 IN THE DIRECTION OF TRAFFIC FLOW. THE CROSS SLOPE SHALL NOT EXCEED 12:1.
6. THE ENTIRE LENGTH OF THE QUARDGUARD SYSTEM LESS 500 CAN BE USED IN LENGTH OF NEED CALCULATIONS AS IT IS FULLY REDIRECTING.
7. SIGNS AND OTHER APPURTENANCES SHALL NOT BE INSTALLED WITHIN 1500 OF THE END OF THE ADJOINING CONCRETE BARRIER. THIS IS TO ALLOW THE FENDER PANELS OF THE QUARDGUARD TO RETRACT DURING END-ON IMPACT.
8. THE QUADGUARD SYSTEM SHALL BE ANCHORED TO A CONCRETE PAD FOUNDATION AS PER THE INSTALLATION INSTRUCTIONS PROVIDED BY THE MANUFACTURER. SEE DRAWING RDG-B6.11 FOR DETAILS.
9. FOR TEMPORARY APPLICATIONS, THE QUADGUARD SYSTEM IS AVAILABLE IN A CZ CONFIGURATION AND MAY BE ANCHORED INTO 150 OF ASPHALT UNDERLAIN WITH AT LEAST 150 OF COMPACTED SUBBASE USING 16 DIA x 460 LONG ANCHOR STUDS AS PER THE MANUFACTURER'S INSTRUCTIONS.
10. FOR MEDIAN INSTALLATIONS IN BIDIRECTIONAL TRAFFIC FLOW AND WHEN CONNECTING DIRECTLY TO A SINGLE SLOPE CONCRETE BARRIER, A TRANSITION PANEL SHALL BE INSTALLED TO FACE OF BARRIER. THE OFFSET BETWEEN CENTERLINE OF THE QUARDGUARD SYSTEM WIDTH "S" AND CENTERLINE OF THE BARRIER SHALL BE DETERMINED USING THE FOLLOWING FORMULA:
W + (0.38)H - S - 10 = OFFSET (mm)

TABLE A

POSTED SPEED KM/H	< 70	≥ 70
NCHRP REPORT 350 TEST LEVEL	TL - 2	TL - 3
BAYS	3	6
TYPE I CARTRIDGES FRONT	3	4
TYPE II CARTRIDGES REAR	1	3
SYSTEM LENGTH	4000	6740

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE INDICATED.

No.	REVISIONS	BY	DATE
2			
1			

Approved:

Executive Director,
Technical Standards Branch

Date: NOVEMBER, 2007

Alberta
INFRASTRUCTURE AND TRANSPORTATION

TL-2 AND TL-3 CONCRETE MEDIAN BARRIER TERMINATION QUADGUARD CRASH CUSHION SYSTEM (BIDIRECTIONAL)

Prepared By: MO	Checked By: WS	Scale: N.T.S.	Dwg No.: RDG-B6.9