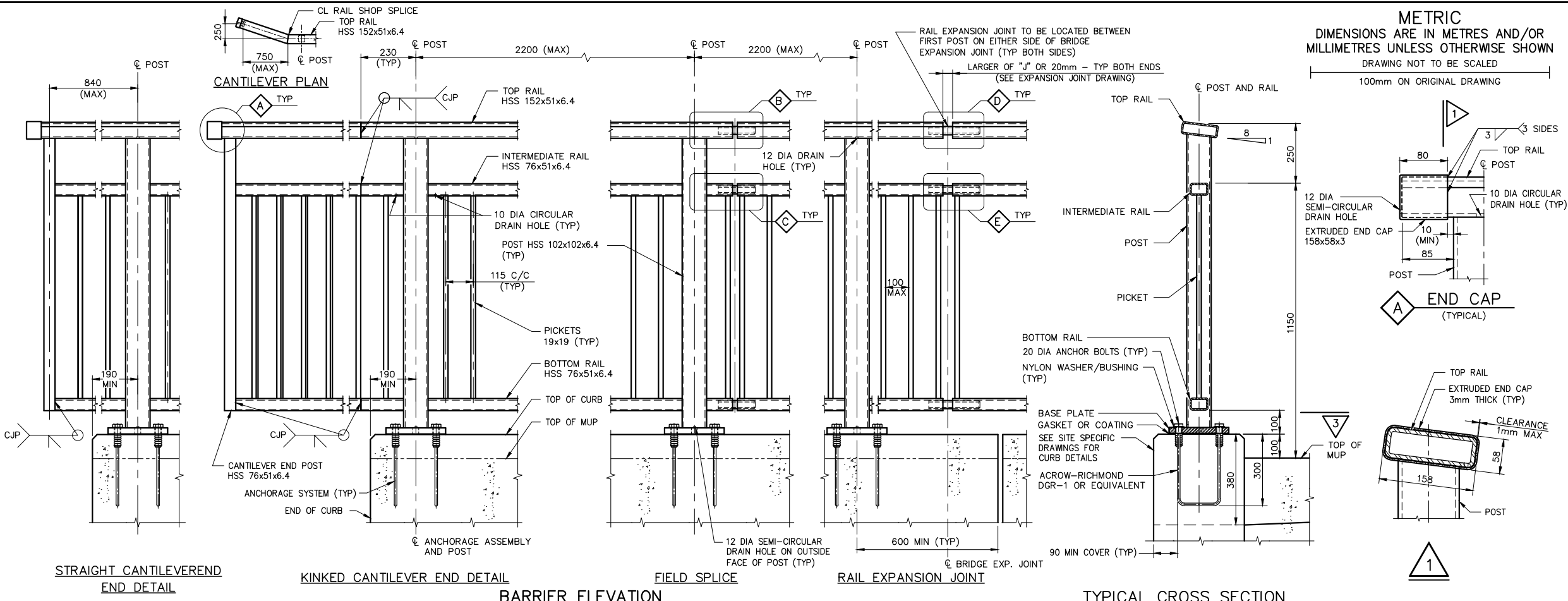


2020-05 ANS D FRAME STRUCTURAL
 MINISTRY OF TRANSPORTATION OF ONTARIO
 FILE NAME: C:\USERS\WEZAKA\ONE\DRIVE - GOVERNMENT OF ONTARIO\DESKTOP\ADAMERUM_JAMESMUP\110-22 NOV 12 2021 DWG
 MODIFIED: 2021-12-23 09:23

Ontario Ministry of Transportation
 CONT GWP **DRAFT**
 MULTI USE PATH (MUP) BICYCLE BARRIER
 SHEET

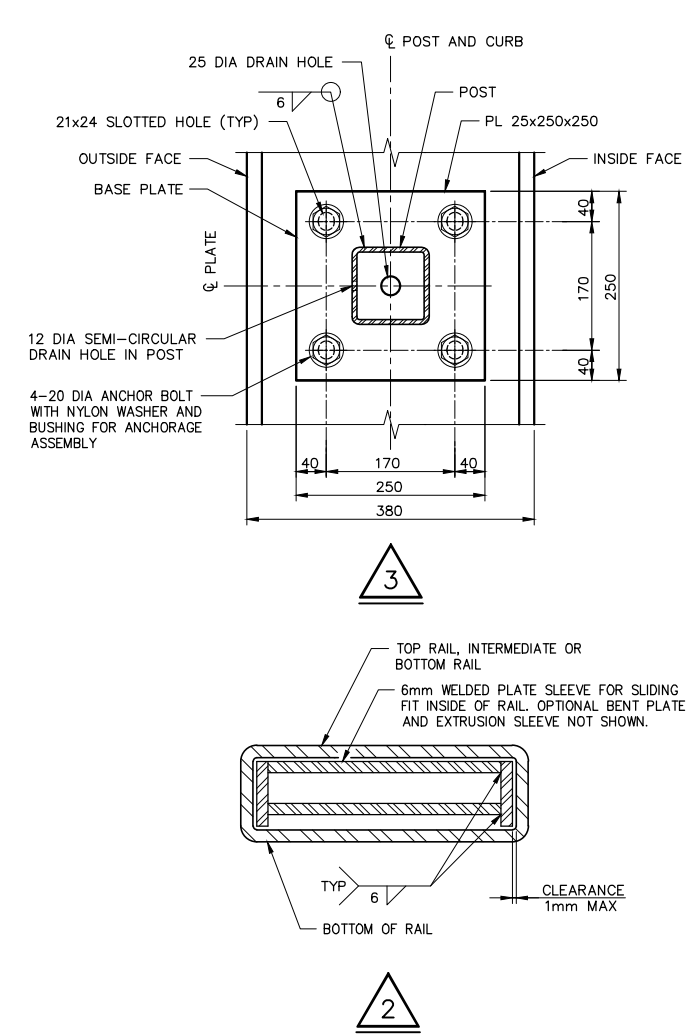
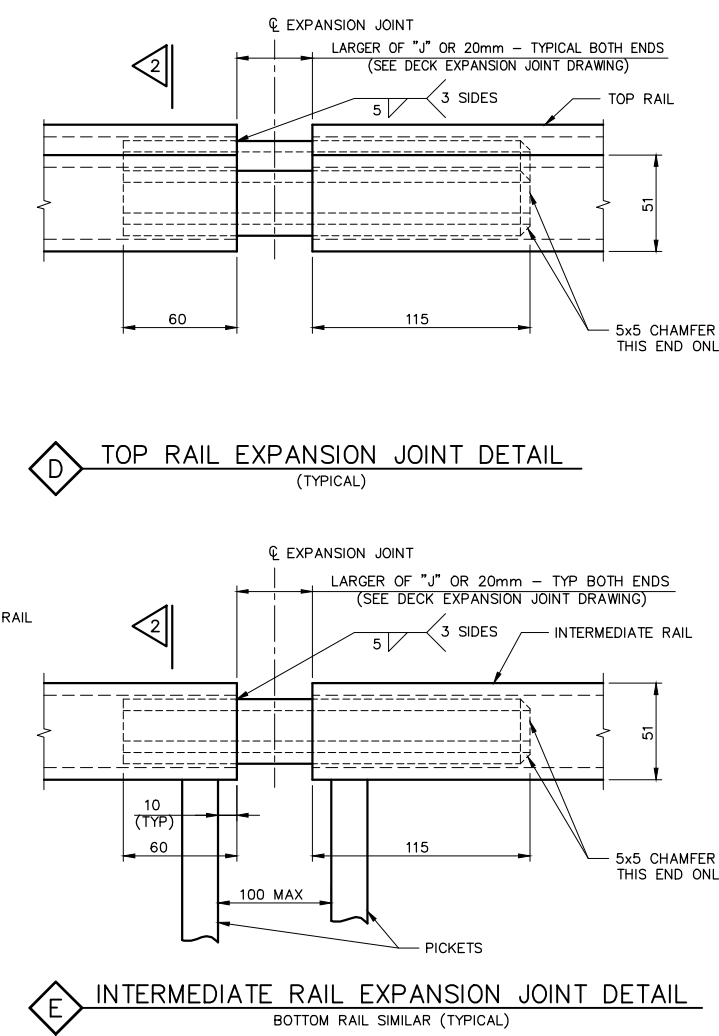
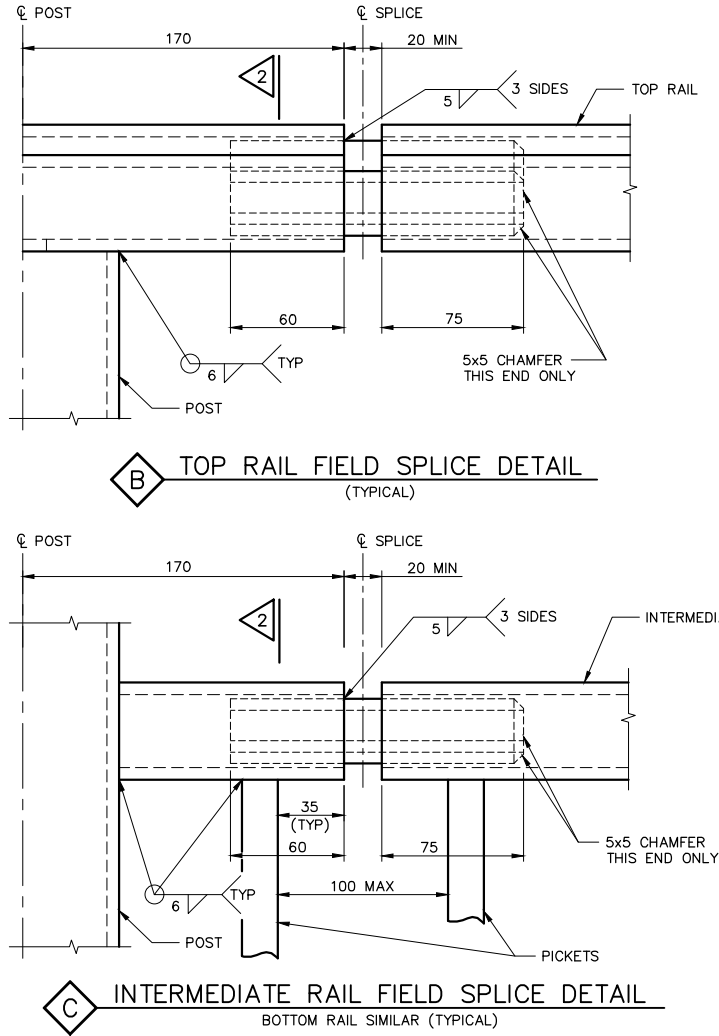
METRIC
 DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE SHOWN
 DRAWING NOT TO BE SCALED
 100mm ON ORIGINAL DRAWING



- NOTES:**
- ALUMINUM RAILING ELEMENTS INCLUDING POSTS PICKETS AND TOP RAIL END CAP SHALL BE 6061-T6 ALLOY HEAT TREATED, CONFORMING TO ASTM B221M. ALUMINUM PLATES SHALL BE 6061-T6 ALLOY HEAT TREATED, CONFORMING TO ASTM B209M.
 - 6351-T6 ALLOY CAN BE SUBSTITUTED FOR 6061-T6 ALLOY.
 - STAINLESS STEEL ANCHORAGE, BOLTS AND WASHERS SHALL CONFORM TO ASTM A593, TYPE 304 OR TYPE 316. NYLON BUSHING AND WASHER SHALL BE PROVIDED TO PREVENT CHEMICAL REACTION BETWEEN ALUMINUM BASE PLATE AND STAINLESS STEEL COMPONENTS.
 - WELDING SHALL CONFORM TO CSA W59.2. FILLER METAL SHALL BE 5356 ACCORDING TO ANSI/AWS A5.10 AND SHALL BE QUALIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF CSA W59.2.
 - RAILING ANCHORAGE TO BE PLACED PRIOR TO CONCRETING. BEDDING GROUT SHALL NOT BE USED UNDER BASE PLATES. THIN PAD OF EPOXY GROUT NOT EXCEEDING 3mm THICKNESS MAY BE USED WHEN REQUIRED FOR FILLING THE VOIDS UNDER THE BASE PLATE.
 - ALUMINUM BASE PLATES SHALL BE SEPARATED FROM CONCRETE SURFACES ACCORDING TO OPSS.PROV 908.
 - AT LEAST TWO POSTS ARE REQUIRED IN RAIL SECTION EITHER SIDE OF AN EXPANSION JOINT AND FIELD SPlice.
 - BARRIER SECTIONS SHALL BE FABRICATED IN LENGTHS NOT EXCEEDING 7m. EACH SECTION SHALL HAVE AT LEAST THREE (3) POST SPACING.
 - ALL POSTS AND PICKETS SHALL REMAIN VERTICAL AFTER INSTALLATION.
 - PICKETS SHALL BE EQUALLY SPACED IN EACH PANEL AT MAXIMUM 115mm TO CENTRE. PICKET SPACING CAN BE ADJUSTED TO SUIT PROJECT SPECIFIC PANEL LENGTHS PROVIDED THAT CLEAR SPACE BETWEEN PICKETS DOES NOT EXCEED 100mm.
 - USE POST SPACING(S) OF 2200mm FOR THE LONGEST POSSIBLE LENGTH OF THE BARRIER. ADJUST THE POST SPACING FOR THE END PANELS TO MEET SITE SPECIFIC LENGTH OF THE BARRIER.
 - ALL DIMENSIONS ARE MEASURED PARALLEL TO TOP OF CURB AND ALONG CENTRELINE OF ANCHOR ROD ASSEMBLIES.

NOTES TO DESIGNER:

- THIS DRAWING SHALL NOT BE USED IN PEDESTRIAN CONGREGATING AREAS UNLESS PERMITTED BY THE REGIONAL HEAD OF STRUCTURAL ENGINEERING.
- RAIL EXPANSION JOINT DETAILS ARE ONLY VALID FOR MOVEMENT UP TO 80mm. MAXIMUM PICKET CLEAR SPACE SHALL NOT EXCEED 100mm WITH MAX JOINT MOVEMENT.
- STRAIGHT CANTILEVER END DETAIL MAY PROVIDE A TRANSITION TO THE ABUTTING APPROACH BARRIER (EXAMPLE: 6"x6" WOOD POST WITH 3"-2"x6", OR CEDAR RAILS; STEEL BEAM GUIDE RAIL; OTHER SYSTEMS). THE KINKED CANTILEVER END DETAIL MAY BE CONSIDERED FOR BRIDGES WITHOUT ABUTTING BARRIER. DELETE UNUSED, OPTIONAL CANTILEVER END DETAILS.
- FOR ANODIZED FINISH OPTION ADD NOTE: "ALL EXPOSED ALUMINUM SHALL BE GIVEN CAUSTIC ETCH FOLLOWED BY AN ARCHITECTURAL CLASS 1 ANODIC COATING WITH COLOUR CONFORMING TO ALUMINUM ASSOCIATION DESIGNATION AA-M10C22A41. THE COLOUR SHALL BE "CLEAR" AND SHALL MEET STANDARDS SET FORTH BY AAMA 611." ALTERNATIVE COLOURS MAY BE DETERMINED BY THE REGIONAL HEAD OF STRUCTURAL ENGINEERING.
- FOR POWDER COATING FINISH OPTION ADD NOTE: "ALL EXPOSED ALUMINUM SHALL RECEIVE POWDER COATING COMPLYING WITH AAMA 2605. THE COLOUR SHALL BE " " AND GLOSS SHALL BE " ". THE SPECIFIC COLOUR AND GLOSS SHALL BE DETERMINED BY THE REGIONAL HEAD OF STRUCTURAL ENGINEERING.
- THE "NOTES TO DESIGNER" SHALL BE DELETED FROM THIS DRAWING PRIOR TO ISSUING.



REFER TO THE STRUCTURAL MANUAL FOR PROFESSIONAL ENGINEER STAMPING REQUIREMENTS
 STANDARD DRAWING JANUARY 2022 **SS110-22**
 MULTI USE PATH (MUP) BICYCLE BARRIER

REVISIONS	DATE	BY	DESCRIPTION
DESIGN	CHK	CODE CSA S6-19/LOAD	DATE JAN 2022
DRAWN	CHK	SITE	DWG