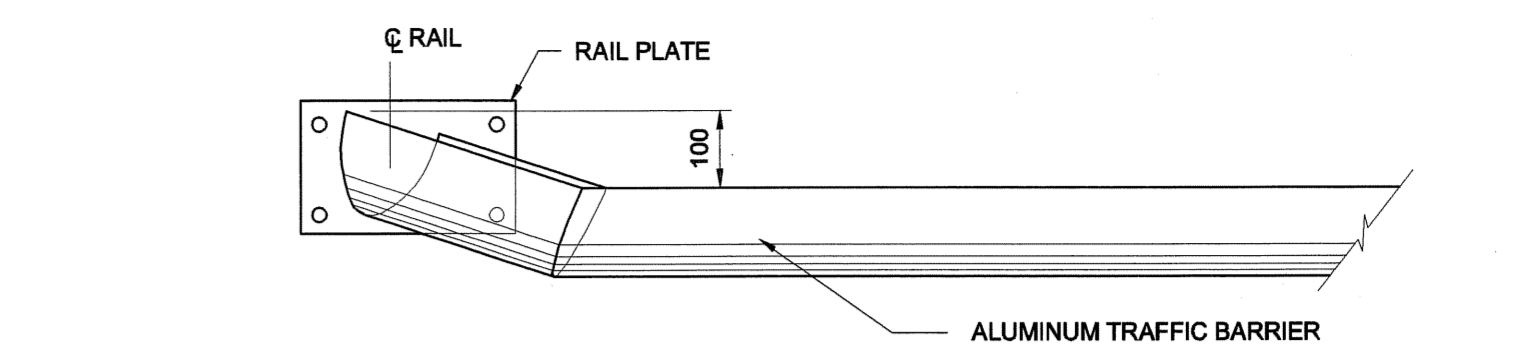
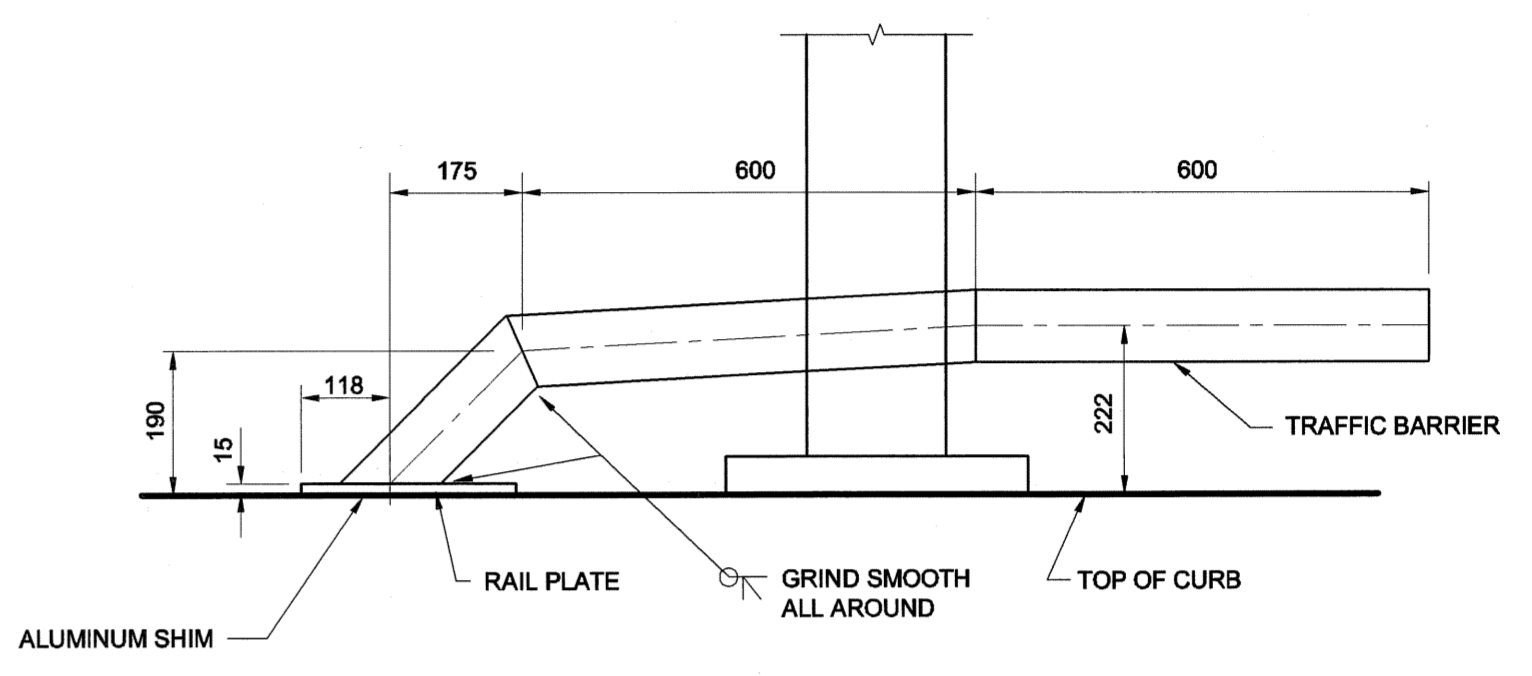


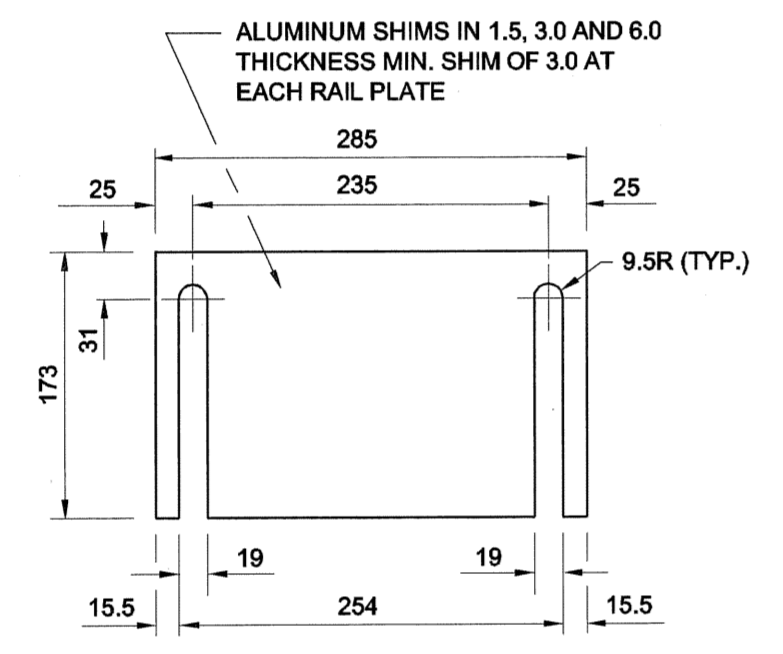
NORTH EAST APPROACH
 NOTE: NO TAPERS @ WEST APPROACH
CURB TRANSITION DETAIL
 SCALE 1:20



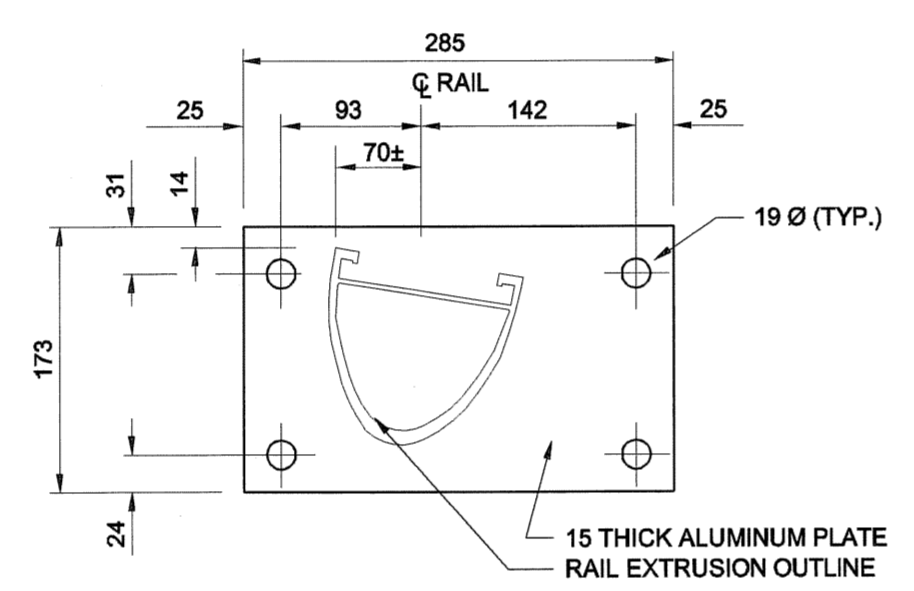
TRAFFIC SIDE
PLAN VIEW



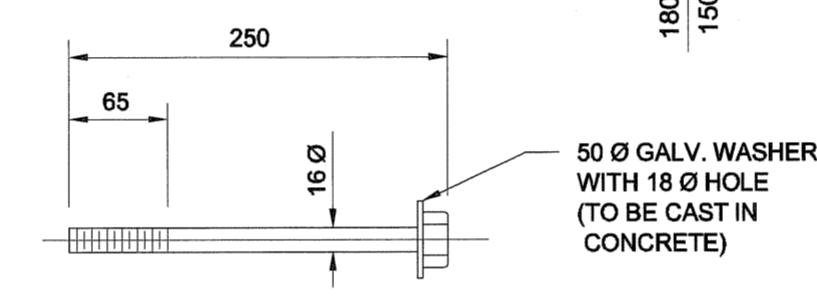
ELEVATION VIEW
TERMINATION RAIL DETAIL
 SCALE 1:10



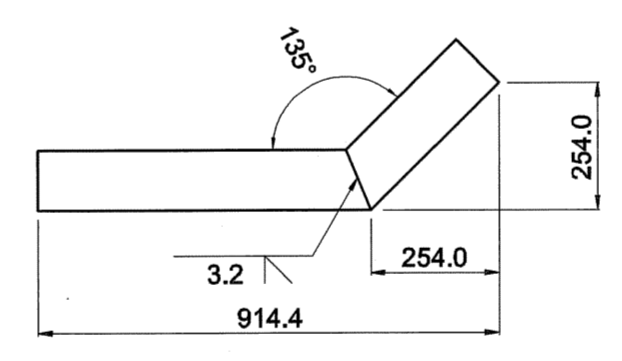
RAIL PLATE SHIM DETAIL
 SCALE 1:5



RAIL PLATE DETAIL
 SCALE 1:5



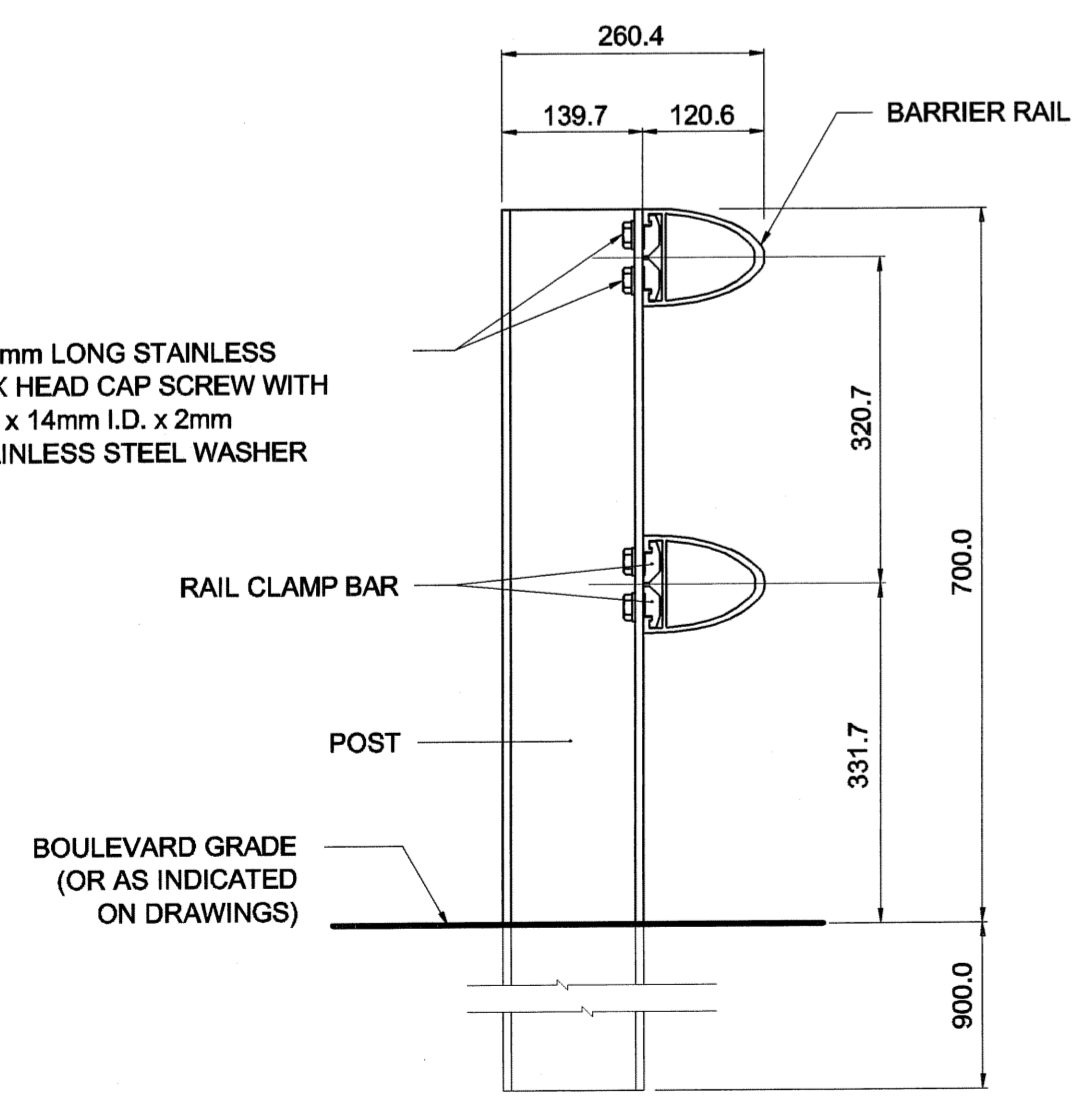
RAIL PLATE ANCHOR BOLT DETAIL
 SCALE 1:5



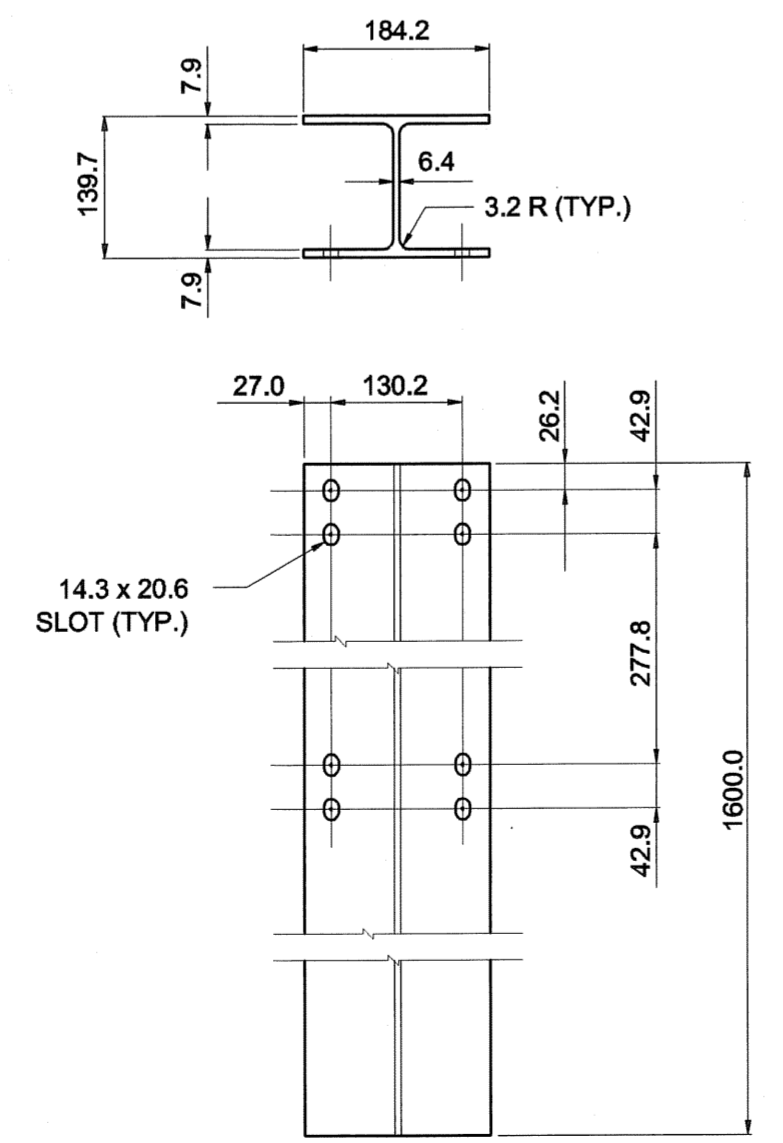
PLAN
FRONT ELEVATION
TERMINAL END DETAIL
 (FABRICATED FROM BARRIER RAIL)
 SCALE 1:15

- NOTES:**
1. THE 19mmØ HOLES, (4), IN THE BASE OF THE BARRIER RAIL PLATE ARE DESIGNED TO ACCOMMODATE 16mmØ ANCHOR BOLTS AS SHOWN. SUPPLY EACH ANCHOR BOLT WITH: ONE STAINLESS STEEL PLAIN WASHER, ONE STAINLESS STEEL LOCK WASHER, ONE STAINLESS STEEL HEX NUT, AND ONE 50mm GALVANIZED PLATE WASHER.
 2. A COMBINATION OF 1.5, 3.0, AND/OR 6.0mm THICK ALUMINUM RAIL PLATE SHIMS ARE TO BE USED AS REQUIRED TO SET THE BARRIER RAIL TO THE SPECIFIED HEIGHT. (MINIMUM 3.0mm SHIM REQUIRED AT EACH PLATE).
 3. REMOVE ALL BURRS AND SHARP EDGES IN THE SHOP. AFTER INSTALLATION OF THE BARRIER HAS BEEN COMPLETED, THE TOP EDGES AND CORNERS OF THE BARRIER RAIL POSTS SHALL BE ROUNDED SMOOTH TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR.
 4. SEE DRAWING NO. 72 FOR BILL OF MATERIALS.
 5. BOTTOM SURFACE OF SHIM, (SURFACE IN CONTACT WITH CONCRETE), IS TO BE PAINTED WITH TWO COATS OF ALKALI RESISTANT BITUMINOUS PAINT, EACH COAT APPLIED 1.0mm IN THICKNESS.
 6. SEE BRIDGE DETAIL DRAWINGS FOR DETAILS OF: P1 TYPE POST AND APPLICABLE COMPONENTS; BARRIER RAIL; SPLICE BAR; SPLICE BAR TO RAIL ASSEMBLY; RAIL END CAP; AND RAIL CLAMP BAR.

- SPECIFICATIONS:**
1. EXTRUDED ALUMINUM SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM B221, ALLOY 6061-T6 OR ALLOY 6351-T6 (MINIMUM ELONGATION 10%).
 2. THE STAINLESS STEEL HEX HEAD AND THE SOCKET HEAD CAP SCREWS SHALL MEET THE REQUIREMENTS OF ASTM A276, TYPE 316 AND THE DIMENSIONAL REQUIREMENTS OF ANSI B18.3.
 3. DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARANCE, AND ACCEPTED MANUFACTURING PRACTICES.
 4. WELDING SHALL CONFORM TO THE REQUIREMENTS OF CSA STANDARDS S244-1968, WELDED ALUMINUM DESIGN AND WORKMANSHIP AND W47.2-1967, ALUMINUM WELDING QUALIFICATION CODE. ALUMINUM FILLER SHALL BE ER5556.
 5. THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS CONSISTING OF THREE PRINTS AND ONE REPRODUCIBLE SEPIA TO THE CONTRACT ADMINISTRATOR FOR APPROVAL PRIOR TO FABRICATION OF ALUMINUM BARRIER COMPONENTS.
 6. ANTI-SEIZE COATING TO BE APPLIED TO ALL THREADED COMPONENTS WHEN BEING ASSEMBLED.



RAIL TO POST ASSEMBLY DETAIL
 SCALE 1:7.5



(0.800m POST SIMILAR EXCEPT WITH ONLY FOUR SLOTS AT TOP OF POST)
1.600m POST DETAIL
 SCALE 1:7.5

LOCATION APPROVED UNDERGROUND STRUCTURES

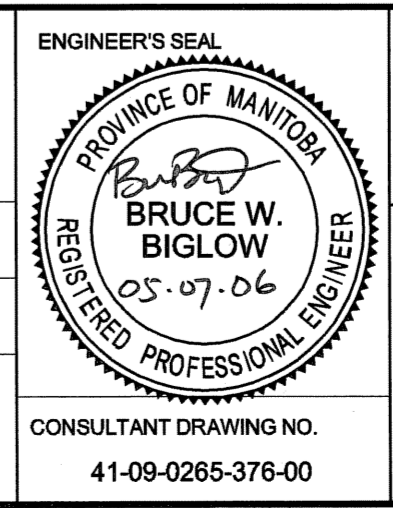
SUPR. U/G STRUCTURES COMMITTEE	DATE

NOTE:
 LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

B.M.	26-030	S.E. Cm. Main St. & Redwood Ave. Tbt. in N. conc. foundation of Bldg. known as Holy Family Nursing Home, 5.8m W. of N.E. crn. of bldg. & 0.2m below btm. of metal doors
ELEV.	231.995m	
NO.	ISSUED FOR CONSTRUCTION	05/07/05
NO.	REVISIONS	DATE BY

UMA Engineering Ltd.
 • Consulting • Engineering • Construction • Management Services

DESIGNED BY	JGK	CHECKED BY	RPB
DRAWN BY	DID	APPROVED BY	<i>Bob</i>
HOR. SCALE:	AS SHOWN	ACCEPTED BY	<i>Michael</i>
VERTICAL:	AS SHOWN	DATE	23/07/07



METRIC
 ALL DIMENSIONS INDICATE MILLIMETRES UNLESS NOTED OTHERWISE

Bid Opportunity No. 257-2005

THE CITY OF WINNIPEG
 PUBLIC WORKS DEPARTMENT
 ENGINEERING DIVISION

REDWOOD BRIDGE
 REHABILITATIVE MAINTENANCE AND RELATED WORKS

WEST & EAST PAVEMENT APPROACHES
 ALUMINUM BALANCED BARRIER RAIL
 POST, RAIL & CURB TRANSITION DETAILS

CITY DRAWING NUMBER B113-05-74
 SHEET 74 OF 74
 REV 0

PLOT SCALE = 1:10.25
 AutoCAD 15:03 P:\0265\355-03\ALD\Redwood Bridge.dwg\ABBR_Details.dwg 2003-08-25 1:31pm DID