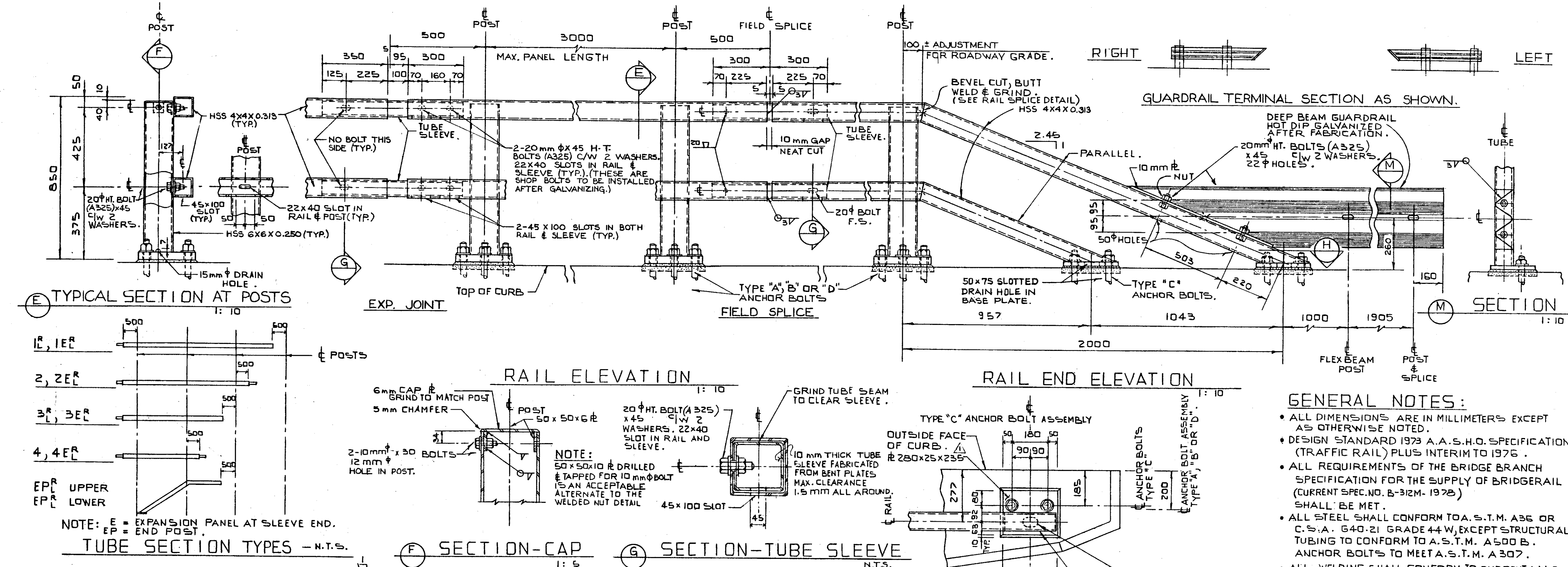
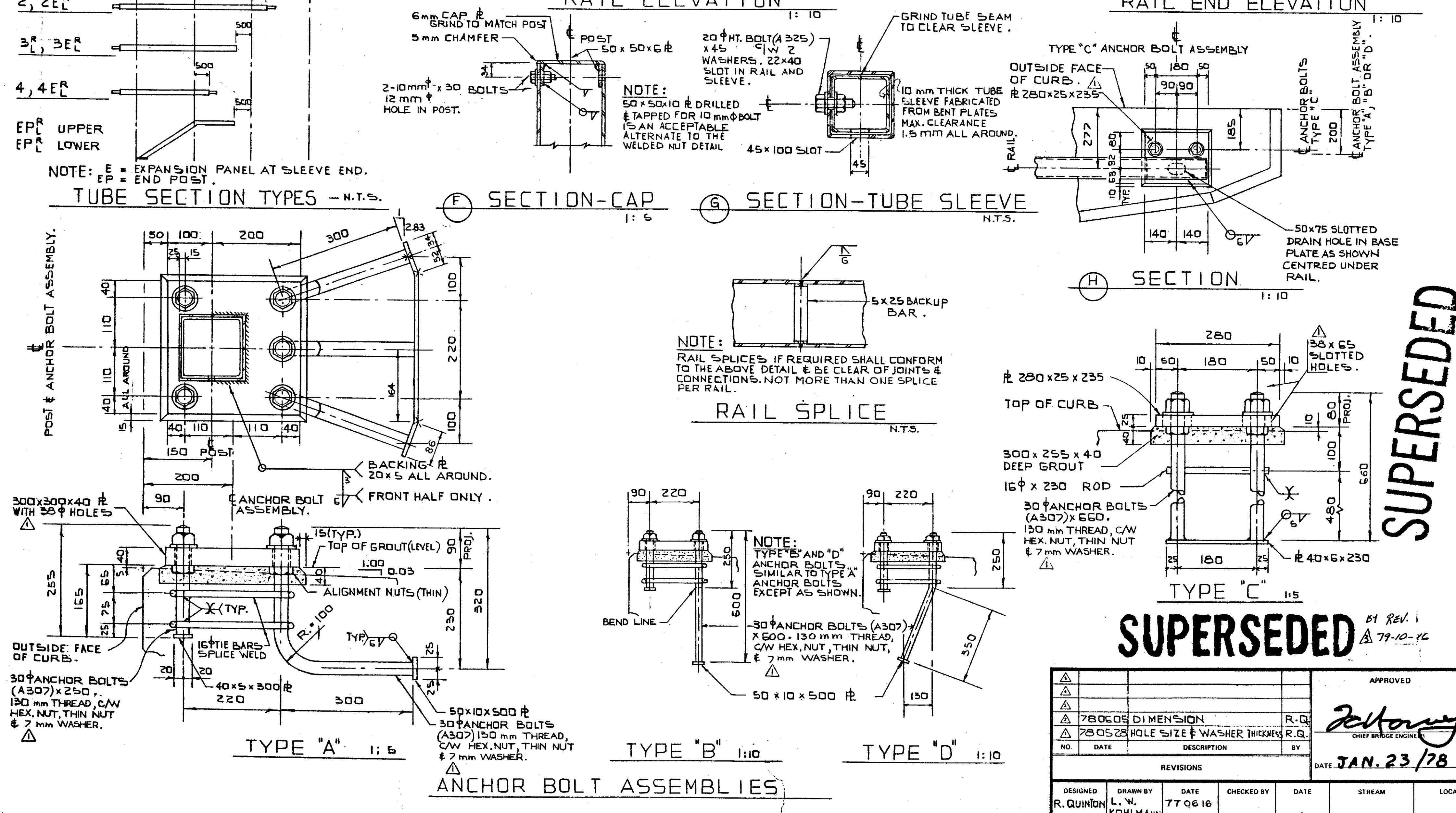


POST
POST
POST
FIELD SPLICE
POST
500
3000
500
MAX. PANEL LENGTH
100 ± ADJUSTMENT FOR ROADWAY GRADE.
RIGHT
LEFT
BEVEL CUT, BUTT WELD & GRIND. (SEE RAIL SPLICE DETAIL)
HSS 4X4X0.313
GUARDRAIL TERMINAL SECTION AS SHOWN.
HSS 4X4X0.313 (TYP.)
NO BOLT THIS SIDE (TYP.)
TUBE SLEEVE.
2-20mm φX45 H-T. BOLTS (A325) C/W 2 WASHERS. 22X40 SLOTS IN RAIL & SLEEVE (TYP.). (THESE ARE SHOP BOLTS TO BE INSTALLED AFTER GALVANIZING.)
10 mm GAP NEAT CUT
TUBE SLEEVE.
PARALLEL.
DEEP BEAM GUARDRAIL HOT DIP GALVANIZED AFTER FABRICATION.
20mmφ HT. BOLTS (A325) x45 C/W 2 WASHERS. 22φ HOLES.
10 mm PL
NUT
TUBE
20φ HT. BOLT (A325)x45 C/W 2 WASHERS.
45x100 SLOT (TYP.)
22x40 SLOT IN RAIL & POST (TYP.)
2-45 X 100 SLOTS IN BOTH RAIL & SLEEVE (TYP.)
20φ BOLT F.S.
50φ HOLES
HSS 6X6X0.250 (TYP.)
15mm φ DRAIN HOLE.
TOP OF CURB
TYPE "A", "B" OR "D" ANCHOR BOLTS
50x75 SLOTTED DRAIN HOLE IN BASE PLATE.
TYPE "C" ANCHOR BOLTS.
TYPICAL SECTION AT POSTS 1:10
EXP. JOINT
FIELD SPLICE
957
1043
1000
1905
2000
SECTION 1:10
FLEX BEAM POST
POST & SPLICE
1R, 1EL; 2, 2EL; 3R, 3EL; 4, 4ER
EPL UPPER
EPR LOWER
& POSTS
NOTE: E = EXPANSION PANEL AT SLEEVE END. EP = END POST.
TUBE SECTION TYPES - N.T.S.
RAIL ELEVATION 1:10
RAIL END ELEVATION 1:10



6mm CAP PL GRIND TO MATCH POST
5 mm CHAMFER
POST
50 x 50 x 6 PL
2-10mmφ x 30 BOLTS
12 mm φ HOLE IN POST.
NOTE: 50 x 50 x 10 PL DRILLED & TAPPED FOR 10 mmφ BOLT IS AN ACCEPTABLE ALTERNATE TO THE WELDED NUT DETAIL
SECTION-CAP 1:5
20 φ HT. BOLT (A325) x45 C/W 2 WASHERS. 22x40 SLOT IN RAIL AND SLEEVE.
GRIND TUBE SEAM TO CLEAR SLEEVE.
10 mm THICK TUBE SLEEVE FABRICATED FROM BENT PLATES MAX. CLEARANCE 1.5 mm ALL AROUND.
45 x 100 SLOT
SECTION-TUBE SLEEVE N.T.S.
TYPE "C" ANCHOR BOLT ASSEMBLY
OUTSIDE FACE OF CURB.
PL 280x25x235
ANCHOR BOLT ASSEMBLY TYPE "A", "B" OR "D"
50x75 SLOTTED DRAIN HOLE IN BASE PLATE AS SHOWN CENTRED UNDER RAIL.
SECTION 1:10
5x25 BACKUP BAR.
NOTE: RAIL SPLICES IF REQUIRED SHALL CONFORM TO THE ABOVE DETAIL & BE CLEAR OF JOINTS & CONNECTIONS. NOT MORE THAN ONE SPLICE PER RAIL.
RAIL SPLICE N.T.S.
POST & ANCHOR BOLT ASSEMBLY.
BACKING PL 20x5 ALL AROUND.
FRONT HALF ONLY.
300x300x40 PL WITH 38φ HOLES
ANCHOR BOLT ASSEMBLY.
TOP OF GROUT (LEVEL)
ALIGNMENT NUTS (THIN)
OUTSIDE FACE OF CURB.
16φ TIE BARS SPLICE WELD
40x5x300 PL
30φ ANCHOR BOLTS (A307)x250. 130 mm THREAD, C/W HEX. NUT, THIN NUT & 7 mm WASHER.
50x10x500 PL
30φ ANCHOR BOLTS (A307) 130 mm THREAD, C/W HEX. NUT, THIN NUT & 7 mm WASHER.
TYPE "A" 1:5
NOTE: TYPE "B" AND "D" ANCHOR BOLTS SIMILAR TO TYPE "A" ANCHOR BOLTS EXCEPT AS SHOWN.
BEND LINE
30φ ANCHOR BOLTS (A307) X 600. 130 mm THREAD, C/W HEX. NUT, THIN NUT, & 7 mm WASHER.
50 x 10 x 500 PL
TYPE "B" 1:10
TYPE "D" 1:10
ANCHOR BOLT ASSEMBLIES
PL 280x25x235
TOP OF CURB
300 x 255 x 40 DEEP GROUT
16φ x 230 ROD
30φ ANCHOR BOLTS (A307) x 660. 130 mm THREAD, C/W HEX. NUT, THIN NUT & 7 mm WASHER.
38 x 65 SLOTTED HOLES.
PL 40x6x230
TYPE "C" 1:5
SUPERSEDED
SUPERSEDED BY REV. 1 79-10-26

GENERAL NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT AS OTHERWISE NOTED.
- DESIGN STANDARD 1973 A.A.S.H.O. SPECIFICATION (TRAFFIC RAIL) PLUS INTERIM TO 1976.
- ALL REQUIREMENTS OF THE BRIDGE BRANCH SPECIFICATION FOR THE SUPPLY OF BRIDGERAIL (CURRENT SPEC. NO. B-312M-1978) SHALL BE MET.
- ALL STEEL SHALL CONFORM TO A.S.T.M. A36 OR C.S.A. G40.21 GRADE 44 W, EXCEPT STRUCTURAL TUBING TO CONFORM TO A.S.T.M. A500 B. ANCHOR BOLTS TO MEET A.S.T.M. A307.
- ALL WELDING SHALL CONFORM TO CURRENT A.W.S. SPECIFICATION D1.1
- BRIDGE TO BE CONSIDERED LEVEL FOR BRIDGERAIL FABRICATION UNLESS THE ROADWAY GRADE EXCEEDS 1%. ADJUSTMENT FOR ROADWAY GRADE, IF REQUIRED, IS TO BE MADE BY VARYING THE 100 mm DIMENSION AS SHOWN ON "RAIL END ELEVATION".
- POST BASE PLATE TO BE PLACED ON BEVEL IF ROADWAY GRADE EXCEEDS 2%.
- TUBE SECTIONS SHALL BE FABRICATED IN THE CONFIGURATIONS SHOWN IN TUBE SECTION TYPES.
- THE FOLLOWING MATERIALS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. SPECIFICATIONS: RAILING AND POSTS A123 & ANCHOR BOLT ASSEMBLIES A153.

ERECTION

- TIGHTENING OF RAIL BOLTS: TOP RAIL BOLTS MAY BE TIGHTENED FROM THE HEAD INSIDE THE POST. BOTTOM RAIL BOLTS MAY BE TIGHTENED THROUGH THE 45x100 mm SLOT UNDER THE RAIL, USING A 15° ANGLED OR OFFSET BOX END WRENCH SUITABLY BENT AND EXTENDED TO ACHIEVE THE REQUIRED 1/6 TURN OF THE NUT FROM SNUG TIGHT.
- ALL POSTS TO BE VERTICAL.
- ALL DIMENSIONS ARE MEASURED PARALLEL TO TOP OF CURB AND ALONG CENTERLINE OF POST ANCHOR BOLT ASSEMBLIES.
- LINE AND ELEVATION OF RAIL TO BE SET BY INSTRUMENT.

(1)

NO.	DATE	DESCRIPTION	BY
△			
△			
△			
△	780605	DIMENSION	R.Q.
△	780528	HOLE SIZE & WASHER THICKNESS	R.Q.

REVISIONS

APPROVED: [signature] CHIEF BRIDGE ENGINEER — DATE JAN. 23/78

Alberta TRANSPORTATION BRIDGE BRANCH — METRIC

850 mm TUBE TYPE BRIDGERAIL

DESIGNED	DRAWN BY	DATE	CHECKED BY	DATE	STREAM	LOCATION	HWY. NO.	SCALE	FILE NO.	SHEET	DWG. NO.
R. QUINTON	L. W. KOHLMANN	77 06 16						SHOWN		___ OF ___	S-1400