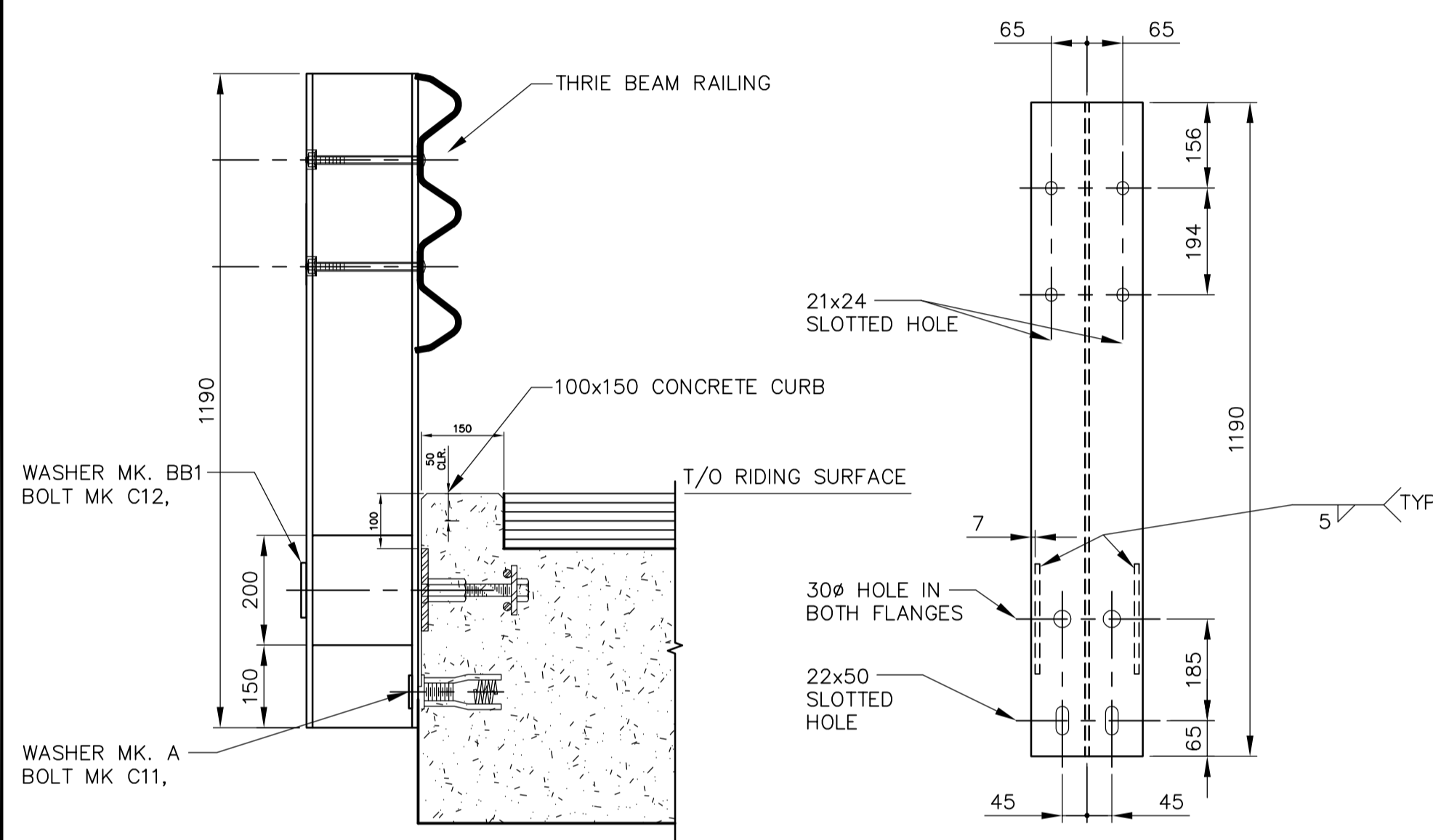


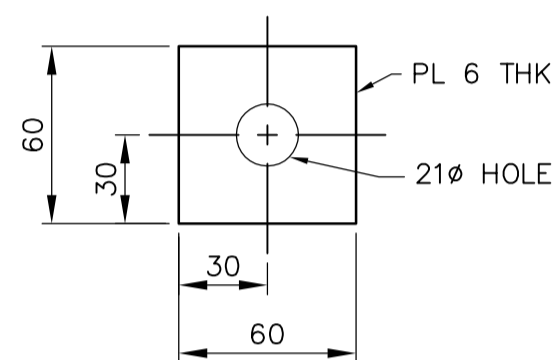
BRIDGE GUARDRAIL LAYOUT
SCALE 1:50

BILL OF MISCELLANEOUS METAL FOR BRIDGE RAILING			
MK.	NO.	DESCRIPTION	SIZE
GP1	18	RAILPOST - GALVANIZED	W200x46, 1190 LONG AS DETAILED
A	18	WASHER - GALVANIZED	AS DETAILED
BB1	18	WASHER - GALVANIZED	AS DETAILED
U1	18	RAILPOST ANCHOR UNIT-COMPLETLY GALVANIZED	
		EACH UNIT TO BE FABRICATED FROM:	
		PLATE	1-PL150x250x12
		HEX. COUPLING UNIT	2-22#x63.5mm LG. BOLT
E1	18	ANCHOR PLATE-COMPLETLY GALVANIZED	
		EACH UNIT TO BE FABRICATED FROM:	
		PLATE	1-PL. 10x90x150 LG. AS DETAILED
		BARS	2-15Mx900 LG. DEFORMED BARS
C11	36	HEAVY HEX. BOLT (A325)	19#x55 LG. NO NUT, GALVANIZED
C12	36	HEAVY HEX. BOLT (A325)	22#x215 LG. NO NUT, GALVANIZED
R22	36	HEAVY HEX. BOLT (A325)	22#x125 LG. NO NUT, GALVANIZED
	36	LOCK WASHERS	ONE REQ'D PER C12, GALVANIZED
	36	LOCK WASHERS	ONE REQ'D PER C11, GALVANIZED

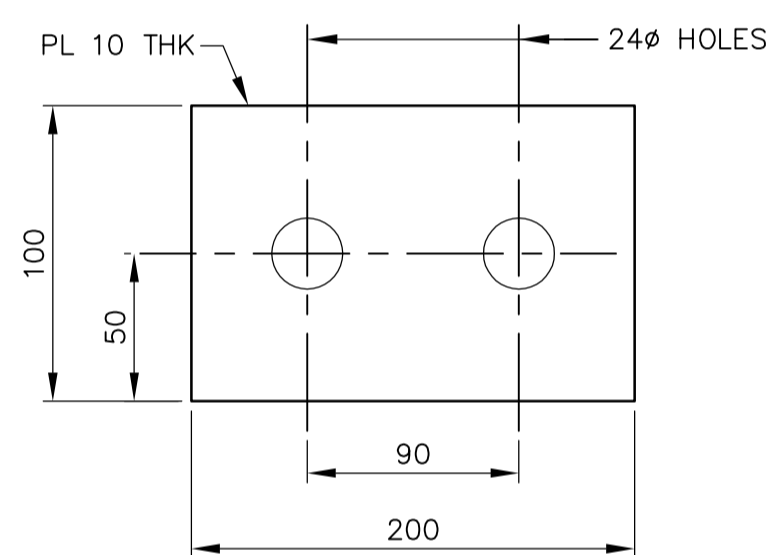
BILL OF REINFORCING STEEL			
MK.	NO.	LENGTH	MASS (kg)
D1001	4	4500	18
D1002	64	350	14
TOTAL MASS OF REINFORCING STEEL			32 kg



RAIL POST MK. GP1
SCALE 1:10

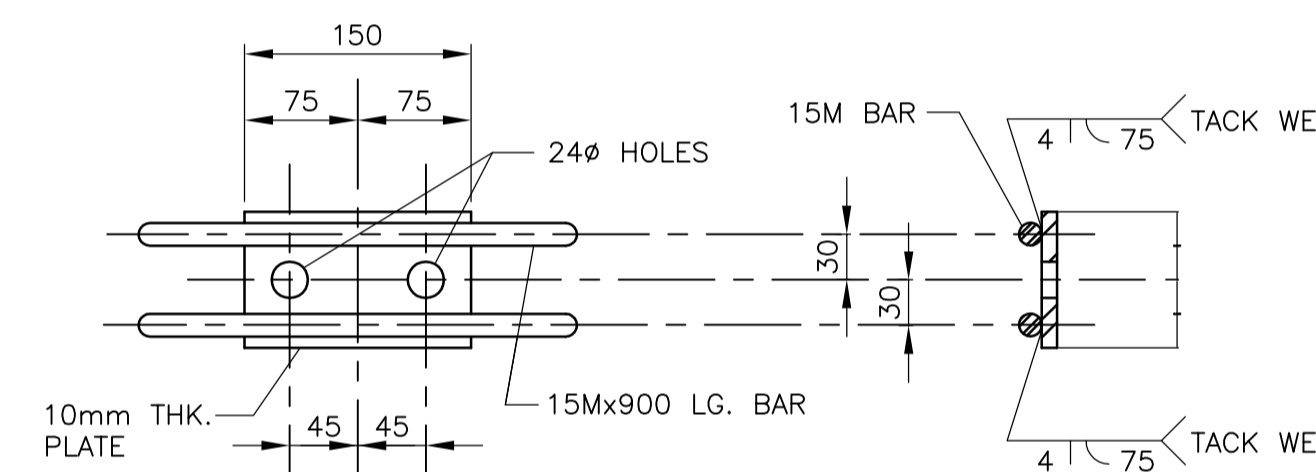


WASHER MK A



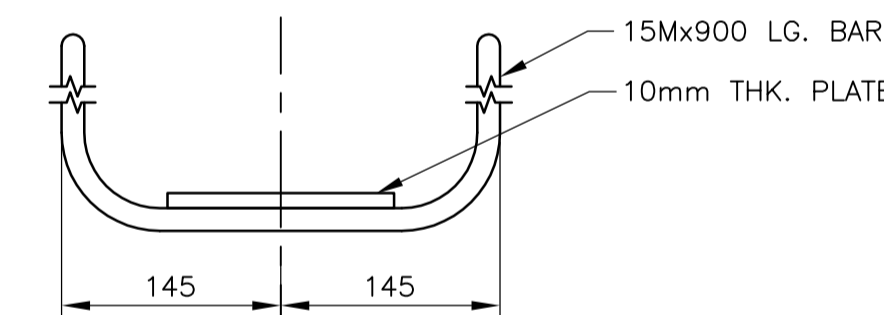
WASHER MK BB1
SCALE 1:5

SUPPLY AND INSTALLATION
BRIDGE RAIL ANCHORS ONLY IN
THIS CONTRACT. CONTRACTOR
NOT RESPONSIBLE FOR SUPPLY
AND INSTALLATION OF BRIDGE
POSTS AND RAILINGS



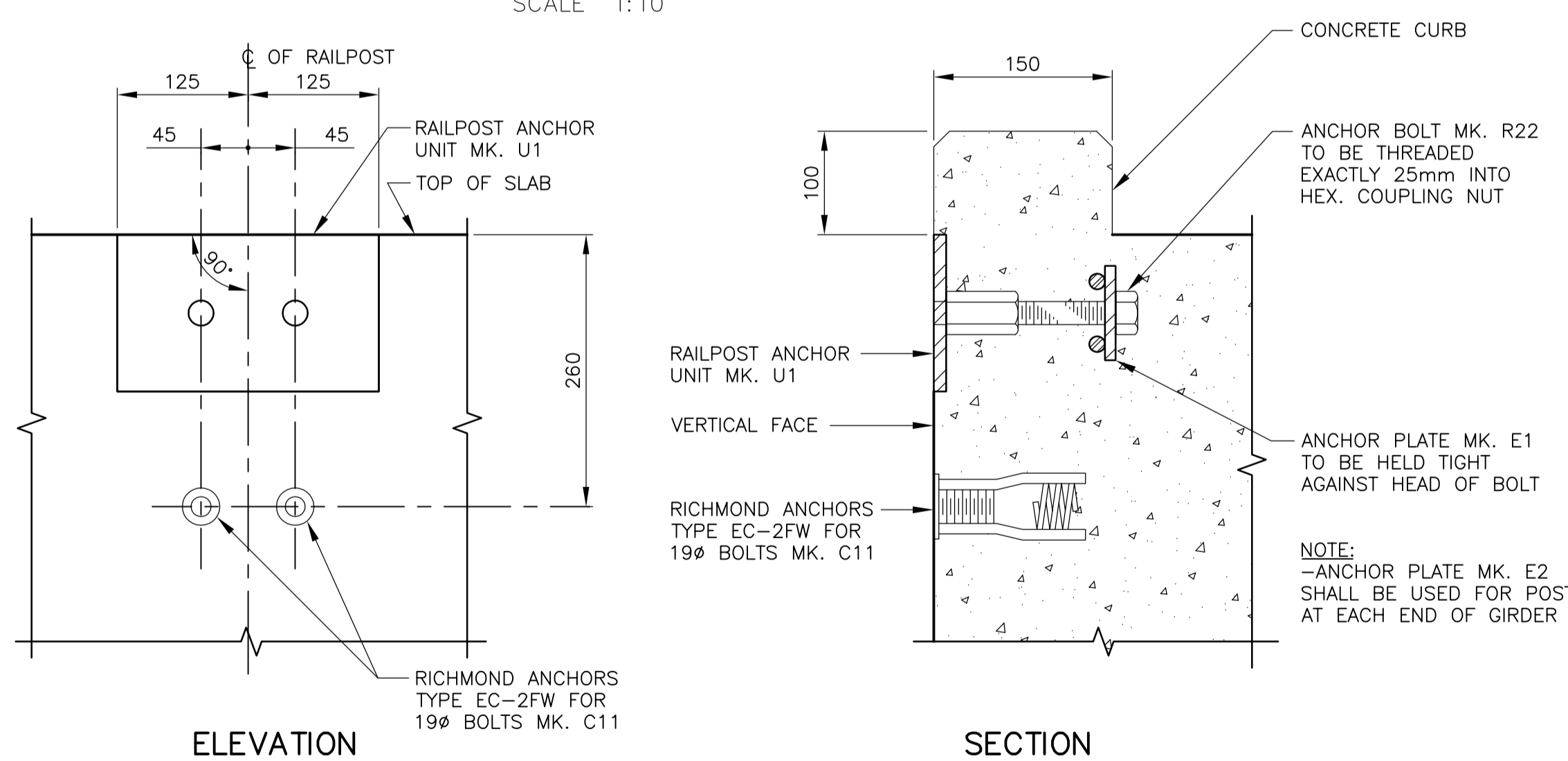
ELEVATION

SIDE VIEW



PLAN

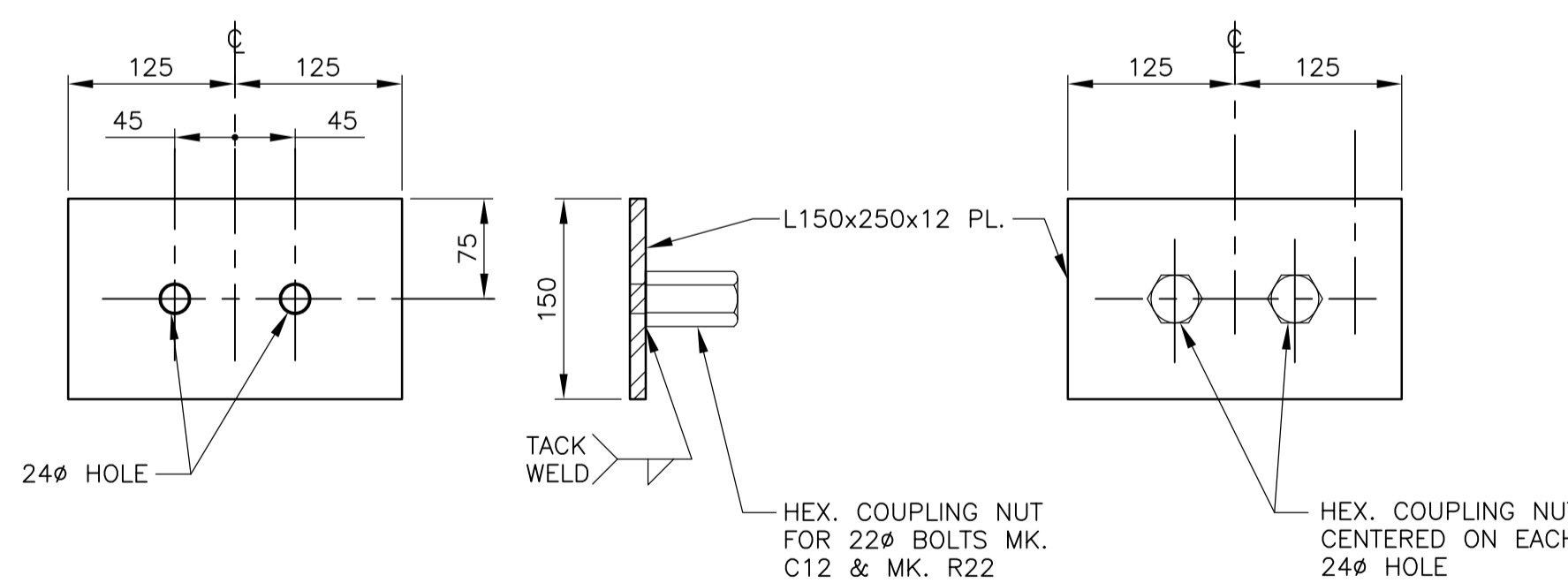
ANCHOR PLATE MK. E1-GALVANIZED
SCALE 1:5



ELEVATION

SECTION

A GUARD POST INSERT DETAILS
SCALE 1:5

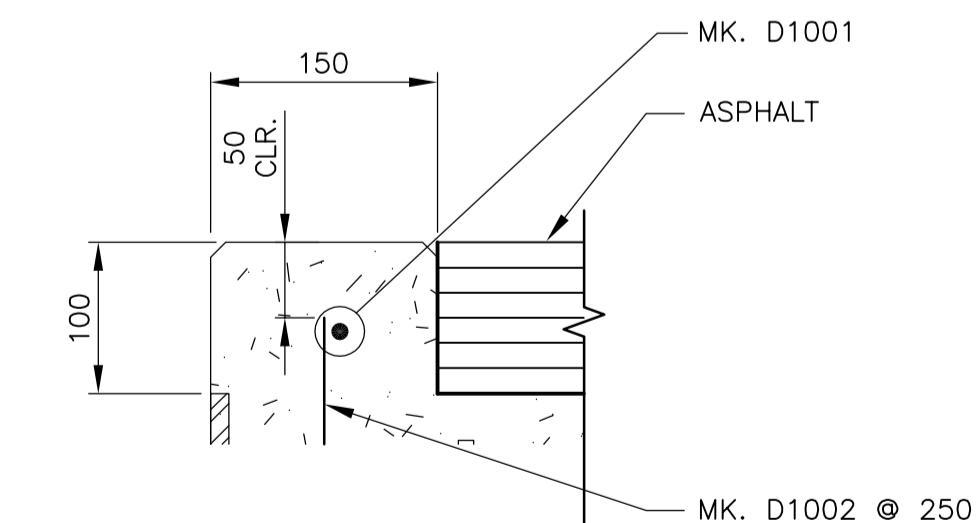


FRONT VIEW

SIDE VIEW

REAR VIEW

RAILPOST ANCHOR UNIT MK. U1-GALVANIZED
SCALE 1:5



CURB REINFORCING STEEL
SCALE 1:5

 APEGM Certificate of Authorization Earth Tech Canada Inc. No. 730 Expiry: April 30, 2006	B.M. ELEV.	 Frederickson Cooper ARCHITECTS	 A Terra International Ltd. Company	ENGINEER'S SEAL PROVINCE OF MANITOBA ORIGINAL SIGNED BY E.B. LOEWEN Member 8325 06/02/06 REGISTERED PROFESSIONAL ENGINEER	 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT ENGINEERING DIVISION
	00 ISSUED FOR TENDER 06/02/03 KC NO. REVISIONS DATE BY DATE	DESIGNED BY AP CHECKED BY EBL DRAWN BY KC APPROVED BY D.J. TANIGUCHI SCALE: AS NOTED RELEASED FOR CONSTRUCTION BY: R. SOROKOWSKI DATE DATE	CONSULTANT DRAWING NO. WN-S0474	WATER TREATMENT PLANT AQUEDUCT BRIDGES FOUNDATIONS & CONCRETE STRUCTURES	CITY FILE NUMBER SHEET 7 OF 8 CITY DRAWING NUMBER I-0601N-A-S0474-001-00D