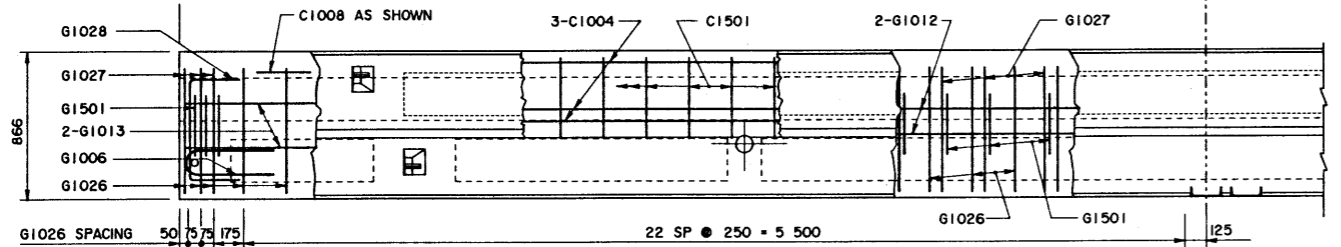
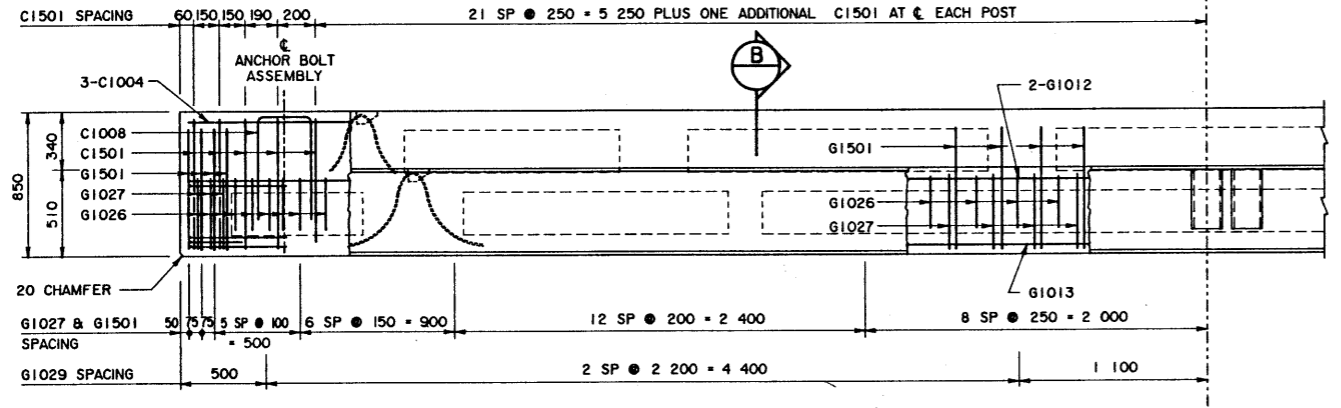


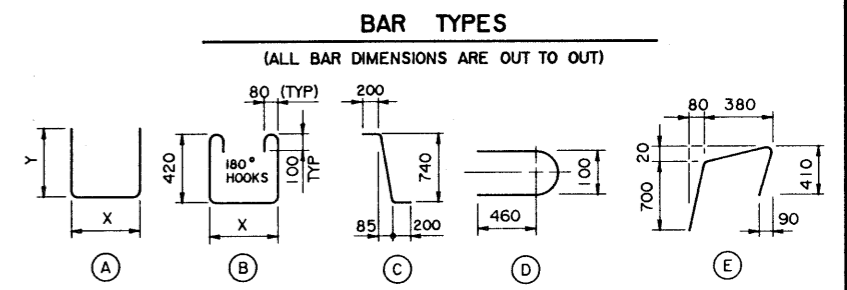
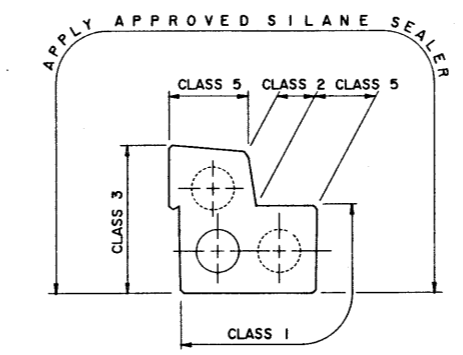
BAR LIST: FOR SQUARE GIRDER							
MARK	SIZE	NO	TYPE	X	Y	LENGTH	MASS
C1004	10	3	STR			11 900	28
C1008	10	2	A	310	600	1 510	2
C1501	15	57	E			1 455	130
G1006	10	6	D			1 020	5
G1012	10	2	STR			11 900	19
G1013	10	2	STR			11 800	19
G1026	10	52	A	725	300	1 325	54
G1027	10	67	B	725		1 820	96
G1028	10	2	A	600	300	1 200	2
G1029	10	6	STR			700	3
G1501	15	67	C			1 140	120
G2502	25	2	A	11 850	350	12 550	99
						TOTAL kg :	577



**REINFORCEMENT PLAN**  
1:20

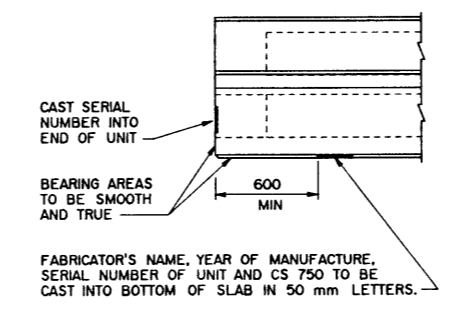


**ELEVATION**  
1:20

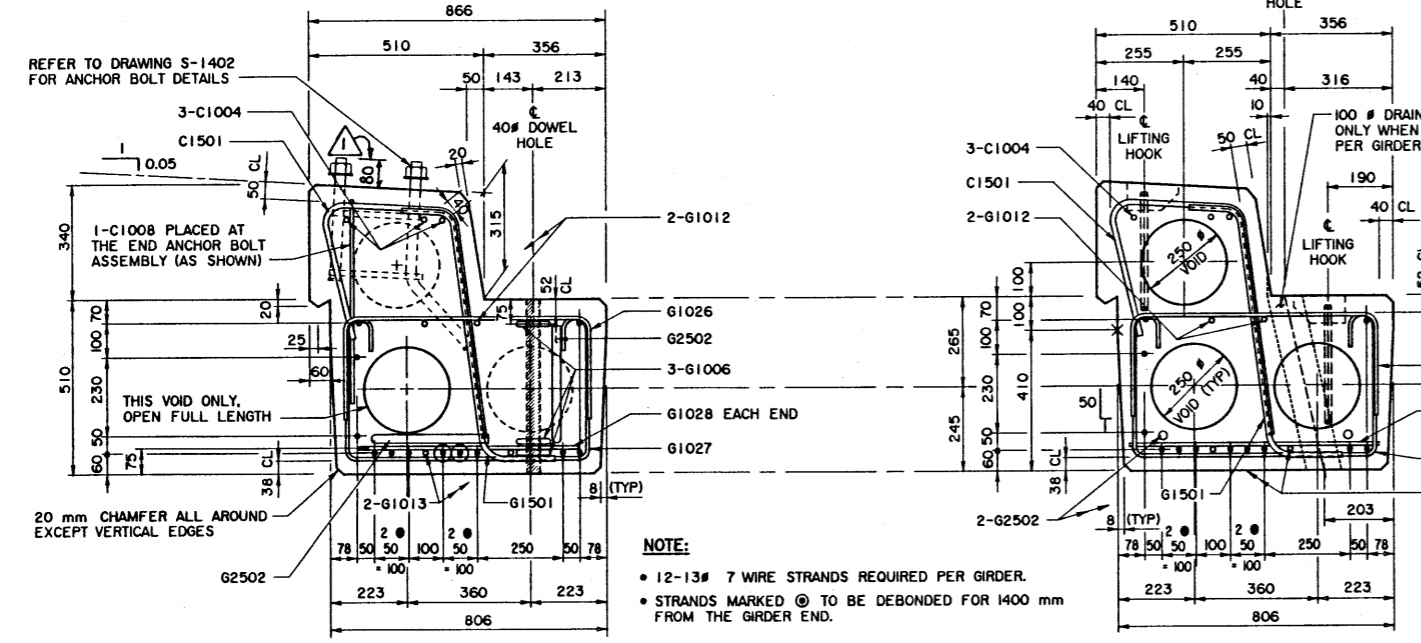


**GENERAL NOTES**

- ALL DRAWING REFERENCES ARE TO CURRENT DRAWINGS.
- DESIGN**
  - CAN/CSA-S6-88 SPECIFICATIONS EXCEPT AS MODIFIED BELOW:
    - ALLOWABLE TENSION AT MIDSPAN IS 40% OF MODULUS OF RUPTURE (SEVERE EXPOSURE CONDITIONS).
    - NO TENSION ALLOWED IN DECK SURFACE.
- LOADING:**
  - LIVE LOAD - CAN/CSA-S6-88; CS-750
  - 0.8 WHEEL LINES PER GIRDER
  - DEAD LOAD - GIRDER = 0.86 t/m
  - WEARING SURFACE = 0.09 t/m
- MATERIALS**
  - CONCRETE SHALL CONTAIN SILICA FUME AND BE MADE OF LIGHTWEIGHT COARSE AGGREGATE AND NATURAL SAND FINES. UNIT WEIGHT OF SEMI-LIGHT WEIGHT CONCRETE SHALL BE 1920 kg/m<sup>3</sup>.
  - 28 DAY CONCRETE STRENGTH - 35 MPa
  - RELEASE STRENGTH - 28 MPa
  - PRESTRESSING STEEL SHALL BE 13# 7 WIRE LOW RELAXATION STRAND (fpu = 1860 MPa).
  - REINFORCING STEEL SHALL BE GRADE 400W (YIELD STRENGTH OF GRADE 300 USED IN DESIGN TO ALLOW TACK WELDING OF SHEAR REINFORCEMENT).
- FABRICATION**
  - GIRDERS SHALL CONFORM TO THE CURRENT REQUIREMENTS OF THE BRIDGE MATERIALS SPECIFICATION FOR THE MANUFACTURE OF PRESTRESSED CONCRETE BRIDGE UNITS (SPEC B190).
  - FORCE IN PRESTRESSING STEEL:
    - INITIAL TENSIONING LOAD = 129 kN/STRAND
    - DESIGN LOAD AFTER LOSSES = 109 kN/STRAND
  - CURB SHALL BE CAST MONOLITHICALLY WITH GIRDER.
  - ANCHOR BOLT ASSEMBLIES SHALL BE CAST IN GIRDER AT SPACINGS SHOWN ON DRAWING S-1546.
  - ALL GALVANIZING SHALL CONFORM TO ASTM SPEC A123 OR A153 AS APPLICABLE.
  - BEND OR SHIFT REINFORCING WHERE REQUIRED TO CLEAR GIRDER CONNECTORS AND LIFTING HOOK ASSEMBLIES. STIRRUP SPACING SHALL BE MAINTAINED.
- ERECTION**
  - ANY FREE SPACE BETWEEN CONNECTORS SHALL BE FILLED WITH DOWEL WASHERS.
  - CALCULATED MASS OF ONE GIRDER IS 10.5 T.
- WORK THESE DRAWINGS TOGETHER : S-1544, S-1545, S-1546.



**GIRDER FINISHES**  
(BY FABRICATOR) 1:20



**SECTION A**  
1:10

**SECTION B**  
1:10

- NOTE:**
- 12-13# 7 WIRE STRANDS REQUIRED PER GIRDER.
  - STRANDS MARKED @ TO BE DEBONDED FOR 1400 mm FROM THE GIRDER END.

**SUPERSEDED**  
BY S-1545 REV. A 94-04-05

DESIGNED		DRAWN		DATE		CHECKED		DATE		STREAM		LOCATION		HIGHWAY		FILE		SHEET		DRAWING	
LEA		VMV		90-07-02		T.J.S.K.		90-08-23										2 OF 4		S-1545	

APPROVED  
EXECUTIVE DIRECTOR  
BRIDGE ENGINEERING  
DATE **Aug 23, 1990**

**Alberta TRANSPORTATION AND UTILITIES**  
BRIDGE ENGINEERING BRANCH

**PRESTRESSED CONCRETE**  
12 m TYPE SC-510  
CURB GIRDER