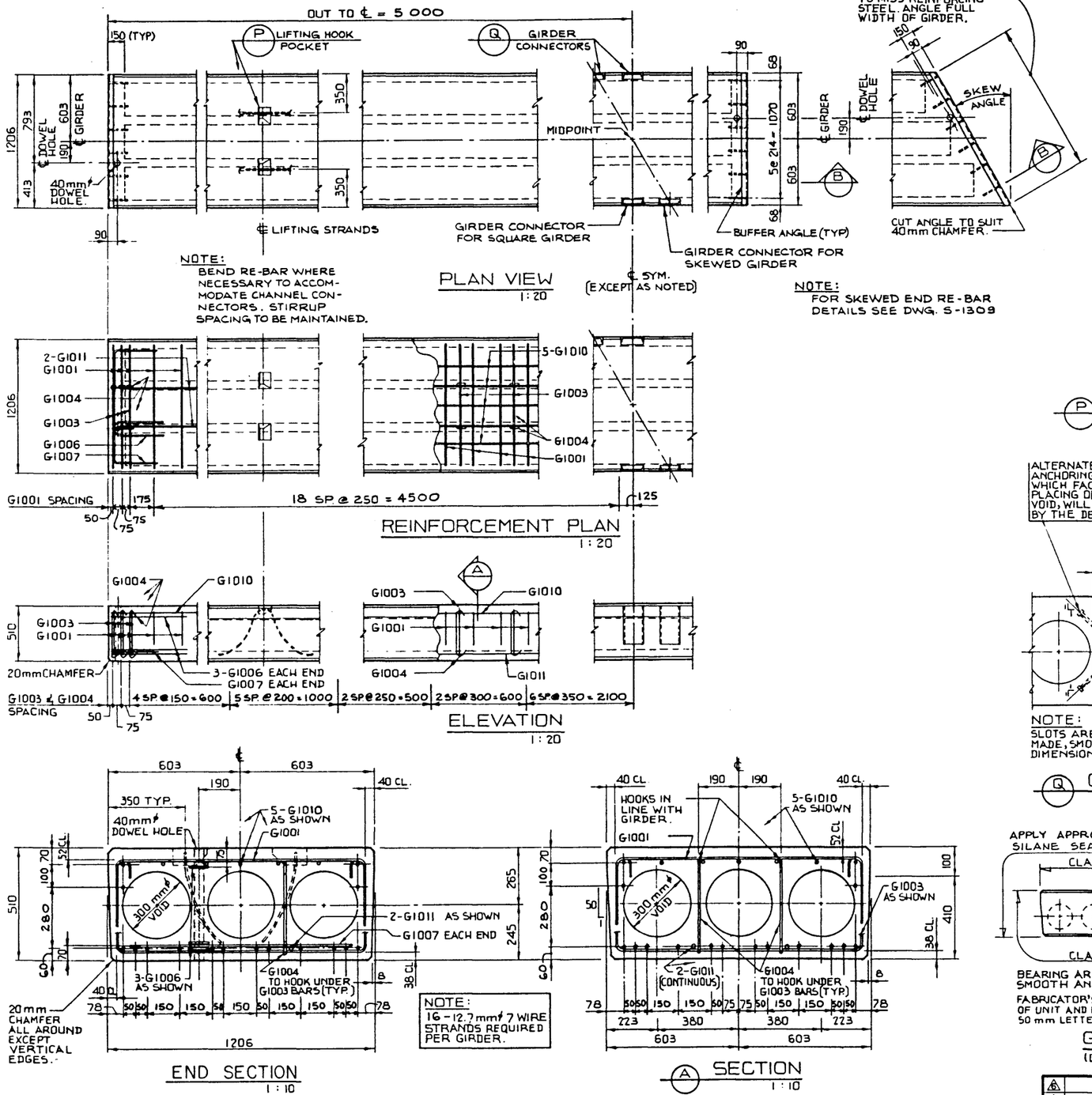
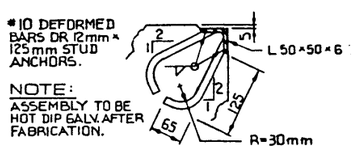
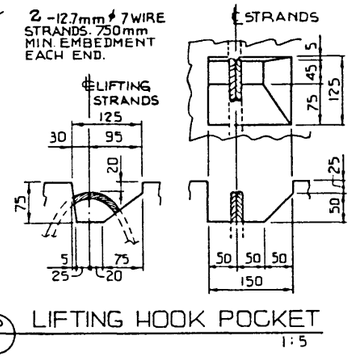
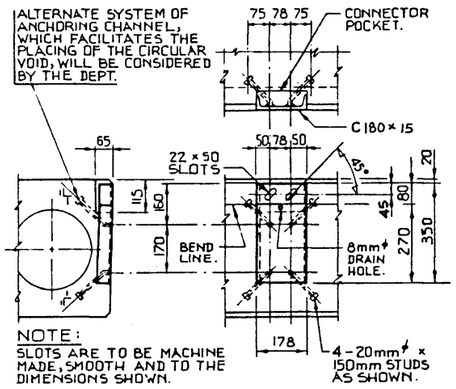
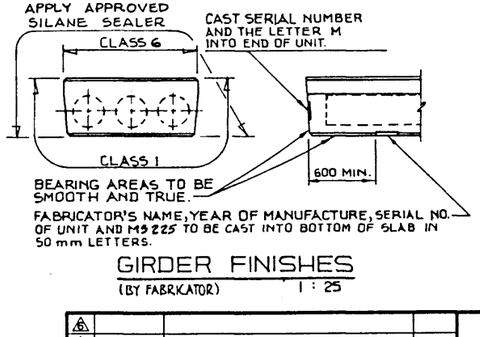








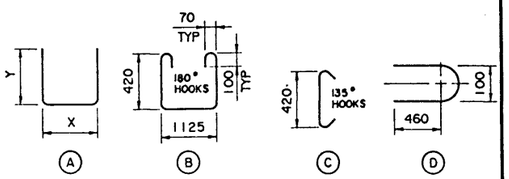


BAR LIST: FOR SQUARE GIRDER							
MARK	SIZE	NO	TYPE	X	Y	LENGTH	MASS
G1001	10	44	A	1 125	300	1 725	60
G1003	10	43	B			2 220	75
G1004	10	84	C			620	41
G1006	10	6	D			1 020	5
G1007	10	2	A	1 000	300	1 600	3
G1010	10	5	STR			9 900	39
G1011	10	2	STR			9 800	15

TOTAL kg : 238

BAR TYPES

(ALL BAR DIMENSIONS ARE OUT TO OUT)



GENERAL NOTES

- ALL DRAWING REFERENCES ARE TO CURRENT DRAWINGS.

DESIGN

- AASHTO 1973 SPECIFICATIONS PLUS INTERIMS TO 1976 EXCEPT AS MODIFIED BELOW:
  - ALLOWABLE TENSION AT MIDSPAN IS 80% OF MODULUS OF RUPTURE.
  - NO TENSION ALLOWED IN DECK SURFACE.
  - WEB REINFORCEMENT - ACCORDING TO ACI 318-71, BUT NOT LESS THAN AASHTO MINIMUM.
  - CAPACITY REDUCTION FACTORS ACCORDING TO CSA S6-1974.
- LOADING:

  LIVE LOAD - CSA CAN3-S6-M78; MS225-77
  - ONE WHEEL LINE PER GIRDER

  DEAD LOAD - GIRDER = 0.78 t/m
  - WEARING SURFACE = 0.15 t/m

MATERIALS

- CONCRETE IN GIRDER SHALL BE MADE OF LIGHTWEIGHT COARSE AGGREGATE AND SAND FINES.
- 28 DAY CONCRETE STRENGTH — 35 MPa
- RELEASE STRENGTH ——— 28 MPa
- UNIT WEIGHT OF SEMI-LIGHT WEIGHT CONCRETE 1920 kg/m³.
- PRESTRESSING STEEL SHALL BE 12.7 mm ϕ 7 WIRE LOW RELAXATION STRAND (f's = 1860 MPa).
- REINFORCING STEEL SHALL BE GRADE 400 (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 = 110 kN/STRAND
- ALL GALVANIZING SHALL CONFORM TO ASTM SPEC A153.
- 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 WASHERS.
- CALCULATED MASS OF ONE GIRDER IS 7.88 t.

- WORK THESE DRAWINGS TOGETHER : S-1307 , S-1308 AND S-1309. (4)

REV	DATE	DESCRIPTION	BY
6			
5			
4			
3			
2			
1	88-06-21	REDRAWN FROM S-1307	D H Q

REVISIONS

APPROVED
EXECUTIVE DIRECTOR BRIDGE ENGINEERING
DATE June 29, 1988

Alberta TRANSPORTATION AND UTILITIES
BRIDGE ENGINEERING BRANCH

PRESTRESSED CONCRETE 10 m TYPE SM-510 INTERIOR GIRDER

DESIGNED	DRAWN	DATE	CHECKED	DATE	STREAM	LOCATION	HIGHWAY	FILE	SHEET	DRAWING
R W L	V G B W S	88-06-21							1 of 3	S-1307-88

MP 236 DESIGN: RWL DRAWN: MMF 78-02-10