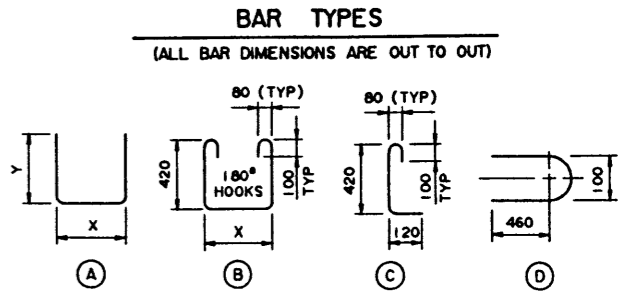
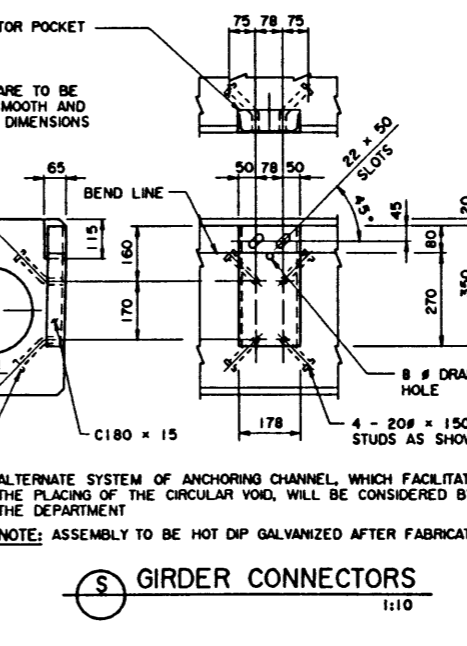
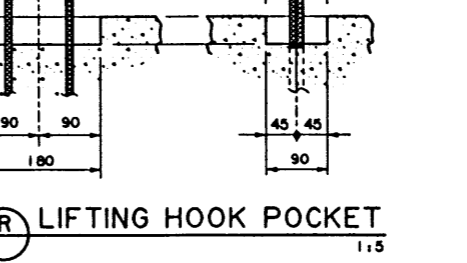
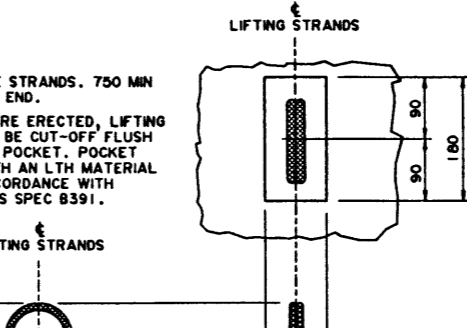
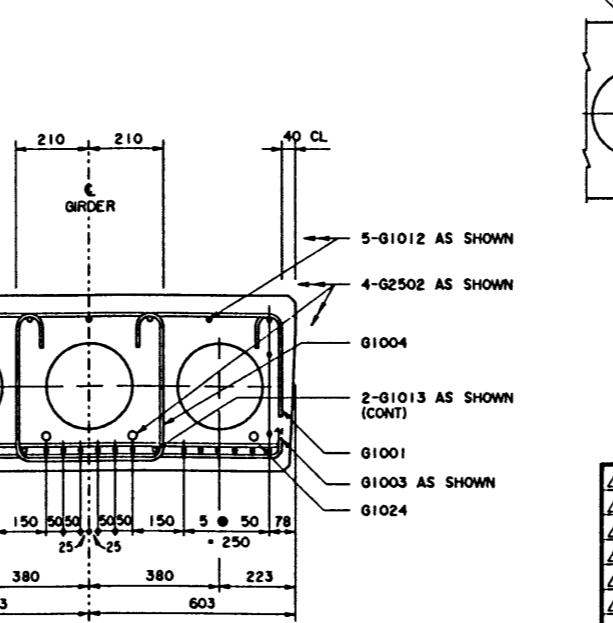
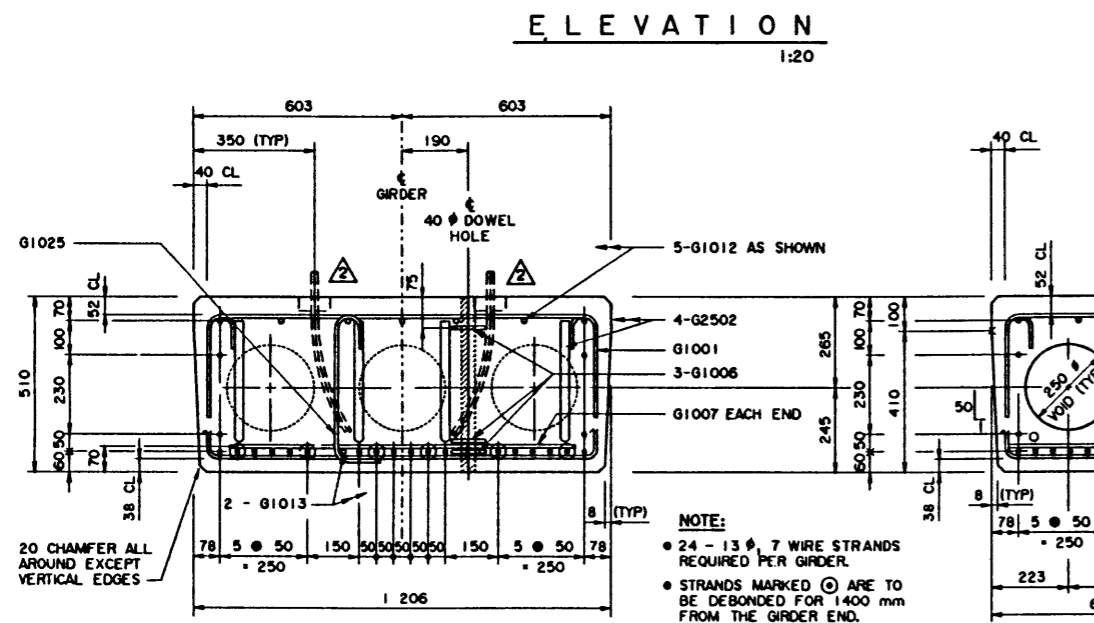
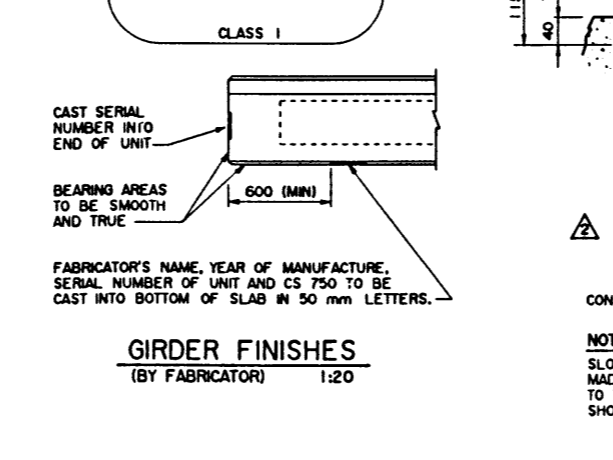
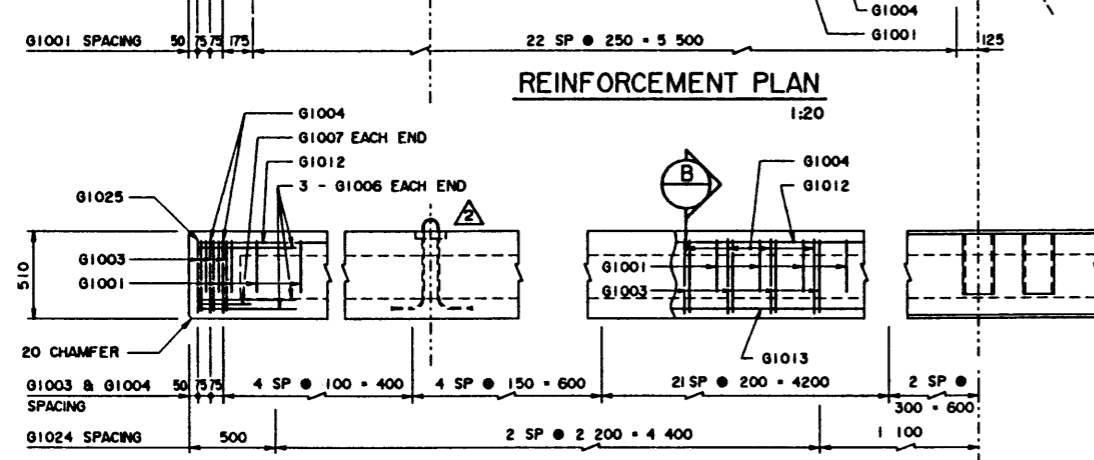
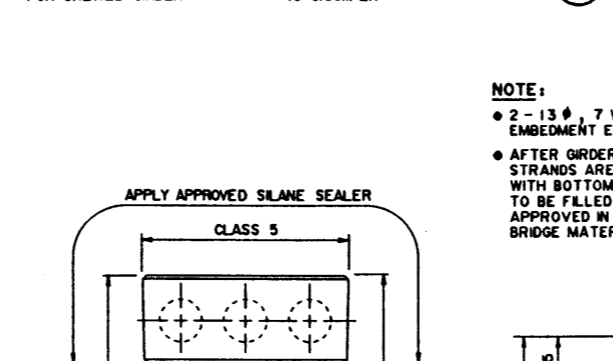
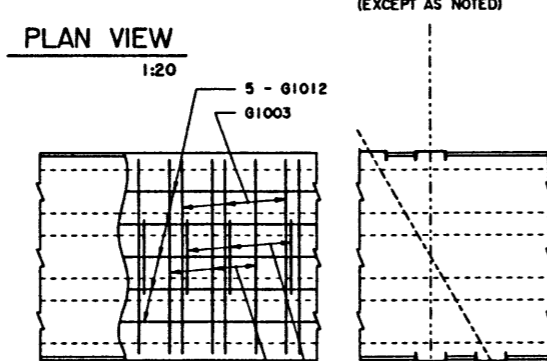
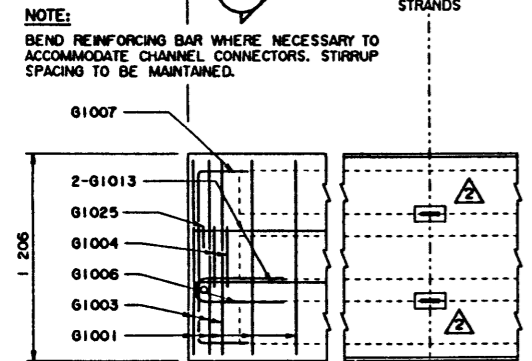


BAR LIST: FOR SQUARE GIRDER							
MARK	SIZE	NO	TYPE	X	Y	LENGTH	MASS
G1001	10	52	A	1 125	300	1 725	70
G1003	10	67	B	1 125		2 220	117
G1004	10	65	B	420		1 520	76
G1006	10	6	D			1 020	5
G1007	10	2	A	1 000	300	1 600	3
G1012	10	5	STR			11 900	47
G1013	10	2	STR			11 800	19
G1024	10	6	STR			1 100	5
G1025	10	2	C			670	1
G2502	25	4	A	11 850	350	12 550	197

TOTAL kg : 540



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 WITH 50 mm WEARING SURFACE (52% WITH 90 mm WEARING SURFACE).
 - NO TENSION ALLOWED IN DECK SURFACE.
- LOADING:
 - LIVE LOAD - CAN/CSA-S6-88; CS-750
ONE WHEEL LINE PER GIRDER
 - DEAD LOAD - GIRDER = 0.93 t/m
 - WEARING SURFACE = 0.24 t/m

MATERIALS

- CONCRETE SHALL CONTAIN SILICA FUME AND BE MADE OF LIGHTWEIGHT COARSE AGGREGATE AND NATURAL SAND FINES. UNIT WEIGHT OF SEMI-LIGHTWEIGHT CONCRETE SHALL BE 1920 kg/m³.
- 28 DAY CONCRETE STRENGTH - 35 MPa
- RELEASE STRENGTH - 28 MPa
- PRESTRESSING STEEL SHALL BE 13 ϕ , 7 WIRE LOW RELAXATION STRAND (f_{pu} = 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 SPECIFICATIONS FOR BRIDGE CONSTRUCTION SECTION 7 - PRECAST CONCRETE UNITS.
- FORCE IN PRESTRESSING STEEL:
 - INITIAL TENSIONING LOAD = 129 kN/STRAND
 - DESIGN LOAD AFTER LOSSES = 104 kN/STRAND
- ALL GALVANIZING SHALL CONFORM TO ASTM SPEC A123.
- BEND OR SHIFT REINFORCING WHERE REQUIRED TO CLEAR GIRDER CONNECTORS AND LIFTING HOOK ASSEMBLIES. STIRRUP SPACING IS TO BE MAINTAINED.

ERECTION

- ANY FREE SPACE BETWEEN CONNECTORS SHALL BE FILLED WITH DROP-IN WASHERS.
- CALCULATED MASS OF ONE GIRDER IS 11.34 t.

WORK THESE DRAWINGS TOGETHER: S-1544, S-1545 AND S-1546

DESIGNED		DRAWN		DATE		CHECKED		DATE		STREAM		LOCATION		HIGHWAY		FILE		SHEET		DRAWING	
LEA		VMV		90-07-02		TJS		90-08-23										1 of 4		S-1544	

ORIGINAL DRAWING APPROVED BY
N. BOYD
EXECUTIVE DIRECTOR
BRIDGE ENGINEERING
AUG 23, 1990

Alberta TRANSPORTATION AND UTILITIES
BRIDGE ENGINEERING BRANCH

PRESTRESSED CONCRETE
12 m TYPE SC-510
INTERIOR GIRDER