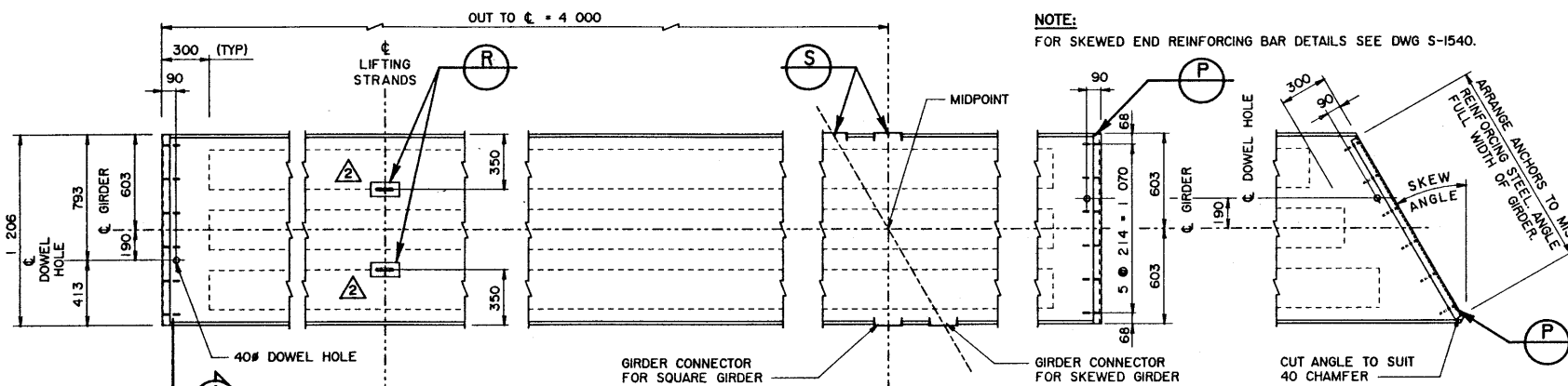
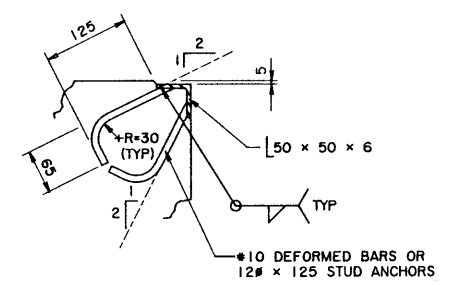


BAR LIST: FOR SQUARE GIRDER							
MARK	SIZE	NO	TYPE	X	Y	LENGTH	MASS
G1001	10	36	A	1 125	300	1 725	49
G1003	10	37	B	1 125		2 220	64
G1004	10	35	B	420		1 520	42
G1006	10	6	D			1 020	5
G1007	10	2	A	1 000	300	1 600	3
G1008	10	5	STR			7 900	31
G1009	10	2	STR			7 800	12
G1025	10	2	C			670	1

TOTAL kg : 207

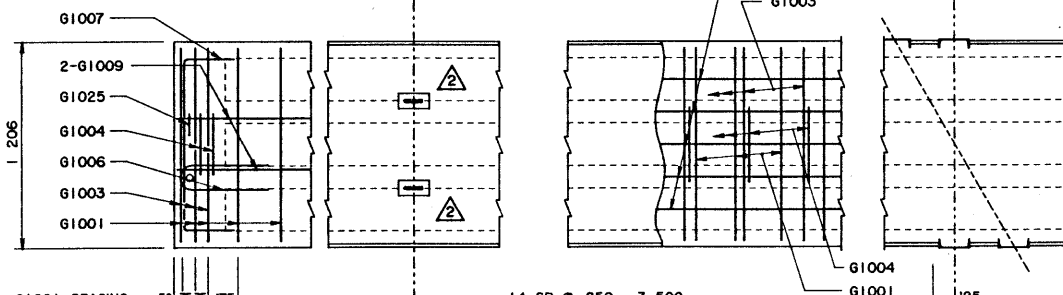


PLAN VIEW
1:20



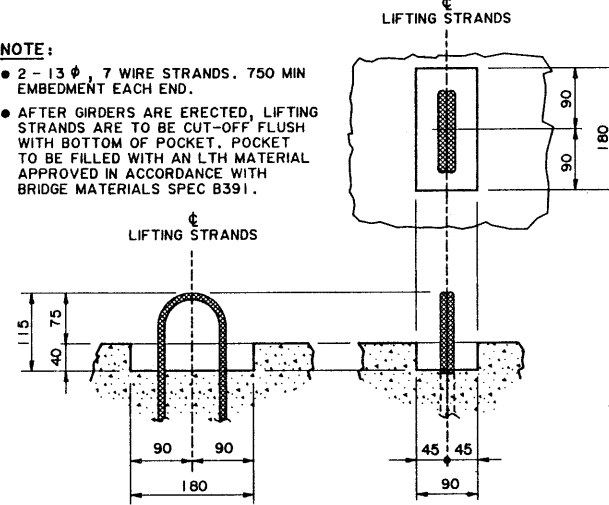
BUFFER ANGLE
1:5

NOTE:
BEND REINFORCING BAR WHERE NECESSARY TO ACCOMMODATE CHANNEL CONNECTORS. STIRRUP SPACING TO BE MAINTAINED.

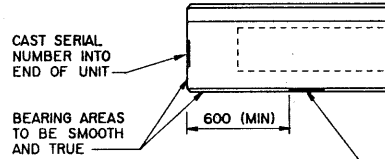
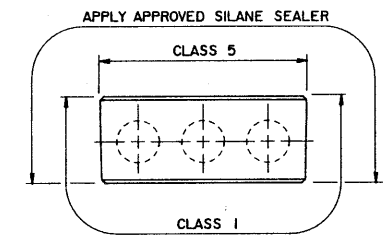


REINFORCEMENT PLAN
1:20

NOTE:
• 2 - 13 ϕ , 7 WIRE STRANDS. 750 MIN EMBEDMENT EACH END.
• AFTER GIRDERS ARE ERECTED, LIFTING STRANDS ARE TO BE CUT-OFF FLUSH WITH BOTTOM OF POCKET. POCKET TO BE FILLED WITH AN LTH MATERIAL APPROVED IN ACCORDANCE WITH BRIDGE MATERIALS SPEC B391.



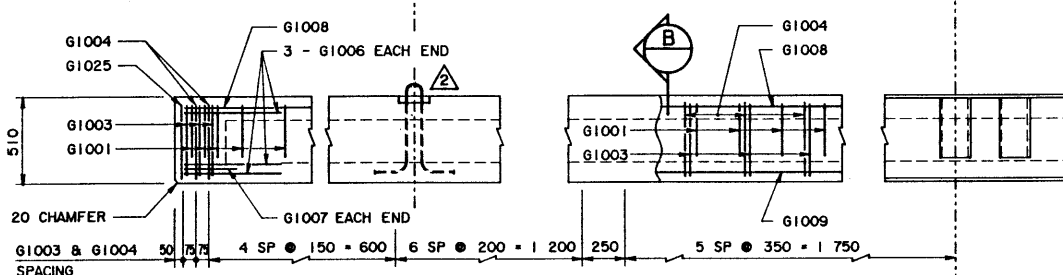
LIFTING HOOK POCKET
1:5



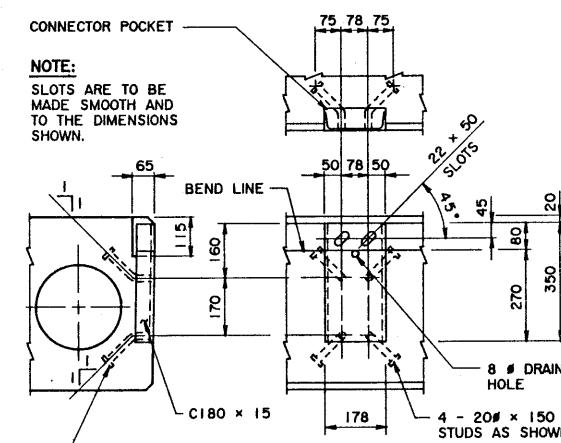
CAST SERIAL NUMBER INTO END OF UNIT
BEARING AREAS TO BE SMOOTH AND TRUE
600 (MIN)

GIRDER FINISHES
(BY FABRICATOR)
1:20

SUPERSEDED
BY REVISION

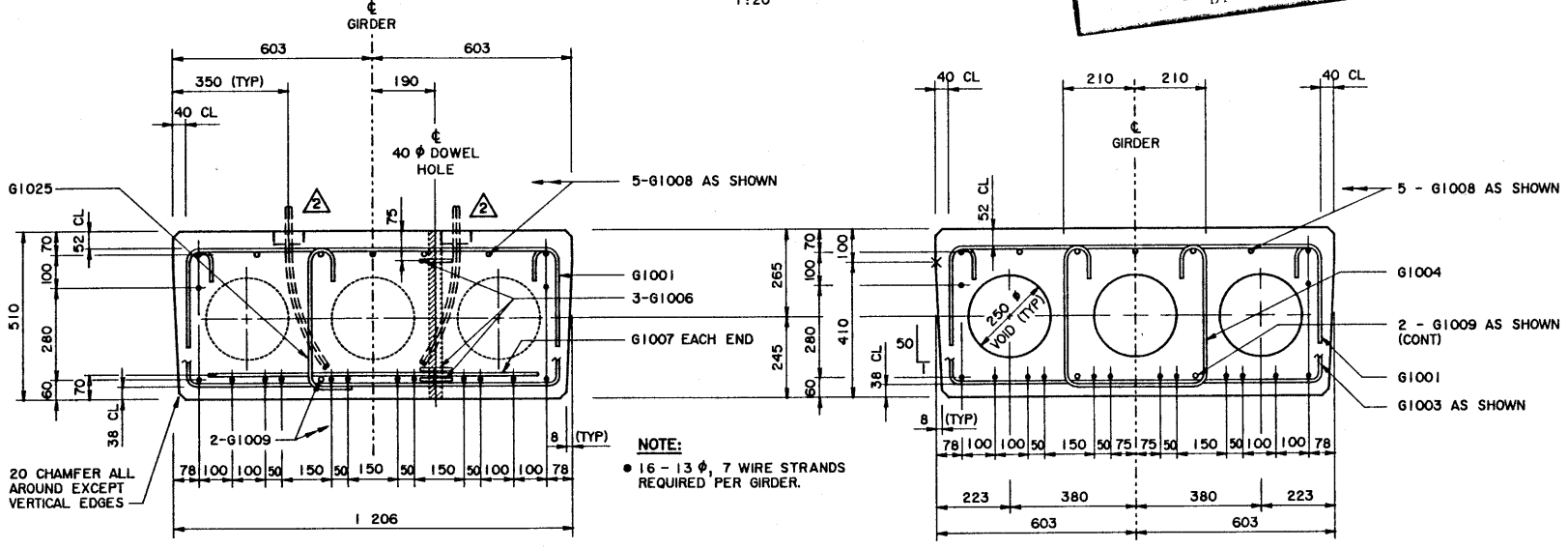


ELEVATION
1:20



NOTE: SLOTS ARE TO BE MADE SMOOTH AND TO THE DIMENSIONS SHOWN.
ALTERNATE SYSTEM OF ANCHORING CHANNEL, WHICH FACILITATES THE PLACING OF THE CIRCULAR VOID, WILL BE CONSIDERED BY THE DEPARTMENT.
NOTE: ASSEMBLY TO BE HOT DIP GALVANIZED AFTER FABRICATION.

GIRDER CONNECTORS
1:10



SECTION A
1:10

SECTION B
1:10

NOTE:
• 16 - 13 ϕ , 7 WIRE STRANDS REQUIRED PER GIRDER.

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 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 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 A123.
- BEND OR SHIFT REINFORCING WHERE REQUIRED TO CLEAR GIRDER CONNECTOR AND LIFTING HOOK ASSEMBLIES. STIRRUP SPACING IS TO BE MAINTAINED.

ERECTOR

- ANY FREE SPACE BETWEEN CONNECTOR SHALL BE FILLED WITH DROP-IN WASHERS.
- CALCULATED MASS OF ONE GIRDER IS 2 t.
- WORK THESE DRAWINGS TOGETHER : S-1538, S-1539 AND S-1540

REV	DATE	REVISIONS	BY
94-04-05		LIFTING HOOK POCKET	DHO
92-01-10		CONCRETE MATERIALS NOTE	DHO

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

Alberta TRANSPORTATION AND UTILITIES
BRIDGE ENGINEERING BRANCH

PRESTRESSED CONCRETE
8 m TYPE SC-510
INTERIOR GIRDER

DESIGNED	DRAWN	DATE	CHECKED	DATE	STREAM	LOCATION	HIGHWAY	FILE	SHEET	DRAWING
LEA	VMV	90-07-02	TJS	90-08-23					1 of 4	S-1538