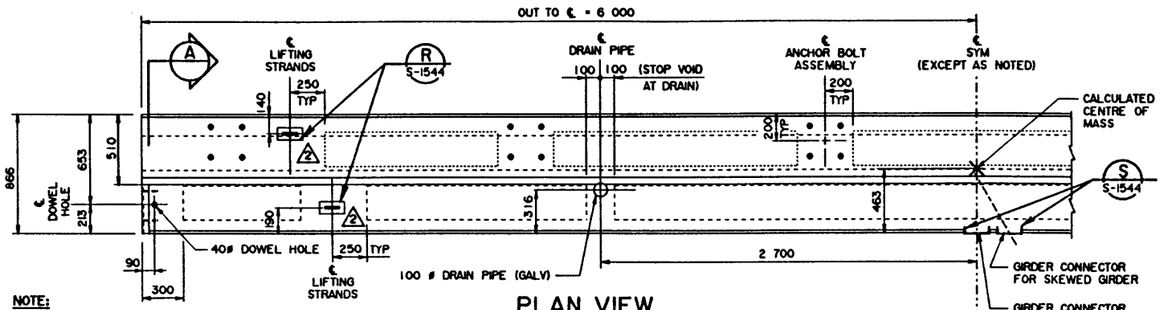
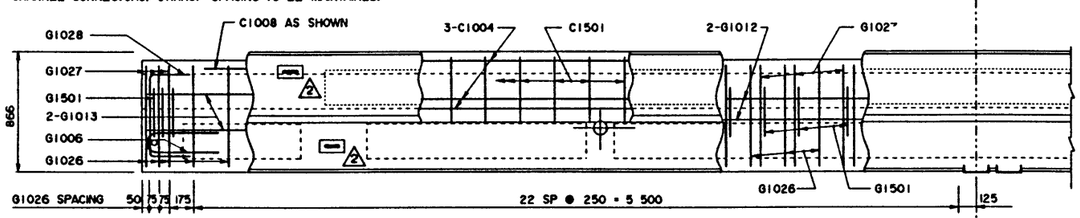
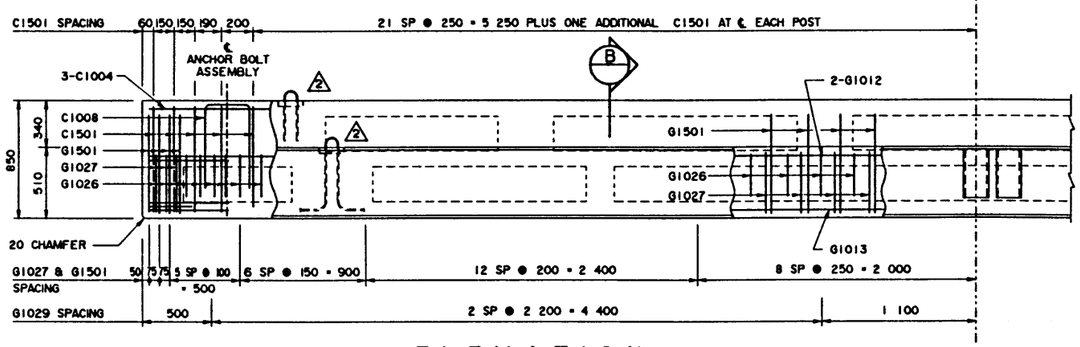


PLAN VIEW
1:20

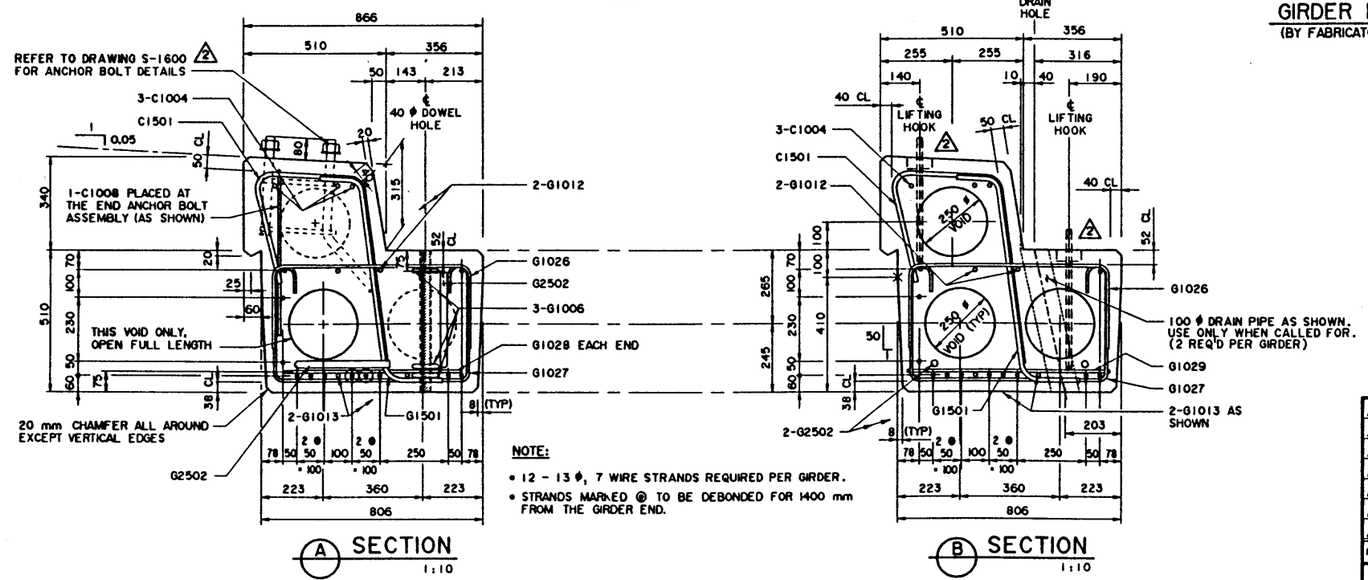
NOTE:
BEND REINFORCING BAR WHERE NECESSARY TO ACCOMMODATE CHANNEL CONNECTORS. STIRRUP SPACING TO BE MAINTAINED.



REINFORCEMENT PLAN
1:20



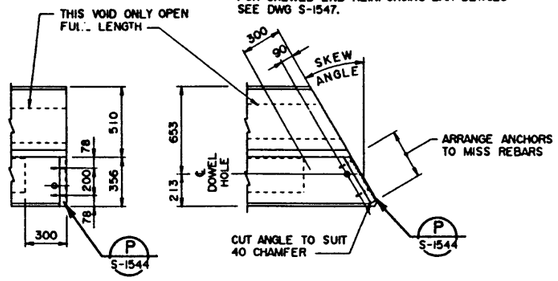
ELEVATION
1:20



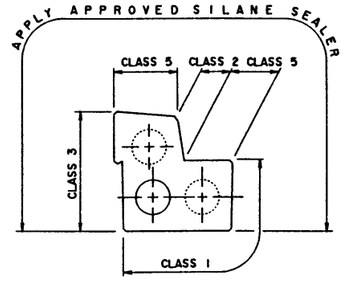
NOTE:
- 12 - 13 ø, 7 WIRE STRANDS REQUIRED PER GIRDER.
- STRANDS MARKED @ TO BE DEBONDED FOR 1400 mm FROM THE GIRDER END.

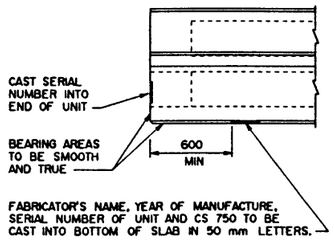
A SECTION
1:10

B SECTION
1:10



NOTE:
FOR SKEWED END REINFORCING BAR DETAILS SEE DWG S-1547.





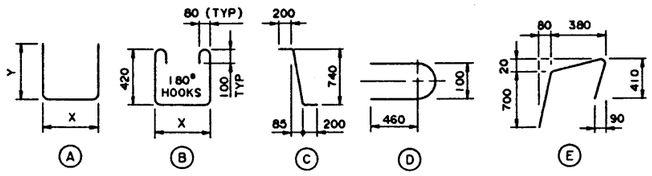
GIRDER FINISHES
(BY FABRICATOR) 1:20

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

BAR TYPES
(ALL BAR DIMENSIONS ARE OUT TO OUT)



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-LIGHTWEIGHT CONCRETE SHALL BE 1920 kg/m³.
- 28 DAY CONCRETE STRENGTH — 35 MPa
- RELEASE STRENGTH ——— 28 MPa
- PRESTRESSING STEEL SHALL BE 13 ø, 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 SPECIFICATIONS FOR BRIDGE CONSTRUCTION SECTION 7 - PRECAST CONCRETE UNITS.
- 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 DROP-IN WASHERS.
- CALCULATED MASS OF ONE GIRDER IS 10.8 t.
- WORK THESE DRAWINGS TOGETHER : S-1544, S-1545, S-1546.

④

REV	DATE	REVISIONS	BY
5			
4			
3			
2	95-07-10	SPECIFICATION NOTE	LEA
1	94-04-05	ANCHOR BOLT REFERENCE & LIFTING HOOK	LEA
0	92-01-10	ANCHOR BOLT PROJ, CONC MATERIALS NOTE	DHQ

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 CURB GIRDER

DESIGNED	DRAWN	DATE	CHECKED	DATE	STREAM	LOCATION	HIGHWAY	FILE	SHEET	DRAWING
LEA	VMV	90-07-02	TJS	90-08-23					2 of 4	S-1545

FILE: S1545-90-173 UPDATE JUL 07, 1995
SHEET 1400 MM