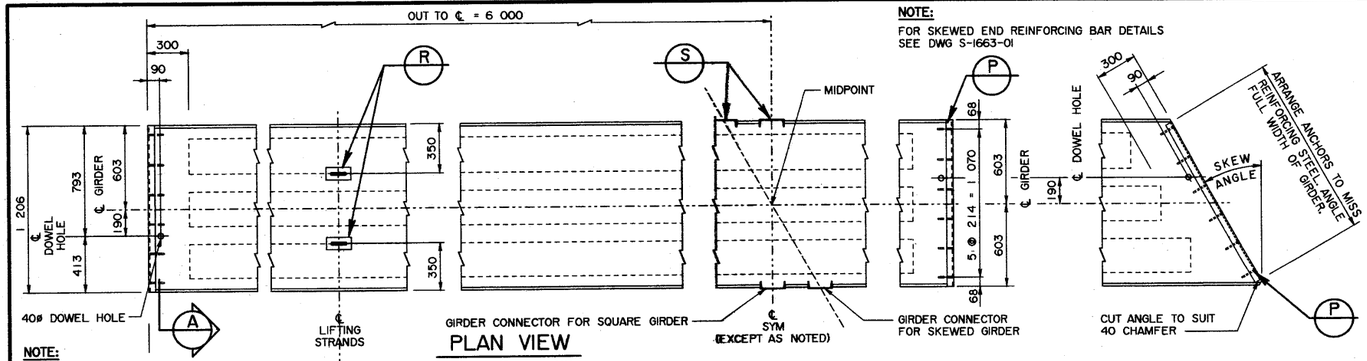
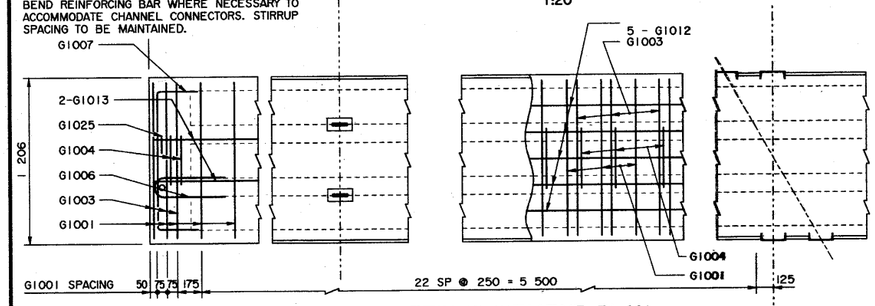


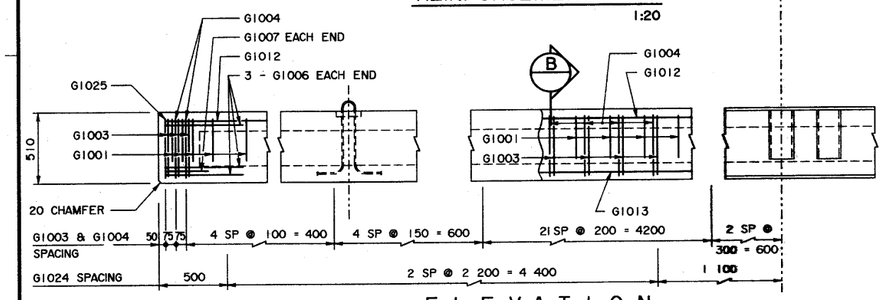
PLAN VIEW
1:20

NOTE:
FOR SKEWED END REINFORCING BAR DETAILS SEE DWG S-1663-01

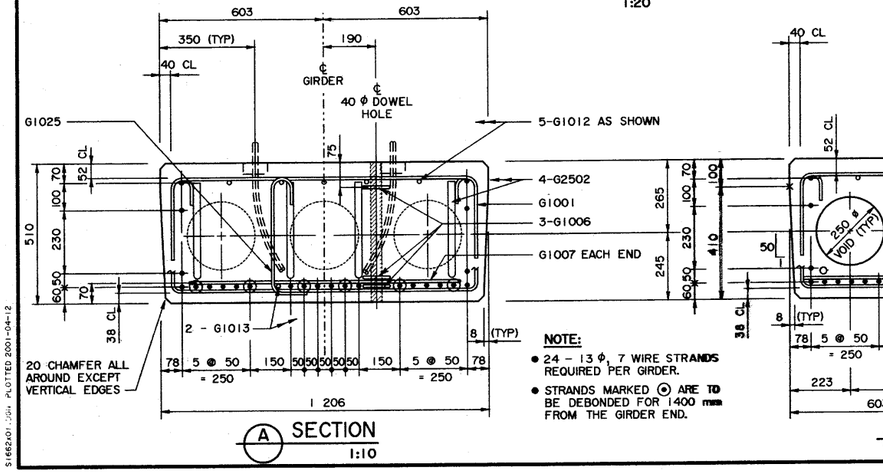
NOTE:
BEND REINFORCING BAR WHERE NECESSARY TO ACCOMMODATE CHANNEL CONNECTORS. STIRRUP SPACING TO BE MAINTAINED.



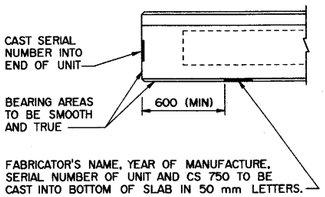
REINFORCEMENT PLAN
1:20



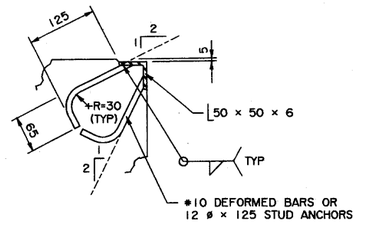
ELEVATION
1:20



NOTE:
- 24 – 13 ϕ, 7 WIRE STRANDS REQUIRED PER GIRDER.
- STRANDS MARKED ⊙ ARE TO BE DEBONDED FOR 1400 mm FROM THE GIRDER END.



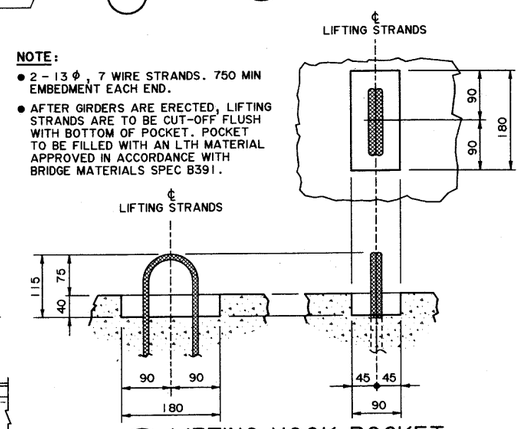
GIRDER FINISHES
(BY FABRICATOR) 1:20



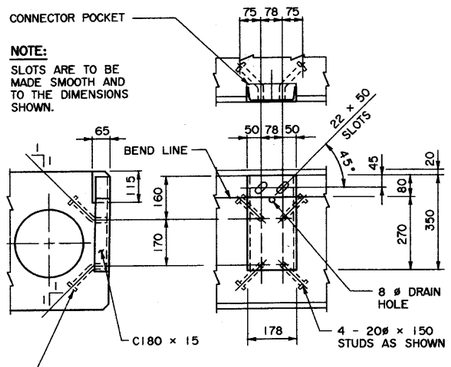
NOTE:
ASSEMBLY TO BE HOT DIP GALVANIZED AFTER FABRICATION.

P BUFFER ANGLE
1:5

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.



R LIFTING HOOK POCKET
1:5



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.

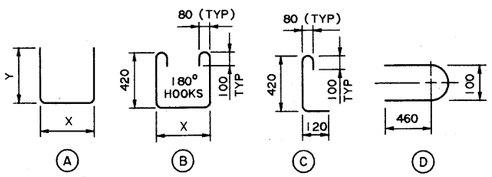
S GIRDER CONNECTORS
1:10

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

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 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 (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 = 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-1662-01 AND S-1663-01 (1)

REV	DATE	REVISIONS	BY
5			
4			
3			
2			
1			

DESIGNER RMY CHECKER CTC

RECOMMENDED DIRECTOR BRIDGE ENGINEERING

APPROVED EXECUTIVE DIRECTOR TECHNICAL STANDARDS BRANCH

DATE 10/01

Alberta TRANSPORTATION

PRESTRESSED CONCRETE 12 m TYPE SC-510 INTERIOR GIRDER

F502019 | DATE 2001-04-12 | SHEET 1 OF 2 | DRAWING S-1662-01

S1662v01.dgn PLOTTED 2001-04-12