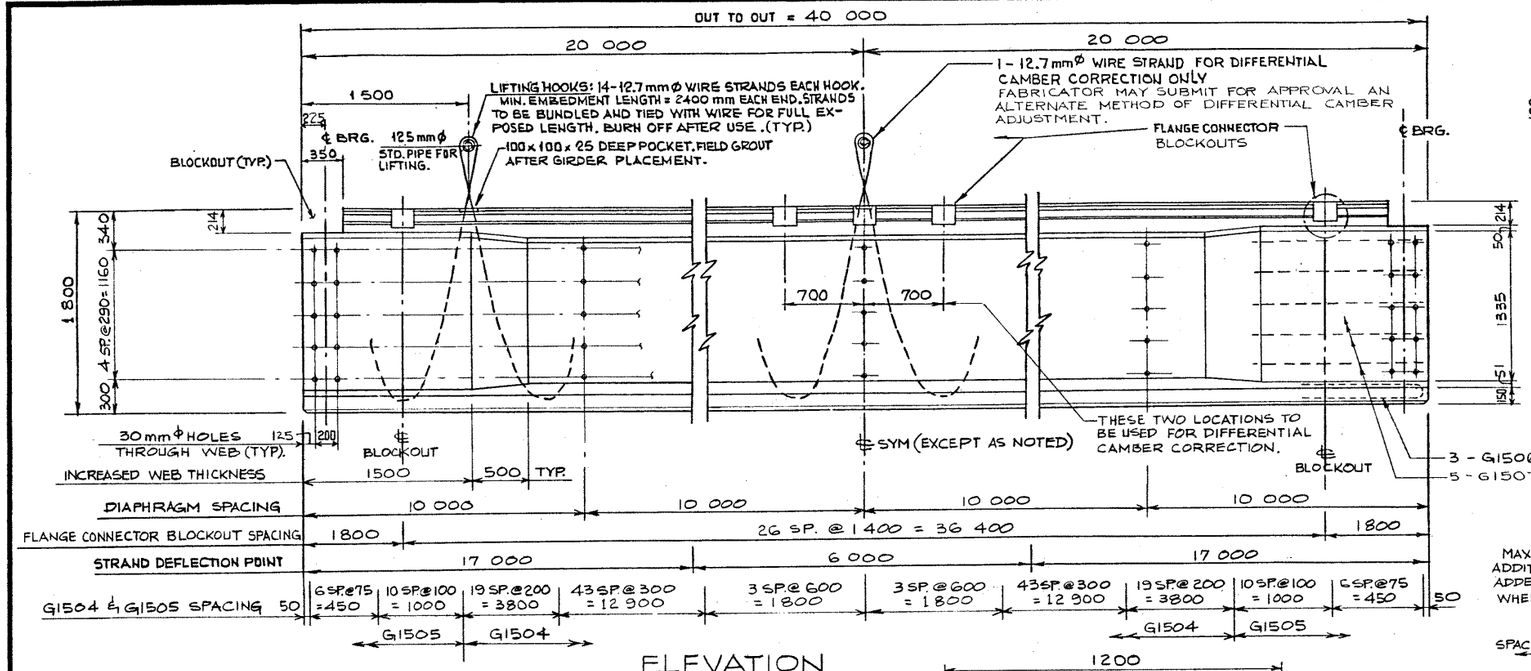
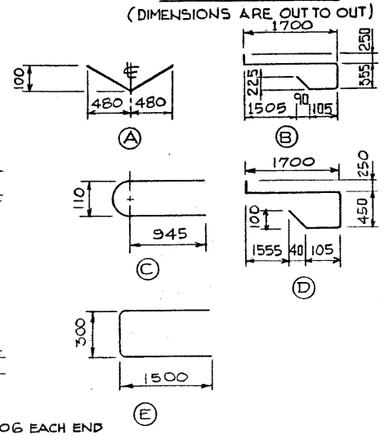


ELEVATION
N.T.S.

BAR TYPES:

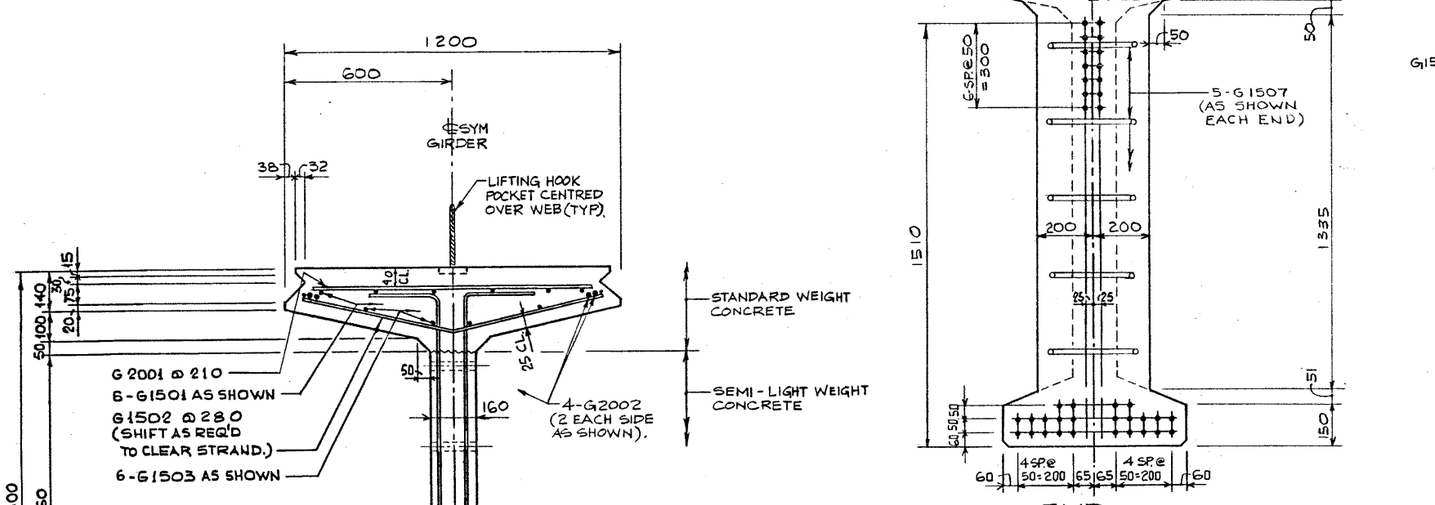
(DIMENSIONS ARE OUT TO OUT)



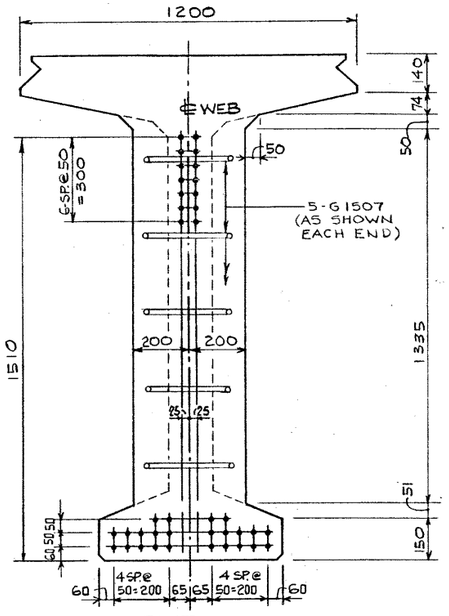
BAR LIST: ONE SQUARE GIRDER

MARK	SIZE	NO.	TYPE	X	Y	LENGTH	MASS
G 1501	15	24	STR.			10450	394
G 1502	15	141	A			980	217
G 1503	15	24	STR.			10450	394
G 1504	15	258	B			2655	1075
G 1505	15	68	D			2615	279
G 1506	15	6	C			2065	19
G 1507	15	10	E			3300	52
G 2001	20	188	STR.			960	425
G 2002	20	16	STR.			10750	405

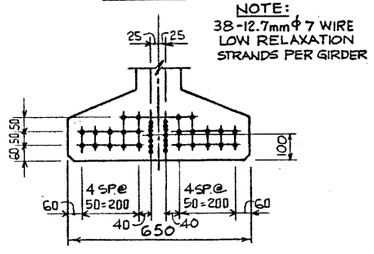
TOTAL kg: 3 260



TYPICAL SECTION 1:10

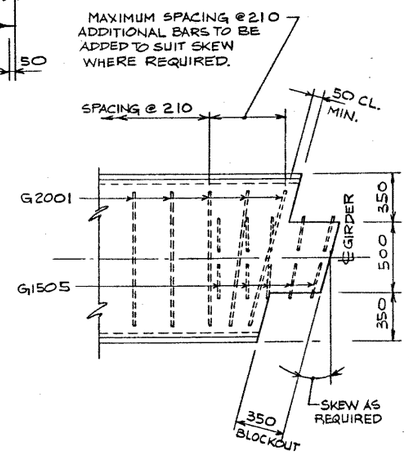


END 1:10



NOTE:
38 - 12.7 mm ϕ 7 WIRE LOW RELAXATION STRANDS PER GIRDER

MIDSPAN
PRESTRESSING PATTERN 1:10



SKEWED END RE-BAR PLAN
1:20

GENERAL NOTES

DESIGN:

- C.S.A. CAN 3-S6-M78.
- NO TENSION IN TOP FLANGE OF GIRDER

LOADING:

- DEAD LOAD - GIRDER = 13.1 kN/M
  - WEARING SURFACE, SHEAR KEYS = 1.8 kN/M
- LIVE LOAD - C-S-A. CAN 3-S6-M78 - MS300 PLUS IMPACT -0.71 WHEEL LINES/GIRDER

PRESTRESSING STEEL:

- PRESTRESSING STEEL SHALL BE 12.7 mm ϕ - 7 WIRE LOW RELAXATION STRAND (f_{pu} = 1860 MPa)
- INITIAL TENSIONING LOAD: 128.61 kN/STRAND
- DESIGN LOAD AFTER LOSSES: 99.0 kN/STRAND

MATERIALS:

- STANDARD WEIGHT CONCRETE WITH NOT LESS THAN 5% AIR ENTRAINMENT (WHEN MEASURED IN PLASTIC STATE) SHALL BE USED AS NOTED.
- SEMI-LIGHT WT. CONCRETE SHALL HAVE A UNIT WEIGHT OF 1920 kG/M³ PLUS OR MINUS 5% IN PLASTIC STATE AND BE MADE USING LIGHTWEIGHT COARSE AGGREGATE AND NATURAL SAND FINES WITH AN AIR ENTRAINMENT OF NOT LESS THAN 6%.
- 28 DAY STRENGTH: 35 MPa
- RELEASE STRENGTH: 28 MPa
- REINFORCING STEEL SHALL BE A MINIMUM OF G30.12M GRADE 300.

FABRICATION:

- GIRDERS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ALBERTA BRIDGE BRANCH "SPECIFICATION FOR THE MANUFACTURE OF PRESTRESSED AND PRECAST CONCRETE BRIDGE UNITS B-190M".
- ALL EXPOSED CONCRETE CORNERS TO HAVE 20 mm CHAMFER OR FILLET UNLESS OTHERWISE NOTED.
- GIRDER FORMS MUST BE ADJUSTABLE SUCH THAT THE TOP AND BOTTOM FLANGES OF THE GIRDER WILL FOLLOW THE SAME PARABOLIC CURVE WITH A MIDPOINT SAG AS SPECIFIED AT THE TIME OF CASTING.
- EXPECTED GIRDER CAMBER DUE TO PRESTRESS IS 90 mm.

ERECTION:

- LIFTING FORCE AT EACH HOOK MUST BE VERTICAL AT ALL TIMES.
- GIRDER SURFACE MUST BE LEVEL AT ALL TIMES.
- THEORETICAL MASS OF ONE GIRDER IS 60.2 TONNES.
- CAMBER DIFFERENTIAL TO BE ELIMINATED BEFORE WELDING FLANGE CONNECTORS, USING JACKING BEAM & LIFTING HOOKS AT 10 SPAN.

SUPERSEDED 02 by S-1553 84-05-07

NOTE: GIRDERS MUST BE GIVEN ADEQUATE TEMPORARY LATERAL SUPPORT IMMEDIATELY AFTER STRIPPING AND UNTIL GIRDERS ARE ERECTED.

02

DESIGNED BY: J.A.S. | DRAWN BY: P.SZÖTS | DATE: 82 03 01 | M.P.-269

NO	DATE	DESCRIPTION

REVISIONS

APPROVED

CHIEF BRIDGE ENGINEER

DATE

Alberta TRANSPORTATION BRIDGE AND STRUCTURAL ENGINEERING BRANCH

METRIC

PRESTRESSED CONCRETE 40m TYPE D.B.T. 1800 x 1200 INTERIOR GIRDER

DESIGNED	DRAWN BY	DATE	CHECKED BY	DATE	STREAM	LOCATION	HWY NO	SCALE	FILE NO	SHEET	DWG NO
J. K. F.	V.G.B.	82-06-24						SHOWN		... OF ...	S-1580

M.P.-269