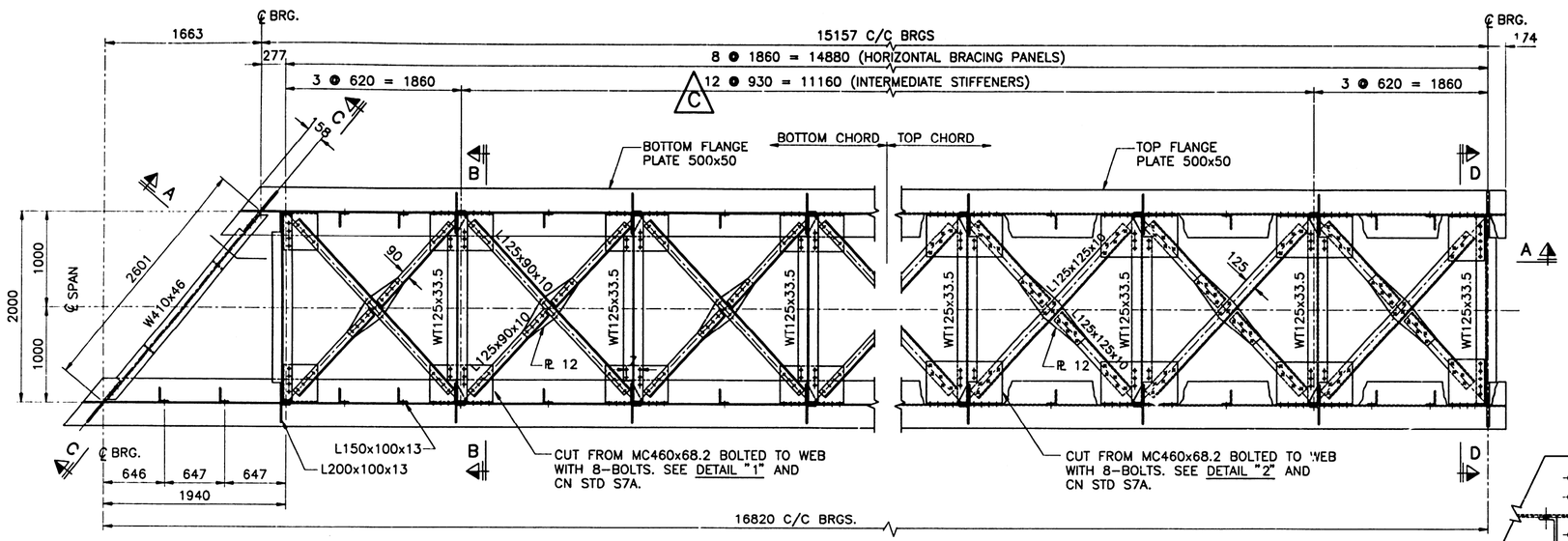
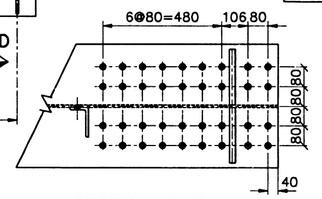
EAST TO PORTAGE JCT.

WEST TO WINNIPEG ST.

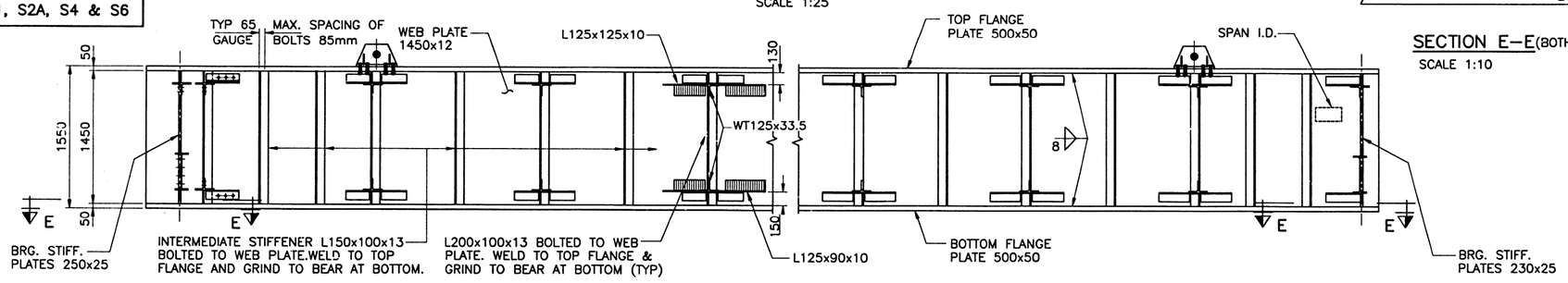


PLAN
SCALE 1:25

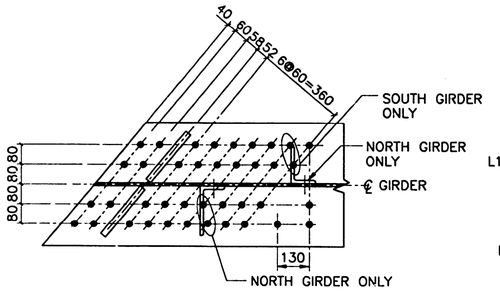
NOTE: SEE ALSO CN STD. DWG.'S S1, S2A, S4 & S6



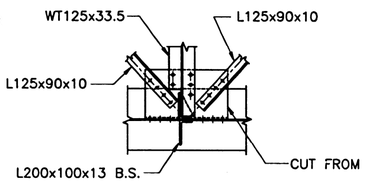
SECTION E–E(BOTH GIRDERS)
SCALE 1:10



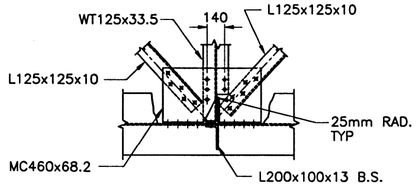
SECTION A–A
SCALE 1:25



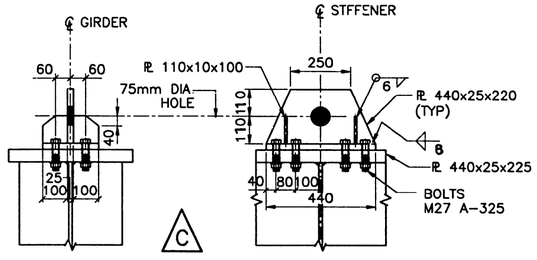
SECTION F–F(SOUTH GIRDER)
SECTION F'–F'(NORTH GIRDER)
SCALE 1:10



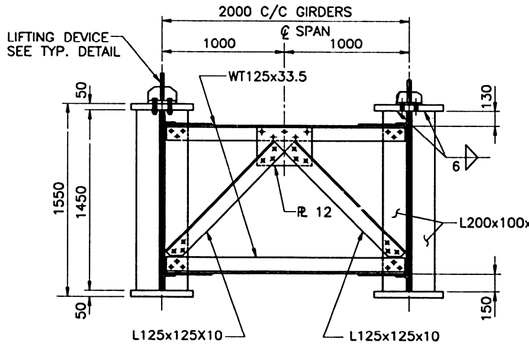
DETAIL "1"(BOTTOM CHORD)
SCALE 1:20



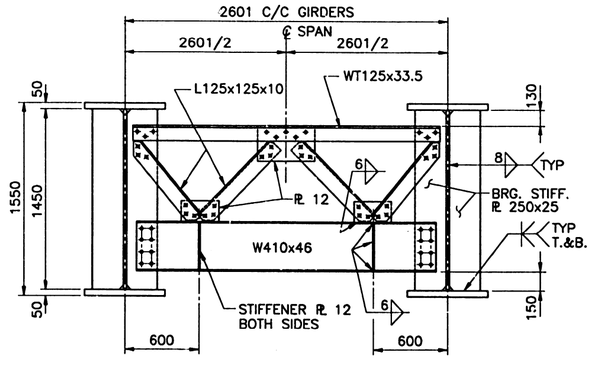
DETAIL "2"(TOP CHORD)
SCALE 1:20



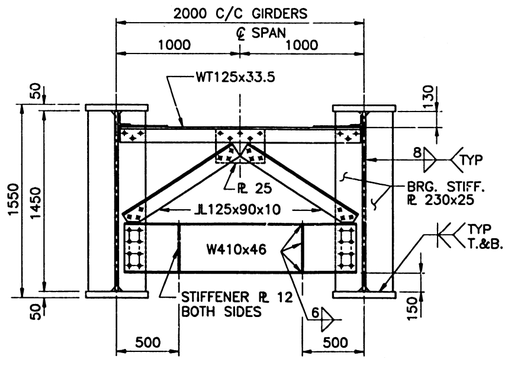
LIFTING DEVICE DETAILS
SCALE 1:10



SECTION B–B
SCALE 1:20



SECTION C–C
SCALE 1:20



SECTION D–D
SCALE 1:20

TABLE OF STRESSES

16.8m SPAN (C/C BEARINGS)

STEEL: SEE NOTES

TOP FLANGE PLATE	500x50	AREA = 25000 mm^2
WEB PLATE	1450X12	AREA = 17400 mm^2
BOTTOM FLANGE PLATE	500x50	AREA = 25000 mm^2

S_{x-x} TOP = 40.2 E+06 mm^3
S_{x-x} BOT = 40.2 E+06 mm^3
I_{x-x} = 31.1E+09 mm^4

	END REACTION kN	SHEAR STRESS MPa	BENDING MOMENT kNm	BENDING STRESSES IN FLANGES (MPa)
DEAD LOAD (13.9 kN/m)	117	6.7	490.0	12.2
LIVE LOAD (E70)	721	41.5	2649	65.8
IMPACT 49.5 %	357	20.5	1312	32.6
CENTRIFUGAL FORCE / COMP.	116	6.7	427	10.6
TOTAL GROUP "A"	1311	75.4	4878	118.8
ALLOWBLE STRESSES (BENDING & SHEAR)		122.5		192.5
RATIO: WORKING/ALLOWABLE		0.62		0.62

$\frac{\text{DEFL. LL + I}}{\text{SPAN}} = \frac{1}{812}$

ALLOWABLE STRESS RANGE FOR FATIGUE CATEGORY "B" FOR N>2,000,000 CYCLES

S_{rsat} = 110.30

MAXIMUM DESIGN STRESS RANGE AT BOTTOM FLANGE TO WEB WELD AT MIDSPAN USING REDUCED IMPACT, 65% OF DESIGN IMPACT

MPa $< S_{rsat}$

RATIO = $\frac{\text{MAX. FATIGUE STRESS RANGE}}{\text{ALLOWABLE FATIGUE STRESS}}$ = 0.80

NOTES

- FOR GENERAL NOTES SEE DRAWING –1.1
- DESIGN AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH AREA MANUAL CHAPTER 15.
- C MATERIAL SHALL BE IN ACCORDANCE WITH THE FOLLOWING SPEC'S.:
  - STRUCTURAL STEEL: CSA CAN3–G40.21–M92 GRADE 300W IN GIRDER WEBS & FLANGES, BEARING STIFFENER PLATES GRADE 300W FOR BEARING PLATES, STIFFENER ANGLES, JACKING BEAMS AND FOR REMAINING MEMBERS.
  - WELDING: CSA CAN3–W59–1989
  - HS BOLTS: ASTM A325, M22, TYPE3 (OR EQUIVALENT)
- ALL HOLES SHALL BE DRILLED FULL SIZE OR SUB–PUNCHED AND REAMED.
- ALL H.S. BOLTS SHALL BE TIGHTENED BY THE TURN–OF–NUT METHOD.
- BOTTOM FLANGES OF GIRDERS OVER BEARINGS SHALL BE TRUE AND SQUARE: MAXIMUM MEASURED DEVIATION AT OUTSIDE EDGE OF BEARING PLATES SHALL NOT EXCEED 1mm.
- DEVIATION FROM STRAIGHTNESS OF MAIN GIRDER SHALL NOT EXCEED 6mm.
- DEVIATION RESULTING IN NEGATIVE CAMBER SHALL NOT BE PERMITTED.
- THE SPAN SHALL BE SHIPPED ENTIRELY SHOP ASSEMBLED.
- CN STANDARD DRAWINGS ARE REFERENCED TO PROVIDE ADDITIONAL INFORMATION NOT SHOWN ON THIS DRAWING.

ESTIMATED QUANTITIES

STRUCTURAL STEEL: (EXCLUDING BEARINGS) 25000 kg

LIFTING WEIGHT

C INCLUDING SPAN, PEDESTALS, RAILS, TIES & WALKWAYS 50300 kg

G.A. Gault P. ENG.
SENIOR STRUCTURAL ENGINEER

No.	Date	Revision	By Par
C	94–07–01	REVISE LIFTING BRACKET, CHANGE STEEL NOTE.	S.S.
B	94–05–06	ISSUED FOR FABRICATION	S.S.
A	94–03–25	GENERAL	S.S.

Region PRAIRIE DIST. Sub–division RIVERS Mile Mille 0.40

BRIDGE OVER MAIN STREET WINNIPEG, MANITOBA
16.8m DPG SPAN

PROVINCE OF MANITOBA G.A. GAULT 94/09/07 REGISTERED PROFESSIONAL ENGINEER

Drawn Dessin S.S.Jr Designed Conception Checked Verification G.G. Scale Echelle 1:20 & 1:25 Date 94–03–15

Office of Chief Engineer
Bureau de l'Ingénieur en Chef

CN

File Reference 0.4 RIVERS Drawing Number Dessin numero AA611–0.40–1.2 C