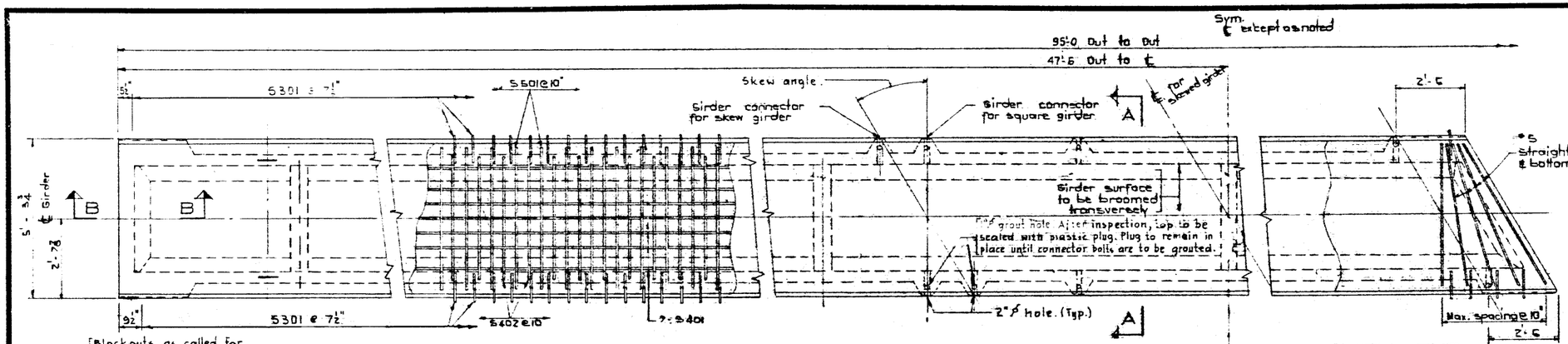
95'-0 Out to Out
47'-6 Out to ℄
Sym. ℄ except as noted
S501@10"
Skew angle.
Girder connector for skew girder
Girder connector for square girder
℄ for skewed girder
Girder surface to be broomed transversely
Fill grout hole. After inspection, top to be sealed with plastic plug. Plug to remain in place until connector bolts are to be grouted.
2" ϕ hole. (Typ.)
S402@10"
S401
5301 @ 7½"
5'-3¾ ℄ Girder
2'-7½
9½"
Blockouts as called for (T402 and S401 bars to project into blockouts.)
PLAN
Scale ½" = 1'-0
Diaphragm locations for exterior girder : 3 spaces @ 15'-6 = 47'-6
Diaphragm for interior girder — 27'-6
23 sp. @ 1'-0 = 23'-0
8 sp. @ 1'-3 = 10'-0
8 sp. @ 1'-6 = 12'-0
6'-0
9"
1'-0
5'-0 max.
T402
5" ϕ Std. pipe for lifting.
½"ϕ - 7 wire strands each hook; Lifting hook: Minimum embedment length, 8'-0 each end. Strands to be bundled & tied with wire for full exposed length.
CG. strand
*8 bar x 4'-0 long ⚠
Shoe plate 1-10" x ¾" x 1'-9 ℞ 4-¾ϕ anchors, 1'-6 long. Galvanize ℞ before fabrication.
2'-6
1'-3
3 @ 10'-0 = 30'-0 ⚠
ELEVATION
Scale 1"=10'
10'-0
5'-0
5'-0
5'-0 to strand deflection point
N.T.S.
Spacing for T401, T403 & T404. except at ends.
SKEW END
for skewed girder
Scale ½" = 1'-0
2'-6
*5 Straight bars top & bottom of deck
Max. spacing 10"
2'-6
1"ϕ x 1'-11 long bolt with 2 washers, hex nut & jam nut All galvanized.
3½ x 3½ x 6 ga. galvanized washer
1⅛" ϕ hole
⅝" ϕ hole - ⅜" from center
CONNECTOR BOLT
Typical gasket of Rodcork or equal placed between girder ends ⚠ 4 - ¾ - ¼ with 2½" ϕ hole
1'-6
5"
2½" Connector bolt spacing, N.T.S. ⚠
BAR TYPES :
(All bar dimensions are out to out)
A
B
C
D
E
F
G
B — B
Scale ½"=1'-0
1" x ¾" x 10" wood block
Ends to be square & plumb
Fabricator's name, year of manufacture, and serial number of unit to be cast into diaphragm in 2" letter
Bearing areas to be smooth & true
GIRDER FINISHES N.T.S.
Class 3
Class 2
Class 1
Class 4
Roadway surface when called for
¾" chamfer all around
INTERIOR GIRDER
EXTERIOR GIRDER
NOTE : Depth of ends not increased for camber.
N.T.S.
DEFLECTED SHAPE AFTER RELEASE OF PRESTRESS
T401 - place 5", 5", 6", 9" from end of girder.
T402
Draped strands.
Typ. anchors only.
2 - D602 Typ.
Shoe plate
END VIEW
Scale ½"=1'-0
S402@10" alt. with S801's' Sym. ℄
S501@10"
Broil hole
2 - S401
T401 spacing varies
2 - D601
¾" Chamfer
See Detail 'A'
A — A
Scale 1"=1'-0
NOTE: 34 - 1"ϕ, 7 wire strands required per girder.
2 - S901 bars.
12'-6 10'-0 50'-0 10'-0 12'-6
95'-0
S 901 LOCATION
N.T.S.
T401
T403 T404
Same spacing as T401 for full length of S901 bars.
NOTE: T404 may be omitted for spaces up to 3'-0 where draped strands interfere.
Draped strands
22"
Scale 3"=1'-0
DETAIL 'A'
BAR LIST For unskewed Girder

MARK	SIZE	NO.	TYPE	"X"	"Y"	LENGTH	WEIGHT
S 301	3	382	A			1'-6	170
S 401	4	21	Str.				454
S 402	4	114	B			6'-4	482
S 501	5	226	Str.			4'-9	1,120
T 401	4	154	C			4'-9	489
D 601	6	6	D	4'-2		5'-10	35
D 602	6	8	D	5'-0		6'-8	40
T 402	4	5	E			7'-6	30
T 601	6	24	Str.			2'-11	105
T 404	4	116	F			1'-4	105
T 403	4	116	G			1'-3	99
S 901	5	4	Str.			60'-0	816

Total lbs: 4,013
GENERAL NOTES
DESIGN
A.A.S.H.O. 1965 Specification
Loading : 0.90 of one wheel line of an H S 20-44 truck plus full dead load plus 2" wearing surface
MATERIALS
Prestressing steel shall be ½"ϕ - 7 wire strand conforming to A.S.T.M. Spec. A416. As = 0.152 sq.in. fy = 270 k.s.i.
Lightweight aggregate shall conform to the requirements of A.S.T.M. Spec. C330 with max aggregate size ¾". Min 28 days compressive strength to be 5,000 p.s.i. Unit weight of the concrete shall be 120 lbs. per cubic foot plus or minus 5% in the plastic state. Entrained air shall be not less than 5%
FABRICATION
Reinforcement: Diameters of all bends shall conform to the recommended sizes and all hooks, unless otherwise noted shall conform to the recommended sizes detailed in the A.C.I. Manual of Standard Practice for Detailing Reinforced Concrete Structures.
Prestressing steel: Initial tensioning load = 28.8 k/strand
Design Load = 21.6 k/strand
Concrete must attain 4,000 p.s.i. compressive strength before the prestressing force is transferred.
Units are to conform to the requirements of the Alberta Bridge Branch Specification B150-64 for the Manufacture of Prestressed Concrete Bridge Units.
Galvanizing to be in accordance with A.S.T.M. Specification A-153.
ERECTION
Lifting force of each loop must be equal at all times.
Girder surface must be level at all times.
SUPERSEDED
SUPERSEDED BY S-379-71

NO.	DATE	DESCRIPTION	BY
5	Mar. 3/69	Shoe Plate Anchor Bar	T.B.
4	Feb 27/69	Dimension	T.B.
3	Feb. 7/69	Camber added	C.W.P.
2	Jan. 7/69	Strand deflection	T.B.
1	Jan. 3/69	Diaphragm & rib spacing	C.W.P.

REVISIONS

PRESTRESSED CONCRETE ①
95'-0 TYPE FC GIRDER
LIGHTWEIGHT CONCRETE

GOVERNMENT OF THE PROVINCE OF ALBERTA
DEPARTMENT OF HIGHWAYS
BRIDGE BRANCH, EDMONTON

FILE NO. ____ DWG. NO. ____
LOCATION ____ SCALE N.T.S.
STREAM ____ SHEET ____ OF ____
DWG. NO. S-979

DESIGNED BY B. Peterson DATE Dec. 19 68
DETAILED BY L. Kohlmann & B.W. Sadicki DATE Dec. 12 19 68
CHECKED BY T. Belke DATE Dec. 19 68

MR 143