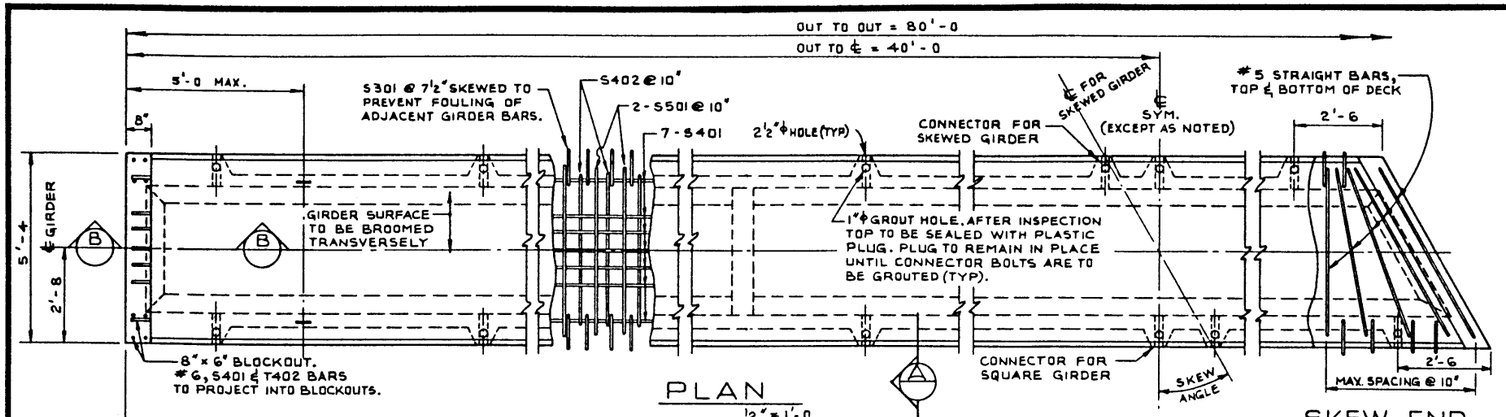
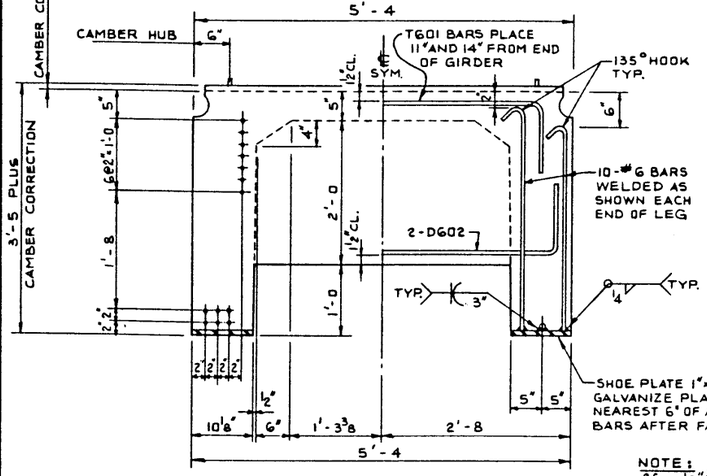
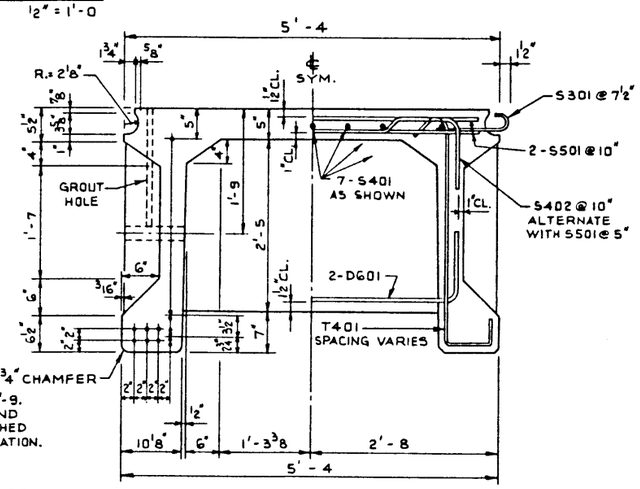


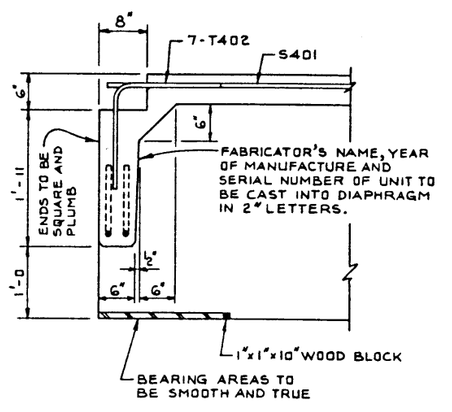




END VIEW
1" = 1'-0

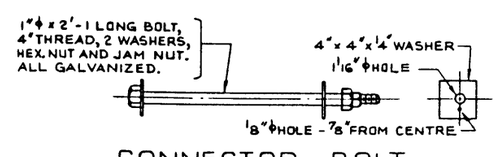
NOTE: 26 - ½" ϕ 7 WIRE STRAND, REQUIRED PER GIRDER.




A SECTION
1" = 1'-0

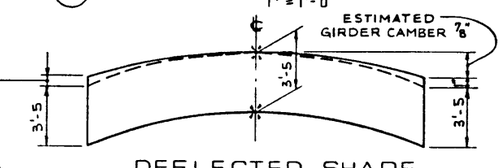



B SECTION
1" = 1'-0



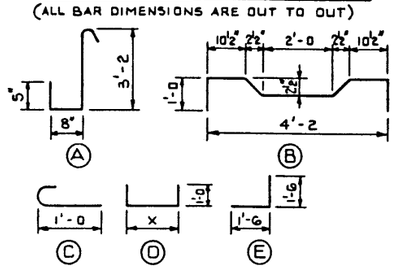

CONNECTOR BOLT
N.T.S.

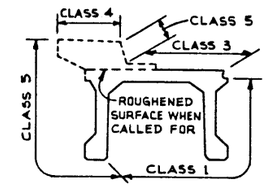
CAMBER CORRECTION. VARIES FROM 0" AT CENTRE TO 1" AT ENDS. CAMBER CORRECTION IS SUCH AS TO PRODUCE A GIRDER CAMBER EQUAL TO THE SPAN/1000 AND MAY BE VARIED TO SUIT GRADELINE.



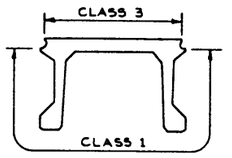

DEFLECTED SHAPE
AFTER RELEASE OF PRESTRESS
N.T.S.

## BAR TYPES N.T.S.
(ALL BAR DIMENSIONS ARE OUT TO OUT)




EXTERIOR GIRDER




INTERIOR GIRDER

## GIRDER FINISHES
N.T.S.

## BAR LIST: FOR UNSKEWED GIRDER

| MARK | SIZE | NO. | TYPE | X | Y | LENGHT | WEIGHT |
|---|---|---|---|---|---|---|---|
| S 301 | 3 | 252 | C | | | 1'-6 | 142 |
| S 401 | 4 | 21 | STR. | | | 27'-3 | 382 |
| S 402 | 4 | 94 | B | | | 6'-4 | 398 |
| S 501 | 5 | 190 | STR | | | 4'-9 | 941 |
| T 401 | 4 | 134 | A | | | 4'-8 | 418 |
| T 402 | 4 | 14 | E | | | 3'-0 | 28 |
| T 601 | 6 | 4 | D | 4'-6 | | 6'-6 | 39 |
| D 601 | 6 | 4 | D | 4'-2 | | 6'-2 | 37 |
| D 602 | 6 | 4 | D | 5'-0 | | 7'-0 | 42 |

TOTAL LBS : 2,427

## GENERAL NOTES:

**DESIGN:**

- A.A.S.H.O. 1969 SPECIFICATION EXCEPT ALLOWABLE FINAL CONCRETE STRESS = 350 P.S.I. IN TENSION.
- LOADING: 0.90 OF ONE WHEEL LINE OF AN HS 20-44 TRUCK PLUS FULL DEAD LOAD PLUS 2½" WEARING SURFACE.

**MATERIALS:**

- LIGHTWEIGHT AGGREGATE SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. SPECIFICATION C330 WITH MAXIMUM AGGREGATE SIZE ¾". MINIMUM 28 DAY 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%.
- PRESTRESSING STEEL SHALL BE ½" DIAMETER - 7 WIRE 270 K STRAND.

**FABRICATION:**

- GIRDERS SHALL CONFORM TO THE REQUIREMENTS OF THE ALBERTA BRIDGE BRANCH SPECIFICATION B 190-66 FOR THE MANUFACTURE OF PRESTRESSED CONCRETE BRIDGE UNITS.
- REINFORCEMENT: DIAMETERS OF ALL BENDS SHALL CONFORM TO THE RECOMMENDED MINIMUMS 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 = 28.91 K/STRAND; DESIGN LOAD = 22.78 K/STRAND
- CONCRETE MUST ATTAIN 4,000 P.S.I. COMPRESSIVE STRENGTH BEFORE THE PRESTRESSING FORCE IS TRANSFERRED.
- GALVANIZING SHALL BE IN ACCORDANCE WITH A.S.T.M. SPECIFICATION A 153.
- SHEAR KEYS AND BLOCKOUTS SHALL BE SANDBLAST ROUGHENED BY THE GIRDER FABRICATOR TO THE APPROVAL OF THE ENGINEER.
- RIBS AND CONNECTOR BOLT HOLES SHALL BE OMITTED ON OUTSIDE LEGS OF EXTERIOR GIRDERS.
- EXTERIOR GIRDER DIAPHRAGMS SHALL BE SPACED AT 13'-6 MAXIMUM.
- CONNECTOR BOLTS, WASHERS, HEX NUTS, JAM NUTS AND RODOFOAM GASKETS SHALL BE SUPPLIED WITH THE GIRDERS.

**ERECTION:**

- LIFTING FORCE AT EACH HOOK MUST BE VERTICAL AT ALL TIMES. GIRDER SURFACE MUST BE LEVEL AT ALL TIMES.

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| 1 | 26/2/73 | REDRAWN FROM S-1006-70 | E.B.J. |

REVISIONS

APPROVED
CHIEF BRIDGE ENGINEER
DATE April 9/73

PROVINCE OF ALBERTA
DEPARTMENT OF HIGHWAYS AND TRANSPORT
BRIDGE BRANCH

# PRESTRESSED CONCRETE 80'-0 TYPE FC-41" GIRDER LIGHTWEIGHT

| DESIGNED | DRAWN BY | DATE | CHECKED BY | DATE | STREAM | LOCATION | HWY. NO. | SCALE | FILE NO. | SHEET | DWG. NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E. B. J. | V.G.B. | FEB./73 | | APR. 73. | | | | SHOWN | | ... OF ..... | S-1006-73 |

MP 205 FEB 9/73

(2)

P03136