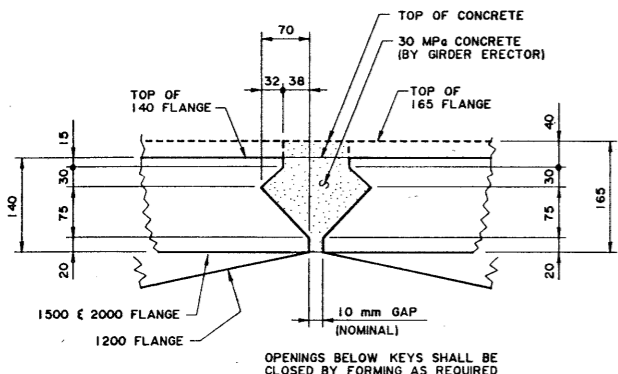


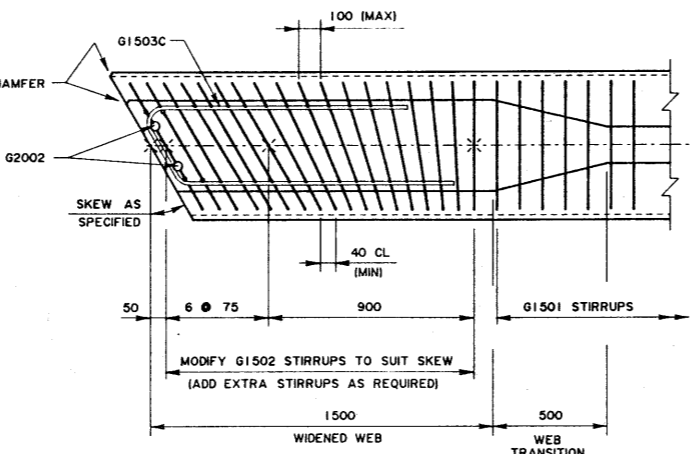
GENERAL NOTES

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- DESIGN:**
 - CAN/CSA-S6-88 SPECIFICATIONS.
 - NO TENSION ALLOWED IN TOP FLANGE OF GIRDER.
 - MAXIMUM TENSION OF 0.75 MPa ALLOWED IN BOTTOM FLANGE UNLESS NOTED OTHERWISE.
- LOADING:**
 - LIVE LOAD: CAN/CSA-S6-88; CS750.
 - WHEEL LINE DISTRIBUTION AS SPECIFIED IN DATA TABLES.
 - DEAD LOAD: GIRDER MASS SPECIFIED IN DATA TABLES PLUS 90 mm WEARING SURFACE.
- MATERIALS:**
 - ALL PLANT CAST CONCRETE SHALL CONTAIN SILICA FUME AS PER THE SPECIFICATION (B190M) NOTED BELOW UNDER "FABRICATION".
 - ALL CONCRETE SHALL BE STANDARD WEIGHT EXCEPT THE WEB AND BULB OF THE 1800 SERIES WHICH SHALL BE SEMI-LIGHT WEIGHT.
 - CURB CONCRETE SHALL HAVE MINIMUM COMPRESSIVE STRENGTH EQUALING THE FINAL STRENGTH VALUE SHOWN IN THE DATA TABLE FOR THE GIRDER.
 - STANDARD WEIGHT CONCRETE SHALL NOT CONTAIN LESS THAN 5% AIR ENTRAINMENT, AND SEMI-LIGHT WEIGHT CONCRETE SHALL NOT CONTAIN LESS THAN 6% AIR ENTRAINMENT, WHEN MEASURED IN THE PLASTIC STATE.
 - MINIMUM CONCRETE COMPRESSIVE STRENGTHS AT RELEASE AND AT 28 DAYS SHALL BE AS SPECIFIED IN THE DATA TABLES.
 - REINFORCING STEEL SHALL CONFORM TO CSA STANDARD G30.16 (GRADE 400). SUFFIX LETTER C ON BAR MARK DENOTES EPOXY COATED BARS.
 - DIAMETERS OF ALL BENDS AND DETAILS OF ALL HOOKS, UNLESS NOTED OTHERWISE, SHALL CONFORM TO THE RECOMMENDED SIZES DETAILED IN THE REINFORCING STEEL INSTITUTE OF ONTARIO MANUAL OF STANDARD PRACTICE AND METRIC SUPPLEMENT FOR DETAILING REINFORCED CONCRETE STRUCTURES.
 - PRESTRESSING STEEL SHALL BE 12.7 mm ϕ - 7 WIRE, LOW RELAXATION STRAND (f_{pu} = 1860 MPa).

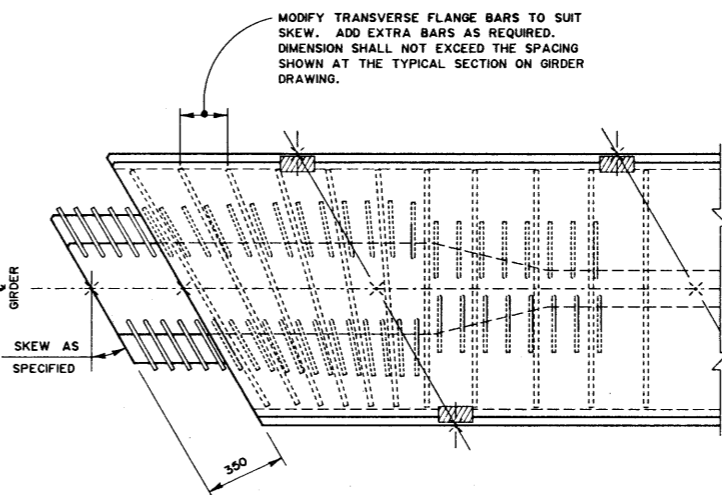
- FABRICATION:**
 - GIRDERS SHALL CONFORM TO THE CURRENT REQUIREMENTS OF THE ALBERTA BRIDGE MATERIALS SPECIFICATION FOR THE MANUFACTURE OF PRESTRESSED AND PRECAST BRIDGE UNITS (B190M).
 - REQUIRED INITIAL AND EXPECTED FINAL FORCES IN PRESTRESSING STEEL ARE GIVEN IN DATA TABLES.
 - DRAWINGS ARE DETAILED ASSUMING A DECK WATERPROOFING SYSTEM WILL BE FIELD PLACED AS A FINAL WEARING SURFACE. IT SHALL CONSIST OF 5 mm ASPHALTIC MEMBRANE, 5 mm PROTECTION BOARD AND 80 mm TWO COURSE HOT-MIX ASPHALTIC CONCRETE PAVEMENT. WHEN DECK WATERPROOFING SYSTEM IS NOT SPECIFIED, AN ADDITIONAL 25 mm PLANT CAST MONOLITHIC CONCRETE SHALL BE PLACED ON THE DECK RESULTING IN A FLANGE THICKNESS OF 165 mm AND CLEAR COVER TO TOP OF STEEL OF 65 mm.
 - GIRDER FORMS SHALL BE ADJUSTABLE AND ADJUSTMENTS SHALL BE MADE SUCH THAT THE TOP AND BOTTOM FLANGES OF THE GIRDER WILL FOLLOW THE SAME PARABOLIC CURVE. MID-POINT SAG SHALL BE EQUAL TO THE ERECTION CAMBER VALUE SPECIFIED IN THE DATA TABLES (ROUNDED TO THE NEAREST 5 mm) UNLESS SPECIFIED OTHERWISE.
 - CURBS SHALL BE PLANT CAST, NOT LESS THAN 14 DAYS AFTER CASTING GIRDERS, WITH GIRDERS SIMPLY SUPPORTED AT BOTH ENDS.
 - ALL GALVANIZING SHALL CONFORM TO ASTM SPEC A123 AND A153 AS APPLICABLE.
- ERECTION:**
 - LIFTING FORCES SHALL BE VERTICAL AT ALL TIMES.
 - GIRDER SURFACE MUST BE LEVEL AT ALL TIMES.
 - DIFFERENTIAL CAMBER BETWEEN ADJACENT GIRDERS SHALL BE ELIMINATED BEFORE WELDING FLANGE CONNECTORS OR INSTALLING LATERAL POST-TENSIONING SYSTEM.
 - FABRICATOR AND ERECTOR SHALL ENSURE THAT GIRDER UNITS ARE GIVEN ADEQUATE LATERAL SUPPORT DURING ALL ASPECTS OF HANDLING.



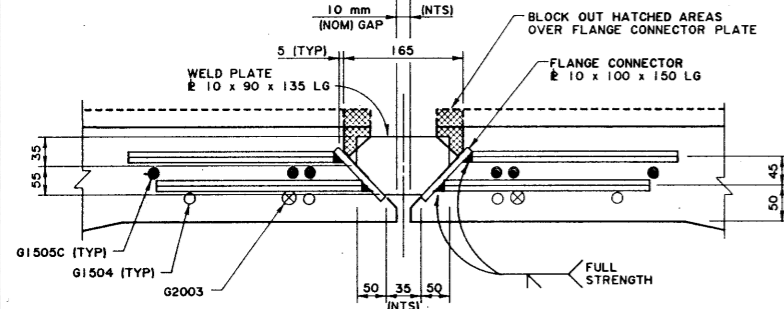
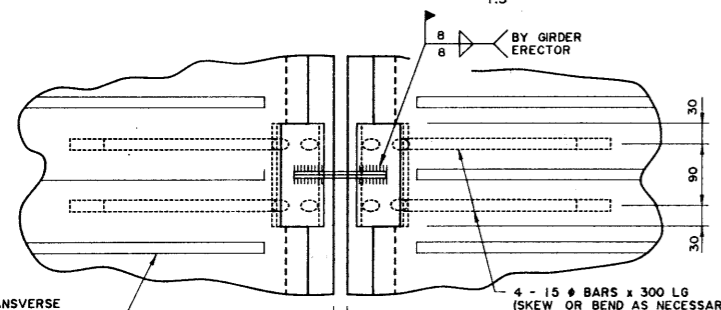
TYPICAL SHEAR KEY



SKEWED END THROUGH WEB



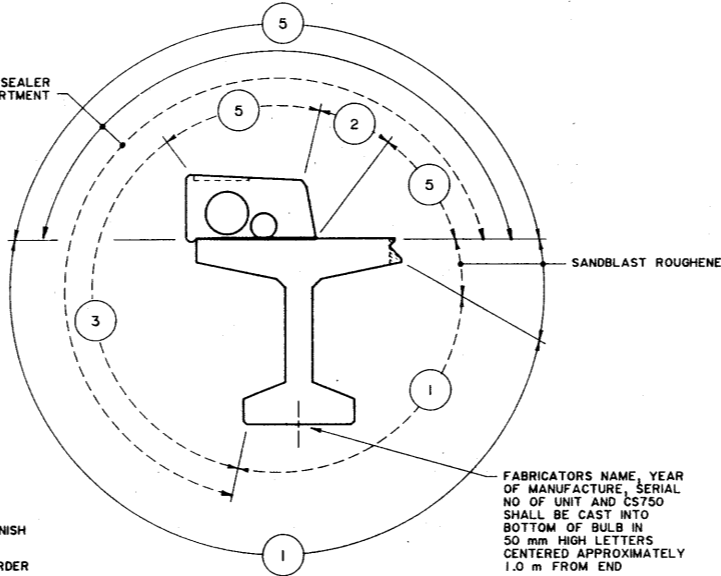
SKEWED END AT FLANGE



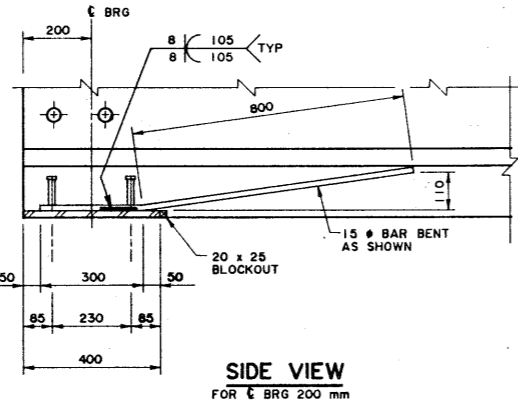
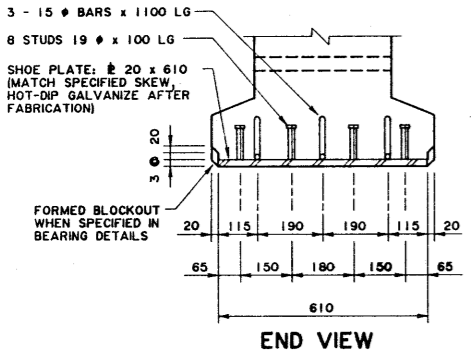
NOTES: FLANGE CONNECTORS AND WELD PLATES SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
THE FLANGE CONNECTION SHALL BE USED AT ALL CAMBER CORRECTION LOCATIONS AND WELDED FLANGE CONNECTIONS. FOR LATERALLY POST-TENSIONED DECKS USE TYPICAL CAMBER CORRECTION DETAIL SHOWN ON DWG S-1591.

TYPICAL FLANGE CONNECTION DETAIL

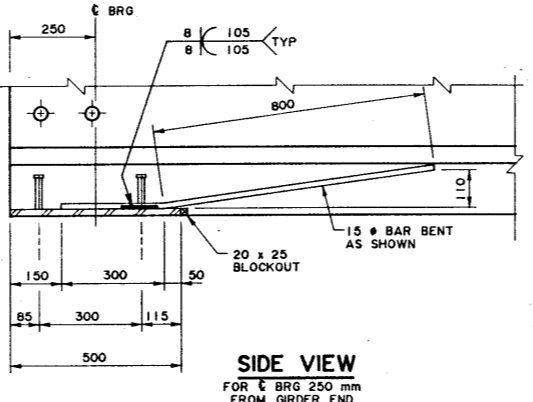
LEGEND
 ○ CLASS OF FINISH
 --- EXTERIOR GIRDER
 ——— INTERIOR GIRDER



GIRDER FINISHES (BY FABRICATOR) NTS



SHOE PLATE DETAILS



SIDE VIEW FOR BRG 250 mm FROM GIRDER END

SUPERSEDED
BY REVISION

SUPERSEDED
① ②

| INDEX STANDARD DBC GIRDER SERIES (NOT ALL OF THESE SHEETS APPLY TO EACH BRIDGE) | | |
|---|---------|---------------------------------|
| SHEET | DRAWING | DESCRIPTION |
| 1 | S-1589 | TYPICAL GIRDER DETAILS |
| 2 | S-1590 | DIAPHRAGM DETAILS |
| 3 | S-1591 | LATERAL POST-TENSIONING DETAILS |
| 4 | S-1592 | CURB GIRDER - SHEET 1 OF 2 |
| 5 | S-1593 | CURB GIRDER - SHEET 2 OF 2 |
| 6 | S-1594 | 800 DEEP INTERIOR GIRDER |
| 7 | S-1595 | 1100 DEEP INTERIOR GIRDER |
| 8 | S-1596 | 1500 DEEP INTERIOR GIRDER |
| 9 | S-1597 | 1800 DEEP INTERIOR GIRDER |

| REV | DATE | DESCRIPTION | BY |
|----------|------|-------------------------------|----|
| 92-01-30 | | GEN NOTES - SILICA FUME ADDED | TL |
| 90-11-07 | | REDRAWN FROM DWG S-1556 | TL |

APPROVED
[Signature]
EXECUTIVE DIRECTOR
BRIDGE ENGINEERING
DATE 91-03-07

| Alberta TRANSPORTATION AND UTILITIES BRIDGE ENGINEERING BRANCH | |
|---|---------|
| STANDARD DBC SERIES TYPICAL GIRDER DETAILS | |
| DESIGNED | DRAWING |
| TL | MIK |
| DATE | FILE |
| 90-11-07 | S-1589 |
| SHEET | DRAWING |
| 1 | S-1589 |