PLAN

10 000

10ME BARS @ 200 — SKEW BARS TO PREVENT FOULING ADJACENT STRINGER BARS

200

150

10ME STIRRUP (TOP)
10M STIRRUP (BOTTOM)
AROUND DOWEL HOLES
SEE ELEVATION
230

25ø VENT HOLES IN BOTTOM SLAB AT ENDS OF ALL VOIDS

7–10ME BARS (TOP)

305 MINIMUM

SKEW ANGLE
10° LEFT
10° RIGHT

200

3–15ME STIRRUPS (TOP)
3–15M STIRRUPS (BOTTOM)
IN END DIAPHRAGM
SPACED AS SHOWN

267
Ç HOLE

1 194 660 Ç HOLE

267
Ç HOLE

4–10ME TIES 700 100

100ø HOLES

1 SET 10ME BARS IN PAIR
2 SETS 10M BARS IN PAIRS
SEE ELEVATION

700

315
200
10ME BARS
180
15 SPACES @ 150 = 2 250
34 SPACES @ 135
15 SPACES @ 150 = 2 250

10ME BARS
180
15 SPACES @ 150 = 2 250
17 SPACES @ 270
15 SPACES @ 150 = 2 250

10M BARS
15 SPACES @ 150 = 2 250
17 SPACES @ 270
15 SPACES @ 150 = 2 250

2 705   4 590   2 705

ELEVATION
EXTERIOR STRINGER (AS SHOWN)
INTERIOR STRINGER (SIMILAR EXCEPT AS NOTED)
SCALE 1:20

620 115° 225

33–15ME BARS @ 300   300

350
600 260
145° 250
34–15ME BARS @ 300   150

2–10M BARS IN EXTERIOR WEBS

2–10M BARS IN INTERIOR WEB

10ME TIE

1 SET 10ME BARS IN PAIR
2 SETS 10M BARS IN PAIRS

10ME STIRRUP

10M STIRRUP

TYPICAL STIRRUP LAYOUT AT GIRDER ENDS

SKEW STIRRUPS AS SHOWN
150 SPACING AT Ç

LIFTING DEVICE RECESS DETAIL
SCALE 1:5

20

RUNNING SURFACE

65 DEEP RECESS (SEE NOTE No. 14)

ESTIMATED MASS

STRINGER MK. 500/10/E/10°	10 495 kg
STRINGER MK. 500/10/I/10°	10 105 kg

STRINGER IDENTIFICATION

SKEW ANGLE, RIGHT OR LEFT
DEPTH OF STRINGER IN mm

MK. 500 / 10 / E or I / 10° R/L

LENGTH OF STRINGER IN METERS
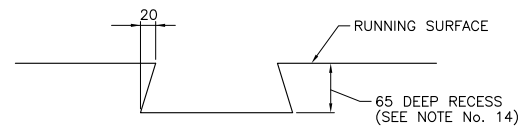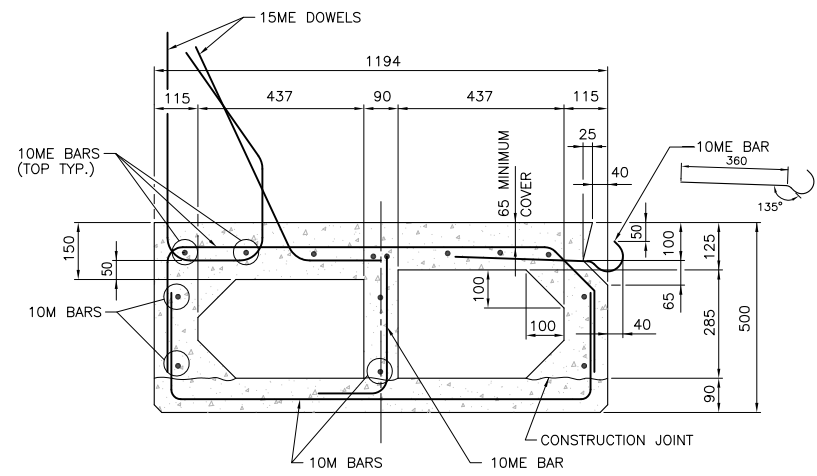EXTERIOR OR INTERIOR STRINGER
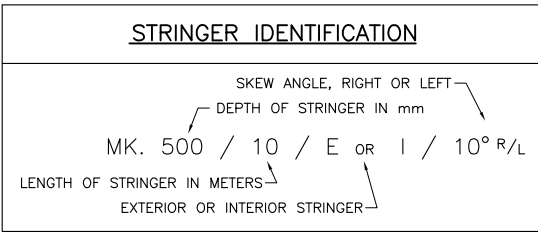
NOTES

1. DESIGN SPECIFICATIONS:
   CAN/CSA-S6-06.
   BC MoT SUPPLEMENT TO S6-06.

2. DESIGN LOAD:
   LIVE LOAD: CL-625 & BCL-625
   DEAD LOAD: DESIGNED FOR 100mm CONCRETE OVERLAY.

3. STRINGERS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE M.O.T. STANDARD SPECIFICATION 415: MANUFACTURE OF PRECAST AND PRESTRESSED CONCRETE MEMBERS.

4. PRESTRESSING STRANDS SHALL BE 13ø (7 WIRE) UNCOATED LOW RELAXATION STRANDS, C.S.A. G279M-1982, 1862 MPa GRADE OR EQUIVALENT. MINIMUM ULTIMATE TENSILE STRENGTH = 184 kN/STRAND. STRAND TENSION IMMEDIATELY BEFORE RELEASE = 136.2 kN/STRAND.

5. CONCRETE: MINIMUM COMPRESSIVE STRENGTH OF CONCRETE AT TIME OF RELEASE OF STRANDS = 27MPa, AT 28 DAYS = 35MPa.

6. REINFORCING STEEL SHALL CONFORM TO C.S.A. G30.18M GRADE 400R.

7. REINFORCING STEEL SHALL HAVE 35mm MINIMUM COVER UNLESS OTHERWISE NOTED.

8. ALL REINFORCING MARKED "ME" IS EPOXY COATED.

9. LAP OF BARS FOR SPLICES TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:
   10M BARS – 450
   10ME BARS – 600
   SPLICES TO BE STAGGERED.

10. BOTTOM EDGES OF STRINGERS SHALL BE CHAMFERED 20mm.

11. LIFTING DEVICES SATISFACTORY TO THE ENGINEER SHALL BE PROVIDED OVER THE BEARINGS. ONLY VERTICAL LIFTS WILL BE PERMITTED. CARE SHALL BE TAKEN TO PREVENT SUDDEN IMPACT LOADS ON THE STRINGERS.

12. ENDS OF PRESTRESSING STRANDS SHALL BE TREATED AS FOLLOWS:
    EMBEDDED IN CONCRETE: PAINTED WITH A GANVANIZING AGENT.
    EXPOSED: A MINIMUM 3mm COAT OF THIXOTROPIC EPOXY AS SHOWN.
    MANUFACTURES INSTRUCTIONS TO BE STRICTLY ADHERED TO.

13. TOP OF BOXES SHALL HAVE A SAND BLASTED FINISH FOR CONCRETE OVERLAY AND FLOAT FINISH FOR NO OVERLAY OR MEMBRANE AND ASPHALT OVERLAY.

14. THE CONCRETE IMMEDIATELY SURROUNDING ALL LIFTING DEVICES SHALL HAVE A FORMED RECESS 65mm DEEP. THE RECESS SHALL BE THOROUGHLY SANDBLASTED IN THE SHOP. AFTER ERECTION, THE LIFTING DEVICE SHALL BE BURNT OFF AT THE BOTTOM OF THE RECESS AND THE RECESS SHALL BE PATCHED WITH AN APPROVED NON-SHRINK GROUT.
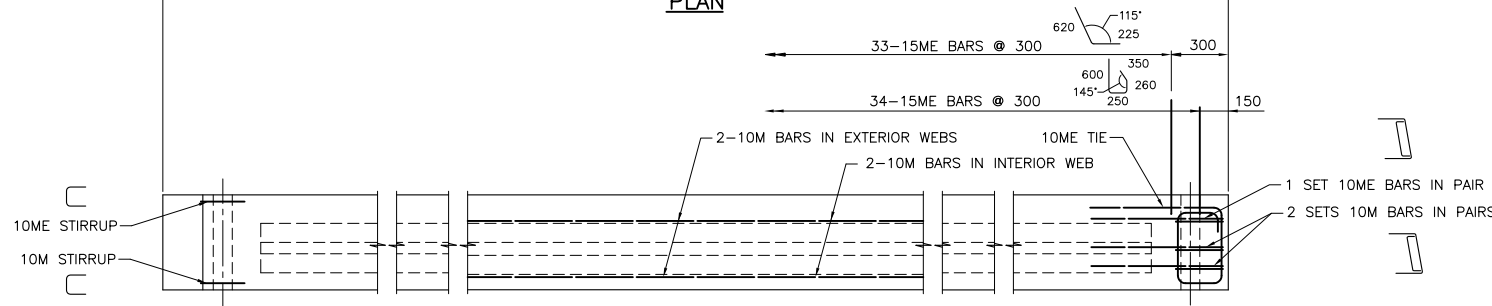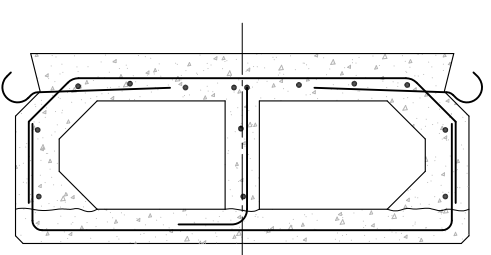
TYPICAL SECTION THROUGH EXTERIOR STRINGER
SCALE 1:10

15ME DOWELS

1194
115 437 90 437 115

10ME BARS (TOP TYP.)

65 MINIMUM COVER
25
10ME BAR 360
40
135°
50 100 125
150
50
100
65
100 40
10M BARS
285 500
90
10M BARS
10ME BAR
CONSTRUCTION JOINT

TYPICAL SECTION THROUGH INTERIOR STRINGER
SCALE 1:10

NOTE: ALL NOT SHOWN SIMILAR TO EXTERIOR STRINGER
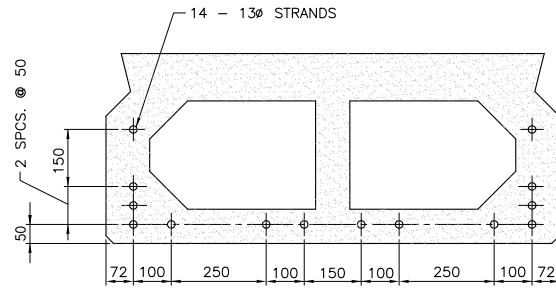
PRESTRESSING STRAND LAYOUT
SCALE 1:10

14 – 13ø STRANDS

2 SPCS. @ 50
150
50

72 100 250 100 150 100 250 100 72
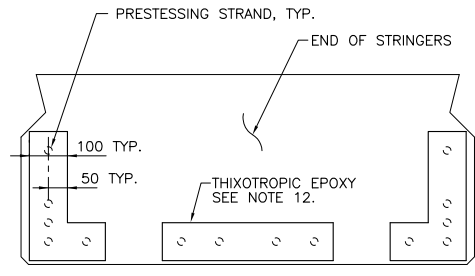
THIXOTROPIC EPOXY LAYOUT
SCALE 1:10

PRESTRESSING STRAND, TYP.
END OF STRINGERS

100 TYP.
50 TYP.

THIXOTROPIC EPOXY SEE NOTE 12.

Rev	Date	Description	Init
C	07-06-28	DESIGN CODE REVISIONS	W.H.K.
B	93-02-04	GENERAL	J.E.S.
A	92-11-12	LIFTING DEVICE RECESS & NOTES	K.L.

REVISIONS

BRITISH COLUMBIA

Ministry of Transportation & Infrastructure
Bridge Engineering

STANDARD TWIN CELL
CONCRETE BOX STRINGER
MK. 500/10/E/10° & MK. 500/10/I/10°

FILE No.   PROJECT No.   REG.

DRAWING No.
2978-6 C