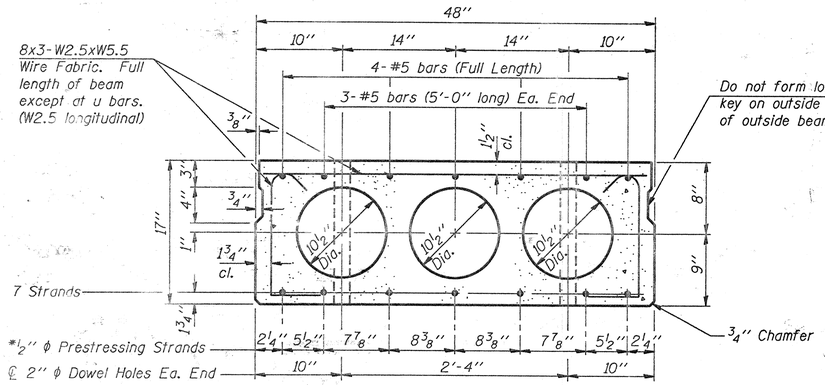
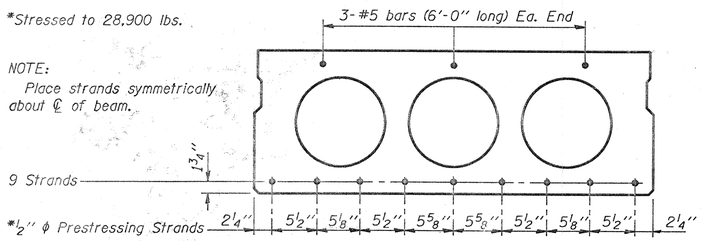
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 248	00-05120-00-BR	FAYETTE	14	8
CONTRACT NO. 95389	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO.	



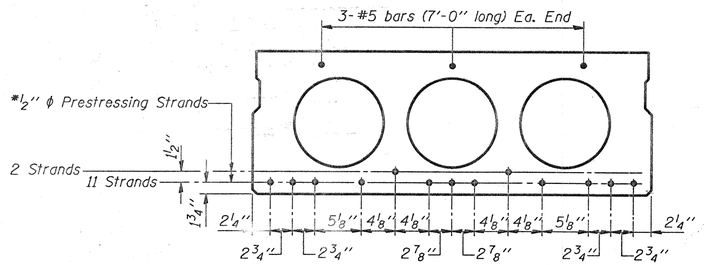
CROSS SECTION
(25' SPAN)

*Stressed to 28,900 lbs.

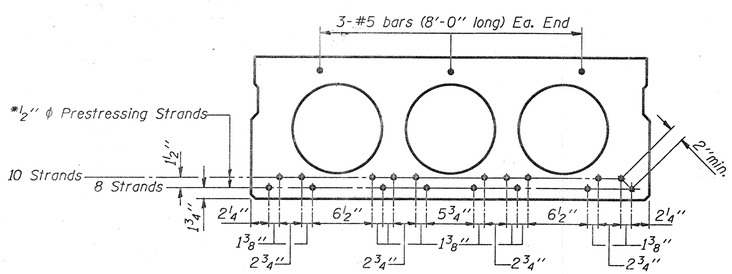
NOTE:
Place strands symmetrically about ℄ of beam.



CROSS SECTION
(30' SPAN)

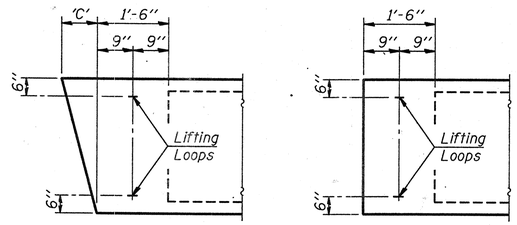


CROSS SECTION
(35' SPAN)



CROSS SECTION
(40' SPAN)

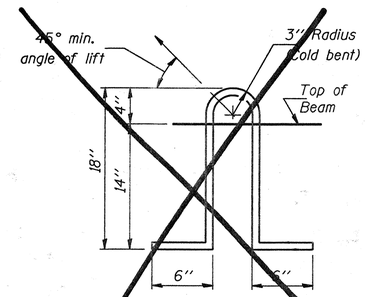
NOTE
The std. reinf. shown on the 25' span cross section is typical for all spans, except as shown.



END BLOCK DETAILS
Each beam shall have four Lifting Loops, two at each end of beam cast in locations shown above. Loops shall be burned off after beams have been erected.

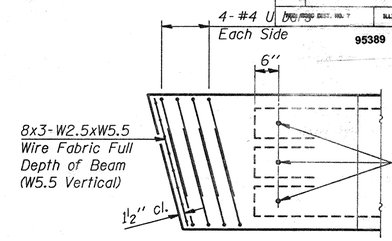
DIMENSION 'C'

Skew Angle 'D'	0°	5°	10°	15°	20°	25°	30°
Dimension 'C' (Inches)	0	4 1/4	8 1/2	12 7/8	17 1/2	22 3/8	27 3/4

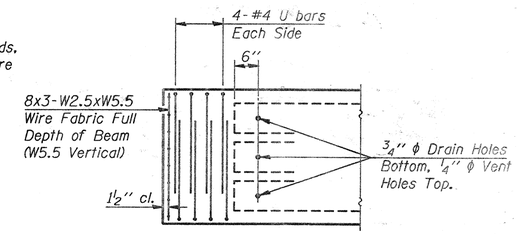


LIFTING LOOP DETAIL
Lifting loops shall be 2. 1/2"ϕ-270 ksi strands, as shown. Alternate approved lifting devices are also acceptable.

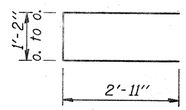
SEE SPECIAL PROVISIONS FOR LIFTING LOOPS



END REINFORCEMENT
(SKEWED)



END REINFORCEMENT
(RIGHT ANGLE)



BAR U

NOTES
1. Prestressing steel shall be uncoated high strength, stress relieved 7-wire strand, Grade 270.
2. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 square inches.
3. Reinforcement bars shall conform to AASHTO M-31, M-42 or M-53, Grade 60.
4. Rail Post anchor devices shall be cast into outside beam as elsewhere specified.
5. When Waterproofing Membrane System is specified, the top surface of the beams shall be finished in accordance with Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".
6. Low-relaxation strands may be substituted for the stress relieved strands. The initial prestressing force applied to each strand shall be the same as for the stress relieved strands (28,900 lbs.).
7. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between the top of the beam and the bottom edge of the key.

DESIGN STRESSES
f'_c = 5,000 p.s.i.
f'_{ci} = (See Required Release Strength Table)
f'_s = 270,000 p.s.i. (1/2" ϕ Strand)
f_{si} = 189,000 p.s.i. (1/2" ϕ Strand)
f_y = 60,000 p.s.i.

REQUIRED RELEASE STRENGTH

Span	f'_{ci} (psi)
25'	4,000
30'	4,000
35'	4,200
40'	4,700

Illinois Department of Transportation

PASSED NOVEMBER 1, 1995
Engineer of Bridge Design
APPROVED NOVEMBER 1, 1995
Engineer of Bridges and Structures
ISSUED 1-1-81

P.P.C. DECK BEAM DETAILS

24' ROADWAY | 17" x 48" BEAMS

STANDARD CB-2417-48