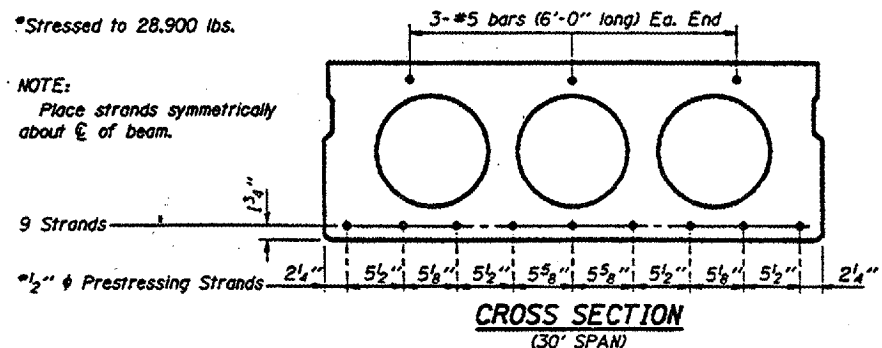
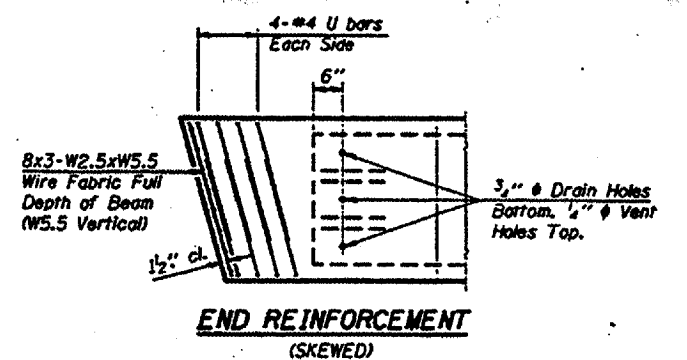
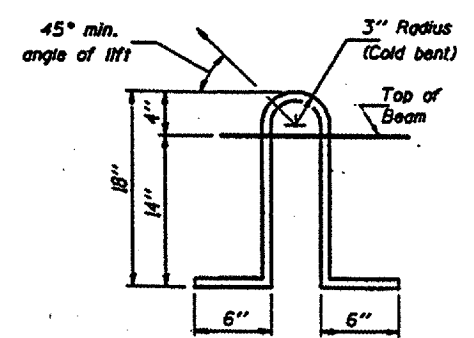
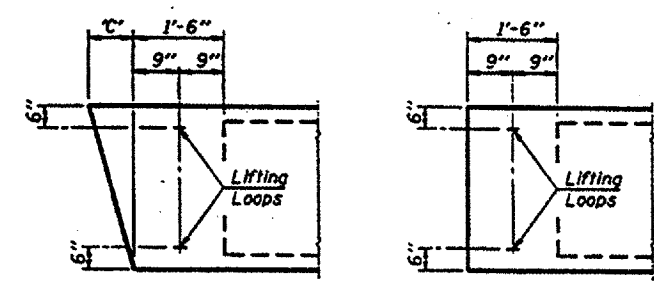
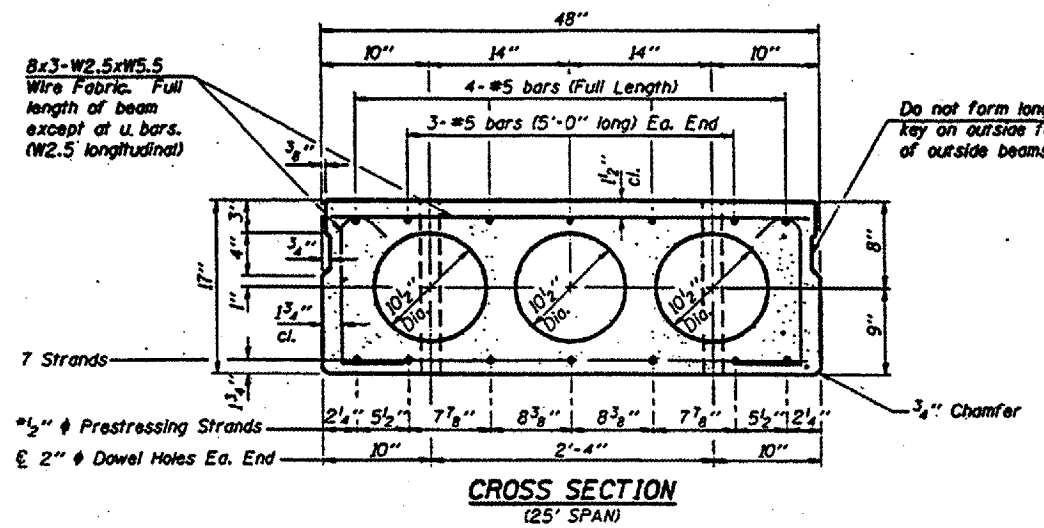
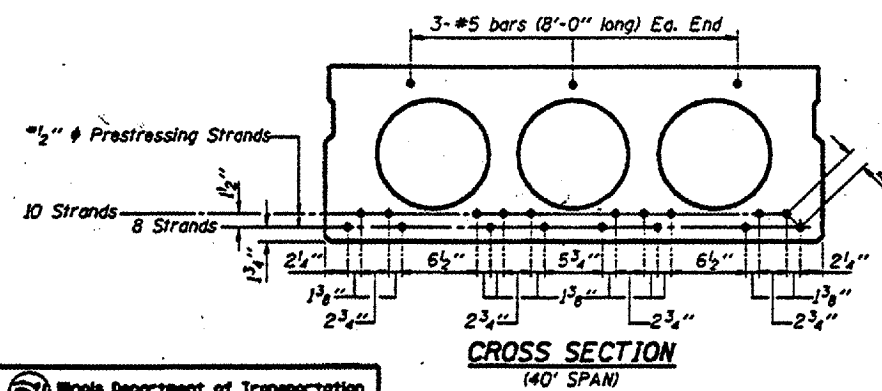
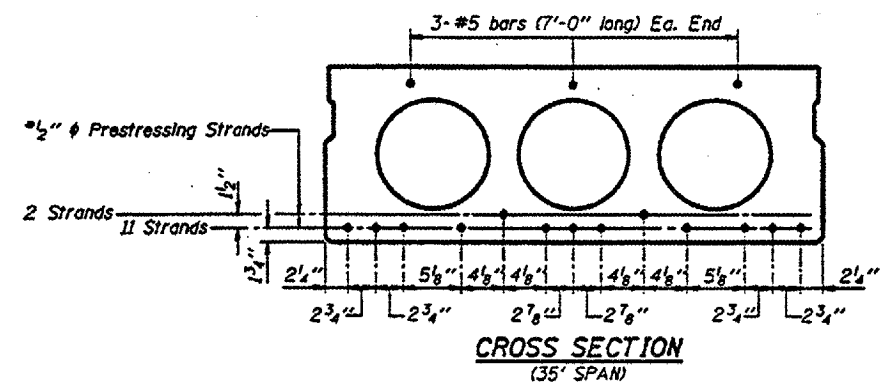
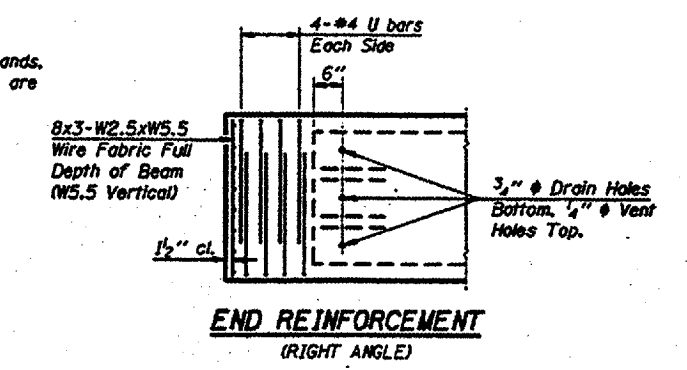


| ROUTE                    | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|--------------------------|----------------|--------|--------------------|-----------|
| CH 1                     | 02-00091-00-BR | UNION  | 11                 | 6         |
| PROJECT NO. BROS-181(17) |                |        | CONTRACT NO. 99206 |           |



**DIMENSION 'C'**

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



- NOTES**
- Prestressing steel shall be uncoated high strength, stress relieved 7-wire strand, Grade 270.
  - The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 square inches.
  - Reinforcement bars shall conform to AASHTO M-31, M-42 or M-53, Grade 60.
  - Rail Post anchor devices shall be cast into outside beam as elsewhere specified.
  - 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".
  - 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.).
  - 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.

$f'_d =$  (See Required Release Strength Table)

$f'_s = 270,000$  p.s.i. (1/2"  $\phi$  Strand)

$f'_m = 189,000$  p.s.i. (1/2"  $\phi$  Strand)

$f_y = 60,000$  p.s.i.

**REQUIRED RELEASE STRENGTH**

| Span | $f'_d$ (psf) |
|------|--------------|
| 25'  | 4,000        |
| 30'  | 4,000        |
| 35'  | 4,200        |
| 40'  | 4,700        |

Illinois Department of Transportation

PASSED NOVEMBER 1, 1995

Approved: *[Signature]*  
Engineer of Bridge Design

APPROVED NOVEMBER 1, 1995

Approved: *[Signature]*  
Engineer of Bridges and Structures

**NOTE**

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

**P.P.C. DECK BEAM DETAILS**

24' ROADWAY | 17" x 48" BEAMS

STANDARD CB-2417-48