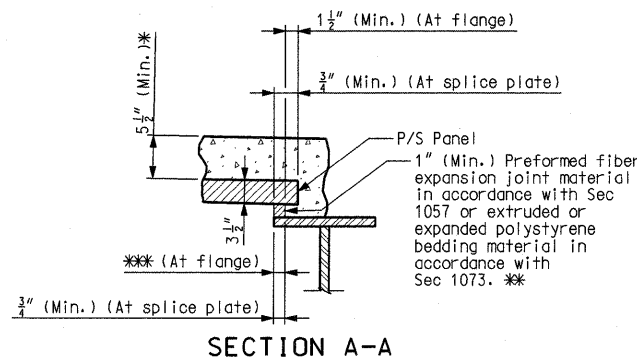


PANELS-SQUARED ENDS

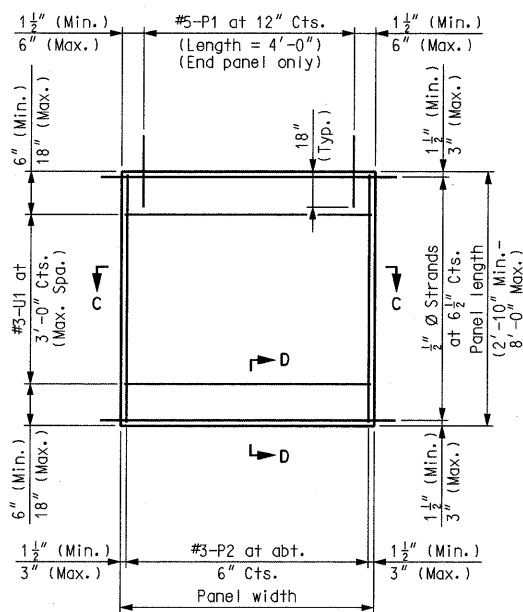
PLAN OF PRECAST PRESTRESSED PANELS PLACEMENT



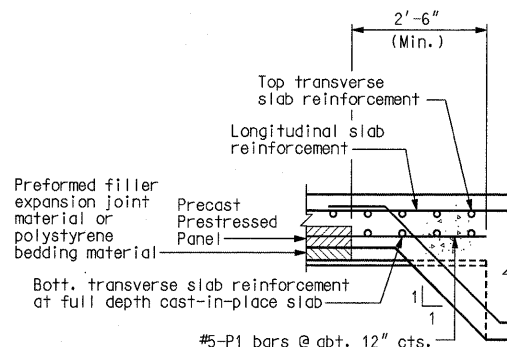
Note: The thickness of the preformed fiber expansion joint material or polystyrene bedding material shall be adjusted to achieve the slab haunching dimension found on Sheet Nos. 66 thru 75. These adjustments shall be within the limits noted in general notes.

GENERAL NOTES

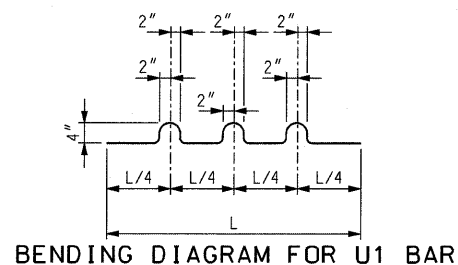
Prestressed Panel Notes:
 Precast panels shall be in accordance with Sec 1029.
 Concrete for prestressed panels shall be Class A-1 with $f'c = 6,000$ psi, $f'ci = 4,000$ psi.
 The top surface of all panels shall receive a scored finish with a depth of scoring of 1/8" perpendicular to the prestressing strands in the panels with a maximum spacing of 1".
 Prestressing tendons shall be high-tensile strength uncoated seven-wire, low-relaxation strands for prestressed concrete in accordance with AASHTO M 203 Grade 270, with nominal diameter of strand = 1/2" and nominal area = 0.153 sq. in. and minimum ultimate strength = 41.31 kips (270 ksi).
 Initial prestressing force = 30.9 kips/strand. The method and sequence of releasing the strands shall be shown on the shop drawings.
 Suitable anchorage devices for lifting panels may be cast in panels, provided the devices are shown on the shop drawings and approved by the engineer. Panel lengths shall be determined by the contractor and shown on the shop drawings.
 Minimum preformed fiber expansion joint material or polystyrene bedding material thickness shall be 1 inch, except over splice plates where minimum thickness shall be 1/4 inch. When the material is less than 1/2 inch thick over a splice plate, the width of material at the splice shall be the same width as panel on splice. Thicker material may be used on one or both sides of the girder to reduce cast-in-place concrete thickness to within tolerances. No more than 3" total thickness shall be used in the tangent regions of the girder and no more than 4" total thickness shall be used in superelevation transition and full superelevation regions of the girder.
 The same thickness of material shall be used under any one edge of any panel except at splices, and the maximum change in thickness between adjacent panels shall be 1/4 inch to correct for variations from girder camber diagram. The polystyrene bedding material may be cut to match haunch height above top of flange.
 Reinforcing Steel Notes:
 All dimensions are out to out.
 Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.
 Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.
 Actual lengths are measured along centerline of bar to the nearest inch.
 The prestressed panel quantities are not included in the table of estimated quantities for slab.
 If U1 bars interfere with placement of slab steel, U1 loops may be bent over, as necessary, to clear slab steel.
 Welded wire fabric or welded deformed bar mats providing a minimum area of reinforcing perpendicular to strands of 0.22 sq. in./ft., with spacing parallel to strands sufficient to insure proper handling, may be used in lieu of the #3-P2 bars shown. Wire or bar diameter shall not be larger than 0.375 inches.
 The reinforcing steel shall be tied securely to the 1/2" diameter strands with the following maximum spacing in each direction:
 #3-P2 bars at 16 inches.
 Welded wire fabric or welded deformed bar mats at 2'-0".
 Tie the #3-U1 bars to the #3-P2 bars, to the welded wire fabric or the welded deformed bar mats at about 3'-0" centers.
 All reinforcement other than prestressing strands shall be epoxy coated.



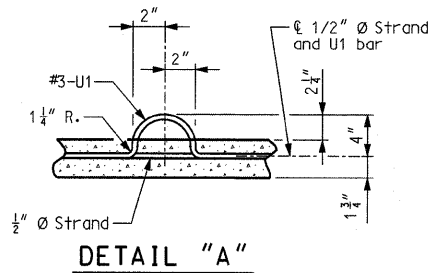
PLAN OF PRECAST PRESTRESSED PANEL



PART SECTION B-B

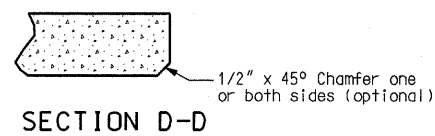


(U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars shall be placed between P1 bars).



DETAIL "A"

Notes:
 The thickness of the preformed fiber expansion joint material or polystyrene bedding material shall be adjusted to achieve the slab haunching dimension found on sheet 66 thru 75. These adjustments shall be within the limits noted in general notes.
 * Adjustment in the slab thickness, preformed fiber expansion joint material or polystyrene bedding material thickness, or grade will be necessary if the girder camber after erection differs from plan camber by more than the % of dead load deflection due to the weight of structural steel. No payment will be made for additional labor or materials for the adjustment.
 Minimum reinforcement steel length shall be 2'-0".
 ** All panel support pads shall be glued to the girder. When support thickness exceeds 1 1/2 inches, the pads shall be glued top and bottom. The glue used shall be the type recommended by the panel support pads manufacturer.
 *** 2 1/2" in tangent regions (normal crown) of girders.
 3" in superelevated and transition regions.



SECTION D-D

DETAILS OF PRECAST PRESTRESSED PANELS

Detailed JUL 2009
 Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 101 of 152

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CONTRACT NO. 76D61

F.A. ROUTE SECTION

999 82-1B-2

FED. AID PROJECT ILLINOIS

COUNTY ST. CLAIR

USER NAME = jcolliff

PLOT SCALE = #SCALE#

PLOT DATE = 4/14/2010

DESIGNED - HNTB

CHECKED - CMT

DRAWN - CMT / HNTB

REVISED -

REVISED -

REVISED -

REVISED -

ILLINOIS APPROACH STRUCTURE
 FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 MISSOURI HIGHWAYS
 AND TRANSPORTATION COMMISSION

HNTB

715 KIRK DRIVE
 KANSAS CITY, MO 64105
 TELEPHONE (816) 472-1201
 CERTIFICATE OF AUTHORITY
 NO. 001270

CMT

CRAWFORD, MURPHY & TILLY, INC.
 2750 WEST WASHINGTON STREET
 SPRINGFIELD, IL 62702
 TELEPHONE (217) 787-8050
 ENGINEERING CORPORATION - 000631