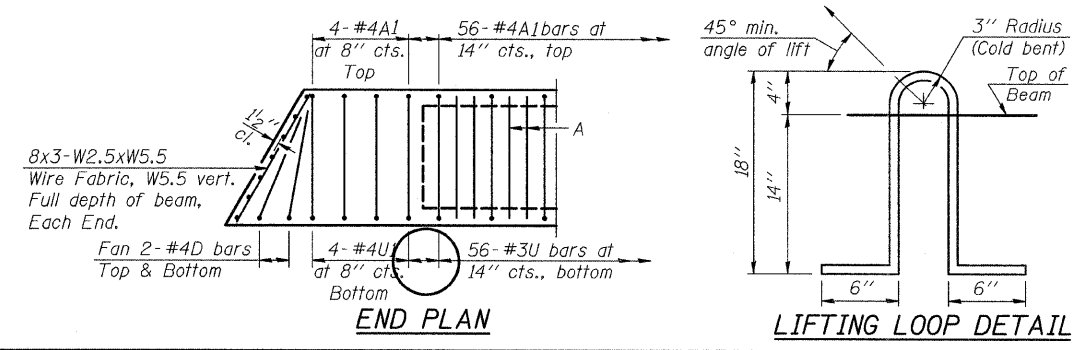
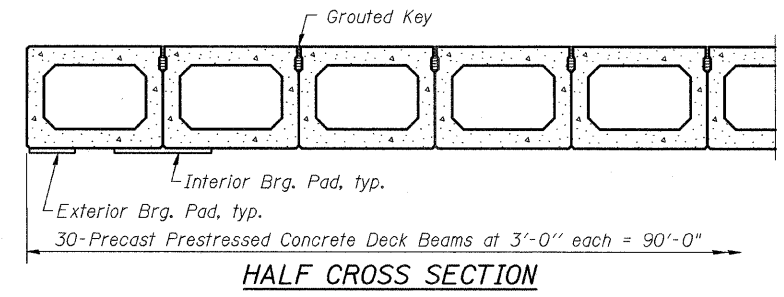


**NOTES:**  
 #4D1(E) & #5D2(E) Bars are to be cast with Beam 1.  
 #5D3(E) Bars are to be cast with Beam 27.  
 #4Z(E) Bars are to be cast with Beams 28 thru 30.  
 (Cost is included with Precast Prestressed Concrete Deck Beams, (33" Depth))



**NOTES:**  
 Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 3-1/2"  $\phi$  270 ksi strands, as shown. The 1"  $\phi$  rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing. 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 top of the beam and the bottom edge of the key. Corrosion Inhibitor, per Article 1020.05(b)(12) of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. Required Release Strength, f'ci, shall be 4,000 p.s.i. Reinforcement Bars indicated thus 2x3-#4 ect., indicates 2 lines of Bars with 3 lengths per Line.

**BILL OF MATERIAL**

Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	6,300
---	---------	-------

**CR & A**  
 CHRISTIAN-ROGE & ASSOCIATES, INC.  
 ENGINEERS / PLANNERS / SURVEYORS  
 211 W. WACKER DRIVE CHICAGO, IL. 60606  
 PHONE: (312)372-2023 FAX: (312)372-5274