

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	556	407
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62300		* (1818, ETC, 2324.6-1PJR-8		

**DESIGN SPECIFICATIONS**

2002 AASHTO

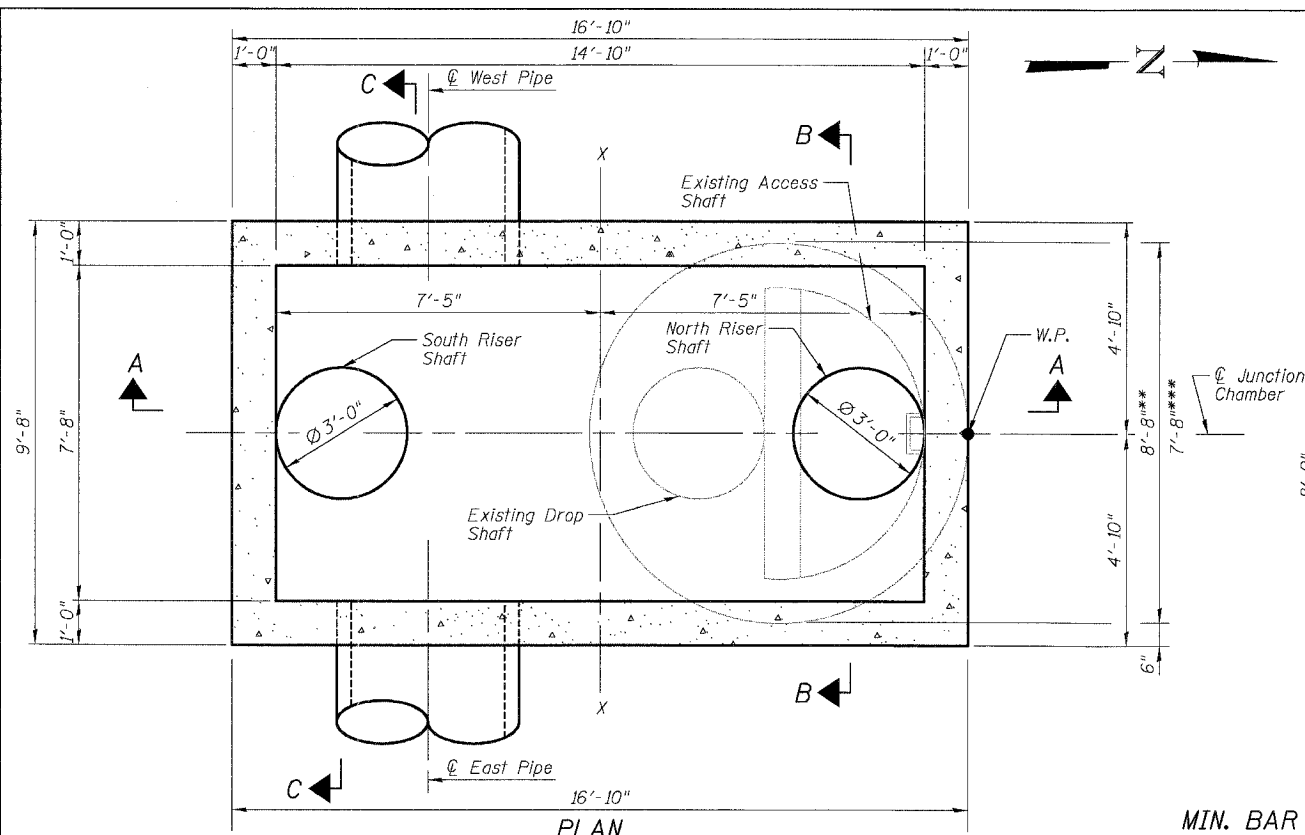
**DESIGN LOADING**

Live Load = HS20-44  
 Future Wearing Surface = 50 psf  
 Traffic Surcharge = 250 psf  
 Equivalent Fluid Soil Pressure = 50 pcf  
 Earth Load = 120 pcf

**DESIGN STRESSES**

$f'_c = 3,500$  psi  
 $T_y = 60,000$  psi (reinforcement)

- NOTES:**
- For additional information, see Special Provisions.
  - For reinforcement details, see Sheets JC-3, JC-4, & JC-5.
  - Work point (W.P.) located at outside edge of existing drop manhole as shown. Mirror proposed Junction Chamber about line X-X when existing drop shaft is located north of existing access shaft.  $\phi$  Junction Chamber is parallel to  $\phi$  Main Drain.
  - For elevations a and b, rim elevations, invert elevations, pipe openings, and dimensions c, d, e, & f, see "Table of Junction Chamber Information" on Sheet JC-2.
  - Precast concrete rings shall conform to ASTM C76 for "Reinforced Concrete Culvert, Storm Drain and Sewer Pipe", Class II, Wall B. Standard lengths of rings are: 4'-0", 2'-8", 1'-4", 0'-8", and 0'-4" collar. Cost included with Junction Chamber. All reinforcement steel required for precast concrete rings shall be included with Junction Chamber.
  - The maximum width of excavation is the width of the junction chamber plus 2 feet either side, and the maximum length is the length of the junction chamber plus 2 feet either side. Excavation outside the maximum dimensions specified will not be measured for payment.
  - The design of the excavation for junction chambers and jacking/receiving pits is the responsibility of the Contractor. The Contractor shall submit drawings and design for the braced excavation to the Engineer for approval. The braced excavation design and drawings shall be signed and sealed by an Illinois Licensed Structural Engineer, submitted and approved prior to the start of any work. The Engineer's approval shall not relieve the Contractor from the sole responsibility of the structural integrity of the braced excavation system. Excavation shall be paid as "Braced Excavation", see Special Provisions and Drainage Plans and Schedule.
  - Work this sheet with Sheets JC-2, JC-3, JC-4, and JC-5.

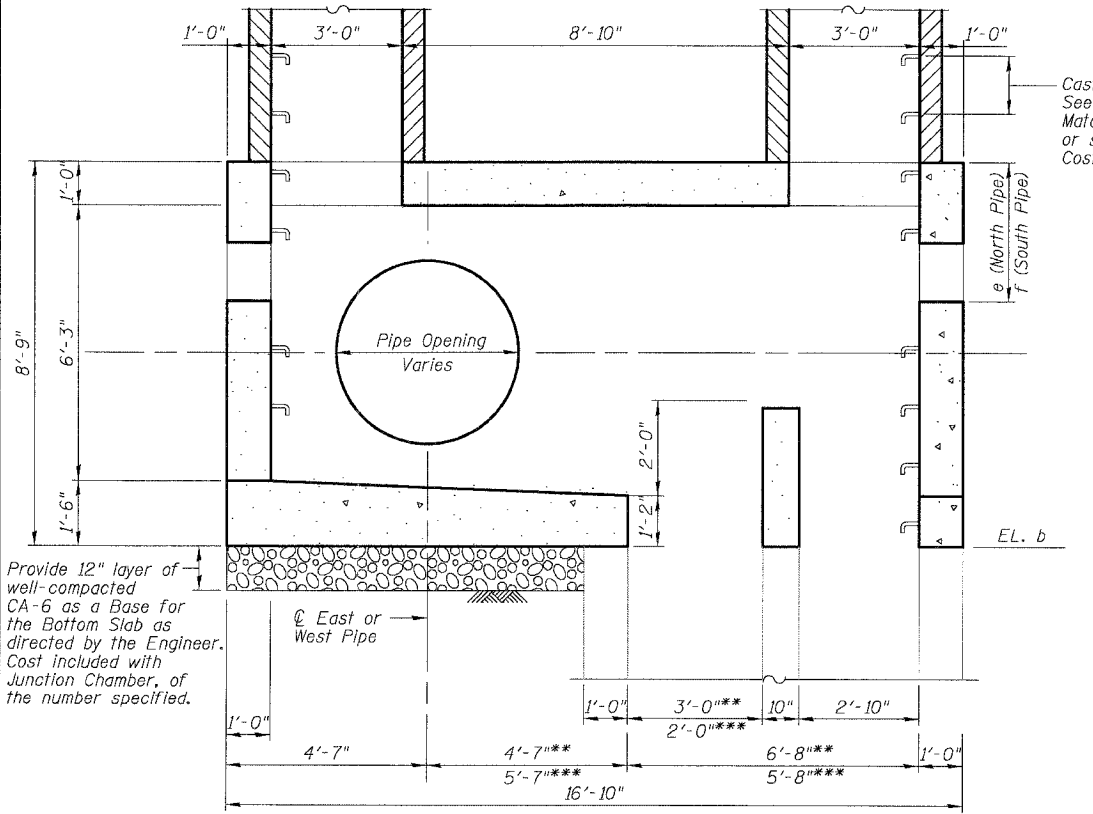


**PLAN**

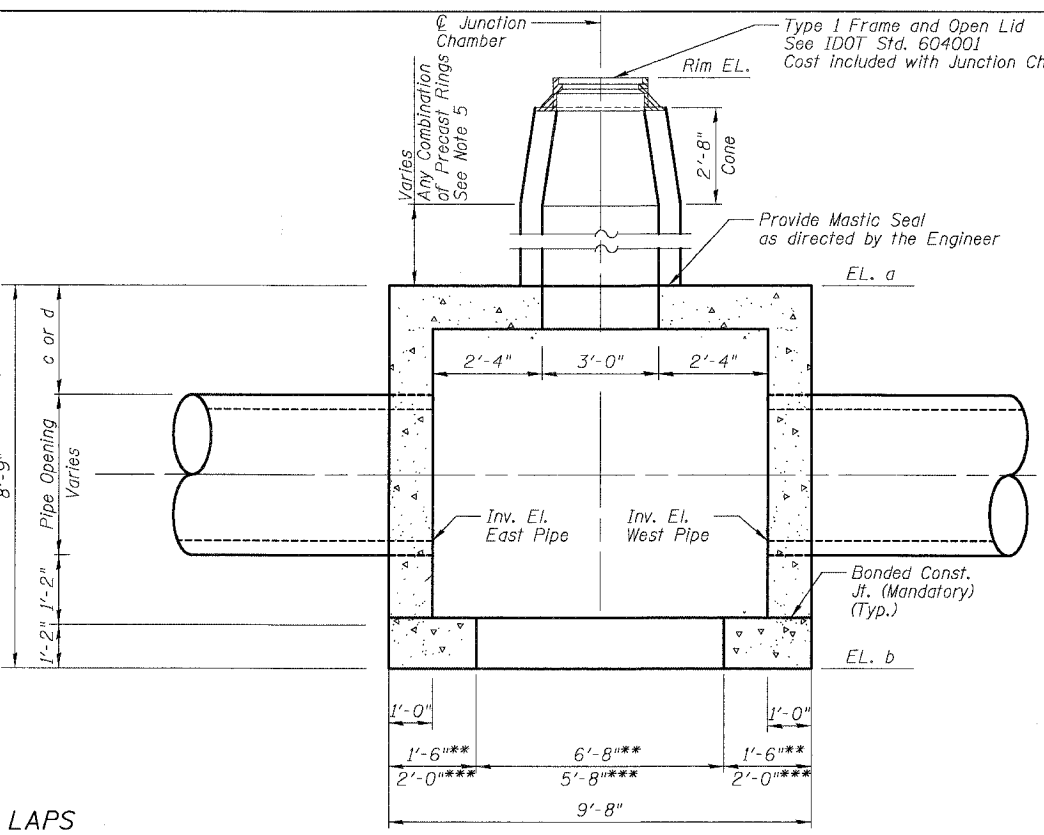
Showing situation with Drop Shaft oriented South, See Note 3 for North orientation

**MIN. BAR LAPS**

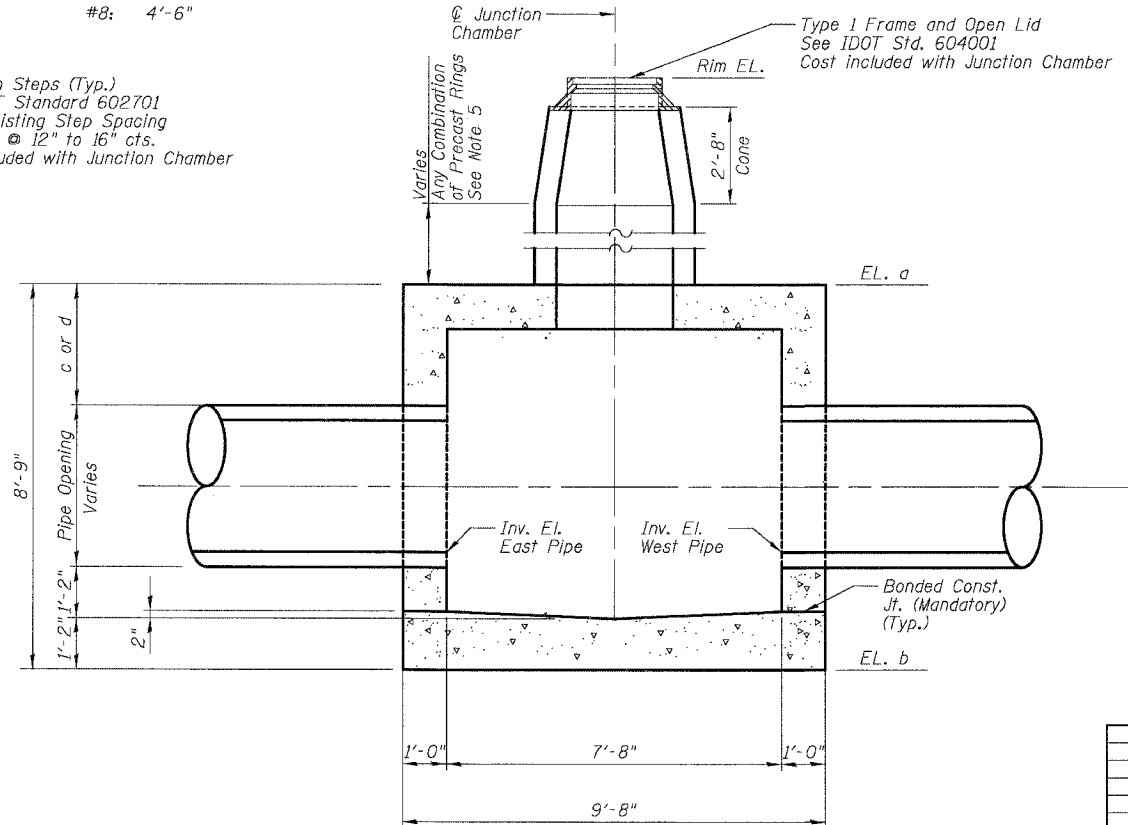
- #5: 2'-2"
- #6: 2'-7"
- #7: 3'-5"
- #8: 4'-6"



**SECTION A-A**



**SECTION B-B**



**SECTION C-C**

**BILL OF MATERIAL**

ITEM	UNIT	TOTAL
** Junction Chamber, No. 3	Each	1
*** Junction Chamber, No. 4	Each	1
** Junction Chamber, No. 5	Each	1
*** Junction Chamber, No. 6	Each	1
** Junction Chamber, No. 7	Each	1
** Junction Chamber, No. 8	Each	1
*** Junction Chamber, No. 9	Each	1
*** Junction Chamber, No. 10	Each	1
*** Junction Chamber, No. 11	Each	1
*** Junction Chamber, No. 12	Each	1
** Junction Chamber, No. 13	Each	1

SHEET JC-1 OF JC-22

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 NB EXPRESS LANE RECONSTRUCTION  
 JUNCTION CHAMBER, TYPE 2  
 GENERAL PLAN AND ELEVATION

SCALE: N.T.S. DRAWN BY: DJM  
 DATE: 07/07/05 CHECKED BY: BLU

BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
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