



- Notes:
1. Space reinforcement in cap to miss anchor bolts.
  2. Pour steps monolithically with cap.
  3. For details of piles, see sheet S-187 of S-234.
  4. C of Pier is perpendicular to 70E55N at Sta. 58+38.00.
  5. #5 sp20(E) spiral, each column
    - 1) Provide 1/2 extra turns, shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap and footing. Provide 4-#4 spacers or equivalent.
    - 2) When splicing spiral reinforcement is necessary, the spirals shall be provided with 1/2 extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4, or shall both terminate with a 135° standard hook.
  6. Contractor shall use Mechanical Splicers in columns and pier cap that will fit between spirals and stirrups.

**PILE DATA**

Type: HP 12x63  
 Nominal Required Bearing: 400 kips  
 Factored Resistance Available: 200 kips  
 Est. Length: 97'  
 No. Production Piles: 53  
 No. Test Piles: 1

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h80(E)	10	#5	29'-8"	
h81(E)	6	#5	13'-9"	
h82(E)	6	#5	35'-1"	
h83(E)	6	#5	52'-2"	
h84(E)	10	#5	37'-6"	
n80(E)	40	#10	10'-5"	U
n81(E)	40	#10	13'-5"	U
p80(E)	12	#10	28'-0"	
p81(E)	10	#10	20'-2"	
p82(E)	16	#6	5'-9"	
p83(E)	12	#10	42'-10"	
p84(E)	10	#10	43'-4"	
p85(E)	12	#10	11'-10"	
s80(E)	200	#5	15'-7"	□
s81(E)	264	#5	10'-8"	□
s82(E)	68	#5	5'-5"	□
s83(E)	80	#5	11'-6"	□
** sp80(E)	5	#5	23'-6"	W
t80(E)	72	#7	14'-8"	
t81(E)	108	#9	18'-4"	
u80(E)	12	#6	18'-2"	U
u81(E)	53	#5	11'-4"	U
v80(E)	40	#10	22'-2"	U
v81(E)	40	#10	19'-2"	U
w80(E)	20	#7	30'-2"	
w81(E)	18	#8	32'-3"	
w82(E)	20	#7	44'-5"	
w83(E)	18	#8	46'-7"	
Concrete Structures	Cu. Yd.		267.8	
Reinforcement Bars, Epoxy Coated	Pound		49,650	
Furnishing Steel Piles HP 12x63	Foot		5,141	
Driving Piles Steel HP 12x63	Foot		5,141	
Test Piles Steel HP 12x63	Foot		1	
Mechanical Splicers	Each		112	



USER NAME =  
 DESIGNED - DDB  
 DRAWN - BRD  
 CHECKED - LLV  
 DATE - 07-01-11

REVISIONS:  
 REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PIER - UNIT 2 - PIER 4 - PLANS & ELEVATIONS  
 I-70E OVER I-55, CSX & KCS RAILROADS

F.A.I. RTE. TO	SECTION 82-1-B-2	COUNTY ST. CLAIR	TOTAL SHEETS 399	SHEET NO. 281
S.N. 082-0322 & S.N. 082-0324	CONTRACT NO. 76C76			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

SCALE: SHEET S-154 OF S-234 SHEETS STA. TO STA.