



Bent 13
(1 Required)

Bar	No.	Size	Length	Shape
p ₆ (E)	36	#7	31'- 9"	—
h ₁ (E)	12	#5	24'- 0"	—
s ₁₁ (E)	112	#4	11'- 5"	□
u(E)	6	#5	6'- 7"	U
u ₁ (E)	87	#4	7'- 2"	U
v(E)	114	#5	3'- 0"	—
Structure Excavation		Cu. Yd.	158	
Concrete Structures		Cu. Yd.	43.4	
Reinforcement Bars, Epoxy Coated		Pound	4,310	
Bar Splicers		Each	12	
Furnishing Metal Shell Piles, 14" x 0.312"		Foot	1,104	
Driving Piles		Foot	1,104	
Test Piles		Each	1	
Concrete Sealer		Sq. Ft.	1,215	

Bent 14
(1 Required)

Bar	No.	Size	Length	Shape
p ₆ (E)	36	#7	31'- 9"	—
h ₁ (E)	12	#5	24'- 0"	—
s ₁₁ (E)	112	#4	11'- 5"	□
u(E)	6	#5	6'- 7"	U
u ₁ (E)	92	#4	7'- 2"	U
v(E)	228	#5	3'- 0"	—
Structure Excavation		Cu. Yd.	164	
Concrete Structures		Cu. Yd.	45.1	
Reinforcement Bars, Epoxy Coated		Pound	4,690	
Bar Splicers		Each	12	
Furnishing Metal Shell Piles, 14" x 0.312"		Foot	1,108	
Driving Piles		Foot	1,108	

- NOTES:**
- Bars indicated thus 20 x 3 - #5 etc. indicates 20 lines of bars with 3 lengths per bar.
 - For details of piles, see Sheet SA26.
 - For details of Bar Splicers, see Sheet SA27.
 - Piles are numbered sequentially as shown. See Bent Cap Table for Test Pile Locations.
 - Apply Concrete Sealer to top and sides of Bent 13.
 - See Sheet SA26 for Metal Shell Reinforcement Detail. Typical for all piles.

TYP. LAP SPLICE

BAR SIZE	MIN. LAP
#5	2'- 11"
#7	5'- 10"

BENT 13 PILE DATA		BENT 14 PILE DATA	
Type: Metal Shell - 14 in. dia. x 0.312 in. wall	Type: Metal Shell - 14 in. dia. x 0.312 in. wall	Nominal Required Bearing: 418 kips	Nominal Required Bearing: 418 kips
Factored Resistance Available: 230 kips	Factored Resistance Available: 230 kips	Est. Length: Piles 1-8: 70 ft., Piles 9-17: 68 ft.	Est. Length: Piles 1-8: 62 ft., Piles 9-17: 68 ft.
No. Production Piles: 16	No. Production Piles: 17	No. Test Piles: 1	No. Test Piles: 0

DESIGNED - J. Vermillion
CHECKED - J. Refvik
DRAWN - J. Vermillion
CHECKED - J. Refvik

BENT CAP TABLE

Bent #	Elev. A	Elev. B	Elev. C	Elev. D	Elev. E	Elev. F	Precore To Elevation		Test Pile Location
							Stage I (NB)	Stage II (SB)	
13	710.54	714.15	714.70	715.33	714.70	714.04	692.38	694.80	13
14	710.53	714.03	714.89	715.52	714.89	714.23	692.38	702.10	-

**BENTS 13 & 14 DETAILS
STRUCTURE NO. 022-0012**

SHEET NO. SA23 OF SA37	F.A.P RTE. 2578	SECTION 532B	COUNTY DUPAGE	TOTAL SHEETS 781	SHEET NO. 627
	CONTRACT NO. 60477				
12/3/2010		ILLINOIS FED. AID PROJECT			

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