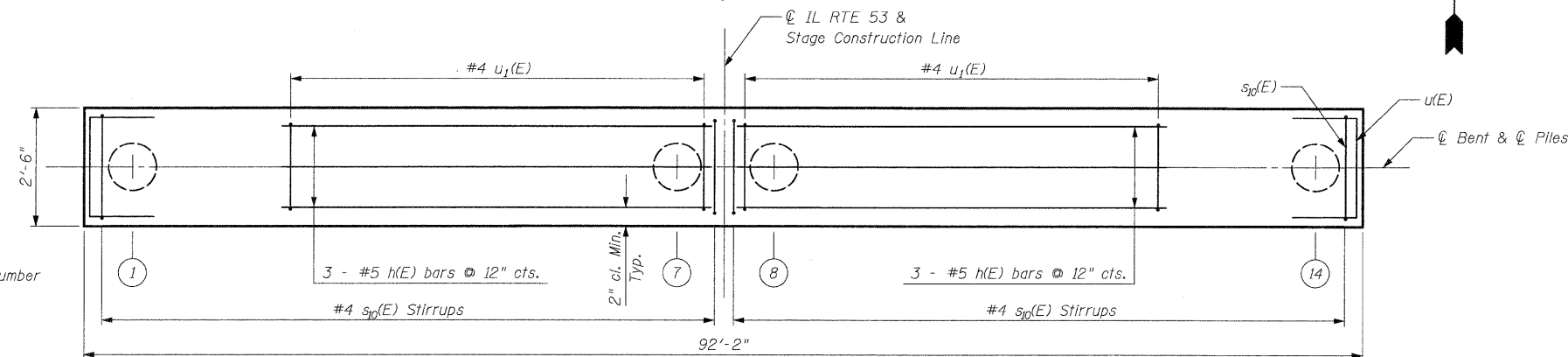


*For all bents except 15, 16, 17, 18, 19, and 20.

ELEVATION

(Looking North)



PLAN

- NOTES:**
- 46 - #5 v(E) Bars @ 12" Cts. Each Face (Fixed and Abutment Bents)
 - 46 - #5 v(E) Bars @ 12" Cts. One Face (Bents 9 & 17)
 - 46 - #5 v1(E) Bars @ 12" Cts. One Face (Abutment Bents)
 - For detail of Piles, see Sheet SA26.
 - For details of Bar Splicers, see Sheet SA27.
 - Bars indicated thus 20 x 3 - #5 etc. indicates 20 lines of bars with 3 lengths per bar.
 - Piles are numbered sequentially as shown. See Pile Data Table for Test Pile Locations.
 - Apply Concrete Sealer to top and sides of Bents 5, 9, & 17.
 - See Sheet SA26 for Metal Shell Reinforcement Detail. Typical all piles.
 - See Sheet SA22 for additional Bill of Materials.

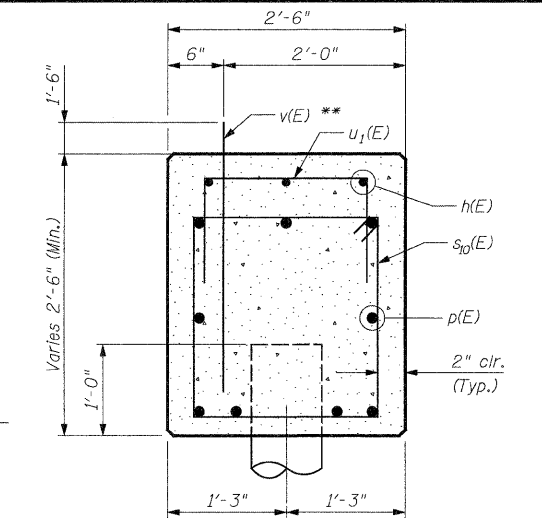
PILE DATA

Type: Metal Shell - 14 in. dia. x 0.312 in. wall
 Nominal Required Bearing: 418 kips
 Factored Resistance Available: 230 kips
 Est. Length: See Table
 No. Production Piles: See Table
 No. Test Piles: See Table

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

Bent #	BENT CAP TABLE						PILE DATA TABLE						
	Elev. A	Elev. B	Elev. C	Elev. D	Elev. E	Elev. F	Est. Pile Length (ft.)		Precore To Elev.		No. Prod. Piles	No. Test Piles	Location of Test Piles
							Stage I (NB)	Stage II (SB)	Stage I (NB)	Stage II (SB)			
1	712.53	715.03	715.40	716.03	715.40	715.03	63	57	701.83	710.90	13	1	10
2	712.37	714.87	715.24	715.87	715.24	714.87	63	57	701.83	710.90	14	0	-
3	712.24	714.74	715.10	715.73	715.10	714.74	63	57	701.83	710.90	13	1	3
4	712.09	714.59	714.96	715.59	714.96	714.59	63	57	701.83	710.90	13	1	12
5	711.96	714.46	714.82	715.45	714.82	714.46	65	54	699.45	705.60	14	0	-
6	711.81	714.31	714.67	715.30	714.67	714.31	65	54	699.45	705.60	13	1	3
7	711.67	714.17	714.54	715.17	714.54	714.17	65	54	699.45	705.60	13	1	12
8	711.54	714.04	714.41	715.04	714.41	714.04	63	66	698.61	699.60	14	0	-
9	711.47	713.97	714.34	714.97	714.34	713.97	63	66	698.61	699.60	13	1	3
10	711.47	713.97	714.34	714.97	714.34	713.97	63	66	693.63	699.60	13	1	12
11	711.53	714.03	714.40	715.03	714.40	714.03	63	70	693.63	694.80	14	0	-
12	711.65	714.15	714.52	715.15	714.52	714.15	68	70	692.38	694.80	13	1	3
15	711.92	714.42	715.08	715.71	715.08	714.71	52	62	712.70	702.10	13	1	3
16	712.10	714.60	715.26	715.89	715.26	714.89	52	62	712.70	702.10	13	1	13
17	712.47	714.97	715.45	716.08	715.45	715.05	52	70	712.70	702.08	14	0	-
18	712.66	715.27	715.64	716.27	715.64	715.16	52	70	712.70	702.08	13	1	2
19	712.84	715.45	715.82	716.45	715.82	715.34	52	70	712.70	702.08	13	1	12
20	713.10	715.64	716.01	716.64	716.01	715.60	48	44	713.25	712.09	14	0	-
21	713.33	715.83	716.20	716.83	716.20	715.83	48	44	713.25	712.09	13	1	5

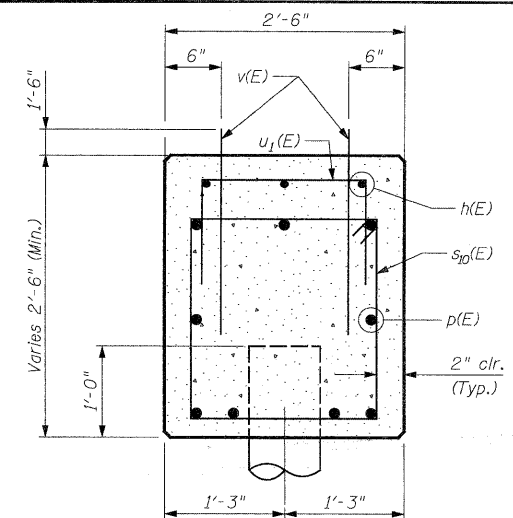
TABLE



SECTION A-A THRU EXPANSION BENT

(Bents 5, 9, & 17)

** At Bents 9 & 17 only.

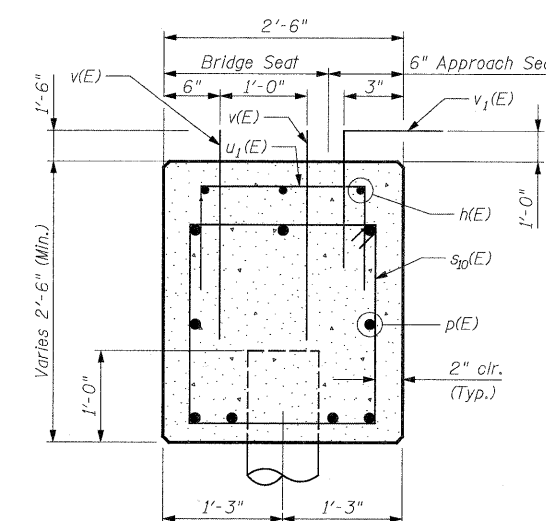


SECTION A-A THRU FIXED BENT

(Bents 2, 3, 4, 6, 7, 8, 10, 11, 12, 15, 16, 18, 19, & 20)

TYP. LAP SPLICE

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

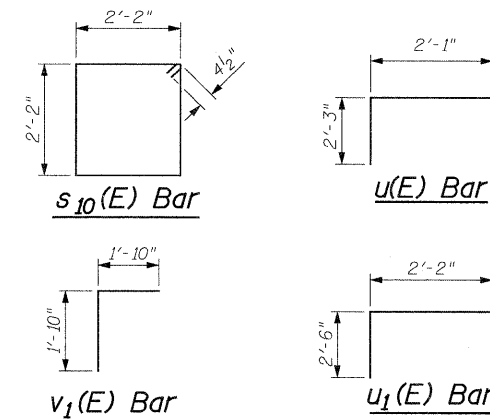


SECTION A-A THRU ABUTMENT BENT

(Bents 1 & 21) (Bent 1 Shown, Bent 21 Opp. Hand)

BILL OF MATERIAL-BENT 1

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'-11"	—
h(E)	6	#5	32'-9"	—
s10(E)	94	#4	9'-5"	□
u(E)	6	#5	6'-7"	U
u1(E)	68	#4	7'-2"	U
v(E)	184	#5	3'-0"	—
v1(E)	92	#5	3'-8"	L
Concrete Structures			Cu. Yd.	25.9
Reinforcement Bars, Epoxy Coated			Pound	4,000
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	117
Porous Granular Embankment (Special)			Cu. Yd.	48
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	777
Driving Piles			Foot	777



TYPICAL BENT DETAILS I
 STRUCTURE NO. 022-0012

PATRICK ENGINEERING INC.
 4970 VARSITY DRIVE
 LISLE, IL 60532
 patrickengineering.com

SHEET NO.
 SA21 OF SA37

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2578	532B	DUPAGE	781	625
CONTRACT NO. 60477				
12/3/2010	ILLINOIS FED. AID PROJECT			