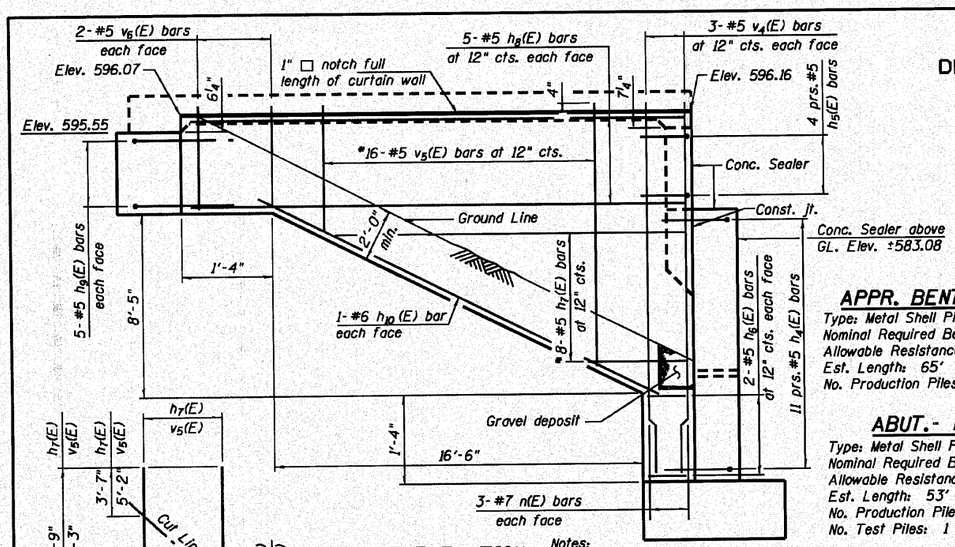
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SIDE ELEVATION

APPR. BENT-PILE DATA

Type: Metal Shell Piles 12" x 0.250" Walls
Nominal Required Bearing: 210 k
Allowable Resistance Available: 70k
Est. Length: 65'
No. Production Piles: 2

ABUT.- PILE DATA

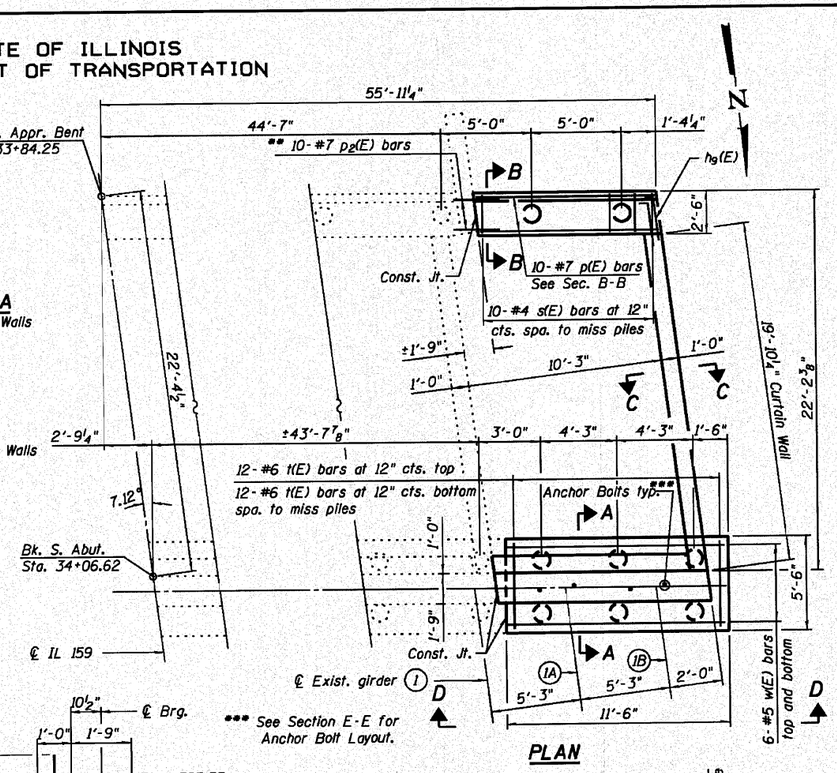
Type: Metal Shell Piles 12" x 0.250" Walls
Nominal Required Bearing: 210 k
Allowable Resistance Available: 70k
Est. Length: 53'
No. Production Piles: 5
No. Test Piles: 1

Notes:
Space reinforcement in cap to miss anchor bolts.
For details of piles, see sheet 19 of 34.
Interior of vault to be sand filled to bottom of slab.
The back face of the widened Abutment shall be waterproofed according to Article 503.18 of the Standard Specifications.

** #5 h_2(E) bars drilled and epoxy grouted into $\frac{7}{8}$" ϕ by 9" holes (min.)
#6 h_3(E) bars drilled and epoxy grouted into 1" ϕ by 9" holes (min.)
#7 p_2(E) bars drilled and epoxy grouted into $1\frac{1}{8}$" ϕ by 9" holes (min.)
The grout and method of application shall be according to Section 584 of the Standard Specifications and shall develop capacity of bar.

FIELD CUTTING DIAGRAM

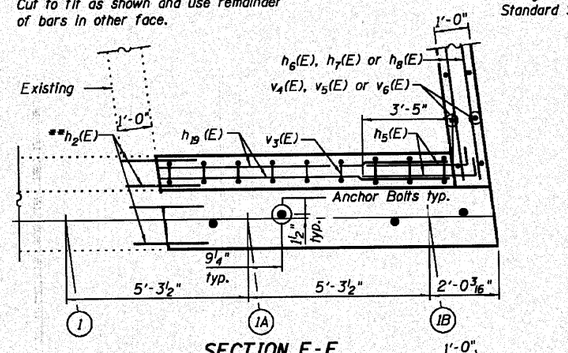
* Order h_7(E) and v_5(E) bars full length. Cut to fit as shown and use remainder of bars in other face.



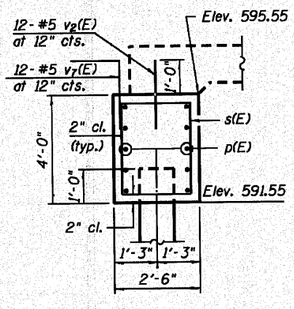
PLAN

BILL OF MATERIAL

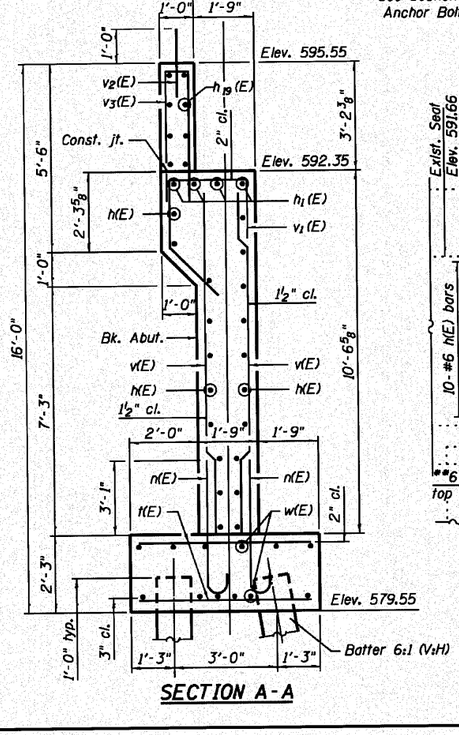
Bar	No.	Size	Length	Shape
h(E)	20	#6	11'-1"	
h_1(E)	4	#5	11'-1"	
h_2(E)	24	#5	4'-2"	
h_3(E)	20	#6	4'-9"	
h_4(E)	22	#5	5'-6"	
h_5(E)	8	#5	4'-6"	
h_6(E)	4	#5	1'-8"	
h_7(E)	8	#5	19'-9"	
h_8(E)	10	#5	19'-6"	
h_9(E)	10	#5	6'-3"	
h_{10}(E)	2	#6	19'-8"	
h_{11}(E)	8	#5	10'-1"	
n(E)	30	#7	5'-11"	
p(E)	10	#7	9'-3"	
p_2(E)	10	#7	6'-1"	
s(E)	10	#4	12'-5"	
t(E)	24	#6	5'-2"	
v(E)	24	#6	10'-5"	
v_1(E)	12	#5	8'-5"	
v_2(E)	23	#5	2'-3"	
v_3(E)	11	#5	11'-1"	
v_4(E)	6	#5	14'-8"	
v_5(E)	16	#5	18'-3"	
v_6(E)	4	#5	4'-8"	
v_7(E)	12	#5	4'-2"	
w(E)	12	#5	11'-2"	
Structure Excavation			Cu. Yd.	23
Concrete Structures			Cu. Yd.	25.7
Reinforcement Bars, Epoxy Coated			Pound	3,590
Furnishing Metal Shell Piles 12" x 0.250"			Foot	395
Driving Piles			Foot	395
Test Pile Metal Shells			Each	1
Sand Backfill			Cu. Yd.	47
Concrete Sealer			Sq. Ft.	163



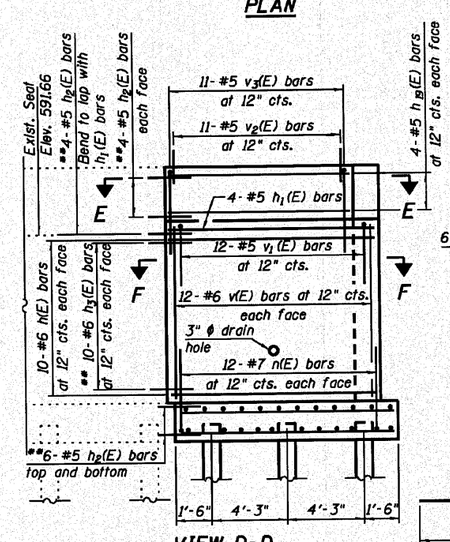
SECTION E-E



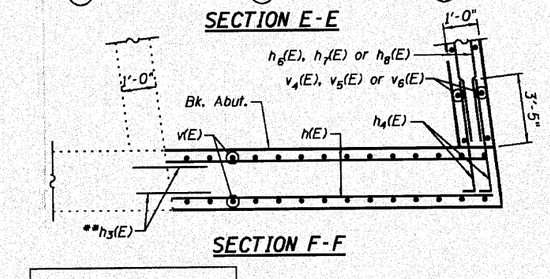
SECTION B-B



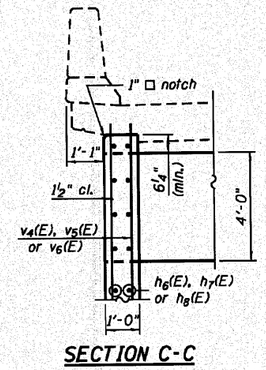
SECTION A-A



VIEW D-D



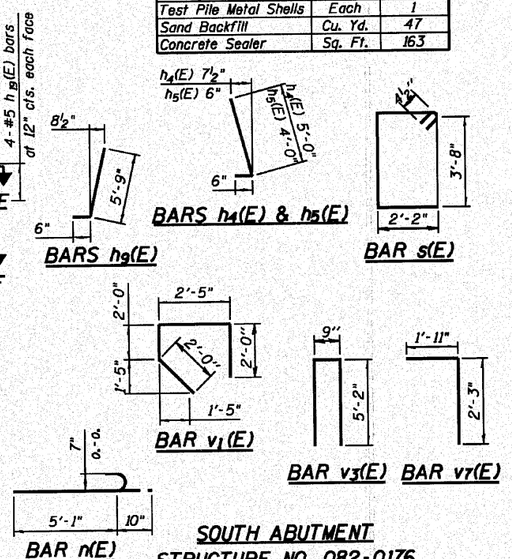
SECTION F-F



SECTION C-C

MINIMUM BAR LAP

#5 bar = 2'-7"
#6 bar = 3'-1"



SOUTH ABUTMENT
STRUCTURE NO. 082-0176

DESIGNED	TJZ
CHECKED	CWC
DRAWN	DLH
CHECKED	CWC, SDS

WHKS & CO. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

SHEET NO. 16	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	64	82-5K-2	ST. CLAIR	162	99
			CONTRACT NO. 76D59		
		ILLINOIS	FED. AID PROJECT		