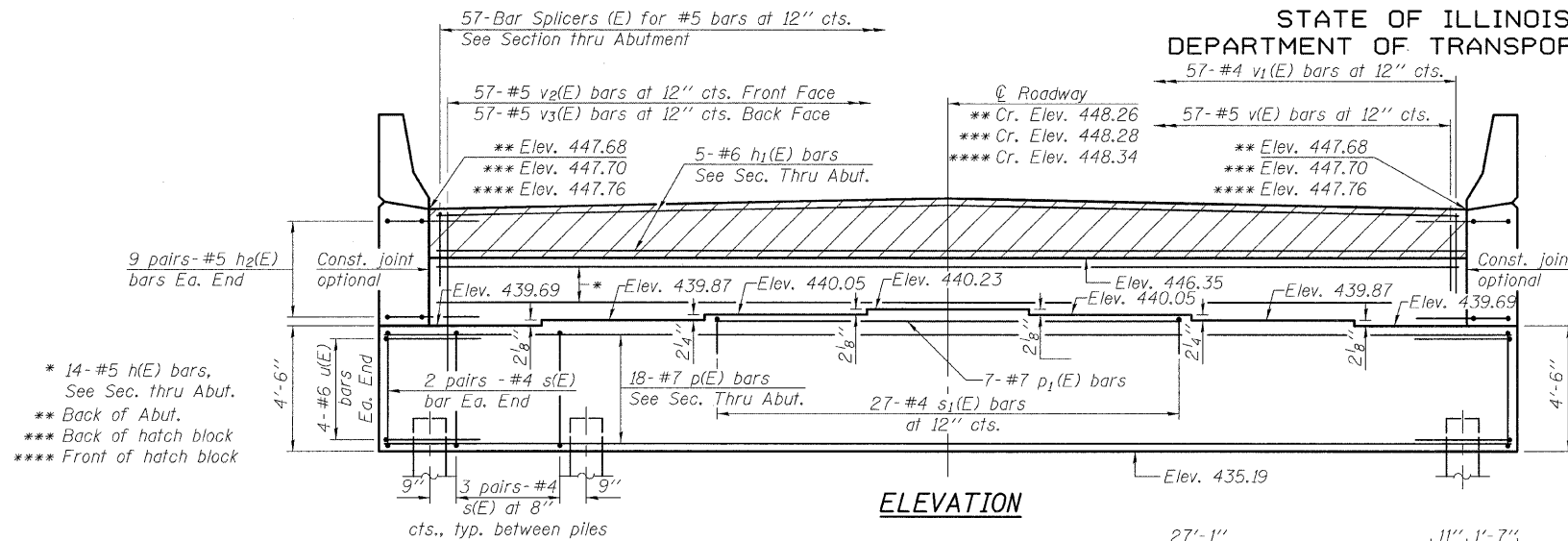
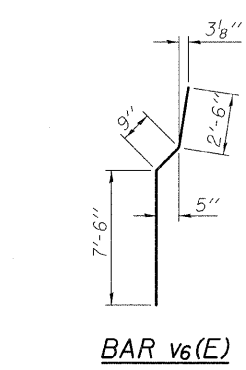
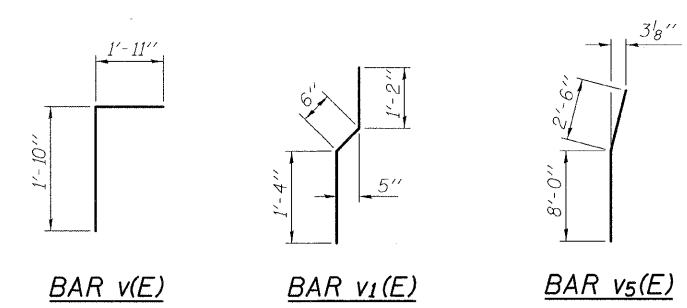
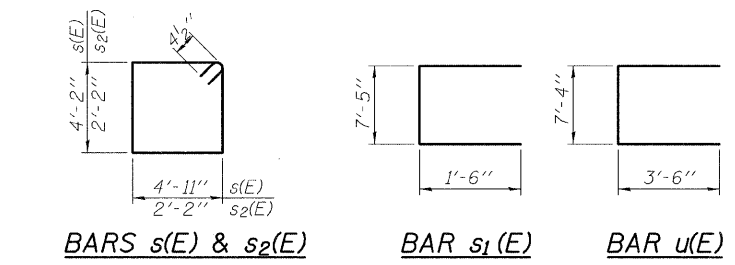
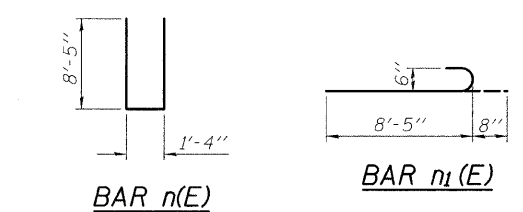
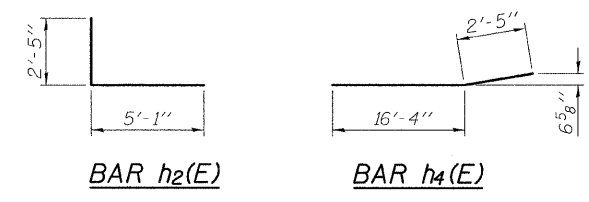
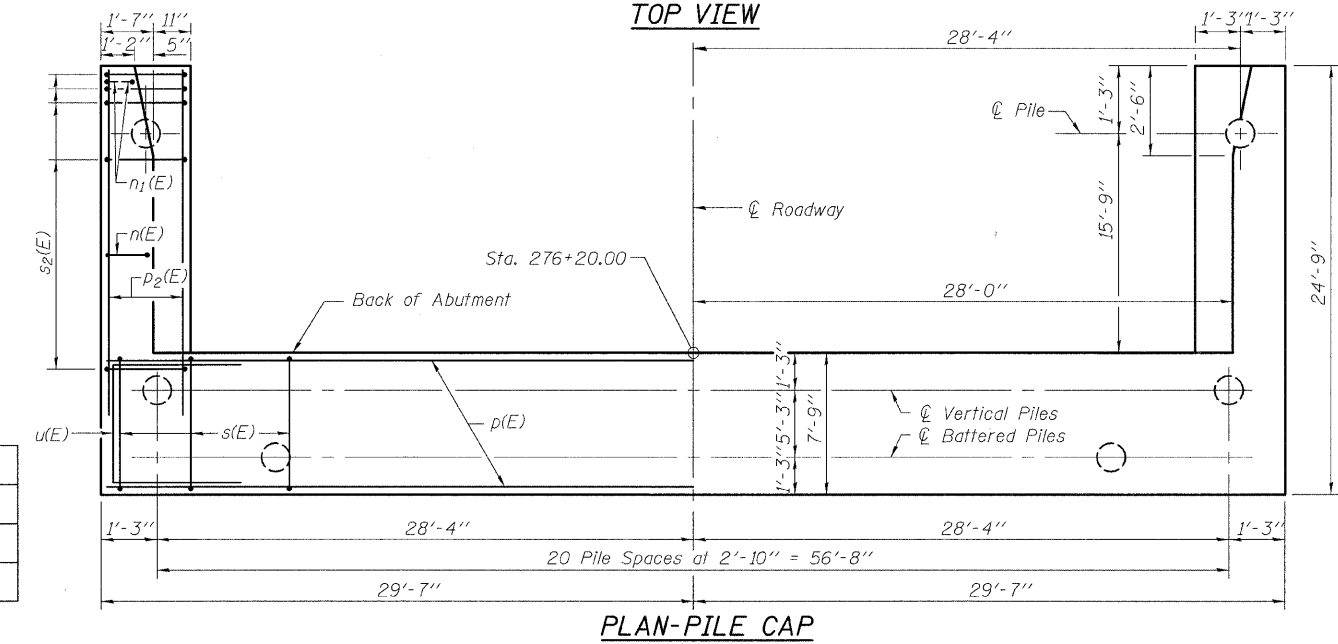
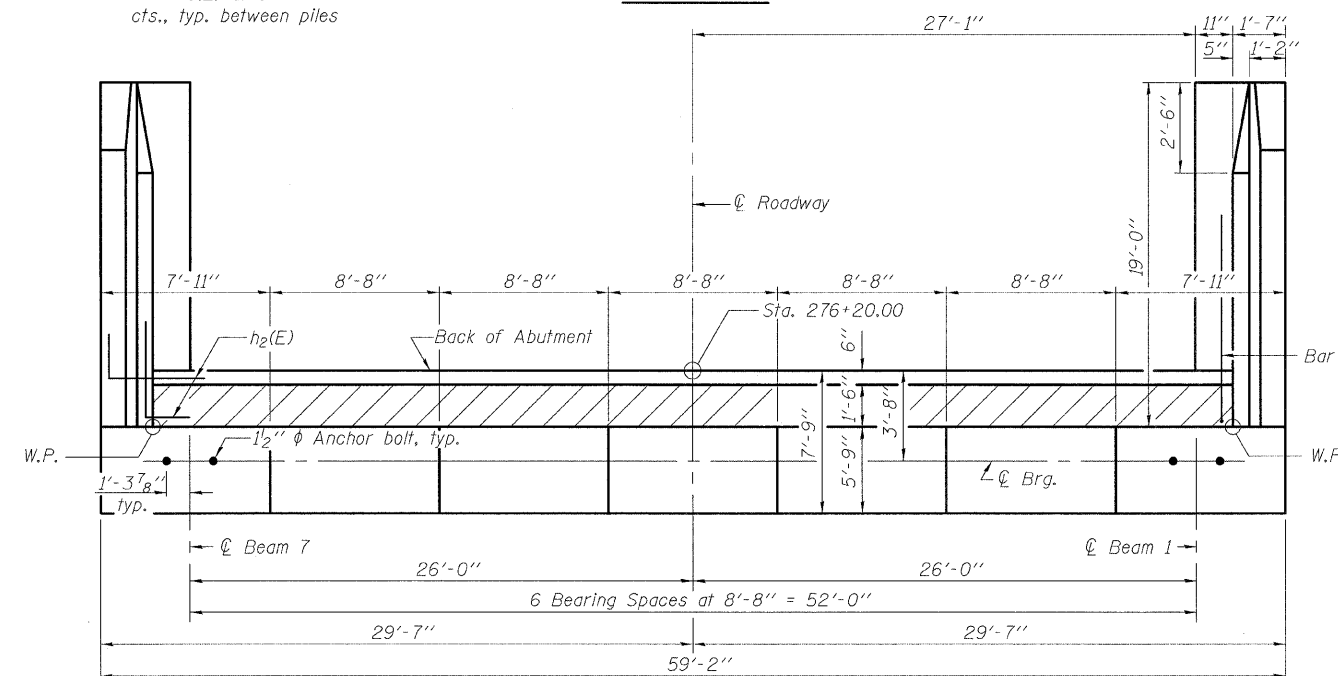


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



* 14-#5 h(E) bars,
See Sec. thru Abut.
** Back of Abut.
*** Back of hatch block
**** Front of hatch block



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	14	#5	55'-9"	—
h1(E)	5	#6	55'-9"	—
h2(E)	36	#5	7'-6"	┌
h3(E)	34	#4	18'-9"	—
h4(E)	22	#4	18'-9"	—
n(E)	34	#6	18'-2"	┌
n1(E)	12	#6	9'-1"	┌
p(E)	18	#7	58'-11"	—
p1(E)	7	#7	25'-9"	—
p2(E)	12	#9	24'-5"	—
s(E)	128	#4	18'-11"	┌
s1(E)	27	#4	10'-5"	┌
s2(E)	40	#4	9'-5"	┌
u(E)	8	#6	14'-4"	┌
v(E)	57	#5	3'-9"	┌
v1(E)	57	#4	3'-0"	┌
v2(E)	57	#5	9'-6"	—
v3(E)	57	#5	8'-5"	—
v4(E)	40	#6	10'-1"	—
v5(E)	6	#6	10'-6"	—
v6(E)	34	#6	10'-9"	—
Structure Excavation		Cu. Yd.	405	
Concrete Structures		Cu. Yd.	133.9	
Reinforcement Bars, Epoxy Coated		Pound	11,730	
Bar Splicers		Each	57	
Furnishing Metal Shell Piles 14" x 0.312"		Foot	1,848	
Driving Piles		Foot	1,848	
Test Pile Metal Shells		Each	1	
Concrete Sealer		Sq. Ft.	1,051	

PILE DATA

Type: Metal Shell - 14" ϕ x 0.312" wall
Nominal Required Bearing: 360 Kips
Factored Resistance Available: 180 Kips
Est. Length: 82 ft.
No. Production Piles: 22
No. Test Piles: 1

For details of Bar Splicers, see sheet 43 of 48.
For details of metal shell piles, see sheet 42 of 48.
For Section thru Abut., see sheet 38 of 48.

DESIGNED	KAK
CHECKED	EML
DRAWN	AJF
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

SHEET NO. 36 48 SHEETS	F.A.P. RTE. 312	SECTION 64-1VBR	COUNTY ST. CLAIR	TOTAL SHEETS 259	SHEET NO. 88
	CONTRACT NO. 76882				
ILLINOIS FED. AID PROJECT					

NORTH ABUTMENT
STRUCTURE NO. 082-0038