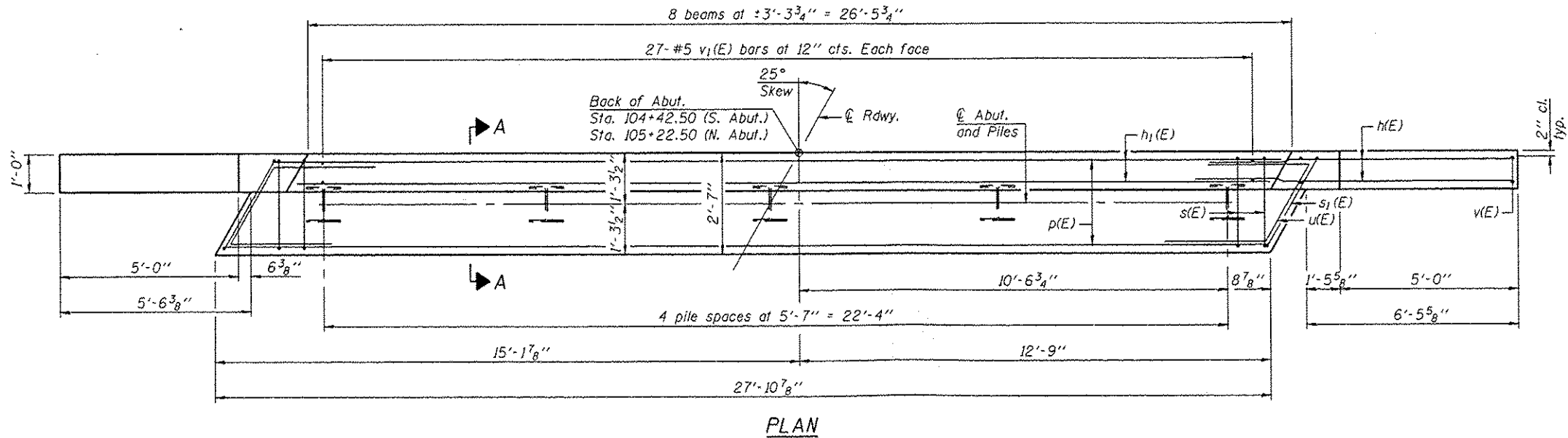
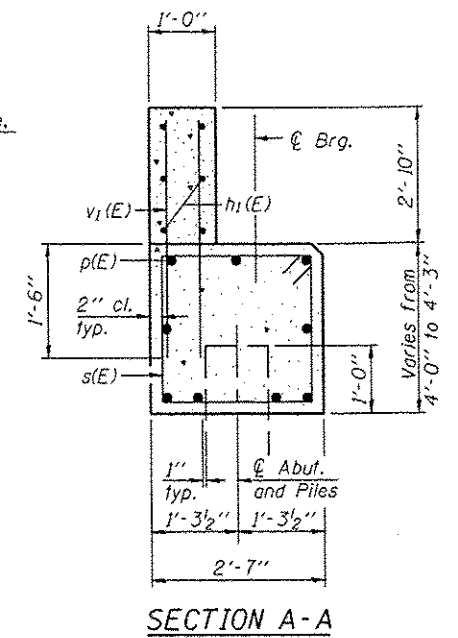
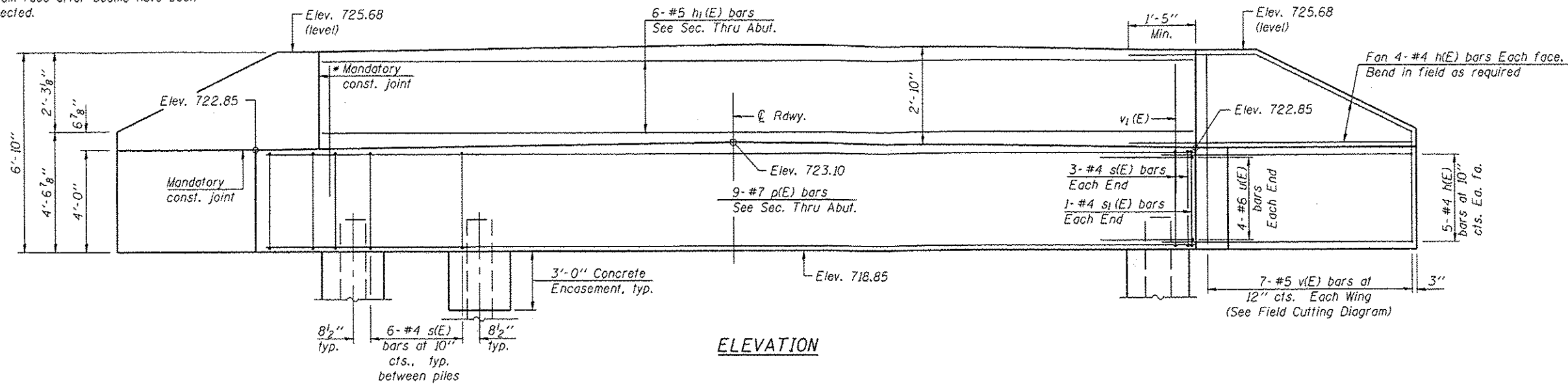


* Cast top of wingwall flush with exterior beam face after beams have been erected.

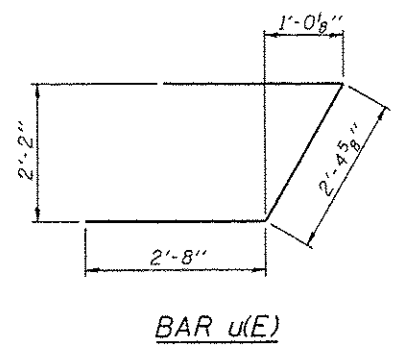
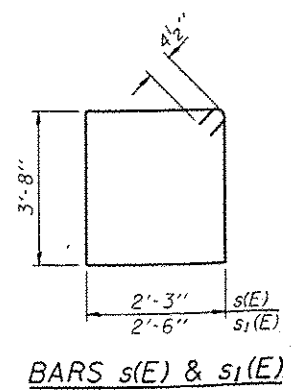
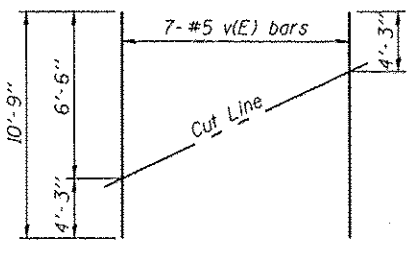


BILL OF MATERIAL TWO ABUTMENTS

Bar	No.	Size	Length	Shape
h(E)	72	#4	8'-5"	—
h ₁ (E)	12	#5	26'-1"	—
p(E)	18	#7	27'-6"	—
s(E)	30	#4	12'-7"	□
s ₁ (E)	4	#4	13'-1"	□
u(E)	16	#6	7'-9"	⌋
v(E)	28	#5	10'-9"	—
v ₁ (E)	108	#5	4'-1"	—
Concrete Structures			Cu. Yd.	33.2
Reinforcement Bars, Epoxy Coated			Pound	2990
Furnishing Steel Piles HP12x53			Foot	522
Driving Piles			Foot	522
Test Pile Steel HP12x53			Each	1
Concrete Encasement			Cu. Yd.	3.5

PILE DATA
(Two Abutments)

Type: Steel - HP12x53
 Nominal Required Bearing: 419 kips
 Factored Resistance Available: 230 kips
 Est. Length: 58 ft
 No. Production Piles: 9
 No. Test Piles: 1 (at North Abutment)



Notes:
 For details of piles and Concrete Encasement, see sheet 6 of 8.
 Cast backwall after beams have been erected.