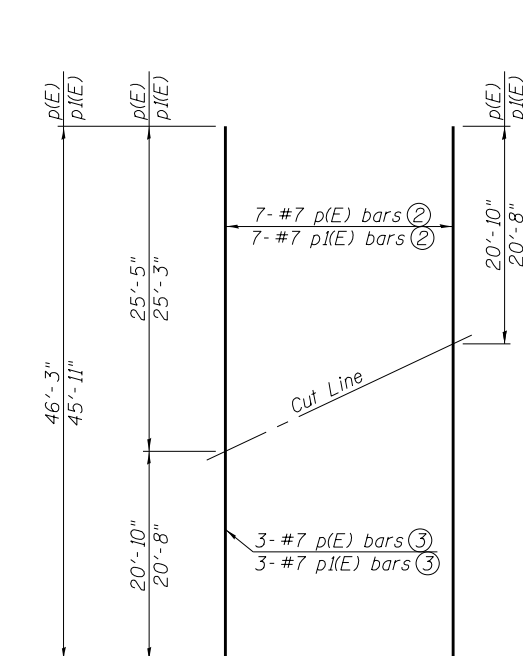
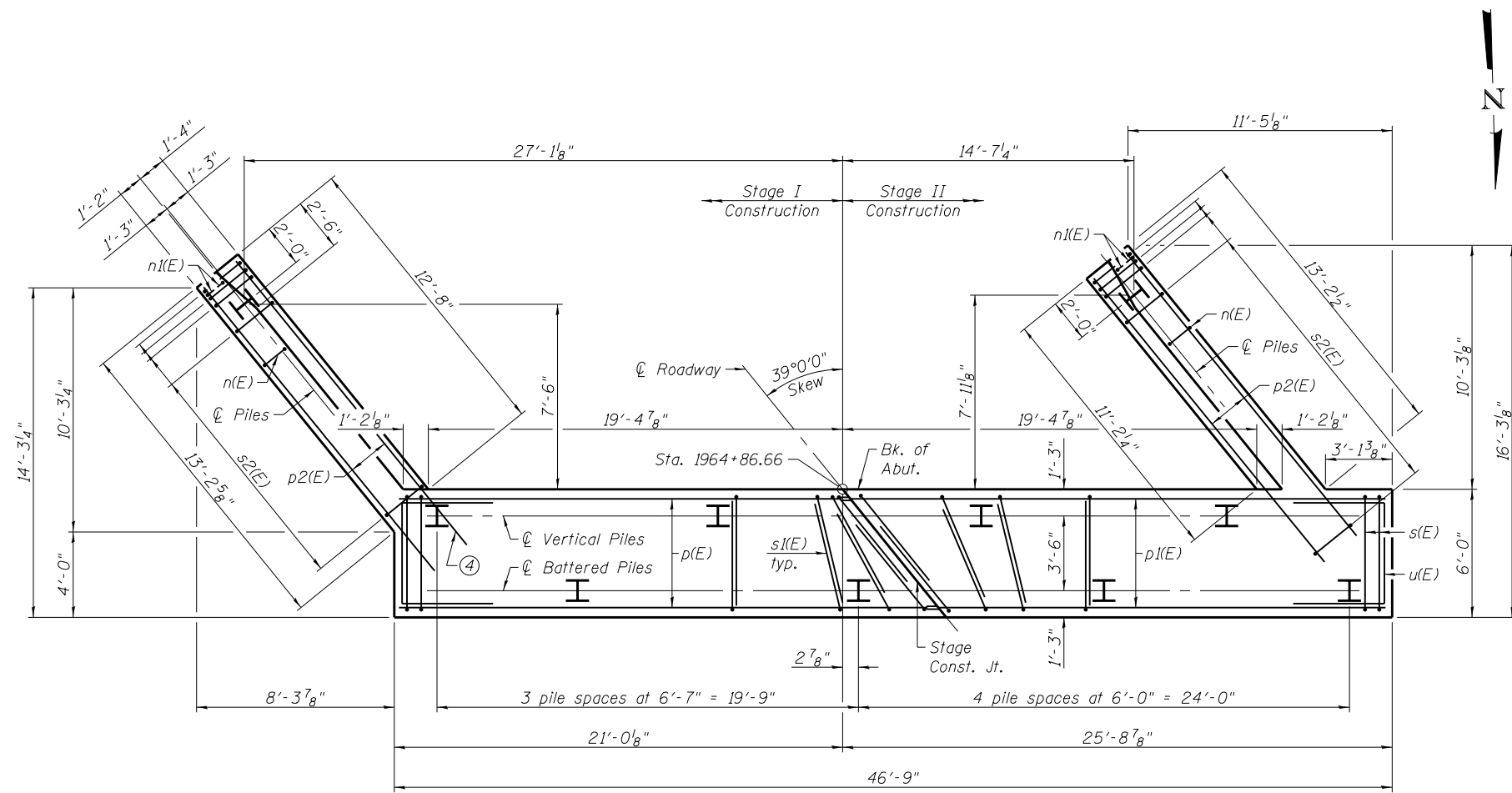
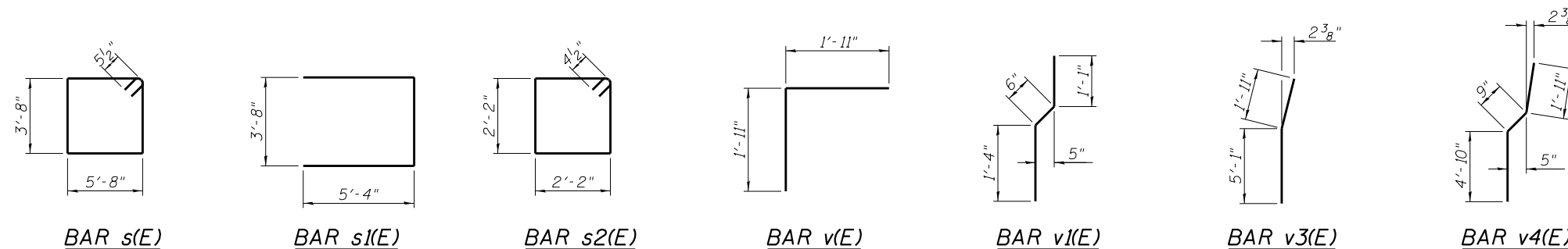
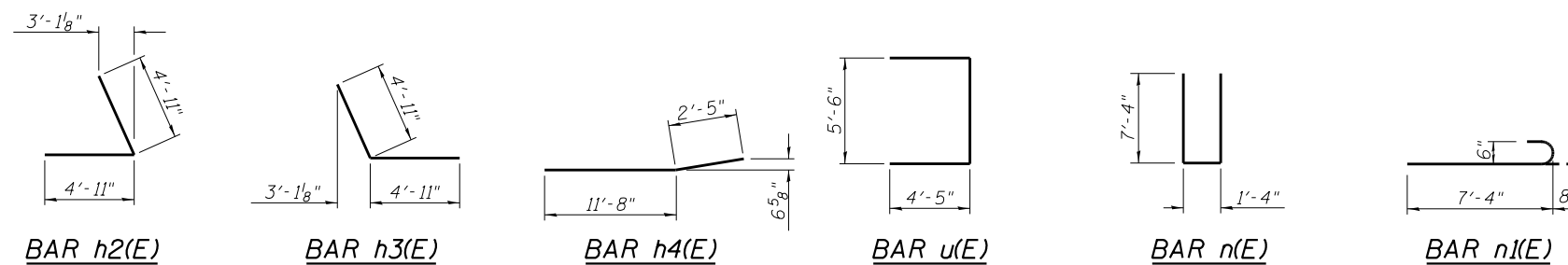


**SOUTH ABUTMENT  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	16	#5	20'-3"	—
h1(E)	10	#6	22'-3"	—
h2(E)	12	#5	9'-10"	L
h3(E)	12	#5	9'-10"	J
h4(E)	16	#4	14'-1"	—
h5(E)	12	#4	13'-3"	—
h6(E)	12	#4	15'-0"	—
n(E)	23	#6	16'-0"	—
n1(E)	12	#6	8'-0"	—
p(E)	10	#7	46'-3"	—
p1(E)	10	#7	45'-11"	—
p2(E)	12	#7	15'-10"	—
s(E)	38	#5	19'-7"	□
s1(E)	56	#5	14'-4"	—
s2(E)	38	#4	9'-5"	□
u(E)	8	#6	14'-4"	—
v(E)	42	#5	3'-10"	Γ
v1(E)	42	#4	2'-11"	—
v2(E)	30	#6	7'-0"	—
v3(E)	6	#6	7'-0"	—
v4(E)	24	#6	7'-6"	—
v5(E)	42	#5	5'-4"	—
v6(E)	42	#5	6'-11"	—
Structure Excavation		Cu. Yd.	222	
Concrete Structures		Cu. Yd.	69.4	
Concrete Encasement		Cu. Yd.	3.5	
Reinforcement Bars, Epoxy Coated		Pound	7,720	
Furnishing Steel Piles HP12x53		Foot	324	
Driving Piles		Foot	324	
Test Pile Steel HP12x53		Each	1	
Concrete Sealer		Sq. Ft.	469	

**PILE DATA**

Type: Steel HP12x53  
 Nominal Required Bearing: 419 kips  
 Factored Resistance Available: 230 kips  
 Est. Length: 36 ft  
 No. Production Piles: 9  
 No. Test Piles: 1



**FIELD CUTTING DIAGRAM**

Order p(E) and p1(E) bars full length. ② ③

- Notes:  
 ① For details of piles and Concrete Encasement, see sheet 50 of 62.  
 ② Cut as shown and place bars in top and bottom faces of abutment cap.  
 ③ Cut as shown and place bars in side faces of abutment cap.  
 ④ Bend p2(E) bars as required to miss pile.