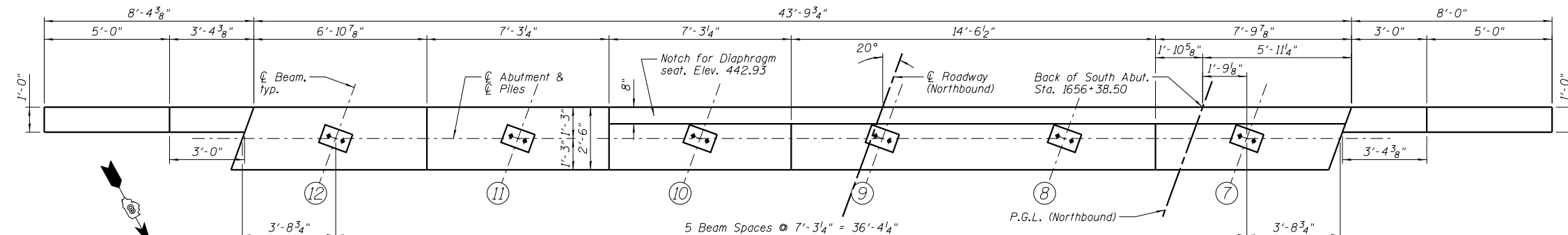


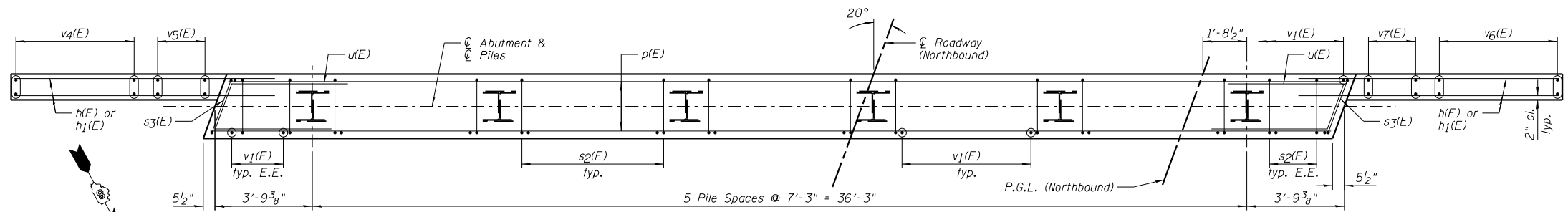
**SOUTH ABUTMENT
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
n(E)	20	#5	10'-2"	—
h1(E)	20	#5	10'-8"	—
p(E)	10	#7	43'-6"	—
p2(E)	3	#7	28'-4"	—
s2(E)	41	#4	11'-5"	□
s3(E)	2	#4	11'-7"	□
u(E)	8	#6	11'-3"	┘
u1(E)	32	#4	6'-8"	□
v1(E)	78	#5	4'-4"	—
v4(E)	6	#5	10'-10"	—
v5(E)	6	#5	6'-4"	—
v6(E)	6	#5	11'-8"	—
v7(E)	6	#5	6'-8"	—

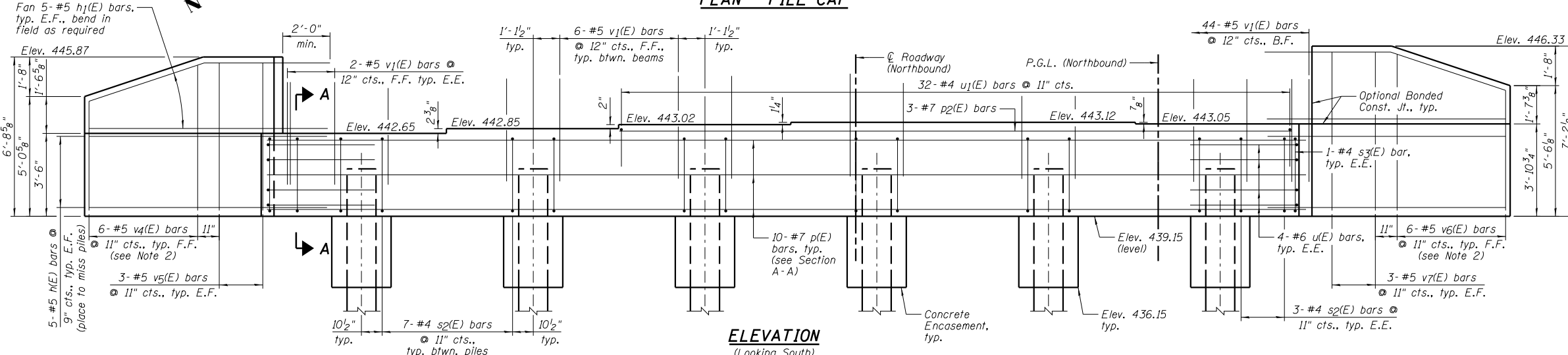
Item	Unit	Quantity
Porous Granular Embankment, Special	Cu. Yd.	64
Structure Excavation	Cu. Yd.	82
Concrete Structures	Cu. Yd.	19.3
Concrete Encasement	Cu. Yd.	3.3
Reinforcement Bars, Epoxy Coated	Pound	2,680
Furnishing Steel Piles HPI4x117	Foot	480
Driving Piles	Foot	480
Test Pile Steel HPI4x117	Each	1
Geocomposite Wall Drain	Sq. Yd.	35
Pipe Underdrains for Structures 4"	Foot	98



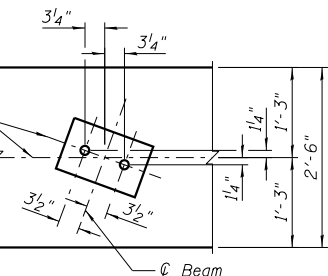
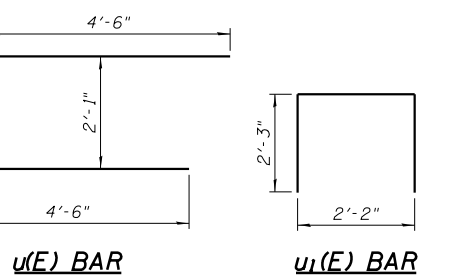
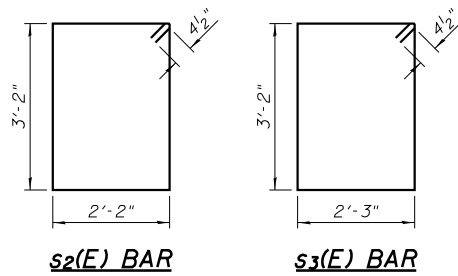
TOP VIEW ABUTMENT (SHOWING BEARING SEAT)



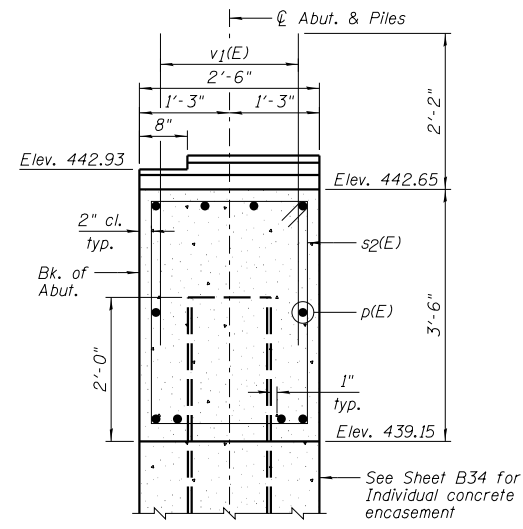
PLAN - PILE CAP



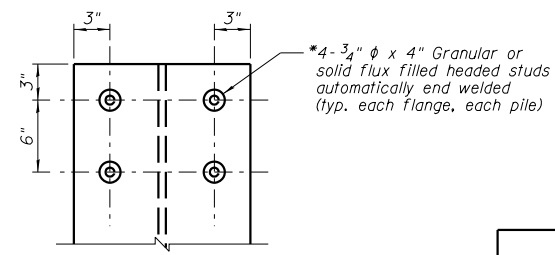
ELEVATION (Looking South)



TYPICAL ANCHOR BOLT PLACEMENT DETAIL



SECTION A-A

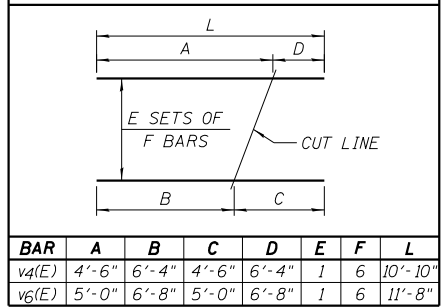


SEISMIC PILE DETAIL

PILE DATA:

Pile Type and Size	Steel - HPI4x117
Nominal Required Bearing	421 kips
Factored Resistance Available	232 kips
Estimated Pile Length	96 Feet
Number of Production Piles	5
Number of Test Piles	1

BAR CUTTING DIAGRAM



NOTES:

- 1.) Pour steps monolithically with cap.
- 2.) Order v4(E) and v6(E) bars full length. Cut according to Bar Cutting Diagram. Use remainder of bars in opposite face of wingwall.
- 3.) Bend or cut h(E) bars to miss piles.
- 4.) E.E. denotes Each End, F.F. denotes Front Face, B.F. denotes Back Face and E.F. denotes Each Face.