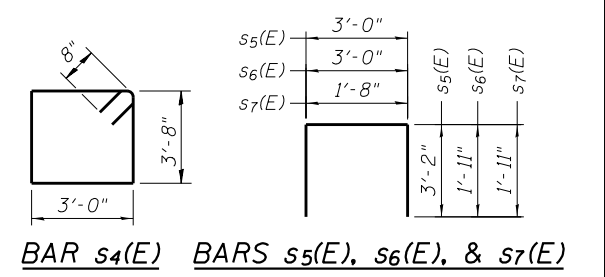


BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h20(E)	4	#6	20'-10"	—
h21(E)	4	#6	25'-3"	—
h22(E)	4	#5	6'-8"	—
h23(E)	4	#5	10'-8"	—
h24(E)	60	#5	9'-2"	—
h25(E)	30	#5	9'-8"	—
p6(E)	8	#10	20'-10"	—
p7(E)	5	#10	20'-10"	—
p8(E)	8	#10	25'-3"	—
p9(E)	5	#10	25'-3"	—
s4(E)	132	#6	14'-8"	□
s5(E)	32	#6	9'-4"	□
s6(E)	20	#5	6'-10"	□
s7(E)	60	#5	5'-6"	□
sp4	4	#6	24'-0"	⋈
sp(E)	4	#6	4'-6"	⋈
u4(E)	10	#6	12'-1"	U
v9(E)	44	#10	32'-4"	U
v10(E)	60	#5	12'-0"	—
v11(E)	60	#5	6'-6"	—
Concrete Structures	Cu. Yd.		58.9	
Reinforcement Bars	Pound		2,520	
Reinforcement Bars, Epoxy Coated	Pound		15,700	
Permanent Casing	Foot		35	
Drilled Shaft in Soil	Cu. Yd.		12.9	
Drilled Shaft in Rock	Cu. Yd.		15.8	

Cast steps monolithically with cap.
Space cap reinforcement to miss anchor bolts.
**** Length is height of spiral.

- Construction Sequence for Web Wall:**
- Excavate as needed between shafts to top of rock elevation and set lower web wall forms through water to bear on the circular edge of the drilled shaft. Secure in place with fill, struts or tie forms together as required.
 - Place the lower web wall reinforcement cage into the forms using spacers to maintain proper clearances.
 - If the forms can be sealed against the shafts and streambed to allow dewatering, the reinforcement and the concrete placement may be completed in the dry. Alternatively, the rebar cage can be lowered into position through water and the concrete discharged at the base of the excavation through a tremie pipe or pump hose, displacing water, sediment, and tainted concrete out the top of the forms.
 - Construct Columns.
 - Construct upper web walls.



SECTION C-C

** If the prevailing water surface elevation during construction is consistently different than estimated on the plans, the contractor may propose an adjustment to the top of the drilled shaft elevation as part of their installation procedure. The top of all drilled shafts within a substructure unit shall be constructed to the same elevation and extend above the prevailing water surface. The quantities and reinforcement detailing are based on the top of shaft and the estimated elevations shown and may change based on the actual elevations encountered at each shaft and the final top of shaft elevation.

*** The Contractor is responsible for determining the casing thickness and the actual bottom of casing elevation, top of encountered rock, to be used at each drilled shaft. See Article 516.06(d) of the Standard Specifications. The Estimated Top of Rock/Bottom of Permanent Casing Elevation is shown. The limits of casing shall be adjusted as necessary, and as approved, such that the actual installed casing length extends to the as-encountered top of rock at each shaft. If the appearance of the Permanent Casing above the actual water surface is undesirable, this portion may be removed as directed by the Engineer after completion of the shaft construction. Any removal directed by the Engineer will be paid for according to Article 109.04 of the Standard Specifications.

