



E. ABUTMENT BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|------|---------|-------|
| h(E) | 4 | #4 | 27'-5" | — |
| h1(E) | 24 | #7 | 13'-6" | — |
| h2(E) | 28 | #7 | 9'-6" | — |
| p(E) | 32 | #8 | 27'-5" | — |
| s2(E) | 52 | #5 | 15'-9" | □ |
| s3(E) | 4 | #5 | 19'-1" | □ |
| s4(E) | 20 | #5 | 9'-0" | □ |
| sp1(E) | 4 | #5 | 17'-0" | ⊗ |
| u1(E) | 56 | #5 | 2'-9" | □ |
| u2(E) | 8 | #6 | 13'-1" | □ |
| v4(E) | 8 | #5 | 8'-6" | — |
| v5(E) | 18 | #5 | 13'-9" | — |
| v6(E) | 64 | #9 | 18'-10" | — |
| Structure Excavation | | | Cu. Yd. | 177 |
| Concrete Structures | | | Cu. Yd. | 40.6 |
| Reinforcement Bars, Epoxy Coated | | | Pound | 9570 |
| Drilled Shaft in Soil | | | Cu. Yd. | 8.9 |
| Drilled Shaft in Rock | | | Cu. Yd. | 9.5 |

For details of Bar Splicers, see sheet 17 of 19.
 ⊗ Length is height of spiral.

*Elevations at back of abutment.

**Allowable substitution: Provide 1/2 extra turns top & bott. with 135° standard hook into core at end of spiral.
 ***Splicing of reinforcement will not be allowed in this region.
 Notes:
 Pour steps monolithically with cap. Space cap reinforcement to miss anchor bolts. Minimum lap for spirals = 1/2 turns.

**#5 sp1(E) spiral Ea. shaft Provide 1/2 extra turns top & bott. Shop weld together extra spiral turn top & bott. per AWS D1.4 Provide min. 4-#4 spacers or equivalent.