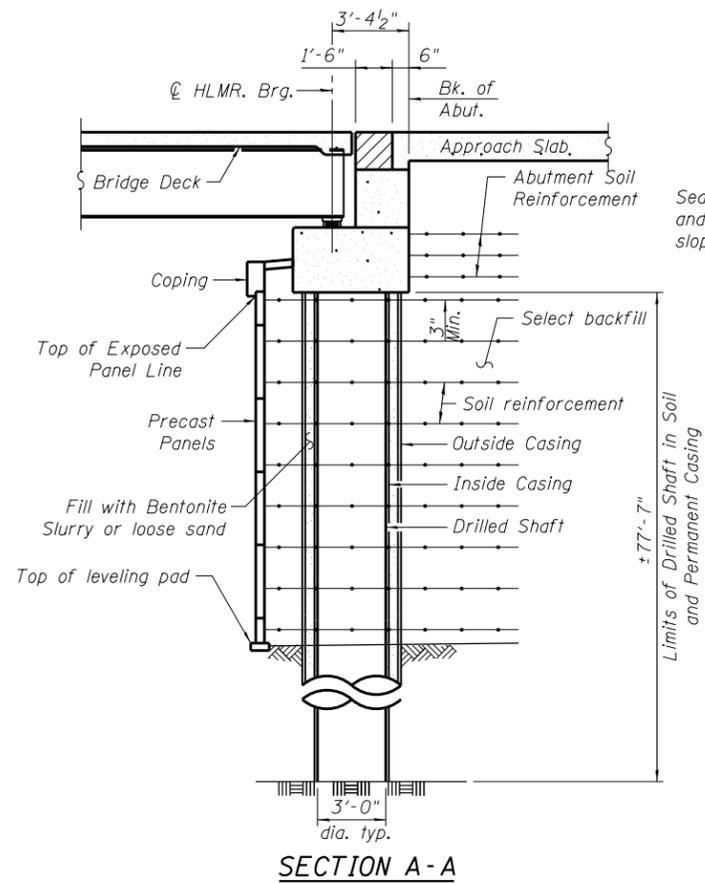


**WEST ABUTMENT  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
$h_{10}(E)$	8	#5	23'-3"	—
$h_{11}(E)$	8	#5	17'-5"	—
$h_{12}(E)$	5	#6	23'-3"	—
$h_{13}(E)$	5	#6	17'-5"	—
$p_{10}(E)$	17	#9	23'-3"	—
$p_{11}(E)$	17	#9	17'-5"	—
$p_{12}(E)$	8	#9	23'-3"	—
$p_{13}(E)$	8	#9	17'-5"	—
$s_{10}(E)$	100	#5	12'-3"	□
* $sp_{10}(E)$	3	#5	78'-9"	⋈
$u_{10}(E)$	6	#6	12'-8"	⋈
$u_{11}(E)$	4	#5	5'-11"	⋈
$u_{12}(E)$	6	#6	11'-11"	⋈
$u_{13}(E)$	4	#5	5'-10"	⋈
$u_{14}(E)$	32	#5	4'-6"	⋈
$v_{10}(E)$	36	#10	45'-9"	⋈
$v_{11}(E)$	40	#5	2'-6"	—
$v_{12}(E)$	40	#5	3'-4"	—
$v_{13}(E)$	40	#5	7'-9"	—
$v_{14}(E)$	40	#5	9'-3"	—
$v_{15}$	36	#10	44'-0"	—
Concrete Structures		Cu. Yd.	42.9	
Reinforcement Bars		Pound	6,820	
Reinforcement Bars, Epoxy Coated		Pound	17,740	
Permanent Casing		Foot	367	
Drilled Shaft in Soil		Cu. Yd.	61.0	
Concrete Sealer		Sq. Ft.	481	
Locate Tunnel		L. Sum	1	
Bulkhead Tunnel		L. Sum	1	

\* Length is height of spiral.



**SECTION A-A**

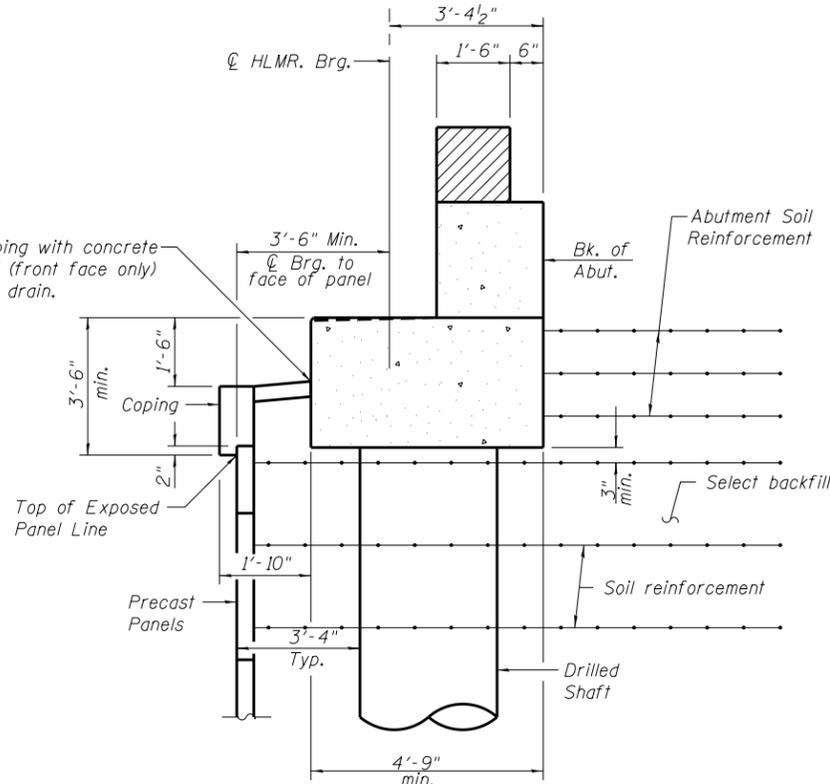
Note:

Existing 8'  $\phi$  tunnel is located near West Abutment. Contractor shall field locate the tunnel within a 20' radius of the proposed caissons. If the tunnel is found, the tunnel shall be bulkheaded. Cost of locating tunnel paid for as Locate Tunnel. If tunnel bulkheading is required, cost of bulkheading paid for as Bulkhead Tunnel. See Special Provisions and Existing Tunnel Bulkhead Notes and Details sheets.

**SUGGESTED CONSTRUCTION SEQUENCE**

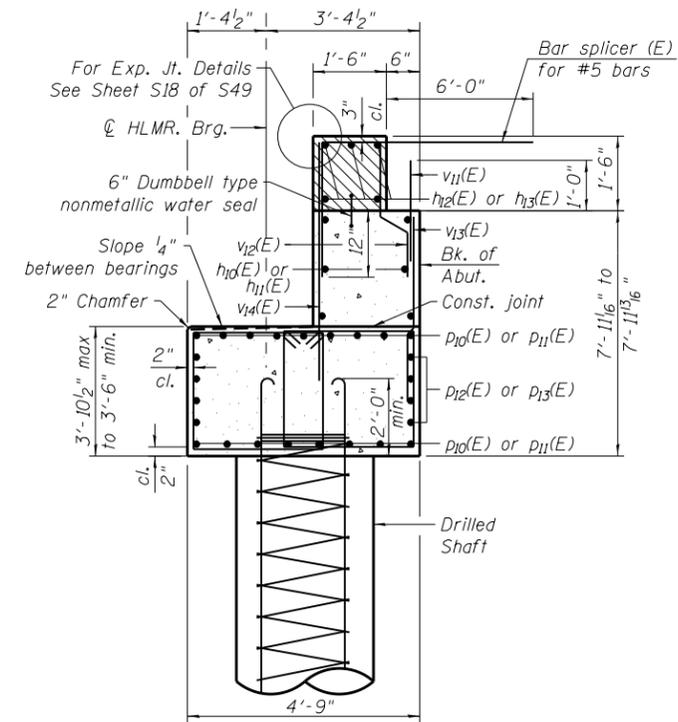
1. Install Permant Casing for Drilled Shafts.
2. Install MSE Wall. See SN 016-1323 Plans for MSE wall details.
3. Pour Concrete for Drilled Shafts.

Seal coping with concrete and PJF (front face only) slope to drain.



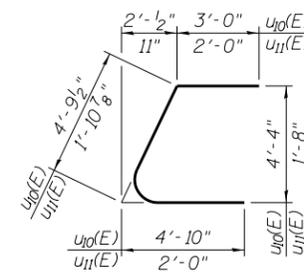
**SECTION THRU ABUTMENT**

Showing soil reinforcement and coping with precast panels. Casing not shown for clarity.

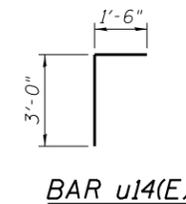


**SECTION THRU ABUTMENT**

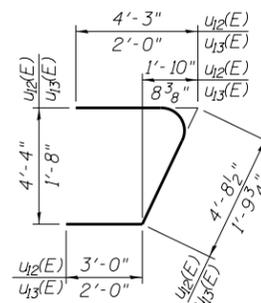
Soil reinforcement and coping are not shown see other "Section Thru Abutment" for details. Casing shown in Section A-A.



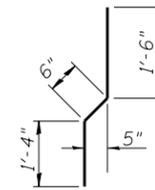
**BARS  $u_{10}(E)$  &  $u_{11}(E)$**



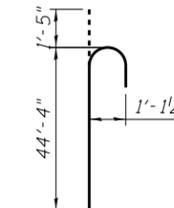
**BAR  $u_{14}(E)$**



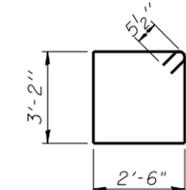
**BARS  $u_{12}(E)$  &  $u_{13}(E)$**



**BAR  $v_{12}(E)$**



**BAR  $v_{10}(E)$**



**BAR  $s_{10}(E)$**

Notes:

Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure on sheet S14 of S49.

Space reinforcement in cap to miss anchor bolts.

Pour steps monolithically with cap. For details of Bar Splicers, see sheet S43 of S49.

Quantity of embankment fill is included with roadway quantities.

Min. lap for spirals = 2'-6".