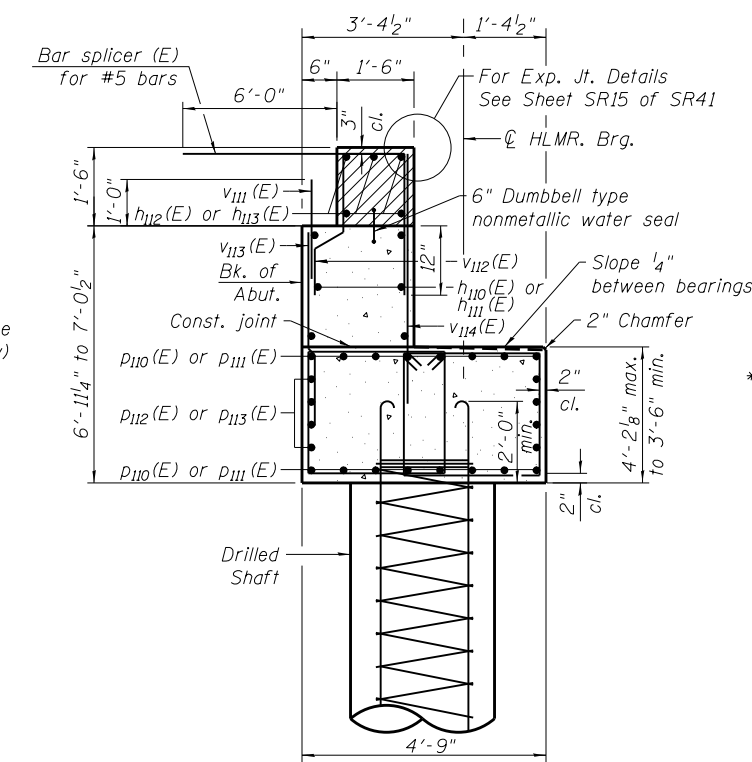


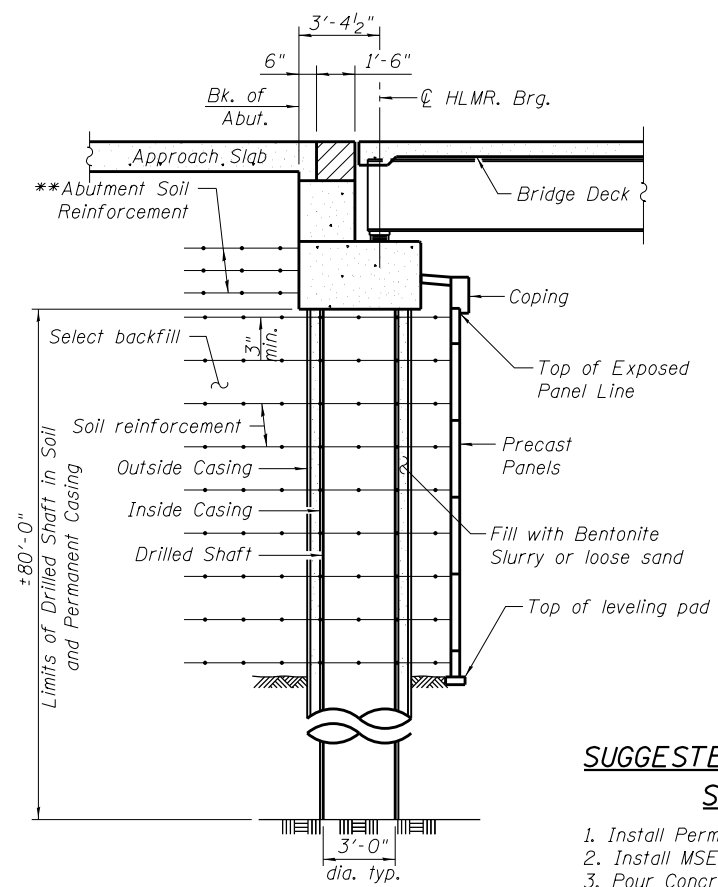
**WEST ABUTMENT
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
$h_{110}(E)$	8	#5	24'-3"	—
$h_{111}(E)$	8	#5	26'-5"	—
$h_{112}(E)$	5	#6	24'-3"	—
$h_{113}(E)$	5	#6	26'-5"	—
$p_{110}(E)$	16	#9	24'-3"	—
$p_{111}(E)$	16	#9	26'-5"	—
$p_{112}(E)$	8	#9	24'-3"	—
$p_{113}(E)$	8	#9	26'-5"	—
$s_{110}(E)$	116	#5	12'-3"	□
* $sp_{110}(E)$	3	#5	81'-0"	⋈
$u_{110}(E)$	6	#6	15'-7"	⋈
$u_{111}(E)$	4	#5	7'-6"	—
$u_{112}(E)$	6	#6	17'-10"	⋈
$u_{113}(E)$	4	#5	7'-7"	—
$u_{114}(E)$	40	#5	4'-6"	⋈
$v_{110}(E)$	36	#10	45'-9"	⋈
$v_{111}(E)$	55	#5	2'-6"	—
$v_{112}(E)$	55	#5	3'-4"	—
$v_{113}(E)$	55	#5	7'-9"	—
$v_{114}(E)$	55	#5	9'-3"	—
v_{115}	36	#10	47'-0"	—
Concrete Structures	Cu. Yd.		47.8	
Reinforcement Bars	Pound		7,290	
Reinforcement Bars, Epoxy Coated	Pound		19,510	
Drilled Shaft in Soil	Cu. Yd.		62.8	
Permanent Casing	Foot		375	
Concrete Sealer	Sq. Ft.		557	
Temporary Mechanically Stabilized Earth Retaining Wall	Sq. Ft.		2,191	
Mechanically Stabilized Earth Retaining Wall	Sq. Ft.		4,821	
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.		598.9	
Aggregate Column	L. Sum		0.45	
Ground Improvement				



SECTION THRU ABUTMENT

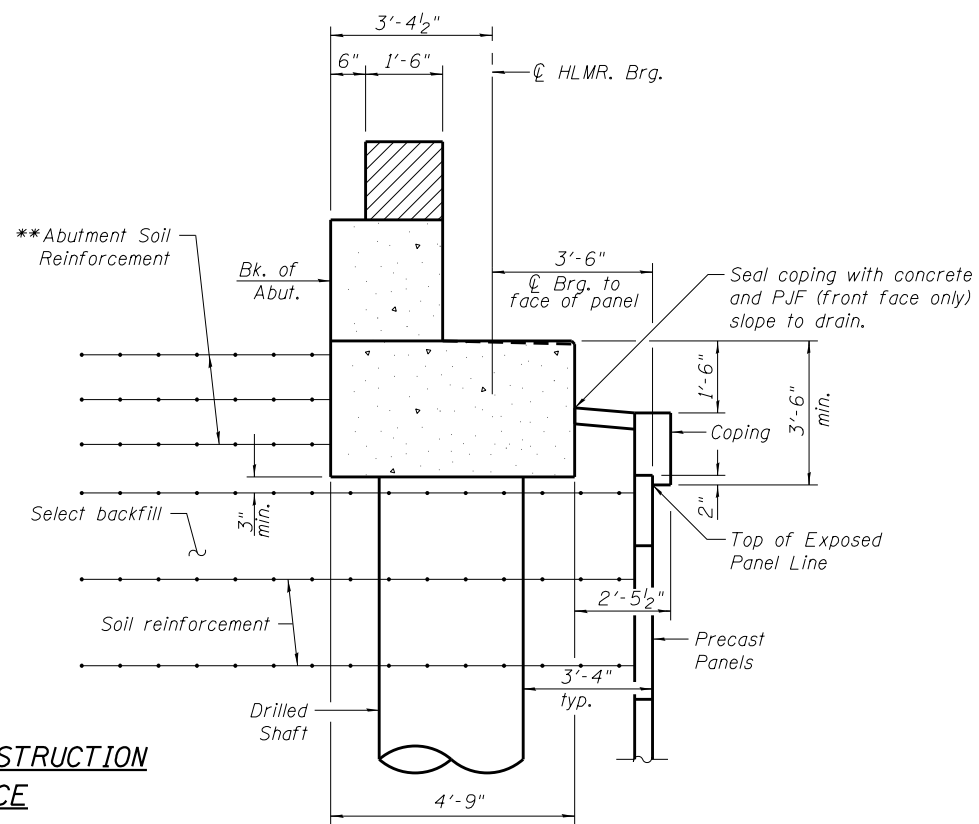
Soil reinforcement and coping are not shown see other "Section Thru Abutment" for details. Casing shown in Section A-A.



SECTION A-A

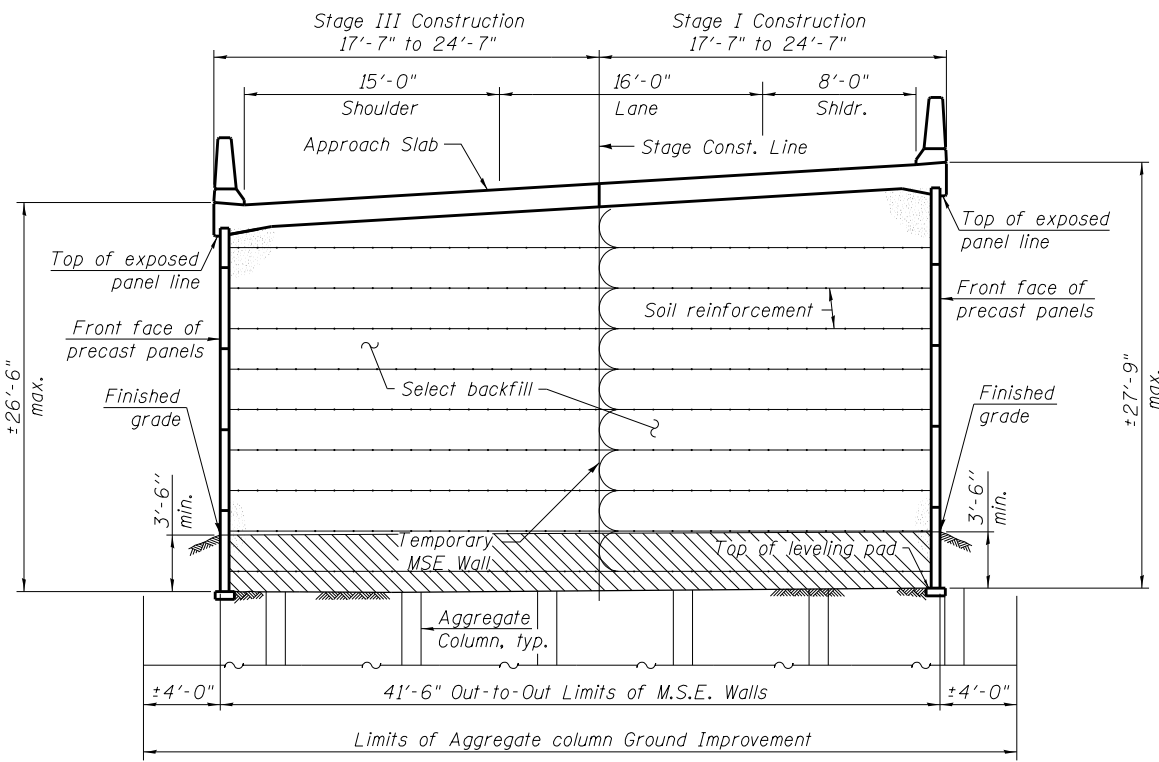
SUGGESTED CONSTRUCTION SEQUENCE

1. Install Permant Casing for Drilled Shafts.
2. Install MSE Wall.
3. Pour Concrete for Drilled Shafts.

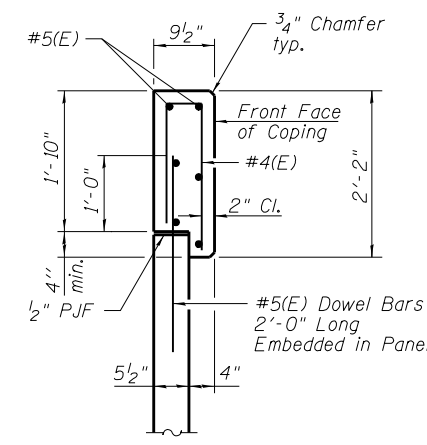


SECTION THRU ABUTMENT

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



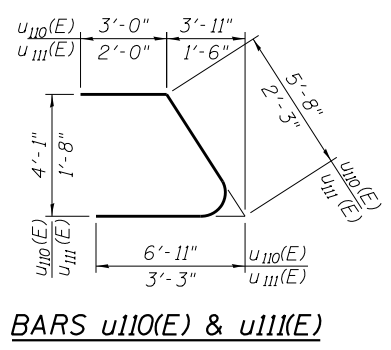
SECTION B-B



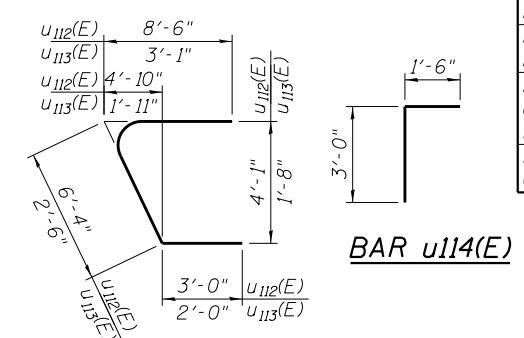
COPING DETAILS

Cost of Coping including Reinforcement in the Coping is included in the pay item "Mechanically Stabilized Earth Retaining Wall."

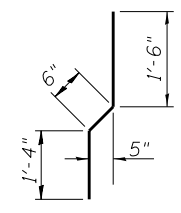
Removal of unsuitable material.



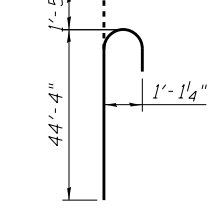
BARS $u_{110}(E)$ & $u_{111}(E)$



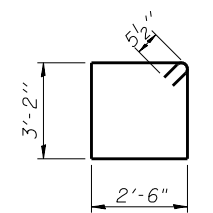
BARS $u_{112}(E)$ & $u_{113}(E)$



BAR $v_{112}(E)$



BAR $v_{110}(E)$



BAR $s_{110}(E)$

* Length is height of spiral.

** The MSE wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 3.8 k/ft of abutment.

Notes:
 Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure on sheet SR11 of SR41.
 Space reinforcement in cap to miss anchor bolts.
 Four steps monolithically with cap. For details of Bar Splicers, see sheet SR38 of SR41.
 Quantity of embankment fill is included with roadway quantities.
 Min. lap for spirals = 2'-6".
 Temporary MSE walls required for stage construction shall remain in place. See SR30 of SR41 and SNO16-1322 plans for remainder of Aggregate Column Ground Improvement quantity.