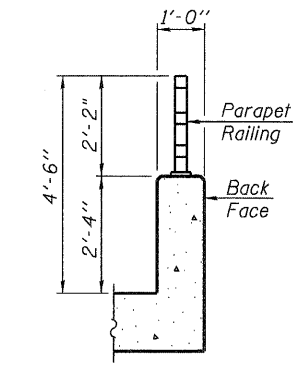
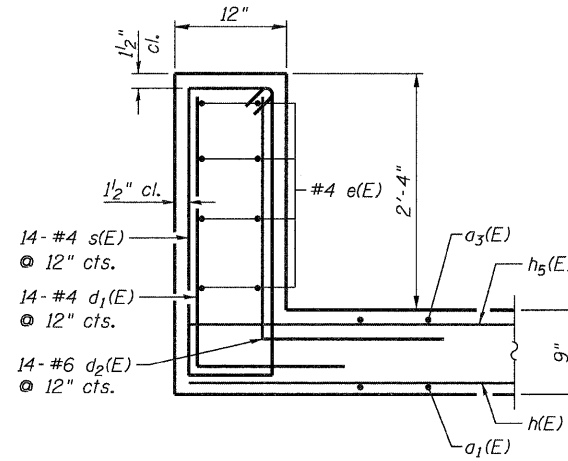


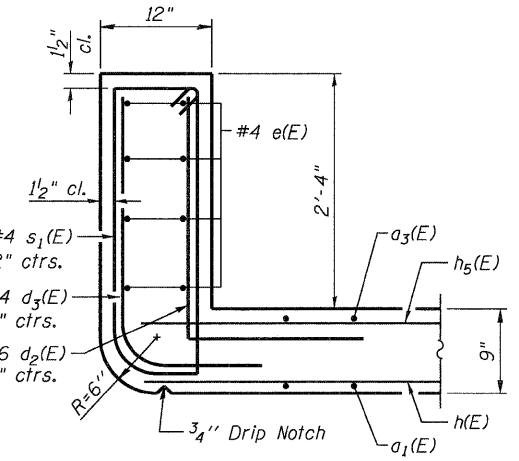
**PARAPET RAILING  
ELEVATION**  
(Inside Face of Three Element Rail)



**SECTION THRU DECK**



**SOUTH HEADWALL REINFORCEMENT DETAIL**

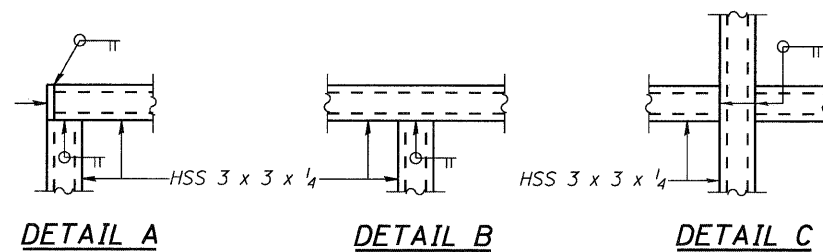


**NORTH HEADWALL REINFORCEMENT DETAIL**

Note:  
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

**BILL OF MATERIAL**

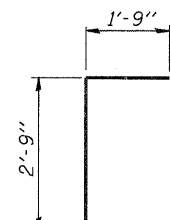
Bar	No.	Size	Length	Shape
a	92	#8	14'-6"	
a1(E)	61	#8	14'-6"	
a2	26	#4	12'-3"	
a3(E)	21	#5	12'-3"	
d	26	#4	4'-6"	
d1(E)	14	#4	4'-0"	
d2(E)	28	#6	5'-4"	
d3(E)	14	#4	4'-5"	
e(E)	16	#4	13'-2"	
h(E)	13	#8	29'-9"	
h1	44	#5	23'-11"	
h2	8	#5	29'-9"	
h3	36	#5	11'-0"	
h4	12	#5	10'-8"	
h5(E)	12	#4	29'-9"	
v	42	#4	3'-9"	
v1	20	#4	6'-2"	
v2	42	#4	4'-3"	
s(E)	14	#4	7'-9"	
s1(E)	14	#4	7'-7"	
Concrete Box Culverts	Cu. Yd.	43.8		
Reinforcement Bars	Pound	6050		
Reinforcement Bars, Epoxy Coated	Pound	4490		
Parapet Railing	Foot	24		



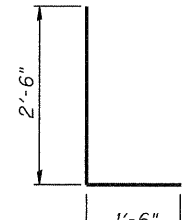
**DETAIL A**

**DETAIL B**

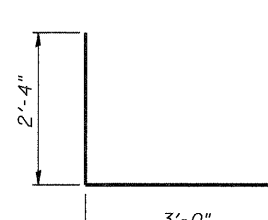
**DETAIL C**



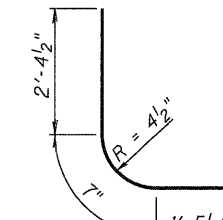
**BAR d**



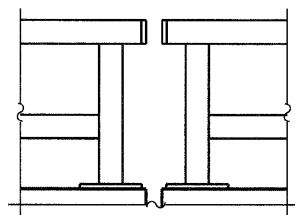
**BAR d1(E)**



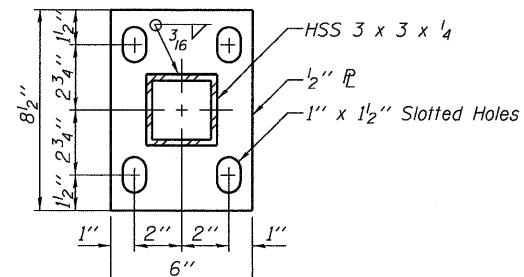
**BAR d2(E)**



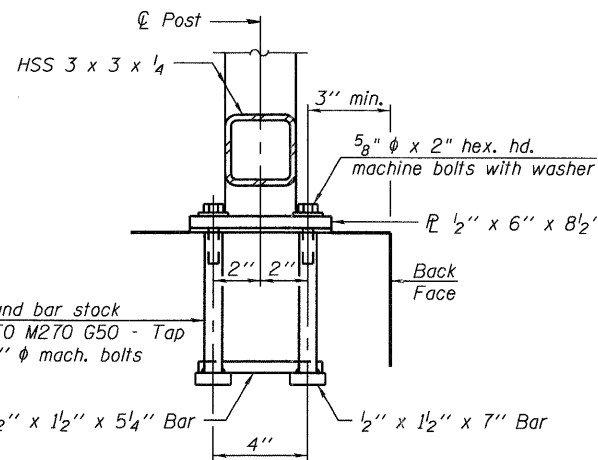
**BAR d3(E)**



**PARAPET RAILING  
ELEVATION AT EXPANSION JOINT**  
(Two Element Rail Shown - Three Element Rail Similar)

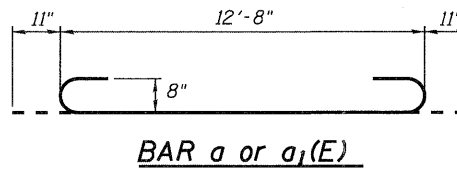


**BASE P**

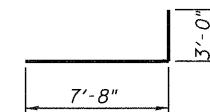


**ANCHOR BOLT DETAILS**

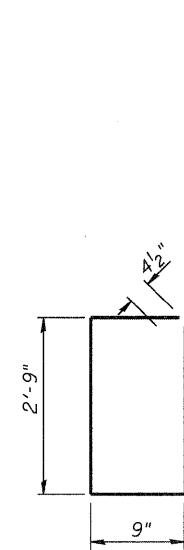
In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" diameter anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



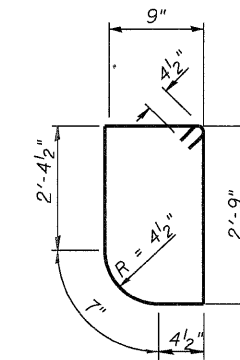
**BAR a or a1(E)**



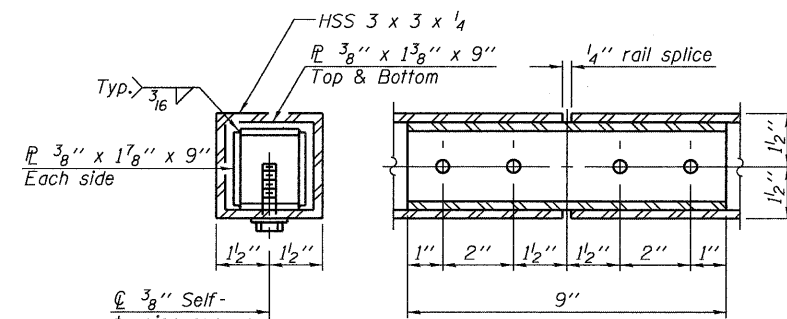
**BAR h4**



**BAR s(E)**



**BAR s1(E)**



**RAIL SPLICE**

**Coombe-Bloxdorf P.C.**  
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- STRUCTURAL ENGINEERS -  
- LAND SURVEYORS -  
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