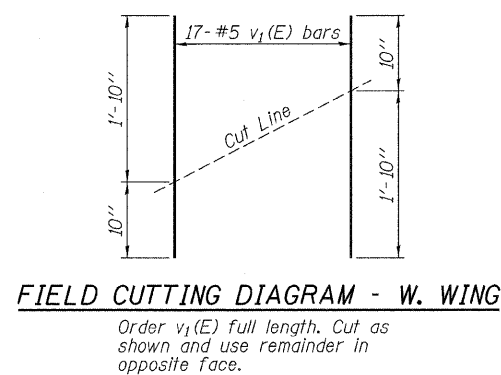
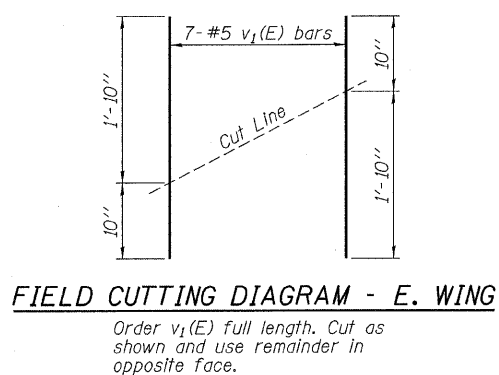
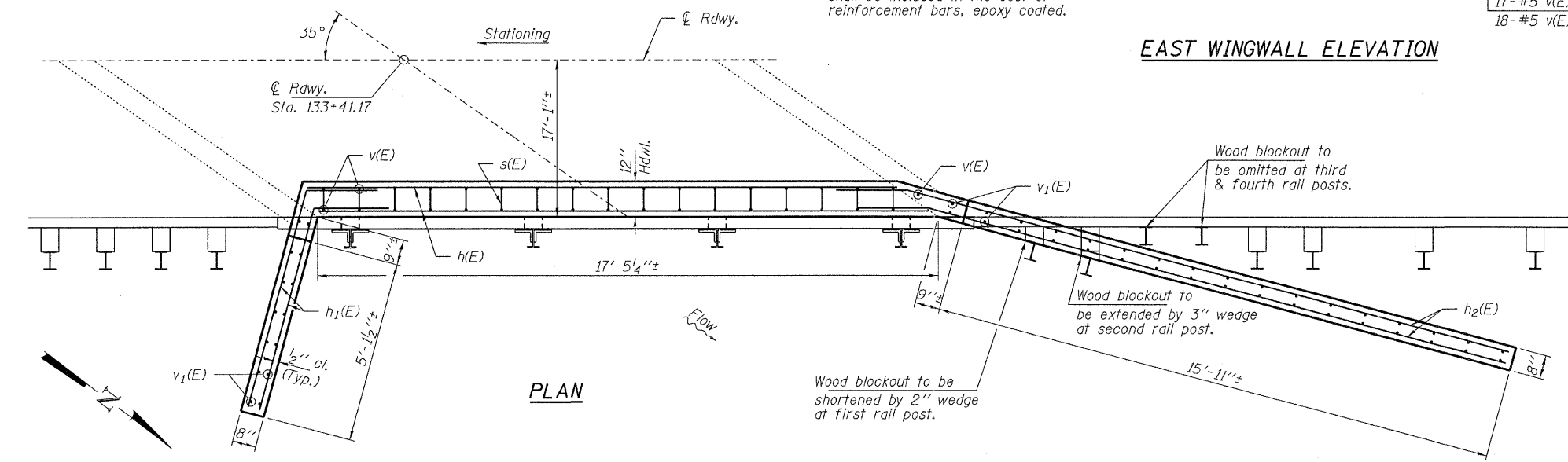
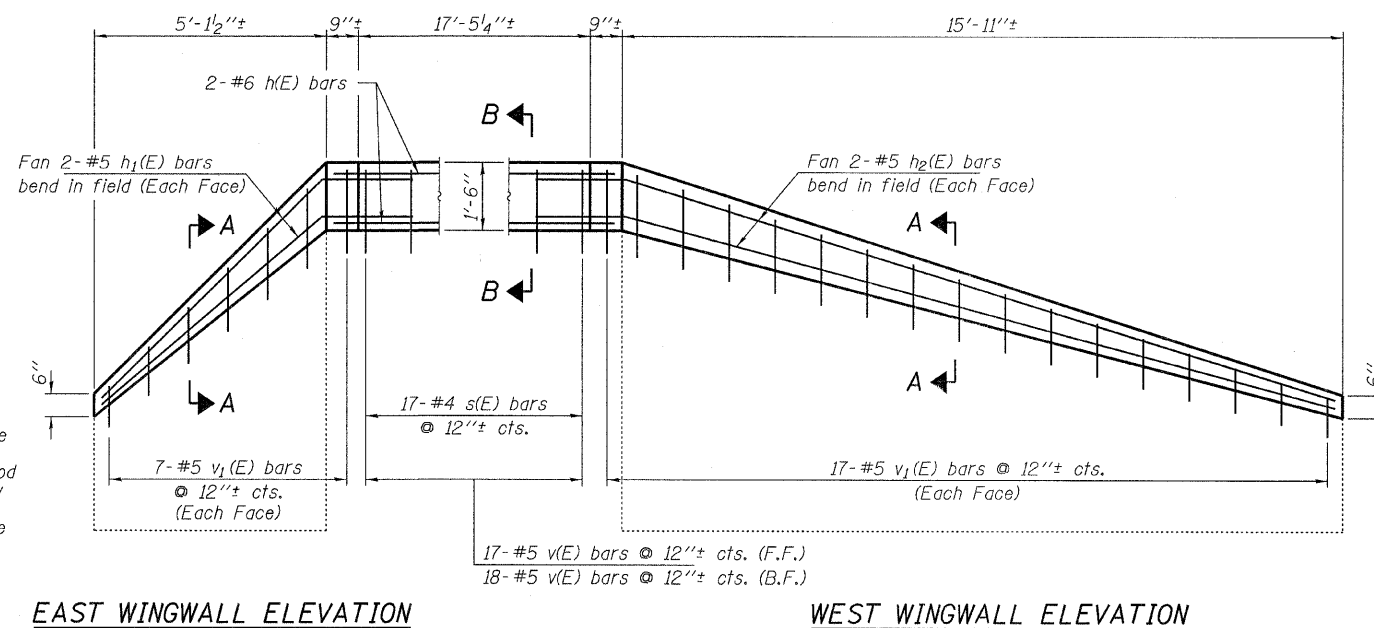


**ELEVATION**  
Showing Rail Post Spaces  
See sheet 4 of 4 for Railing Details.



Note:  
Reinforcement bars shall be drilled and grouted into the existing headwalls and wingwalls. A grout approved by the Department or epoxy grout in accordance with Section 584 of the Standard Specifications, shall be used. The method of grout application shall be approved by the Engineer. Drilling and grouting of reinforcement bars into existing concrete shall be included in the cost of reinforcement bars, epoxy coated.



**BILL OF MATERIAL - NORTH END**

BAR	NO.	SIZE	LENGTH	SHAPE	
h(E)	4	#6	17'-0"	—	
h <sub>1</sub> (E)	4	#5	7'-9"	—	
h <sub>2</sub> (E)	4	#5	18'-6"	—	
s(E)	17	#4	4'-7"	□	
v(E)	35	#5	1'-10"	—	
v <sub>1</sub> (E)	24	#5	2'-8"	—	
Reinforcement Bars, Epoxy Coated				Pound	400
Anchor Bolts, 3/4"				Each	16
Concrete Box Culverts				Cu. Yd.	1.6

Notes:  
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F<sub>y</sub> = 36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.