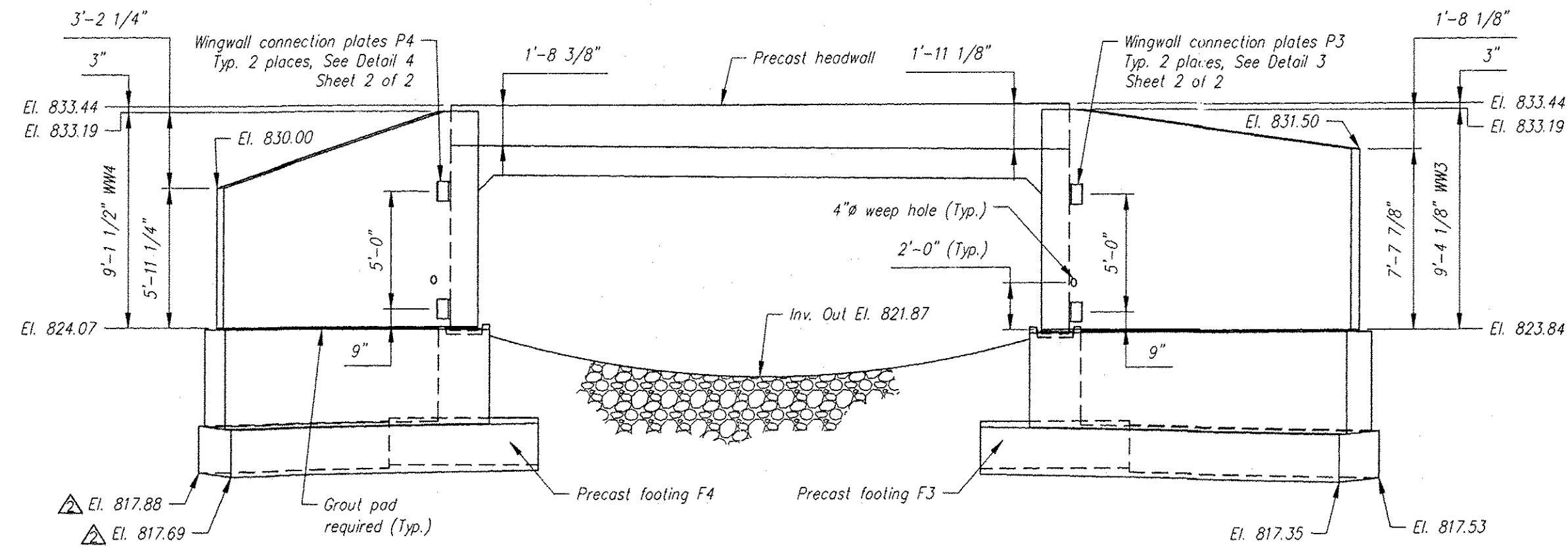
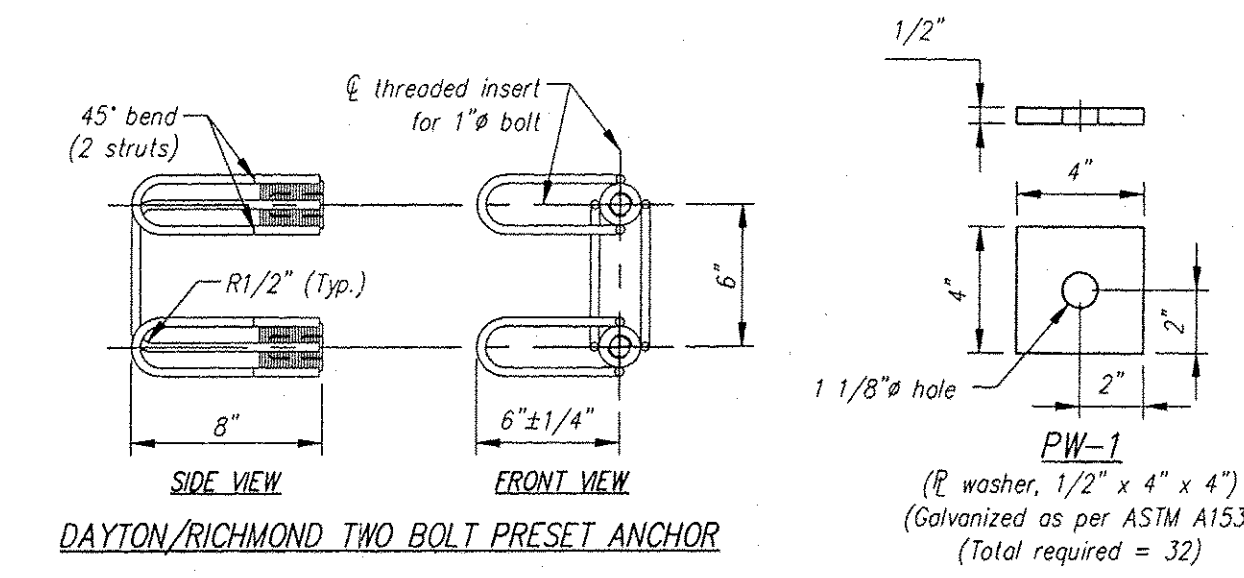


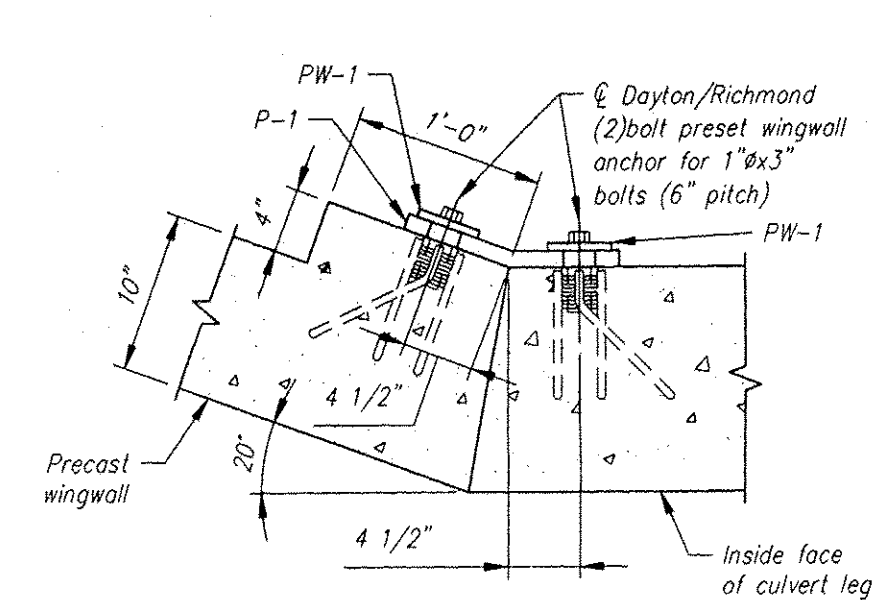
ELEVATION B
1 of 2



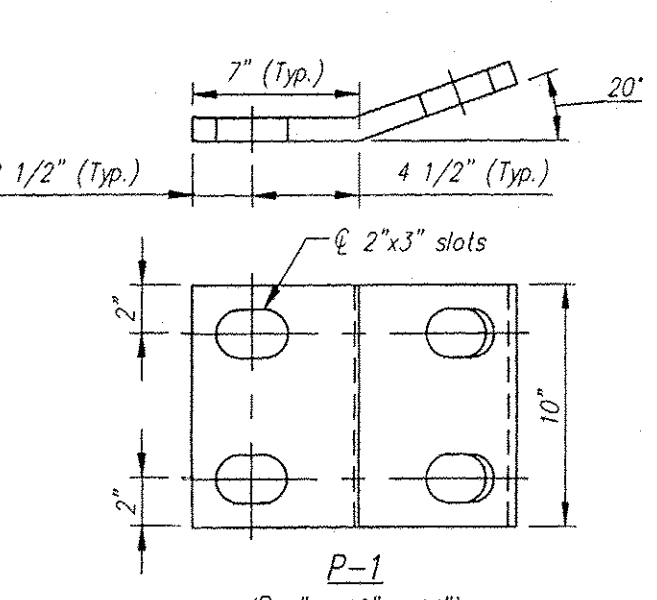
ELEVATION C
1 of 2



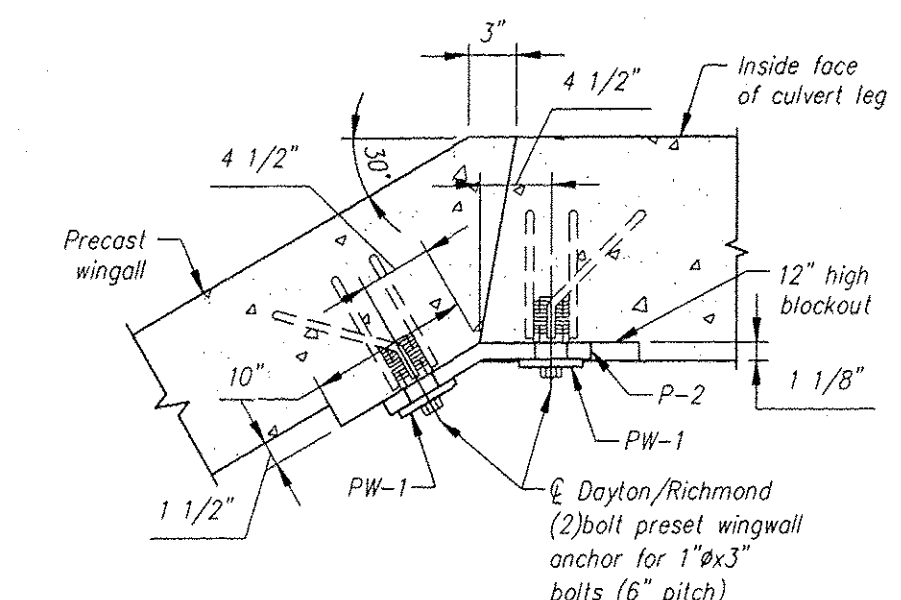
WINGWALL GENERAL NOTES:
 1. The wingwalls have been designed for general site conditions. The project engineer shall be responsible for the structure's suitability to the existing site conditions and for the hydraulic evaluation -- including scour and confirmation of soil conditions.
 2. Prior to construction, contractor must verify all elevations shown through the engineer.
DESIGN DATA
 Design Method: AASHTO LRFD Specification
 Assumed Allowable Soil Bearing: 3,500 psf
 Wingwalls designed for Earth Pressure
 (Washer, 1/2" x 4" x 4")
 (Galvanized as per ASTM A153)
 (Total required = 32)



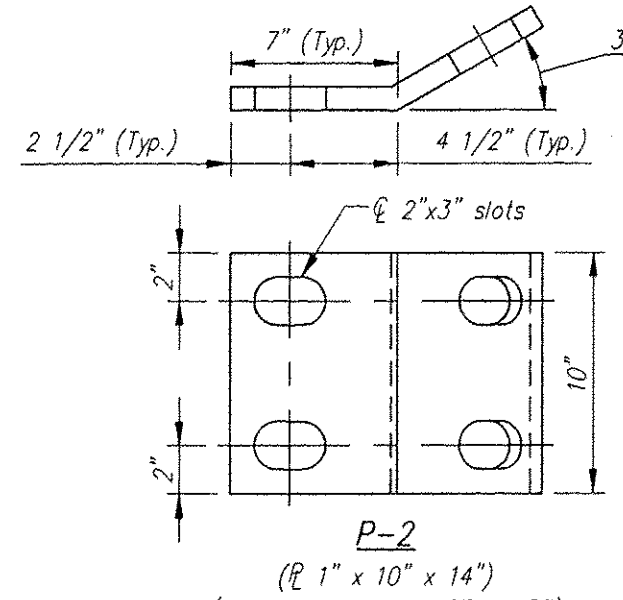
DETAIL 1
2 of 2



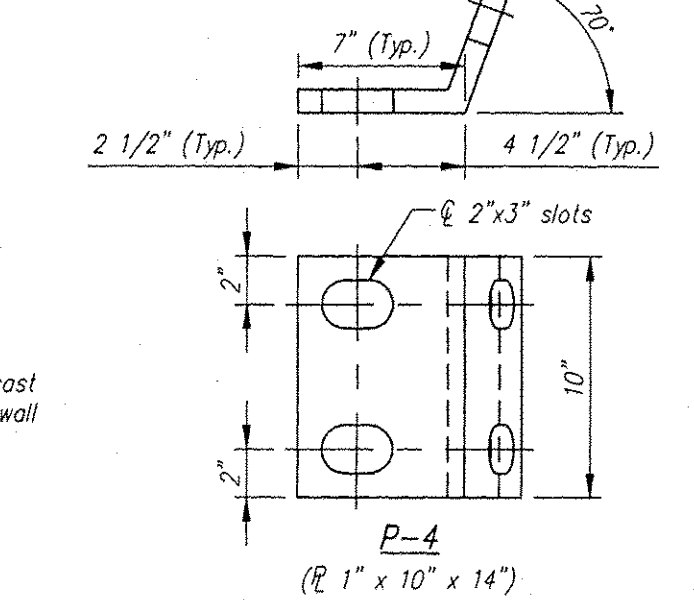
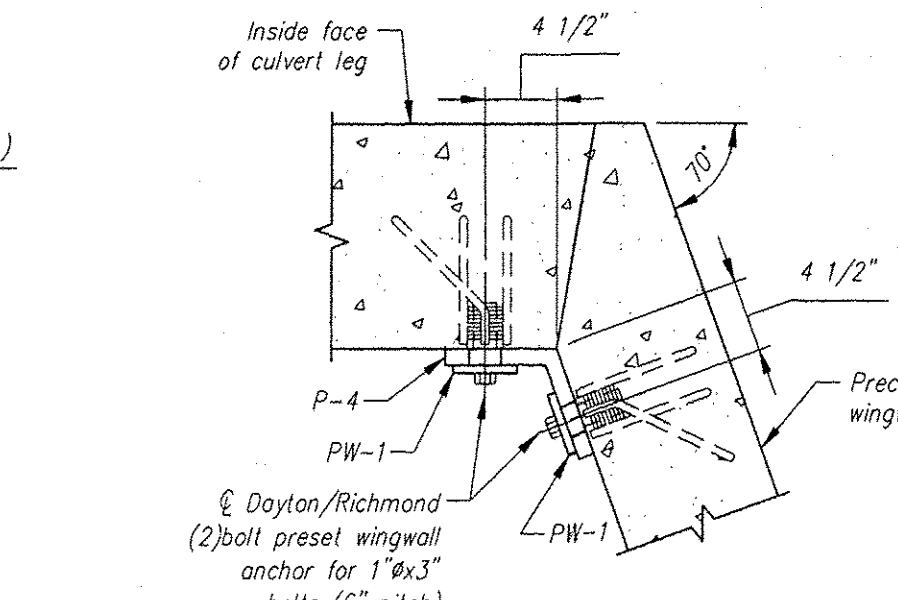
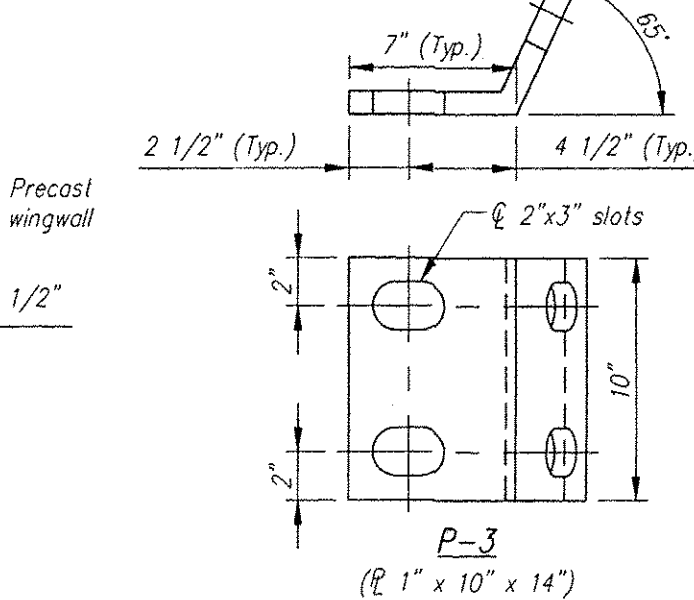
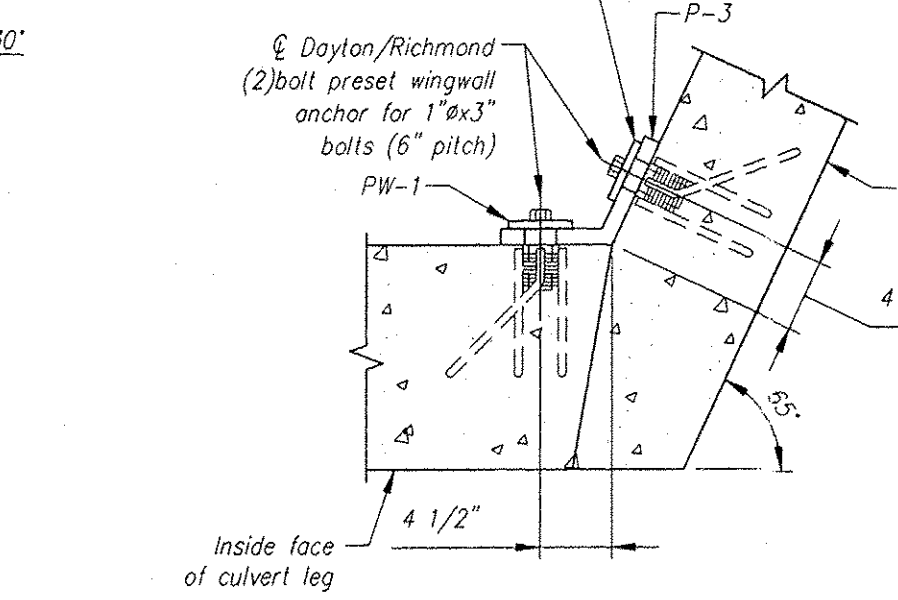
DETAIL 2
2 of 2



DETAIL 3
2 of 2

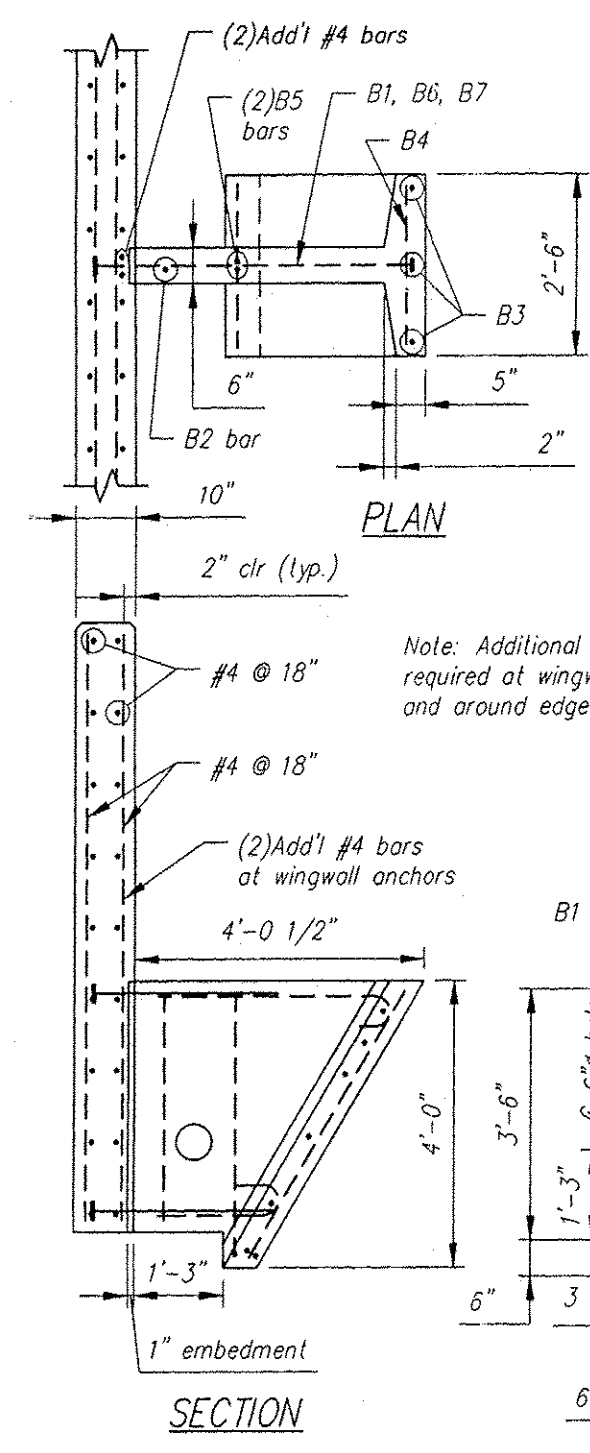
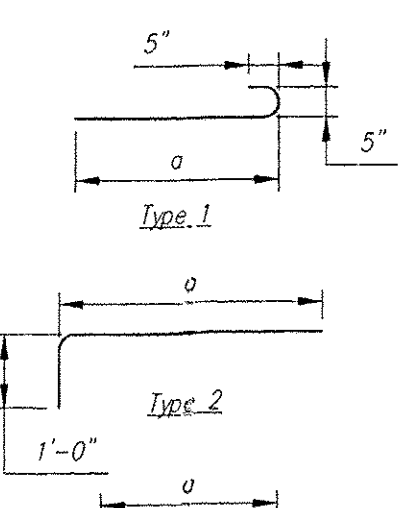


DETAIL 4
2 of 2



BAR LIST					
MARK	QTY	SIZE	a	TYPE	LENGTH
B1	2	#6	2'-7"	3	
B2	1	#5		Str.	3'-2"
B3	4	#5		Str.	4'-3"
B4	7	#5		Str.	2'-2"
B5	2	#5	3'-8"	2	
B6	1	#5	1'-9"	1	
B7	1	#5	3'-2"	1	

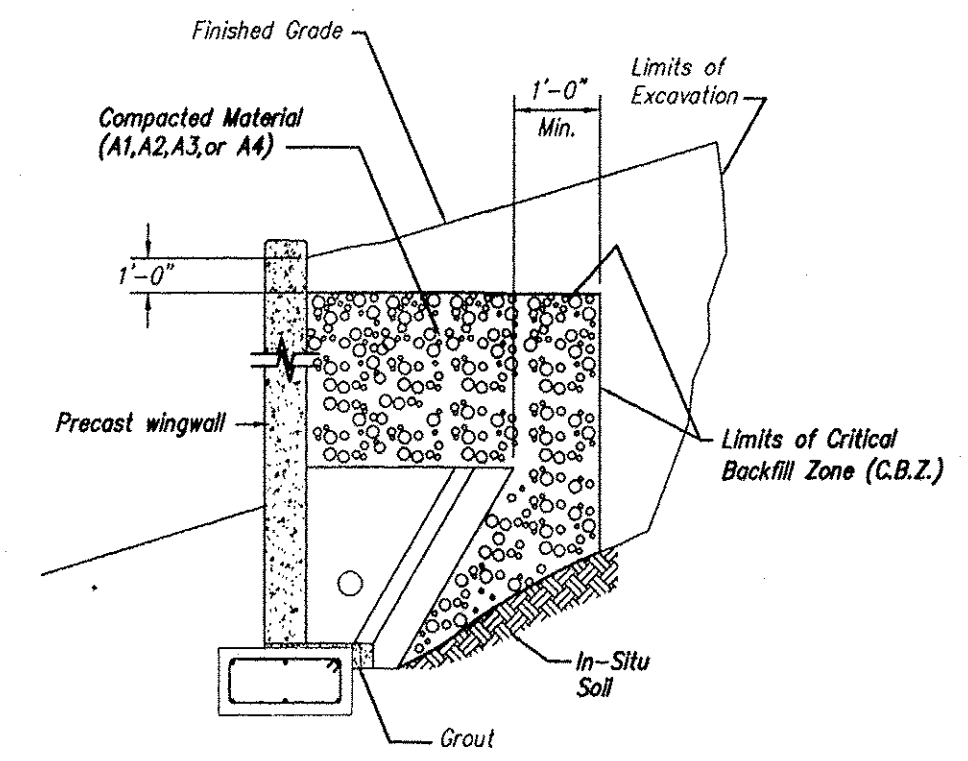
Note: "Str." denotes straight bar. Standard clearance = 2"



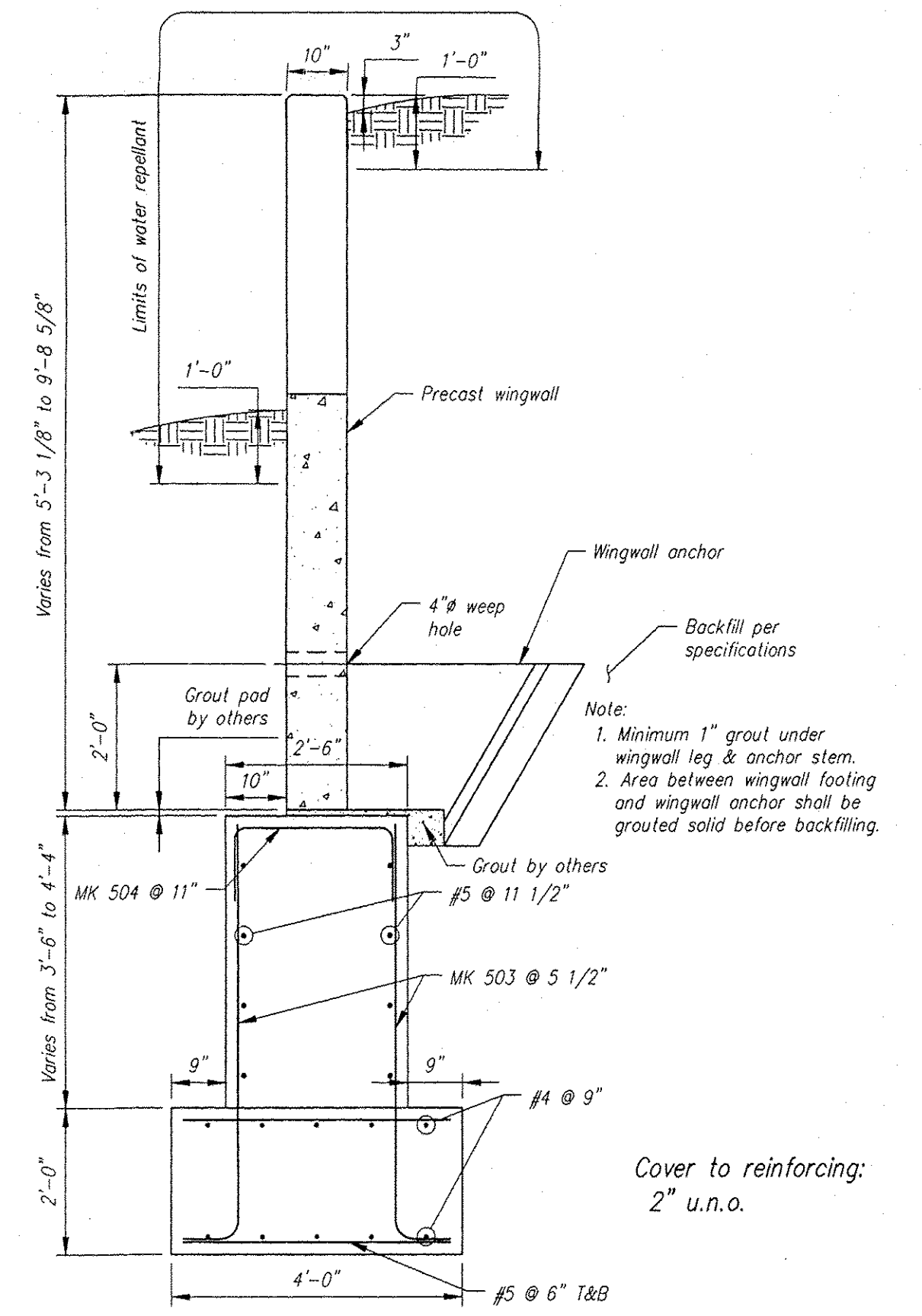
WINGWALL LIFTING DETAIL

Group Classification	BACKFILL DESCRIPTION						
	A-1	A-3	A-2				
	A-1-a	A-1-b	A-2-4	A-2-5	A-2-6	A-2-7	
Sieve Analysis, Percent Passing							
No. 10	50 max.						
No. 40	30 max.	50 max.	51 min.				
No. 200	15 max.	25 max.	10 max.	35 max.	35 max.	35 max.	
Characteristics of Fraction Passing							
No. 40				40 max.	41 min.	40 max.	41 min.
Liquid Limit				10 max.	10 max.	11 min.	11 min.
Plasticity Index	6 max.		N.P.				
Usual Types of Significant Constituent Materials	Stone Fragments, Gravel & Sand		Fine Sand			Silty or Clayey Gravel and Sand	
General Rating as Subgrade				Excellent to Good			

NOTES:
 1. BACKFILLING OPERATIONS WITHIN THE C.B.Z. SHALL BE PERFORMED IN LIFTS OF 8" OR LESS (LOOSE DEPTH).
 2. MAXIMUM DRY DENSITY SHALL BE DETERMINED BY AASHTO T-99 OR OTHER APPROVED METHODS.
 3. BACKFILL SHALL BE COMPACTED IN LAYERS UNTIL THE DENSITY IS NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY.



WINGWALL BACKFILL REQUIREMENTS



TYPICAL WINGWALL SECTION

Contractor is to verify that all information shown on drawings has been thoroughly checked, complies with the contract documents and is adequate to meet the field conditions. Some dimensions and details may differ slightly from contract drawings to accommodate the manufacturing or design process. Approval of this drawing indicates that any deviation from the contract documents has been reviewed and found to be acceptable. Production will not commence until receipt of signed, approved shop drawings.

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Stamp for structural design only

Rev.	Date	DESCRIPTION	By
5			
4			
3	11/28/11	Revised Detail 3 for WW2	MS
2	11/08/11	Renamed Section B and Section C to Elevation B & C; Revised Footing F4 elevations	MS
1	10/18/11	Revised dimensions of WW1 and WW2	MS

This drawing is based upon information provided from the following documents and/or sources:
 Engineer:
 Project No:
 Drawings:
 Specifications:
 Other Sources:

Concrete Systems Inc.
 9 Commercial St., Hudson, NH, 03051
 Phone 603-889-4163
 Fax 603-889-2417

Drawn by: M. SCOTT
 Checked by: B. KOLAWOLE
 Approved by: M. SCOTT

Date: 10/06/2011
 Date: 10/07/2011
 Date: 11/28/2011

STATE AGENCY: KUBRICKY CONSTRUCTION CO.
 BRIDGE REHABILITATION
 PITTSFIELD, VT

Project No: BOX CULVERT WINGWALL DETAILS
 C20962-LO1-B

Quantity: 1
 Project No: SHEET 2 OF 2