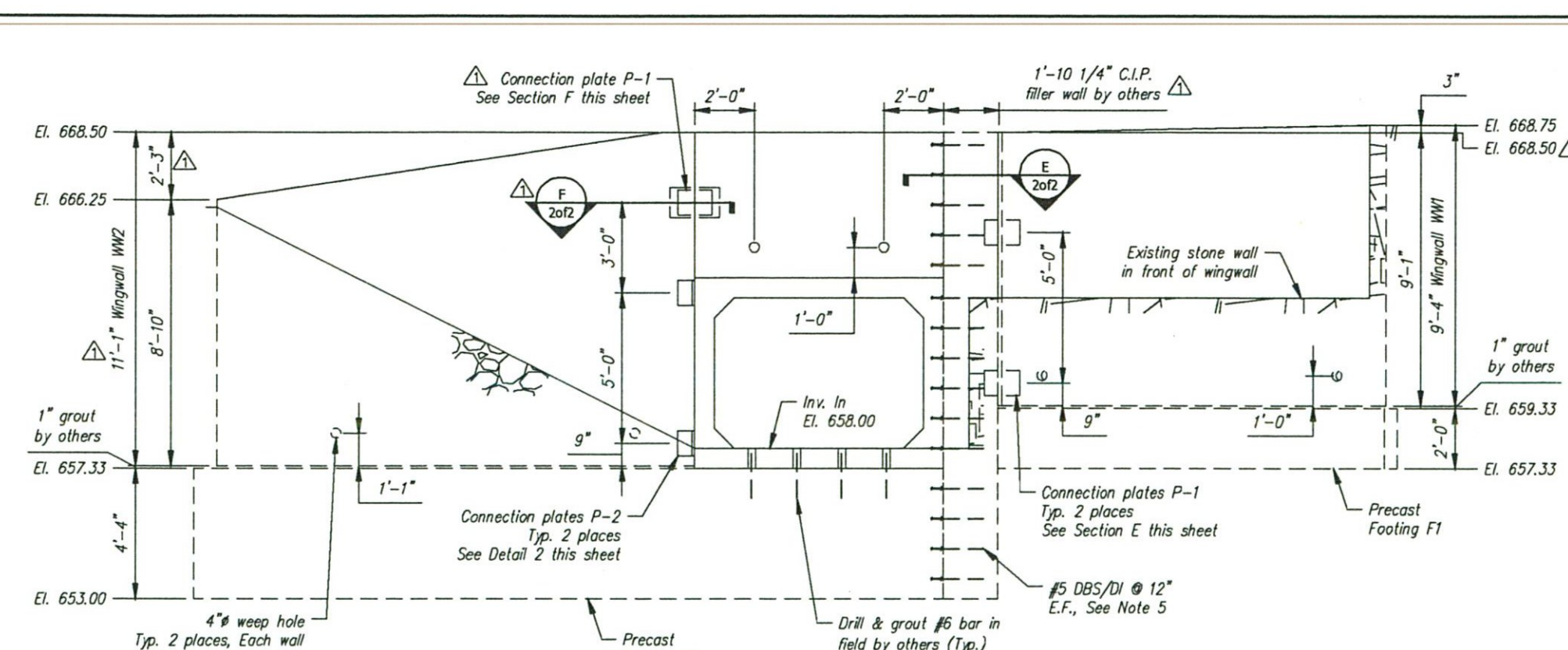


C-C OUTLET END ELEVATION
Scale: 1/4" = 1'-0"

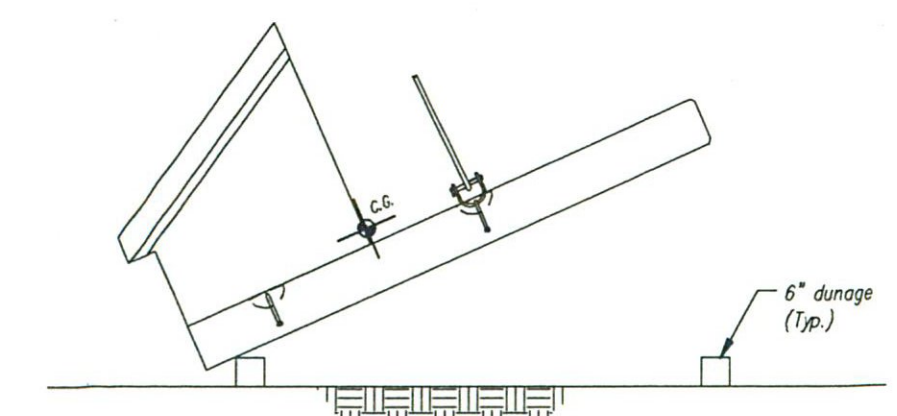


D-D INLET END ELEVATION
Scale: 1/4" = 1'-0"

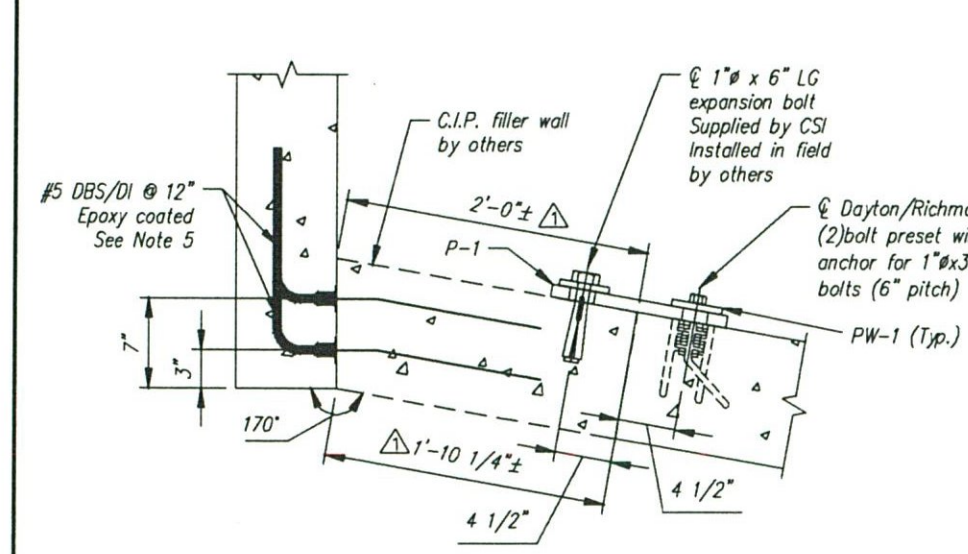
- WINGWALL GENERAL NOTES:**
- Reference standard: **ASTM LRPD Specifications**
 - Design Parameters:
Soil Bearing: 4500 psf
Concrete: Design strength $f_c = 4000$ psi
Unit weight = 150 pcf
Reinforcing: **ASTM A615 (rebar), grade 60**
Soil: Unit weight = 140 pcf
Minimum lateral pressure coefficient .34
Maximum lateral pressure coefficient .50
Cover to reinforcing: 2" u.n.a.
 - 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.
 - Prior to construction, contractor must verify all elevations shown through the engineer.

MARK	QTY	LENGTH	YDS	WEIGHT
WW1	1	12.83	4.97	10.06 TONS
WW2	1	15.83	6.67	13.51 TONS
WW3	1	10.88	2.77	5.61 TONS
WW4	1	10.88	2.77	5.61 TONS
F1	1	13.25	2.45	4.97 TONS
F2	1	24.58	9.86	19.97 TONS
F3	1	15.48	5.99	12.13 TONS
F4	1	15.48	5.99	12.13 TONS

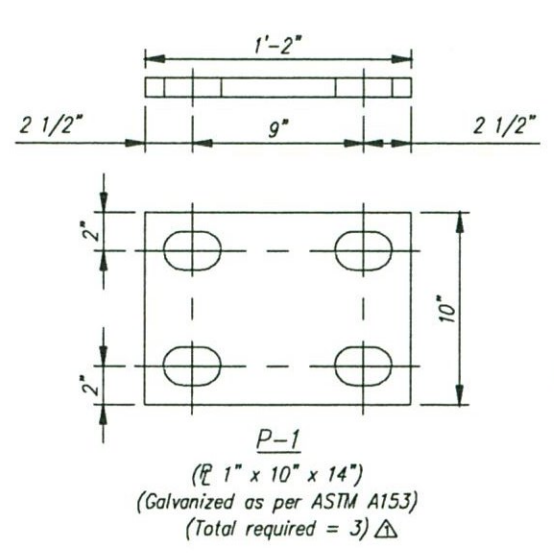
Footings to be 4,000 psi (MX-FA4000SC30)



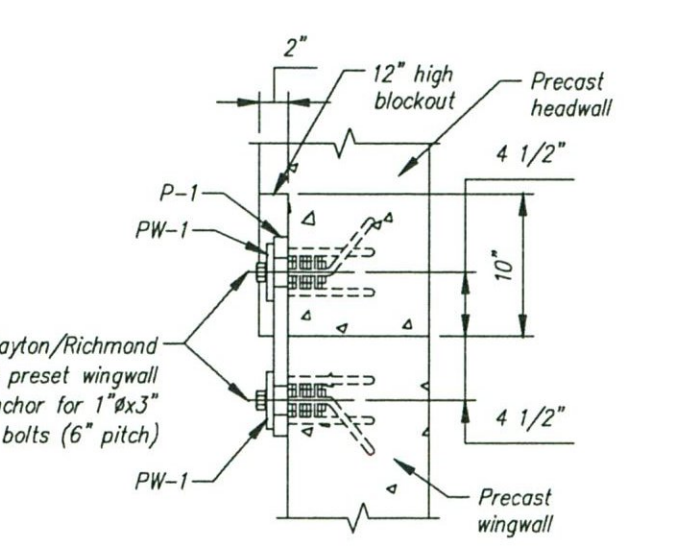
TRIPPING DETAIL
Scale: N.T.S.



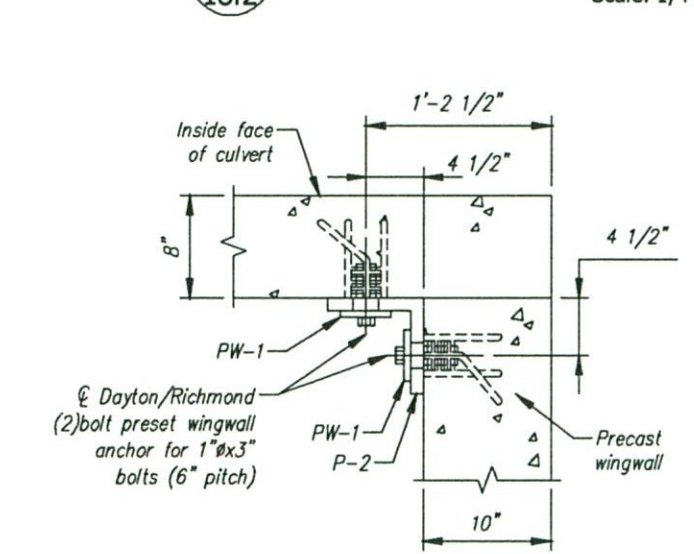
E WINGWALL CONNECTION SECTION E
Scale: 1" = 1'-0"



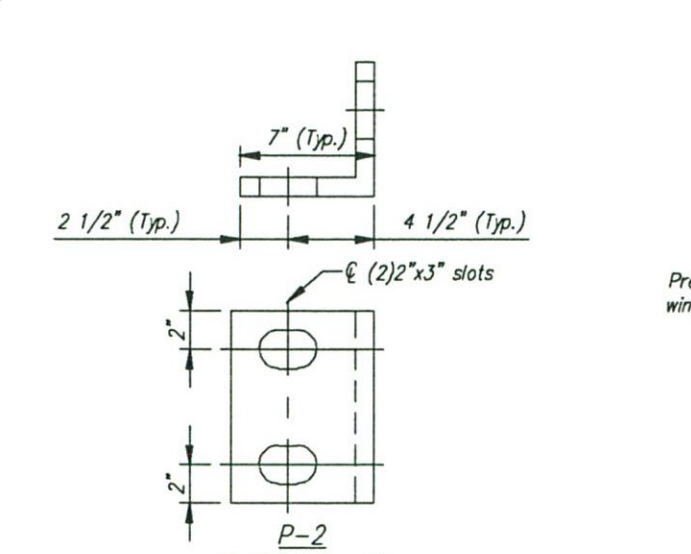
F P-1 PLATE DETAIL
Scale: N.T.S.



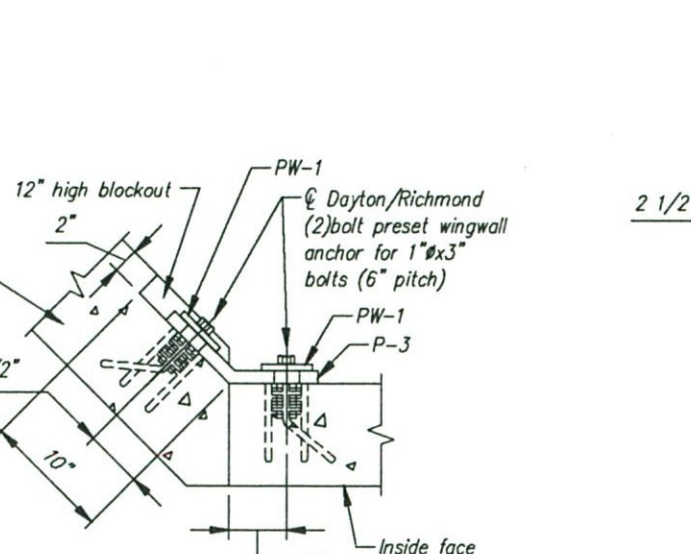
G WINGWALL CONNECTION TYPE 1
Scale: 1" = 1'-0"



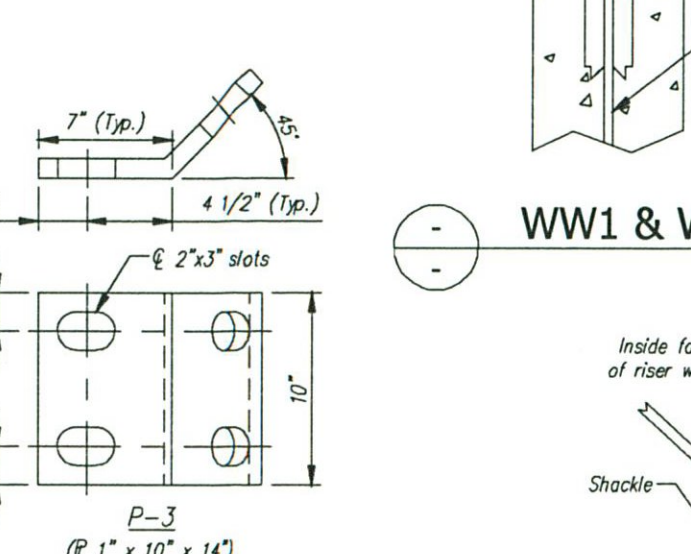
H WINGWALL CONNECTION TYPE 2
Scale: 1" = 1'-0"



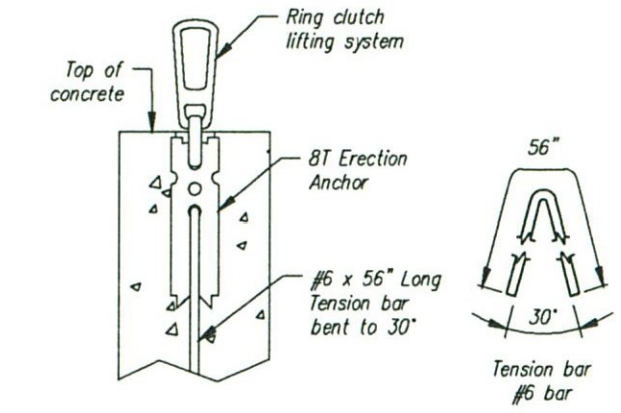
I P-2 PLATE DETAIL
Scale: N.T.S.



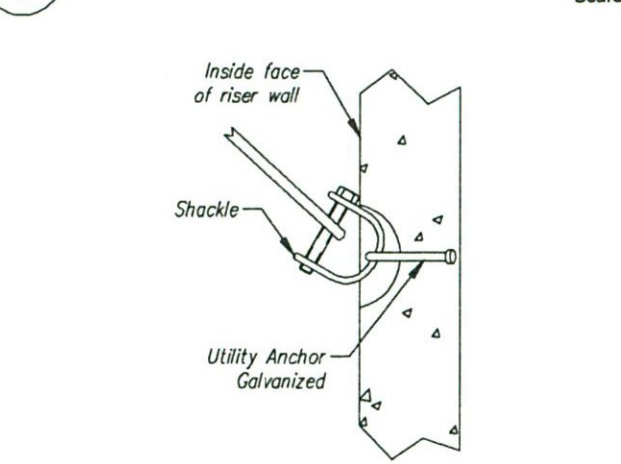
J WINGWALL CONNECTION TYPE 3
Scale: 1" = 1'-0"



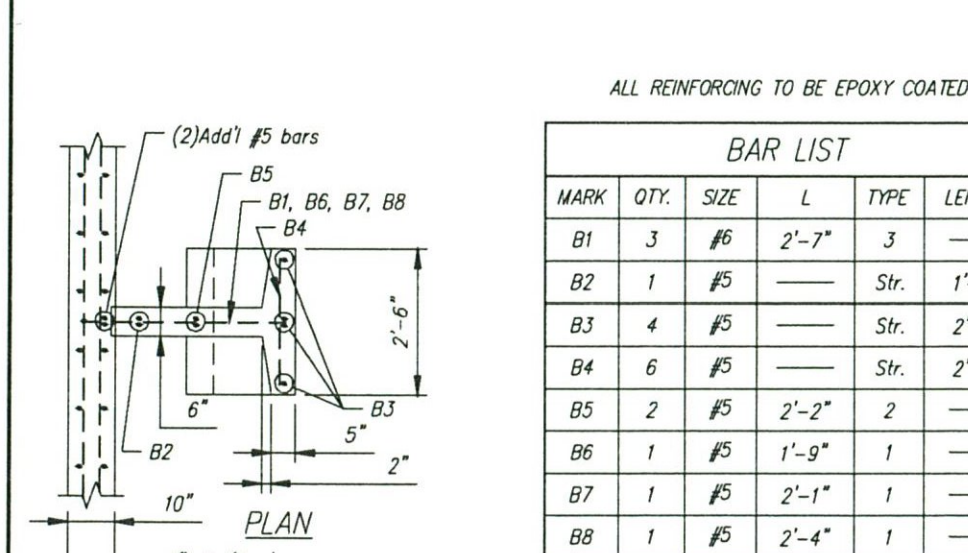
K P-3 PLATE DETAIL
Scale: N.T.S.



L WW1 & WW2 LIFTING DETAIL
Scale: N.T.S.



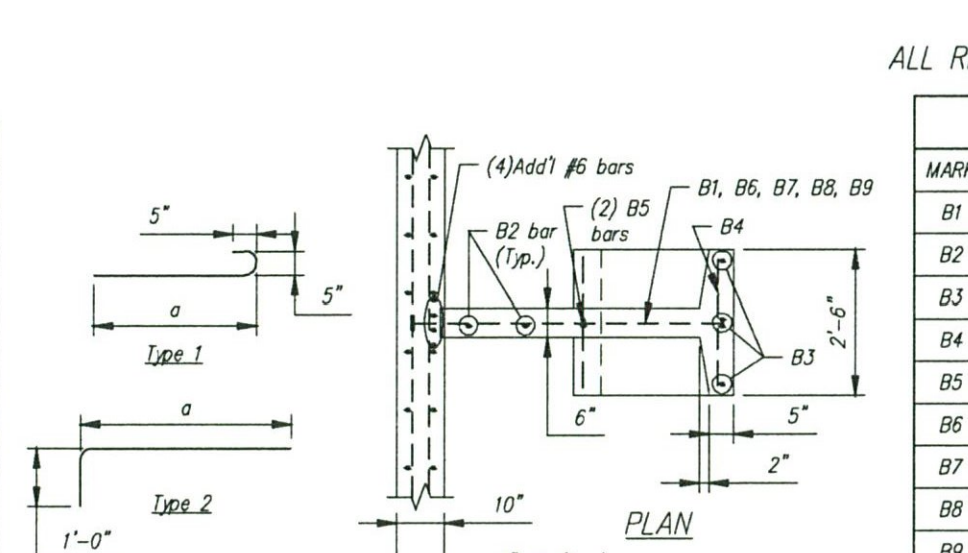
M WW3 & WW4 LIFTING DETAIL
Scale: N.T.S.



ALL REINFORCING TO BE EPOXY COATED

MARK	QTY	SIZE	L	TYPE	LENGTH
B1	3	#6	2'-7"	3	
B2	1	#5	Str.	1'-8"	
B3	4	#5	Str.	2'-6"	
B4	6	#5	Str.	2'-2"	
B5	2	#5	2'-2"	2	
B6	1	#5	1'-9"	1	
B7	1	#5	2'-1"	1	
B8	1	#5	2'-4"	1	

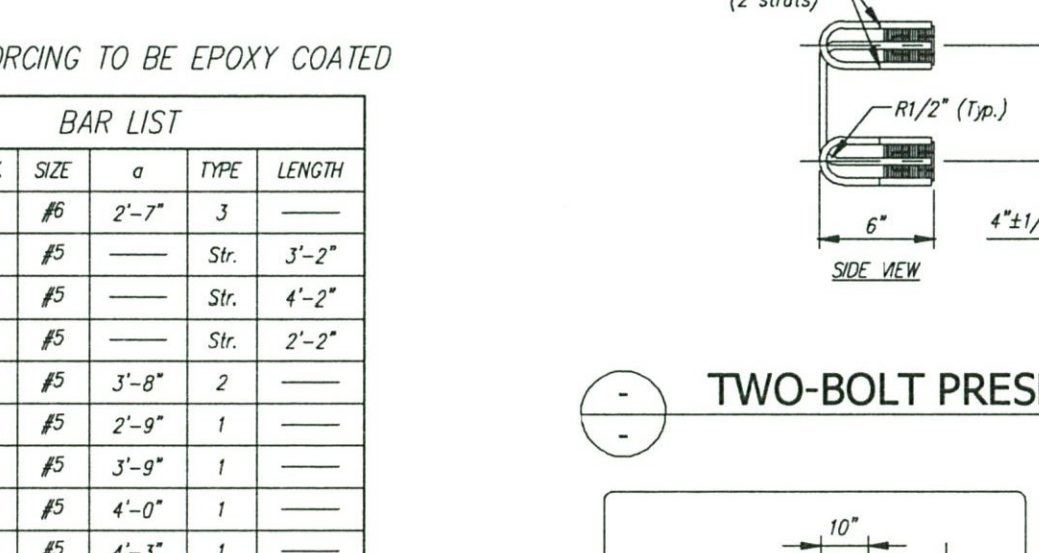
Note: "Str." denotes straight bar. Standard clearance = 2"



ALL REINFORCING TO BE EPOXY COATED

MARK	QTY	SIZE	a	TYPE	LENGTH
B1	4	#6	2'-7"	3	
B2	2	#5	Str.	3'-2"	
B3	4	#5	Str.	4'-2"	
B4	7	#5	Str.	2'-2"	
B5	2	#5	3'-8"	2	
B6	1	#5	2'-9"	1	
B7	1	#5	3'-9"	1	
B8	1	#5	4'-0"	1	
B9	1	#5	4'-3"	1	

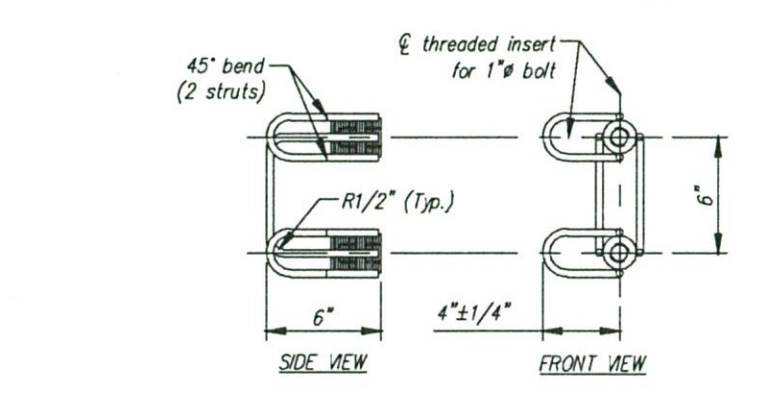
Note: "Str." denotes straight bar. Standard clearance = 2"



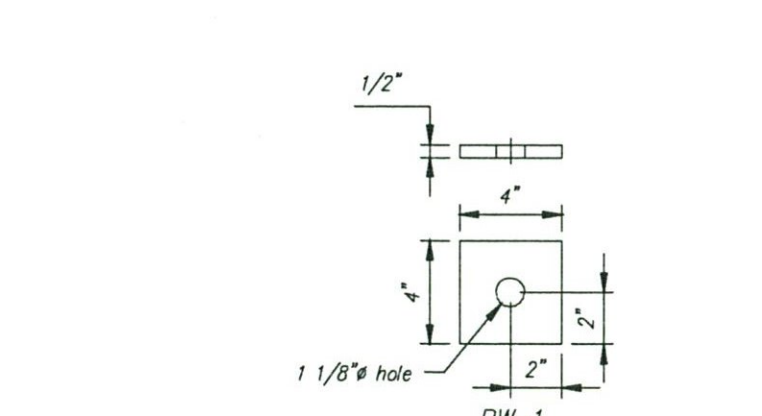
ALL REINFORCING TO BE EPOXY COATED

MARK	QTY	SIZE	a	TYPE	LENGTH
B1	4	#6	2'-7"	3	
B2	2	#5	Str.	3'-2"	
B3	4	#5	Str.	4'-2"	
B4	7	#5	Str.	2'-2"	
B5	2	#5	3'-8"	2	
B6	1	#5	2'-9"	1	
B7	1	#5	3'-9"	1	
B8	1	#5	4'-0"	1	
B9	1	#5	4'-3"	1	

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



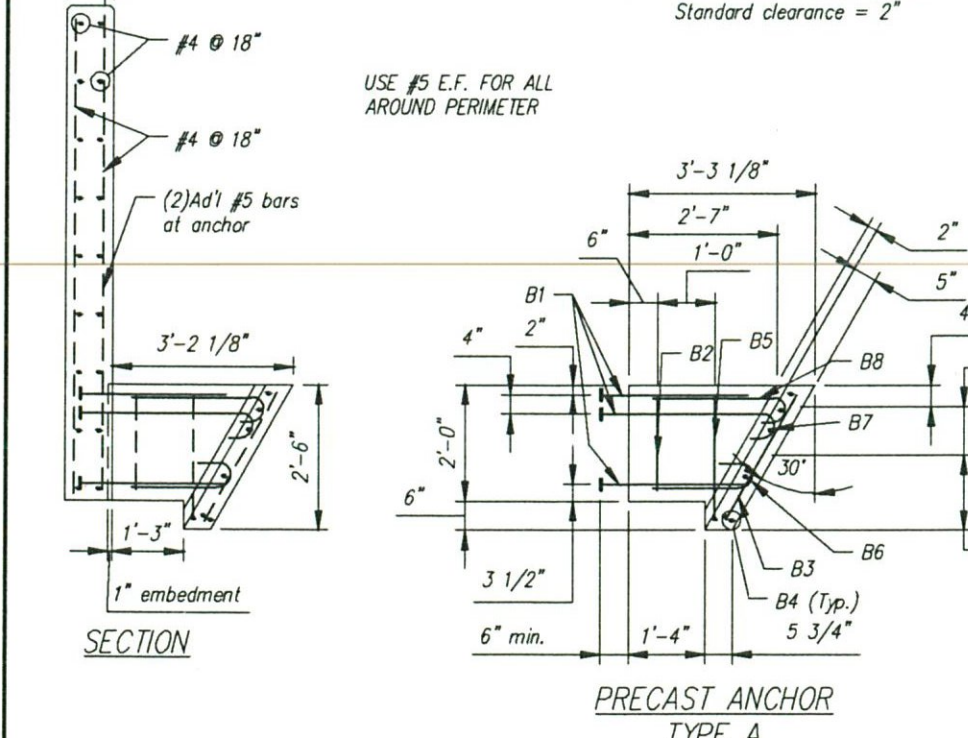
Q TWO-BOLT PRESET WING ANCHOR
Scale: N.T.S.



R PW-1 PLATE WASHER DETAIL
Scale: N.T.S.



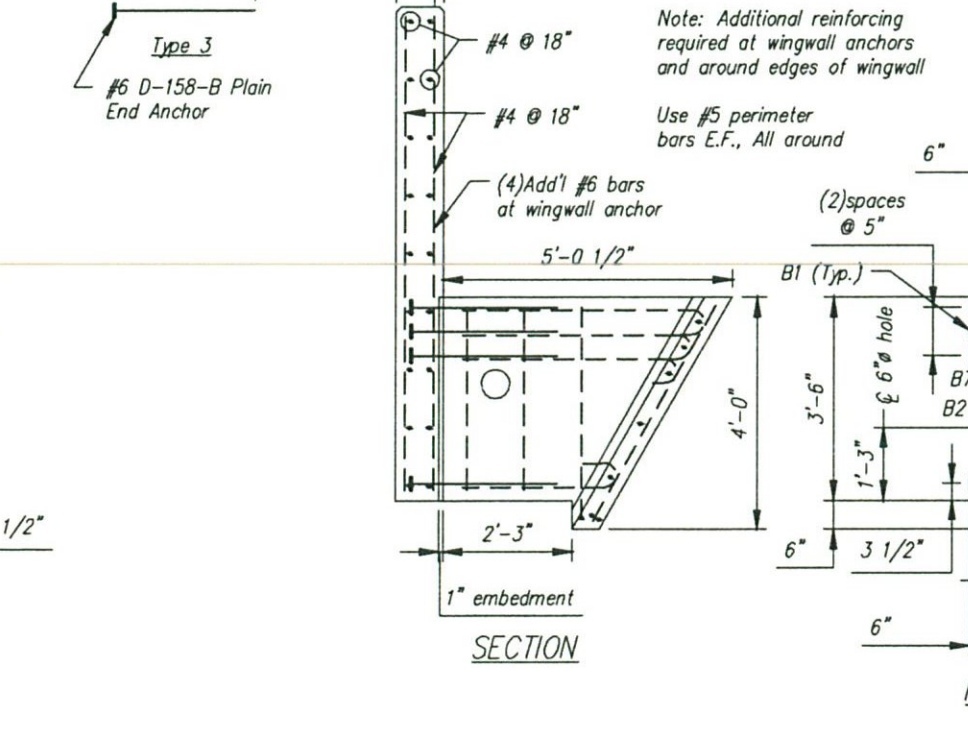
S TYPICAL WINGWALL OFFLOADING DETAIL
Scale: N.T.S.



ALL REINFORCING TO BE EPOXY COATED

MARK	QTY	SIZE	L	TYPE	LENGTH
B1	3	#6	2'-7"	3	
B2	1	#5	Str.	1'-8"	
B3	4	#5	Str.	2'-6"	
B4	6	#5	Str.	2'-2"	
B5	2	#5	2'-2"	2	
B6	1	#5	1'-9"	1	
B7	1	#5	2'-1"	1	
B8	1	#5	2'-4"	1	

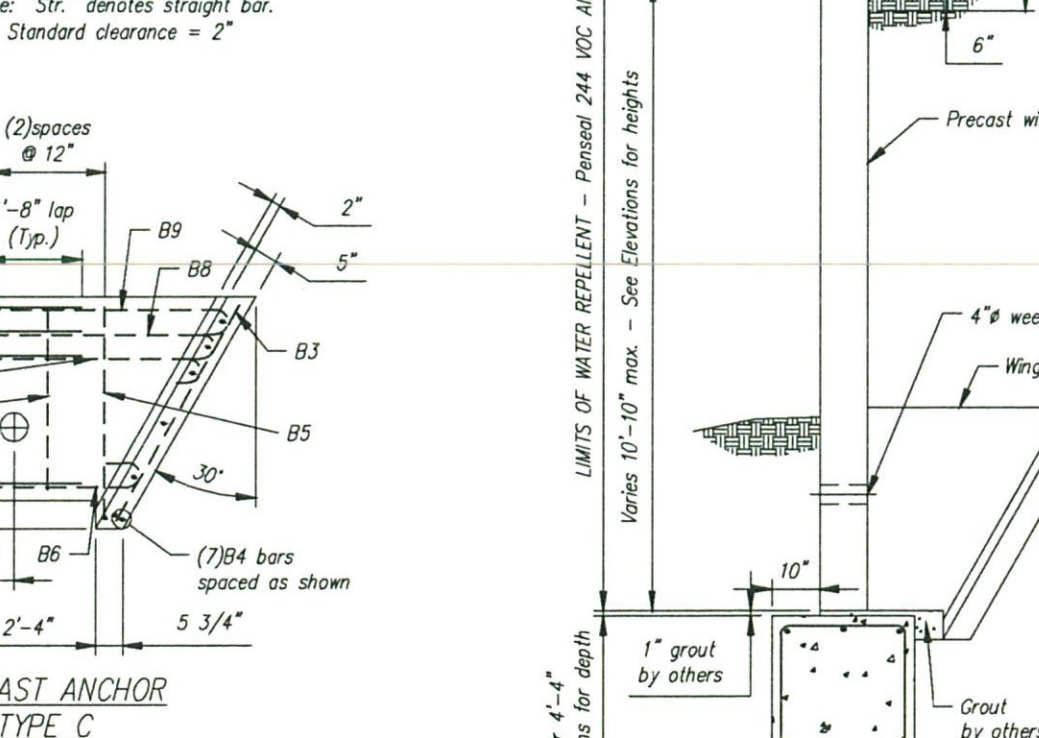
Note: "Str." denotes straight bar. Standard clearance = 2"



ALL REINFORCING TO BE EPOXY COATED

MARK	QTY	SIZE	a	TYPE	LENGTH
B1	4	#6	2'-7"	3	
B2	2	#5	Str.	3'-2"	
B3	4	#5	Str.	4'-2"	
B4	7	#5	Str.	2'-2"	
B5	2	#5	3'-8"	2	
B6	1	#5	2'-9"	1	
B7	1	#5	3'-9"	1	
B8	1	#5	4'-0"	1	
B9	1	#5	4'-3"	1	

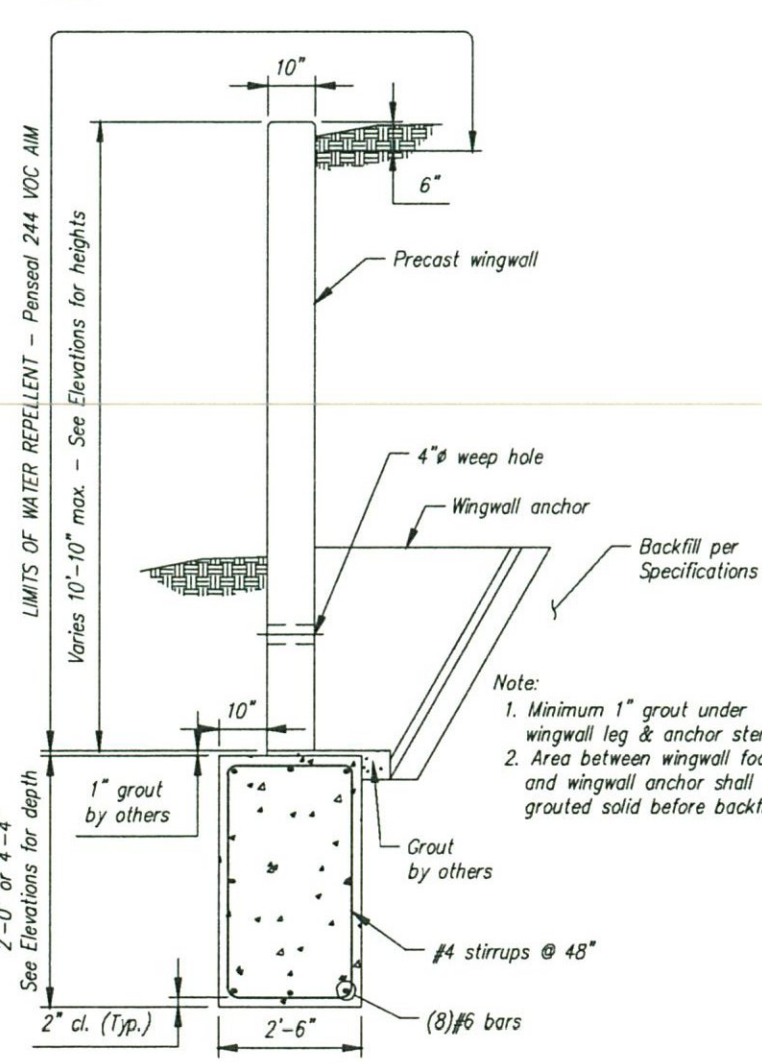
Note: "Str." denotes straight bar. Standard clearance = 2"



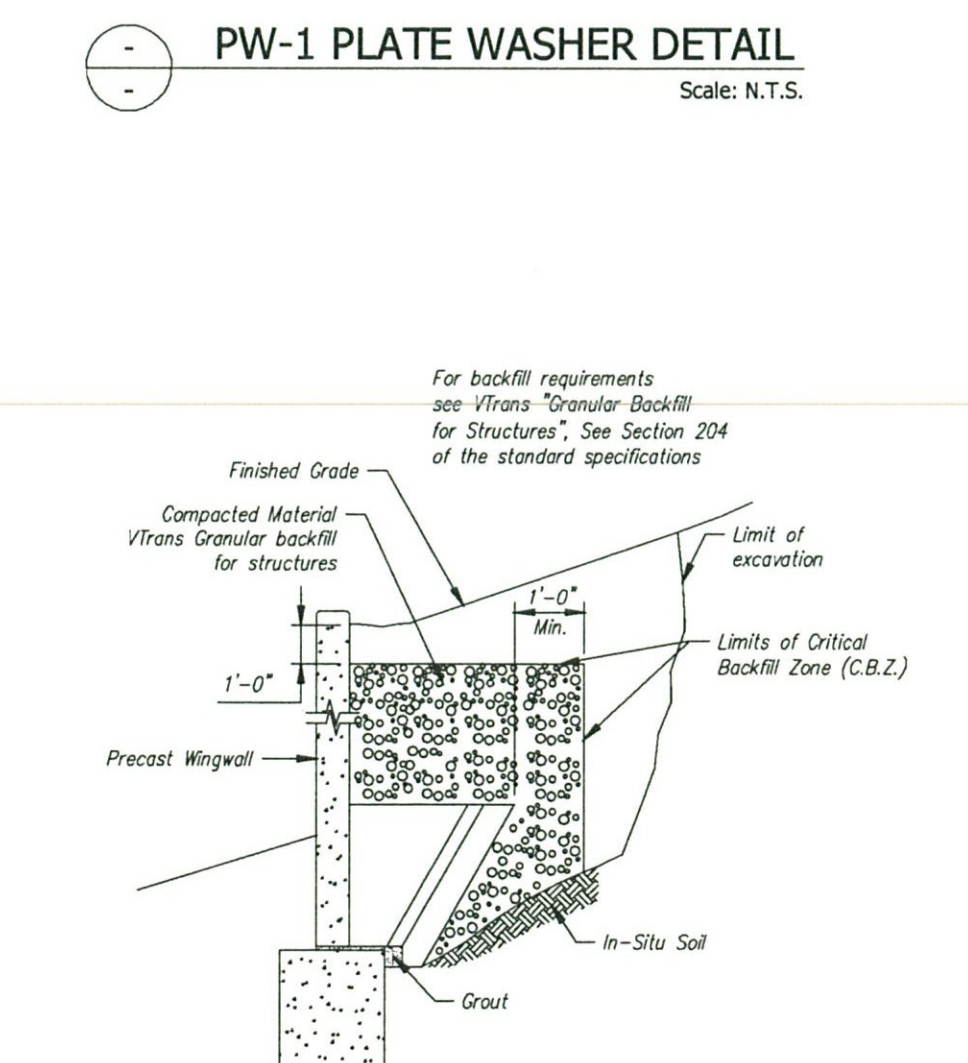
ALL REINFORCING TO BE EPOXY COATED

MARK	QTY	SIZE	a	TYPE	LENGTH
B1	4	#6	2'-7"	3	
B2	2	#5	Str.	3'-2"	
B3	4	#5	Str.	4'-2"	
B4	7	#5	Str.	2'-2"	
B5	2	#5	3'-8"	2	
B6	1	#5	2'-9"	1	
B7	1	#5	3'-9"	1	
B8	1	#5	4'-0"	1	
B9	1	#5	4'-3"	1	

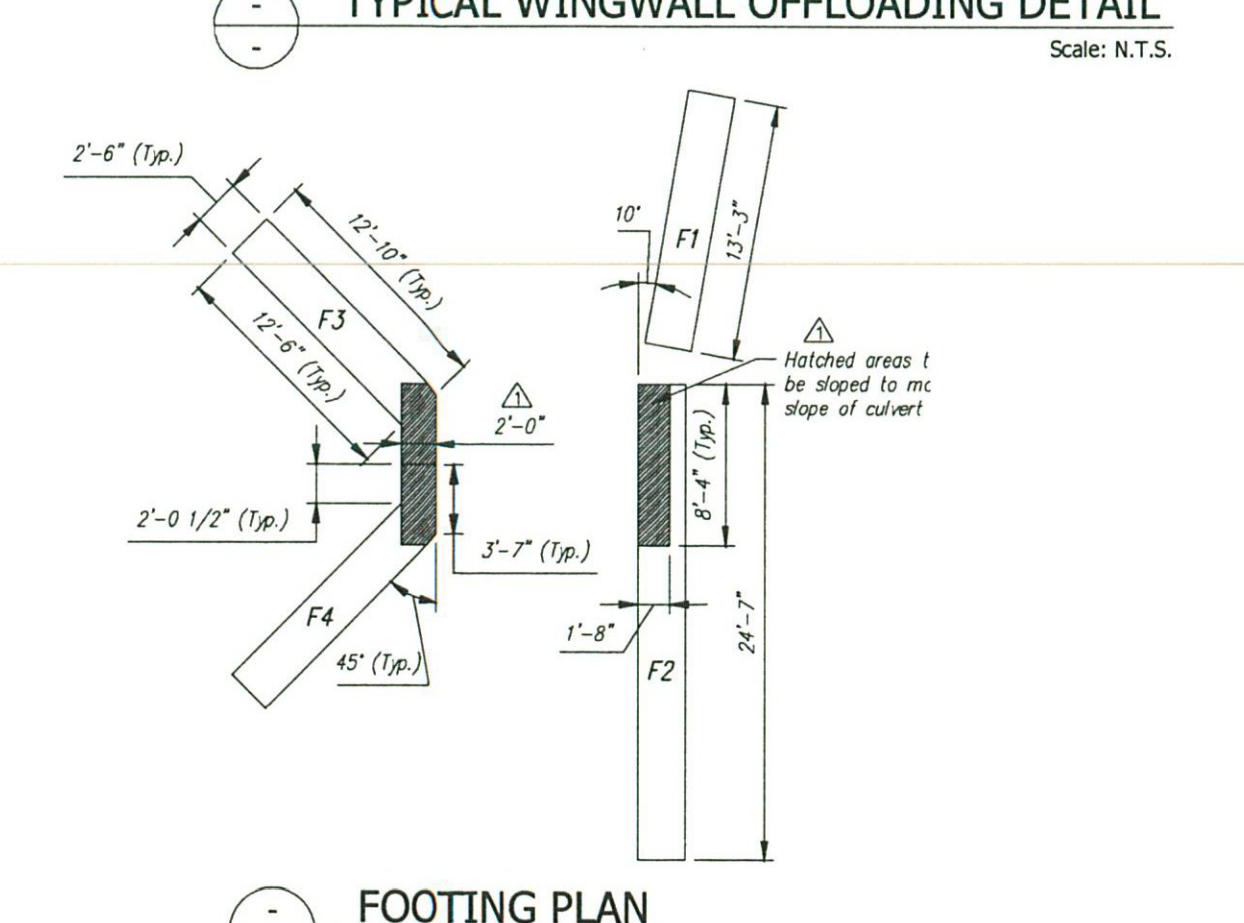
Note: "Str." denotes straight bar. Standard clearance = 2"



T TYPICAL WINGWALL SECTION
Scale: 3/8" = 1'-0"



U WINGWALL BACKFILL REQUIREMENTS
Scale: N.T.S.



V FOOTING PLAN
Scale: 1/8" = 1'-0"

Contractor is to verify that all information shown on drawings has been thoroughly checked, compares 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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plans need to have a PE stamp (typ each sheet)

WINGWALL REINFORCING DETAILS
Scale: 3/8" = 1'-0"

Rev.	Date	DESCRIPTION	MS/CV	By
5				
4				
3				
2				
1	06/19/14	Revised wingwall lengths; Miscellaneous revisions		

This drawing is based upon information provided from the following documents and/or sources:
 Engineer: CLD CONSULTING ENGINEERS
 Project No: STP SCR(10)
 Drawings: PROPOSED IMPROVEMENT VT ROUTE 14 (MINOR ARTERIAL)
 Specifications: PROPOSED IMPROVEMENT VT ROUTE 14 (MINOR ARTERIAL)
 Other Sources:

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

PROJECT NO. STP SCR(10)
 B.U.R. CONSTRUCTION
 VT ROUTE 14 (MINOR ARTERIAL)
 BARRRE, VT
 BOX CULVERT WINGWALL DETAILS
 C21980-LO1B
 SHEET 2 OF 2