

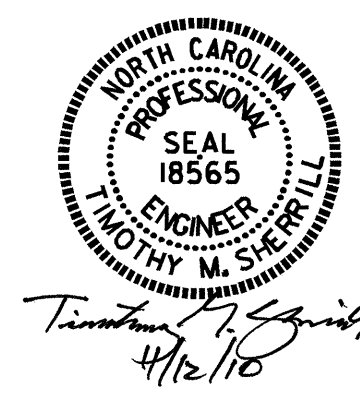
**PEDESTRIAN CULVERT  
 SOUTH END ELEVATION NORMAL TO SKEW**

PROJECT NO. EB-4978  
WAKE COUNTY  
 STATION: 27+29.94 -G-

SHEET 1 OF 5

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**WALL ADDITIONS  
 PEDESTRIAN CULVERT  
 EDWARDS MILL  
 MULTI-USE TRAIL**



THESE PLANS ARE BASED ON THE DIMENSIONS, LAYOUT, AND OTHER INFORMATION ON THE ORIGINAL PLANS OF THE CULVERT AND WALLS. THE CONTRACTOR SHALL CONFIRM THAT THE EXISTING CONDITIONS ARE SIMILAR. SHOULD FIELD CONDITIONS DIFFER SIGNIFICANTLY FROM THOSE INDICATED, PLEASE NOTIFY THE ENGINEER IMMEDIATELY.

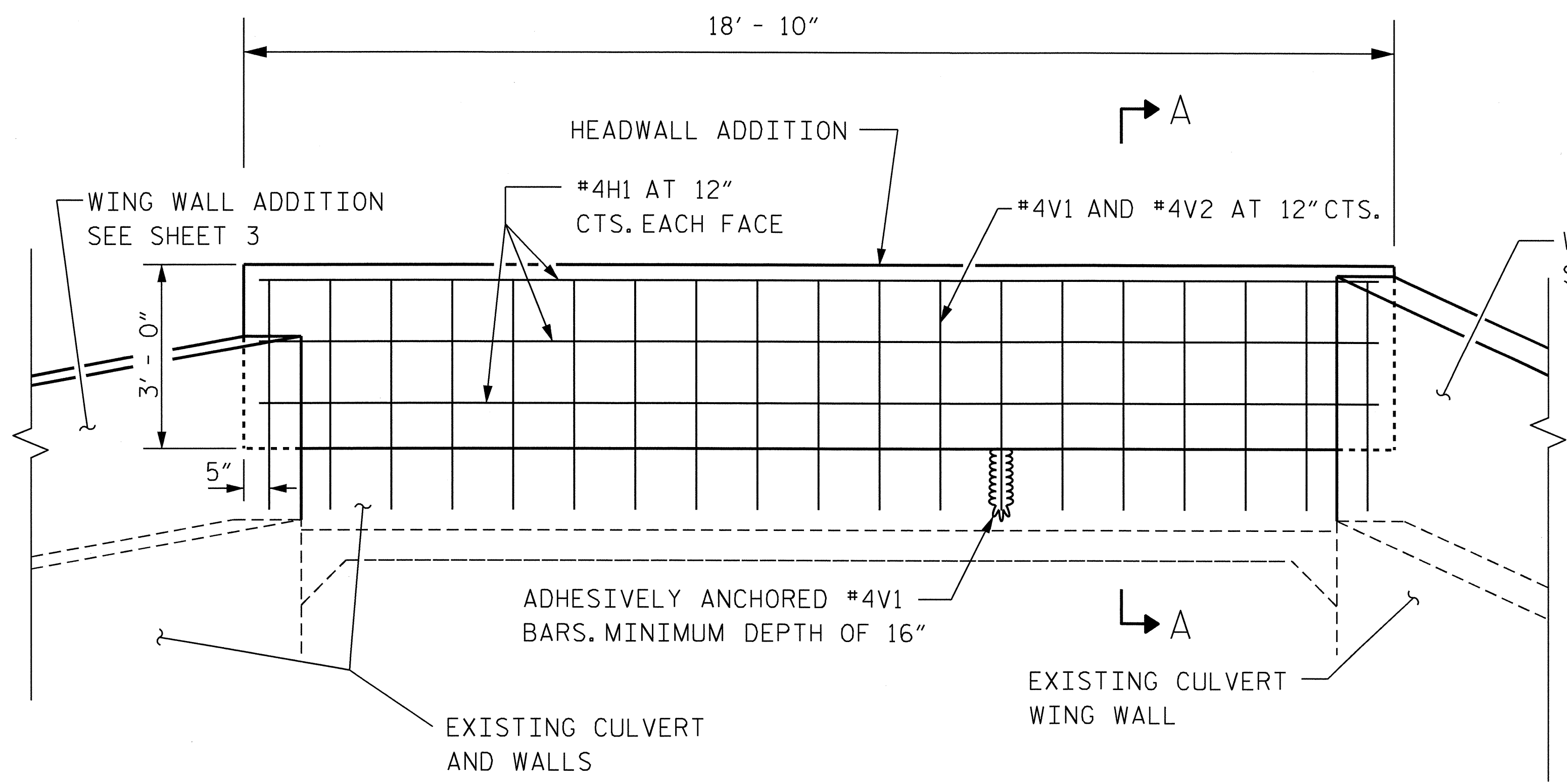
DRAWN BY : T. SHERRILL DATE : 08/10  
 CHECKED BY : F. ASEFNIA DATE : 08/10

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			

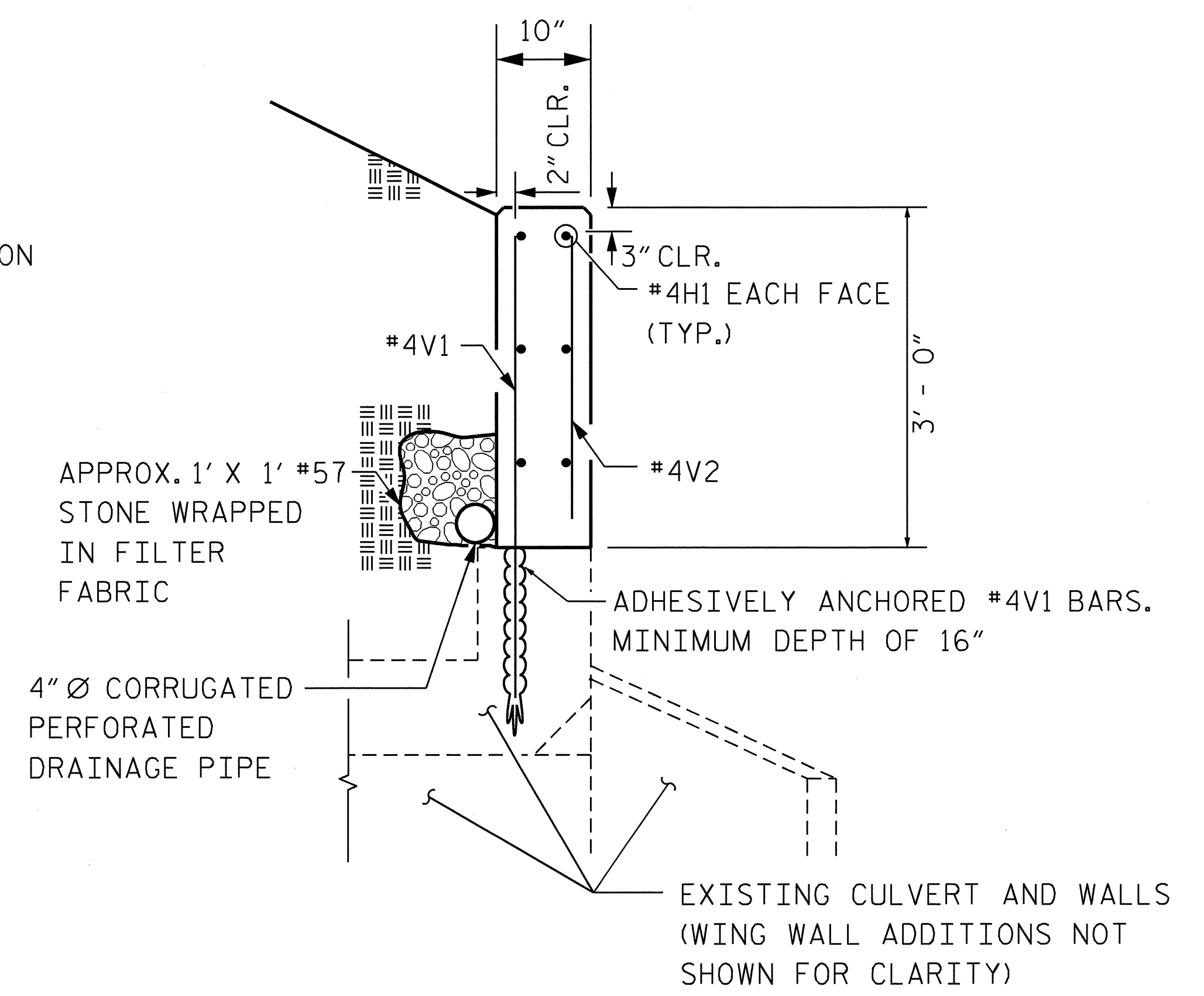
BILL OF MATERIAL					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
H1	6	#4	STR	18'-4"	74
V1	19	#4	STR	4'-1"	52
V2	19	#4	STR	2'-6"	32
REINFORCING STEEL FOR HEADWALL					158 LBS
CLASS A CONCRETE 1 HEADWALL					1.7 CY

**NOTE:**

PLACE DRAIN (#57 STONE AND PERFORATED PIPE) BEHIND HEADWALL AND WING WALL ADDITIONS, AS SHOWN. ROUTE AND SLOPE TO DAYLIGHT NEAR ENDS OF WING WALL ADDITIONS.



**ELEVATION HEADWALL**



**SECTION A-A**

**NOTES:**

PARTICULAR CARE SHALL BE TAKEN TO DRILL, CLEAN, AND OTHERWISE PROPERLY PREPARE THE HOLES FOR INSTALLATION OF THE ADHESIVELY ANCHORED REINFORCING BARS. THE ADHESIVE ANCHOR SYSTEM MANUFACTURER'S RECOMMENDATIONS SHALL BE STRICTLY FOLLOWED.

ADHESIVE SYSTEM SHALL BE NCDOT-APPROVED.

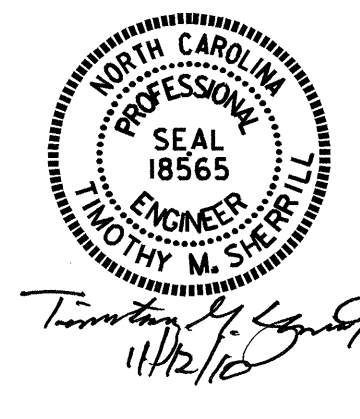
ADHESIVELY ANCHORED BARS SHALL BE SUBJECTED TO LEVEL TWO FIELD TESTING, AS OUTLINED IN THE PROJECT SPECIAL PROVISION, "ADHESIVELY

ANCHORED ANCHOR BOLTS OR DOWELS," EXCEPT THAT TESTING SHALL NOT BE DONE AT 80% OF THE YIELD. THE TEST LOAD = 1000 lbs. TENSION.

NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR FURNISHING, INSTALLING, AND TESTING DRAIN PIPE, STONE, FABRIC, OR OTHER ASSOCIATED ITEMS. PAYMENT AT THE CONTRACT UNIT PRICES FOR THE VARIOUS PAY ITEMS WILL BE FULL COMPENSATION FOR ALL MATERIALS, EQUIPMENT, TOOLS, LABOR, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

PROJECT NO. EB-4978  
 WAKE COUNTY  
 STATION: 27+29.94 -G-  
 SHEET 2 OF 5

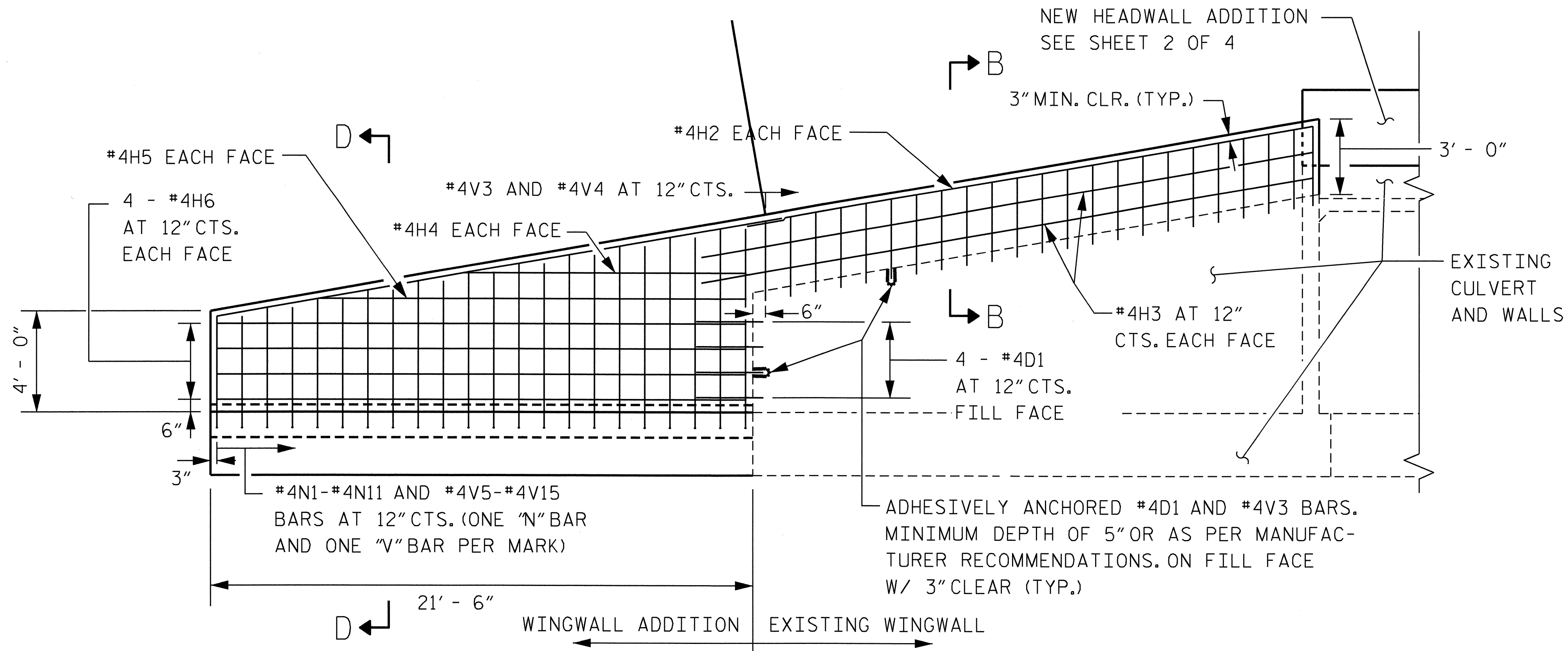
DRAWN BY : T. SHERRILL DATE : 08/10  
 CHECKED BY : F. ASEFNIA DATE : 08/10



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**EDWARDS MILL  
 MULTI-USE TRAIL  
 PEDESTRIAN CULVERT  
 WALL ADDITIONS  
 HEADWALL DETAILS**

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. S-2  
 TOTAL SHEETS



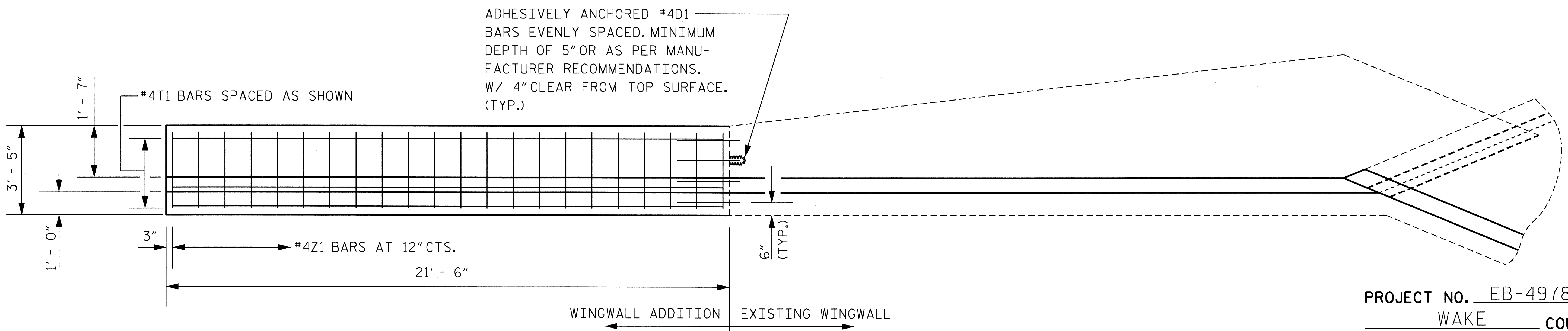
ELEVATION W1

NOTES:

PARTICULAR CARE SHALL BE TAKEN TO DRILL, CLEAN, AND OTHERWISE PROPERLY PREPARE THE HOLES FOR INSTALLATION OF THE ADHESIVELY ANCHORED REINFORCING BARS. THE ADHESIVE ANCHOR SYSTEM MANUFACTURER'S RECOMMENDATIONS SHALL BE STRICTLY FOLLOWED.

ADHESIVE SYSTEM SHALL BE NCDOT-APPROVED.

ADHESIVELY ANCHORED BARS SHALL BE SUBJECTED TO LEVEL TWO FIELD TESTING, AS OUTLINED IN THE PROJECT SPECIAL PROVISION, "ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS," EXCEPT THAT TESTING SHALL NOT BE DONE AT 80% OF THE YIELD. THE TEST LOAD = 1000 lbs. TENSION.



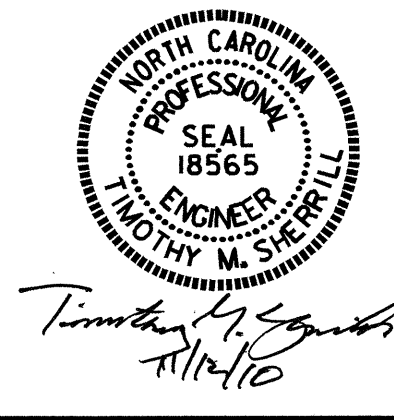
PLAN W1

NOTE:  
ONLY FOOTING REINFORCING SHOWN.  
STEM BARS NOT SHOWN FOR CLARITY.

PROJECT NO. EB-4978  
WAKE COUNTY  
STATION: 27+29.94 -G-

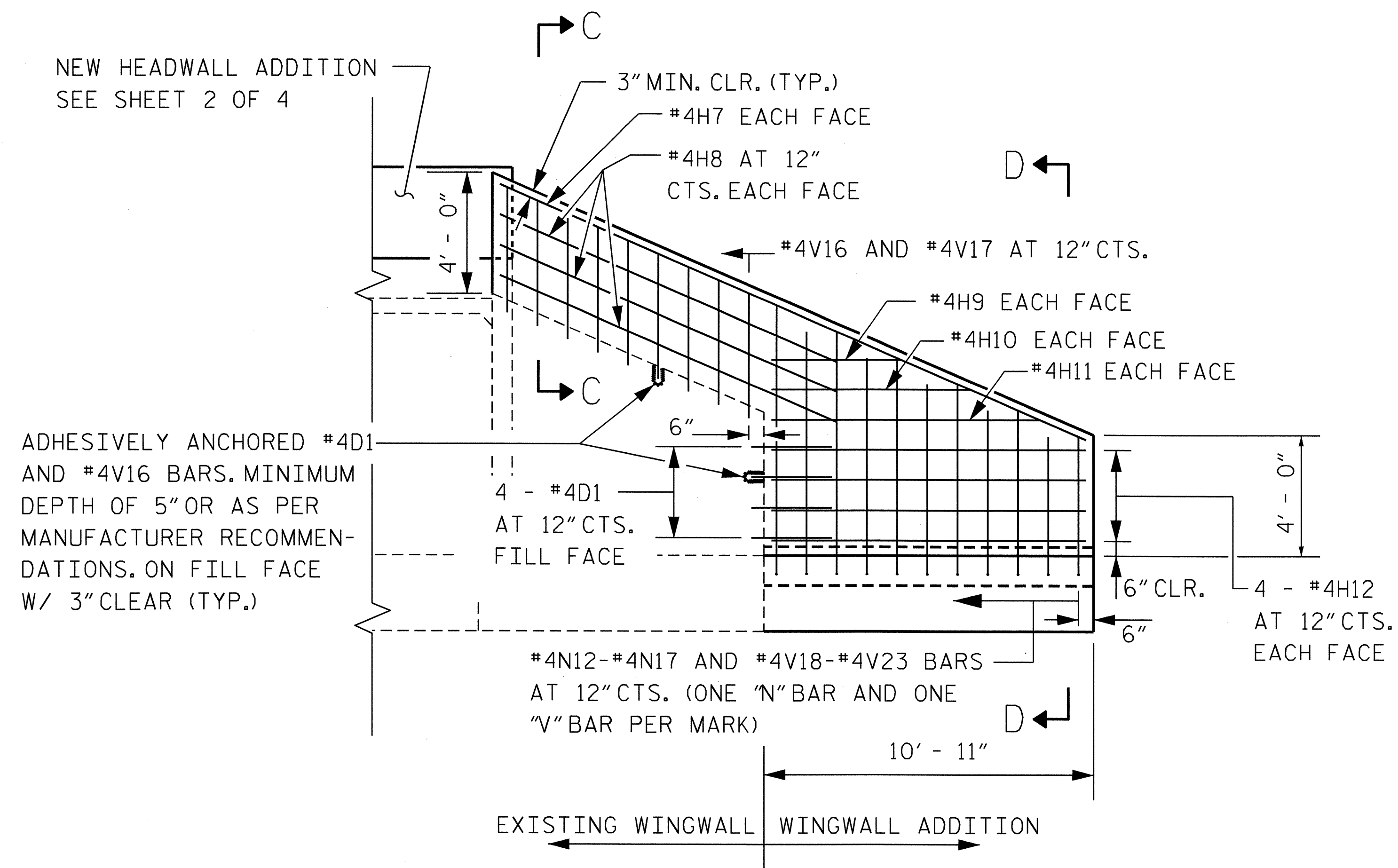
SHEET 3 OF 5

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
EDWARDS MILL  
MULTI-USE TRAIL  
PEDESTRIAN CULVERT  
WALL ADDITIONS  
WING WALL DETAILS

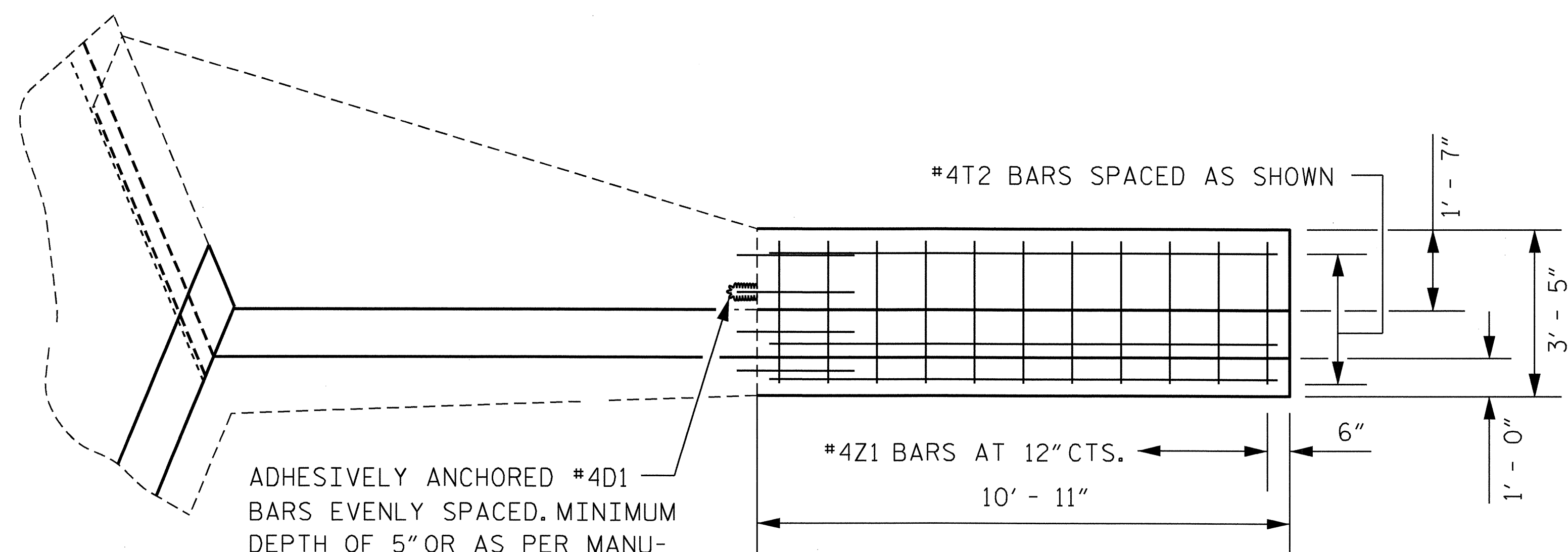


REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS
2			4			

DRAWN BY: T. SHERRILL DATE: 08/10  
CHECKED BY: F. ASEFNIA DATE: 08/10



ELEVATION W2



PLAN W2

NOTE:  
ONLY FOOTING REINFORCING SHOWN.  
STEM BARS NOT SHOWN FOR CLARITY.

BAR TYPES					
ALL BAR DIMENSIONS ARE OUT TO OUT.					
N1	2	#4	1	5'-4"	7
N2	2	#4	1	5'-8"	8
N3	2	#4	1	6'-0"	8
N4	2	#4	1	6'-4"	8
N5	2	#4	1	6'-8"	9
N6	2	#4	1	7'-0"	9
N7	2	#4	1	7'-5"	10
N8	2	#4	1	7'-9"	10
N9	2	#4	1	8'-1"	11
N10	2	#4	1	8'-6"	11
N11	2	#4	1	8'-9"	12
N12	2	#4	1	5'-5"	7
N13	2	#4	1	6'-4"	8
N14	2	#4	1	7'-2"	10
N15	2	#4	1	8'-0"	11
N16	2	#4	1	8'-11"	12
N17	1	#4	1	9'-9"	7
T1	3	#4	STR	21'-0"	42
T2	3	#4	STR	10'-5"	21
D1	16	#4	STR	2'-5"	26
Z1	33	#4	2	3'-4"	73
REINFORCING STEEL FOR 2 WINGS					972 LBS
CLASS A CONCRETE 2 WINGS					14.5 CY

NOTES:

PARTICULAR CARE SHALL BE TAKEN TO DRILL, CLEAN, AND OTHERWISE PROPERLY PREPARE THE HOLES FOR INSTALLATION OF THE ADHESIVELY ANCHORED REINFORCING BARS. THE ADHESIVE ANCHOR SYSTEM MANUFACTURER'S RECOMMENDATIONS SHALL BE STRICTLY FOLLOWED.

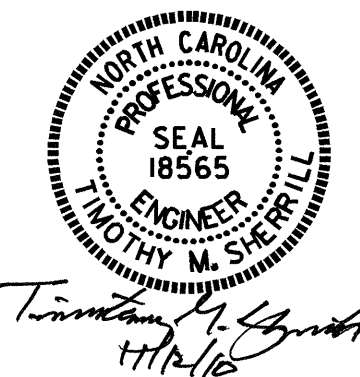
ADHESIVE SYSTEM SHALL BE NCDOT-APPROVED.

ADHESIVELY ANCHORED BARS SHALL BE SUBJECTED TO LEVEL TWO FIELD TESTING, AS OUTLINED IN THE PROJECT SPECIAL PROVISION, "ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS," EXCEPT THAT TESTING SHALL NOT BE DONE AT 80% OF THE YIELD. THE TEST LOAD = 1000 lbs. TENSION.

PROJECT NO. EB-4978  
WAKE COUNTY  
 STATION: 27+29.94 -G-

SHEET 4 OF 5

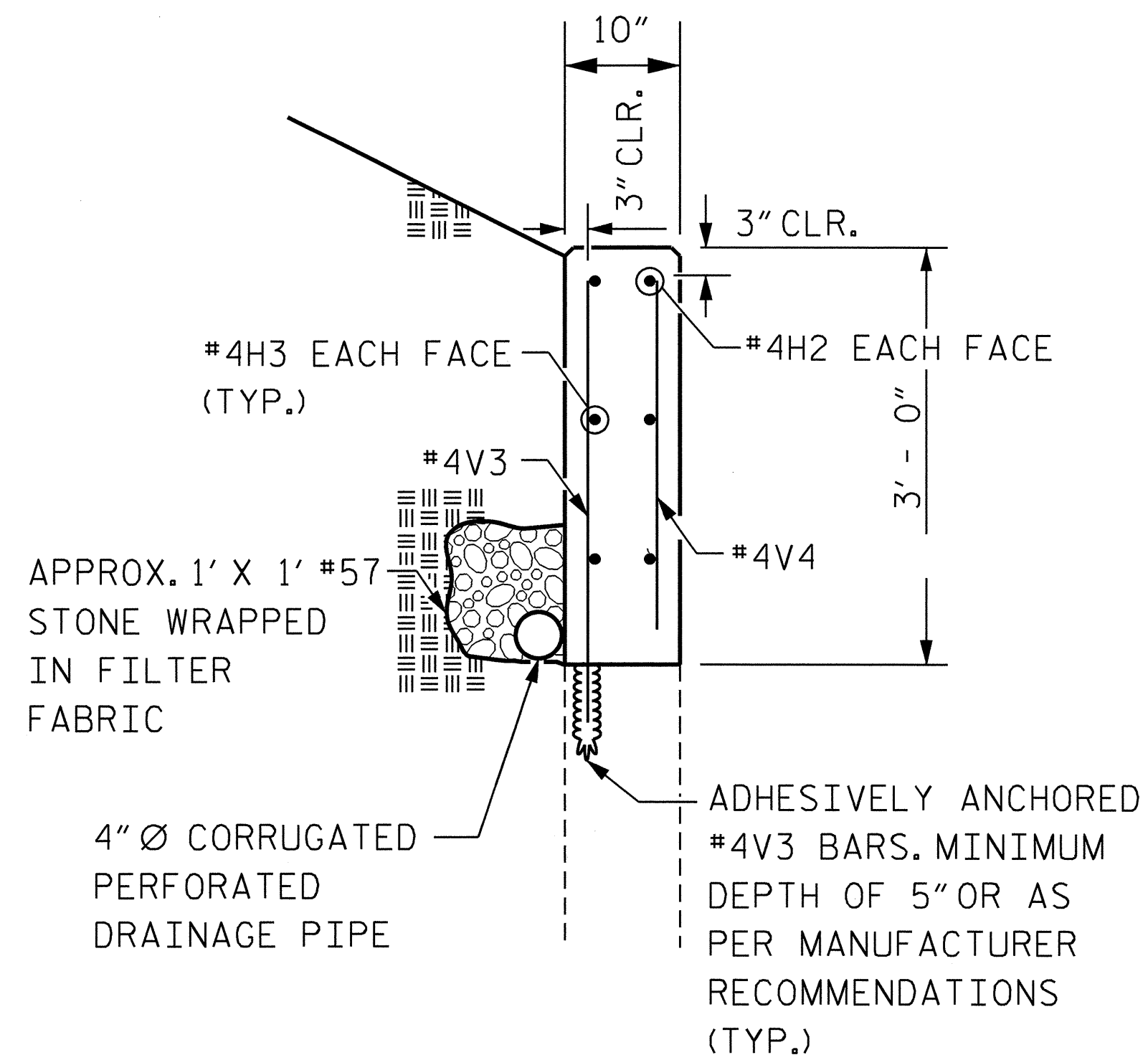
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**EDWARDS MILL  
 MULTI-USE TRAIL  
 PEDESTRIAN CULVERT  
 WALL ADDITIONS  
 WING WALL DETAILS**



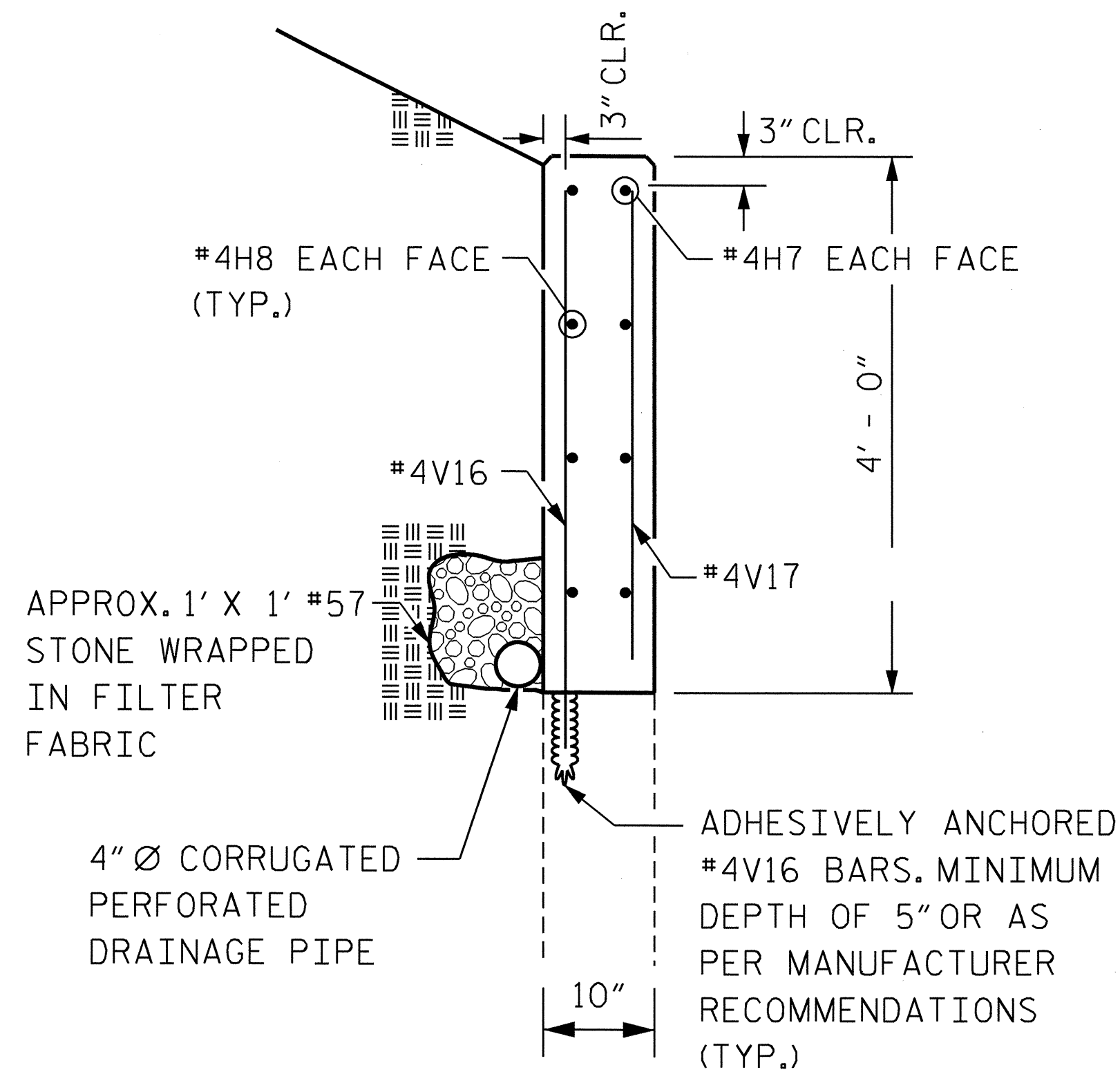
DRAWN BY : T. SHERRILL DATE : 08/10  
 CHECKED BY : F. ASEFNIA DATE : 08/10

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	5-4
1			3			TOTAL SHEETS
2			4			

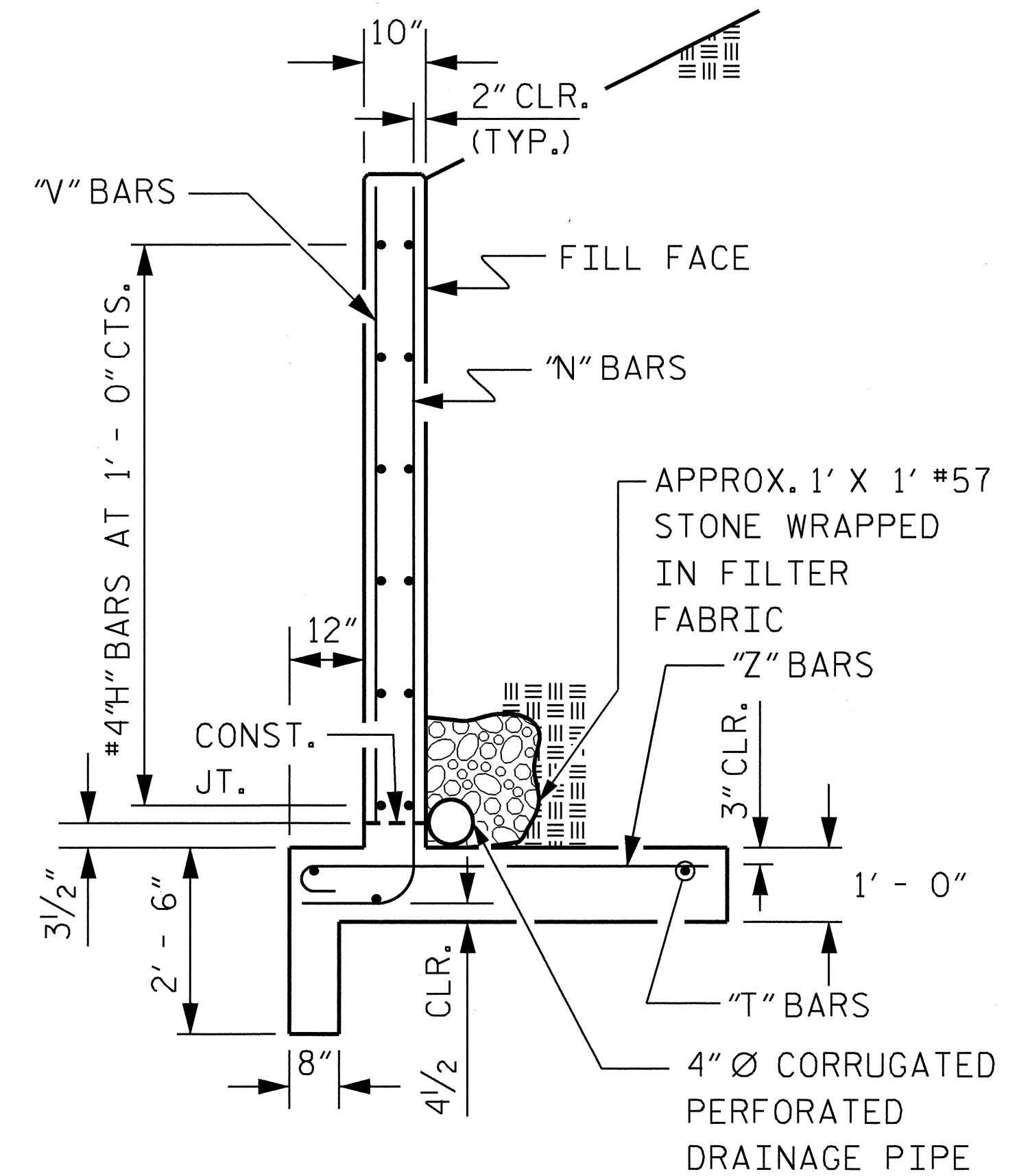




SECTION B-B



SECTION C-C



SECTION D-D

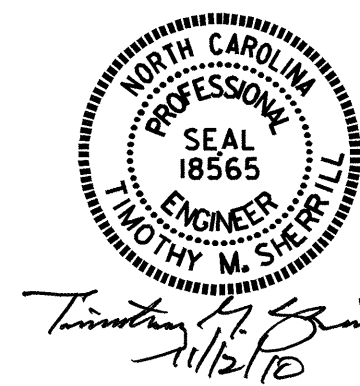
NOTES:

PLACE DRAIN (#57 STONE AND PERFORATED PIPE) BEHIND HEADWALL AND WING WALL ADDITIONS, AS SHOWN. ROUTE AND SLOPE TO DAYLIGHT NEAR ENDS OF WING WALL ADDITIONS.

NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR FURNISHING, INSTALLING, AND TESTING DRAIN PIPE, STONE, FABRIC, OR OTHER ASSOCIATED ITEMS. PAYMENT AT THE CONTRACT UNIT PRICES FOR THE VARIOUS PAY ITEMS WILL BE FULL COMPENSATION FOR ALL MATERIALS, EQUIPMENT, TOOLS, LABOR, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

PROJECT NO. EB-4978  
WAKE COUNTY  
 STATION: 27+29.94 -G-

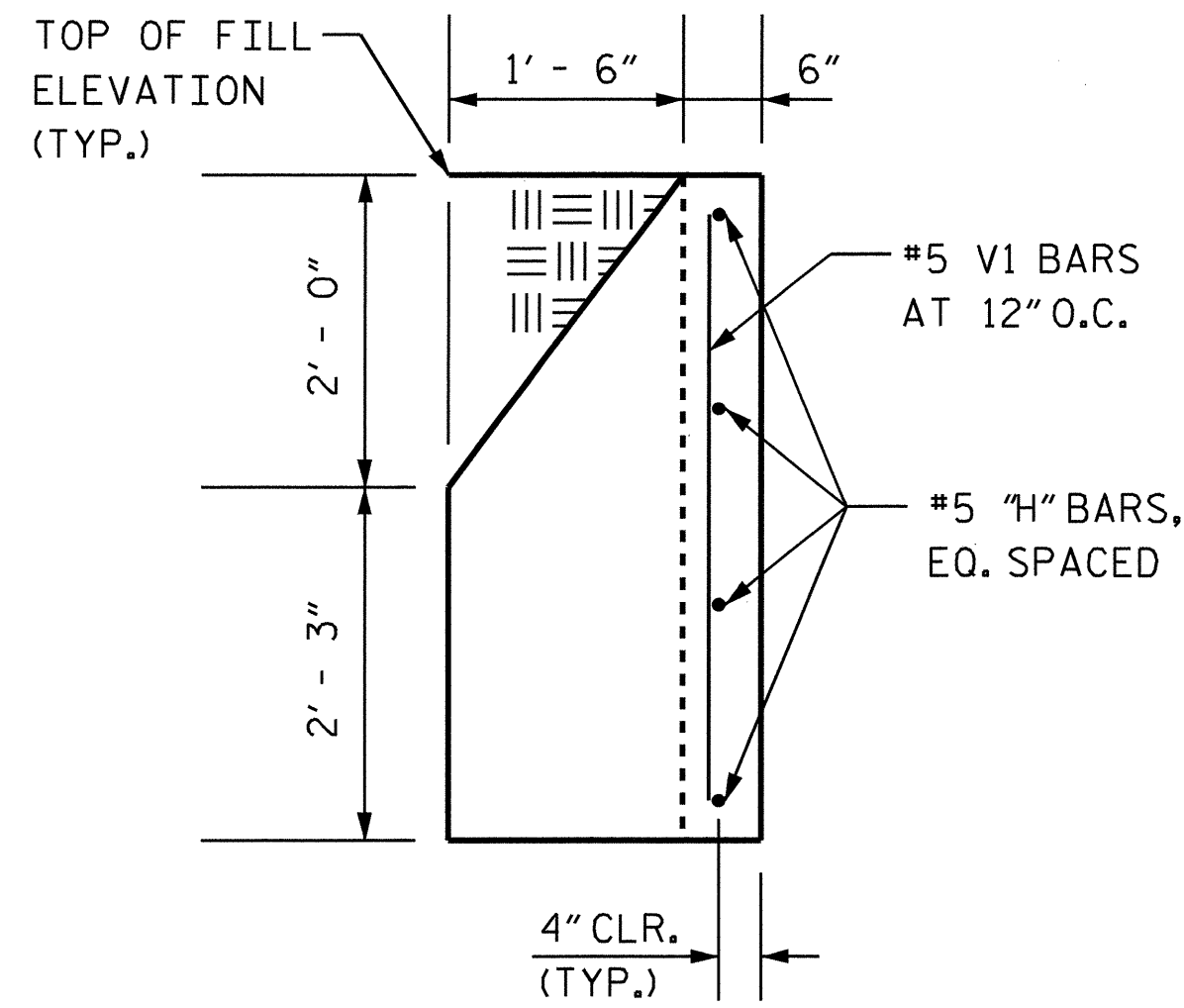
SHEET 5 OF 5



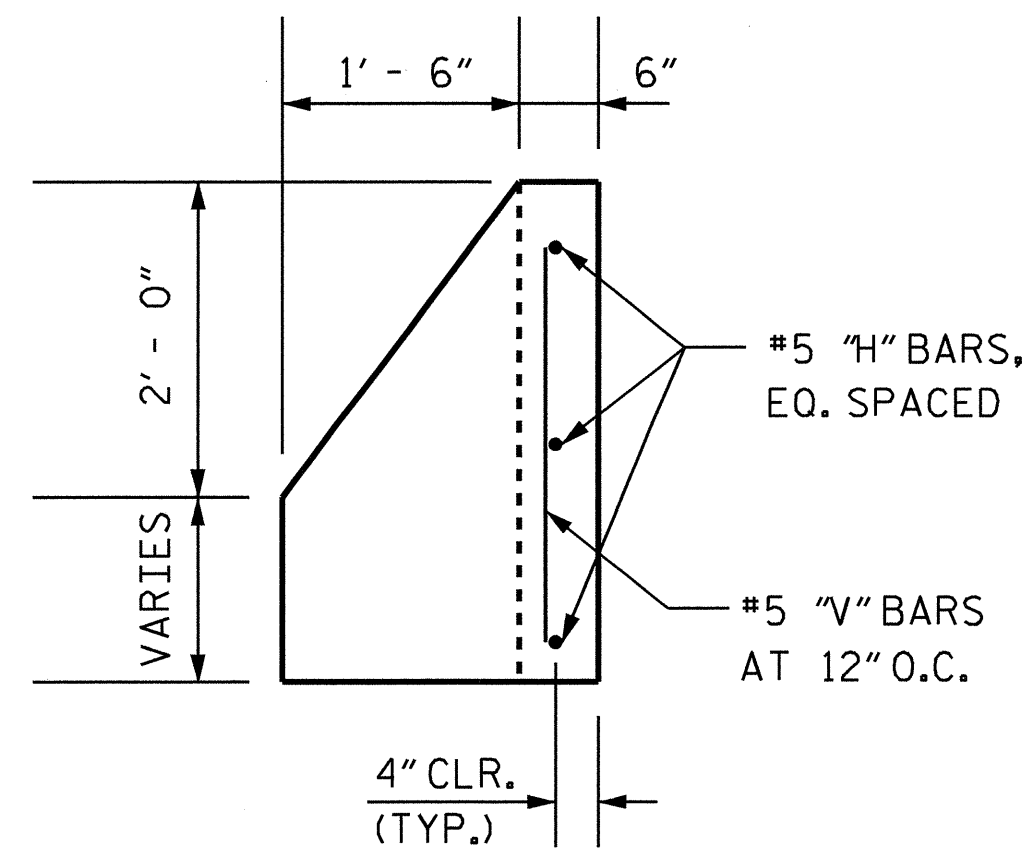
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**EDWARDS MILL  
 MULTI-USE TRAIL  
 PEDESTRIAN CULVERT  
 WALL ADDITIONS  
 WING WALL DETAILS**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-5
1			3			TOTAL SHEETS
2			4			

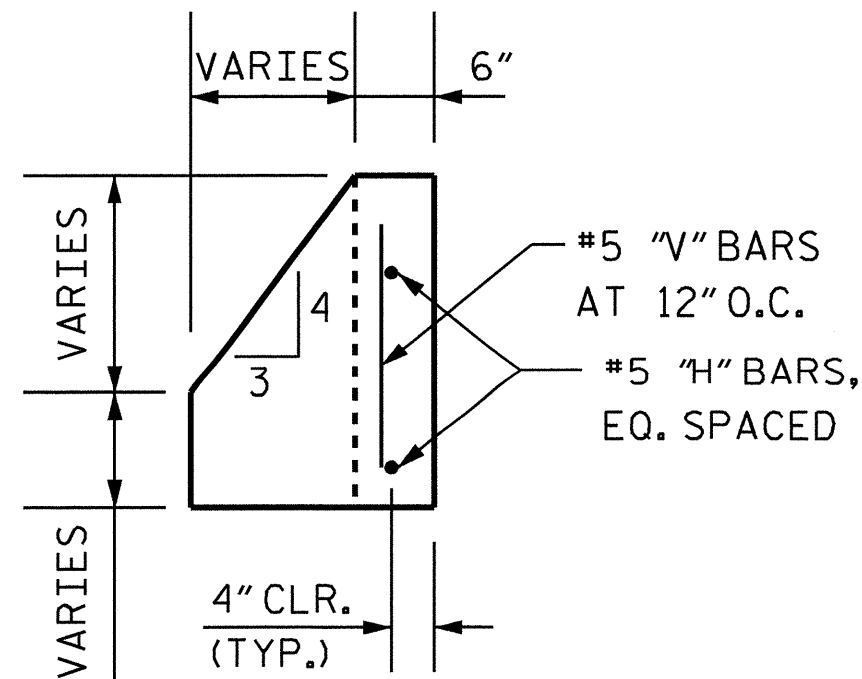
DRAWN BY : T. SHERRILL DATE : 08/10  
 CHECKED BY : F. ASEFNIA DATE : 08/10



SECTION A - A

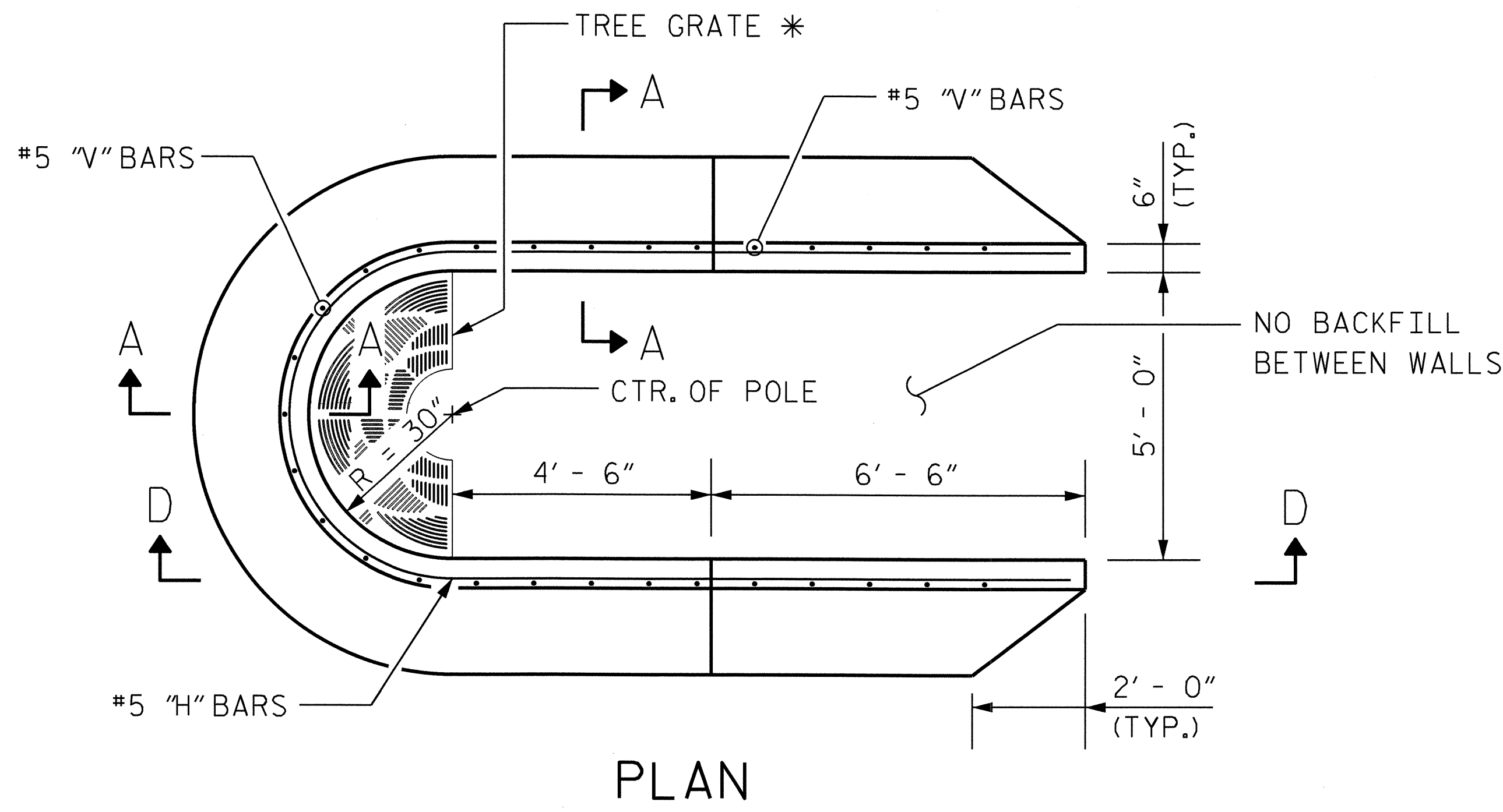


SECTION B - B

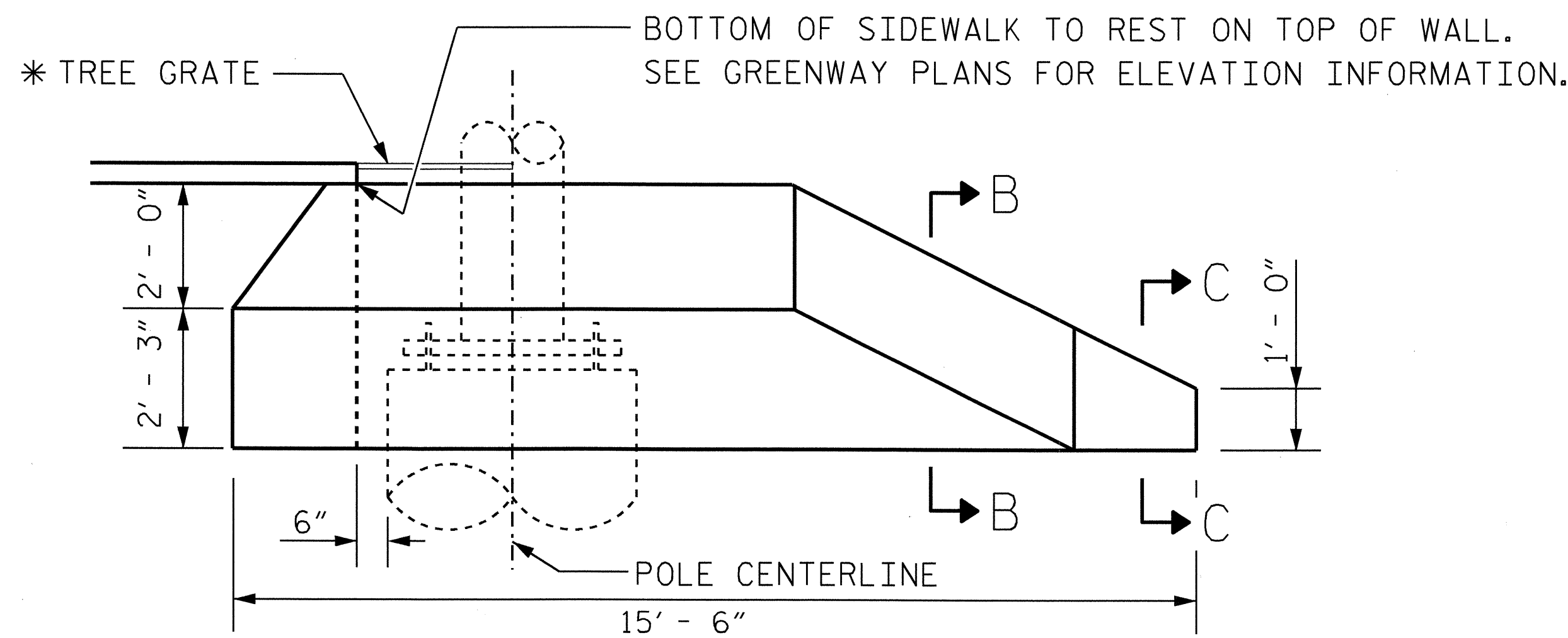


SECTION C - C

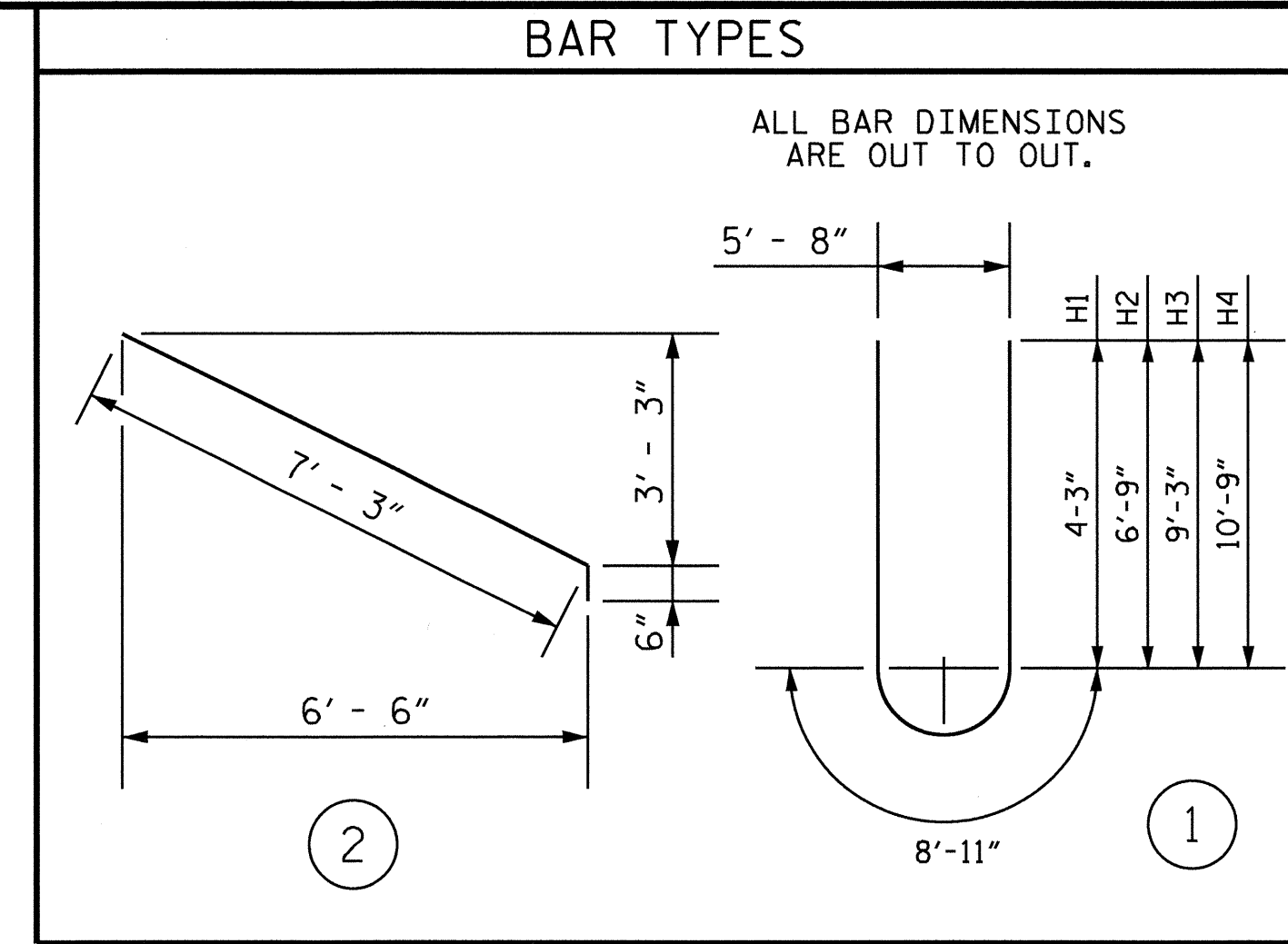
\* NOTE: CAST IRON TREE GRATE (AND ASSOCIATED FRAME) TO BE 60" DIA-METER ROUND, WITH 18" TO 19" TREE OPENING. ONE HALF SECTION OF GRATE ASSEMBLY AT EACH POLE COLLAR WALL. GRATE SHALL MEET ALL ADA REQUIREMENTS. GRATE FRAME TO BE CAST WITH SIDEWALK. GRATE TO BE BOLTED TO FRAME AND TAMPER-PROOF MEASURES PROVIDED. SUBMIT PROPOSED TREE GRATE TO NCDOT FOR PROJECT APPROVAL. TREE GRATE SHALL MEET NCDOT SPECIFICATIONS OR SHALL BE NCDOT-APPROVED.



PLAN

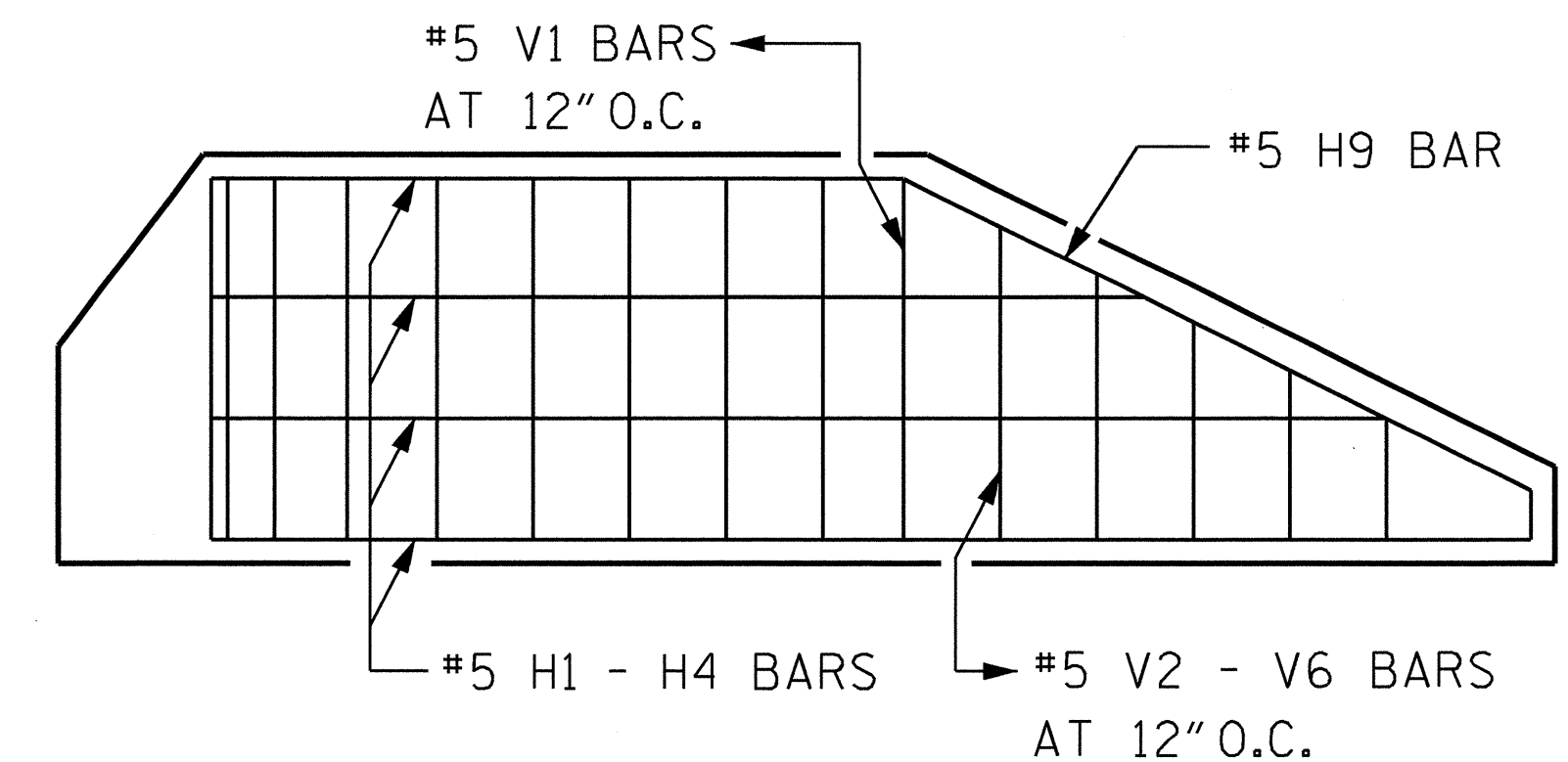


ELEVATION



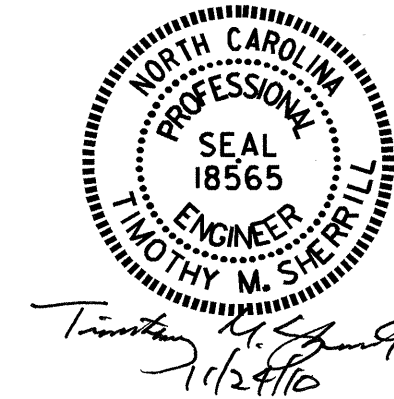
NOTE:

CONTRACTOR MAY USE STAY-IN-PLACE FORMS FOR WALL. SUBMIT PROPOSED STAY-IN-PLACE FORMS FOR APPROVAL.

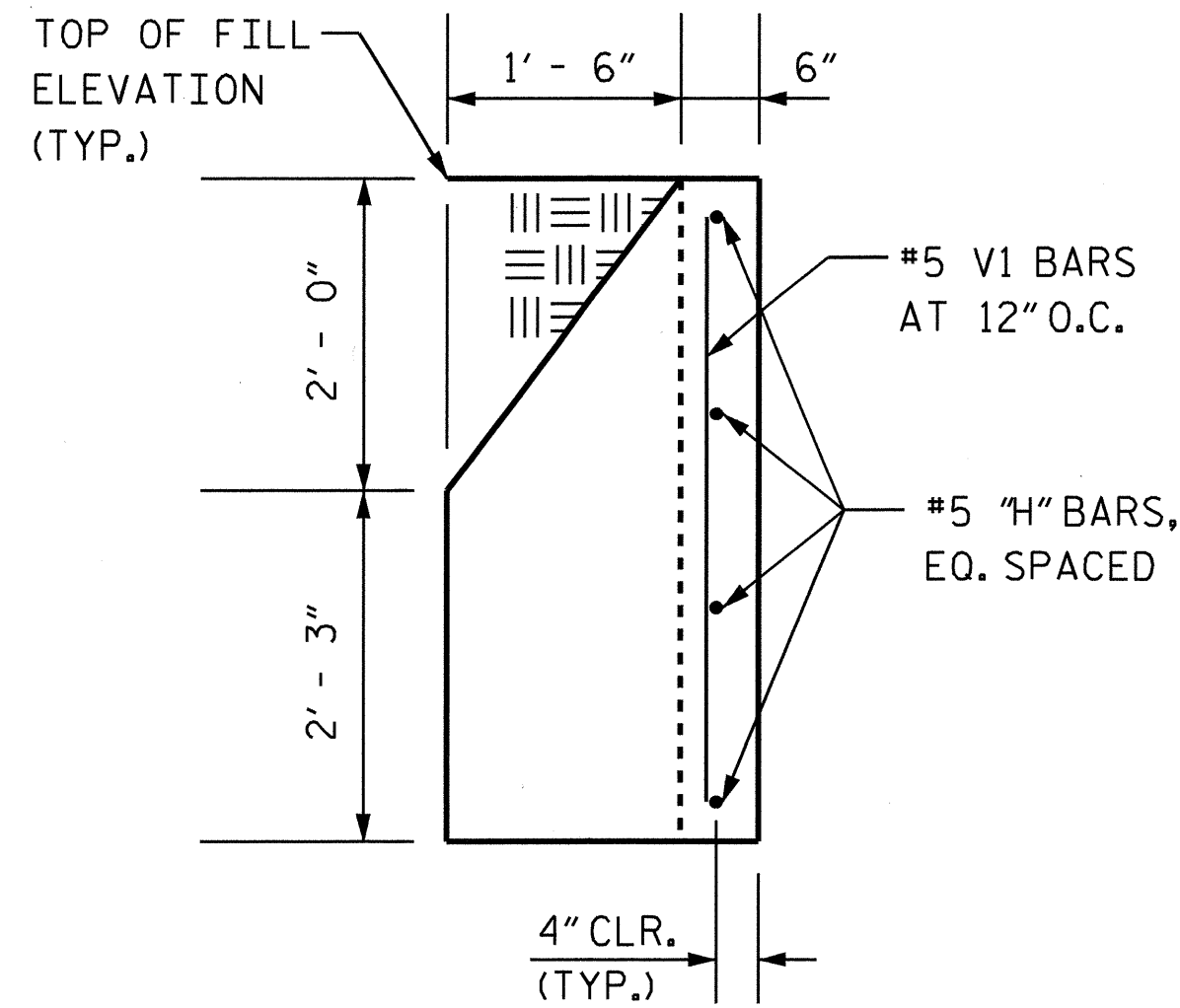


SECTION D - D

BILL OF MATERIAL					
BAR NO.	NO.	SIZE	TYPE	LENGTH	WEIGHT
H1	1	#5	1	17'-5"	18
H2	1	#5	1	22'-5"	23
H3	1	#5	1	27'-5"	29
H4	1	#5	1	30'-5"	32
H9	2	#5	2	7'-9"	16
V1	19	#5	STR	3'-9"	75
V2	2	#5	STR	3'-3"	7
V3	2	#5	STR	2'-9"	6
V4	2	#5	STR	2'-3"	5
V5	2	#5	STR	1'-9"	4
V6	2	#5	STR	1'-3"	3
REINFORCING STEEL FOR 1 POLE COLLAR WALL					218 LBS
CLASS A CONCRETE 1 COLLAR WALL					5.9 CY

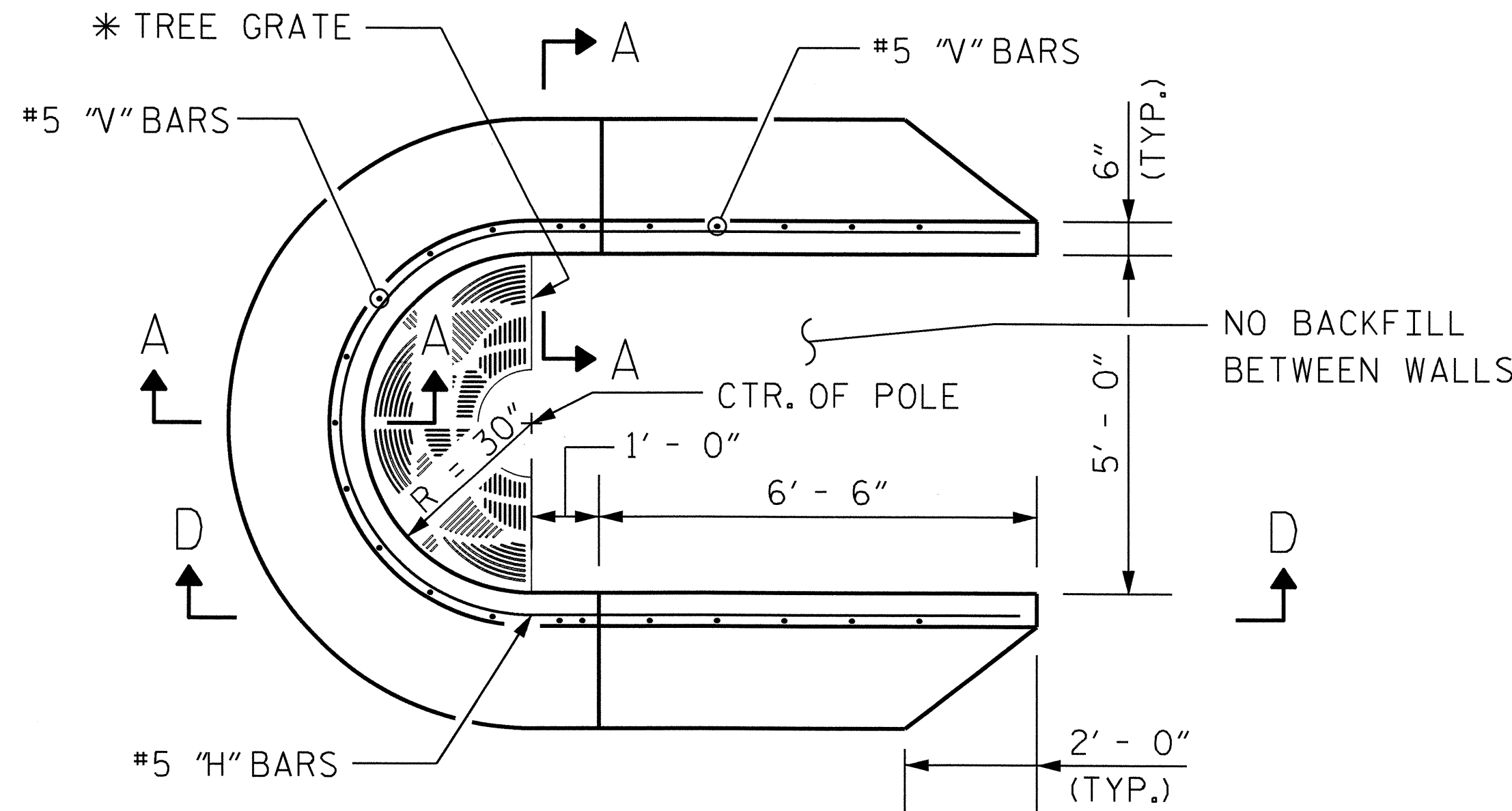


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NO.	BY:	DATE:	NO.	BY:	DATE:	S-6
1			3			TOTAL SHEETS
2			4			

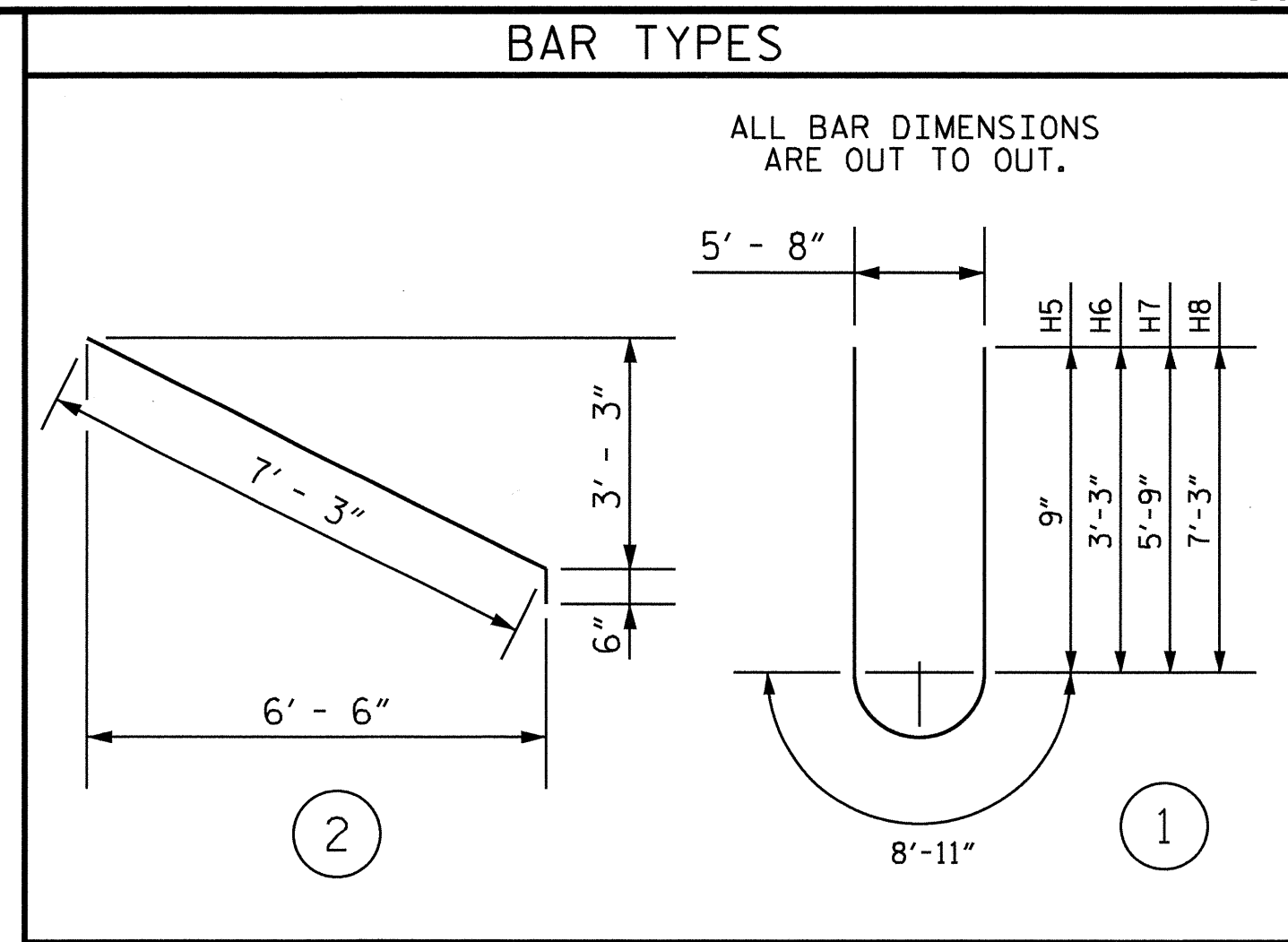


SECTION A - A

\* NOTE: CAST IRON TREE GRATE (AND ASSOCIATED FRAME) TO BE 60" DIA-METER ROUND, WITH 18" TO 19" TREE OPENING. ONE HALF SECTION OF GRATE ASSEMBLY AT EACH POLE COLLAR WALL. GRATE SHALL MEET ALL ADA REQUIREMENTS. GRATE FRAME TO BE CAST WITH SIDEWALK. GRATE TO BE BOLTED TO FRAME AND TAMPER-PROOF MEASURES PROVIDED. SUBMIT PROPOSED TREE GRATE TO NCDOT FOR PROJECT APPROVAL. TREE GRATE SHALL MEET NCDOT SPECIFICATIONS OR SHALL BE NCDOT-APPROVED.

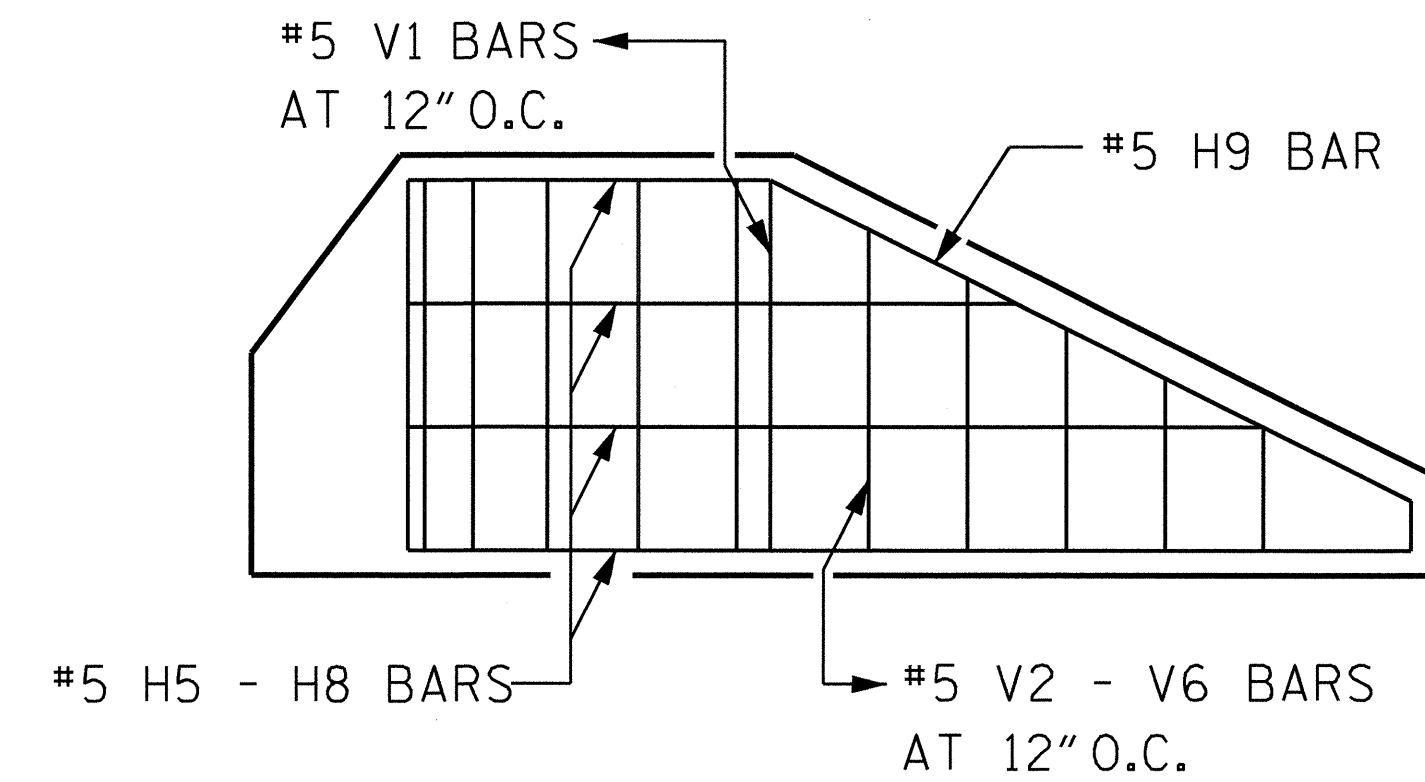


PLAN



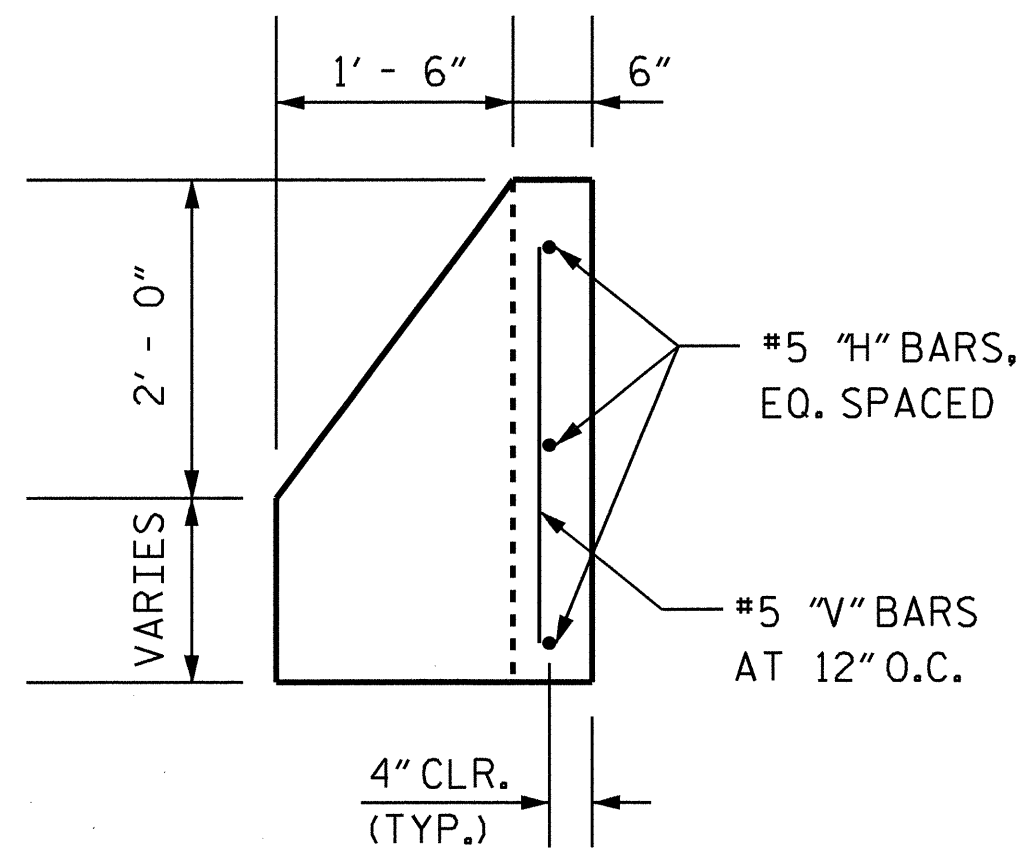
NOTE:

CONTRACTOR MAY USE STAY-IN-PLACE FORMS FOR WALL. SUBMIT PROPOSED STAY-IN-PLACE FORMS FOR APPROVAL.

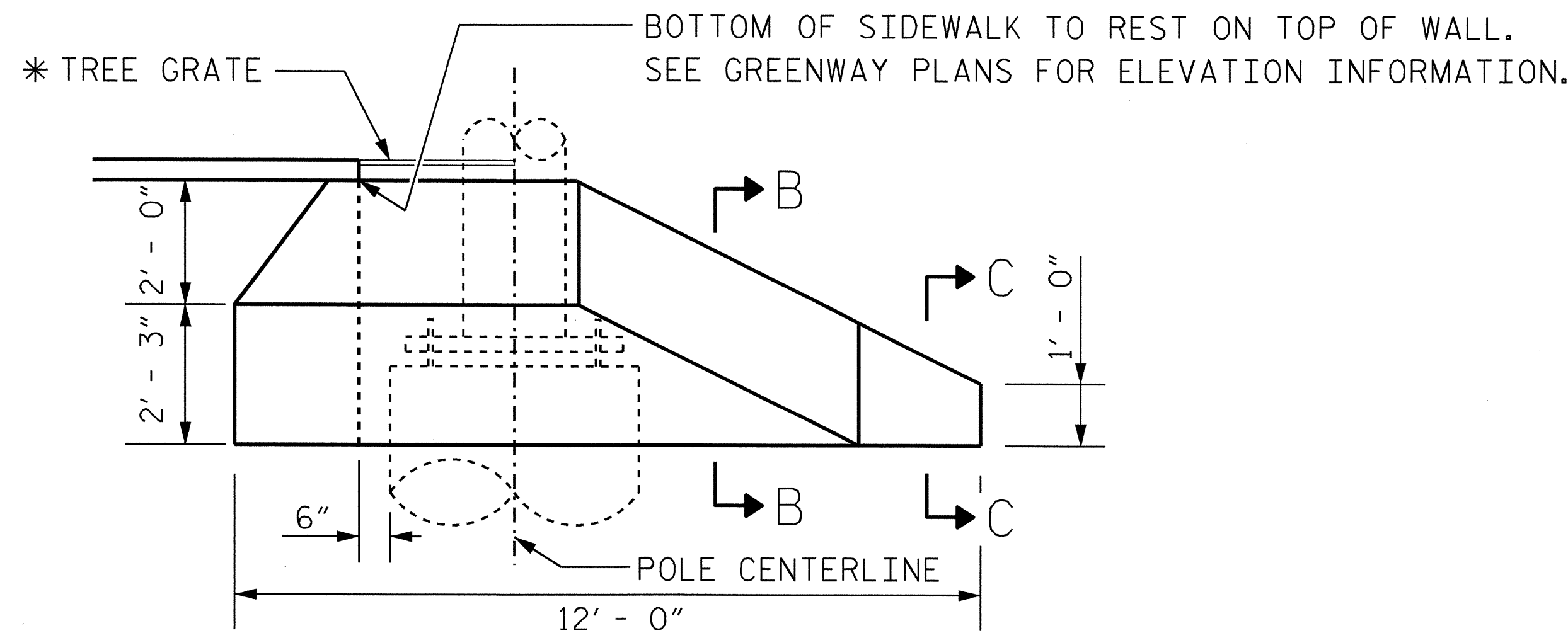


SECTION D - D

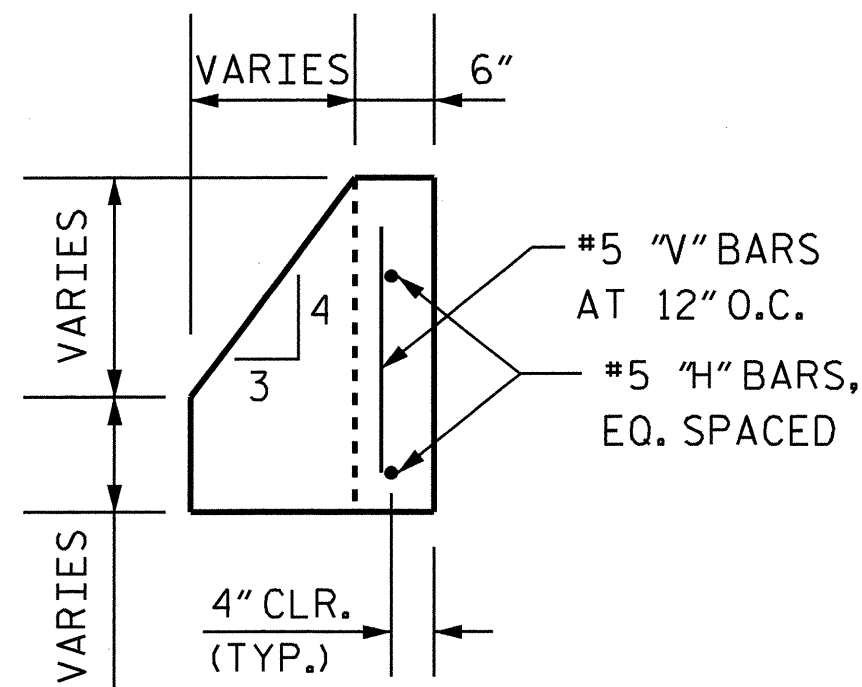
BILL OF MATERIAL					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
H5	1	#5	1	10'-5"	11
H6	1	#5	1	15'-5"	16
H7	1	#5	1	20'-5"	21
H8	1	#5	1	23'-5"	24
H9	2	#5	2	7'-9"	16
V1	13	#5	STR	3'-9"	51
V2	2	#5	STR	3'-3"	7
V3	2	#5	STR	2'-9"	6
V4	2	#5	STR	2'-3"	5
V5	2	#5	STR	1'-9"	4
V6	2	#5	STR	1'-3"	3
REINFORCING STEEL FOR 1 POLE COLLAR WALL					164 LBS
CLASS A CONCRETE 1 COLLAR WALL					4.1 CY



SECTION B - B

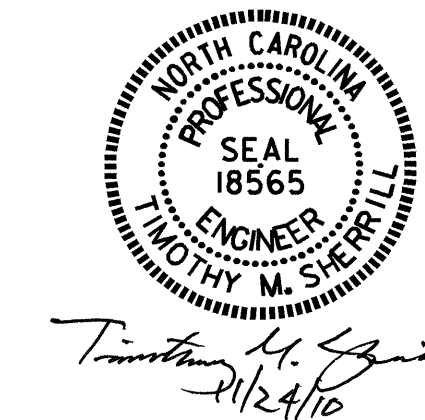


ELEVATION



SECTION C - C

DRAWN BY : T. SHERRILL DATE : 08/10  
 CHECKED BY : F. ASEFNIA DATE : 08/10



PROJECT NO. EB-4978  
 WAKE COUNTY  
 STATION: 27+04.17 -G-

SHEET 2 OF 2

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 POLE COLLAR WALLS  
 EDWARDS MILL  
 MULTI-USE TRAIL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-7
1			3			TOTAL SHEETS
2			4			