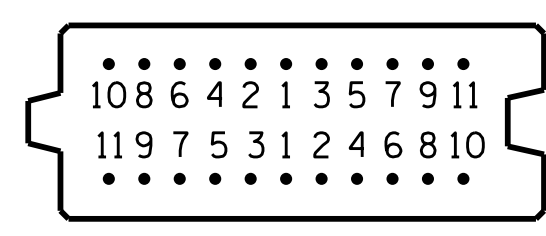
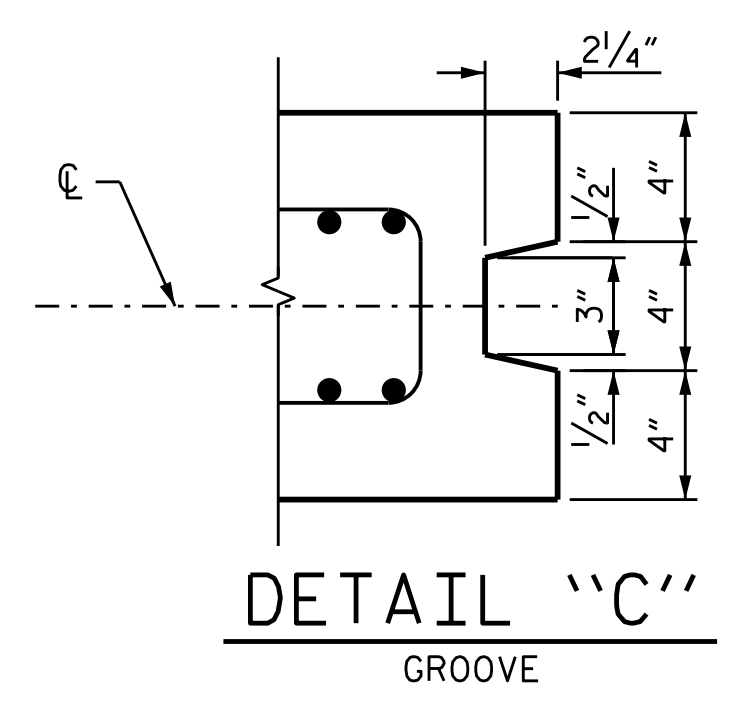
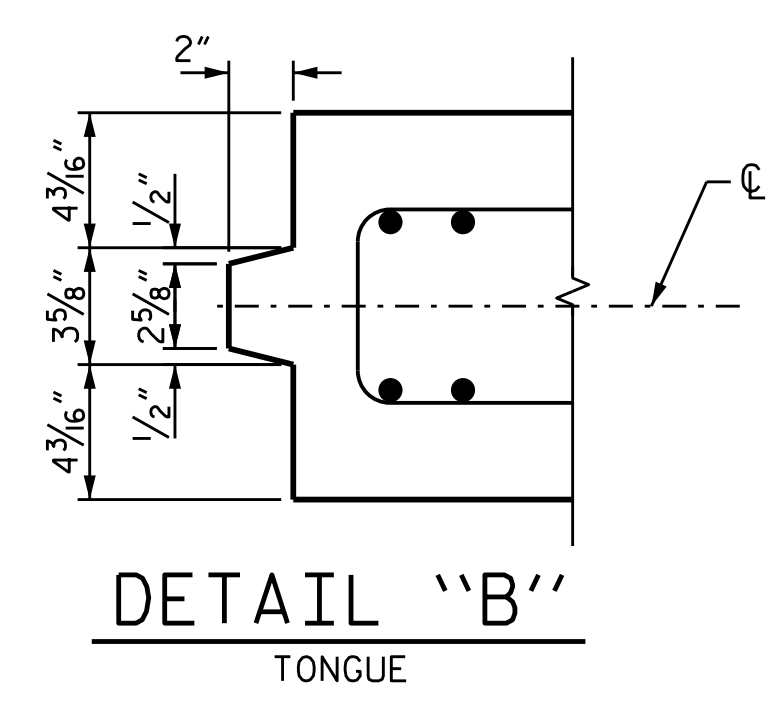
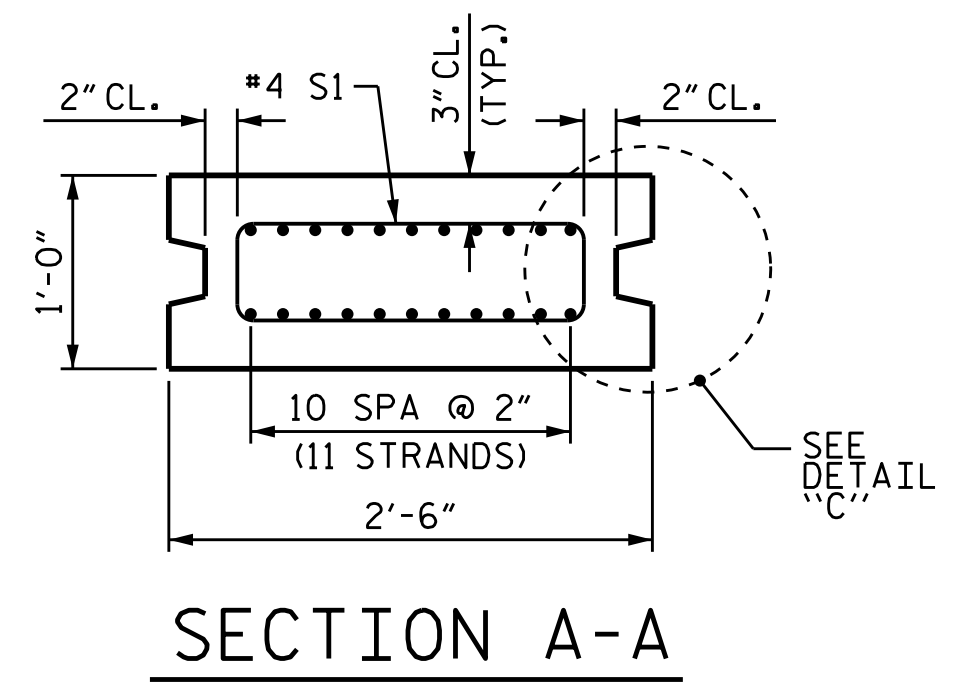


0.6" Ø L. R. GRADE 270 STRANDS		
AREA (SQUARE INCHES)	ULTIMATE STRENGTH (LBS. PER STRAND)	APPLIED PRESTRESS (LBS. PER STRAND)
0.217	58,600	43,950



PATTERN FOR BURNING

NOTES

THE SHEET PILE WIDTH DIMENSIONS ARE NOMINAL. THESE DIMENSIONS MAY BE SHORTENED BY THE MANUFACTURER UP TO 1/2" TO ALLOW FOR SHEET PILE FIT-UP IN ITS FINAL POSITION. NO CHANGES SHALL BE MADE TO THE TONGUES OR GROOVES.

THE WATER/CEMENT RATIO FOR PRESTRESSED CONCRETE SHEET PILES SHALL NOT EXCEED 0.40.

PRESTRESSED CONCRETE SHEET PILES SHALL CONTAIN CALCIUM NITRITE CORROSION INHIBITOR IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, EXCEPT THAT THE INHIBITOR SHALL BE APPLIED AT A RATE OF 4.0 GALLONS PER CUBIC YARD. NO SEPARATE PAYMENT WILL BE MADE FOR THE ADDITION OF CALCIUM NITRITE, AS IT IS CONSIDERED INCIDENTAL TO THE VARIOUS PAY ITEMS.

PRESTRESSED CONCRETE SHEET PILES SHALL CONTAIN A MINIMUM OF 25% FLY ASH CLASS F OR A MINIMUM OF 40% GROUND GRANULATED BLAST FURNACE SLAG (GGBFS). ADDITIONALLY, SILICA FUME SHALL BE SUBSTITUTED FOR A MINIMUM 5% OF THE PORTLAND CEMENT BY WEIGHT IN THE PRESTRESSED CONCRETE SHEET PILES. MINERAL ADMIXTURES SHALL REPLACE THE CEMENT CONTENT AT A 1:1 RATIO BY WEIGHT. NO PAYMENT WILL BE MADE FOR THIS SUBSTITUTION, AS IT IS CONSIDERED INCIDENTAL TO THE VARIOUS PAY ITEMS.

BAR TYPES	
S1	1'-9 1/2"
S2	1'-11 1/2"
S3	1'-8"
S4	1'-4"
S5	2'-2"
S6	1'-7"
S7	11"
V1	23'-4"
V2	19'-10"
V3	21'-10"
V4	24'-10"

BILL OF MATERIAL					
A1 (STARTER PILE)					
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT
S1	12	#4	1	5'-4"	43
S5	27	#4	1	6'-1"	110
S6	1	#4	1	4'-11"	3
S7	1	#4	1	3'-7"	2
V1	4	#5	2	24'-4"	102
A2 (TYPICAL PILE)					
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT
S1	9	#4	1	5'-4"	32
S2	24	#4	1	5'-8"	91
S3	1	#4	1	5'-1"	3
S4	1	#4	1	4'-5"	3
V2	2	#5	2	20'-10"	43
A3 (TYPICAL PILE)					
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT
S1	10	#4	1	5'-4"	36
S2	26	#4	1	5'-8"	98
S3	1	#4	1	5'-1"	3
S4	1	#4	1	4'-5"	3
V3	2	#5	2	22'-10"	48
A4 (TYPICAL PILE)					
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT
S1	12	#4	1	5'-4"	43
S2	27	#4	1	5'-8"	102
S3	1	#4	1	5'-1"	3
S4	1	#4	1	4'-5"	3
V4	2	#5	2	24'-4"	51
A5 (TYPICAL PILE)					
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT
S1	13	#4	1	5'-4"	46
S2	29	#4	1	5'-8"	110
S3	1	#4	1	5'-1"	3
S4	1	#4	1	4'-5"	3
V4	2	#5	2	25'-10"	54

QUANTITIES FOR ONE PILE			
PILE	REINFORCING STEEL	8,000 PSI CONCRETE	0.6" Ø L. R. STRANDS
	LB.	C.Y.	No.
A1 (STARTER PILE)	260	3.0	22
A2 (TYPICAL PILE)	172	2.4	22
A3 (TYPICAL PILE)	188	2.7	22
A4 (TYPICAL PILE)	202	3.0	22
A5 (TYPICAL PILE)	216	3.2	22

PROJECT NO. B-2500AB
 DARE COUNTY
 STATION: 3170+75.00 -L-

SHEET 7 OF 11

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

CONCRETE SHEET PILE
 RETAINING WALL
 SHEET PILE DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			W-7 TOTAL SHEETS 13
2			4			

DRAWN BY: T. M. GARRISON, P.E. DATE: 6/15
 CHECKED BY: M. A. ALLEN DATE: 6/15
 DESIGN ENGINEER OF RECORD: T. M. GARRISON, P.E. DATE: 6/15



DocuSigned by:
 61EAF7529A5456E
 8/3/2015