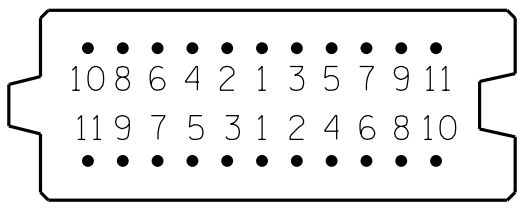
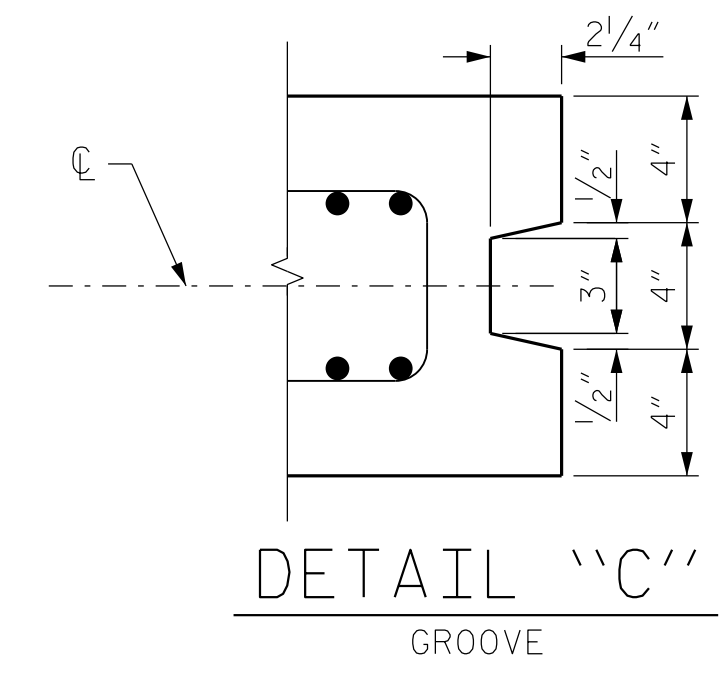
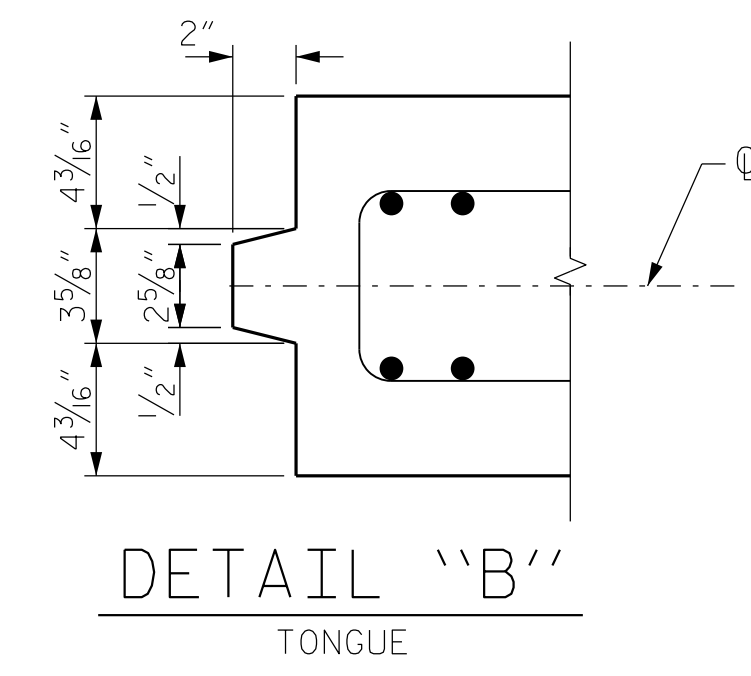
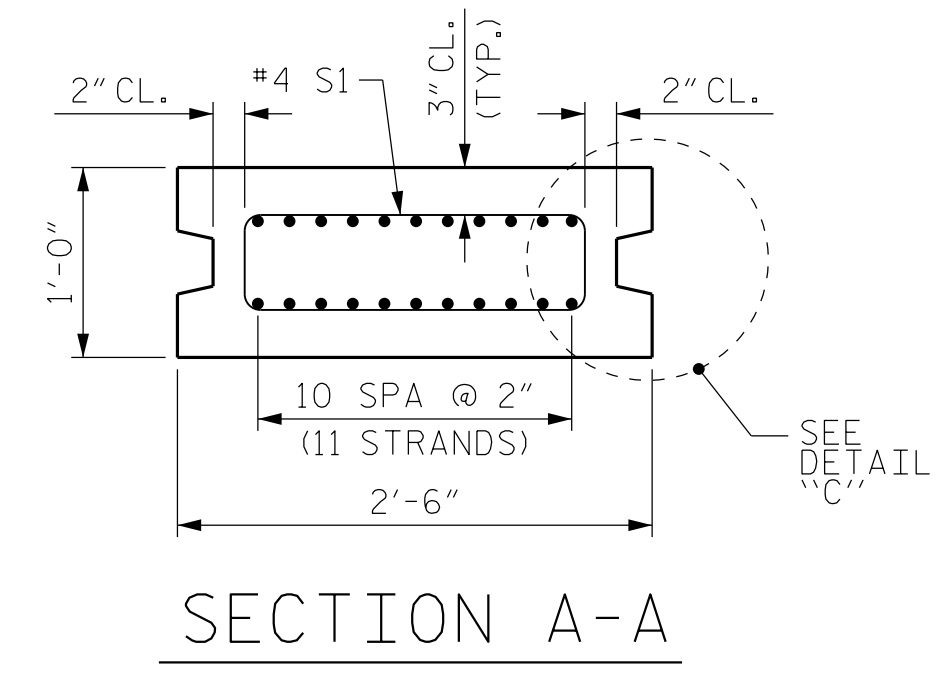


PILE TYPES
A3, A4, A5,
A6, A7 & A8
(TYPICAL PILES)

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

BAR TYPES	
S1	1'-9 1/2"
S5	1'-11 1/2"
S6	1'-8"
S7	1'-4"
V1	39'-10"
V2	30'-10"
V3	36'-4"
V4	29'-4"
V9	34'-10"

ALL BAR DIMENSIONING ARE OUT-TO-OUT

BILL OF MATERIAL					
A3 (TYPICAL PILE)					
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT
S1	19	#4	1	5'-4"	68
S5	35	#4	1	5'-8"	133
S6	1	#4	1	5'-1"	4
S7	1	#4	1	4'-5"	3
V2	2	#5	2	31'-10"	67
A4 (TYPICAL PILE)					
S1	23	#4	1	5'-4"	82
S5	40	#4	1	5'-8"	152
S6	1	#4	1	5'-1"	4
S7	1	#4	1	4'-5"	3
V3	2	#5	2	37'-4"	78
A5 (TYPICAL PILE)					
S1	12	#4	1	5'-4"	43
S5	39	#4	1	5'-8"	148
S6	1	#4	1	5'-1"	4
S7	1	#4	1	4'-5"	3
V9	2	#5	2	35'-10"	75
A6 (TYPICAL PILE)					
S1	16	#4	1	5'-4"	58
S5	33	#4	1	5'-8"	125
S6	1	#4	1	5'-1"	4
S7	1	#4	1	4'-5"	3
V4	2	#5	2	30'-4"	64
A7 (TYPICAL PILE)					
S1	9	#4	1	5'-4"	33
S5	35	#4	1	5'-8"	133
S6	1	#4	1	5'-1"	4
S7	1	#4	1	4'-5"	3
V2	2	#5	2	31'-10"	67
A8 (TYPICAL PILE)					
S1	14	#4	1	5'-4"	50
S5	44	#4	1	5'-8"	167
S6	1	#4	1	5'-1"	4
S7	1	#4	1	4'-5"	3
V1	2	#5	2	40'-10"	86

PILE	QUANTITIES FOR ONE PILE		
	REINFORCING STEEL LB.	8,000 PSI CONCRETE C.Y.	0.6" Ø L. R. STRANDS No.
A3 (TYPICAL PILE)	275	4.4	22
A4 (TYPICAL PILE)	319	5.2	22
A5 (TYPICAL PILE)	273	4.1	22
A6 (TYPICAL PILE)	254	3.9	22
A7 (TYPICAL PILE)	240	3.4	22
A8 (TYPICAL PILE)	310	4.7	22

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.



DocuSigned by:
Brandon Green
20200806061448
3/9/2020

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. B-4863
CARTERET COUNTY
STATION: 34+75.00 -L-

SHEET 7 OF 16

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		
2			4		

W-07
TOTAL SHEETS
24

DRAWN BY : B. L. GREEN, P.E. DATE : 3/19
CHECKED BY : D. A. CANTRELL, P.E. DATE : 6/19
DESIGN ENGINEER OF RECORD : B. L. GREEN, P.E. DATE : 7/19