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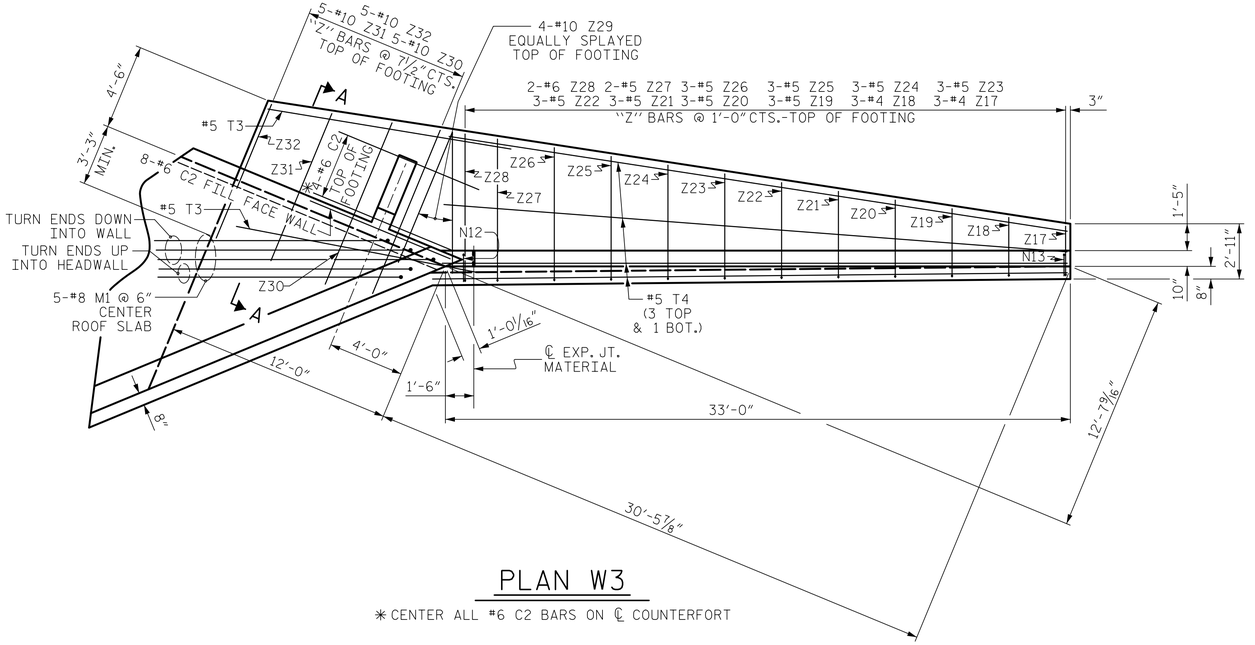
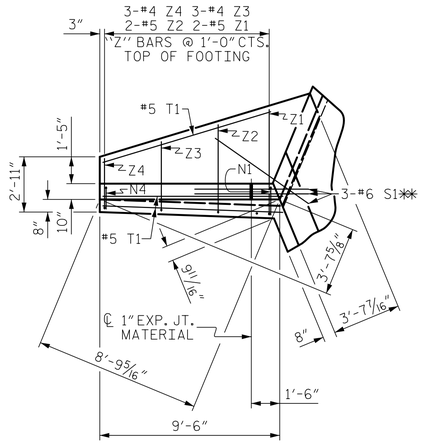
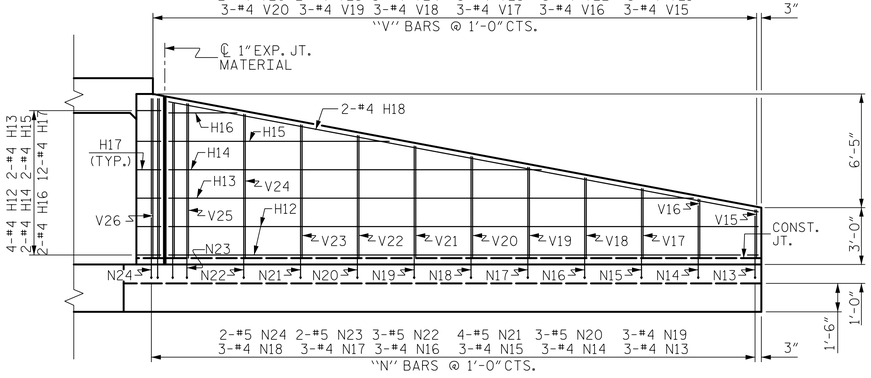


PLAN W3

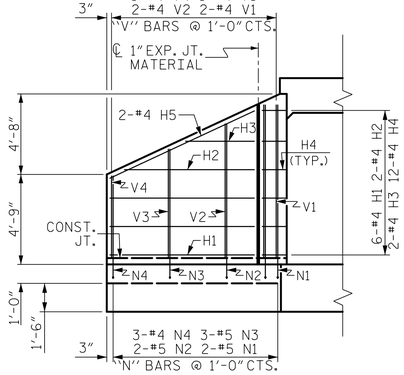
✱ CENTER ALL #6 C2 BARS ON ℄ COUNTERFORT



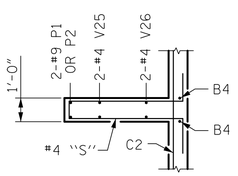
PLAN W2



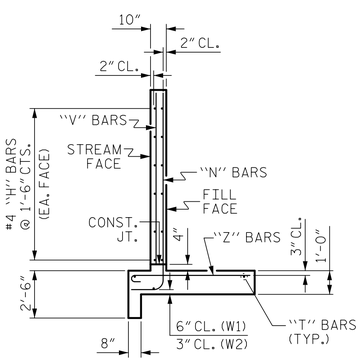
ELEVATION W3



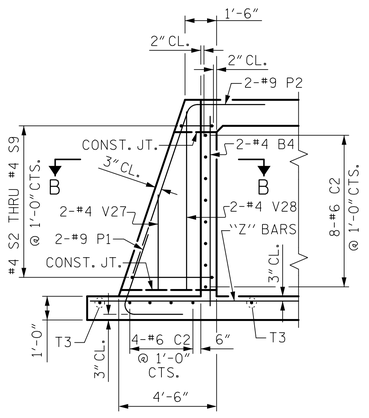
ELEVATION W2



SECTION B-B



WING SECTION



SECTION A-A

STANDARD REINFORCING STEEL IN BARREL NOT SHOWN

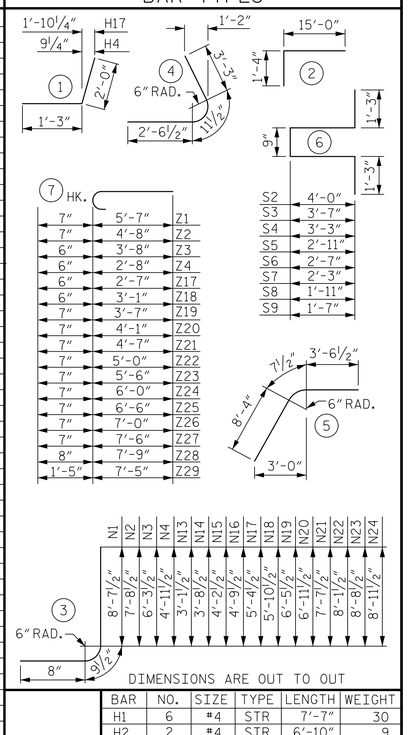
BILL OF MATERIAL

LONG WING W3

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B4	2	#4	STR	9'-0"	12
C2	12	#6	STR	8'-0"	144
H12	4	#4	STR	31'-1"	83
H13	2	#4	STR	27'-8"	37
H14	2	#4	STR	19'-7"	26
H15	2	#4	STR	11'-7"	15
H16	2	#4	STR	3'-7"	5
H17	12	#4	1	3'-6"	28
H18	2	#4	STR	31'-8"	42
M1	5	#8	2	16'-4"	218
N13	3	#4	3	4'-7"	9
N14	3	#4	3	5'-2"	10
N15	3	#4	3	5'-8"	11
N16	3	#4	3	6'-3"	13
N17	3	#4	3	6'-10"	14
N18	3	#4	3	7'-4"	15
N19	3	#4	3	7'-11"	16
N20	3	#5	3	8'-5"	26
N21	3	#5	3	9'-1"	28
N22	3	#5	3	9'-7"	30
N23	2	#5	3	10'-2"	21
N24	2	#5	3	10'-5"	22
P1	2	#9	4	6'-9"	46
P2	2	#9	5	12'-6"	85
S2	1	#4	6	11'-3"	8
S3	1	#4	6	10'-5"	7
S4	1	#4	6	9'-9"	7
S5	1	#4	6	9'-1"	6
S6	1	#4	6	8'-5"	6
S7	1	#4	6	7'-9"	5
S8	1	#4	6	7'-1"	5
S9	1	#4	6	6'-5"	4
T3	2	#5	STR	12'-0"	25
T4	4	#5	STR	33'-0"	138
V15	3	#4	STR	2'-6"	5
V16	3	#4	STR	3'-1"	6
V17	3	#4	STR	3'-7"	7
V18	3	#4	STR	4'-2"	8
V19	3	#4	STR	4'-9"	10
V20	3	#4	STR	5'-4"	11
V21	3	#4	STR	5'-10"	12
V22	3	#4	STR	6'-5"	13
V23	3	#4	STR	7'-0"	14
V24	3	#4	STR	7'-7"	15
V25	2	#4	STR	8'-2"	11
V26	2	#4	STR	8'-9"	12
V27	2	#4	STR	4'-0"	5
V28	2	#4	STR	8'-0"	11
Z17	3	#4	7	3'-1"	6
Z18	3	#4	7	3'-7"	7
Z19	3	#5	7	4'-2"	13
Z20	3	#5	7	4'-8"	15
Z21	3	#5	7	5'-2"	16
Z22	3	#5	7	5'-7"	17
Z23	3	#5	7	6'-1"	19
Z24	3	#5	7	6'-7"	21
Z25	3	#5	7	7'-1"	22
Z26	3	#5	7	7'-7"	24
Z27	2	#5	7	8'-1"	17
Z28	2	#6	7	8'-5"	25
Z29	4	#10	7	8'-10"	152
Z30	5	#10	STR	9'-2"	197
Z31	5	#10	STR	8'-4"	179
Z32	5	#10	STR	7'-8"	165

REINFORCING STEEL FOR 1 W3 WING 2,202 LBS.

BAR TYPES



DIMENSIONS ARE OUT TO OUT

SHORT WING W2

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
H1	6	#4	STR	7'-7"	30
H2	2	#4	STR	6'-10"	9
H3	2	#4	STR	3'-7"	5
H4	12	#4	1	3'-3"	26
H5	2	#4	STR	8'-5"	11
N1	2	#5	3	10'-1"	21
N2	2	#5	3	9'-2"	19
N3	3	#5	3	7'-9"	24
N4	3	#4	3	6'-5"	13
S1	3	#6	STR	6'-0"	27
T1	3	#5	STR	9'-6"	30
V1	2	#4	STR	8'-1"	11
V2	2	#4	STR	7'-1"	9
V3	3	#4	STR	5'-9"	12
V4	3	#4	STR	4'-4"	9
Z1	2	#5	7	6'-2"	13
Z2	2	#5	7	5'-3"	11
Z3	3	#4	7	3'-8"	8
Z4	3	#4	7	2'-8"	6

REINFORCING STEEL FOR 1 W2 WING 294 LBS.

TOTAL WING QUANTITIES

REINFORCING STEEL FOR 2 WINGS	2,496 LBS.
CLASS A CONCRETE	
2 WINGS	20.5 C.Y.
1 END CURTAIN WALL	1.9 C.Y.
1 HEADWALL	1.6 C.Y.
TOTAL	24.0 C.Y.

NOTE:
A 3 FOOT STRIP OF FILTER FABRIC SHALL BE ATTACHED TO THE FILL FACE OF THE WING COVERING THE ENTIRE LENGTH OF THE EXPANSION JOINT.

G1 BARS IN HEADWALL ARE INCLUDED WITH THE BARREL REINFORCING STEEL.

PROJECT NO. A-0009CA
GRAHAM COUNTY
STATION: 195+16.00 -L-

SHEET 7 OF 7

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 20125 Marshall G. Cheek, Jr. 6/1/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
706 HILLSBOROUGH STREET
SUITE 200
RALEIGH, NC 27603
PH. (919) 773-8887
CORP. LICENSE NO.: C-0275

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

OUTLET WINGS W2 AND W3

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C6-7
1			3			TOTAL SHEETS
2			4			7

DRAWN BY : ZCS DATE : 2/21
CHECKED BY : MGC DATE : 6/21
DESIGN ENGINEER OF RECORD: ZCS DATE : 11/21

3/22/2022
X:\NCDOT\A-0009\Structures\A-0009CA\STR. #6 195+16.00 -L-\Final Plans\DGNs\416_013_A-0009CA_SMU_CU07.dgn
User:ZSmith