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PROJECT REFERENCE NO.	SHEET NO.
R-2561CA	2C-7

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

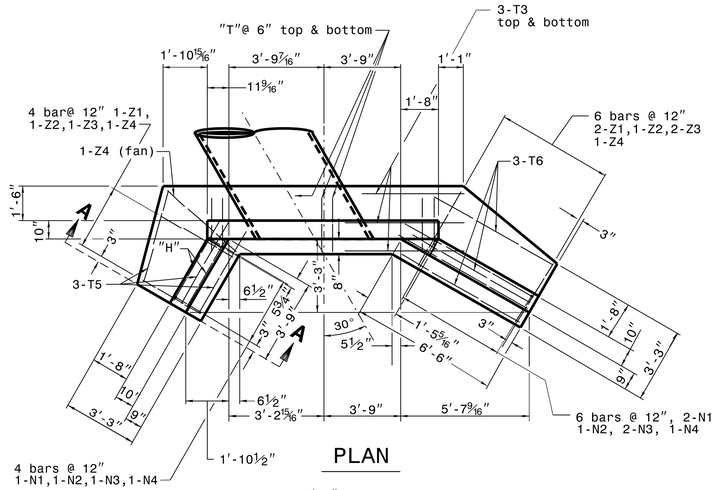
ENGLISH DETAIL DRAWING FOR

REINFORCED CONCRETE ENDWALL

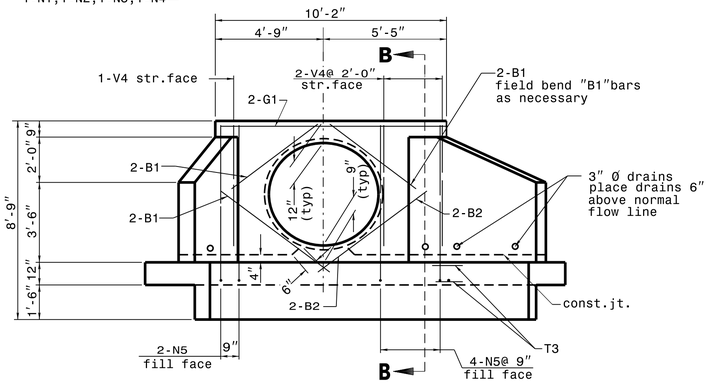
SINGLE 54" PIPE 60° OR 120° SKEW

SHEET 1 OF 1

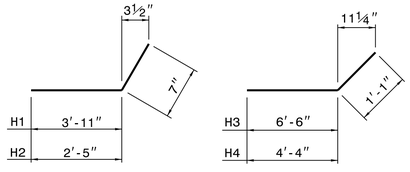
838D24



PLAN

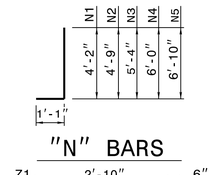


ELEVATION

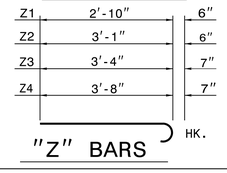


"H" BARS

"H" BARS



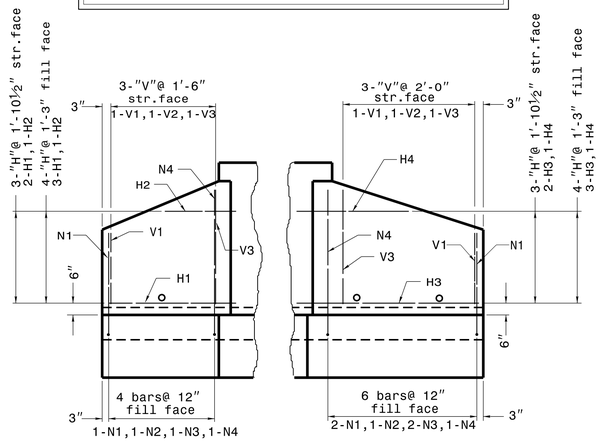
"N" BARS



"Z" BARS

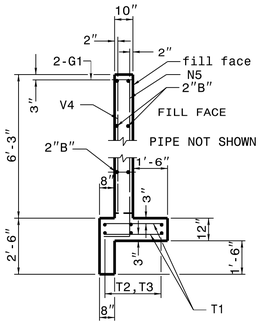
"H", "N", & "Z" BAR DIMENSIONS ARE OUT TO OUT.

SEE STD. NO. 838.45 FOR GENERAL NOTES.

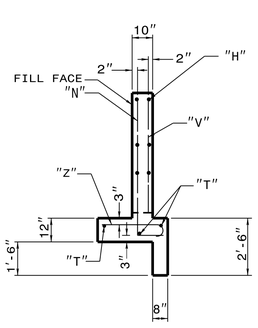


WING ELEVATION

BILL OF MATERIAL FOR ENDWALLS				
REINF. STEEL			1-PIPE	
BAR	SIZE	LENGTH	NO.	WEIGHT
Z1	#4	3'-4"	3	7
Z2	#4	3'-7"	2	5
Z3	#5	3'-11"	3	12
Z4	#5	4'-3"	3	13
N1	#4	5'-3"	3	11
N2	#4	5'-10"	2	8
N3	#4	6'-5"	3	13
N4	#5	7'-1"	2	15
N5	#4	7'-11"	6	32
V1	#4	3'-0"	2	4
V2	#4	3'-10"	2	5
V3	#4	4'-8"	2	6
V4	#4	5'-9"	3	12
H1	#4	4'-6"	5	15
H2	#4	3'-0"	2	4
H3	#4	7'-7"	5	25
H4	#4	5'-5"	2	7
G1	#7	9'-10"	2	40
T1	#4	2'-6"	40	67
T2	#4	12'-10"	6	51
T5	#4	4'-2"	3	8
T6	#4	6'-0"	3	12
B1	#4	4'-9"	6	19
B2	#4	6'-0"	2	8
REINF. STEEL LBS.				399
CONC/C.M. CU. YDS.				5.8
CONC/R.C. CU. YDS.				5.6



SECTION - BB



SECTION - AA

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR

REINFORCED CONCRETE ENDWALL

SINGLE 54" PIPE 60° OR 120° SKEW

SHEET 1 OF 1

838D24

DocuSigned by:
Ron Davenport
F81B8038A47A4C...
2022.08.17

NORTH CAROLINA PROFESSIONAL SEAL 022071 ENGINEER RONALD DAVENPORT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS & DEVELOPMENT UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-707-6950 FAX 919-250-4119

SEE PLATE FOR TITLE

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MODIFIED BY: rnbritt DATE: 05-08-06
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FILE SPEC.: s:\nbritt\english\hydro\838d24_54_endwall_60sk.dgn

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jhowerton AT CSD-242595