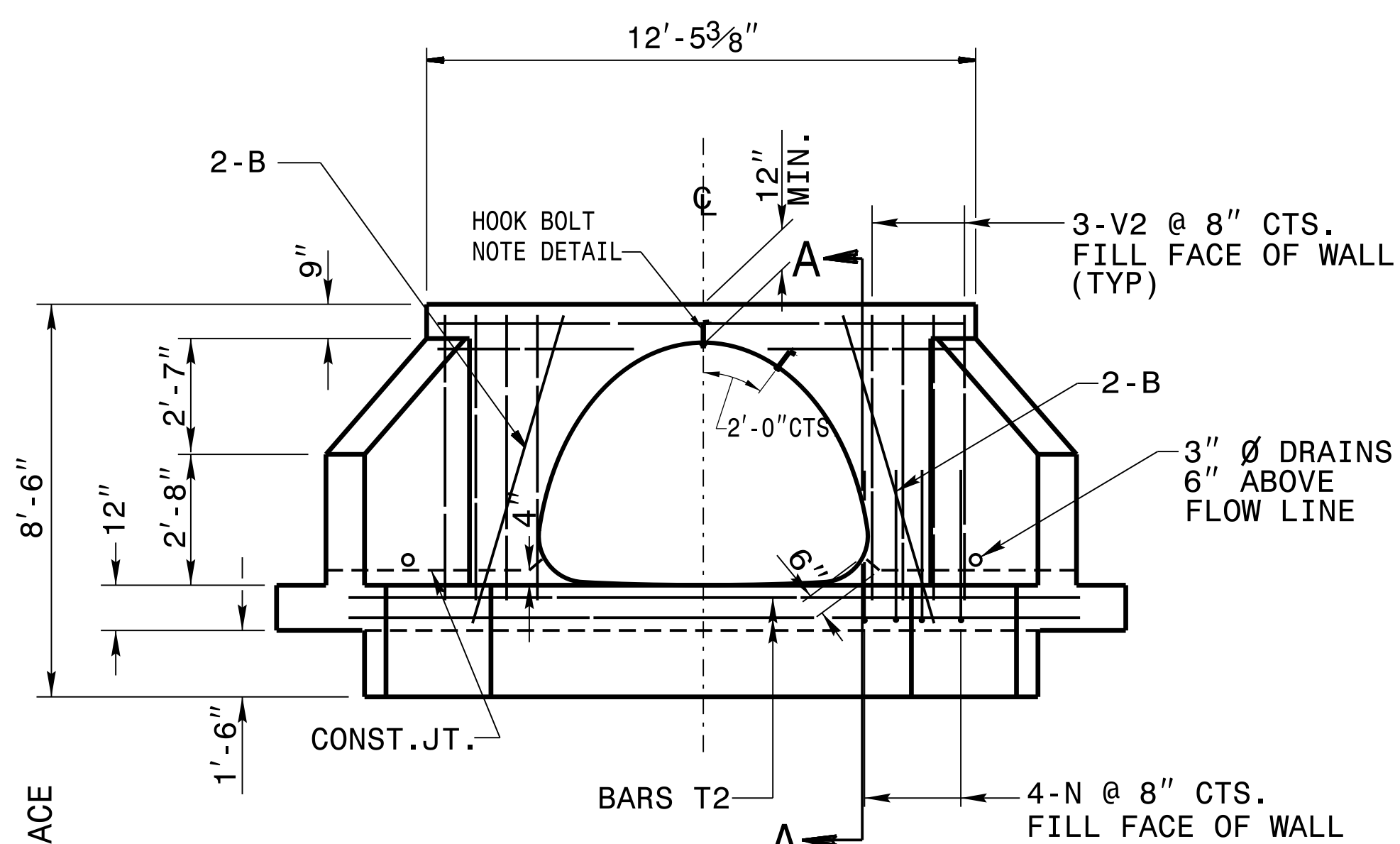
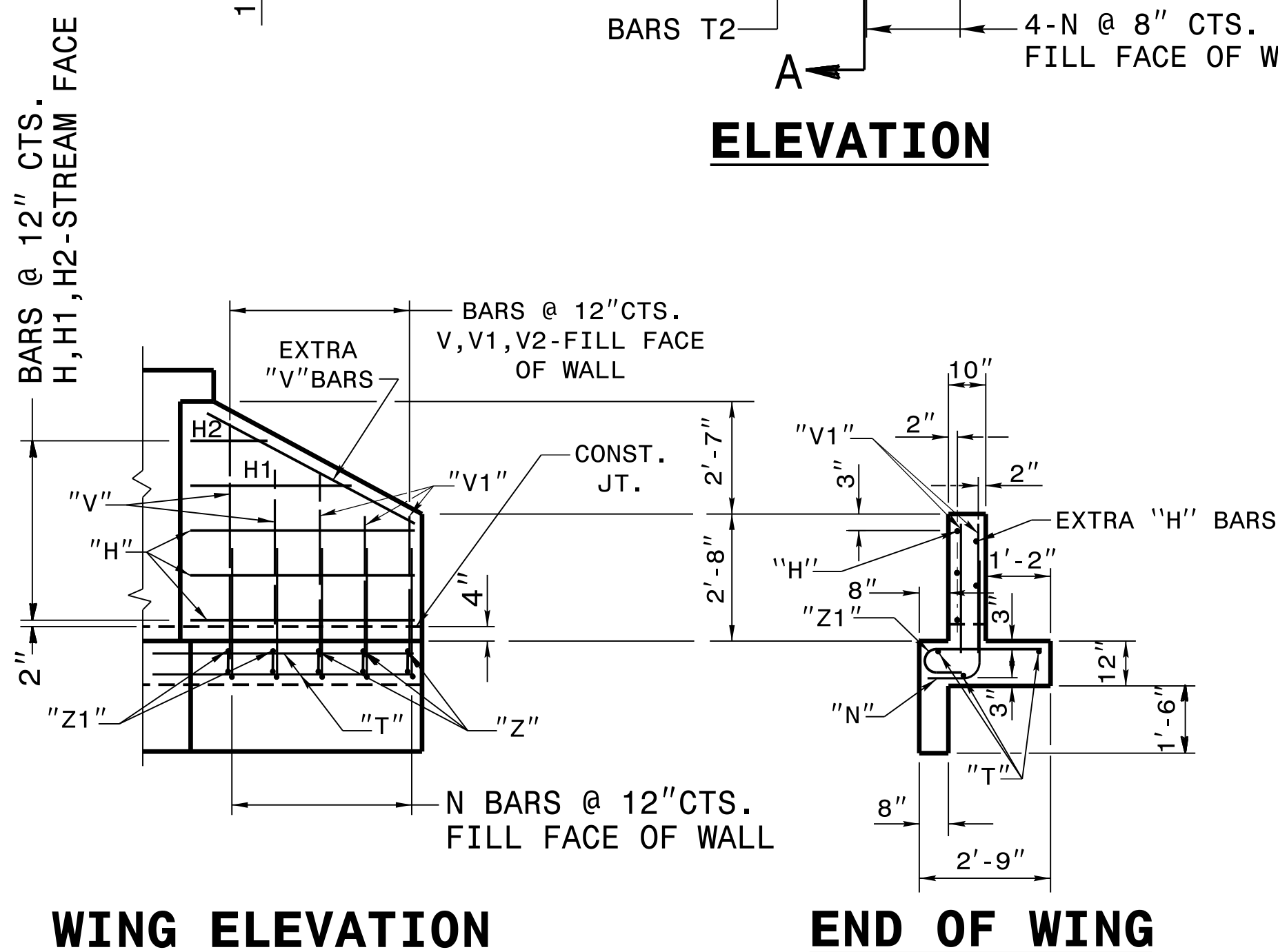


PLAN

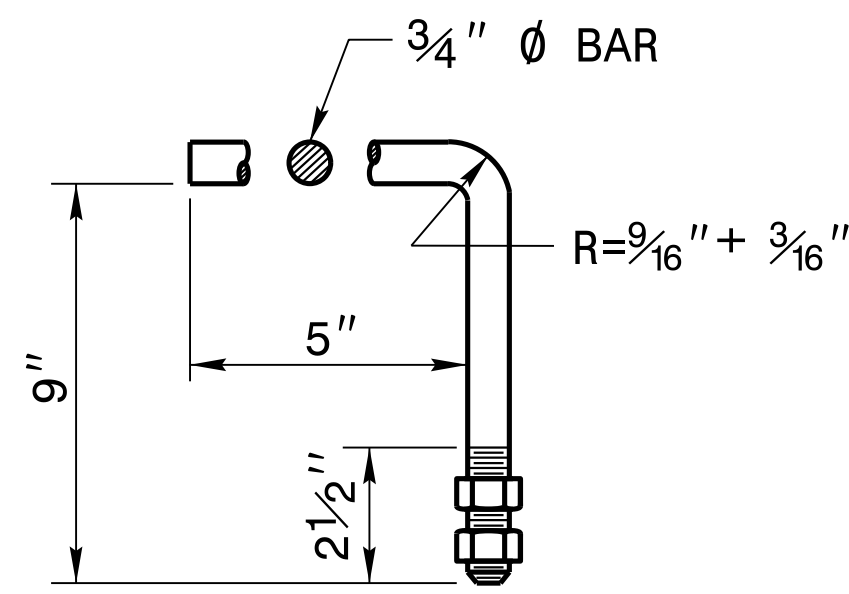


ELEVATION



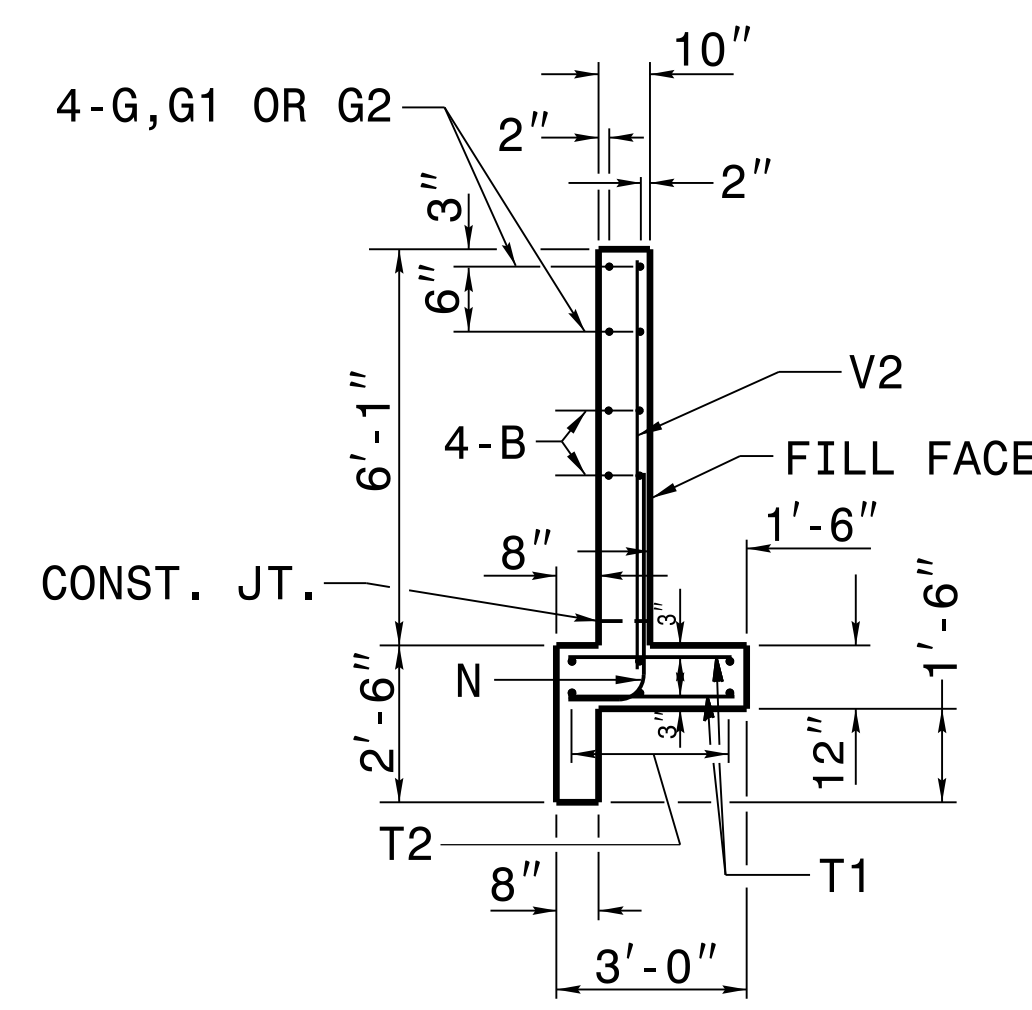
WING ELEVATION

END OF WING

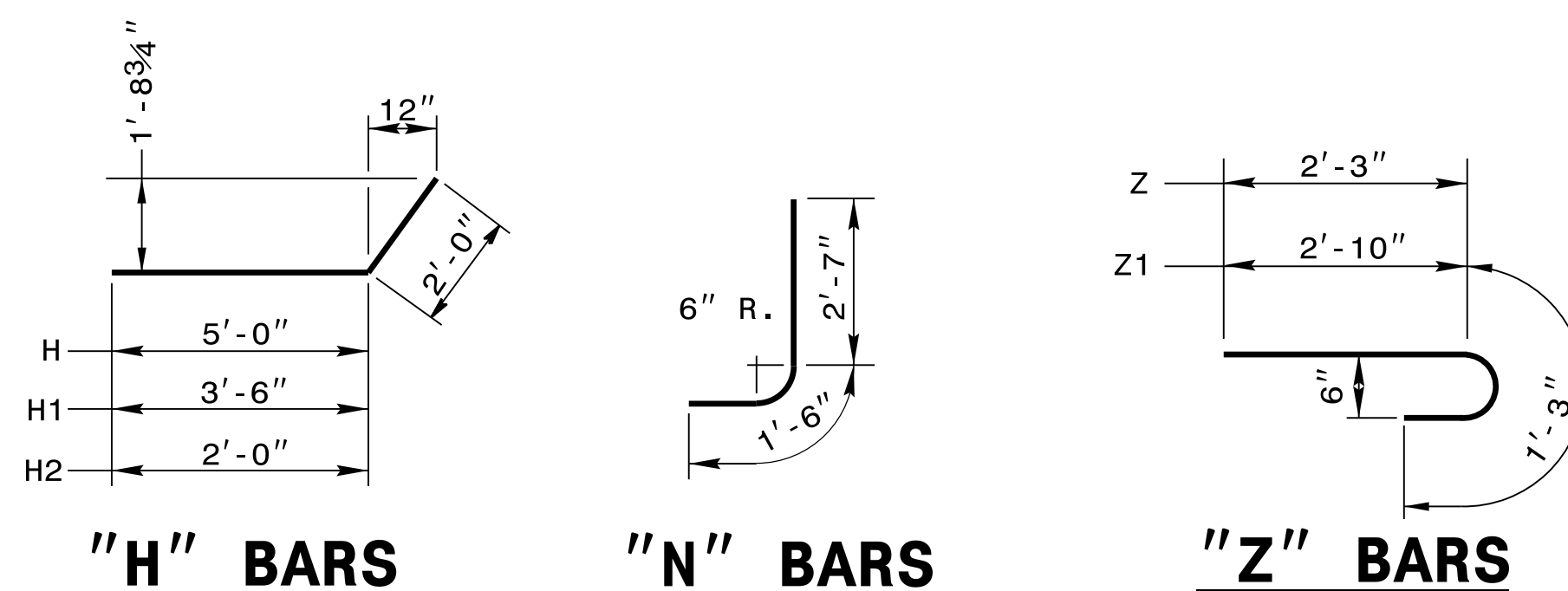


HOOK BOLT

NOTE: CONSTRUCT HOOK BOLTS (ANCHORS) AT 2'-0" CTS. ALONG THE CIRCUMFERENCE OF THE 95" X 67" CMP. EMBED THE HOOK BOLTS 6" IN DEPTH. THE GALVANIZED 3/4" DIA. HOOK BOLTS MUST MEET ASTM A-307 OR ASTM A-836. BOTH BOLTS AND NUTS MUST BE IN ACCORDANCE WITH ASTM A-153 FOR GALVANIZING.



SECTION - AA



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

DESIGN DATA

Specifications A.A.S.H.T.O.
 Steel in tension 20,000 LBS. PER SQ. IN.
 Concrete in compression 1,200 LBS. PER SQ. IN.
 Shear Class "A" Concrete SEE A.A.S.H.T.O.
 Equiv. fluid pressure of earth 30 LBS. PER CU. FT.

NOTES:
 ALL CONCRETE TO BE CLASS "A".
 ALL REINFORCING STEEL SHALL BE ASTM A615-GRADE 60.
 ALL REINFORCING STEEL SHALL BE DEFORMED BARS. WHERE SPLICING OF REINFORCEMENT IS NECESSARY, BARS ARE TO BE LAPPED 45 DIAMETERS. ALL DIMENSIONS RELATIVE TO REINFORCEMENT ARE TO CENTERS OF BARS.
 THE FOOTING, CURTAIN WALL AND 4" OF WALL ARE TO BE POURED IN ONE OPERATION ALLOWING NO TIME FOR INITIAL SET TO TAKE PLACE BETWEEN THEM. THE REMAINING WALL SHALL THEN BE POURED IN ONE OPERATION.
 ALL EXPOSED CORNERS ARE TO BE CHAMFERED 1".
 3" DIAMETER DRAINS SHALL BE PLACED IN WALL AS SHOWN AND BE 6" ABOVE NORMAL FLOW LINE.
 ALL MATERIAL AND WORKMANSHIP AS PER N.C. DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
 THE EXTRA BARS ARE PROVIDED FOR HOLDING REINFORCING STEEL IN CORRECT POSITION IN WING.

BILL OF MATERIAL FOR ENDWALL

REINF. STEEL		1 PIPES	
BAR	SIZE	LENGTH	NO. WEIGHT
B	#4	7'-0"	4 18
H	#4	7'-0"	10 47
H1	#4	5'-6"	2 8
H2	#4	4'-0"	4 11
N	#4	4'-1"	18 50
T	#4	5'-0"	8 27
T1	#4	2'-9"	12 23
T2	#4	15'-10"	6 64
V	#4	5'-3"	8 29
V1	#4	4'-1"	8 22
V2	#4	6'-2"	6 33
Z	#4	3'-6"	5 12
Z1	#4	4'-1"	5 14

REINF. STEEL LBS.	358
TOTAL CON./R.C. CU. YDS.	6.8
95" X 67" CSAP DEDUCTION	0.9
CON./R.C. CU. YDS.	5.9

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8/1/2017



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

DETAIL OF REINFORCED CONCRETE ENDWALL FOR 95" X 67" CSAP-90°

ORIGINAL BY: _____ DATE: _____
 MODIFIED BY: rnbritt DATE: 3-27-09
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: details/rnbritt/english/hydro/r402_41m x 1.7m csap sk90.dgn