-3₄" Ø BAR $R = \frac{9}{16}'' \pm \frac{3}{16}''$ Z & Z1 IN TOP OF FTG.

HOOK BOLT

-6 T2 OR T3 TOP & BOTTOM

5 BARS @ 12" N BARS

_3-V3 @ 8" CTS.

FILL FACE OF WALL

-3" Ø DRAINS

6" ABOVE

FLOW LINE

3-N @ 8" CTS. FILL FACE OF WALL

IN BOTTOM OF FTG.

4-G1 OR G2

─ BARS @ 12" CTS.

3-N @ 8" CTS.

TWO PIPES $11'-4\frac{1}{2}''$

THREE PIPES 16'-9"

5'-4½"

TWO PIPES

12" MIN.

__2′ -0″CTS | \

ELEVATION

END OF WING

Symm About ©

For Two Pipes

10'-9"

THREE PIPES

PLAN

22'-9" TWO PIPES

33'-6" THREE PIPES

√4-V3 @ 8"CTS.

FILL FACE

2 - B ¬

2-T2

Symm. About G

For Three Pipes

2-B-

4-N @ 8" CTS.

FILL FACE OF WALL

EXTRA "H" BARS

BARS T2 OR T3

1'-6"

3'-0" 45/8"

HOOK BOLT

NOTE DETAIL

BARS @ 12"CTS.

OF WALL

CONST.

V,V1,V2-FILL FACE

4'-47/8"

11½"-

`31/

2

BARS @ 12" CTS. H,H1,H2-STREAM

N BARS @ 12"CTS.

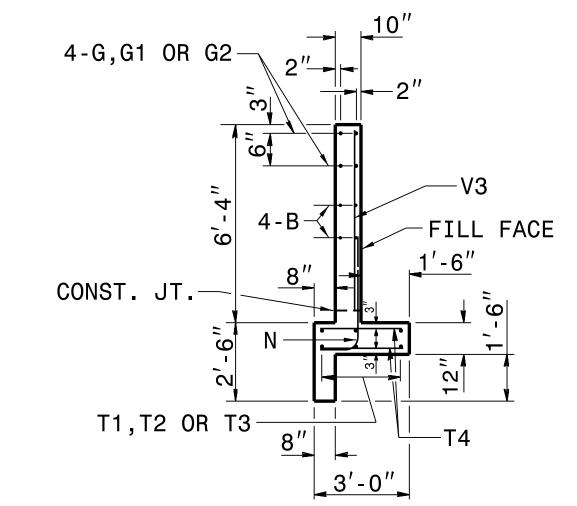
FILL FACE OF WALL

WING ELEVATION

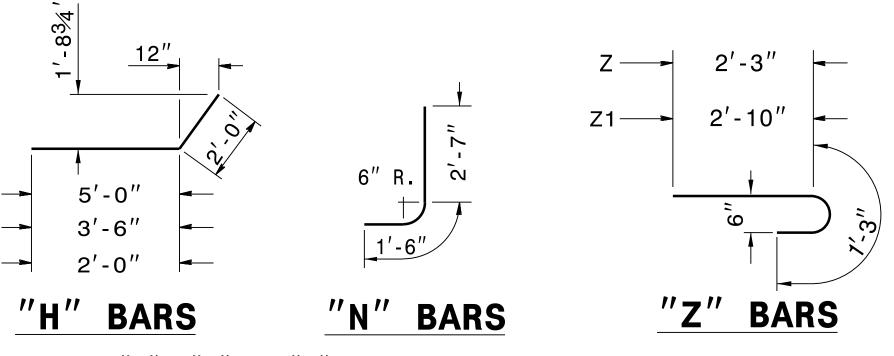
10" 1'-6

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.

NOTES:

ALL CONCRETE TO BE CLASS "A".

ALL REINFORCING STEEL SHALL BE ASTMA615-GRADE 60.

ALL REINFORCING STEEL SHALL BE DEFORMED BARS. WHERE SPLICING OF REINFORCMENT IS NECESSARY, BARS ARE TO BE LAPPED 45 DIAMETERS. ALL DIMENSIONS RÉLATIVE 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 MAT			ERIAL		FOR ENDWAL			L
REINF. STEEL			1 PIPES		2 PIPES		3 PIPES	
BAR	SIZE	LENGTH	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT
В	#4	6'-6"	8	35	16	69	24	104
G	#5	11'-9"	4	49	-	_	•	-
G1	#5	12'-6"	-	-	8	104	-	-
G2	#5	17'-9"	-	-	-	-	8	148
Н	#4	7'-0"	10	47	10	47	10	47
H1	#4	5'-6"	2	7	2	7	2	7
H2	#4	4'-0"	4	11	4	11	4	11
N	#4	4'-1"	16	44	20	55	24	65
Т	#4	5'-0"	6	20	6	20	6	20
T1	#4	15'-0"	6	60	_	-	-	-
T2	#4	14'-0"	-	-	12	112	=	-
T3	#4	18'-3"	-	-	-	-	12	146
T4	#4	2'-9"	4	7	7	13	10	18
V	#4	4'-3"	6	17	6	17	6	17
V1	#4	3'-0"	6	12	6	12	6	12
V2	-	-	-	-	-	-		-
٧3	#4	5'-10"	6	23	10	39	14	55
Z	#4	3'-6"	6	14	6	14	6	14
Z1	#4	4'-1"	4	11	4	11	4	11
REINF. STEEL LBS.				357		531		675
CON.	/R.C.	CU. YDS.	6.2		8.6		11.0	
.411111111								



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

DETAIL OF REINFORCED CONCRETE ENDWALL FOR 95"X 67" (Pipe Arch)-90°

ORIGINAL BY:_ __ DATE: ____ __ DATE: ____ 5-04-07__ MODIFIED BY: rnbritt DATE: 5-04-07
CHECKED BY: DATE:
FILE SPEC. details/nbritt/english/r4071endwpiparch95x67.dgn DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

