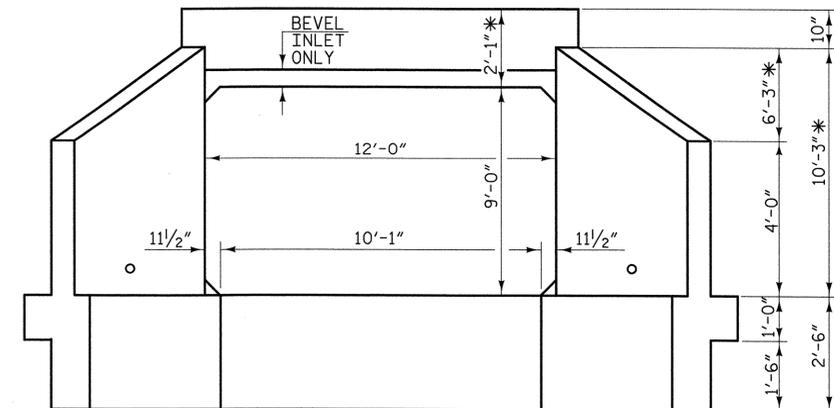
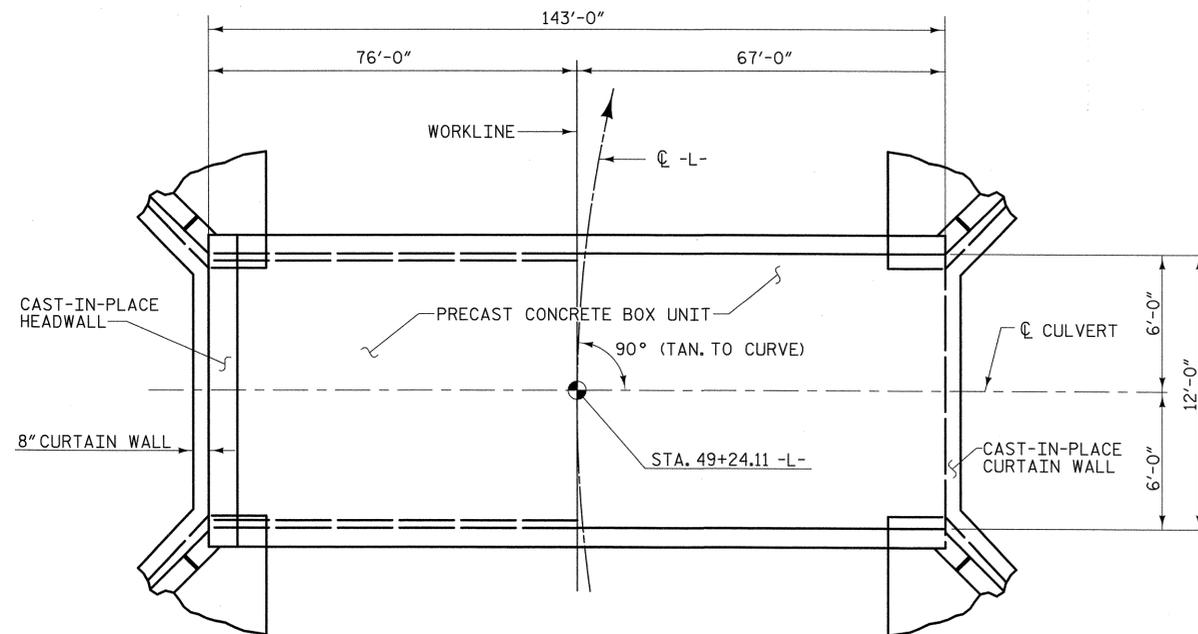


CULVERT SECTION NORMAL TO ROADWAY



END ELEVATION NORMAL TO SKEW

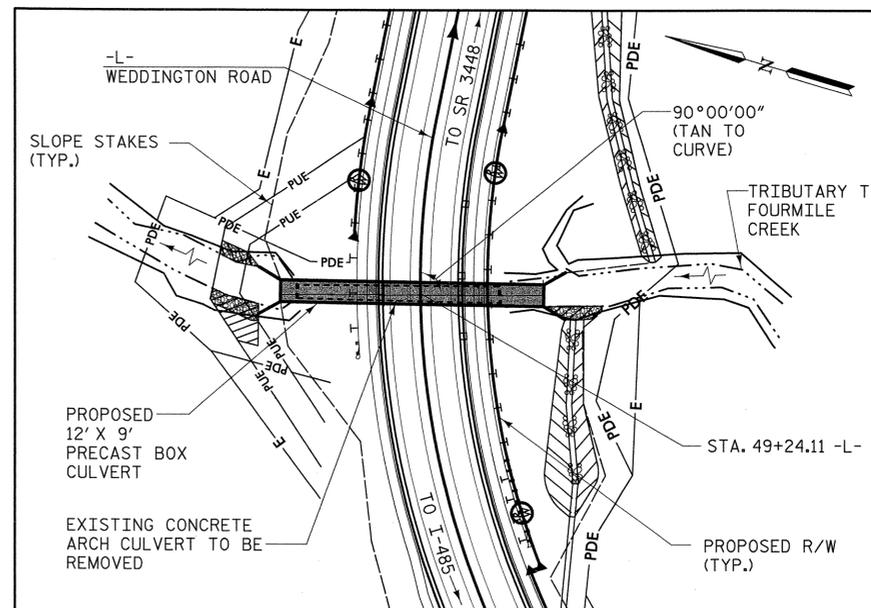
* THESE DIMENSIONS WILL NEED TO BE ADJUSTED FOR ACTUAL TOP SLAB THICKNESS.



PART PLAN - ROOF SLAB

PART PLAN - FLOOR SLAB

BM:
RR SPIKE IN 36" OAK TREE
58.85' RT. OF -L- STA. 52+96.48
ELEV. 643.94 NAVD 88



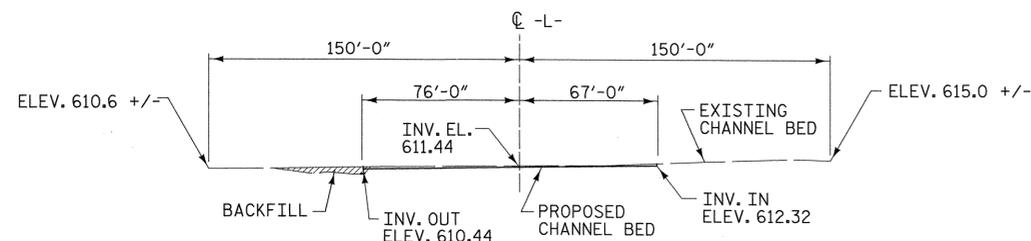
LOCATION SKETCH

HYDROGRAPHIC DATA

GRADE POINT EL. @ STA. 49+24.11 -L-	= 638.05 FT
BED ELEVATION @ STA. 49+24.11 -L-	= 611.44 FT
ROADWAY SLOPES	= 2:1
DESIGN DISCHARGE	= 1032 CFS
FREQUENCY OF DESIGN FLOOD	= 50 YR.
DESIGN HIGH WATER ELEVATION	= 622.73 FT
DRAINAGE AREA	= 0.85 MI ²
BASIC DISCHARGE (Q ₁₀₀)	= 1147 CFS
BASIC HIGH WATER ELEVATION	= 623.42

OVERTOPPING FLOOD DATA

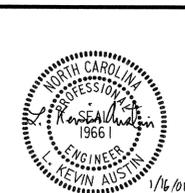
OVERTOPPING DISCHARGE	= 2325 CFS
FREQUENCY OF OVERTOPPING FLOOD	= 500 YR +
OVERTOPPING FLOOD ELEVATION	= 637.4



PROFILE ALONG CULVERT

PROJECT NO. MA10181R
MECKLENBURG COUNTY
STATION: 49+24.11 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**PRECAST REINFORCED
CONCRETE BOX CULVERT
SINGLE 12 FT. X 9 FT.
90° SKEW**



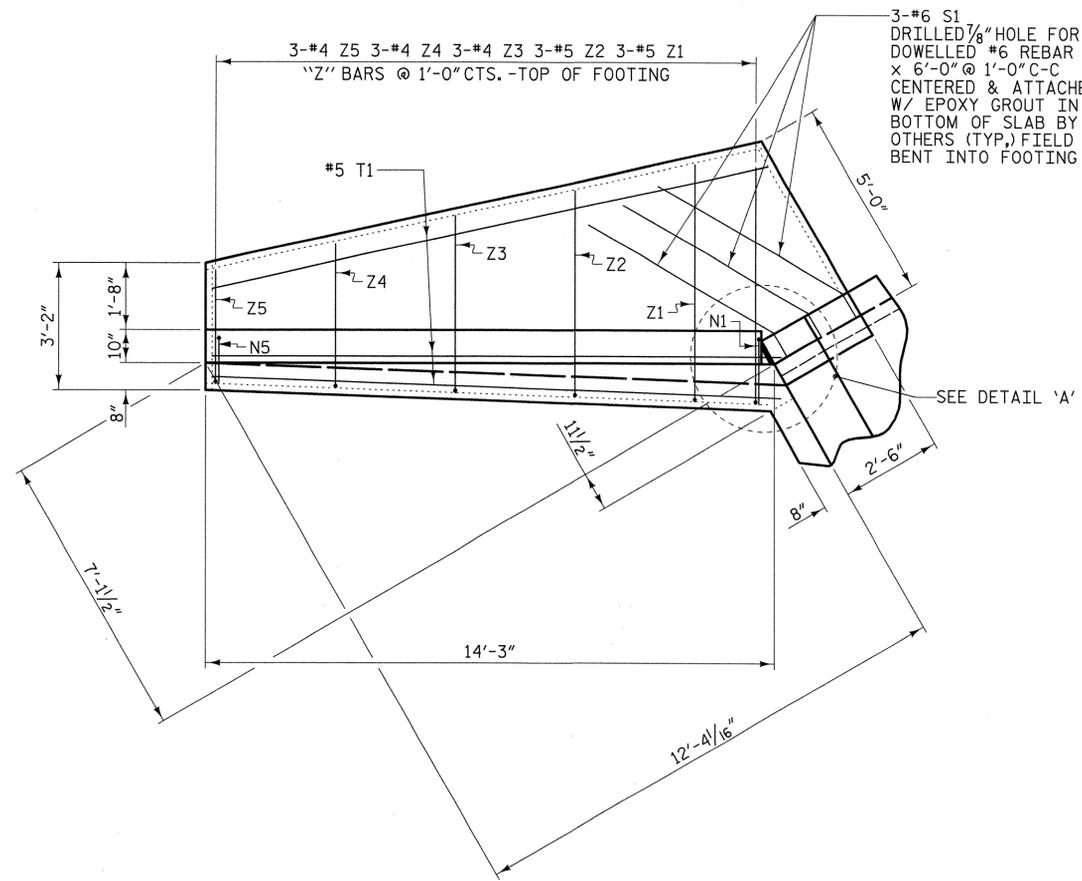
PLANS PREPARED BY:
MULKEY
ENGINEERS & CONSULTANTS
PO BOX 33127
RALEIGH, N.C. 27636
(919) 851-1912
(919) 851-1915 (FAX)
WWW.MULKEYING.COM

REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

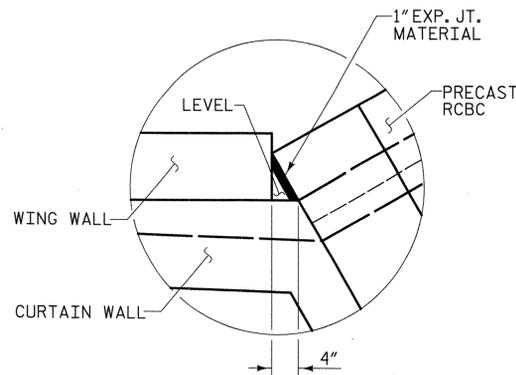
REF. NO. U-5025, 37162

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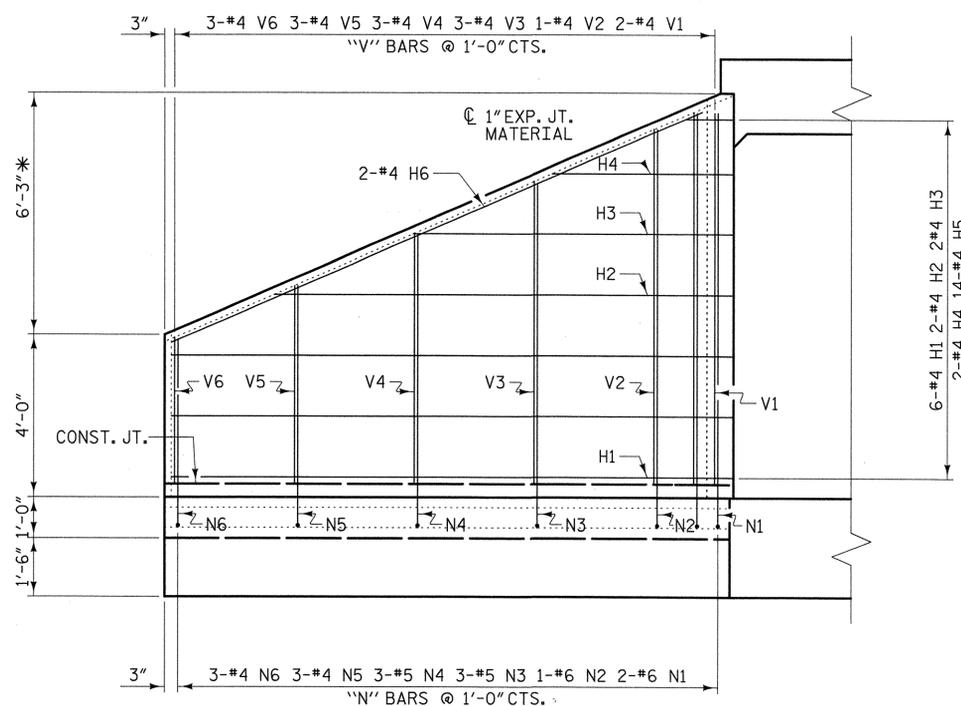
DRAWN BY: W. B. ALLEN DATE: 12/07
CHECKED BY: L. K. AUSTIN DATE: 12/07



PLAN

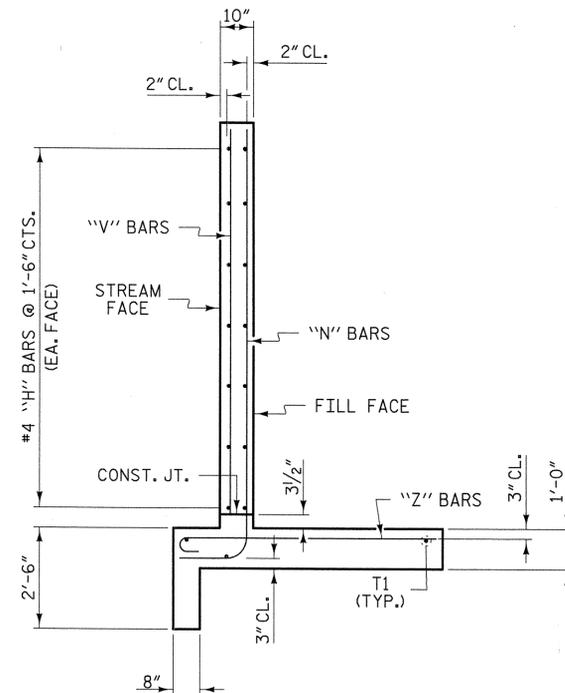


DETAIL 'A'



ELEVATION

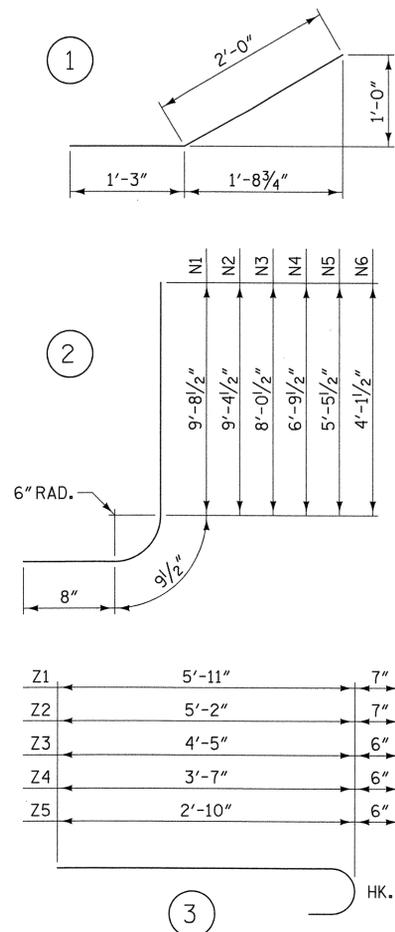
* THIS DIMENSIONS WILL NEED TO BE ADJUSTED FOR ACTUAL TOP SLAB THICKNESS.



TYPICAL WING SECTION

BAR TYPES

ALL BAR DIMENSIONS ARE OUT TO OUT.



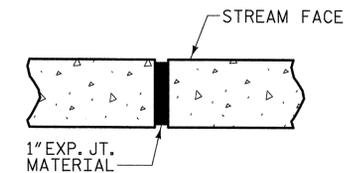
BILL OF MATERIAL

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
H1	24	#4	STR	12'-5"	199
H2	8	#4	STR	9'-10"	53
H3	8	#4	STR	6'-5"	34
H4	8	#4	STR	2'-11"	16
H5	56	#4	1	3'-3"	122
H6	8	#4	STR	13'-6"	72
N1	8	#6	2	11'-2"	134
N2	4	#6	2	10'-10"	65
N3	12	#5	2	9'-6"	119
N4	12	#5	2	8'-3"	103
N5	12	#4	2	6'-11"	55
N6	12	#4	2	5'-7"	45
S1	12	#6	STR	6'-0"	108
T1	12	#5	STR	14'-3"	178
V1	8	#4	STR	9'-2"	49
V2	4	#4	STR	8'-9"	23
V3	12	#4	STR	7'-5"	59
V4	12	#4	STR	6'-2"	49
V5	12	#4	STR	4'-10"	39
V6	12	#4	STR	3'-7"	29
Z1	12	#5	3	6'-6"	81
Z2	12	#5	3	5'-9"	72
Z3	12	#4	3	4'-11"	39
Z4	12	#4	3	4'-1"	33
Z5	12	#4	3	3'-4"	27

REINFORCING STEEL FOR 4 WINGS 1803 LBS

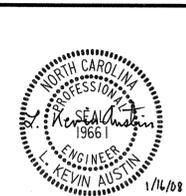
CLASS A CONCRETE
 4 WINGS 26.2 CY
 2 HEADWALLS 1.3 CY
 2 END CURTAIN WALLS 1.2 CY
 TOTAL 28.7 CY

EXPANSION JOINT DETAIL



PROJECT NO. MA10181R
 MECKLENBURG COUNTY
 STATION: 49+24.11 -L-

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 WINGS FOR CONCRETE BOX CULVERT
 H = 9'-0" SLOPE = 2:1
 90° SKEW



PLANS PREPARED BY:
MULKEY
 ENGINEERS & CONSULTANTS
 PO BOX 32137
 RALEIGH, N.C. 27636
 (919) 851-1313
 (919) 851-1318 (FAX)
 WWW.MULKEYINC.COM

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

REF. NO. U-5025, 37162

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DRAWN BY: W. B. ALLEN DATE: 12/07
 CHECKED BY: L. K. AUSTIN DATE: 12/07