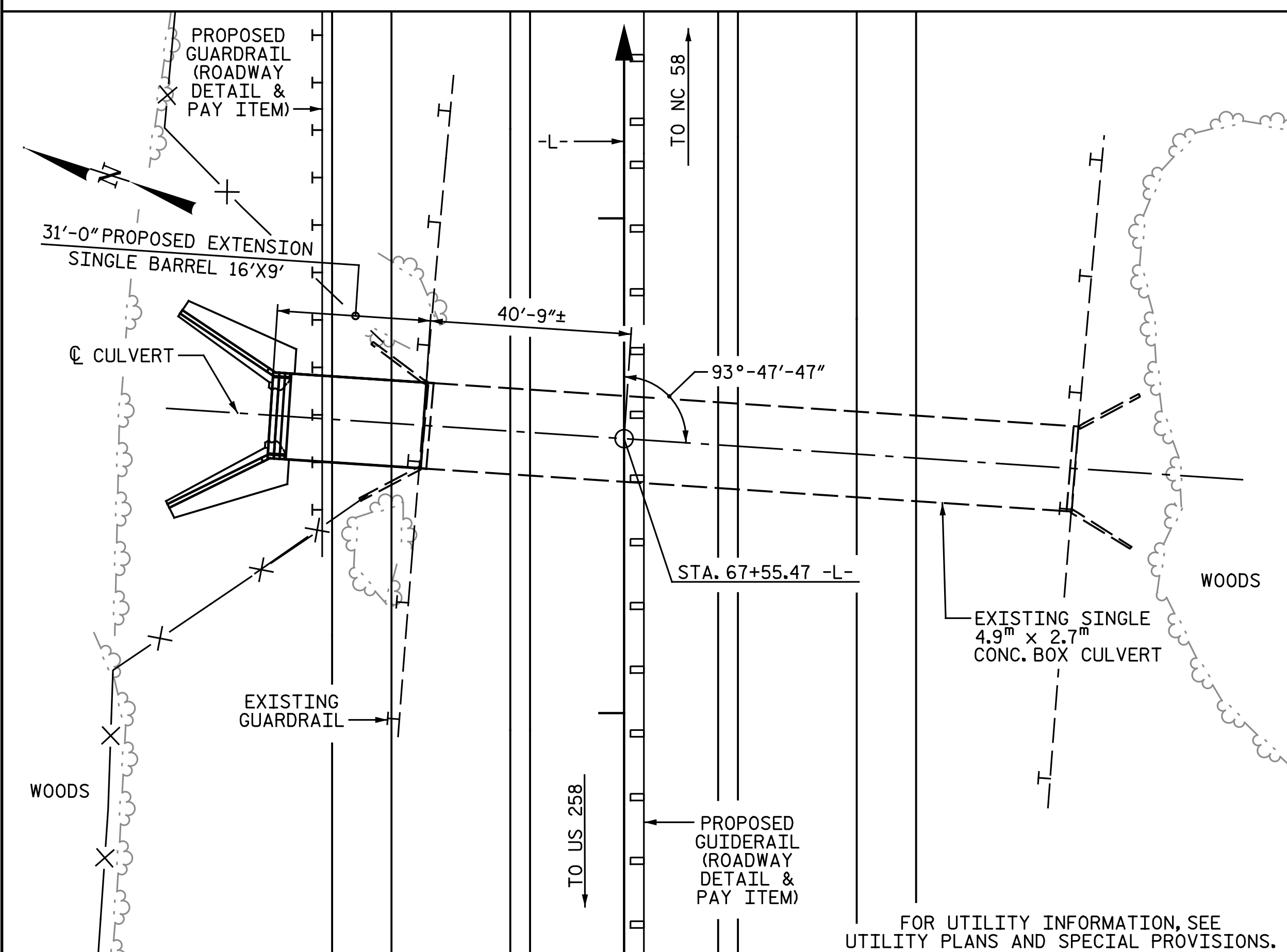


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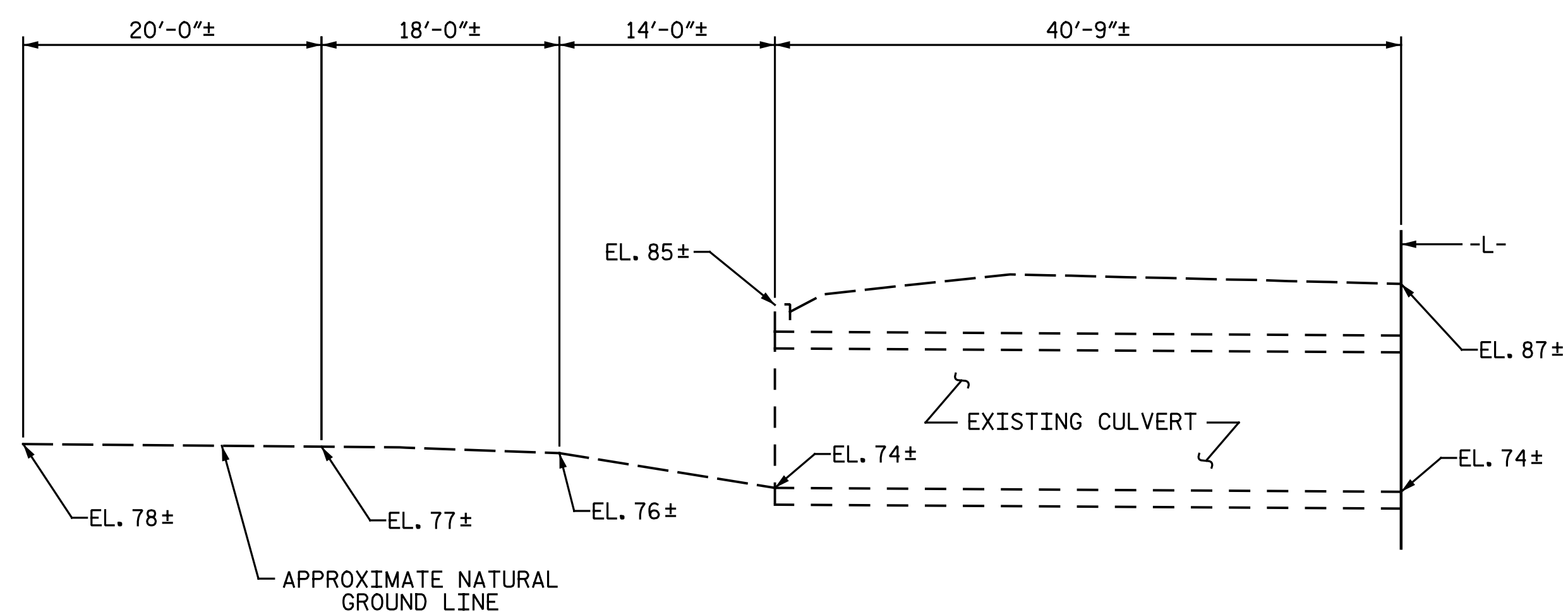
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B.M. #10 - RR SPIKE IN BASE OF 24" PINE, STA. 87+34.22 -L-, 81.85' RIGHT; EL. 76.99



LOCATION SKETCH



PROFILE ALONG ϕ CULVERT

DRAWN BY : N. B. SPEAKS DATE : 10-6-17
 CHECKED BY : J. M. GARRISON DATE : 10-6-17

NOTES:

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.

DESIGN FILL = 3.83'

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE STANDARD NOTES SHEET.

3" ϕ WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.

CONCRETE IN CULVERT TO BE POURED IN THE FOLLOWING ORDER:

1. WING FOOTINGS AND FLOOR SLAB INCLUDING 4" OF ALL VERTICAL WALLS.
2. THE REMAINING PORTIONS OF THE WALLS AND WINGS FULL HEIGHT FOLLOWED BY ROOF SLAB AND HEADWALLS.

THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF CULVERT BEFORE STAKING IT OUT TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF THE FILL.

DIMENSIONS FOR WING LAYOUT AS WELL AS ADDITIONAL REINFORCING STEEL EMBEDDED IN BARREL ARE SHOWN ON WING SHEET.

AT THE CONTRACTOR'S OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR WALLS ABOVE LOWER WALL CONSTRUCTION JOINT. THE SPLICE LENGTH SHALL BE AS PROVIDED IN THE SPLICE LENGTH CHART SHOWN ON THE PLANS. EXTRA WEIGHT OF STEEL DUE TO THE SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.

NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.

FOR EROSION CONTROL, SEE ROADWAY PLANS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

IF APPROVED BY THE ENGINEER, THE CONTRACTOR MAY USE THE EXISTING WINGS AS TEMPORARY SHORING FOR THE CONSTRUCTION OF THE CULVERT EXTENSION. IN THIS CASE, THE BOTTOM SLAB OF THE EXTENSION SHALL BE POURED AT LEAST 72 HOURS PRIOR TO CUTTING THE WINGS. THE WINGS MAY BE CUT EARLIER PROVIDED THE SLAB CONCRETE STRENGTH HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 1500 PSI.

DOWELS SHALL BE USED TO CONNECT THE CULVERT EXTENSION TO THE EXISTING CULVERT AS SHOWN. FOR NOTE REGARDING SETTING OF DOWELS, SEE "STANDARD NOTES" SHEET.

A 3'-0" STRIP OF FILTER FABRIC SHALL BE ATTACHED TO THE FILL FACE OF THE WING COVERING THE ENTIRE LENGTH OF THE EXPANSION JOINT.

EXCAVATE 1.5 FEET BELOW CULVERT BOTTOM TO AN ELEVATION OF 71.6 FEET AND REPLACE WITH FOUNDATION CONDITIONING MATERIAL IN ACCORDANCE WITH SECTION 414 OF THE STANDARD SPECIFICATIONS.

PLACE TYPE 4 GEOTEXTILE BENEATH UNDERCUT AREAS FOR SOIL STABILIZATION IN ACCORDANCE WITH SECTION 270 OF THE STANDARD SPECIFICATIONS.

ELEVATIONS AND HORIZONTAL LOCATIONS ARE APPROXIMATE AND PROVIDED FOR INFORMATION ONLY. EXTEND CULVERT ALONG EXISTING ALIGNMENT AND GRADE. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING STRUCTURE PRIOR TO ORDERING MATERIALS AND NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICTS OR DISCREPANCIES WITH THE PLANS.

ROADWAY DATA	
GRADE POINT ELEV. @ STATION 67+55.47 -L-	= 88.26
BED ELEV. @ STATION 67+55.47 -L-	= 73.9±
ROADWAY SLOPES	= 3:1

TOTAL STRUCTURE QUANTITIES		
CULVERT EXCAVATION	LUMP SUM	
FOUNDATION CONDITIONING MATERIAL	70.0 TONS	
CLASS A CONCRETE		
BARREL @ 1.839 CY/FT	57.0	C.Y.
WING ETC.	25.0	C.Y.
TOTAL	82.0	C.Y.
REINFORCING STEEL		
BARREL	12,352	LBS.
WINGS ETC.	1,675	LBS.
TOTAL	14,027	LBS.
GEOTEXTILE FOR SOIL STABILIZATION (ROADWAY PAY ITEM)	100	S.Y.

PROJECT NO. R-5703
LENOIR COUNTY
 STATION: 67+55.47 -L-

SHEET 1 OF 5



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

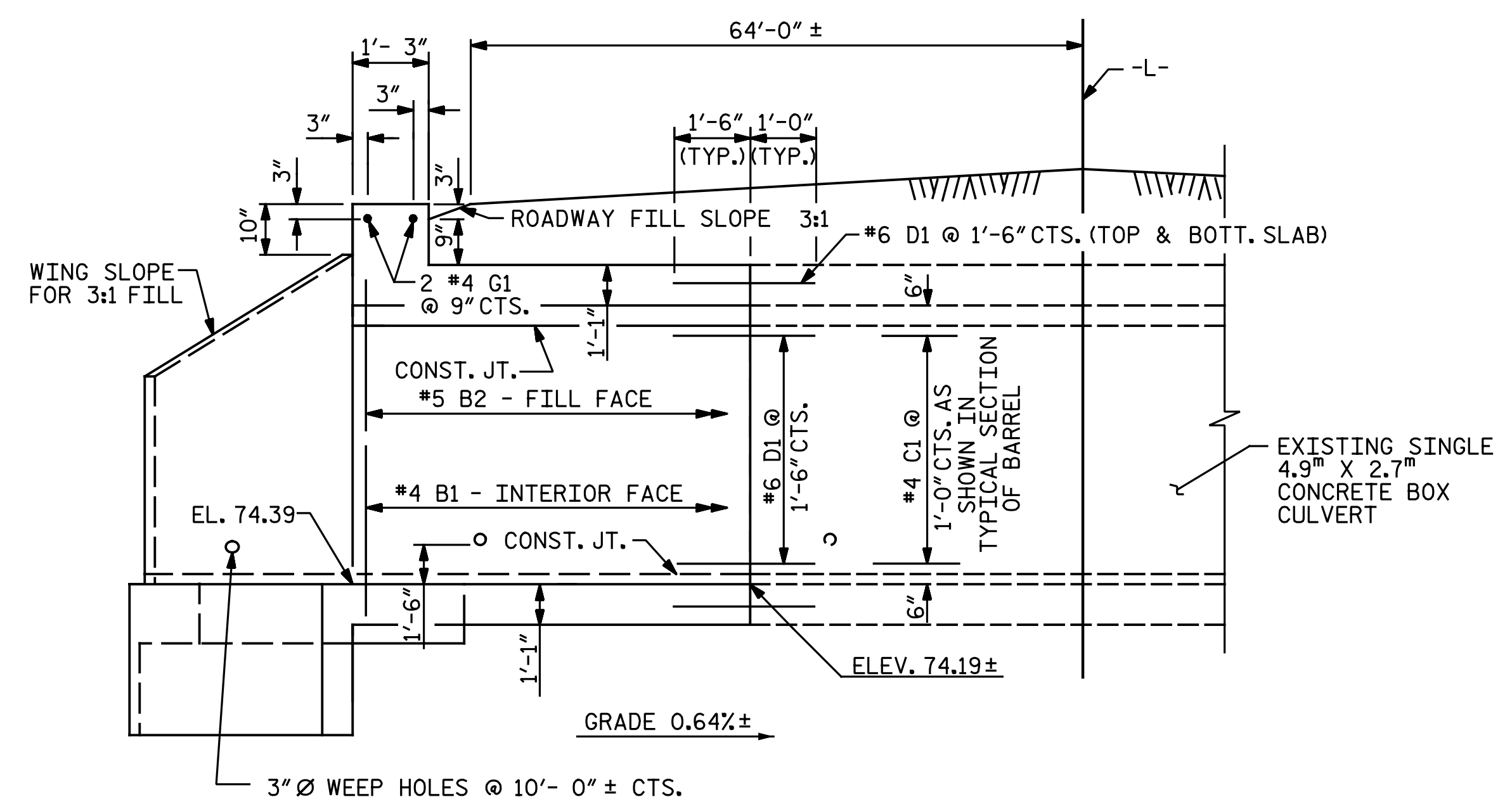
SINGLE 16 FT. X 9 FT.
 CONCRETE BOX CULVERT
 93°-47'-47" SKEW

LEFT EXTENSION

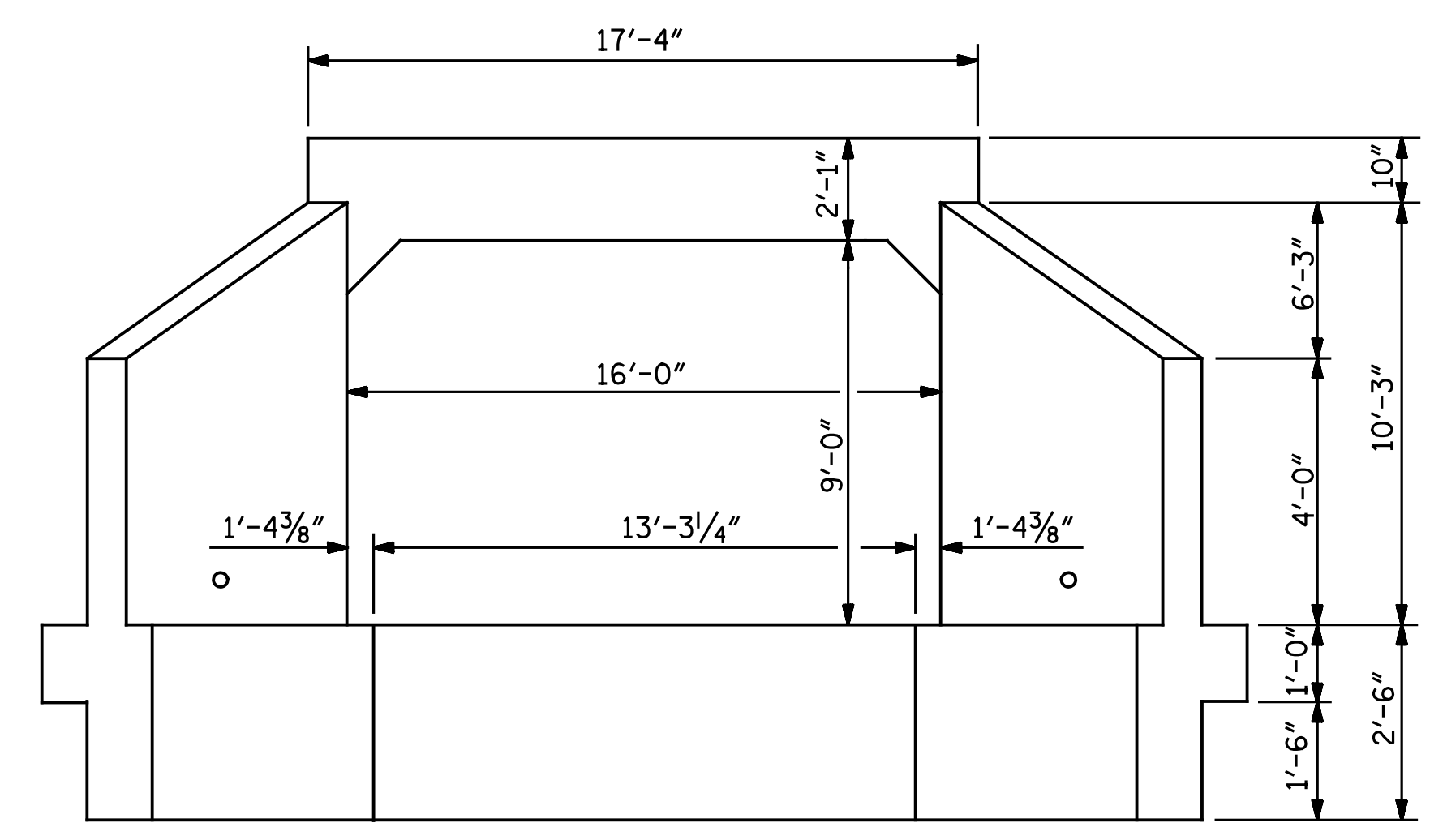
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 Michael Baker Engineering
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 Cary, North Carolina 27518
 NC License No.: F-1084

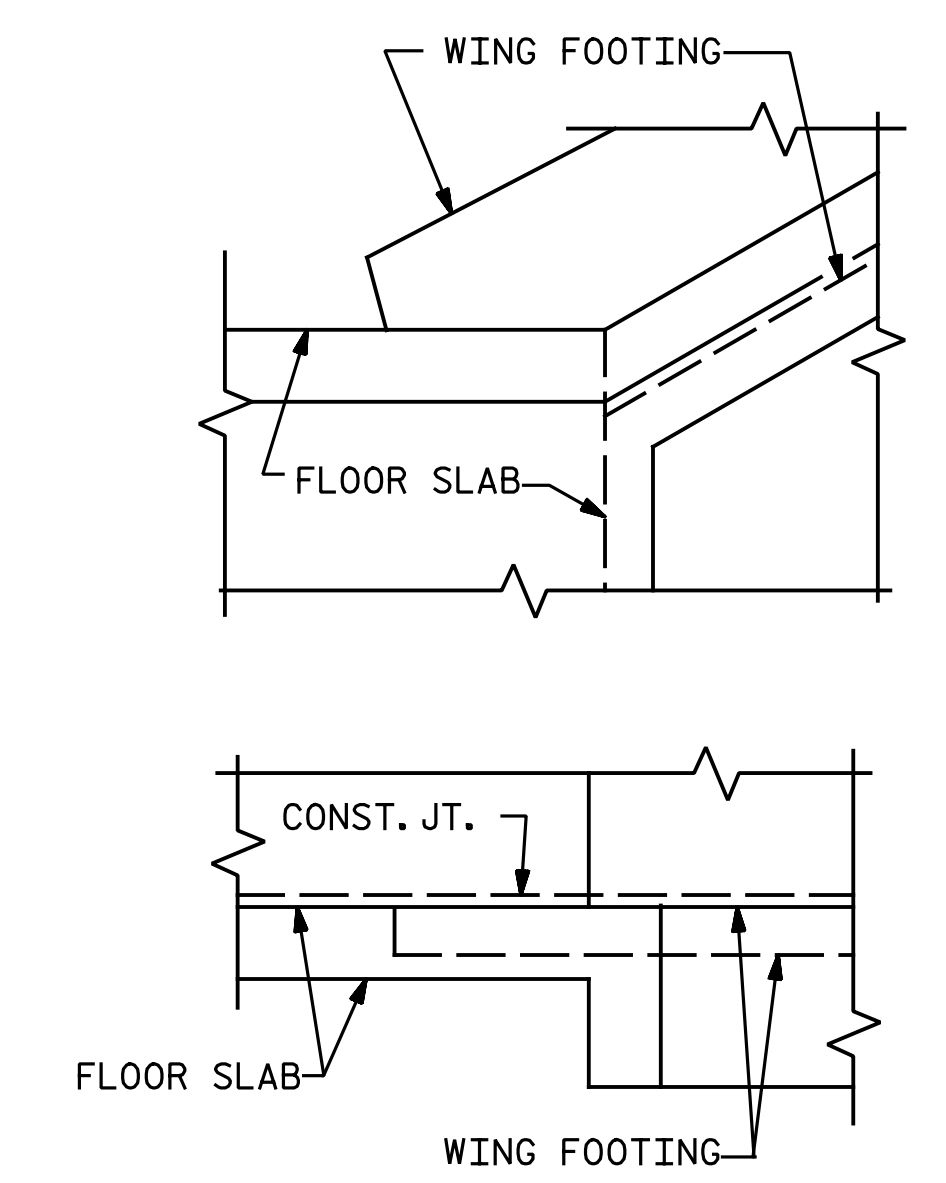
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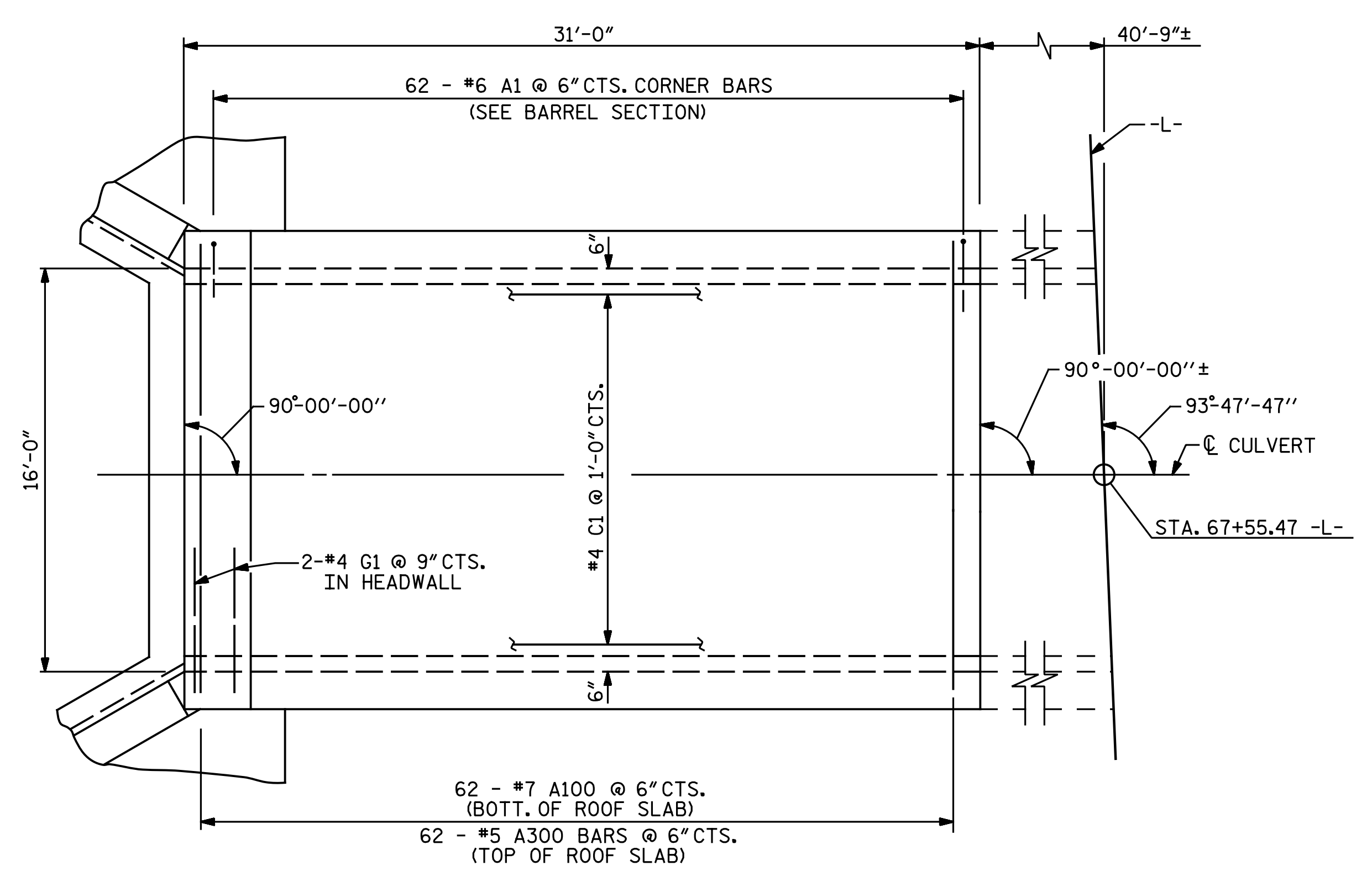
CULVERT SECTION NORMAL TO ROADWAY



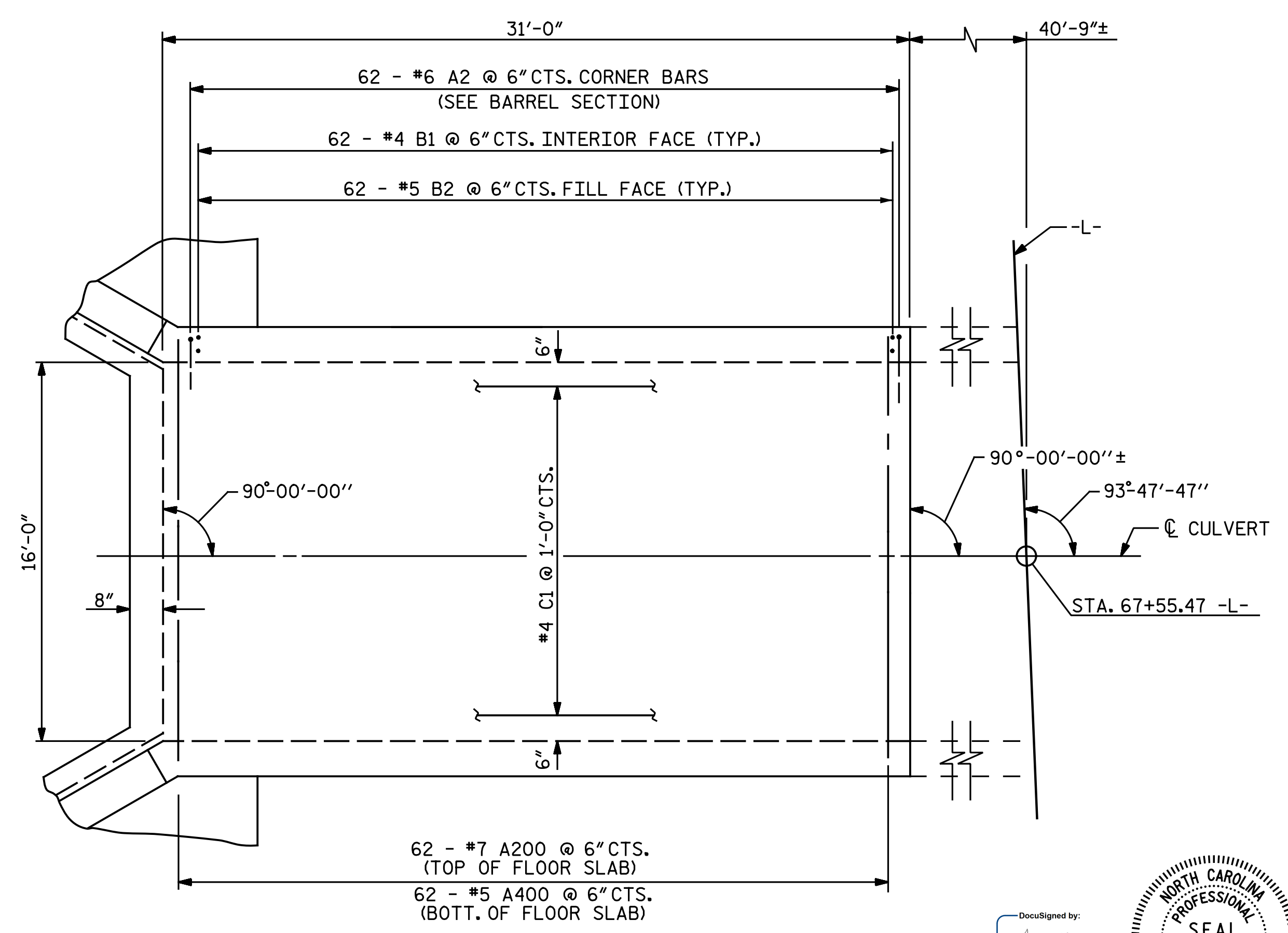
END ELEVATION



CONNECTION OF WING FOOTING AND FLOOR SLAB

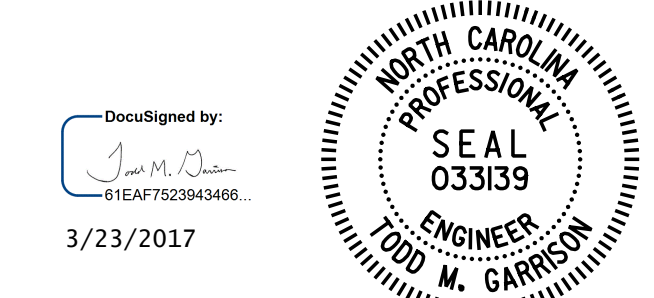


PLAN OF ROOF SLAB



PLAN OF FLOOR SLAB

PROJECT NO. R-5703
LENOIR COUNTY
 STATION: 67+55.47 -L-
 SHEET 2 OF 5



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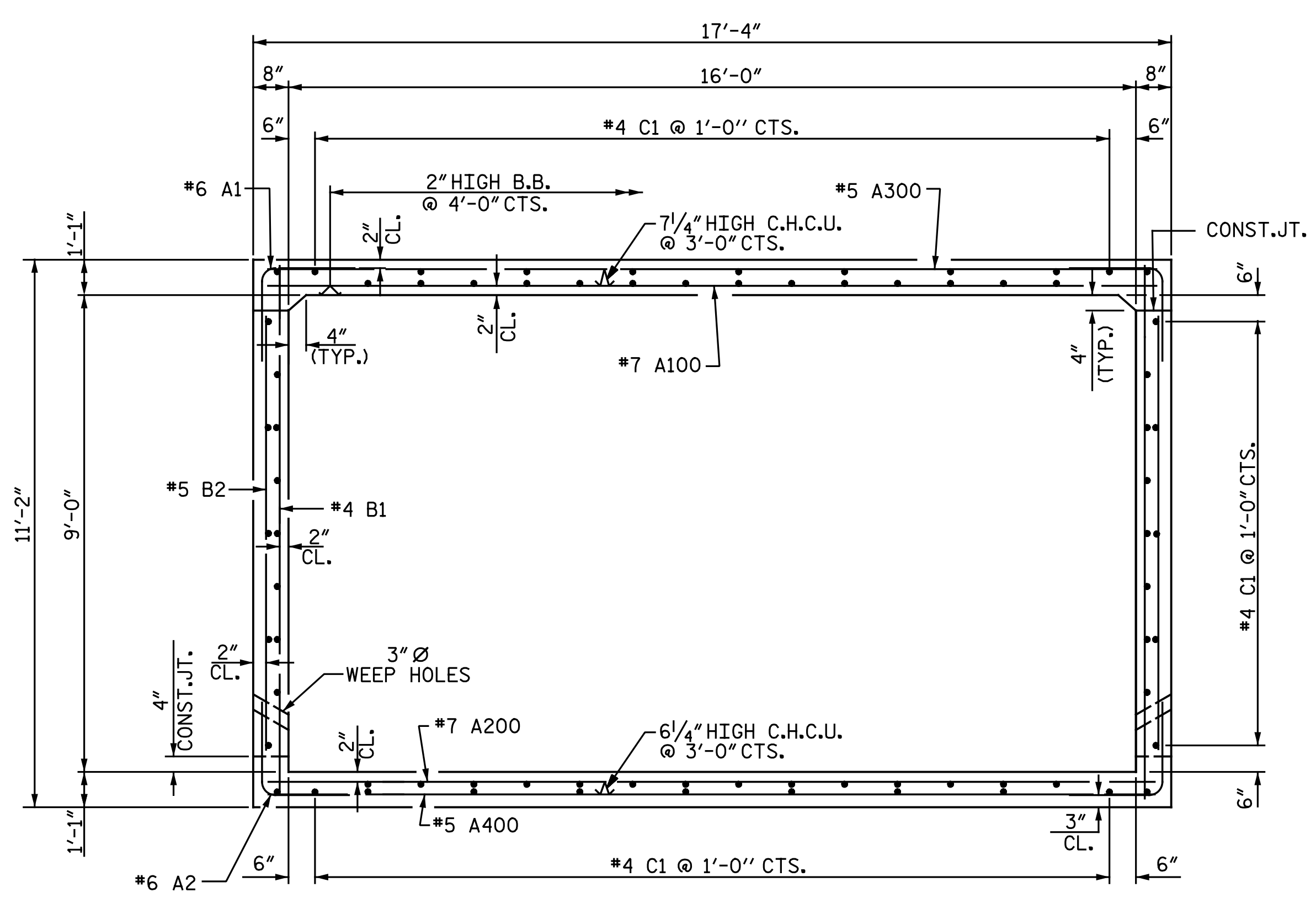
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 Michael Baker Engineering
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 NC License No.: F-1084

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SINGLE 16 FT. X 9 FT.
 CONCRETE BOX CULVERT
 93°-47'-47" SKEW
 LEFT EXTENSION

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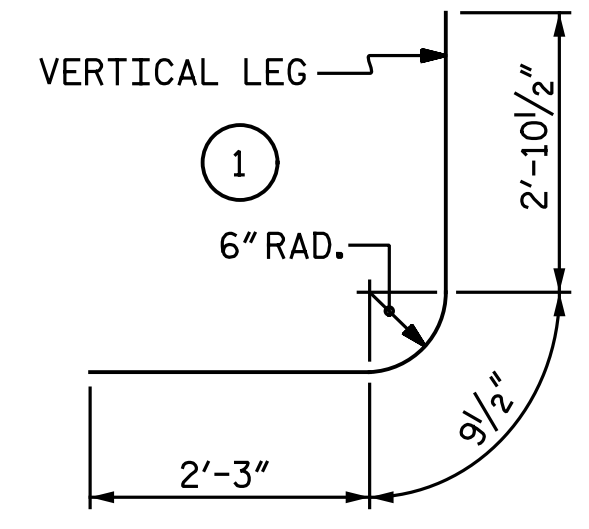
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DRAWN BY: N. B. SPEAKS DATE: 1-26-17
 CHECKED BY: T. M. GARRISON DATE: 2-15-17



RIGHT ANGLE SECTION OF BARREL
THERE ARE 74 C1 BARS IN SECTION OF BARREL.

BAR TYPE		BILL OF MATERIAL				
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	
A1	124	#6	1	5'-11"	1,102	
A2	124	#6	1	5'-11"	1,102	
A100	62	#7	STR	17'-0"	2,154	
A200	62	#7	STR	17'-0"	2,154	
A300	62	#5	STR	17'-0"	1,099	
A400	62	#5	STR	17'-0"	1,099	
B1	124	#4	STR	10'-9"	890	
B2	124	#5	STR	8'-4"	1,078	
C1	74	#4	STR	30'-8"	1,516	
D1	36	#6	STR	2'-6"	135	
G1	2	#4	STR	17'-0"	23	
				REINFORCING STEEL	LBS. 12,352	



ALL BAR DIMENSIONS ARE OUT TO OUT

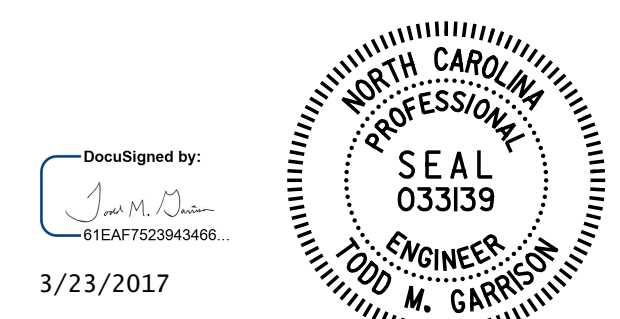
SPLICE LENGTH CHART		
BAR	SIZE	SPLICE LENGTH
B1	#4	1'-5"

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DRAWN BY : N. B. SPEAKS DATE : 1-27-17
 CHECKED BY : I. M. GARRISON DATE : 2-15-17

PROJECT NO. R-5703
LENOIR COUNTY
 STATION: 67+55.47 -L-

SHEET 3 OF 5



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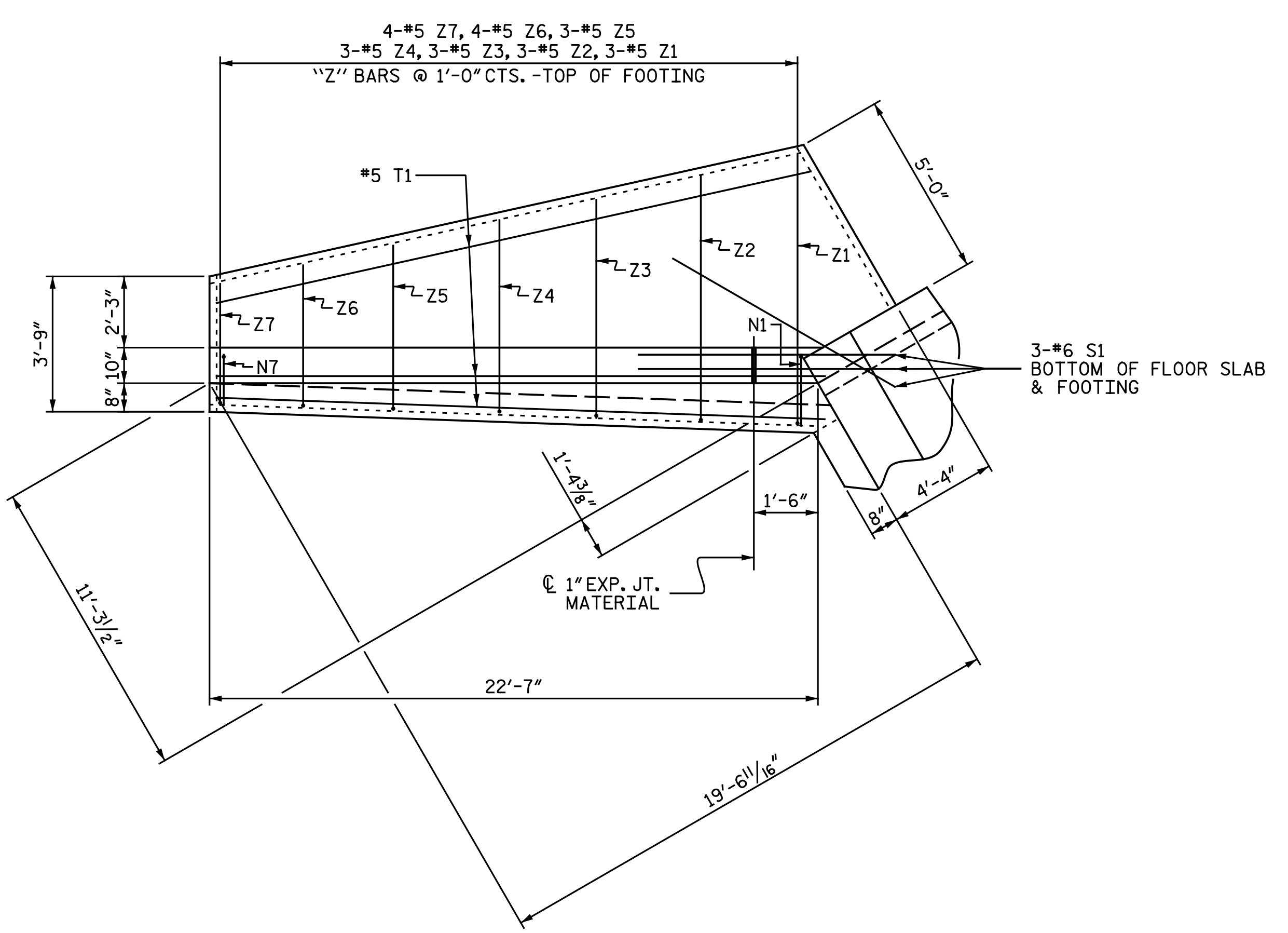


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DEPARTMENT OF TRANSPORTATION
RALEIGH

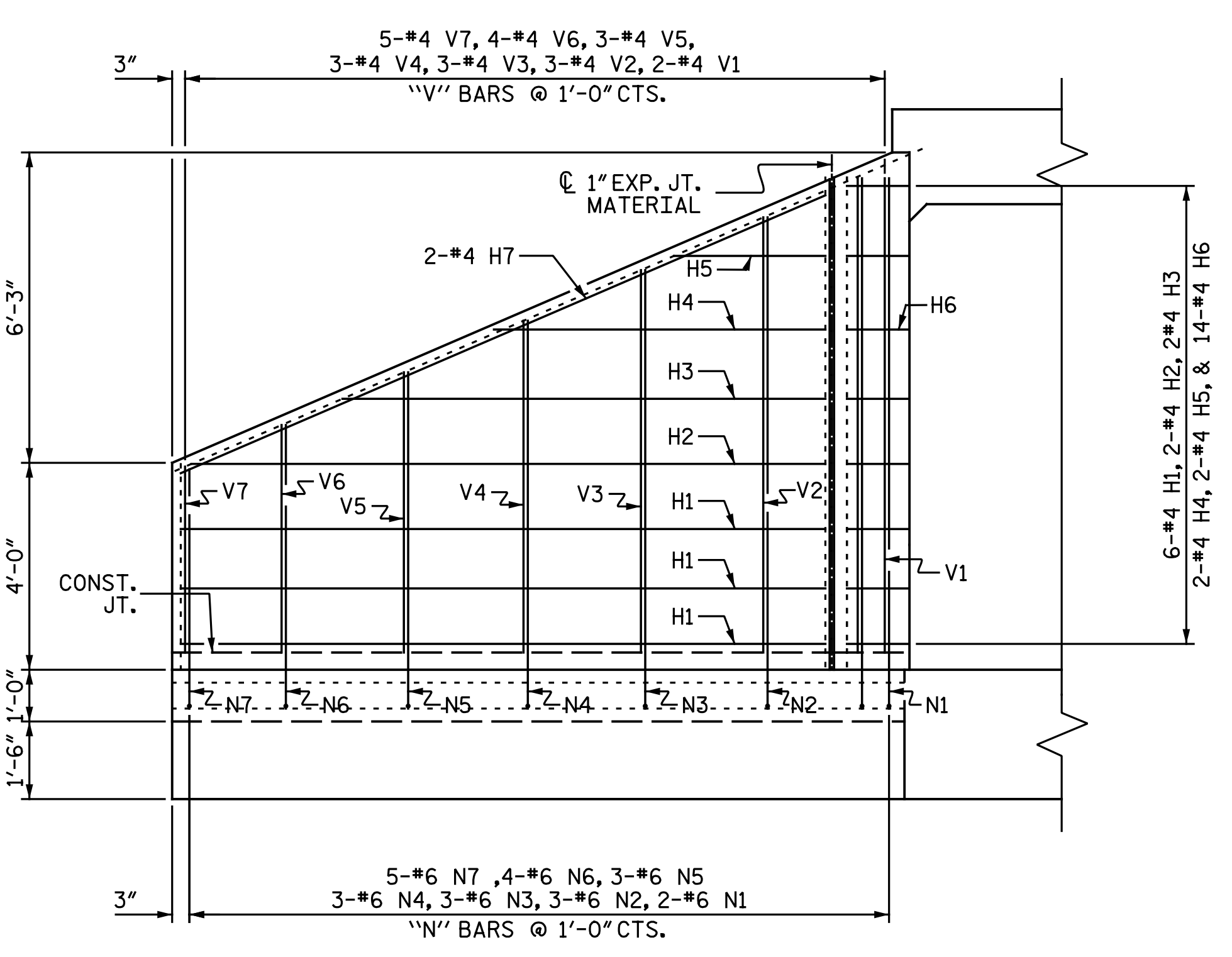
SINGLE 16 FT. X 9 FT.
CONCRETE BOX CULVERT
93°-47'-47" SKEW

LEFT EXTENSION

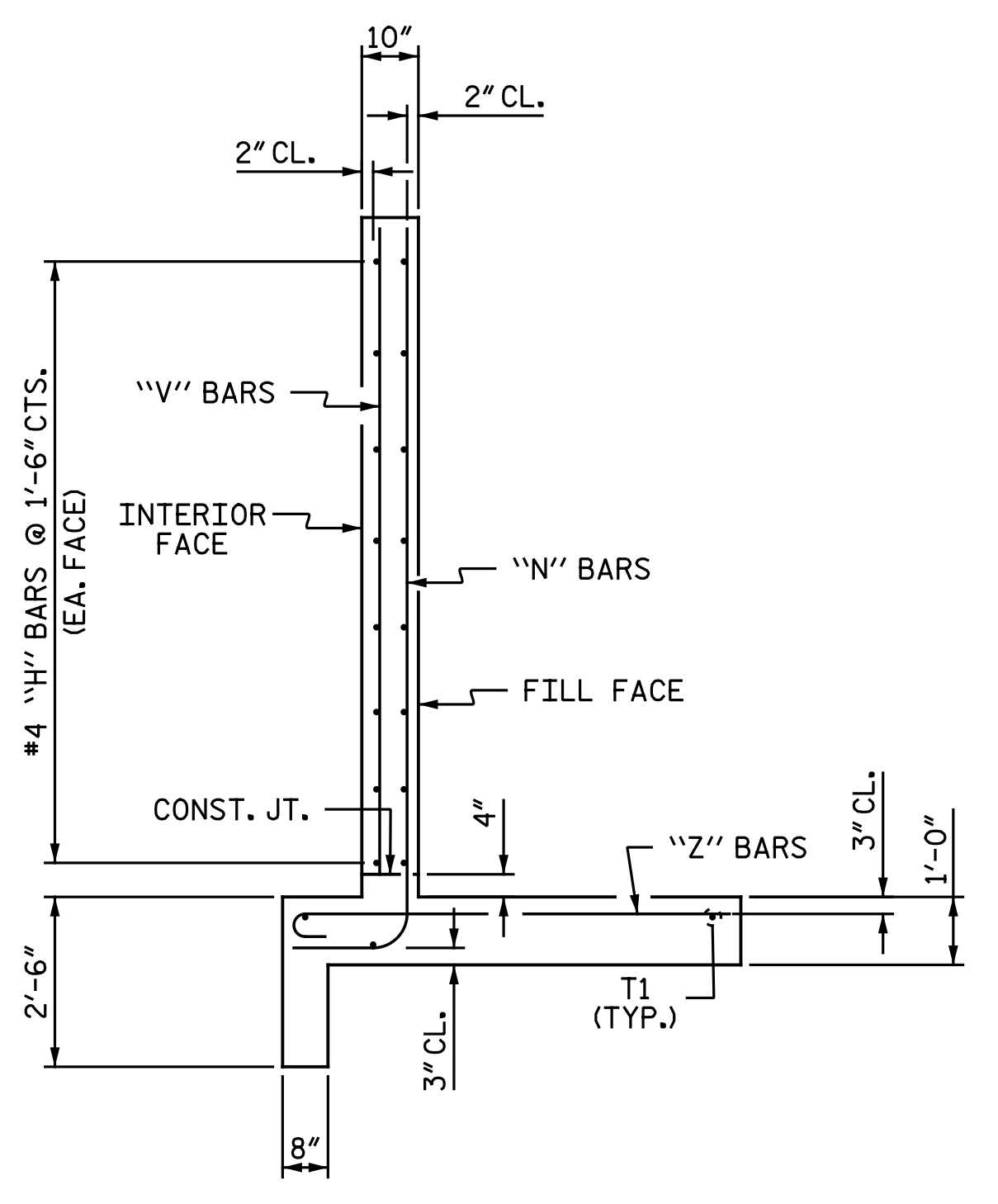
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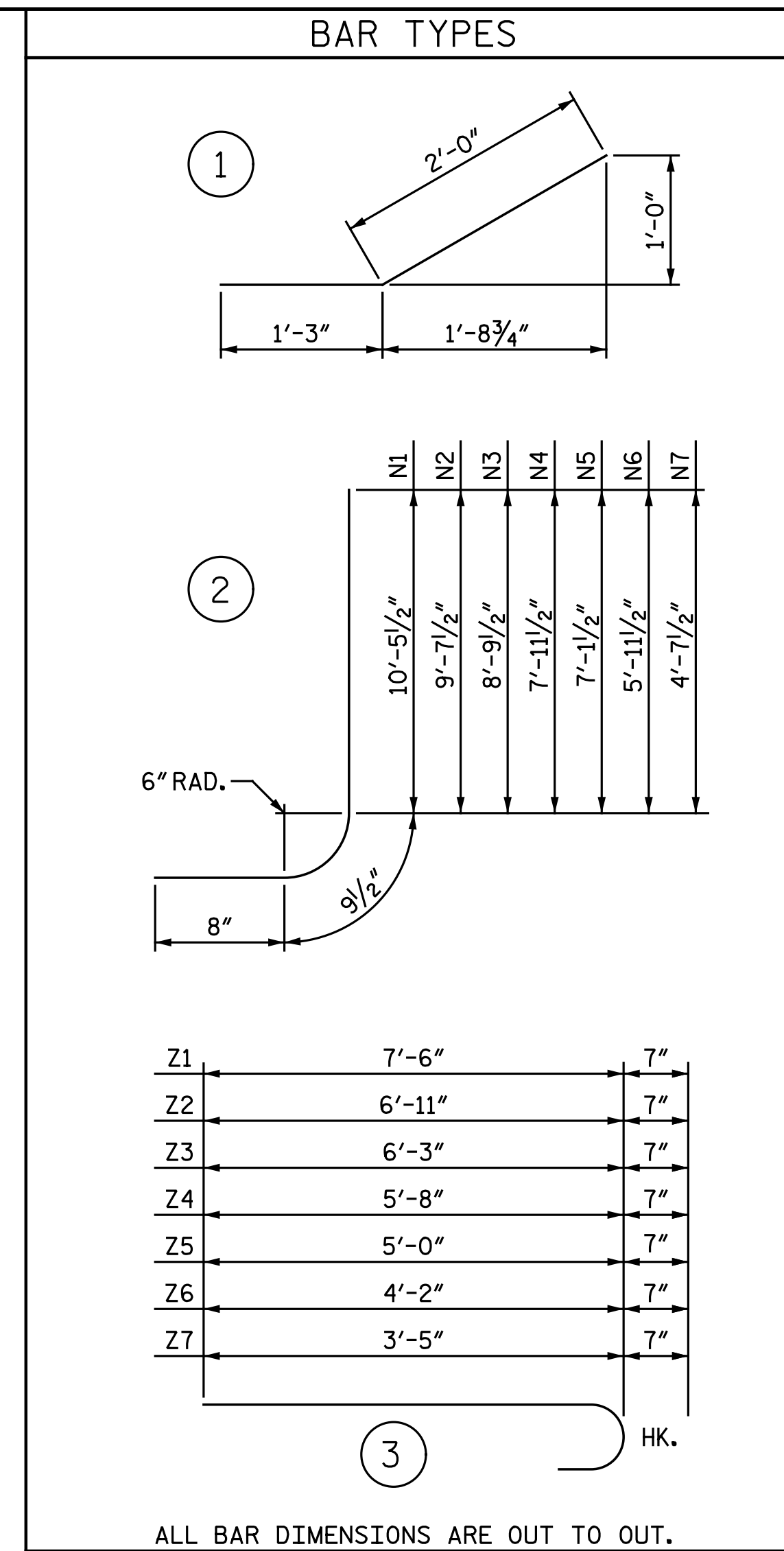
PLAN



ELEVATION



TYPICAL WING SECTION



BILL OF MATERIAL					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
H1	12	#4	STR	20'-8"	166
H2	4	#4	STR	17'-10"	48
H3	4	#4	STR	12'-5"	33
H4	4	#4	STR	7'-0"	19
H5	4	#4	STR	1'-7"	4
H6	28	#4	1	3'-3"	61
H7	4	#4	STR	21'-5"	57
N1	4	#6	2	11'-11"	72
N2	6	#6	2	11'-1"	100
N3	6	#6	2	10'-3"	92
N4	6	#6	2	9'-5"	85
N5	6	#6	2	8'-7"	77
N6	8	#6	2	7'-5"	89
N7	10	#6	2	6'-1"	91
S1	6	#6	STR	6'-0"	54
T1	6	#5	STR	22'-0"	138
V1	4	#4	STR	9'-8"	26
V2	6	#4	STR	8'-10"	35
V3	6	#4	STR	8'-0"	32
V4	6	#4	STR	7'-2"	29
V5	6	#4	STR	6'-4"	25
V6	8	#4	STR	5'-3"	28
V7	10	#4	STR	3'-11"	26
Z1	6	#5	3	8'-1"	51
Z2	6	#5	3	7'-6"	47
Z3	6	#5	3	6'-10"	43
Z4	6	#5	3	6'-3"	39
Z5	6	#5	3	5'-7"	35
Z6	8	#5	3	4'-9"	40
Z7	8	#5	3	4'-0"	33
REINFORCING STEEL FOR 2 WINGS					1,675 LBS
CLASS A CONCRETE 2 WINGS					23.4 CY
1 HEADWALL					0.8 CY
1 END CURTAIN WALL					0.8 CY
TOTAL					25.0 CY

PROJECT NO. R-5703
 LENOIR COUNTY
 STATION: 67+55.47 -L-
 SHEET 4 OF 5



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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 WINGS FOR CONCRETE BOX CULVERT
 H = 9'-0" SLOPE = 3:1
 90° SKEW

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 S15-4
 TOTAL SHEETS
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DRAWN BY: N. B. SPEAKS DATE: 2-9-17
 CHECKED BY: J. M. GARRISON DATE: 2-15-17

LOAD AND RESISTANCE FACTOR RATING (LRFR) SUMMARY FOR REINFORCED CONCRETE BOX CULVERT

LEVEL	VEHICLE	WEIGHT (W) (TONS)	CONTROLLING LOAD RATING #	MINIMUM RATING FACTORS (RF)	TONS = W x RF	STRENGTH I LIMIT STATE								COMMENT NUMBER		
						MOMENT				SHEAR						
						LIVE-LOAD FACTORS (%LL)	RATING FACTOR	BOX NO.	ELEMENT TYPE	DISTANCE FROM LEFT END OF ELEMENT (ft)	RATING FACTOR	BOX NO.	ELEMENT TYPE		DISTANCE FROM LEFT END OF ELEMENT (ft)	
DESIGN LOAD RATING	HL-93 (INVENTORY)	N/A	1	1.11	--	1.75	1.11	1	TOP SLAB	8.33	1.88	1	TOP SLAB	1.24		
	HL-93 (OPERATING)	N/A		1.43	--	1.35	1.43	1	TOP SLAB	8.33	2.44	1	TOP SLAB	1.24		
	HS-20 (INVENTORY)	36.000	2	1.48	53.28	1.75	1.48	1	BOTTOM SLAB	8.33	2.10	1	BOTTOM SLAB	1.15		
	HS-20 (OPERATING)	36.000		1.92	69.12	1.35	1.92	1	BOTTOM SLAB	8.33	2.72	1	BOTTOM SLAB	1.15		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH		3.30	44.55	1.40	3.30	1	TOP SLAB	8.33	5.38	1	TOP SLAB	1.24		
		SNGARBS2	20.000		3.09	61.80	1.40	3.09	1	TOP SLAB	8.33	4.82	1	BOTTOM SLAB	1.15	
		SNAGRIS2	22.000		3.23	71.06	1.40	3.23	1	BOTTOM SLAB	8.33	4.58	1	BOTTOM SLAB	1.15	
		SNCOTTS3	27.250	3	1.65	44.96	1.40	1.65	1	TOP SLAB	8.33	2.81	1	TOP SLAB	1.24	
		SNAGGRS4	34.925		1.84	64.26	1.40	1.84	1	TOP SLAB	8.33	2.99	1	BOTTOM SLAB	1.15	
		SNS5A	35.550		1.71	60.79	1.40	1.71	1	TOP SLAB	8.33	2.75	1	BOTTOM SLAB	1.15	
		SNS6A	39.950		1.70	67.92	1.40	1.70	1	TOP SLAB	8.33	2.65	1	BOTTOM SLAB	1.15	
	SNS7B	42.000		1.69	70.98	1.40	1.69	1	TOP SLAB	8.33	2.59	1	BOTTOM SLAB	1.15		
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		2.47	81.51	1.40	2.47	1	BOTTOM SLAB	8.33	3.68	1	BOTTOM SLAB	1.15	
		TNT4A	33.075		1.97	65.16	1.40	1.97	1	TOP SLAB	8.33	3.12	1	BOTTOM SLAB	1.15	
		TNT6A	41.600		1.83	76.13	1.40	1.83	1	TOP SLAB	8.33	3.09	1	BOTTOM SLAB	1.15	
		TNT7A	42.000		1.90	79.80	1.40	1.90	1	TOP SLAB	8.33	3.10	1	BOTTOM SLAB	1.15	
		TNT7B	42.000		1.81	76.02	1.40	1.81	1	TOP SLAB	8.33	2.74	1	BOTTOM SLAB	1.15	
		TNAGRIT4	43.000		1.84	79.12	1.40	1.84	1	BOTTOM SLAB	8.33	2.70	1	BOTTOM SLAB	1.15	
TNAGT5A		45.000		1.84	82.80	1.40	1.84	1	BOTTOM SLAB	8.33	2.70	1	BOTTOM SLAB	1.15		
TNAGT5B	45.000		1.76	79.20	1.40	1.76	1	BOTTOM SLAB	8.33	2.56	1	BOTTOM SLAB	1.15			

LOAD FACTORS:

DESIGN LOAD RATING FACTORS

LOAD TYPE	MAX FACTOR	MIN FACTOR
DC	1.25	0.90
DW	1.50	0.65
EV	1.30	0.90
EH	1.35	0.90
ES	1.35	0.90
LS	1.75	--
WA	1.00	--

NOTE:

RATING FACTORS ARE BASED ON THE STRENGTH I LIMIT STATE.

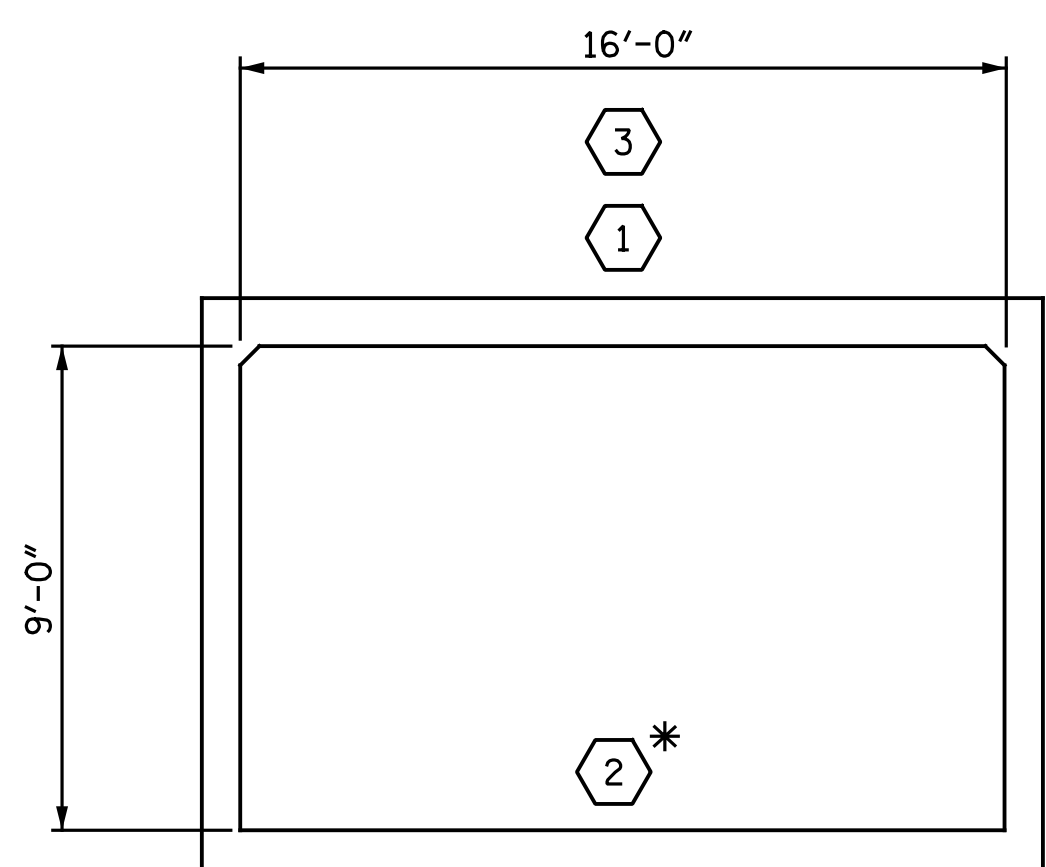
CONTROLLING LOAD RATING

1 DESIGN LOAD RATING (HL-93)

2 DESIGN LOAD RATING (HS-20)

3 LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE



PROJECT NO. R-5703
LENOIR COUNTY
 STATION: 67+55.47 -L-
 SHEET 5 OF 5

DocuSigned by:
 Todd M. Garrison
 61EAF7523843466
 3/23/2017



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

STANDARD
 LRFR SUMMARY FOR
 REINFORCED CONCRETE
 BOX CULVERT
 (NON-INTERSTATE TRAFFIC)

DOCUMENT NOT CONSIDERED FINAL
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Michael Baker INTERNATIONAL

Michael Baker Engineering
 8000 Regency Parkway, Suite 600
 Cary, North Carolina 27518
 NC License No.: F-1084

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STD. NO. LRFR5

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DRAWN BY : N. B. SPEAKS DATE : 2-14-17
 CHECKED BY : J. M. GARRISON DATE : 2-15-17

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	-----	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	-----	SEE PLANS
IMPACT ALLOWANCE	-----	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF		
STRUCTURAL STEEL - AASHTO M270 GRADE 36	-	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	-	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	-	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION		
GRADE 60	--	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	-----	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	-----	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR		
UNTREATED - EXTREME FIBER STRESS	-----	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	-----	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	-----	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2012 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 1/4" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

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