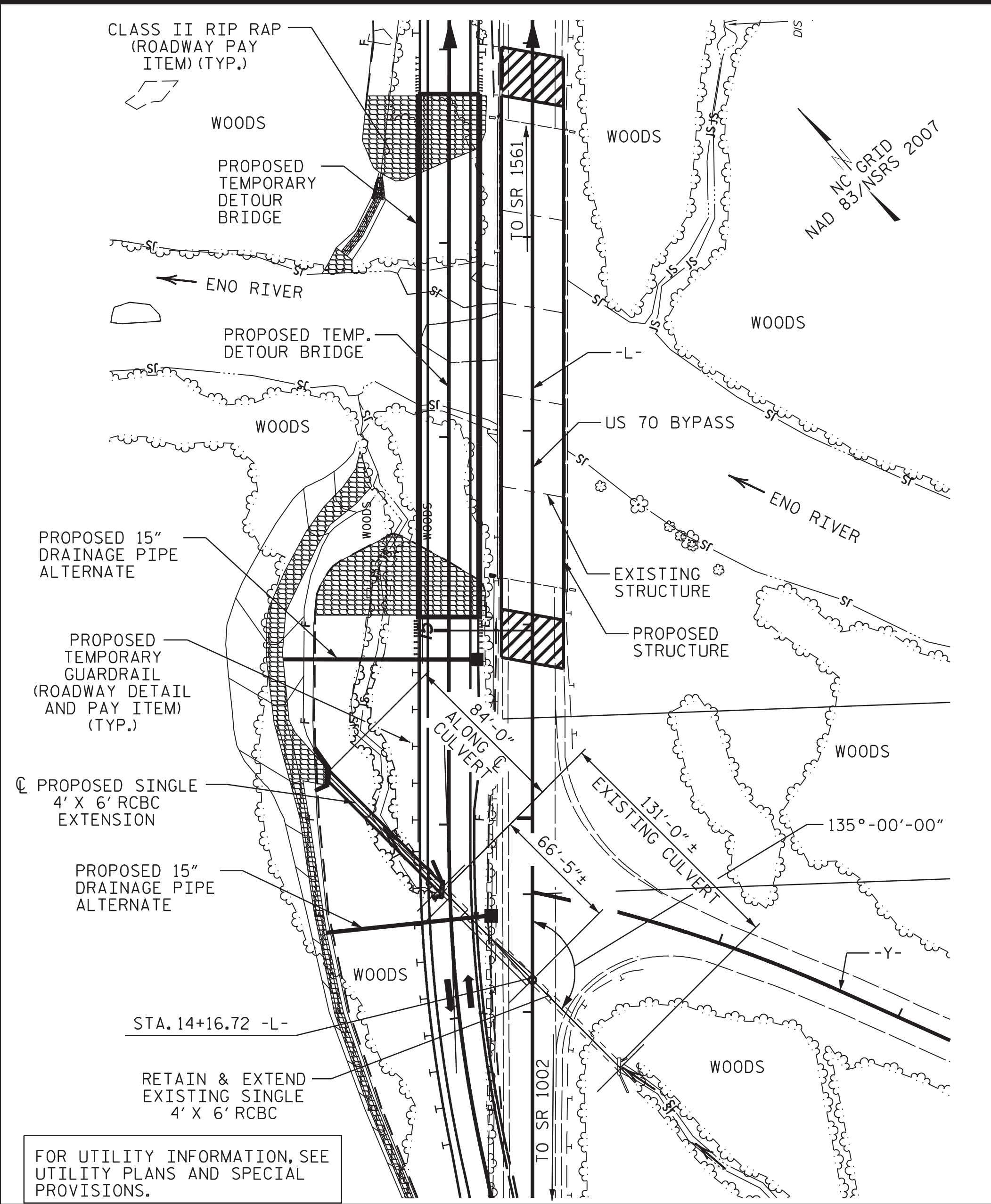


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BM #1: RAILROAD SPIKE IN 36" POPLAR, 152' RT. OF STA. 15+12.36 -L-, ELEV. = 512.36, DATUM : NAVD88



LOCATION SKETCH

ROADWAY DATA	
GRADE POINT EL. @ STA. 14+16.72 -L-	= 518.11
BED EL. @ STA. 14+16.72 -L-	= 491.79
ROADWAY FILL SLOPES (LEFT) @ STA. 14+16.72 -L-	= VARIES

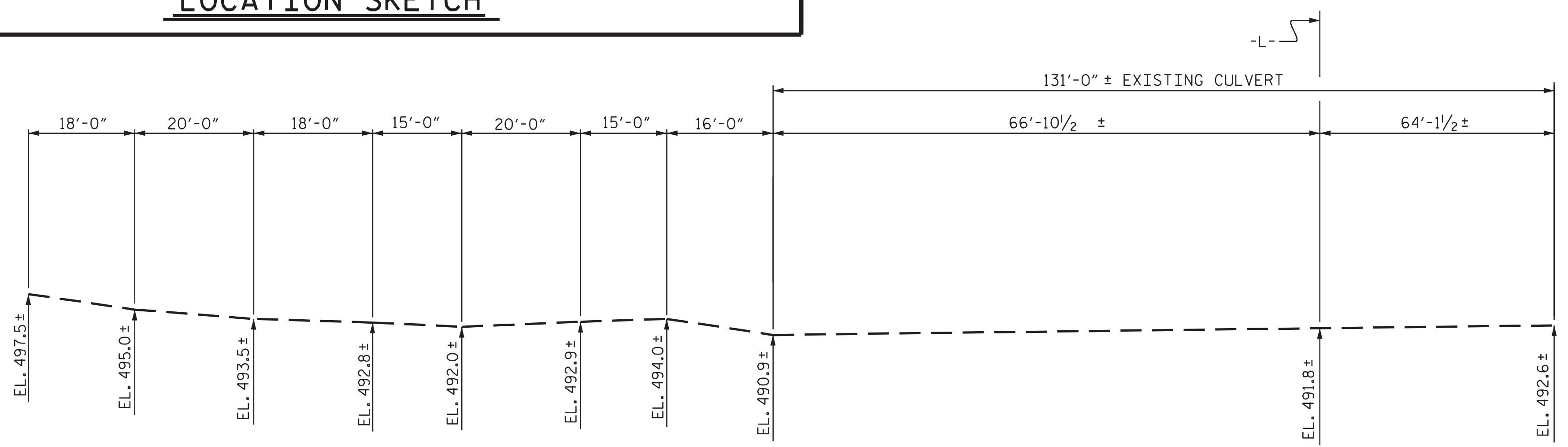
HYDRAULIC DATA	
DESIGN DISCHARGE	= 120 C.F.S.
FREQUENCY OF DESIGN FLOOD	= 50 YEARS
DESIGN HIGH WATER ELEVATION	= 497.29 FT.
DRAINAGE AREA	= 70.4 ACRES
BASE DISCHARGE (Q100)	= 130 C.F.S.
BASE HIGH WATER ELEVATION	= 497.55 FT.

OVERTOPPING FLOOD DATA	
OVERTOPPING DISCHARGE	= 430 C.F.S.
FREQUENCY OF OVERTOPPING FLOOD	= 500+ YEARS
OVERTOPPING FLOOD ELEVATION	= 508.60 FT.

TOTAL STRUCTURE QUANTITIES	
CLASS A CONCRETE	
BARREL @ 0.564 CY/FT	47.4 C.Y.
WING ETC.	10.6 C.Y.
TOTAL	58.0 C.Y.
REINFORCING STEEL	
BARREL	6,692 LBS.
WINGS ETC.	587 LBS.
TOTAL	7,279 LBS.
CULVERT EXCAVATION	LUMP SUM
FOUNDATION CONDITIONING MAT'L	55.0 TONS

NOTES:

- ASSUMED LIVE LOAD ----- HL-93 OR ALTERNATE LOADING.
- DESIGN FILL----- 21.85 FT.
- FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.
- 3" Ø 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.
- TRANSVERSE CONSTRUCTION JOINTS SHALL BE USED IN THE BARREL, SPACED TO LIMIT THE POURS TO A MAXIMUM OF 70 FT. LOCATION OF JOINTS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.
- AT THE CONTRACTOR'S OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR WALL 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.
- DOWELS SHALL BE USED TO CONNECT THE CULVERT EXTENSION TO THE EXISTING CULVERT AS SHOWN. FOR NOTE REGARDING SETTING OF DOWELS, SEE SHEET SN.
- IF APPROVED BY THE ENGINEER, THE CONTRACTOR MAY USE THE EXISTING WINGS AS TEMPORARY SHORING FOR THE CONSTRUCTION OF THE CULVERT EXTENSIONS. 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.
- NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.
- A 3 FOOT STRIP OF FILTER FABRIC SHALL BE ATTACHED TO THE FILL FACE OF THE WING COVERING THE ENTIRE LENGTH OF THE EXPANSION JOINT.
- FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

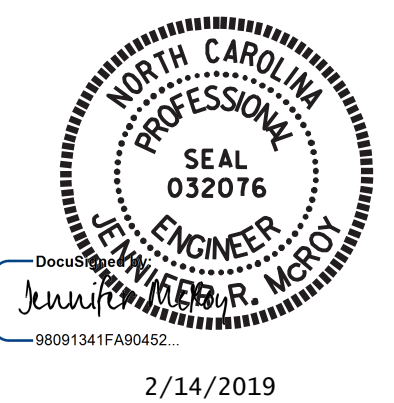


PROFILE ALONG CULVERT

I HEREBY CERTIFY THESE PLANS ARE THE AS-BUILT PLANS

PROJECT NO. B-4962
ORANGE COUNTY
 STATION: 14+16.72 -L-

SHEET 1 OF 6



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 5540 Centerview Drive, Suite 305
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SINGLE 4 FT. X 6 FT. CONCRETE BOX CULVERT LEFT EXTENSION 135° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-42
1			3			TOTAL SHEETS
2			4			47

DRAWN BY : J.R. MCROY DATE : 9/18
 CHECKED BY : D.R. SMITH DATE : 10/18
 DESIGN ENGINEER OF RECORD: J.R. MCROY DATE : 10/18

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

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 (γ _{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	1.77	--	1.75	4.25	1	EXTERIOR WALL	0.33	1.77	1	EXTERIOR WALL	0.33		
	HL-93 (OPERATING)	N/A		2.29	--	1.35	5.51	1	EXTERIOR WALL	0.33	2.29	1	EXTERIOR WALL	0.33		
	HS-20 (INVENTORY)	36.000	2	1.77	63.64	1.75	4.25	1	EXTERIOR WALL	0.33	1.77	1	EXTERIOR WALL	0.33		
	HS-20 (OPERATING)	36.000		2.29	82.49	1.35	5.51	1	EXTERIOR WALL	0.33	2.29	1	EXTERIOR WALL	0.33		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH		1.55	20.88	1.40	3.72	1	EXTERIOR WALL	0.33	1.55	1	EXTERIOR WALL	0.33		
		SNGARBS2	20.000		1.55	30.94	1.40	3.72	1	EXTERIOR WALL	0.33	1.55	1	EXTERIOR WALL	0.33	
		SNAGRIS2	22.000		1.55	34.03	1.40	3.72	1	EXTERIOR WALL	0.33	1.55	1	EXTERIOR WALL	0.33	
		SNCOTTS3	27.250		1.55	42.16	1.40	3.72	1	EXTERIOR WALL	0.33	1.55	1	EXTERIOR WALL	0.33	
		SNAGGRS4	34.925	3	1.55	54.03	1.40	3.72	1	EXTERIOR WALL	0.33	1.55	1	EXTERIOR WALL	0.33	
		SNS5A	35.550		1.55	55.00	1.40	3.72	1	EXTERIOR WALL	0.33	1.55	1	EXTERIOR WALL	0.33	
		SNS6A	39.950		1.55	61.80	1.40	3.72	1	EXTERIOR WALL	0.33	1.55	1	EXTERIOR WALL	0.33	
	SNS7B	42.000		1.55	64.97	1.40	3.72	1	EXTERIOR WALL	0.33	1.55	1	EXTERIOR WALL	0.33		
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.55	51.05	1.40	3.72	1	EXTERIOR WALL	0.33	1.55	1	EXTERIOR WALL	0.33	
		TNT4A	33.075		1.55	51.17	1.40	3.72	1	EXTERIOR WALL	0.33	1.55	1	EXTERIOR WALL	0.33	
		TNT6A	41.600		1.55	64.36	1.40	3.72	1	EXTERIOR WALL	0.33	1.55	1	EXTERIOR WALL	0.33	
		TNT7A	42.000		1.55	64.97	1.40	3.72	1	EXTERIOR WALL	0.33	1.55	1	EXTERIOR WALL	0.33	
		TNT7B	42.000		1.55	64.97	1.40	3.72	1	EXTERIOR WALL	0.33	1.55	1	EXTERIOR WALL	0.33	
		TNAGRIT4	43.000		1.55	66.52	1.40	3.72	1	EXTERIOR WALL	0.33	1.55	1	EXTERIOR WALL	0.33	
TNAGT5A		45.000		1.55	69.62	1.40	3.72	1	EXTERIOR WALL	0.33	1.55	1	EXTERIOR WALL	0.33		
TNAGT5B	45.000		1.55	69.62	1.40	3.72	1	EXTERIOR WALL	0.33	1.55	1	EXTERIOR WALL	0.33			

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	--

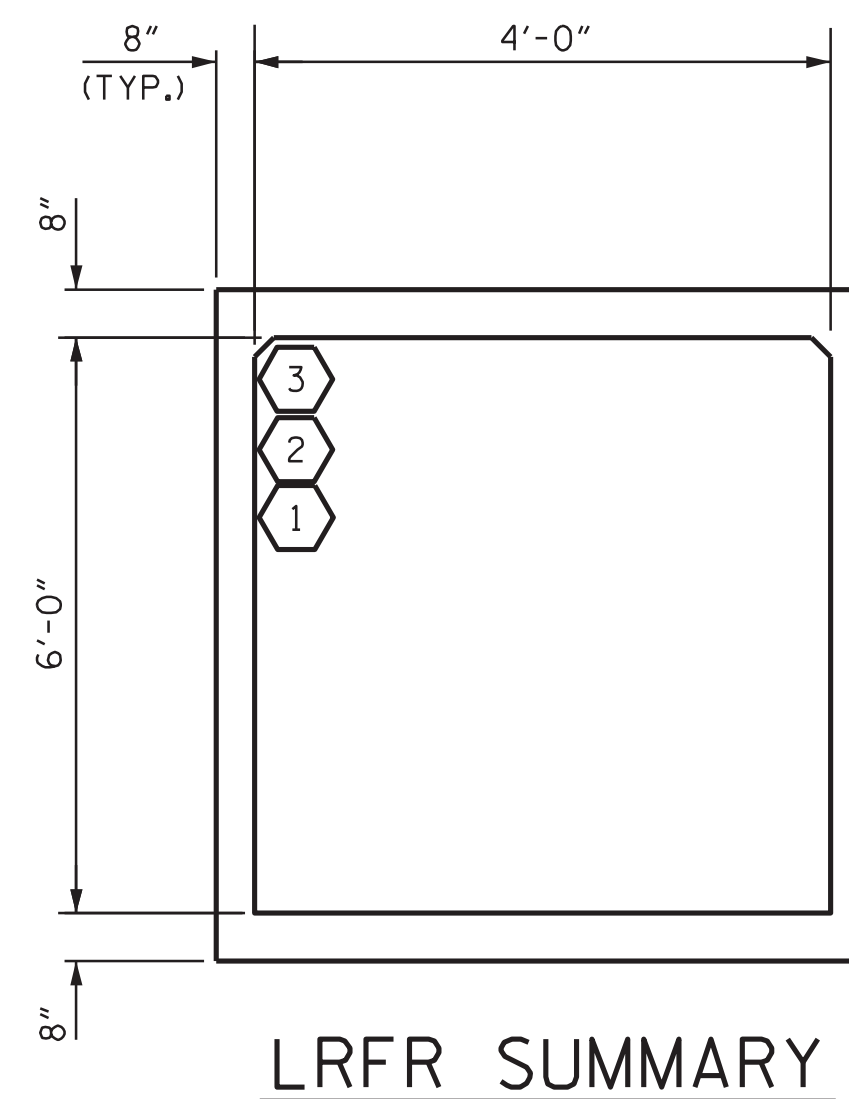
NOTE

RATING FACTORS ARE BASED ON THE STRENGTH I LIMIT STATE.

COMMENTS

- 1.
- 2.
- 3.
- 4.

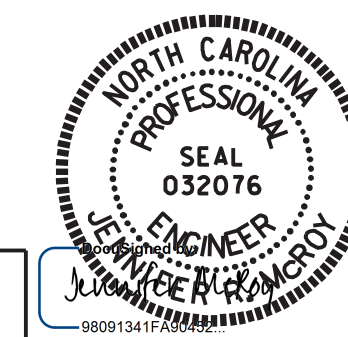
#	CONTROLLING LOAD RATING
1	DESIGN LOAD RATING (HL-93)
2	DESIGN LOAD RATING (HS-20)
3	LEGAL LOAD RATING **
** SEE CHART FOR VEHICLE TYPE	



PROJECT NO. B-4962
ORANGE COUNTY
 STATION: 14+16.72 -L-

SHEET 2 OF 6

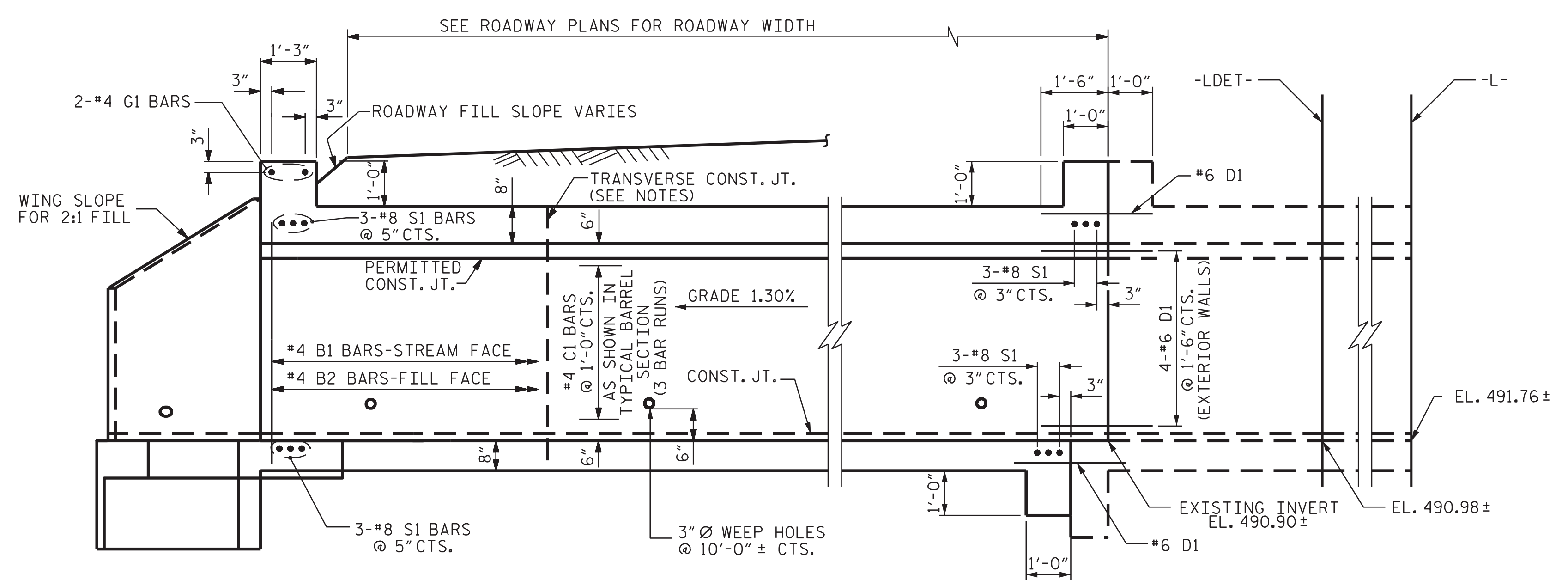
DRAWN BY : J.R. MCROY	DATE : 9/18
CHECKED BY : D.R. SMITH	DATE : 10/18
DESIGN ENGINEER OF RECORD : J.R. MCROY	DATE : 10/18
DRAWN BY : WMC 7/11	
CHECKED BY : GM 7/11	



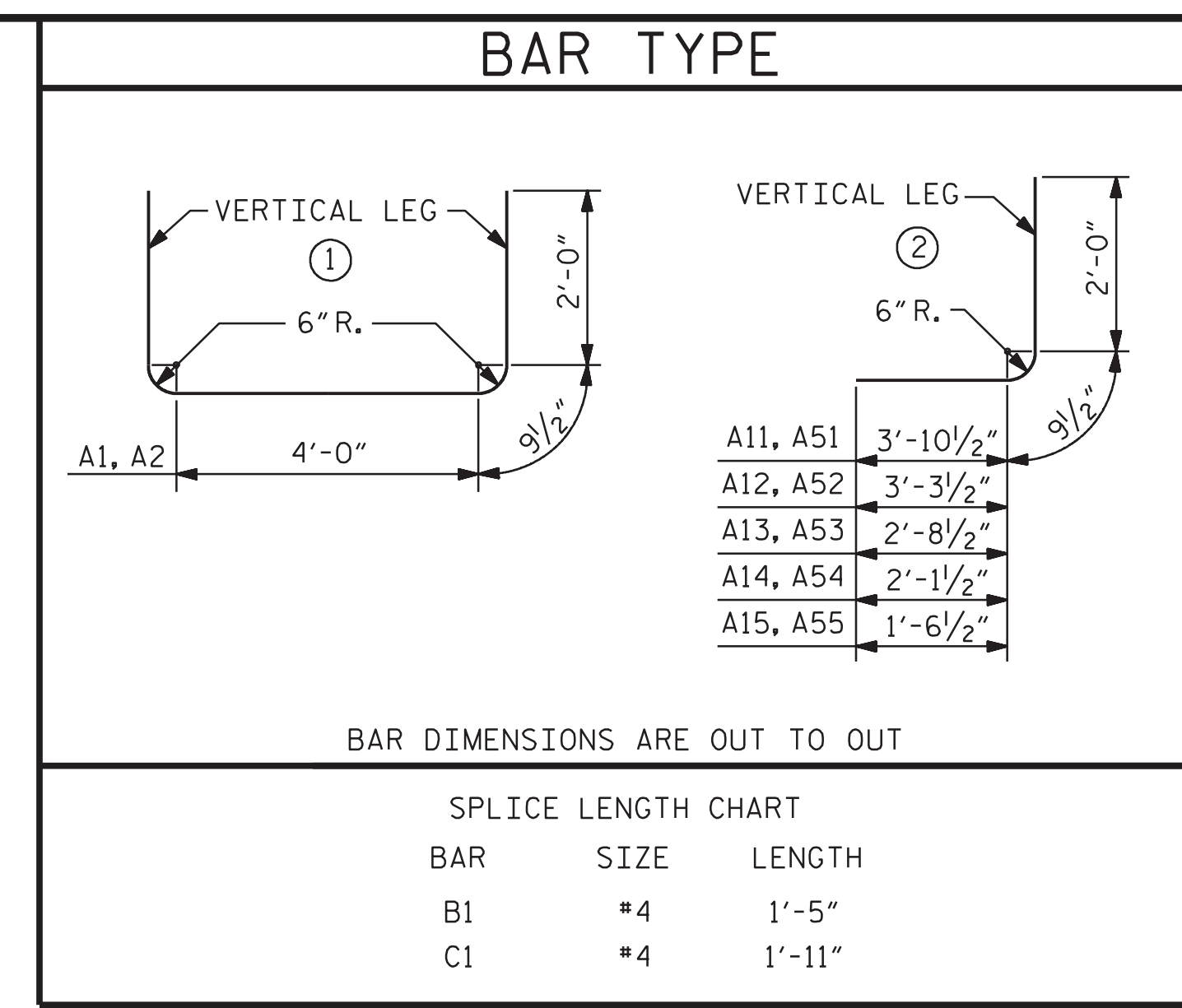
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STANDARD
 LRFR SUMMARY FOR
 REINFORCED CONCRETE
 BOX CULVERTS
 LEFT EXTENSION
 (NON-INTERSTATE TRAFFIC)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-43
1			3			TOTAL SHEETS
2			4			47

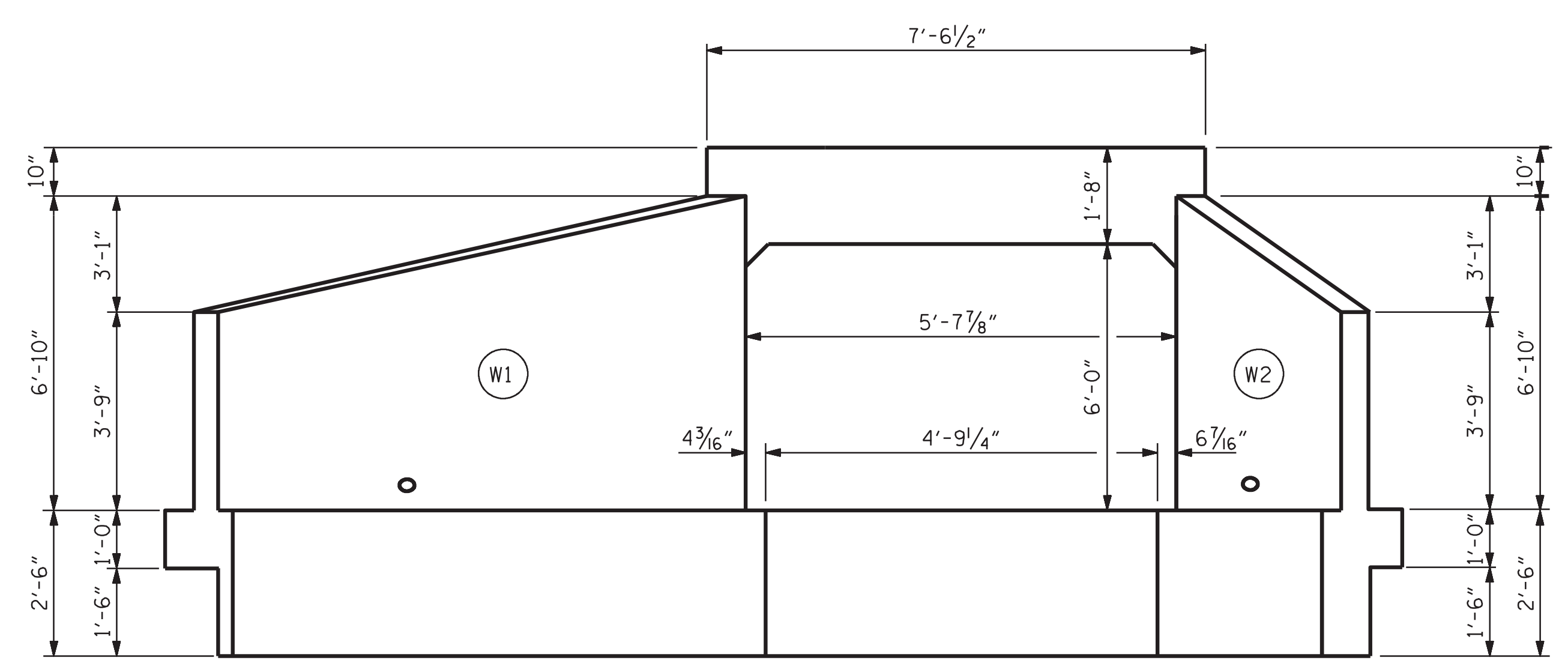
STD. NO. LRFR5



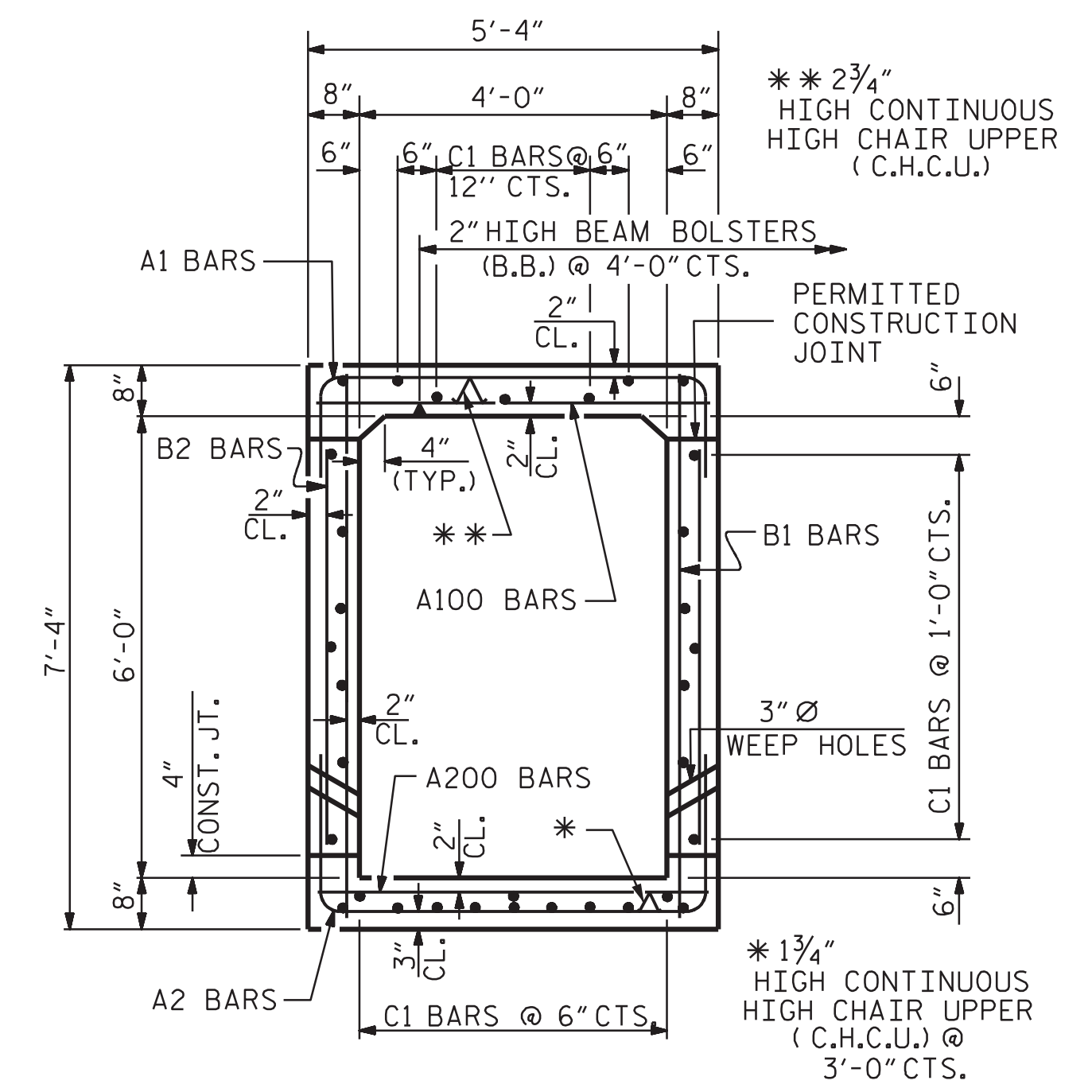
CULVERT SECTION NORMAL TO ROADWAY



BAR SCHEDULE					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A1	135	#4	1	9'-7"	864
A2	135	#4	1	9'-7"	864
A11	2	#4	2	6'-8"	9
A12	2	#4	2	6'-1"	8
A13	2	#4	2	5'-6"	7
A14	2	#4	2	4'-11"	7
A15	2	#4	2	4'-4"	6
A51	2	#4	2	6'-8"	9
A52	2	#4	2	6'-1"	8
A53	2	#4	2	5'-6"	7
A54	2	#4	2	4'-11"	7
A55	2	#4	2	4'-4"	6
A100	135	#4	STR	4'-11"	443
A101	2	#4	STR	4'-5"	6
A102	2	#4	STR	3'-10"	5
A103	2	#4	STR	3'-3"	4
A104	2	#4	STR	2'-8"	4
A105	2	#4	STR	2'-1"	3
A200	135	#4	STR	4'-11"	443
A201	2	#4	STR	4'-5"	6
A202	2	#4	STR	3'-10"	5
A203	2	#4	STR	3'-3"	4
A204	2	#4	STR	2'-8"	4
A205	2	#4	STR	2'-1"	3
B1	168	#4	STR	6'-11"	776
B2	288	#4	STR	5'-0"	962
C1	99	#4	STR	29'-2"	1929
D1	16	#6	STR	2'-6"	60
G1	2	#4	STR	7'-0"	9
S1	12	#8	STR	7'-0"	224
REINFORCING STEEL					= 6692 LBS



OUTLET END ELEVATION NORMAL TO SKEW

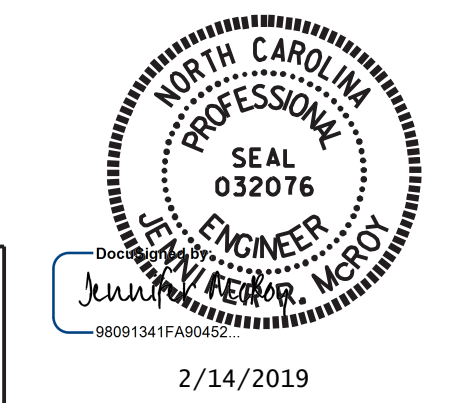


RIGHT ANGLE SECTION OF BARREL
THERE ARE 33 "C" BARS IN SECTION OF BARREL

PROJECT NO. B-4962
ORANGE COUNTY
 STATION: 14+16.72 -L-

SHEET 3 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SINGLE 4 FT. X 6 FT.
 CONCRETE BOX CULVERT
 LEFT EXTENSION
 135° SKEW**



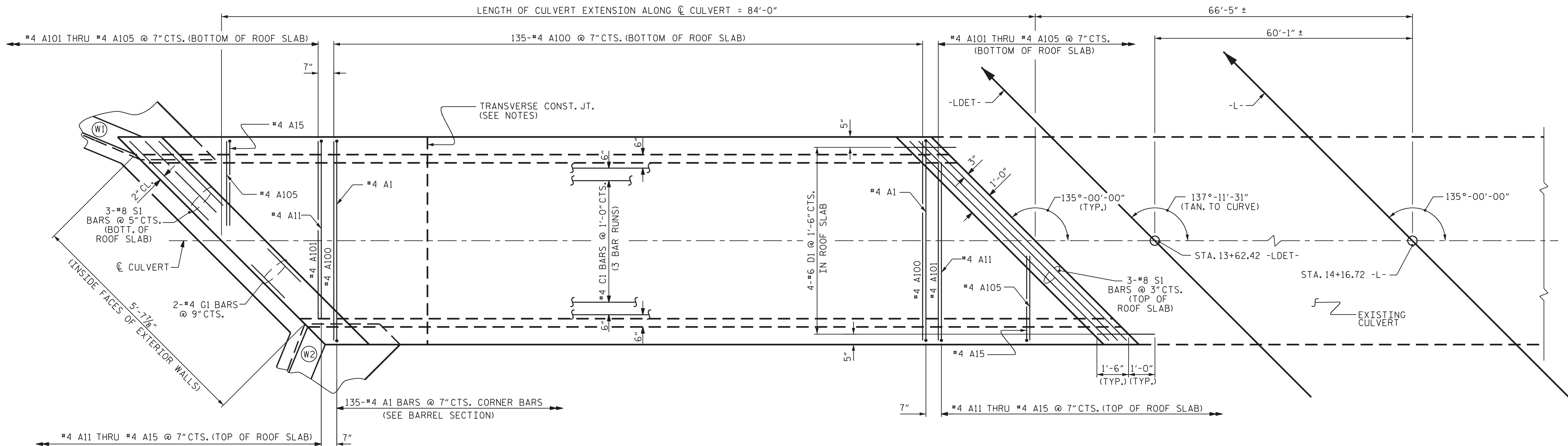
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REVISIONS				SHEET NO.
NO.	BY:	DATE:	NO.	DATE:
1			3	
2			4	

TOTAL SHEETS: 47

DRAWN BY: J.R. MCROY DATE: 9/18
 CHECKED BY: D.R. SMITH DATE: 10/18
 DESIGN ENGINEER OF RECORD: J.R. MCROY DATE: 10/18

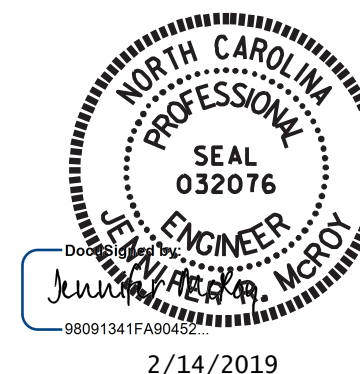


PLAN - ROOF SLAB

PROJECT NO. B-4962
ORANGE COUNTY
 STATION: 14+16.72 -L-

SHEET 4 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SINGLE 4 FT. X 6 FT.
 CONCRETE BOX CULVERT
 LEFT EXTENSION
 135° SKEW



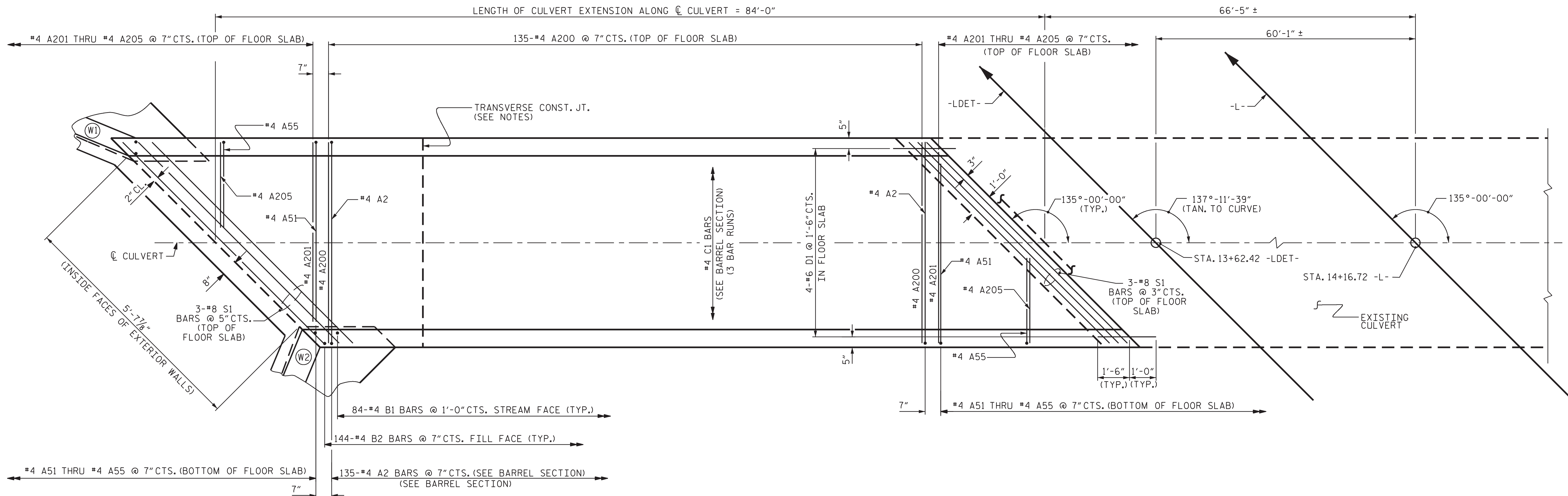
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-45
1			3			TOTAL SHEETS
2			4			47

DRAWN BY : J.R. MCROY DATE : 9/18
 CHECKED BY : D.R. SMITH DATE : 10/18
 DESIGN ENGINEER OF RECORD: J.R. MCROY DATE : 10/18



PLAN - FLOOR SLAB

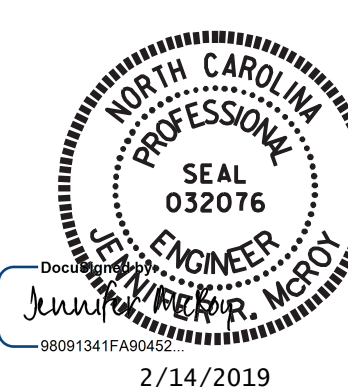
PROJECT NO. B-4962

ORANGE COUNTY

STATION: 14+16.72 -L-

SHEET 5 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SINGLE 4 FT. X 6 FT.
 CONCRETE BOX CULVERT
 LEFT EXTENSION
 135° SKEW



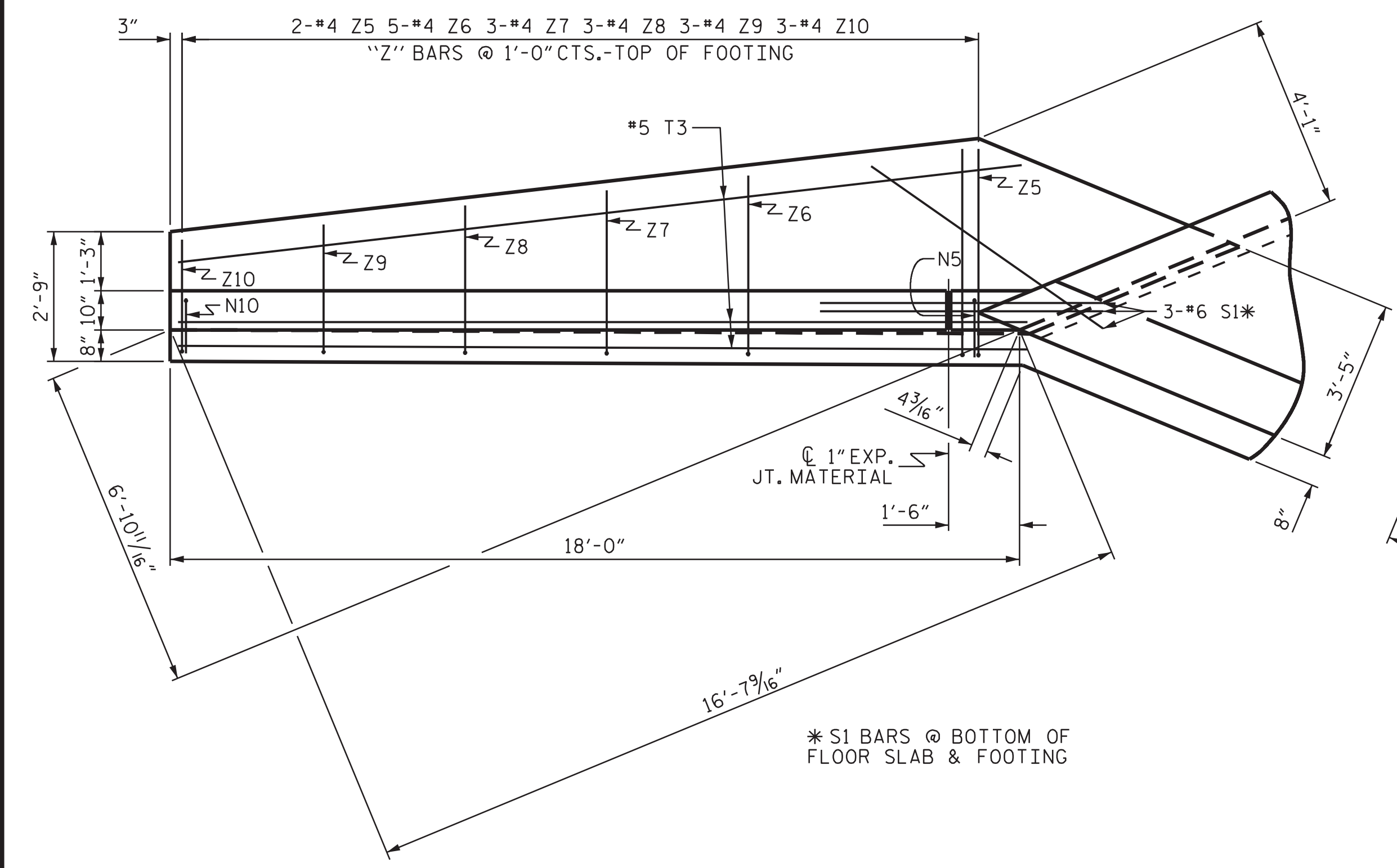
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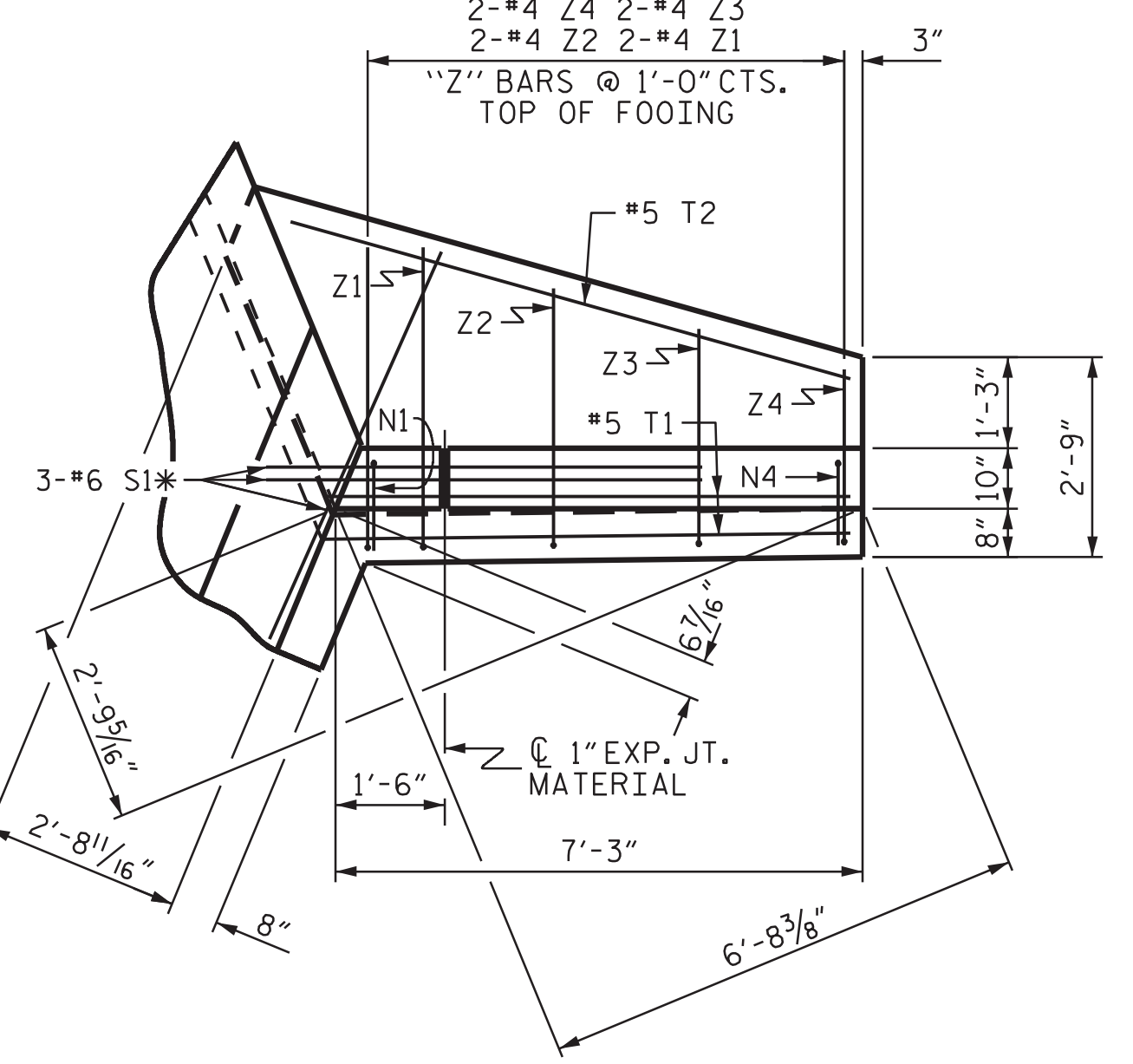
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-46
1			3			TOTAL SHEETS
2			4			47

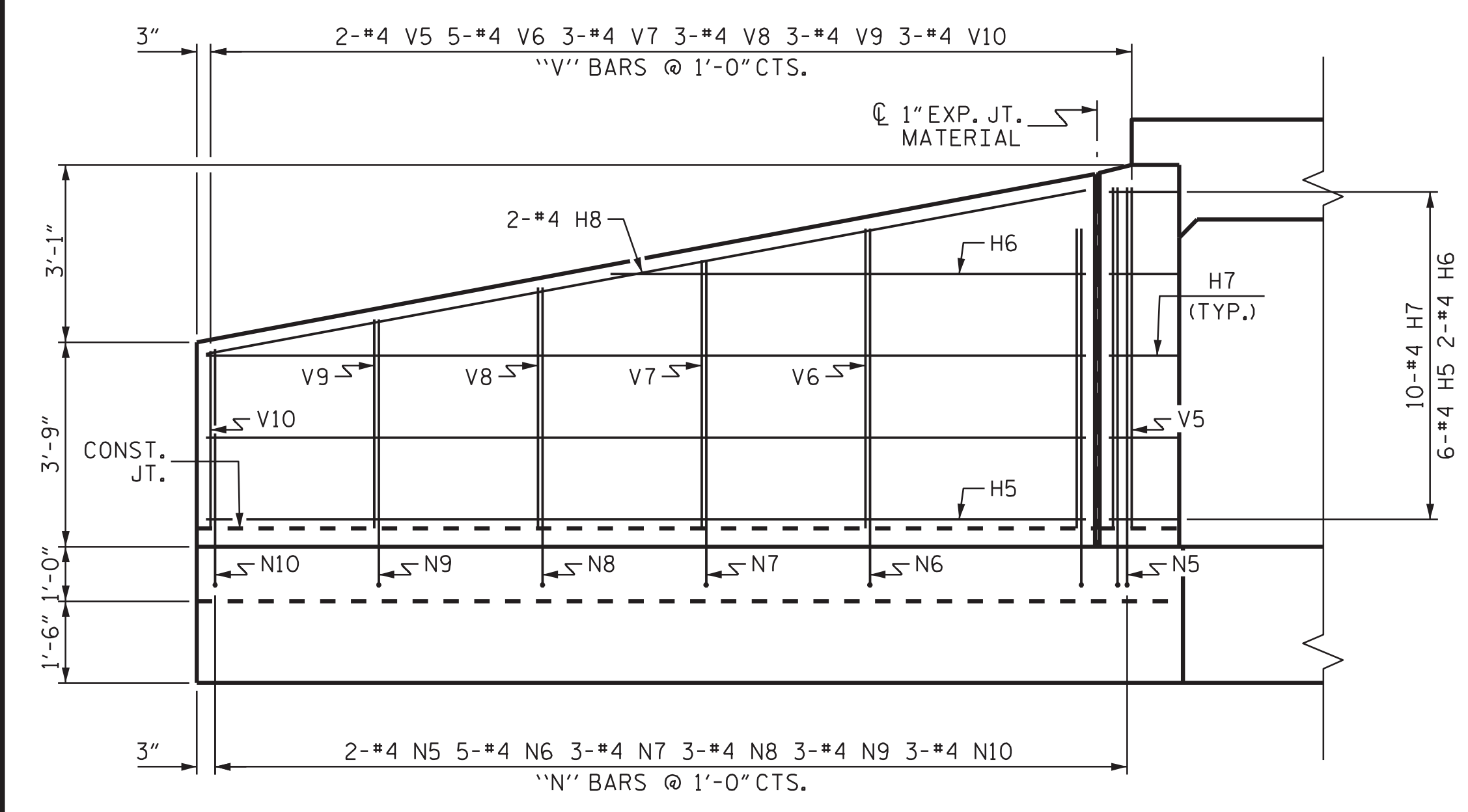
DRAWN BY : J.R. MCROY DATE : 9/18
 CHECKED BY : D.R. SMITH DATE : 10/18
 DESIGN ENGINEER OF RECORD: J.R. MCROY DATE : 10/18



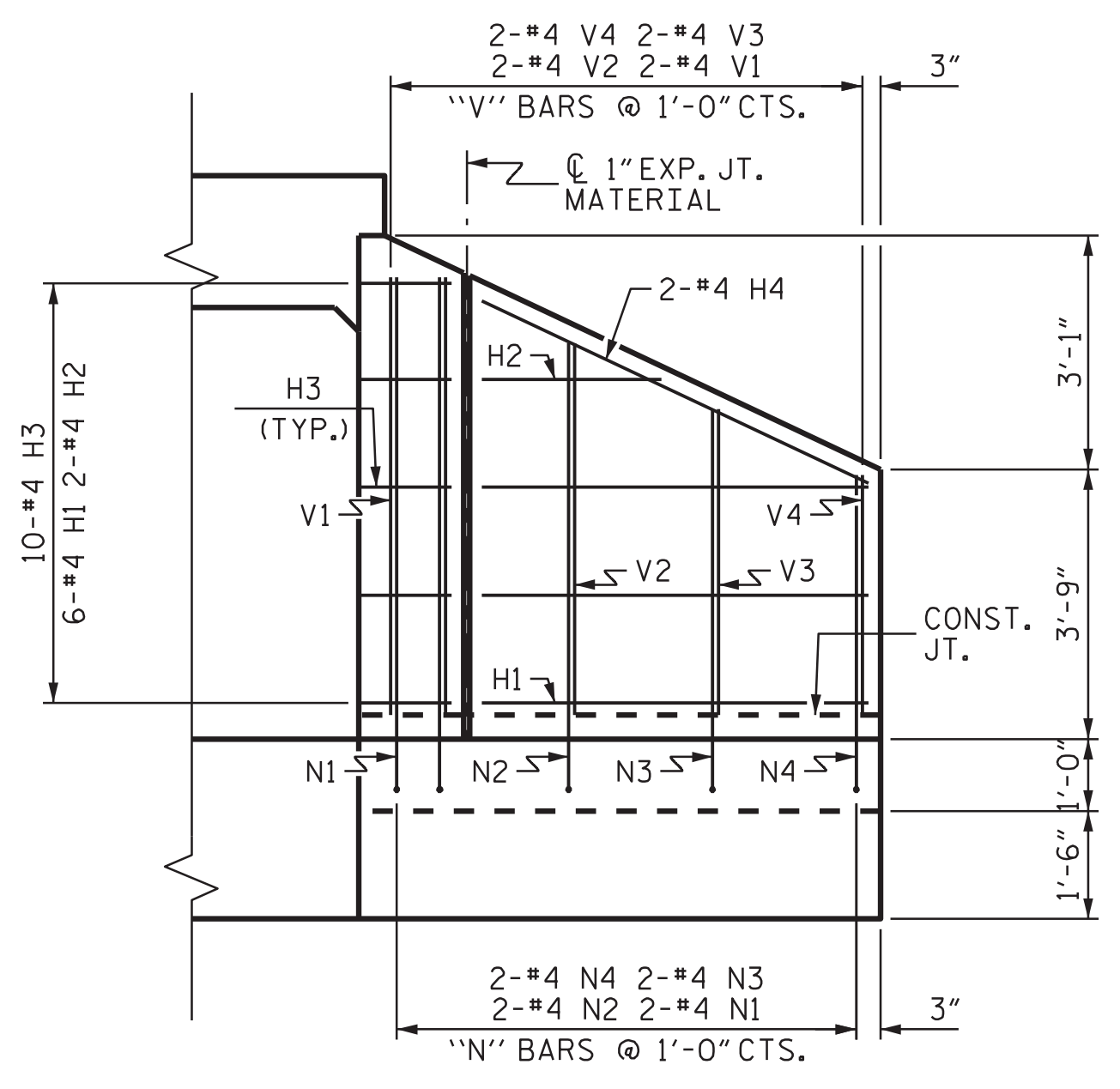
PLAN W1



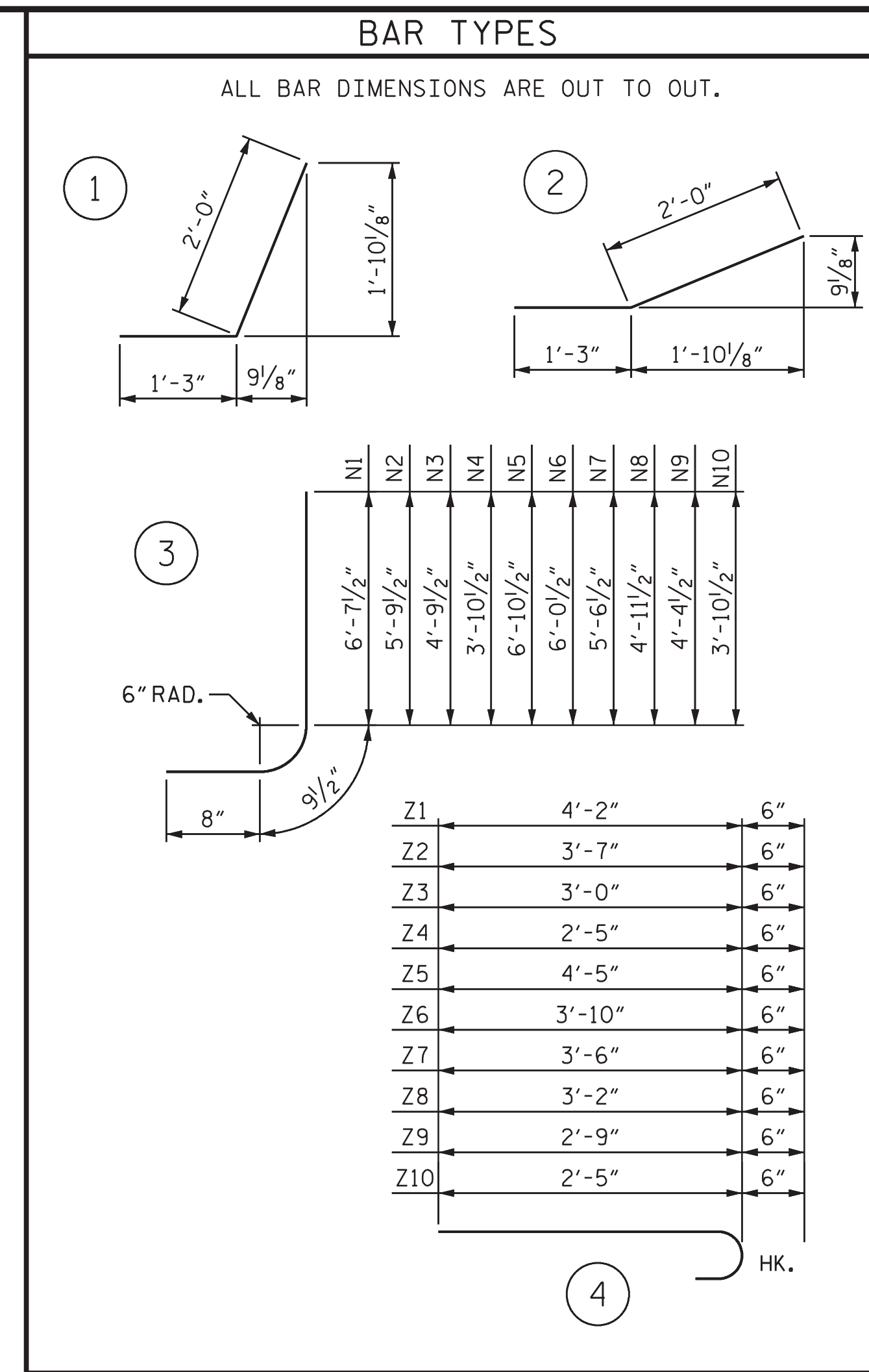
PLAN W2



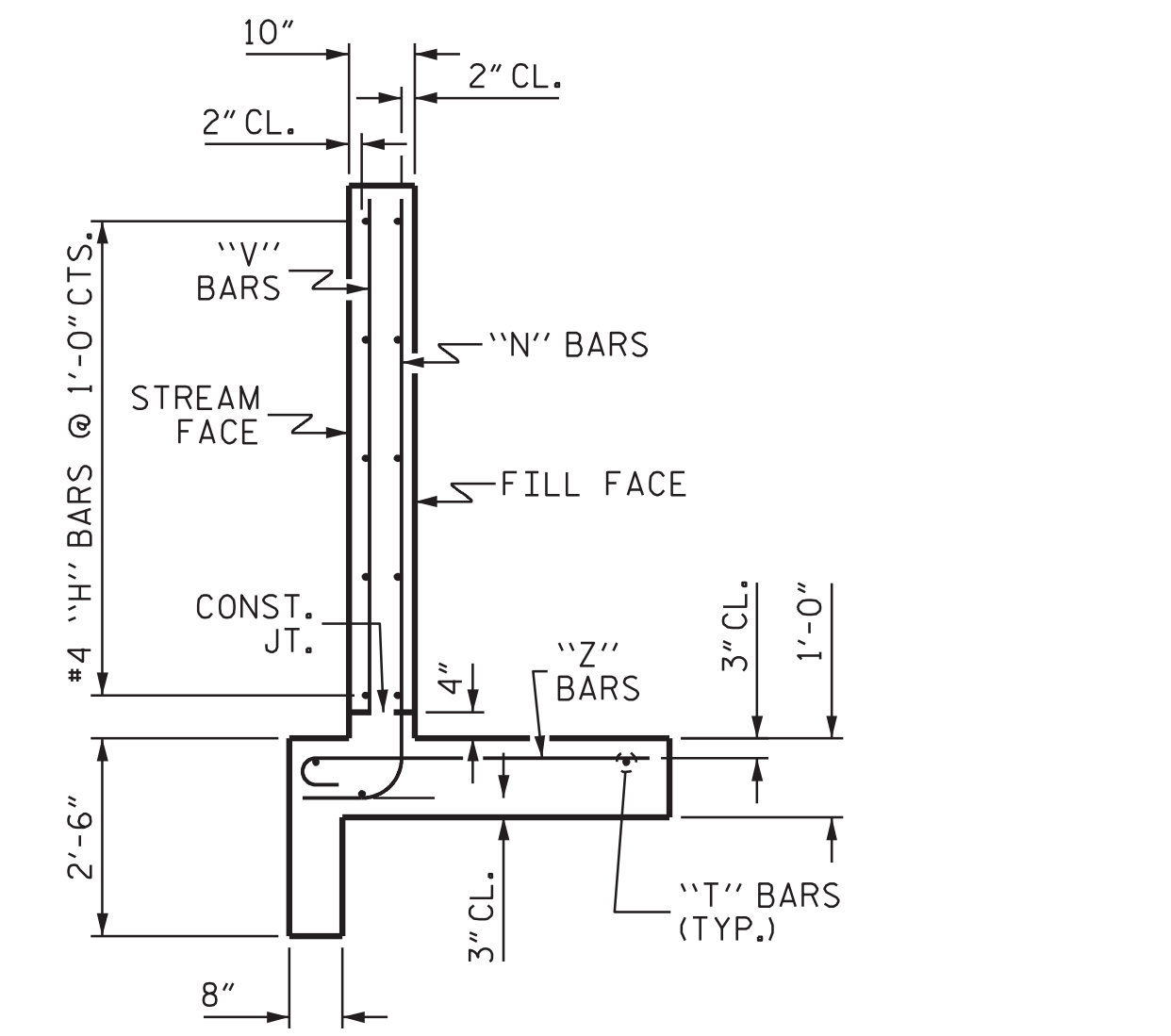
ELEVATION W1



ELEVATION W2



BILL OF MATERIAL					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
H1	6	#4	STR	5'-4"	21
H2	2	#4	STR	2'-6"	3
H3	10	#4	1	3'-3"	22
H4	2	#4	STR	5'-11"	8
H5	6	#4	STR	16'-1"	65
H6	2	#4	STR	8'-8"	12
H7	10	#4	2	3'-3"	22
H8	2	#4	STR	16'-4"	22
N1	2	#4	3	8'-1"	11
N2	2	#4	3	7'-3"	10
N3	2	#4	3	6'-3"	8
N4	2	#4	3	5'-4"	7
N5	2	#4	3	8'-4"	11
N6	5	#4	3	7'-6"	25
N7	3	#4	3	7'-0"	14
N8	3	#4	3	6'-5"	13
N9	3	#4	3	5'-10"	12
N10	3	#4	3	5'-4"	11
S1	6	#6	STR	6'-0"	54
T1	2	#5	STR	7'-3"	15
T2	1	#5	STR	8'-0"	8
T3	3	#5	STR	18'-0"	56
V1	2	#4	STR	6'-1"	8
V2	2	#4	STR	5'-2"	7
V3	2	#4	STR	4'-3"	6
V4	2	#4	STR	3'-4"	5
V5	2	#4	STR	6'-3"	8
V6	5	#4	STR	5'-6"	18
V7	3	#4	STR	4'-11"	10
V8	3	#4	STR	4'-5"	9
V9	3	#4	STR	3'-10"	8
V10	3	#4	STR	3'-3"	7
Z1	2	#4	4	4'-8"	6
Z2	2	#4	4	4'-1"	6
Z3	2	#4	4	3'-6"	5
Z4	2	#4	4	2'-11"	4
Z5	2	#4	4	4'-11"	7
Z6	5	#4	4	4'-4"	15
Z7	3	#4	4	4'-0"	8
Z8	3	#4	4	3'-8"	7
Z9	3	#4	4	3'-3"	7
Z10	3	#4	4	2'-11"	6
REINFORCING STEEL FOR 2 WINGS					587 LBS
CLASS A CONCRETE					
2 WINGS				9.3	CY
1 HEADWALL				0.4	CY
1 END CURTAIN WALL				0.3	CY
2 EDGE BEAMS				0.6	CY
TOTAL					10.6



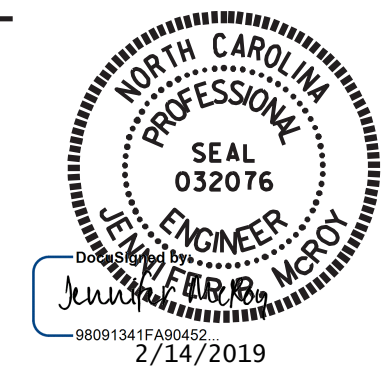
TYPICAL WING SECTION

PROJECT NO. B-4962
ORANGE COUNTY
 STATION: 14+16.72 -L-
 SHEET 6 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
WINGS FOR CONCRETE BOX CULVERT
 H = 6'-0" SLOPE = 2:1
 135° SKEW

ASSEMBLED BY: J.R. MCROY DATE: 09/18
 CHECKED BY: D.R. SMITH DATE: 10/18
 DRAWN BY: CCJ 01/00
 CHECKED BY: RWW 03/00

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 5540 Centerville Drive, Suite 305
 Raleigh, NC 27606
 Tel. 919-854-0344 Fax 919-854-0355
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-47
1			3			TOTAL SHEETS
2			4			47

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 2018 "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 1/2" 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 3/16" 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. FINIS 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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