

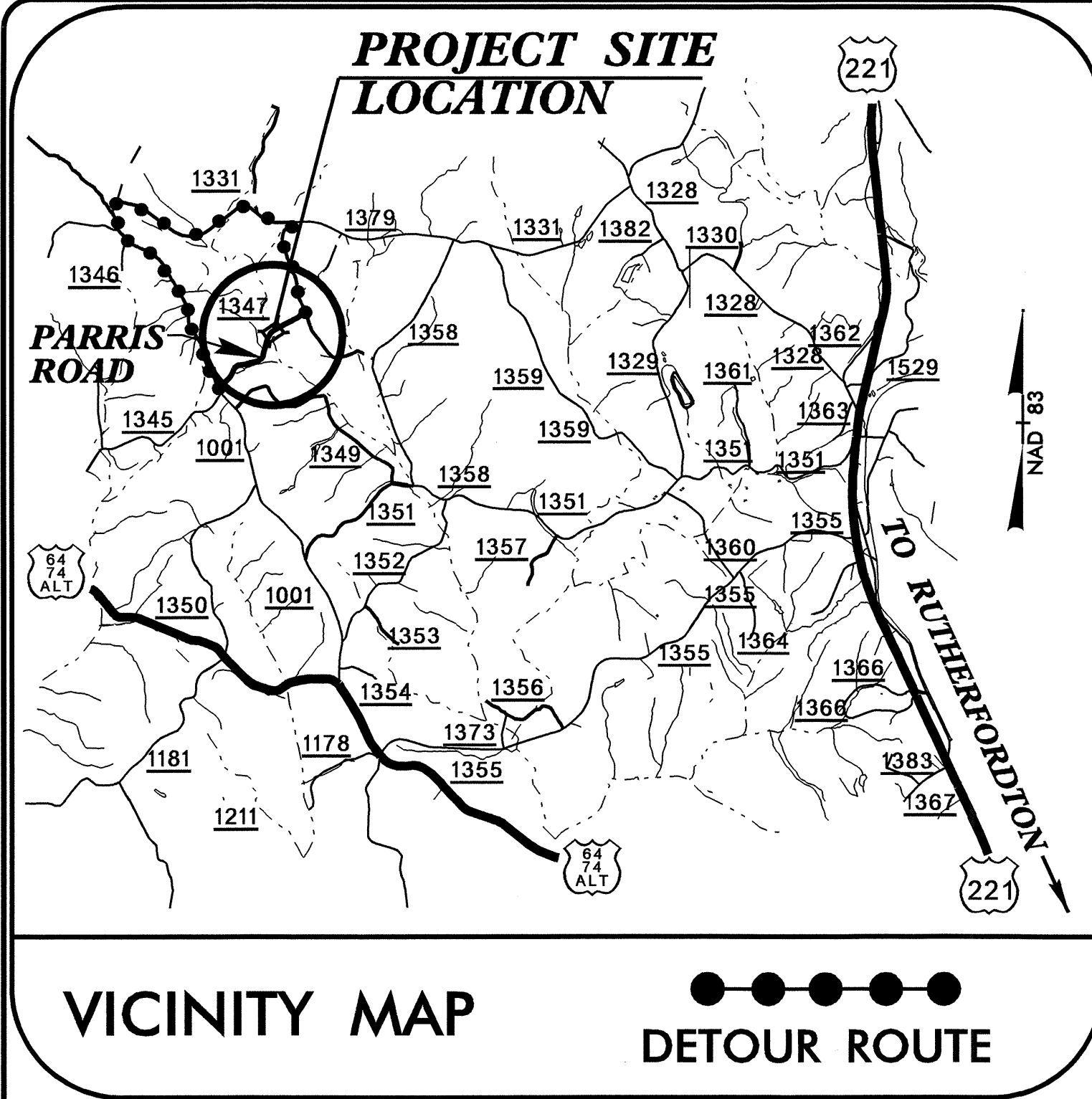
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4631		
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33805.1.1	BRZ-1347(3)	P.E.	
33805.2.1	BRZ-1347(3)	ROW	
33805.3.1	BRZ-1347(3)	CONST.	

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**RUTHERFORD COUNTY**

LOCATION: BRIDGE NO. 526 ON SR 1347 (PARRIS ROAD)  
OVER WEST BRANCH MOUNTAIN CREEK.

TYPE OF WORK: GRADING, DRAINAGE, PAVEMENT, AND CULVERT



VICINITY MAP

●●●●●●●●  
DETOUR ROUTE

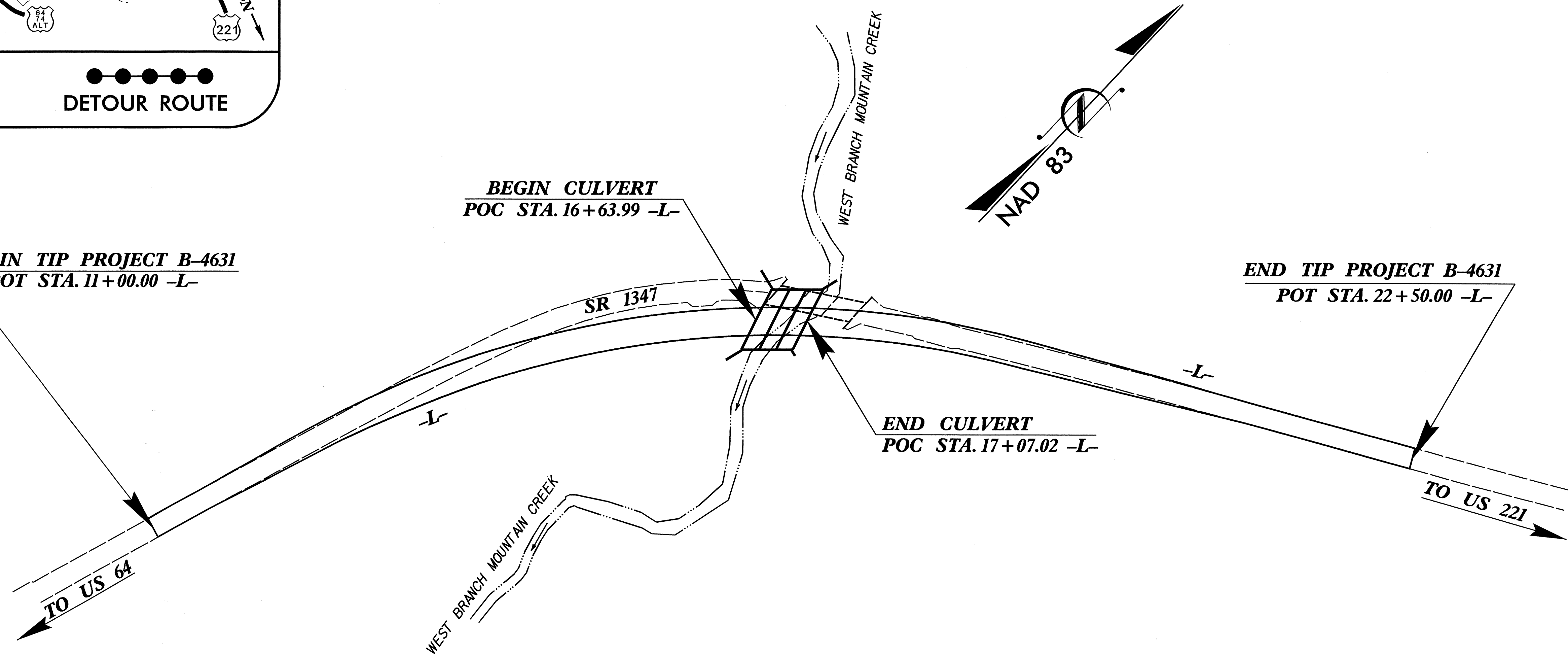
**CULVERT**

BEGIN TIP PROJECT B-4631  
POT STA. 11+00.00 -L-

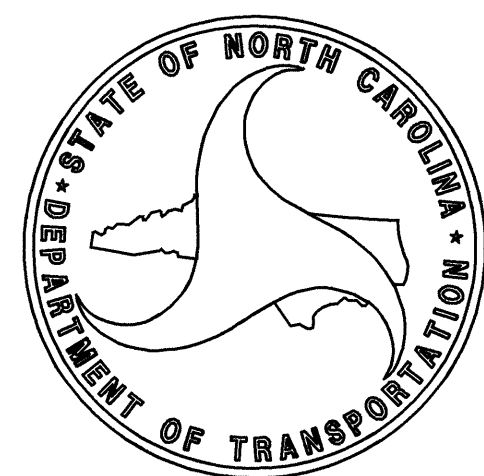
BEGIN CULVERT  
POC STA. 16+63.99 -L-

END TIP PROJECT B-4631  
POT STA. 22+50.00 -L-

END CULVERT  
POC STA. 17+07.02 -L-



\*\* DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED



DESIGN DATA	
ADT 2007 =	330
ADT 2030 =	500
DHV =	10 %
D =	60 %
T =	3 % *
** V =	50 MPH
FUNC. CLASS =	LOCAL
* TTST 1%	DUAL 2%

PROJECT LENGTH	
LENGTH ROADWAY TIP PROJECT B-4631 =	0.210 MI
LENGTH STRUCTURE TIP PROJECT B-4631 =	0.008 MI
TOTAL LENGTH TIP PROJECT B-4631 =	0.218 MI

Prepared In the Office of: DIVISION OF HIGHWAYS 1000 Birch Ridge Dr., Raleigh NC, 27610	
2006 STANDARD SPECIFICATIONS	
LETTING DATE: SEPTEMBER 16, 2008	B. S. COX, P.E. PROJECT ENGINEER
	D. E. PETREY, P.E. PROJECT DESIGN ENGINEER


DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA	
STATE DESIGN ENGINEER	
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED DIVISION ADMINISTRATOR	DATE

TIP PROJECT: B-4631

CONTRACT: C201929

09-MAY-2008 14:00  
\$\$\$\$\$DGN\$\$\$\$\$  
groyd

BM. #2 R/R SPIKE IN POWER POLE STA. 11+04.77 -L-, 208.85' LT, EL.=945.90'

F. A. PROJECT NO. BRZ-1347 (3)

NOTES

ASSUMED LIVE LOAD = HS20 OR ALTERNATE LOADING.  
 DESIGN FILL-----1.21'  
 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 OF STAGE 1 INCLUDING 4" OF ALL VERTICAL WALLS.  
 2. THE REMAINING PORTIONS OF THE STAGE 1 WALLS AND WINGS FULL HEIGHT FOLLOWED BY THE ROOF SLAB, HEADWALLS, AND SILL IN STAGE 1 BARREL.  
 3. WING FOOTINGS AND FLOOR SLAB OF STAGE 2 INCLUDING 4" OF VERTICAL WALL.  
 4. THE REMAINING PORTION OF STAGE 2 WALL AND WINGS FULL HEIGHT FOLLOWED BY THE ROOF SLAB, HEADWALLS, AND SILL IN STAGE 2.  
 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.  
 THE EXISTING STRUCTURE CONSISTING OF 1 @ 25.9', 1 @ 24.5' AND 1 @ 25.9' SPANS WITH A CLEAR ROADWAY WIDTH OF 19.7' AND TIMBER DECK WITH ASPHALT WEARING SURFACE ON STEEL I BEAMS; ON END BENTS & BENTS CONSISTING OF TIMBER CAPS WITH TIMBER PILES, AND LOCATED AT THE SITE OF THE PROPOSED STRUCTURE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED BELOW THE LEGAL LOAD LIMIT.  
 FOR REMOVAL OF EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE, PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS.

AT THE CONTRACTOR'S OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR WALL AND BOTH FACES OF INTERIOR 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 SPLICED SHALL BE PAID FOR BY THE CONTRACTOR.

AT THE CONTRACTOR'S OPTION HE MAY SUBMIT, TO THE ENGINEER FOR APPROVAL, DESIGN AND DETAIL DRAWINGS FOR A PRECAST REINFORCED CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE CULVERT SHOWN ON THE PLANS. THE DESIGN SHALL PROVIDE THE SAME SIZE AND NUMBER OF BARRELS AS USED ON THE CAST-IN-PLACE DESIGN. FOR OPTIONAL PRECAST REINFORCED CONCRETE BOX CULVERT, SEE SPECIAL PROVISIONS.

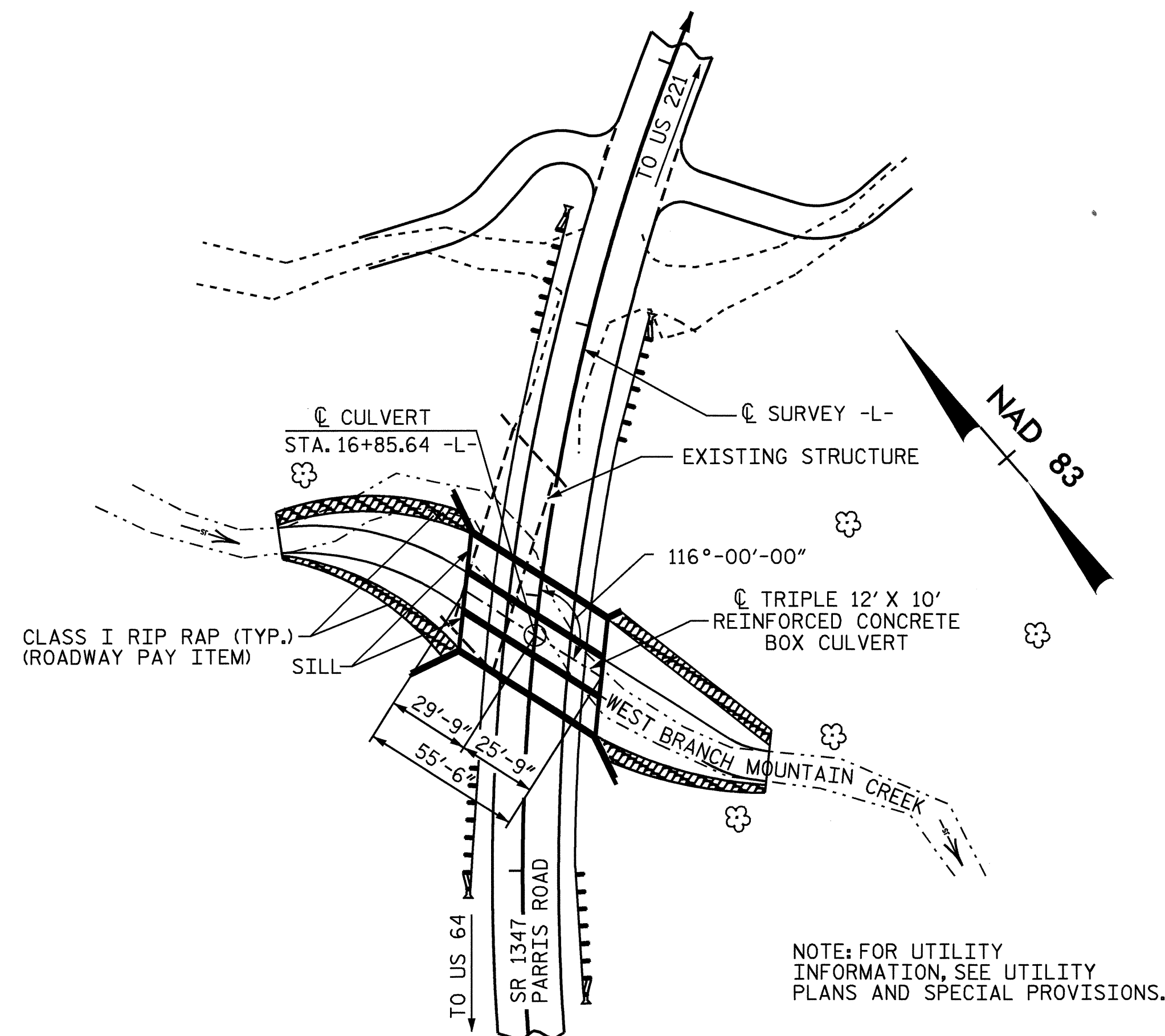
FOR CONSTRUCTION SEQUENCE, SEE EROSION CONTROL PLANS.  
 FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.

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.

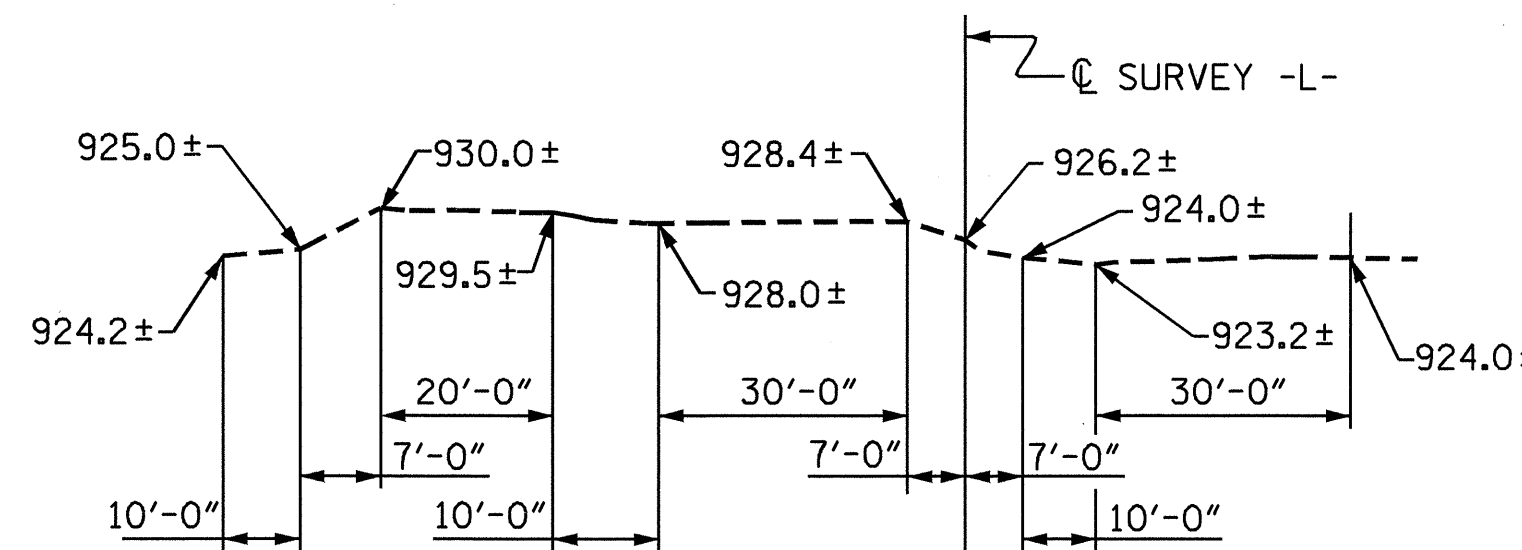
REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL REMOVE THE BRIDGE AND SUBMIT PLANS FOR DEMOLITION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS.  
 FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.  
 FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.  
 FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

INASMUCH AS THE PAINT SYSTEM ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD, THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLE 107-1 OF THE STANDARD SPECIFICATIONS. ANY COSTS RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERIALS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE BID PRICE FOR "REMOVAL OF EXISTING STRUCTURE AT STATION 16+85.64 -L-".



LOCATION SKETCH



PROFILE ALONG CULVERT

HYDRAULIC DATA

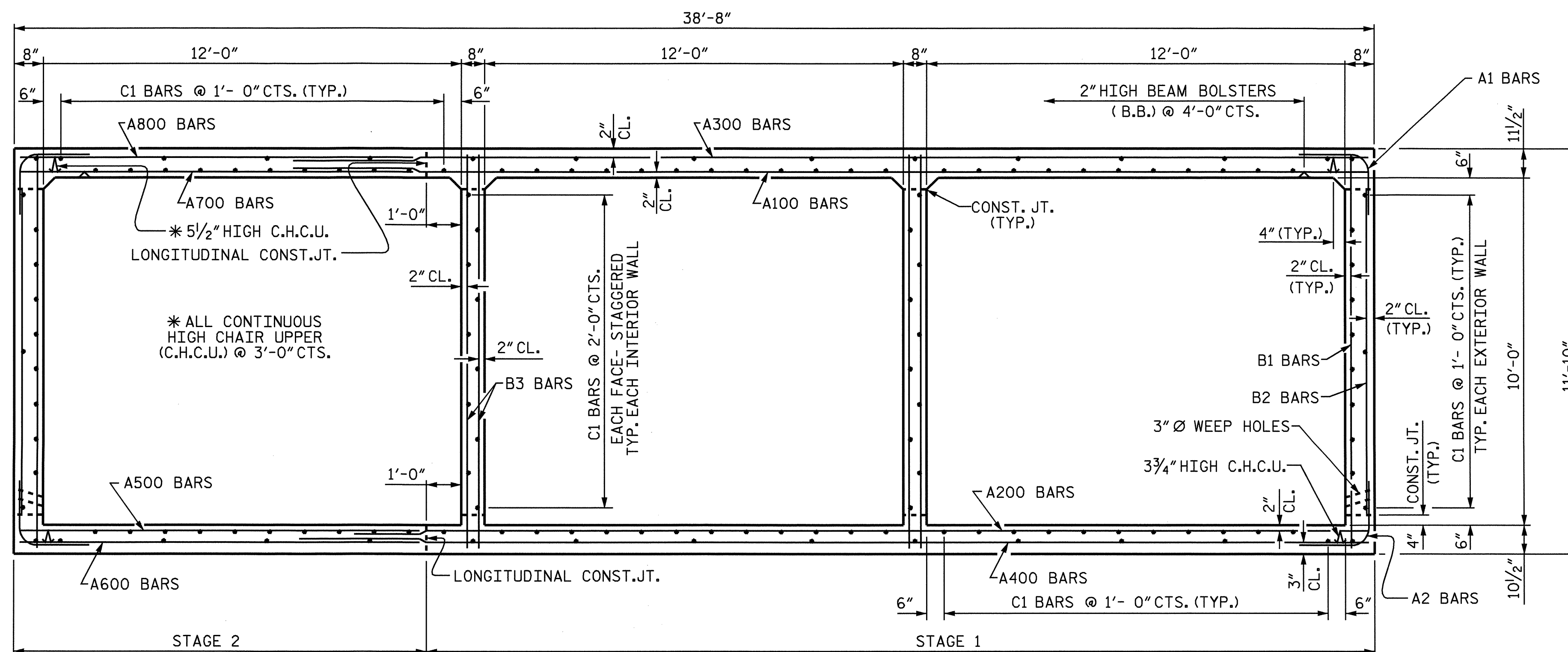
DESIGN DISCHARGE = 1150 C.F.S.  
 FREQUENCY OF DESIGN FLOOD = 25 YR.  
 DESIGN HIGH WATER ELEVATION = 933.0  
 DRAINAGE AREA = 3.81 SQ. MI.  
 BASIC DISCHARGE (Q100) = 1700 C.F.S.  
 BASIC HIGH WATER ELEVATION = 933.9

OVERTOPPING DATA

OVERTOPPING DISCHARGE = 2600 C.F.S.  
 FREQUENCY OF OVERTOPPING = 500 YR.  
 FLOOD  
 DESIGN HIGH WATER ELEVATION = 935.2

GRADE DATA

GRADE POINT ELEVATION @ STA. 16+85.64 -L- = 936.23  
 BED ELEVATION @ STA. 16+85.64 -L- = 922.55  
 ROADWAY SLOPE = 2:1



RIGHT ANGLE SECTION OF BARREL

(LOOKING DOWNSTREAM)  
 THERE ARE 140 "C" BARS IN SECTION OF BARREL.

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE		
BARREL @ 3.626	CY/FT	201.2 C.Y.
SILLS		2.5 C.Y.
WING ETC.		44.8 C.Y.
TOTAL		248.5 C.Y.

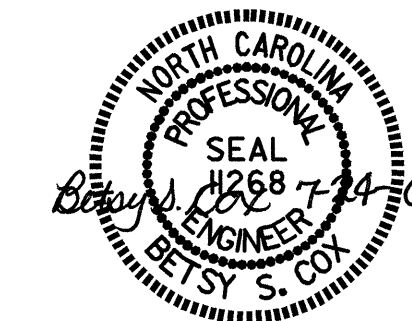
REINFORCING STEEL		
BARREL AND SILLS		44806 LBS.
WING ETC.		2781 LBS.
TOTAL		47587 LBS.

REMOVAL OF EXISTING STRUCTURE	LUMP SUM
FOUNDATION CONDITIONING MAT'L	152 TONS
CULVERT EXCAVATION	LUMP SUM

PROJECT NO. B-4631  
 RUTHERFORD COUNTY  
 STATION: 16+85.64 -L-

SHEET 1 OF 5 REPLACES BRIDGE No. 526

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 BARREL STANDARD  
 TRIPLE 12 FT. X 10 FT.  
 CONCRETE BOX CULVERT  
 116° SKEW



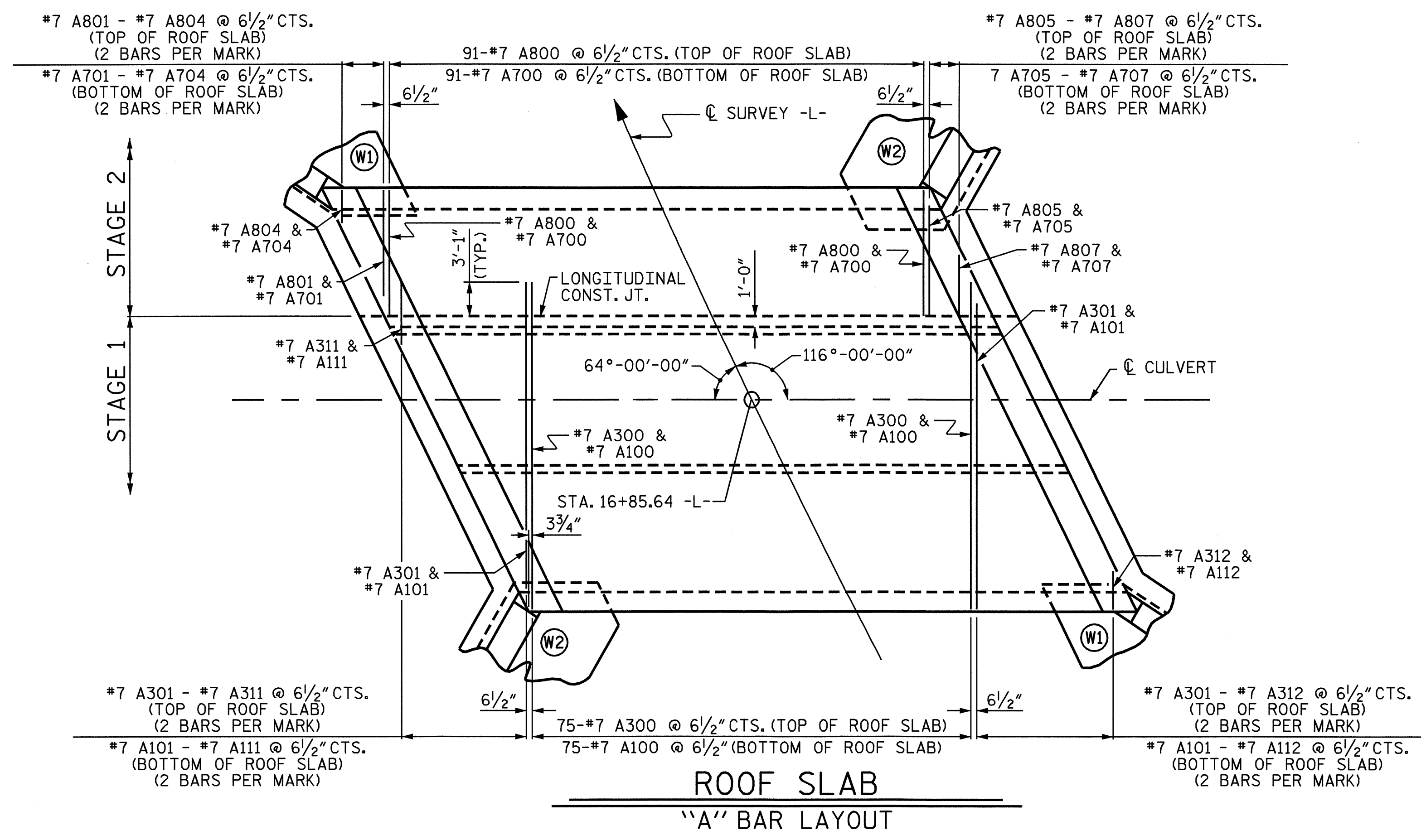
ADDED 10-1-90

ASSEMBLED BY: A. V. ROYAL DATE: 9/07  
 CHECKED BY: M. L. BROWN DATE: 9/07  
 DRAWN BY: J.E. MANGUM DATE: OCT. 1989  
 CHECKED BY: A.R. BISSETTE DATE: AUG. 1989

SPECIAL  
 STANDARD

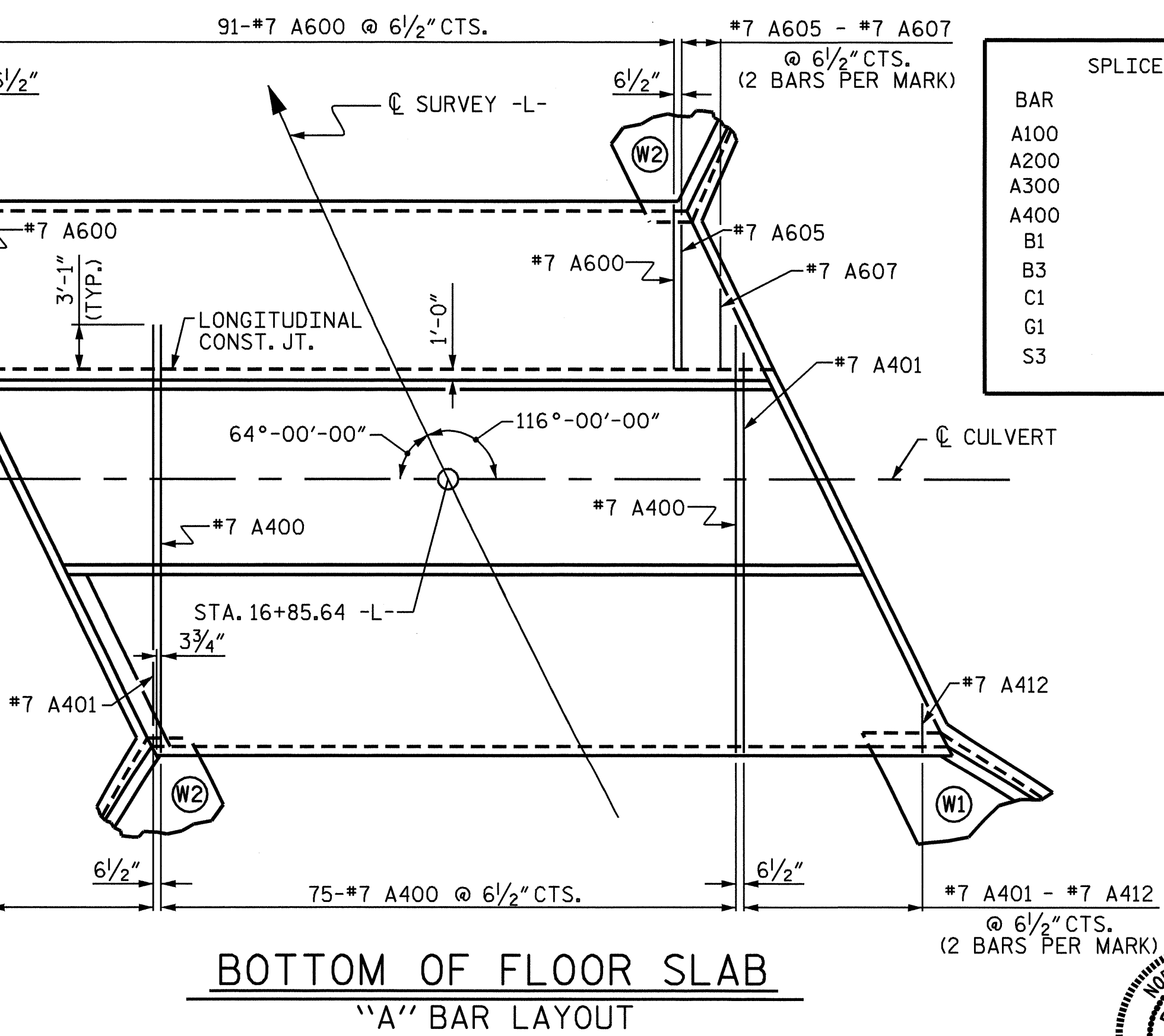
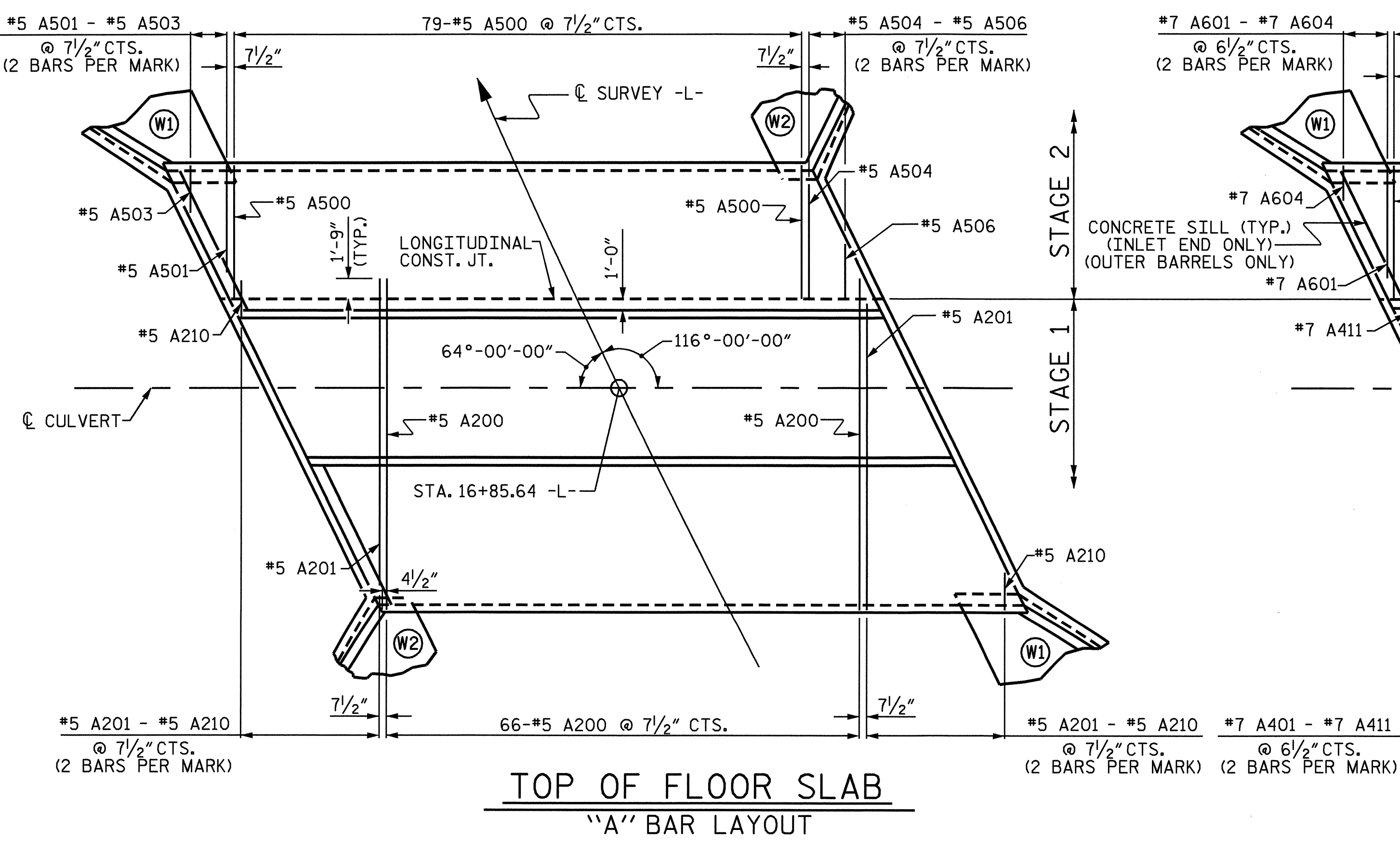
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NO.	BY:	DATE:	NO.	BY:	DATE:	C-1
1			3			TOTAL SHEETS
2			4			5



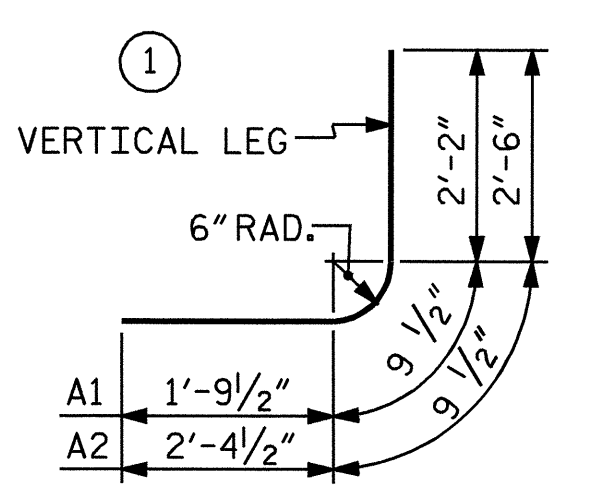


REINFORCING STEEL BAR SCHEDULE																			
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT		
A1	206	#5	1	4'-9"	1021	A305	4	#7	STR	19'-0"	155	A603	2	#7	STR	5'-2"	21		
A2	206	#6	1	5'-8"	1753	A306	4	#7	STR	16'-9"	137	A604	2	#7	STR	2'-11"	12		
A100	75	#7	STR	29'-11"	4586	A307	4	#7	STR	14'-7"	119	A605	2	#7	STR	10'-0"	41		
A101	4	#7	STR	27'-11"	228	A308	4	#7	STR	12'-4"	101	A606	2	#7	STR	7'-10"	32		
A102	4	#7	STR	25'-8"	210	A309	4	#7	STR	10'-1"	82	A607	2	#7	STR	5'-7"	23		
A103	4	#7	STR	23'-5"	191	A310	4	#7	STR	7'-11"	65	A700	91	#7	STR	11'-5"	2124		
A104	4	#7	STR	21'-3"	174	A311	4	#7	STR	5'-8"	46	A701	2	#7	STR	9'-7"	39		
A105	4	#7	STR	19'-0"	155	A312	2	#7	STR	3'-6"	14	A702	2	#7	STR	7'-5"	30		
A106	4	#7	STR	16'-9"	137	A400	75	#7	STR	29'-11"	4586	A703	2	#7	STR	5'-2"	21		
A107	4	#7	STR	14'-7"	119	A401	4	#7	STR	27'-11"	228	A704	2	#7	STR	2'-11"	12		
A108	4	#7	STR	12'-4"	101	A402	4	#7	STR	25'-8"	210	A705	2	#7	STR	10'-0"	41		
A109	4	#7	STR	10'-1"	82	A403	4	#7	STR	23'-5"	191	A706	2	#7	STR	7'-10"	32		
A110	4	#7	STR	7'-11"	65	A404	4	#7	STR	21'-3"	174	A707	2	#7	STR	5'-7"	23		
A111	4	#7	STR	5'-8"	46	A405	4	#7	STR	19'-0"	155	A800	91	#7	STR	11'-5"	2124		
A112	2	#7	STR	3'-6"	14	A406	4	#7	STR	16'-9"	137	A801	2	#7	STR	9'-7"	39		
A200	66	#5	STR	28'-6"	1962	A407	4	#7	STR	14'-7"	119	A802	2	#7	STR	7'-5"	30		
A201	4	#5	STR	26'-4"	110	A408	4	#7	STR	12'-4"	101	A803	2	#7	STR	5'-2"	21		
A202	4	#5	STR	23'-9"	99	A409	4	#7	STR	10'-1"	82	A804	2	#7	STR	2'-11"	12		
A203	4	#5	STR	21'-3"	89	A410	4	#7	STR	7'-11"	65	A805	2	#7	STR	10'-0"	41		
A204	4	#5	STR	18'-8"	78	A411	4	#7	STR	5'-8"	46	A806	2	#7	STR	7'-10"	32		
A205	4	#5	STR	16'-1"	67	A412	2	#7	STR	3'-6"	14	A807	2	#7	STR	5'-7"	23		
A206	4	#5	STR	13'-6"	56	A500	79	#5	STR	11'-5"	941	B1	112	#4	STR	11'-4"	848		
A207	4	#5	STR	11'-0"	46	A501	2	#5	STR	9'-2"	19	B2	206	#4	STR	9'-4"	1284		
A208	4	#5	STR	8'-5"	35	A502	2	#5	STR	6'-7"	14	B3	316	#5	STR	11'-4"	3735		
A209	4	#5	STR	5'-10"	24	A503	2	#5	STR	4'-0"	8	C1	280	#4	STR	28'-8"	5362		
A210	4	#5	STR	3'-3"	14	A504	2	#5	STR	9'-10"	21	D1	6	#6	STR	2'-11"	26		
A300	75	#7	STR	29'-11"	4586	A505	2	#5	STR	7'-3"	15	G1	8	#5	STR	33'-0"	275		
A301	4	#7	STR	27'-11"	228	A506	2	#5	STR	4'-8"	10	G2	8	#5	STR	12'-9"	106		
A302	4	#7	STR	25'-8"	210	A600	91	#7	STR	11'-5"	2124	S3	12	#8	STR	34'-0"	1089		
A303	4	#7	STR	23'-5"	191	A601	2	#7	STR	9'-7"	39	S4	12	#8	STR	12'-9"	409		
A304	4	#7	STR	21'-3"	174	A602	2	#7	STR	7'-5"	30								

REINFORCING STEEL		44806
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BAR	SIZE	LENGTH
A100	#7	3'-1"
A200	#5	1'-9"
A300	#7	3'-1"
A400	#7	3'-1"
B1	#4	1'-9"
B3	#5	1'-9"
C1	#4	1'-11"
G1	#5	3'-0"
S3	#8	4'-0"



BAR TYPE  
DIMENSIONS ARE OUT TO OUT

PROJECT NO. B-4631  
RUTHERFORD COUNTY  
STATION: 16+85.64 -L-

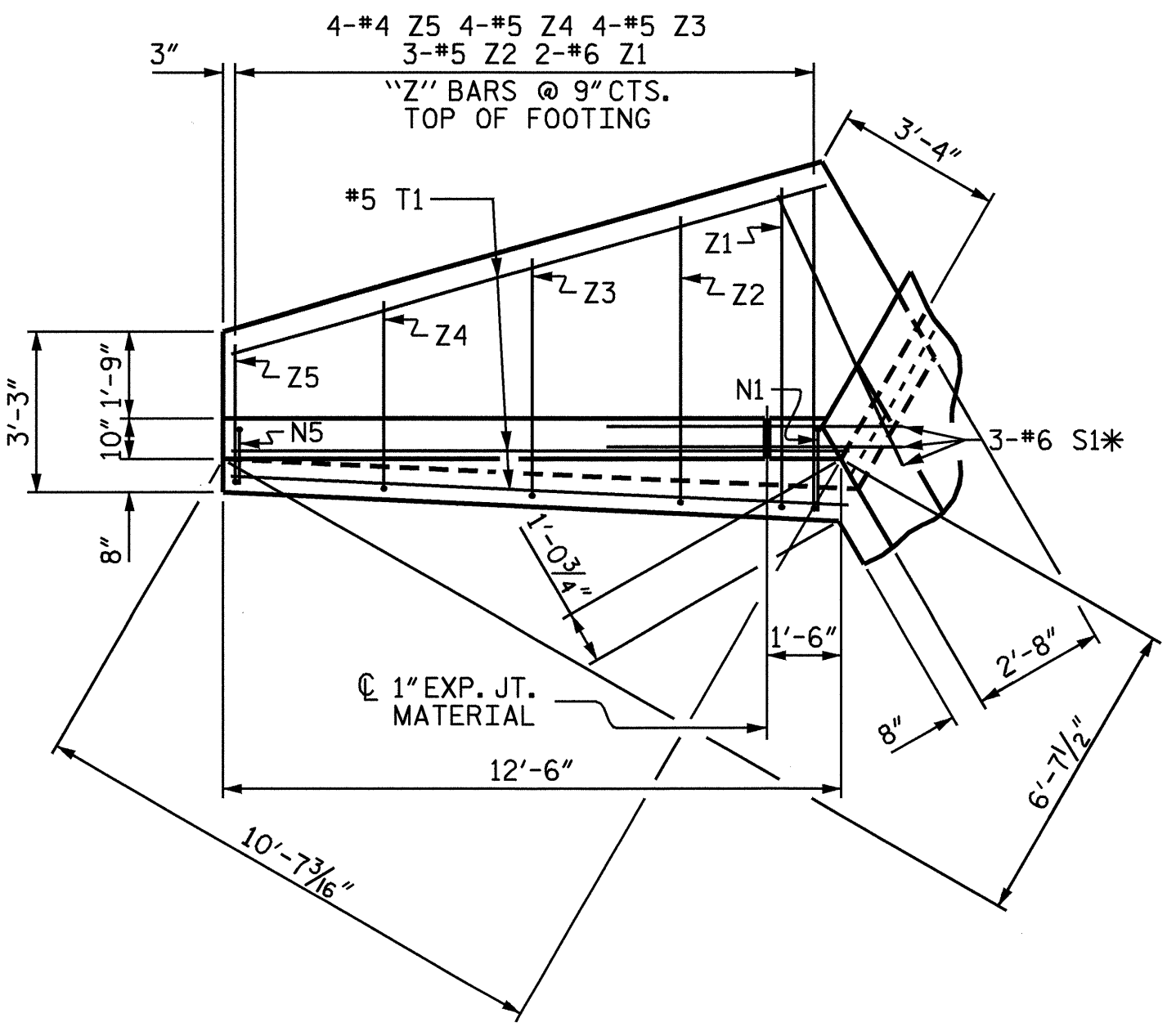
SHEET 3 OF 5  
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
TRIPLE 12 FT. X 10 FT.  
CONCRETE BOX CULVERT  
116° SKEW



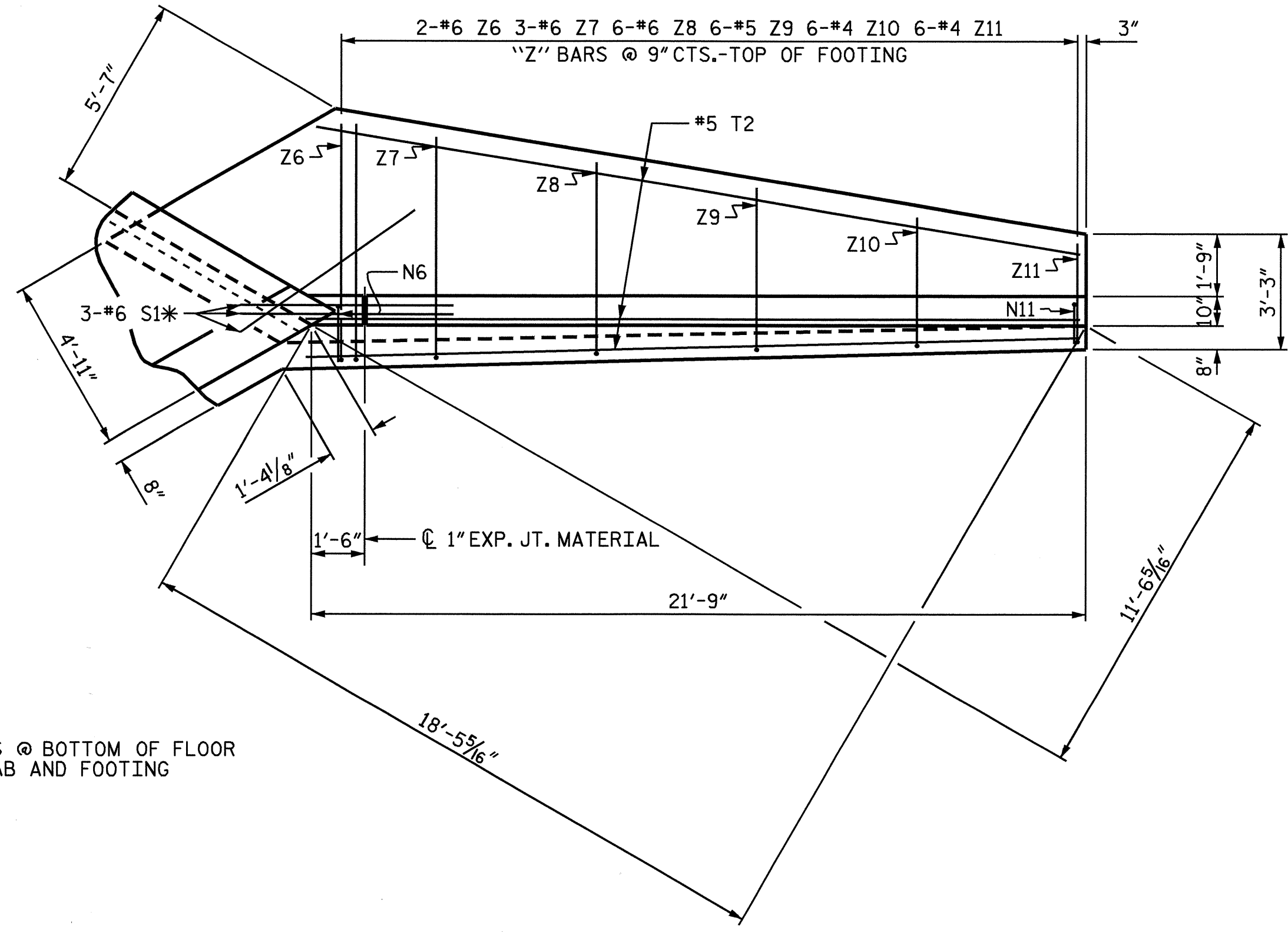
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	C-3	
1			3			TOTAL SHEETS	
2			4			5	

DRAWN BY: A. V. ROYAL DATE: 9/07  
CHECKED BY: D. E. PETREY DATE: 10/07

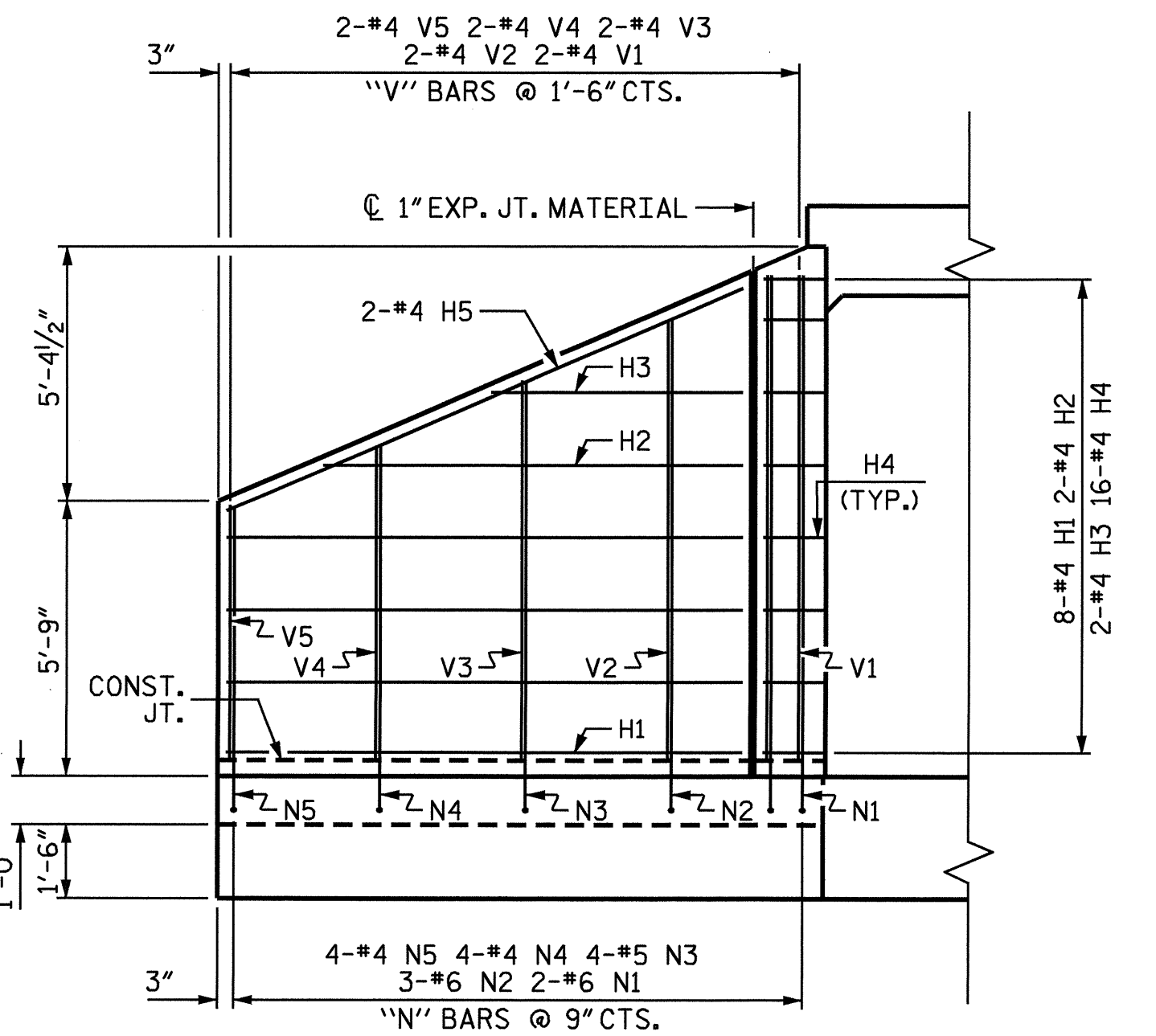
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tbankovich



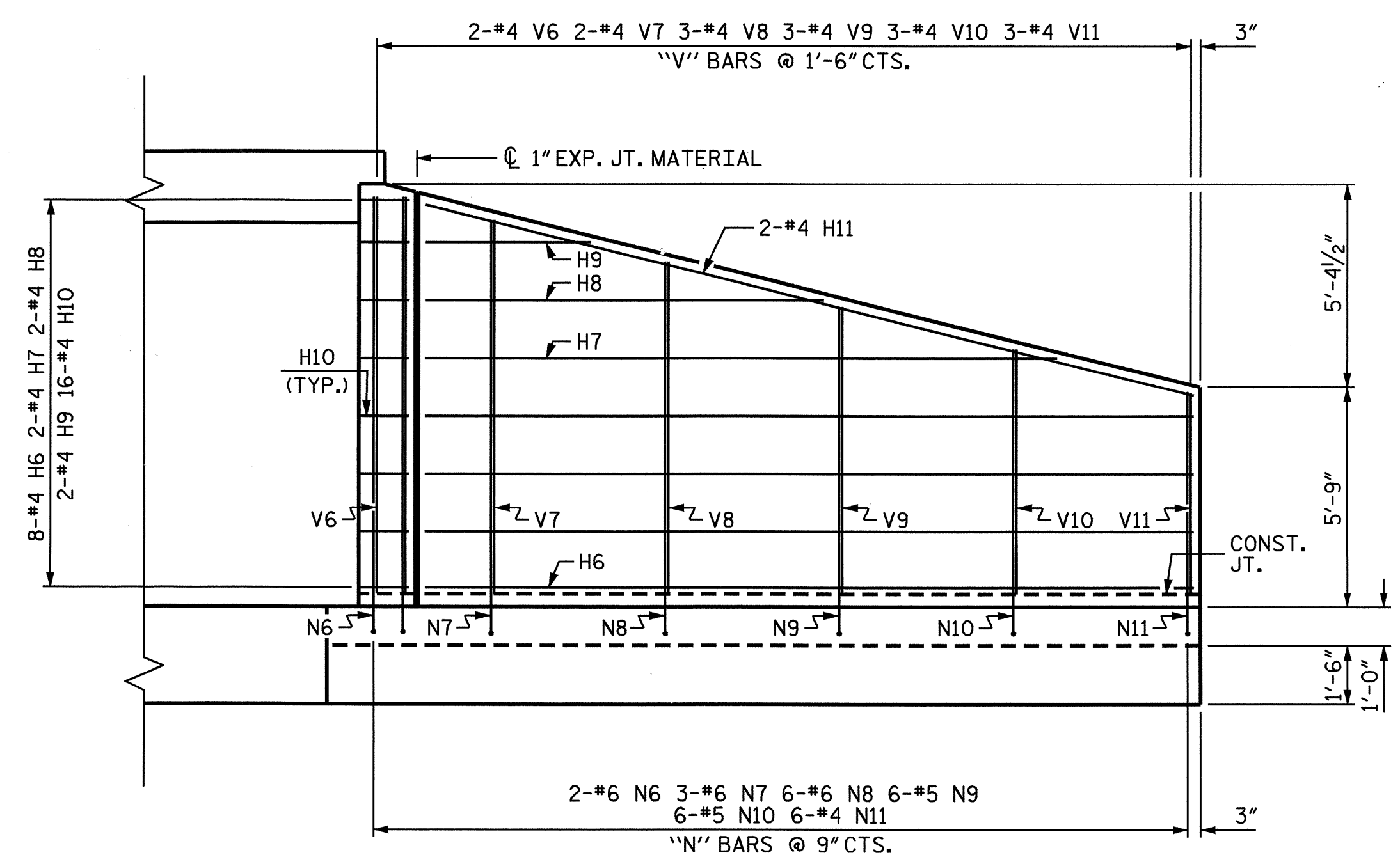
PLAN W2



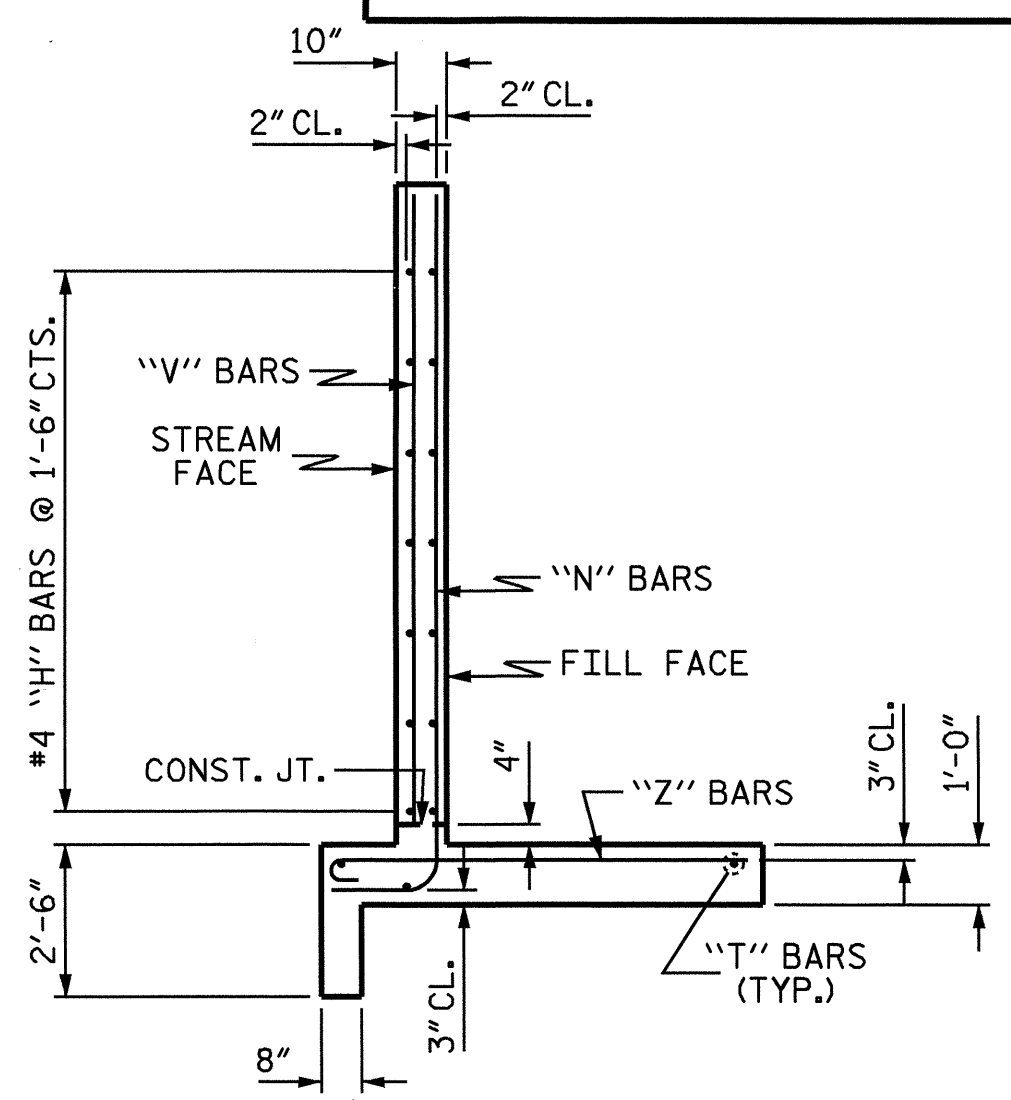
PLAN W1



ELEVATION W2



ELEVATION W1



TYPICAL WING SECTION

**BAR TYPES**

ALL BAR DIMENSIONS ARE OUT TO OUT.

Z1	6'-6"	8"
Z2	5'-10"	7"
Z3	4'-10"	7"
Z4	3'-10"	7"
Z5	2'-10"	6"
Z6	6'-8"	8"
Z7	6'-3"	8"
Z8	5'-5"	8"
Z9	4'-7"	7"
Z10	3'-8"	6"
Z11	2'-10"	6"

**BILL OF MATERIAL**

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
H1	16	#4	STR	10'-7"	113
H2	4	#4	STR	8'-7"	23
H3	4	#4	STR	5'-2"	14
H4	32	#4	1	3'-3"	69
H5	4	#4	STR	11'-7"	31
H6	16	#4	STR	19'-10"	212
H7	4	#4	STR	16'-4"	44
H8	4	#4	STR	10'-3"	27
H9	4	#4	STR	4'-3"	11
H10	32	#4	2	3'-3"	69
H11	4	#4	STR	20'-5"	55
N1	4	#6	3	12'-2"	73
N2	6	#6	3	11'-3"	101
N3	8	#5	3	9'-11"	83
N4	8	#4	3	8'-8"	46
N5	8	#4	3	7'-4"	39
N6	4	#6	3	12'-4"	74
N7	6	#6	3	11'-9"	106
N8	12	#6	3	10'-8"	192
N9	12	#5	3	9'-6"	119
N10	12	#5	3	8'-5"	105
N11	12	#4	3	7'-4"	59
S1	12	#6	STR	6'-0"	108
T1	6	#5	STR	12'-6"	78
T2	6	#5	STR	21'-9"	136
V1	4	#4	STR	10'-1"	27
V2	4	#4	STR	9'-2"	24
V3	4	#4	STR	7'-11"	21
V4	4	#4	STR	6'-7"	18
V5	4	#4	STR	5'-4"	14
V6	4	#4	STR	10'-4"	28
V7	4	#4	STR	9'-9"	26
V8	6	#4	STR	8'-8"	35
V9	6	#4	STR	7'-6"	30
V10	6	#4	STR	6'-5"	26
V11	6	#4	STR	5'-3"	21
Z1	4	#6	4	7'-2"	43
Z2	6	#5	4	6'-5"	40
Z3	8	#5	4	5'-5"	45
Z4	8	#5	4	4'-5"	37
Z5	8	#4	4	3'-4"	18
Z6	4	#6	4	7'-4"	44
Z7	6	#6	4	6'-11"	62
Z8	12	#6	4	6'-1"	110
Z9	12	#5	4	5'-2"	65
Z10	12	#4	4	4'-2"	33
Z11	12	#4	4	3'-4"	27

REINFORCING STEEL FOR 4 WINGS 2781 LBS

CLASS A CONCRETE

4 WINGS	36.0 CY
2 HEADWALLS	4.0 CY
2 END CURTAIN WALLS	4.8 CY
<b>TOTAL</b>	<b>44.8 CY</b>

PROJECT NO. B-4631  
 RUTHERFORD COUNTY  
 STATION: 16+85.64 -L-  
 SHEET 4 OF 5

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**WINGS FOR CONCRETE BOX CULVERT**  
 H = 10'-0" SLOPE = 2:1  
 116° SKEW



ASSEMBLED BY : A. V. ROYAL DATE : 9/07  
 CHECKED BY : M. L. BROWN DATE : 9/07  
 DRAWN BY : CCJ 12/99  
 CHECKED BY : RWW 03/00

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-4
1			3			TOTAL SHEETS
2			4			5

NOTES

THE GUARDRAIL ANCHOR ASSEMBLY FOR CULVERTS SHALL CONSIST OF THE FOLLOWING COMPONENTS :

- A. FERRULES SHALL BE MADE FROM STEEL MEETING THE REQUIREMENTS OF AASHTO M169, GRADE 12L14 AND SHALL HAVE A MINIMUM LENGTH OF THREADS OF 2 1/2".
- B. 4 - 1" Ø X 2 1/4" BOLTS WITH WASHERS, BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307. BOLTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 1" Ø X 2 1/4" GALVANIZED BOLTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.)
- C. WIRE STRUTS SHOWN IN THE GUARDRAIL ANCHOR ASSEMBLY FOR CULVERTS DETAIL ARE MINIMUM ALLOWABLE SIZE AND SHALL HAVE A MINIMUM TENSILE STRENGTH OF 100,000 P.S.I. AS AN OPTION, A 1/16" Ø WIRE STRUT WITH A MINIMUM TENSILE STRENGTH OF 90,000 PSI IS ACCEPTABLE.

GUARDRAIL ANCHOR ASSEMBLY WITH BOLTS SHALL BE ASSEMBLED IN THE SHOP. BOLT THREADS MAY BE RECUT AS NECESSARY TO INSURE FIT.

THE COST OF THE GUARDRAIL ANCHOR ASSEMBLY FOR CULVERTS COMPLETE IN PLACE, SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR CLASS "A" CONCRETE.

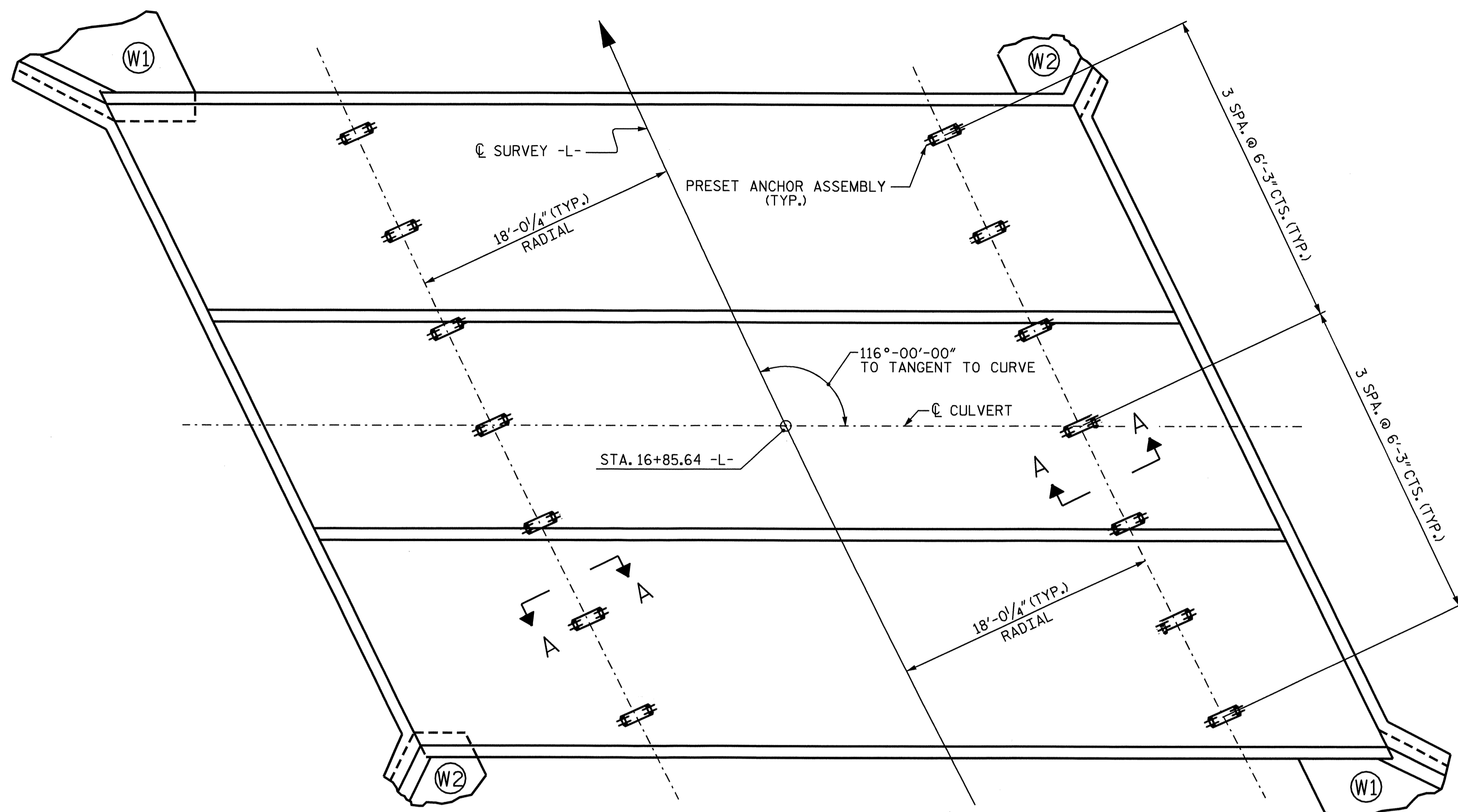
FERRULES TO BE PLUGGED DURING POURING OF SLAB AS RECOMMENDED BY THE MANUFACTURER.

AT THE CONTRACTOR'S OPTION, FERRULES WITH OPEN OR CLOSED ENDS MAY BE USED.

PAYMENT FOR GUARDRAIL, POSTS, AND POST BASE PLATES IS INCLUDED IN ROADWAY PAY ITEMS.

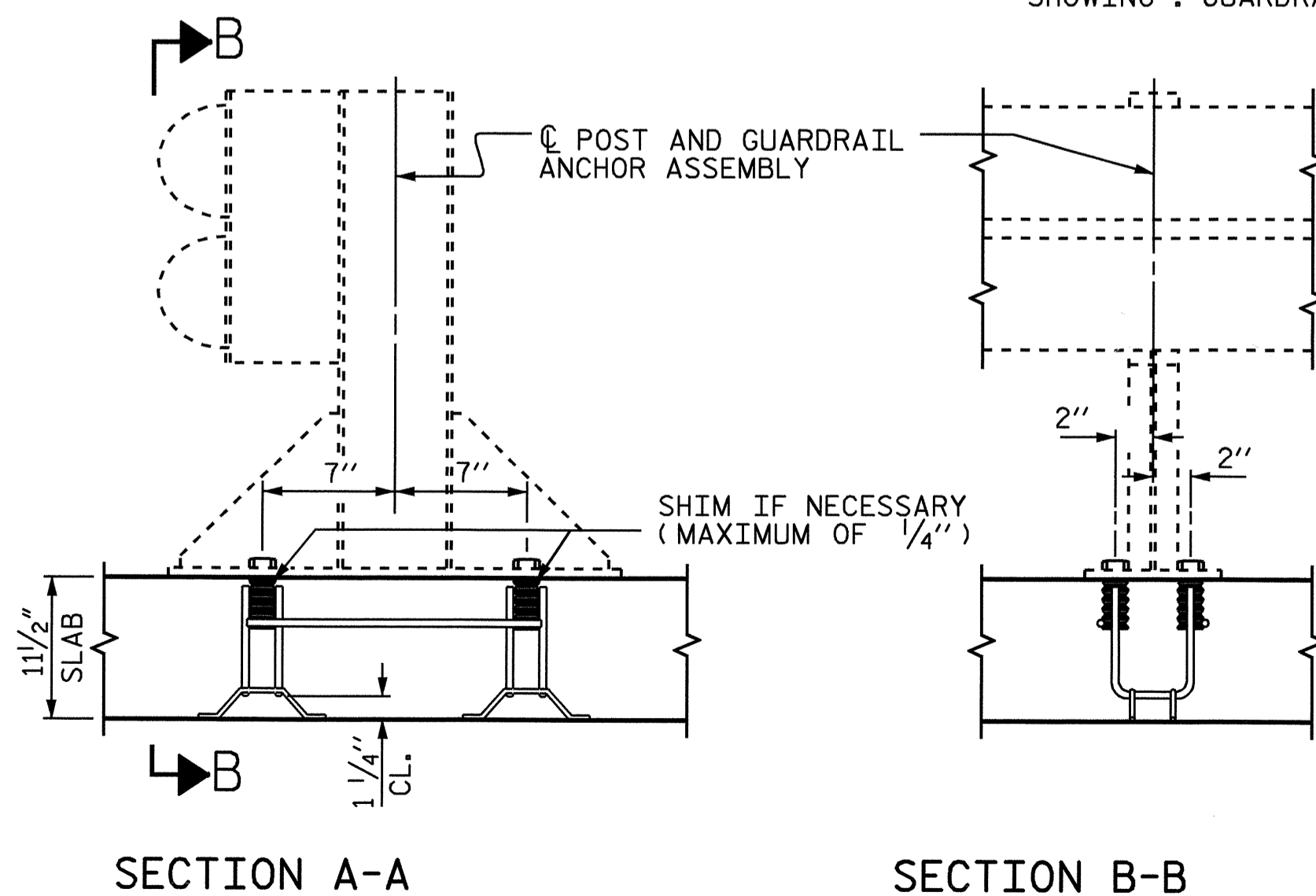
SLAB REINFORCING STEEL MAY BE SHIFTED AS NECESSARY TO CLEAR GUARDRAIL ANCHOR ASSEMBLY. CARE SHOULD BE TAKEN TO KEEP THE SHIFTING OF REINFORCING STEEL TO A MINIMUM.

THE CONTRACTOR MAY USE ADHESIVELY ANCHORED ANCHOR BOLTS IN PLACE OF GUARDRAIL ANCHOR ASSEMBLY. LEVEL TWO FIELD TESTING IS REQUIRED, AND THE YIELD LOAD OF THE 1" Ø BOLT IS 21.8 KIPS. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE SPECIAL PROVISIONS.



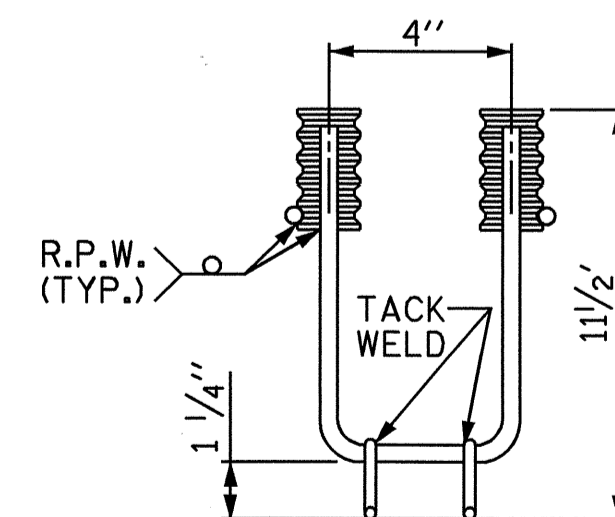
PLAN

SHOWING : GUARDRAIL ANCHOR ASSEMBLY SPACING.

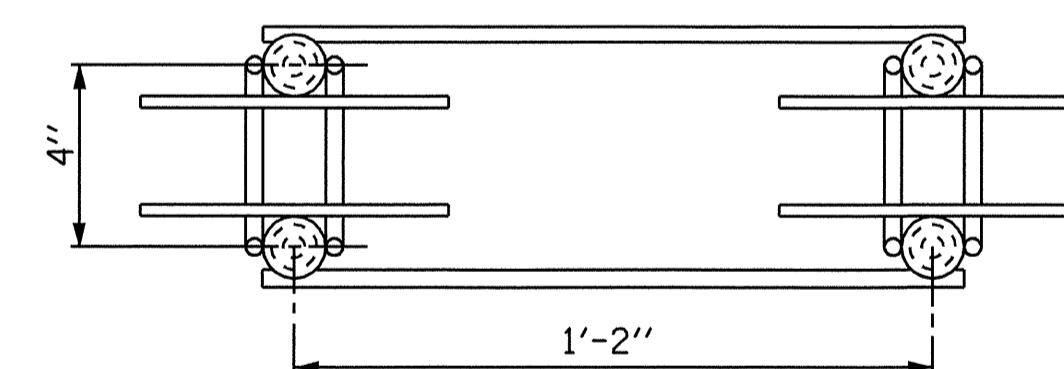


SECTION A-A

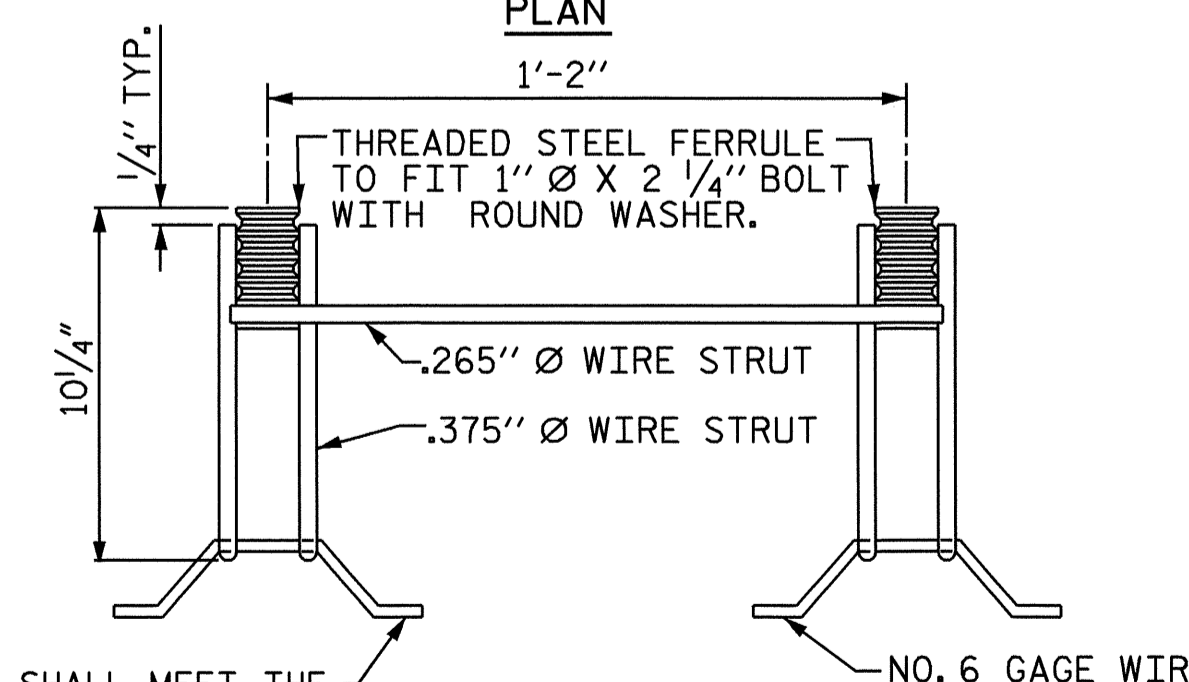
SECTION B-B



ELEVATION



PLAN



SIDE VIEW

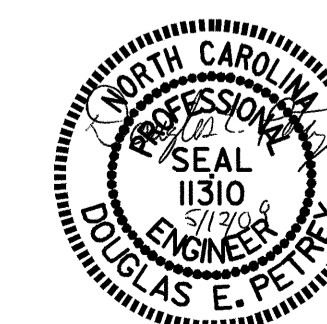
THIS SUPPORT SHALL MEET THE REQUIREMENTS AS SPECIFIED FOR SUPPORTS FOR REINFORCING STEEL. SEE SPECIFICATIONS.

GUARDRAIL ANCHOR ASSEMBLY FOR CULVERTS

PROJECT NO. B-4631  
RUTHERFORD COUNTY  
 STATION: 16+85.64 -L-

SHEET 5 OF 5

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 STANDARD  
 ANCHORAGE DETAILS  
 FOR GUARDRAIL ANCHOR  
 ASSEMBLY  
 FOR CULVERTS



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-5
1			3			TOTAL SHEETS
2			4			5

DRAWN BY : A. V. ROYAL DATE : 9/07  
 CHECKED BY : M. L. BROWN DATE : 9/07

09-MAY-2008 13:57  
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