

LOCATION SKETCH

PROFILE DATA

VPI = 32+00.00  
 EL = 1255.58  
 VC = 325.00  
 g1 = -3.6700 %  
 g2 = -0.3000 %

GRADE DATA

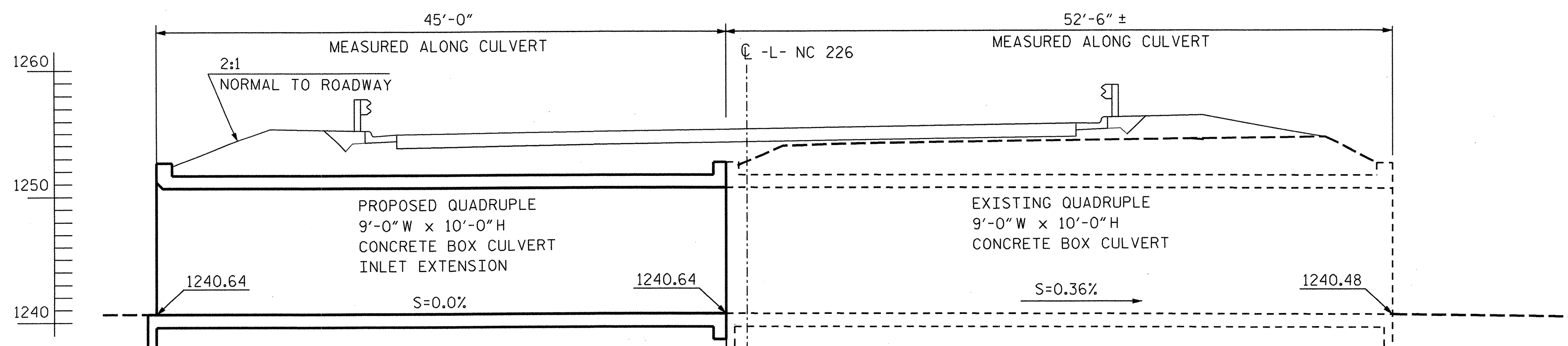
GRADE POINT ELEV.  
 @ STA 34+28.00 -L- = 1254.90  
 BED ELEV. @ STA. 34+25.51 -L- = 1240.64  
 ROADWAY SLOPES = 2:1

HYDRAULIC DATA

DESIGN DISCHARGE = 2000 cfs  
 FREQUENCY OF DESIGN FLOOD = 50 yr.  
 DESIGN HIGH WATER ELEVATION = 1247.88 ft.  
 DRAINAGE AREA = 3.92 sq. mile  
 BASIC DISCHARGE (Q100) = 2200 cfs  
 BASIC HIGH WATER ELEVATION = 1248.47 ft.

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = 5300 cfs  
 FREQUENCY OF OVERTOPPING FLOOD = >500 yr.  
 OVERTOPPING FLOOD ELEVATION = 1255.70 ft.



PROFILE ALONG CULVERT

NOTES:

- ASSUMED LIVE LOAD -----HS20-44 OR ALTERNATE LOADING.
- DESIGN FILL-----4'-6"
- FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.
- 3" Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.
- CONCRETE IN CULVERTS 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.
- STEEL IN THE BOTTOM SLAB MAY BE SPliced AT THE PERMITTED CONSTRUCTION JOINT AT THE CONTRACTOR'S OPTION. EXTRA WEIGHT OF STEEL DUE TO THE SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.
- FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE CULVERT EXTENSION CONSTRUCTION SEQUENCE PLAN AND WRITE UP. (EC-2A)
- NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.
- FOR EROSION CONTROL, SEE EROSION CONTROL PLANS.
- DOWELS SHALL BE USED TO CONNECT THE CULVERT EXTENSION TO THE EXISTING CULVERT AS SHOWN. FOR NOTE REGARDING SETTING OF DOWELS, SEE STANDARD NOTE SHEET.
- 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.
- ADDITIONAL TEMPORARY SHORING MAY BE REQUIRED FOR MAINTENANCE OF TRAFFIC. SEE TRAFFIC CONTROL PLANS FOR LIMITS.
- 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.

TOTAL STRUCTURE QUANTITIES

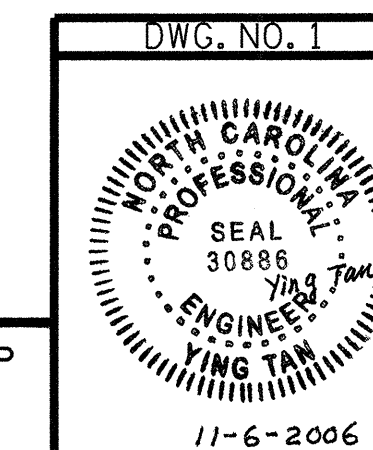
CLASS A CONCRETE	
BARREL @ 4.435 CY/FT	199.6 C.Y.
WING ETC.	29.9 C.Y.
TOTAL	229.5 C.Y.
REINFORCING STEEL	
BARREL	35,499 LBS.
WINGS ETC.	1,604 LBS.
TOTAL	37,103 LBS.
CULVERT EXCAVATION	LUMP SUM
FOUNDATION COND. MATERIAL	126 TONS

PROJECT NO. 37857  
 McDOWELL COUNTY  
 STATION: 34+27.24 -L- P.O.C.

SHEET 1 OF 6

DRAWN BY: F. WEEDEN DATE: 04/05  
 CHECKED BY: R. D. FAUTEUX DATE: 04/05

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 consulting engineers  
 900 RIDGEFIELD DRIVE - SUITE 350  
 RALEIGH, NORTH CAROLINA 27609-3960



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

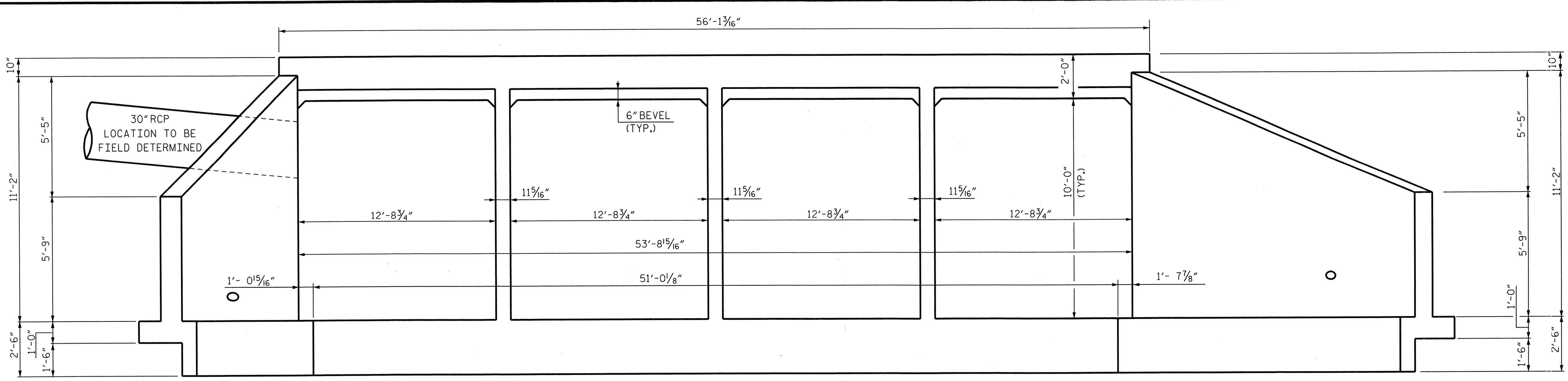
GENERAL DRAWING-INLET EXTENSION  
 QUADRUPLE 9'-0" W x 10'-0" H  
 CONCRETE BOX CULVERT  
 45°00'00" SKEW

APRIL 2005

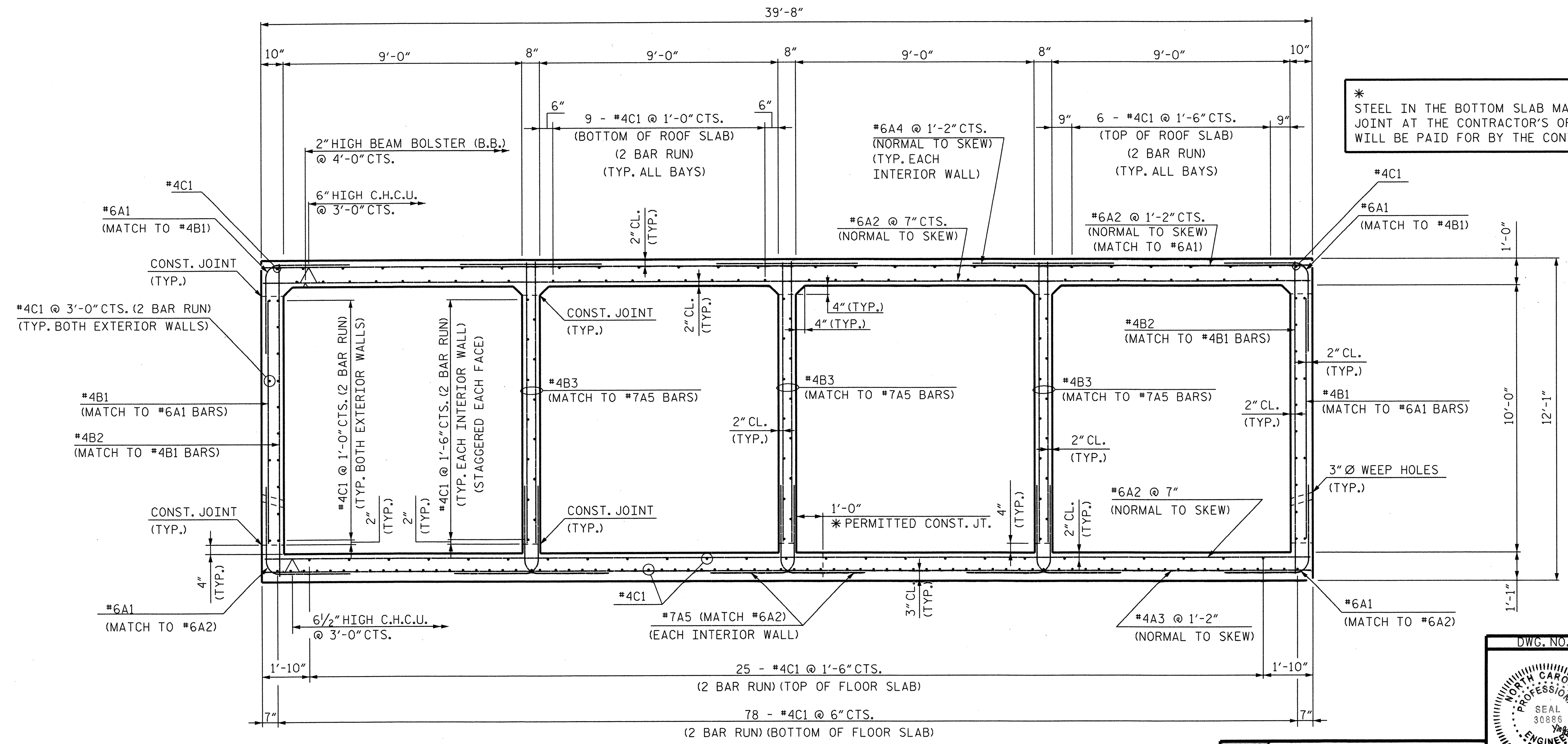
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SHEET NO. S-1  
 TOTAL SHEETS

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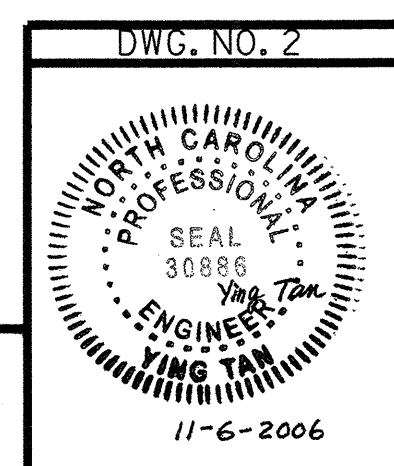
END ELEVATION NORMAL TO SKEW



\* STEEL IN THE BOTTOM SLAB MAY BE SPLICED AT THE PERMITTED CONSTRUCTION JOINT AT THE CONTRACTOR'S OPTION. EXTRA WEIGHT OF STEEL DUE TO THE SPLICES WILL BE PAID FOR BY THE CONTRACTOR.

PROJECT NO. 37857  
 McDOWELL COUNTY  
 STATION: 34+27.24 -L- P.O.C.

SHEET 2 OF 6  
 STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 TYPICAL SECTION-INLET EXTENSION  
 QUADRUPLE 9'-0" W x 10'-0" H  
 CONCRETE BOX CULVERT  
 45°00'00" SKEW



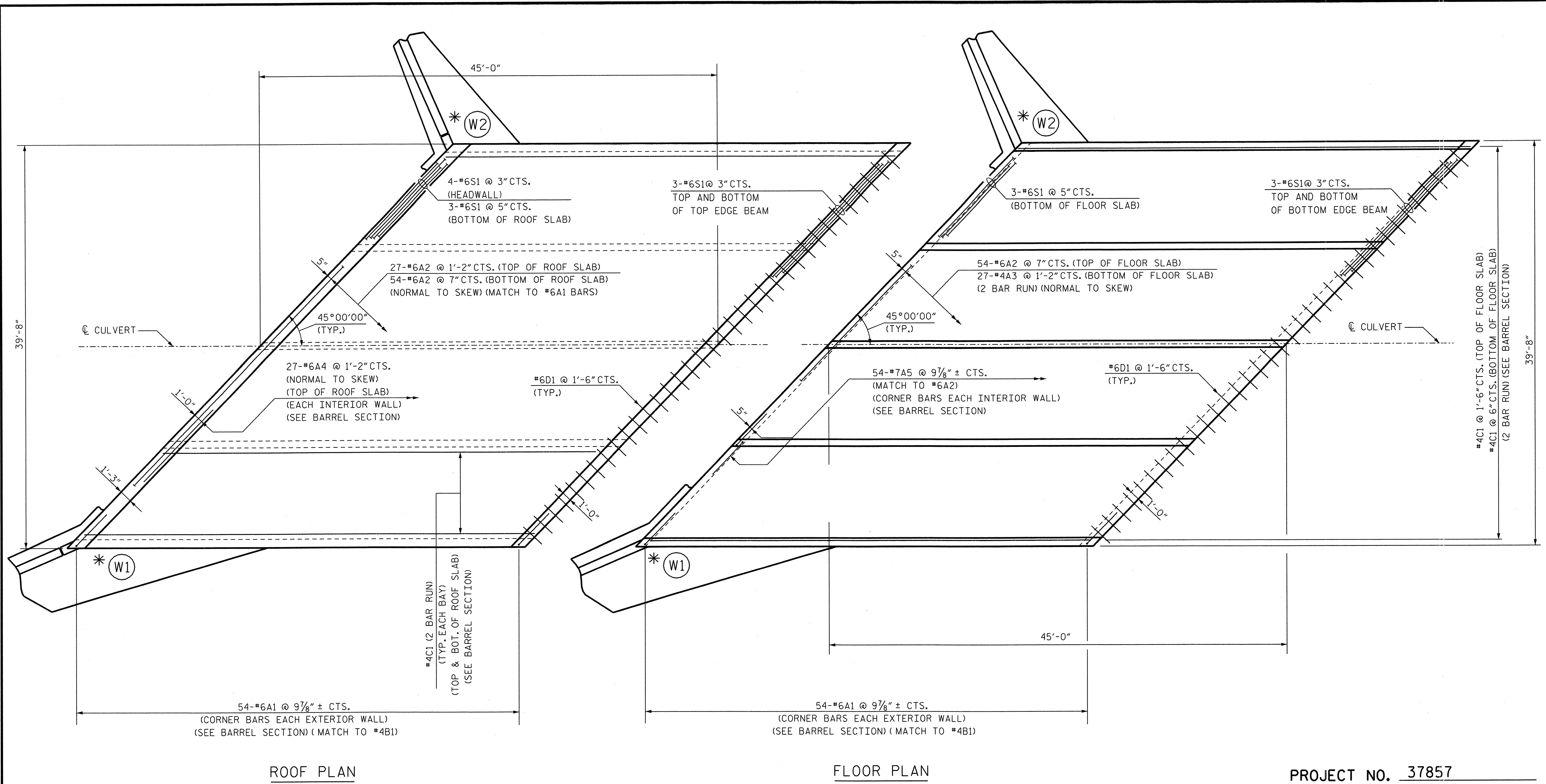
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1			3			S-2	
2			4				

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RIGHT ANGLE SECTION OF BARREL  
 THERE ARE 232 "C" BARS IN BARREL SECTION

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ROOF PLAN

FLOOR PLAN

\* SEE SHEET 5 OF 6 FOR WINGWALL STEEL REINFORCING.

**NOTES:**

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.

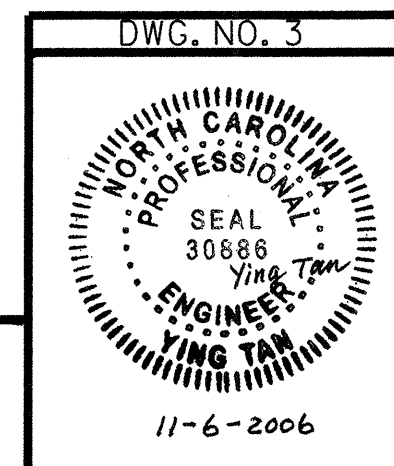
PROJECT NO. 37857  
McDOWELL COUNTY  
 STATION: 34+27.24 -L- P.O.C.

SHEET 3 OF 6

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

ROOF & FLOOR SLAB-INLET EXT.  
 QUADRUPLE 9'-0" W x 10'-0" H  
 CONCRETE BOX CULVERT  
 45°00'00" SKEW

APRIL 2005

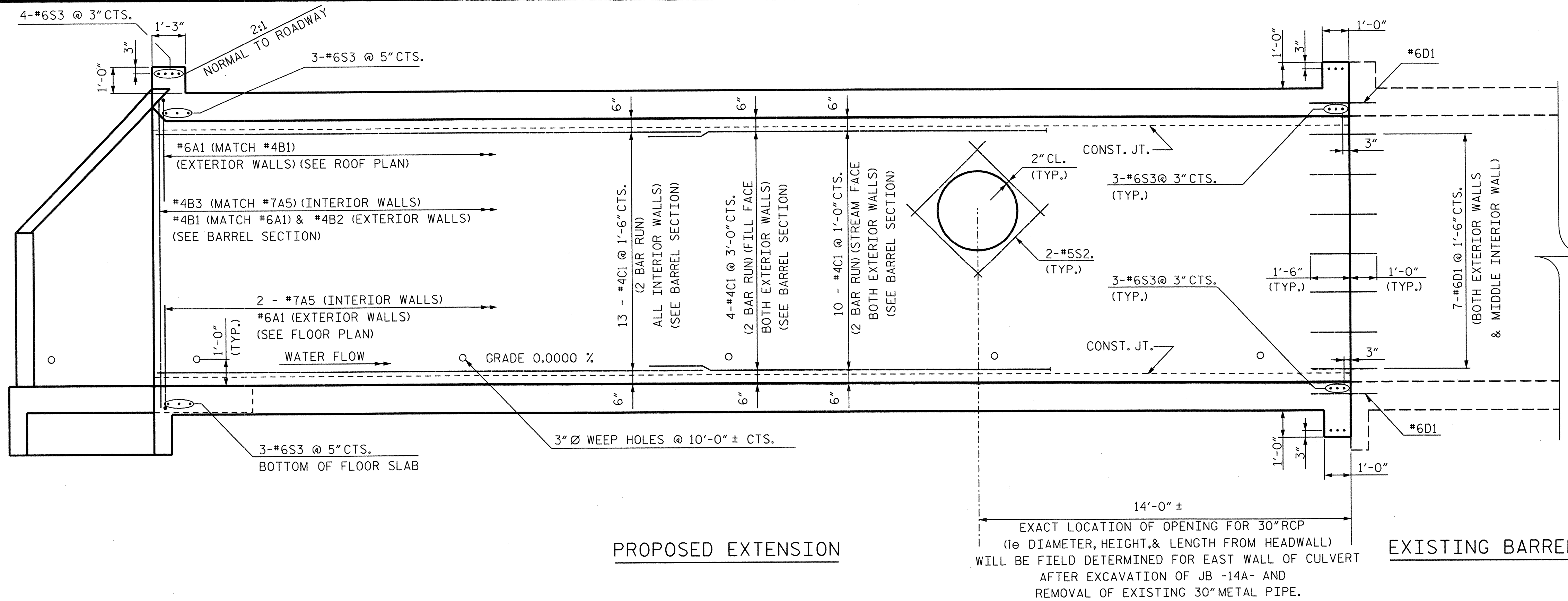


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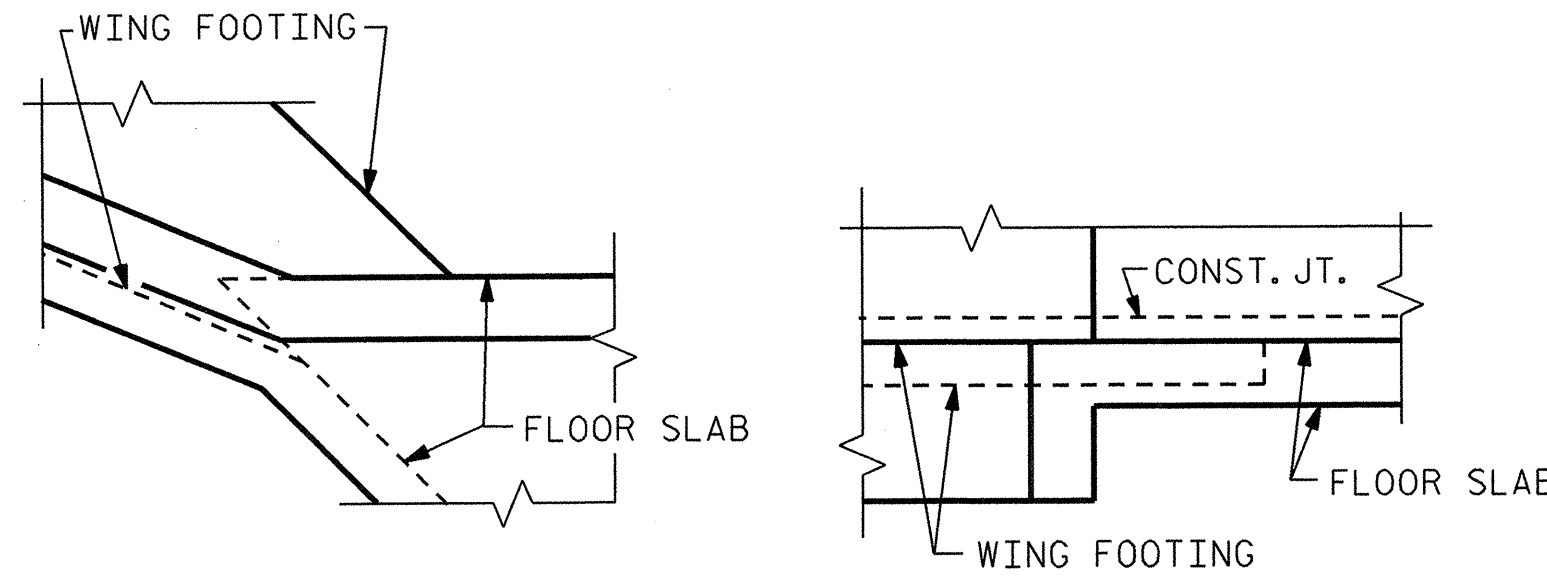
PROPOSED EXTENSION

EXISTING BARREL

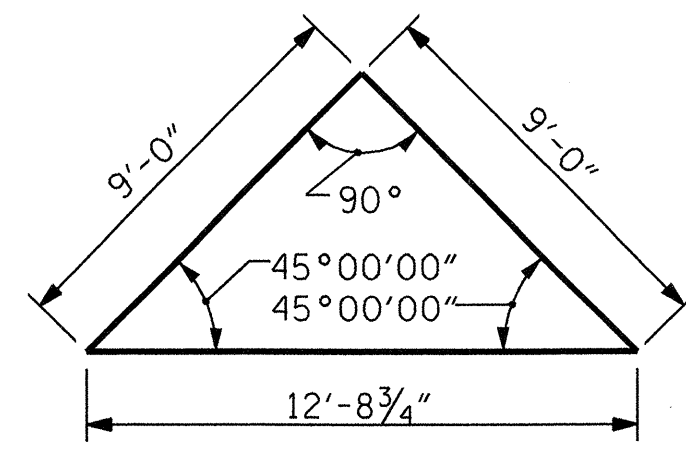
14'-0" ±  
 EXACT LOCATION OF OPENING FOR 30" RCP  
 (i.e. DIAMETER, HEIGHT, & LENGTH FROM HEADWALL)  
 WILL BE FIELD DETERMINED FOR EAST WALL OF CULVERT  
 AFTER EXCAVATION OF JB -14A- AND  
 REMOVAL OF EXISTING 30" METAL PIPE.

CULVERT INLET EXTENSION SECTION

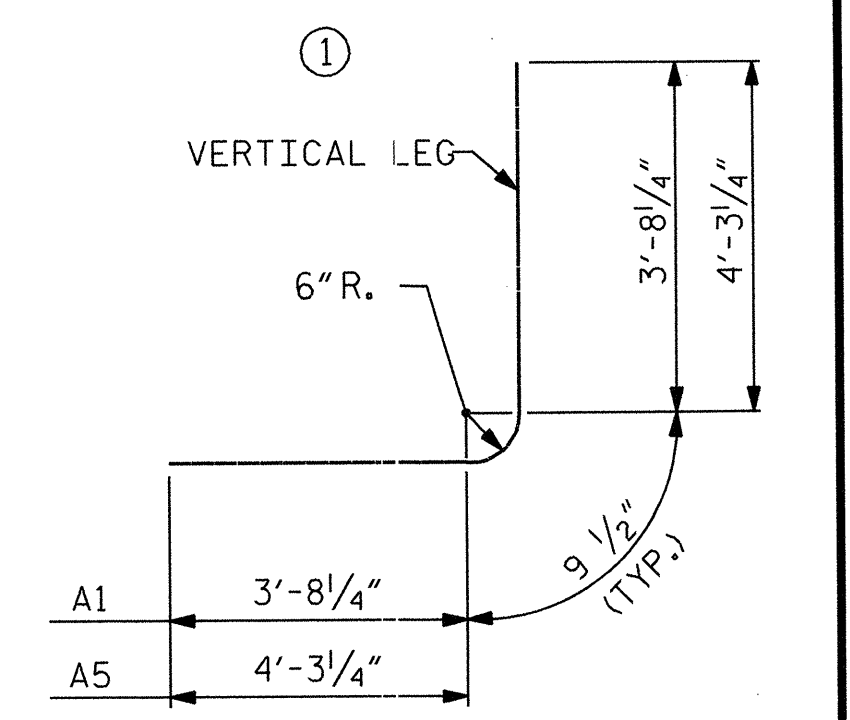
NOTE: DOWELS SHALL BE USED TO CONNECT THE CULVERT EXTENSION TO THE EXISTING CULVERT AS SHOWN. FOR NOTE REGARDING SETTING OF DOWELS SEE SHEET SN.



CONNECTION OF WING FOOTING AND FLOOR SLAB WHEN SLAB IS THICKER THAN FOOTING



SKIEW TRIANGLE



BAR TYPE

BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A1	216	#6	1	8'-2"	2650
A2	135	#6	STR	55'-6"	11254
A3	54	#4	STR	28'-6"	1028
A4	81	#6	STR	10'-0"	1217
A5	324	#7	1	9'-4"	6181
B1	108	#4	STR	9'-0"	649
B2	108	#4	STR	11'-8"	842
B3	324	#4	STR	10'-4"	2237
C1	464	#4	STR	23'-4"	7232
D1	91	#6	STR	2'-6"	342
S2	8	#5	STR	4'-0"	33
S3	22	#6	STR	55'-6"	1834

REINFORCING STEEL 35,499 LBS

SPLICE LENGTH CHART

BAR	LENGTH
A3	1'-5"
C1	1'-11"

PROJECT NO. 37857  
 McDOWELL COUNTY  
 STATION: 34+27.24 -L- P.O.C.

SHEET 4 OF 6

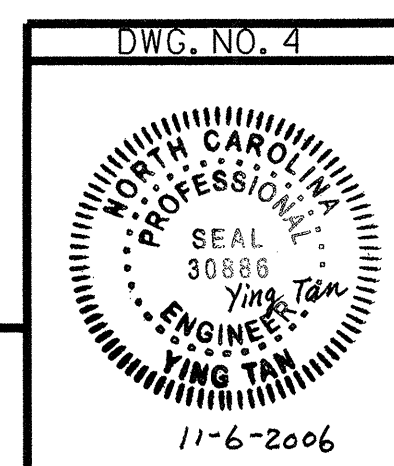
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

SIDE ELEVATION-INLET EXTENSION  
 QUADRUPLE 9'-0" W x 10'-0" H  
 CONCRETE BOX CULVERT  
 45°00'00" SKEW

APRIL 2005

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TOTAL SHEETS: S-4

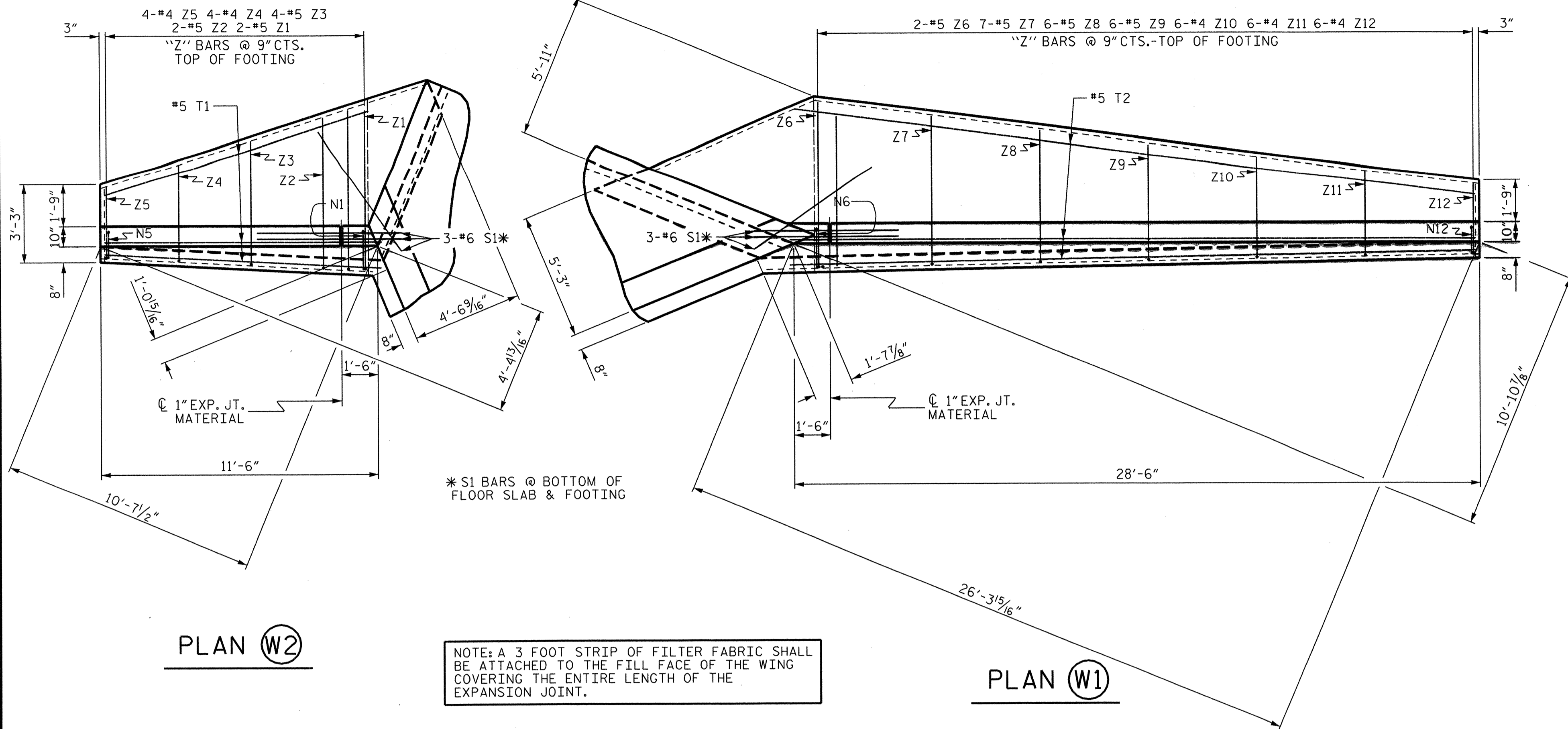


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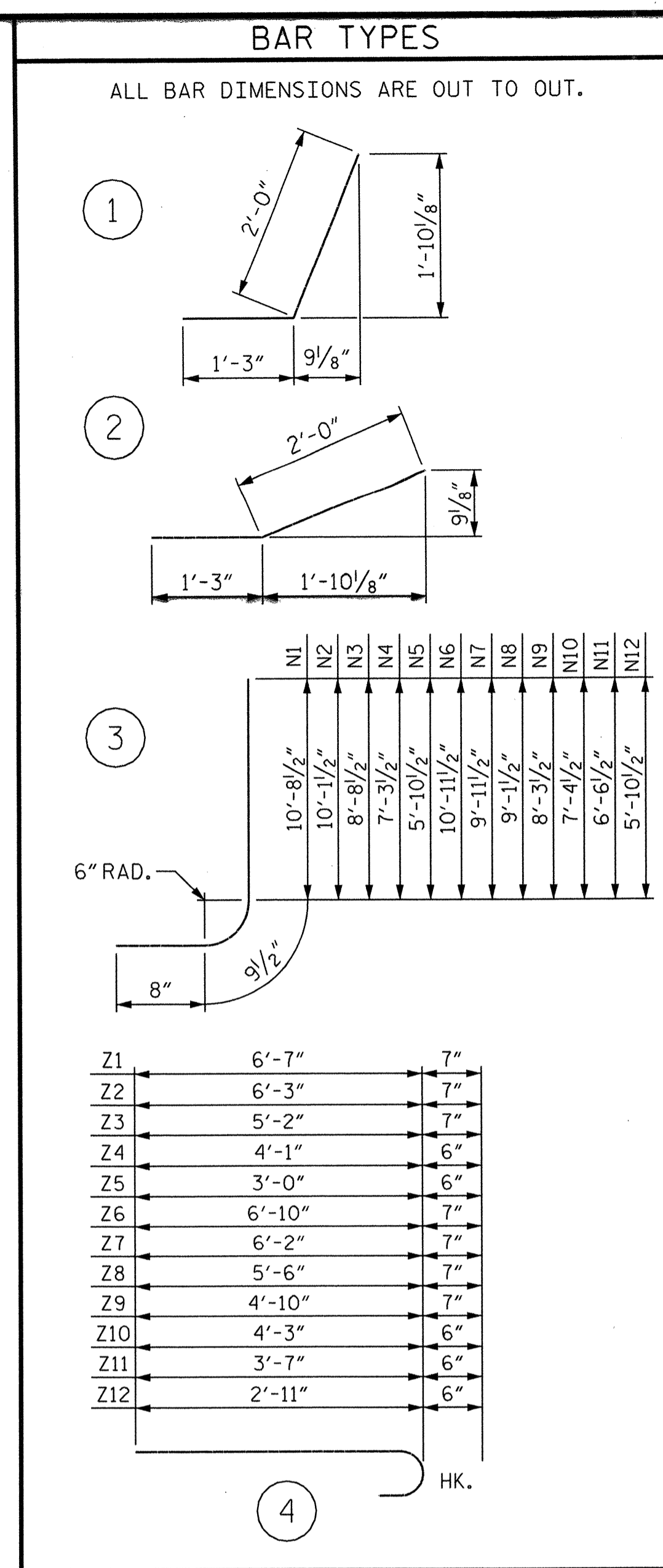
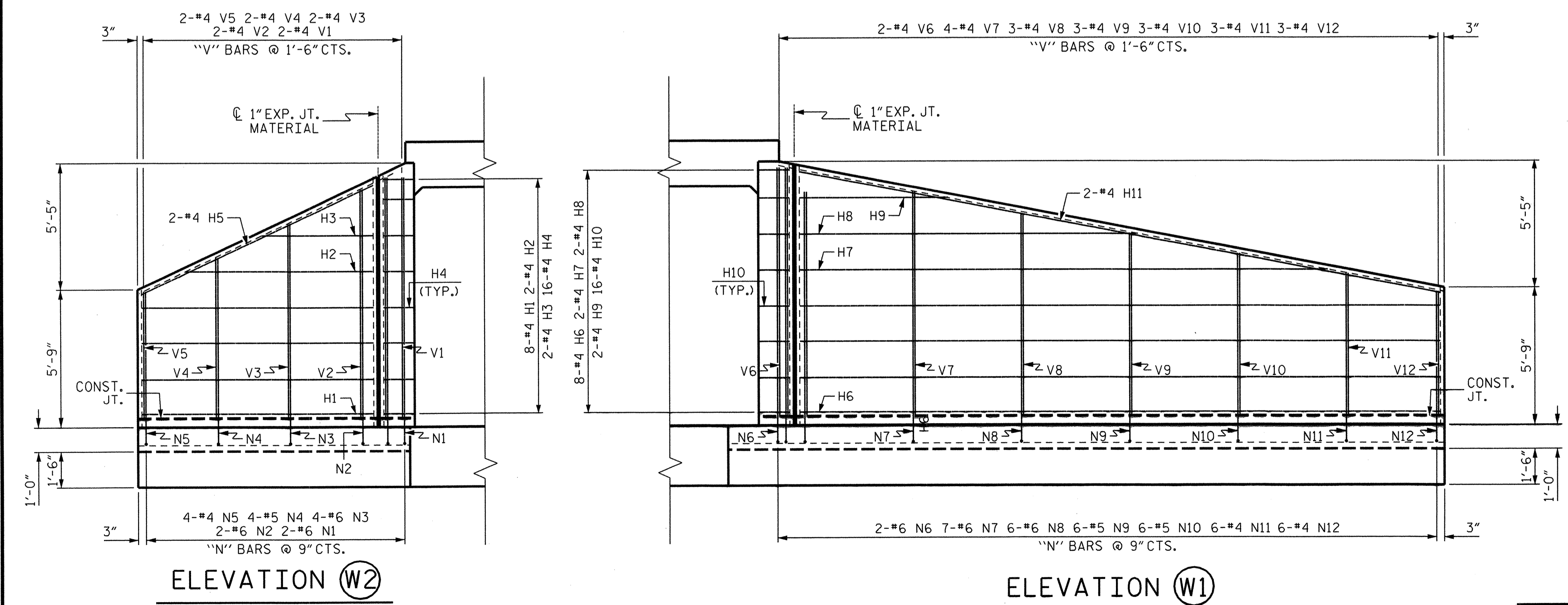
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DRAWN BY: F. WEEDEN DATE: 04/05  
 CHECKED BY: R. D. FAUTEUX DATE: 04/05

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NOTE: 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.



Z1	6'-7"	7"
Z2	6'-3"	7"
Z3	5'-2"	7"
Z4	4'-1"	6"
Z5	3'-0"	6"
Z6	6'-10"	7"
Z7	6'-2"	7"
Z8	5'-6"	7"
Z9	4'-10"	7"
Z10	4'-3"	6"
Z11	3'-7"	6"
Z12	2'-11"	6"

BILL OF MATERIAL					
BAR NO.	NO.	SIZE	TYPE	LENGTH	WEIGHT
H1	8	#4	STR	9'-7"	51
H2	2	#4	STR	7'-9"	10
H3	2	#4	STR	4'-7"	6
H4	16	#4	1	3'-3"	35
H5	2	#4	STR	10'-7"	14
H6	8	#4	STR	26'-7"	142
H7	2	#4	STR	21'-11"	29
H8	2	#4	STR	14'-0"	19
H9	2	#4	STR	6'-2"	8
H10	16	#4	2	3'-3"	35
H11	2	#4	STR	27'-11"	37
N1	2	#6	3	12'-2"	37
N2	2	#6	3	11'-7"	35
N3	4	#6	3	10'-2"	61
N4	4	#5	3	8'-9"	37
N5	4	#4	3	7'-4"	20
N6	2	#6	3	12'-5"	37
N7	7	#6	3	11'-5"	120
N8	6	#6	3	10'-7"	95
N9	6	#5	3	9'-9"	61
N10	6	#5	3	8'-10"	55
N11	6	#4	3	8'-0"	32
N12	6	#4	3	7'-4"	29
S1	6	#6	STR	6'-0"	54
T1	3	#5	STR	11'-6"	36
T2	3	#5	STR	28'-6"	89
V1	2	#4	STR	10'-1"	13
V2	2	#4	STR	9'-7"	13
V3	2	#4	STR	8'-2"	11
V4	2	#4	STR	6'-9"	9
V5	2	#4	STR	5'-4"	7
V6	2	#4	STR	10'-5"	14
V7	4	#4	STR	9'-5"	25
V8	3	#4	STR	8'-6"	17
V9	3	#4	STR	7'-8"	15
V10	3	#4	STR	6'-10"	14
V11	3	#4	STR	6'-0"	12
V12	3	#4	STR	5'-3"	11
Z1	2	#5	4	7'-2"	15
Z2	2	#5	4	6'-10"	14
Z3	4	#5	4	5'-9"	24
Z4	4	#4	4	4'-7"	12
Z5	4	#4	4	3'-6"	9
Z6	2	#5	4	7'-5"	15
Z7	7	#5	4	6'-9"	49
Z8	6	#5	4	6'-1"	38
Z9	6	#5	4	5'-5"	34
Z10	6	#4	4	4'-9"	19
Z11	6	#4	4	4'-1"	16
Z12	6	#4	4	3'-5"	14

REINFORCING STEEL 1604 LBS  
FOR 2 WINGS  
CLASS A CONCRETE  
2 WINGS 21.4 CY  
1 HEADWALL 4.6 CY  
1 END CURTAIN WALL 3.9 CY  
TOTAL 29.9 CY

PROJECT NO. 37857  
McDOWELL COUNTY  
STATION: 34+27.24 -L- P.O.C.

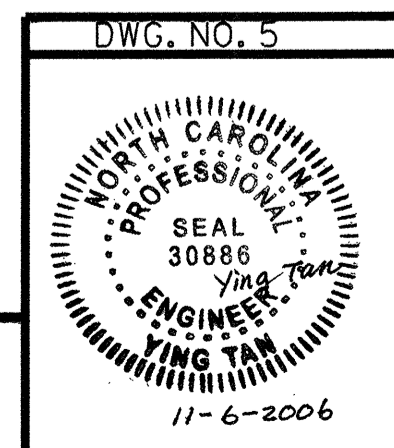
SHEET 5 OF 6

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
STANDARD WINGS  
FOR  
CONCRETE BOX CULVERT  
H = 10'-0" SLOPE = 2:1  
APRIL 45°00'00" SKEW 2005

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
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ASSEMBLED BY : F. WEEDEN DATE : 04/05  
CHECKED BY : R. FAUTEUX DATE : 04/05  
DRAWN BY : CCJ 01/00  
CHECKED BY : RWW 03/00

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## 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 2002 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; CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP; AND CLASS S SHALL BE USED FOR UNDERWATER FOOTING SEALS.

### 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 WITH THE EXCEPTION OF #2 BARS WHICH MAY BE FABRICATED FROM COLD DRAWN STEEL WIRE. 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. PLACEMENT OF BEAM OR GIRDER MEMBERS ON TRUCKS FOR HAULING SHALL BE DONE IN COMPLIANCE WITH LIMITS SHOWN ON SKETCHES PROVIDED TO THE MATERIALS AND TEST UNIT APPROVED BY THE STRUCTURE DESIGN UNIT DATED MAY 8, 1991. THESE SKETCHES PRIMARILY LIMIT THE UNSUPPORTED CANTILEVER LENGTH OF MEMBERS. WHEN THE CONTRACTOR WISHES TO PLACE MEMBERS ON TRUCKS NOT IN ACCORDANCE WITH THESE LIMITS, TO SHIP BY RAIL, TO ATTACH SHIPPING RESTRAINTS TO THE MEMBERS OR TO INVERT MEMBERS, HE SHALL SUBMIT A SKETCH FOR APPROVAL PRIOR TO SHIPPING. SEE ALSO ARTICLE 1072-11. 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.

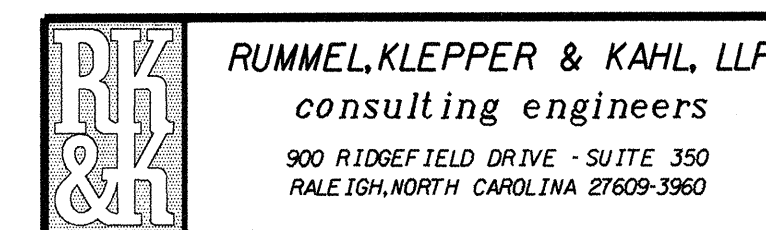
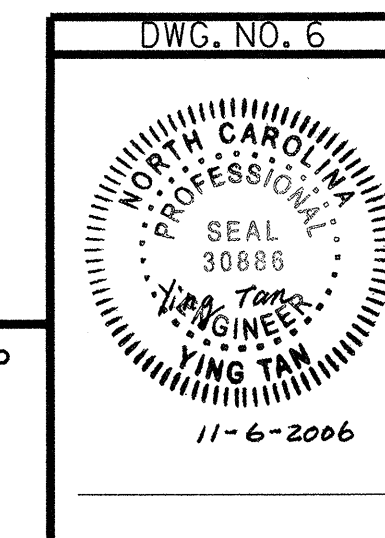
### SPECIAL NOTES:

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.

PROJECT NO. 37857  
McDOWELL COUNTY  
 STATION: 34+27.24 -L- P.O.C.

SHEET 6 OF 6

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
STANDARD NOTES					
APRIL	2005				
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S-6 TOTAL SHEETS



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DRAWN BY: F. WEEDEN DATE: 04/05  
 CHECKED BY: R. D. FAUTEUX DATE: 04/05