

NOTES

ASSUMED LIVE LOAD HS20-44 OR ALTERNATE LOADING.

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

DESIGN FILL = 5.70 FEET.

FOR OTHER DESIGN DATA AND NOTES SEE SHEET SN.

3" DIA. 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 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 CONTRACTORS OPTION THE VERTICAL CONSTRUCTION JOINT BETWEEN THE OUTLET WINGS AND THE BARREL MAYBE ELIMINATED AND THE 'C' BARS IN THE BARREL MAYBE EXTENDED TO REPLACE THE 'D' AND 'H' BARS IN THE WING AND SLAB.

AT THE CONTRACTORS OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR WALL ABOVE THE 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.

TRANSVERSE CONSTRUCTION JOINTS SHALL BE USED IN THE BARREL, SPACED TO LIMIT THE POURS TO A MAXIMUM OF 70 FEET. LOCATION OF JOINTS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.

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.

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.

FOR EROSION CONTROL PLANS, SEE ROADWAY PLANS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

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 CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT, SEE SPECIAL PROVISIONS.

TOTAL STRUCTURE QUANTITIES

QUANTIT	10
CULVERT EXCAVATION	LUMP SUM
FOUNDATION COND. MAT'L	TONS 84
CLASS A CONCRETE BARREL & OUTLET WINGS WINGS ETC. TOTAL	CU. YDS. 101.0 CU. YDS. 8.2 CU. YDS. 109.2
REINFORCING STEEL BARRELS OUTLET WINGS WINGS ETC. TOTAL	LBS. 15,334 LBS. 469 LBS. 15,803

PROJECT NO. U-3300B

STANLY COUNTY

STATION: 43+98.00 -L-

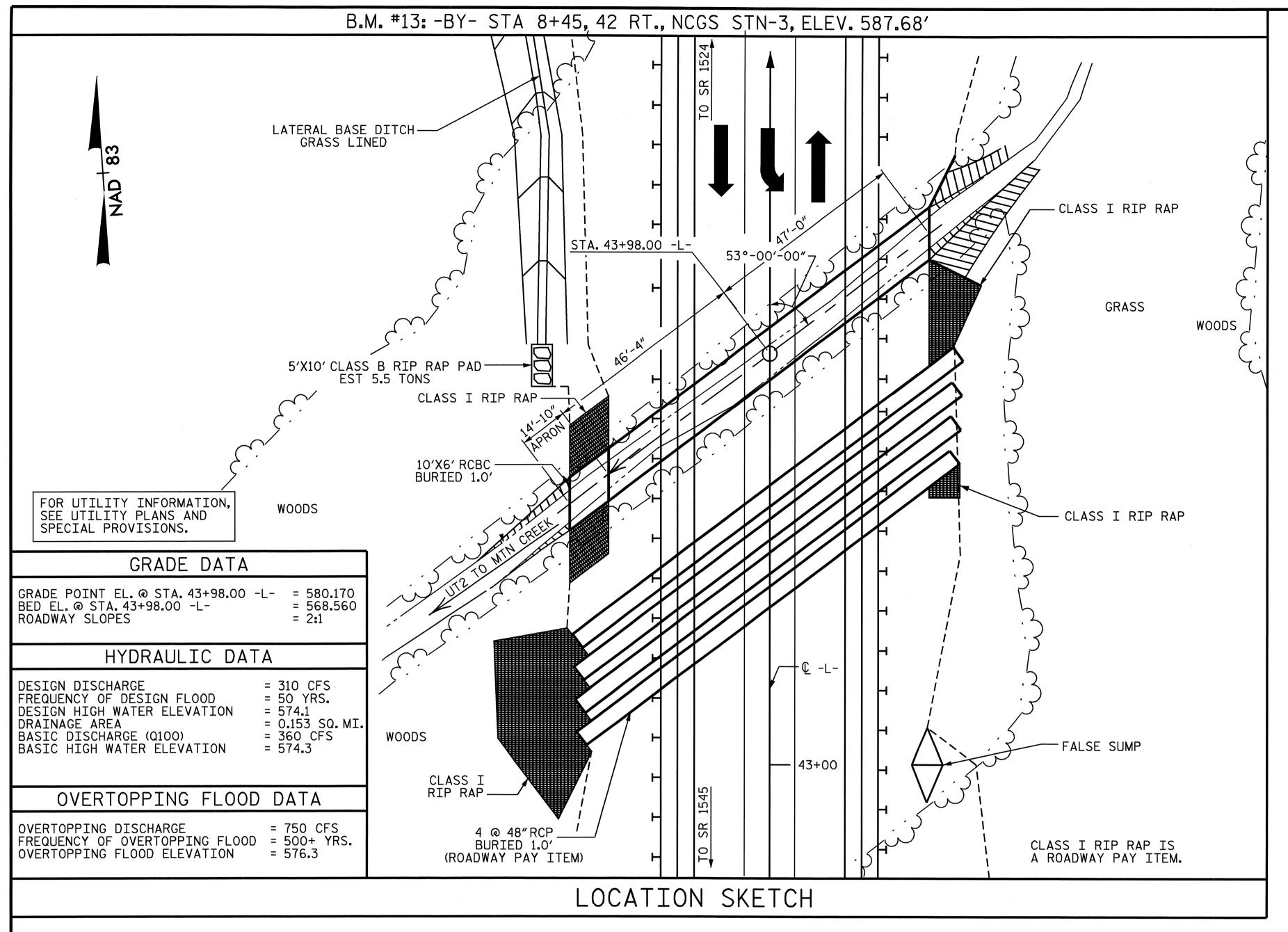
SHEET 1 OF 5

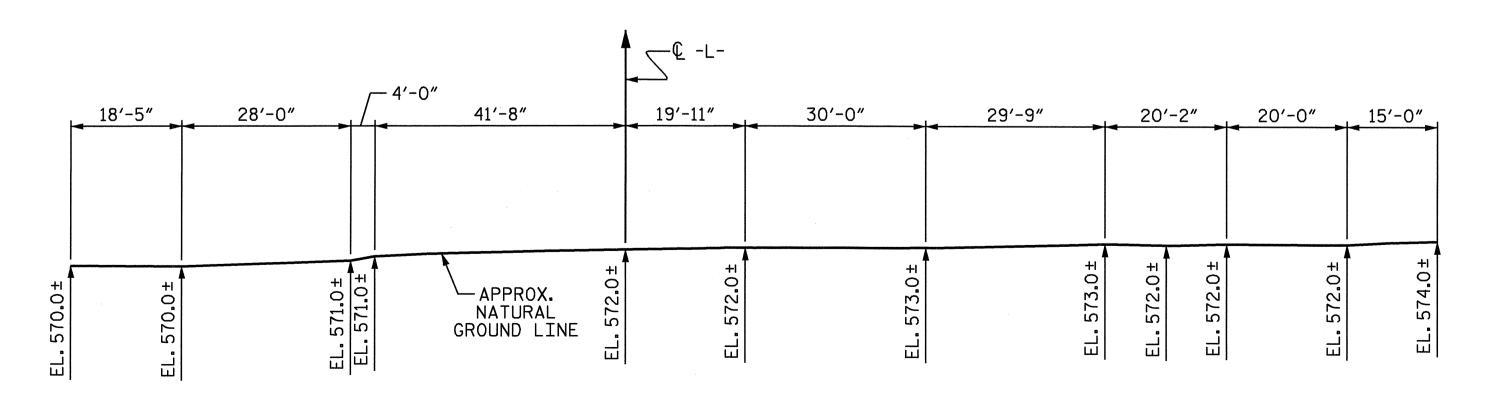
11 259

DEPARTMENT OF TRANSPORTATION

BARREL STANDARD SINGLE 10 FT.X 6 FT. CONCRETE BOX CULVERT 53° SKEW

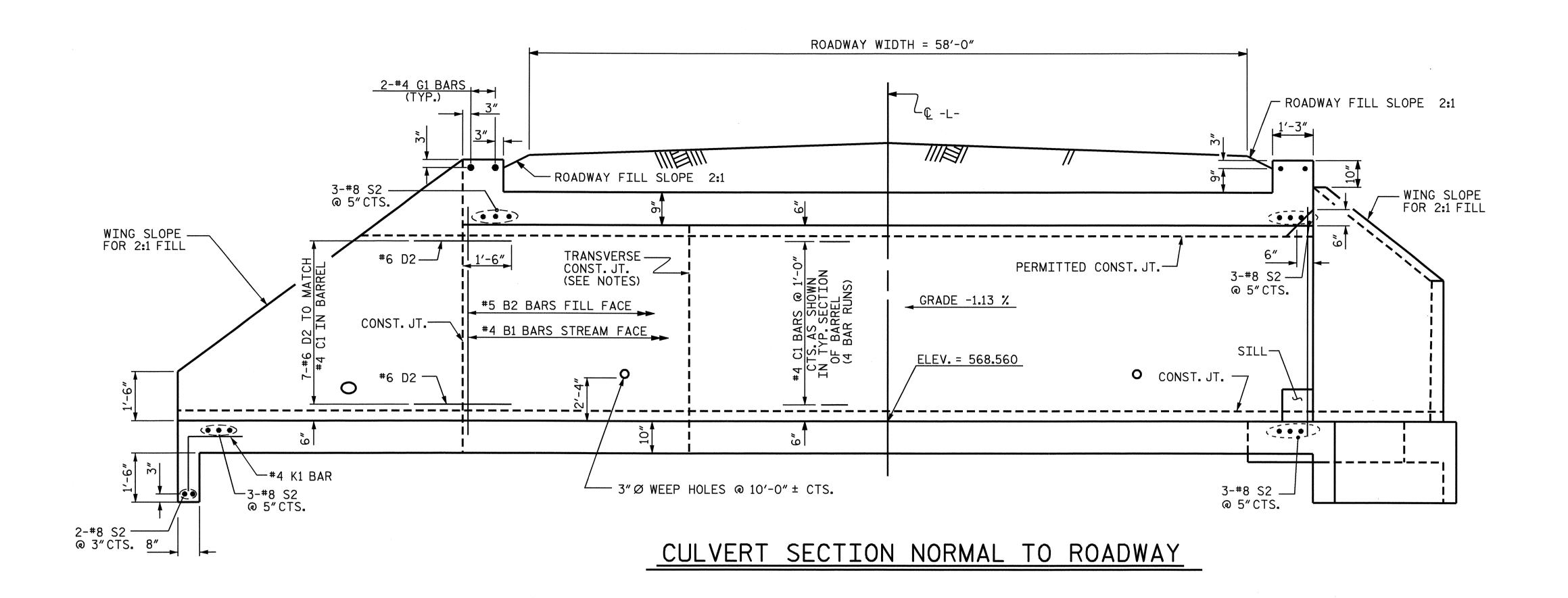
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NO.	BY:	DATE:	NO.	BY:	DATE:	C-1
1			3			TOTAL SHEETS
2			4			9

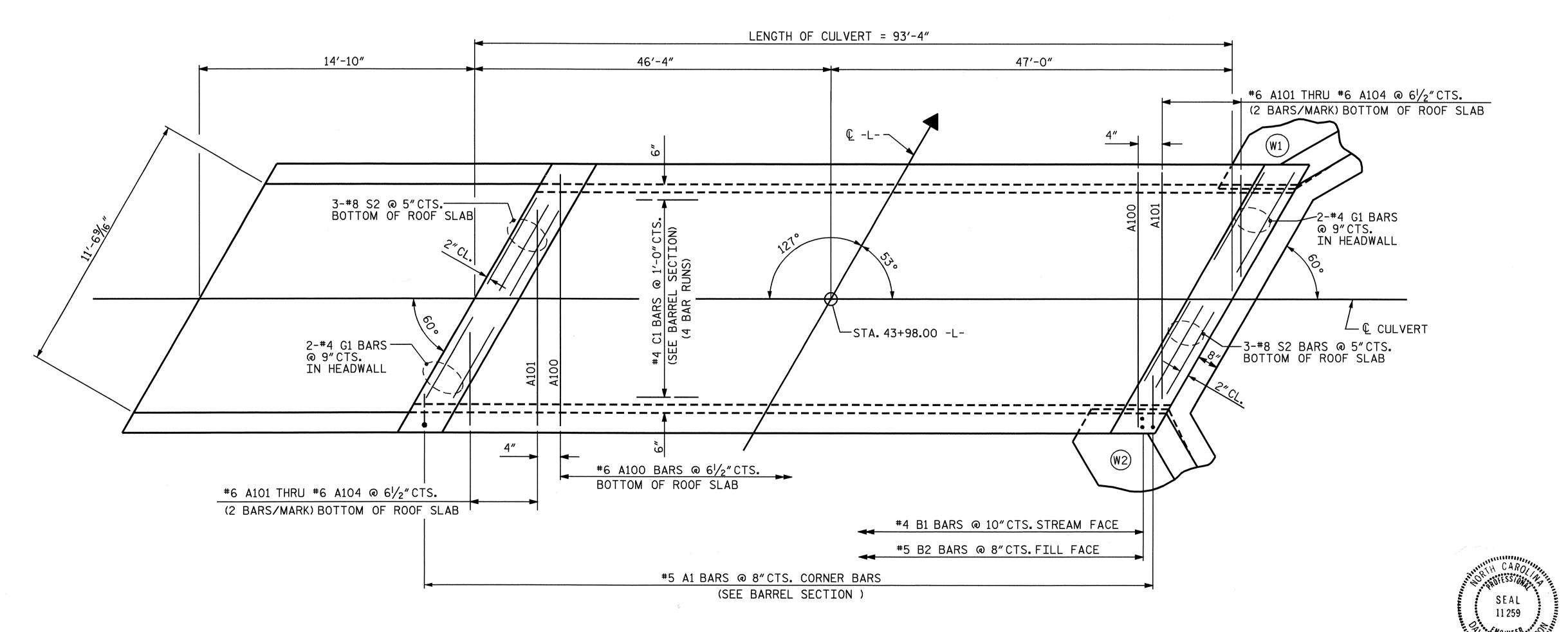




PROFILE ALONG & CULVERT

DRAWN BY: J.A. TILLMAN DATE: 9/02/08
CHECKED BY: R.G. EMERSON DATE: 9/22/08





PART PLAN - ROOF SLAB

PROJECT NO. U-3300B STANLY COUNTY STATION: 43+98.00 -L-

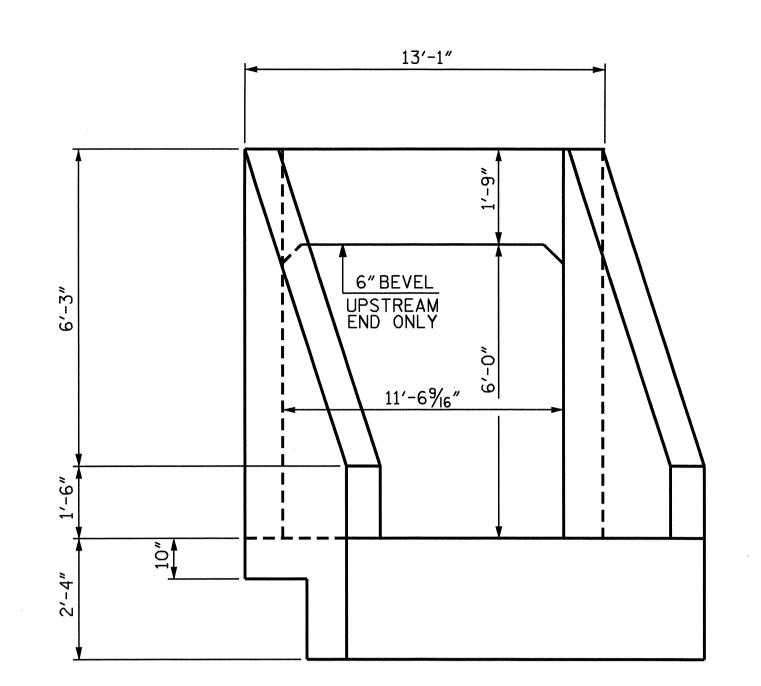
SHEET 2 OF 5

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RALEIGH BARREL STANDARD SINGLE 10FT. X 6FT. CONCRETE BOX CULVERT 53° SKEW

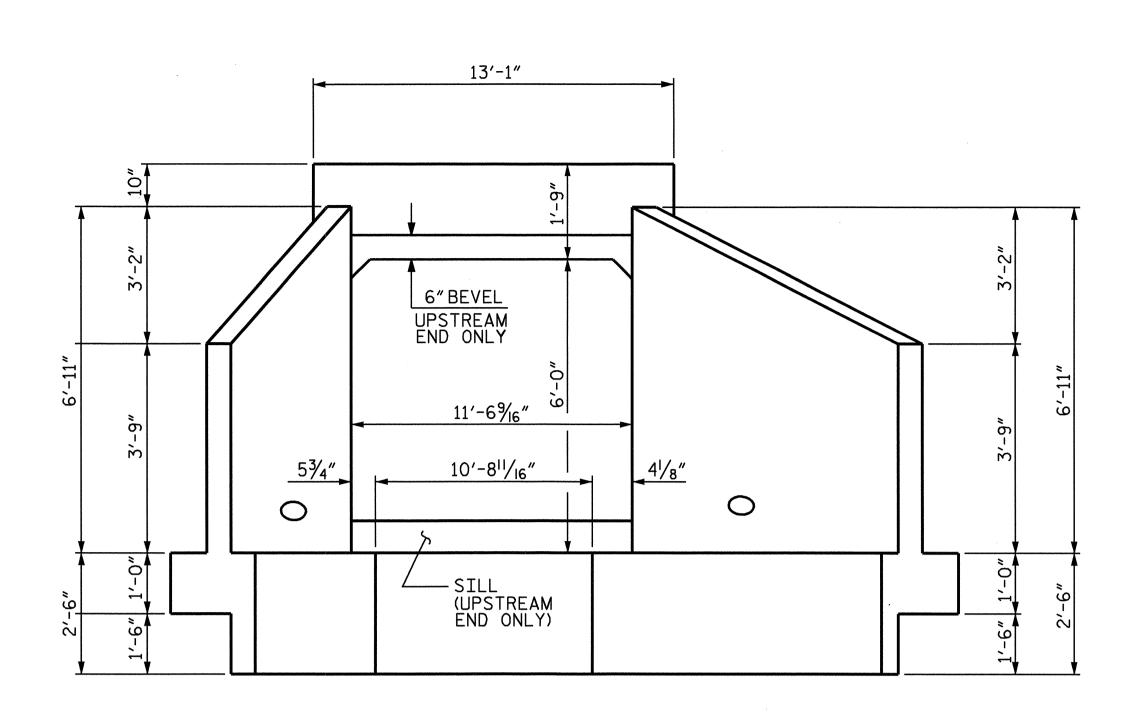
		SHEET NO.				
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1			3			TOTAL SHEETS
2			4			9

STD, NO, CB3I

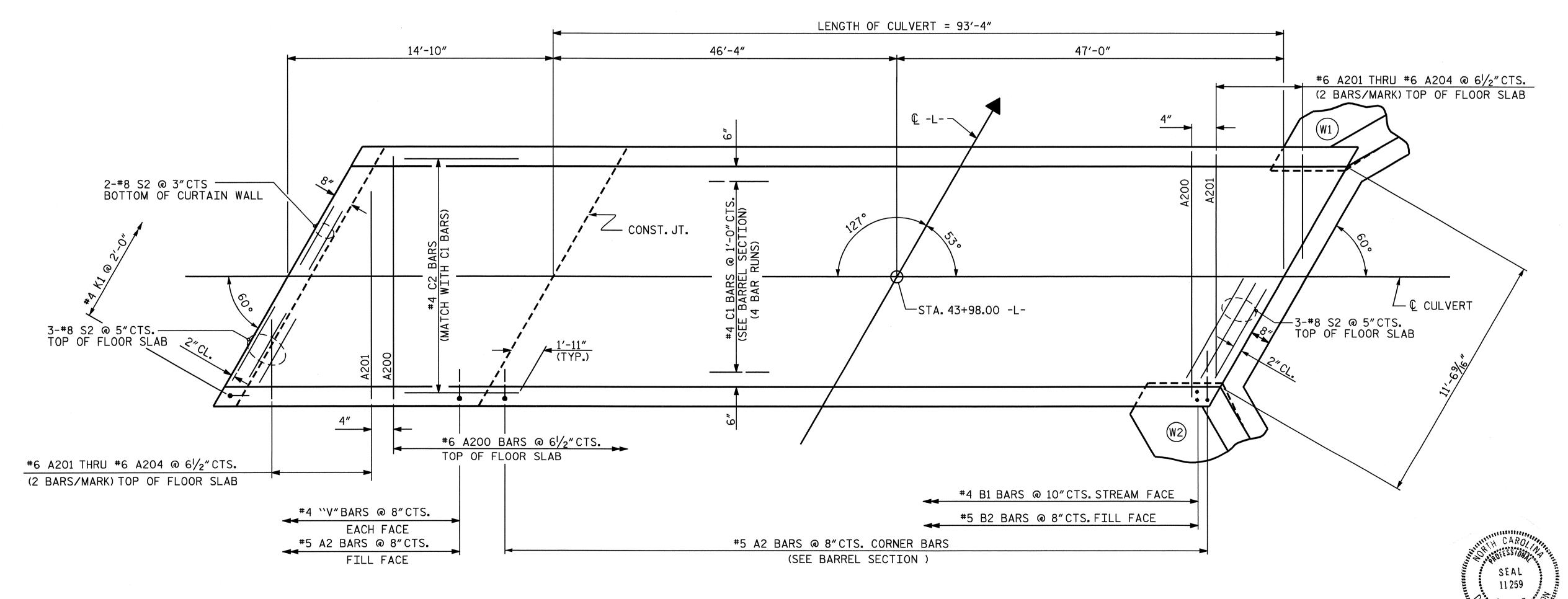
ASSEMBLED BY: J.A. TILLMAN DATE: 9/15/08 CHECKED BY: R.G. EMERSON DATE: 9/22/08 SPECIAL DRAWN BY : B.M. MEYERS
CHECKED BY : A.R. BISSETTE _ DATE : AUG. 1989 STANDARD



OUTLET END ELEVATION - NORMAL TO SKEW



END ELEVATION NORMAL TO SKEW



PART PLAN - FLOOR SLAB

ASSEMBLED BY: J.A. TILLMAN DATE: 9/15/08 CHECKED BY: R.G. EMERSON DATE: 9/22/08 SPECIAL DRAWN BY : B.M. MEYERS
CHECKED BY : A.R. BISSETTE __ DATE : AUG. 1989 __ DATE : AUG. 1989 __ STANDARD

STANLY COUNTY STATION: 43+98.00 -L-

PROJECT NO. U-3300B

SHEET 3 OF 5

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION BARREL STANDARD SINGLE 10FT. X 6FT. CONCRETE BOX CULVERT 53° SKEW

	REVISIONS						
BY:	BY: DATE: NO. BY: DATE:						
		3			TOTAL SHEETS		
		4			9		

STD. NO. CB3I

1485

1577

2640

42

31

20

53

42

31

20

1060

1558

2521

63

34

38

18

42

13

35

32

29

26

23

20

14

15,334

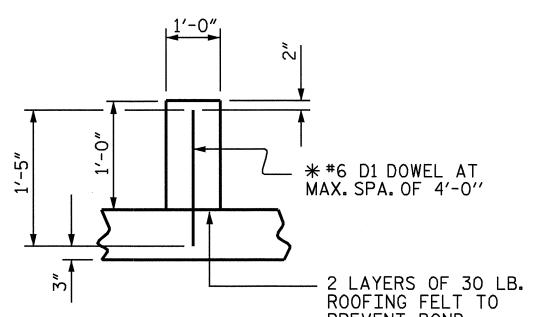
0.4 CY 0.6 CY

101.0 CY

3066

NOTES

THE VERTICAL LEG OF THE A2 BARS SHALL BE CUT OFF AS NECESSARY AT THE ENDS OF THE OUTLET WINGS TO MAINTAIN 21/2 INCH CLEARANCE FROM TOP OF WINGS.



SIZE BAR PREVENT BOND B1 4 SECTION THRU SILL . C1 4

VERTICAL LEG ─ 6"RAD. DIMENSIONS ARE OUT TO OUT

BAR TYPE

SPLICE LENGTHS CHART SPLICE LENGTH 1'-9'' 1'-11'' C2 4

BILL OF MATERIAL SIZE TYPE LENGTH WEIGHT NO. 280 #5 **A1** 5′-1″ 324 #5 4'-8" A2 A100 | 161 #6 | STR | 10'-11" #6 STR 8'-10" #6 STR 7'-0" A102 4 #6 STR A103 5'-1" A104 #6 STR 3'-3" A200 | 187 #6 | STR | 10'-11" #6 STR 8'-10" #6 STR A202 7'-0" #6 | STR 5'-1" A204 #6 STR 3'-3" #4 STR 7'-1" 224 #5 STR 280 B2 5'-4" 152 #4 STR C2 #4 STR 16'-6" 12 D1 2 #6 STR 1'-5" D2 14 #6 STR 3'-0" #4 STR 12′-8″ G1 1'-11'' #4 | STR | #4 STR

14'-4" 38 14'-1" #4 STR 11'-8" 31 #4 STR 25 9'-4" #4 STR 6'-11" #4 STR 4'-7" #4 STR 2'-2" #4 STR 15′-7″ 4 #4 2 K1 6 3'-4"

#4 | STR | 6'-6" V1 #4 STR V2 6'-0" ٧3 #4 | STR | 5′-5″ #4 | STR | 4'-10" ٧4 ٧5

#4 | STR | 4'-3" #4 STR 3′-9″ #4 STR 3'-2" #4 STR 2'-7" V8 8 #4 STR 2'-0"

REINFORCING STEEL CLASS A CONCRETE

S2 | 14

CULVERT BARREL (0.965 CY/FT.) 90.1 CY 9.9 CY 2 OUTLET WINGS W/FLOOR SLAB,1 CURTAIN WALL

1 SILL 1 HEADWALL

#8 STR 12′-8″

LBS

TOTAL

PROJECT NO. U-3300B STANLY

_ COUNTY STATION: 43+98.00 -L-

SHEET 4 OF 5

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

BARREL STANDARD SINGLE 10FT. X 6FT. CONCRETE BOX CULVERT 53° SKEW

	Physiother b.				
	SHEET NO.				
3Y:	DATE:	NO.	BY:	DATE:	C-4
		3			TOTAL SHEETS
		4			9
<u> </u>					

2 LAYERS OF 30 LB. ROOFING FELT TO PREVENT BOND #6 D1 DOWEL (TYP.) ELEVATION

CULVERT SILL DETAILS

* DOWELS MAY BE PUSHED INTO GREEN CONCRETE AFTER SLAB HAS BEEN FLOAT FINISHED.

14'-10" -PERMITTED CONST. JT. --- 2-#4 H8 *4 H1 THRU #4 H7 CONST. JT. _ H3 Zv2 Zv3 Zv4 Zv5 Zv6 Zv7 Zv8 #5 A2 @ 8"CTS.(FILL FACE OF EA.WING) 3-#5 A2 @ 10"CTS.
(FILL FACE OF EA. WING) 41/4" #4 "V"@ 8"CTS.(EACH FACE)(2 BARS/MARK)

PERMITTED

CONST. JT.

11'-4"

10'-0"

 $3\frac{1}{2}$ " HIGH C.H.C.U. (TYP.) -

A100 BARS-

A200 BARS -7

#4 C1 BARS @ 1'-0"CTS.

RIGHT ANGLE SECTION OF BARREL

THERE ARE 38 "C" BARS IN SECTION OF BARREL

#4 C1 BARS @ 1'-0"CTS.

2"HIGH BEAM BOLSTERS

(B.B.) @ 4'-0" CTS.

- B1 BARS

WEEP HOLES

A1 BARS-

B2 BARS→

A2 BARS-

<u>ELEVATION</u>

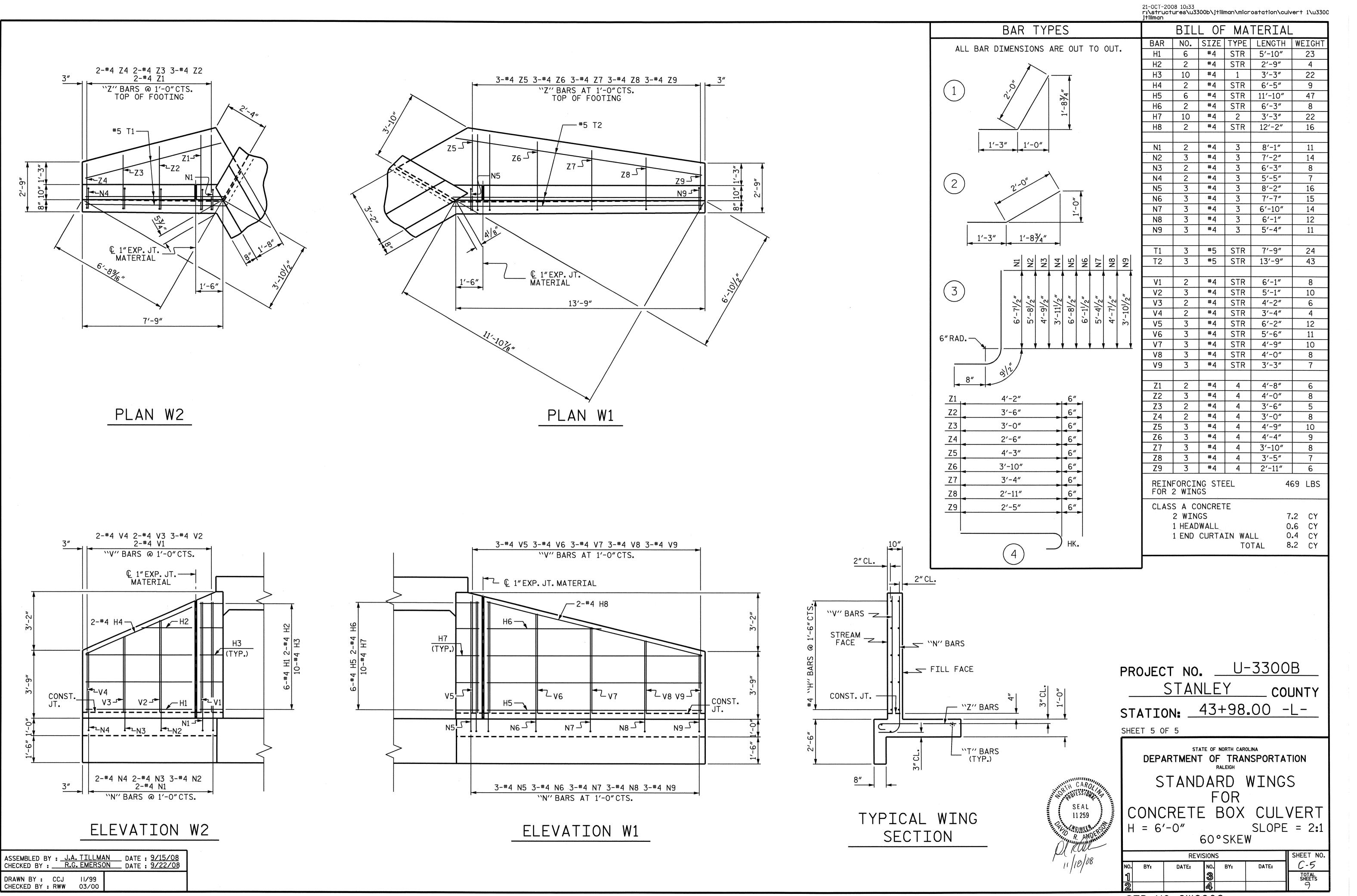
CONST. JT.-"V"BARS -FILL -FACE CONST. JT.— APRON -#5 A2 BARS (SEE -BARREL DETAILS)

OUTLET WING SECTION

ASSEMBLED BY: J.A. TILLMAN DATE: 9/15/08 CHECKED BY: R.G. EMERSON DATE: 9/22/08 **SPECIAL** B.M. MEYERS DATE : <u>AUG. 1989</u> DATE : <u>AUG. 1989</u> STANDARD

CHECKED BY : A.R. BISSETTE

VIEDU UN UES



 $\overset{1}{\diamond}$

CONST JT.

STD NO CWEOOR

NOTES

ASSUMED LIVE LOAD HS20-44 OR ALTERNATE LOADING.
FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.

DESIGN FILL = 4.77 FEET.

FOR OTHER DESIGN DATA AND NOTES, SEE SHEET SN.

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

CONCRETE IN CULVERT TO BE POURED IN THE FOLLOWING ORDER:

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

BURY THE INVERT AT BOTH ENDS OF THE CULVERT APPROXIMATELY 1'-O"BELOW THE NATURAL BED ELEVATION.

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 CONTRACTORS OPTION THE VERTICAL CONSTRUCTION JOINT BETWEEN THE OUTLET WINGS AND THE BARREL MAY BE ELIMINATED AND THE 'C' BARS IN THE BARREL MAY BE EXTENDED TO REPLACE THE 'D' AND 'H' BARS IN THE WING AND SLAB.

AT THE CONTRACTORS 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.

A 3 FOOT STRIP OF FILTER FABRIC SHALL BE ATTACHED TO THE FILL FACE OF THE STANDARD WING COVERING THE ENTIRE LENGTH OF THE EXPANSION JOINT.

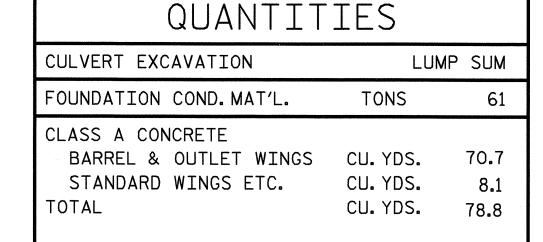
THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE 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.

THE CONTRACTOR 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 FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

- FOR EROSION CONTROL PLANS, SEE ROADWAY PLANS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT, SEE SPECIAL PROVISIONS.



TOTAL STRUCTURE

REINFORCING STEEL

BARREL AND OUTLET WINGS LBS. 10,436
STANDARD WINGS ETC. LBS. 396
TOTAL LBS. 10,832

SEAL 21545

9804

MGINE STANDARD STANDARD STANDARD SEAL 21545

11-18-00

PROJECT NO. U-3300B

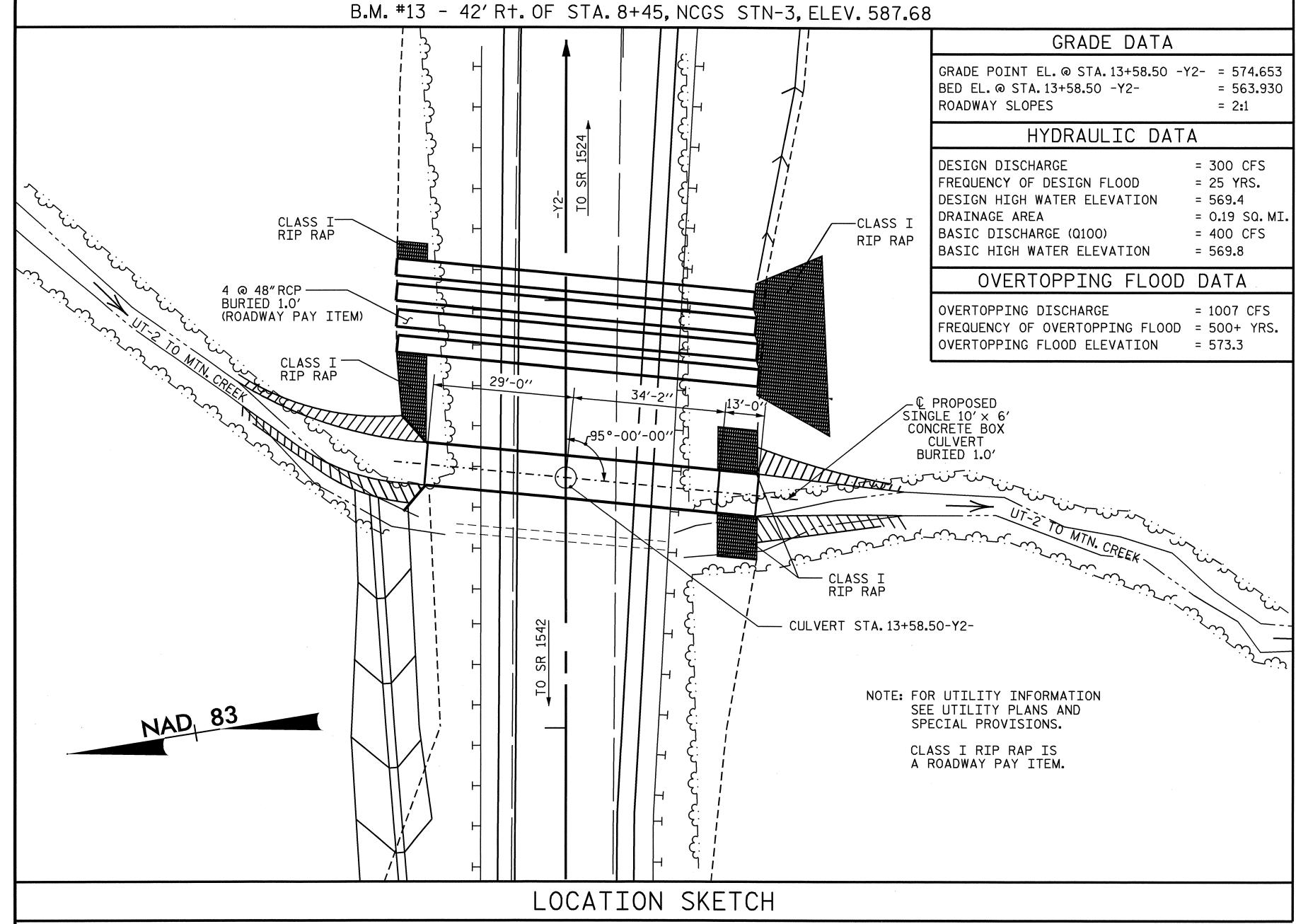
STANLY COUNTY

STATION: 13+58.50 -Y2
SHEET 1 OF 4 REPLACES BRIDGE NO. 57

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

SINGLE BARREL 10 FT. X 6 FT. CONCRETE BOX CULVERT 95° SKEW

	SHEET NO				
BY:	DATE:	NO.	BY:	DATE:	C-6
		3			TOTAL SHEETS
		4			9

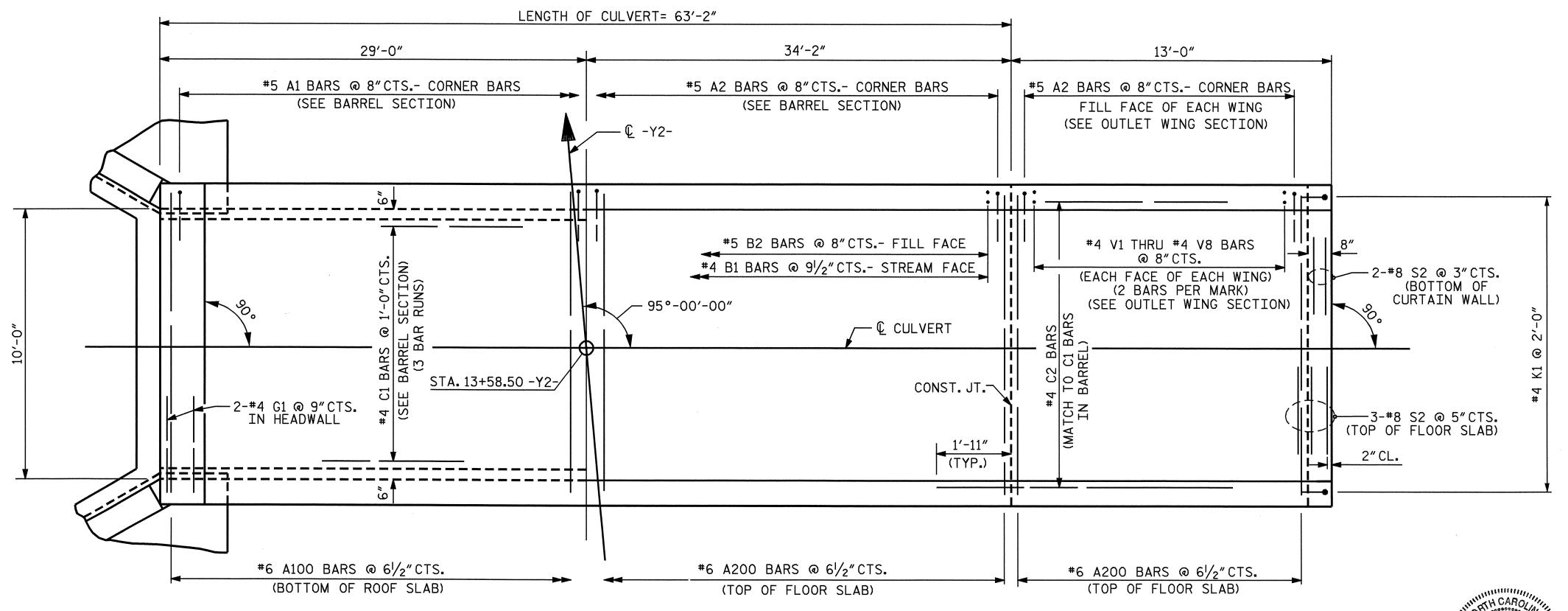


				-L- 7_					
<u></u>	21'-2''	21'-9''	30′-10′′	52′-3′′	15′-0′′	36′-7′′	23′-6′′	12'-4''	30′-1′′
EL. 568,3 ±	EL. 568.1 ±	. 567.9 ±	567.6 ±	APPROX. NATURAL GROUND LINE	566.4 ±	566.2 ±	566.0 ±	565.8 ±	565.2 ±

PROFILE ALONG & CULVERT

DRAWN BY: S.L. WANCE DATE: 08/08
CHECKED BY: R.G. EMERSON DATE: 10/08

CULVERT SECTION NORMAL TO ROADWAY



PART PLAN ROOF SLAB

PART PLAN FLOOR SLAB

U-3300B PROJECT NO. STANLY COUNTY 13+58.50 -Y2-STATION:

SHEET 2 OF 4

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

SINGLE 10 FT. X 6 FT. CONCRETE BOX CULVERT 95° SKEW

		SHEET NO.				
0.	BY:	DATE:	NO.	BY:	DATE:	C-7
1			3			TOTAL SHEETS
2			4			9

STD. NO. CB11

__ DATE : 0<u>9/21/2008</u> __ DATE : <u>10/08</u>___ ASSEMBLED BY : ___S.L. WANCE_ SPECIAL CHECKED BY : R. G. EMERSON R. WRIGHT DATE : <u>AUG. 1989</u> DATE : <u>AUG. 1989</u> STANDARD CHECKED BY : A.R. BISSETTE



#6 | STR | 10'-11"

#6 | STR | 10'-11"

#4 | STR |

#5 STR

#4 | STR |

#4 | STR |

#6 | STR |

#6 STR

#4 STR

#4 STR

#4 STR

#4 | STR |

#4 STR

#4 | STR | 11'-0"

5′-1″

4′-8″

5′-4″

22'-4"

14'-9"

1'-5"

12'-6"

12'-3"

10'-6"

8'-6"

6′-5″

1'-10"

1007

1017

1918

2296

757

1057

1701

118

63

6

29

33

33

28

23

17

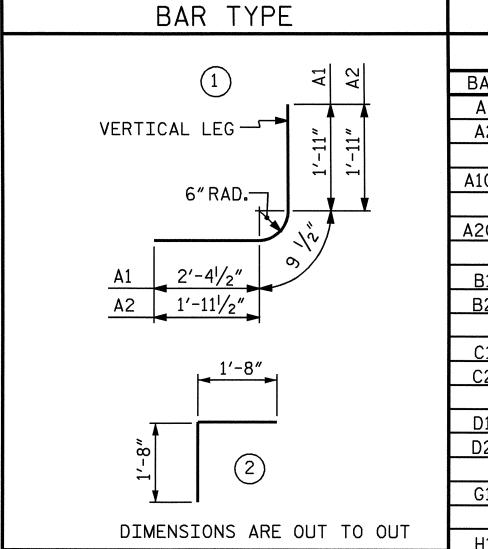
10

87

BILL OF MATERIAL

#5

#5



SIZE | SPLICE LENGTH B1 1'-9'' C1 1'-11'' 4 C2 4 1'-11''

CULVERT AND OUTLET WINGS NO. | SIZE | TYPE | LENGTH | WEIGHT 190 Α2 209 A100 117 A200 | 140 160 190 114 12 14

H2 SPLICE LENGTHS CHART

> #4 STR 4'-4" H7 #4 STR 2'-3" Н8 #4 | STR | 13'-11 37 #4 3'-4" 13 #4 | STR | 6'-6" 35 #4 STR 5′-10″ 31 #4 STR ٧3 5'-2" 28 ٧4 #4 STR 4'-6" 24 #4 STR 3′-10″ 20 #4 STR 3'-2" 17 #4 STR 2'-6" 13

REINFORCING STEEL LBS 10,436

#8 STR 10′-10″

#4 | STR

CLASS A CONCRETE

V8

CULVERT BARREL (0.965 CY/FT.) 61.0 CY 8.6 CY 2 OUTLET WINGS W/FLOOR SLAB, 1 CURTAIN WALL

1 SILL 0.4 CY 0.7 CY 1 HEADWALL

TOTAL 70.7 CY

PROJECT NO. U-3300B

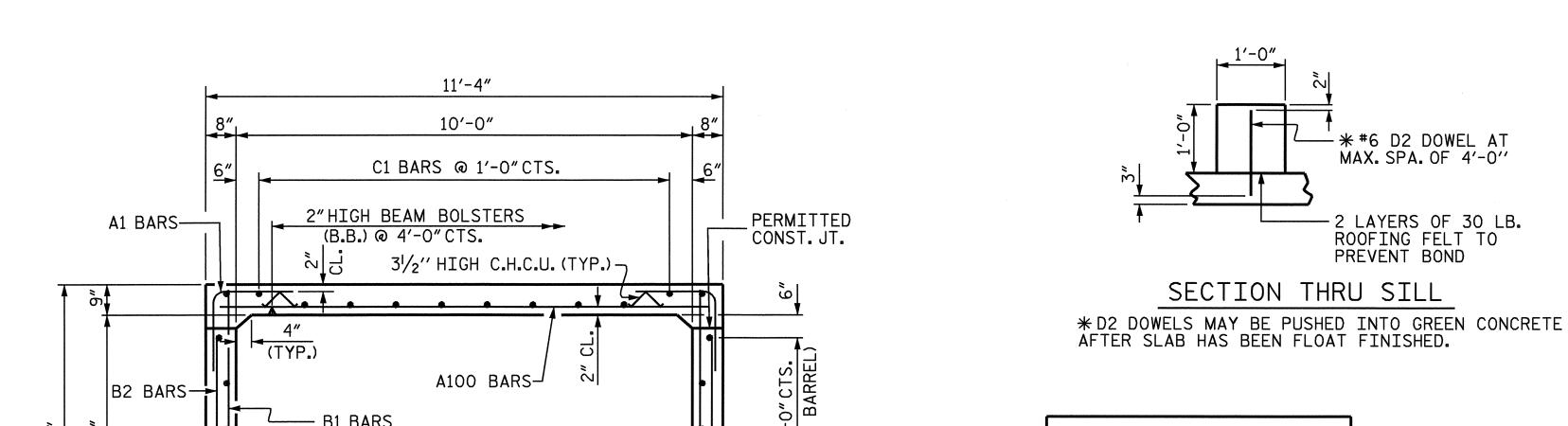
STANLY COUNTY STATION: 13+58.50 -Y2-

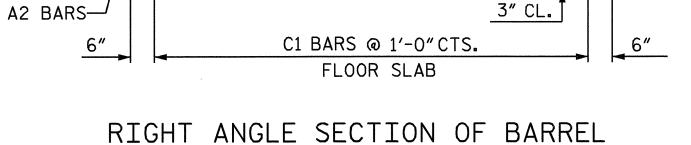
SHEET 3 OF 4

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RALEIGH

SINGLE 10FT. X 6FT. CONCRETE BOX CULVERT 95° SKEW

	REVISIONS						
BY:	DATE:	NO.	BY:	DATE:	C-8		
		3			TOTAL SHEETS		
		4			9		





THERE ARE 38 "C" BARS IN SECTION OF BARREL

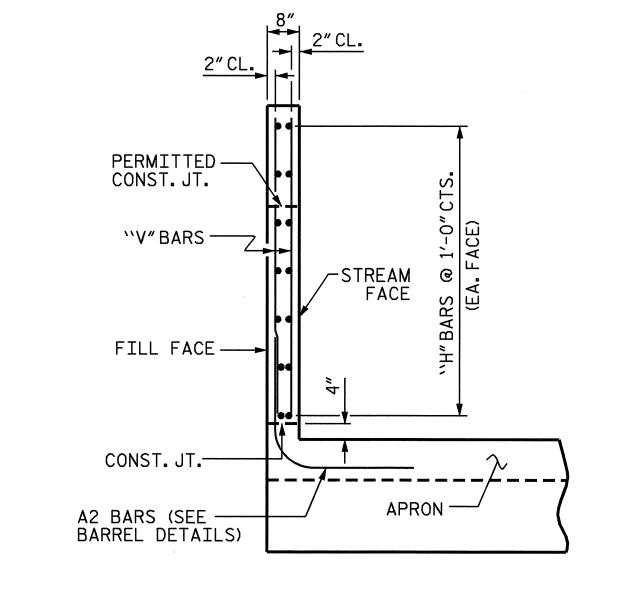
A200 BARS-



ELEVATION

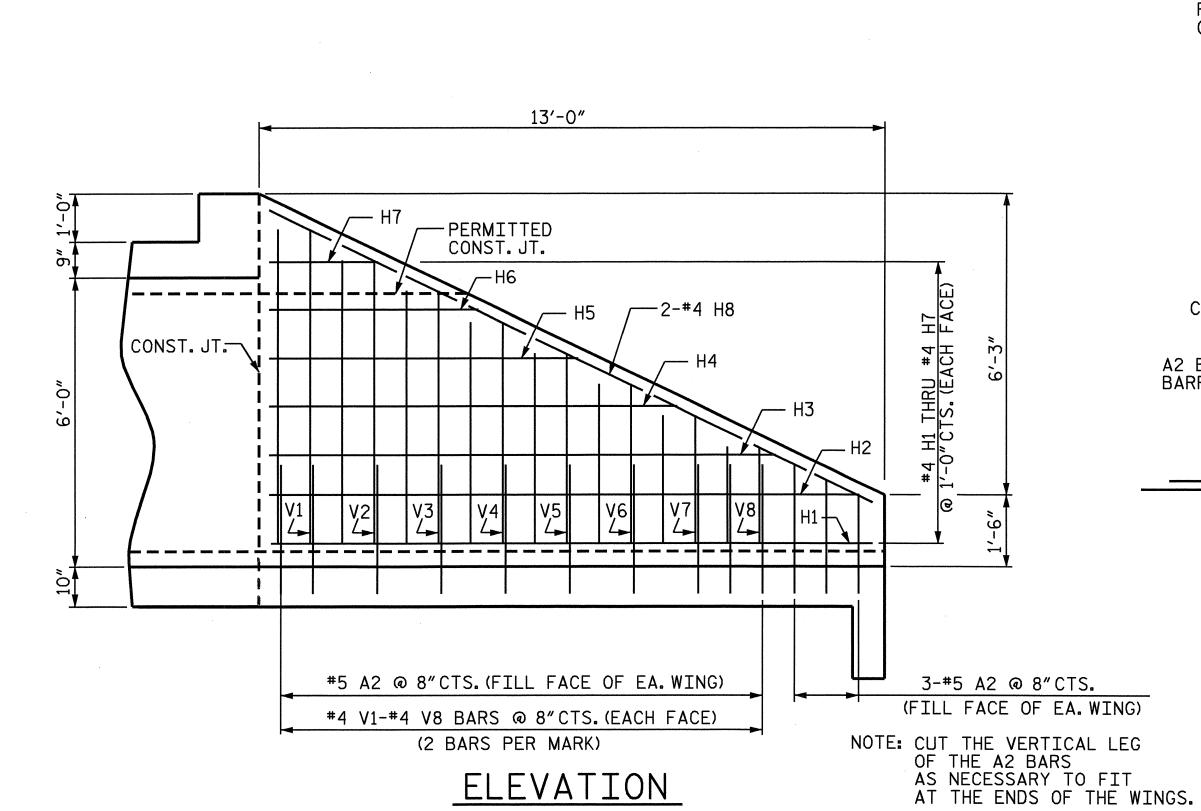
2 LAYERS OF 30 LB. 7

PREVENT BOND



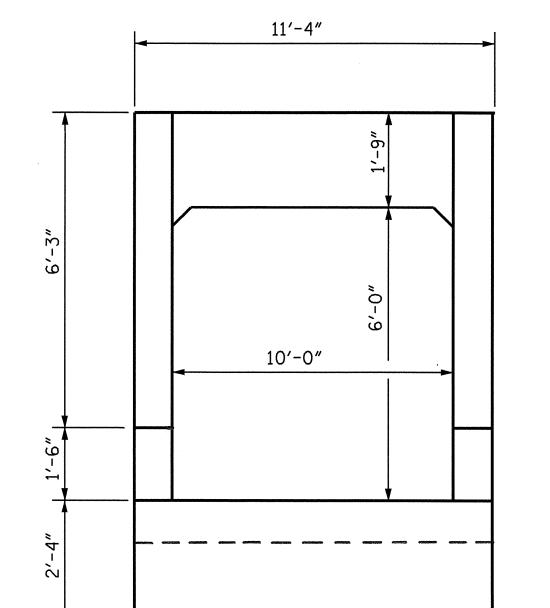
— #6 D2 DOWEL (TYP.)

OUTLET WING SECTION

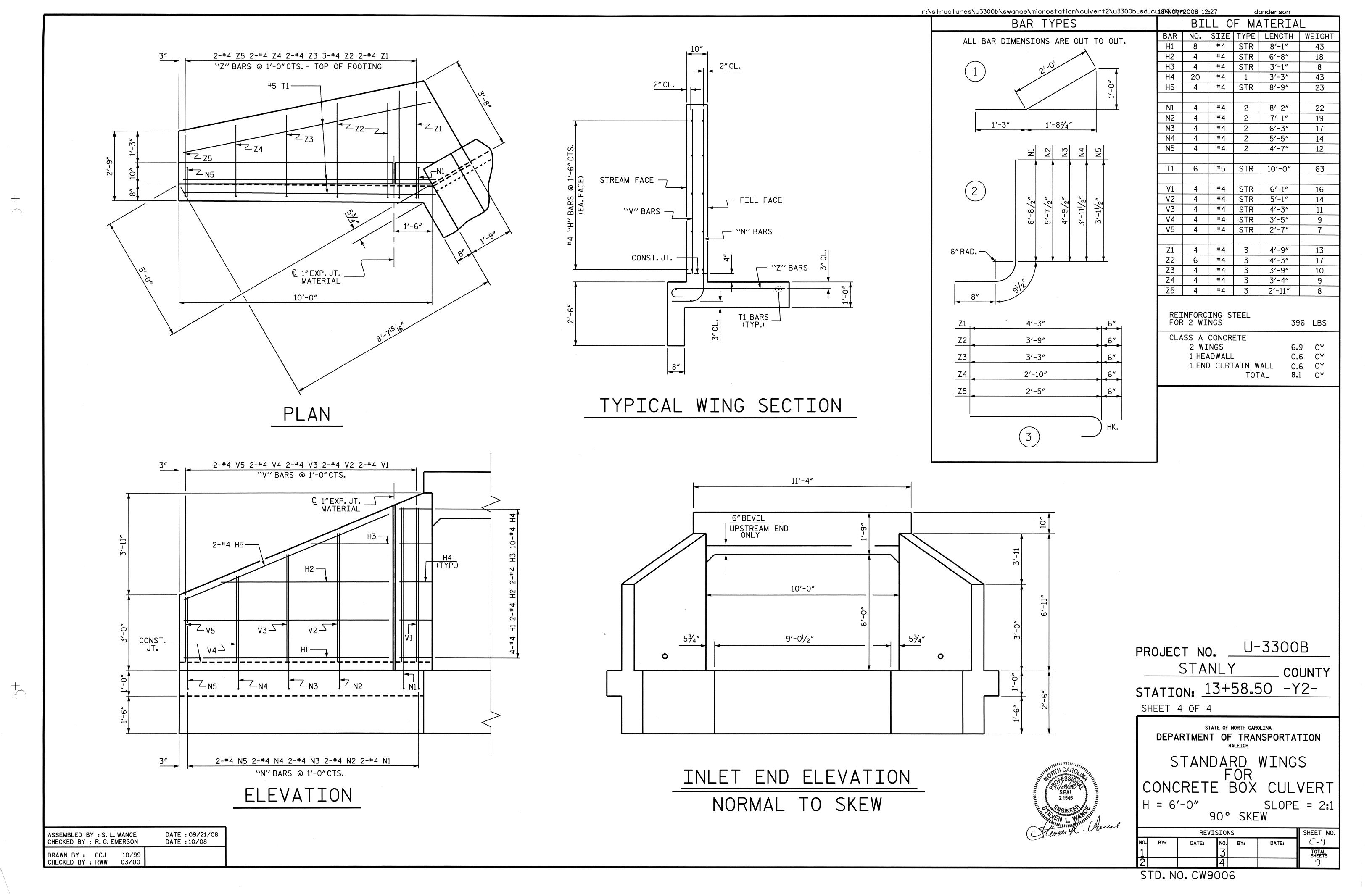


ELEVATION

__ DATE : <u>09/21/2008</u> __DATE : <u>10/08</u> ASSEMBLED BY : S.L. WANCE **SPECIAL** CHECKED BY : R. G. EMERSON DRAWN BY : B.M. MEYERS
CHECKED BY : A.R. BISSETTE DATE : <u>AUG. 1989</u> DATE : <u>AUG. 1989</u> STANDARD



OUTLET END ELEVATION NORMAL TO SKEW



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 24,000 LBS. PER SQ. IN.

CONCRETE IN COMPRESSION ---- 1.200 LBS. PER SQ. IN. ---- SEE A.A.S.H.T.O.

CONCRETE IN SHEAR

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

STRUCTURAL TIMBER - TREATED OR

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 2006 "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 $rac{3}{4}$ "Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8 $^{\prime\prime}$ $^{\prime\prime}$ STUDS FOR 4 - 3/4 $^{\prime\prime}$ $^{\prime\prime}$ 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

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.

BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL

NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

ENGLISH

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