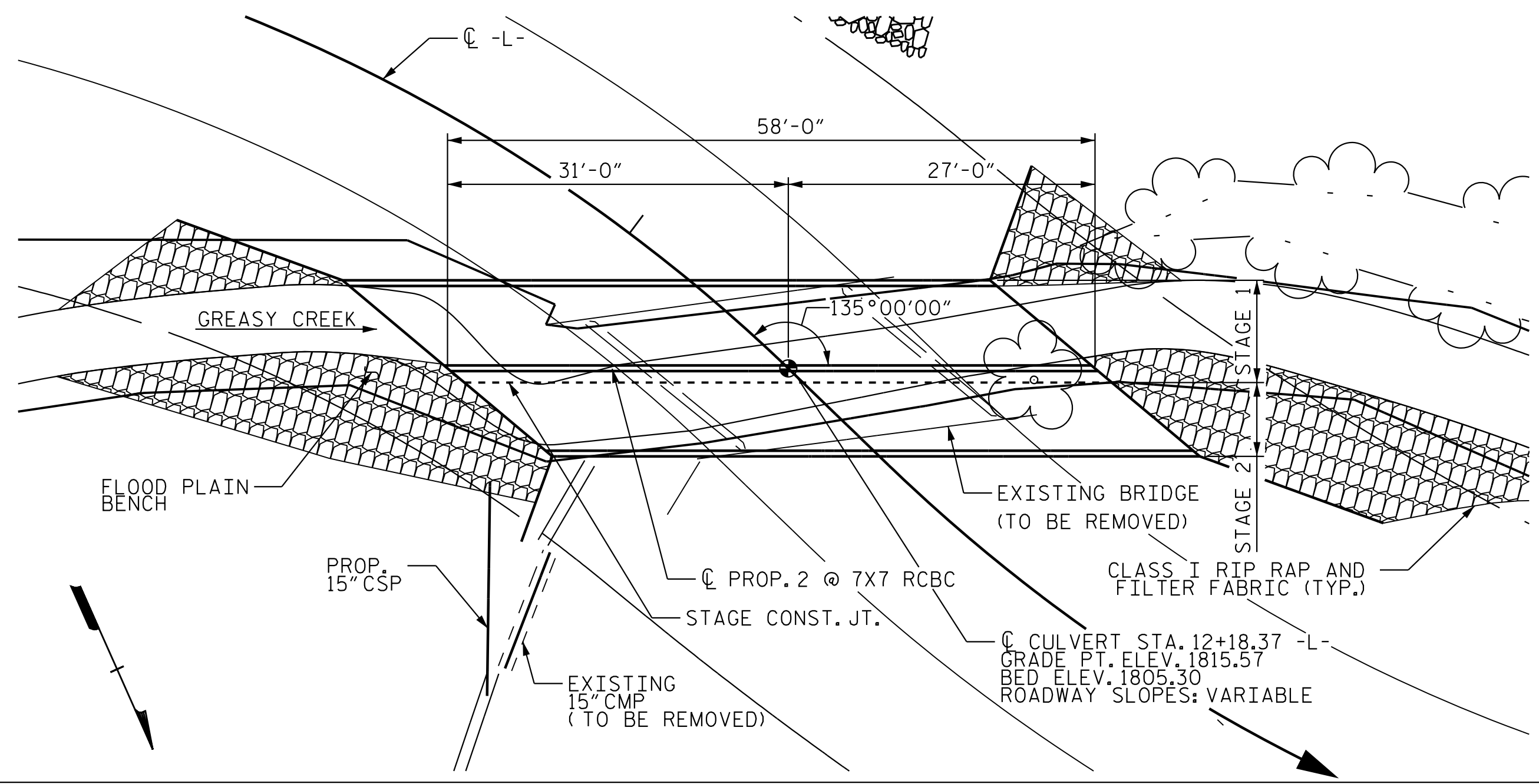


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BENCH MARK: -BL- STATION 5+00.00 S 58°13'14.24"E DIST. 59.10 8 INCH SPIKE IN BASE OF 20 INCH MAPLE ELEV. 1818.41



**LOCATION SKETCH**  
NO KNOWN UTILITY CONFLICTS

**OVERTOPPING FLOOD DATA**

OVERTOPPING DISCHARGE ----- = 520 CFS  
 FREQUENCY OF OVERTOPPING ----- = 25 YR.  
 OVERTOPPING FLOOD ELEVATION ----- = 1808.7

**HYDRAULIC DATA**

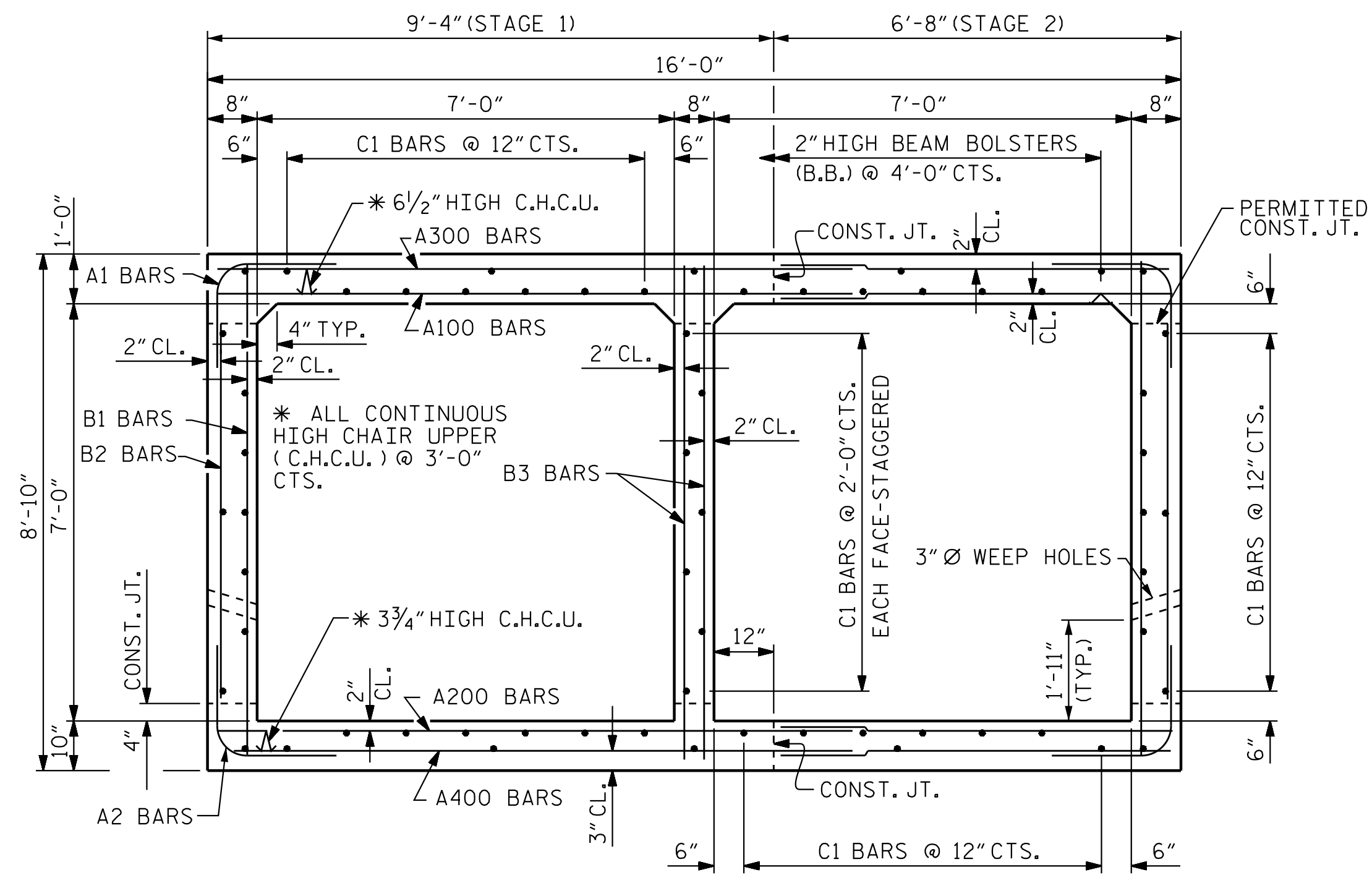
DESIGN DISCHARGE ----- = 380 CFS  
 FREQUENCY OF DESIGN FLOOD ----- = 10 YR.  
 DESIGN HIGH WATER ELEVATION ----- = 1809.7  
 BASIC DRAINAGE (Q100) ----- = 750 CFS  
 BASIC HIGH WATER ELEVATION ----- = 1810.07  
 DRAINAGE AREA ----- = 1.45 SQ. MI.

**TOTAL STRUCTURE QUANTITIES**

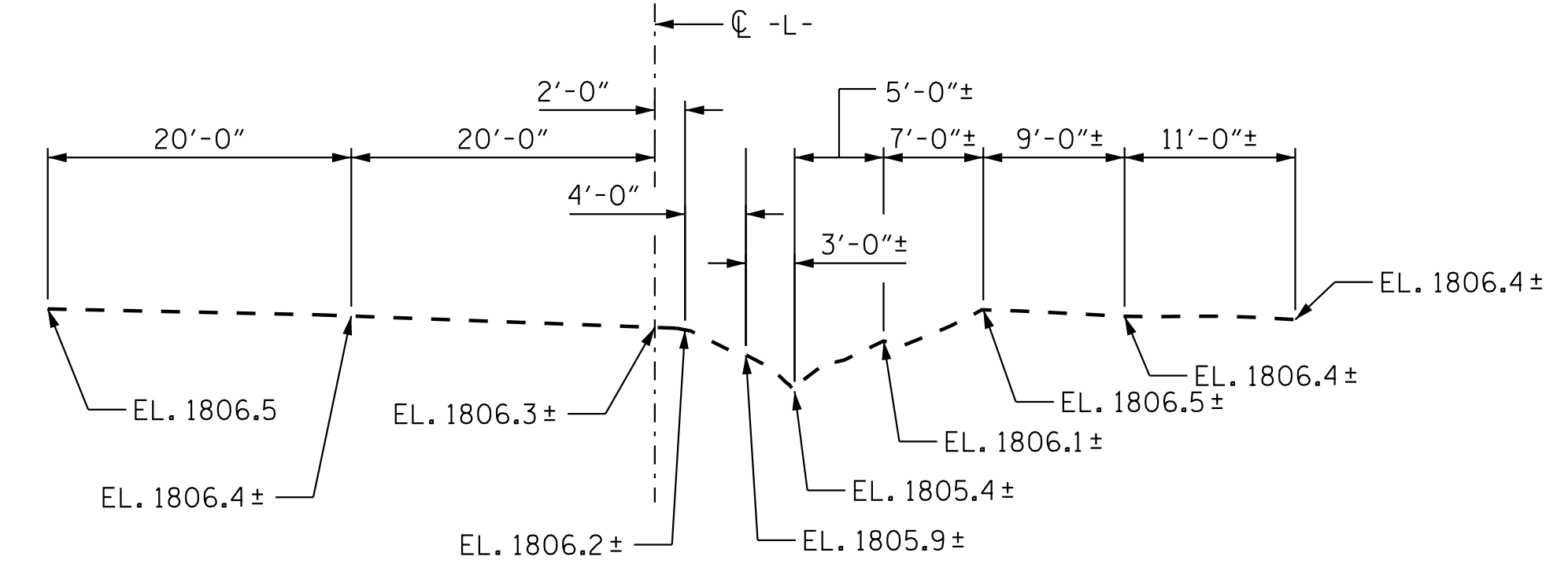
CLASS A CONCRETE		
BARREL @	1,613	93.6 C.Y.
SILL WALLS	2.0	C.Y.
WING ETC.	28.1	C.Y.
TOTAL	123.7	C.Y.
REINFORCING STEEL		
BARREL	9,909	LBS.
SILL WALLS	206	LBS.
WINGS ETC.	1502	LBS.
TOTAL	11,617	LBS.
FOUNDATION CONDITIONING MATERIAL = 87 TONS		
RIP RAP, CLASS I = 60 TONS		
RIP RAP, CLASS B = 41 TONS		
GEOTEXTILE FOR DRAINAGE = 85 S.Y.		
CULVERT EXCAVATION = LUMP SUM		
REMOVAL OF EXISTING STRUCTURE AT STATION 12+18.37 -L- = LUMP SUM		

**NOTES**

ASSUMED LIVE LOAD -----HS20-44 OR ALTERNATE LOADING.  
 DESIGN FILL-----3.28'  
 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.  
 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 SPLICES 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.  
 THE EXISTING STRUCTURE CONSISTING OF ONE, 18'-6" LONG TIMBER JOIST SPAN WITH 15'-9"± OF CLEAR ROADWAY AND A TIMBER DECK WITH AN ASPHALT WEARING SURFACE ON END BENTS WITH TIMBER CAPS/ POSTS AND SILLS @ 7' CENTERS AND LOCATED @ THE SAME STATION AS THE PROPOSED STRUCTURE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED BELOW THE LEGAL LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE FURTHER DETERIORATE, THIS LOAD LIMITATION MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT.



**RIGHT ANGLE SECTION OF BARREL**  
THERE ARE 61 "C" BARS IN SECTION OF BARREL.



**PROFILE ALONG CULVERT**

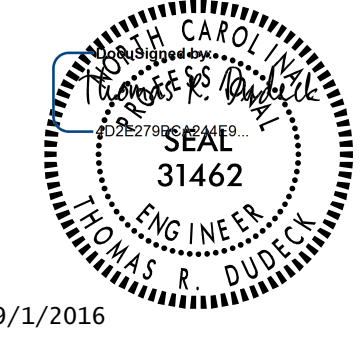
PROJECT NO. 17BP.14.R.38  
CLAY COUNTY  
 STATION: 12+18.37 -L-  
 SHEET 1 OF 7 REPLACES BRIDGE NO. 78

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**BARREL STANDARD**  
**DOUBLE 7 FT. X 7 FT.**  
**CONCRETE BOX CULVERT**  
**135°00'00" SKEW**

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

TOTAL SHEETS: 7

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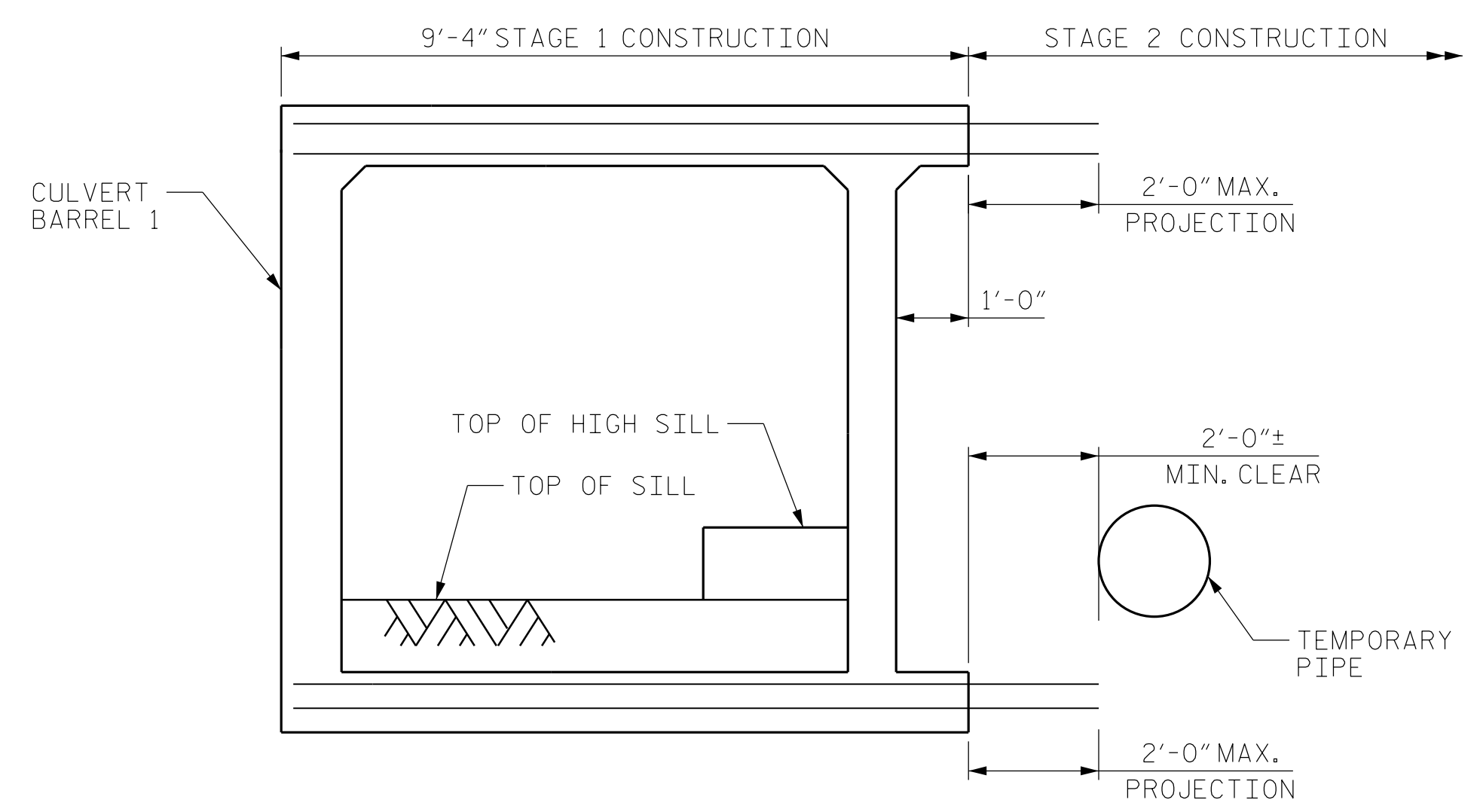
ASSEMBLED BY : T.R. DUDECK DATE : 04/2012  
 CHECKED BY : J.T. KELVINGTON DATE : 04/2012  
 DRAWN BY : D.P. DONOVAN DATE : DEC. 1989  
 CHECKED BY : M. A. JONES DATE : NOV. 90

**SPECIAL**  
**STANDARD**

U:\Clay78\Structures\Drawing\C-1.dgn 9/1/2016 9:59:28 AM tdudeck DIV 14 PEN TABLE.tbl Raleigh PDF Creator (Full).plt

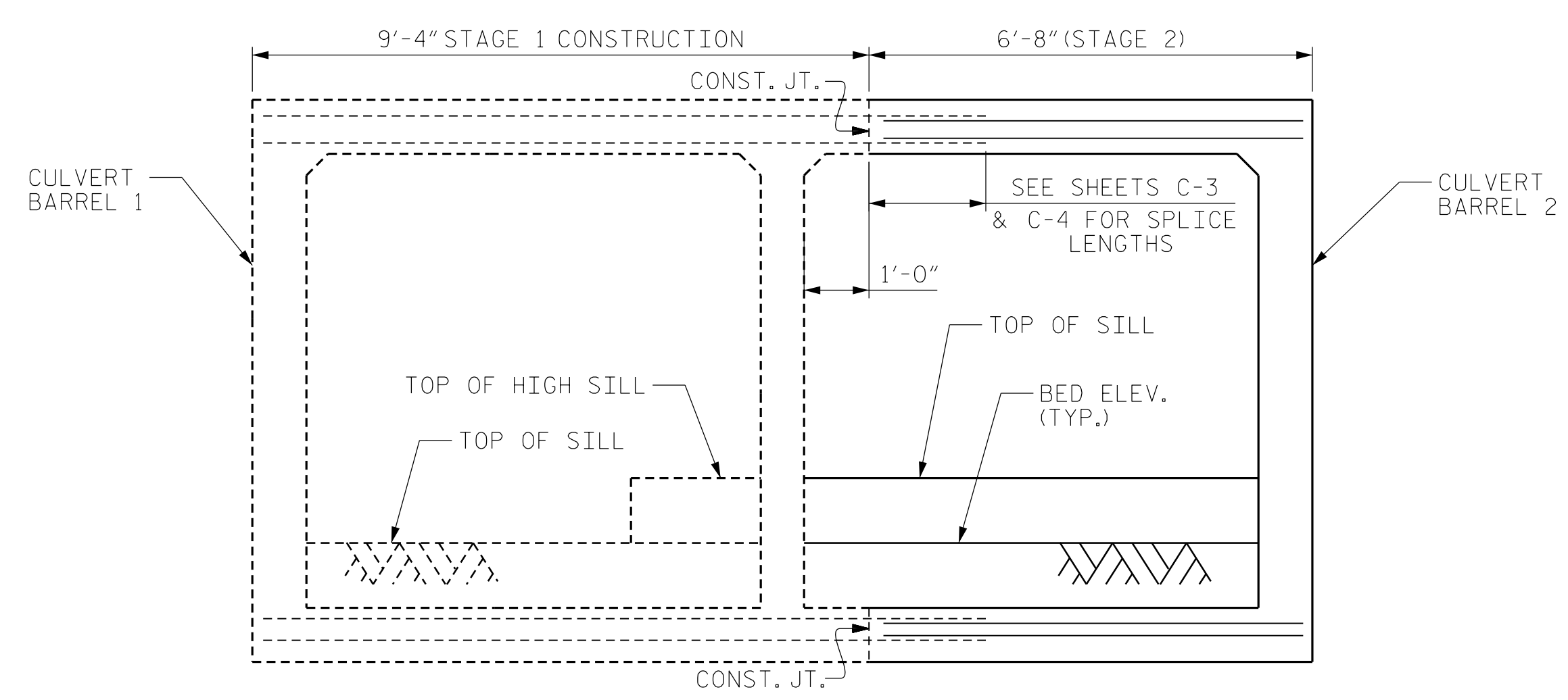
NOTES

SEE CULVERT CONSTRUCTION SEQUENCE FOR MORE INFORMATION.



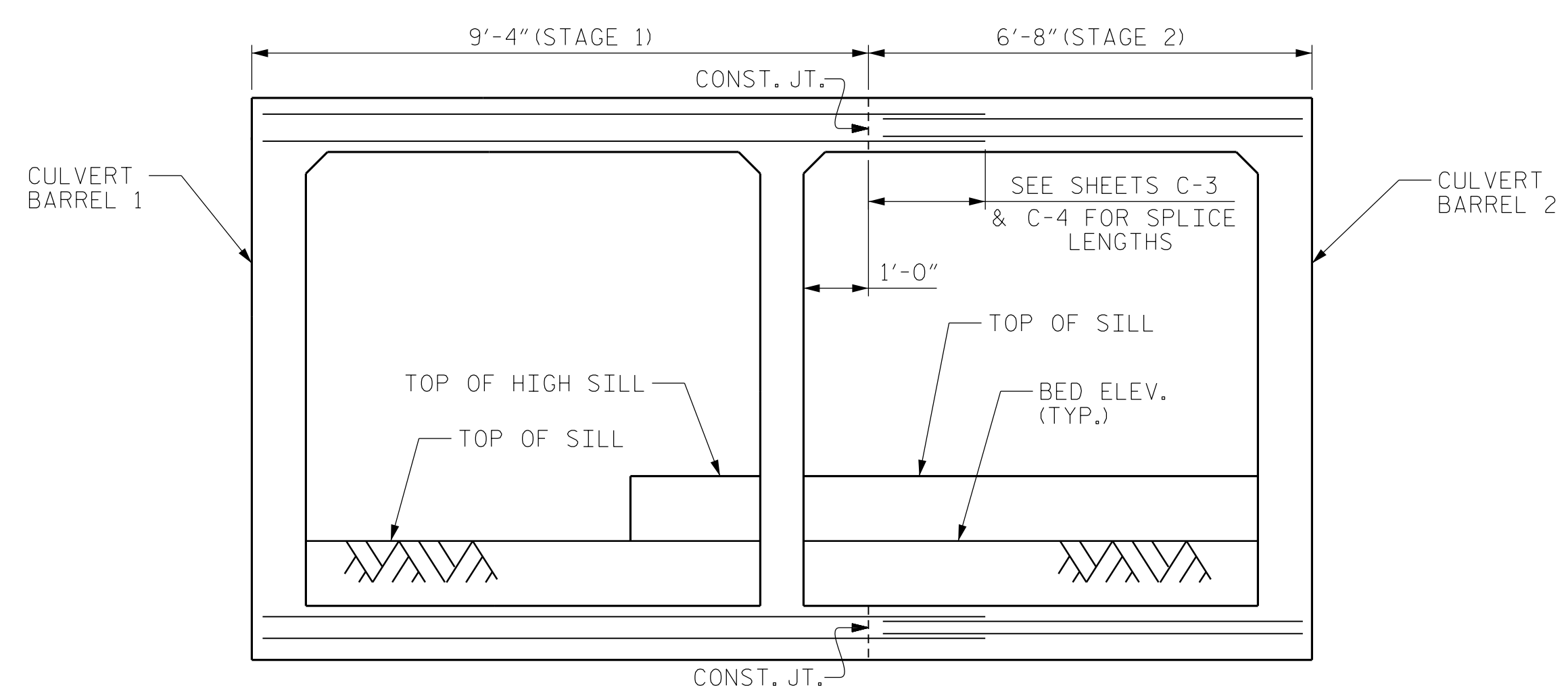
**STAGE I**

NOTE: DIVERT FLOW TO TEMPORARY PIPE AND  
CONSTRUCT CULVERT BARREL 1



**STAGE II**

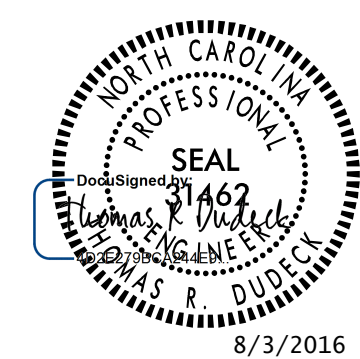
NOTE: RELOCATE FLOW TO CULVERT BARREL 1  
AND CONSTRUCT CULVERT BARREL 2.



**FINAL STAGE**

PROJECT NO. 17BP.14.R.38  
CLAY COUNTY  
STATION: 12+18.37 -L-

SHEET 2 of 7



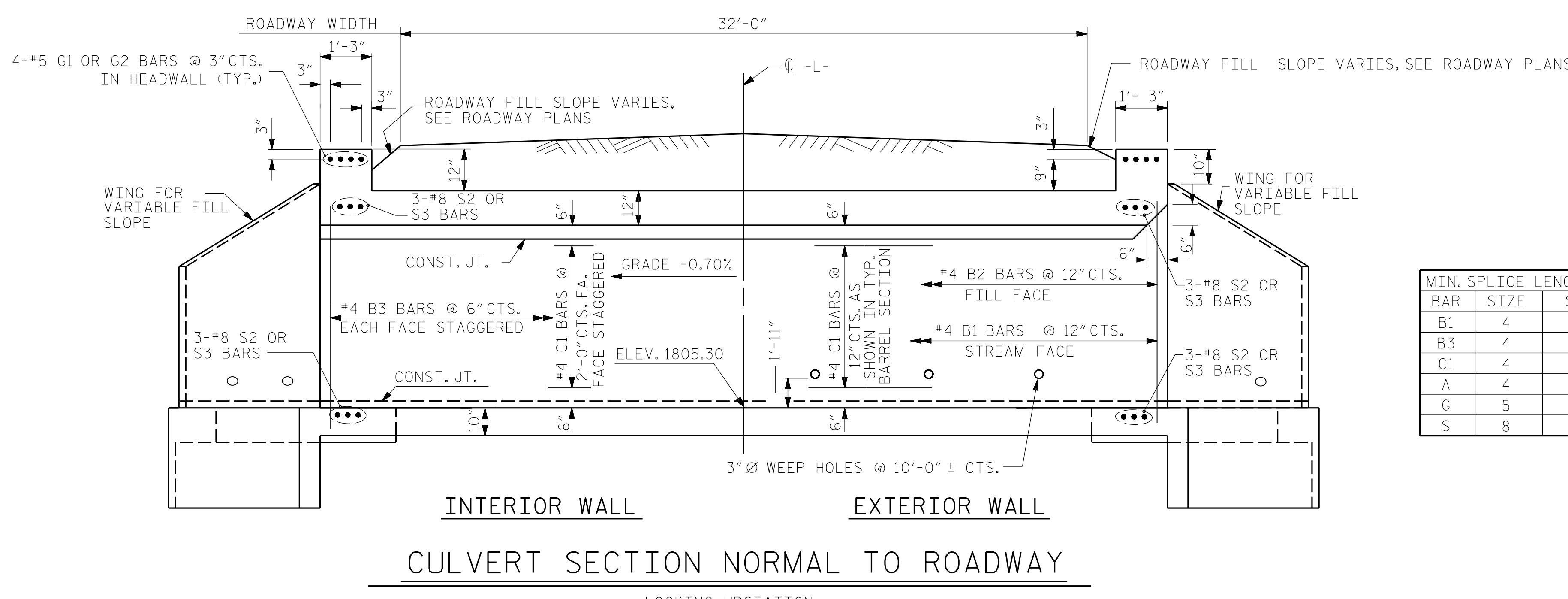
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

**STAGE CONSTRUCTION  
DETAIL**

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

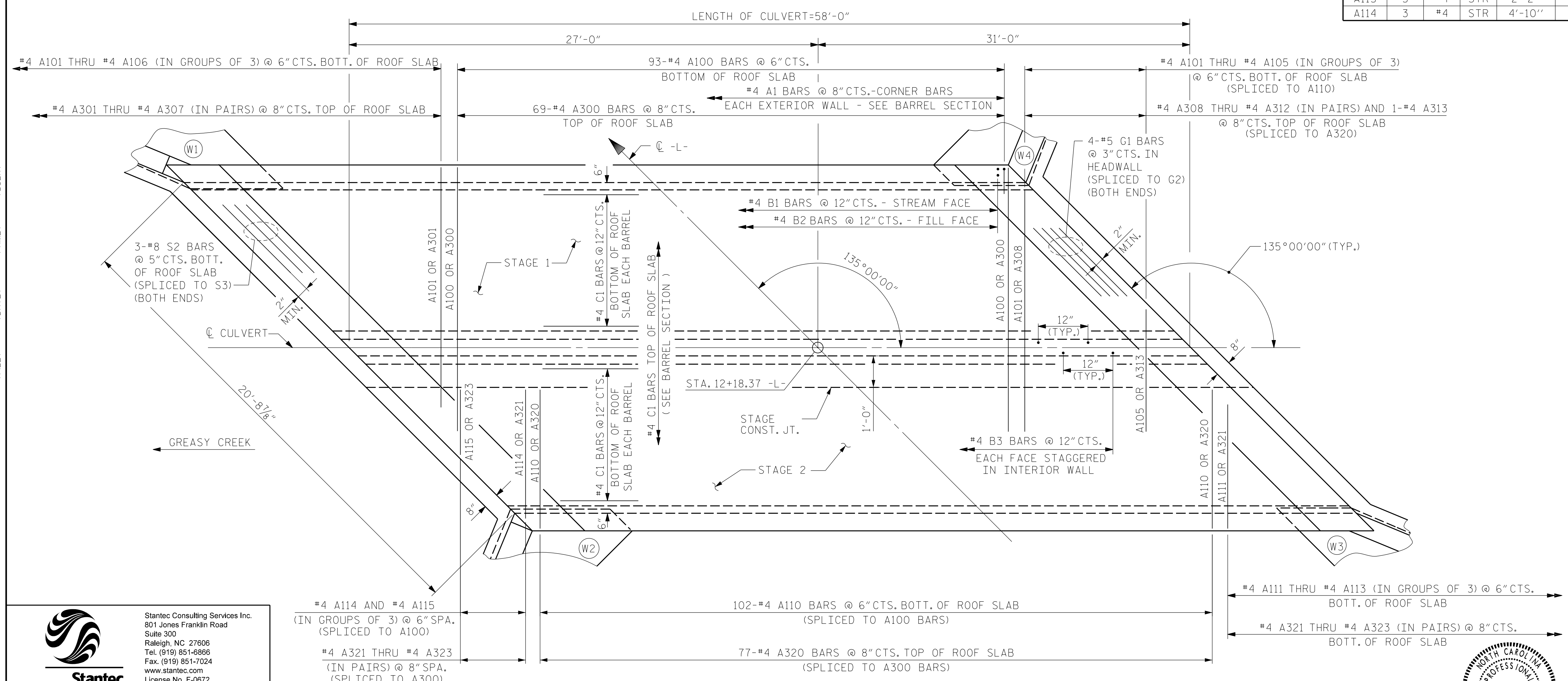
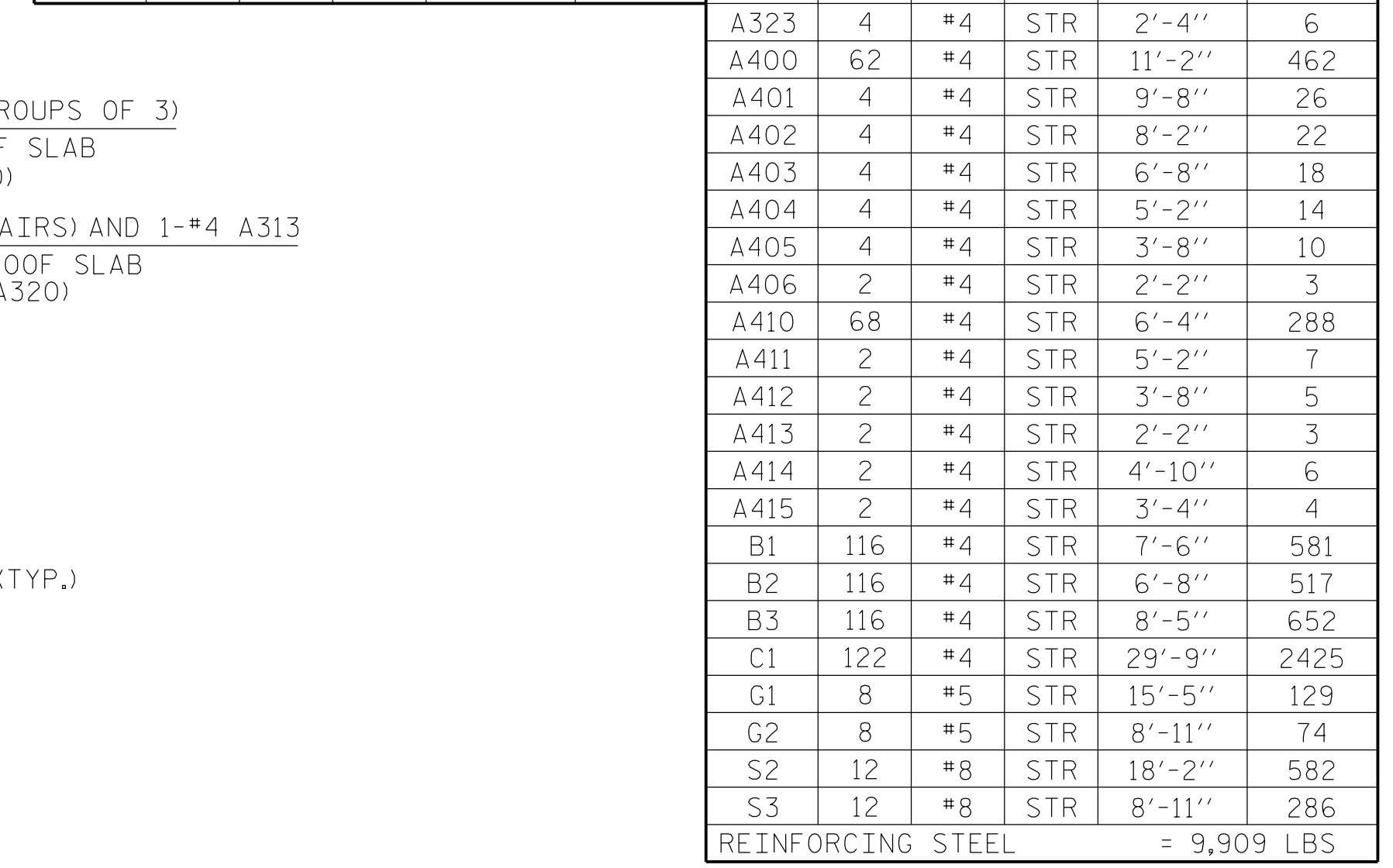


DRAWN BY : M. G. BRADLEY DATE : 04-15-16  
CHECKED BY : V. E. FRAGA DATE : 04-16-16



BAR	SIZE	SPLICE
B1	4	1'-9"
B3	4	1'-9"
C1	4	1'-9"
A	4	1'-9"
G	5	2'-2"
S	8	4'-11"

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A115	3	#4	STR	3'-4"	7
A200	62	#4	STR	11'-2"	462
A201	4	#4	STR	9'-8"	26
A202	4	#4	STR	8'-2"	22
A203	4	#4	STR	6'-8"	18
A204	4	#4	STR	5'-2"	14
A205	4	#4	STR	3'-9"	10
A206	2	#4	STR	2'-2"	3
A210	68	#4	STR	6'-4"	288
A211	2	#4	STR	5'-2"	7
A212	2	#4	STR	3'-8"	5
A213	2	#4	STR	2'-2"	3
A214	2	#4	STR	4'-10"	6
A215	2	#4	STR	3'-4"	4
A300	69	#4	STR	11'-2"	515
A301	2	#4	STR	10'-4"	14
A302	2	#4	STR	9'-0"	12
A303	2	#4	STR	7'-8"	10
A304	2	#4	STR	6'-4"	8
A305	2	#4	STR	5'-0"	7
A306	2	#4	STR	3'-8"	5
A307	2	#4	STR	2'-4"	3
A308	2	#4	STR	9'-10"	13
A309	2	#4	STR	8'-6"	11
A310	2	#4	STR	7'-2"	10
A312	2	#4	STR	4'-6"	6
A313	1	#4	STR	3'-9"	3
A112	3	#4	STR	3'-8"	7
A113	3	#4	STR	2'-2"	4
A321	4	#4	STR	5'-0"	13
A322	4	#4	STR	3'-8"	10
A323	4	#4	STR	2'-4"	6
A400	62	#4	STR	11'-2"	462
A401	4	#4	STR	9'-8"	26
A402	4	#4	STR	8'-2"	22
A403	4	#4	STR	6'-8"	18
A404	4	#4	STR	5'-2"	14
A405	4	#4	STR	3'-8"	10
A406	2	#4	STR	2'-2"	3
A410	68	#4	STR	6'-4"	288
A411	2	#4	STR	5'-2"	7
A412	2	#4	STR	3'-8"	5
A413	2	#4	STR	2'-2"	3
A414	2	#4	STR	4'-10"	6
A415	2	#4	STR	3'-4"	4
B1	116	#4	STR	7'-6"	581
B2	116	#4	STR	6'-8"	517
B3	116	#4	STR	8'-5"	652
C1	122	#4	STR	29'-9"	2425
G1	8	#5	STR	15'-5"	129
G2	8	#5	STR	8'-11"	74
S2	12	#8	STR	18'-2"	582
S3	12	#8	STR	8'-11"	286
REINFORCING STEEL					= 9,909 LBS

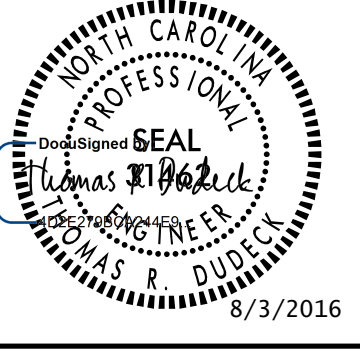


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 www.stantec.com  
 License No. F-0672

ASSEMBLED BY: T.R. DUDECK DATE: 04/2012  
 CHECKED BY: J.T. KELVINGTON DATE: 04/2012  
 DRAWN BY: HASON A. JUDEH DATE: MAY 1972  
 CHECKED BY: RALPH D. UNDERWOOD DATE: APR. 1972

SPECIAL  
 STANDARD

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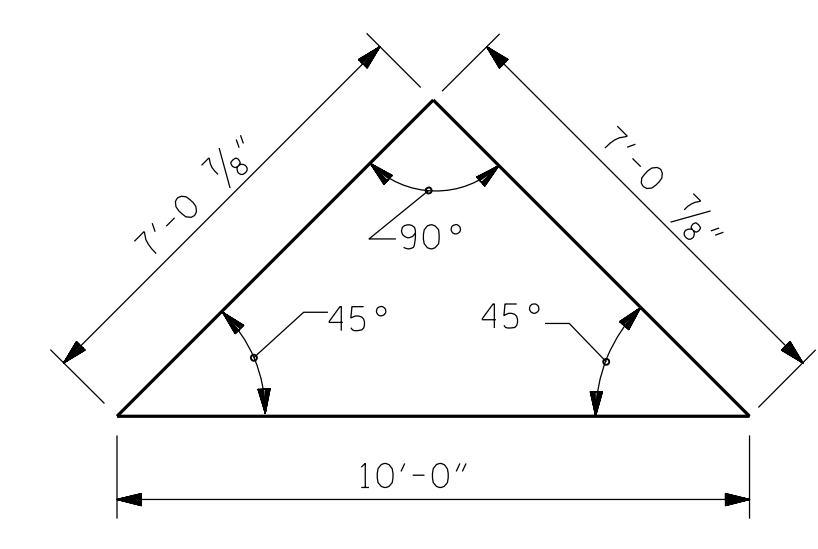
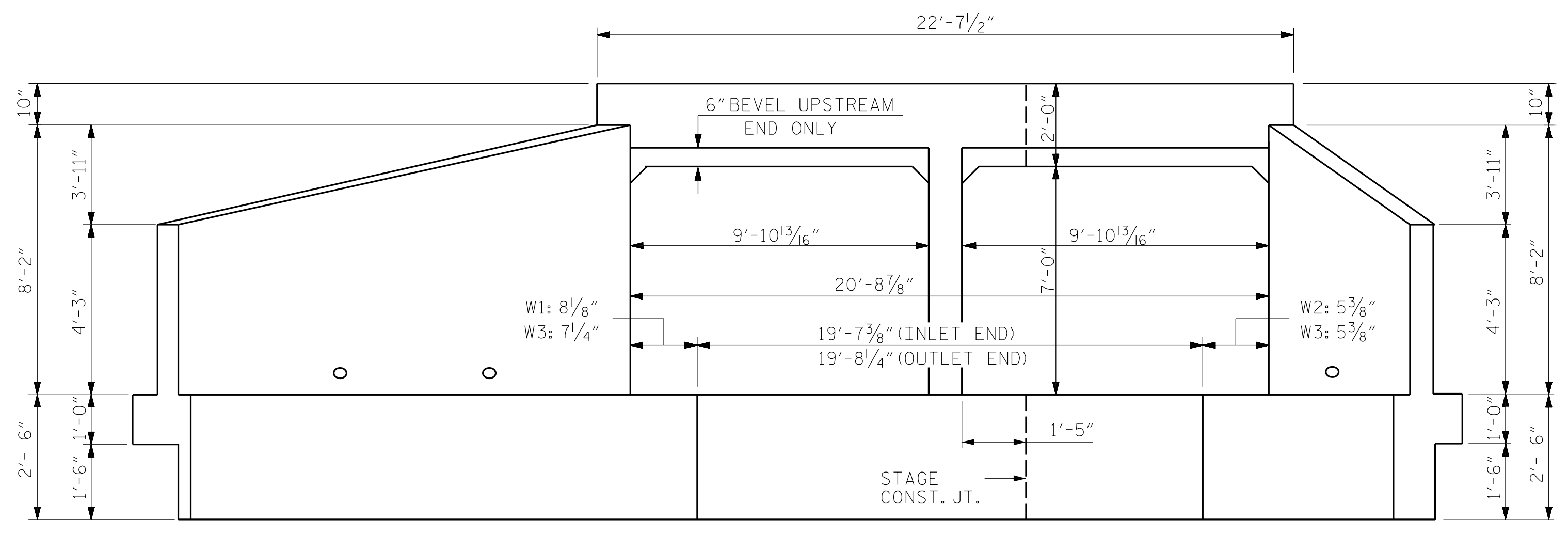


PROJECT NO. 17BP.14.R.38  
 CLAY COUNTY  
 STATION: 12+18.37 -L-  
 SHEET 3 OF 7

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BARREL STANDARD DOUBLE 7 FT. X 7 FT. CONCRETE BOX CULVERT 135°00'00" SKEW					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

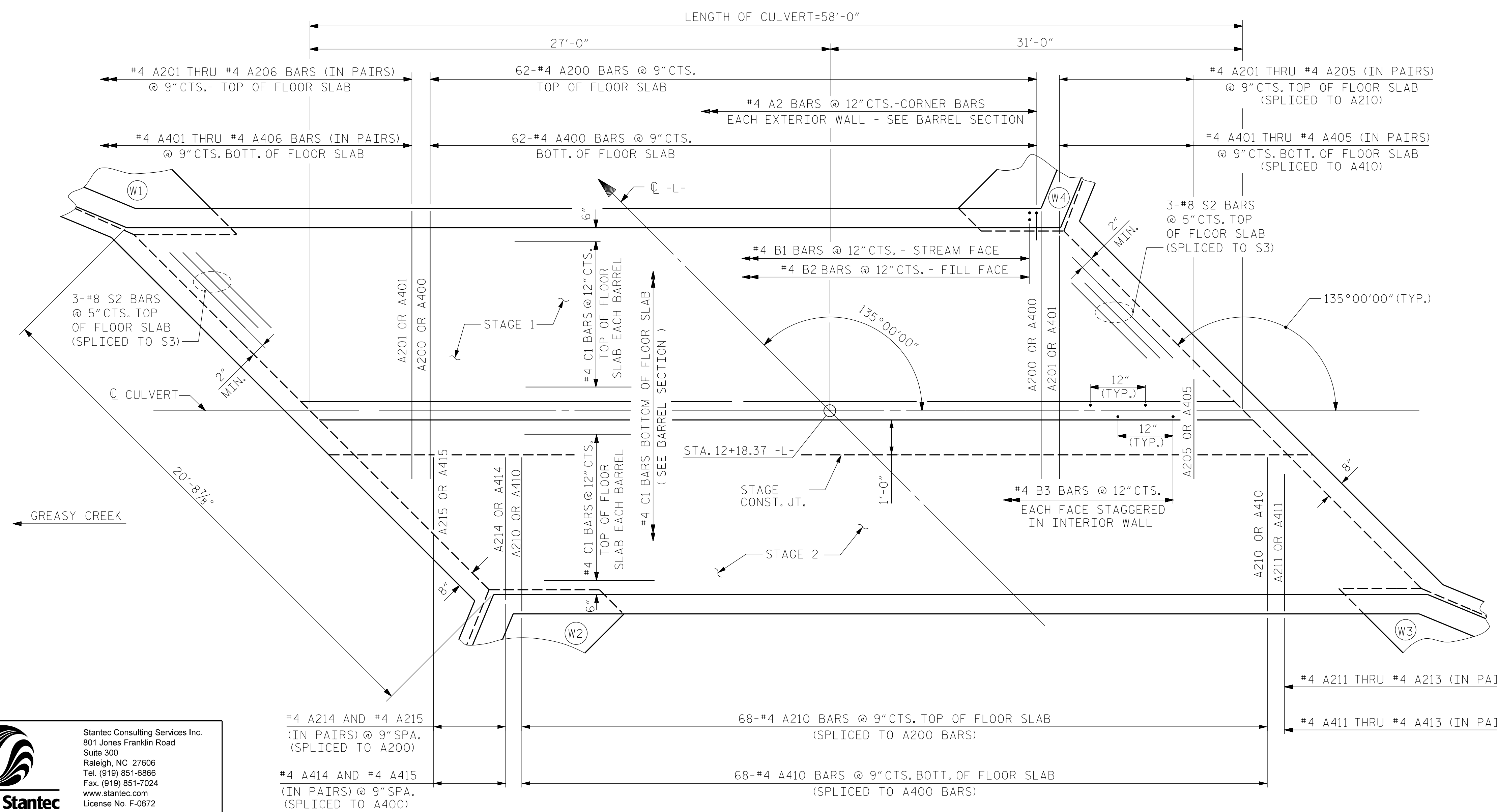
SHEET NO. C-3  
 TOTAL SHEETS 7

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**END ELEVATION NORMAL TO SKEW**

MIN. SPLICE LENGTH CHART		
BAR	SIZE	SPLICE
B1	4	1'-9"
B3	4	1'-9"
C1	4	1'-9"
A	4	1'-9"
S	8	4'-11"

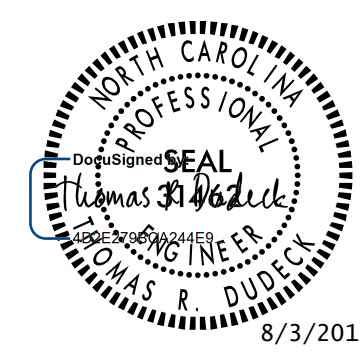


**PLAN - FLOOR SLAB**

PROJECT NO. 17BP.14.R.38  
CLAY COUNTY  
 STATION: 12+18.37 -L-

SHEET 4 OF 7

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**BARREL STANDARD**  
**DOUBLE 7 FT. X 7 FT.**  
**CONCRETE BOX CULVERT**  
**135°00'00" SKEW**



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

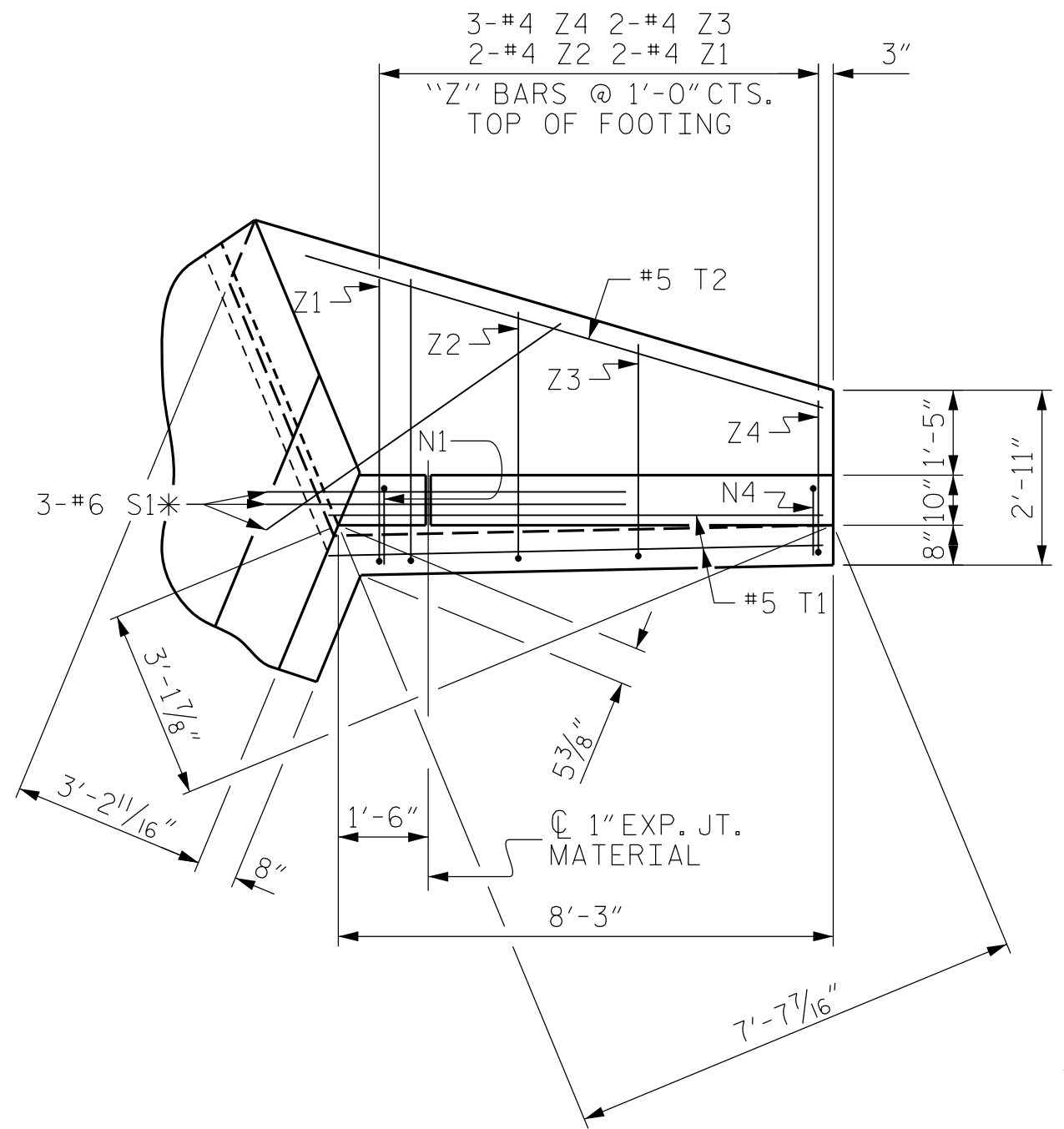


ASSEMBLED BY: T.R. DUDECK DATE: 04/2012  
 CHECKED BY: J.T. KELVINGTON DATE: 04/2012  
 DRAWN BY: HASON A. JUDEH DATE: MAY 1972  
 CHECKED BY: RALPH D. UNDERWOOD DATE: APR. 1972

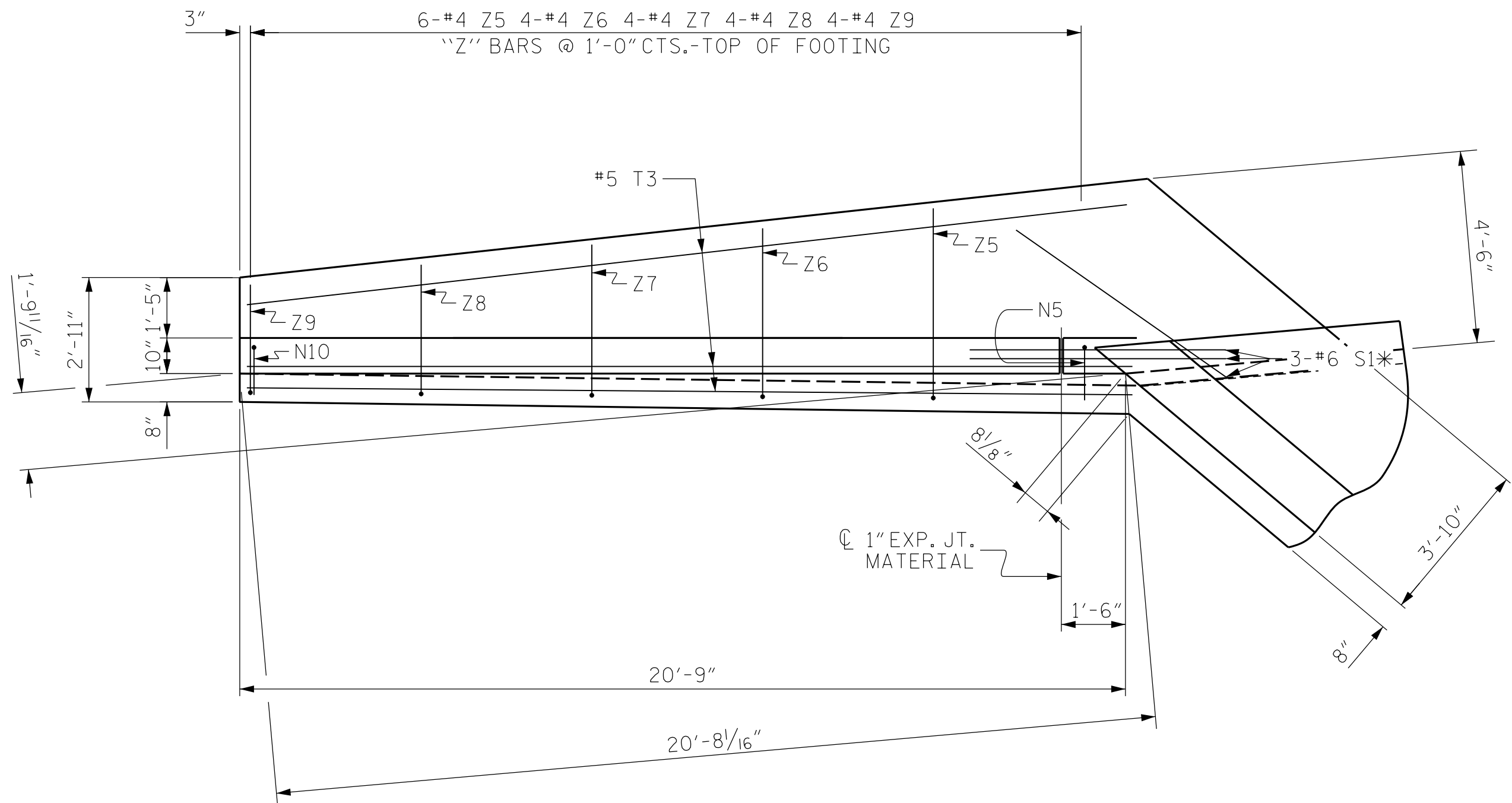
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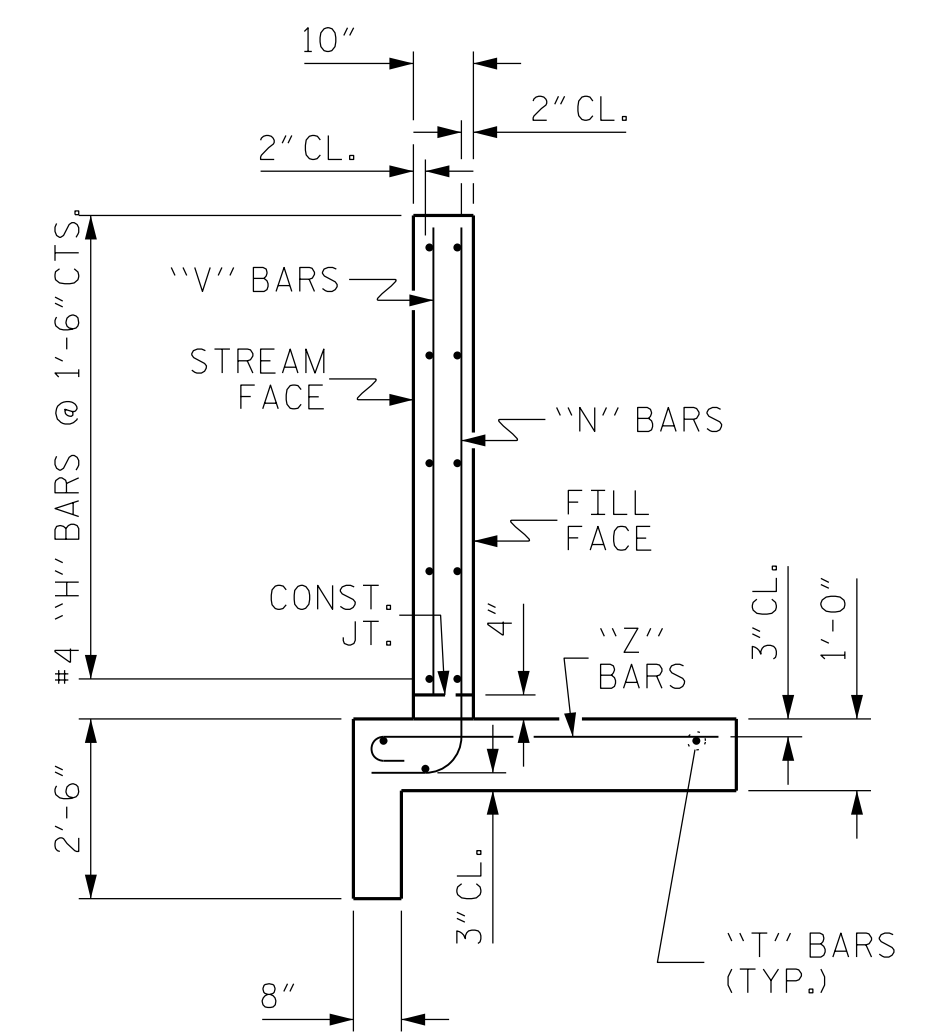


PLAN W2



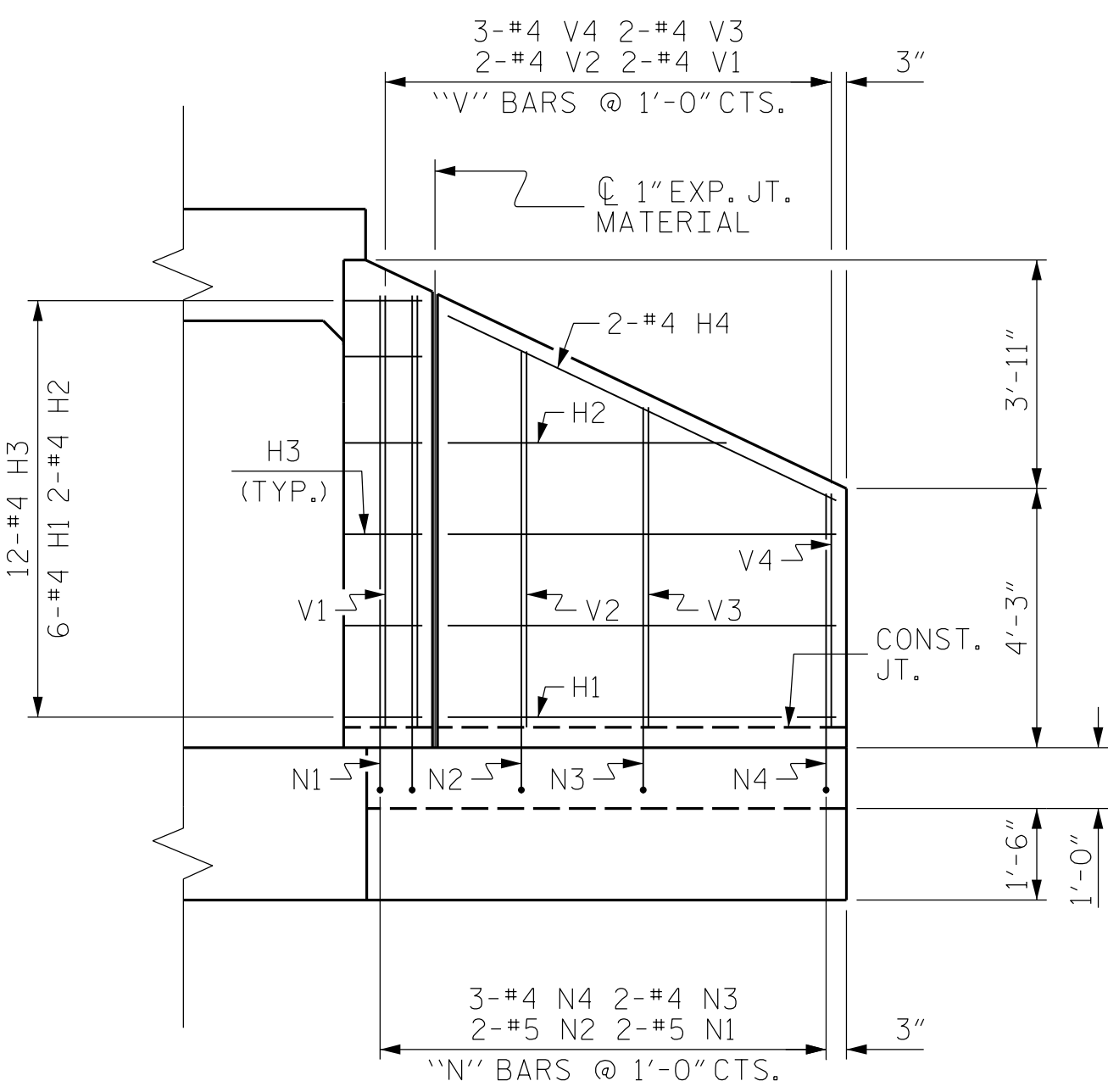
PLAN W1

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

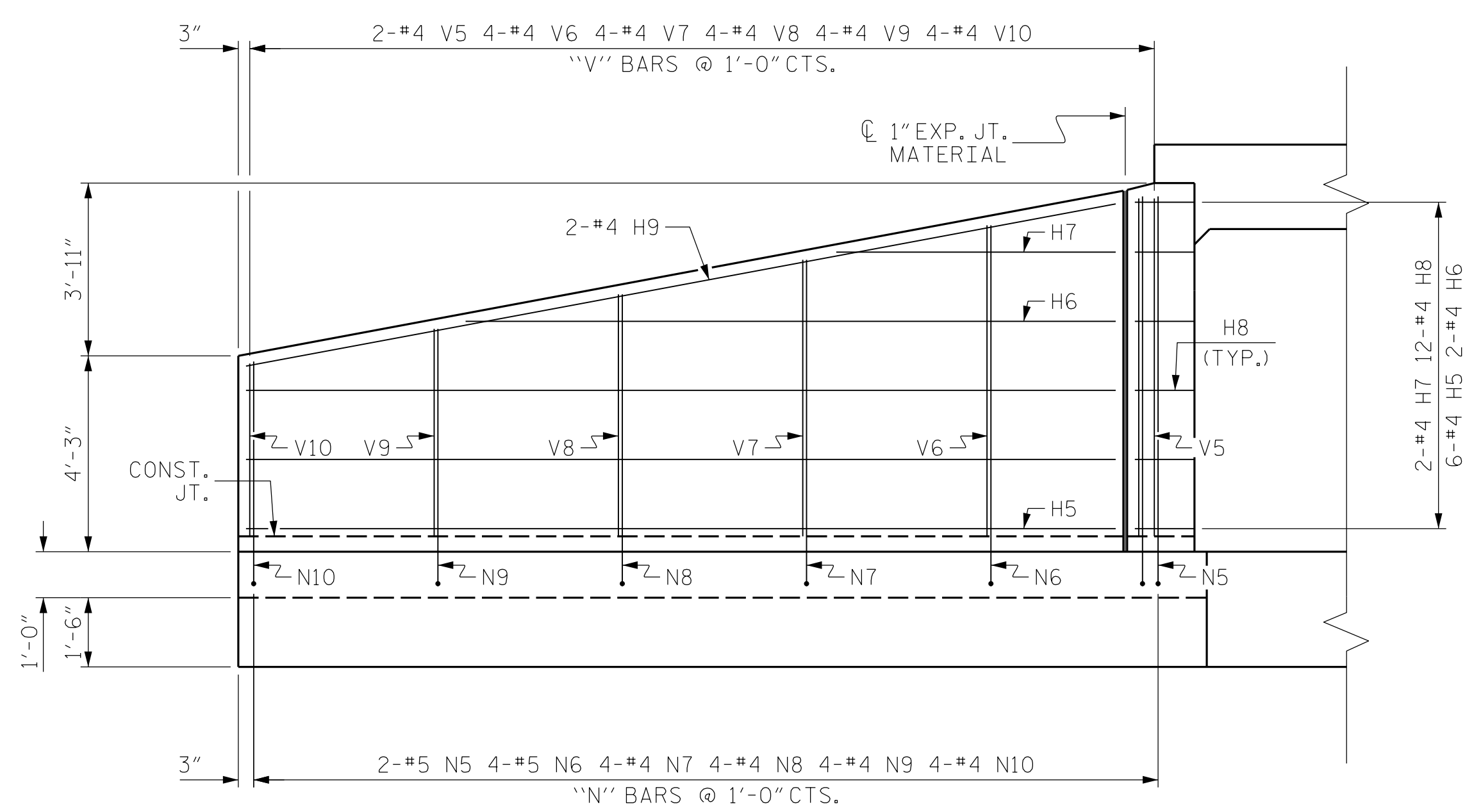


TYPICAL WING SECTION

NOTE: FOR WING WALL QUANTITIES, SEE SHEET 4.



ELEVATION W2



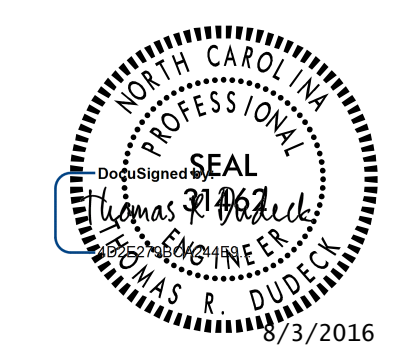
ELEVATION W1

PROJECT NO. 17BP.14.R.38  
CLAY COUNTY  
 STATION: 12+18.37 -L-  
 SHEET 5 OF 7

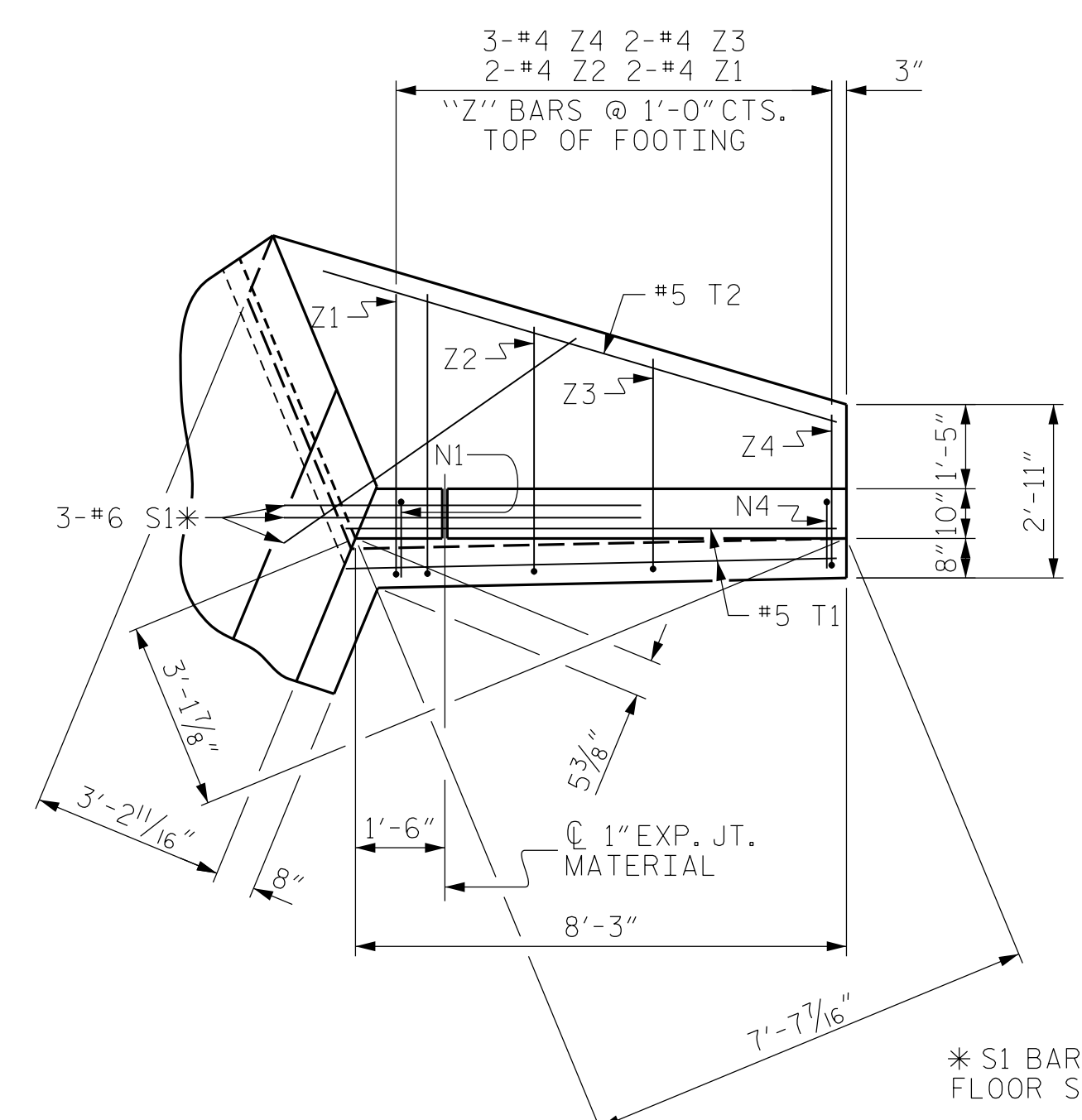


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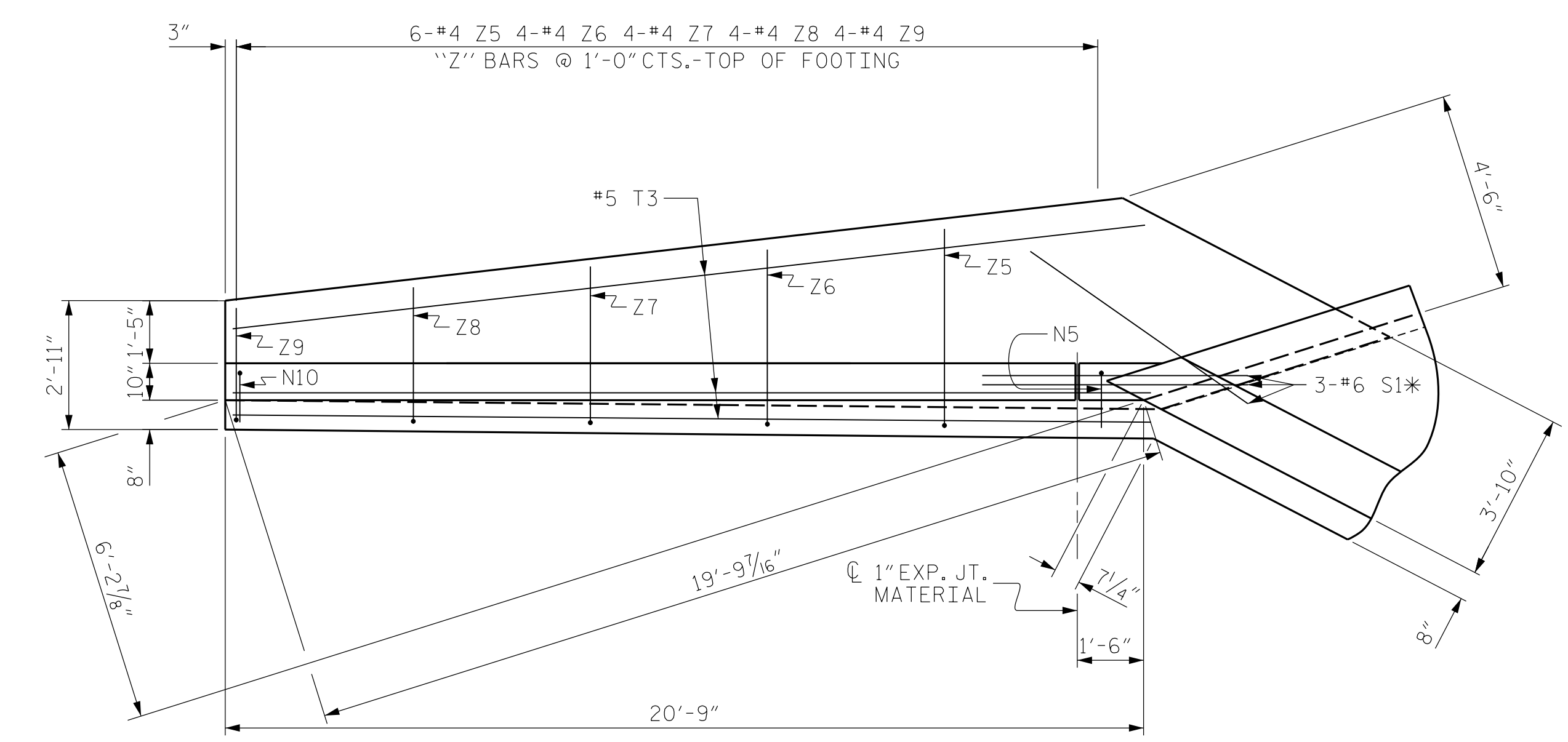
ASSEMBLED BY : T.R. DUDECK DATE : 04/2012  
 CHECKED BY : J.T. KELVINGTON DATE : 04/2012  
 DRAWN BY : CCJ 01/00  
 CHECKED BY : RWW 03/00



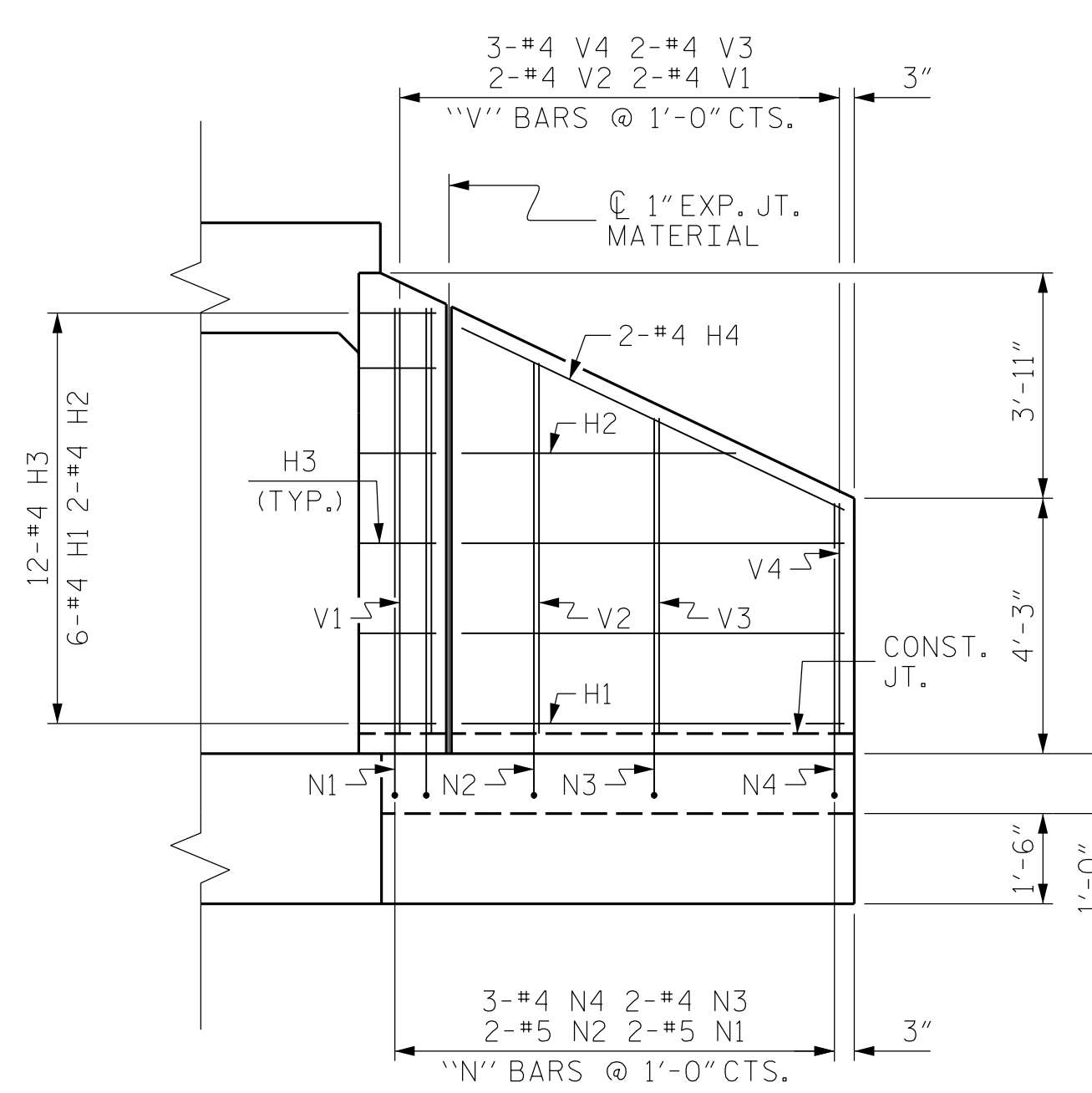
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
WINGS 1 & 2					
REVISIONS					SHEET NO. C-5
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS					7



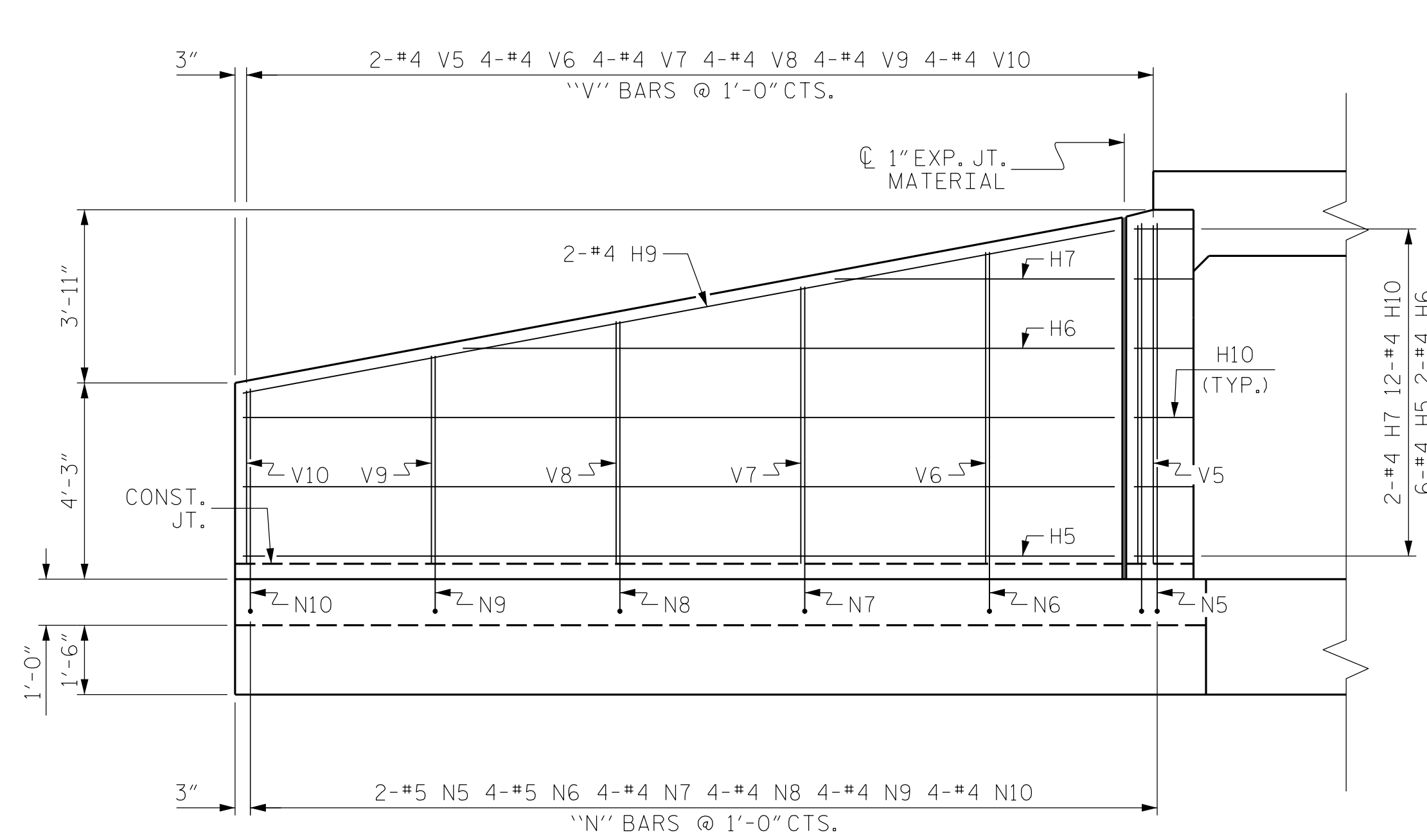
PLAN W4



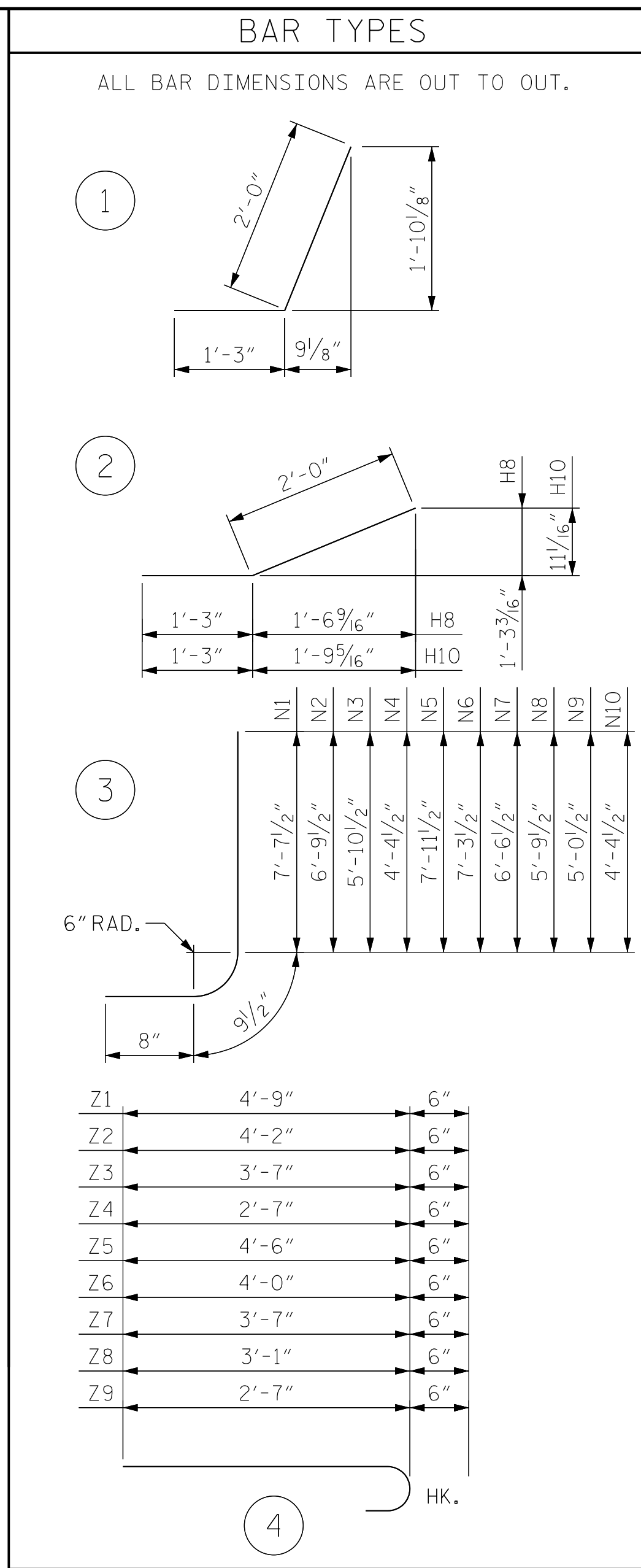
PLAN W3



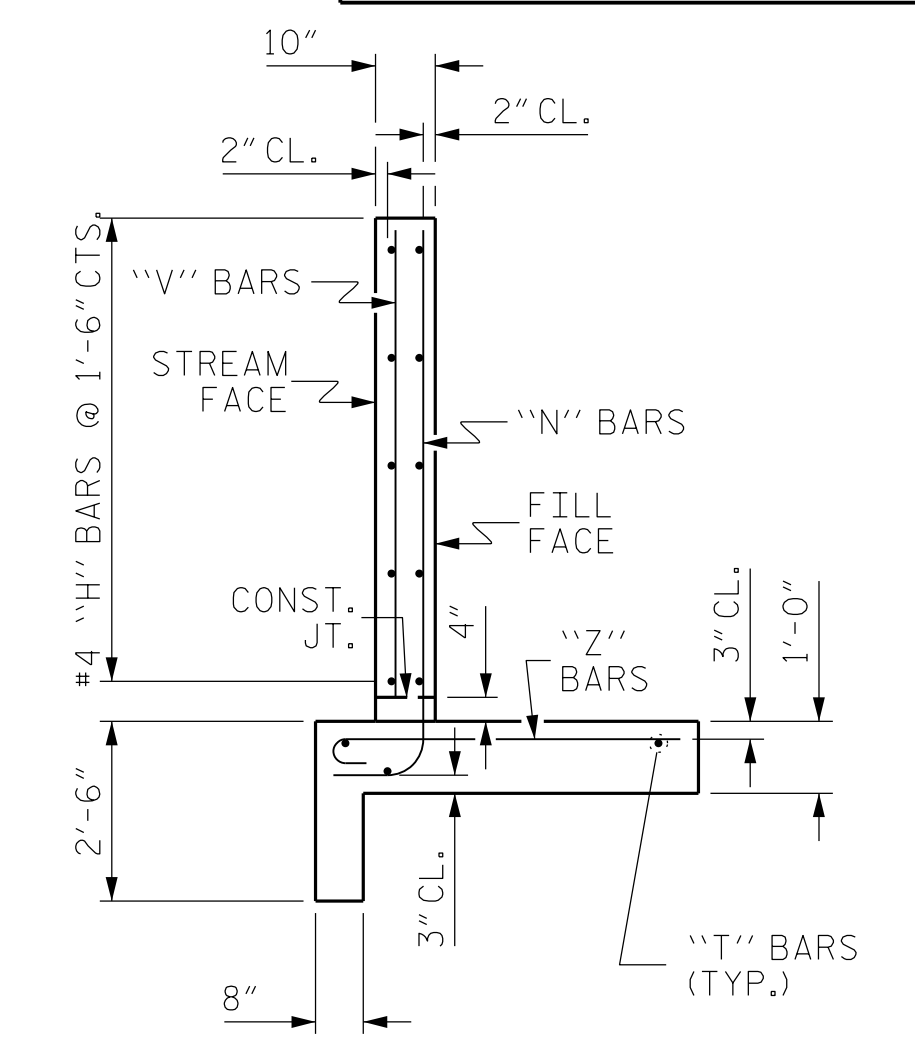
ELEVATION W4



ELEVATION W3



BILL OF MATERIAL					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
H1	12	#4	STR	6'-4"	51
H2	4	#4	STR	4'-6"	12
H3	24	#4	1	3'-3"	52
H4	4	#4	STR	7'-0"	19
H5	12	#4	STR	18'-10"	151
H6	4	#4	STR	14'-1"	38
H7	4	#4	STR	6'-0"	16
H8	12	#4	2	3'-3"	26
H9	4	#4	STR	19'-2"	51
H10	12	#4	2	3'-3"	26
N1	4	#5	3	9'-1"	38
N2	4	#5	3	8'-3"	34
N3	4	#4	3	7'-4"	20
N4	6	#4	3	5'-10"	23
N5	4	#5	3	9'-5"	39
N6	4	#5	3	8'-9"	73
N7	8	#4	3	8'-0"	43
N8	8	#4	3	7'-3"	39
N9	8	#4	3	6'-6"	35
N10	8	#4	3	5'-10"	31
S1	12	#6	STR	6'-0"	108
T1	4	#5	STR	8'-3"	34
T2	2	#5	STR	9'-0"	19
T3	6	#5	STR	20'-9"	130
V1	4	#4	STR	7'-1"	19
V2	4	#4	STR	6'-2"	16
V3	4	#4	STR	5'-3"	14
V4	6	#4	STR	3'-9"	15
V5	4	#4	STR	7'-4"	20
V6	8	#4	STR	6'-9"	36
V7	8	#4	STR	6'-0"	32
V8	8	#4	STR	5'-3"	28
V9	8	#4	STR	4'-6"	24
V10	8	#4	STR	3'-9"	20
Z1	4	#4	4	5'-3"	14
Z2	4	#4	4	4'-8"	12
Z3	4	#4	4	4'-1"	11
Z4	6	#4	4	3'-1"	12
Z5	12	#4	4	5'-0"	40
Z6	8	#4	4	4'-6"	24
Z7	8	#4	4	4'-1"	22
Z8	8	#4	4	3'-7"	19
Z9	8	#4	4	3'-1"	16
REINFORCING STEEL FOR 4 WINGS					1502 LBS
CLASS A CONCRETE					
4 WINGS					23.6 CY
2 HEADWALLS					2.1 CY
2 END CURTAIN WALLS					2.4 CY
TOTAL					28.1 CY



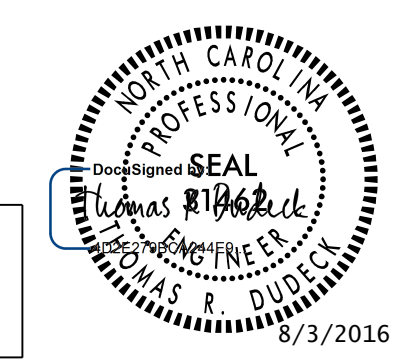
TYPICAL WING SECTION

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 License No. F-0672

ASSEMBLED BY : T.R. DUDECK DATE : 04/2012  
 CHECKED BY : J.T. KELVINGTON DATE : 04/2012

DRAWN BY : CCJ 01/00  
 CHECKED BY : RWW 03/00

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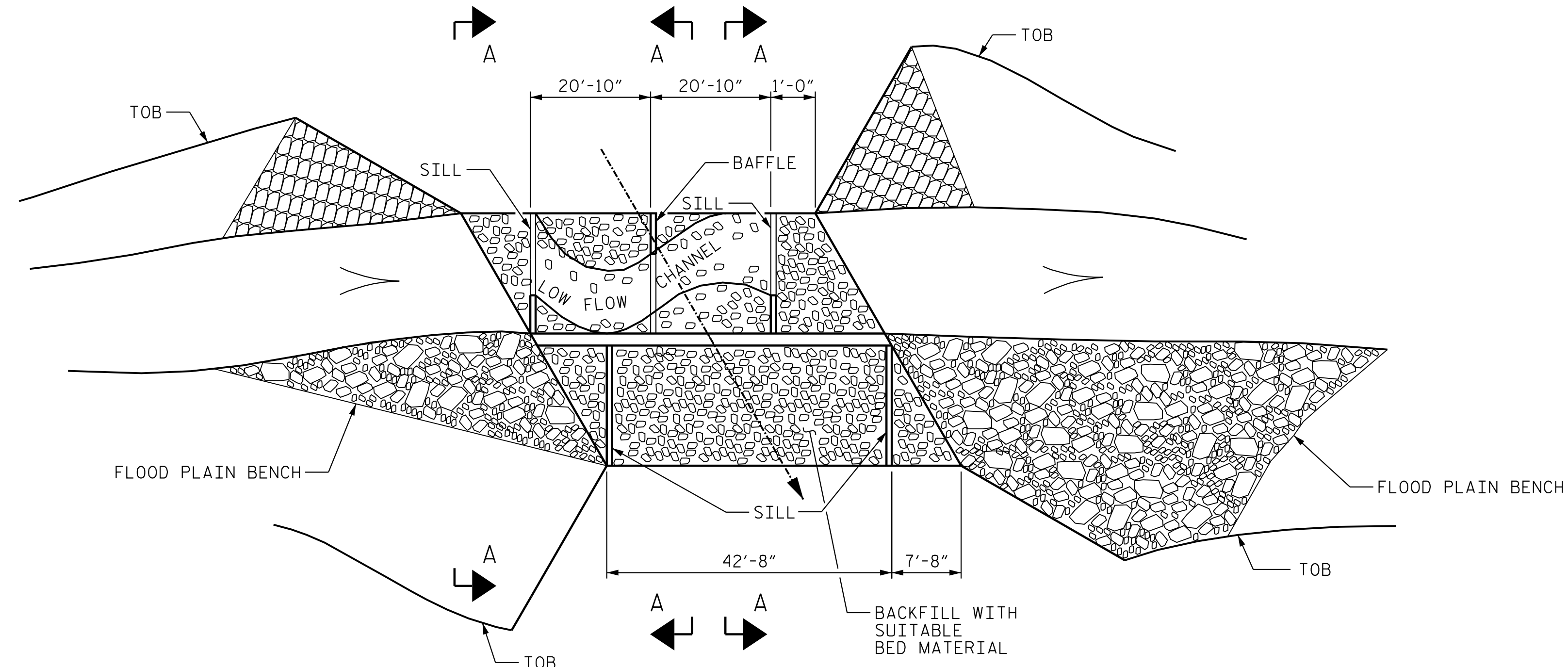
PROJECT NO. 17BP.14.R.38  
 CLAY COUNTY  
 STATION: 12+18.37  
 SHEET 6 OF 7

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**WINGS 3 & 4**

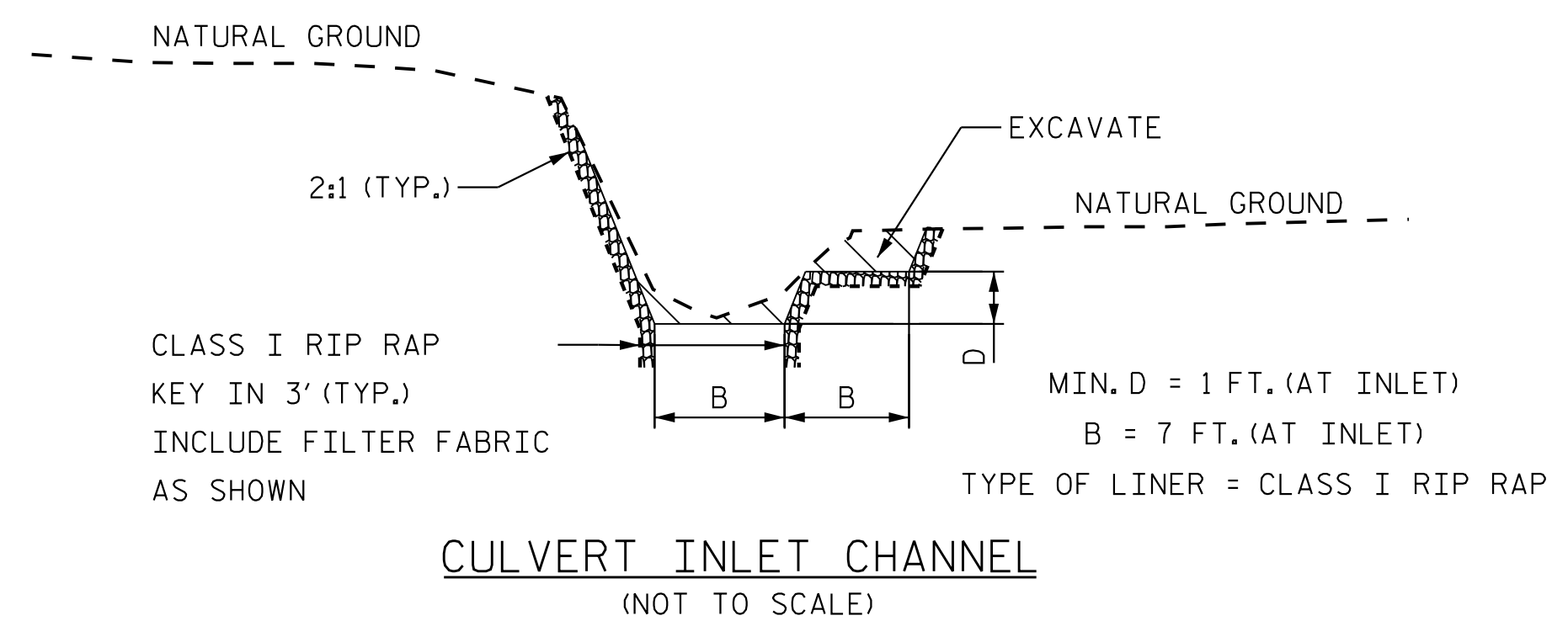
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-6
1			3			TOTAL SHEETS
2			4			7

- NOTES:**
1. BED MATERIAL BETWEEN SILLS/BAFFLES IN THE CULVERT SHALL PROVIDE A CONTINUOUS LOW FLOW CHANNEL. THE MATERIAL SHALL BE NATURAL STONE WITH A GRADATION SIZE SIMILAR TO THAT OF CLASS B RIP RAP. STONES LARGER THAN 10" SHALL NOT BE PLACED WITHIN THE LOW FLOW CHANNEL. BED MATERIALS SUBJECT TO APPROVAL BY THE ENGINEER.
  2. SILLS/BAFFLES ARE TO BE 1.0 FT. WIDE, CAST SEPARATELY AND ATTACHED BY DOWELS.
  3. TOP OF LOW FLOW SILLS/BAFFLES SHOULD MATCH STREAM BED ELEVATION IN LOW FLOW CHANNEL OF STREAM. (THALWEG)
  4. CLASS B RIP RAP MAY BE USED TO SUPPLEMENT NATURAL BED MATERIAL.
  5. DO NOT SET ELEVATION OF HIGH SILL/BAFFLES ABOVE BANK FULL.
  6. NUMBER OF SILLS/BAFFLES DETERMINED BY THE ENGINEER.
  7. FOR ADDITIONAL DETAILS, SEE CULVERT SURVEY REPORT.
  8. BED MATERIAL SHALL BE PAID BY CONTRACTOR AS CLASS B RIP RAP.

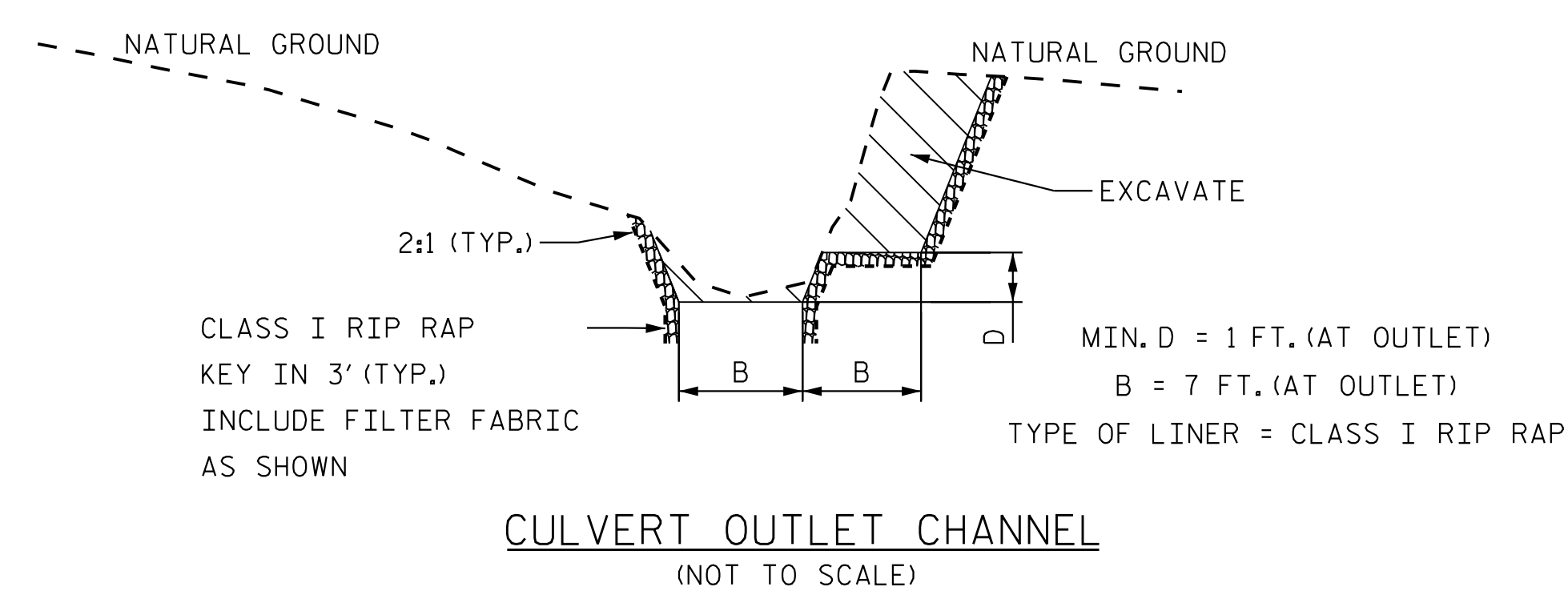


**PLAN VIEW**

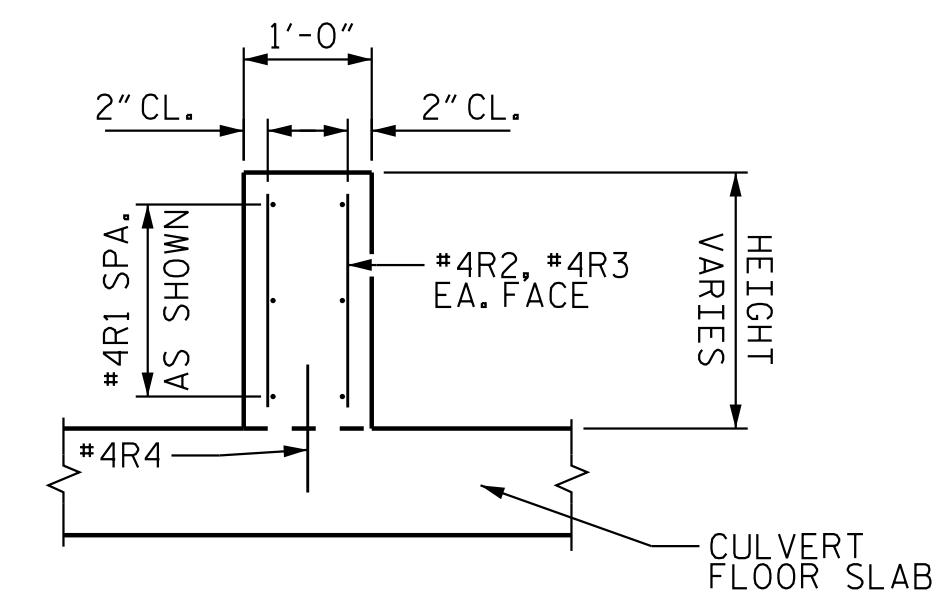
BILL OF MATERIAL					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
R1	24	#4	STR	6'-8"	107
R2	56	#4	STR	1'-8"	62
R3	36	#4	STR	0'-8"	16
R4	32	#4	STR	1'-0"	21
TOTAL REINFORCING STEEL					206 LBS
CLASS A CONCRETE					2.0 CY
RIP RAP, CLASS B					41 TONS



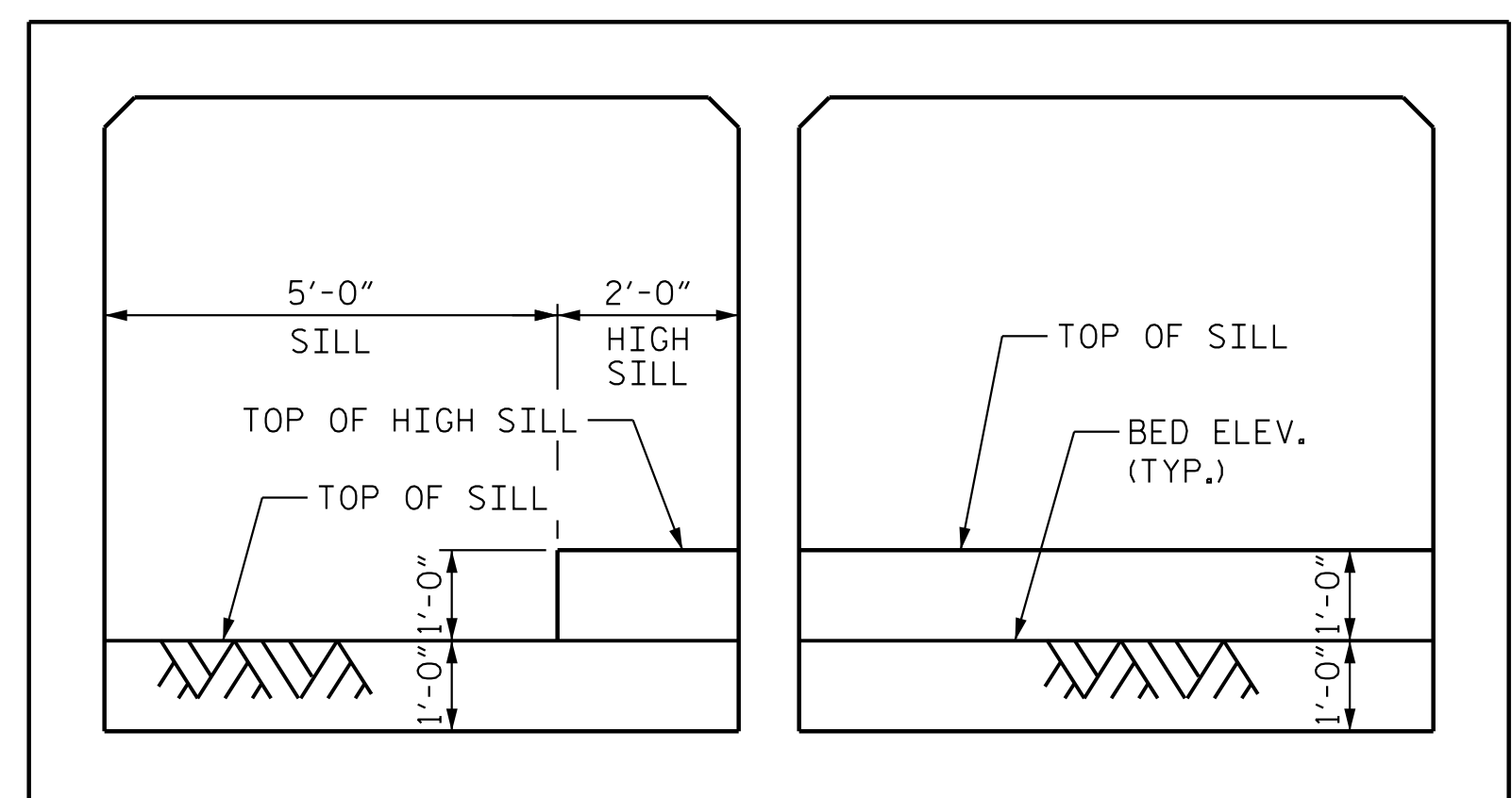
**CULVERT INLET CHANNEL**  
(NOT TO SCALE)



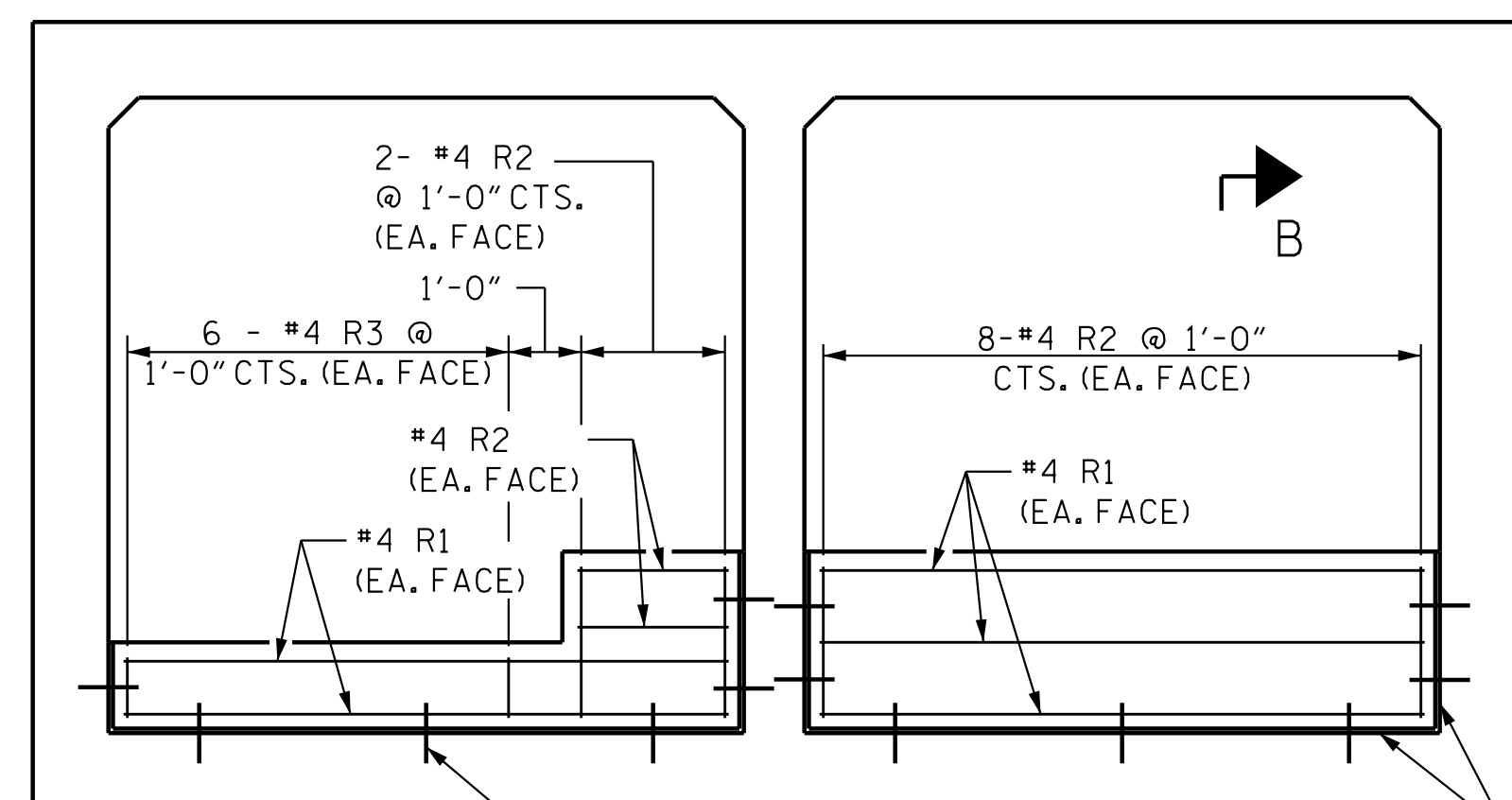
**CULVERT OUTLET CHANNEL**  
(NOT TO SCALE)



**SECTION B-B**



**SILL & BAFFLE GEOMETRY**



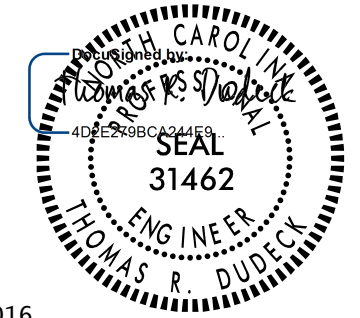
**SILL & BAFFLE REINFORCEMENT**

2 LAYERS OF 30 LB. ROOFING FELT TO PREVENT BOND (TYP.)

PROJECT NO. 17BP.14.R.38  
CLAY COUNTY  
 STATION: 12+18.37 -L-

SHEET 7 OF 7

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BAFFLE & SILL DETAILS					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		



9/1/2016

**SECTION A-A**



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 www.stantec.com  
 License No. F-0672

DRAWN BY : C. B. BAKER DATE : 05-03-12  
 CHECKED BY : T. R. DUDECK DATE : 05-03-12

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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 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. 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.

# ENGLISH

JANUARY, 1990

STD. NO. SN