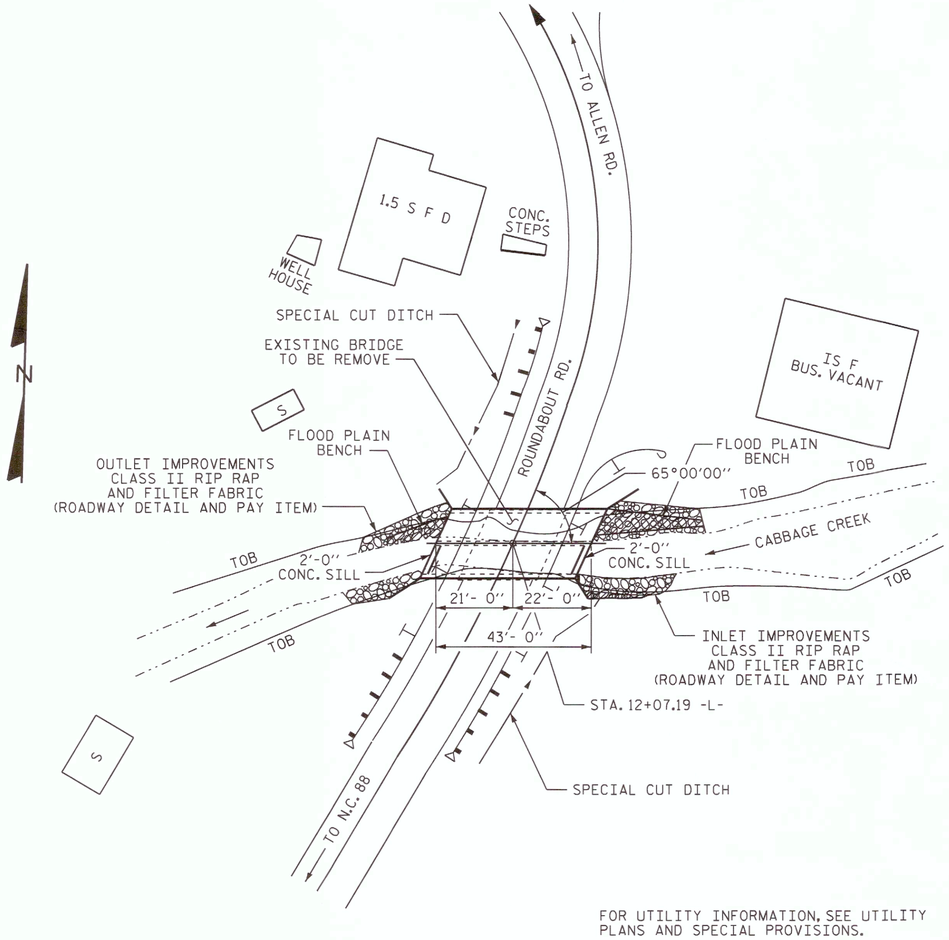
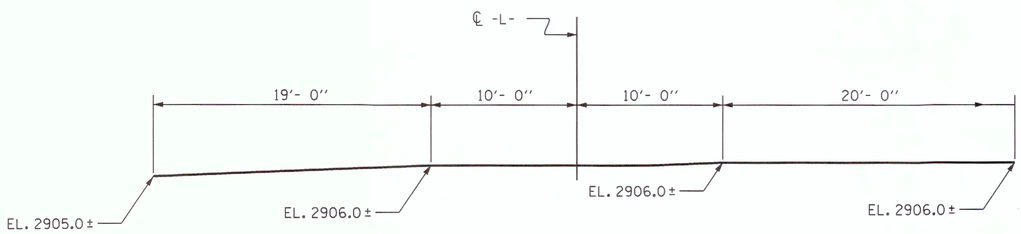
BENCHMARK: "BM #1", ON -L- STA. 11+89.92, 80.40' RT., 8" SPIKE IN ROOT OF 20" PINE
N 989687.8364, E 1218514.9917, ELEV. 2923.3657, DATUM: NAVD 88



FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

LOCATION SKETCH



PROFILE ALONG ℄ CULVERT

NOTES

ASSUMED LIVE LOAD --------- HL-93 OR ALTERNATE LOADING.

DESIGN FILL = 3.54 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 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.

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 NATURAL BED MATERIAL EXCAVATED FROM THE SITE FOR THE PROPOSED BOX CULVERT CONSTRUCTION IS TO BE STOCKPILED AND LATER BACKFILLED TO A DEPTH OF 1'-0" ABOVE TOP OF FLOOR SLAB OF COMPLETED CULVERT.

THE EXISTING STRUCTURE CONSISTING OF 1 SPAN AT 20'- 6", 3" ASPHALT WEARING SURFACE ON 4 X 8 TIMBER FLOOR ON 9 LINES OF 12" I-BEAMS, ON TIMBER END BENT CAPS WITH TIMBER POST AND SILLS, WITH A CLEAR ROADWAY WIDTH OF 17.3 FEET LOCATED AT THE SAME LOCATION AS THE PROPOSED STUCTURE, SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED FOR LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE DETERIORATE DURING CONSTRUTION OF THE PROPOSED CULVERT, A LOAD LIMIT MAY BE POSTED AND MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT.

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.

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 12+07.19 -L-."

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

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.

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

ROADWAY DATA

GRADE POINT ELEV. @ STATION 12+07.19 -L-	=	2911.73'
BED ELEV. @ STATION 12+07.19 -L-	=	2904.68'
ROADWAY SLOPES	=	2 : 1

HYDRAULIC DATA

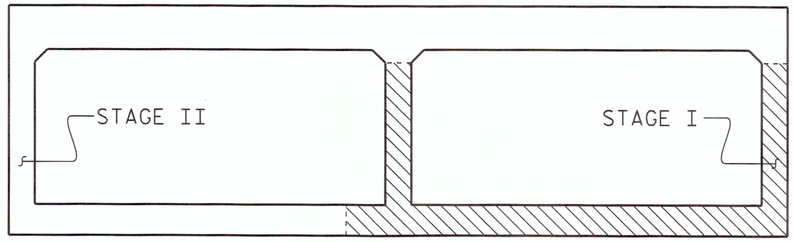
DESIGN DISCHARGE	=	370 C.F.S.
FREQUENCY OF DESIGN FLOOD	=	2 YEARS
DESIGN HIGH WATER ELEVATION	=	2910.90'
DRAINAGE AREA	=	4.8 SQ. MI.
BASIC DISCHARGE (Q100)	=	1975 C.F.S.
BASIC HIGH WATER ELEVATION	=	2914.03'

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	=	390 C.F.S.
FREQUENCY OF OVERTOPPING FLOOD	=	2 YEARS+
OVERTOPPING FLOOD ELEVATION	=	2911.30'

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE				
BARREL @	1.724	CY/FT	74.1	C.Y.
WING ETC.			16.2	C.Y.
TOTAL			90.3	C.Y.
REINFORCING STEEL				
BARREL			9242	LBS.
WINGS ETC.			791	LBS.
TOTAL			10033	LBS.
CULVERT EXCAVATION =			LUMP SUM	
FOUNDATION COND. MAT'L. =			61 TONS	
REMOVAL OF EXISTING STRUCTURE =			LUMP SUM	



CONSTRUCTION SEQUENCE

(LOOKING UP STREAM)

PROJECT NO. 17BP.11.R.6
ASHE COUNTY
STATION: 12+07.19 -L-

SHEET 1 OF 6 REPLACES BRIDGE NO. 130

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BARREL STANDARD
DOUBLE 9 FT. X 4 FT.
CONCRETE BOX CULVERT
65° SKEW

NORTH CAROLINA PROFESSIONAL SEAL 15825 ENGINEER BRUCE D. KLAPPENBACH
5-17-2013

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

ASSEMBLED BY : D. A. GLADDEN DATE : 2-18-13	SPECIAL	
CHECKED BY : V.X. NGUYEN DATE : 4-22-13		
DRAWN BY : B. WYNN/D.DONOVAN DATE : SEPT. 1990	STANDARD	
CHECKED BY : A.R.BISSETTE DATE : OCT. 90		

ADDED 10-1-90

17-MAY-2013 09:29
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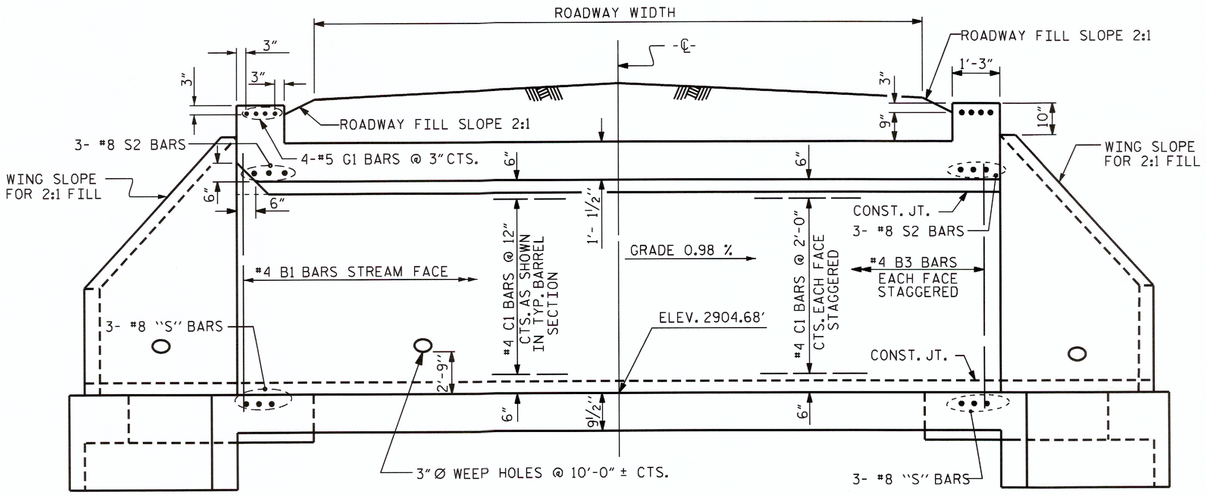
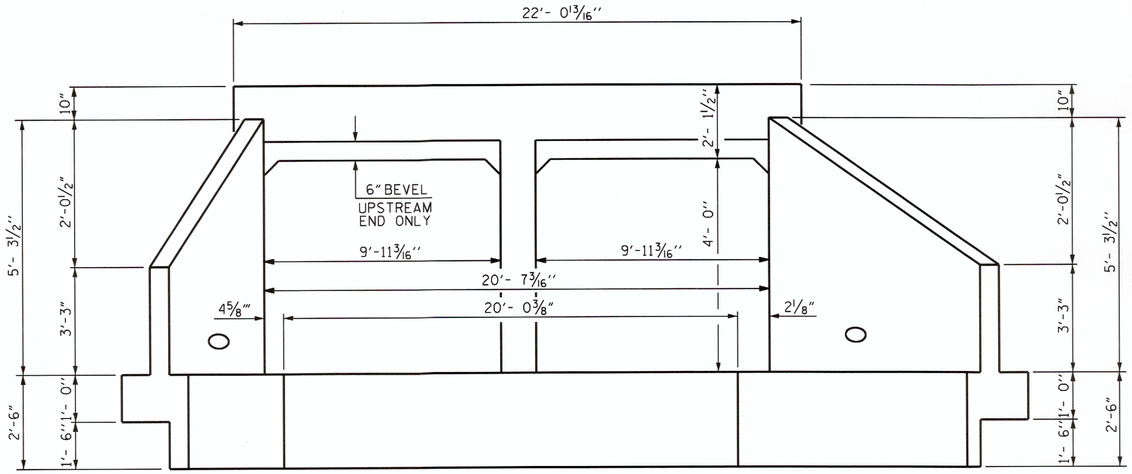
bklappenbach

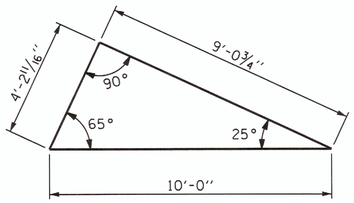


EXTERIOR WALL INTERIOR WALL

CULVERT SECTION NORMAL TO ROADWAY



END ELEVATION NORMAL TO SKEW



SKEW TRIANGLE

PROJECT NO. 17BP.11.R.6
ASHE COUNTY
STATION: 12+07.19 -L-

SHEET 2 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

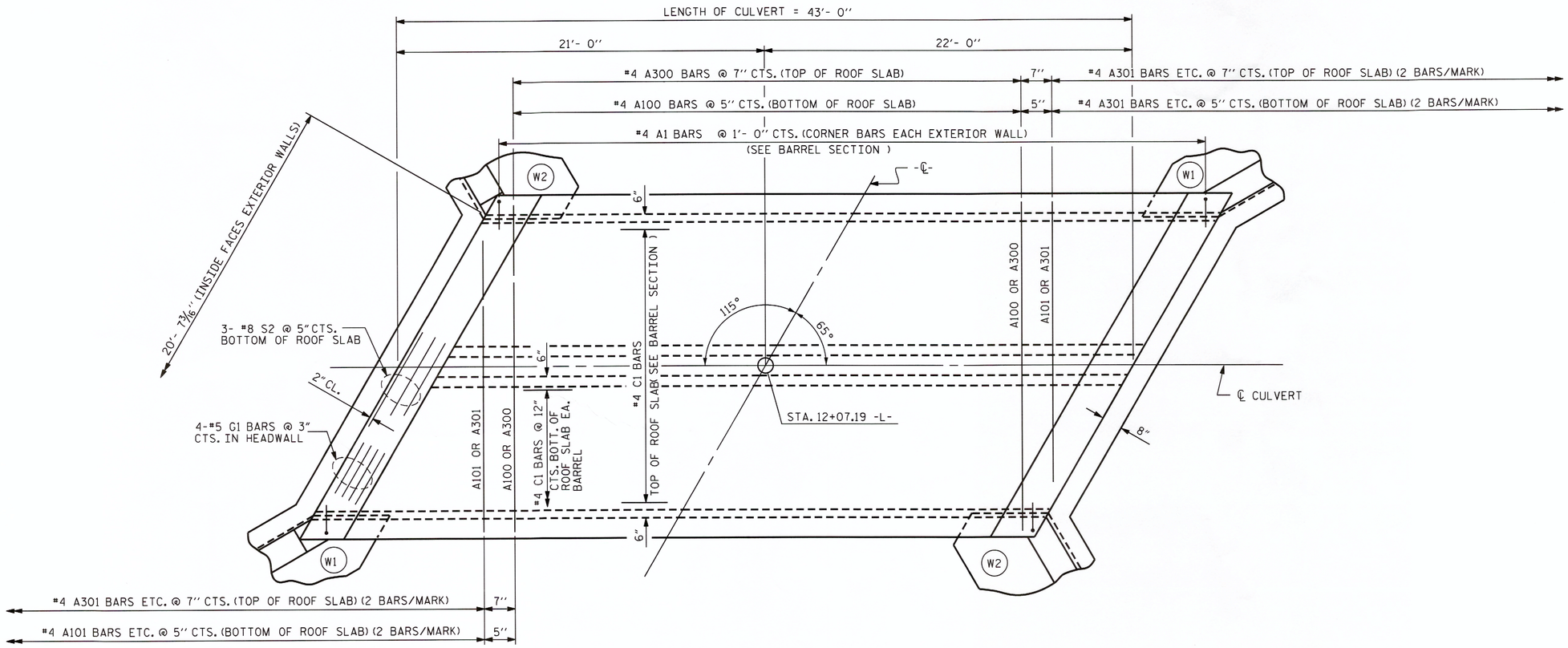
BARREL STANDARD
DOUBLE 9 FT. X 4 FT.
CONCRETE BOX CULVERT
65° SKEW

NORTH CAROLINA PROFESSIONAL SEAL 15825 ENGINEER BRUCE D. KLAPPENBACH
5-17-2013

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

REVISED 11-19-99 BY M.M. CHECKED BY R.W.W.
REDRAWN 10-1-90 BY P. DONOVAN CHECKED BY: ARB

ASSEMBLED BY : D. A. GLADDEN DATE : 2-18-13		SPECIAL	
CHECKED BY : V.X. NGUYEN DATE : 4-22-13			
DRAWN BY : JERRY HARRIS DATE : JUNE 1971		STANDARD	
CHECKED BY : JOEL JOHNSON DATE : JULY 1971			



PLAN OF ROOF SLAB

PROJECT NO. 17BP.11.R.6

ASHE COUNTY

STATION: 12+07.19 -L-

SHEET 3 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BARREL STANDARD

DOUBLE 9 FT. X 4 FT.
CONCRETE BOX CULVERT
65° SKEW

NORTH CAROLINA PROFESSIONAL SEAL 15825 ENGINEER BRUCE D. KLAPPENBACH
5-17-2013

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

DRAWN BY : D. A. GLADDEN DATE : 2-18-13
CHECKED BY : V.X. NGUYEN DATE : 4-22-13

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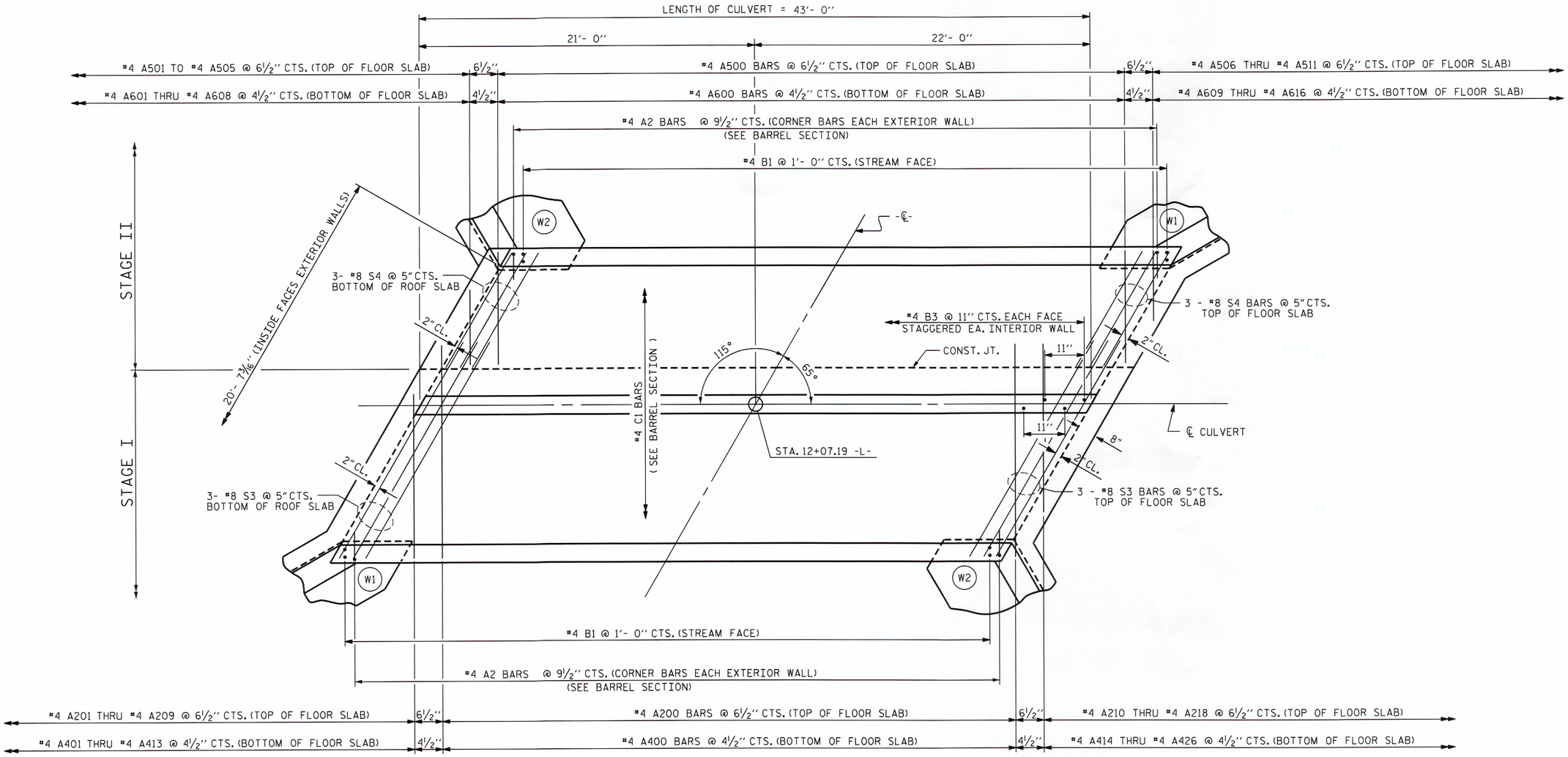
bklappenbach



PLAN OF FLOOR SLAB

PROJECT NO. 17BP.11.R.6
ASHE COUNTY
STATION: 12+07.19 -L-

SHEET 4 OF 6

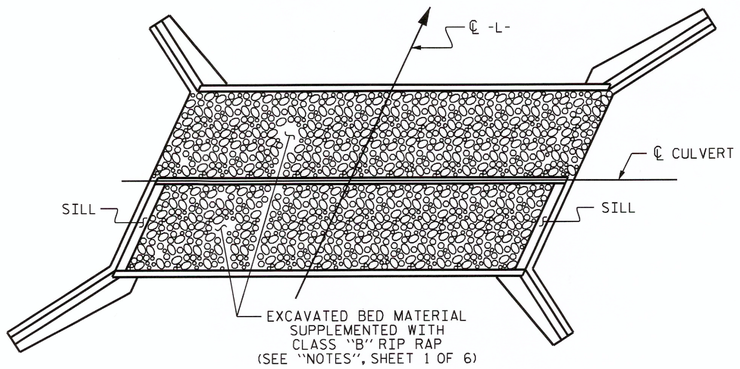
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BARREL STANDARD
DOUBLE 9 FT. X 4 FT.
CONCRETE BOX CULVERT
65° SKEW

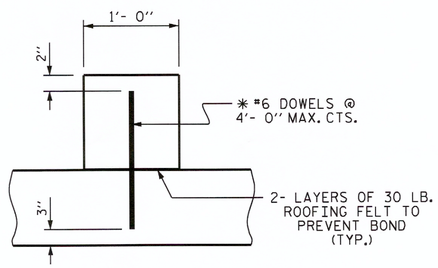
NORTH CAROLINA PROFESSIONAL SEAL 15825 ENGINEER BRUCE O. KLAPPENBACH
5-17-2013

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

DRAWN BY : D. A. GLADDEN DATE : 2-18-13
CHECKED BY : V.X. NGUYEN DATE : 4-22-13

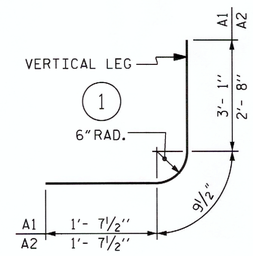


PLAN OF SILL LOCATIONS



SECTION THROUGH SILL

BAR TYPE



BAR DIMENSIONS ARE OUT TO OUT

SPLICE LENGTH CHART

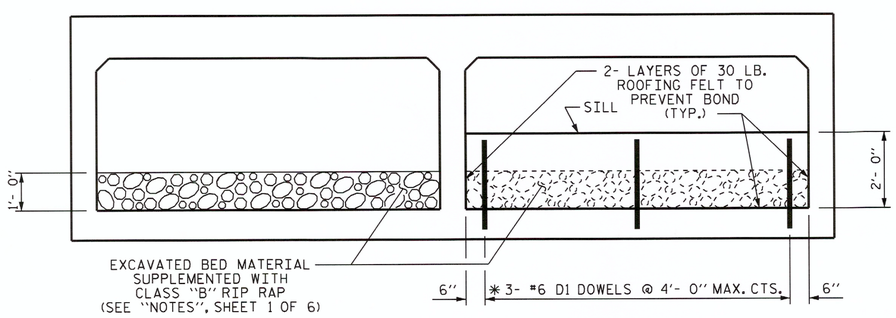
BAR	SIZE	LENGTH
C1	#4	1'-11"

BILL OF MATERIAL

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A1	88	#4	1	5'- 6"	323
A2	112	#4	1	5'- 1"	380
A100	83	#4	STR	19'- 7"	1086
A101	4	#4	STR	16'- 9"	45
A102	4	#4	STR	14'- 0"	37
A103	4	#4	STR	11'- 4"	30
A104	4	#4	STR	8'- 8"	23
A105	4	#4	STR	6'- 0"	16
A106	4	#4	STR	3'- 4"	9
A200	71	#4	STR	12'-11"	613
A201	1	#4	STR	11'- 9"	8
A202	1	#4	STR	10'- 7"	7
A203	1	#4	STR	9'- 6"	6
A204	1	#4	STR	8'- 4"	6
A205	1	#4	STR	7'- 2"	5
A206	1	#4	STR	6'- 0"	4
A207	1	#4	STR	4'-10"	3
A208	1	#4	STR	3'- 8"	2
A209	1	#4	STR	2'- 6"	2
A210	1	#4	STR	12'- 0"	8
A211	1	#4	STR	10'-10"	7
A212	1	#4	STR	9'- 8"	6
A213	1	#4	STR	8'- 6"	6
A214	1	#4	STR	7'- 4"	5
A215	1	#4	STR	6'- 2"	4
A216	1	#4	STR	5'- 0"	3
A217	1	#4	STR	3'-10"	3
A218	1	#4	STR	2'-9"	2
A300	59	#4	STR	19'- 7"	772
A301	4	#4	STR	16'-11"	45
A302	4	#4	STR	14'- 5"	39
A303	4	#4	STR	11'-11"	32
A304	4	#4	STR	9'- 5"	25
A305	4	#4	STR	6'-11"	18
A306	4	#4	STR	4'- 5"	12

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A400	102	#4	STR	12'-11"	880
A401	1	#4	STR	12'- 1"	8
A402	1	#4	STR	11'- 3"	8
A403	1	#4	STR	10'- 5"	7
A404	1	#4	STR	9'- 8"	6
A405	1	#4	STR	8'-10"	6
A406	1	#4	STR	8'- 0"	5
A407	1	#4	STR	7'- 3"	5
A408	1	#4	STR	6'- 5"	4
A409	1	#4	STR	5'- 7"	4
A410	1	#4	STR	4'-10"	3
A411	1	#4	STR	4'- 0"	3
A412	1	#4	STR	3'- 3"	2
A413	1	#4	STR	2'- 5"	2
A414	1	#4	STR	12'- 5"	8
A415	1	#4	STR	11'- 7"	8
A416	1	#4	STR	10'- 9"	7
A417	1	#4	STR	10'- 0"	7
A418	1	#4	STR	9'- 2"	6
A419	1	#4	STR	8'- 4"	6
A420	1	#4	STR	7'- 7"	5
A421	1	#4	STR	6'- 9"	5
A422	1	#4	STR	5'-11"	3
A423	1	#4	STR	5'- 2"	3
A424	1	#4	STR	4'- 4"	3
A425	1	#4	STR	3'- 6"	2
A426	1	#4	STR	2'- 9"	2
A500	74	#4	STR	8'- 4"	412
A501	1	#4	STR	7'- 9"	5
A502	1	#4	STR	6'- 7"	4
A503	1	#4	STR	5'- 5"	4
A504	1	#4	STR	4'- 3"	3
A505	1	#4	STR	3'- 1"	2
A506	1	#4	STR	8'- 4"	6
A507	1	#4	STR	7'- 2"	5
A508	1	#4	STR	6'- 0"	4
A509	1	#4	STR	4'-10"	3

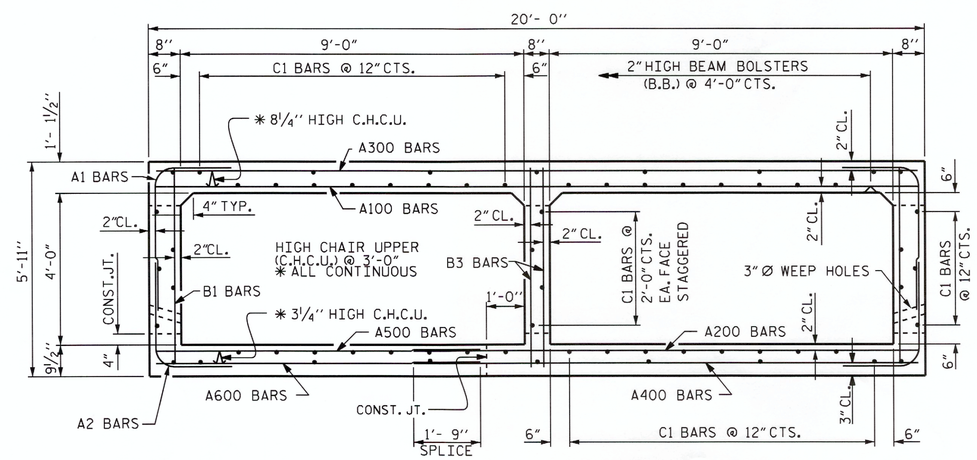
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A510	1	#4	STR	3'- 8"	2
A511	1	#4	STR	2'- 6"	2
A600	107	#4	STR	8'- 4"	596
A601	1	#4	STR	8'- 3"	6
A602	1	#4	STR	7'- 6"	5
A603	1	#4	STR	6'- 8"	4
A604	1	#4	STR	5'-11"	4
A605	1	#4	STR	5'- 1"	3
A606	1	#4	STR	4'- 3"	3
A607	1	#4	STR	3'- 6"	2
A608	1	#4	STR	2'- 8"	2
A609	1	#4	STR	8'- 0"	5
A610	1	#4	STR	7'- 3"	5
A211	1	#4	STR	6'- 5"	4
A212	1	#4	STR	5'- 7"	4
A213	1	#4	STR	4'-10"	3
A214	1	#4	STR	4'- 0"	3
A215	1	#4	STR	3'- 2"	2
A216	1	#4	STR	2'- 5"	2
B1	88	#4	STR	5'- 5"	318
B3	96	#4	STR	5'- 5"	347
C1	128	#4	STR	22'- 9"	1945
D1	6	#6	STR	2'- 4"	21
G1	8	#5	STR	21'- 8"	181
S2	6	#8	STR	21'- 8"	347
S3	6	#8	STR	14'- 1"	226
S4	6	#8	STR	9'- 6"	152
REINFORCING STEEL				=	9242 LBS



ELEVATION
(LOOKING UP STREAM)

CULVERT SILL DETAILS

* D1 DOWELS MAY BE PUSHED INTO GREEN CONCRETE AFTER SLAB HAS BEEN FLOAT FINISHED.



RIGHT ANGLE SECTION OF BARREL

THERE ARE 64 "C" BARS IN SECTION OF BARREL.

PROJECT NO. 17BP.11.R.6
ASHE COUNTY
STATION: 12+07.19 -L-

SHEET 5 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

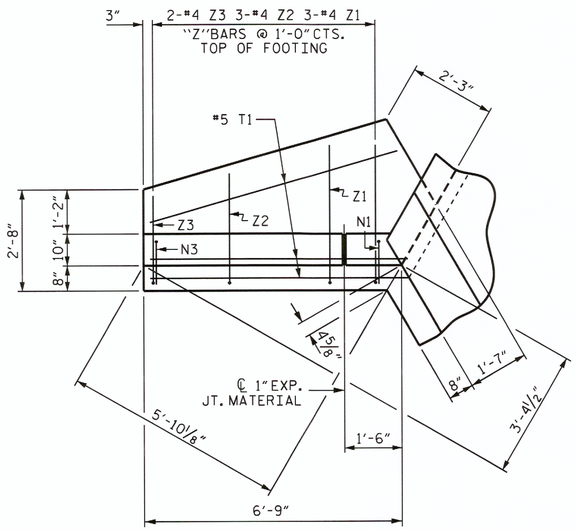
BARREL STANDARD
DOUBLE 9 FT. X 4 FT.
CONCRETE BOX CULVERT
65° SKEW

SEPTEMBER 1990

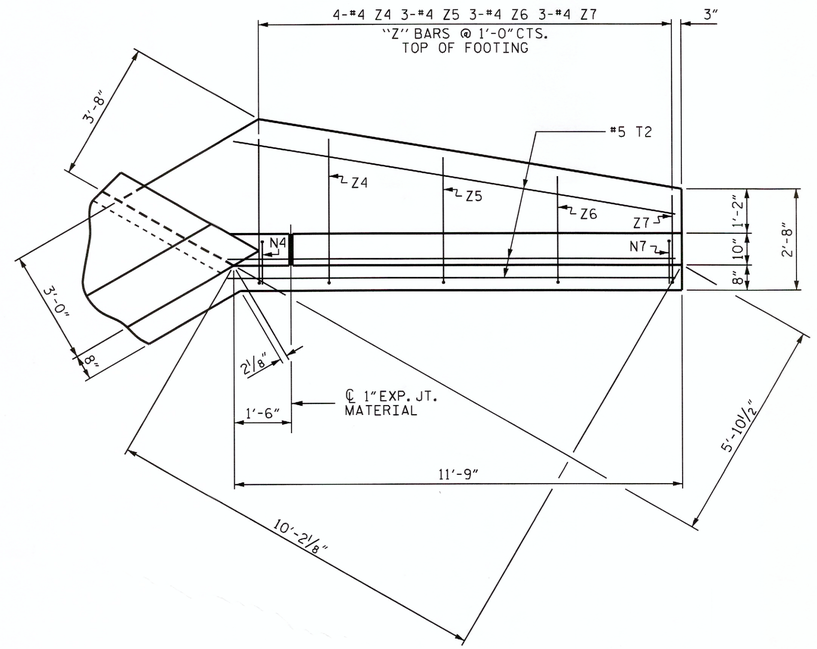
NORTH CAROLINA PROFESSIONAL SEAL 15825 ENGINEER BRUCE D. KLAPPENBACH
5-17-2013

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-5
1			3			TOTAL SHEETS
2			4			6

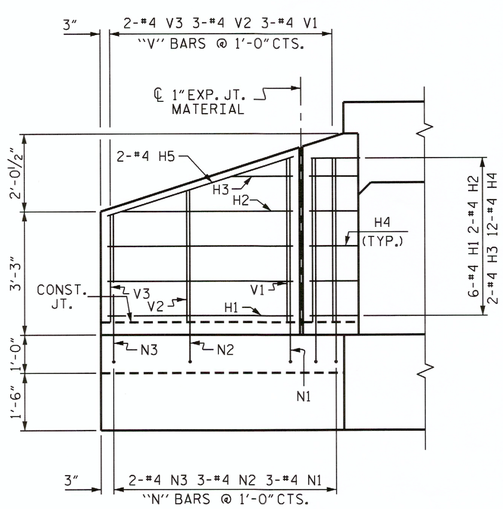
DRAWN BY : D. A. GLADDEN DATE : 2-18-13
CHECKED BY : V.X. NGUYEN DATE : 4-22-13



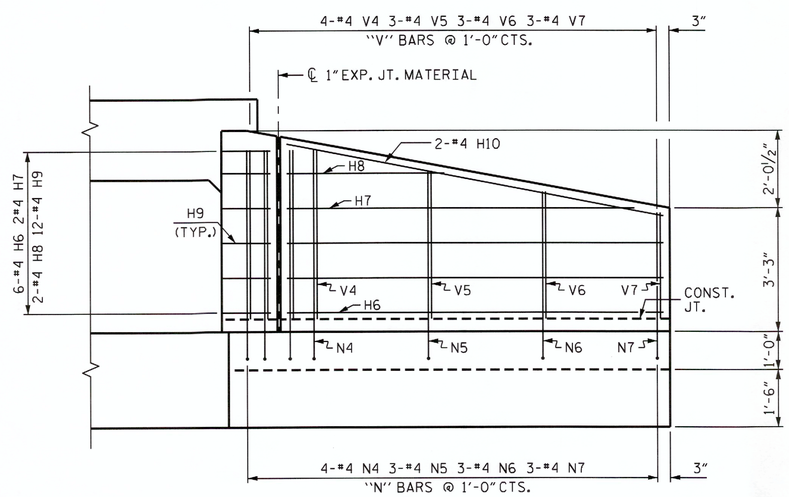
PLAN W2



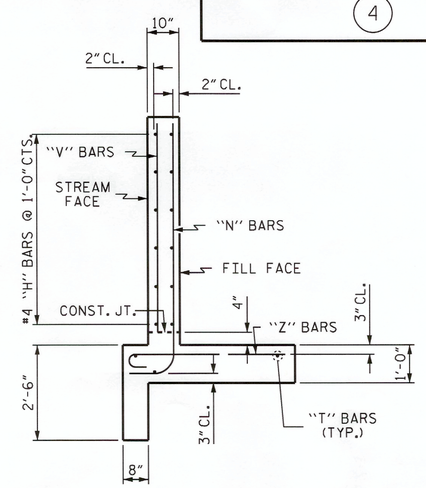
PLAN W1



ELEVATION W2



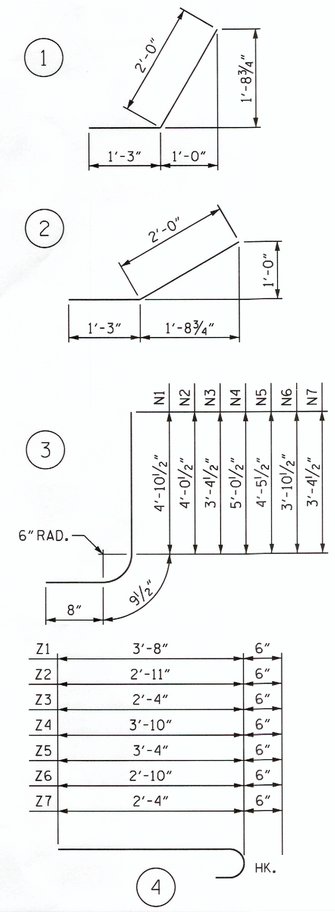
ELEVATION W1



TYPICAL WING SECTION

BAR TYPES

ALL BAR DIMENSIONS ARE OUT TO OUT.



BILL OF MATERIAL

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
H1	12	#4	STR	4'-10"	39
H2	4	#4	STR	4'-5"	12
H3	4	#4	STR	1'-7"	4
H4	24	#4	1	3'-3"	52
H5	4	#4	STR	5'-1"	14
H6	12	#4	STR	9'-10"	79
H7	4	#4	STR	9'-1"	24
H8	4	#4	STR	4'-1"	11
H9	24	#4	2	3'-3"	52
H10	4	#4	STR	10'-0"	27
N1	6	#4	3	6'-4"	25
N2	6	#4	3	5'-6"	22
N3	4	#4	3	4'-10"	13
N4	8	#4	3	6'-5"	34
N5	6	#4	3	5'-11"	24
N6	6	#4	3	5'-4"	21
N7	6	#4	3	4'-10"	19
T1	6	#5	STR	6'-9"	42
T2	6	#5	STR	11'-9"	74
V1	6	#4	STR	4'-3"	17
V2	6	#4	STR	3'-5"	14
V3	4	#4	STR	2'-10"	8
V4	8	#4	STR	4'-5"	24
V5	6	#4	STR	3'-10"	15
V6	6	#4	STR	3'-4"	13
V7	6	#4	STR	2'-9"	11
Z1	6	#4	4	4'-2"	17
Z2	6	#4	4	3'-4"	13
Z3	4	#4	4	2'-10"	8
Z4	8	#4	4	4'-4"	23
Z5	6	#4	4	4'-0"	16
Z6	6	#4	4	3'-4"	13
Z7	6	#4	4	2'-10"	11

REINFORCING STEEL FOR 4 WINGS	791 LBS
CLASS A CONCRETE	
4 WINGS	11.7 CY
2 HEADWALLS	2.0 CY
2 END CURTAIN WALLS	2.5 CY
TOTAL	16.2 CY

PROJECT NO. 17BP.11.R.6

ASHE COUNTY

STATION: 12+07.19 -L-

SHEET 6 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

WINGS FOR CONCRETE BOX CULVERT

H = 4'-0" SLOPE = 2:1
60° OR 120° SKEW

NORTH CAROLINA PROFESSIONAL SEAL 15825 ENGINEER B. D. KLAPPENBACH
5-17-2013

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

ASSEMBLED BY: B.D. KLAPPENBACH DATE: 4/1/13
CHECKED BY: V.X. NGUYEN DATE: 4/5/13

DRAWN BY : CCJ 11/99
CHECKED BY : RWW 03/00

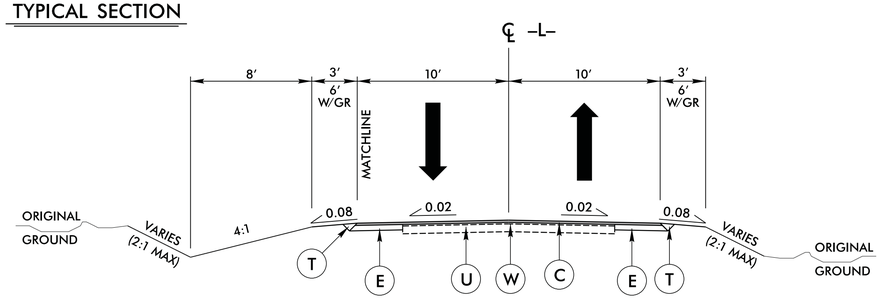
17-MAY-2013 09:15
S:\DPG4\17BP.11.R.6\bklappenbach\microstation\17BP11R6_SD_wings.dgn

PROJECT REFERENCE NO.	SHEET NO.
ASHE #130	RDY-1
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 38649 ENGINEER MATTHEW A. LAMB 5/20/13

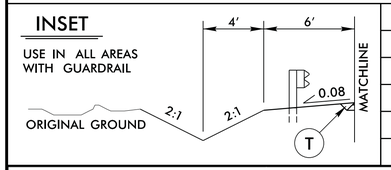
HYDRAULICS ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 036821 ENGINEER ELENI M. RIGOS 5/20/13

TYPICAL SECTION



INSET

USE IN ALL AREAS WITH GUARDRAIL

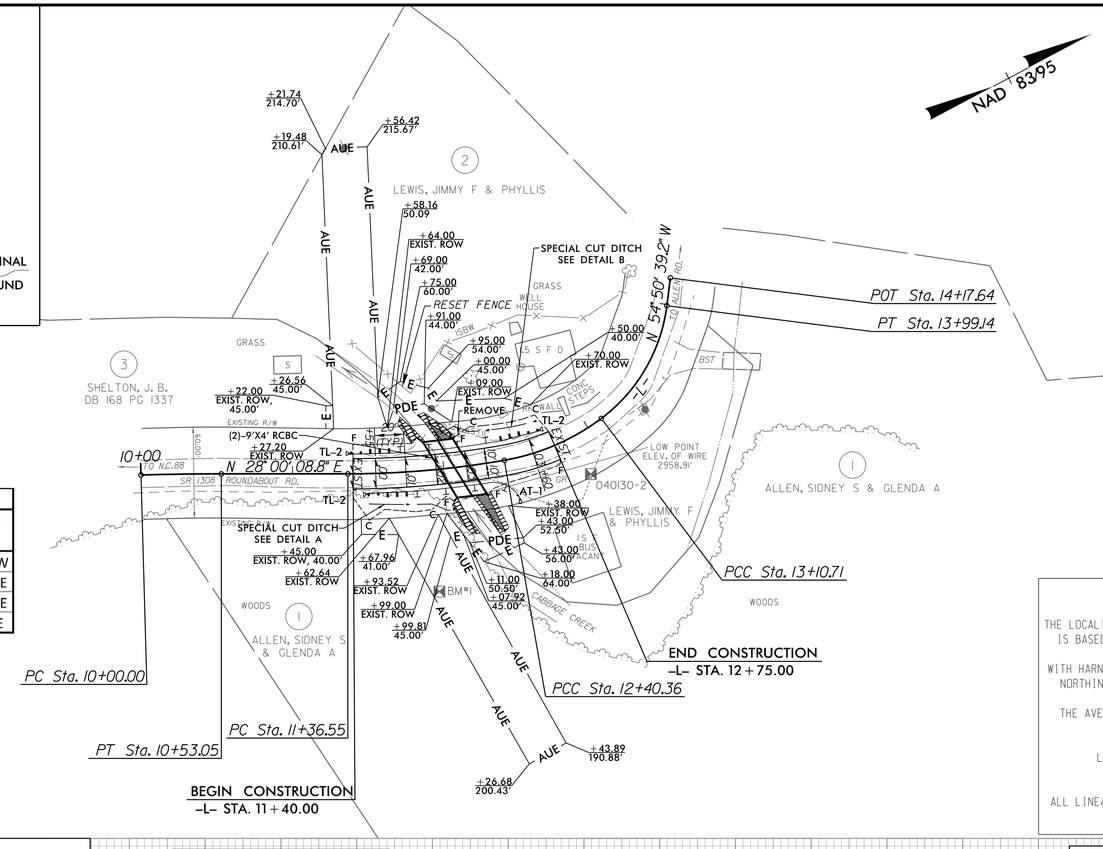


PAVEMENT SCHEDULE	
C	1½" SURFACE COURSE, TYPE SF9.5A
E	5½" BASE COURSE, TYPE B25.0B
T	EARTH MATERIAL
U	EXISTING PAVEMENT.
W	WEDGING

Bridge 130 Control Points

Point Description	Proposed Station	Proposed Offset	Northing	Easting	Elevation	Distance from Sta. 10+00	Direction from Sta. 10+00
040130-1	*	*	989,525.3623'	1,218,331.6009'	2,909.29'	34.88'	S 41° 08' 00.0" W
BM #1	11+89.92	80.40' RT	989,687.8364'	1,218,514.9917'	2,923.37'	210.46'	N 49° 40' 19.9" E
040130-2	12+87.35	27.48' RT	989,812.5049'	1,218,493.4748'	2,914.15'	295.55'	N 28° 02' 15.7" E
BL-3	*	*	989,974.4086'	1,218,341.2743'	2,919.79'	422.98'	N 1° 47' 54.2" E
BEGIN ALN	10+00.00	0.00'	989,550.0506'	1,218,354.5430'			
PT	10+53.05	0.00'	989,597.2353'	1,218,378.7952'			
PC	11+36.55	0.00'	989,670.9561'	1,218,417.9973'			
BEGIN PROJECT	11+40.00	0.00'	989,674.0067'	1,218,419.6083'			
PCC	12+40.36	0.00'	989,766.3605'	1,218,458.5844'			
END PROJECT	12+75.00	0.00'	989,800.2344'	1,218,465.4598'			
PCC	13+10.71	0.00'	989,835.8367'	1,218,464.2400'			
PT	13+99.14	0.00'	989,908.9775'	1,218,418.8677'			
END ALN	14+17.64	0.00'	989,919.6316'	1,218,403.7398'			

* OUTSIDE ALN LIMITS



GRAPHIC SCALES

50 0 50 100 PLANS

50 0 50 100 PROFILE (HORIZONTAL)

10 0 10 20 PROFILE (VERTICAL)

DESIGN SPEED = 25 mph
ADT = 260 (2010)

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "040130-2"
WITH HARN-NAD 83/NSRS2007 STATE PLANE GRID COORDINATES OF
NORTHING: 989812.5049(ft) EASTING: 1218493.4748(ft)
ELEVATION: 2914.1463(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9999537833
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "040130-2" TO -L- STATION 10+00.00 IS
N 27°53'41.24" E 296.96(ft)
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

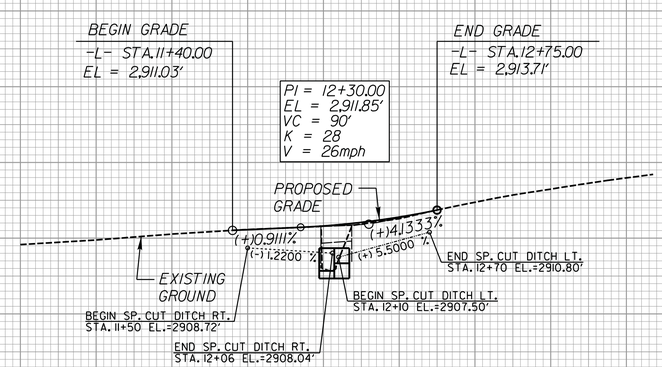
RIGHT-OF-WAY AREAS

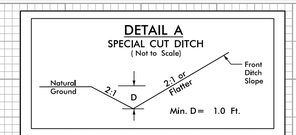
PARCEL #	PROPERTY OWNER'S NAME	TOTAL AREA	AREA TAKEN	AREA REMAINING RIGHT	AREA REMAINING LEFT	CONSTRUCTION EASEMENT	PERMANENT DRAINAGE EASEMENT	TEMPORARY DRAINAGE EASEMENT	AERIAL UTILITY EASEMENT
1	SIDNET S. & GLENDA A. ALLEN	N/A	0 Ac.	N/A	N/A	0.011 Ac.	0.006 Ac.	0 Ac.	0.118 Ac.
2	JIMMY F. & PHYLLIS LEWIS	N/A	0 Ac.	N/A	N/A	0.028 Ac.	0.019 Ac.	0 Ac.	0.100 Ac.
3	UNKNOWN	N/A	0 Ac.	N/A	N/A	0.004 Ac.	0.002 Ac.	0 Ac.	0.028 Ac.

-L- CURVE DATA

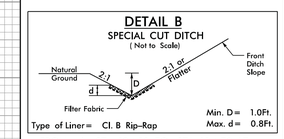
PI Sta 10+26.53	PI Sta 11+88.58	PI Sta 12+76.19	PI Sta 13+57.47
△ = 1° 35' 59.6" (RT)	△ = 9° 54' 46.7" (LT)	△ = 26° 52' 16.9" (LT)	△ = 46° 03' 44.4" (LT)
D = 3° 00' 56.0"	D = 9° 32' 57.5"	D = 38° 11' 49.9"	D = 52° 05' 13.5"
L = 53.05'	L = 103.81'	L = 70.35'	L = 88.43'
T = 26.53'	T = 52.03'	T = 35.83'	T = 46.76'
R = 1,900.00'	R = 600.00'	R = 150.00'	R = 110.00'
	SE = 0.03	SE = 0.03	
	V = 28mph	V = 16mph	

BM#1 EL = 2,923.37'
-L- STA.11+89.92 80.40' RT.
8" SPIKE IN ROOT OF 20" PINE

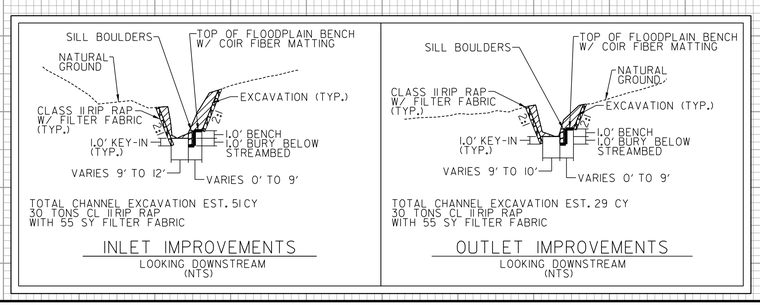




FROM -L- STA. 11+50 TO STA. 12+06 RT



FROM -L- STA. 12+10 TO STA. 12+70 LT



2,960 2,950 2,940 2,930 2,910 2,900 2,890 2,880 2,870

10+00 11+00 12+00 13+00 14+00

PLANS PREPARED BY :

RK&K

RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
NC LICENSE NO. F-0112 • (919) 878-9560

8/17/99

5/20/2013
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STATE PROJECT REFERENCE NO.	SHEET NO.
ASHE #130	TCP-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION

ASHE COUNTY

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS"-PROJECT SERVICES UNIT-N.C. DEPARTMENT OF TRANSPORTATION-RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1110.01	STATIONARY WORK ZONE SIGNS
1145.01	BARRICADES
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

PROJECT PHASING

PHASE I

STEP 1: USING ROADWAY STANDARD DRAWING NUMBER 1101.04, SHEET 1 OF 1, STATE FORCES TO INSTALL ALL ADVANCE WARNING SIGNS FOR DETOUR, KEEPING SIGNS COVERED.

WORKING IN A CONTINUOUS MANNER, COMPLETE THE FOLLOWING WORK IN PHASE I, STEP 2.

STEP 2: CLOSE SR 1308, (ROUNDABOUT RD.) TO TRAFFIC, USING ROADWAY STANDARD DRAWING 1101.03 SHEET 1. UNCOVER ALL ADVANCE WARNING SIGNS FOR ROAD CLOSURE AND SHIFT TRAFFIC TO TEMPORARY DETOUR.

STEP 3: DEMOLISH AND REMOVE EXISTING BRIDGE NO. 130 OVER CABBAGE CREEK.

STEP 4: COMPLETE CONSTRUCTION OF PROPOSED STRUCTURE, APPROACH ROADWAY WIDENING AND PAVING, (SEE ROADWAY AND STRUCTURE PLANS).

STEP 5: STATE FORCES TO PLACE FINAL PAVEMENT MARKINGS, (PAINT) ON SR 1308, (ROUNDABOUT RD.).

WORKING IN A CONTINUOUS MANNER, COMPLETE THE FOLLOWING WORK IN PHASE I, STEP 6.

STEP 6: USING ROADWAY STANDARD DRAWING NO. 1101.04, SHEET 1 OF 1, THE CONTRACTOR SHALL REMOVE SIGNS AND TRAFFIC CONTROL DEVICES ERECTED IN STEP 2 AND OPEN SR 1308, (ROUNDABOUT RD.) TO TRAFFIC. STATE FORCES WILL REMOVE OFF-SITE DETOUR SIGNING.

PROJECT NOTES

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TRAFFIC PATTERN ALTERATIONS

A) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATIONS.

SIGNING

B) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

STATE FORCES WILL PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS, UNLESS OTHERWISE NOTED.

C) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

D) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

E) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICENT LENGTH TO CLOSE ENTIRE ROADWAY.

F) STATE FORCES TO INSTALL PAVEMENT MARKINGS ON THE FINAL SURFACE AS FOLLOWS:

	ROAD NAME	MARKING
1.	SR 1308 (ROUNDABOUT RD.)	PAINT

G) STATE FORCES TO PLACE AT LEAST TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE ON NEW ASPHALT PAVEMENT. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON SUFFICENT DRYING TIME, AS DETERMINED BY THE ENGINEER.

H) CONTRACTOR TO MAINTAIN ACCESS TO ALL DRIVEWAYS, WITHIN THE PROJECT LIMITS AT ALL TIMES.

FINAL PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION	QUANTITY BREAKDOWN	PAY ITEM	TOTAL QUANTITY
	PAVEMENT MARKING LINES		PAINT (4")	
PA	WHITE EDGELINE 2X	540 LF		
PI	YELLOW DOUBLE CENTER 2X	540 LF		
			TOTAL	1080 LF

2X = TWO APPLICATIONS

PLANS PREPARED BY :
RK&K
RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
NC LICENSE NO. F-0112 • (919) 878-9560
FOR DIVISION OF HIGHWAYS

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 21047 ENGINEER KEVIN W. BISBY
Kevin W. Bisby
APR 4, 2013

K. W. BISBY, PE	TRAFFIC CONTROL ENGINEER
M. A. COLE	TRAFFIC CONTROL PROJECT DESIGNER
A. TUTT	TRAFFIC CONTROL PROJECT DESIGNER

TIP PROJECT:

ASHE #130

2/26/2013
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mcole

PROJ. REFERENCE NO.	SHEET NO.
ASHE #130	TCP-2

TYPE III BARRICADE(S)

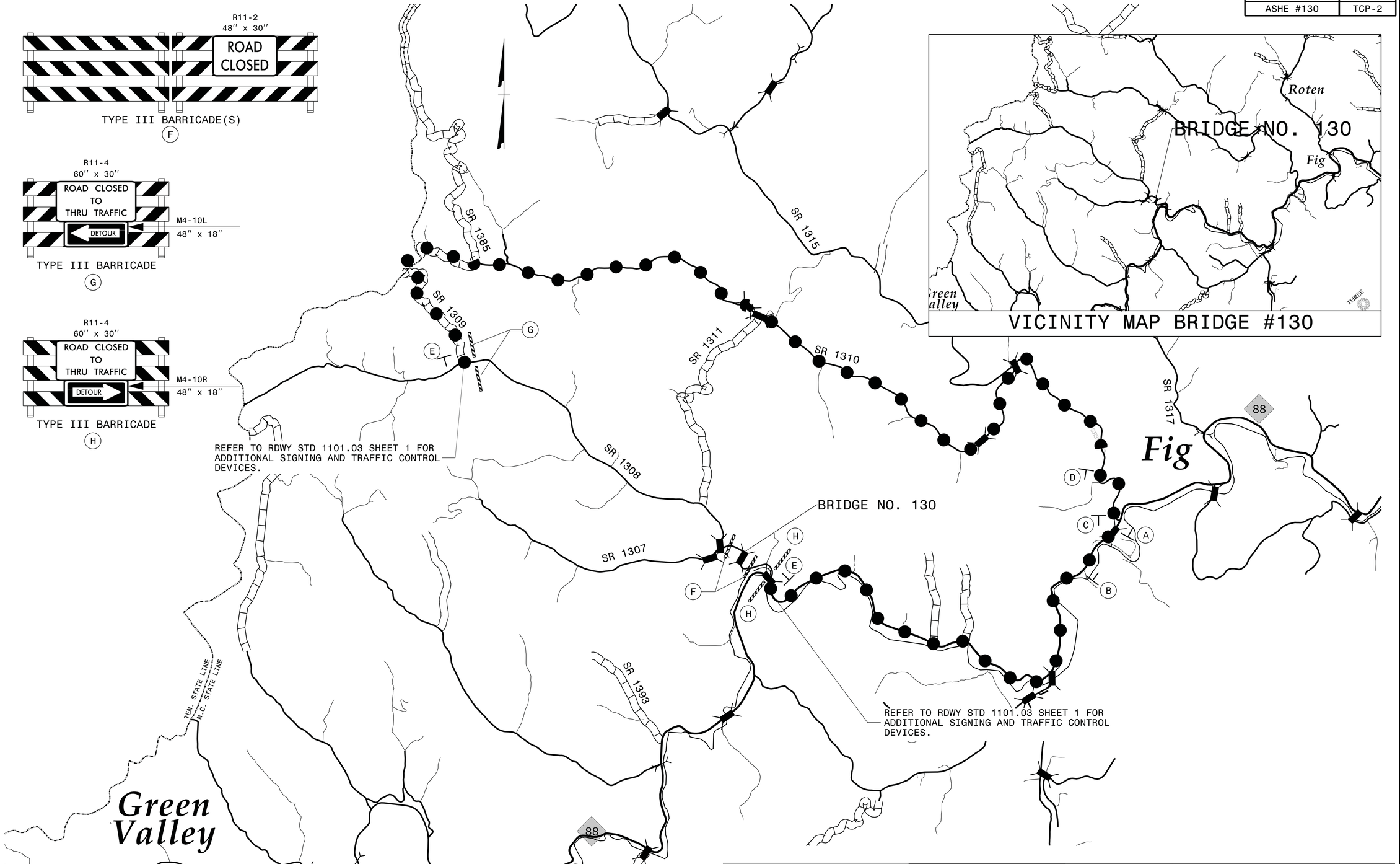
(F)

TYPE III BARRICADE

(G)

TYPE III BARRICADE

(H)



REFER TO RDWY STD 1101.03 SHEET 1 FOR ADDITIONAL SIGNING AND TRAFFIC CONTROL DEVICES.

REFER TO RDWY STD 1101.03 SHEET 1 FOR ADDITIONAL SIGNING AND TRAFFIC CONTROL DEVICES.

(A)

SR 1308	24" X 12"
DETOUR	M4-8 24" X 12"
←	M6-1 21" X 15"

(B)

SR 1308	24" X 12"
DETOUR	M4-8 24" X 12"
↰	M5-1 21" X 15"

(C)

SR 1308	24" X 12"
DETOUR	M4-8 24" X 12"
→	M6-1 21" X 15"

(D)

SR 1308	24" X 12"
DETOUR	M4-8 24" X 12"
↱	M5-1 21" X 15"

(E)

SR 1308	24" X 12"
END DETOUR	M4-8A 24" X 18"

PLANS PREPARED BY :

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NORTH CAROLINA PROFESSIONAL SEAL 21047 ENGINEER KEVIN W. BIGLEY

SEAL

APR 4, 2013

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

OFFSITE DETOUR
BRIDGE #130
SR 1308

4/3/2013
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mcole

EROSION CONTROL PLAN

Std. #	Description	Symbol
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1630.06	Special Stilling Basin	
1632.03	Rock Inlet Sediment Trap Type C	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle	
	Wattle with Polyacrylamide (PAM)	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	

2012 STANDARD DRAWINGS

1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

ELENI RIGGS, PE
LEVEL IIIA NAME

3056
LEVEL IIIA CERTIFICATION NO.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER. ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

HIGH QUALITY WATER(S) EXIST ON THIS PROJECT

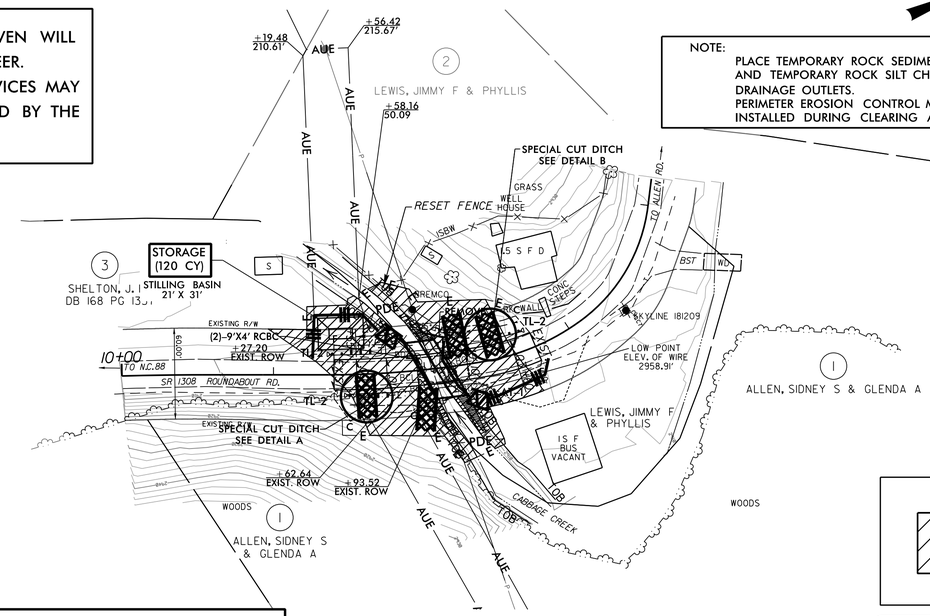
High Quality Water Zone(s) Exist
From Sta. 10+00.00
to Sta. 14+17.64
Refer To E. C. Special Provisions for Special Considerations.

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT

Refer To E. C. Special Provisions for Special Considerations.

PLACE MATTING FOR EROSION CONTROL ON SLOPES AS WORK ALLOWS.

NOTES:
1. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.



NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE

PROJECT REFERENCE NO.	SHEET NO.
ASHE #130	EC-1/RDY-1
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

GRAPHIC SCALES

50 0 50 100
PLANS

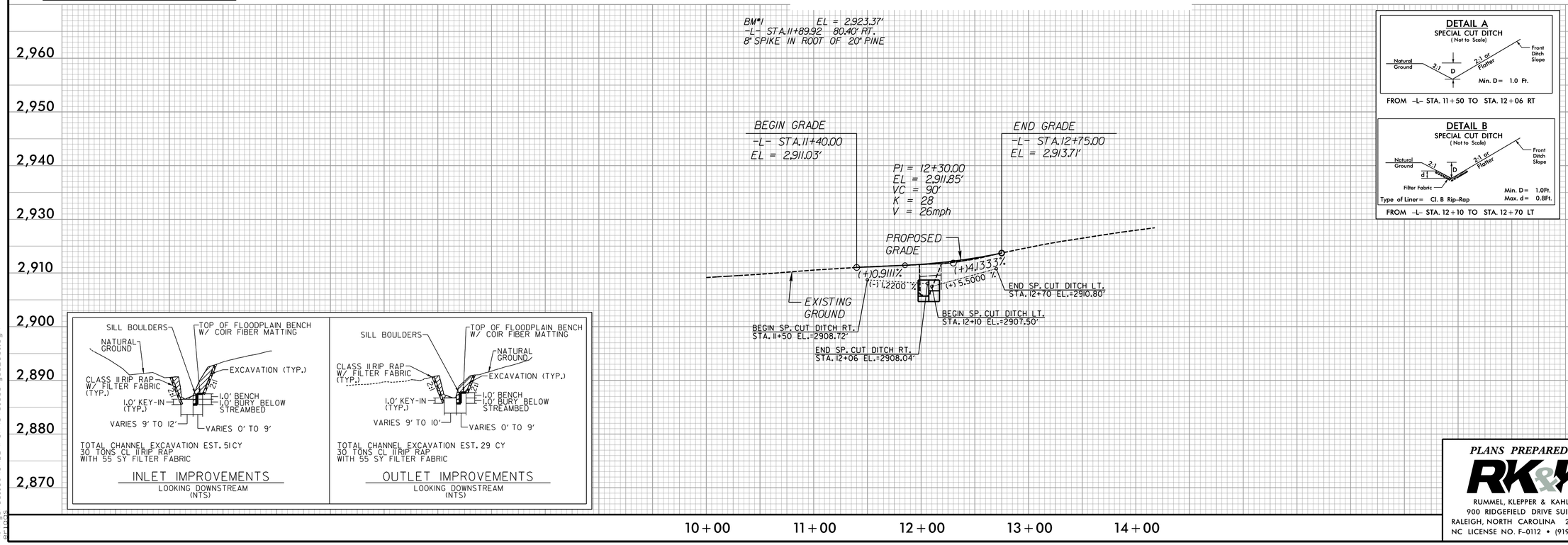
50 0 50 100
PROFILE (HORIZONTAL)

10 0 10 20
PROFILE (VERTICAL)

2012 STANDARD SPECIFICATIONS

ENVIRONMENTALLY SENSITIVE AREA
PLEASE SEE HIGH QUALITY WATERS NOTE

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.



DETAIL A
SPECIAL CUT DITCH
(Not to Scale)

FROM -L- STA. 11+50 TO STA. 12+06 RT

DETAIL B
SPECIAL CUT DITCH
(Not to Scale)

Type of Liner= Cl. B Rip-Rap

FROM -L- STA. 12+10 TO STA. 12+70 LT

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5/22/2013
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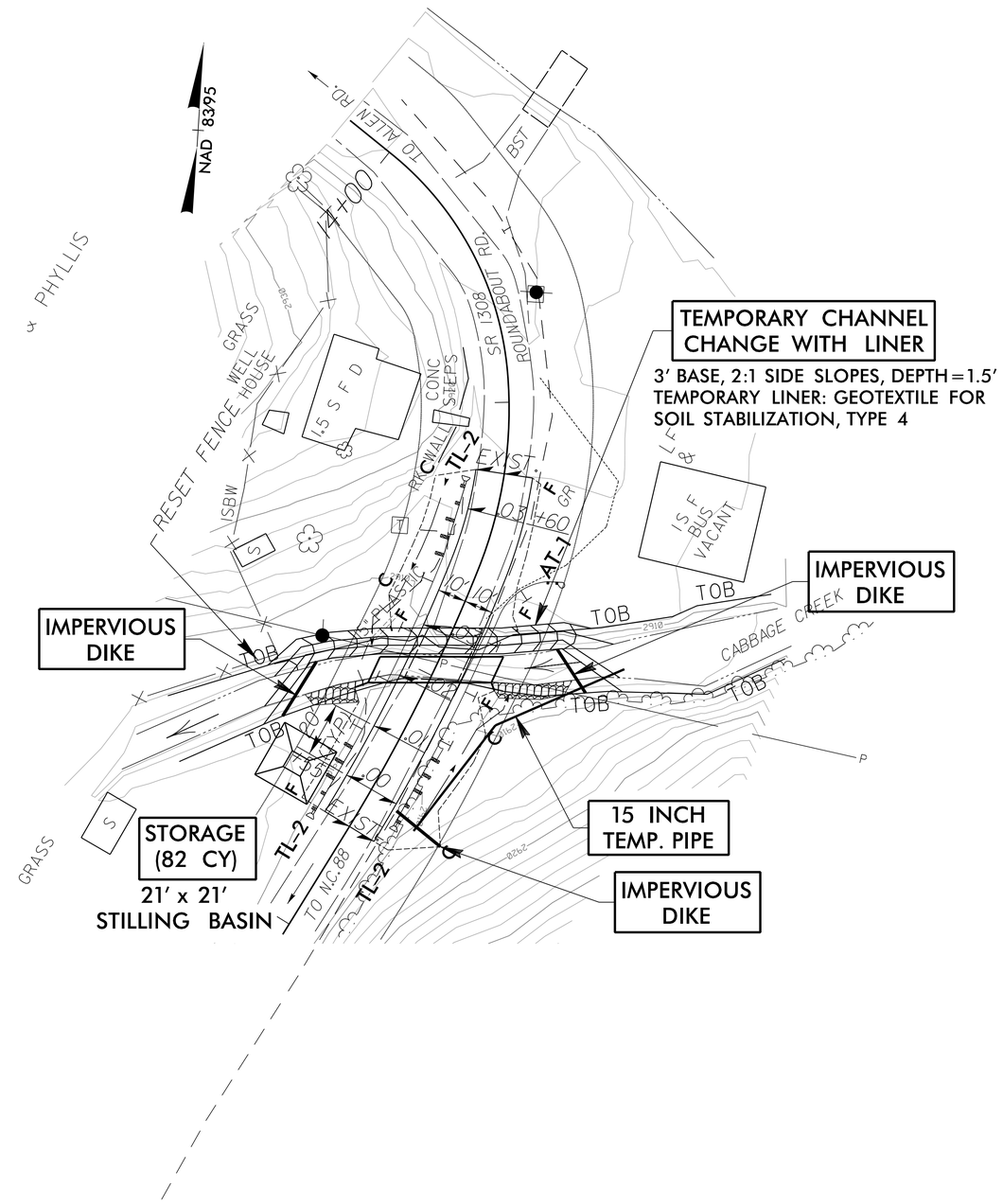
PROJECT REFERENCE NO.	SHEET NO.
ASHE #130	EC-1A

PHASE I
CULVERT CONSTRUCTION SEQUENCE
STA. 12+07.19 –L–

1. INSTALL TEMPORARY 15" PIPE IN EXISTING DITCH LINE AT –L– STA. 11+50 RT AS SHOWN ON PHASING PLAN. INSTALL IMPERVIOUS DIKE IN DITCH LINE AND DIVERT FLOW INTO TEMPORARY PIPE.
2. UTILIZE A SPECIAL STILLING BASIN WITH A MINIMUM STORAGE CAPACITY OF 82 CUBIC YARDS OR CONSTRUCT A 21' X 21' STILLING BASIN AT THE DOWNSTREAM END OF THE PROPOSED CULVERT.
3. CONSTRUCT TEMPORARY CHANNEL CHANGE WITH LINER (APPROX. 115 LF +/–). INSTALL TEMPORARY LINER, GEOTEXTILE FOR SOIL STABILIZATION, TYPE 4. INSTALL IMPERVIOUS DIKES AT EACH END OF WORK AREA AND DIVERT FLOW INTO TEMPORARY CHANNEL CHANGE.
4. CONSTRUCT SOUTH BARREL OF THE PROPOSED CULVERT AS SHOWN ON THE PHASING PLAN.
5. CONSTRUCT CHANNEL IMPROVEMENTS AT BOTH ENDS OF THE CULVERT. STABILIZE NEW CHANNEL IMPROVEMENTS.

INSTALL PIPE(S) IN JURISDICTIONAL AREAS ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.



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RALEIGH, NORTH CAROLINA 27609-3960
NC LICENSE NO. F-0112 • (919) 878-9560

8/17/99
5/22/2013
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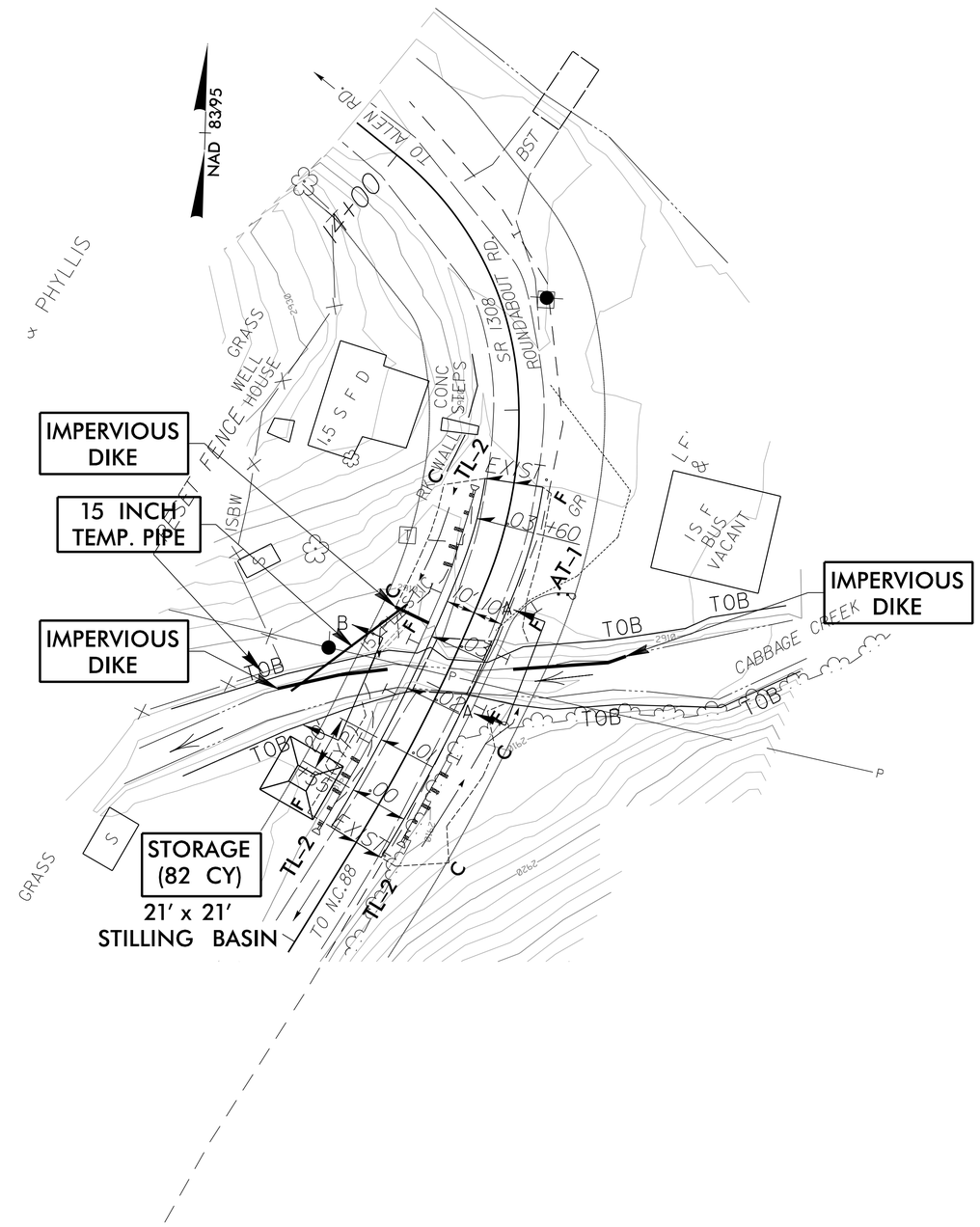
PROJECT REFERENCE NO.	SHEET NO.
ASHE #130	EC-1B

PHASE II
CULVERT CONSTRUCTION SEQUENCE
STA. 12 + 07.19 –L–

1. INSTALL TEMPORARY 15" PIPE IN EXISTING DITCH LINE AT –L– STA. 12 + 22 LT AS SHOWN ON PHASING PLAN. INSTALL IMPERVIOUS DIKE IN DITCH LINE AND DIVERT FLOW INTO TEMPORARY PIPE.
2. INSTALL IMPERVIOUS DIKES AT NORTH EDGE OF BARREL AS SHOWN IN PHASING PLAN. REMOVE IMPERVIOUS DIKE IN EXISTING DITCH LINE AT –L– STA. 11 + 50 RT. DIVERT STREAM FLOW THROUGH SOUTH BARREL.
3. CONSTRUCT NORTH BARREL OF THE PROPOSED CULVERT AS SHOWN ON THE PHASING PLAN.
4. CONSTRUCT CHANNEL IMPROVEMENTS AT BOTH ENDS OF THE CULVERT. STABILIZE NEW CHANNEL IMPROVEMENTS.
5. REMOVE TEMPORARY PIPES AND IMPERVIOUS DIKES AND DIVERT STREAM THROUGH BOTH BARRELS.
6. CONSTRUCT –L– ROADWAY WIDENING AND EMBANKMENTS.

INSTALL PIPE(S) IN JURISDICTIONAL AREAS ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.



PLANS PREPARED BY :

RK&K

RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
NC LICENSE NO. F-0112 • (919) 878-9560

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EROSION CONTROL PLAN

Std. #	Description	Symbol
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1630.06	Special Stilling Basin	
1632.03	Rock Inlet Sediment Trap Type C	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle	
	Wattle with Polyacrylamide (PAM)	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	

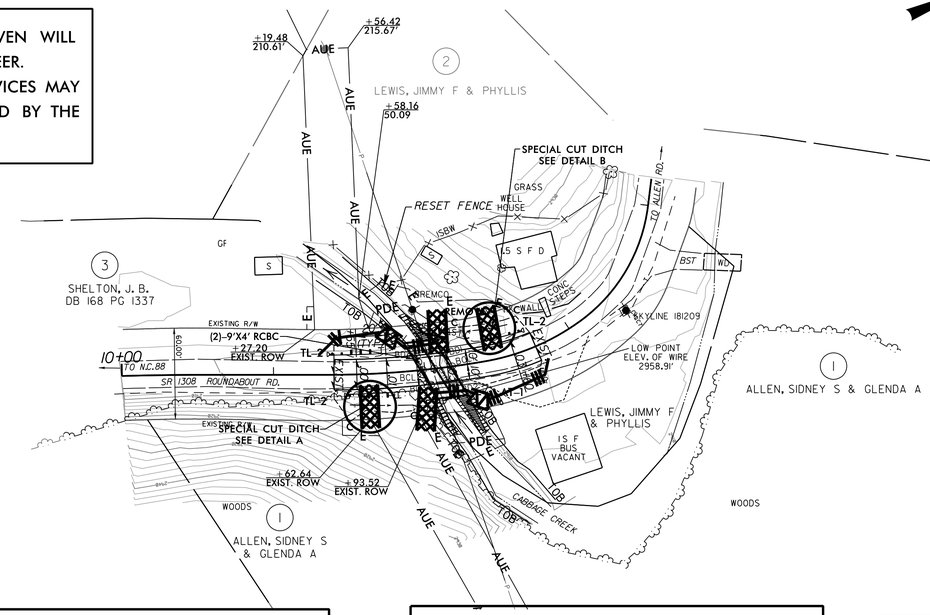
NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER. ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

HIGH QUALITY WATER(S) EXIST ON THIS PROJECT

High Quality Water Zone(s) Exist
From Sta. 10+00.00
to Sta. 14+17.64
Refer To E. C. Special Provisions for Special Considerations.

2012 STANDARD DRAWINGS

1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		



PROJECT REFERENCE NO.	SHEET NO.
ASHE #130	EC-2/RDY-1
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

GRAPHIC SCALES

PLANS: 50 0 50 100
PROFILE (HORIZONTAL): 50 0 50 100
PROFILE (VERTICAL): 10 0 10 20

2012 STANDARD SPECIFICATIONS

ELENI RIGGS, PE
LEVEL IIIA NAME

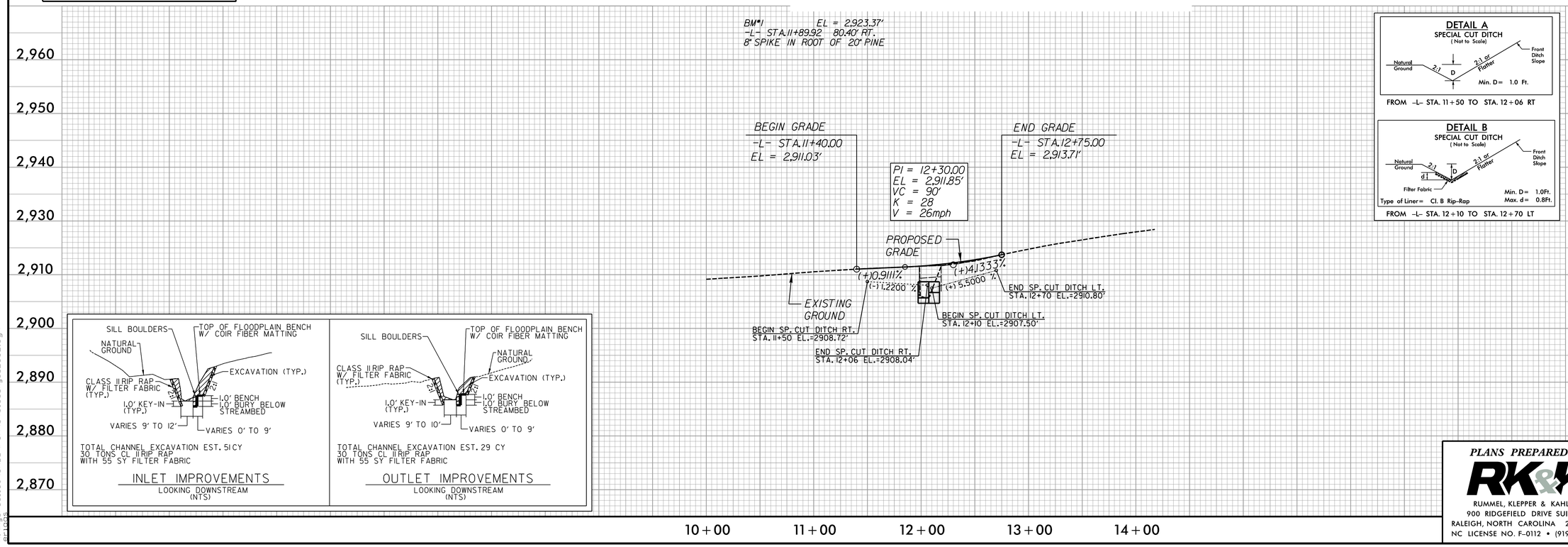
3056
LEVEL IIIA CERTIFICATION NO.

PLACE MATTING FOR EROSION CONTROL ON SLOPES AS WORK ALLOWS DUE TROUT STREAM.

INSTALL MATTING IN THE PROPOSED DITCH LINE. FROM STA. 11+50 TO STA. 12+05 RT (30 SY)

NOTES:
1. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.



DETAIL A
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground, 2:1, D, 2:1 or Flatter, Front Ditch Slope
Min. D= 1.0 Ft.
FROM -L- STA. 11+50 TO STA. 12+06 RT

DETAIL B
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground, 2:1, D, d, 2:1 or Flatter, Front Ditch Slope
Filter Fabric
Min. D= 1.0Ft.
Max. d= 0.8Ft.
Type of Liner= Cl. B Rip-Rap
FROM -L- STA. 12+10 TO STA. 12+70 LT

PLANS PREPARED BY :

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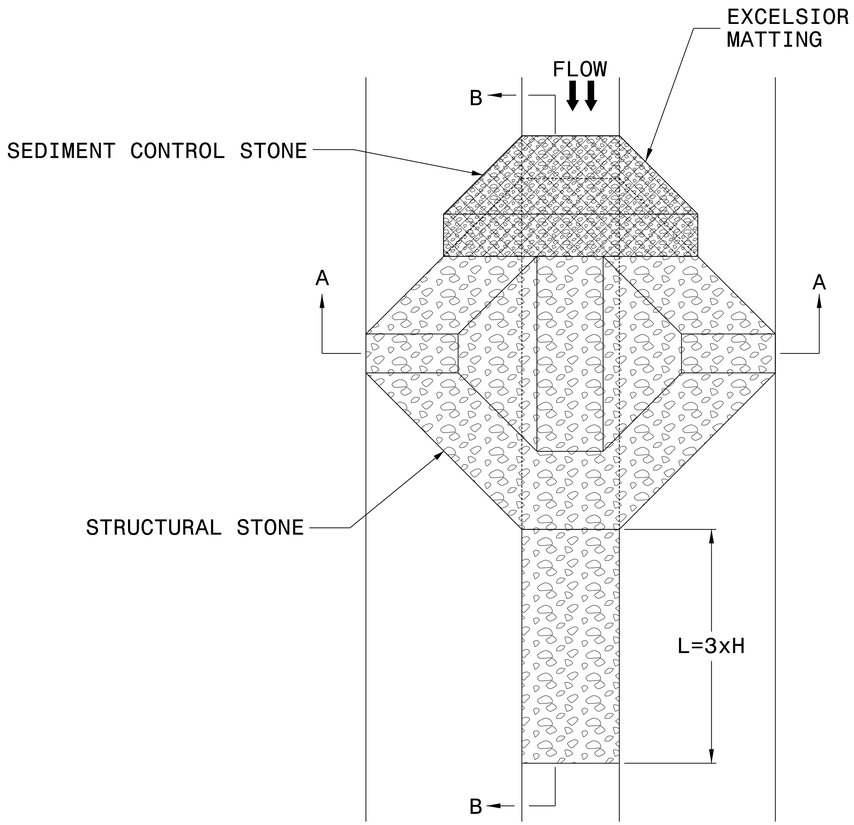
PROJECT REFERENCE NO.	SHEET NO.
ASHE #130	EC-2A

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



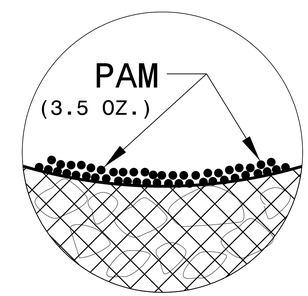
PLAN

NOTES

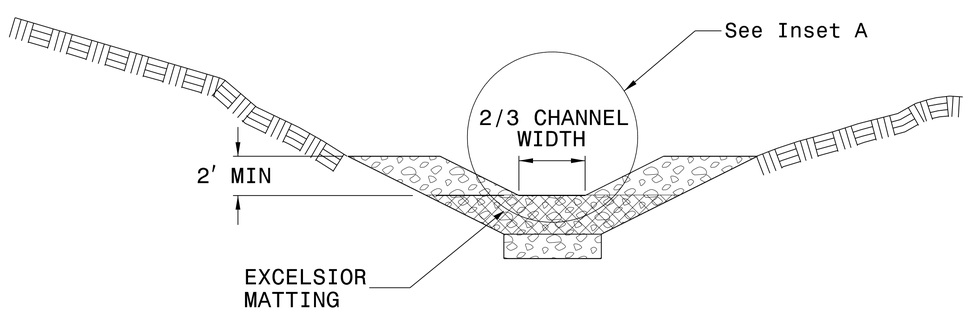
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

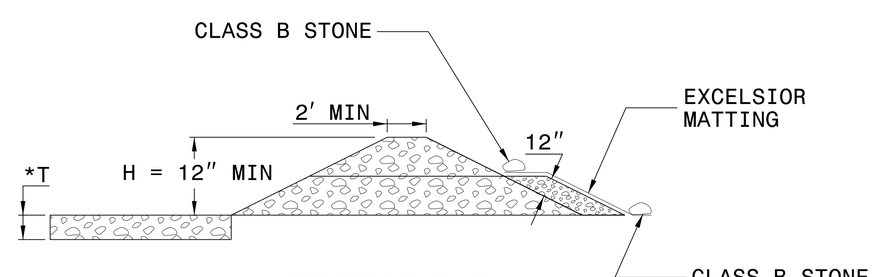
INITIALLY APPLY 3.5 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



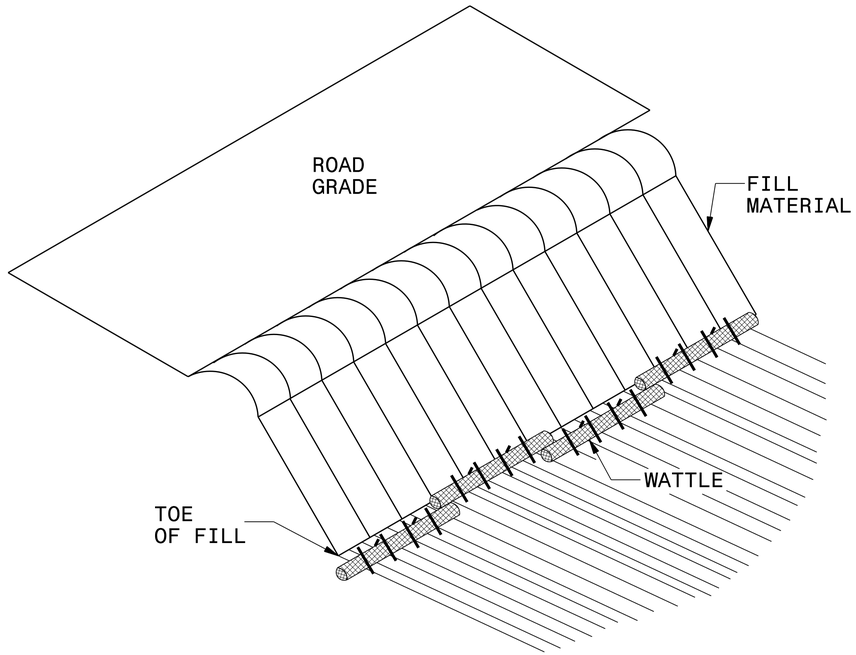
SECTION B-B

*T = 12" MIN., 18" MAX.

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
ASHE #130	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE BARRIER DETAIL



ISOMETRIC VIEW

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLES ON TOE OF SLOPE.

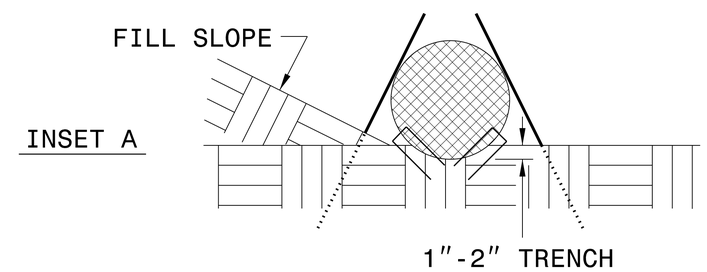
USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

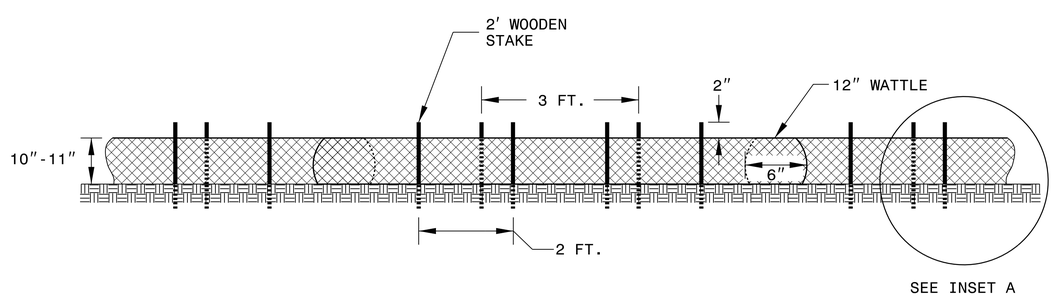
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

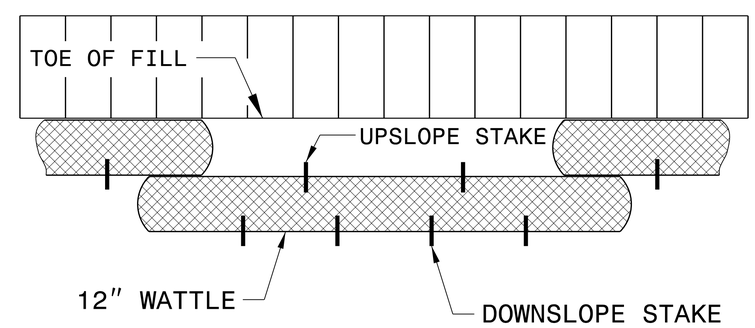
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

FOR BREAKS ALONG LARGE SLOPES, USE MAXIMUM SPACING OF 20 FT.





FRONT VIEW



TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
ASHE #130	EC-3

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

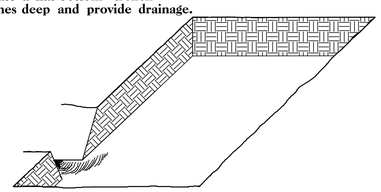
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	ASHE *130	RF-1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	

PLANTING DETAILS

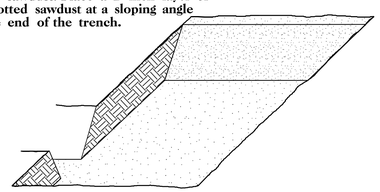
SEEDLING / LINER BAREROOT PLANTING DETAIL

HEALING IN

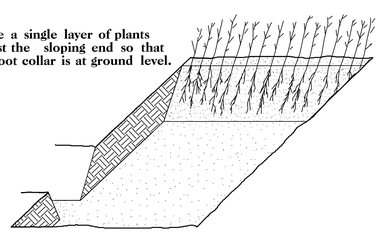
1. Locate a healing-in site in a shady, well protected area.
2. Excavate a flat bottom trench 12 inches deep and provide drainage.



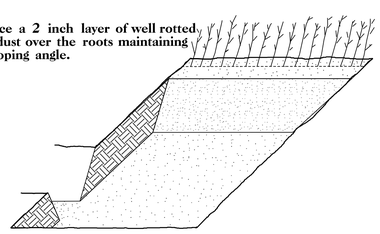
3. Backfill the trench with 2 inches well rotted sawdust. Place a 2 inch layer of well rotted sawdust at a sloping angle at one end of the trench.



4. Place a single layer of plants against the sloping end so that the root collar is at ground level.

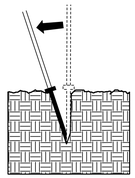


5. Place a 2 inch layer of well rotted sawdust over the roots maintaining a sloping angle.

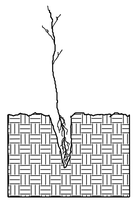


6. Repeat layers of plants and sawdust as necessary and water thoroughly.

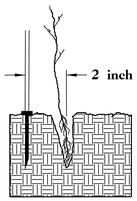
DIBBLE PLANTING METHOD
USING THE KBC PLANTING BAR



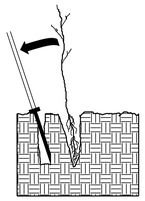
1. Insert planting bar as shown and pull handle toward planter.



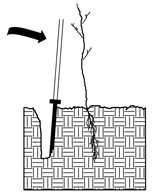
2. Remove planting bar and place seedling at correct depth.



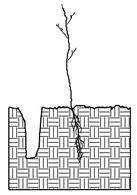
3. Insert planting bar 2 inches toward planter from seedling.



4. Pull handle of bar toward planter, firming soil at bottom.



5. Push handle forward firming soil at top.



6. Leave compaction hole open. Water thoroughly.

PLANTING NOTES:

PLANTING BAG
During planting, seedlings shall be kept in a moist canvas bag or similar container to prevent the root systems from drying.

KBC PLANTING BAR
Planting bar shall have a blade with a triangular cross section, and shall be 12 inches long, 4 inches wide and 1 inch thick at center.

ROOT PRUNING
All seedlings shall be root pruned, if necessary, so that no roots extend more than 10 inches below the root collar.

REFORESTATION

☐ TREE REFORESTATION SHALL BE PLANTED 6 FT. TO 10 FT. ON CENTER, RANDOM SPACING, AVERAGING 8 FT. ON CENTER, APPROXIMATELY 680 PLANTS PER ACRE.

REFORESTATION

MIXTURE, TYPE, SIZE, AND FURNISH SHALL CONFORM TO THE FOLLOWING:

25%	LIRIODENDRON TULIPIFERA	TULIP POPLAR	12 in – 18 in BR
25%	PLATANUS OCCIDENTALIS	SYCAMORE	12 in – 18 in BR
25%	FRAXINUS PENNSYLVANICA	GREEN ASH	12 in – 18 in BR
25%	BETULA NIGRA	RIVER BIRCH	12 in – 18 in BR

REFORESTATION DETAIL SHEET

N.C.D.O.T. - ROADSIDE ENVIRONMENTAL UNIT

PROJECT REFERENCE NO.	SHEET NO.
ASHE #130	*UO-1*

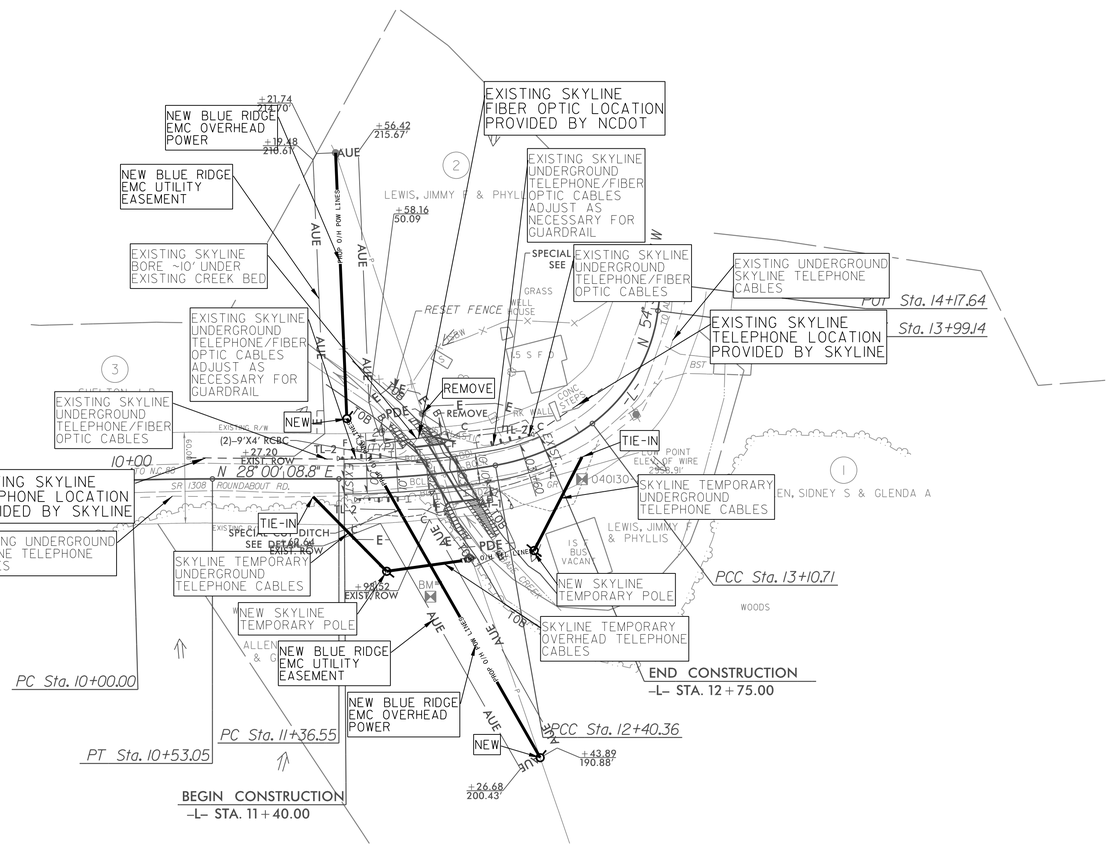
UTILITY ASSESSMENT AND PRELIMINARY ROUTING

NOTE:
ALL PROPOSED UTILITY RELOCATION AND ROUTING IS FOR PRELIMINARY ANALYSIS ONLY, NOT FOR CONSTRUCTION

GRAPHIC SCALES

50 0 50 100
PLANS

DESIGN SPEED = 25 mph
ADT = 260 (2010)



NOTE;

1)SKYLINE TEMPORARILY RELOCATE TELEPHONE CABLES AND POLES DURING CONSTRUCTION AS NOTED ON UO PLAN SHEET. SKYLINE TO ADJUST IN PLACE FIBER OPTIC AROUND GUARDRAIL. AFTER CONSTRUCTION IS COMPLETED SKYLINE TO REMOVE TEMPORARY POLES AND TELEPHONE LINES. IF TELEPHONE CABLES ARE STILL REQUIRED AFTER CONSTRUCTION IS COMPLETED SKYLINE WILL RELOCATE WITHIN NCDOT R/W NOT TO RE-ATTACH TO CULVERT.
SKYLINE REQUIRES A 72 HOUR NOTICE TO PERFORM ON-SITE WORK.

UTILITY OWNERS ON THIS SHEET

BLUE RIDGE EMC – POWER
SKYLINE – TELEPHONE AND FIBER OPTIC

PLANS PREPARED BY :
RK&K
RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
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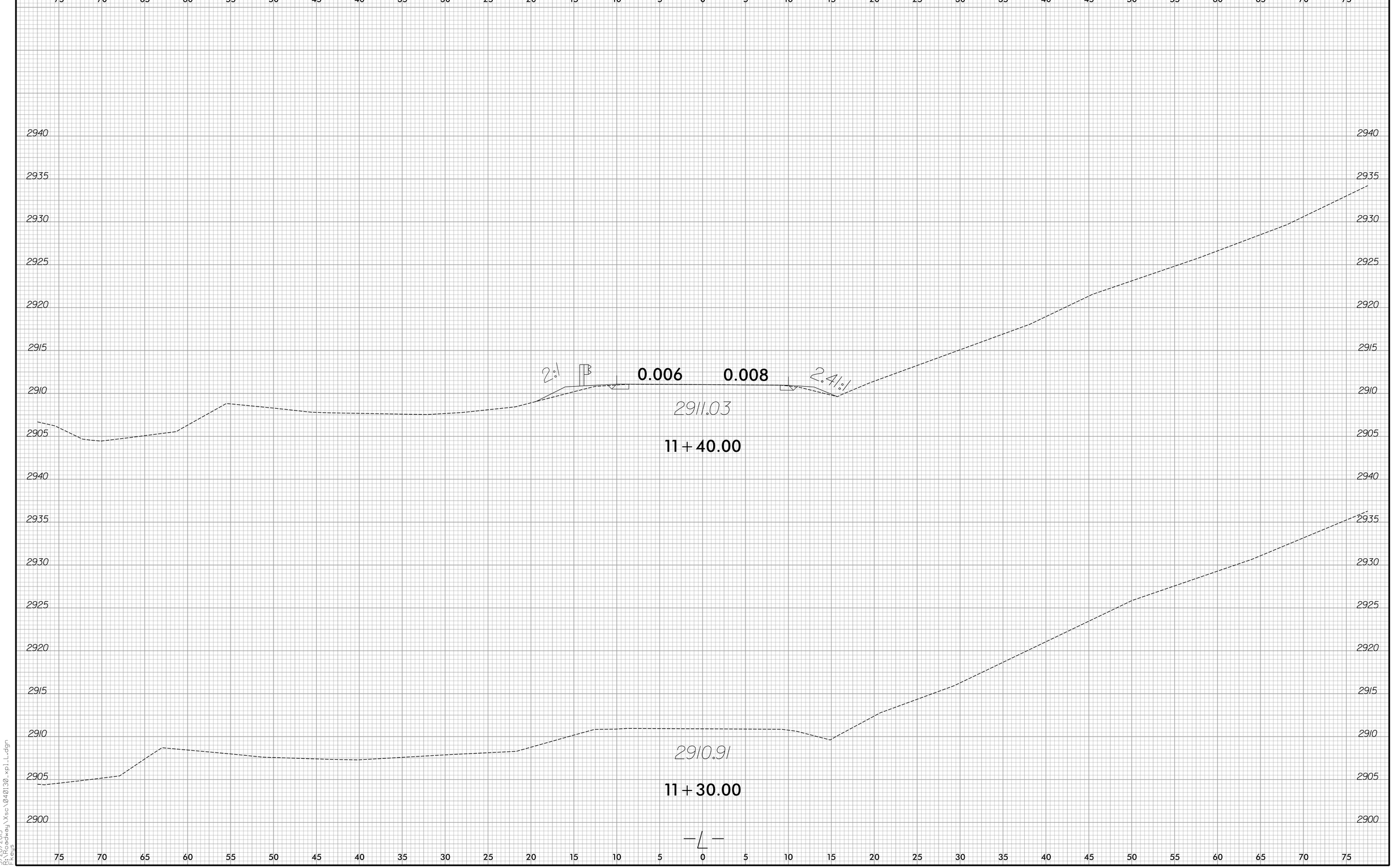
8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	Ashe #130	X-1



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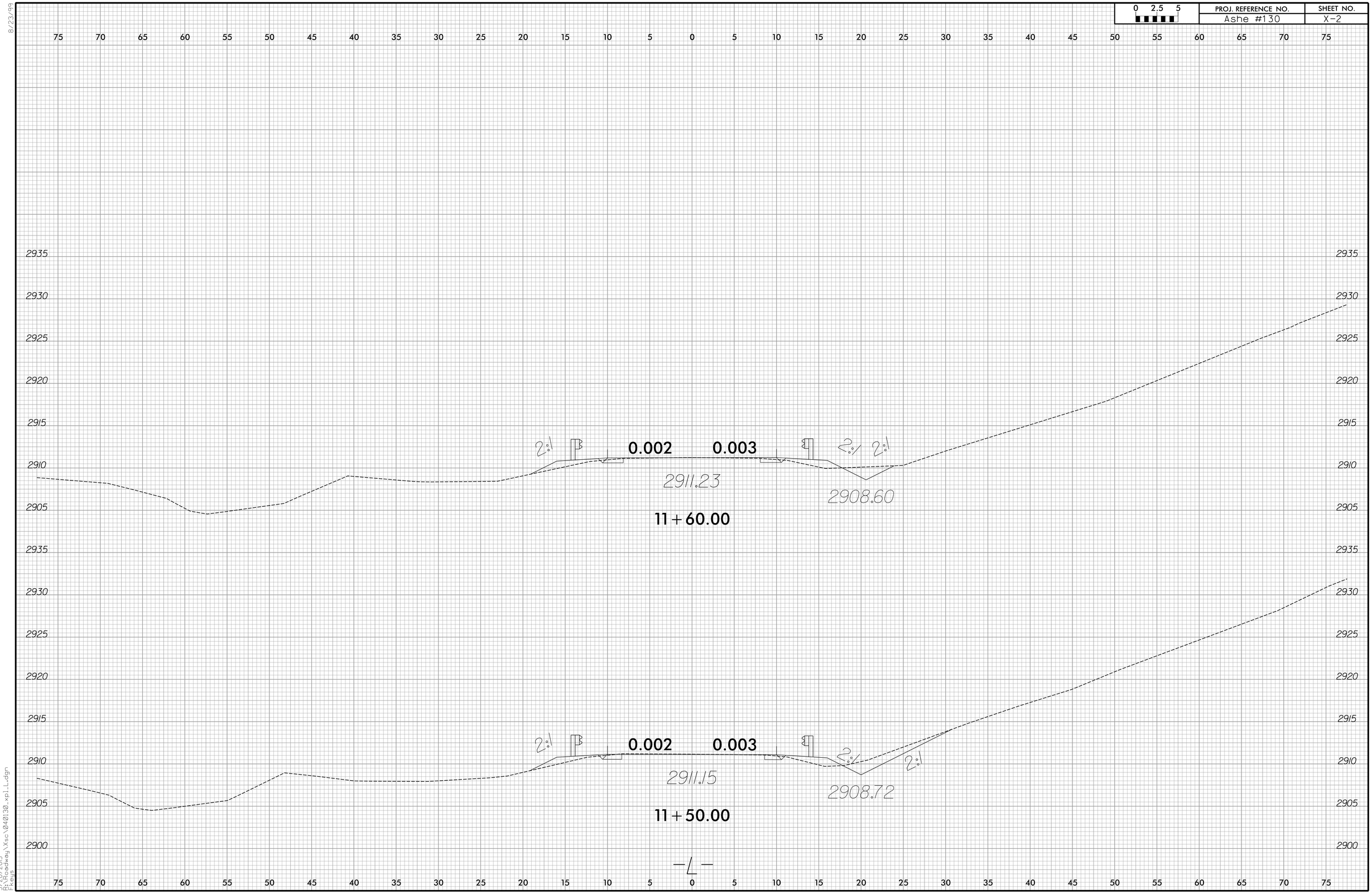

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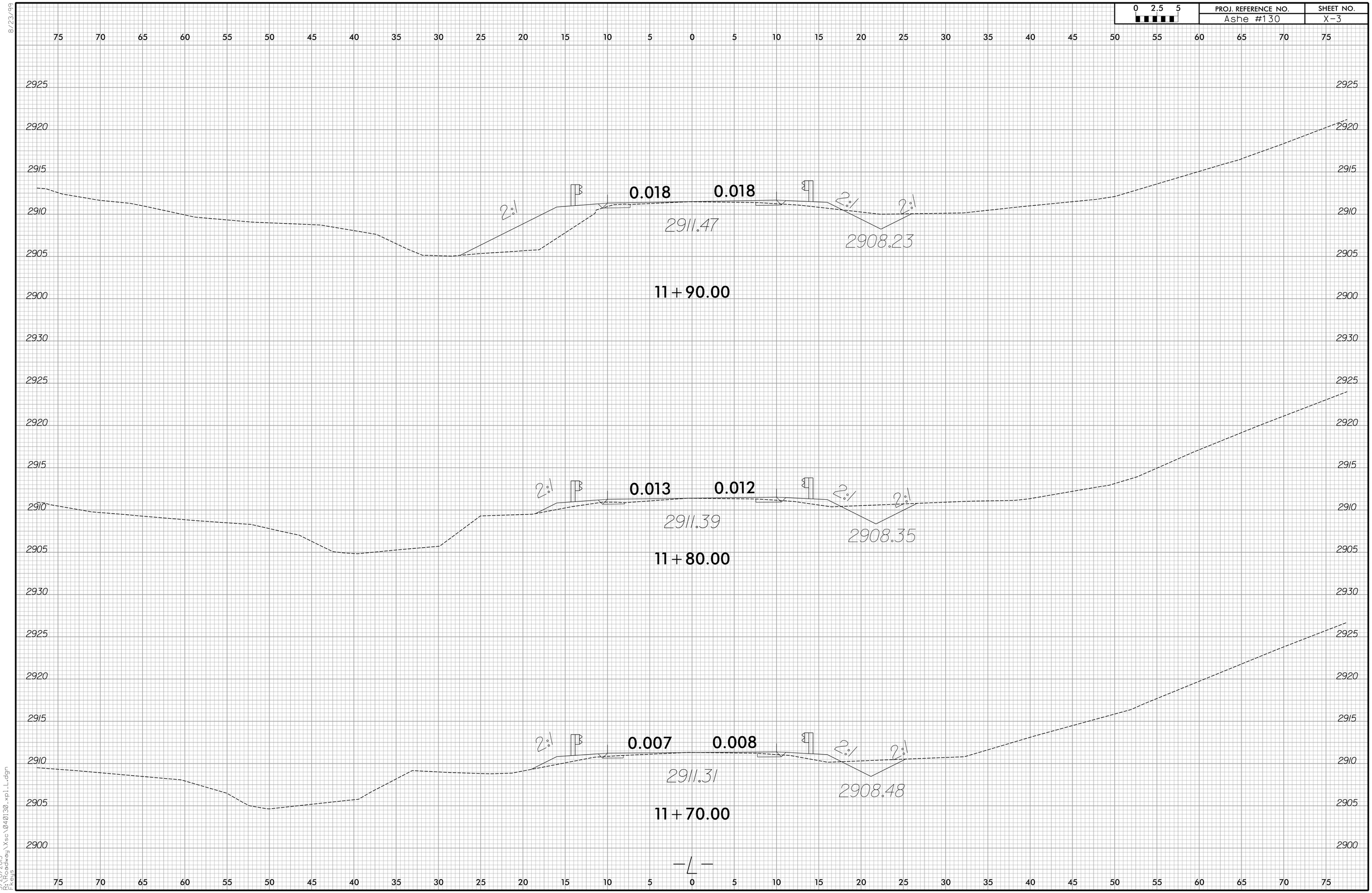
0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	Ashe #130	X-3



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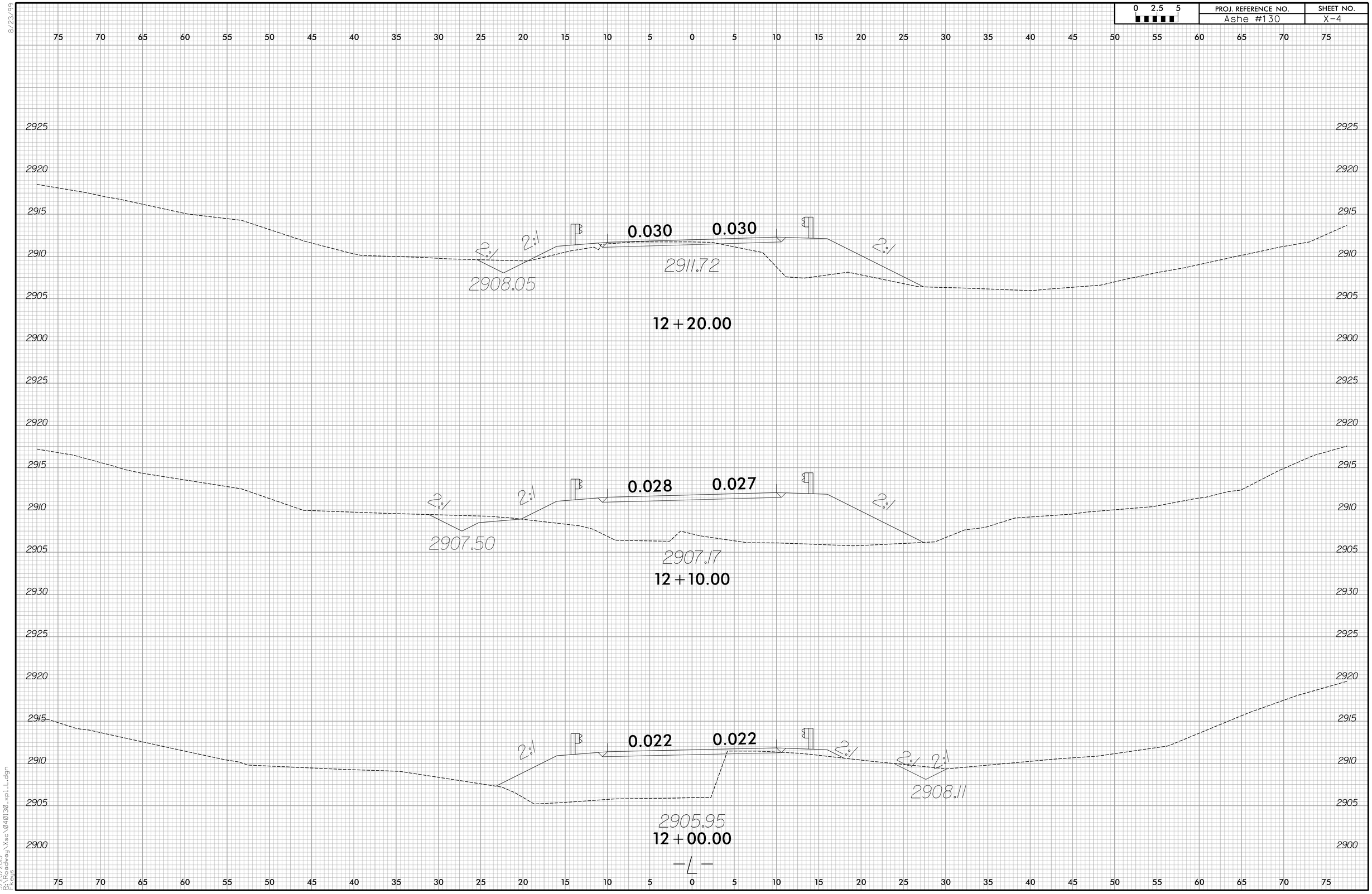
0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	Ashe #130	X-4



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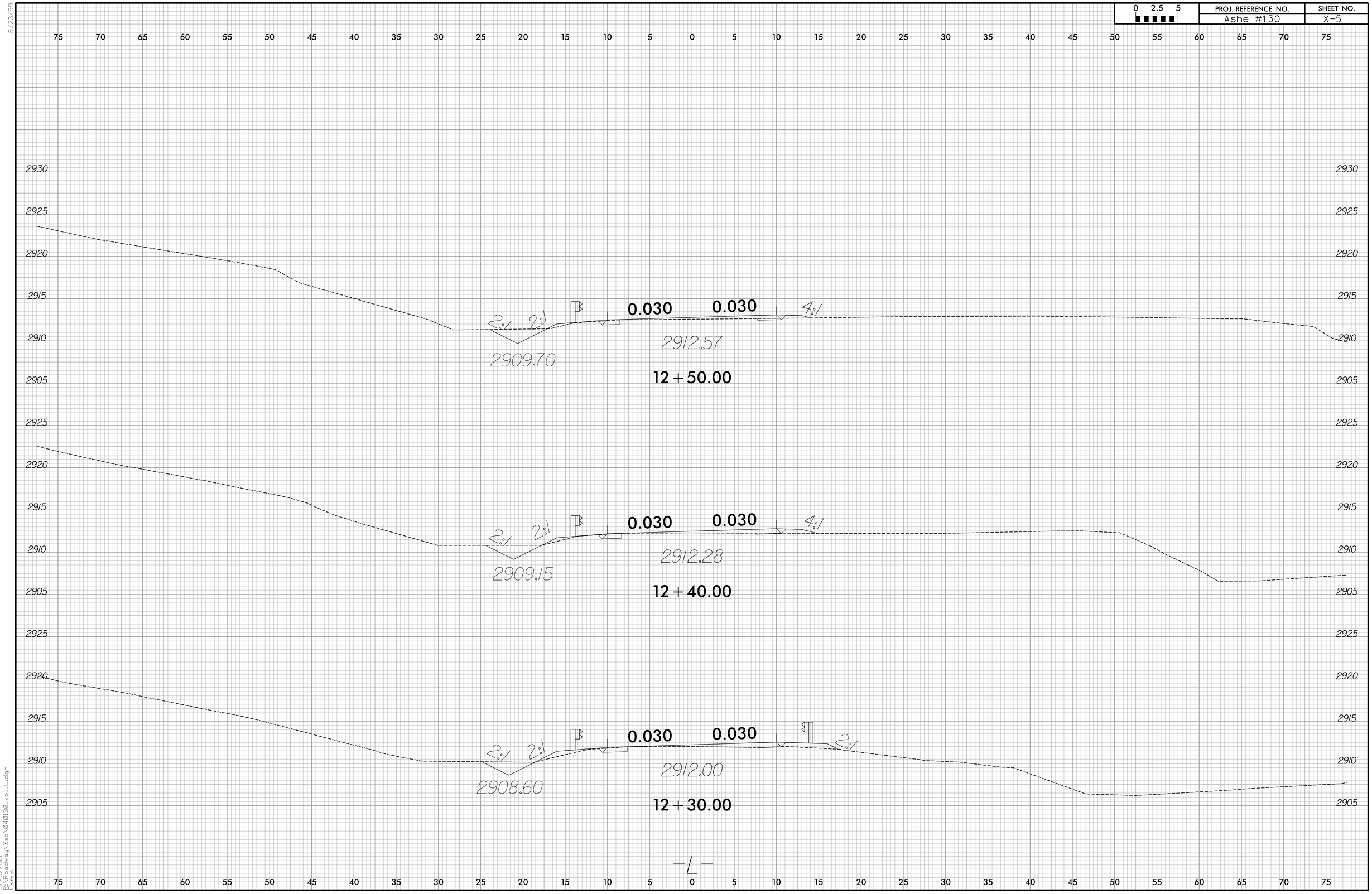
PROJ. REFERENCE NO.	SHEET NO.
Ashe #130	X-5



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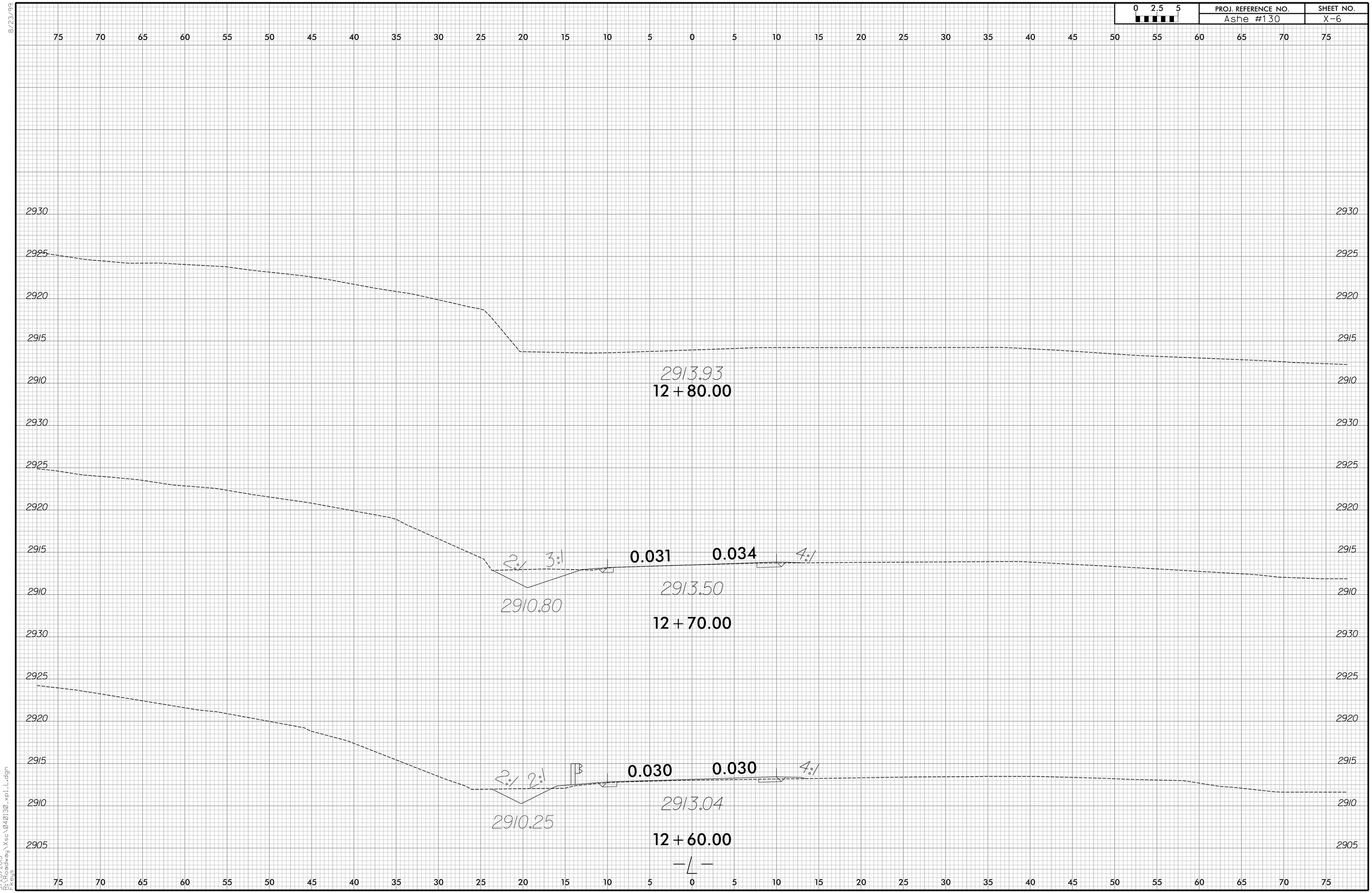
0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	Ashe #130	X-6



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