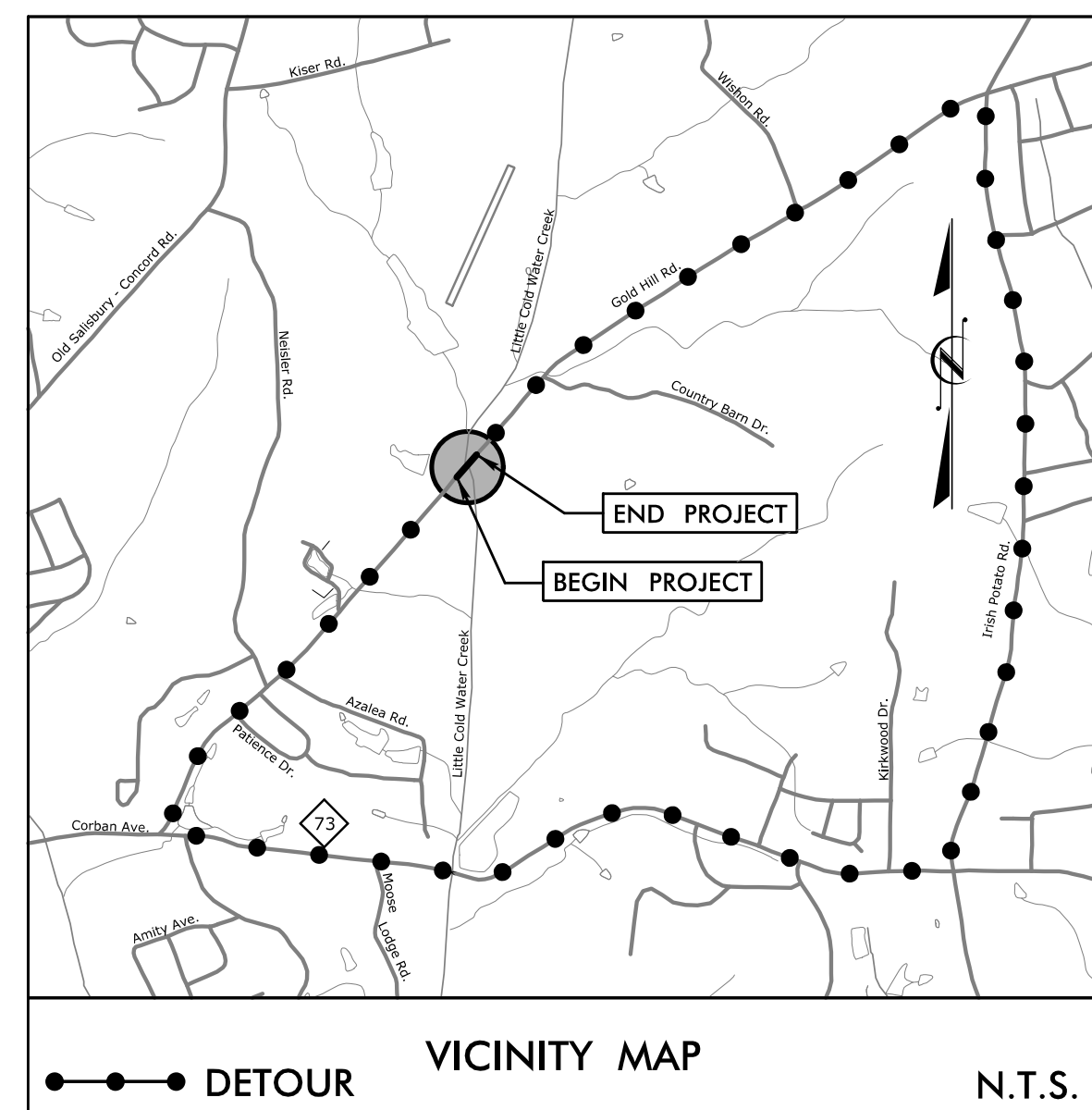


PROJECT: WBS 17BP.10.R.39

CONTRACT:

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Standard Symbology Sheet



FINAL PLANS

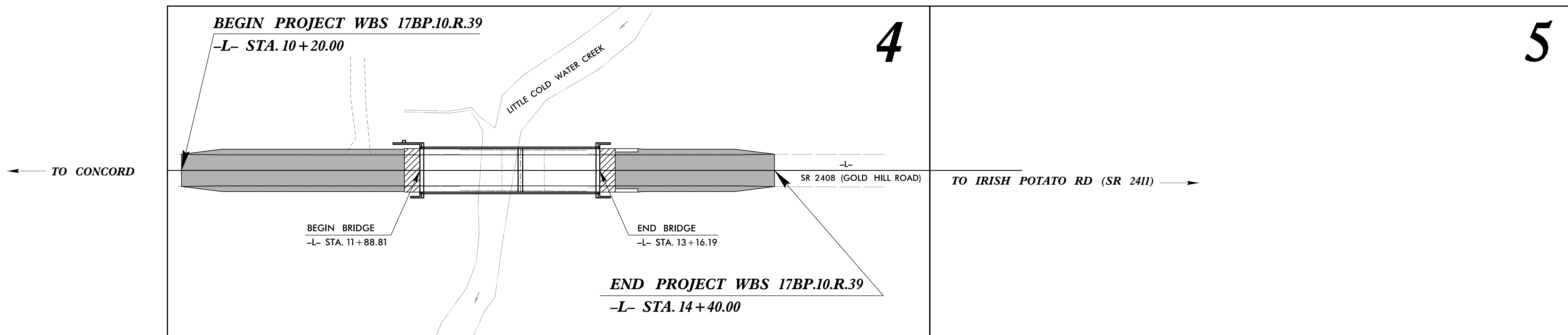
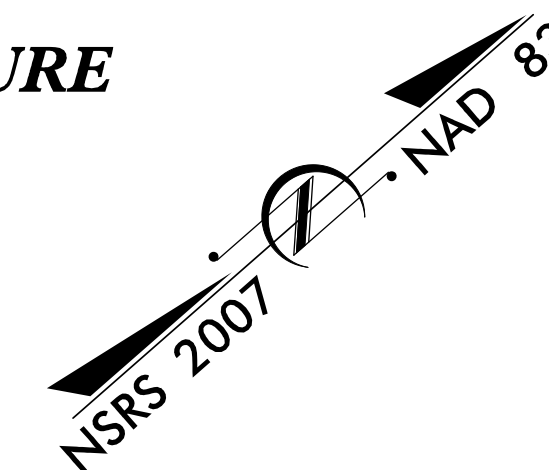
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CABARRUS COUNTY

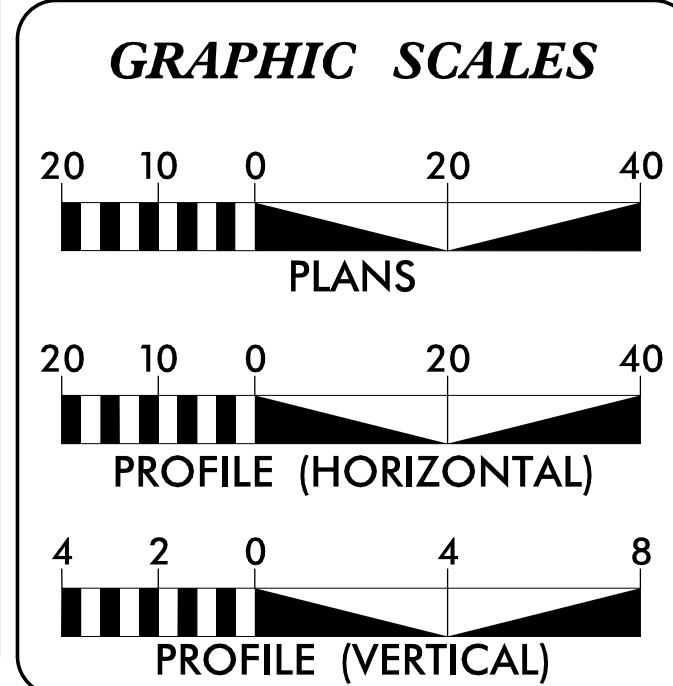
**LOCATION: BRIDGE #080 OVER LITTLE COLD WATER CREEK
ON SR 2408 (GOLD HILL ROAD)**

TYPE OF WORK: GRADING, PAVING, DRAINAGE & STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.10.R.39	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.10.R.39		P.E.	
17BP.10.R.39		R / W & UTILITIES	
17BP.10.R.39		CONST.	



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



DESIGN DATA

ADT 2012 =	3,290
ADT 2035 =	6,316
DHV =	N/A
D =	N/A
T =	6%
V =	55 MPH
FUNC. CLASSIFICATION:	
MINOR COLLECTOR	

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT WBS 17BP.10.R.39 =	0.056 MILES
LENGTH OF STRUCTURE PROJECT WBS 17BP.10.R.39 =	0.024 MILES
TOTAL LENGTH OF PROJECT WBS 17BP.10.R.39 =	0.080 MILES

NCDOT CONTACT: GARLAND HAYWOOD, PE
Division Bridge Manager

PLANS PREPARED FOR THE NCDOT BY:
STV/RALPH WHITEHEAD ASSOCIATES, INC.
1000 West Morehead St., Ste. 200, Charlotte NC, 28208
NC License Number F-0991

2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE:	NIKKI T. HONEYCUTT, PE PROJECT ENGINEER
LETTING DATE:	RICHARD A. ODYNSKI, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

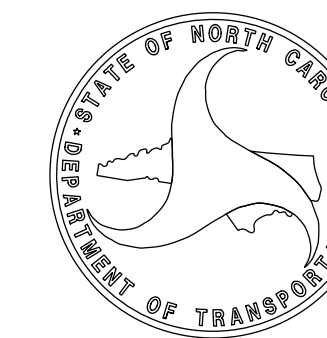
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

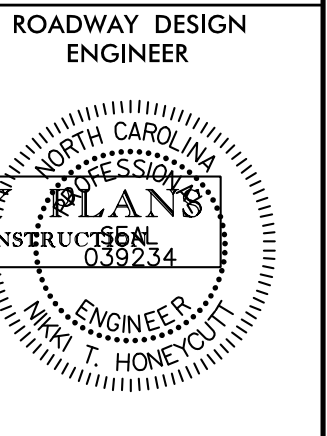
SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SIGNATURE: _____ P.E.





PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
3	SUMMARIES AND TYPICALS
4 THRU 5	PLAN AND PROFILE SHEET
TCP-1 THRU TCP-2	TRAFFIC CONTROL PLANS
UC-1 THRU UC-2	UTILITY PLANS
EC-1 THRU EC-4	EROSION CONTROL PLANS
X-1 THRU X-2	CROSS-SECTIONS
S-1 THRU S-21	STRUCTURE PLANS

GENERAL NOTES

GENERAL NOTES: 2012 SPECIFICATIONS
EFFECTIVE: 01-01-2012

GRADE LINE:
GRADING AND SURFACING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

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

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01.

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

END BENTS:

THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY CONTRACT.

STANDARD DRAWINGS

2012 ROADWAY ENGLISH STANDARD DRAWINGS EFF. January, 2012

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - 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
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
840.29	Frames and Narrow Slot Flat Grates
840.35	Traffic Bearing Grated Drop Inlet
846.01	Concrete Curb, Gutter and Curb & Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
876.02	Guide for Rip Rap at Pipe Outlets
DIVISION 11 - WORK ZONE TRAFFIC CONTROL	
1110.01	Stationary Work Zone Signs - Mounting Height & Lateral Clearance
1145.01	Barricades - Type III
DIVISION 16 - EROSION CONTROL AND ROADSIDE DEVELOPMENT	
1605.01	Temporary Silt Fence
1606.01	Special Sediment Control Fence
1607.01	Gravel Construction Entrance
1622.01	Guide for Temporary Berms and Slope Drains
1630.06	Special Stilling Basin
1632.03	Rock Inlet Sediment Trap Type C
1633.01	Temporary Rock Silt Check Type A

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	⊙ EIP
Property Corner	-----x
Property Monument	⊠ ECM
Parcel/Sequence Number	Ⓜ 123
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	⊠
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-WLB-
Proposed Wetland Boundary	-WLB-
Existing Endangered Animal Boundary	-EAB-
Existing Endangered Plant Boundary	-EPB-
Known Soil Contamination: Boundary or Site	☠
Potential Soil Contamination: Boundary or Site	?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	⊙
Well	⊙ W
Small Mine	⊗
Foundation	⊠
Area Outline	⊠
Cemetery	⊠ †
Building	⊠
School	⊠
Church	⊠
Dam	⊠

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	⊠
Jurisdictional Stream	-----JS
Buffer Zone 1	-----BZ 1
Buffer Zone 2	-----BZ 2
Flow Arrow	←
Disappearing Stream	----->
Spring	⊙
Wetland	⊠
Proposed Lateral, Tail, Head Ditch	-----FLOW
False Sump	⊠

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	⊙ CSX TRANSPORTATION MILEPOST 35
Switch	⊠ SWITCH
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	-----RW
Proposed Right of Way Line with Iron Pin and Cap Marker	-----RW ⊠
Proposed Right of Way Line with Concrete or Granite Marker	-----RW ⊠
Existing Control of Access	⊙
Proposed Control of Access	⊙
Existing Easement Line	-----E
Proposed Temporary Construction Easement	-----E
Proposed Temporary Drainage Easement	-----TDE
Proposed Permanent Drainage Easement	-----PDE
Proposed Permanent Drainage / Utility Easement	-----DUE
Proposed Permanent Utility Easement	-----PUE
Proposed Temporary Utility Easement	-----TUE
Proposed Aerial Utility Easement	-----AUE
Proposed Permanent Easement with Iron Pin and Cap Marker	-----◆

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-----C
Proposed Slope Stakes Fill	-----F
Proposed Curb Ramp	-----CR
Curb Cut Future Ramp	-----CCFR
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊙
Pavement Removal	⊠

Proposed Edge of Pavement	-----
Proposed Curb	-----
Proposed Slope Stakes Cut	-----C
Proposed Slope Stakes Fill	-----F
Proposed Curb Ramp	-----CR
Curb Cut Future Ramp	-----CCFR
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊙
Pavement Removal	⊠

Proposed Edge of Pavement	-----
Proposed Curb	-----
Proposed Slope Stakes Cut	-----C
Proposed Slope Stakes Fill	-----F
Proposed Curb Ramp	-----CR
Curb Cut Future Ramp	-----CCFR
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊙
Pavement Removal	⊠

VEGETATION:

Single Tree	⊙
Single Shrub	⊙
Hedge	-----
Woods Line	-----

Orchard	⊙
Vineyard	⊠ Vineyard

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	-----CONC
Bridge Wing Wall, Head Wall and End Wall	-----CONC WW
MINOR:	
Head and End Wall	-----CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	⊠ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	⊙
Storm Sewer	-----S

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊙
Power Line Tower	⊠
Power Transformer	⊠
U/G Power Cable Hand Hole	⊠
H-Frame Pole	●
Recorded U/G Power Line	-----P
Designated U/G Power Line (S.U.E.*)	-----P

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊙
Telephone Booth	⊠
Telephone Pedestal	⊠
Telephone Cell Tower	⊠
U/G Telephone Cable Hand Hole	⊠
Recorded U/G Telephone Cable	-----T
Designated U/G Telephone Cable (S.U.E.*)	-----T
Recorded U/G Telephone Conduit	-----TC
Designated U/G Telephone Conduit (S.U.E.*)	-----TC
Recorded U/G Fiber Optics Cable	-----T FO
Designated U/G Fiber Optics Cable (S.U.E.*)	-----T FO

WATER:

Water Manhole	⊙
Water Meter	⊙
Water Valve	⊗
Water Hydrant	⊙
Recorded U/G Water Line	-----W
Designated U/G Water Line (S.U.E.*)	-----W
Above Ground Water Line	-----A/G Water

TV:

TV Satellite Dish	⊠
TV Pedestal	⊠
TV Tower	⊗
U/G TV Cable Hand Hole	⊠
Recorded U/G TV Cable	-----TV
Designated U/G TV Cable (S.U.E.*)	-----TV
Recorded U/G Fiber Optic Cable	-----TV FO
Designated U/G Fiber Optic Cable (S.U.E.*)	-----TV FO

GAS:

Gas Valve	◇
Gas Meter	⊙
Recorded U/G Gas Line	-----G
Designated U/G Gas Line (S.U.E.*)	-----G
Above Ground Gas Line	-----A/G Gas

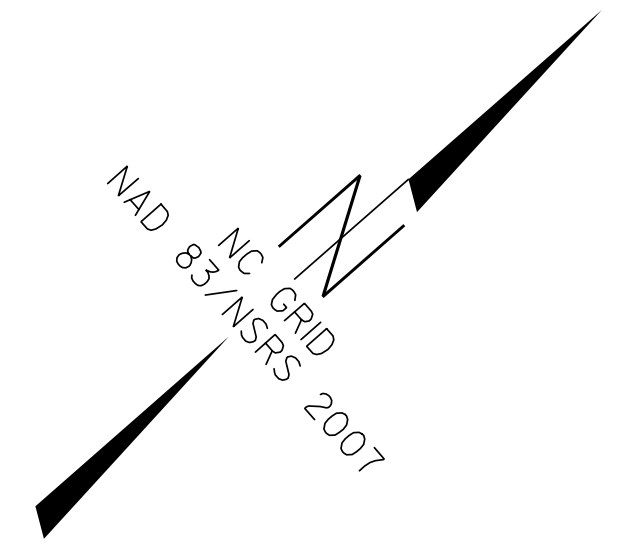
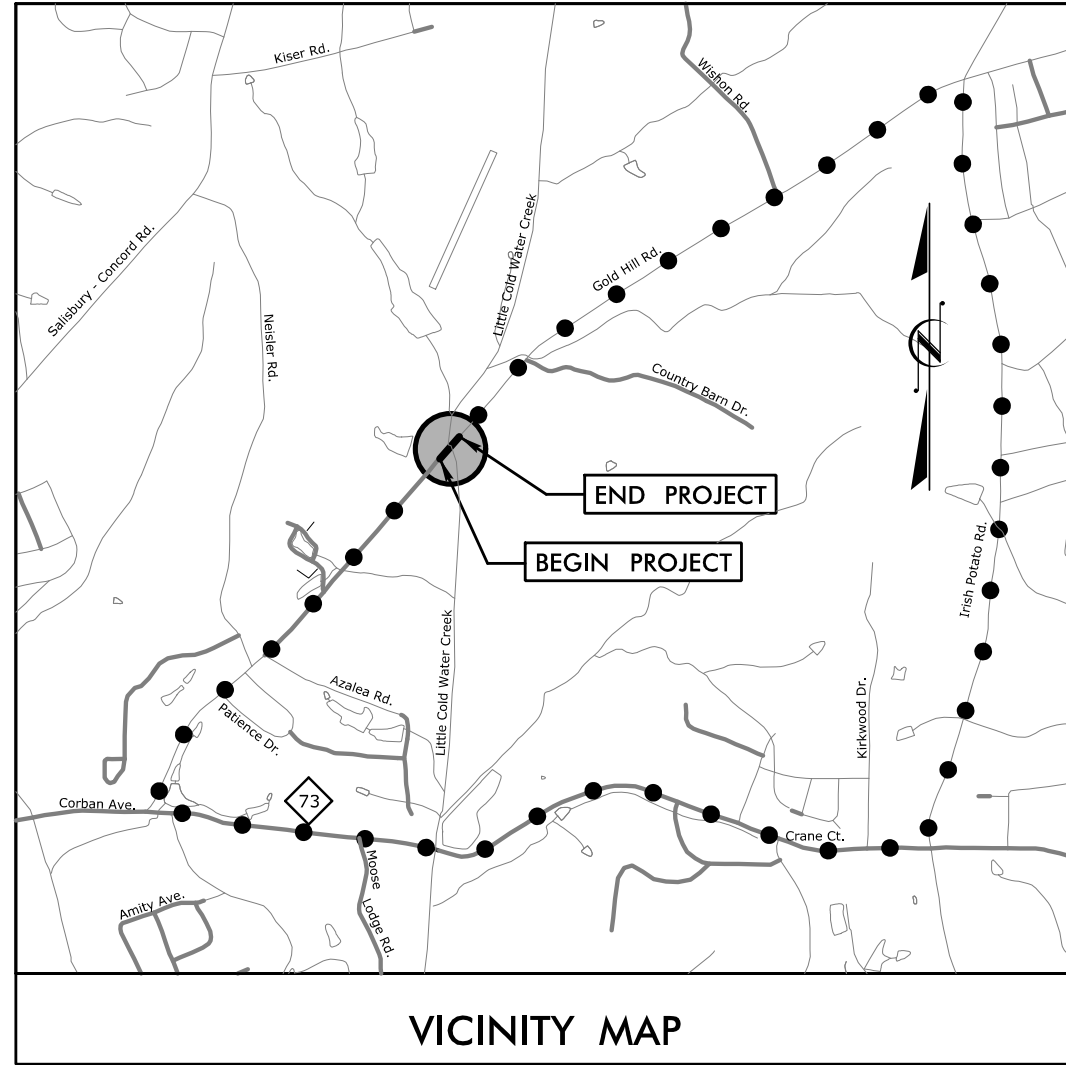
SANITARY SEWER:

Sanitary Sewer Manhole	⊙
Sanitary Sewer Cleanout	⊙
U/G Sanitary Sewer Line	-----SS
Above Ground Sanitary Sewer	-----A/G Sanitary Sewer
Recorded SS Forced Main Line	-----FSS
Designated SS Forced Main Line (S.U.E.*)	-----FSS

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	⊠
Utility Located Object	○
Utility Traffic Signal Box	⊠
Utility Unknown U/G Line	-----2UTL
U/G Tank; Water, Gas, Oil	⊠
Underground Storage Tank, Approx. Loc.	⊠ UST
A/G Tank; Water, Gas, Oil	⊠
Geoenvironmental Boring	⊙
U/G Test Hole (S.U.E.*)	⊙
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

SURVEY CONTROL SHEET



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "BL-2"

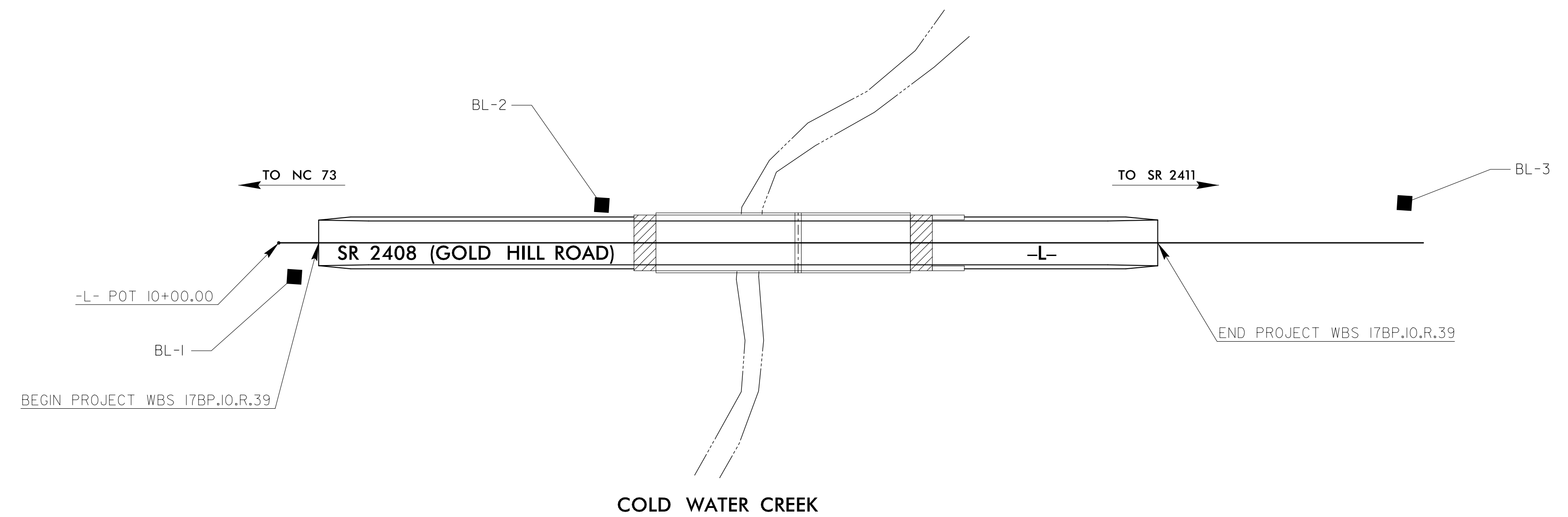
WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF
 NORTHING: 615070.898(±) EASTING: 1542278.220(±)
 ELEVATION: 586.92(±)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999854

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "BL-2" TO -L- POT STATION 10+20.00 IS
 S 33° 33' 56.5432" W 143.3486 (±)

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NAVD 88

BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	BL-1	614931.4930	1542203.8190	586.94	10+07.80	16.95 RT
2	BL-2	615070.8980	1542278.2200	586.92	11+61.68	18.97 LT
3	BL-3	615373.7880	1542542.2740	585.69	15+63.51	19.98 LT



NOTES:

- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTP://WWW.NCDOT.ORG/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/](http://www.ncdot.org/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/)
 THE FILES TO BE FOUND ARE AS FOLLOWS:
 12-0080_LS_CONTROL.TXT
 SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
 ■ INDICATES CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
 PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.

	L	NORTH	EAST
POT	10+00.00	614936.7956	1542185.9326
POT	17+18.24	615476.9991	1542659.2781

ROW MARKER IRON PIN AND CAP				
ALIGN	STATION	OFFSET	NORTH	EAST
L	10+55.00	-45.00	615007.8184	1542188.3341
L	10+55.00	-29.98	614997.9226	1542199.6276
L	10+90.00	50.00	614971.5345	1542282.8511
L	10+90.00	30.03	614984.6982	1542267.8281
L	10+95.00	-75.00	615057.6739	1542192.1318
L	11+53.50	-75.00	615101.6727	1542230.6851
L	11+92.50	-45.00	615111.2343	1542278.9508
L	11+92.50	-57.50	615119.4722	1542269.5493
L	13+50.00	-45.00	615229.6926	1542382.7481
L	13+50.00	-29.90	615219.7414	1542394.1049
L	16+20.00	30.18	615383.2202	1542617.2280
L	16+20.00	50.00	615370.1560	1542632.1375

NOTE: DRAWING NOT TO SCALE

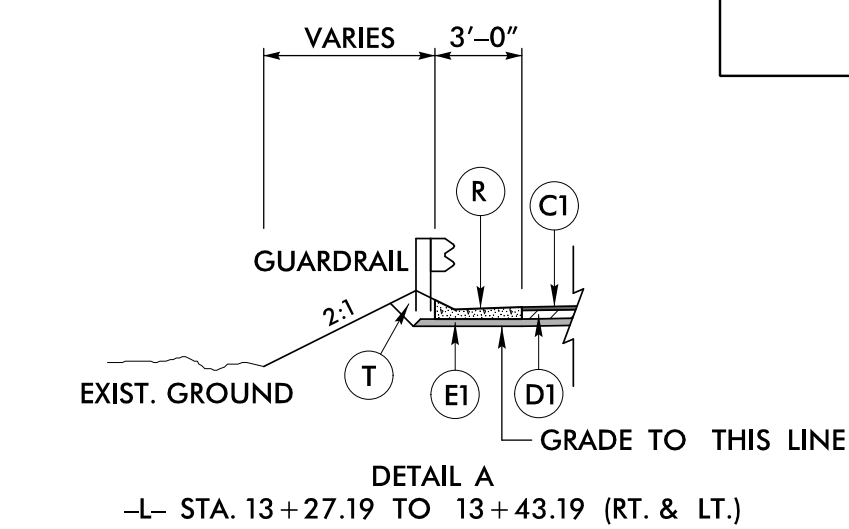
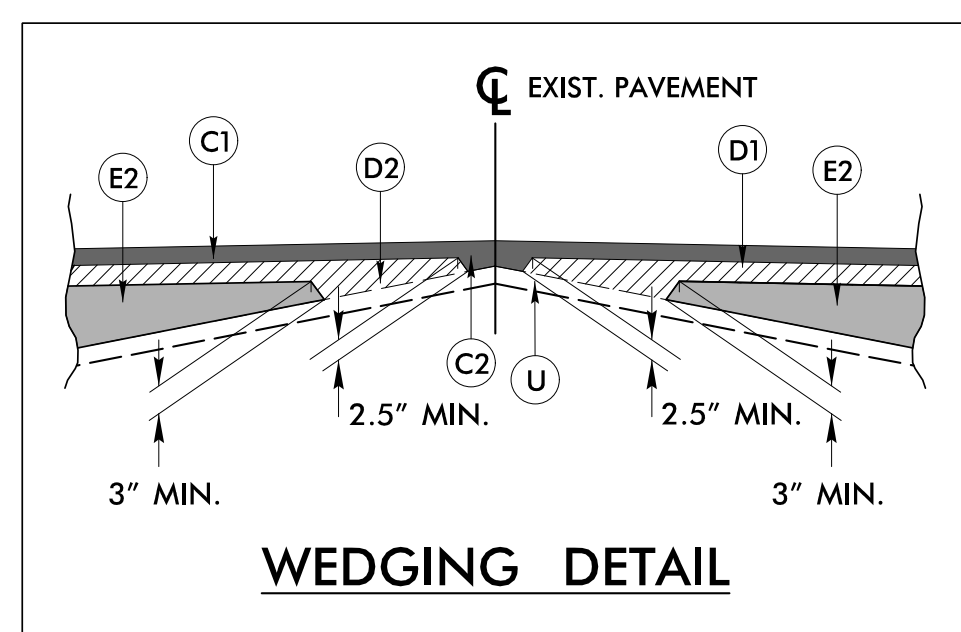
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. 17BP10.R.39	SHEET NO. 3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PAVEMENT DESIGN PROVIDED BY NCDOT	

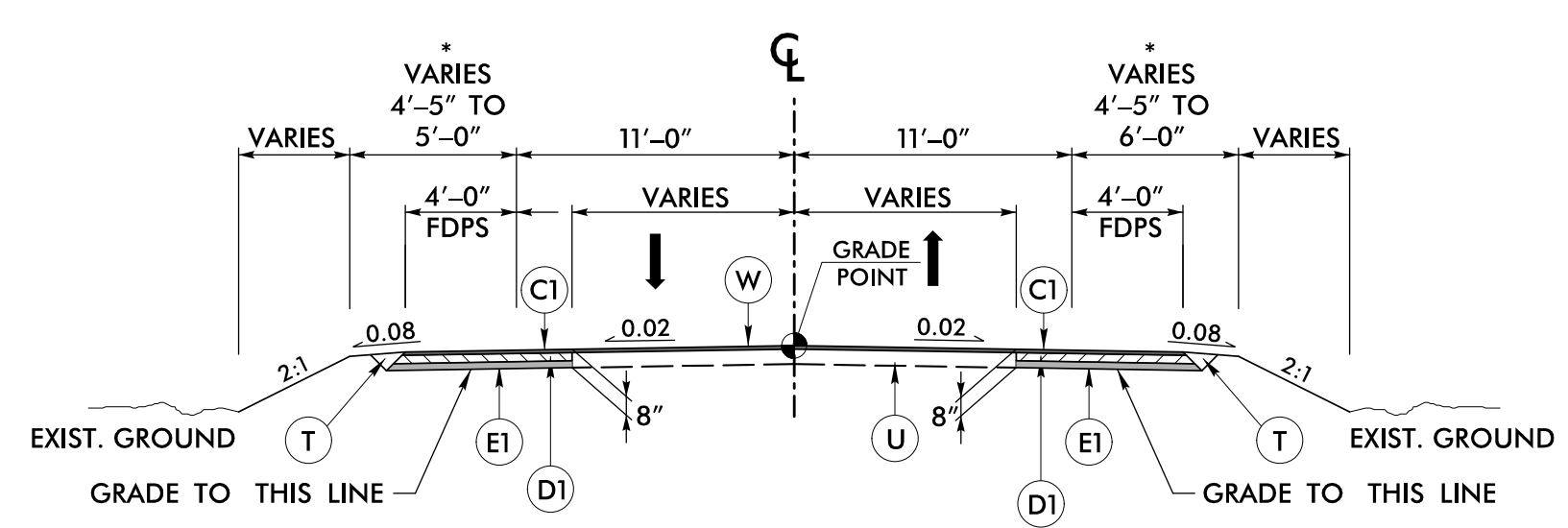
STV / Ralph Whitehead Associates, Inc.
1000 West Morehead St., Ste. 200
Charlotte, NC 28208
NC License Number F-0991

EARTHWORK SUMMARY (IN CUBIC YARDS)

CHAIN	FROM STATION	TO STATION	SIDE	UNCL. EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
-L-	10+20.00	11+88.81	LT & RT	300		208		92
SUBTOTAL SUMMARY NO. 1				300		208		92
-L-	13+16.19	14+40.00	LT & RT	11		100	89	
SUBTOTAL SUMMARY NO. 2				11		100	89	
SUBTOTAL SUMMARY 1-2				311		308	89	92
LOSS DUE TO CLEARING AND GRUBBING							214	
PROJECT TOTAL				311		308	89	92
WASTE IN LIEU OF BORROW							-92	-92
ESTIMATE 5% FOR TOPSOIL ON BORROW PITS							11	
GRAND TOTAL				311		308	222	0
SAY				315		225		



PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1.5" IN DEPTH OR GREATER THAN 2.0" IN DEPTH.
D1	PROP. APPROX. 3.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 399 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 3" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3.0" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.
R	CONCRETE SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	PAVEMENT WEDGING



NOTE: Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

Approximate quantities only. Unclassified Excavation, Borrow Excavation, Fine Grading, Clearing and Grubbing, Breaking of Existing Pavement, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

* ADDITIONAL 3'-0" WITH GUARDRAIL
** ALL PAVEMENT SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
*** SEE DETAIL A FOR SHOULDER BERM GUTTER LOCATION

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

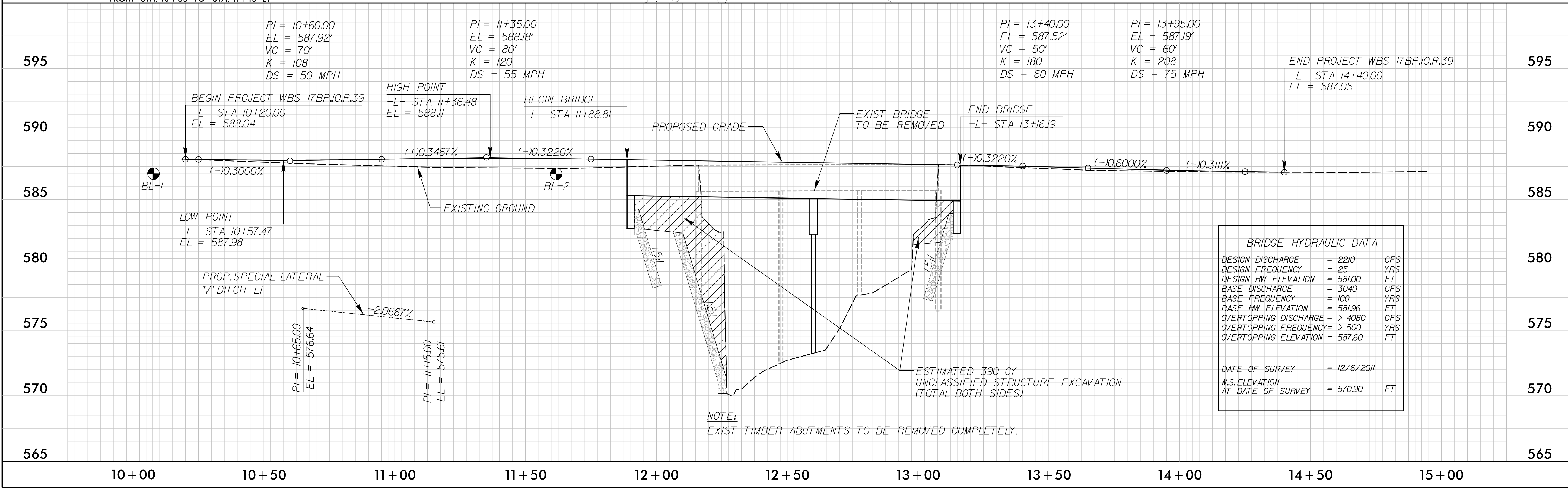
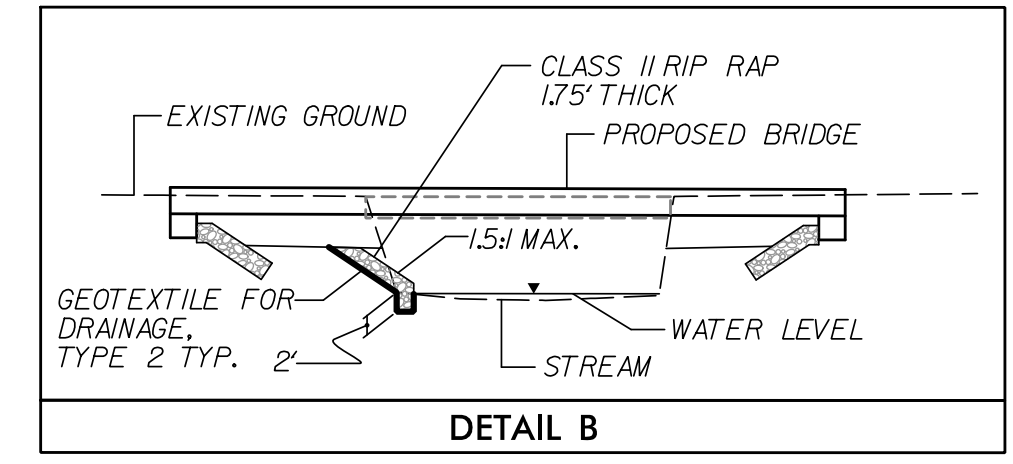
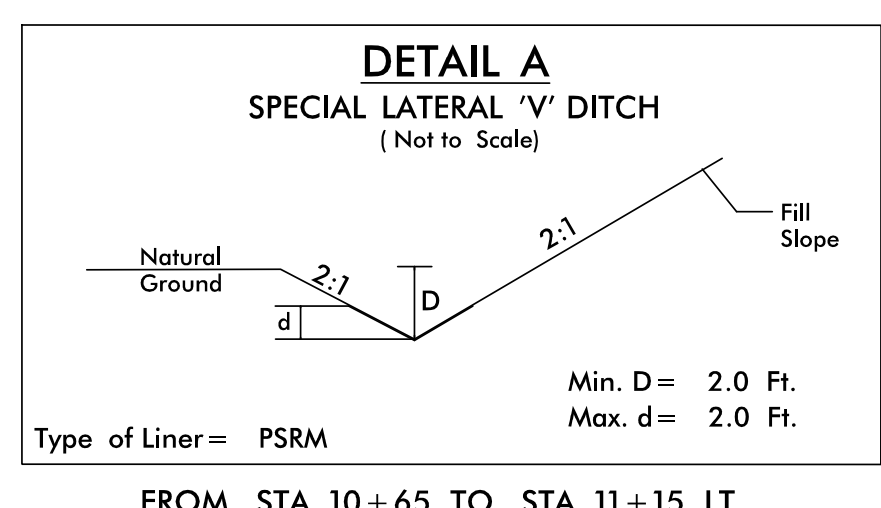
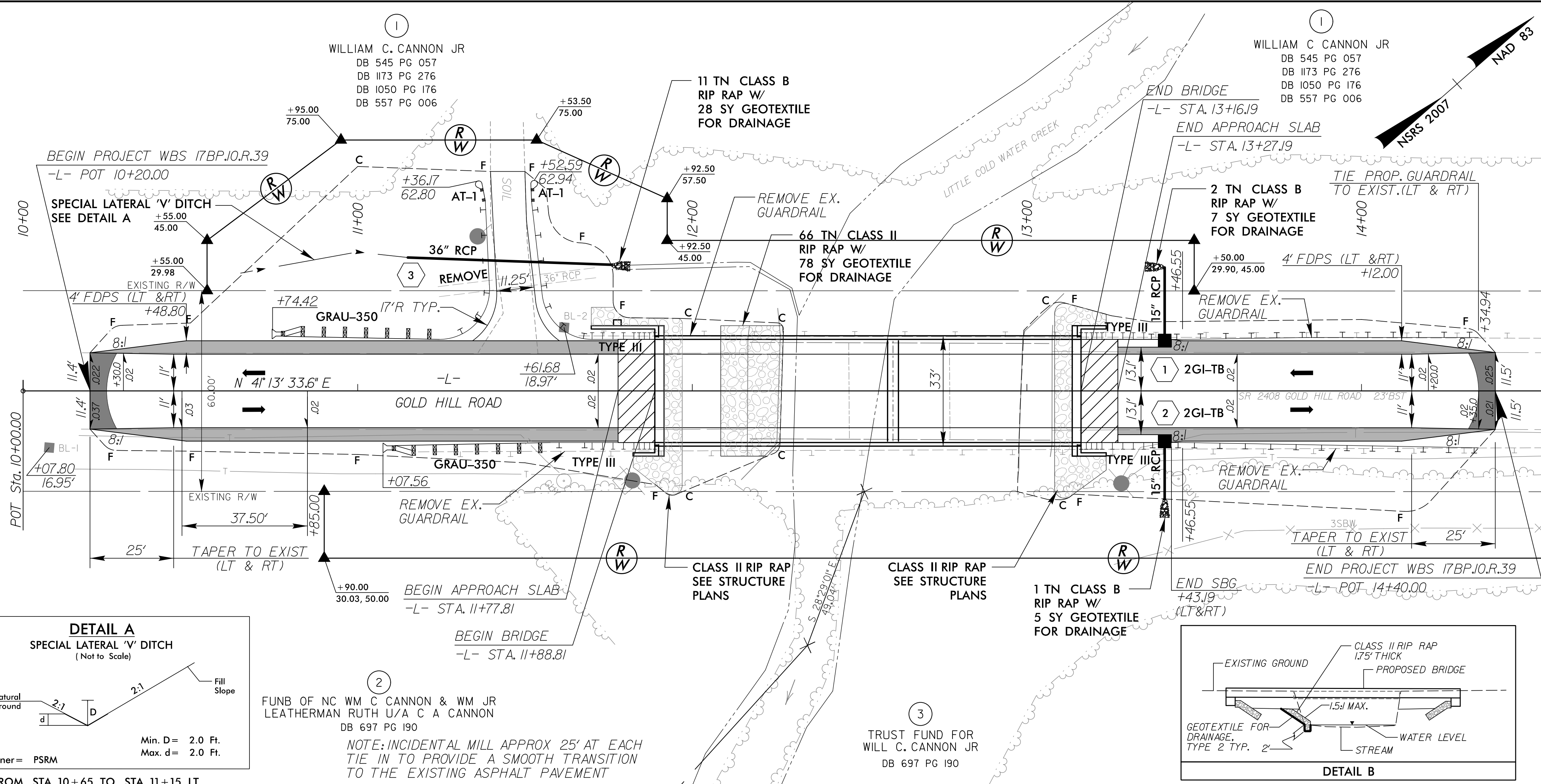
STATION	LOCATION (LT, RT, OR CL)	STRUCTURE NO.	TOP ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC)				C.S. PIPE				R.C. PIPE CLASS III				R.C. PIPE CLASS IV				ENDWALLS	QUANTITIES FOR DRAINAGE STRUCTURES	FRAME, GRATES, AND HOOD STANDARD 840.03	CONCRETE TRANSITIONAL SECTION	PIPE REMOVAL LIN. FT.	REMARKS			
						12"	15"	18"	24"	12"	15"	18"	24"	12"	15"	18"	24"	12"	15"	18"	24"							STANDARD	PER EACH (0' THRU 50')	PER EACH (50' THRU 100')
-L- 13+41.19	LT	1	587.23																											
-L- 13+41.19	RT	2	587.23																											
-L- 11+15.00	LT	3	575.61	574.00	2.68																									
SHEET TOTALS																														

* W MEASURED FROM "N" AT THE BEGINNING OF THE ANCHOR TO "N" AT THE END OF THE ANCHOR.
"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W*		ANCHORS							IMPACT ATTENUATOR TYPE 350	SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS								
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	XI MOD	B-77	GRAU 350	M-350	TYPE III	CAT-1	VI MOD	BIC	AT-1						EA	G	NG					
-L-	11+07.56	11+88.81	RT	81.25			11+88.81		4.42-5.42	7.42	50.00'		1.0'																					
-L-	10+74.42	11+36.17	LT	81.25	25.00			11+00.00	4.42-5.42	7.42	50.00'		1.0'																					
-L-	11+52.59	11+88.81	LT	50.00	25.00			11+88.81	4.42	7.42																								
-L-	13+16.19	14+34.94	RT	118.75				13+16.19	4.42-6.00	7.42-9.00		87.50'		1.58'																				
-L-	13+16.19	14+34.94	LT	118.75					4.42-5.00	7.72-8.00	37.50'		0.58'																					
TOTAL:				450	50.0																													
TOTAL ANCHOR LENGTH:				187.5	0.0																													
TOTAL GUARDRAIL LENGTH:				262.5	50.0																													
SAY:				262.5	50.0																													

F:\roadway\proj\NDR39_rdy_dsr\03.dgn 10/3/2012



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DATUM DESCRIPTION

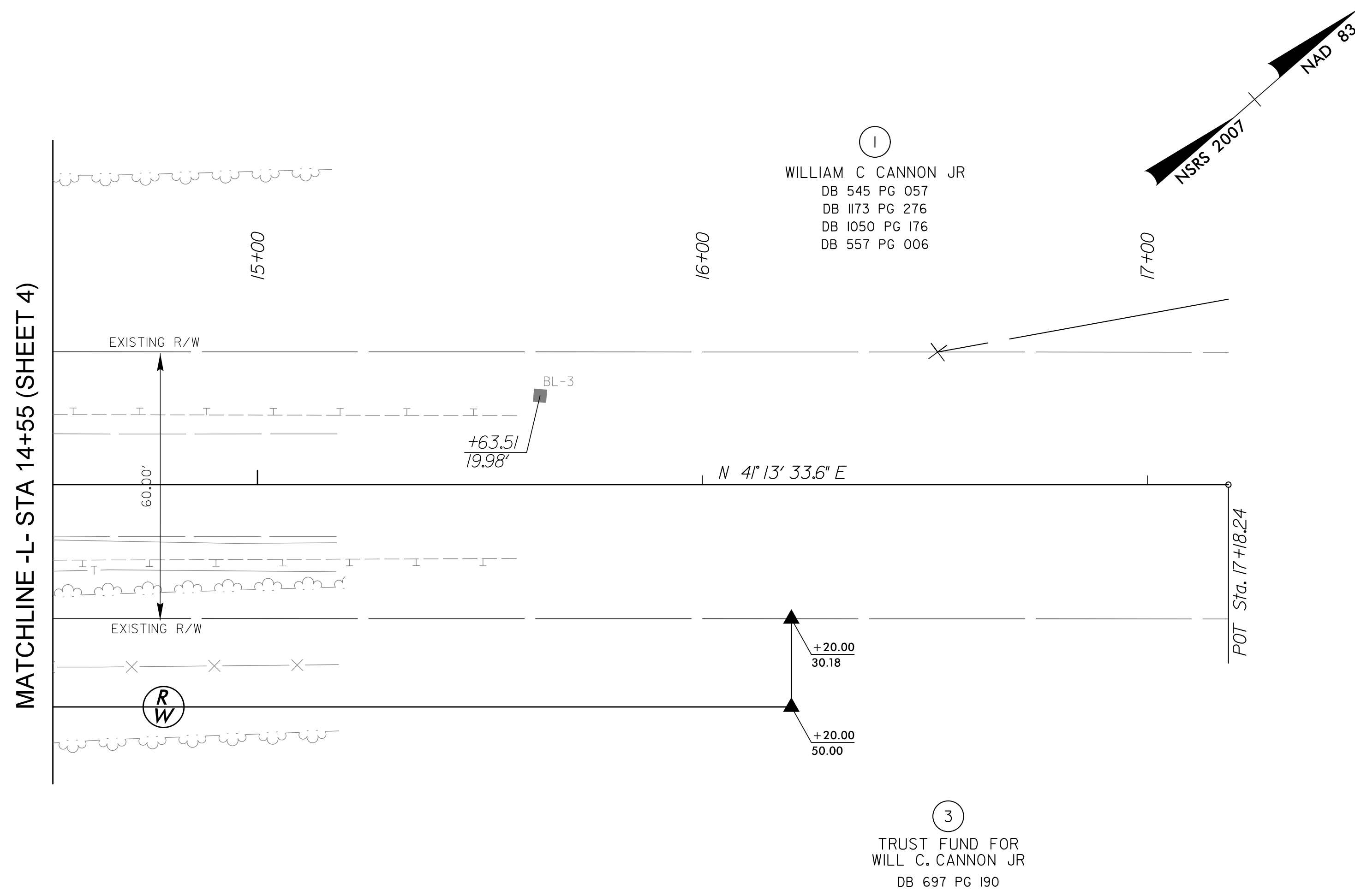
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "BL-2" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 615070.898(±) EASTING: 1542278.220(±) ELEVATION: 586.92(±)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999854

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "BL-2" TO "L- POT STATION 10+20.00 IS S 33° 36' 04.1771" W 142.9447 (±)

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

BL-1	N 614931.493	E 1542203.819	ELEV 586.94
BL-2	N 615070.898	E 1542278.220	ELEV 586.92
BL-3	N 615373.788	E 1542542.274	ELEV 585.69



DETOUR ROUTE

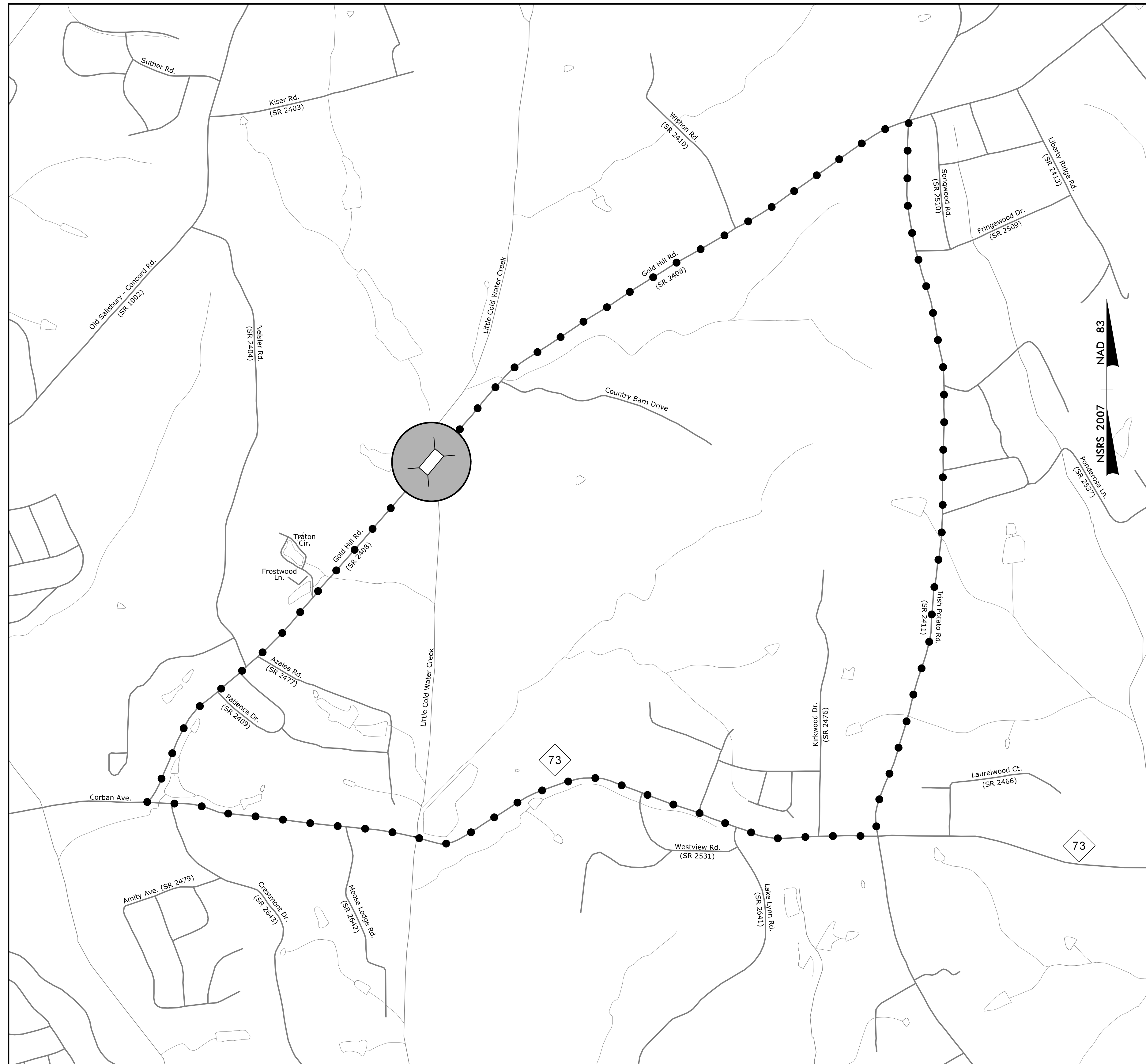
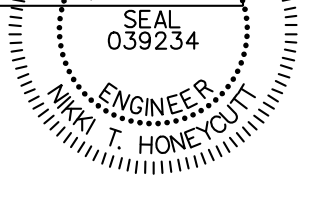
PROJECT REFERENCE NO. 17BP10.R.39	SHEET NO. TCP-1
RW SHEET NO.	



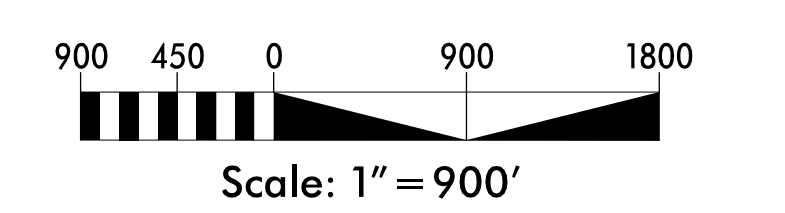
STV / Ralph Whitehead Associates, Inc.
1000 West Morehead St., Ste. 200
Charlotte, NC 28208
NC License Number F-0991

ROADWAY DESIGN
ENGINEER

PRELIMINARY
DO NOT USE FOR CONSTRUCTION



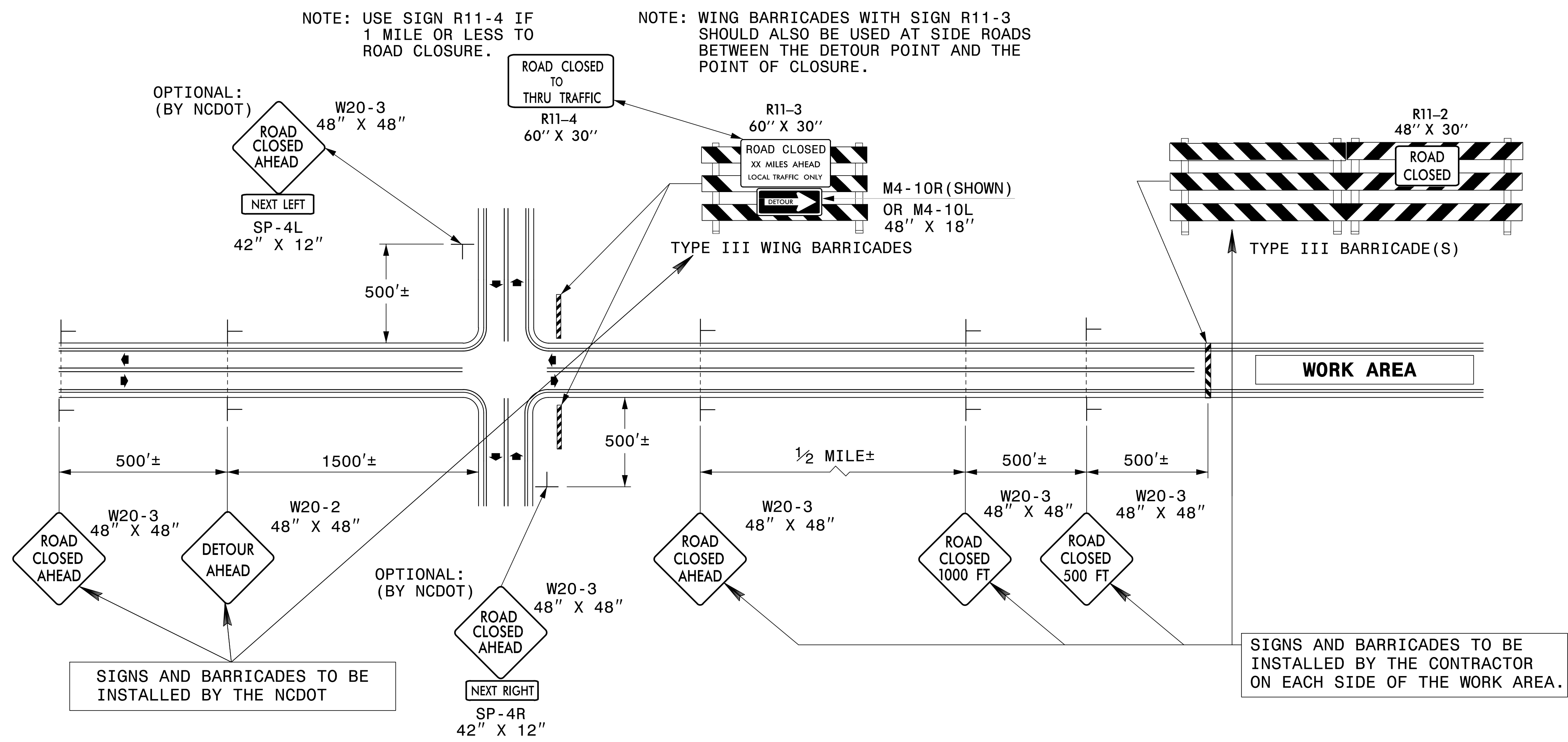
NAD 83
NSRS 2007



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 10/3/2012

TEMPORARY ROAD CLOSURE CLOSURE BEYOND DETOUR POINT

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



SIGNS AND BARRICADES TO BE INSTALLED BY THE NCDOT

SIGNS AND BARRICADES TO BE INSTALLED BY THE CONTRACTOR ON EACH SIDE OF THE WORK AREA.

GENERAL NOTES

- 1- IF NECESSARY USE THIS STD. FOR TWO-LANE, TWO-WAY, AND MULTILANE DIVIDED AND UNDIVIDED ROADWAYS.
- 2- INSTALLATION OF DETOUR ROUTING PANELS, TEMPORARY ROUTE MARKERS, DESTINATION SIGNS, AND ANY NECESSARY MODIFICATIONS TO EXISTING OR PROPOSED REGULATORY OR WARNING SIGNS WILL BE MADE BY NCDOT FORCES UNLESS OTHERWISE DESIGNATED IN THE PLANS. PROVIDE A MINIMUM 21 CALENDAR DAY NOTICE TO STATE FORCES BEFORE A ROADWAY IS CLOSED TO TRAFFIC SUCH THAT THE NECESSARY PROVISIONS CAN BE MADE TO INSTALL DETOUR ROUTE SIGNS, INFORM LOCAL EMERGENCY AND LAW ENFORCEMENT PERSONNEL, SCHOOLS, OR ANY OTHER PARTIES AFFECTED BY THE ROAD CLOSURE.
- 3- INSTALL SIGNS BEFORE THE BARRICADES WHEN CLOSING THE ROADWAY TO TRAFFIC. REMOVE BARRICADES BEFORE SIGNS WHEN OPENING THE ROADWAY TO TRAFFIC. INSTALL/REMOVE SIGNS AND BARRICADES WITHIN THE SAME CALENDAR DAY.
- 4- USE ADDITIONAL TYPE III BARRICADES IN STAGGERED LOCATIONS SUPPLEMENTED WITH SIGN R11-4 "ROAD CLOSED TO THRU TRAFFIC" IN THE EVENT THAT TRAFFIC MUST BE MAINTAINED BEYOND THE DETOUR POINT.
- 5- DO NOT DISPLAY FRACTIONS OR DECIMALS ON SIGN R11-3 "ROAD CLOSED XX MILES AHEAD".
- 6- POSITION WING BARRICADES ON THE SHOULDERS AND SLOPE THE STRIPES DOWNWARD IN THE DIRECTION TOWARD WHICH TRAFFIC MUST TURN IN DETOURING.
- 7- USE PORTABLE SIGNS IF ROAD CLOSURE IS TO BE IMPLEMENTED FOR LESS THAN ONE DAY OR FOR EMERGENCIES.

LEGEND

┆ STATIONARY SIGN

◄ DIRECTION OF TRAFFIC FLOW

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PROJECT: WBS 17BP.10.R.39

CONTRACT:

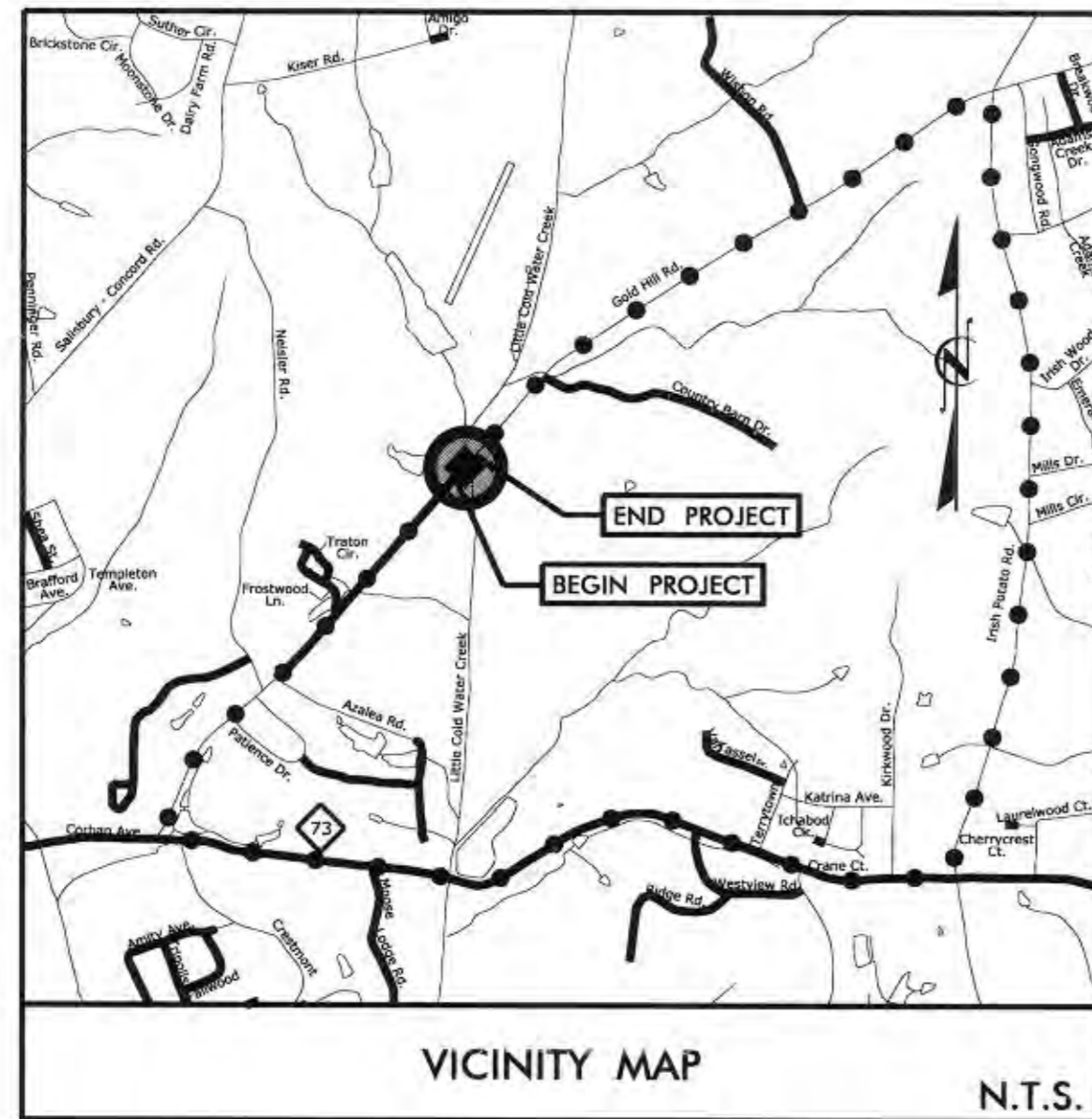
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
17BP.10.R.39	UO-1

UTILITIES BY OTHERS PLANS CABARRUS COUNTY

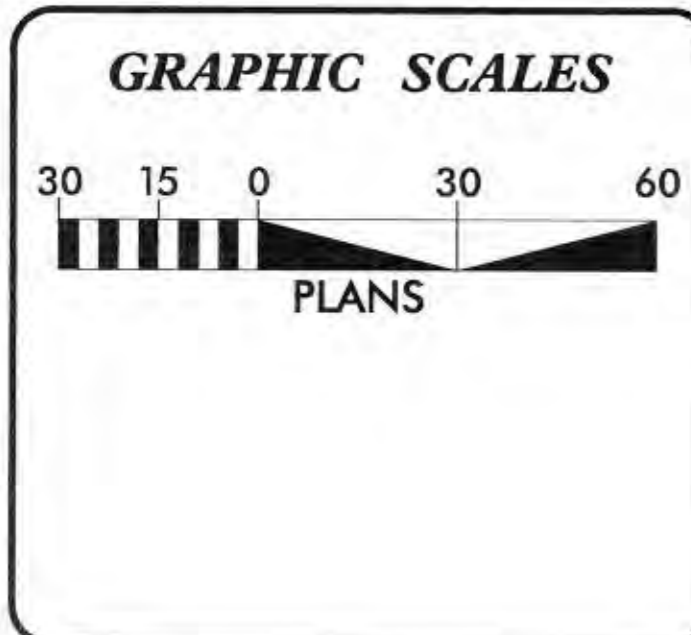
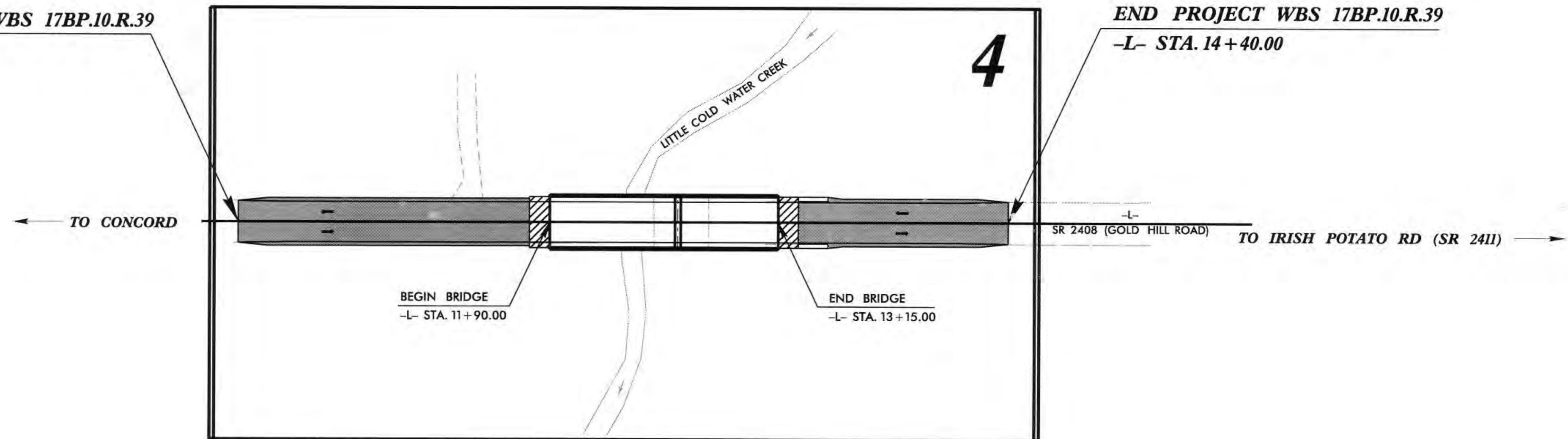
LOCATION: BRIDGE #80 OVER LITTLE COLD WATER CREEK
ON SR 2408 (GOLD HILL ROAD)

TYPE OF WORK: TELEPHONE



BEGIN PROJECT WBS 17BP.10.R.39
-L- STA. 10 + 20.00

END PROJECT WBS 17BP.10.R.39
-L- STA. 14 + 40.00



SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2	UTILITY BY OTHERS PLAN SHEET

UTILITY OWNERS ON PROJECT

(1) TELEPHONE - WINDSTREAM

V&M
Vaughn & Melton
Consulting Engineers
3089-L Beam Road
Charlotte, NC 28217
704-357-0488

PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
UTILITIES ENGINEERING SECTION

1591 MAIL SERVICES CENTER
RALEIGH NC 27699-1591
PHONE (919) 250-4128
FAX (919) 250-4119

Roger Worthington, P.E. UTILITIES SECTION ENGINEER
Xxxxx Xxxxx, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
Reece Schuler, PE UTILITIES PROJECT DESIGNER

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

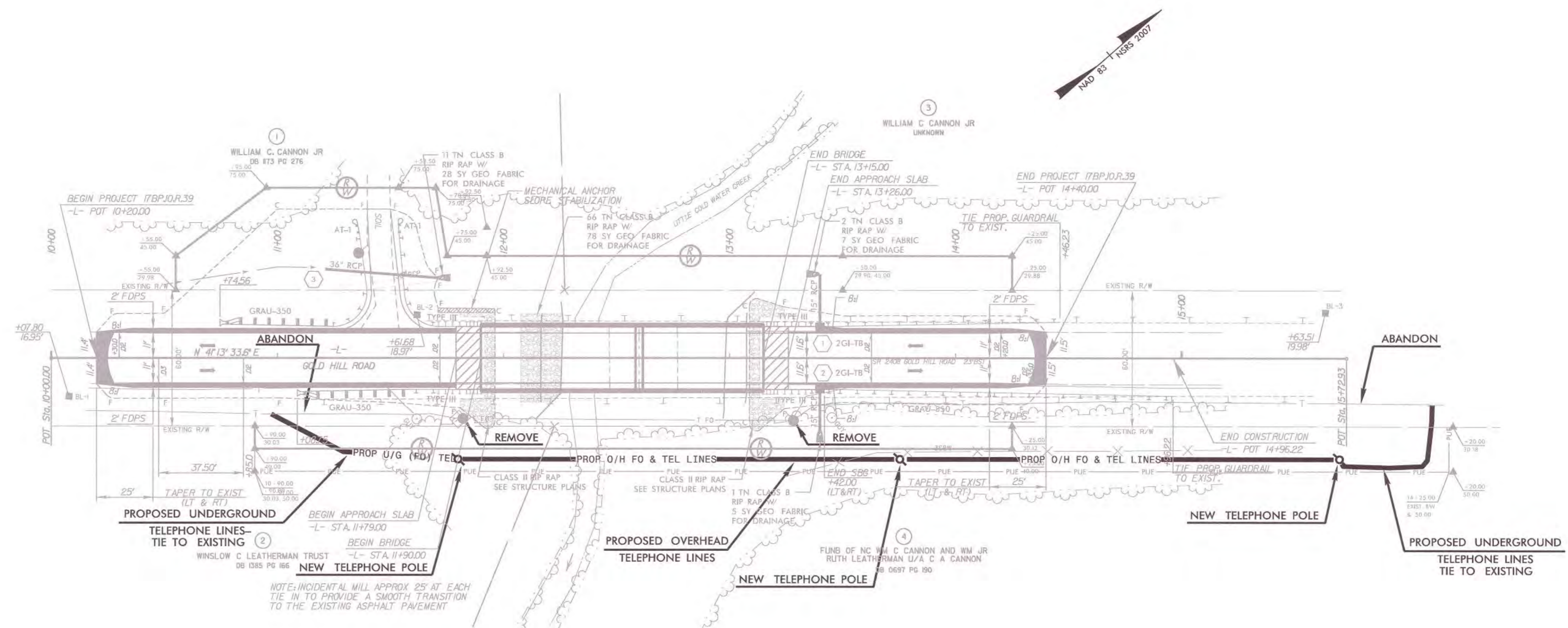
V&M
Vaughn & Melton
Consulting Engineers

Asheville, North Carolina 828-253-2796
Tri-Cities, Tennessee 423-467-9403
Knoxville, Tennessee 865-546-5800
Middlesboro, Kentucky 606-248-5600
Spartanburg, South Carolina 864-574-4775

Charlotte, North Carolina 704-357-0488

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REVISIONS

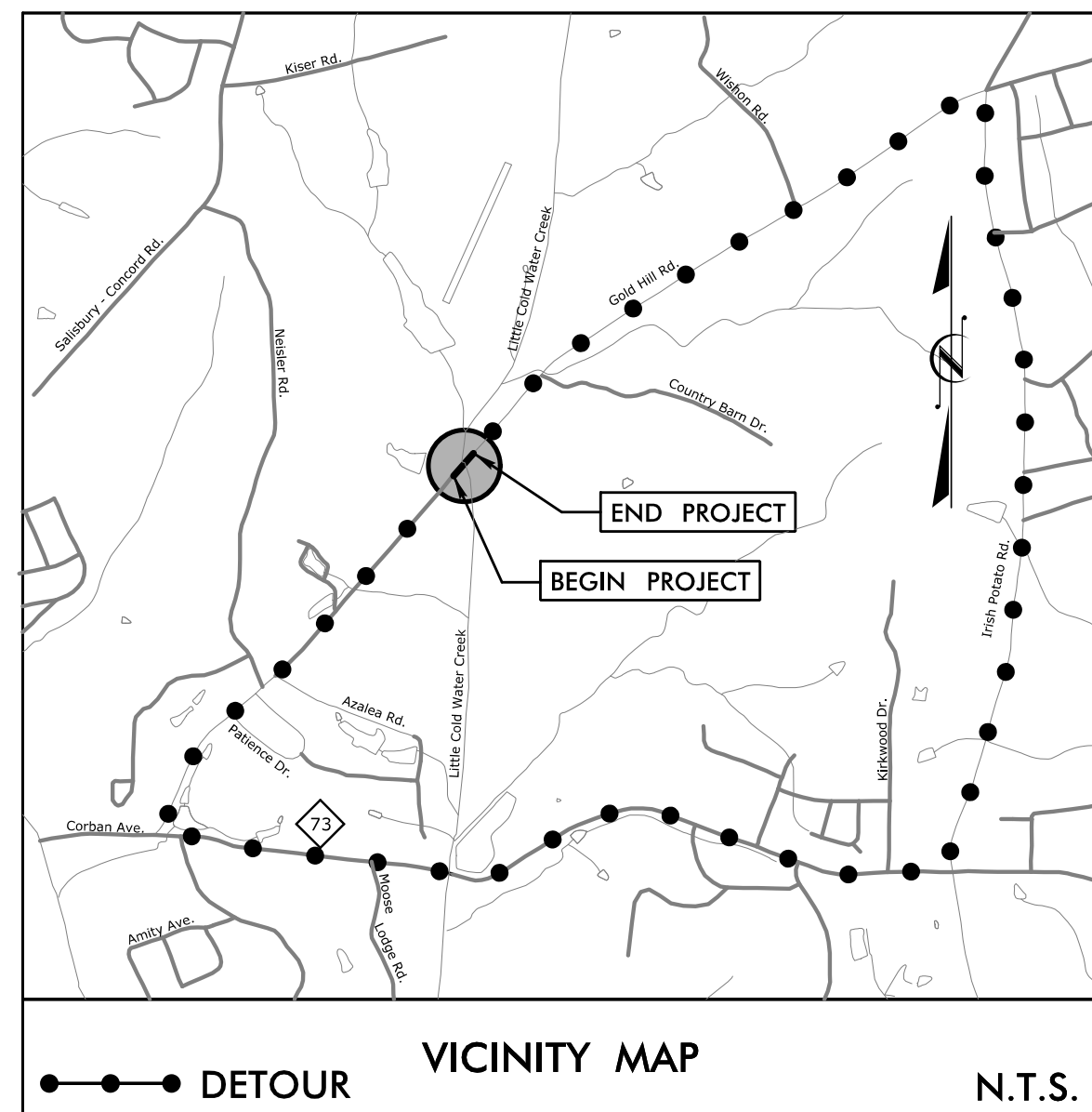


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CONTRACT:

PROJECT: WBS 17BP.10.R.39

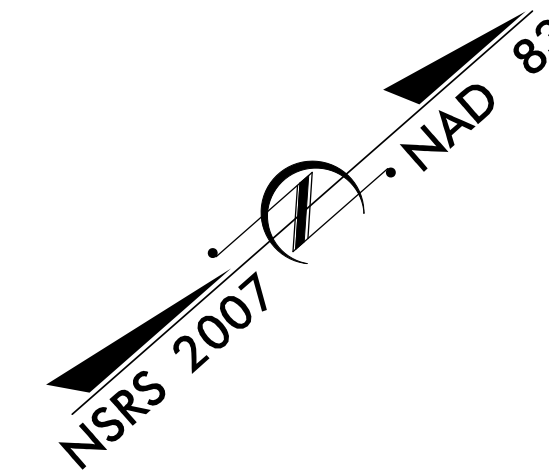
See Sheet 1-A For Index of Sheets
See Sheet 1-B For Standard Symboly Sheet



EROSION CONTROL PLANS

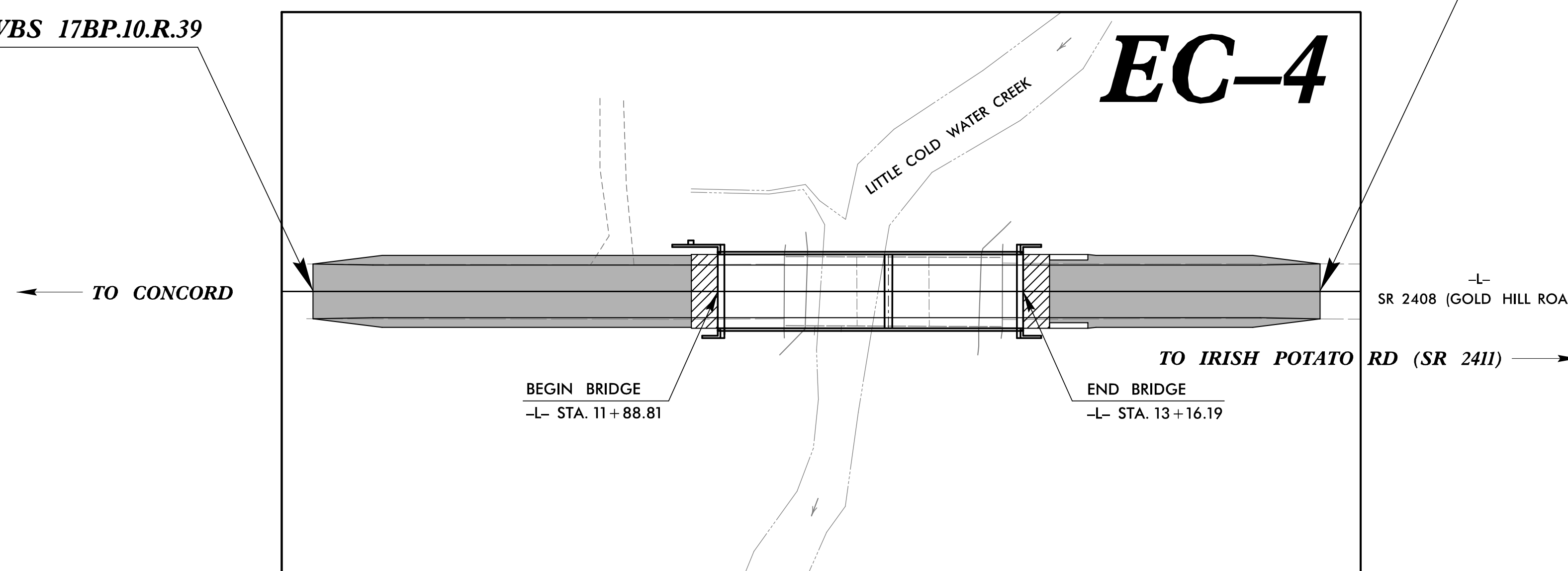
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL
CABARRUS COUNTY

LOCATION: BRIDGE #080 OVER LITTLE COLD WATER CREEK
ON SR 2408 (GOLD HILL ROAD)



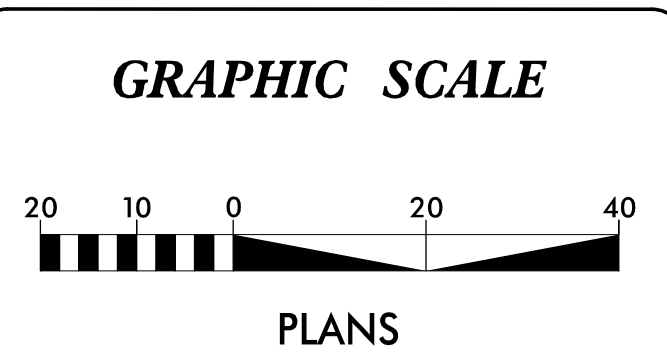
BEGIN PROJECT WBS 17BP.10.R.39
-L- STA. 10+20.00

END PROJECT WBS 17BP.10.R.39
-L- STA. 14+40.00



These Erosion and Sediment Control Plans comply with the regulations set forth by the NCG010000 general construction permit effective August 3, 2011 issued by the North Carolina Department of Environment and Natural Resources Division of Water Quality.

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



ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

Level III Designer
Davin Morrison, PE #3126

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Prepared in the Office of:
STV/RALPH WHITEHEAD ASSOCIATES, INC.
1000 West Morehead St., Ste. 200, Charlotte NC, 28208
NC License Number F-0991
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2012 STANDARD SPECIFICATIONS

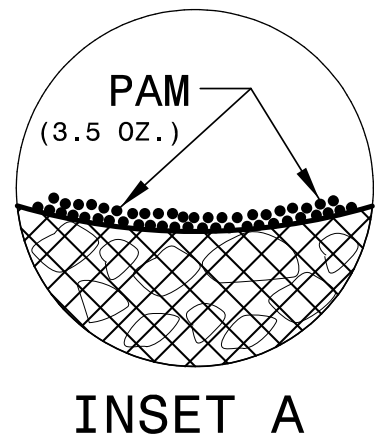
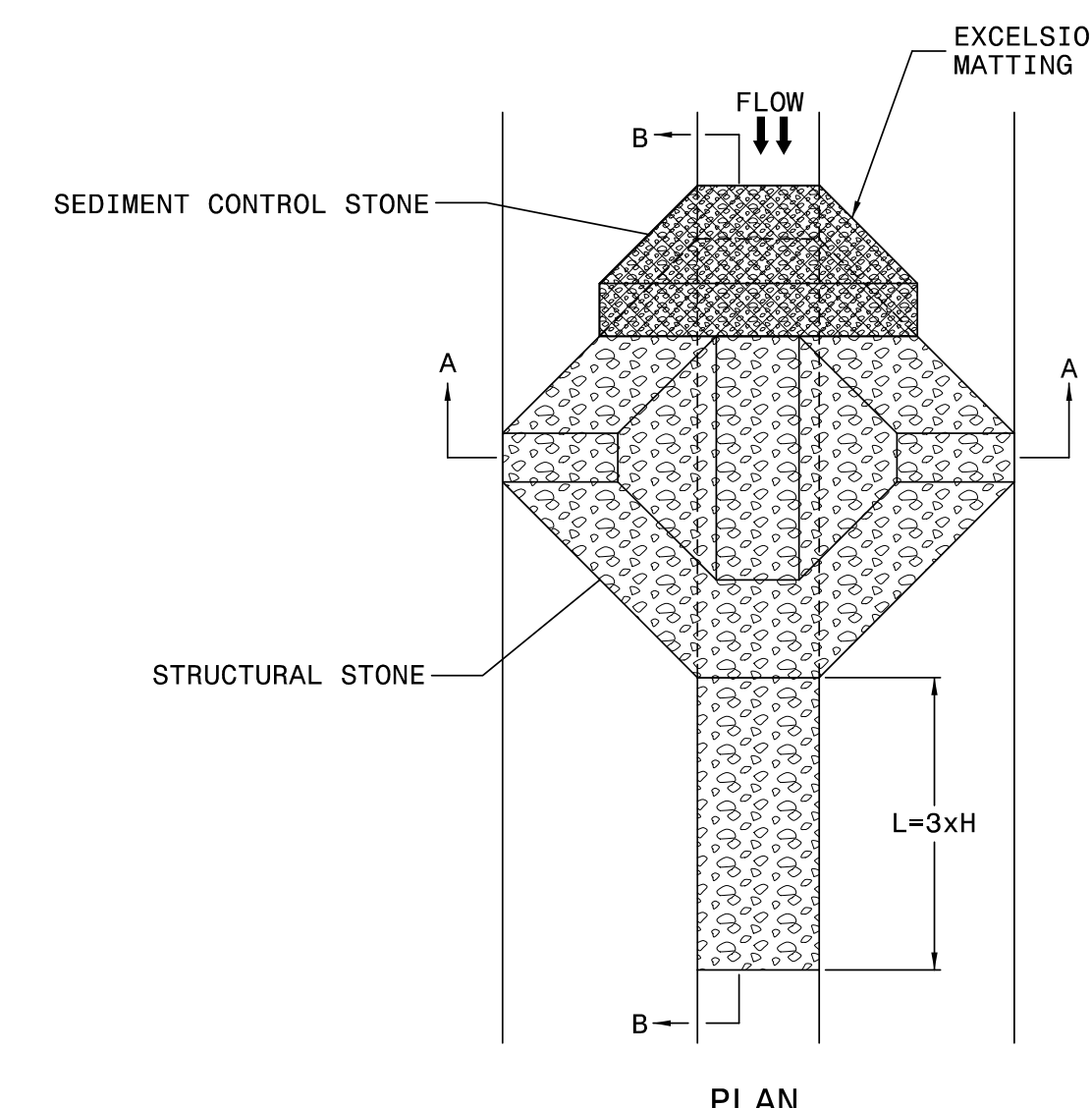
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.10.R.39	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.10.R.39		P.E.	
17BP.10.R.39		R / W & UTILITIES	
17BP.10.R.39		CONST.	

EROSION AND SEDIMENT CONTROL MEASURES

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N.C. Department of Transportation - Raleigh, N.C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

Std. #	Description	Symbol
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	XXXXXXXXXX
1607.01	Gravel Construction Entrance	
1622.01	Temporary Berms and Slope Drains	←
1630.01	Riser Basin	⊙
1630.03	Temporary Silt Ditch	TD
1630.04	Stilling Basin	▭
1630.05	Temporary Diversion	TD
1630.06	Special Stilling Basin	▭
1632.01	Rock Inlet Sediment Trap Type A	A
1632.02	Rock Inlet Sediment Trap Type B	B
1632.03	Rock Inlet Sediment Trap Type C	C
1633.01	Temporary Rock Silt Check Type-A	▨
1633.02	Temporary Rock Silt Check Type-B	▨
1634.01	Temporary Rock Sediment Dam Type-A	▨
1634.02	Temporary Rock Sediment Dam Type-B	▨
1635.01	Rock Pipe Inlet Sediment Trap Type-A	⊙
1635.02	Rock Pipe Inlet Sediment Trap Type-B	⊙
SP	Silt Basin Type B	▨
SP	Skimmer Basin	▭
SP	Tiered Skimmer Basin	▭
SP	Infiltration Basin	▭
SP	Wattle	⊙
SP	Wattle w/ Polyacrylamide (PAM)	⊙
SP	Coir Fiber Matting	▨

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

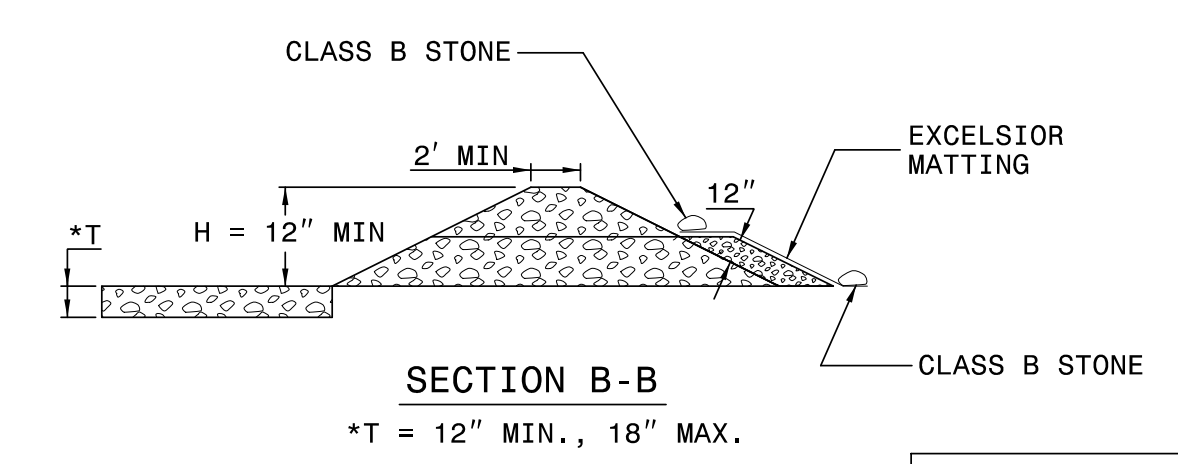
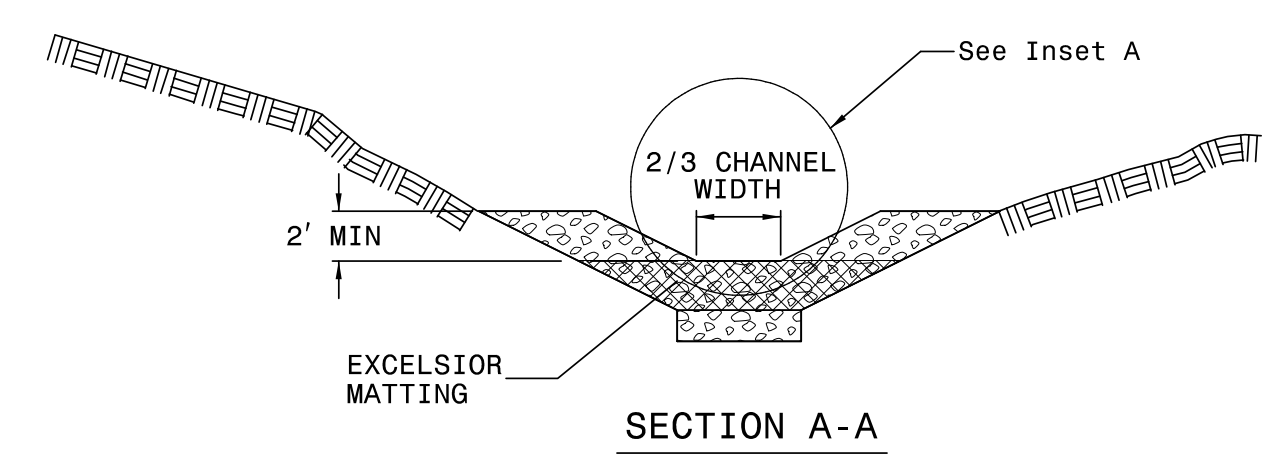


NOTES

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.

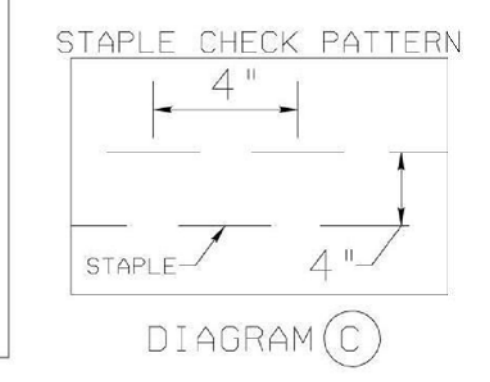
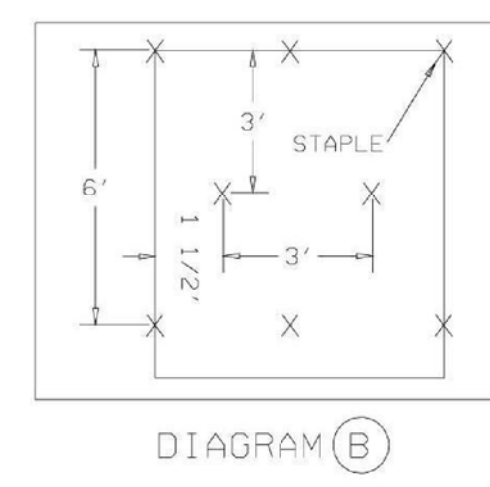
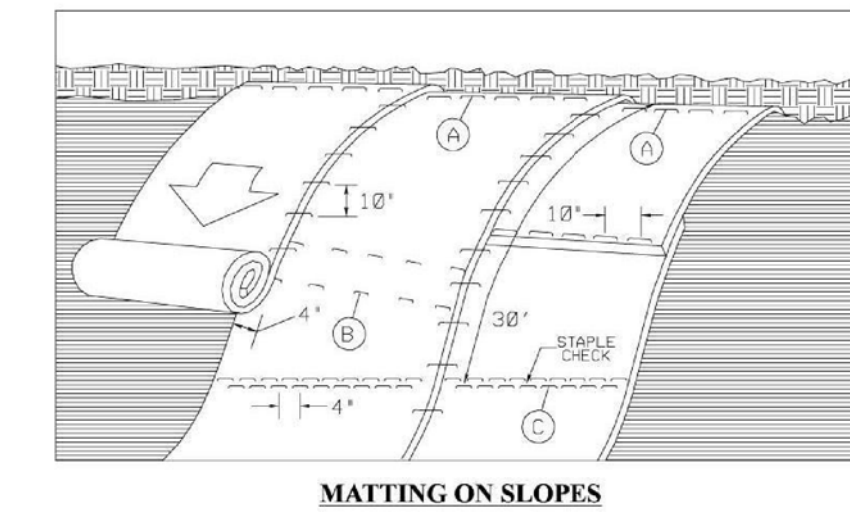
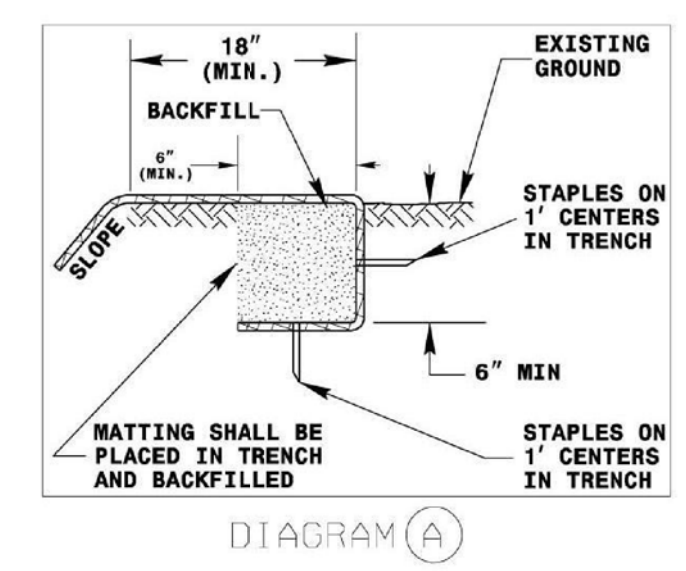
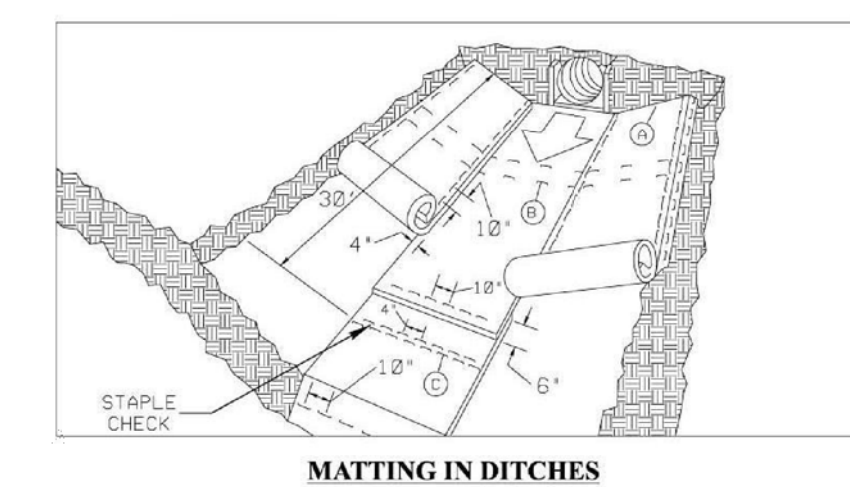
INITIALLY APPLY 3.5 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



NOT TO SCALE

PRELIMINARY PLANS
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MATTING INSTALLATION DETAIL




NOTES:

THIS DETAIL APPLIES TO STRAW, EXCELSIOR, AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION.

STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 1 INCH AND NOT LESS THAN 6 INCHES IN LENGTH.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. 17BP10.R.39	SHEET NO. EC-3
RW SHEET NO.	
 STV / Ralph Whitehead Associates, Inc. 1000 West Morehead St., Ste. 200 Charlotte, NC 28208 NC License Number F-0991	

HYDRAULICS
ENGINEER

PRELIMINARY PLANS
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SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL (FOR SLOPE STABILIZATION)

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
			SUBTOTAL		925
	MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER				100
				TOTAL	1025
				SAY	1025

COIR FIBER MATTING (FOR FLOODPLAIN BENCH)

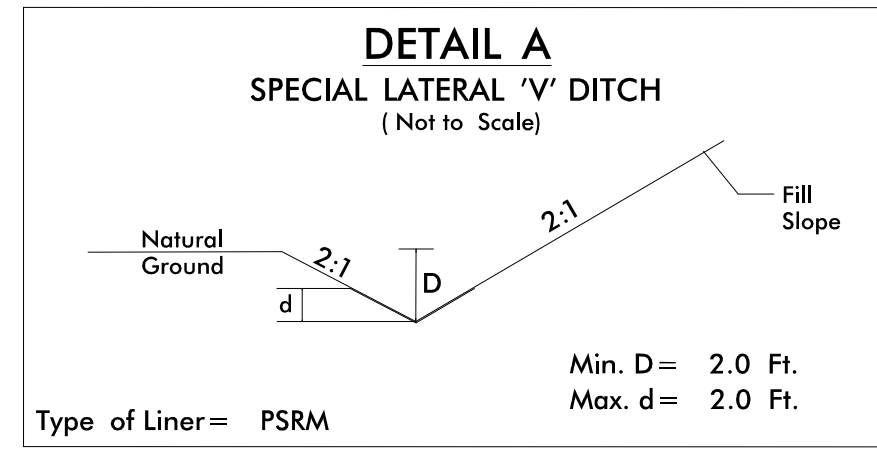
CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
			SUBTOTAL		215
	MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER				25
				TOTAL	240
				SAY	240

PERMANENT SOIL REINFORCEMENT MATTING (FOR DITCH STABILIZATION)

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L- V-DITCH	10+50	11+15	LT	60
			SUBTOTAL		60
	MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER				10
				TOTAL	70
				SAY	70

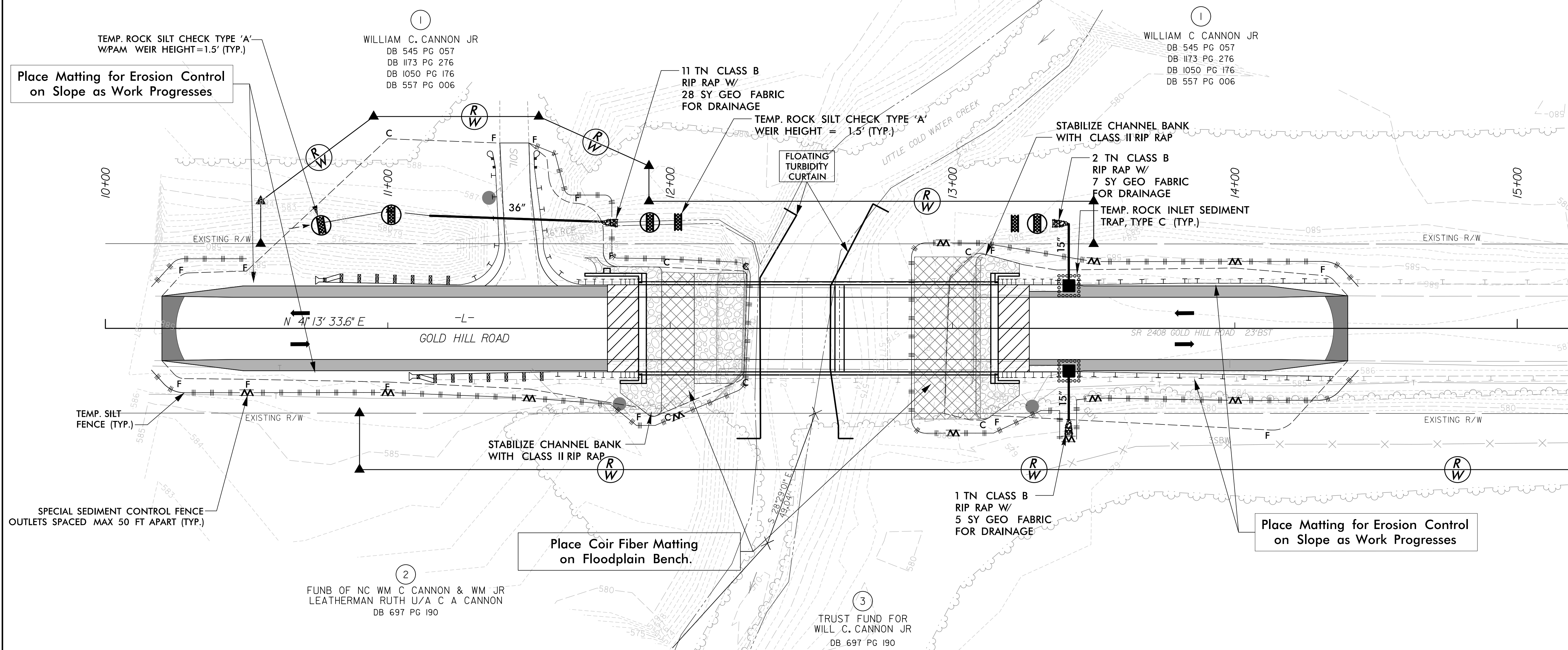
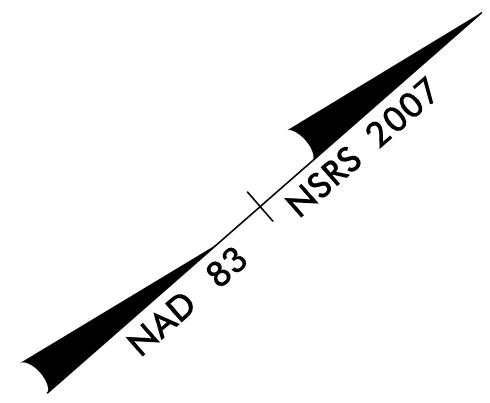
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10/31/2012



FROM STA. 10+65 TO STA. 11+15 LT

PROJECT REFERENCE NO. 17BP10.R.39	SHEET NO. EC-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
STV / Ralph Whitehead Associates, Inc. 1000 West Morehead St., Ste. 200 Charlotte, NC 28208 NC License Number F-0991	

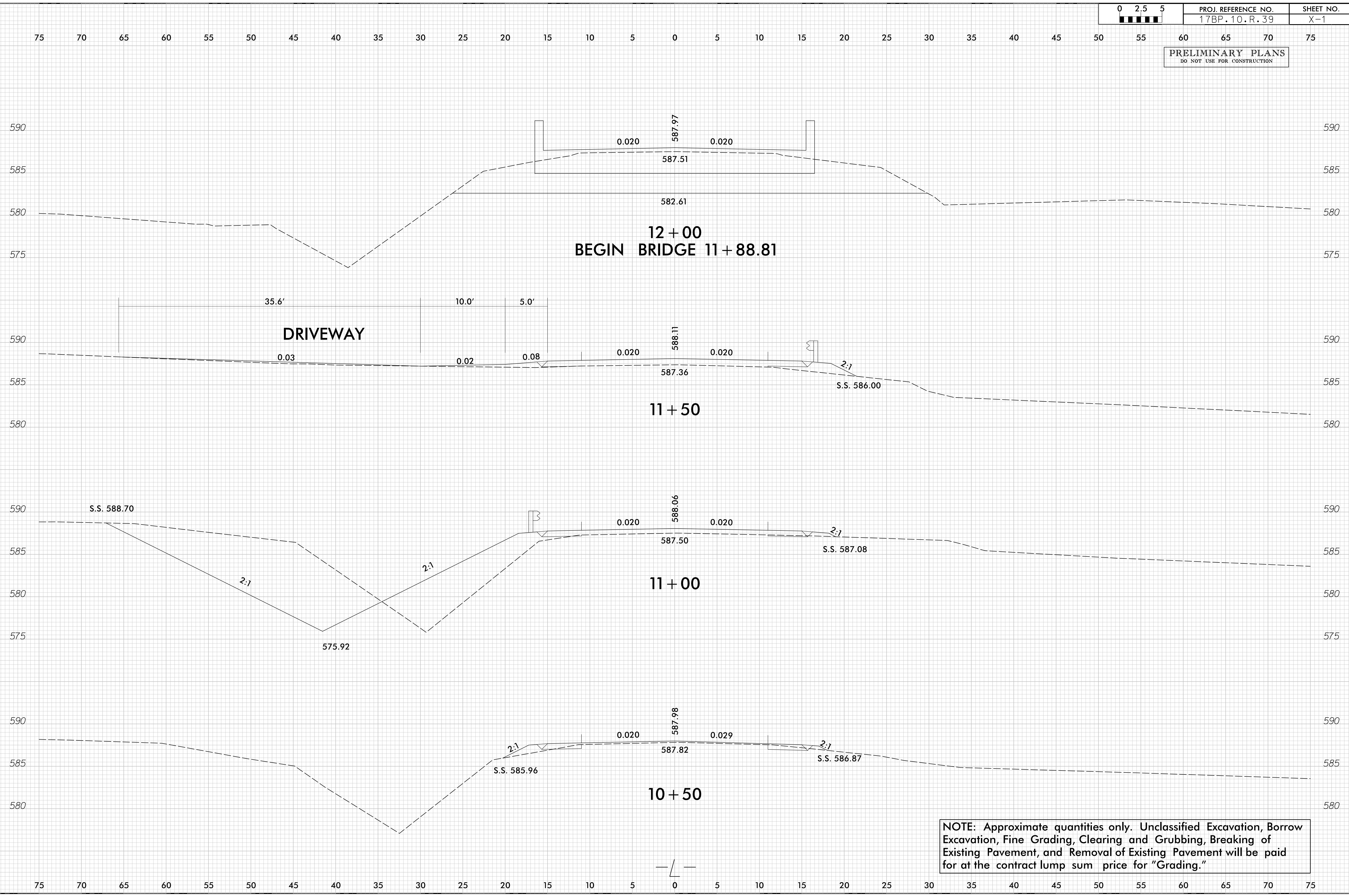


NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

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 10/3/2012

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



NOTE: Approximate quantities only. Unclassified Excavation, Borrow Excavation, Fine Grading, Clearing and Grubbing, Breaking of Existing Pavement, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

