

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4809	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38579.1.1	BRZ-1308 (9)	P.E.	
38579.2.1	BRZ-1308 (9)	RW, UTL	
38579.3.1	BRZ-1308 (9)	CONST	



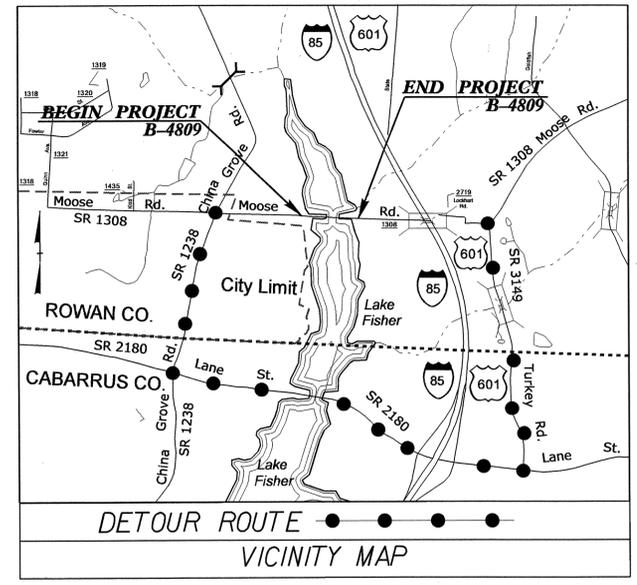
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROWAN COUNTY

LOCATION: BRIDGE 221 OVER LAKE FISHER ON SR 1308

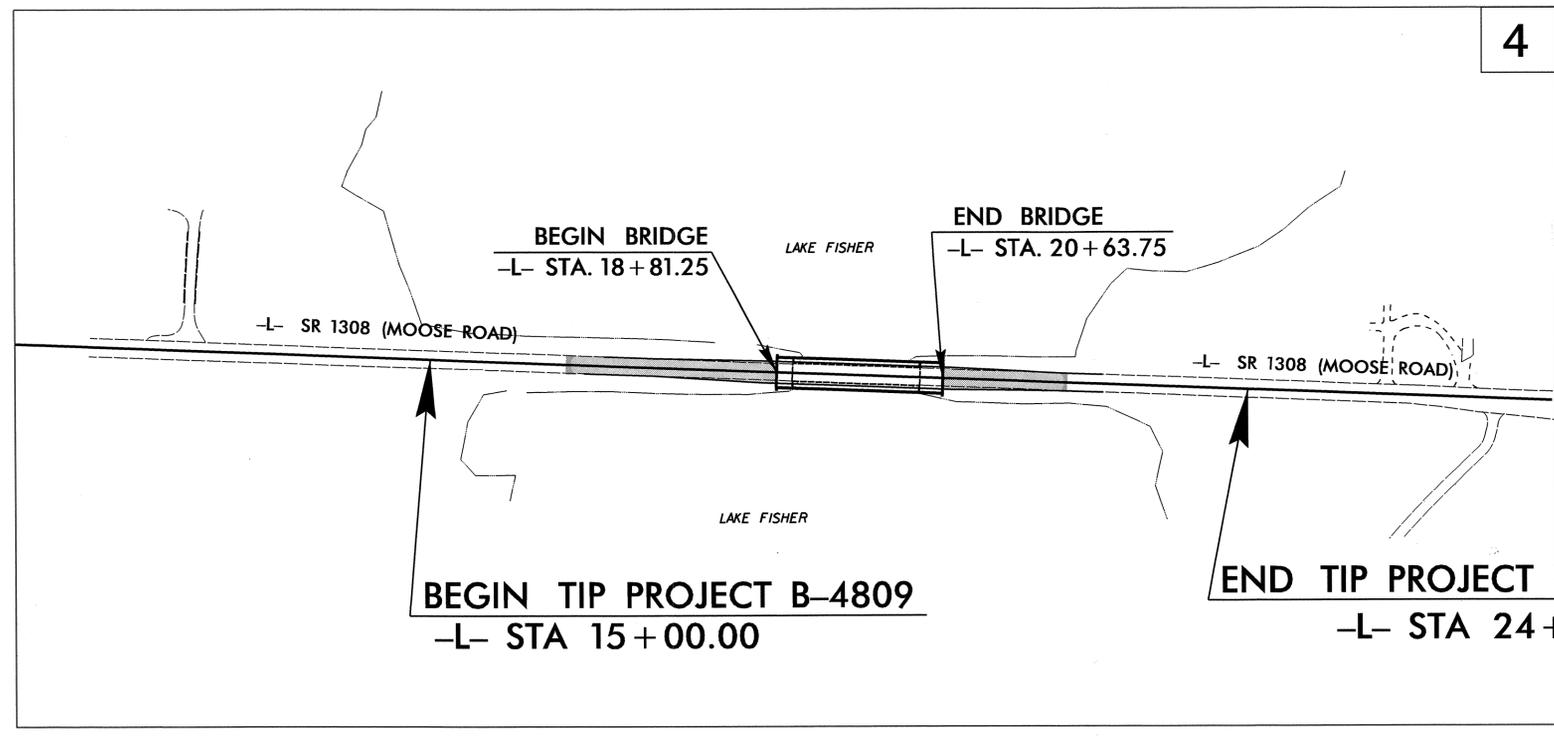
TYPE OF WORK: GRADING, DRAINAGE, PAVING,
AND STRUCTURE

See Sheet 1-A For Index of Sheets

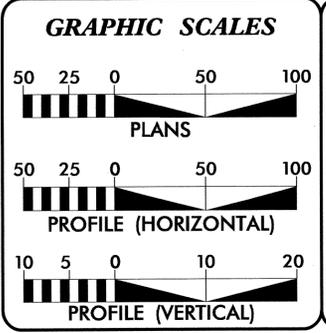


TIP PROJECT: B-4809

CONTRACT: C203031



THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.



DESIGN DATA

ADT 2013 =	1907
ADT 2035 =	3400
DHV =	10 %
D =	60 %
T =	15 % *
V =	60 MPH
FUNC CLASS =	LOCAL
* TTST 12	DUAL 3%
SUB REGIONAL TIER	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4809 =	0.135 MILE
LENGTH STRUCTURE TIP PROJECT B-4809 =	0.035 MILE
TOTAL LENGTH TIP PROJECT B-4809 =	0.170 MILE

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

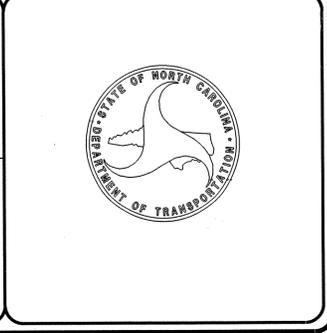
2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: DECEMBER 16, 2011	TONY A. HOUSER, PE PROJECT ENGINEER
LETTING DATE: JANUARY 15, 2013	BRUCE B. PAYNE, PE PROJECT DESIGN ENGINEER

Signature: *Paul Atkinson*

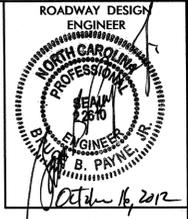
PAUL ATKINSON, PE
HYDRAULICS ENGINEER
SEAL 18880
10/30/12

Signature: *Bruce B. Payne*

BRUCE B. PAYNE, PE
ROADWAY DESIGN ENGINEER
SEAL 22910
10/30/12



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\$\$\$\$\$USERNAME\$\$\$\$\$



CONTRACT: C203031
 TIP PROJECT: B-4809
 COUNTY: ROWAN

INDEX OF SHEETS

SHEET NUMBER	SHEET TITLE
1	TITLE SHEET
1-A	"INDEX OF SHEETS, GENERAL NOTES," AND LIST OF STANDARDS
1-B	CONVENTIONAL SYMBOLS
1-C THRU 1-D	SURVEY CONTROL SHEETS
2	"PAVEMENT SCHEDULE, DETAIL SHOWING" "METHOD OF WEDGING, AND TYPICAL SECTION"
3	SUMMARY OF QUANTITIES
3-A	SUMMARY OF DRAINAGE QUANTITIES
3-B	SUMMARY OF GUARDRAIL SUMMARY OF PAVEMENT REMOVAL SUMMARY OF EARTHWORK
4	PLAN SHEET / PROFILE SHEET
TMP-1 THRU TMP-2	TRANSPORTATION MANAGEMENT PLANS
SD-1	WORK ZONE SIGN PLANS
PM-1	PAVEMENT MARKING PLANS
EC-1 THRU EC-4	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-2	SIGNING PLANS
UC-1 THRU UC-3	UTILITY CONSTRUCTION PLANS
X-0	CROSS SECTION SUMMARY
X-1 THRU X-4	CROSS SECTIONS
S-1 THRU S-25	STRUCTURE PLANS
W-1 THRU W-6	SHEET PILE WALL CONSTRUCTION DETAILS

GENERAL NOTES: 2012 SPECIFICATIONS
 EFFECTIVE: 01-17-12
 REVISED: 11/01/11

GRADING AND SURFACING OR RESURFACING AND WIDENING:
 THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED 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 111.

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.

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.

TEMPORARY SHORING:
 SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

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.

UTILITIES:
 UTILITY OWNERS ON THIS PROJECT ARE
 City of Kannapolis - water
 ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

2012 ROADWAY ENGLISH STANDARD DRAWINGS

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	
200.03	Method of Clearing - Method 111
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Super-elevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 4 - MAJOR STRUCTURES	
422.11	Reinforced Bridge Approach Fills - Sub Regional Tier
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
840.00	Concrete Base Pad for Drainage Structures
840.29	Frames and Narrow Slot Flat Grates
840.34	Traffic Bearing Junction Box - for Use with Pipes 42" and Under
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.46	Traffic Bearing Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
876.02	Guide for Rip Rap at Pipe Outlets

8/17/99

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Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○
Property Corner	→
Property Monument	□
Parcel/Sequence Number	(23)
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: Area or Site	☠
Potential Soil Contamination: Area or Site	?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
Well	○
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	←
False Sump	▽

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○
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	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	-----
Proposed Right of Way Line with Concrete or Granite Marker	-----
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-

ROADS AND RELATED FEATURES:

Proposed Permanent Easement with Iron Pin and Cap Marker	◇
Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-C-
Proposed Slope Stakes Fill	-F-
Proposed Curb Ramp	CR
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	XXXX

VEGETATION:

Single Tree	○
Single Shrub	○
Hedge	-----
Woods Line	-----

Orchard	○
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	PH
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	PH
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	TF
Designated U/G Fiber Optics Cable (S.U.E.*)	TF

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	PH
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	UTL
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.

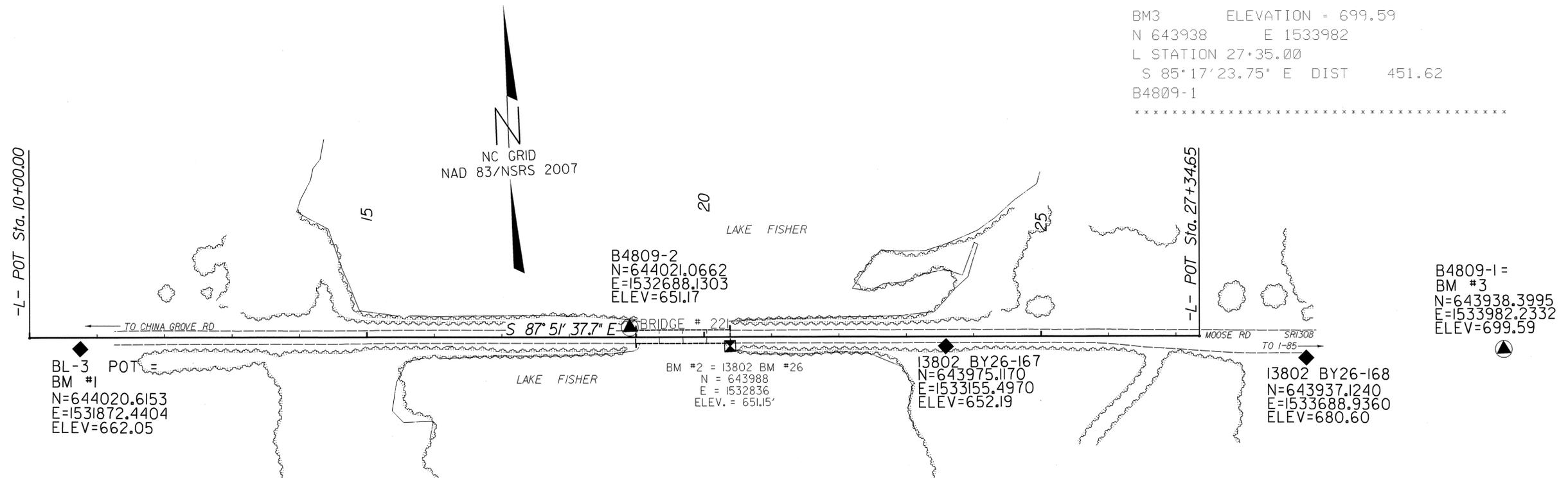
SURVEY CONTROL SHEET B-4809

BL	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
3	BL-3		644020.6153	1531872.4404	662.05	10+74.65	16.45 RT
2	B4809-2		644021.0662	1532688.1303	651.17	18+89.76	14.45 LT
167	I-3802 BY26-167		643975.1170	1533155.4970	652.19	23+58.51	14.02 RT
168	I-3802 BY26-168		643937.1240	1533688.9360	680.60	OUTSIDE PROJECT LIMITS	
1	B4809-1		643938.3995	1533982.2332	699.59	OUTSIDE PROJECT LIMITS	

 BM1 ELEVATION = 662.05
 N 644021 E 1531872
 L STATION 10+74.65 16 RIGHT
 BL-3

 BM2 ELEVATION = 651.15
 N 643988 E 1532836
 L STATION 20+39.00 13 RIGHT
 I3802 BM #26 CHISLED SQUARE IN SE
 WINGWALL OF BRIDGE ON MOOSE RD. OVER
 LAKE FISHER

 BM3 ELEVATION = 699.59
 N 643938 E 1533982
 L STATION 27+35.00
 S 85° 17' 23.75" E DIST 451.62
 B4809-1



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "I3802-12"
 WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF
 NORTHING: 641735.246(ft) EASTING: 1535065.380(ft)
 ELEVATION: 708.81(ft)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99985319
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "I3802-12" TO -L- STATION 10+00.00 IS
 N 54° 47' 58.46" W 3997.996
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NAVD 88

NOTES:

1. 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:
 B4809_LS_CONTROL_DATA.HTML

SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

⊗ INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
 PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.

NOTE: DRAWING NOT TO SCALE

SURVEY CONTROL SHEET B-4809

PERMANENT DRAINAGE EASEMENT

ALIGN	STATION	OFFSET	NORTH	EAST
L	15+15.00	29.85	643990.7803	1532311.9817
L	15+35.00	29.85	643990.0433	1532331.9681
L	15+35.00	41.00	643978.8998	1532331.5518
L	15+15.00	41.00	643979.6464	1532311.5657
L	23+00.00	39.00	643952.3387	1533096.0931
L	23+20.00	39.00	643951.5920	1533116.0788
L	23+00.00	29.10	643962.2310	1533096.4627
L	23+20.00	29.10	643961.4938	1533116.4492

TYPE	STATION	NORTH	EAST
POT	10+00.00	644039.8443	1531798.4554
POT	27+34.65	643975.0846	1533531.9004

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "13802-12"

WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF
 NORTHING: 641735.246(ft) EASTING: 1535065.380(ft)
 ELEVATION: 708.81(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99985319

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "13802-12" TO -L- STATION 10+00.00 IS
 N 54°47'58.46" W 3997.996

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

NOTES:

1. 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:
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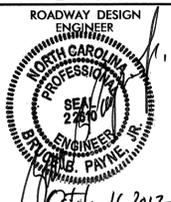
SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

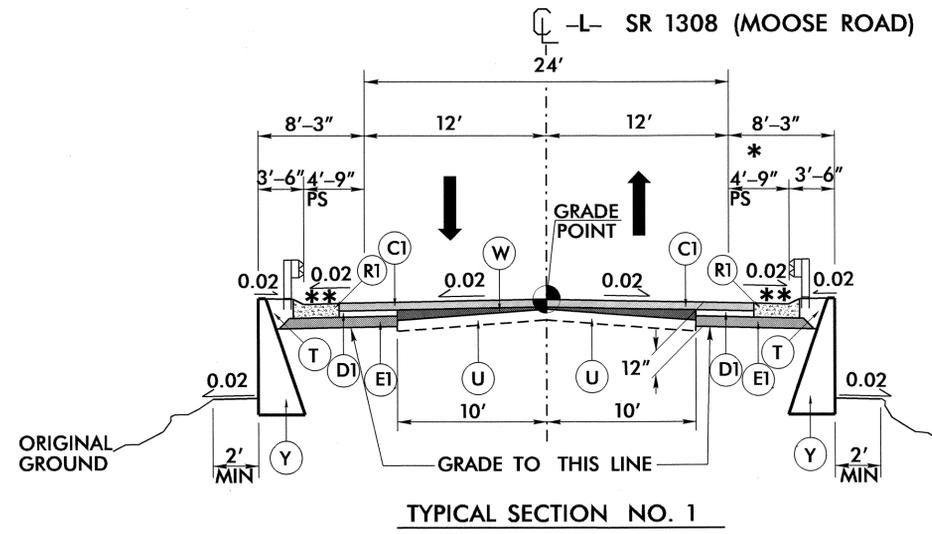
PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
 NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING USER SERVICE (OPUS)

NOTE: DRAWING NOT TO SCALE

6/22/09

PROJECT: 2012 15-13
 PLAN: 4809_rdy_tup.dgn
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PROJECT REFERENCE NO. B-4809	SHEET NO. 2
ROADWAY DESIGN ENGINEER  BLAINE PAYNE 10/16/2012	PAVEMENT DESIGN ENGINEER  CLARK S. MORRISON 10/16/2012

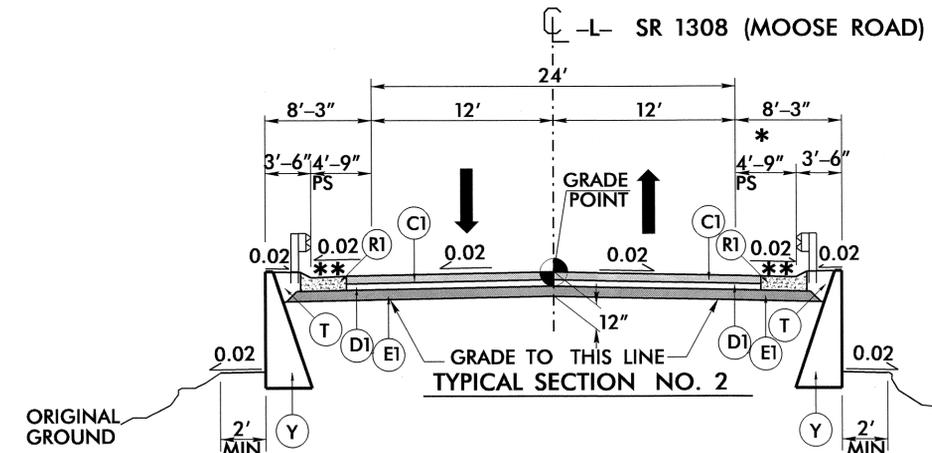


USE TYPICAL SECTION NO. 1
 -L- STA. 17+50.00 TO -L- STA. 18+31.25
 -L- STA. 21+13.75 TO -L- STA. 21+50.00

NOTE: 4'-9" PAVED SHOULDER USED FOR BIKE ROUTE

* SHOULDER WIDENING FOR GUARDRAIL ONLY
 -L- STA. 22+00.00 TO -L- STA. 22+25.00 (RIGHT)

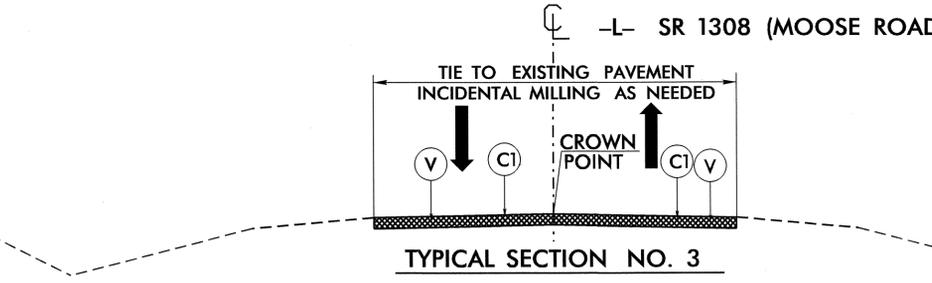
** SHOULDER BERM GUTTER USED FROM -L- STA. 17+22.00 TO -L- STA. 18+81.25 (BEGIN BRIDGE) RT AND LT AND -L- STA. 20+63.75 (END BRIDGE) TO -L- STA. 21+90.00 LT AND -L- STA. 20+63.75 (END BRIDGE) TO -L- STA. 22+05.00 RT



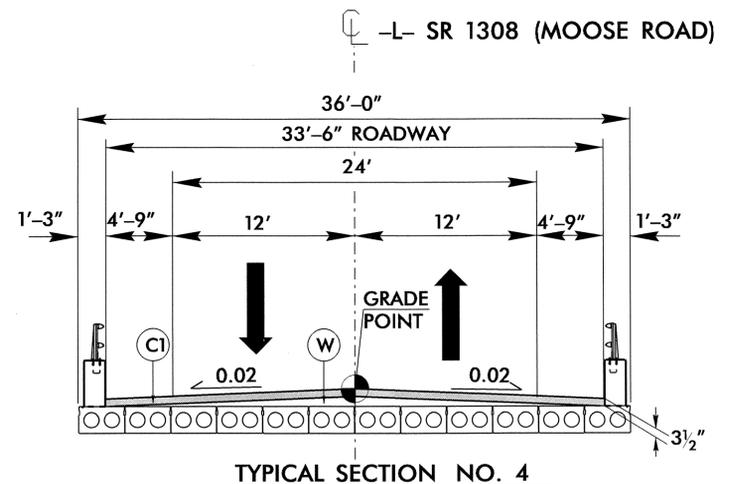
USE TYPICAL SECTION NO. 2
 -L- STA. 18+31.25 TO -L- STA. 18+81.25 (BEGIN BRIDGE)
 -L- STA. 20+63.75 (END BRIDGE) TO -L- STA. 21+13.75

NOTE: 4'-9" PAVED SHOULDER USED FOR BIKE ROUTE

** SHOULDER BERM GUTTER USED FROM -L- STA. 17+22.00 TO -L- STA. 18+81.25 (BEGIN BRIDGE) RT AND LT AND -L- STA. 20+63.75 (END BRIDGE) TO -L- STA. 21+90.00 LT AND -L- STA. 20+63.75 (END BRIDGE) TO -L- STA. 22+05.00 RT



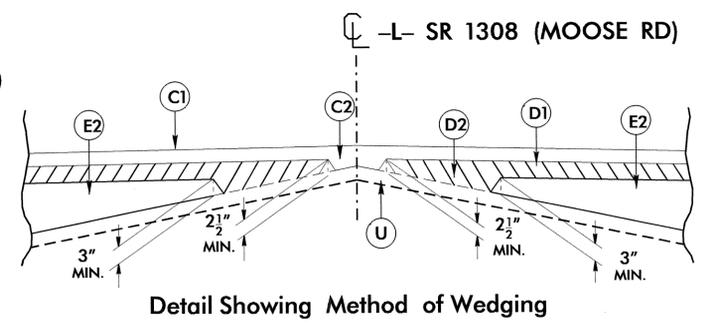
USE TYPICAL SECTION NO. 3
 -L- STA. 17+00.00 TO -L- STA. 17+50.00
 -L- STA. 21+50.00 TO -L- STA. 22+05.00



USE TYPICAL SECTION NO. 4
 -L- STA. 18+81.25 (BEGIN BRIDGE) TO -L- STA. 20+63.75 (END BRIDGE)

PAVEMENT SCHEDULE (REVISED FINAL PAVEMENT DESIGN DECEMBER 9, 2011)	
C1	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 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 TO EXCEED 2" DEPTH.
D1	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 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" OR GREATER THAN 4" DEPTH.
E1	PROP. APPROX. 7" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 399 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
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" OR GREATER THAN 5.5" DEPTH.
R1	SHOULDER BERM GUTTER
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	INCIDENTAL MILLING.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING).
Y	RETAINING WALL.

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C203031					SUMMARY OF QUANTITIES - B-4809									
ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION	2556000000-E	846	586	LF	SHOULDER BERM GUTTER	5888000000-E	SP	42	LF	GENERIC UTILITY ITEM PILE EXCAVATION NOT IN SOIL FOR WATER LINE
0000400000-N	801	Lump Sum		CONSTRUCTION SURVEYING	3030000000-E	862	900	LF	STEEL BM GUARDRAIL	5888000000-E	SP	500	LF	GENERIC UTILITY ITEM PIPE INSULATION
0030000000-N	SP	Lump Sum		BRIDGE APPROACH FILL - SUB REGIONAL TIER, STATION ***** (19+72.50)	3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS	6000000000-E	1605	1,525	LF	TEMPORARY SILT FENCE
0043000000-N	226	Lump Sum		GRADING	3215000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE III	6006000000-E	1610	225	TON	STONE FOR EROSION CONTROL, CLASS A
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB- BING	3270000000-N	SP	1	EA	GUARDRAIL ANCHOR UNITS, TYPE 350	6009000000-E	1610	5	TON	STONE FOR EROSION CONTROL, CLASS B
0057000000-E	226	50	CY	UNDERCUT EXCAVATION	3360000000-E	863	1,091	LF	REMOVE EXISTING GUARDRAIL	6012000000-E	1610	385	TON	SEDIMENT CONTROL STONE
0196000000-E	270	300	SY	GEOTEXTILE FOR SOIL STABILIZA- TION	3649000000-E	876	3	TON	RIP RAP, CLASS B	6015000000-E	1615	0.5	ACR	TEMPORARY MULCHING
0318000000-E	300	71	TON	FOUNDATION CONDITIONING MATE- RIAL, MINOR STRUCTURES	3656000000-E	876	1,275	SY	GEOTEXTILE FOR DRAINAGE	6018000000-E	1620	50	LB	SEED FOR TEMPORARY SEEDING
0320000000-E	300	222	SY	FOUNDATION CONDITIONING GEO- TEXTILE	4072000000-E	903	61	LF	SUPPORTS, 3-LB STEEL U-CHANNEL	6021000000-E	1620	0.25	TON	FERTILIZER FOR TEMPORARY SEED- ING
0335200000-E	305	24	LF	15" DRAINAGE PIPE	4096000000-N	904	2	EA	SIGN ERECTION, TYPE D	6024000000-E	1622	200	LF	TEMPORARY SLOPE DRAINS
0354000000-E	310	648	LF	**** RC PIPE CULVERTS, CLASS ***** (15", V)	4155000000-N	907	8	EA	DISPOSAL OF SIGN SYSTEM, U- CHANNEL	6029000000-E	SP	100	LF	SAFETY FENCE
1099500000-E	505	100	CY	SHALLOW UNDERCUT	4400000000-E	1110	297	SF	WORK ZONE SIGNS (STATIONARY)	6030000000-E	1630	100	CY	SILT EXCAVATION
1099700000-E	505	190	TON	CLASS IV SUBGRADE STABILIZA- TION	4410000000-E	1110	94	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)	6036000000-E	1631	500	SY	MATTING FOR EROSION CONTROL
1220000000-E	545	20	TON	INCIDENTAL STONE BASE	4445000000-E	1145	80	LF	BARRICADES (TYPE III)	6042000000-E	1632	570	LF	1/4" HARDWARE CLOTH
1330000000-E	607	222	SY	INCIDENTAL MILLING	4685000000-E	1205	1,150	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	6048000000-E	SP	350	SY	FLOATING TURBIDITY CURTAIN
1489000000-E	610	280	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B	4686000000-E	1205	1,150	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)	6070000000-N	1639	12	EA	SPECIAL STILLING BASINS
1498000000-E	610	118	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0B	5325800000-E	1510	524	LF	8" WATER LINE	6084000000-E	1660	0.5	ACR	SEEDING & MULCHING
1519000000-E	610	210	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	5546000000-E	1515	2	EA	8" VALVE	6087000000-E	1660	0.25	ACR	MOWING
1575000000-E	620	30	TON	ASPHALT BINDER FOR PLANT MIX	5801000000-E	1530	520	LF	ABANDON 8" UTILITY PIPE	6090000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
1693000000-E	654	10	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR	5882000000-N	SP	13	EA	GENERIC UTILITY ITEM STEEL PIPE CAP FOR WATER LINE	6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
2286000000-N	840	10	EA	MASONRY DRAINAGE STRUCTURES	5888000000-E	SP	301.5	LF	GENERIC UTILITY ITEM HP 12 X 53 GALVANIZED STEEL PILES FOR WATER LINE	6096000000-E	1662	50	LB	SEED FOR SUPPLEMENTAL SEEDING
2367000000-N	840	8	EA	FRAME WITH TWO GRATES, STD 840.23	5888000000-E	SP	97.5	LF	GENERIC UTILITY ITEM PERM ST CASING FOR 2'-6" MIN DIA HOLE	6108000000-E	1665	0.25	TON	FERTILIZER TOPDRESSING
2396000000-N	840	2	EA	FRAME WITH COVER, STD 840.54	5888000000-E	SP	70.5	LF	GENERIC UTILITY ITEM PILE EXCAVATION IN SOIL FOR WATER LINE	6114500000-N	1667	10	MHR	SPECIALIZED HAND MOWING
										6117000000-N	SP	18	EA	RESPONSE FOR EROSION CONTROL

RD242264

COMPUTED BY: ESM DATE: 9/27/11
 CHECKED BY: CHL DATE: 10-26-11

PROJECT NO. B-4809 SHEET NO. 3-B

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

IN CUBIC YARDS

Station	Station	Uncl. Excav.	Embank. +%	Borrow	Waste
16+50.00	8+81.25 (BEGIN BRIDGE)	61	108	47	0
SUBTOTAL		61	108	47	0
20+63.75 (END BRIDGE)	22+50.00	68	89	21	0
SUBTOTAL		68	89	21	0
TOTAL		129	197	68	0
SHOULDER MATERIAL		0	129	129	0
PROJECT TOTAL		129	326	197	0
EST. FOR REPL TOPSOIL ON BORROW PIT				10	
GRAND TOTALS:		129		207	
SAY:		150		220	

SUMMARY OF EXISTING ASPHALT PAVEMENT REMOVAL

LINE	Station	Station	LOC LT/RT/CL	YD ²
-L-	18+31.25	18+81.25	CL	105.56
-L-	20+63.75	21+13.75	CL	105.56
TOTAL:				211.12
SAY:				215

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.

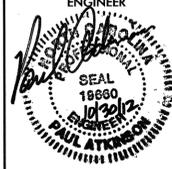
Note: Approximate quantities only. Unclassified Excavation, Borrow, Fine Grading, Clearing and Grubbing, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading

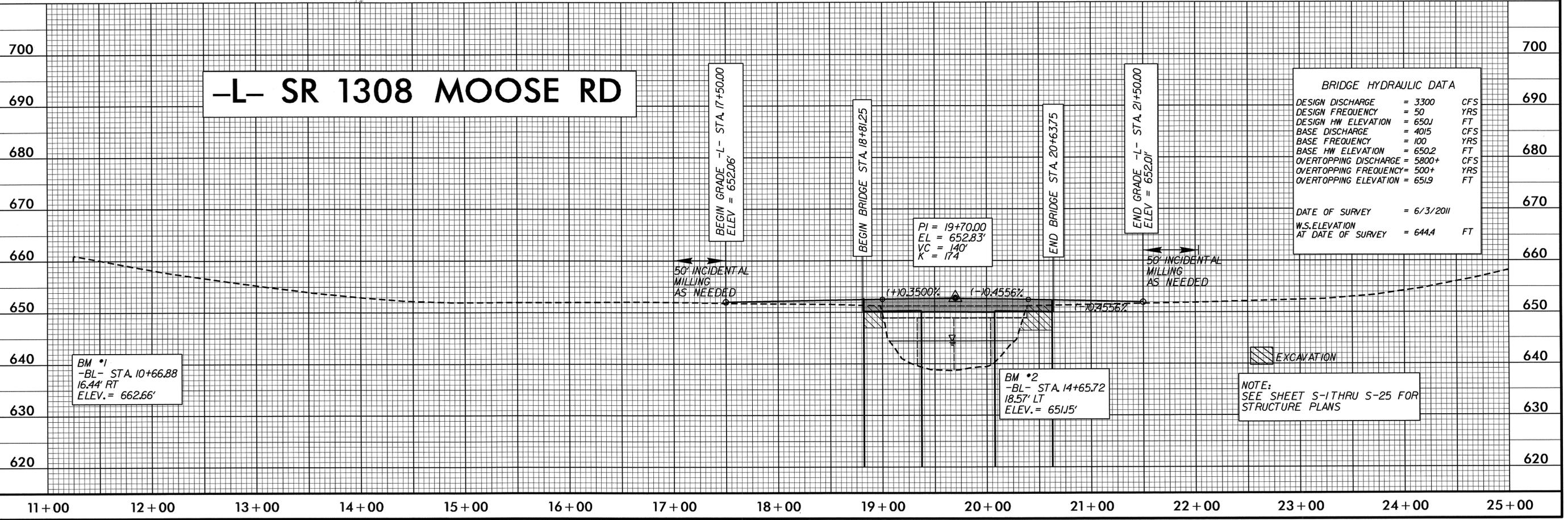
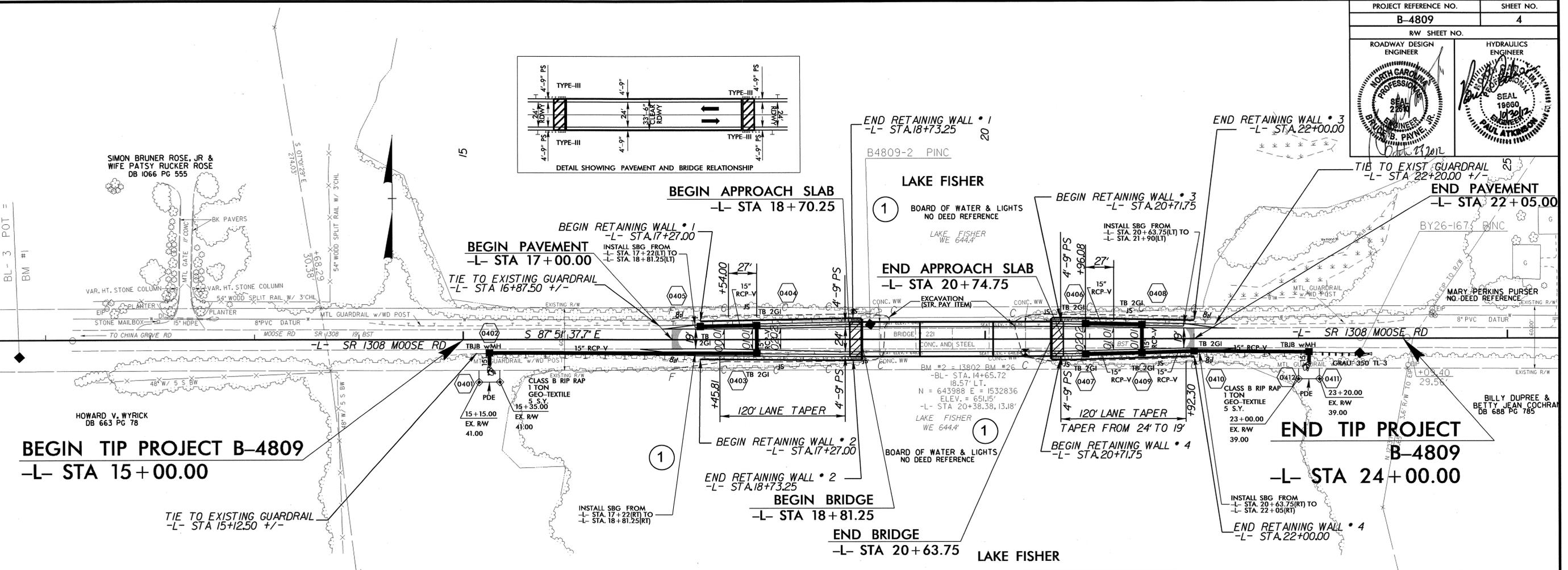
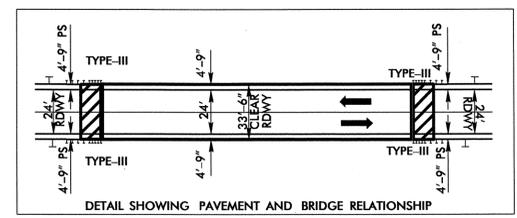
"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL
 TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
 FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
 W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
 G = GATING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

GUARDRAIL SUMMARY

LINE	BEG. STA.	END STA.	LOC.	LENGTH			WARRANT POINT		"N" DIST FROM E.O.L.	TOTAL SHLDR WIDTH	FLAIR LENGTH		W		ANCHORS				IMP. ATTEN. TYPE 350			REMOVE EXISTING GRDRAIL	REMARKS	
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPR. END	TRAIL. END			APPR. END	TRAIL. END	APPR. END	TRAIL. END	III	XI	GRAU-350 TL-3	M-350	EA	G	NG			
-L-	15+12.50	18+81.25	RT	368.75					4.71	7.5	348.03	120.15	4.29	4.29									386.00	
-L-	20+63.75	23+70.00	RT	306.25					4.71	7.5							1						312.50	
-L-	16+87.50	18+81.25	LT	193.75					4.71	7.5		173.38	4.29										211.00	
-L-	20+63.75	22+20.00	LT	156.25					4.71	7.5	137.52			4.29									181.50	
SUB TOTALS:				1025																			1091.00	
ANCHOR DEDUCTION:				125																				
PROJECT TOTALS:				900																				
ADDITIONAL GUARDRAIL POST =5																								
												ANCHOR UNIT DEDUCTION												
												GRAU-350 TL-3				1 @ 50'								
												TYPE III				4 @ 18.75'								
												TOTAL				125								

8/17/09

PROJECT REFERENCE NO. B-4809	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 



26-OCT-2012 12:01 b4809_Rdy_psh_04.dgn