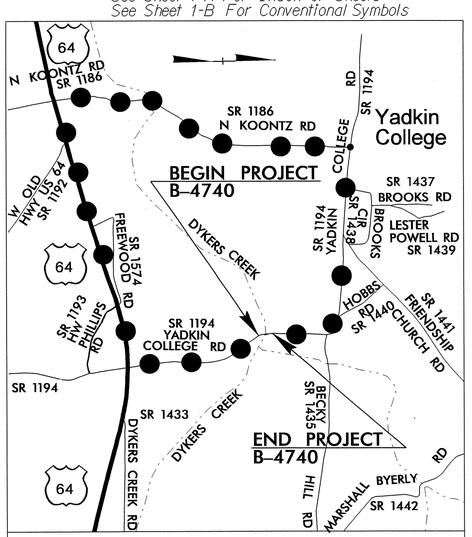
09/08/99

TIP PROJECT: B-4740

CONTRACT: C203362

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

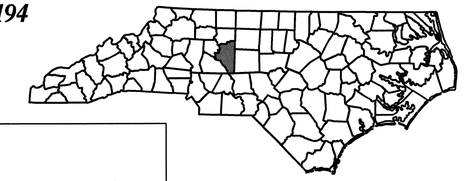
DAVIDSON COUNTY

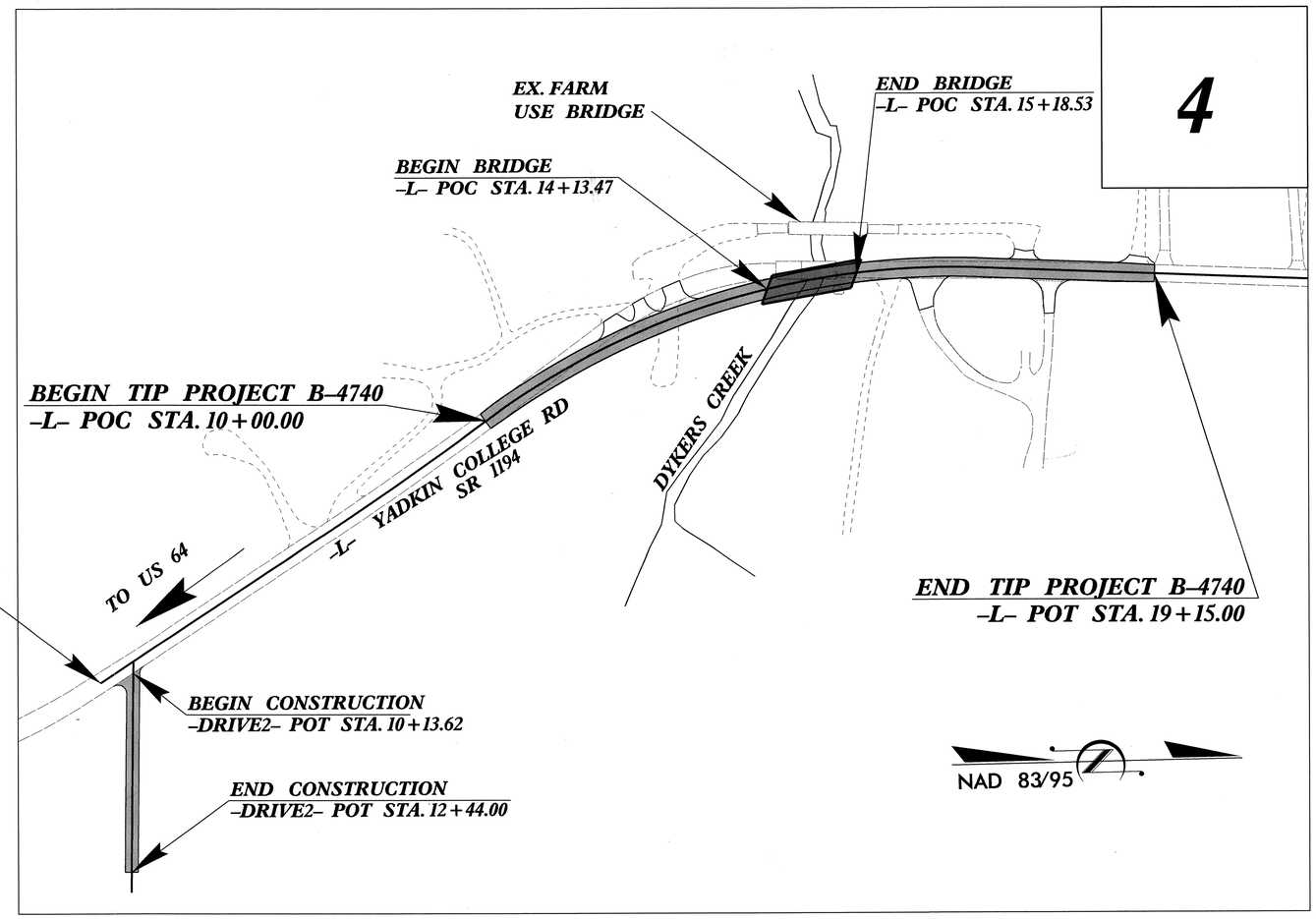
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4740	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
38513.1.1	BRZ-1194(9)	P.E.
38513.2.1	BRZ-1194(9)	R/W, UTL
38513.3.FD1	BRZ-1194(9)	CONST

LOCATION: REPLACE BRIDGE NO. 7 OVER DYKERS CREEK ON SR 1194 (YADKIN COLLEGE ROAD)

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





GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2014 = 758
ADT 2035 = 1,000
DHV = 10 %
D = 60 %
T = 3 % *
V = 40 MPH
* (TTST 1% + DUAL 2%)
FUNC CLASS: RURAL LOCAL
SUBREGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-4740 = 0.153 MILE
LENGTH OF STRUCTURE TIP PROJECT B-4740 = 0.020 MILE
TOTAL LENGTH OF TIP PROJECT B-4740 = 0.173 MILE

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
FEBRUARY 25, 2013

LETTING DATE:
MARCH 18, 2014

TONY HOUSER, PE
PROJECT ENGINEER

BRUCE PAYNE, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 19721 ENGINEER WILLIAM H ELAM
SIGNATURE: 1/22/14

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 2610 ENGINEER BRUCE A. PAYNE
SIGNATURE: 12/18/13

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

18-DEC-2013 11:59
R:\Roadway\Proj\b4740_rdy_tsh.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-4740	1-A

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 19010 ENGINEER
B. PAYNE, JR.
December 18 2013

CONTRACT: C203362
TIP PROJECT: B-4740
COUNTY: DAVIDSON

INDEX OF SHEETS

SHEET NUMBER	SHEET
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
2-A	STANDARD ROCK PLATING DETAIL
2-B	GUARDRAIL ANCHOR UNIT, TYPE III SHOP CURVED DETAIL
3-A	SUMMARY OF DRAINAGE QUANTITIES
3-B	SUMMARY OF GUARDRAIL SUMMARY OF PAVEMENT REMOVAL SUMMARY OF EARTHWORK SUMMARY OF SHOULDER BERM GUTTER SUMMARY OF ROCK PLATING SUMMARY OF SUBSURFACE DRAINAGE SUMMARY OF AGGREGATE SUBGRADE / STABILIZATION
4	PLAN SHEET
5 THRU 6	PROFILE SHEETS
TMP-1 THRU TMP-2	TRAFFIC CONTROL PLANS
SD-1	SIGN DETAIL
PMP-1	PAVEMENT MARKING PLANS
EC-1 THRU EC-5/CONST.4	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-2	SIGNING PLANS
UO-1 THRU UO-2	UTILITY BY OTHERS
X-0	CROSS SECTION SUMMARY
X-1 THRU X-9	CROSS SECTIONS
S-1 THRU S-17	STRUCTURE 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 III
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - 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 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
815.03	Pipe Underdrain and Blind Drain
840.00	Concrete Base Pad for Drainage Structures
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.24	Frames and Narrow Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
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
876.04	Drainage Ditches with Class 'B' Rip Rap

GENERAL NOTES: 2012 SPECIFICATIONS
EFFECTIVE: 01-17-2012
REVISED: 07-30-2012

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 III.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 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 SIDE ROADS: THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

UNDERDRAINS:

UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.03 AT LOCATIONS DIRECTED BY THE ENGINEER.

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.

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

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
Piedmont Communications
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

RIGHT-OF-WAY MARKERS:

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

8/17/99
18-DEC-2013 16:07
R:\Roadway\Proj\B4740_Rdy_psh_1a.dgn
$$$$USERNAME$$$$

04/16/11

PROJECT REFERENCE NO.	SHEET NO.
B-4740	1-B

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 — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- 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 — S
- 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 — CSX TRANSPORTATION
- RR Signal Milepost — 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 R/W Marker — RW
- Proposed Control of Access Line with Concrete C/A Marker — CA
- Existing Control of Access — CA
- Proposed Control of Access — CA
- 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
- 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 — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- 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 — T
- Telephone Booth
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- 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 — W
- 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 — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- 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:

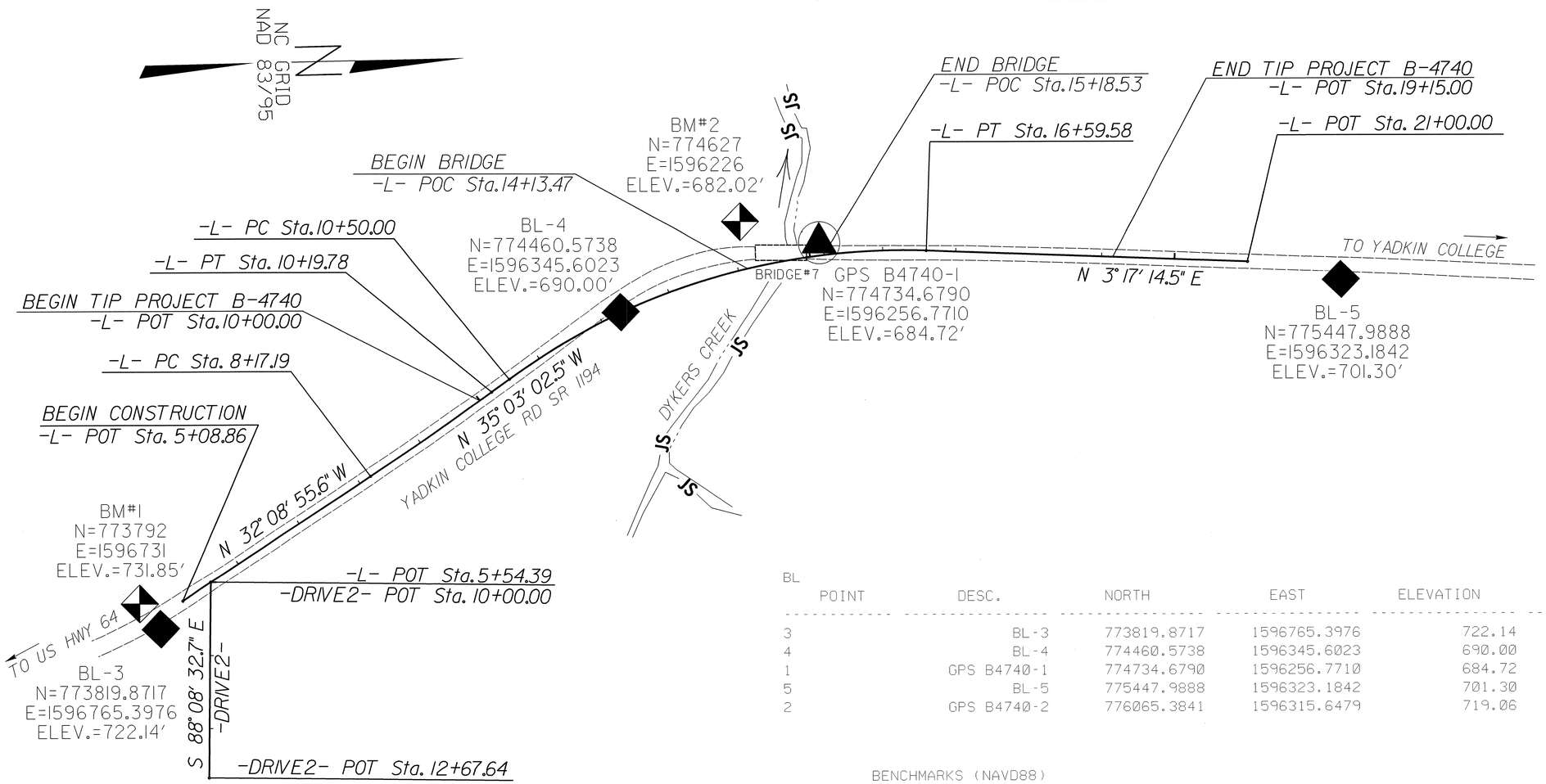
- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- 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.

PROJECT REFERENCE NO.	SHEET NO.
B-4740	1-C
Location and Surveys	

SURVEY CONTROL SHEET B-4740



BL

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
3	BL-3	773819.8717	1596765.3976	722.14	OUTSIDE PROJECT LIMITS	
4	BL-4	774460.5738	1596345.6023	690.00	12+28.67	1.24 LT
1	GPS B4740-1	774734.6790	1596256.7710	684.72	15+14.67	17.20 LT
5	BL-5	775447.9888	1596323.1842	701.30	OUTSIDE PROJECT LIMITS	
2	GPS B4740-2	776065.3841	1596315.6479	719.06	OUTSIDE PROJECT LIMITS	

BENCHMARKS (NAVD88)
****
BM#1 ELEVATION = 731.85'
N 773792 E 1596731
L STATION 5+08.86 TO BM#1
S 29°29'39" E DIST 543.27'
RR SPIKE IN NORTHERN ROOT OF 12"
HICKORY 35' FROM WEST EP
****
****
BM#2 ELEVATION = 682.02'
N 774627 E 1596226
L STATION 14+17 65' LEFT
SCRIBED CROSS IN SE CORNER OF CONCRETE
APPROACH OF PRIVATE RAIL BRIDGE OVER
CREEK
****
****
BM#3 ELEVATION = 719.06'
N 776065 E 1596316
L STATION 21+00 TO BM#3
N 01°31'00" E DIST 744.80'
GPS B4740-2
****

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4740-1"
WITH NAD 83/95 STATE PLANE GRID COORDINATES OF
NORTHING: 774734.679(ft) EASTING: 1596256.771(ft)
ELEVATION: 684.72(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99990322
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4740-1" TO -L- STATION 5+08.86 IS
S 28°04'13.0" E 1001.26'
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.CONNECT.NCDOT.GOV/RESOURCES/LOCATION/

THE FILES TO BE FOUND ARE AS FOLLOWS:
B4740_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 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

PROJECT REFERENCE NO.	SHEET NO.
B-4740	1-D
Location and Surveys	

SURVEY CONTROL SHEET B-4740
FINAL

L

TYPE	STATION	NORTH	EAST
POT	5+08.86	773851.1948	1596727.9187
PC	8+17.19	774112.2497	1596563.8495
PT	10+19.78	774280.9751	1596451.7497
PC	10+50.00	774305.7141	1596434.3947
PT	16+59.58	774881.1422	1596270.6788
POT	21+00.00	775320.8447	1596295.9345

DRIVE2

TYPE	STATION	NORTH	EAST
POT	10+00.00	773889.7449	1596703.6905
POT	12+67.64	773881.0693	1596971.1904

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	10+19.78	24.91	774295.2804	1596472.1415
L	10+19.78	45.00	774306.8186	1596488.5887
L	11+50.00	45.00	774412.2132	1596421.0181
L	16+70.00	27.43	774889.9764	1596298.6643

ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	14+88.00	-32.75	774705.6590	1596244.5085
L	15+50.00	-40.00	774769.1186	1596231.0607
L	17+38.00	-36.97	774961.5576	1596238.2680
L	17+38.00	-24.13	774960.8213	1596251.0874

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4740-1"
WITH NAD 83/95 STATE PLANE GRID COORDINATES OF
NORTHING: 774734.679(ft) EASTING: 1596256.771(ft)
ELEVATION: 684.72(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99990322
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4740-1" TO -L- STATION 10+00.00 IS
S 23°42'25.2" E 513.20'
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.CONNECT.NCDOT.GOV/RESOURCES/LOCATION/

   THE FILES TO BE FOUND ARE AS FOLLOWS:
   B4740_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 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

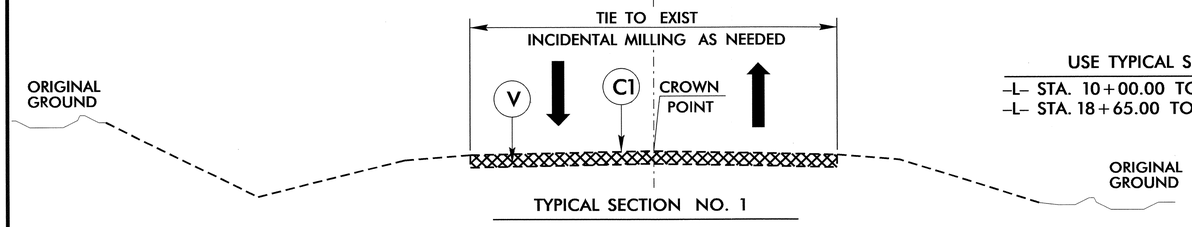
12-DEC-2013 14:10
R:\Roadway\Proj\B4740_LS_1d.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-4740	2

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 22810 ENGINEER — B. PAYNE, JR. — December 18, 2013

PAVEMENT DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 22883 ENGINEER — CLARK S. MORRISON — 1/22/14

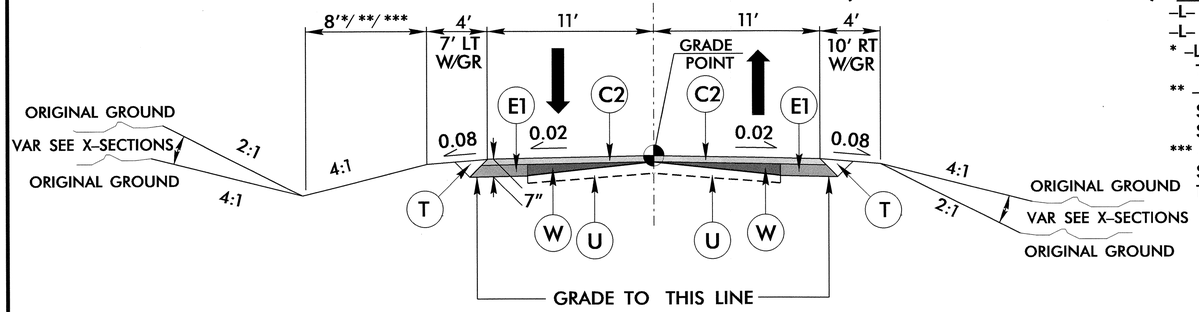
℄ –L– SR 1194 (YADKIN COLLEGE RD)



TYPICAL SECTION NO. 1

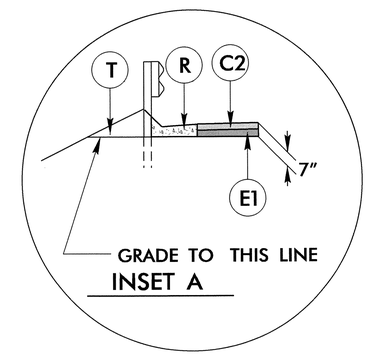
USE TYPICAL SECTION NO. 1
–L– STA. 10+00.00 TO –L– STA. 10+50.00
–L– STA. 18+65.00 TO –L– STA. 19+15.00

℄ –L– SR 1194 (YADKIN COLLEGE RD)



TYPICAL SECTION NO. 2

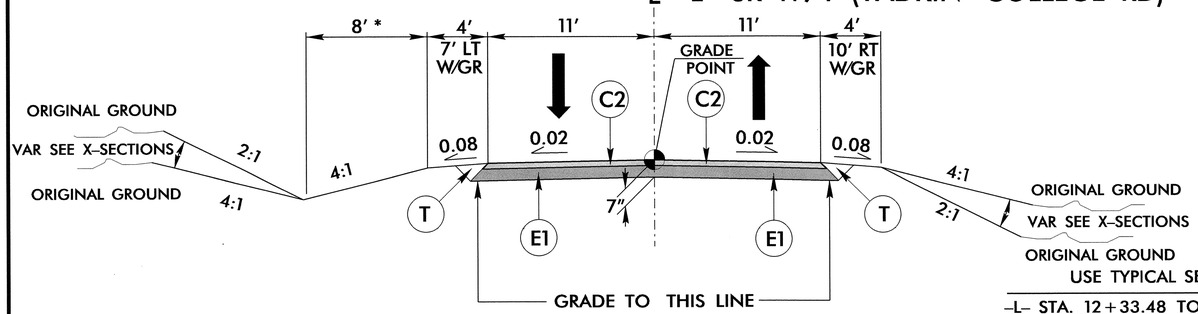
USE TYPICAL SECTION NO. 2
–L– STA. 10+50.00 TO –L– STA. 12+33.48
–L– STA. 16+50.00 TO –L– STA. 18+65.00
* –L– STA. 16+00.00 TO –L– 17+00.00 (LT)
TO TIE TO EXISTING DITCH
** –L– STA. 16+50.00 TO –L– STA. 17+25.00 (RT)
SEE X-SECTIONS FOR DITCH DESIGN TO PROVIDE SHALLOW COVER OVER PROPOSED PIPE
*** –L– STA. 10+50.00 TO –L– STA. 12+00.00 (LT)
SEE X-SECTION FOR SLOPE AND DITCH WIDTH TO TIE TO EXISTING SLOPE



INSET A

USE INSET A
–L– STA. 12+60.00 TO –L– STA. 14+02.99 (RT)
–L– STA. 15+09.94 TO –L– STA. 15+30.00 (RT)

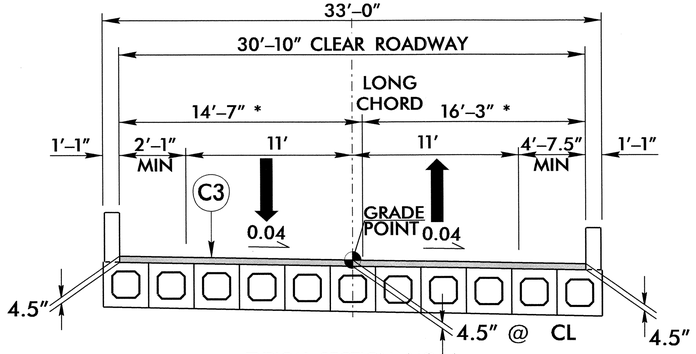
℄ –L– SR 1194 (YADKIN COLLEGE RD)



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3
–L– STA. 12+33.48 TO –L– STA. 14+13.47 (BEGIN BRIDGE)
–L– STA. 15+18.53 (END BRIDGE) TO –L– STA. 16+50.00
* –L– STA. 15+18.53 TO –L– STA. 16+00.00 (LT)
TO TIE TO EXISTING DITCH

℄ –L– SR 1194 (YADKIN COLLEGE RD)



TYPICAL SECTION NO. 4

USE BRIDGE TYPICAL SECTION NO. 4
–L– STA. 14+13.47 TO –L– STA. 15+18.53

* DIMENSIONS ARE AT THE BEGINNING AND ENDING OF BRIDGE

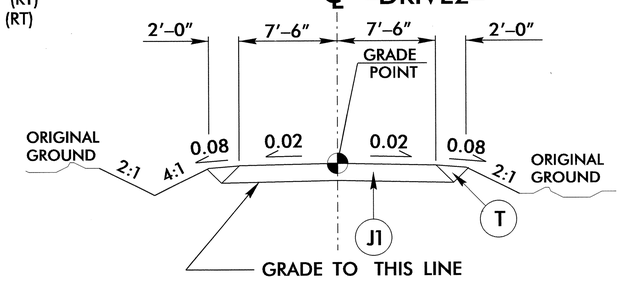
PAVEMENT SCHEDULE

(FINAL PAVEMENT DESIGN 9/6/12)

C1	PROP. APPROX. 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 2½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.
E1	PROP. APPROX. 4½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LVS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
J1	6" DEPTH AGGREGATE BASE COURSE
R	SHOULDER BERM GUTTER
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	INCIDENTAL MILLING
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING)

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

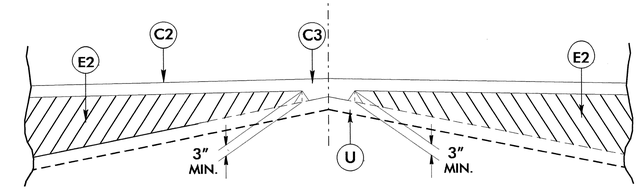
℄ –DRIVE2–



TYPICAL SECTION NO. 5

–DRIVE2– STA. 10+13.62 TO –DRIVE2– STA. 12+44.00

℄ SURVEY



Detail Showing Method of Wedging

6/2/99

18-DEC-2013 14:53
H:\Roadway\Proj\b4740_rdy_typ.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET
B-4740	2-A

GEOTECHNICAL ENGINEER

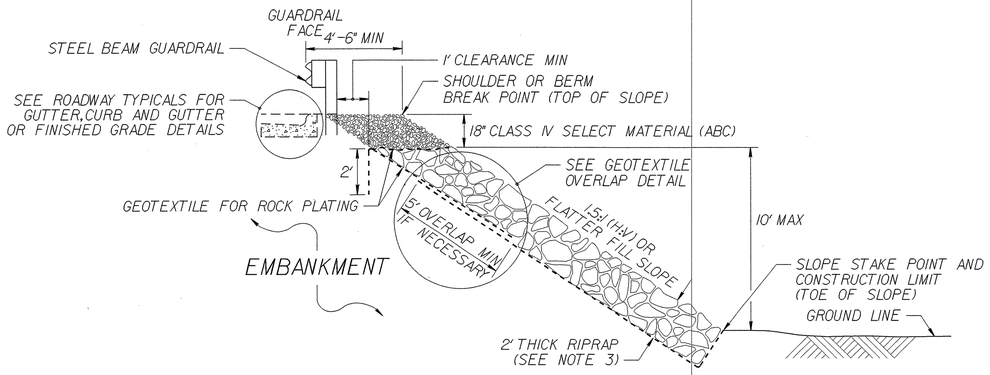
NORTH CAROLINA PROFESSIONAL SEAL 022246 ENGINEER SCOTT A. HIDDEN

Scott A. Hidden 7/22/13

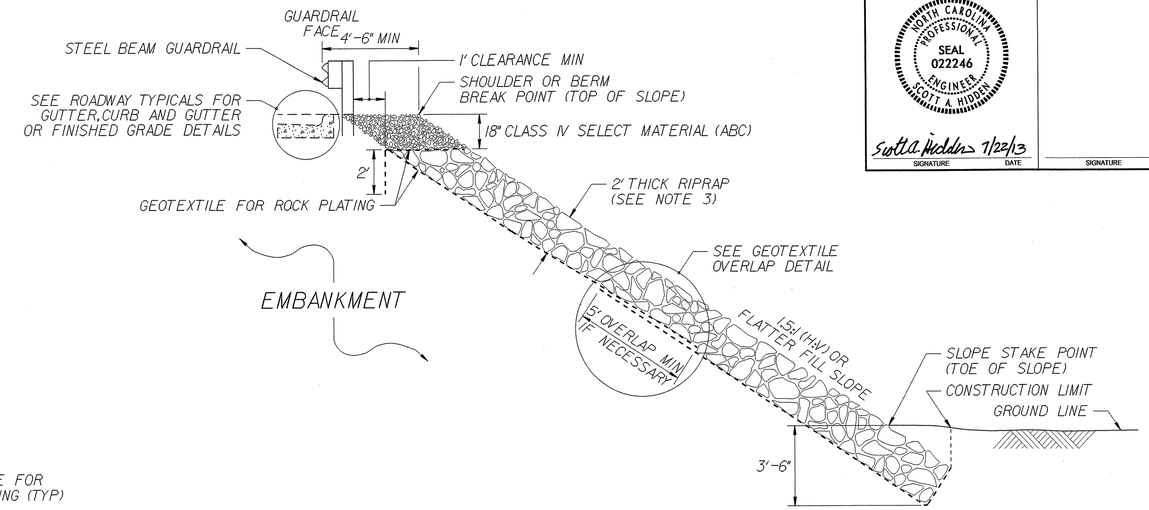
SIGNATURE DATE

ENGINEER

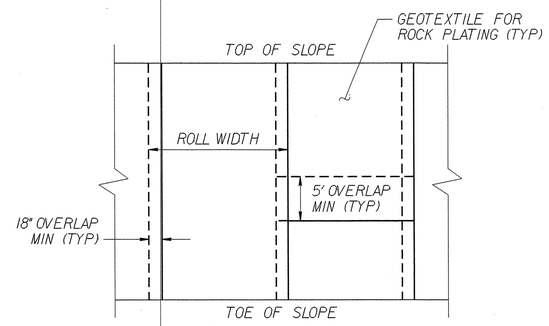
SIGNATURE DATE



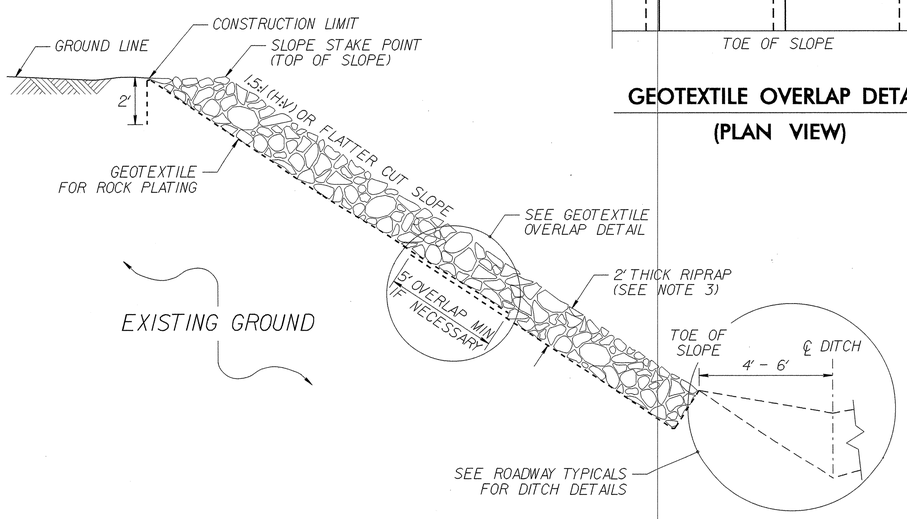
ROCK PLATING DETAIL NO. 1 – TYPICAL SECTION



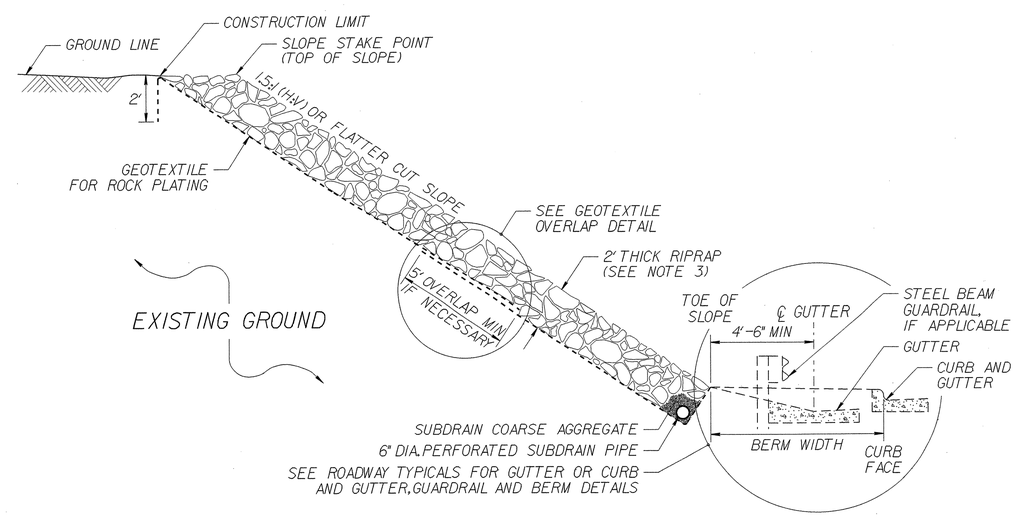
ROCK PLATING DETAIL NO. 2 – TYPICAL SECTION



GEOTEXTILE OVERLAP DETAIL (PLAN VIEW)



ROCK PLATING DETAIL NO. 3 – TYPICAL SECTION



ROCK PLATING DETAIL NO. 4 – TYPICAL SECTION

NOTES:

1. SEE ROADWAY PLANS AND SUMMARY SHEETS FOR ROCK PLATING LOCATIONS.
2. FOR STANDARD ROCK PLATING, SEE SECTION 275 OF THE STANDARD SPECIFICATIONS.
3. USE CLASS 1, 2 OR B RIPRAP UNLESS REQUIRED OTHERWISE IN THE ROADWAY SUMMARY SHEETS.

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL ENGINEERING UNIT

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

STANDARD DRAWING NO. 1802.01

STANDARD ROCK PLATING

DATE: 2-19-13

PROJECT REFERENCE NO.	SHEET NO.
B-4740	2-B

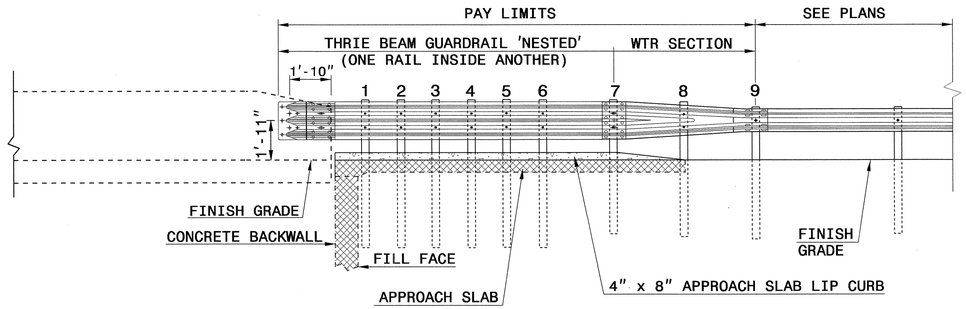
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR

TYPE III - SHOP CURVED
STRUCTURE ANCHOR UNIT

SHEET 1 OF 1

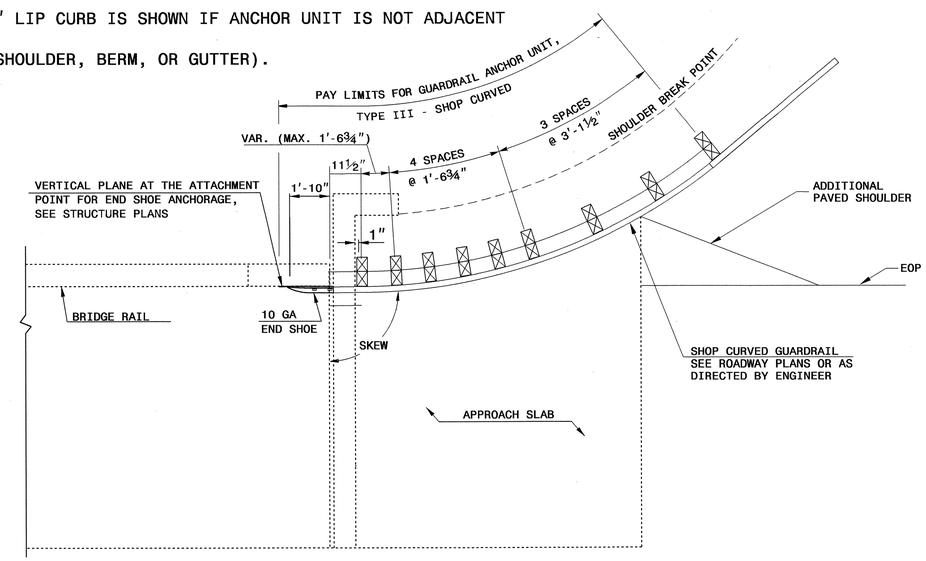
TYPE III SC



ELEVATION

SEE ROADWAY PLANS FOR END TREATMENT

NOTE:
- **POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- *THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11½" IF CONCRETE BACKWALL IS NOT PRESENT.
- -SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" x 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.
- -MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).
- -USE NO STEEL POSTS WITHIN THE GUARDRAIL ANCHOR UNIT LIMITS.
- -LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
- -SEE STANDARD 862.03 SHEET 4 FOR POST SECTIONS 1 THRU 9.



PLAN VIEW

GUARDRAIL ANCHOR UNIT, TYPE III - SHOP CURVED FOR ATTACHMENT TO RAIL ON BRIDGE

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR

TYPE III - SHOP CURVED
STRUCTURE ANCHOR UNIT

SHEET 1 OF 1

TYPE III SC

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER T.S. SPELL
12/20/13

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: E.E.Ward DATE: 4-4-02
MODIFIED BY: T.S.Spell DATE: 5-29-09
CHECKED BY: DATE:
FILE SPEC.: ward:\usr\details\stand\862stds\typeiiisc.dgn

COMPUTED BY:	Hydraulics	DATE:	
CHECKED BY:	AEV	DATE:	11-25-13

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
B-4740	3-A

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

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

LINE & STATION	OFFSET		STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18	24	30	36	42	48	54	60	66	72	78	84		DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC
L 15+26	14	RT	0401		685.9																							
			0401	0402		683.0	677.0			24														X		X		
L 16+60	21	RT	0403		684.0																							
			0403	0404		681.0	676.6				136																	
			0405	0403		685.3	681.0				104																	
L 13+88	11	RT	0406		687.6																							
			0406	0407		684.9	676.8			24														X		X		
SHEET TOTALS										48	240																	
PROJECT TOTALS										48	240																	

SIZE / THICKNESS OR GAUGE

C. S. PIPE (SE: SHOP ELONGATED) 12	15	18	24		30			36			42	48	54	60	66	72	78	84		
.064	.064	.064	.064		.079			.079			.109	.109								

R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	54	60	66	72	78	84	

LINE & STATION	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	T.B.D.I. STD. 840.35	15" DRAINAGE PIPE ELBOW	PIPE REMOVAL LIN. FT.	REMARKS
L 15+26						1											1	1			
																			2	84	
L 16+60						1									1	1					
																				184	
L 13+88						1											1	1		32	
																			2		
SHEET TOTALS						3.000									1	1	2	2	4	300	
PROJECT TOTALS						3.000									1	1	2	2	4	300	

NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

RD261585

RD261649

COMPUTED BY: ESM	DATE: 11-1-12
CHECKED BY: AEV	DATE: 12-3-13

PROJECT NO.	SHEET NO.
B-4740	3-B

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

IN CUBIC YARDS

Station	Station	Uncl. Excav.	Embank. +20%	Borrow	Waste
STA					
-L- STA. 10+50.00	14+13.47	29	2,198	2,169	0
	BEGIN BRIDGE				
-DRIVE2- STA. 10+13.62	12+44.00	15	641	626	
SUBTOTALS:		44	2,839	2,795	0
-L- STA. 15+18.53	18+65.00	131	587	456	0
END BRIDGE					
SUBTOTALS:		131	587	456	0
PROJECT TOTALS:		175	3,426	3,251	0
LOSS DUE TO CLEAR & GRUB		-100		100	
SHOULDER MATERIAL			18	18	
PROJECT TOTALS		75		3,369	0
EST. FOR REPL.					
TOPSOIL ON BOR. PIT				168	
GRAND TOTALS:		75		3,537	0
SAY:		100		3,550	0

UNDERCUT EXCAVATION	200 CY
SHALLOW UNDERCUT	200 CY
DDE	35 CY

PAVEMENT REMOVAL SUMMARY

IN SQUARE YARDS

SURVEY LINE	Station	Station	LOCATION LT/RT/CL	ASPHALT REMOVAL
-L-	10+74.32	14+29.57	LT	578.27
-L-	14+95.48	16+50.00	CL	324.84
-L-	16+50.00	17+22.56	RT	6.93
		TOTAL:		910.04
		SAY:		920

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
CONTINGENCY				UD	200
				TOTAL LF:	200

*UD = Underdrain
*BD = Blind Drain
*SD = Subsurface Drain

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, Fine Grading, Clearing and Grubbing and Removal of Existint Pavement will be paid for at the contract lump sum price for "Grading"

SHOULDER BERM GUTTER SUMMARY

LINE	Station	Station	LENGTH (LF)
-L- RT	12+60.00	14+02.99	142.99
-L- RT	15+09.94	15+30.00	20.06
		TOTAL:	163.05
		SAY:	165.00

SUMMARY OF ROCK PLATING

LINE	Beginning Slope	Approx. Station	Ending Slope	Approx. Station	Location LT/RT	Rock Plating Detail No. 1/2/3/4	Riprap Class* 1/2/B	SY
-L-	1.5:1	15+75.00	1.5:1	16+75.00	LT	2	2	150
							TOTAL SY:	150

*Use Class 1, 2 or B riprap if riprap class is not shown for rock plating location.

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

LINE	Station	Station	Aggregate Type* ASU/AST	Aggregate Thickness INCHES	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Soil Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
CONTINGENCY			ASU		200	400	800	0	0
			TOTAL CY/TONS/SY:		200	400	800	0	0

*ASU = Aggregate Subgrade
*AST = Aggregate Stabilization

GUARDRAIL SUMMARY

"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

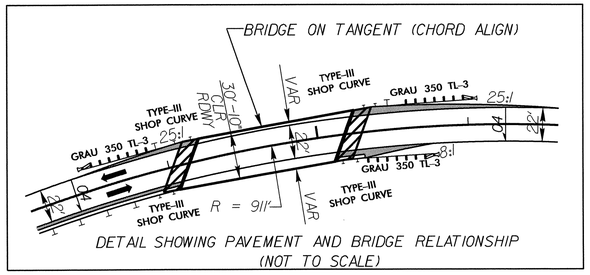
SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH STRAIGHT	LENGTH SHOP CURVED	LENGTH DOUBLE FACED	WARRANT POINT APPROACH END	WARRANT POINT TRAILING END	"N" DIST. FROM E.O.L.	TOTAL SHOUL WIDTH	FLARE LENGTH APPROACH END	FLARE LENGTH TRAILING END	W APPROACH END	W TRAILING END	ANCHORS XI MOD	ANCHORS XI	ANCHORS GRAU 350TL-3	ANCHORS M-350	ANCHORS SHOP CURVED TYPE III	ANCHORS CAT-1	ANCHORS VI MOD	ANCHORS BIC	ANCHORS	IMPACT ATTENUATOR TYPE 350 G	IMPACT ATTENUATOR TYPE 350 NG	SINGLE FACED CONCRETE BARRIER	REMOVE EXISTING GUARDRAIL	REMOVE & STOCKPILE EXISTING GUARDRAIL	REMARKS
-L-	11+96.74	14+02.99	RT	206.25			14+02.99		VAR	10'	50		1				1		1										
-L-	13+41.33	14+22.58	LT	81.25				14+22.58	VAR	7'		50		1			1		1										
-L-	15+09.94	15+78.69	RT	68.75				15+09.94	VAR	10'		50		1			1		1										
-L-	15+25.97	16+94.72	LT	168.75			15+25.97		VAR	7'	50		1				1		1										
		SUBTOTAL		525																	ANCHOR UNIT DEDUCTIONS								
		ANCHOR DEDUCTION		-275																	GRAU 350 TL-3		4 @ 50'						
																					TYPE III		4 @ 18.75'						
																					TOTAL		275'						
		TOTAL		250													4		4										
		SAY		275													4		4										
	ADDITIONAL GUARDRAIL POSTS =			5																									

PROJECT REFERENCE NO.	SHEET NO.
B-4740	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 22510 ENGINEER BARRY S. PAYNE, JR.

NORTH CAROLINA PROFESSIONAL SEAL 19721 ENGINEER WILLIAM H. ELLIS

December 18, 2013



DETAIL SHOWING PAVEMENT AND BRIDGE RELATIONSHIP
(NOT TO SCALE)

-L-

PI Sta 9+18.51
Δ = 2° 54' 06.9" (LT)
D = 1° 25' 56.6"
L = 202.59'
T = 101.32'
R = 4,000.00'

PI Sta 13+66.69
Δ = 38° 20' 16.9" (RT)
D = 6° 17' 21.6"
L = 609.57'
T = 316.69'
R = 911.00'
SE = 04

BEGIN TIP PROJECT B-4740
-L- POC Sta.10+00.00

-L- PT Sta.10+19.78
-L- PC Sta.10+50.00
-L- PC Sta.8+17.19

BEGIN BRIDGE
-L- POC Sta.14+13.47

BEGIN APPROACH SLAB
-L- POC Sta.14+02.39

RETAIN EXISTING FARM BRIDGE DO NOT DISTURB

END BRIDGE
-L- POC Sta.15+18.53

END APPROACH SLAB
-L- POC Sta.15+29.65
-L- PT Sta.16+59.58

END PAVEMENT
-L- POT Sta.18+65.00

END TIP PROJECT B-4740
-L- POT Sta.19+15.00

BEGIN CONSTRUCTION
-L- POT Sta.5+08.86

-L- POT Sta.5+54.39
-DRIVE2- POT Sta.10+00.00

BEGIN DRIVEWAY CONSTRUCTION
-DRIVE2- STA.10+13.62

END DRIVEWAY CONSTRUCTION
-DRIVE2- STA.12+44.00

-DRIVE2- POT Sta.12+67.64

N 35°03'02.5" W
N 32°08'55.6" W
-L- YADKIN COLLEGE RD SR 1194
N 3°17'14.5" E

WILMA GRIMES
JANE WALSER
DB 1114 PG 943

DRY CREEK PROPERTIES INC.
DB 1375 PG 1278

DONALD LEE CURRY
DB 512 PG 548

FELTON W. & BRENDA J. GREGG
DB 1269 PG 223

MARK WALSER
DB 1114 PG 940

MARK WALSER
DB 1958 PG 1091
DB 1166 PG 872

DEBRA M. & CRAIG A. SMITH
DB 1436 PG 97

TOE PROTECTION SEE DETAIL D

CLASS B RIP RAP = 2 TONS
GEOTEXTILE = 7 SQ. YDS.

CLASS II RIP RAP TO ELEV. = 678.5' STRUCTURE PAY ITEM

RIP RAP AT EMBANKMENT SEE DETAIL C

RIP RAP AT EMBANKMENT 1.5:1 ON BANK SEE DETAIL E

SPECIAL BERM BASE DITCH W/CLASS B RIP RAP SEE DETAIL B
DDE = 30 CY

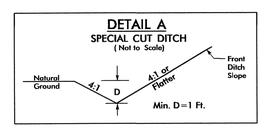
SPECIAL CUT DITCH SEE DETAIL A

ROCK PLATING -L- 15+75.00 TO 16+75.00 CLASS II RIP RAP SEE SHEET 2-A

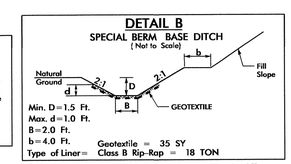
SHOULDER BERM GUTTER
-L- STA. 12+60.00 TO 14+02.99 RT

SHOULDER BERM GUTTER
-L- STA. 15+09.94 TO 15+30.00 RT

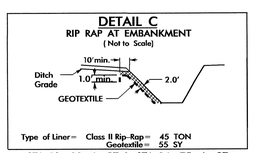
TAPER



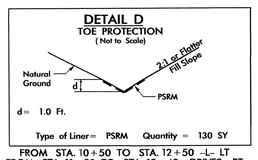
FROM STA. 16+25 TO STA. 17+25 -L- RT



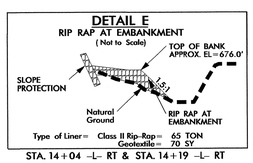
FROM STA. 14+75 TO STA. 15+18 -L- RT



STA. 13+90 -L- RT & STA. 14+75 -L- RT



FROM STA. 10+50 TO STA. 12+50 -L- LT
FROM STA. 11+50 TO STA. 12+40 -DRIVE2- RT



STA. 14+04 -L- RT & STA. 14+19 -L- RT

EXCAVATION (STRUCTURE PAY ITEM)

PAVED SHOULDERS

PAVEMENT REMOVAL

NOTES:
ALL DRIVEWAY RADII ARE 20' UNLESS OTHERWISE NOTED
SEE SHEET 5 FOR -L- PROFILE
SEE SHEET 6 FOR -DRIVE2- PROFILE
SEE SHEETS S-1 THRU S-17 FOR STRUCTURE PLANS

8/17/09

18-DEC-2013 11:59
R:\Roadway\Proj\B4740_rdy_psh_04.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-4740	5

ROADWAY DESIGN ENGINEER

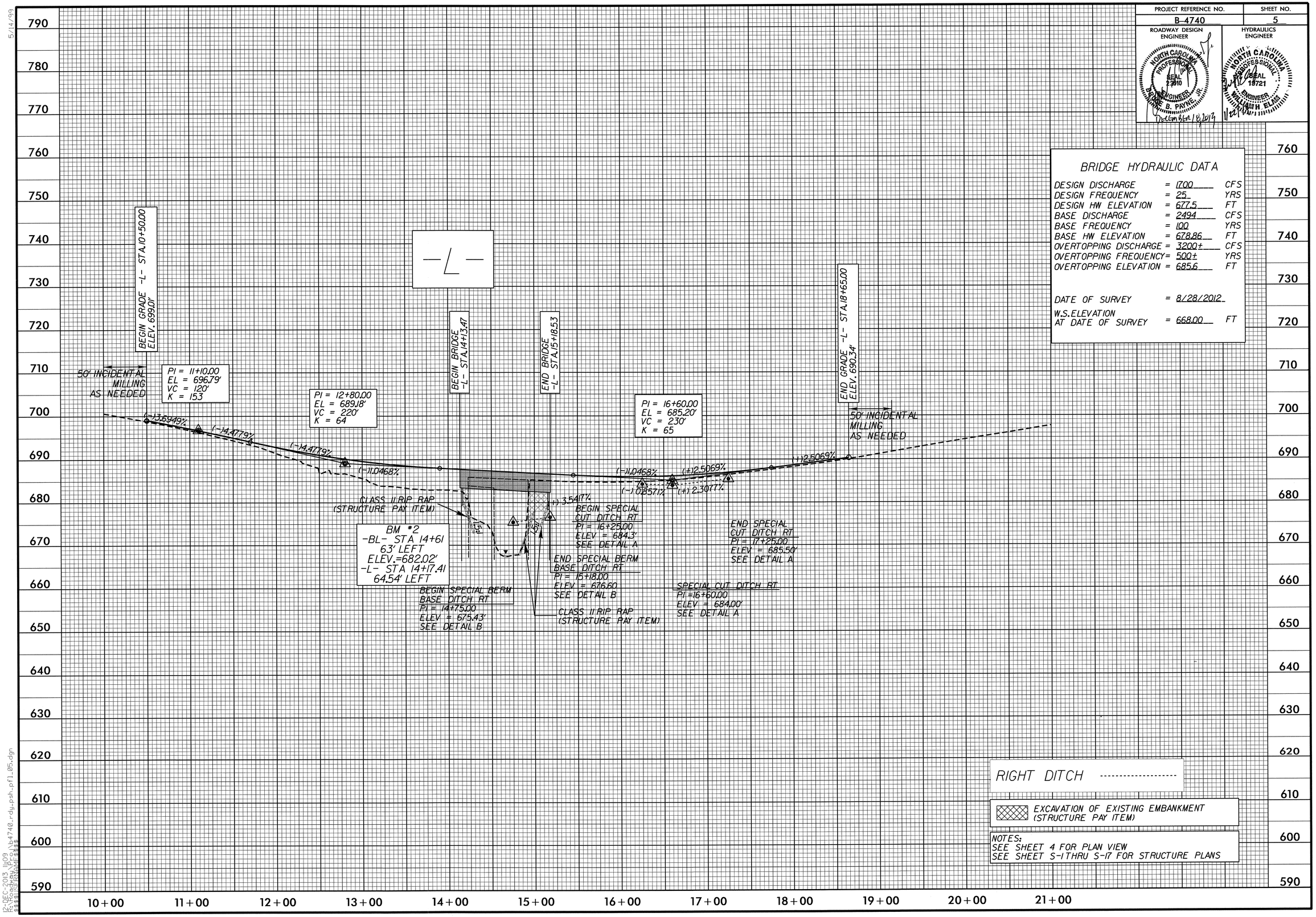
NORTH CAROLINA PROFESSIONAL SEAL 22810 ENGINEER JOHN B. PAYNE, JR.

December 18, 2013

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 18721 ENGINEER WILLIAM HAITH ELAM

12/18/2013



BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 1700	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 677.5	FT
BASE DISCHARGE	= 2494	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 678.86	FT
OVERTOPPING DISCHARGE	= 3200±	CFS
OVERTOPPING FREQUENCY	= 500±	YRS
OVERTOPPING ELEVATION	= 685.6	FT
DATE OF SURVEY	= 8/28/2012	
W.S. ELEVATION AT DATE OF SURVEY	= 668.00	FT

NOTES:
SEE SHEET 4 FOR PLAN VIEW
SEE SHEET S-1 THRU S-17 FOR STRUCTURE PLANS

5/14/99

12-DEC-2013 11:09
R:\Roadway\Proj\b4740_rdy_psh_pfl_05.dgn
$$$$USERNAME$$$$

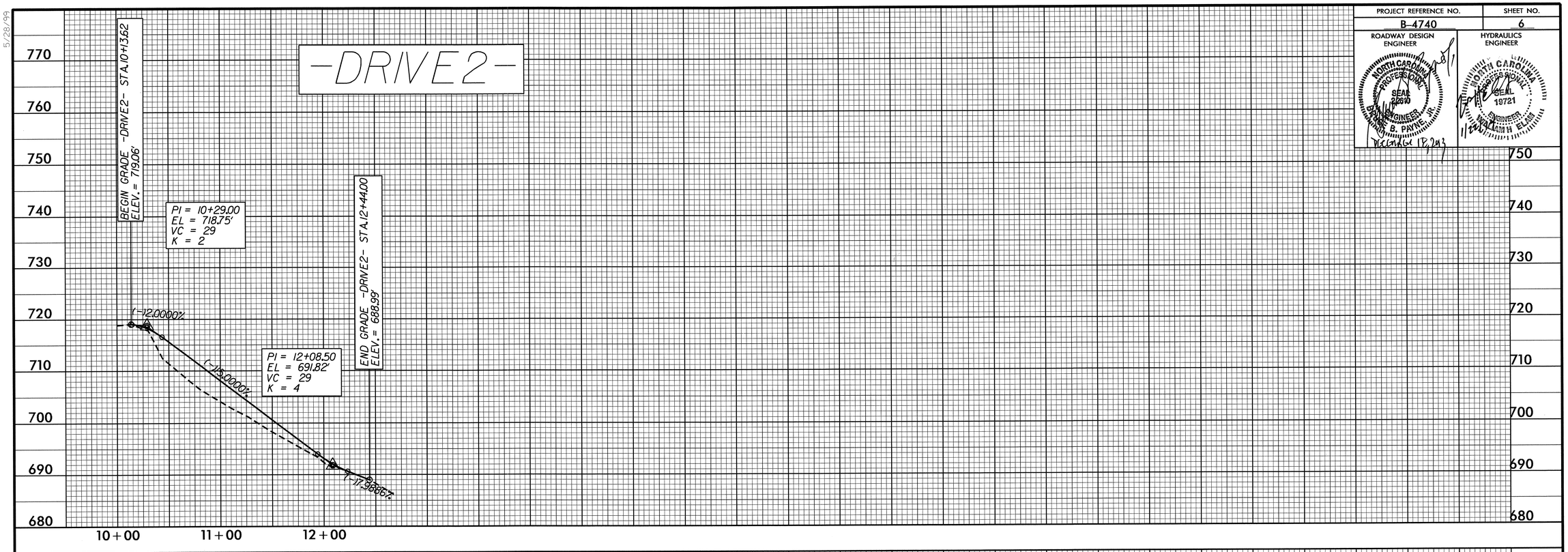
PROJECT REFERENCE NO.	SHEET NO.
B-4740	6

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 22610 ENGINEER JOE B. PAYNE, JR.

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 19721 ENGINEER WILLIAM H. ELLIS



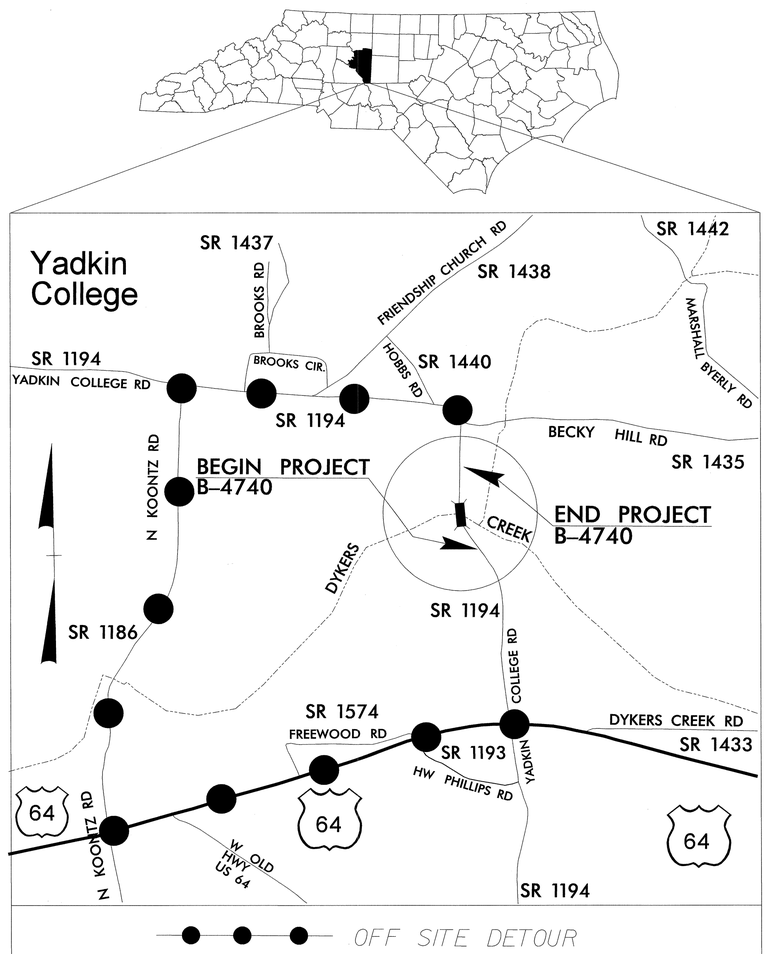
5/28/99

12-DEC-2013 14:09
R:\Roadway\Proj\b4740_Rdy_psh_pf1_06.dgn
$$$$USERNAME$$$$

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

DAVIDSON COUNTY



VICINITY MAP

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES AND LOCAL NOTES)
TMP-2	PLAN DETAIL
SD-1	SPECIAL SIGN DESIGN

SHEET NO.
TMP-1

B-4740

TIP PROJECT:

WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

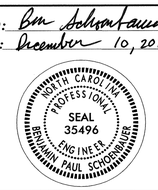
N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. — STATE TRAFFIC MANAGEMENT ENGINEER
J. ISHAK, P.E. — TRAFFIC CONTROL PROJECT ENGINEER
B. SCHOENBAUER, P.E. — TRAFFIC CONTROL PROJECT DESIGN ENGINEER
G. MAZE — TRAFFIC CONTROL DESIGN ENGINEER

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

APPROVED: Ben Schoenbauer
DATE: December 10, 2013

SEAL



12/10/2013
P:\TIPProjects-B\B4740\Traffic\TrafficControl\TCP\B-4740_TC_TMP.dgn
User:gmaze

PROJ. REFERENCE NO.	SHEET NO.
B-4740	TMP-1A

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN 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
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1145.01	BARRICADES

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- WORK AREA
- REMOVAL
- USER DEFINED (IF NEEDED)
- USER DEFINED (IF NEEDED)

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM — SKINNY DRUM — TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW PANEL (TYPE C)
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY (TEMP)

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

APPROVED: Ben Schonhaus DATE: 12/10/13

NORTH CAROLINA PROFESSIONAL SEAL 35496 ENGINEER BENJAMIN PAUL SCHONHAUER

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

ROADWAY STANDARD DRAWINGS & LEGEND

12/10/2013
R:\TIPProjects-B\B4740\Traffic\TrafficControl\TCP\B-4740_TC_TMP_1A.dgn
User:gmoze

PROJ. REFERENCE NO.	SHEET NO.
B-4740	TMP-1B

MANAGEMENT STRATEGIES

- DURING CONSTRUCTION OF PROPOSED STRUCTURE BRIDGE #7, SR 1194 (YADKIN COLLEGE RD.) WILL BE CLOSED TO THROUGH TRAFFIC. YADKIN COLLEGE RD TRAFFIC WILL BE MAINTAINED ON THE FOLLOWING OFF-SITE DETOUR ROUTE: US 64 TO N KOONTZ RD.

- ACCESS TO ALL RESIDENCES AND BUSINESSES MUST BE MAINTAINED AT ALL TIMES WITHIN THE PROJECT LIMITS.

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 ALTERATION.

SIGNING

B) INSTALL ADVANCED WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

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

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

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

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

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

TRAFFIC CONTROL DEVICES

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

PAVEMENT MARKINGS AND MARKERS

G) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

PHASING

MAINTAIN ACCESS TO ALL RESIDENCES AND BUSINESSES AT ALL TIMES WITHIN THE PROJECT LIMITS

STEP 1:
USING RSD 1101.03, SHEET 1 OF 9, SHEETS TMP-2 AND SD-1, INSTALL DETOUR SIGNS, PLACE TYPE III BARRICADES TO CLOSE SR-1194 (YADKIN COLLEGE RD.) TO THROUGH TRAFFIC, AND DETOUR TRAFFIC OFF-SITE.

STEP 2:
AWAY FROM TRAFFIC, COMPLETE THE FOLLOWING:
(SEE ROADWAY AND STRUCTURE PLANS).

1) REMOVE EXISTING STRUCTURE (NO.7) AND CONSTRUCT PROPOSED STRUCTURE.
2) CONSTRUCT PROPOSED ROADWAY UP TO AND INCLUDING FINAL LAYER OF SURFACE COURSE.
3) USING FINAL PAVEMENT MARKING PLAN PLACE FINAL PAVEMENT MARKINGS AMD MARKERS AND TIE INTO EXISTING PAVEMENT MARKINGS.

STEP 5:
REMOVE ALL TRAFFIC CONTROL DEVICES AND DETOUR SIGNING, AND OPEN SR-1194 (YADKIN COLLEGE RD.) TO TRAFFIC IN TWO-LANE, TWO-WAY PATTERN.

APPROVED: Ben Johnston DATE: 12/10/13

NORTH CAROLINA PROFESSIONAL SEAL 35496 ENGINEER BENJAMIN PAUL SCHOENBAUER

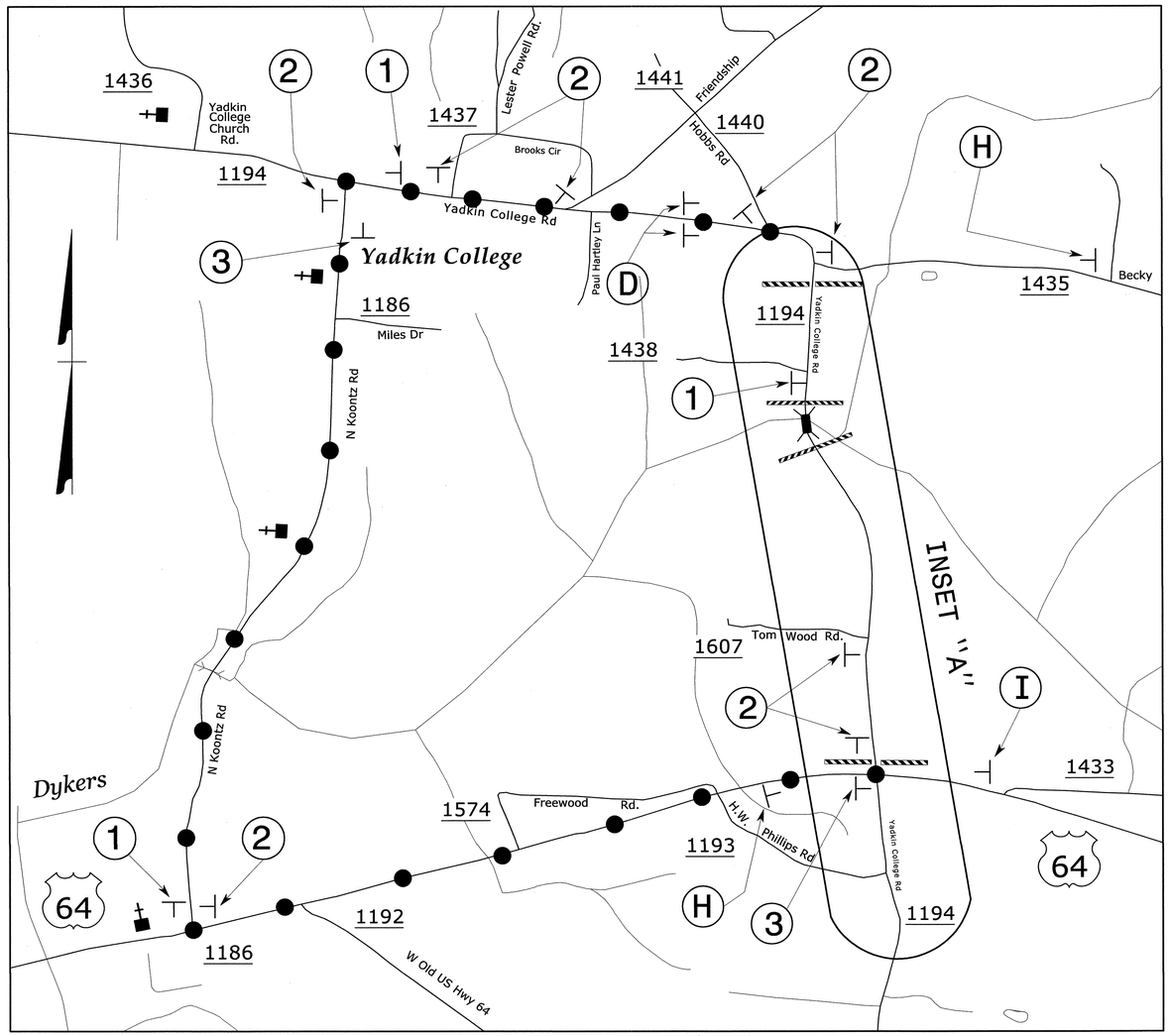
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

TRANSPORTATION OPERATION PLAN

12/10/2013
P:\TIPProjects-B\B4740\Traffic\TrafficControl\TCP\B-4740_TC_TMP_1B.dgn
Usersgmaze

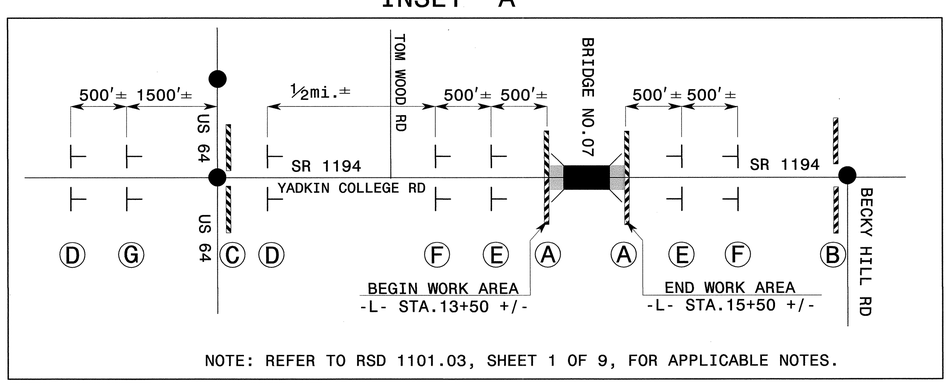
PROJ. REFERENCE NO.	SHEET NO.
B-4740	TMP-2

VICINITY MAP: DAVIDSON COUNTY

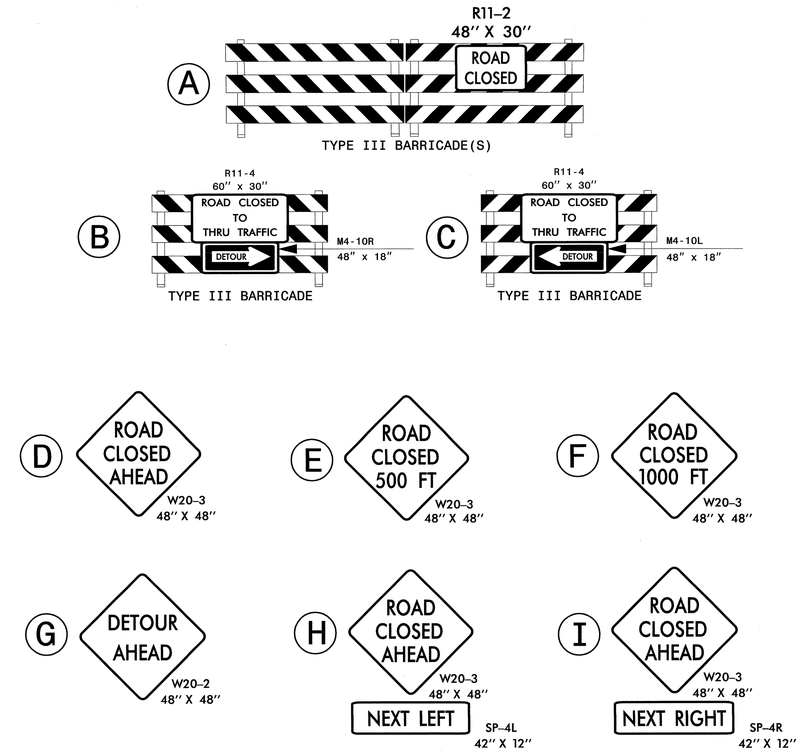


OFFSITE DETOUR:

INSET "A"



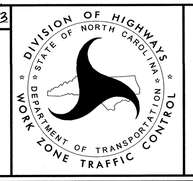
NOTE: REFER TO RSD 1101.03, SHEET 1 OF 9, FOR APPLICABLE NOTES.



NOTES:
1. SEE RSD 1101.03, SHEET 1 OF 9, FOR ADDITIONAL WORK ZONE SIGNS.
2. SEE SHEET SD-1 FOR SPECIAL SIGN DESIGN.
3. ALL DETOUR SIGN LOCATIONS ARE APPROXIMATE.

APPROVED: Ben Schonstein DATE: 12/10/13

SEAL



OFFSITE DETOUR ROUTE AND BARRICADE PLACEMENT

12/10/2013
P:\TIPProjects-B\B4740\Traffic\TrafficControl\TCP\B-4740_TC_TMP_2.dgn
User:gmaze

PROJ. REFERENCE NO.	SHEET NO.
B-4740	SD-1

SIGN NUMBER: WZTC 1
TYPE: STATIONARY
QUANTITY: SEE PLANS

SIGN WIDTH: 3'-6"
HEIGHT: 1'-6"
TOTAL AREA: 5.3 Sq.Ft.

BORDER TYPE: INSET
RECESS: 0.5"
WIDTH: 0.5"
RADII: 1.5"

NO. Z BARS:
LENGTH:

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT'L: 0.080" (2.0 mm) ALUMINUM

DESIGN BY: A. GRADY
PROJECT ID: B-4740
CHECKED BY: S. KUNZ
DIV: 9
DATE: Jun 12, 2013

USE NOTES: 1,2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be NC GRADE B fluoresent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																										Series/Size Text Length
	Y	A	D	K	I	N																				C 2000
11.3	3.5	3.9	3.8	3.7	1.8	2.8	11.3																			19.5
	C	O	L	L	E	G	E		R	D																C 2000
4.6	3.7	4	3.3	3.3	3.3	3.8	2.6	2.5	3.6	2.8	4.6															32.8

FILENAME: B-4740_Sgn_SGN_WZTC

NORTH CAROLINA D.O.T. SIGN DETAIL

APPROVED: DATE: 10/31/13

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022959 ENGINEER RONALD W. KING

WORK ZONE SIGNS

SCALE:	NONE
DATE:	6/25
DWG. BY:	AHG
DESIGN BY:	AHG
REVIEWED BY:	SBK

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · TRAFFIC ENGINEERING BRANCH · TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/29/2013
R:\TPPro Projects-B\B4740\Traffic\TrafficControl\TCP\B-4740_TC_SD_1.dgn
User:gmcze

TIP NO.	SHEET NO.
B-4740	PMP-1

APPROVED: RWK
DATE: 11/25/13

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022959 ENGINEER RONALD W. KING

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN

DAVIDSON COUNTY

LOCATION: BRIDGE No. 7 OVER DYKERS CREEK ON SR 1194 (YADKIN COLLEGE ROAD)

T.I.P.: B-4740

CONTRACT: C203362

ROADWAY STANDARD DRAWING

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
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
	PAINT (4")
PI	YELLOW DOUBLE CENTER
PA	WHITE EDGELINE

GENERAL NOTES

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.

A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
SR 1194	PAINT	NONE

B) PLACE TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE. PLACE THE SECOND APPLICATION OF PAINT UPON SUFFICIENT DRYING TIME OF THE FIRST.

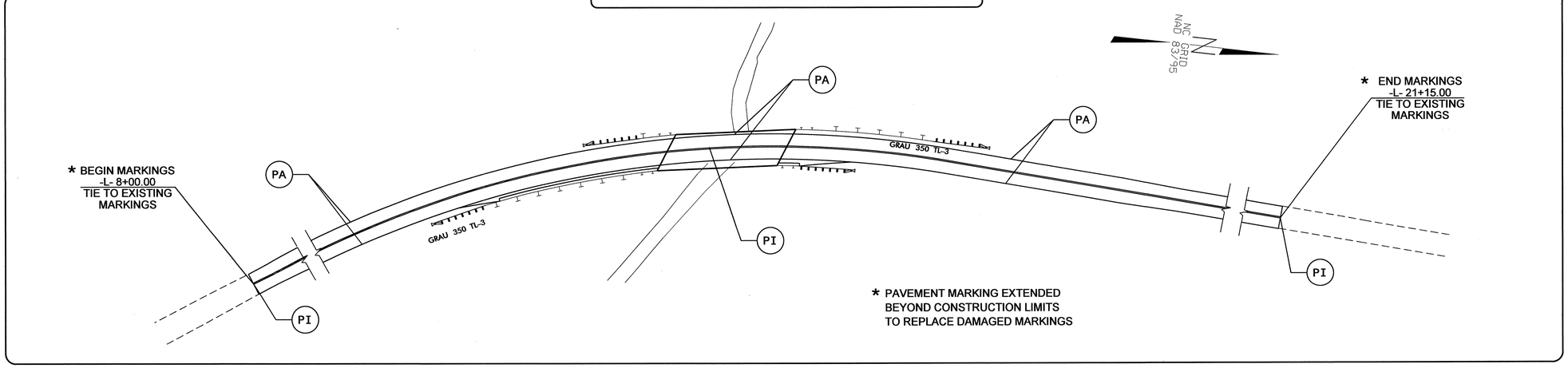
C) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

D) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.

E) PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.

F) MARKERS ARE TO BE PLACED ACCORDING TO THE ROADWAY STANDARD DRAWINGS.

PAVEMENT MARKING DETAIL



PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

SUSAN B. KUNZ — SIGNING & DELINEATION REGIONAL ENGINEER

ADAM GRADY — SIGNING & DELINEATION PROJECT DESIGN ENGINEER/TECHNICIAN

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

25-NOV-2013 09:27
S:\TPB\Projects\B4740\Traffic\Signing\PMP\Pavement Marking Seed REV.dgn
ahgrady AT-TE274443

TIP PROJECT: B-4740

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4740	EC-1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION

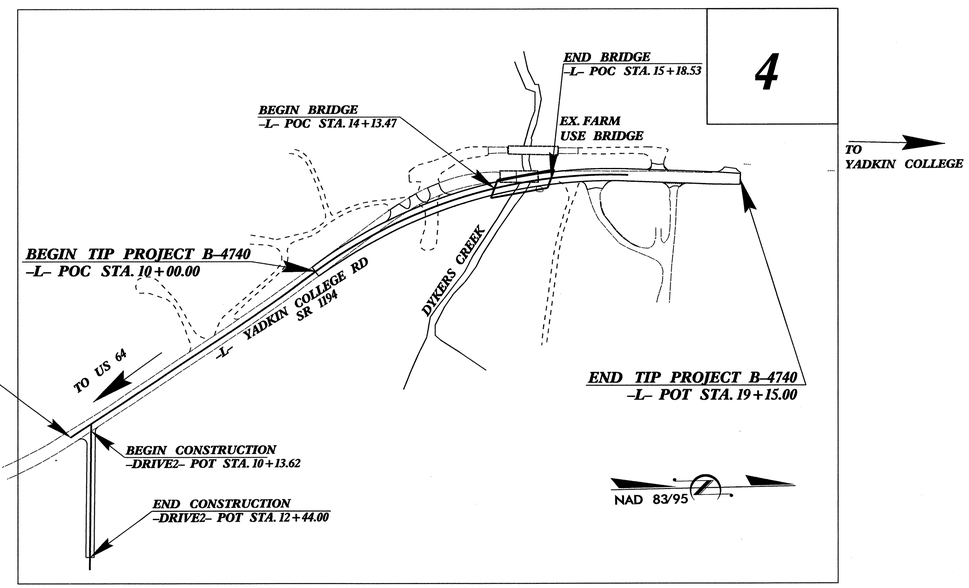
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

DAVIDSON COUNTY

LOCATION: REPLACE BRIDGE NO. 7 OVER DYKERS CREEK ON SR 1194 (YADKIN COLLEGE ROAD)

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



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
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 / Coir Fiber Wattle	EW CFW
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	
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	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

GRAPHIC SCALE

0
PLANS

0
PROFILE (HORIZONTAL)

0
PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

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.

Prepared in the Office of:

ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611

2012 STANDARD SPECIFICATIONS

Roadway Standard Drawings

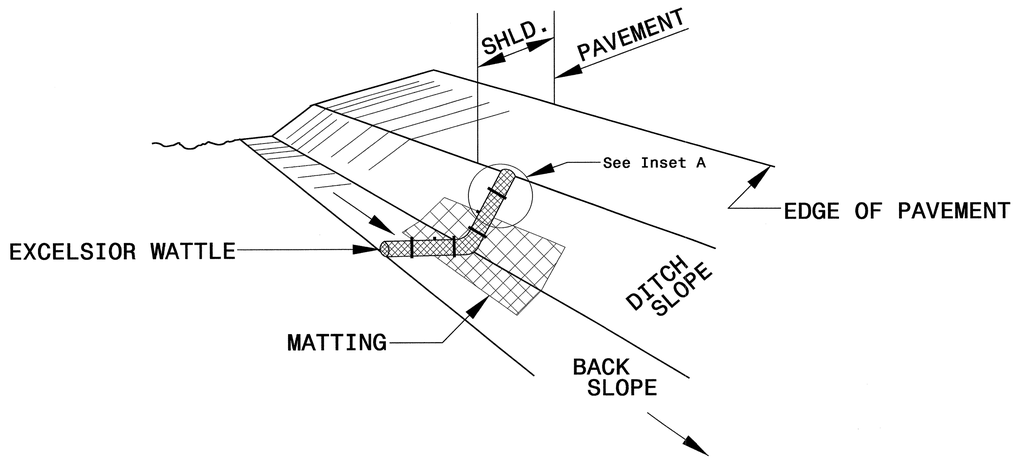
The following roadway <u>english</u> standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated January 2012 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

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		

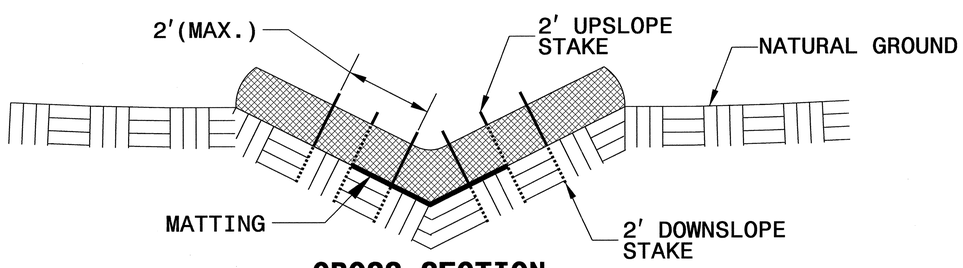
03-DEC-2013 10:01
R:\Environmental\Stormwater\Projects\B-4740_EC_tsh.dgn
w_johnston1
AT REN\27416

PROJECT REFERENCE NO.	SHEET NO.
B-4740	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

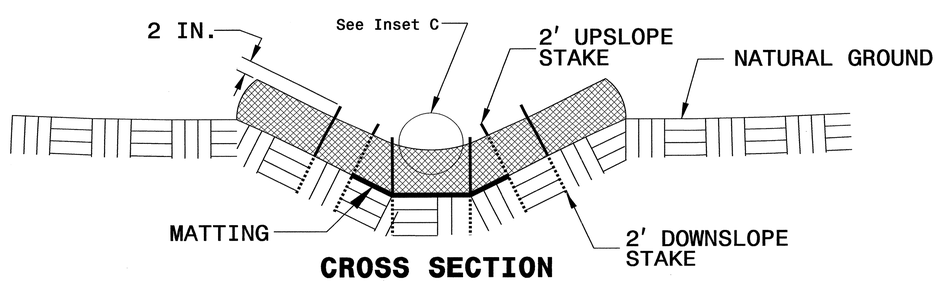
WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

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

ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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

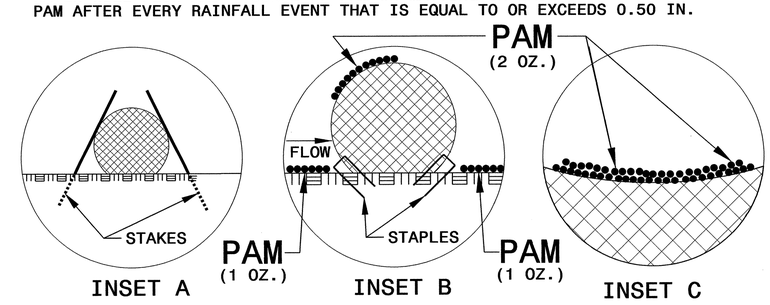
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

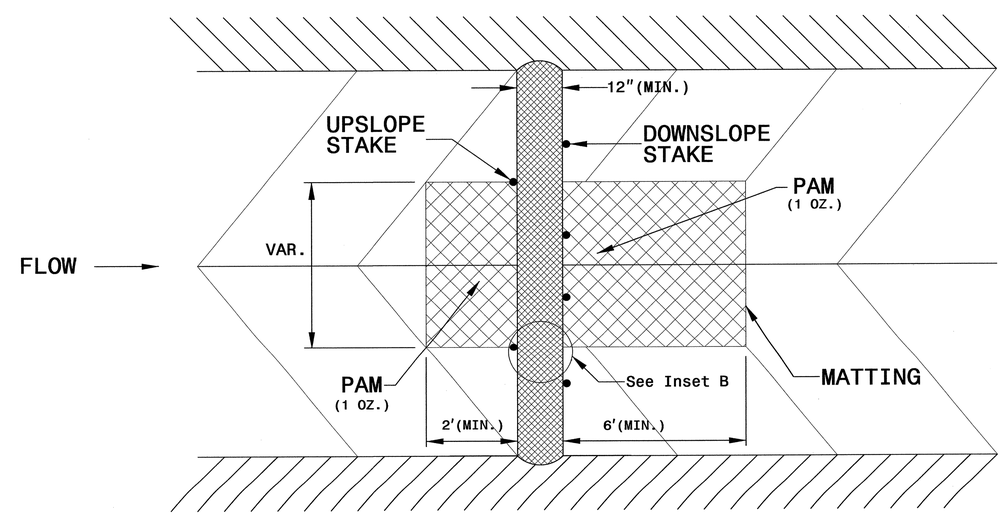
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

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 WATTLE.

INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

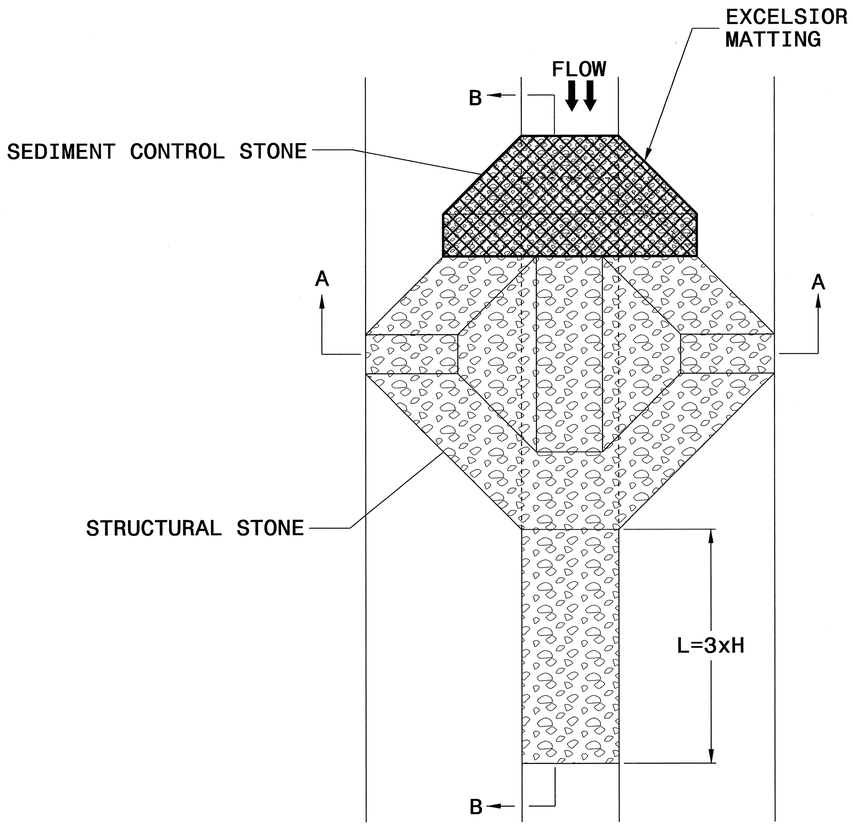




TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-4740	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



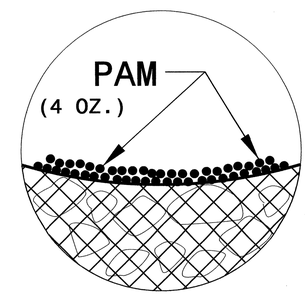
PLAN

NOTES

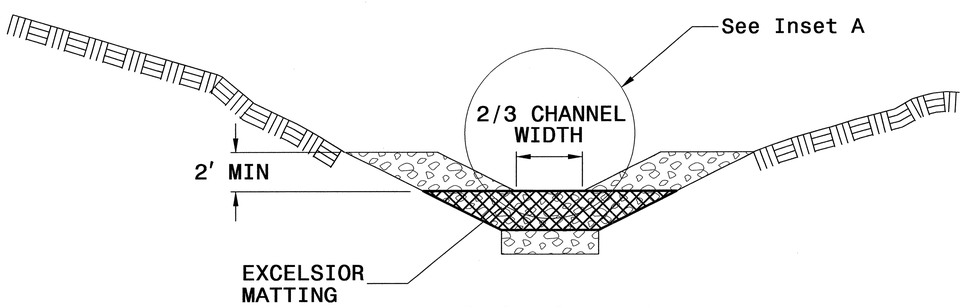
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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.

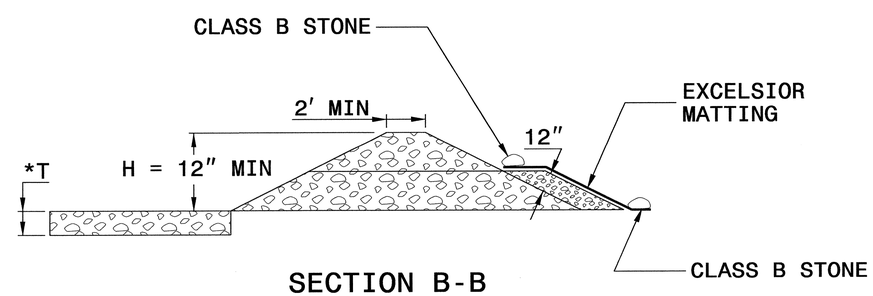
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



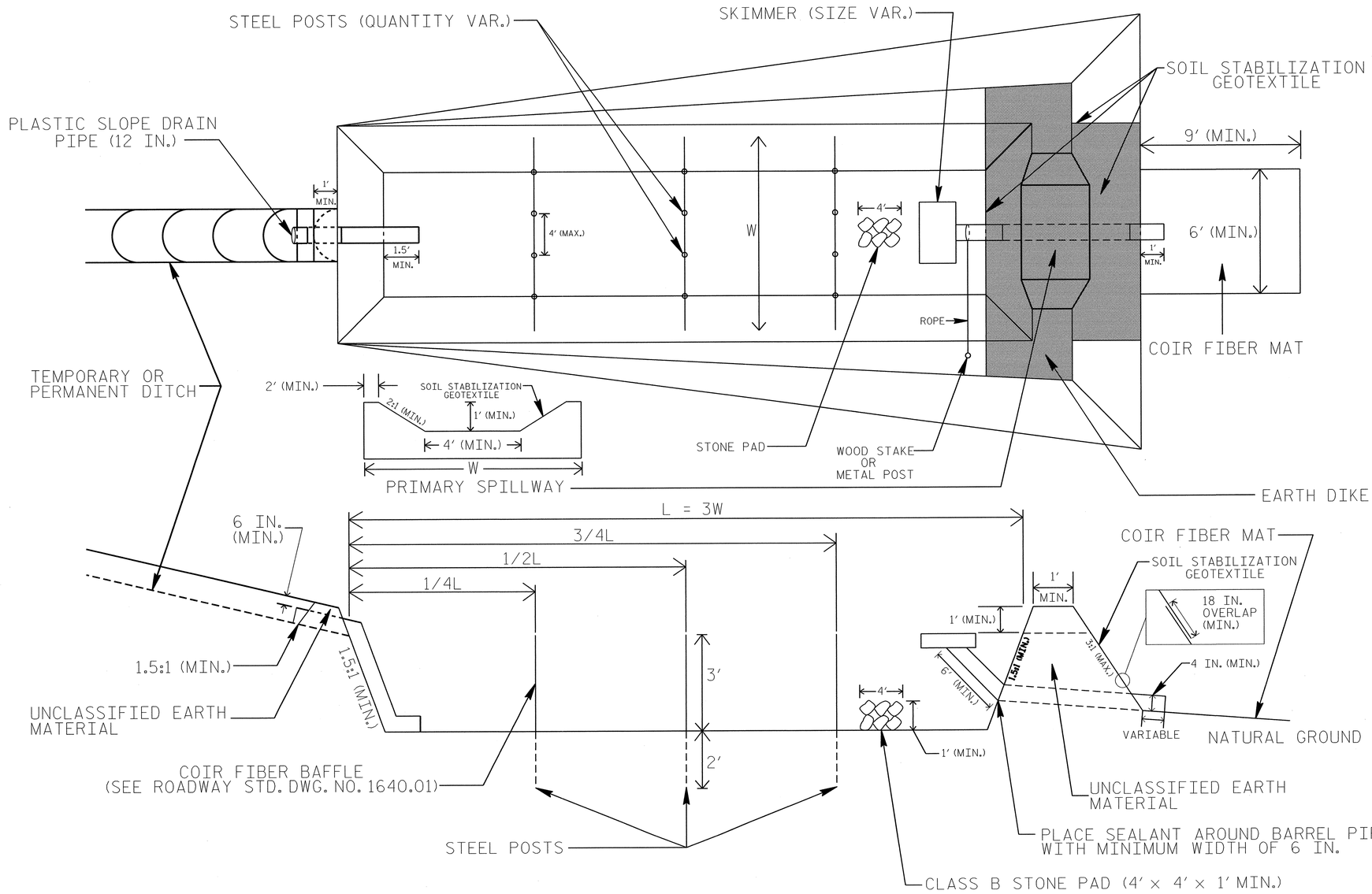
SECTION B-B

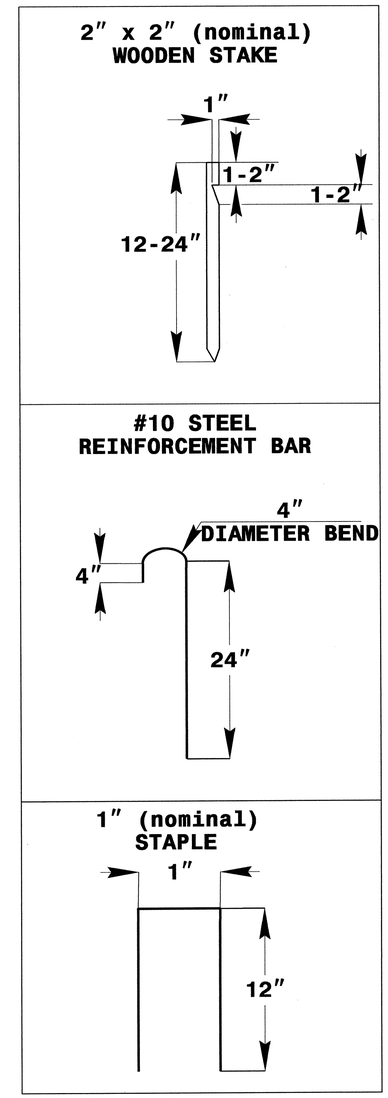
*T = 12" MIN., 18" MAX.

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
B-4740	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL





COIR FIBER MAT ANCHOR OPTIONS

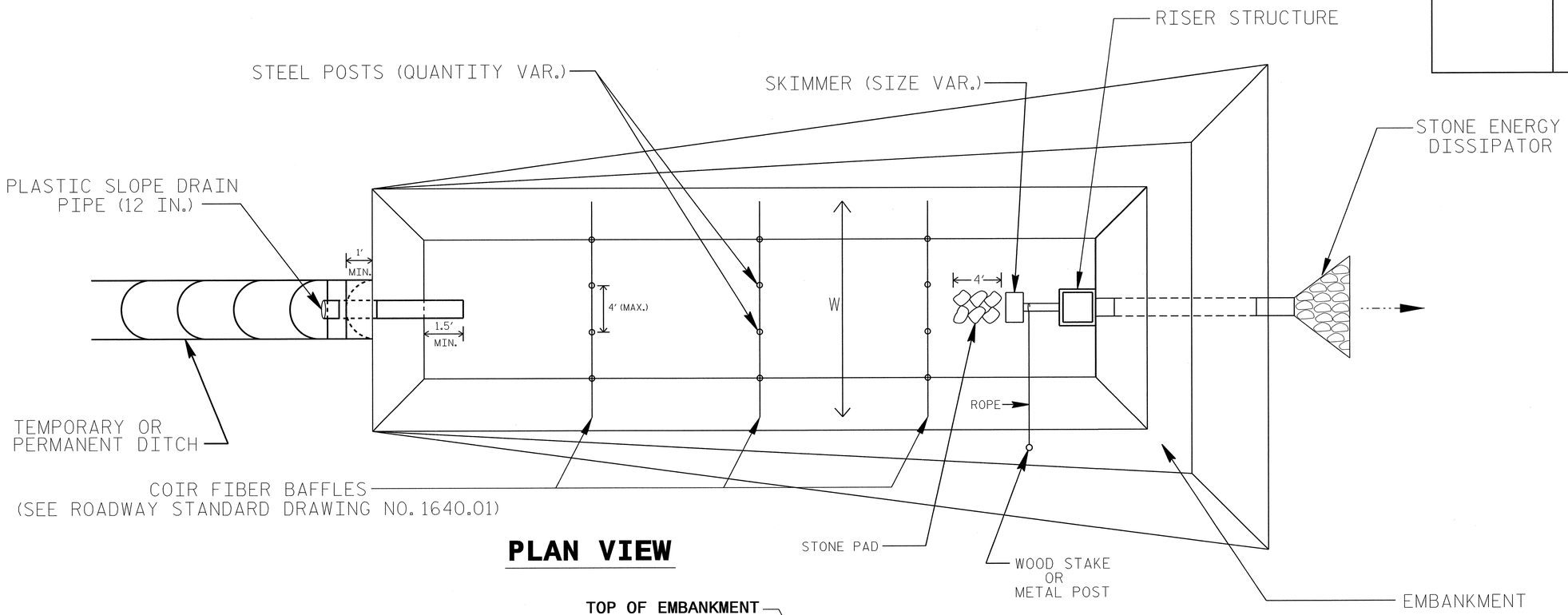
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE PRIMARY SPILLWAY WEIR LENGTH (FT.) USING Q/0.4, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE OR TARP AS DIRECTED.
6. SOIL STABILIZATION GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

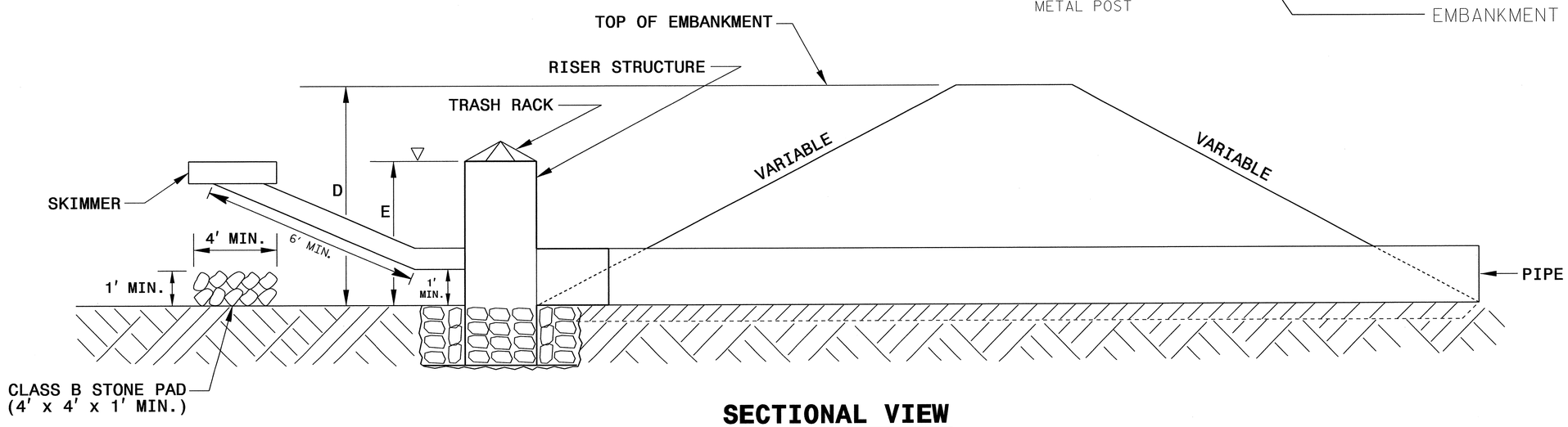
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
B-5134	EC-2C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STORMWATER BASIN WITH SKIMMER



PLAN VIEW



SECTIONAL VIEW

NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. INSTALL A MINIMUM OF 3 COIR FIBER BAFFLES IN ACCORDANCE WITH ROADWAY STD. DRAWING 1640.01.
3. INSTALL SKIMMER AND COUPLING TO RISER STRUCTURE OR DIRECTLY INTO EMBANKMENT 1 FT. FROM BOTTOM OF BASIN.
4. THE ARM PIPE SHALL HAVE A MINIMUM LENGTH OF 6 FT. BETWEEN THE SKIMMER AND COUPLING.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE AS DIRECTED.
6. THE DIFFERENCE BETWEEN LENGTHS "D" AND "E" REPRESENT THE FREEBOARD AND SHOULD BE 1 FT. MINIMUM.

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
B-4740	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	16+50	17+14.37	RT	60
4	-L-	17+72.87	18+00	LT	40
4	-L-	18+00	18+50	RT	35
				SUBTOTAL	135
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					5,000
				TOTAL	5,135
				SAY	5,200

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)

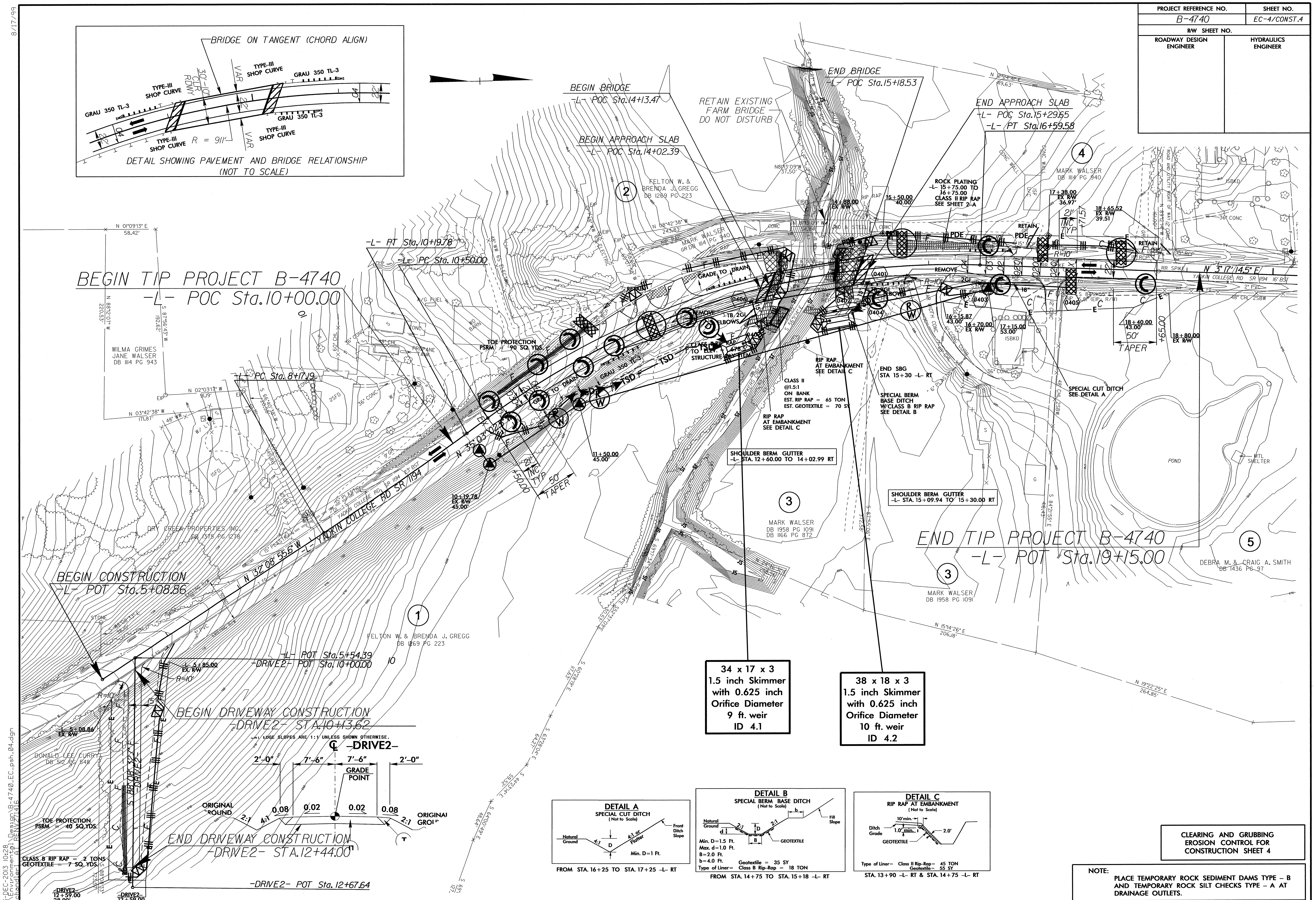
PROJECT REFERENCE NO.	SHEET NO.
B-4740	EC-3A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

PROJECT REFERENCE NO.	SHEET NO.
B-4740	EC-4/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



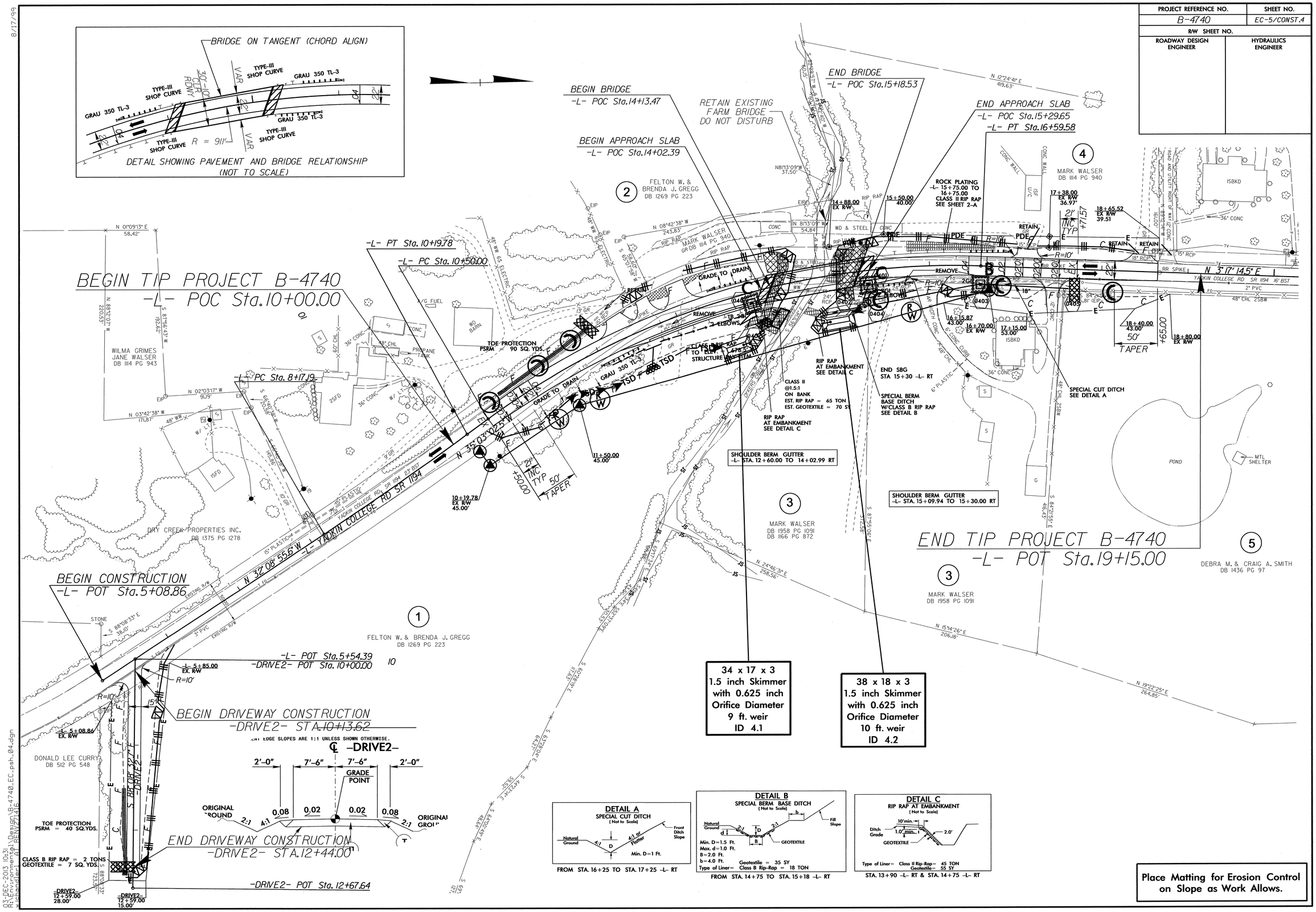
34 x 17 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
9 ft. weir
ID 4.1

38 x 18 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
10 ft. weir
ID 4.2

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

PROJECT REFERENCE NO.	SHEET NO.
B-4740	EC-5/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



T.I.P.: B-4740

CONTRACT: C203362

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

TIP NO.	SHEET NO.
B-4740	SIGN-1

APPROVED: RLW
DATE: 11/25/13

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022959 ENGINEER RONALD W. KING

SIGNING PLAN
DAVIDSON COUNTY

LOCATION: BRIDGE #7 OVER DYKERS CREEK ON SR 1194 (YADKIN COLLEGE ROAD)

GENERAL NOTES

- SIGNS FURNISHED BY STATE
- ALL TYPE 'D' SIGNS SHALL BE MOUNTED ON TWO U-CHANNEL POSTS UNLESS OTHERWISE INDICATED ON THE PLANS.
- WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER
- ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.
- WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.
- THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.
- SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.

ROADWAY STANDARD DRAWING

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
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS

SUMMARY OF QUANTITIES

ITEM NO. DESC. NO.	ITEM NO. SECT. NO.	ITEM DESCRIPTION	QUANTITY	UNIT
4072000000	903	SUPPORTS, 3 LB STEEL U-CHANNEL	71	L.F.
4096000000	904	SIGN ERECTION, TYPE D	2	EA.
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	12	EA.

SIGN NUMBER: 301,302
TYPE: D
QUANTITY: 2
SIGN WIDTH: 3'-0"
HEIGHT: 2'-0"
TOTAL AREA: 6.0 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 1"
RADII: 3"
NO. Z BARS:
LENGTH:

BACKG COLOR: Green
COPY COLOR: White

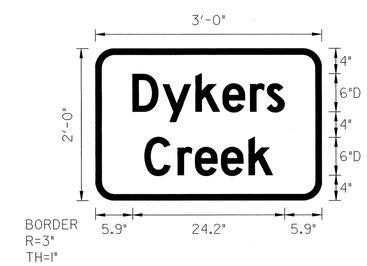
SYMBOL	X	Y	WID	HT

MAT'L: 0.125" (3.2 mm) ALUMINUM

USE NOTES:

1. Legend and border(except those that are colored black) shall be direct applied Grade C sheeting.
2. Background shall be Grade C reflective sheeting.

DESIGN BY: A. GRADY
PROJECT ID: B-4740
CHECKED BY: S. KUNZ
DIV: 9
DATE: Nov 12, 2013



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

								Series/Size Text Length
	D	y	k	e	r	s		D 2000
5.9	4.8	5.2	4.3	4.4	2.6	2.8	5.9	24.2
	C	r	e	e	k			D 2000
7.8	5.3	2.8	4.1	4.4	3.8	7.8		20.4

FILENAME: B-4740_Sgn_SGN

NORTH CAROLINA D.O.T. SIGN DETAIL

PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

SUSAN B. KUNZ — SIGNING & DELINEATION REGIONAL ENGINEER

ADAM GRADY — SIGNING & DELINEATION PROJECT DESIGN ENGINEER

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET
SIGN-2	SIGN DETAIL SHEET

25-NOV-2013 07:22
R:\TIPProjects\B4740\Traffic\Signing\CADD\Signing Layout Plans\Bridgeseed.dgn
ehgrady AT TE274143

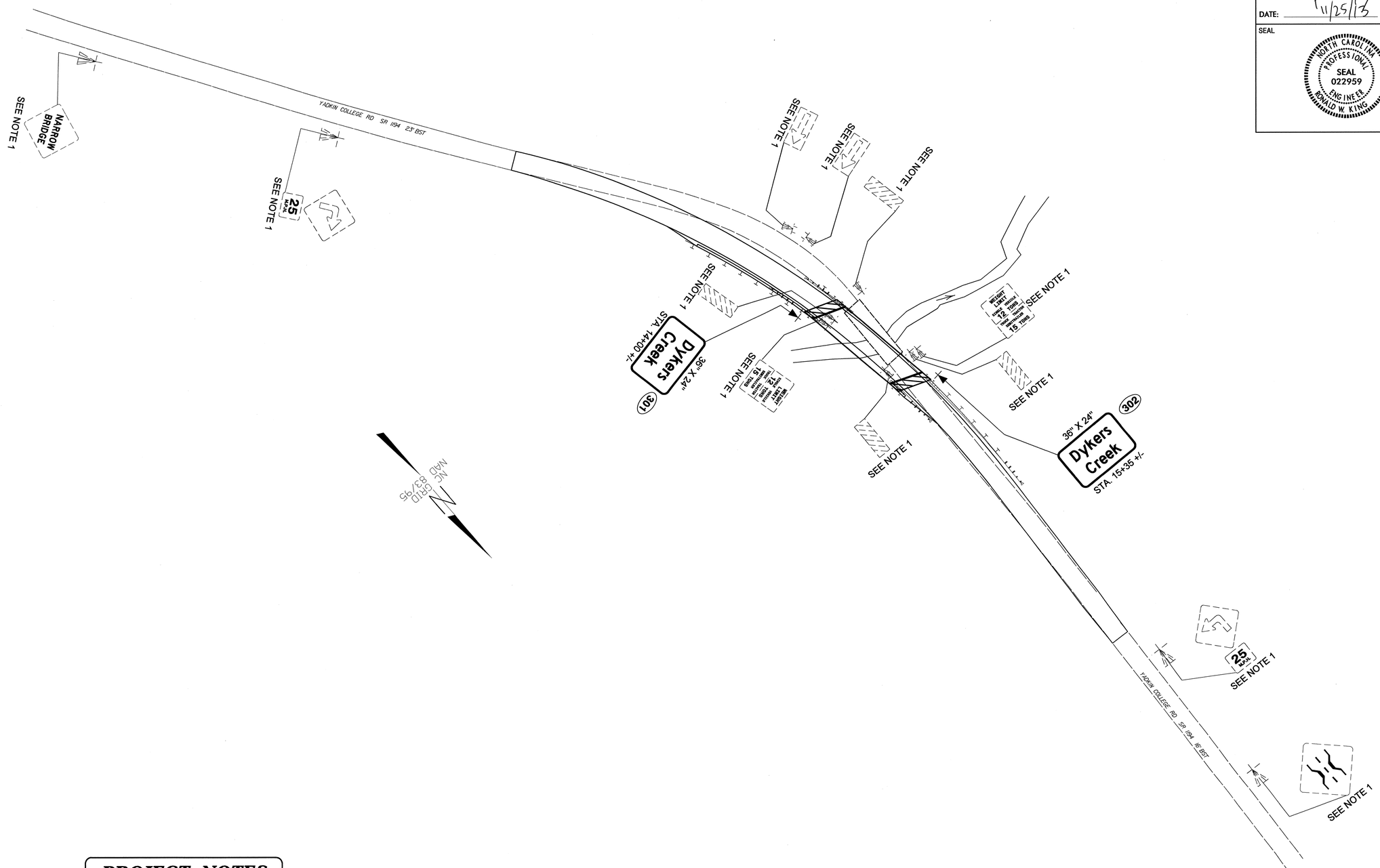
TIP NO.	SHEET NO.
B-4740	SIGN-2

APPROVED: R.W.K.

DATE: 11/25/13

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022959 ENGINEER RONALD W. KING



PROJECT NOTES

1 DISPOSAL OF SIGN SYSTEM, U-CHANNEL

SIGN DETAIL SHEET

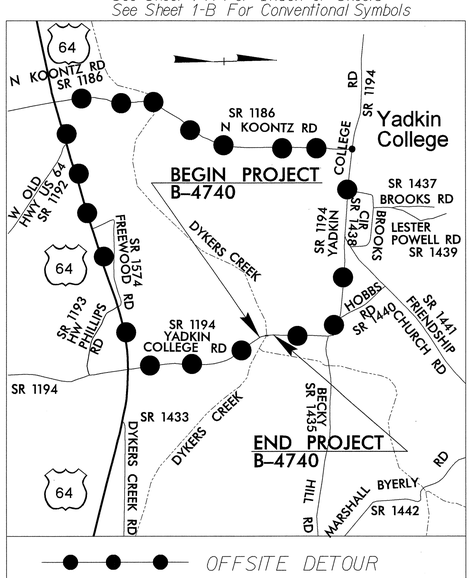
25-NOV-2013 07:22
R:\Traffic\Projects\B4740\Traffic\Signing\CADD\Signing Layout Plans\Bridgeseed.dgn
ahgrady AT TE274443

09/08/99

TIP PROJECT: B-4740

CONTRACT:

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



VICINITY MAP

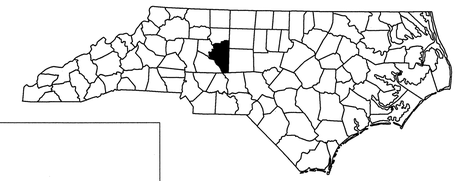
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

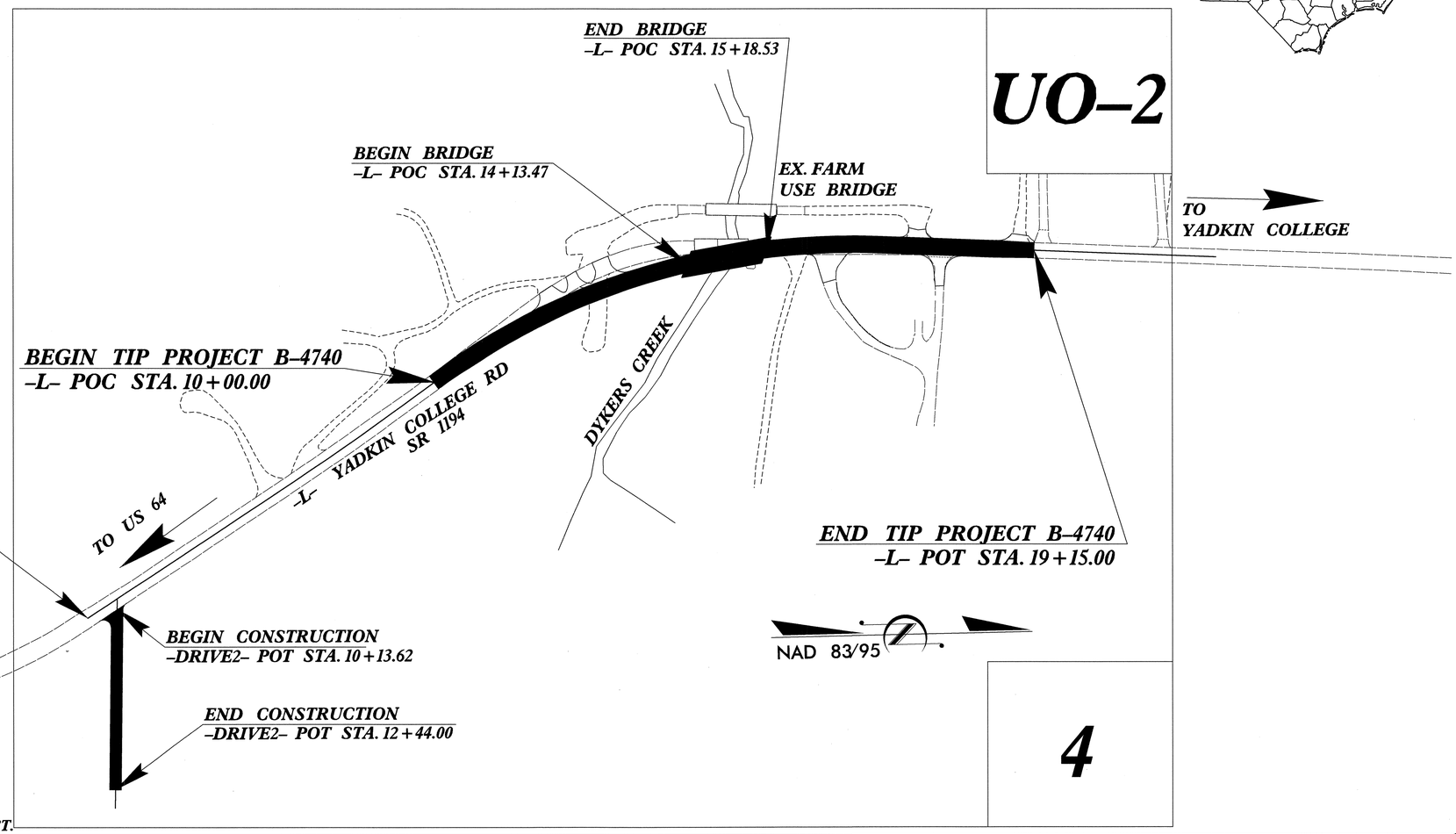
T.I.P. NO.	SHEET NO.
B-4740	UO-1

DAVIDSON COUNTY

LOCATION: REPLACE BRIDGE 7 OVER DYKERS CREEK ON SR 1194 (YADKIN COLLEGE ROAD)

TYPE OF WORK: UTILITIES BY OTHERS





THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

INDEX OF SHEETS

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

UTILITY OWNERS ON PROJECT

(1) PIEDMONT COMMUNICATIONS (TELEPHONE)

Prepared by:
WETHERILL ENGINEERING
559 JONES FRANKLIN ROAD
SUITE 164
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

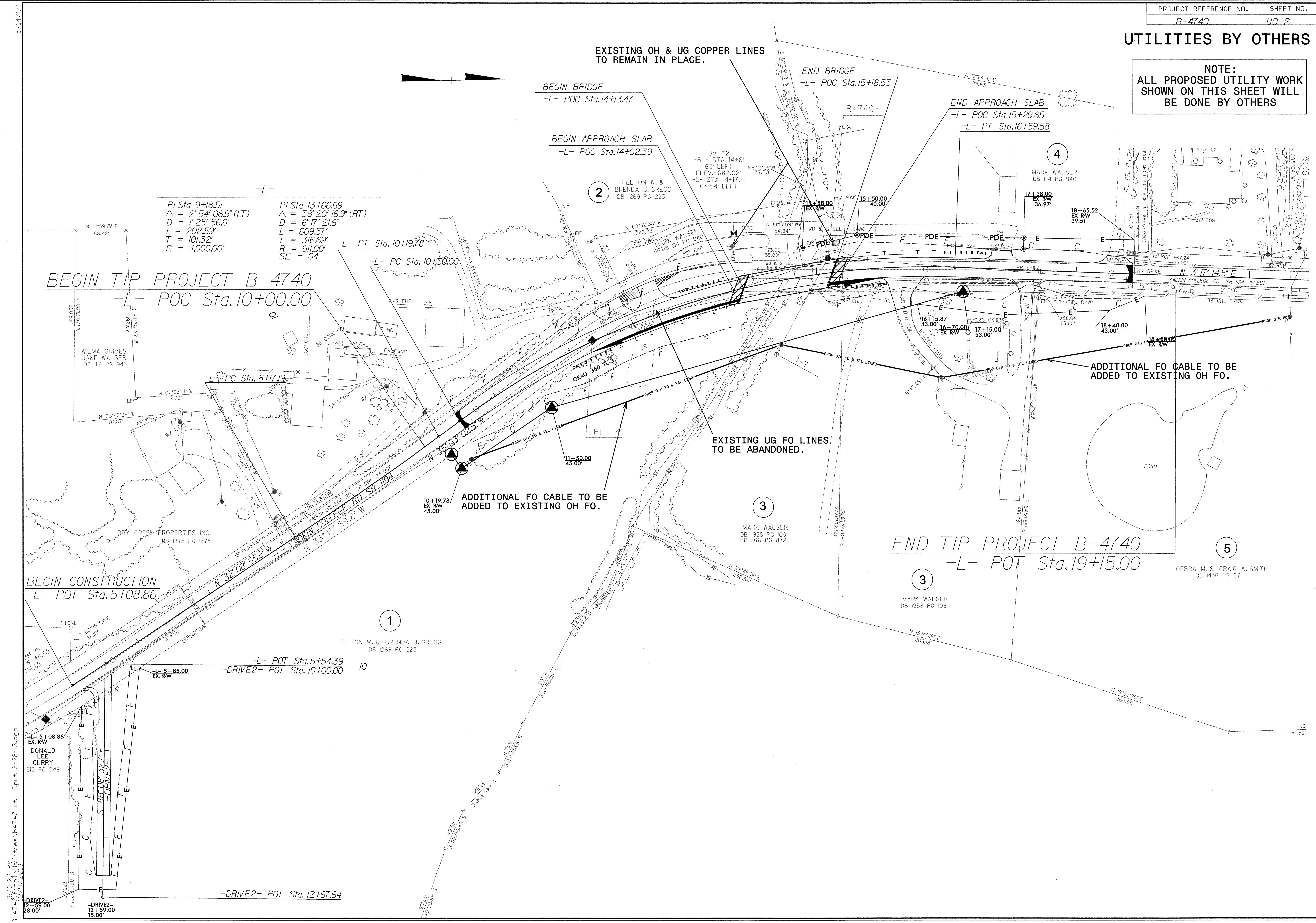
JOHN D. SCHRINER, PLS
UTILITY COORDINATOR

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

1591 MAIL SERVICES CENTER
RALEIGH NC 27699-1591
PHONE (919) 707-6690
FAX (919) 250-4151

Roger Worthington, P.E. — UTILITIES SECTION ENGINEER
Steve McKee, P.E. — UTILITIES SQUAD LEADER PROJECT ENGINEER
Donald Proper — UTILITIES PROJECT DESIGN ENGINEER

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$$$USERNAME$$$$$$$$


PROJECT REFERENCE NO.
B-4740
SHEET NO.
UO-2
UTILITIES BY OTHERS
NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS
EXISTING OH & UG COPPER LINES
TO REMAIN IN PLACE.
END BRIDGE
-L- POC Sta.15+18.53
BEGIN BRIDGE
-L- POC Sta.14+13.47
BEGIN APPROACH SLAB
-L- POC Sta.14+02.39
END APPROACH SLAB
-L- POC Sta.15+29.65
-L- PT Sta.16+59.58
B4740-1
BM #2
-BL- STA 14+61
63' LEFT
ELEV.=682.02'
-L- STA 14+17.41
64.54' LEFT
-L-
PI Sta 9+18.51
△ = 2° 54' 06.9" (LT)
D = 1° 25' 56.6"
L = 202.59'
T = 101.32'
R = 4,000.00'
PI Sta 13+66.69
△ = 38° 20' 16.9" (RT)
D = 6° 17' 21.6"
L = 609.57'
T = 316.69'
R = 911.00'
SE = 04
-L- PT Sta. 10+19.78
-L- PC Sta. 10+50.00
BEGIN TIP PROJECT B-4740
-L- POC Sta.10+00.00
-L- PC Sta. 8+17.19
WILMA GRIMES
JANE WALSER
DB 1114 PG 943
FELTON W. &
BRENDA J. GREGG
DB 1269 PG 223
MARK WALSER
GR DB 1114 PG 940
MARK WALSER
DB 1114 PG 940
DRY CREEK PROPERTIES INC.
DB 1375 PG 1278
14+88.00
EX R/W
15+50.00
40.00'
17+38.00
EX R/W
36.97'
18+65.52
EX R/W
39.51
16+15.87
43.00'
16+70.00
EX R/W
17+15.00
53.00'
18+40.00
43.00'
18+80.00
EX R/W
N 3° 17' 14.5" E
N 5° 19' 09.2" E
YADKIN COLLEGE RD SR 1194 16' BST
ADDITIONAL FO CABLE TO BE
ADDED TO EXISTING OH FO.
PROP O/H FO & TEL LINES
GRAU 350 TL-3
EXISTING UG FO LINES
TO BE ABANDONED.
11+50.00
45.00'
10+19.78
EX R/W
45.00'
ADDITIONAL FO CABLE TO BE
ADDED TO EXISTING OH FO.
N 35° 03' 02.5" W
N 32° 08' 55.6" W
-L- YADKIN COLLEGE RD SR 1194
N 33° 13' 59.8" W
DYKERS CREEK
MARK WALSER
DB 1958 PG 1091
DB 1166 PG 872
END TIP PROJECT B-4740
-L- POT Sta.19+15.00
MARK WALSER
DB 1958 PG 1091
DEBRA M. & CRAIG A. SMITH
DB 1436 PG 97
POND
BEGIN CONSTRUCTION
-L- POT Sta.5+08.86
FELTON W. & BRENDA J. GREGG
DB 1269 PG 223
-L- POT Sta.5+54.39
-DRIVE2- POT Sta. 10+00.00
-L- 5+85.00
EX. R/W
-L- 5+08.86
EX. R/W
DONALD
LEE
CURRY
512 PG 548
S 88° 08' 32.7" E
-DRIVE2-
-DRIVE2- POT Sta. 12+67.64
-DRIVE2-
12+59.00
28.00'
-DRIVE2-
12+59.00
15.00'
5/14/99
3:40:22 PM
B-4740_final_Utilities\b4740_ut_UOput 3-28-13.dgn
12/9/2013

PROJ. REFERENCE NO.	SHEET NO.
B-4740	X-0

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

Approximate quantities only. Unclassified excavation, fine grading, clearing and grubbing, and removal of existing pavement will be paid for at the lump sum price for "Grading".

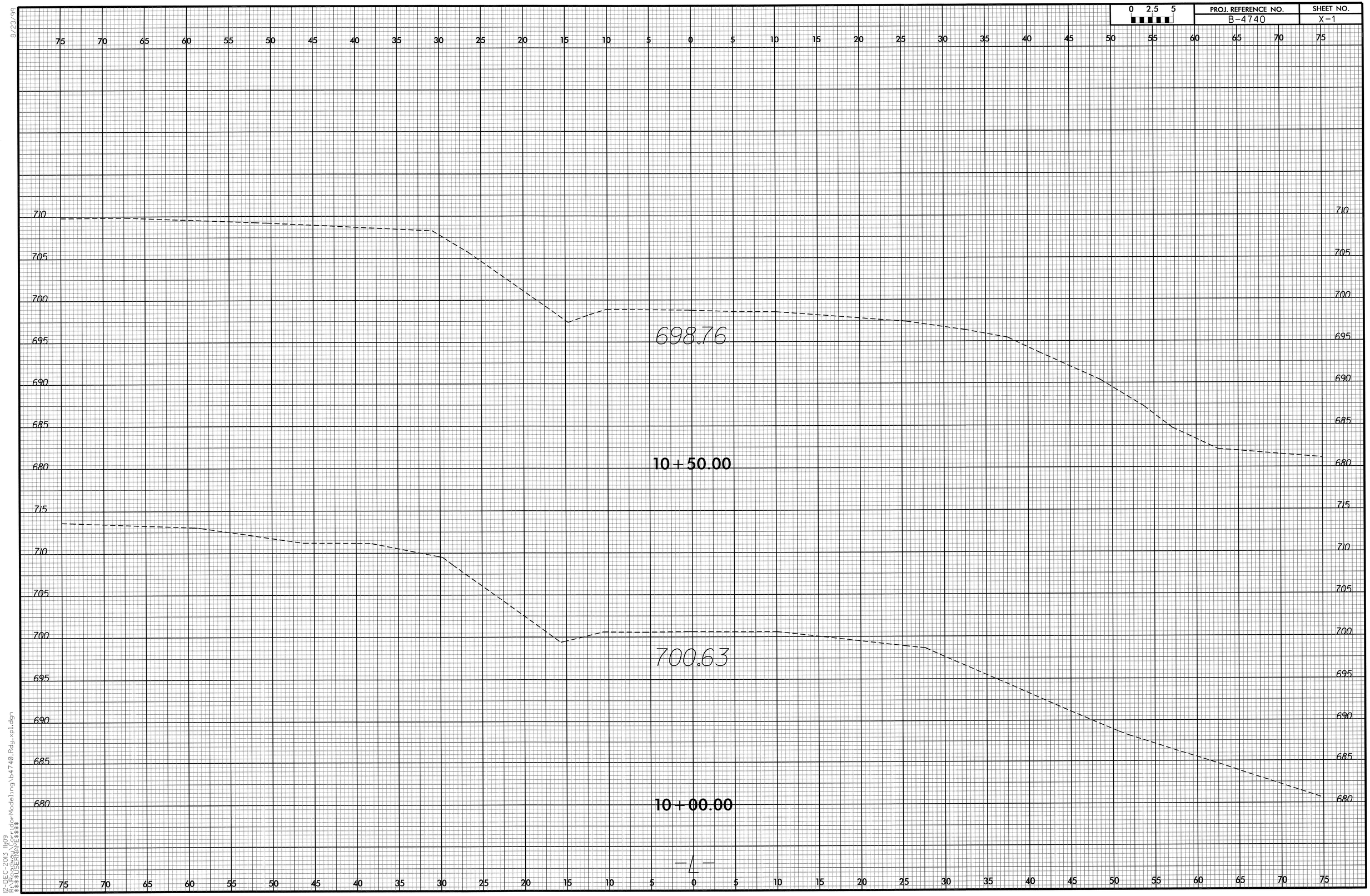
NOTE: EMBANKMENT COLUMN DOES NOT INCLUDE BACKFILL FOR UNDERCUT

CROSS-SECTION SUMMARY

Station L	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)	Station L	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
10+50.00	0	0	15+18.53	0	0
11+00.00	5	22	15+50.00	0	108
11+50.00	12	52	16+00.00	0	131
12+00.00	10	72	16+50.00	10	87
12+33.48	2	77	17+00.00	35	56
12+50.00	0	61	17+42.87	24	34
13+00.00	0	271	17+50.00	1	5
13+50.00	0	471	18+00.00	23	37
14+00.00	0	619	18+50.00	34	28
14+13.47	0	187	18+65.00	4	3

Station Drive2	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
10+13.62	0	0
10+50.00	0	154
11+00.00	0	197
11+50.00	0	131
12+00.00	8	46
12+44.00	7	6

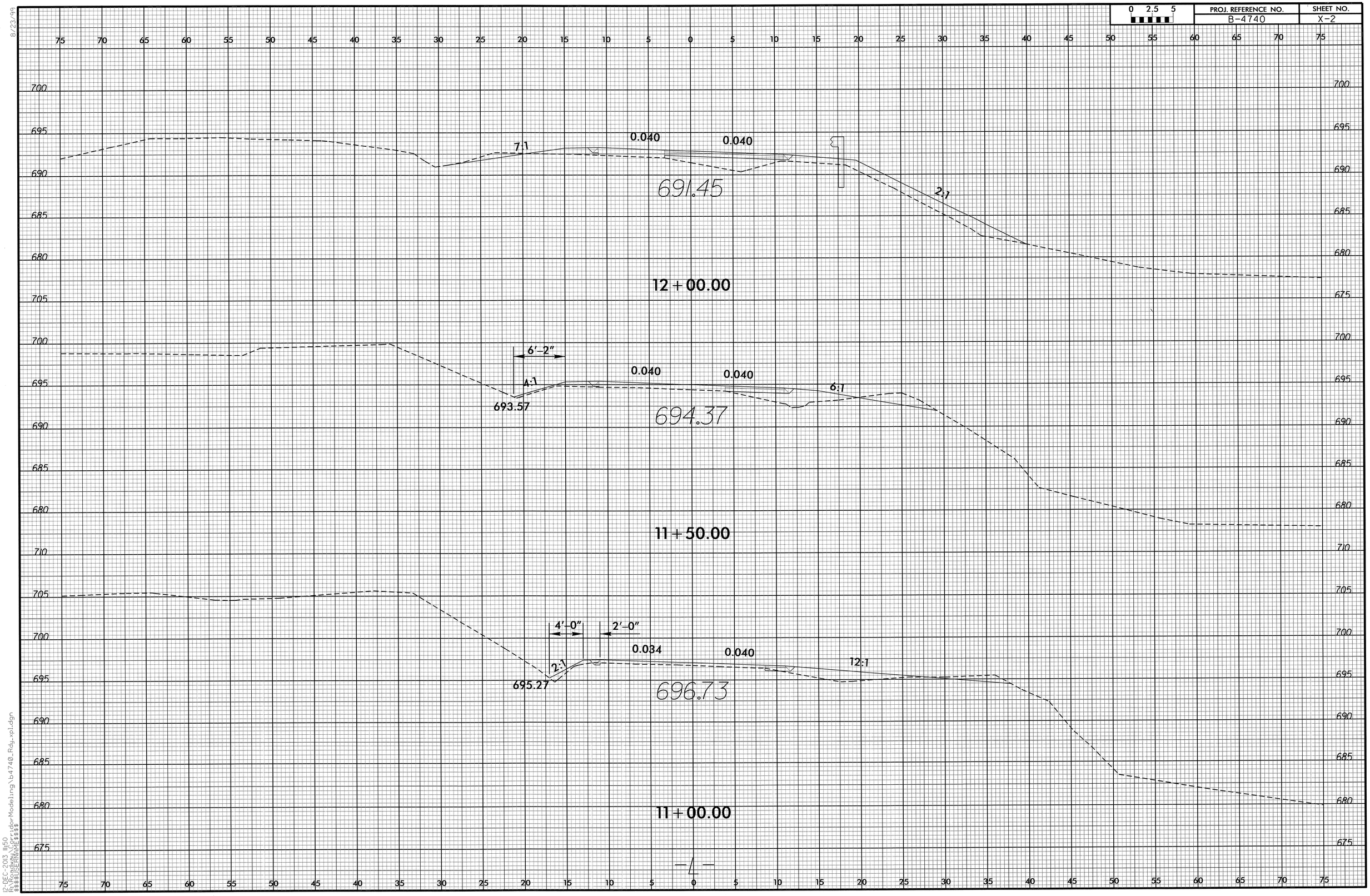
0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-4740	X-1



8/23/99

12-DEC-2013 11:09
R:\Roadway\Prelim\SideroModeling\b4740_Rdy_xpl.dgn
$$$$USERNAME$$$$

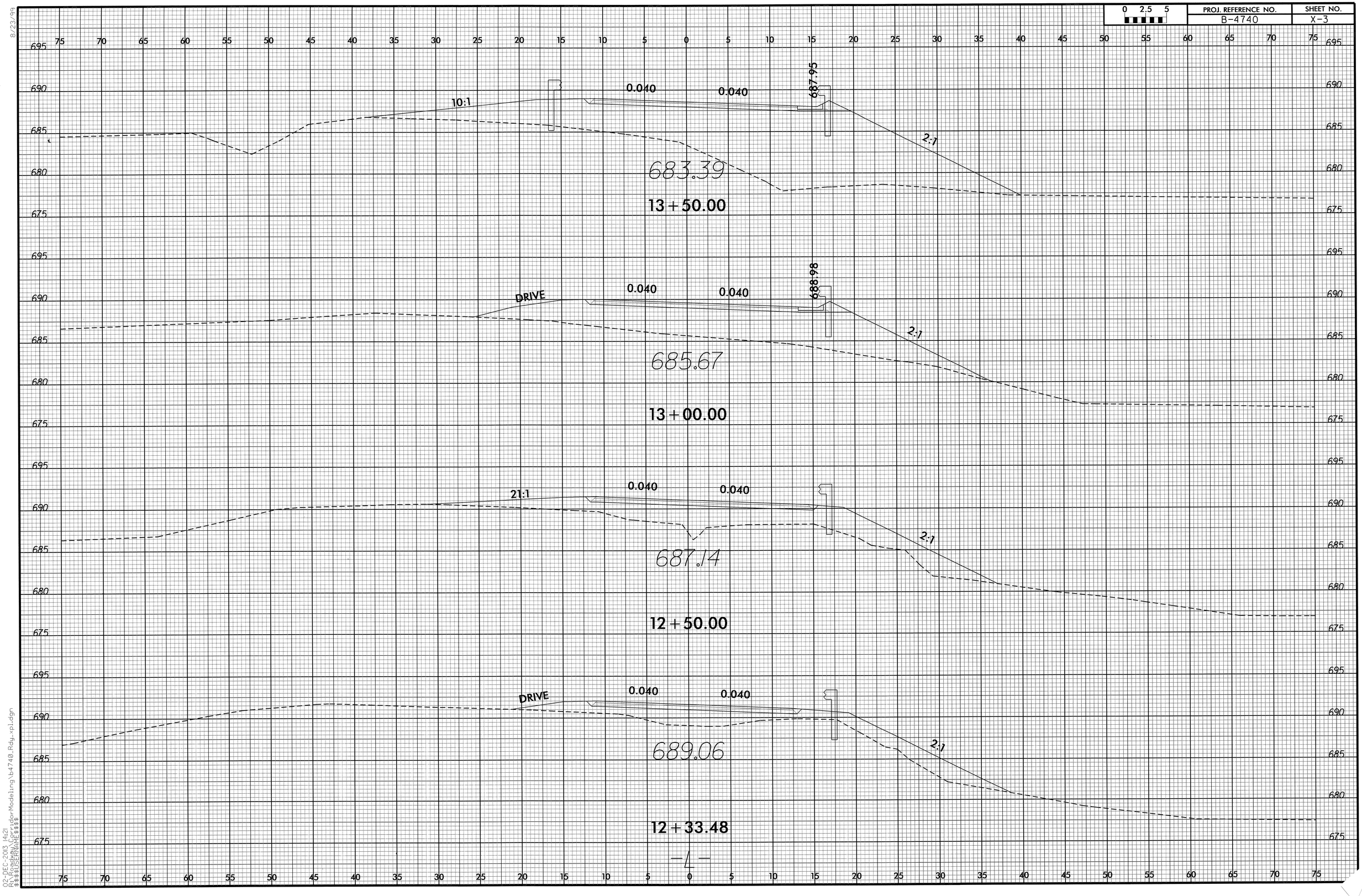
0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-4740	X-2



8/23/99

12-DEC-2013 11:50
R:\Roadway\Corridor Modeling\b4740_Rdy_xpl.dgn
$$$$USERNAME$$$$

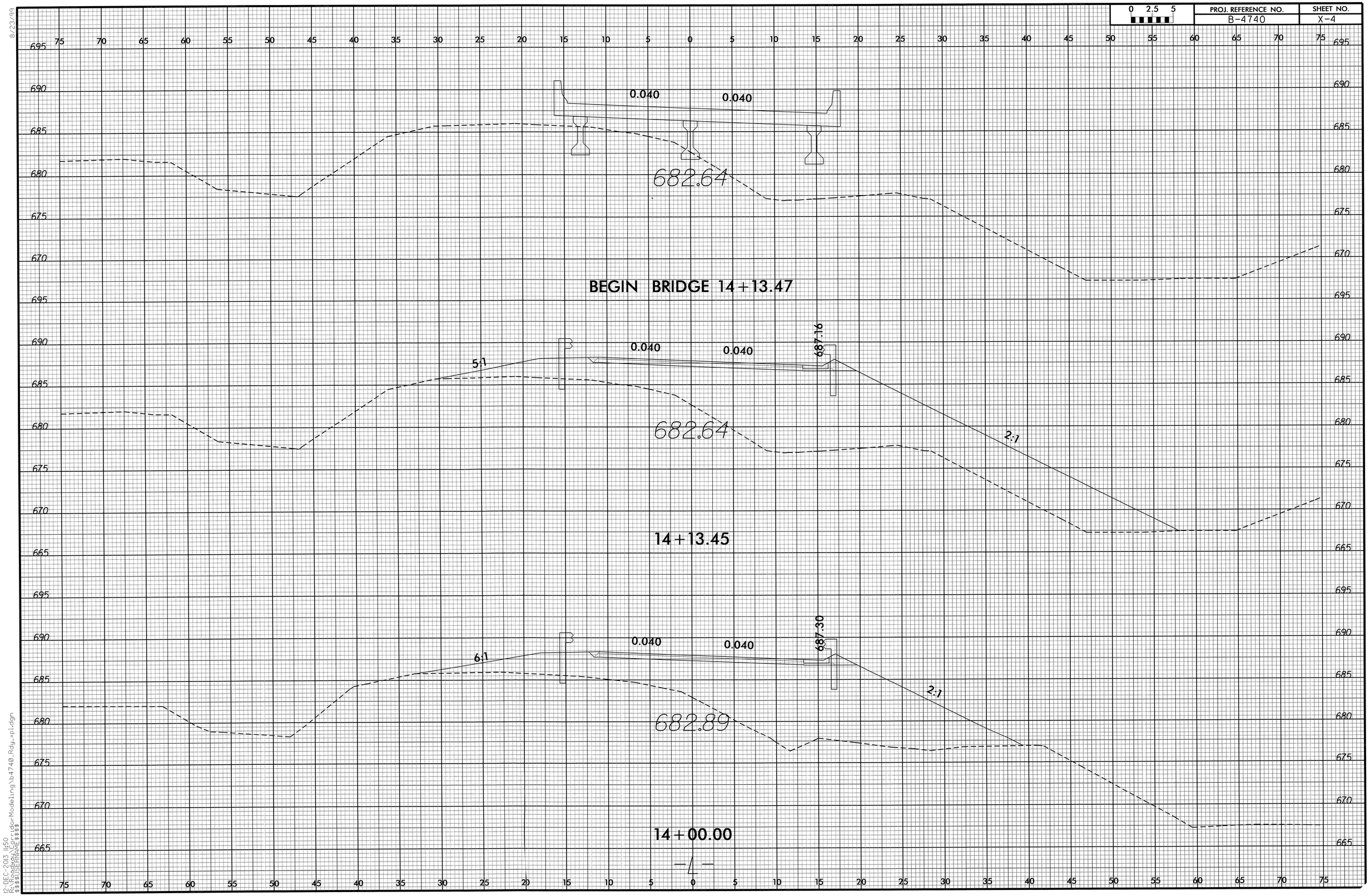
0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-4740	X-3



8/23/99

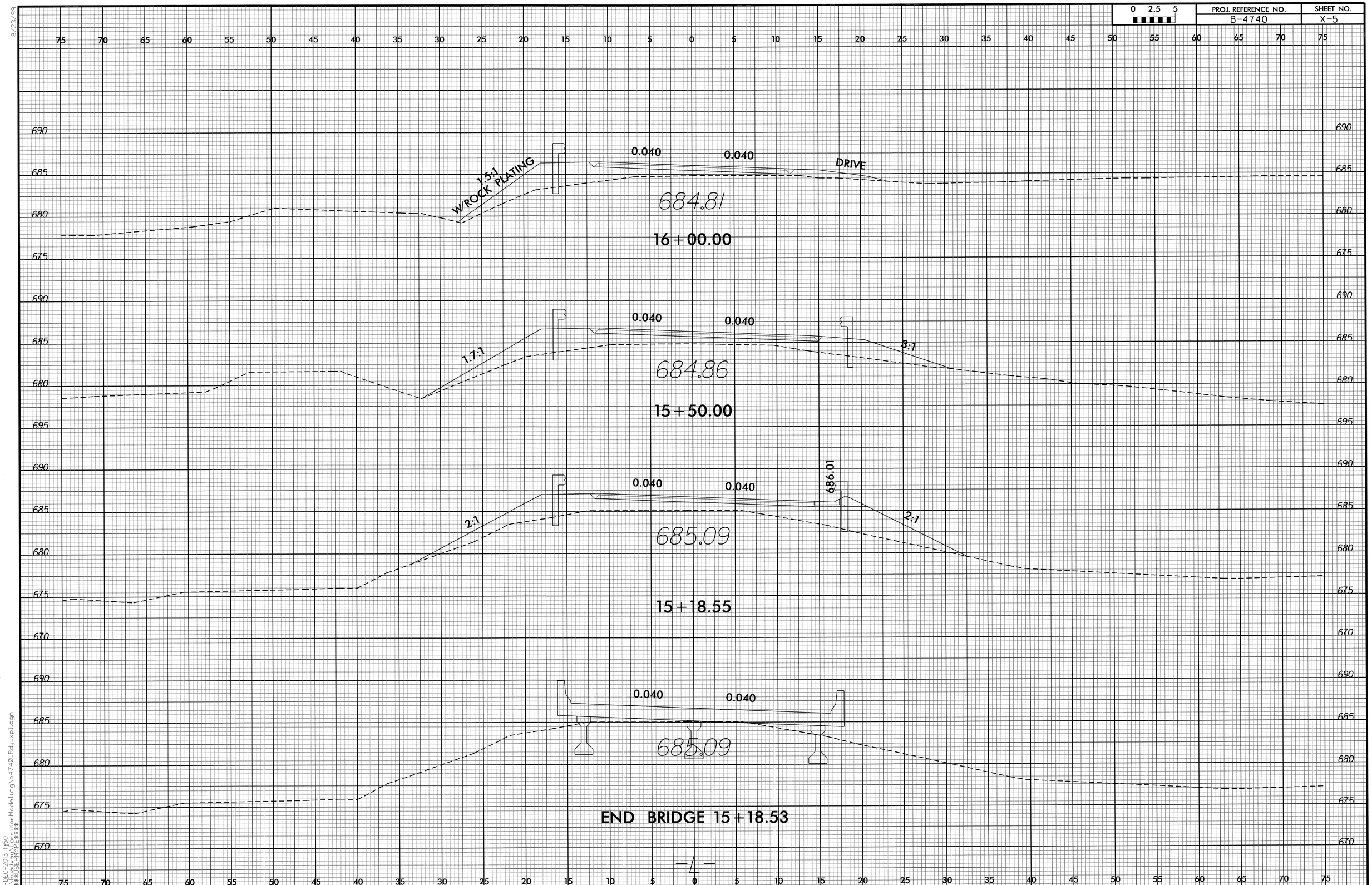
02-DEC-2013 14:21
R:\Roadway\Proposed\Modeling\b4740_Rdy_xpl.dgn
$$$$USERNAME$$$$

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-4740	X-4



8/23/99
12-DEC-2013 1:50
R:\Roadway\Corridor-Modeling\b4740_Rdy-xpl.dgn
$$$$USERNAME$$$$

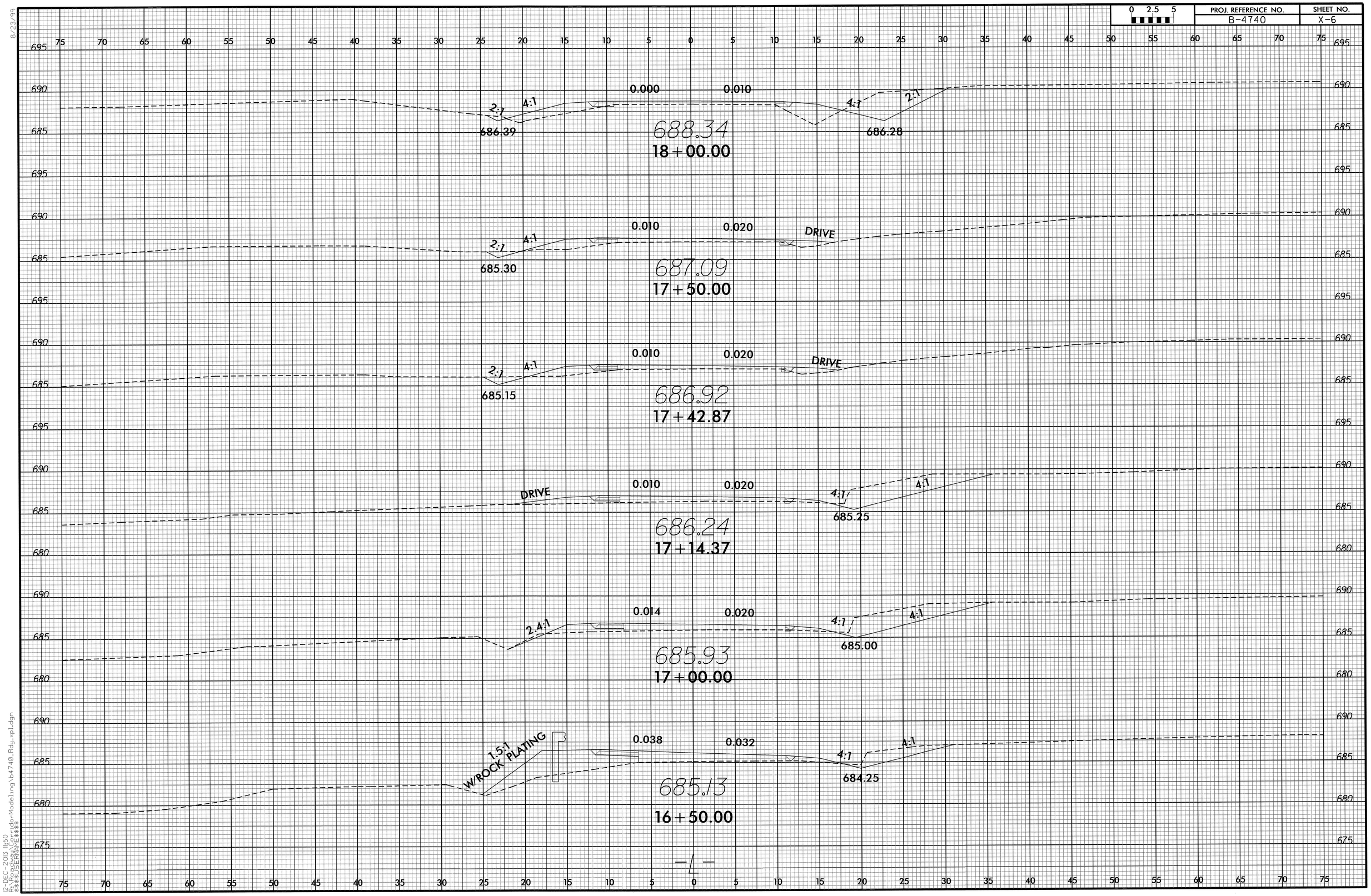
0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-4740	X-5



8/23/99

12-DEC-2013 1:50
R:\Roadway\Corridor\Modeling\b4740_Rdy_xpl.dgn
$$$$USERNAME$$$$

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-4740	X-6

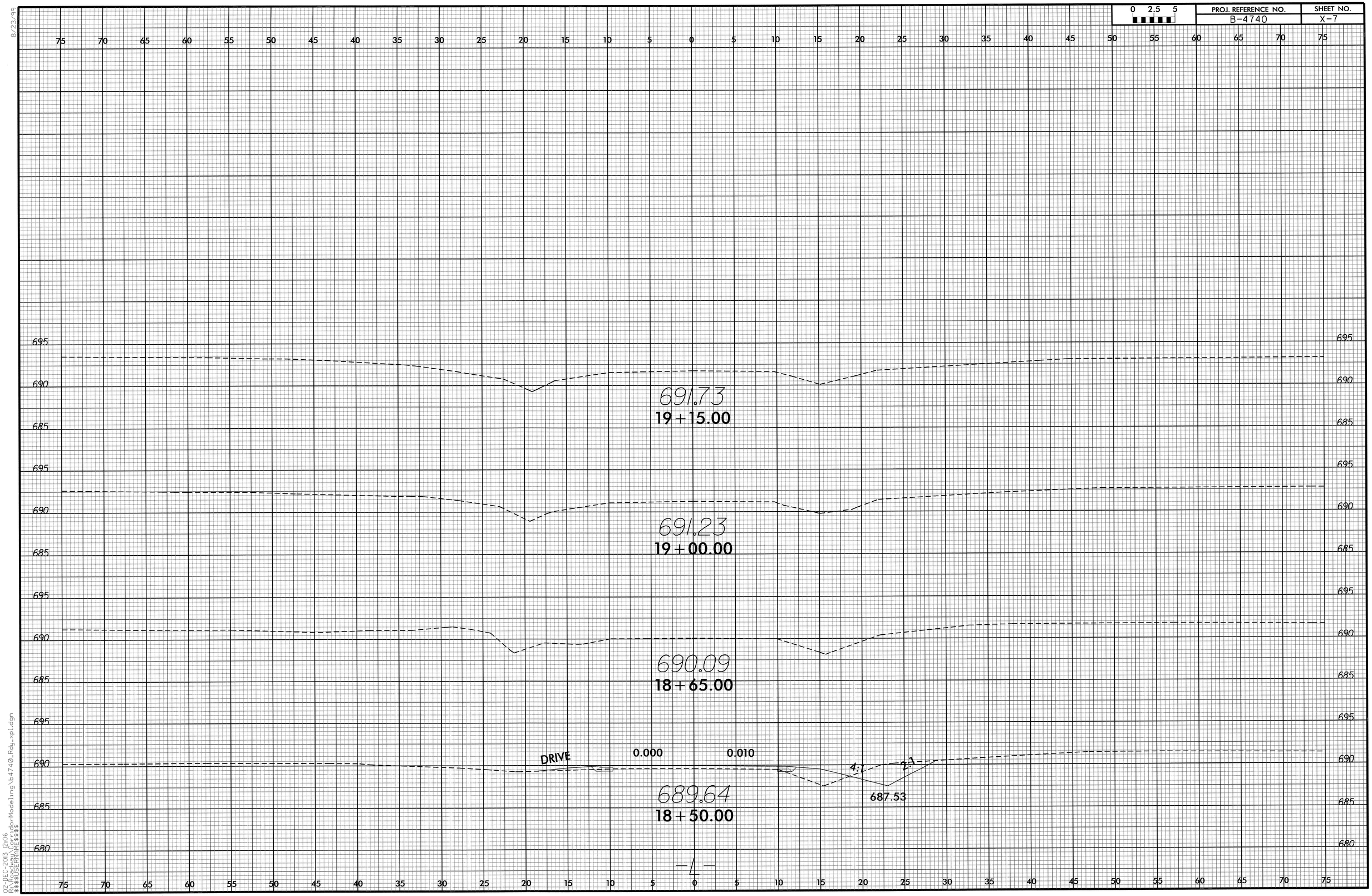


8/23/99

12-DEC-2013 11:50
R:\Roadway\Corridor Modeling\b4740_Rdy_xpl.dgn
$$$$USERNAME$$$$

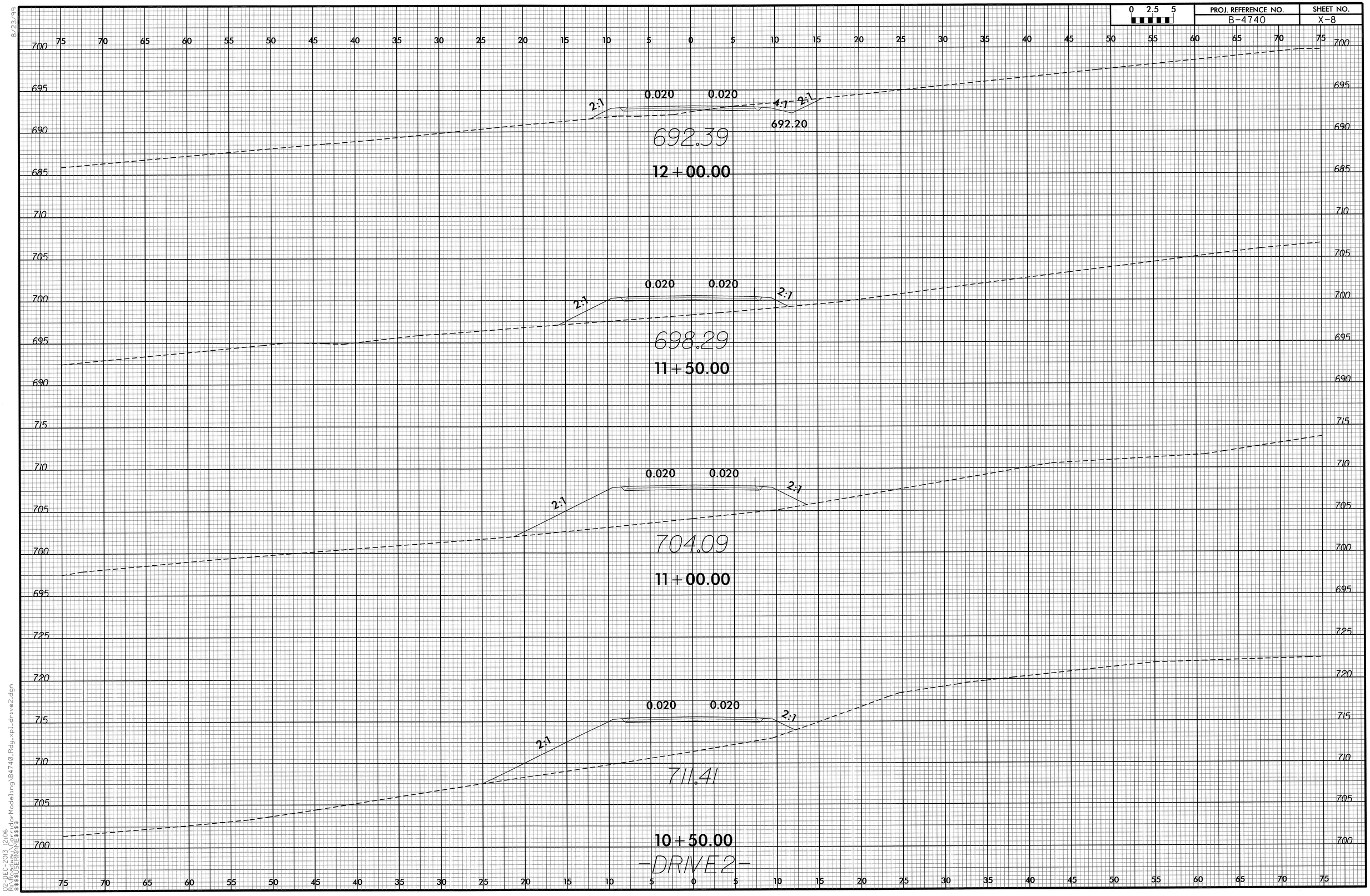
8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-4740	X-7

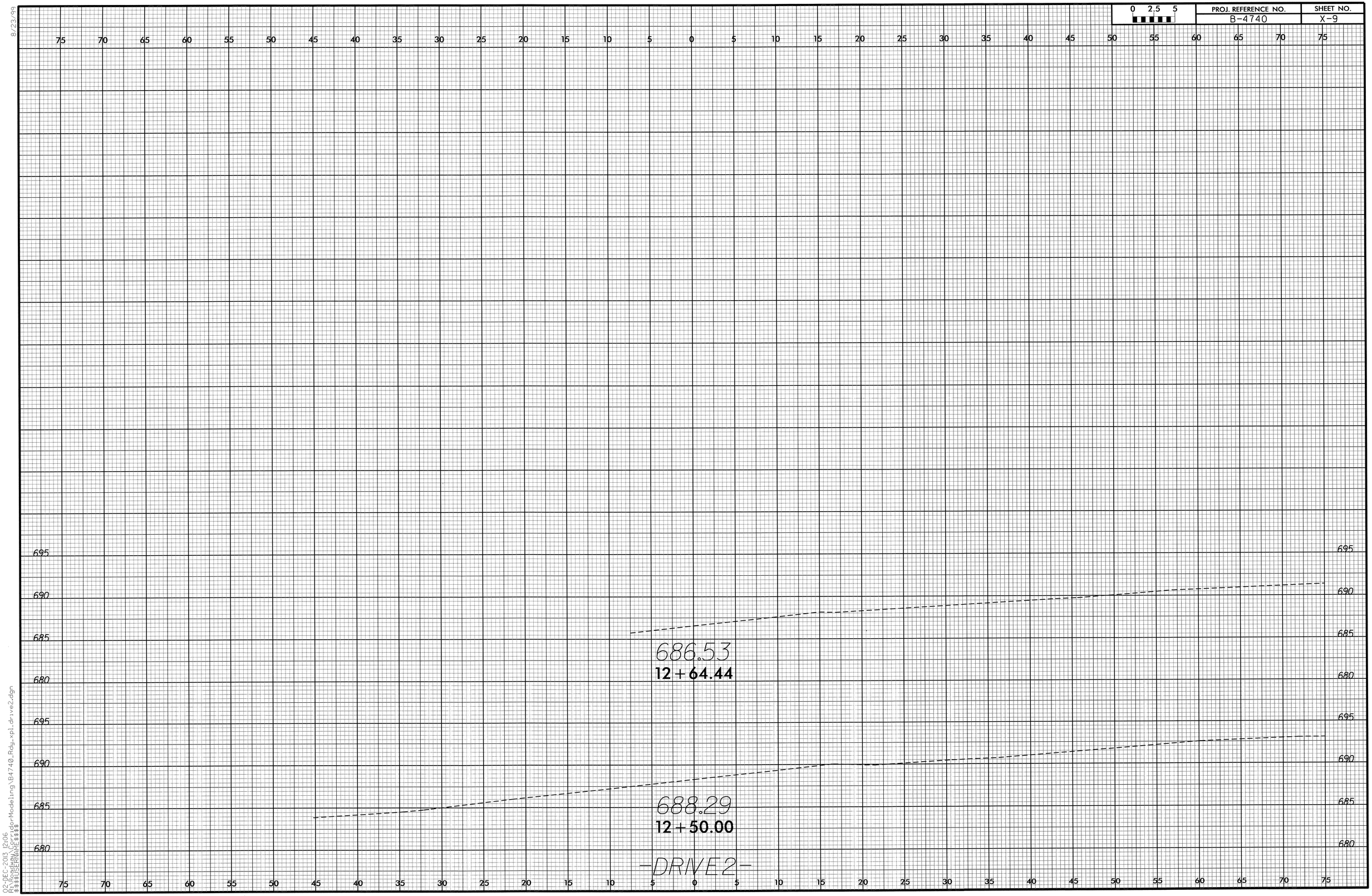


02-DEC-2013 12:06
R:\Roadway\Corridor Modeling\b4740_Rdy_xpl.dgn
$$$$USERNAME$$$$

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-4740	X-8



8/23/99
02-DEC-2013 12:06
R:\Roadway\Corridor Modeling\B4740_Rdy_xpl_drive2.dgn
$$$$USERNAME$$$$



8/23/99
02-DEC-2013 12:06
R:\Roadway\CorridorModeling\B4740_Rdy_xpl_drive2.dgn
$$$$USERNAME$$$$