09/08/99

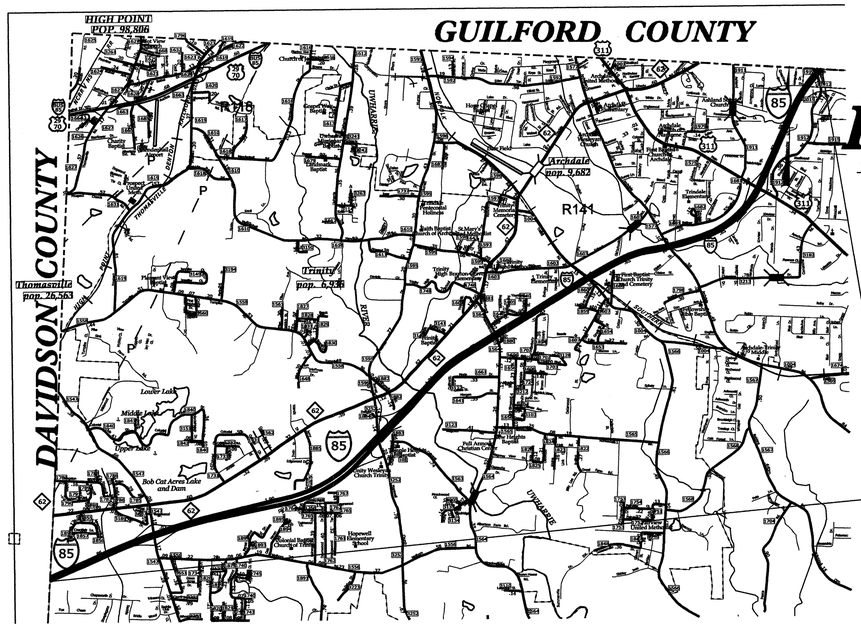
PROJECT: I-5314

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5314	1	

WBS ELEMENT	F.A. PROJ. NO.	DESCRIPTION
47034.1.1	IMS-085-3(208)105	PE, R/W
47034.3.1	IMS-085-3(208)105	CONST.



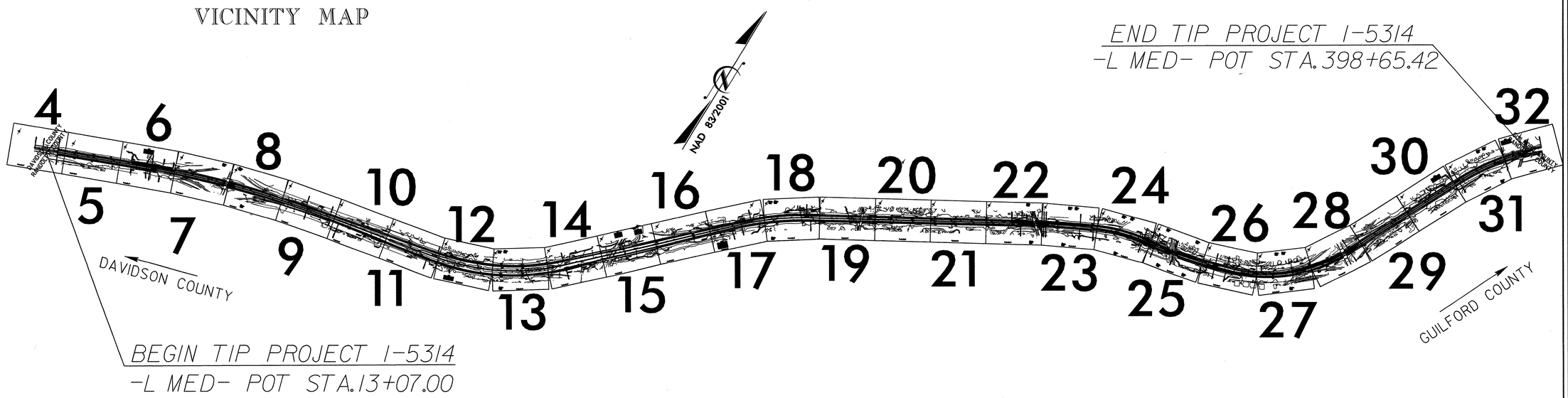
VICINITY MAP

RANDOLPH COUNTY

LOCATION: INTERSTATE 85, NORTH AND SOUTH BOUND LANES FROM THE DAVIDSON COUNTY LINE TO THE GUILFORD COUNTY LINE

TYPE OF WORK: GRADING, DRAINAGE, PAVING

PROJECT LOCATION



CONTRACT: C203154

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 20 0 50 100
PROFILE (HORIZONTAL)

5 2.5 0 5 10
PROFILE (VERTICAL)

DESIGN DATA

ADT 2011 = 52,000

Prepared In the Office of:
DIVISION OF HIGHWAYS
DIVISION 8 DESIGN & CONSTRUCT UNIT
902 N. SANDHILLS BLVD.
ABERDEEN NC 28315

PROJECT LENGTH
ROADWAY: 7.30 MILES
STRUCTURE: ____ MILES
TOTAL: 7.30 MILES

DIVISION OF HIGHWAYS

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: ____

LETTING DATE: JUNE 18, 2013

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 026463 ENGINEER W. GALEN CAMPBELL 2-10-13

DIVISION DESIGN & CONSTRUCT ENGINEER

4-1-13

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

01-APR-2013 11:50
C:\div8_projects\rdy\Randolph\I-5314\psh\I-5314_tsh.dgn
gsadavis ATD8CAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	1-A

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

DIVISION DESIGN / CONSTRUCT ENGINEER

INDEX OF SHEETS

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
2 THRU 2-E	TYPICAL SECTIONS
3	SUMMARY OF QUANTITIES
3-A	SUMMARY OF EARTHWORK, REMOVAL OF, ETC
3-B	GUARDRAIL SUMMARY
3-C THRU 3-G	LIST OF PIPES ENDWALLS, ETC. (FOR PIPES 48" & UNDER)
4 THRU 32	PLAN SHEETS
33 THRU 51	PROFILE SHEETS (L1)
52 THRU 68	PROFILE SHEETS (L2)
PMP 1 THRU PMP 26	PAVEMENT MARKING PLANS
EC 1 THRU EC 30	EROSION CONTROL PLANS
X-A THRU X-B	CROSS-SECTION SUMMARY (L1)
X-C THRU X-D	CROSS-SECTION SUMMARY (L2)
X-1 THRU X-92	CROSS-SECTIONS (L1)
X-93 THRU 152	CROSS-SECTIONS (L2)

GENERAL NOTES

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 THE PROPER TIE-IN.

CLEARING

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

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NOs. 560.01 & 560.02.

SUPERELEVATION

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.05. SUPERELEVATION IS TO BE REVOLVED ABOUT THE CROWN POINTS OR GRADE POINTS AS SHOWN ON THE TYPICAL SECTIONS OR AS 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.

SUBSURFACE PLANS:

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

UTILITIES

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS PRIOR TO THE DATE OF AVAILABILITY.

ROADWAY STANDARD DRAWINGS

The following Roadway Standards as appear in the "Roadway standard Drawings" highway Design Branch – N.C. Department of Transportation – Raleigh, N.C., dated January 17, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE
200.03	Method of Clearing – Method III
225.05	Guide for Grading Subgrade – Interstate and Freeway
225.05	Method of Obtaining Superelevation – Divided Highways.
300.01	Method of Pipe Installation
560.01	Method of Shoulder Construction – Method I
560.02	Method of Shoulder Construction – Method II
665.01	Asphalt Shoulders – Milled Rumble Strips
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin – 12" thru 54" Pipe
840.02	Concrete Catch Basin – 12" thru 54" Pipe
840.03	Frame, Grates and Hood – for Use on Standard Catch Basin
840.14	Concrete Drop Inlet – 12" thru 30" Pipe
840.15	Brick Drop Inlet – 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates – for use with Std. Dwg. 840.14 and 840.15
840.18	Concrete Grated Drop Inlet Type 'B' – 12" thru 36" Pipe
840.20	Frames and Wide Slot Flat Grates
840.25	Anchorage for Frames – Brick or Concrete or Precast
840.27	Brick Grated Drop Inlet Type 'B' – 12" thru 36" Pipe
840.36	Traffic Bearing Grated Drop Inlet – for Steel (840.37) Double Frame and Grates
840.37	Steel Grate and Frame
840.45	Precase Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Guttter
846.02	Drop Inlet Installation in Expressway Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
862.04	Anchoring End of Guardrail – B-77 and B-83 Anchor Units
876.02	Guide for Rip Rap at Pipe Outlets

8/17/99

01-APR-2013 10:56
C:\div8-projects\randolph\I-5314\psh\INDEX\IndexofSheets.dgn
gadavis A1 Default 246463

12/05/11

PROJECT REFERENCE NO.	SHEET NO.
I-5314	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

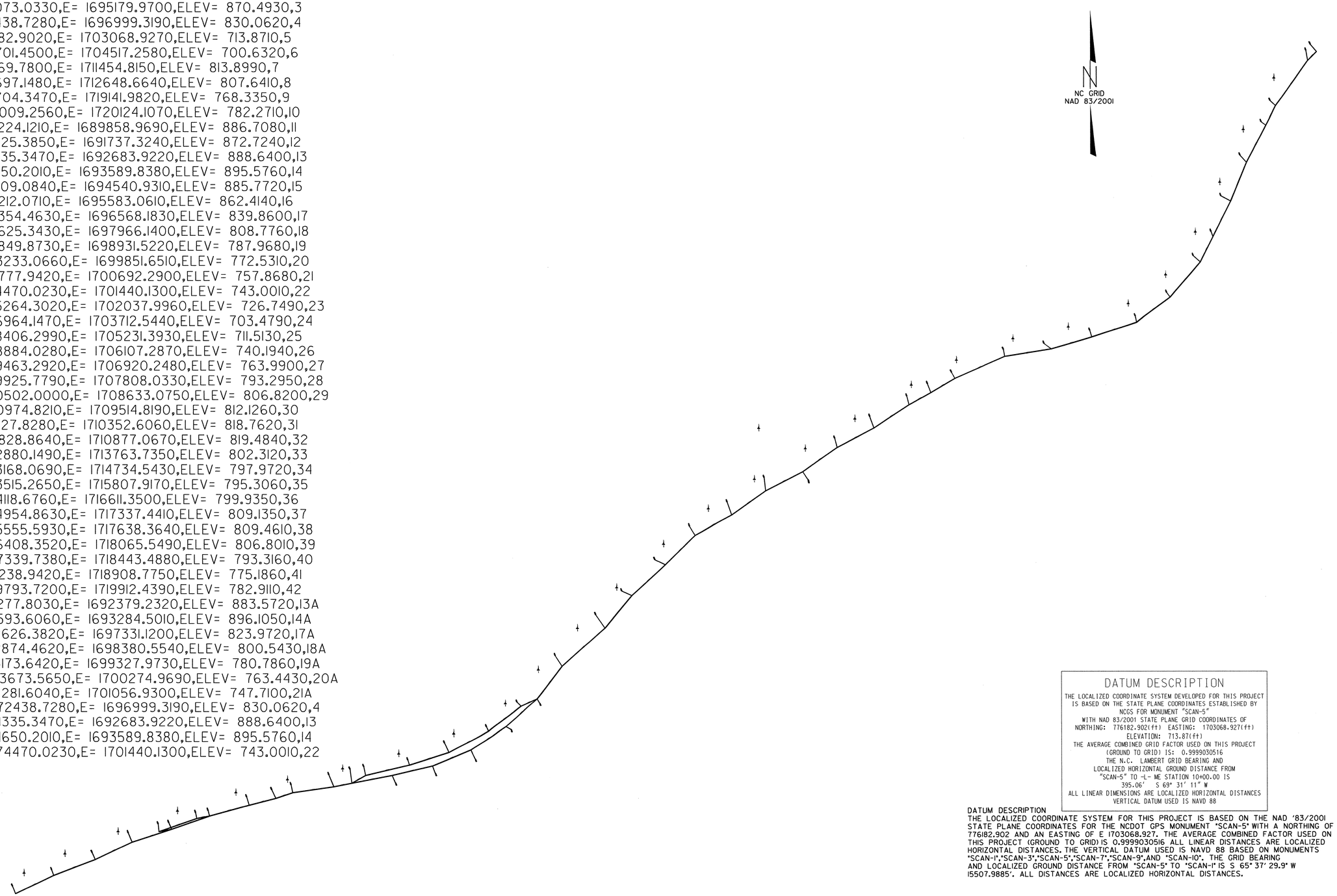
MISCELLANEOUS:

- 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.
I-5314	1-C
R/W SHEET NO.	

SURVEY CONTROL SHEET I-5314

Point#	North(Y)	East(X)	Elev(Z)	Description
PT= 1,	N= 769782.6400,	E= 1688943.2640,	ELEV= 902.7960,	1
PT= 2,	N= 770604.0070,	E= 1690852.5730,	ELEV= 870.9010,	2
PT= 3,	N= 772073.0330,	E= 1695179.9700,	ELEV= 870.4930,	3
PT= 4,	N= 772438.7280,	E= 1696999.3190,	ELEV= 830.0620,	4
PT= 5,	N= 776182.9020,	E= 1703068.9270,	ELEV= 713.8710,	5
PT= 6,	N= 777701.4500,	E= 1704517.2580,	ELEV= 700.6320,	6
PT= 7,	N= 782169.7800,	E= 1711454.8150,	ELEV= 813.8990,	7
PT= 8,	N= 782697.1480,	E= 1712648.6640,	ELEV= 807.6410,	8
PT= 9,	N= 788704.3470,	E= 1719141.9820,	ELEV= 768.3350,	9
PT= 10,	N= 790009.2560,	E= 1720124.1070,	ELEV= 782.2710,	10
PT= 11,	N= 770224.1210,	E= 1689858.9690,	ELEV= 886.7080,	11
PT= 12,	N= 771025.3850,	E= 1691737.3240,	ELEV= 872.7240,	12
PT= 13,	N= 771335.3470,	E= 1692683.9220,	ELEV= 888.6400,	13
PT= 14,	N= 771650.2010,	E= 1693589.8380,	ELEV= 895.5760,	14
PT= 15,	N= 771909.0840,	E= 1694540.9310,	ELEV= 885.7720,	15
PT= 16,	N= 772212.0710,	E= 1695583.0610,	ELEV= 862.4140,	16
PT= 17,	N= 772354.4630,	E= 1696568.1830,	ELEV= 839.8600,	17
PT= 18,	N= 772625.3430,	E= 1697966.1400,	ELEV= 808.7760,	18
PT= 19,	N= 772849.8730,	E= 1698931.5220,	ELEV= 787.9680,	19
PT= 20,	N= 773233.0660,	E= 1699851.6510,	ELEV= 772.5310,	20
PT= 21,	N= 773777.9420,	E= 1700692.2900,	ELEV= 757.8680,	21
PT= 22,	N= 774470.0230,	E= 1701440.1300,	ELEV= 743.0010,	22
PT= 23,	N= 775264.3020,	E= 1702037.9960,	ELEV= 726.7490,	23
PT= 24,	N= 776964.1470,	E= 1703712.5440,	ELEV= 703.4790,	24
PT= 25,	N= 778406.2990,	E= 1705231.3930,	ELEV= 711.5130,	25
PT= 26,	N= 778884.0280,	E= 1706107.2870,	ELEV= 740.1940,	26
PT= 27,	N= 779463.2920,	E= 1706920.2480,	ELEV= 763.9900,	27
PT= 28,	N= 779925.7790,	E= 1707808.0330,	ELEV= 793.2950,	28
PT= 29,	N= 780502.0000,	E= 1708633.0750,	ELEV= 806.8200,	29
PT= 30,	N= 780974.8210,	E= 1709514.8190,	ELEV= 812.1260,	30
PT= 31,	N= 781527.8280,	E= 1710352.6060,	ELEV= 818.7620,	31
PT= 32,	N= 781828.8640,	E= 1710877.0670,	ELEV= 819.4840,	32
PT= 33,	N= 782880.1490,	E= 1713763.7350,	ELEV= 802.3120,	33
PT= 34,	N= 783168.0690,	E= 1714734.5430,	ELEV= 797.9720,	34
PT= 35,	N= 783515.2650,	E= 1715807.9170,	ELEV= 795.3060,	35
PT= 36,	N= 784118.6760,	E= 1716611.3500,	ELEV= 799.9350,	36
PT= 37,	N= 784954.8630,	E= 1717337.4410,	ELEV= 809.1350,	37
PT= 38,	N= 785555.5930,	E= 1717638.3640,	ELEV= 809.4610,	38
PT= 39,	N= 786408.3520,	E= 1718065.5490,	ELEV= 806.8010,	39
PT= 40,	N= 787339.7380,	E= 1718443.4880,	ELEV= 793.3160,	40
PT= 41,	N= 788238.9420,	E= 1718908.7750,	ELEV= 775.1860,	41
PT= 42,	N= 789793.7200,	E= 1719912.4390,	ELEV= 782.9110,	42
PT= 113,	N= 771277.8030,	E= 1692379.2320,	ELEV= 883.5720,	13A
PT= 114,	N= 771593.6060,	E= 1693284.5010,	ELEV= 896.1050,	14A
PT= 117,	N= 772626.3820,	E= 1697331.1200,	ELEV= 823.9720,	17A
PT= 118,	N= 772874.4620,	E= 1698380.5540,	ELEV= 800.5430,	18A
PT= 119,	N= 773173.6420,	E= 1699327.9730,	ELEV= 780.7860,	19A
PT= 120,	N= 773673.5650,	E= 1700274.9690,	ELEV= 763.4430,	20A
PT= 121,	N= 774281.6040,	E= 1701056.9300,	ELEV= 747.7100,	21A
PT= 204,	N= 772438.7280,	E= 1696999.3190,	ELEV= 830.0620,	4
PT= 213,	N= 771335.3470,	E= 1692683.9220,	ELEV= 888.6400,	13
PT= 214,	N= 771650.2010,	E= 1693589.8380,	ELEV= 895.5760,	14
PT= 222,	N= 774470.0230,	E= 1701440.1300,	ELEV= 743.0010,	22



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "SCAN-5"
WITH NAD 83/2001 STATE PLANE GRID COORDINATES OF
NORTHING: 776182.902(ft) EASTING: 1703068.927(ft)
ELEVATION: 713.87(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9999030516
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "SCAN-5" TO -L- ME STATION 10+00.00 IS
395.06' S 69° 31' 11" W
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

DATUM DESCRIPTION
THE LOCALIZED COORDINATE SYSTEM FOR THIS PROJECT IS BASED ON THE NAD '83/2001 STATE PLANE COORDINATES FOR THE NCDOT GPS MONUMENT "SCAN-5" WITH A NORTHING OF 776182.902 AND AN EASTING OF E 1703068.927. THE AVERAGE COMBINED FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS 0.9999030516 ALL LINEAR DISTANCES ARE LOCALIZED HORIZONTAL DISTANCES. THE VERTICAL DATUM USED IS NAVD 88 BASED ON MONUMENTS "SCAN-1","SCAN-3","SCAN-5","SCAN-7","SCAN-9",AND "SCAN-10". THE GRID BEARING AND LOCALIZED GROUND DISTANCE FROM "SCAN-5" TO "SCAN-1" IS S 65° 37' 29.9" W 15507.9885'. ALL DISTANCES ARE LOCALIZED HORIZONTAL DISTANCES.

REVISIONS

8/17/99

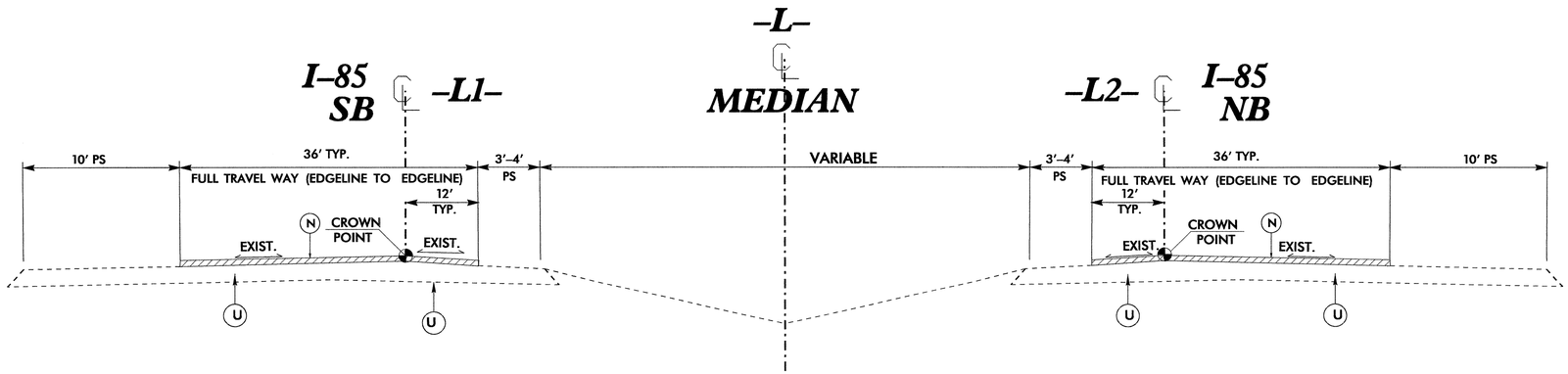
28-MAR-2013 17:02
c:\div8_projects\rdy\randolph\i-5314\psh\bln\BLN 1 C.dgn
psdavis A1 D81ad246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	2
R/W SHEET NO.	

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

DIVISION DESIGN / CONSTRUCT ENGINEER

4-1-13

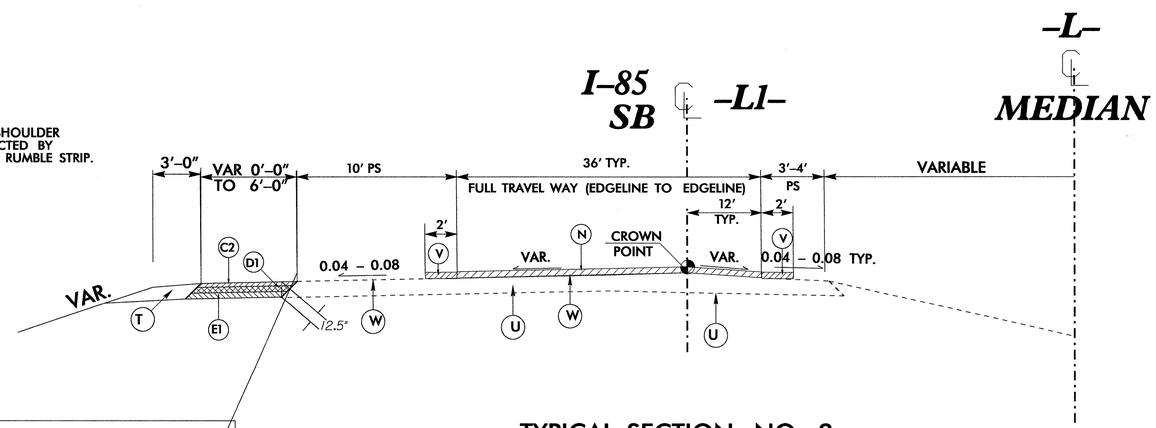


NOTE: PAVE JUST OVER EDGELINES BUT NOT INTO EXISTING RUMBLE STRIP

TYPICAL SECTION NO. 1

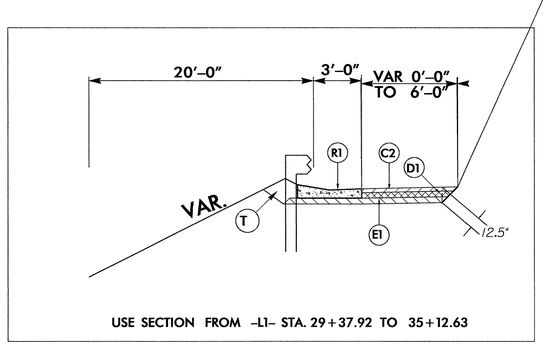
-L-MED- STA. 13+07.00 TO STA. 34+54.76 (NB)
-L-MED- STA. 13+07.00 TO STA. 34+57.65 (SB)
-L-MED- STA. 47+66.46 TO STA. 68+24.62 (NB)
-L-MED- STA. 49+54.83 TO STA. 68+58.00 (SB)
-L-MED- STA. 74+80.33 TO STA. 78+00.00 (SB)
-L-MED- STA. 81+79.32 TO STA. 94+06.72 (SB)
-L-MED- STA. 85+62.40 TO STA. 95+06.22 (NB)
-L-MED- STA. 99+23.28 TO STA. 118+30.26 (SB)
-L-MED- STA. 100+33.85 TO STA. 109+21.32 (NB)
-L-MED- STA. 112+81.26 TO STA. 137+01.22 (NB)
-L-MED- STA. 126+14.56 TO STA. 148+44.82 (SB)
-L-MED- STA. 143+14.06 TO STA. 146+70.25 (NB)
-L-MED- STA. 150+29.62 TO STA. 153+52.55 (NB)
-L-MED- STA. 165+50.28 TO STA. 175+40.00 (SB)
-L-MED- STA. 171+25.79 TO STA. 183+53.11 (NB)
-L-MED- STA. 188+10.78 TO STA. 293+18.84 (NB)
-L-MED- STA. 191+59.23 TO STA. 191+98.79 (SB)
-L-MED- STA. 195+55.06 TO STA. 208+16.83 (SB)
-L-MED- STA. 211+83.65 TO STA. 260+18.63 (SB)
-L-MED- STA. 263+78.63 TO STA. 293+18.84 (SB)
-L-MED- STA. 296+79.40 TO STA. 299+70.48 (SB)
-L-MED- STA. 296+79.81 TO STA. 300+46.36 (NB)
-L-MED- STA. 302+96.70 TO STA. 333+27.23 (NB)
-L-MED- STA. 307+10.02 TO STA. 317+05.00 (SB)
-L-MED- STA. 320+98.19 TO STA. 324+35.96 (SB)
-L-MED- STA. 334+75.29 TO STA. 343+00.00 (SB)
-L-MED- STA. 338+33.82 TO STA. 343+90.95 (NB)

NOTE: WEDGING MAY EXTEND ONTO SHOULDER PAST THE 2' ON TYPICAL AS DIRECTED BY THE ENGINEER. REPLACE EDGELINE RUMBLE STRIP. AS NECESSARY.



TYPICAL SECTION NO. 2

-L1- STA. 28+70.00 TO STA. 39+00.00



USE SECTION FROM -L1- STA. 29+37.92 TO 35+12.63

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD IN EACH OF TWO (2) LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1.5" IN DEPTH OR GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4.00" IN DEPTH.
E1	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3.0" IN DEPTH OR GREATER THAN 5.50" IN DEPTH.
N	PROP. APPROX. 5/8" ULTRATHIN BONDED WEARING COURSE (UBWC), AT AN AVERAGE RATE OF 70 LBS. PER SQ. YARD
R1	EXPRESSWAY GUTTER (RDWY STD. NO. 846.01)
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLED RUMBLE STRIP
W	WEDGING OF EXISTING PAVEMENT (SEE DETAIL)

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

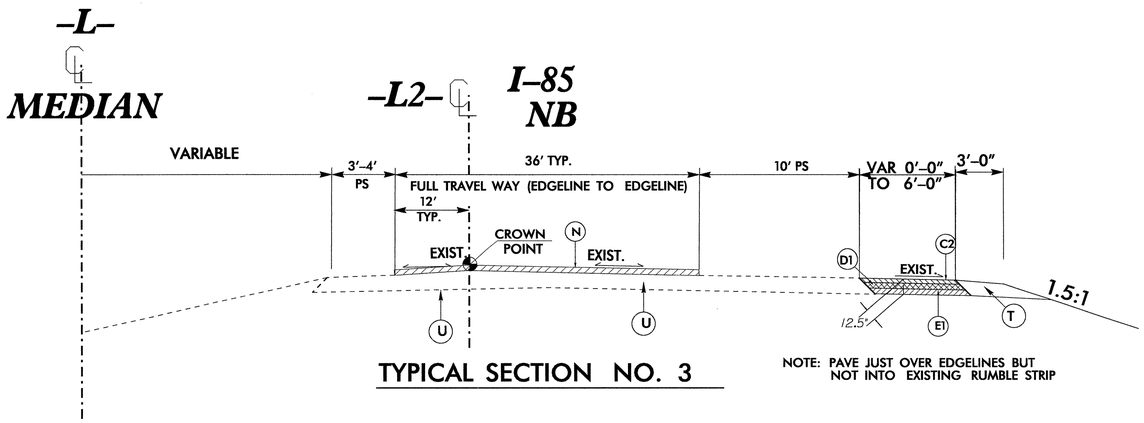
8/17/99
28-MAR-2013 17:02
C:\div8_projects\rdu\randolph\I-5314\psh\typ\5314_typ.dgn
psdevs A1 DGN-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	2-A
R/W SHEET NO.	

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER REG. S. DAVIS

4-1-13

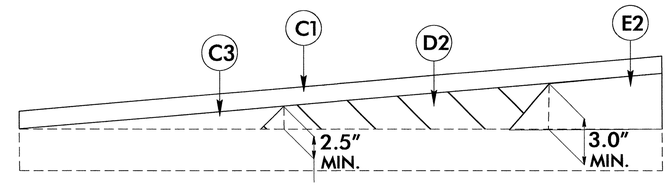
DIVISION DESIGN / CONSTRUCT ENGINEER



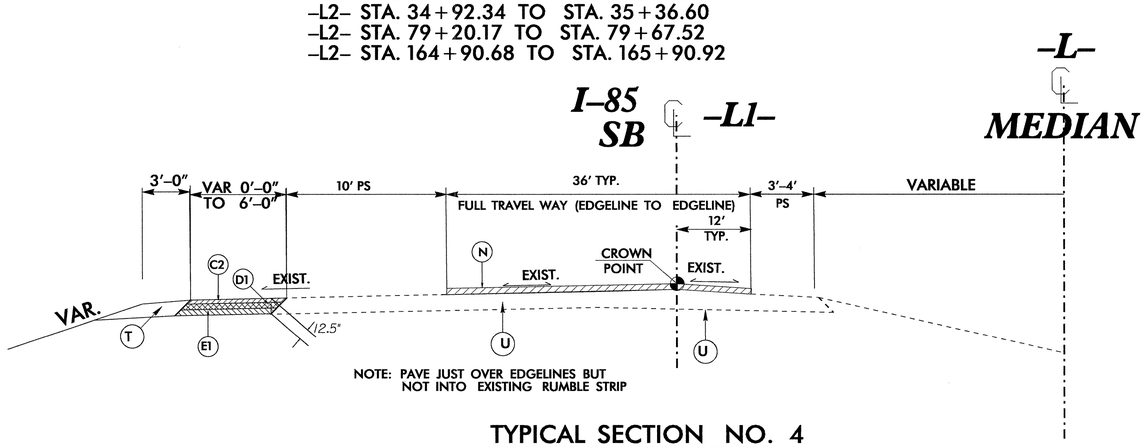
NOTE: PAVE JUST OVER EDGELINES BUT NOT INTO EXISTING RUMBLE STRIP

TYPICAL SECTION NO. 3

-L2- STA. 28+67.10 TO STA. 29+61.86
-L2- STA. 34+92.34 TO STA. 35+36.60
-L2- STA. 79+20.17 TO STA. 79+67.52
-L2- STA. 164+90.68 TO STA. 165+90.92



Wedging Detail For Resurfacing

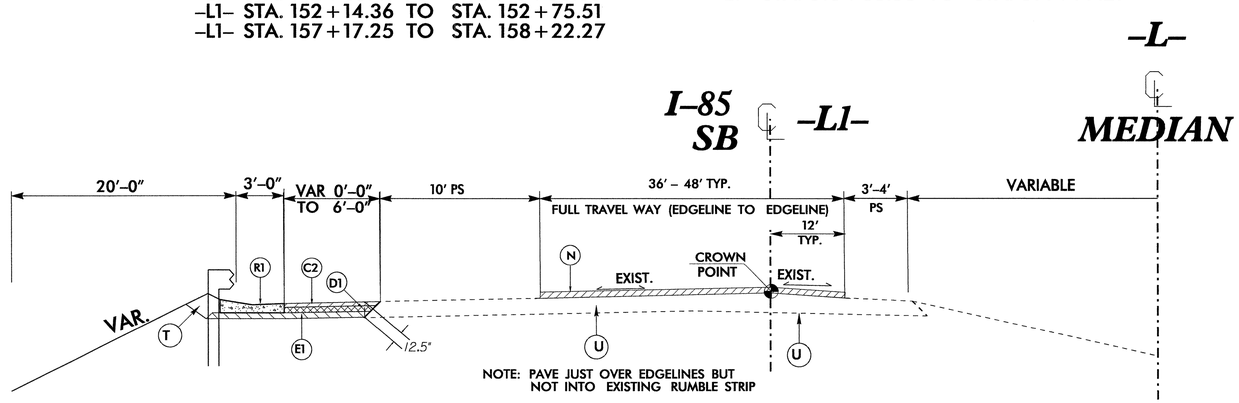


NOTE: PAVE JUST OVER EDGELINES BUT NOT INTO EXISTING RUMBLE STRIP

TYPICAL SECTION NO. 4

-L1- STA. 88+29.29 TO STA. 88+77.64
-L1- STA. 92+45.95 TO STA. 93+45.97
-L1- STA. 112+42.72 TO STA. 112+74.73
-L1- STA. 119+28.61 TO STA. 120+12.40
-L1- STA. 142+05.41 TO STA. 143+53.63
-L1- STA. 152+14.36 TO STA. 152+75.51
-L1- STA. 157+17.25 TO STA. 158+22.27

-L1- STA. 175+81.55 TO STA. 176+23.09
-L1- STA. 184+32.64 TO STA. 185+20.07
-L1- STA. 300+24.65 TO STA. 301+02.83
-L1- STA. 310+89.06 TO STA. 311+42.49
-L1- STA. 313+88.58 TO STA. 314+77.27



NOTE: PAVE JUST OVER EDGELINES BUT NOT INTO EXISTING RUMBLE STRIP

TYPICAL SECTION NO. 5

-L1- STA. 88+77.64 TO STA. 92+45.95
-L1- STA. 112+74.73 TO STA. 119+28.61
-L1- STA. 143+53.63 TO STA. 152+14.02
-L1- STA. 155+23.56 TO STA. STA. 157+17.25

-L1- STA. 176+23.09 TO STA. 184+32.64
-L1- STA. 293+75.47 TO STA. 294+05.74
-L1- STA. 296+22.35 TO STA. 300+24.56
-L1- STA. 311+42.49 TO STA. 313+88.58

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD IN EACH OF TWO (2) LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1.5" IN DEPTH OR GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4.00" IN DEPTH.
E1	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3.0" IN DEPTH OR GREATER THAN 5.50" IN DEPTH.
N	PROP. APPROX. 5/8" ULTRATHIN BONDED WEARING COURSE (UBWC), AT AN AVERAGE RATE OF 70 LBS. PER SQ. YARD
R1	EXPRESSWAY GUTTER (RDWY STD. NO. 846.01)
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLED RUMBLE STRIP
W	WEDGING OF EXISTING PAVEMENT (SEE DETAIL)

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

8/17/99

REVISIONS

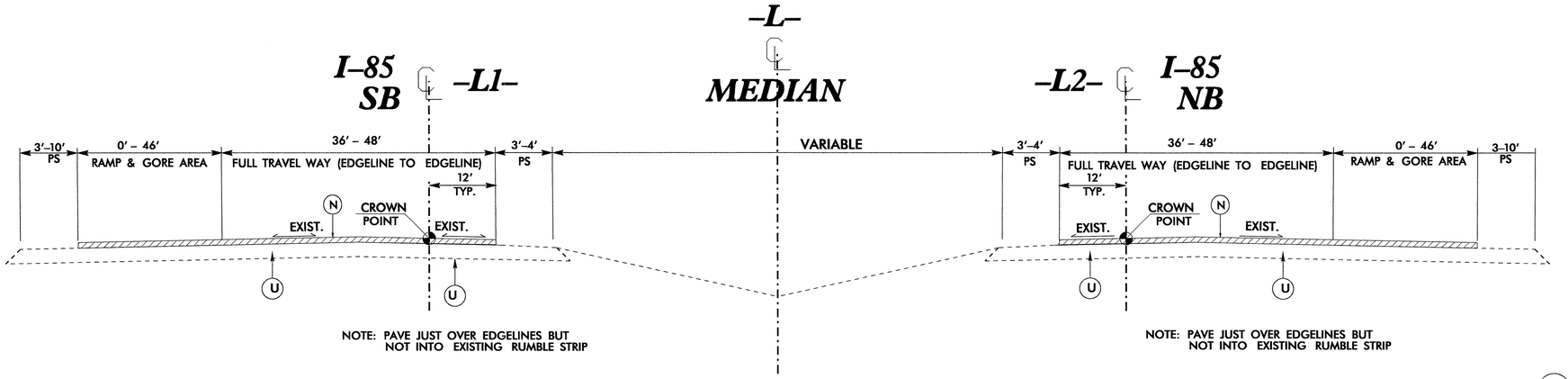
28-MAR-2013 17:02
C:\div8_projects\rdu\rangelph\I-5314\psh\typ\I5314_typ.dgn
pcsavis AT 108.80.246.163

PROJECT REFERENCE NO.	SHEET NO.
I-5314	2-B
R/W SHEET NO.	

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

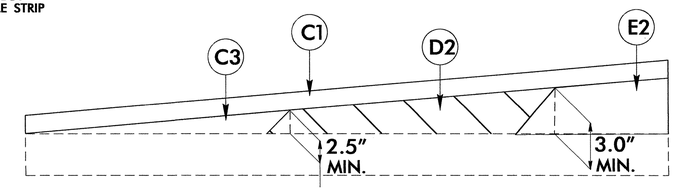
4-1-13

DIVISION DESIGN / CONSTRUCT ENGINEER

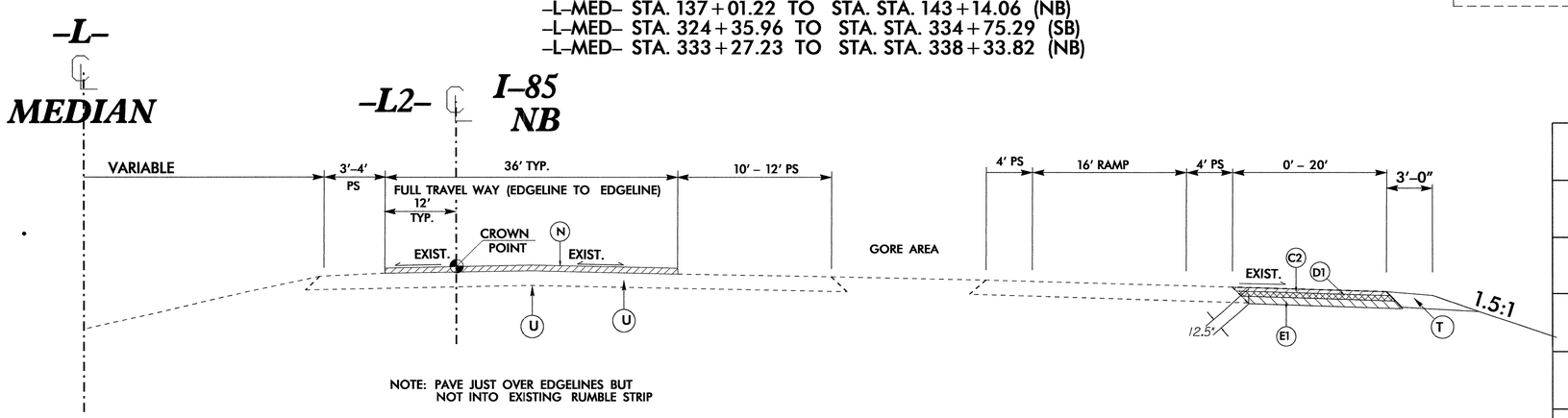


TYPICAL SECTION NO. 6

-L-MED- STA. 41+24.63 TO STA. STA. 47+66.46 (NB)
-L-MED- STA. 44+86.75 TO STA. STA. 49+54.83 (SB)
-L-MED- STA. 68+58.00 TO STA. STA. 74+80.33 (SB)
-L-MED- STA. 137+01.22 TO STA. STA. 143+14.06 (NB)
-L-MED- STA. 324+35.96 TO STA. STA. 334+75.29 (SB)
-L-MED- STA. 333+27.23 TO STA. STA. 338+33.82 (NB)

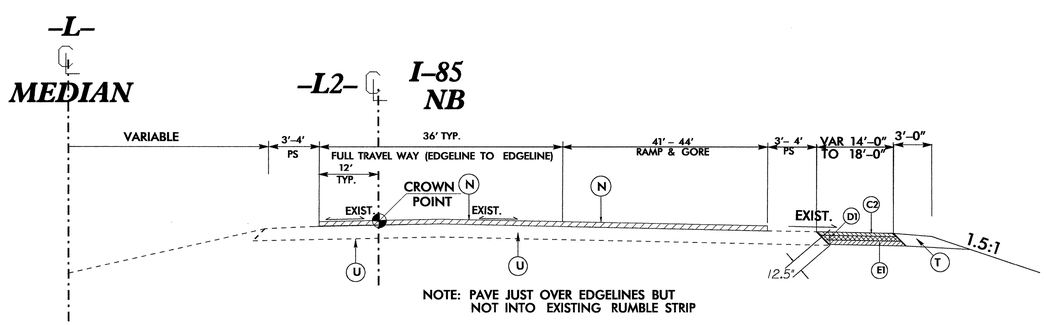


Wedging Detail For Resurfacing



TYPICAL SECTION NO. 7

-L-MED- STA. 68+24.62 TO STA. 69+02.74



TYPICAL SECTION NO. 8

-L2- STA. 63+09.14 TO STA. 63+46.05
-L2- STA. 147+85.64 TO STA. 148+68.86

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD IN EACH OF TWO (2) LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1.5" IN DEPTH OR GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4.00" IN DEPTH.
E1	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3.0" IN DEPTH OR GREATER THAN 5.50" IN DEPTH.
N	PROP. APPROX. 5/8" ULTRATHIN BONDED WEARING COURSE (UBWC), AT AN AVERAGE RATE OF 70 LBS. PER SQ. YARD
R1	EXPRESSWAY GUTTER (RDWY STD. NO. 846.01)
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLED RUMBLE STRIP
W	WEDGING OF EXISTING PAVEMENT (SEE DETAIL)

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

8/17/99

REVISIONS

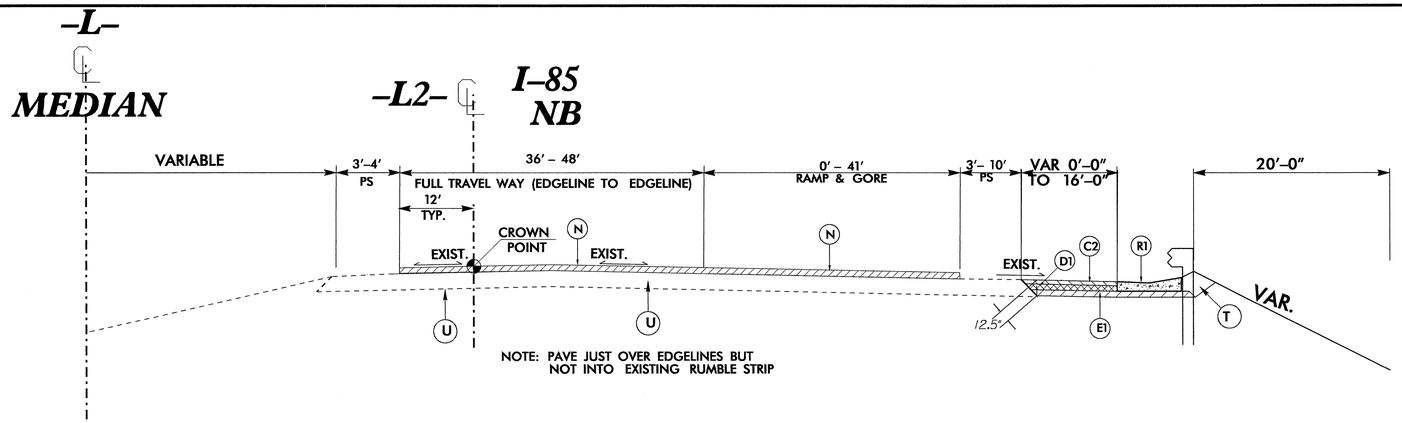
28-MAR-2013 17:02
C:\div8\projects\rdu\randolph\I-5314\psh\typ\I-5314_typ.dgn
osdavis at INBAD02246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	2-C
R/W SHEET NO.	

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

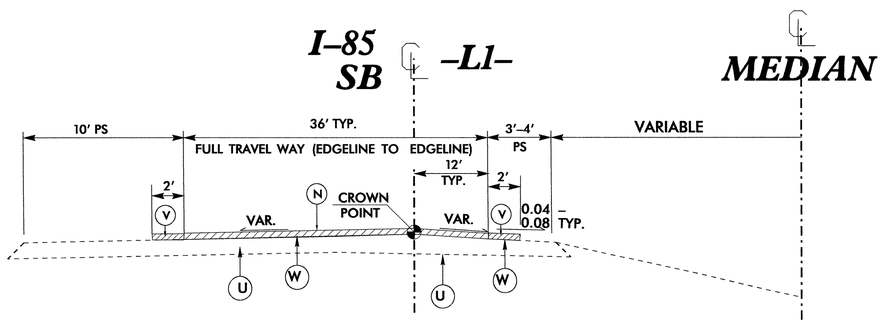
DIVISION DESIGN / CONSTRUCT ENGINEER



NOTE: PAVE JUST OVER EDGELINES BUT NOT INTO EXISTING RUMBLE STRIP

TYPICAL SECTION NO. 9

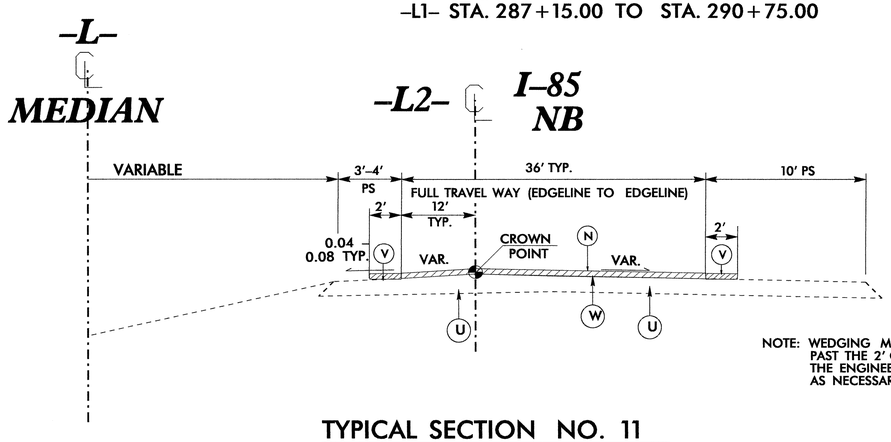
-L2- STA. 63+46.05 TO STA. 79+20.17
-L2- STA. 148+68.52 TO STA. 151+70.64
-L2- STA. 154+64.14 TO STA. 164+90.68



NOTE: WEDGING MAY EXTEND ONTO SHOULDER PAST THE 2' ON TYPICAL AS DIRECTED BY THE ENGINEER. REPLACE EDGELINE RUMBLE STRIP. AS NECESSARY.

TYPICAL SECTION NO. 10

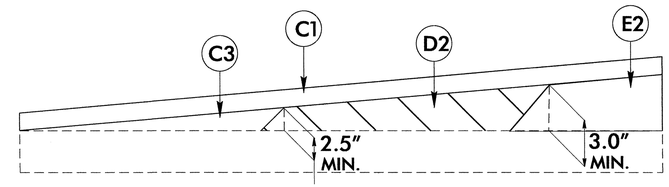
-L1- STA. 72+20.00 TO STA. 76+00.00
-L1- STA. 185+60.00 TO STA. 189+19.60
-L1- STA. 201+92.00 TO STA. 205+60.00
-L1- STA. 253+95.00 TO STA. 257+55.00
-L1- STA. 287+15.00 TO STA. 290+75.00



NOTE: WEDGING MAY EXTEND ONTO SHOULDER PAST THE 2' ON TYPICAL AS DIRECTED BY THE ENGINEER. REPLACE EDGELINE RUMBLE STRIP. AS NECESSARY.

TYPICAL SECTION NO. 11

-L2- STA. 141+35.00 TO STA. 144+95.00
-L2- STA. 287+55.00 TO STA. 291+15.00



Wedging Detail For Resurfacing

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD IN EACH OF TWO (2) LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1.5" IN DEPTH OR GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4.00" IN DEPTH.
E1	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3.0" IN DEPTH OR GREATER THAN 5.50" IN DEPTH.
N	PROP. APPROX. 5/8" ULTRATHIN BONDED WEARING COURSE (UBWC), AT AN AVERAGE RATE OF 70 LBS. PER SQ. YARD
R1	EXPRESSWAY GUTTER (RDWY STD. NO. 846.01)
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLED RUMBLE STRIP
W	WEDGING OF EXISTING PAVEMENT (SEE DETAIL)

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

REVISIONS

8/17/99

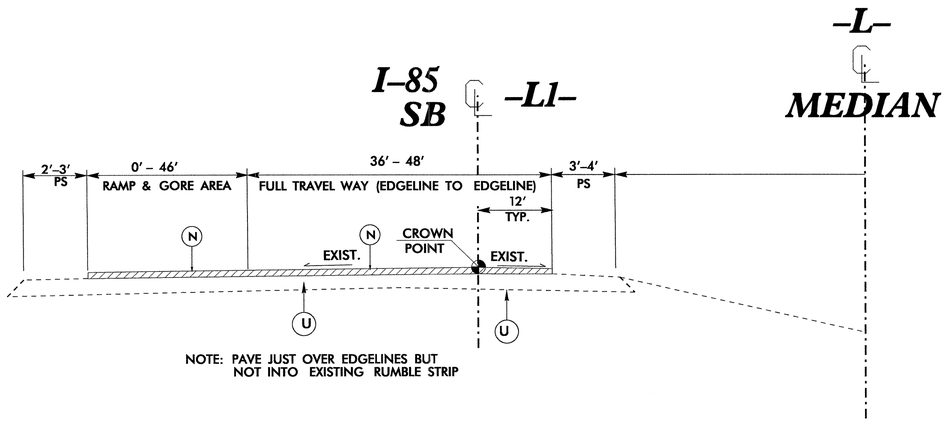
28-MAR-2013 17:02
C:\div8_projects\rdu\randolph\i-5314\psh\typ\i-5314_typ.dgn
osdavis at NBI-DP-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	2-D
R/W SHEET NO.	

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

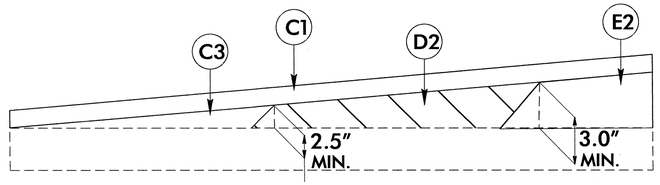
4-1-13

DIVISION DESIGN /CONSTRUCT ENGINEER

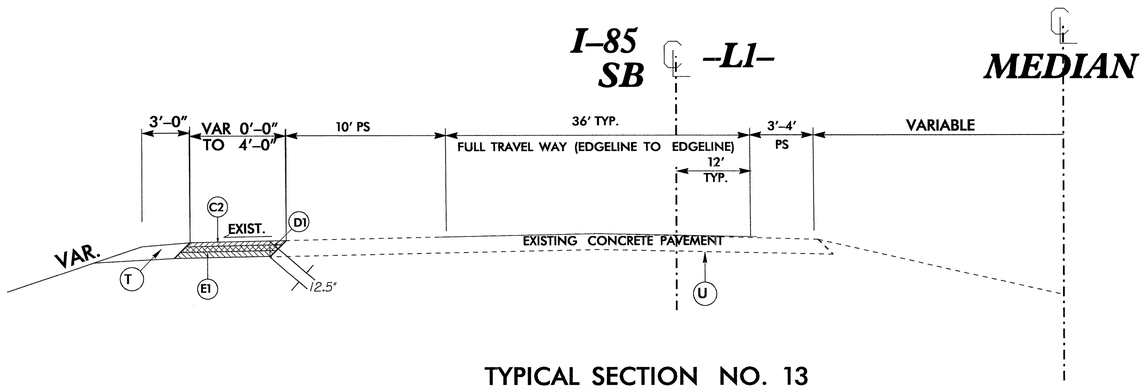


TYPICAL SECTION NO. 12

-L1- STA. 158+22.27 TO STA. 159+10.55
-L1- STA. 169+00.00 TO STA. 175+81.55

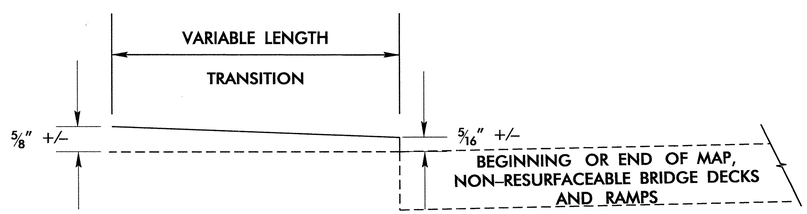


Wedging Detail For Resurfacing



TYPICAL SECTION NO. 13

-L1- STA. 364+73.03 TO STA. 365+13.77
-L1- STA. 370+97.57 TO STA. 371+89.61



TRANSITION AREA AT BEGINNING OR END OF MAP, NON-RESURFACEABLE BRIDGE DECKS AND RAMPS (USE UBWC, AS PER SPECAL PROVISIONS)

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD IN EACH OF TWO (2) LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1.5" IN DEPTH OR GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4.00" IN DEPTH.
E1	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3.0" IN DEPTH OR GREATER THAN 5.50" IN DEPTH.
N	PROP. APPROX. 5/8" ULTRATHIN BONDED WEARING COURSE (UBWC), AT AN AVERAGE RATE OF 70 LBS. PER SQ. YARD
R1	EXPRESSWAY GUTTER (RDWY STD. NO. 846.01)
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLED RUMBLE STRIP
W	WEDGING OF EXISTING PAVEMENT (SEE DETAIL)

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

REVISIONS

8/17/99

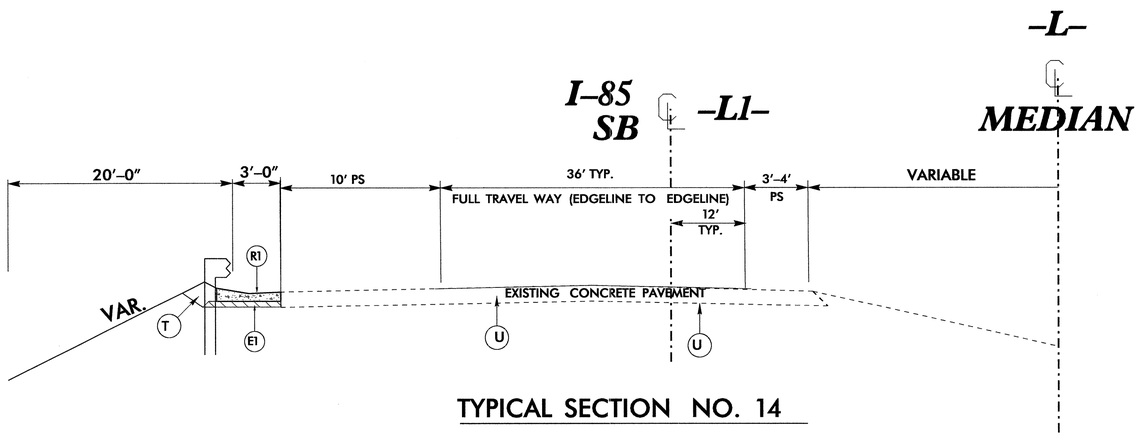
28-MAR-2013 17:02
C:\div8_projects\rdy\randolph\I-5314\psh\typ\I5314_typ.dgn
psavis

PROJECT REFERENCE NO.	SHEET NO.
I-5314	2-E
R/W SHEET NO.	

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER REG. S. DANIEL

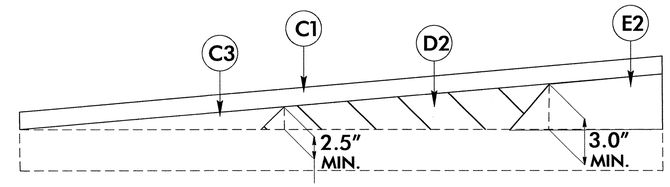
4-1-13

DIVISION DESIGN / CONSTRUCT ENGINEER

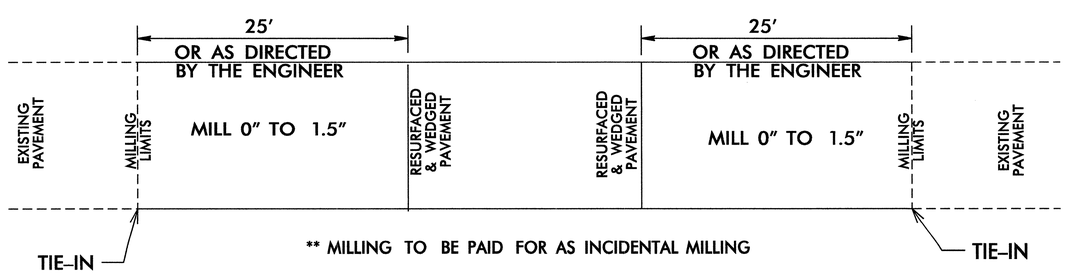


TYPICAL SECTION NO. 14

-L1- STA. 365+13.77 TO STA. 370+97.57



Wedging Detail For Resurfacing



PAVEMENT TIE-IN DETAIL AT WEDGING AREAS

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD IN EACH OF TWO (2) LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1.5" IN DEPTH OR GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4.00" IN DEPTH.
E1	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3.0" IN DEPTH OR GREATER THAN 5.50" IN DEPTH.
N	PROP. APPROX. 5/8" ULTRATHIN BONDED WEARING COURSE (UBWC), AT AN AVERAGE RATE OF 70 LBS. PER SQ. YARD
R1	EXPRESSWAY GUTTER (RDWY STD. NO. 846.01)
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLED RUMBLE STRIP
W	WEDGING OF EXISTING PAVEMENT (SEE DETAIL)

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

REVISIONS

8/17/99

28-MAR-2013 17:02
C:\div8_projects\rdu\randolph\I-5314\psh\tup\I5314_tup.dgn
psdavis

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C203154

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0000400000-N	801	Lump Sum		CONSTRUCTION SURVEYING
0043000000-N	226	Lump Sum		GRADING
0050000000-E	226	2	ACR	SUPPLEMENTARY CLEARING & GRUBBING
0318000000-E	300	640	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES
0320000000-E	300	2,010	SY	FOUNDATION CONDITIONING GEOTEXTILE
0343000000-E	310	1,436	LF	15" SIDE DRAIN PIPE
0348000000-E	310	58	EA	**" SIDE DRAIN PIPE ELBOWS (15")
0366000000-E	310	484	LF	15" RC PIPE CULVERTS, CLASS III
0448200000-E	310	4,104	LF	15" RC PIPE CULVERTS, CLASS IV
0995000000-E	340	984	LF	PIPE REMOVAL
1220000000-E	545	250	TON	INCIDENTAL STONE BASE
1330000000-E	607	2,110	SY	INCIDENTAL MILLING
1491000000-E	610	3,050	TON	ASPHALT CONC BASE COURSE, TYPE B25.0C
1503000000-E	610	2,660	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C
1523000000-E	610	5,515	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5C
1575000000-E	620	588	TON	ASPHALT BINDER FOR PLANT MIX
1577000000-E	620	553	TON	POLYMER MODIFIED ASPHALT BINDER FOR PLANT MIX
1840000000-E	665	7,160	LF	MILLED RUMBLE STRIPS (ASPHALT CONCRETE)
1880000000-E	SP	10,630	TON	GENERIC PAVING ITEM ULTRATHIN BONDED WEARING COURSE
2275000000-E	SP	7	CY	FLOWABLE FILL
2286000000-N	840	83	EA	MASONRY DRAINAGE STRUCTURES
2364200000-N	840	74	EA	FRAME WITH TWO GRATES, STD 840.20
2374000000-N	840	2	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)
2407000000-N	840	7	EA	STEEL FRAME WITH TWO GRATES, STD 840.37
2473000000-N	SP	51	EA	GENERIC DRAINAGE ITEM REPLACE CONCRETE APRON
2577000000-E	846	8,970	LF	CONCRETE EXPRESSWAY GUTTER
3030000000-E	862	9,025	LF	STEEL BM GUARDRAIL
3150000000-N	862	10	EA	ADDITIONAL GUARDRAIL POSTS
3210000000-N	862	12	EA	GUARDRAIL ANCHOR UNITS, TYPE CAT-1
3270000000-N	SP	13	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
3317000000-N	862	5	EA	GUARDRAIL ANCHOR UNITS, TYPE B-77
3360000000-E	863	9,180	LF	REMOVE EXISTING GUARDRAIL
3628000000-E	876	65	TON	RIP RAP, CLASS I
3656000000-E	876	1,395	SY	GEOTEXTILE FOR DRAINAGE
4399000000-N	1105	Lump Sum		TEMPORARY TRAFFIC CONTROL
4510000000-N	SP	120	HR	LAW ENFORCEMENT
4688000000-E	1205	140,190	LF	THERMOPLASTIC PAVEMENT MARKING LINES (6", 90 MILS)
4690000000-E	1205	34,200	LF	THERMOPLASTIC PAVEMENT MARKING LINES (6", 120 MILS)
4700000000-E	1205	7,285	LF	THERMOPLASTIC PAVEMENT MARKING LINES (12", 90 MILS)
4725000000-E	1205	6	EA	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)
4815000000-E	1205	174,000	LF	PAINT PAVEMENT MARKING LINES (6")
4847100000-E	1205	2,915	LF	POLYUREA PAVEMENT MARKING LINES (6", **********) (HIGHLY REFLECTIVE ELEMENTS)
4905000000-N	1253	2,440	EA	SNOWPLOWABLE PAVEMENT MARKERS
5255000000-N	1413	Lump Sum		PORTABLE LIGHTING
6000000000-E	1605	500	LF	TEMPORARY SILT FENCE
6006000000-E	1610	900	TON	STONE FOR EROSION CONTROL, CLASS A
6012000000-E	1610	1,000	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	7.6	ACR	TEMPORARY MULCHING
6024000000-E	1622	200	LF	TEMPORARY SLOPE DRAINS
6029000000-E	SP	200	LF	SAFETY FENCE
6030000000-E	1630	100	CY	SILT EXCAVATION
6036000000-E	1631	18,000	SY	MATTING FOR EROSION CONTROL
6042000000-E	1632	4,500	LF	1/4" HARDWARE CLOTH
6071010000-E	SP	250	LF	WATTLE
6071020000-E	SP	10	LB	POLYACRYLAMIDE (PAM)
6084000000-E	1660	7.6	ACR	SEEDING & MULCHING
6114500000-N	1667	10	MHR	SPECIALIZED HAND MOWING
6117000000-N	SP	75	EA	RESPONSE FOR EROSION CONTROL

5/28/99
23-MAR-2013 09:05
c:\div8_projects\rdy\Randolph\I-5314\psh\INDEX\S00.dgn
psdavis at R8ROUT246463

COMPUTED BY: ___DDC_____ DATE: __3/4/2013_____
CHECKED BY: ___GSD_____ DATE: __3/6/2013__

PROJECT NO.	SHEET NO.
I-5314	3-A

D8CAD-246463

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

Station	Station	Uncl. Excav.	Embank. +%	Borrow	Waste
L1					
28+80	39+00	86	1386	1300	
72+40	76+00	0	93	93	
88+29	93+45	82	270	188	
112+42.72	120+00	153	259	106	
142+20	152+60	380	603	223	
155+40	158+20	96	22		74
175+81.55	185+20.07	202	359	157	
185+60	189+20	0	127	127	
201+92	205+52		127	127	
253+95	257+55		102	102	
287+15	290+75		55	55	
293+75.47	301+00	134	138	4	
310+89.06	314+77.27	83	99	16	
364+80	371+89.61	158	130		28
L2					
28+67.10	35+20	130	378	248	
62+31.18	79+67.52	469	363		106
89+20	94+20	169	180	11	
103+25	106+85	3	189	186	
141+35	144+95	5	113	108	
148+00	151+60	141	30		111
154+80	165+80	370	726	356	
178+18.31	182+60	79	202	123	
287+55	291+00		57	57	
SUBTOTALS:		2740	6008	3587	319
WASTE TO REPLACE BORROW				-319	-319
PROJECT TOTALS:		2740	6008	3268	
EST. 5% TO REPLACE				163	
PITS					
GRAND TOTALS:		2740	6008	3431	
SAY:		2750		3500 **	

** Shoulder material is included in this quantity

SUMMARY OF EXISTING CONCRETE CURB REMOVAL

LINE	Station	Station	LOC LT/RT/CL	SF
L MED	35+00	40+87.50	RT	440.63
	35+19	41+50	LT	473.25
	68+92	85+21	RT	1221.75
	94+49	98+73	LT	318
	95+50	99+95	RT	333.75
	118+56	125+81	LT	543.75
	149+84	159+17	LT	699.75
	153+57	157+13	RT	267.00
	159+51	170+35	RT	813.00
	161+47	164+07	LT	195.00
	182+53	191+22	LT	651.75
	183+99	187+62	RT	272.25
	302+18	306+82	LT	348.00
	317+53	320+60	LT	230.25
	371+54	377+95	LT	480.75
			TOTAL:	7288.88
			SAY:	7300

* Note:

Concrete curb removal is included in lump sum price for "Grading"

NOTE:

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

D8CAD-2

COMPUTED BY:	DDC	DATE:	3-4-2013
CHECKED BY:	GSD	DATE:	3-6-2013

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
GUARDRAIL SUMMARY

PROJECT REFERENCE NO.	SHEET NO.
I-5314	3-B

"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			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL WIDTH	FLARE LENGTH		W		ANCHORS									IMPACT ATTENUATOR TYPE 350		SINGLE FACED CONCRETE BARRIER	REMOVE EXISTING GUARDRAIL	REMOVE & STOCKPILE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	XI MOD	XI	GRAU 350	M-350	B-77	CAT-1	VI MOD	BIC		G	NG				
-L-MED-	35+00	40+87.50	RT	587.5					15	18							1			1							552		
-L-MED-	35+19	41+50	LT	631.25					14	17							1			1							585		
-L-MED-	68+92	85+21	RT	1637.5					14	17							1			1							1579		
-L-MED-	94+49	98+73	LT	425					15	18							1			1							408		
-L-MED-	95+50	99+95	RT	450					15	18							1			1							405		
-L-MED-	118+56	125+81	LT	712.5					14	17							1			1							693		
-L-MED-	149+84	159+17	LT	937.5			159+17		16	19									1	1							924		B-77 Lengths are excluded in lengths and not deducted.
-L-MED-	153+57	157+13	RT	362.5			157+13		11	14							1		1								202		B-77 Lengths are excluded in lengths and not deducted.
-L-MED-	159+51	170+35	RT	1087.5			159+51		15	18									1	1							1089		B-77 Lengths are excluded in lengths and not deducted.
-L-MED-	161+47	164+07	LT	262.5			161+47		14	17							1		1								224		B-77 Lengths are excluded in lengths and not deducted.
-L-MED-	182+53	191+22	LT	868.75					14	17							1			1							864		
-L-MED-	183+99	187+62	RT	362.5					14	17							1			1							338		
-L-MED-	302+18	306+82	LT	468.75			302+18		14	17							1		1								439		B-77 Lengths are excluded in lengths and not deducted.
-L-MED-	317+53	320+60	LT	306.25					15	18							1			1							264		
-L-MED-	371+54	377+95	LT	643.75					15	18							1			1							614		
Subtotal				9743.75													13		5	12							9180		
Less Deductions		GRAU-350 13 @ 50'		650																									
		CAT-1 12@ 6.25		75																									
TOTALS				9018.75																									
SAY				9025													13		5	12							9180		
Additional GR Posts				10																									

COMPUTED BY: ____________________ DATE: ________

CHECKED BY: ____________________ DATE: ________

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
I-5314	3-C

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)

ABBREVIATIONS

C.B. CATCH BASIN
N.D.I. NARROW DROP INLET
D.I. DROP INLET
G.D.I. GRATED DROP INLET
G.D.I.(N.S.) (NARROW SLOT)
J.B. JUNCTION BOX
M.H. MANHOLE
T.B.D.I. TRAFFIC BEARING DROP INLET
T.B.J.B. TRAFFIC BEARING JUNCTION BOX

STATION	LOCATION (LT, RT, OR CL)	STRUCTURE NO.		TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	SIDE DRAIN PIPE (RCP, CSP, CAAP, HDPE, or PVC)												C.S. PIPE								R.C. PIPE CLASS III								R.C. PIPE CLASS IV								** R.C. PIPE (CLASS V)	**** RC PIPE CULVERTS, CONTRACTOR DESIGN	***** RC PIPE CULVERTS, CONTRACTOR DESIGN	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE)		QUANTITIES FOR DRAINAGE STRUCTURES	*TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B')		C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03			CONCRETE TRANSITIONAL SECTION		GRATED DROP INLET TYPE B, 840.18 & 840.27	FRAME WITH TWO GRATES, STD 840.20	GRATED DROP INLET TRAFFIC BEARING, STD 840.36	STEEL GRATE AND FRAME, STD 840.37	ROD AND LUG		REPLACE APRON (EA)					SIDE DRAIN PIPE ELBOWS	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	FLOWABLE FILL C.Y.	PIPE REMOVAL LIN. FT.	REMARKS
SIZE								12"	15"	18"	24"	30"	36"	42"	48"					12"	15"	18"	24"	30"	36"	42"	48"	12"	15"	18"	24"	30"	36"	42"	48"	12"	15"	18"	24"	30"	36"	42"	48"				CU. YARDS			LIN. FT. A	LIN. FT. B		TYPE OF GRATE																				
THICKNESS OR GAUGE		FROM	TO													DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	.064	.064	.064	.064	.079	.079	.109	.109																				R.C.P.	C.S.P.	PER EACH (0' THRU 5.0')	5.0' THRU 10.0'	10.0' AND ABOVE		E	F	G	DROP INLET	CATCH BASIN																
-L MED- 15+90	CL																																																															1									
-L MED- 20+38	CL																																																															1									
-L MED- 24+89	CL																																																															1									
-L MED- 29+38	CL																																																															1									
-L MED- 37+63	LT	610		869.8'	867.1'																																												1											1	1												
		610	601		867.1'	867.4'																															88.0'																																				
-L MED- 36+62	LT	601		870.1'	867.4'																																												1											1	1												
	LT	601	611		867.1'	845.0'			48.0'							X																																														4							2 @ 15"				REMOVE AND REPLACE
-L MED- 36+62	LT	611			845.0'																																																																				
-L MED- 38+24	LT	602		869.8'	867.1'																																												1											1	1											1.1		
		602	603		867.1'	867.3'																															56.0'																																				
-L MED- 38+81	LT	603		870.0'	867.3'																																												1											1	1												
-L MED- 39+63	LT	604		870.6'	867.9'																																												1											1	1												
		604	603		867.9'	867.3'																															80.0'																																				
		603	612		867.3'	844.5'			48.0'							X																																														4							2 @ 15"				REMOVE AND REPLACE
-L MED- 37+11	RT	605		869.0'	866.3'																																												1									1	1													51.0'	
		605	606		866.3'	866.1'																															68.0'																																				
-L MED- 39+56	RT	608		869.0'	866.3'																																												1									1	1													56.0'	
		608	607		866.3'	866.2'																															76.0'																																				
-L MED- 38+80	RT	607		868.9'	866.2'																																												1									1	1													67.0'	
		607	606		866.2'	866.1'																															92.0'																																				
		606	609		866.1'	839.5'			60.0'							X																																														4							2 @ 15"				REMOVE AND REPLACE
-L MED- 37+83	RT	606		868.8'	866.1'																																												1									1	1														
-L MED- 39+07	CL																																																															1									
-L MED- 45+11	CL																																																																1									
-L MED- 48+16	CL																																																																1									
-L MED- 48+39	RT																																																																1									
-L MED- 50+36	LT	701		881.5'	878.8'																																												1									1	1														
		701	702		878.8'																								232.0'																																															
-L MED- 52+70	LT	702		885.8'	883.1'																																												1									1	1														
		702	703		883.1'	884.7'																							56.0'																																															
-L MED- 52+70	LT	703		887.4'	884.7'																																												1									1	1														
-L MED- 53+85	CL																																																																1									
-L MED- 67+96	CL																																																																1									
-L MED- 67+65	LT	801		894.7'	892.0'																																												1									1	1														
		801	802		892.0'	891.7'																							80.0'																																															
-L MED- 68+39	LT	802		894.4'	891.7'																																												1									1	1														
-L MED- 70+80	RT	803		890.0'	887.3'																																												1									1	1														
		803	804		887.3'	886.6'																															68.0'																																				
-L MED- 71+35	RT	804		889.3'	886.6'																																												1									1	1														
		804	805		886.6'				36.0'							X																																														3							2 @ 15"				
-L MED- 71+35	RT	805			864.0'																																																																				
-L MED- 72+90	RT	806		887.2'	884.5'																																												1									1	1														
		806	901		884.5'	883.0'																															76.0'																																				
-L MED- 73+69	RT	901		885.7'	883.0'																																												1									1	1														
		901	902		883.0'	860.5'			56.0'							X																																														4							2 @ 15"				REMOVE AND REPLACE
-L MED- 75+12	RT	903		882.8'	880.1'																																												1									1	1														
		903	904		880.1'	878.3'																															84.0'																																				
-L MED- 75+99	RT	904		881.0'	878.3'																																												1									1	1														
		904	905		878.3'	858.0'			56.0'							X																																														4							2 @ 15"				REMOVE AND REPLACE
-L MED- 75+99	RT	905			858.0'																																																																				
-L MED- 77+40	RT	906		878.0'	875.3'																																												1									1	1														
		906	907		875.3'	873.3'																															92.0'																																				
-L MED- 78+33	RT	907		876.0'	873.3'																																												1									1	1												1.1		
		907	908		873.3'	871.8'																															72.0'																																				
-L MED- 79+07	RT	908		874.5'	871.8'																																												1									1	1														
		908	909		871.8'																																76.0'																																				
-L MED- 79+84	RT	909		872.7'																																													1									1	1														
		909	910		869.9'	869.0'			28.0'																																																							3							2 @ 15"				
-L MED- 79+84	RT	910			869.0'																																																																				
SHEET TOTALS									332.0'																				368.0'								928.0'												24									19	19	5	5	26		10					14 @ 15"		2.2	174	

COMPUTED BY: _____ DATE: _____

CHECKED BY: _____ DATE: _____

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
I-5314	3-D

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)

STATION	LOCATION (LT, RT, OR CL)'	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	SIDE DRAIN PIPE (RCP, CSP, CAAP, HDPE, or PVC) SIZE	THICKNESS OR GAUGE	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	C.S. PIPE SIZE	THICKNESS OR GAUGE	R.C. PIPE CLASS III SIZE	R.C. PIPE CLASS IV SIZE	" " R.C. PIPE (CLASS V)	**** RC PIPE CULVERTS, CONTRACTOR DESIGN	***** RC PIPE CULVERTS, CONTRACTOR DESIGN	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P.	ENDWALLS CU. YARDS C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	LIN. FT. A 5.0' THRU 10.0'	LIN. FT. B 10.0' AND ABOVE	"TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL. 'B')"	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	CONCRETE TRANSITIONAL SECTION DROP INLET	CATCH BASIN	GRATED DROP INLET TYPE B, 840.18 & 840.27	FRAME WITH TWO GRATES, STD 840.20	ROD AND LUG			REPLACE APRON (EA)					SIDE DRAIN PIPE ELBOWS	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	FLOWABLE FILL C.Y.	PIPE REMOVAL LIN. FT.	REMARKS
-L MED- 80+02	CL																																				1									
-L MED- 80+67	RT	911		870.8'	867.0'																		1									1	1												
		911	912		867.0'	866.5'		24.0'																																						REMOVE AND REPLACE
-L MED- 80+67	RT	912			866.5'																																									
-L MED- 82+92	RT	913		865.2'	862.5'																		1									1	1												49.0'	
		913	914		862.5'	860.2'											108.0'																												
-L MED- 84+02	RT	914		862.9'	860.2'																		1									1	1												
		914	915		860.2'	858.0'											96.0'																												
-L MED- 85+01	RT	915		860.7'	858.0'																		1									1	1												
		915	916		858.0'	839.5'		60.0'		X																								4								2 @ 15"				REMOVE AND REPLACE
-L MED- 91+51	CL																																				1									
-L MED- 96+44	LT	1001		836.9'	834.2'																		1									1	1											1		
		1001	1002		834.2'	830.8'											164.0'																												
-L MED- 97+08	LT	1002		833.5'	830.8'																		1									1	1												
		1002	1003		830.8'	824.5'		36.0'		X																								3								2 @ 15"				REMOVE AND REPLACE
-L MED- 97+08	LT	1003			824.5'																																									
-L MED- 97+25	RT	1004		833.9'	831.2'																		1									1	1												45.0'	
		1004	1005		831.2'			48.0'		X																								4								2 @ 15"				
-L MED- 97+25	RT	1005			816.0'																																									
-L MED- 98+60	RT	1006		830.7'	828.0'																		1									1	1												49.0'	
		1006	1007		828.0'	825.7'											116.0'																												
-L MED- 99+80	RT	1007		828.4'	825.7'																		1									1	1												
		1007	1008		825.7'	810.0'		56.0'		X																								4								2 @ 15"				
-L MED- 99+80	RT	1008			810.0'																																									
-L MED- 120+65	LT	1201		785.1'	782.4'																		1									1	1												
		1201	1202		882.4'	858.5'		56.0'		X																								4								2 @ 15"				REMOVE AND REPLACE
-L 120+65	LT	1202			858.5'																																									
-L 122+91	LT	1203		781.0'	778.3'																		1									1	1											1.4		
		1203	1204		778.3'	774.2'											228.0'																												
-L MED- 125+27	LT	1204		776.9'	774.2'																		1									1	1												
		1204	1205		774.2'	772.8'		24.0'																										3								2 @ 15"				
-L MED- 125+27	LT	1205			772.8'																																									
-L MED- 136+12	RT																																				1									
-L MED- 136+13	RT																																				1									
-L MED- 136+15	LT																																				1									
-L MED- 136+20	LT																																				1									
-L MED- 145+79	CL																																				1									
-L MED- 151+84	LT	1401		736.0'	733.3'																		1									1	1												67.0'	
		1401	1402		733.3'	730.2'											188.0'																												
-L MED- 153+75	LT	1402		732.9'	730.2'																		1									1	1												
		1402	1403		730.2'	703.5'		60.0'		X																								4								2 @ 15"				REMOVE AND REPLACE
-L MED- 153+75	LT	1403			703.5'																																									
-L MED- 155+66	LT	1404		728.7'	726.0'																		1									1	1												69.0'	
		1404	1501		726.0'	725.0'											120.0'																												
-L MED- 156+90	LT	1501		727.7'	725.0'																		1									1	1												
		1501	1502		725.0'	723.8'											96.0'																												
-L MED- 157+87	LT	1502		726.5'	723.8'																		1									1	1												
		1502	1503		723.8'												60.0'																												
-L MED- 158+49	LT	1503		725.8'	723.8'																		1									1	1												
		1503	1504		723.8'	701.5'		48.0'		X																								4								2 @ 15"				
158+49	LT	1504			701.5'																																									
SHEET TOTALS								412.0'									1176.0'						18									18	18	30			7					16 @ 15"		2.4	279	

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I.(N.S.)	(NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

COMPUTED BY: ______________________ DATE: ________

CHECKED BY: ______________________ DATE: ________

PROJECT NO.	SHEET NO.
I-5314	3-E

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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)

Other column headings (no entries on this sheet): SLOPE CRITICAL; SIDE DRAIN PIPE (RCP, CSP, CAAP, HDPE, or PVC) 12", 18", 24", 30", 36", 42", 48"; DO NOT USE CSP; DO NOT USE CAAP; DO NOT USE HDPE; C.S. PIPE 12" .064, 15" .064, 18" .064, 24" .064, 30" .079, 36" .079, 42" .109, 48" .109; R.C. PIPE CLASS III 12", 15", 18", 24", 30", 36", 42", 48"; R.C. PIPE CLASS IV 12", 18", 24", 30", 36", 42", 48"; ** R.C. PIPE (CLASS V); **** RC PIPE CULVERTS, CONTRACTOR DESIGN; **** RC PIPE CULVERTS, CONTRACTOR DESIGN; ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P., C.S.P.; QUANTITIES FOR DRAINAGE STRUCTURES *TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') LIN. FT. A 5.0' THRU 10.0', B 10.0' AND ABOVE; FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E, G; CONCRETE TRANSITIONAL SECTION DROP INLET, CATCH BASIN; CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71.

STATION	LOCATION (LT, RT, OR CL)	STRUCTURE NO. FROM	TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SIDE DRAIN PIPE 15"	DO NOT USE RCP	R.C. PIPE CLASS IV 15"	PER EACH (0' THRU 5.0')	C.B. STD. 840.01 OR STD. 840.02	TYPE OF GRATE F	GRATED DROP INLET TYPE B, 840.18 & 840.27	FRAME WITH TWO GRATES, STD 840.20	GRATED DROP INLET TRAFFIC BEARING, STD 840.36	STEEL GRATE AND FRAME, STD 840.37	ROD AND LUG	REPLACE APRON (EA)	SIDE DRAIN PIPE ELBOWS	FLOWABLE FILL C.Y.	PIPE REMOVAL LIN. FT.	REMARKS
-L MED- 152+34	RT	1405		match ex						1	1	1										
-L MED-		1405	1406				72.0'	X									5		2 @ 15"			
-L MED- 153+10	RT	1406			727.5'																	
-L MED- 153+11	RT	1407		match ex						1	1	1										
		1407	1408			727.5'	56.0'	X									4		2 @ 15"			
-L MED- 155+46	RT	1409		733.4'	730.7'					1			1	1								
		1409	1410		730.7'	729.9'			76.0'													
-L MED- 156+25	RT	1410		732.6'	729.9'					1			1	1								
-L MED- 156+95	RT	1509		731.6'	728.9'					1			1	1								
		1509	1410		728.9'				68.0'													
		1410	1411		729.9'	715.0'	60.0'	X									4		2 @ 15"			
-L MED- 156+25	RT	1411			715.0'																	
-L MED- 161+61	LT	1505		match ex						1					1	1						
-L MED- 162+88	LT	1506		718.8'	716.1'					1			1	1							40.0'	
		1506	1507		716.1'	714.9'			56.0'													
-L MED- 163+48	LT	1507		717.6'	714.9'					1			1	1								
		1507	1508		714.9'	714.0'	16.0'															
-L MED- 163+48	LT	1508			714.0'																	
-L MED- 159+67	RT	1510		match ex						1					1	1						
-L MED- 160+69	RT	1511		726.2'	723.5'					1			1	1								
		1511	1512		723.5'	722.4'			96.0'													
-L MED- 161+66	RT	1512		725.1'	722.4'					1			1	1								
		1512	1513		722.4'	694.5'	60.0'	X									4		2 @ 15"			REMOVE AND REPLACE
-L MED- 161+66	RT	1513			694.5'																	
-L MED- 163+00	RT	1514		723.1'	720.4'					1			1	1								
		1514	1515		720.4'	718.9'			132.0'													
-L MED- 164+32	RT	1515		721.6'	718.9'					1			1	1								
		1515	1516		718.9'	717.2'			120.0'													
-L MED- 165+54	RT	1516		719.9'	717.2'					1			1	1							58.0'	
		1516	1517		717.2'	696.8'	44.0'	X									4		2 @ 15"			
-L MED- 165+54	RT	1517			696.8'																	
-L MED- 166+75	RT	1518		718.8'	716.1'					1			1	1								
		1518	1519		716.1'	714.9'			120.0'													
-L MED- 167+97	RT	1519		717.6'	714.9'					1			1	1						1.4		
		1519	1520		714.9'	713.9'			120.0'													
-L MED- 169+18	RT	1520		716.6'	713.9'					1			1	1								
		1520	1521		713.9'	712.9'			100.0'													
-L MED- 170+20	RT	1521		715.6'	712.9'					1			1	1							56.0'	
		1521	1522		712.9'	696.0'	44.0'	X									4		2 @ 15"			REMOVE AND REPLACE
-L MED- 170+20	RT	1522			696.0'																	
-L MED- 170+96	LT																	1				
-L MED- 179+67	LT																	1				
-L MED- 179+73	RT																	1				
-L MED- 184+09	LT	1601		701.9'	699.2'					1			1	1								
		1601	1602		699.2'	682.0'	32.0'	X									3		2 @ 15"			
-L MED- 184+09	LT	1602			682.0'																	
-L MED- 185+61	LT	1701		700.8'	698.1'					1			1	1							51.0'	
		1701	1702		698.1'	697.3'			148.0'													
-L MED- 187+18	LT	1702		700.0'	697.3'					1			1	1								
		1702	1703		697.3'	679.8'	40.0'	X									3		2 @ 15"			
-L MED- 187+18	LT	1703			679.8'																	
SHEET TOTALS							424.0'		1036.0'	21	2	2	17	17	2	2	31	3	16 @ 15"	1.4	205	

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I.(N.S.)	GRATED DROP INLET (NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

COMPUTED BY: _____ DATE: _____

CHECKED BY: _____ DATE: _____

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
I-5314	3-F

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)

STATION	LOCATION (LT, RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL
-L MED- 188+58	LT	1704		699.1'	696.4'		
		1704	1705		696.4'	696.1'	
-L MED- 189+65	LT	1705		698.8'	696.1'		
		1705	1706		696.1'	696.0'	
-L MED- 190+20	LT	1706		698.7'	696.0'		
		1706	1707		696.0'	696.0'	
-L MED- 190+70	LT	1707		698.7'	696.0'		
		1707	1708		696.0'	690.5'	
-L MED- 190+70	LT	1708			690.5'		
-L MED- 186+34	RT	1709		707.7'	705.0'		
		1709	1710		705.0'	698.9'	
-L MED- 187+40	RT	1710		701.6'	698.9'		
		1710	1711		698.9'	679.3'	
-L MED- 186+43	CL						
-L MED- 190+43	CL						
-L MED- 197+37	CL						
-L MED- 201+01	CL						
-L MED- 201+00	RT						
-L MED- 207+38	CL						
-L MED- 210+13	CL						
-L MED- 224+40	CL						
-L MED- 235+39	CL						
-L MED- 240+76	CL						
-L MED- 245+70	CL						
-L MED- 253+92	CL						
-L MED- 260+06	CL						
-L MED- 271+40	CL						
-L MED- 280+24	CL						
-L MED- 286+53	CL						
-L MED- 292+24	CL						
-L MED- 297+24	CL						
-L MED- 300+02	LT	2501		802.4'	799.7'		
		2501	2502		799.7'		
-L MED- 300+14							
-L MED- 302+30	LT	2503		match ex			
-L MED- 303+10	LT	2504		800.5'	797.8'		
		2504	2505		797.8'	797.3'	
-L MED- 304+33	LT	2505		800.0'	797.3'		
		2505	2506		797.3'	785.0'	
-L MED- 304+33	LT	2506			785.0'		
-L MED- 305+40	LT	2507		799.7'	797.0'		
		2507	2508		797.0'	796.7'	
-L MED- 306+23	LT	2508		799.4'	796.7'		
	LT	2508	2509	796.7'	796.7'	789.5'	
-L MED- 306+23	LT	2509			789.5'		
-L MED- 310+52	CL						
-L MED- 319+00	LT	2601		793.4'	790.7'		
		2601	2602		790.7'	790.3'	
-L MED- 320+00	LT	2602		793.0'	790.3'		
		2602	2603		790.3'	789.0'	
-L MED- 320+00	LT	2603			789.0'		
-L MED- 319+51	CL						
-L MED- 327+00	CL						
-L MED- 331+95	CL						
SHEET TOTALS							

STATION	SIDE DRAIN PIPE (RCP, CSP, CAAP, HDPE, or PVC) SIZE 12"	15"	18"	24"	30"	36"	42"	48"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	C.S. PIPE SIZE 12"	15"	18"	24"	30"	36"	42"	48"	THICKNESS OR GAUGE .064	.064	.064	.064	.079	.079	.109	.109
-L MED- 188+58																												
-L MED- 189+65																												
-L MED- 190+20																												
-L MED- 190+70																												
		28.0'							X																			
-L MED- 190+70																												
-L MED- 186+34																												
-L MED- 187+40																												
		40.0'							X																			
-L MED- 186+43																												
-L MED- 190+43																												
-L MED- 197+37																												
-L MED- 201+01																												
-L MED- 201+00																												
-L MED- 207+38																												
-L MED- 210+13																												
-L MED- 224+40																												
-L MED- 235+39																												
-L MED- 240+76																												
-L MED- 245+70																												
-L MED- 253+92																												
-L MED- 260+06																												
-L MED- 271+40																												
-L MED- 280+24																												
-L MED- 286+53																												
-L MED- 292+24																												
-L MED- 297+24																												
-L MED- 300+02																												
		56.0'							X																			
-L MED- 300+14																												
-L MED- 302+30																												
-L MED- 303+10																												
-L MED- 304+33																												
		36.0'							X																			
-L MED- 304+33																												
-L MED- 305+40																												
-L MED- 306+23																												
		48.0'							X																			
-L MED- 306+23																												
-L MED- 310+52																												
-L MED- 319+00																												
-L MED- 320+00																												
		20.0'																										
-L MED- 320+00																												
-L MED- 319+51																												
-L MED- 327+00																												
-L MED- 331+95																												
SHEET TOTALS		228.0'																			0.0'							

STATION	R.C. PIPE CLASS III SIZE 12"	15"	18"	24"	30"	36"	42"	48"	R.C. PIPE CLASS IV SIZE 12"	15"	18"	24"	30"	36"	42"	48"	** R.C. PIPE (CLASS V)	*** RC PIPE CULVERTS, CONTRACTOR DESIGN	**** RC PIPE CULVERTS, CONTRACTOR DESIGN	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P.	C.S.P.
-L MED- 188+58																					
									104.0'												
-L MED- 189+65																					
									52.0'												
-L MED- 190+20																					
									48.0'												
-L MED- 190+70																					
-L MED- 190+70																					
-L MED- 186+34																					
									104.0'												
-L MED- 187+40																					
-L MED- 186+43																					
-L MED- 190+43																					
-L MED- 197+37																					
-L MED- 201+01																					
-L MED- 201+00																					
-L MED- 207+38																					
-L MED- 210+13																					
-L MED- 224+40																					
-L MED- 235+39																					
-L MED- 240+76																					
-L MED- 245+70																					
-L MED- 253+92																					
-L MED- 260+06																					
-L MED- 271+40																					
-L MED- 280+24																					
-L MED- 286+53																					
-L MED- 292+24																					
-L MED- 297+24																					
-L MED- 300+02																					
-L MED- 300+14																					
-L MED- 302+30																					
-L MED- 303+10																					
									120.0'												
-L MED- 304+33																					
-L MED- 304+33																					
-L MED- 305+40																					
									80.0'												
-L MED- 306+23																					
-L MED- 306+23																					
-L MED- 310+52																					
-L MED- 319+00																					
									68.0'												
-L MED- 320+00																					
-L MED- 320+00																					
-L MED- 319+51																					
-L MED- 327+00																					
-L MED- 331+95																					
SHEET TOTALS									576.0'												

STATION	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	LIN. FT. A 5.0' THRU 10.0'	LIN. FT. B 10.0' AND ABOVE	"TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL. 'B')"	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	CONCRETE TRANSITIONAL SECTION DROP INLET	CATCH BASIN	GRATED DROP INLET TYPE B, 840.18 & 840.27	FRAME WITH TWO GRATES, STD 840.20	GRATED DROP INLET TRAFFIC BEARING, STD 840.36	STEEL GRATE AND FRAME, STD 840.37	ROD AND LUG		REPLACE APRON (EA)	L.F. REMOVE OR FILL EXISTING SLOPE DRAINS				SIDE DRAIN PIPE ELBOWS	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	FLOWABLE FILL C.Y.	PIPE REMOVAL LIN. FT.	REMARKS
-L MED- 188+58	1										1	1													58.0'	
-L MED- 189+65	1										1	1												1		
-L MED- 190+20	1										1	1														
-L MED- 190+70	1										1	1														
															3						2 @ 15"					REMOVE AND REPLACE
-L MED- 190+70																										
-L MED- 186+34	1										1	1														
-L MED- 187+40																										
																					2 @ 15"					REMOVE AND REPLACE
-L MED- 186+43																1										
-L MED- 190+43																1										
-L MED- 197+37																1										
-L MED- 201+01																1										
-L MED- 201+00																1										
-L MED- 207+38																1										
-L MED- 210+13																1										
-L MED- 224+40																1										
-L MED- 235+39																1										
-L MED- 240+76																1										
-L MED- 245+70																1										
-L MED- 253+92																1										
-L MED- 260+06																1										
-L MED- 271+40																1										
-L MED- 280+24																1										
-L MED- 286+53																1										
-L MED- 292+24																1										
-L MED- 297+24																1										
-L MED- 300+02	1										1	1														
															4						2 @ 15"					
-L MED- 300+14																1										
-L MED- 302+30	1										1	1														
-L MED- 303+10	1										1	1													49.0'	
-L MED- 304+33	1										1	1														
															3						2 @ 15"					
-L MED- 304+33																										
-L MED- 305+40	1										1	1													49.0'	
-L MED- 306+23	1										1	1														
															4						2 @ 15"					REMOVE AND REPLACE
-L MED- 306+23																										
-L MED- 310+52																1										
-L MED- 319+00	1										1	1													35.0'	
-L MED- 320+00	1										1	1														
-L MED- 320+00																										
-L MED- 319+51																1										
-L MED- 327+00																1										
-L MED- 331+95																1										
SHEET TOTALS	13										13	13			14	23					10 @ 15"		1		191.0'	

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I.(N.S.)	(NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

COMPUTED BY: _____ DATE: _____

CHECKED BY: _____ DATE: _____

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
I-5314	3-G

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)

STATION	LOCATION (LT, RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	SIDE DRAIN PIPE (RCP, CSP, CAAP, HDPE, or PVC) SIZE 12"	15"	18"	24"	30"	36"	42"	48"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE
-L MED- 335+01	CL																		
-L MED- 336+50	LT	2701		797.6'	794.9'														
		2701	2801		794.9'	796.1'													
-L MED- 337+72	LT	2801			796.1'														
-L MED- 339+95	CL																		
-L MED- 347+33	RT																		
-L MED- 347+35	LT																		
-L MED- 351+26	RT																		
-L MED- 351+28	RT	2901		805.8'	803.2'														
-L MED- 366+03	CL																		
-L MED- 373+44	LT	3001		784.7'	782.0'														
		3001	3003		782.0'	778.7'													
-L MED- 375+27	LT	3003		781.4'	778.7'														
		3003	3004		778.7'	776.5'													
-L MED- 376+55	LT	3004		779.2'	776.5'														
		3004	3005		776.5'														
-L MED- 377+40	LT	3005		777.9'															
		3005	3006		775.2'	769.8'			40.0'								X		
-L MED- 377+40	LT	3006			769.8'														
-L MED- 380+72	CL																		
-L MED- 394+64	CL																		
SHEET TOTALS									40.0'										
PROJECT TOTALS									1436.0'										

STATION	C.S. PIPE SIZE 12"	15"	18"	24"	30"	36"	42"	48"	R.C. PIPE CLASS III SIZE 12"	15"	18"	24"	30"	36"	42"	48"	R.C. PIPE CLASS IV SIZE 12"	15"	18"	24"	30"	36"	42"	48"
THICKNESS OR GAUGE	.064	.064	.064	.064	.079	.079	.109	.109																
-L MED- 335+01																								
-L MED- 336+50																								
										116.0'														
-L MED- 337+72																								
-L MED- 339+95																								
-L MED- 347+33																								
-L MED- 347+35																								
-L MED- 351+26																								
-L MED- 351+28																								
-L MED- 366+03																								
-L MED- 373+44																								
																		180.0'						
-L MED- 375+27																								
																		124.0'						
-L MED- 376+55																								
																		84.0'						
-L MED- 377+40																								
-L MED- 377+40																								
-L MED- 380+72																								
-L MED- 394+64																								
SHEET TOTALS										116.0'								388.0'						
PROJECT TOTALS										484.0'								4104.0'						

STATION	* R.C. PIPE (CLASS V)	** RC PIPE CULVERTS, CONTRACTOR DESIGN	*** RC PIPE CULVERTS, CONTRACTOR DESIGN	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P.	C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES *TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') PER EACH (0' THRU 5.0')	LIN. FT. A 5.0' THRU 10.0'	B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	CONCRETE TRANSITIONAL SECTION DROP INLET	CATCH BASIN	GRATED DROP INLET TYPE B, 840.18 & 840.27	FRAME WITH TWO GRATES, STD 840.20	GRATED DROP INLET TRAFFIC BEARING, STD 840.35	STEEL GRATE AND FRAME, STD 840.37	ROD AND LUG		REPLACE APRON (EA)	L.F. REMOVE OR FILL EXISTING SLOPE DRAINS				SIDE DRAIN PIPE ELBOWS	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	FLOWABLE FILL C.Y.	PIPE REMOVAL LIN. FT.	REMARKS
-L MED- 335+01																					1									
-L MED- 336+50						1								1	1															
-L MED- 337+72						1								1	1															
-L MED- 339+95																					1									
-L MED- 347+33																					1									
-L MED- 347+35																					1									
-L MED- 351+26																					1									
-L MED- 351+28						1								1	1															
-L MED- 366+03																					1									
-L MED- 373+44						1								1	1														45.0'	
-L MED- 375+27						1								1	1														45.0'	
-L MED- 376+55						1								1	1														45.0'	
-L MED- 377+40						1								1	1															
																		3					2	@	15"					
-L MED- 377+40																														
-L MED- 380+72																					1									
-L MED- 394+64																					1									
SHEET TOTALS						7								7	7			3			8				2	@	15"		135.0'	
PROJECT TOTALS						83			2		2			74	74	7	7	*104			51				58	@	15"		7 984.0	*INCIDENTAL TO PIPE INSTALLATION

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I.(N.S.)	(NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

PROJECT REFERENCE NO.	SHEET NO.
I-5314	4
R/W SHEET NO.	

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 022090 ENGINEER W. GALEN GAINES

4/10/13

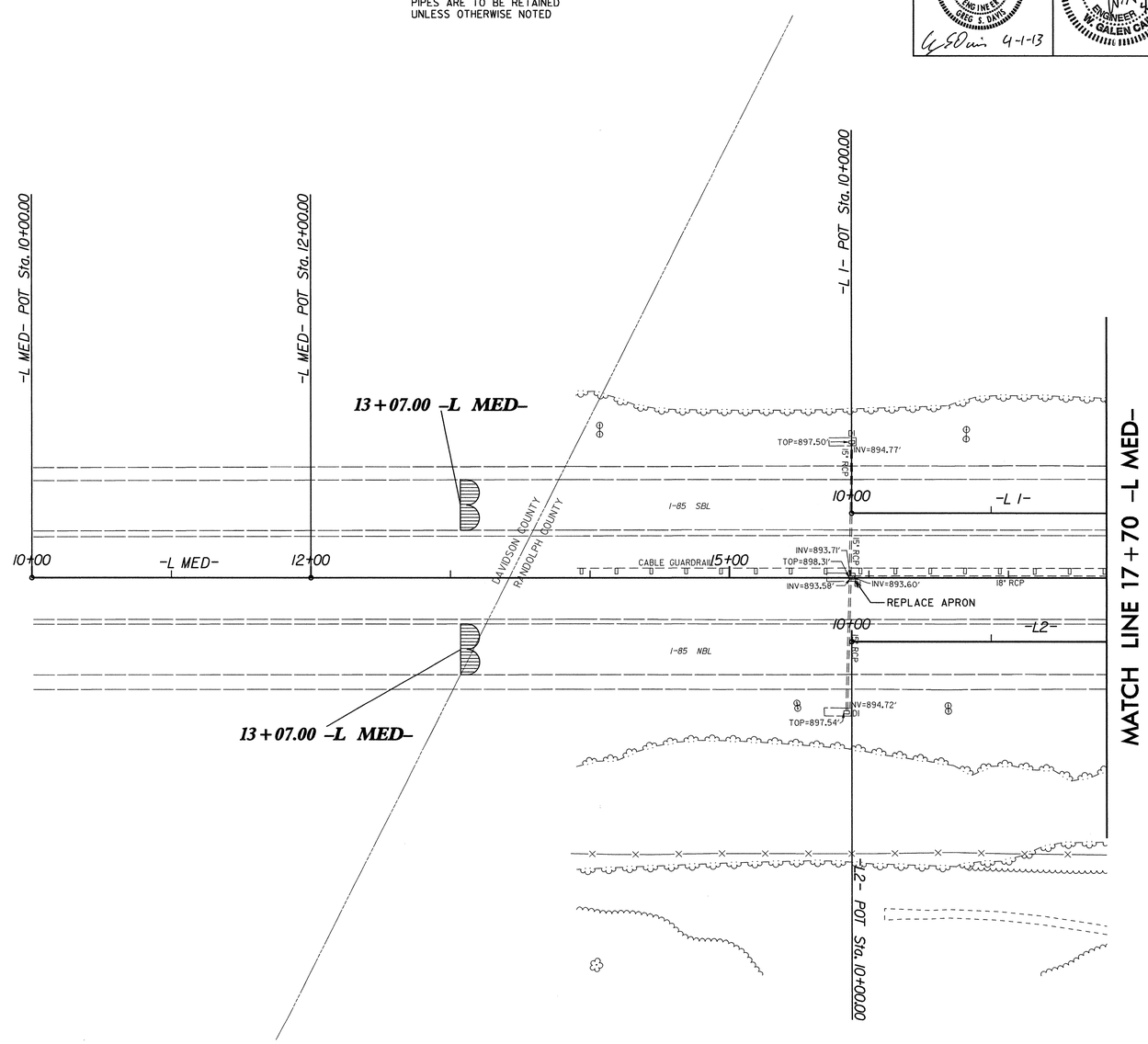
NC GRID NAD 83/2001

L 1 SUPER ELEVATION CHANGES RIGHT		L 1 SUPER ELEVATION CHANGES LEFT	
29+30.000000	1.5000	31+40.000000	-2.0000
29+60.000000	2.0000	31+90.000000	-2.0000
31+40.000000	2.0000	32+50.000000	-2.0000
31+90.000000	2.0000	33+10.000000	-1.0000
32+50.000000	2.0000	33+70.000000	0.0000
33+10.000000	-1.0000	34+40.000000	1.0000
33+70.000000	0.0000	35+40.000000	2.0000
34+40.000000	-1.0000	36+00.000000	1.6000
35+40.000000	-2.0000		
36+00.000000	-2.0000		
72+40.000000	-2.140	72+40.000000	1.550
73+00.000000	-2.000	73+00.000000	2.000
73+60.000000	-1.000	73+60.000000	1.000
74+20.000000	0.000	74+20.000000	0.000
74+80.000000	1.000	74+80.000000	-1.000
75+40.000000	2.000	75+40.000000	-2.000
76+40.000000	1.060	76+40.000000	-2.130
185+60.000000	1.0200	185+60.000000	-2.2100
186+20.000000	2.0000	186+20.000000	-2.0000
186+80.000000	1.0000	186+80.000000	-1.0000
187+40.000000	0.0000	187+40.000000	0.0000
188+00.000000	-1.0000	188+00.000000	1.0000
188+60.000000	-2.0000	188+60.000000	2.0000
189+20.000000	-3.4500	189+20.000000	2.2500
201+92.000000	-2.3800	201+92.000000	2.3800
202+52.000000	-2.0000	202+52.000000	2.0000
203+12.000000	-1.0000	203+12.000000	1.0000
203+72.000000	0.0000	203+72.000000	0.0000
204+32.000000	1.0000	204+32.000000	-1.0000
204+92.000000	2.0000	204+92.000000	-2.0000
205+52.000000	2.3300	205+52.000000	-2.3300
253+95.000000	1.5100	253+95.000000	-2.3100
254+55.000000	2.0000	254+55.000000	-2.0000
255+15.000000	1.0000	255+15.000000	-1.0000
255+75.000000	0.0000	255+75.000000	0.0000
256+35.000000	-1.0000	256+35.000000	1.0000
256+95.000000	-2.0000	256+95.000000	2.0000
257+55.000000	-2.0400	257+55.000000	1.0400
287+15.000000	-3.3500	287+15.000000	2.5900
287+75.000000	-2.0000	287+75.000000	2.0000
288+35.000000	-1.0000	288+35.000000	1.0000
288+95.000000	0.0000	288+95.000000	0.0000
289+55.000000	1.0000	289+55.000000	-1.0000
290+15.000000	2.0000	290+15.000000	-2.0000
290+75.000000	0.8100	290+75.000000	-2.2300

L 2 SUPER ELEVATION CHANGES RIGHT		L 2 SUPER ELEVATION CHANGES LEFT	
103+25.000000	1.7600	103+25.000000	-1.9400
103+85.000000	2.0000	103+85.000000	-2.0000
104+45.000000	1.0000	104+45.000000	-1.0000
105+05.000000	0.0000	105+05.000000	0.0000
105+65.000000	-1.0000	105+65.000000	1.0000
106+25.000000	-2.0000	106+25.000000	2.0000
106+85.000000	-3.1000	106+85.000000	2.6200
141+35.000000	-2.610	141+35.000000	2.070
141+95.000000	-2.000	141+95.000000	2.000
142+55.000000	-1.000	142+55.000000	1.000
143+15.000000	0.000	143+15.000000	0.000
143+75.000000	1.000	143+75.000000	-1.000
144+35.000000	2.000	144+35.000000	-2.000
144+95.000000	1.650	144+95.000000	-1.890
287+55.000000	2.7900	287+55.000000	-3.1500
288+15.000000	2.0000	288+15.000000	-2.0000
288+75.000000	1.0000	288+75.000000	-1.0000
289+35.000000	0.0000	289+35.000000	0.0000
289+95.000000	-1.0000	289+95.000000	1.0000
290+55.000000	-2.0000	290+55.000000	2.0000
291+15.000000	-0.7000	291+15.000000	0.2200

50' 0 50' 100'

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED



REVISIONS

8/17/99

22-MAR-2013 16:21
c:\dwg\pms\rdu\randolph\I-5314\psh\dsn\I-5314-dsn_psh_4.dgn
davis
$1" = 10' PS_ap=246463

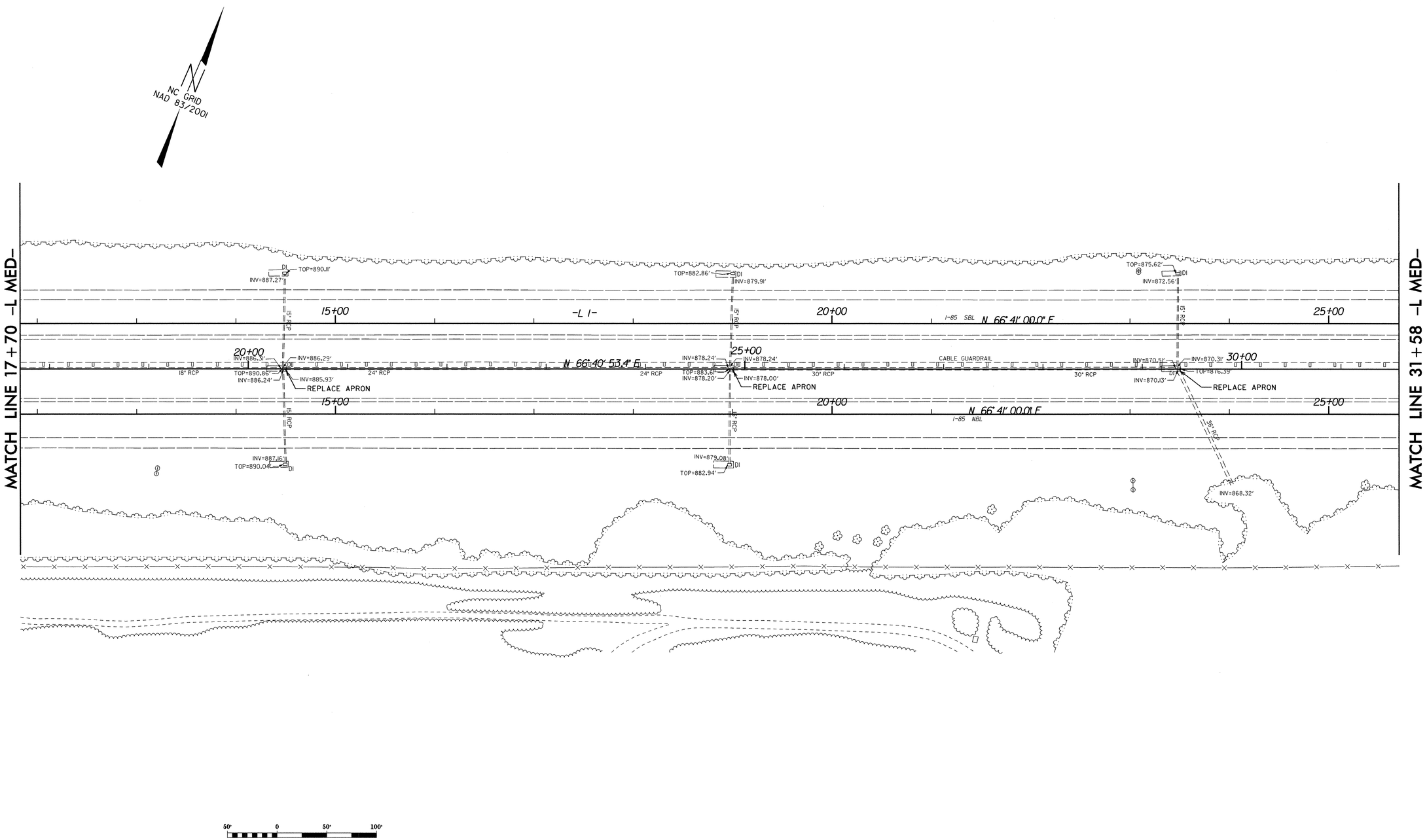
PROJECT REFERENCE NO.	SHEET NO.
I-5314	5
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

NORTH CAROLINA PROFESSIONAL SEAL 022001 ENGINEER W. GALEN CAIN

4-1-13

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED



REVISIONS

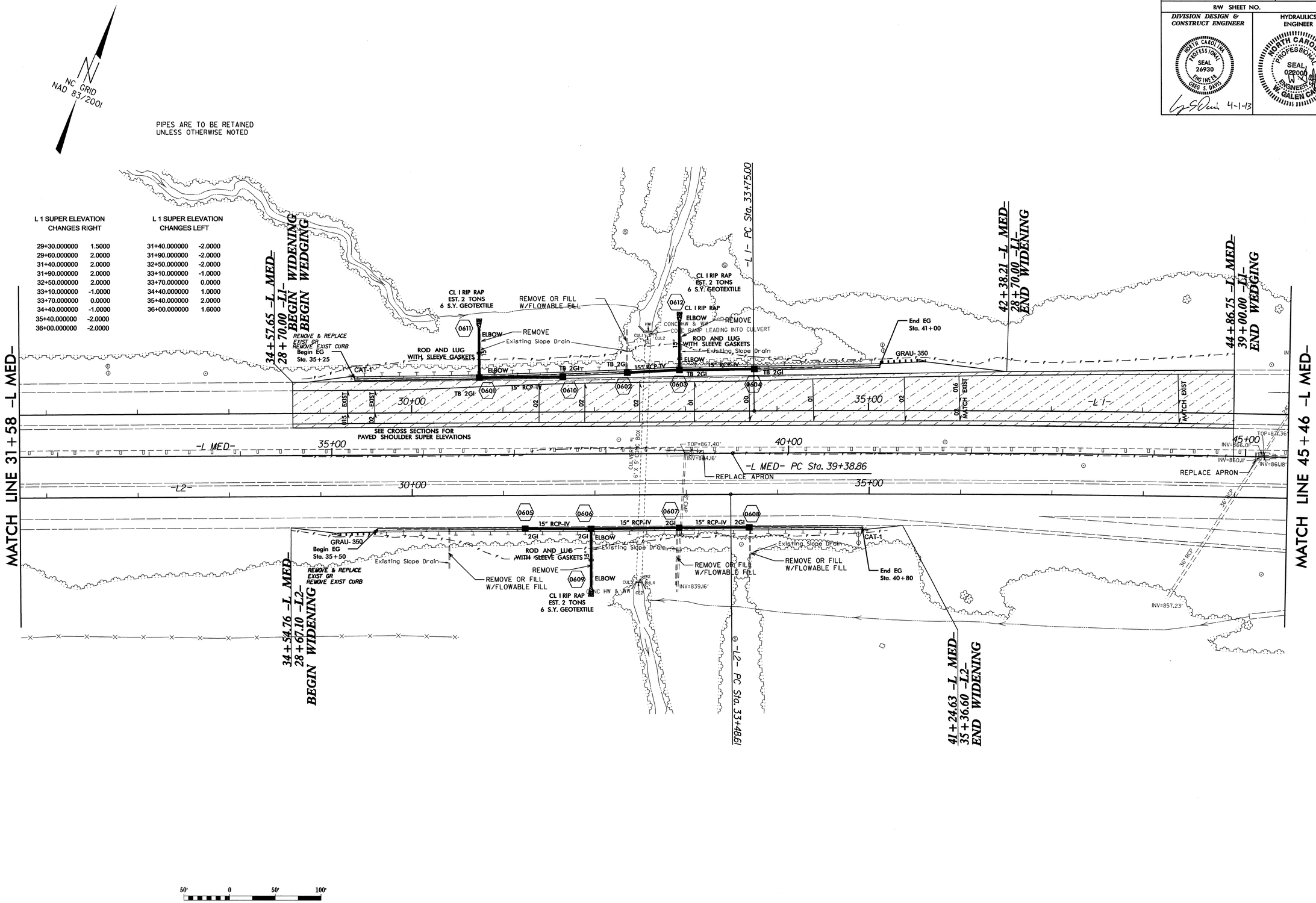
8/17/99

22-MAR-2013 16:21
C:\div8_projects\rdu\randolph\I-5314\psh\dsn\I-5314-dsn_psh_5.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	6
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS 4-1-13

NORTH CAROLINA PROFESSIONAL SEAL 022000 ENGINEER W. GALEN CAIL



L 1 SUPER ELEVATION CHANGES RIGHT	
29+30.000000	1.5000
29+60.000000	2.0000
31+40.000000	2.0000
31+90.000000	2.0000
32+50.000000	2.0000
33+10.000000	-1.0000
33+70.000000	0.0000
34+40.000000	-1.0000
35+40.000000	-2.0000
36+00.000000	-2.0000

L 1 SUPER ELEVATION CHANGES LEFT	
31+40.000000	-2.0000
31+90.000000	-2.0000
32+50.000000	-2.0000
33+10.000000	-1.0000
33+70.000000	0.0000
34+40.000000	1.0000
35+40.000000	2.0000
36+00.000000	1.6000

REVISIONS

8/17/99

03-APR-2013 16:18
C:\div8_projects\rdu\randolph\I-5314\psh\dsn\I-5314-dsn_psh_6.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	7
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

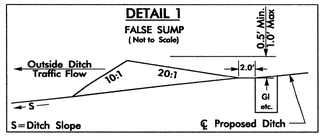
NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER CRAIG S. DAVIS 4-13-13

NORTH CAROLINA PROFESSIONAL SEAL 022000 ENGINEER W. GALEN CANNON 4/15/13

-L I-
PI Sta 53+73.37
△ = 9° 58' 00.0" (RT)
D = 0° 15' 00.0"
L = 3,986.67'
T = 1,998.37'
R = 22,918.31'

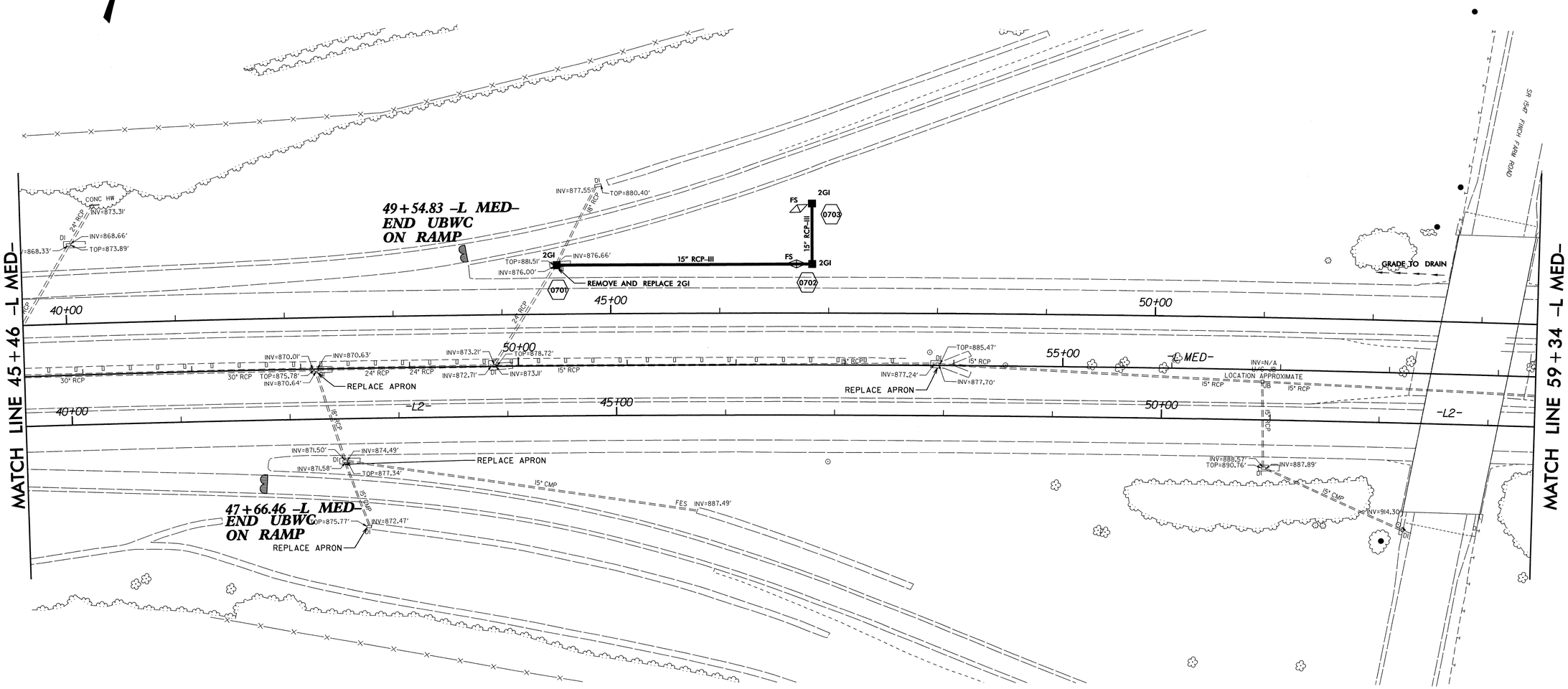
PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED

DETAIL 1
FALSE SUMP
(Not to Scale)



STA. -L MED- 55+52 LT

NC GRID NAD 83/2001



50' 0 50' 100'

REVISIONS

8/17/99

22-MAR-2013 16:21
C:\pwworkingdir\ocs\jrandolph\I-5314\psh\dsn\I-5314-dsn-psh_7.dgn
cs_dw8.prp
ATTACHED:246463
psdavis

PROJECT REFERENCE NO.	SHEET NO.
I-5314	8
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

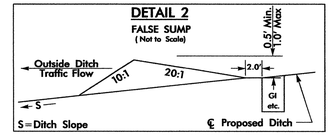
NORTH CAROLINA PROFESSIONAL SEAL 022098 ENGINEER W. GALEN CAMP

-L MED-
PI Sta 59+68.73
△ = 10° 06' 22.4" (RT)
D = 0° 14' 58.5"
L = 4,049.20'
T = 2,029.87'
R = 22,956.34'

NC GRID
NAD 83/2001

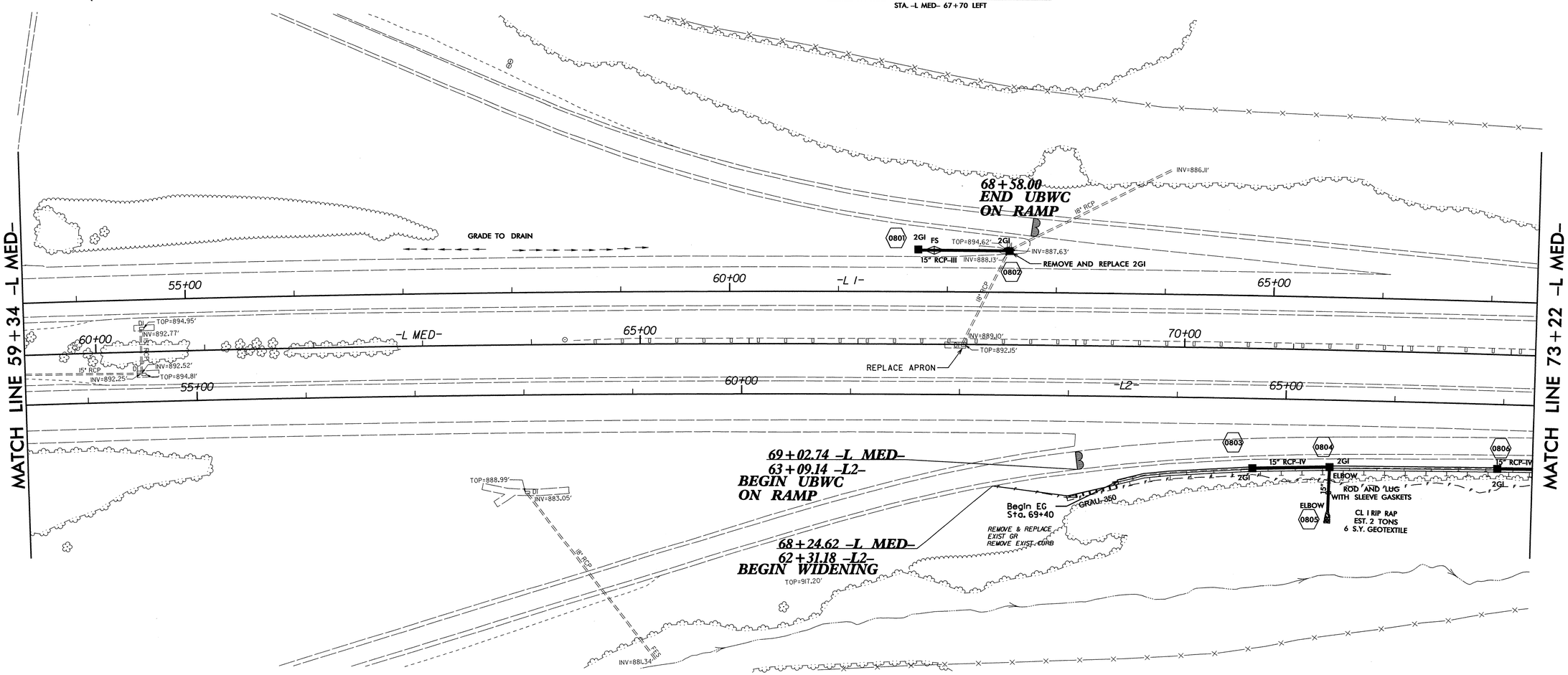
REMOVE EXISTING FUNNEL DRAINS, REMOVE PIPES OR FILL WITH FLOWABLE FILL AND STABILIZE SLOPE AS DIRECTED BY THE ENGINEER

DETAIL 2
FALSE SUMP
(Not to Scale)



STA. -L MED- 67+70 LEFT

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED



-L2-
PI Sta 58+11.36
△ = 12° 16' 00.0" (RT)
D = 0° 15' 00.0"
L = 4,906.67'
T = 2,462.75'
R = 22,918.31'

50' 0 50' 100'

REVISIONS

8/17/99

22-MAR-2013 16:21
C:\div8_proj\ts\rdu\randolph\I-5314\psh\dsn\I-5314-dsn_psh_8.dgn
psdavis

PROJECT REFERENCE NO.	SHEET NO.
I-5314	9
R/W SHEET NO.	

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

HYDRAULICS ENGINEER

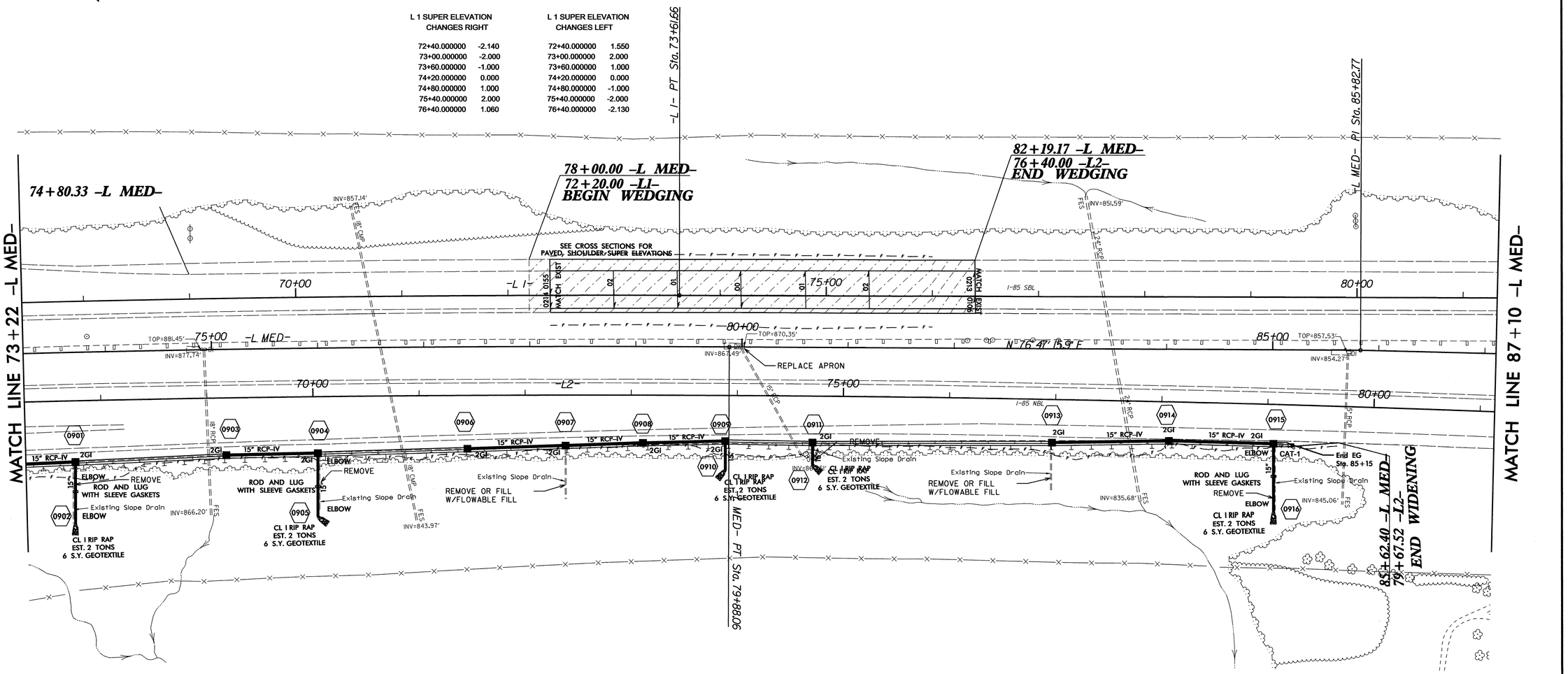
NORTH CAROLINA PROFESSIONAL SEAL 022000 ENGINEER W. GALEN CAL

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED

NC GRID NAD 83/2001

REMOVE EXISTING FUNNEL DRAINS, REMOVE PIPES OR FILL WITH FLOWABLE FILL AND STABILIZE SLOPE AS DIRECTED BY THE ENGINEER

L 1 SUPER ELEVATION CHANGES RIGHT		L 1 SUPER ELEVATION CHANGES LEFT	
72+40.000000	-2.140	72+40.000000	1.550
73+00.000000	-2.000	73+00.000000	2.000
73+60.000000	-1.000	73+60.000000	1.000
74+20.000000	0.000	74+20.000000	0.000
74+80.000000	1.000	74+80.000000	-1.000
75+40.000000	2.000	75+40.000000	-2.000
76+40.000000	1.060	76+40.000000	-2.130



REVISIONS

8/17/99

22-MAR-2013 16:21
c:\div8_projects\rdu\randolph\I-5314\psh\dsn\I-5314-dsn_psh_9.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	10
R/W SHEET NO.	

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

G S Davis 4-1-13

HYDRAULICS ENGINEER

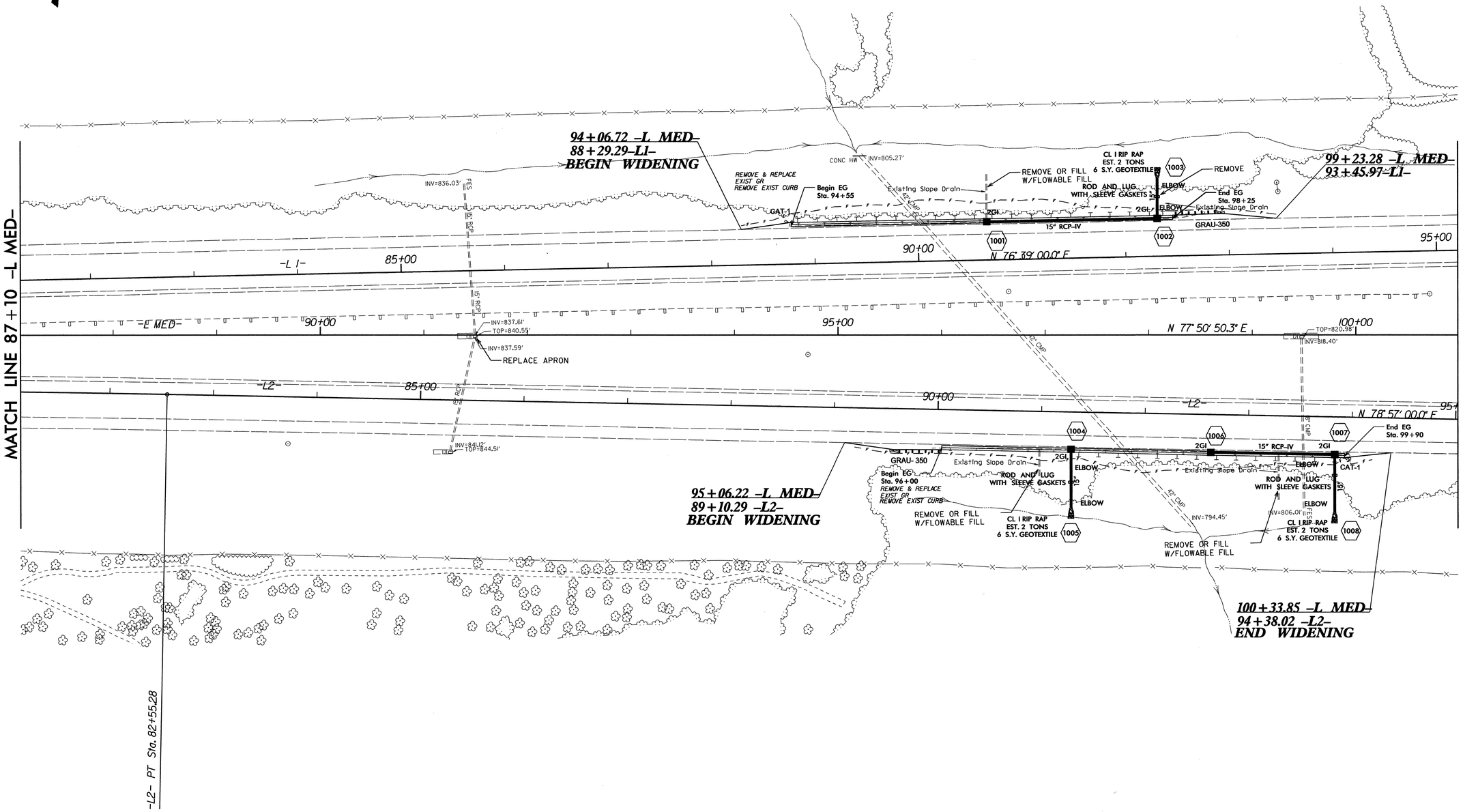
NORTH CAROLINA PROFESSIONAL SEAL 022008 ENGINEER W. GALEN CAIN

W G Cain 4/10/13

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED

NC GRID NAD 83/2001

REMOVE EXISTING FUNNEL DRAINS, REMOVE PIPES OR FILL WITH FLOWABLE FILL AND STABILIZE SLOPE AS DIRECTED BY THE ENGINEER



REVISIONS

8/17/99

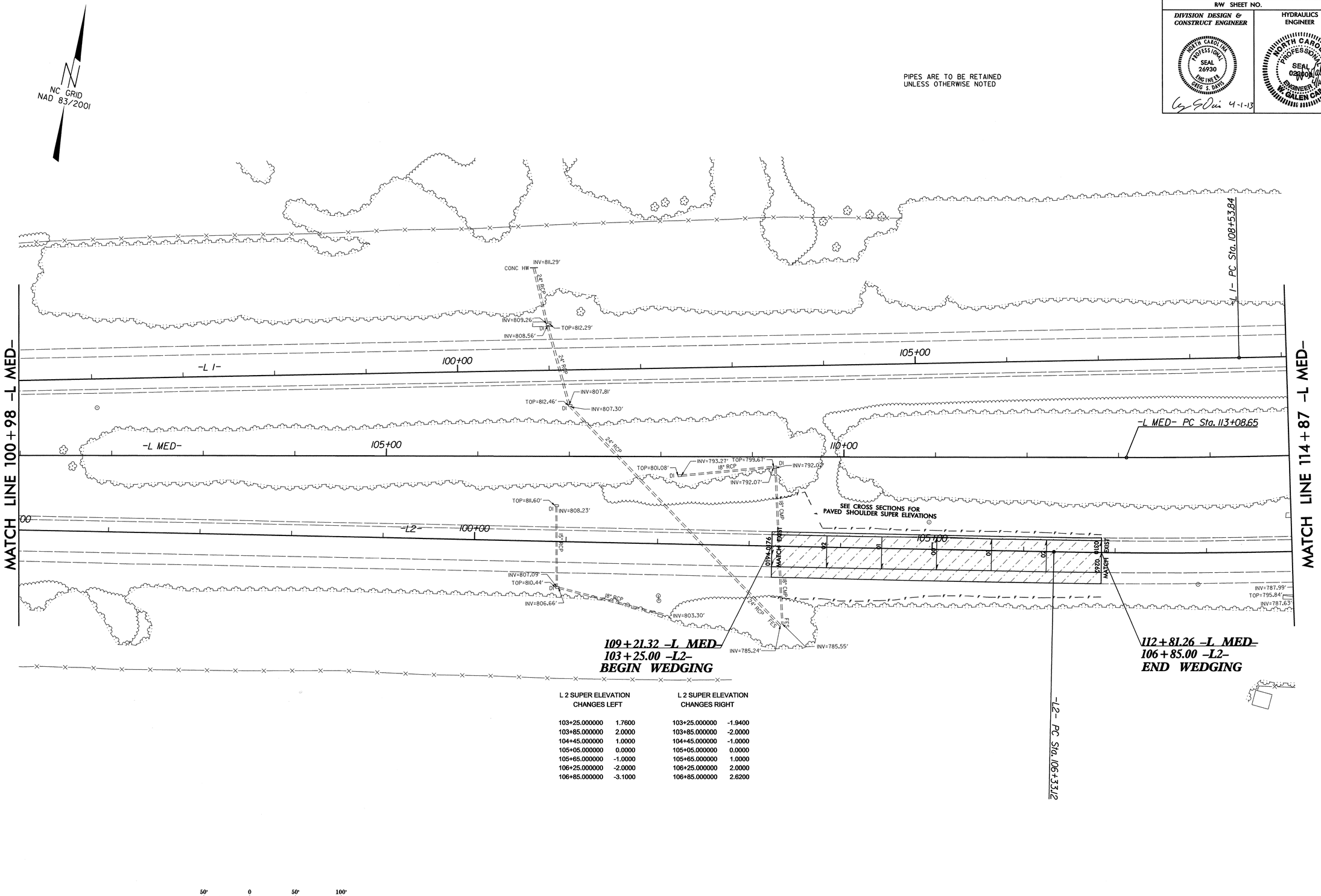
22-MAR-2013 16:21
C:\WINDOWS\temp\{ecs\rdh\rangdolph\I-5314\psh\dsn\I-5314-dsn_psh_10.dgn
psh08.prp (ecs)
rdh
A1 Plot: 246463
osdavis

PROJECT REFERENCE NO.	SHEET NO.
I-5314	11
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS 4-1-13

NORTH CAROLINA PROFESSIONAL SEAL 022000 ENGINEER W. GALEN CAIL 4/18/13

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED



L 2 SUPER ELEVATION CHANGES LEFT		L 2 SUPER ELEVATION CHANGES RIGHT	
103+25.000000	1.7600	103+25.000000	-1.9400
103+85.000000	2.0000	103+85.000000	-2.0000
104+45.000000	1.0000	104+45.000000	-1.0000
105+05.000000	0.0000	105+05.000000	0.0000
105+65.000000	-1.0000	105+65.000000	1.0000
106+25.000000	-2.0000	106+25.000000	2.0000
106+85.000000	-3.1000	106+85.000000	2.6200

REVISIONS

8/17/99

22-MAR-2013 16:20
c:\div8_projects\rdu\randolph\I-5314\psh\dsn\I-5314-dsn_psh_11.dgn
gsdavis AT DOAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	12
R/W SHEET NO.	

DIVISION DESIGN & CONSTRUCT ENGINEER

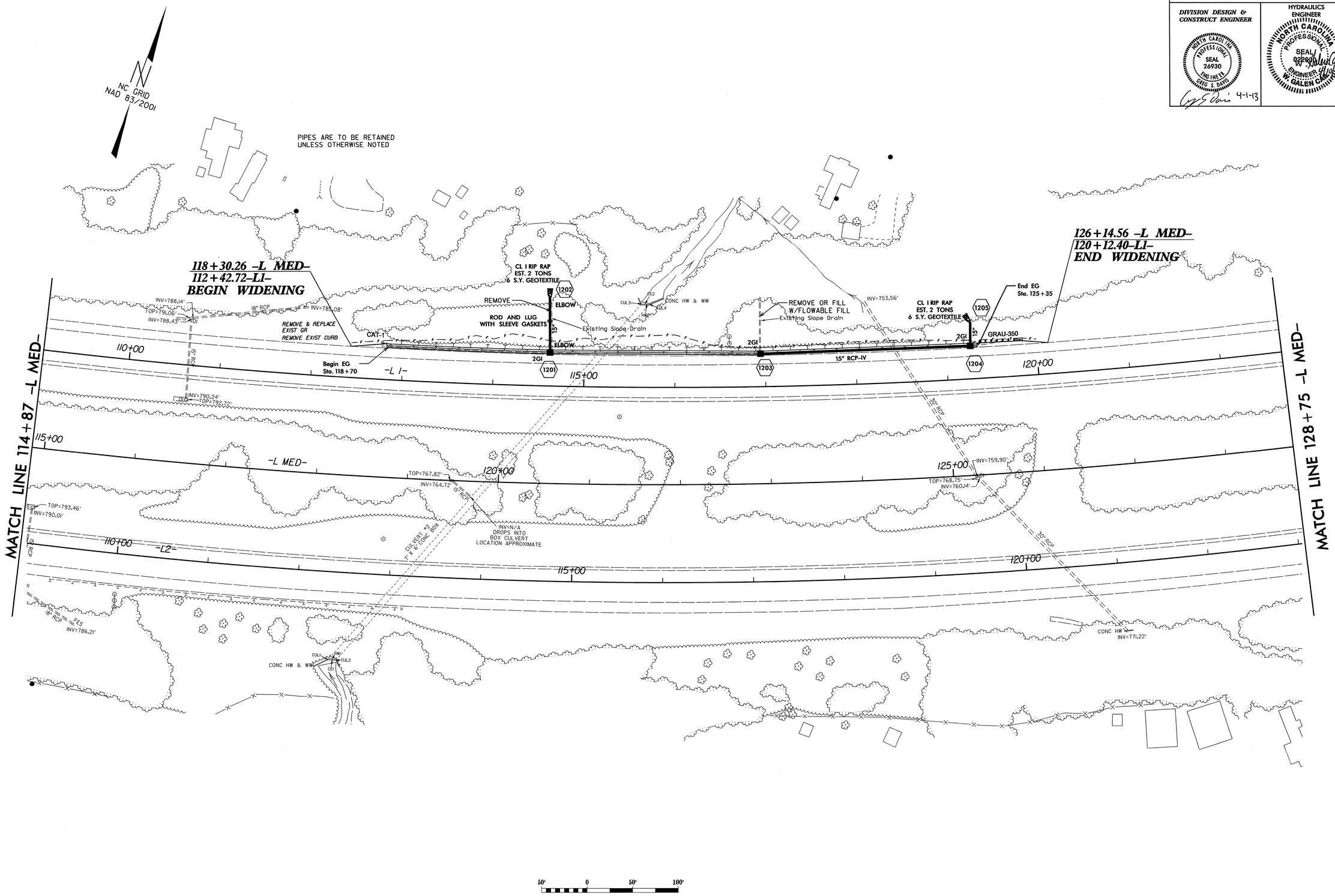
NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 022000 ENGINEER W. GALEN CAIN

4/10/13



REVISIONS

8/17/99

03-APR-2013 16:18
C:\div8_projects\rdu\randolph\I-5314\psh\dsn\I-5314-dsn_psh_12.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	13
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

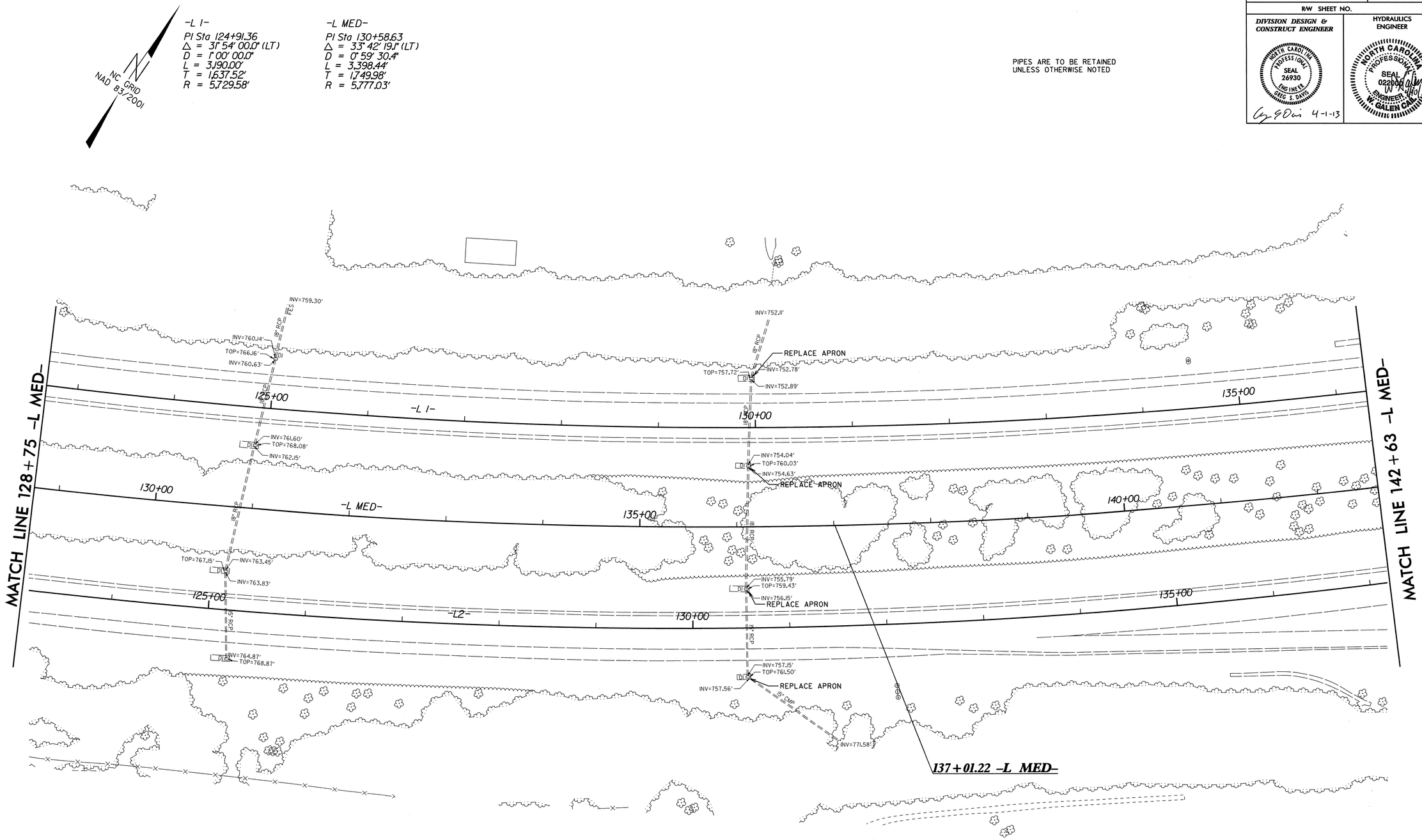
4-1-13

NORTH CAROLINA PROFESSIONAL SEAL 022000 ENGINEER W. GALEN CAMPBELL

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED

-L 1-
PI Sta 124+91.36
Δ = 31° 54' 00.0" (LT)
D = 1° 00' 00.0"
L = 3,190.00'
T = 1,637.52'
R = 5,729.58'

-L MED-
PI Sta 130+58.63
Δ = 33° 42' 19.1" (LT)
D = 0° 59' 30.4"
L = 3,398.44'
T = 1,749.98'
R = 5,777.03'



-L2-
PI Sta 124+63.50
Δ = 35° 26' 00.0" (LT)
D = 1° 00' 00.0"
L = 3,543.33'
T = 1,830.38'
R = 5,729.58'

50' 0 50' 100'

REVISIONS

8/17/99

22-MAR-2013 16:20
C:\div8_projects\rdu\rendolph\I-5314\psh\dsn\I-5314-dsn_psh_13.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	14
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER REG. S. DAVIS

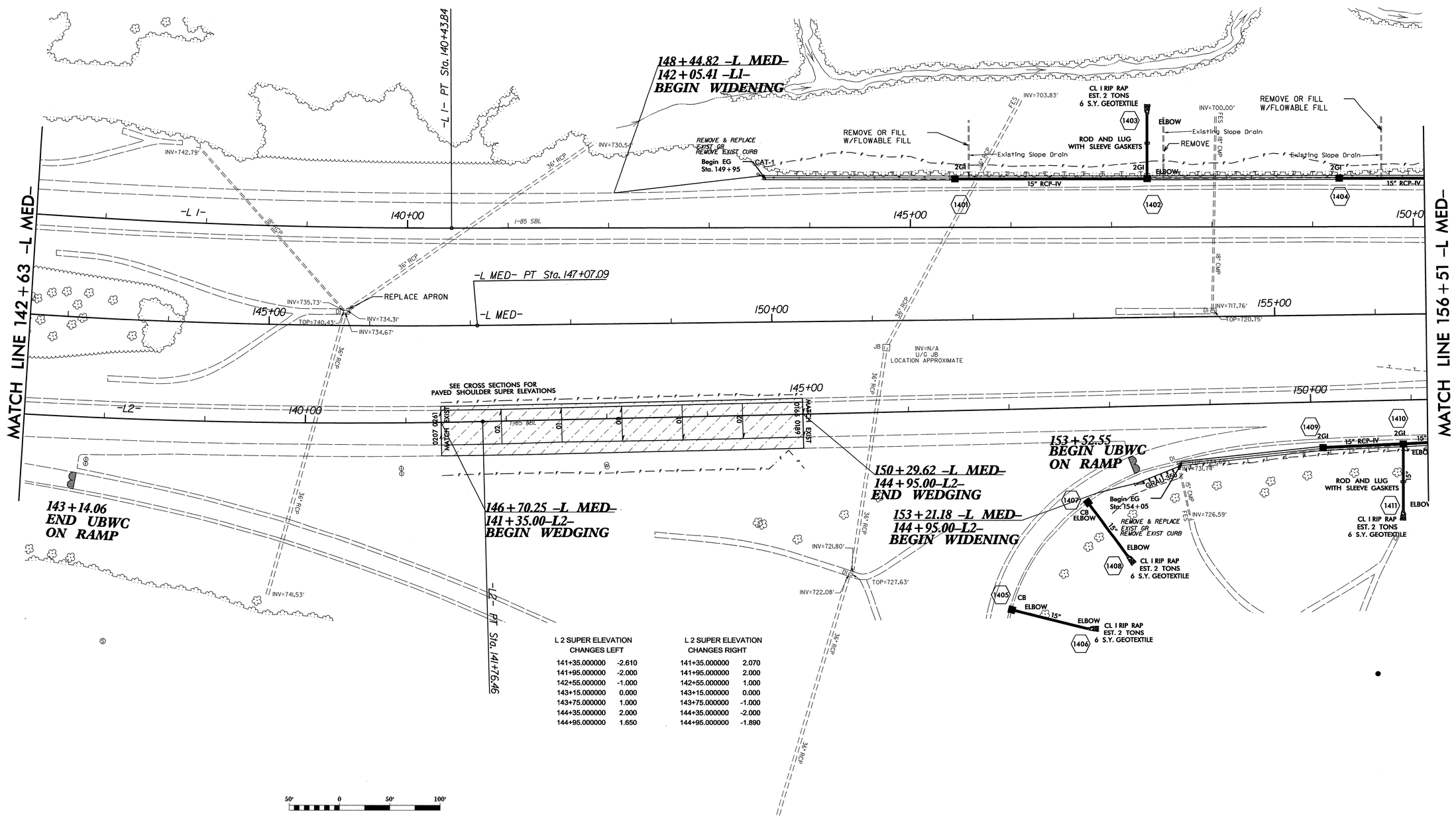
4-1-13

NORTH CAROLINA PROFESSIONAL SEAL 022000 ENGINEER W. GALEN CALLAHAN

NC GRID NAD 83/2001

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED

REMOVE EXISTING FUNNEL DRAINS, REMOVE PIPES OR FILL WITH FLOWABLE FILL AND STABILIZE SLOPE AS DIRECTED BY THE ENGINEER



L 2 SUPER ELEVATION CHANGES LEFT		L 2 SUPER ELEVATION CHANGES RIGHT	
141+35.000000	-2.610	141+35.000000	2.070
141+95.000000	-2.000	141+95.000000	2.000
142+55.000000	-1.000	142+55.000000	1.000
143+15.000000	0.000	143+15.000000	0.000
143+75.000000	1.000	143+75.000000	-1.000
144+35.000000	2.000	144+35.000000	-2.000
144+95.000000	1.650	144+95.000000	-1.890

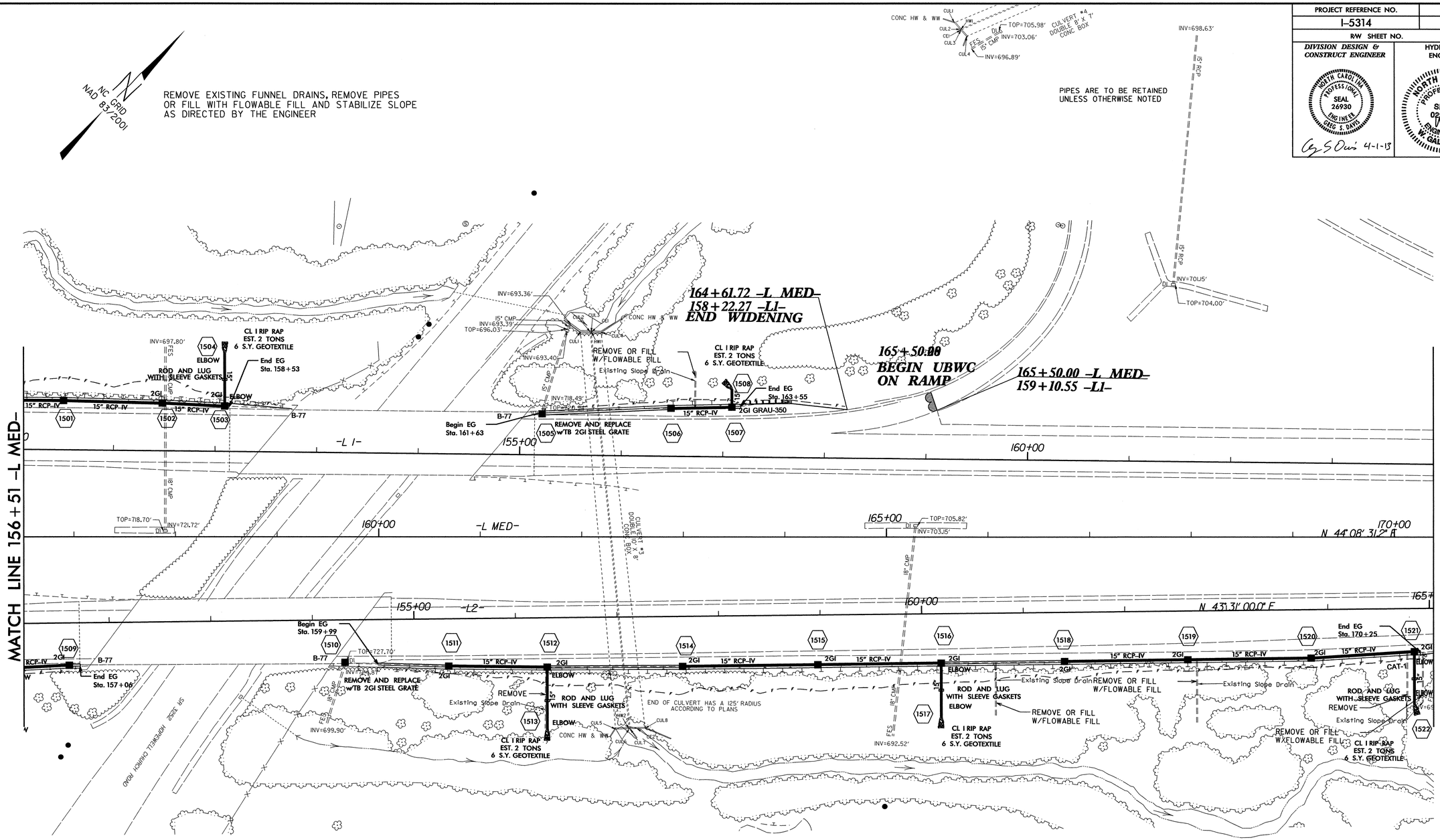
50' 0 50' 100'

REVISIONS

8/17/99

22-MAR-2013 16:20
c:\pwworking\rdu\randolph\I-5314\psh\dsn\I-5314-dsn_psh_14.dgn
psdavis
$I_DBIAS=246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	15
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER



REVISIONS

8/17/99

28-MAR-2013 17:02
C:\div8_projects\rdu\randolph\I-5314\psh\dsn\I-5314-dsn_psh_15.dgn
gsdavis AT DBCAD-246463

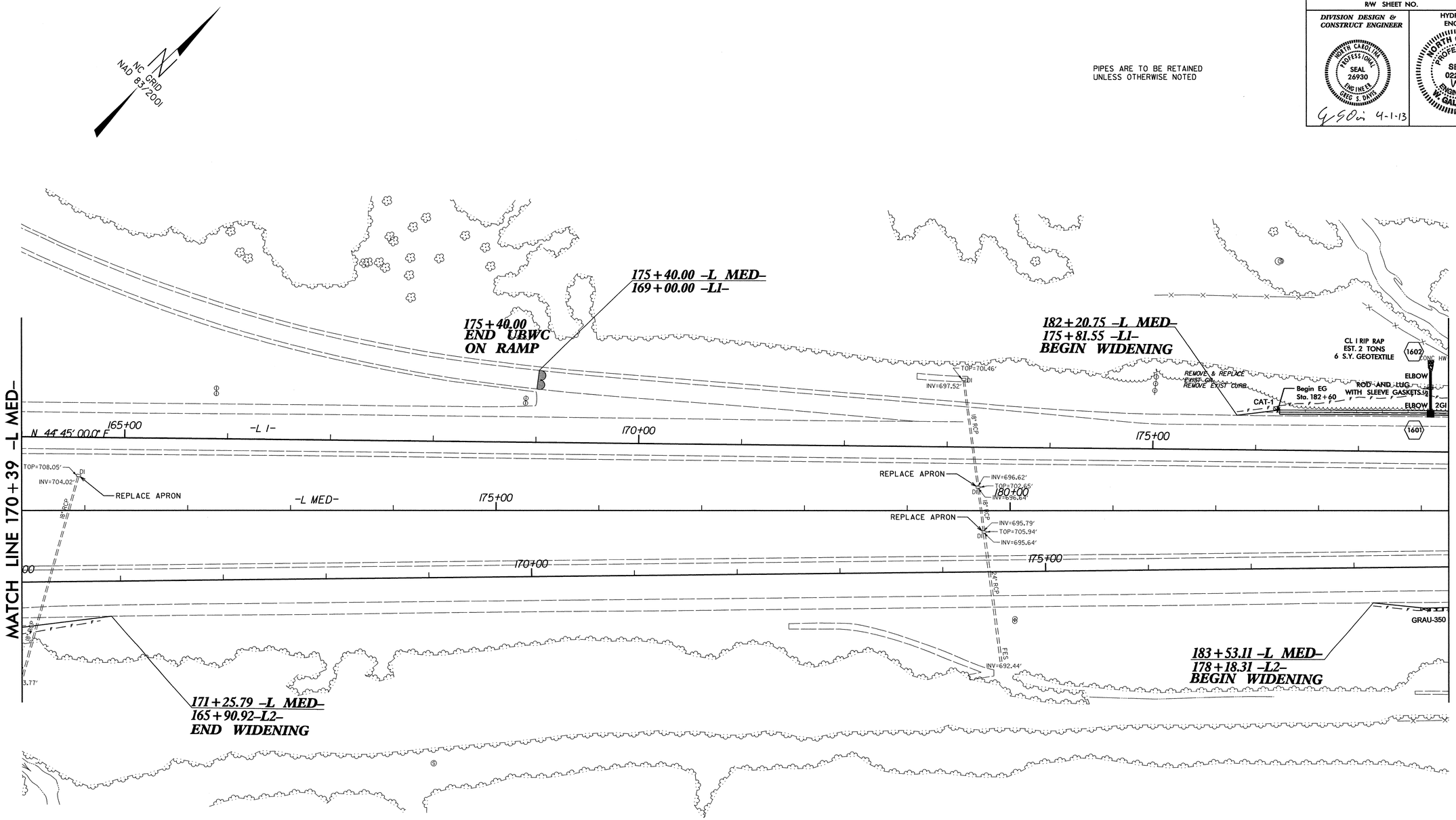
PROJECT REFERENCE NO.	SHEET NO.
I-5314	16
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

NORTH CAROLINA PROFESSIONAL SEAL 022090 ENGINEER W. GALEN CAIL

G S Davis 4-1-13

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED



REVISIONS

8/17/99

28-MAR-2013 17:01
C:\div8_projects\rdu\randolph\I-5314\psh\dsn\I-5314-dsn_psh_16.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	17
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS 4-1-13

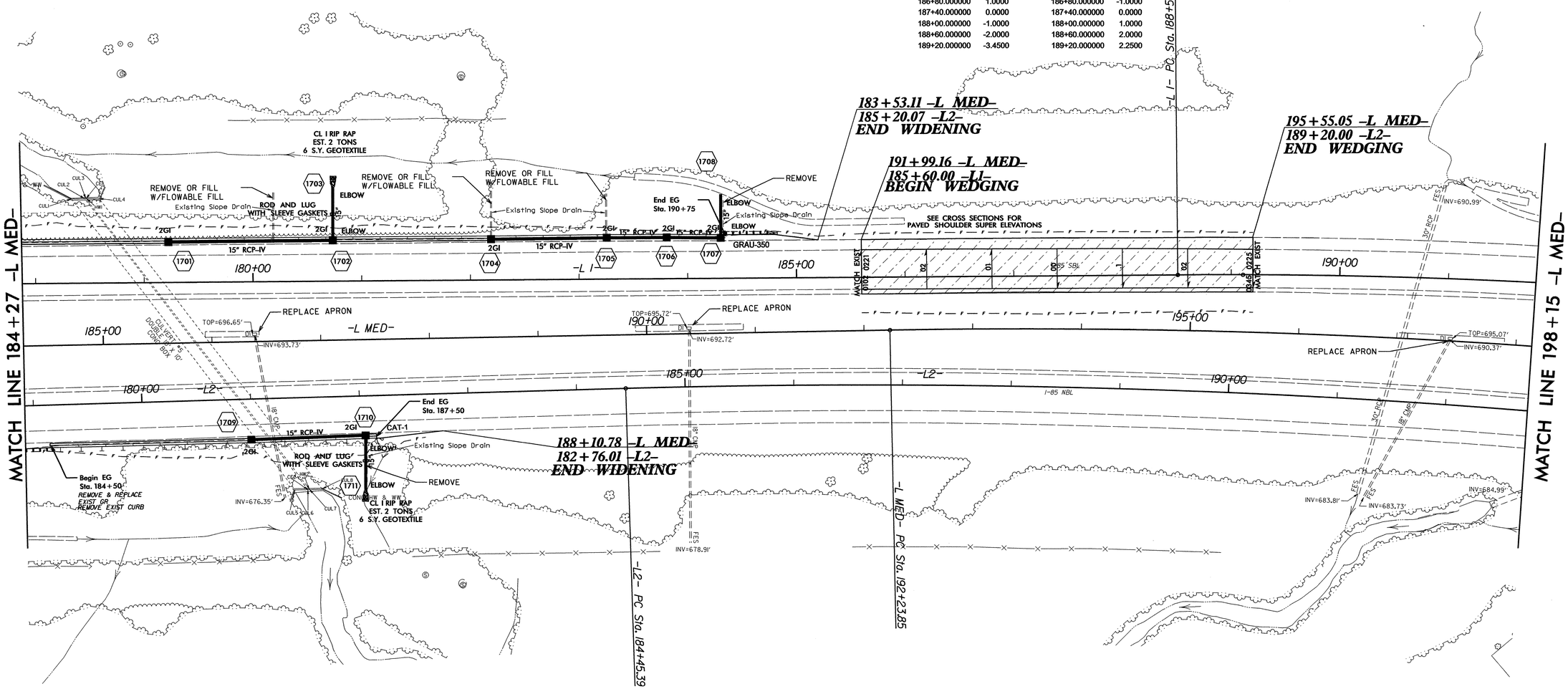
NORTH CAROLINA PROFESSIONAL SEAL 022009 ENGINEER W. GALEN CAROLIN

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED

NC GRID NAD 83/2001

REMOVE EXISTING FUNNEL DRAINS, REMOVE PIPES OR FILL WITH FLOWABLE FILL AND STABILIZE SLOPE AS DIRECTED BY THE ENGINEER

L 1 SUPER ELEVATION CHANGES RIGHT		L 1 SUPER ELEVATION CHANGES LEFT	
185+60.000000	1.0200	185+60.000000	-2.2100
186+20.000000	2.0000	186+20.000000	-2.0000
186+80.000000	1.0000	186+80.000000	-1.0000
187+40.000000	0.0000	187+40.000000	0.0000
188+00.000000	-1.0000	188+00.000000	1.0000
188+60.000000	-2.0000	188+60.000000	2.0000
189+20.000000	-3.4500	189+20.000000	2.2500



REVISIONS

8/17/99

22-MAR-2013 16:20
C:\div8_projects\rdu\rendolph\I-5314\psh\dsn\I-5314-dsn_psh_17.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	18
R/W SHEET NO.	

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 022006 ENGINEER W. GALEN CAMPBELL

4-1-13

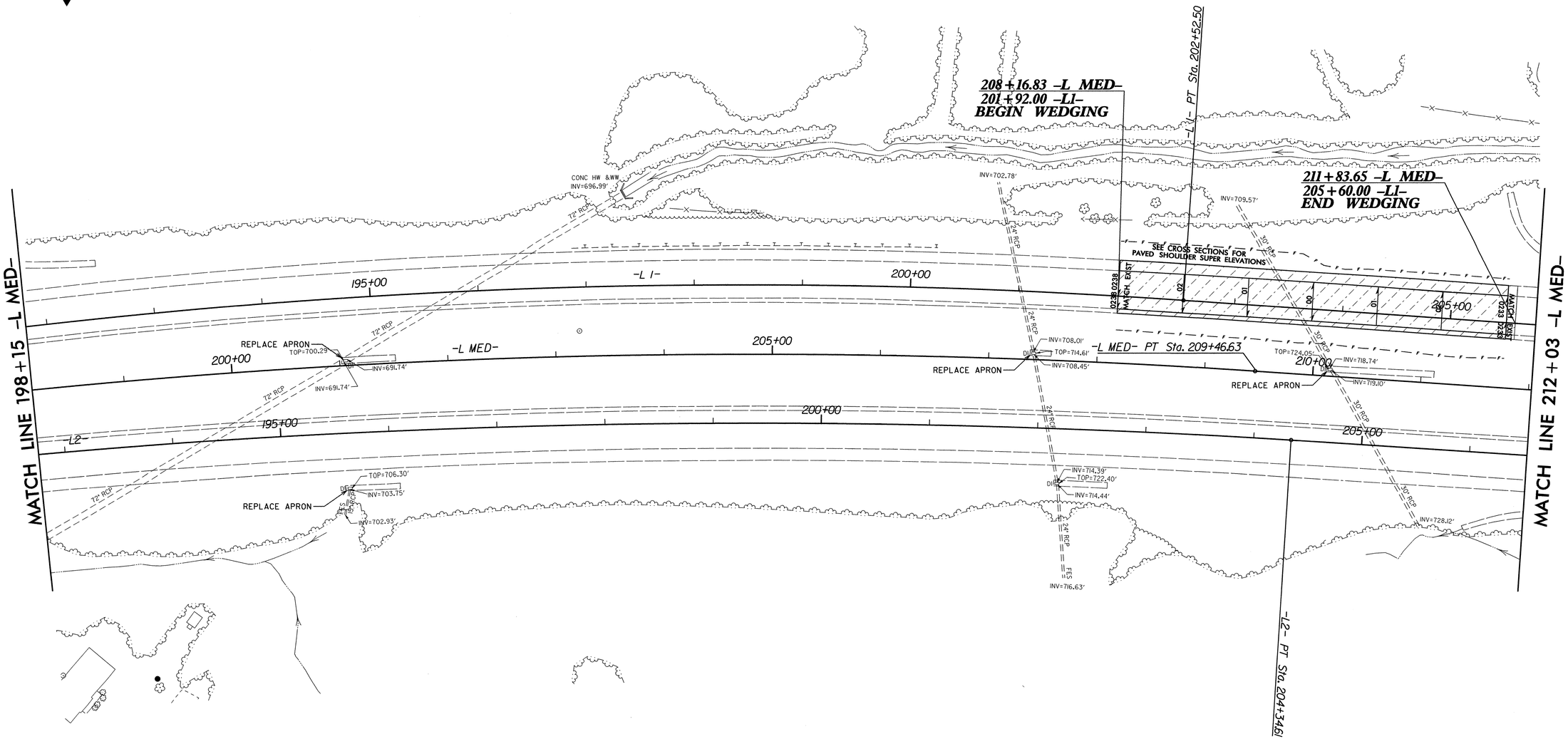
NC GRID NAD 83/2001

-L 1-
PI Sta 195+55.19
△ = 14° 00' 59.2" (RT)
D = 1° 00' 00.0"
L = 1,401.64'
T = 704.34'
R = 5,729.58'

-L MED-
PI Sta 200+89.85
△ = 14° 28' 02.8" (RT)
D = 0° 50' 23.2"
L = 1,722.78'
T = 866.00'
R = 6,822.77'

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED

L 1 SUPER ELEVATION CHANGES RIGHT		L 1 SUPER ELEVATION CHANGES LEFT	
201+92.000000	-2.3800	201+92.000000	2.3800
202+52.000000	-2.0000	202+52.000000	2.0000
203+12.000000	-1.0000	203+12.000000	1.0000
203+72.000000	0.0000	203+72.000000	0.0000
204+32.000000	1.0000	204+32.000000	-1.0000
204+92.000000	2.0000	204+92.000000	-2.0000
205+52.000000	2.3300	205+52.000000	-2.3300



-L2-
PI Sta 194+45.66
△ = 14° 55' 09.0" (RT)
D = 0° 45' 00.0"
L = 1,989.22'
T = 1,000.27'
R = 7,639.44'

50' 0 50' 100'

REVISIONS

8/17/99

22-MAR-2013 16:20
cv_dv18.pl; jes29.rdu\randolph\I-5314\psh\dsn\I-5314-dsn_psh_18.dgn
osdavis A1 DRCAD-246463

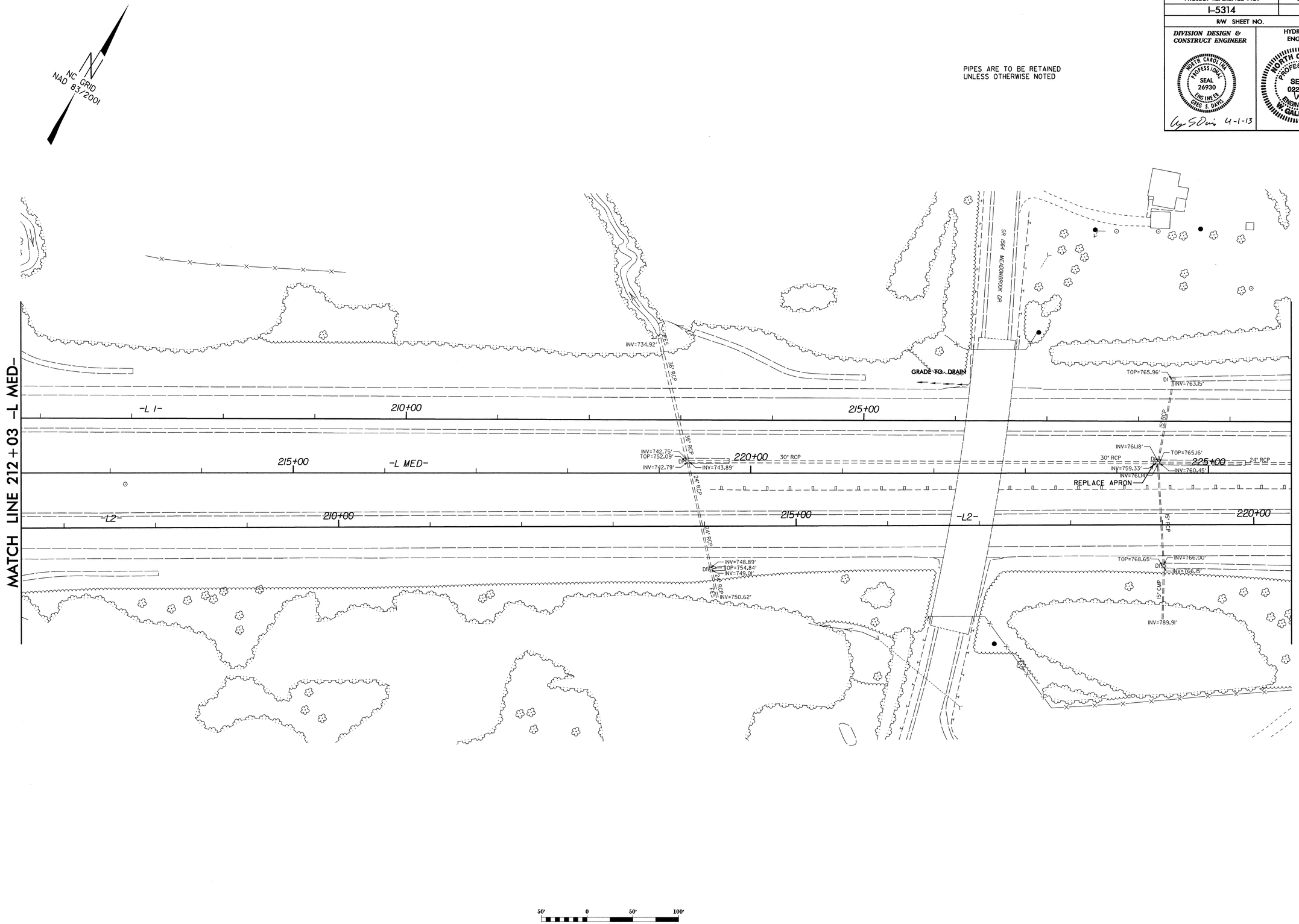
PROJECT REFERENCE NO.	SHEET NO.
I-5314	19
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

NORTH CAROLINA PROFESSIONAL SEAL 022080 ENGINEER W. GALEN CARLTON

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED



REVISIONS

8/17/99

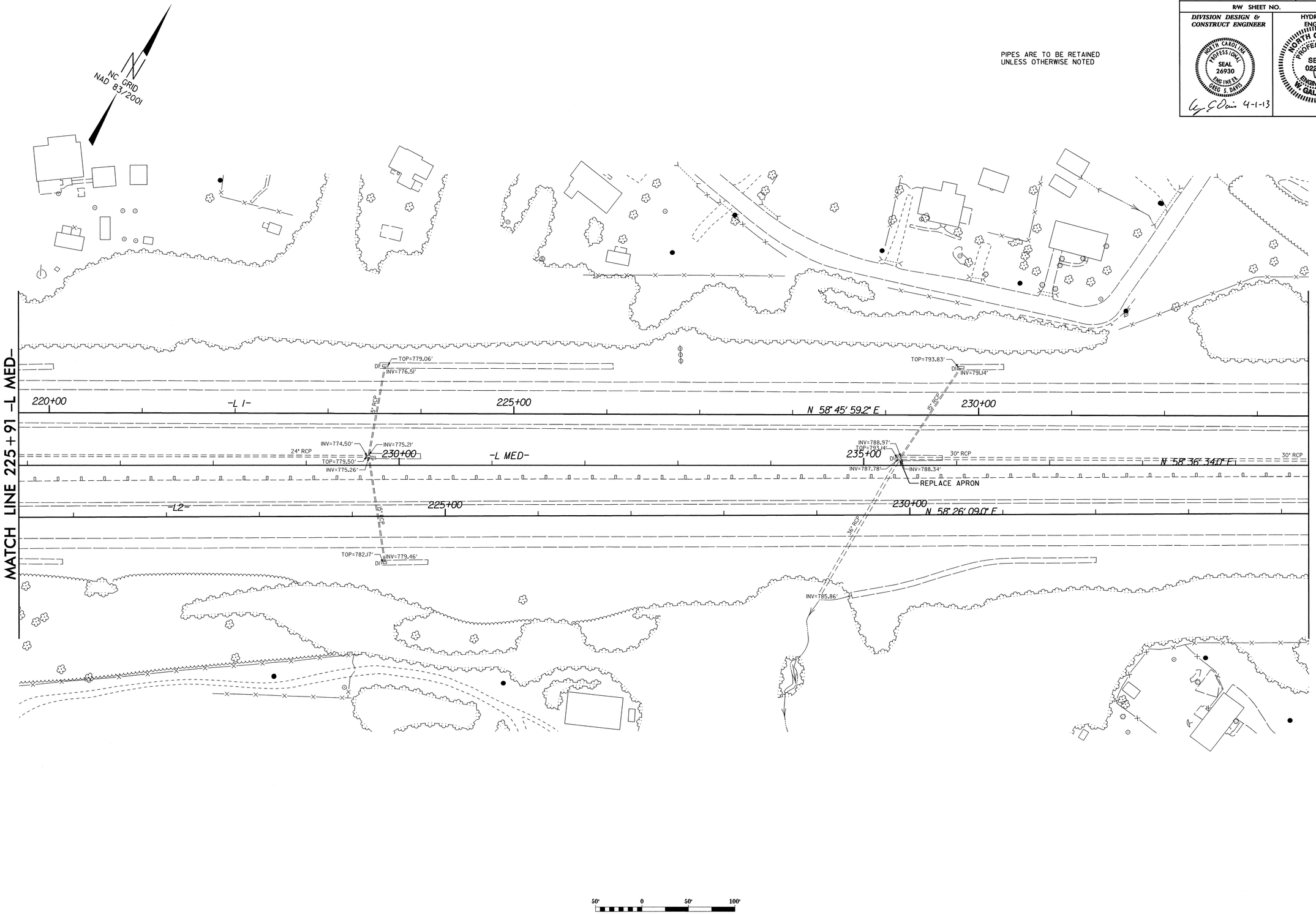
22-MAR-2013 16:20
C:\div8_projects\rdy\randolph\I-5314\psh\dsn\I-5314-dsn_psh_19.dgn
osdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	20
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS
4-1-13

NORTH CAROLINA PROFESSIONAL SEAL 022000 ENGINEER W. GALEN CAMPBELL
4/1/13

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED



REVISIONS

8/17/99

22-MAR-2013 16:20
C:\div8_projects\rdu\randolph\I-5314\psh\dsn\I-5314-dsn_psh_20.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	21
R/W SHEET NO.	

DIVISION DESIGN & CONSTRUCT ENGINEER

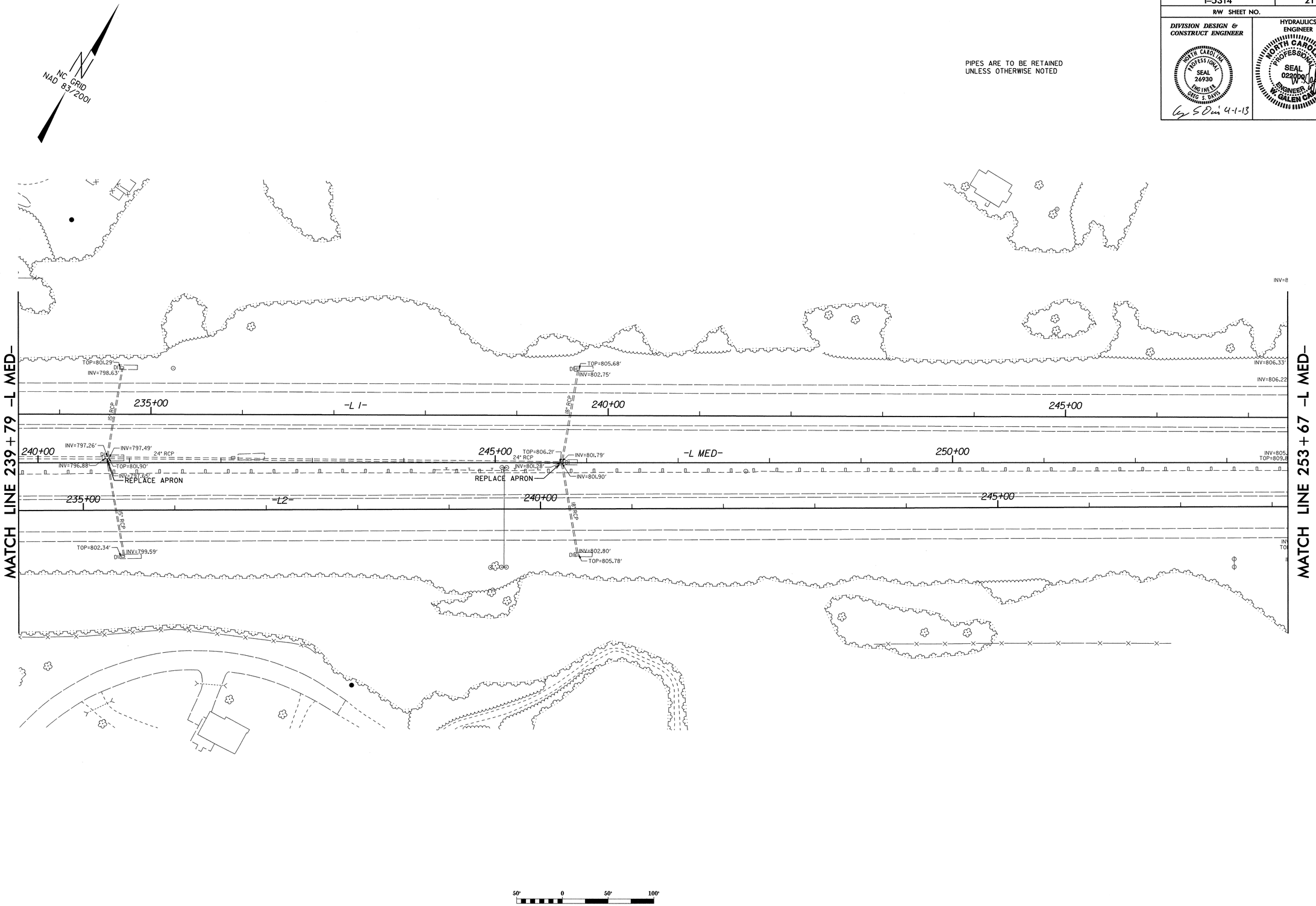
NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 022009 ENGINEER W. GALEN CAMPBELL

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED



REVISIONS

8/17/99

22-MAR-2013 16:20
C:\div8_projects\rdu\randolph\I-5314\psh\dsn\I-5314-dsn_psh_21.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	22
R/W SHEET NO.	

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

HYDRAULICS ENGINEER

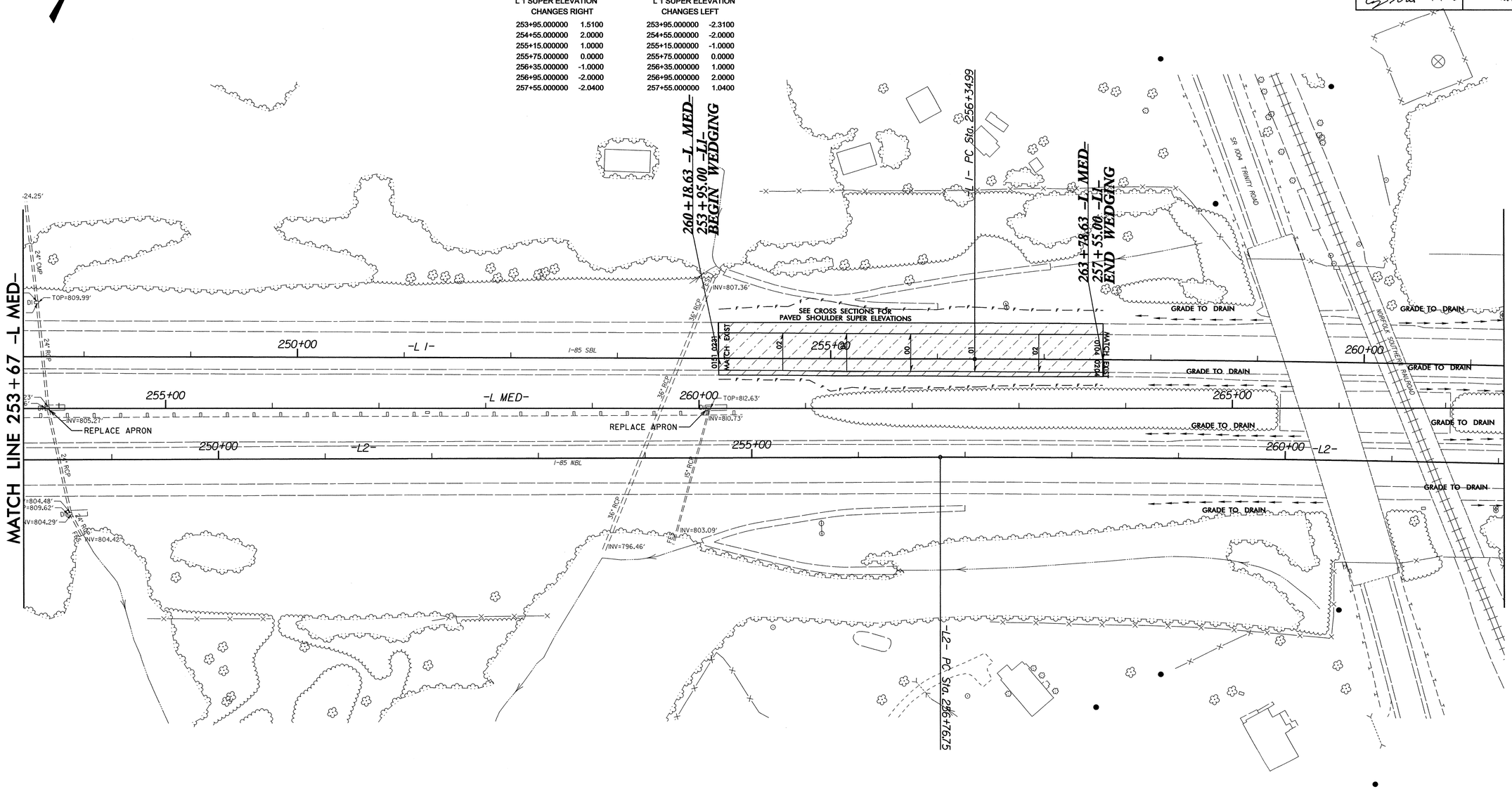
NORTH CAROLINA PROFESSIONAL SEAL 022000 ENGINEER W. GALEN CAMPBELL

4-1-13

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED

-L 1-
PI Sta 259+09.27
Δ = 1° 16' 19.1" (RT)
D = 0° 13' 54.8"
L = 548.54'
T = 274.28'
R = 24,708.46'

L 1 SUPER ELEVATION CHANGES RIGHT		L 1 SUPER ELEVATION CHANGES LEFT	
253+95.000000	1.5100	253+95.000000	-2.3100
254+55.000000	2.0000	254+55.000000	-2.0000
255+15.000000	1.0000	255+15.000000	-1.0000
255+75.000000	0.0000	255+75.000000	0.0000
256+35.000000	-1.0000	256+35.000000	1.0000
256+95.000000	-2.0000	256+95.000000	2.0000
257+55.000000	-2.0400	257+55.000000	1.0400



-L2-
PI Sta 259+65.64
Δ = 1° 20' 41.1" (RT)
D = 0° 13' 57.9"
L = 577.75'
T = 288.89'
R = 24,616.19'

50' 0 50' 100'

REVISIONS

8/17/99

22-MAR-2013 16:20
c:\div8_projects\rdu\randolph\I-5314\psh\dsn\I-5314-dsn_psh_22.dgn
psdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	23
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS
4-1-13

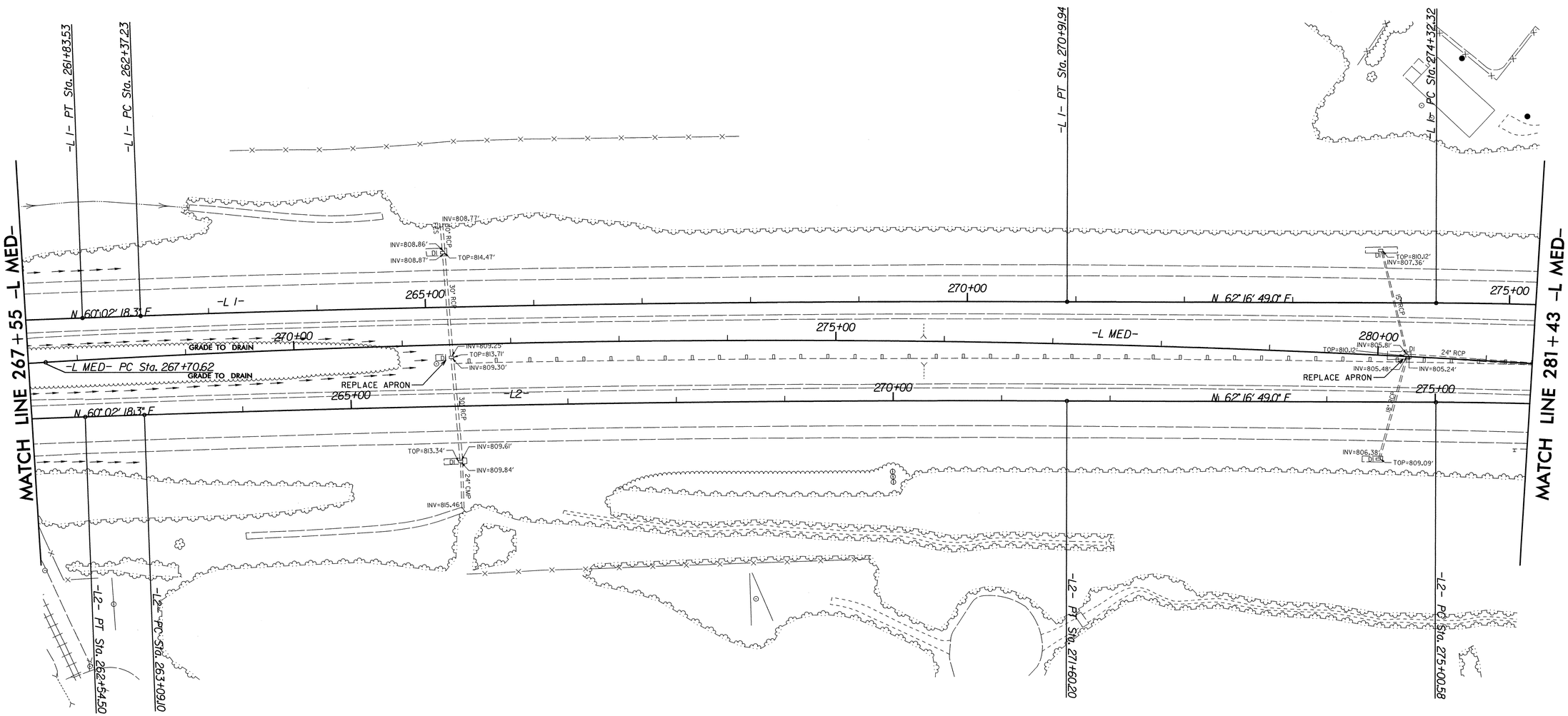
NORTH CAROLINA PROFESSIONAL SEAL 022009 ENGINEER W. GALEN CAMPBELL
4/1/13

NC GRID NAD 83/2001

-L I-
PI Sta 266+64.64
Δ = 2° 14' 30.6" (RT)
D = 0° 15' 44.2"
L = 854.72'
T = 427.41'
R = 21,844.35'

-L MED-
PI Sta 275+75.81
Δ = 8° 11' 12.6" (RT)
D = 0° 30' 33.3"
L = 1,607.65'
T = 805.19'
R = 11,251.17'

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED



-L2-
PI Sta 267+34.70
Δ = 2° 14' 30.6" (RT)
D = 0° 15' 48.3"
L = 851.11'
T = 425.61'
R = 21,752.08'

50' 0 50' 100'

REVISIONS

8/17/99

22-MAR-2013 16:20
r:\hydro\projects\rdu\randolph\I-5314\psh\dsn\I-5314-dsn_psh_23.dgn
pgdavis
$$$$ DGN@PW246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	24
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

NORTH CAROLINA PROFESSIONAL SEAL 022009 ENGINEER W. GALEN CAMPBELL

-L I-
PI Sta 280+84.80
△ = 17° 56' 29.7" (RT)
D = 1° 23' 10.4"
L = 1,294.29'
T = 652.48'
R = 4,133.26'

-L MED-
PI Sta 289+00.07
△ = 13° 16' 53.1" (RT)
D = 1° 16' 42.1"
L = 1,038.93'
T = 521.80'
R = 4,481.92'

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED

NC GRID NAD 83/2001

L 1 SUPER ELEVATION CHANGES RIGHT	
287+15.000000	-3.3500
287+75.000000	-2.0000
288+35.000000	-1.0000
288+95.000000	0.0000
289+55.000000	1.0000
290+15.000000	2.0000
290+75.000000	0.8100

L 1 SUPER ELEVATION CHANGES LEFT	
287+15.000000	2.5900
287+75.000000	2.0000
288+35.000000	1.0000
288+95.000000	0.0000
289+55.000000	-1.0000
290+15.000000	-2.0000
290+75.000000	-2.2300

293+20.44 -L MED-
287+15.00 -L1-
BEGIN WIDENING

293+18.84 -L MED-
287+55.00 -L2-
BEGIN WEDGING

MATCH LINE 281+43 -L MED-

MATCH LINE 295+31 -L MED-

-L I-

280+00

285+00

290+00

295+00

-L MED- PCC Sta. 283+78.27

-L MED- PT Sta. 294+17.20

-L2-

-L I- PT Sta. 287+26.61

-L2- PT Sta. 287+65.97

INV=793.48'

INV=799.33'

INV=775

30" RCP

15" RCP

42" RCP

24" BCP

INV=801.32'

INV=801.22'

INV=801.50'

TOP=806.62'

REPLACE APRON

INV=801.88'

TOP=804.53'

REPLACE APRON

INV=802.26'

TOP=804.92'

INV=782.38'

CONC HW

0335.0259 MATCH EXIST

0315.0279 MATCH EXIST

N 80°13'18.6" E

SEE CROSS SECTIONS FOR PAVED SHOULDER SUPER ELEVATIONS

SEE CROSS SECTIONS FOR PAVED SHOULDER SUPER ELEVATIONS

L 2 SUPER ELEVATION CHANGES LEFT	
287+55.000000	2.7900
288+15.000000	2.0000
288+75.000000	1.0000
289+35.000000	0.0000
289+95.000000	-1.0000
290+55.000000	-2.0000
291+15.000000	-0.7000

L 2 SUPER ELEVATION CHANGES RIGHT	
287+55.000000	-3.1500
288+15.000000	-2.0000
288+75.000000	-1.0000
289+35.000000	0.0000
289+95.000000	1.0000
290+55.000000	2.0000
291+15.000000	0.2200

-L2-
PI Sta 281+38.50
△ = 17° 56' 29.7" (RT)
D = 1° 25' 04.3"
L = 1,265.39'
T = 637.92'
R = 4,040.99'

50' 0 50' 100'

REVISIONS

8/17/99

22-MAR-2013 16:29
C:\pwworking\ardot\randolph\I-5314\psh\dsn\I-5314-dsn_psh_24.dgn
$DGNLIB\ARDOT_Plans_Sheets.pltcfg
ardot_ab

PROJECT REFERENCE NO.	SHEET NO.
I-5314	25
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

NORTH CAROLINA PROFESSIONAL SEAL 022090 ENGINEER W. GALEN CAUDILL

4-1-13

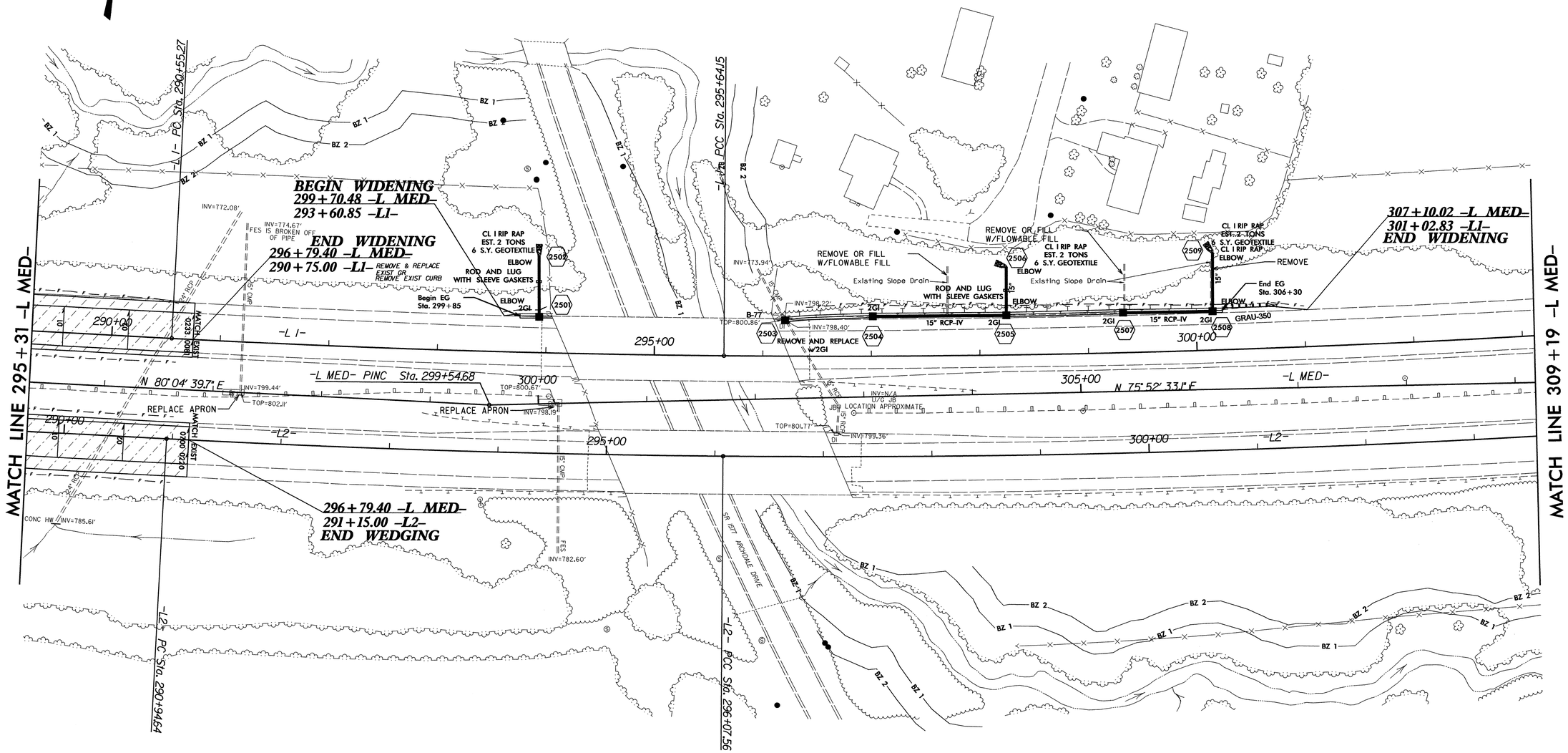
NC GRID NAD 83/2001

-L 1-
PI Sta 293+09.75
Δ = 2° 35' 19.2" (LT)
D = 0° 30' 31.3"
L = 508.88'
T = 254.48'
R = 11,263.19'

REMOVE EXISTING FUNNEL DRAINS, REMOVE PIPES OR FILL WITH FLOWABLE FILL AND STABILIZE SLOPE AS DIRECTED BY THE ENGINEER

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED

-L 1-
PI Sta 300+99.63
Δ = 5° 26' 36.2" (LT)
D = 0° 30' 31.2"
L = 1,070.16'
T = 535.48'
R = 11,264.20'



-L2-
PI Sta 293+51.14
Δ = 2° 35' 17.0" (LT)
D = 0° 30' 16.4"
L = 512.93'
T = 256.51'
R = 11,355.46'

-L2-
PI Sta 301+47.49
Δ = 5° 26' 38.4" (LT)
D = 0° 30' 16.3"
L = 1,079.04'
T = 539.92'
R = 11,356.40'

50' 0 50' 100'

REVISIONS

8/17/99

22-MAR-2013 16:20
r:\hydro\rdy\randolph\i-5314\psh\dsn\i-5314-dsn_psh_25.dgn
psdevis PC 1" h&c 80-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	26
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER G. DAVIS

4-1-13

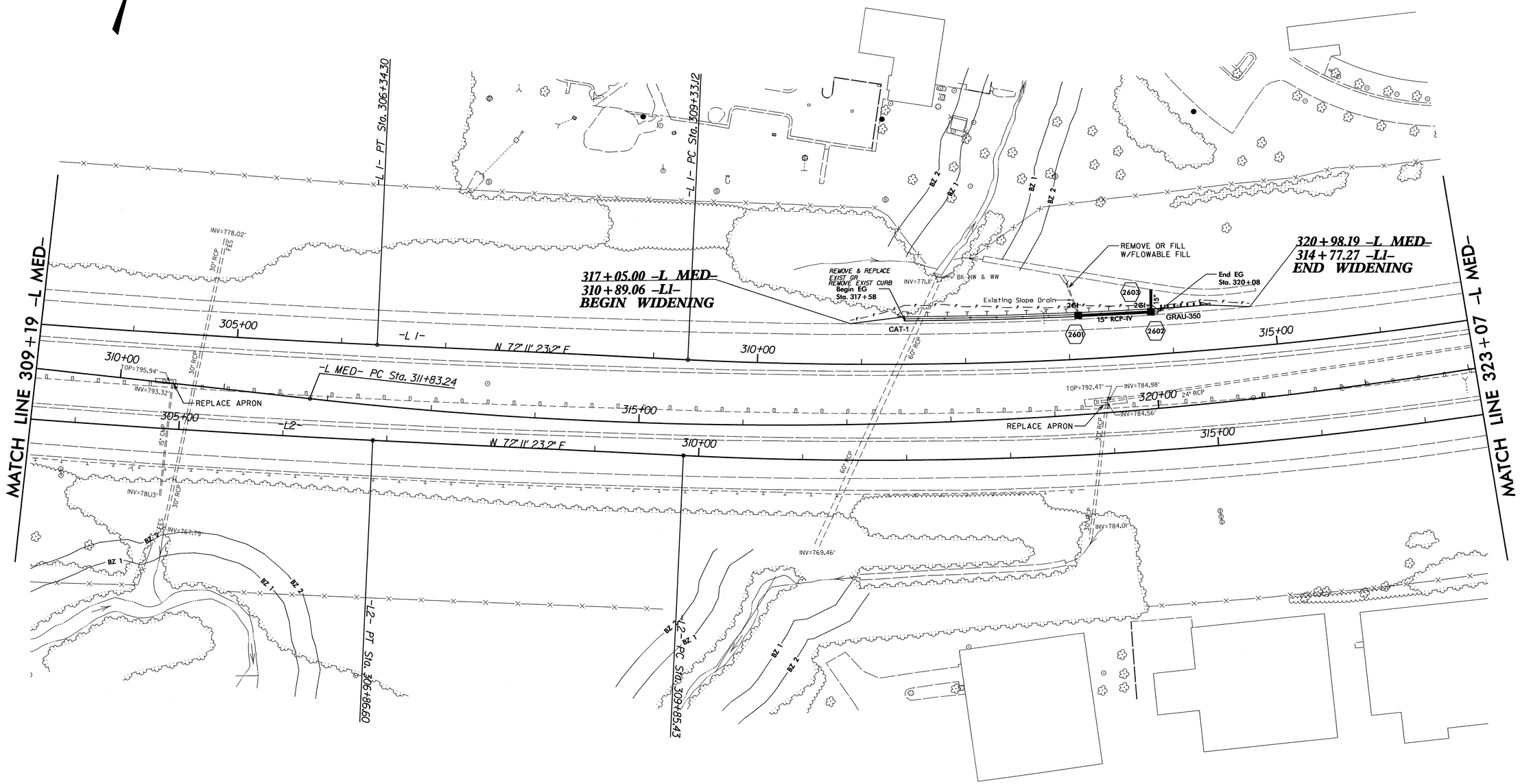
NORTH CAROLINA PROFESSIONAL SEAL 022090 ENGINEER W. GALEN CAIN

4/10/13

NC GRID NAD 83/2001

REMOVE EXISTING FUNNEL DRAINS, REMOVE PIPES OR FILL WITH FLOWABLE FILL AND STABILIZE SLOPE AS DIRECTED BY THE ENGINEER

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED



50' 0 50' 100'

REVISIONS

8/17/99

22-MAR-2013 16:20
C:\DVB_DPD_pcts\rdu\randolph\I-5314\psh\dsn\I-5314-dsn_psh_26.dgn
asdavis
A1 D8(40)-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	27
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

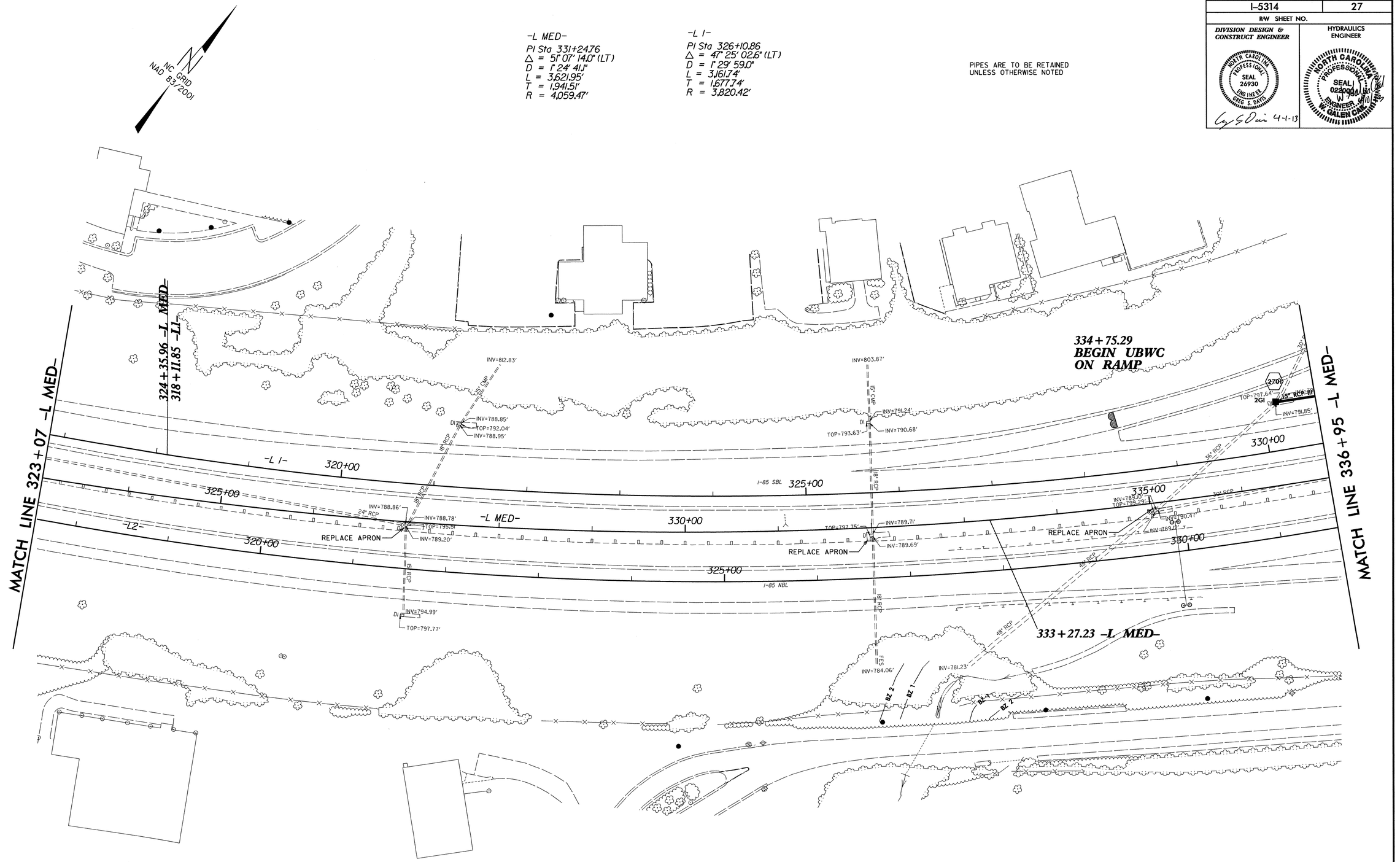
NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS
4-1-13

NORTH CAROLINA PROFESSIONAL SEAL 022090 ENGINEER W. GALEN CAMP
4/10

-L MED-
PI Sta 331+24.76
Δ = 51° 07' 14.0" (LT)
D = 1° 24' 41.1"
L = 3,621.95'
T = 1,941.51'
R = 4,059.47'

-L 1-
PI Sta 326+10.86
Δ = 47° 25' 02.6" (LT)
D = 1° 29' 59.0"
L = 3,161.74'
T = 1,677.74'
R = 3,820.42'

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED



-L2-
PI Sta 327+03.68
Δ = 41° 25' 02.6" (LT)
D = 1° 27' 51.7"
L = 3,238.10'
T = 1,718.26'
R = 3,912.69'

50' 0 50' 100'

REVISIONS

8/17/99

22-MAR-2013 16:20
c:\pw_temp\pw00008\ecs\rdu\rangdolph\i-5314\psh\dsn\i-5314-dsn_psh_27.dgn
ecs
dsdevis
A1 - 1 Dgn: ap246163

PROJECT REFERENCE NO.	SHEET NO.
I-5314	28
R/W SHEET NO.	

DIVISION DESIGN & CONSTRUCT ENGINEER

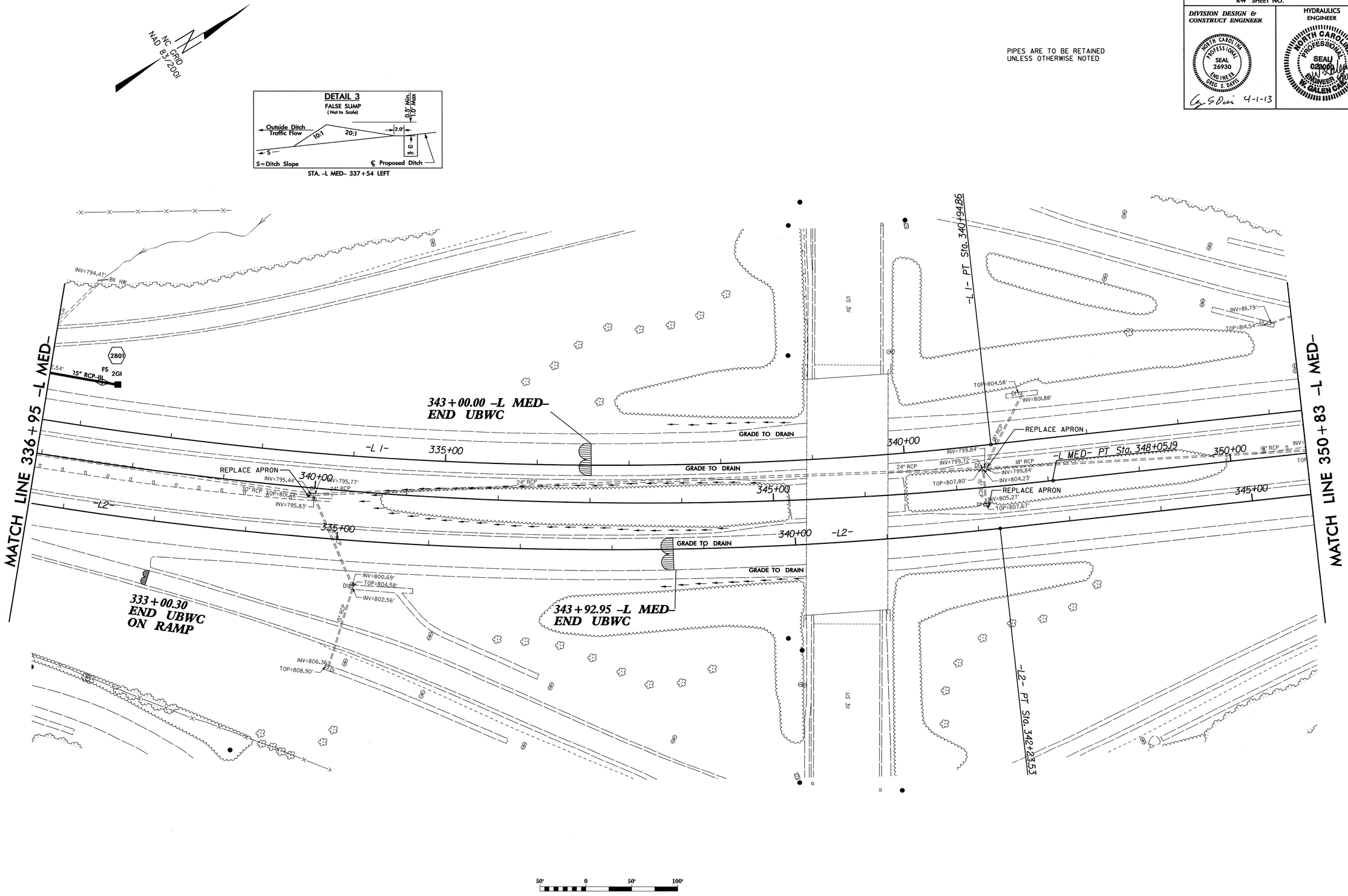
HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

NORTH CAROLINA PROFESSIONAL SEAL 022000 ENGINEER W. GALEN CAROLIN

4-1-13

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED



REVISIONS

8/17/99

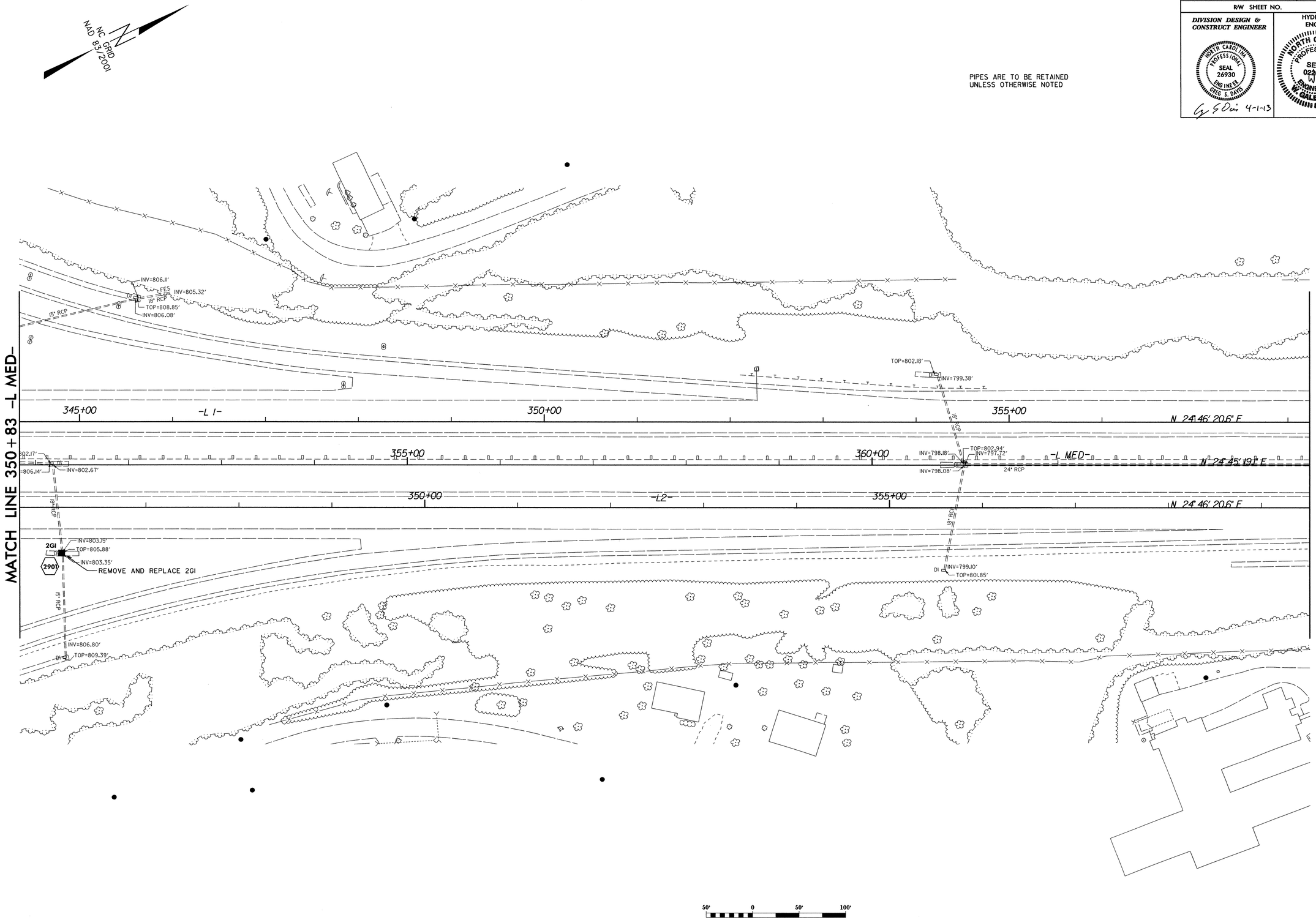
22-MAR-2013 16:20
C:\dlv8_projects\rdu\rendolph\I-5314\psh\dsn\I-5314-dsn_psh_28.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	29
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

NORTH CAROLINA PROFESSIONAL SEAL 022000 ENGINEER W. GALEN CAIL



REVISIONS

8/17/99

22-MAR-2013 16:20
c:\div8_projects\rdy\randolph\I-5314\psh\dsn\I-5314-dsn_psh_29.dgn
gsdavis A1 DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	30
R/W SHEET NO.	

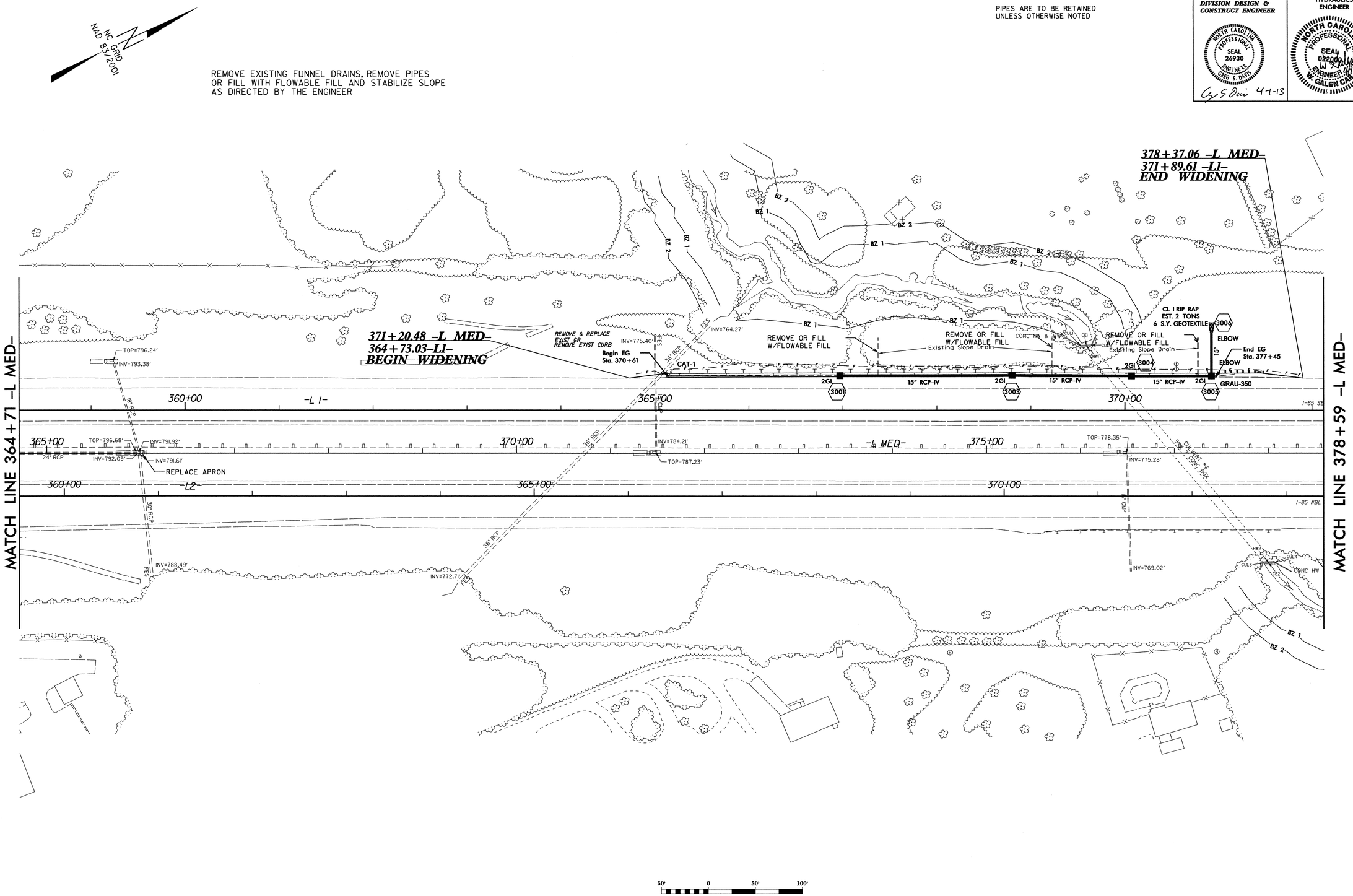
DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 022000 ENGINEER W. GALEN CAIL

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED



REVISIONS

8/17/99

22-MAR-2013 16:20
C:\div8_projects\rdy\randolph\I-5314\psh\dsn\I-5314-dsn_psh_30.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	31
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

NORTH CAROLINA PROFESSIONAL SEAL 022900 ENGINEER W. GALEN CAL

-L MED-
PI Sta 388+72.65
Δ = 17° 50' 06.0" (RT)
D = 1° 00' 00.0"
L = 1,783.49'
T = 899.02'
R = 5,729.54'

-L I-
PI Sta 384+73.11
Δ = 22° 18' 47.0" (RT)
D = 0° 59' 19.6"
L = 2,256.61'
T = 1,142.78'
R = 5,794.55'

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED

-L2-
PI Sta 385+83.58
Δ = 22° 18' 47.0" (RT)
D = 1° 00' 17.2"
L = 2,220.68'
T = 1,124.59'
R = 5,702.28'

50' 0 50' 100'

REVISIONS

8/17/99

22-MAR-2013 16:20
C:\div8_projects\rdu\randolph\I-5314\psh\dsn\I-5314-dsn_psh_31.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	32
R/W SHEET NO.	

DIVISION DESIGN & CONSTRUCT ENGINEER

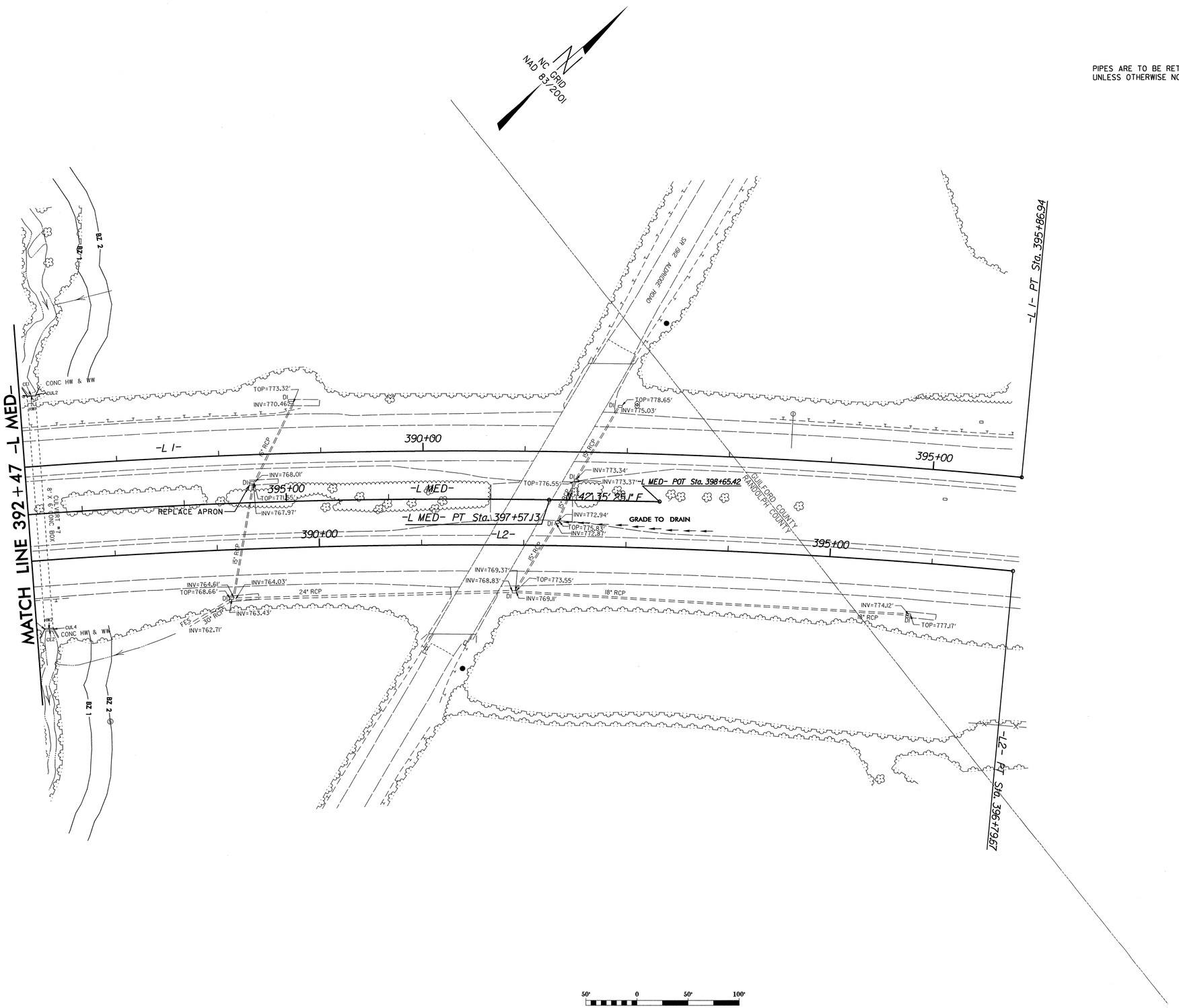
NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 022080 ENGINEER W. GALEN CAIL

PIPES ARE TO BE RETAINED UNLESS OTHERWISE NOTED



REVISIONS

8/17/99

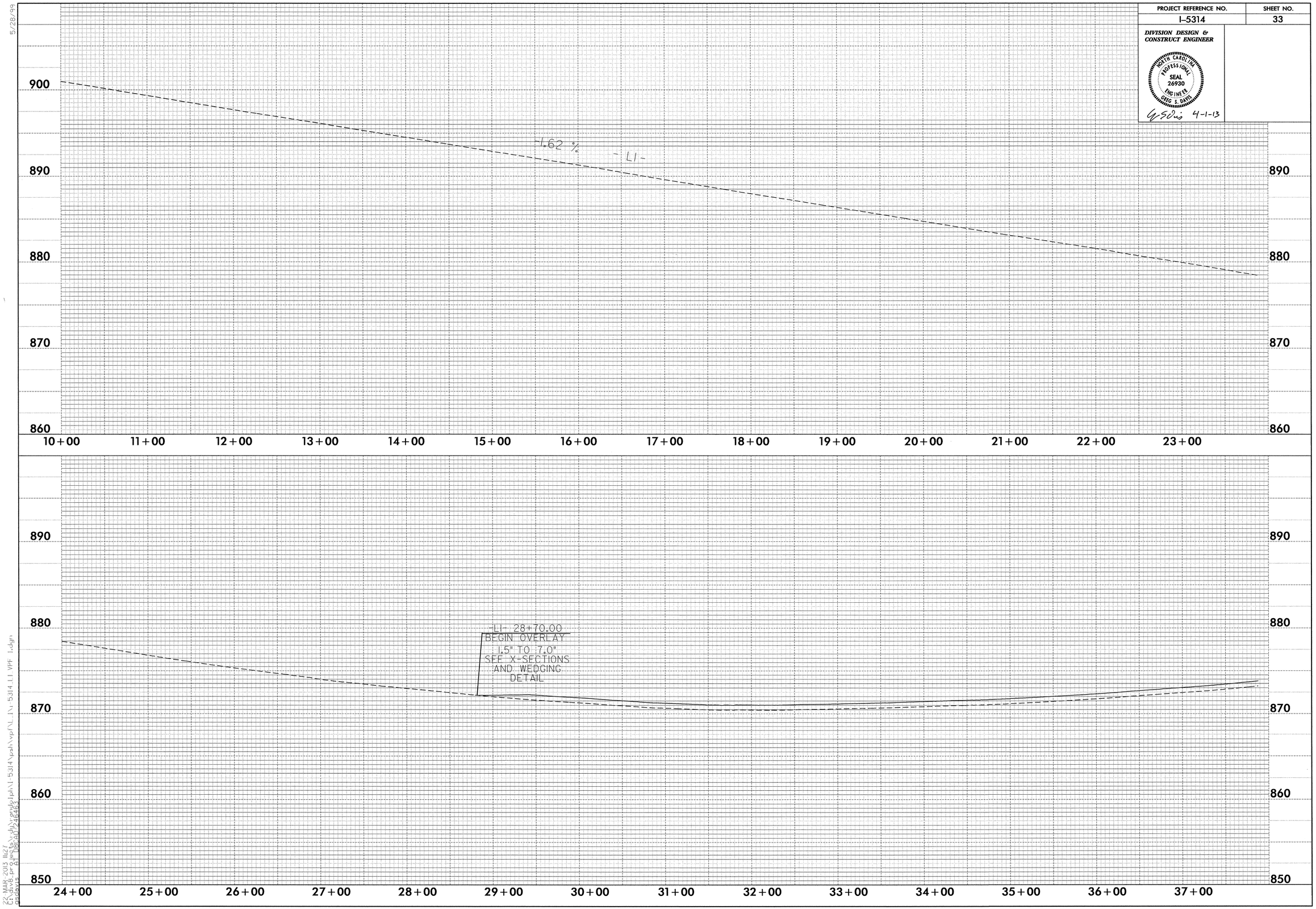
22-MAR-2013 16:20
C:\div8_projects\rdu\randolph\I-5314\psh\dsn\I-5314-dsn_psh_32.dgn
psdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	33

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

GSDavis 4-1-13



5/28/99

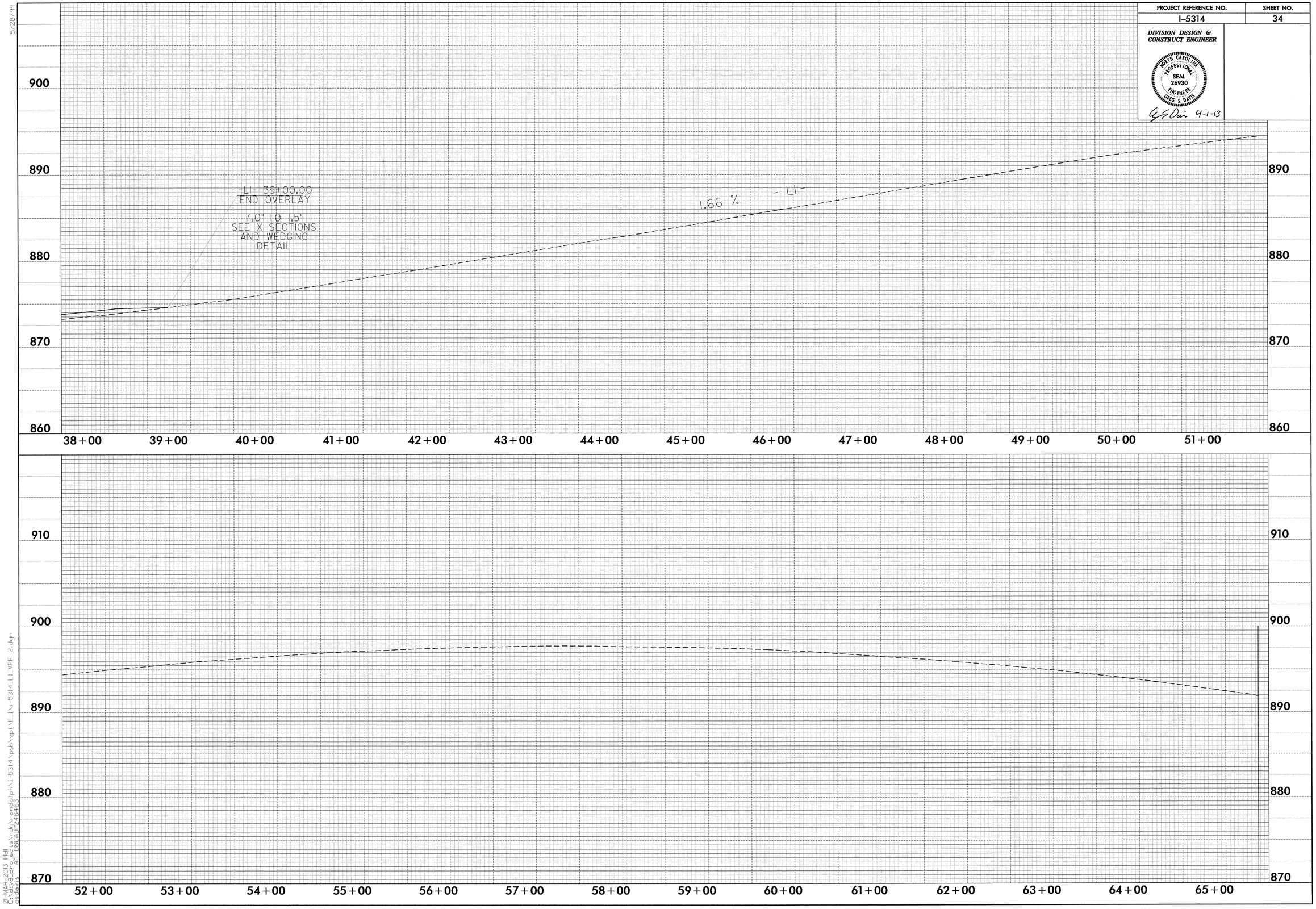
22-MAR-2013 11:27
C:\div8_projects\rdy\randolph\I-5314\psh\vpf\L_I\I-5314_L1_VPF_1.dgn
gsdavis A1 08CAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	34

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

21-MAR-2013 14:11
C:\div8_projects\rdy\rondolph\I-5314\psh\vpf\L_I\I-5314_L1_VPF 2.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	35
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

Elevation Profile Ll existing
Even 10 28+70.00 To 33+80.00

Elev at 28+70.00 = 872.1395
Elev at 28+80.00 = 872.0470
Elev at 28+90.00 = 871.9557
Elev at 29+00.00 = 871.8830
Elev at 29+10.00 = 871.7975
Elev at 29+20.00 = 871.7098
Elev at 29+30.00 = 871.6419
Elev at 29+40.00 = 871.5675
Elev at 29+50.00 = 871.5124
Elev at 29+60.00 = 871.4361
Elev at 29+70.00 = 871.3767
Elev at 29+80.00 = 871.3265
Elev at 29+90.00 = 871.2680
Elev at 30+00.00 = 871.1992
Elev at 30+10.00 = 871.1325
Elev at 30+20.00 = 871.0569
Elev at 30+30.00 = 870.9898
Elev at 30+40.00 = 870.9307
Elev at 30+50.00 = 870.8705
Elev at 30+60.00 = 870.7883
Elev at 30+70.00 = 870.7230
Elev at 30+80.00 = 870.6845
Elev at 30+90.00 = 870.6571
Elev at 31+00.00 = 870.6214
Elev at 31+10.00 = 870.5778
Elev at 31+20.00 = 870.5421
Elev at 31+30.00 = 870.4963
Elev at 31+40.00 = 870.4578
Elev at 31+50.00 = 870.4527
Elev at 31+60.00 = 870.4475
Elev at 31+70.00 = 870.4727
Elev at 31+80.00 = 870.4575
Elev at 31+90.00 = 870.4435
Elev at 32+00.00 = 870.4337
Elev at 32+10.00 = 870.4392
Elev at 32+20.00 = 870.4459
Elev at 32+30.00 = 870.4571
Elev at 32+40.00 = 870.4831
Elev at 32+50.00 = 870.5132
Elev at 32+60.00 = 870.5200
Elev at 32+70.00 = 870.5348
Elev at 32+80.00 = 870.5625
Elev at 32+90.00 = 870.5770
Elev at 33+00.00 = 870.6084
Elev at 33+10.00 = 870.6255
Elev at 33+20.00 = 870.6438
Elev at 33+30.00 = 870.6637
Elev at 33+40.00 = 870.6911
Elev at 33+50.00 = 870.7157
Elev at 33+60.00 = 870.7577
Elev at 33+70.00 = 870.7927
Elev at 33+80.00 = 870.8200

Elevation Profile Ll proposed
Even 10 28+70.00 To 33+80.00

Elev at 28+70.00 = 872.1395
Elev at 28+80.00 = 872.1442
Elev at 28+90.00 = 872.1501
Elev at 29+00.00 = 872.1746
Elev at 29+10.00 = 872.1842
Elev at 29+20.00 = 872.1938
Elev at 29+30.00 = 872.2249
Elev at 29+40.00 = 872.1543
Elev at 29+50.00 = 872.0943
Elev at 29+60.00 = 872.0194
Elev at 29+70.00 = 871.9600
Elev at 29+80.00 = 871.9098
Elev at 29+90.00 = 871.8499
Elev at 30+00.00 = 871.7825
Elev at 30+10.00 = 871.7158
Elev at 30+20.00 = 871.6403
Elev at 30+30.00 = 871.5731
Elev at 30+40.00 = 871.5140
Elev at 30+50.00 = 871.4532
Elev at 30+60.00 = 871.3716
Elev at 30+70.00 = 871.3063
Elev at 30+80.00 = 871.2678
Elev at 30+90.00 = 871.2404
Elev at 31+00.00 = 871.2041
Elev at 31+10.00 = 871.1629
Elev at 31+20.00 = 871.1253
Elev at 31+30.00 = 871.0856
Elev at 31+40.00 = 871.0411
Elev at 31+50.00 = 871.0360
Elev at 31+60.00 = 871.0419
Elev at 31+70.00 = 871.0560
Elev at 31+80.00 = 871.0408
Elev at 31+90.00 = 871.0333
Elev at 32+00.00 = 871.0170
Elev at 32+10.00 = 871.0225
Elev at 32+20.00 = 871.0292
Elev at 32+30.00 = 871.0404
Elev at 32+40.00 = 871.0664
Elev at 32+50.00 = 871.0985
Elev at 32+60.00 = 871.1033
Elev at 32+70.00 = 871.1181
Elev at 32+80.00 = 871.1392
Elev at 32+90.00 = 871.1603
Elev at 33+00.00 = 871.1917
Elev at 33+10.00 = 871.2088
Elev at 33+20.00 = 871.2271
Elev at 33+30.00 = 871.2577
Elev at 33+40.00 = 871.2789
Elev at 33+50.00 = 871.3027
Elev at 33+60.00 = 871.3410
Elev at 33+70.00 = 871.3760
Elev at 33+80.00 = 871.4033

Elevation Profile Ll existing
Even 10 33+90.00 To 39+00.00

Elev at 33+90.00 = 870.8505
Elev at 34+00.00 = 870.8898
Elev at 34+10.00 = 870.9127
Elev at 34+20.00 = 870.9582
Elev at 34+30.00 = 870.9723
Elev at 34+40.00 = 871.0026
Elev at 34+50.00 = 871.0183
Elev at 34+60.00 = 871.0469
Elev at 34+70.00 = 871.0998
Elev at 34+80.00 = 871.1351
Elev at 34+90.00 = 871.1913
Elev at 35+00.00 = 871.2363
Elev at 35+10.00 = 871.2906
Elev at 35+20.00 = 871.3377
Elev at 35+30.00 = 871.3904
Elev at 35+40.00 = 871.4535
Elev at 35+50.00 = 871.4975
Elev at 35+60.00 = 871.5579
Elev at 35+70.00 = 871.6183
Elev at 35+80.00 = 871.6846
Elev at 35+90.00 = 871.7401
Elev at 36+00.00 = 871.8113
Elev at 36+10.00 = 871.8743
Elev at 36+20.00 = 871.9548
Elev at 36+30.00 = 872.0457
Elev at 36+40.00 = 872.1101
Elev at 36+50.00 = 872.1849
Elev at 36+60.00 = 872.2479
Elev at 36+70.00 = 872.3296
Elev at 36+80.00 = 872.4002
Elev at 36+90.00 = 872.4692
Elev at 37+00.00 = 872.5308
Elev at 37+10.00 = 872.6017
Elev at 37+20.00 = 872.6816
Elev at 37+30.00 = 872.7717
Elev at 37+40.00 = 872.8526
Elev at 37+50.00 = 872.9532
Elev at 37+60.00 = 873.0554
Elev at 37+70.00 = 873.1453
Elev at 37+80.00 = 873.2383
Elev at 37+90.00 = 873.3389
Elev at 38+00.00 = 873.4378
Elev at 38+10.00 = 873.5280
Elev at 38+20.00 = 873.6302
Elev at 38+30.00 = 873.7378
Elev at 38+40.00 = 873.8512
Elev at 38+50.00 = 873.9800
Elev at 38+60.00 = 874.1020
Elev at 38+70.00 = 874.2167
Elev at 38+80.00 = 874.3280
Elev at 38+90.00 = 874.4396
Elev at 39+00.00 = 874.5570

Elevation Profile Ll proposed
Even 10 33+90.00 To 39+00.00

Elev at 33+90.00 = 871.4374
Elev at 34+00.00 = 871.4670
Elev at 34+10.00 = 871.4942
Elev at 34+20.00 = 871.5415
Elev at 34+30.00 = 871.5555
Elev at 34+40.00 = 871.5834
Elev at 34+50.00 = 871.6016
Elev at 34+60.00 = 871.6301
Elev at 34+70.00 = 871.6823
Elev at 34+80.00 = 871.7184
Elev at 34+90.00 = 871.7757
Elev at 35+00.00 = 871.8225
Elev at 35+10.00 = 871.8773
Elev at 35+20.00 = 871.9206
Elev at 35+30.00 = 871.9737
Elev at 35+40.00 = 872.0367
Elev at 35+50.00 = 872.0808
Elev at 35+60.00 = 872.1412
Elev at 35+70.00 = 872.2016
Elev at 35+80.00 = 872.2679
Elev at 35+90.00 = 872.3234
Elev at 36+00.00 = 872.3946
Elev at 36+10.00 = 872.4575
Elev at 36+20.00 = 872.5381
Elev at 36+30.00 = 872.6289
Elev at 36+40.00 = 872.6933
Elev at 36+50.00 = 872.7681
Elev at 36+60.00 = 872.8304
Elev at 36+70.00 = 872.9141
Elev at 36+80.00 = 872.9777
Elev at 36+90.00 = 873.0454
Elev at 37+00.00 = 873.1141
Elev at 37+10.00 = 873.1890
Elev at 37+20.00 = 873.2652
Elev at 37+30.00 = 873.3550
Elev at 37+40.00 = 873.4342
Elev at 37+50.00 = 873.5365
Elev at 37+60.00 = 873.6387
Elev at 37+70.00 = 873.7313
Elev at 37+80.00 = 873.8216
Elev at 37+90.00 = 873.9222
Elev at 38+00.00 = 874.0211
Elev at 38+10.00 = 874.1113
Elev at 38+20.00 = 874.2203
Elev at 38+30.00 = 874.3220
Elev at 38+40.00 = 874.4379
Elev at 38+50.00 = 874.4664
Elev at 38+60.00 = 874.4914
Elev at 38+70.00 = 874.5091
Elev at 38+80.00 = 874.5235
Elev at 38+90.00 = 874.5368
Elev at 39+00.00 = 874.5583

NOTE:
ELEVATIONS DO NOT INCLUDE 5/8 INCH UBWC COURSE

REVISIONS

8/17/99

21-MAR-2013 14:11
c:\dgn8-projects\rdu\randolph\i-5314\psh\vpf\l1 & l2 cl_vpf_report.dgn
osdavis at bdrdnr246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	36

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

5/28/99

22-MAR-2013 11:27
C:\div8_projects\rdy\randolph\I-5314\psh\vpf\L_1\I-5314_L1_VPF_3.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	37
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

Elevation Profile L1existing
Even 10 72+40.00 To 76+40.00

Elev at 72+40.00 = 878.1638
Elev at 72+50.00 = 877.9422
Elev at 72+60.00 = 877.7245
Elev at 72+70.00 = 877.5178
Elev at 72+80.00 = 877.3218
Elev at 72+90.00 = 877.1114
Elev at 73+00.00 = 876.8792
Elev at 73+10.00 = 876.6431
Elev at 73+20.00 = 876.4127
Elev at 73+30.00 = 876.1768
Elev at 73+40.00 = 875.9532
Elev at 73+50.00 = 875.7105
Elev at 73+60.00 = 875.4772
Elev at 73+70.00 = 875.2552
Elev at 73+80.00 = 875.0268
Elev at 73+90.00 = 874.8133
Elev at 74+00.00 = 874.5711
Elev at 74+10.00 = 874.3306
Elev at 74+20.00 = 874.0974
Elev at 74+30.00 = 873.8706
Elev at 74+40.00 = 873.6330
Elev at 74+50.00 = 873.4210
Elev at 74+60.00 = 873.1829
Elev at 74+70.00 = 872.9473
Elev at 74+80.00 = 872.7121
Elev at 74+90.00 = 872.4845
Elev at 75+00.00 = 872.2568
Elev at 75+10.00 = 872.0273
Elev at 75+20.00 = 871.8063
Elev at 75+30.00 = 871.5718
Elev at 75+40.00 = 871.3560
Elev at 75+50.00 = 871.1404
Elev at 75+60.00 = 870.9207
Elev at 75+70.00 = 870.7168
Elev at 75+80.00 = 870.5081
Elev at 75+90.00 = 870.2761
Elev at 76+00.00 = 870.0501
Elev at 76+10.00 = 869.8257
Elev at 76+20.00 = 869.6088
Elev at 76+30.00 = 869.3741
Elev at 76+40.00 = 869.1426

Elevation Profile L1proposed
Even 10 72+40.00 To 76+40.00

Elev at 72+40.00 = 878.1612
Elev at 72+50.00 = 878.0162
Elev at 72+60.00 = 877.8634
Elev at 72+70.00 = 877.7261
Elev at 72+80.00 = 877.5994
Elev at 72+90.00 = 877.4587
Elev at 73+00.00 = 877.2959
Elev at 73+10.00 = 877.0598
Elev at 73+20.00 = 876.8294
Elev at 73+30.00 = 876.5935
Elev at 73+40.00 = 876.3699
Elev at 73+50.00 = 876.1271
Elev at 73+60.00 = 875.8939
Elev at 73+70.00 = 875.6719
Elev at 73+80.00 = 875.4435
Elev at 73+90.00 = 875.2300
Elev at 74+00.00 = 874.9874
Elev at 74+10.00 = 874.7473
Elev at 74+20.00 = 874.5161
Elev at 74+30.00 = 874.2873
Elev at 74+40.00 = 874.0515
Elev at 74+50.00 = 873.8384
Elev at 74+60.00 = 873.6015
Elev at 74+70.00 = 873.3638
Elev at 74+80.00 = 873.1288
Elev at 74+90.00 = 872.8984
Elev at 75+00.00 = 872.6735
Elev at 75+10.00 = 872.4440
Elev at 75+20.00 = 872.2212
Elev at 75+30.00 = 871.9885
Elev at 75+40.00 = 871.7727
Elev at 75+50.00 = 871.5155
Elev at 75+60.00 = 871.2540
Elev at 75+70.00 = 871.0086
Elev at 75+80.00 = 870.7582
Elev at 75+90.00 = 870.4845
Elev at 76+00.00 = 870.2168
Elev at 76+10.00 = 869.9507
Elev at 76+20.00 = 869.6921
Elev at 76+30.00 = 869.4197
Elev at 76+40.00 = 869.1507

NOTE:
ELEVATIONS DO NOT INCLUDE 5/8 INCH UBWC COURSE

REVISIONS

8/17/99

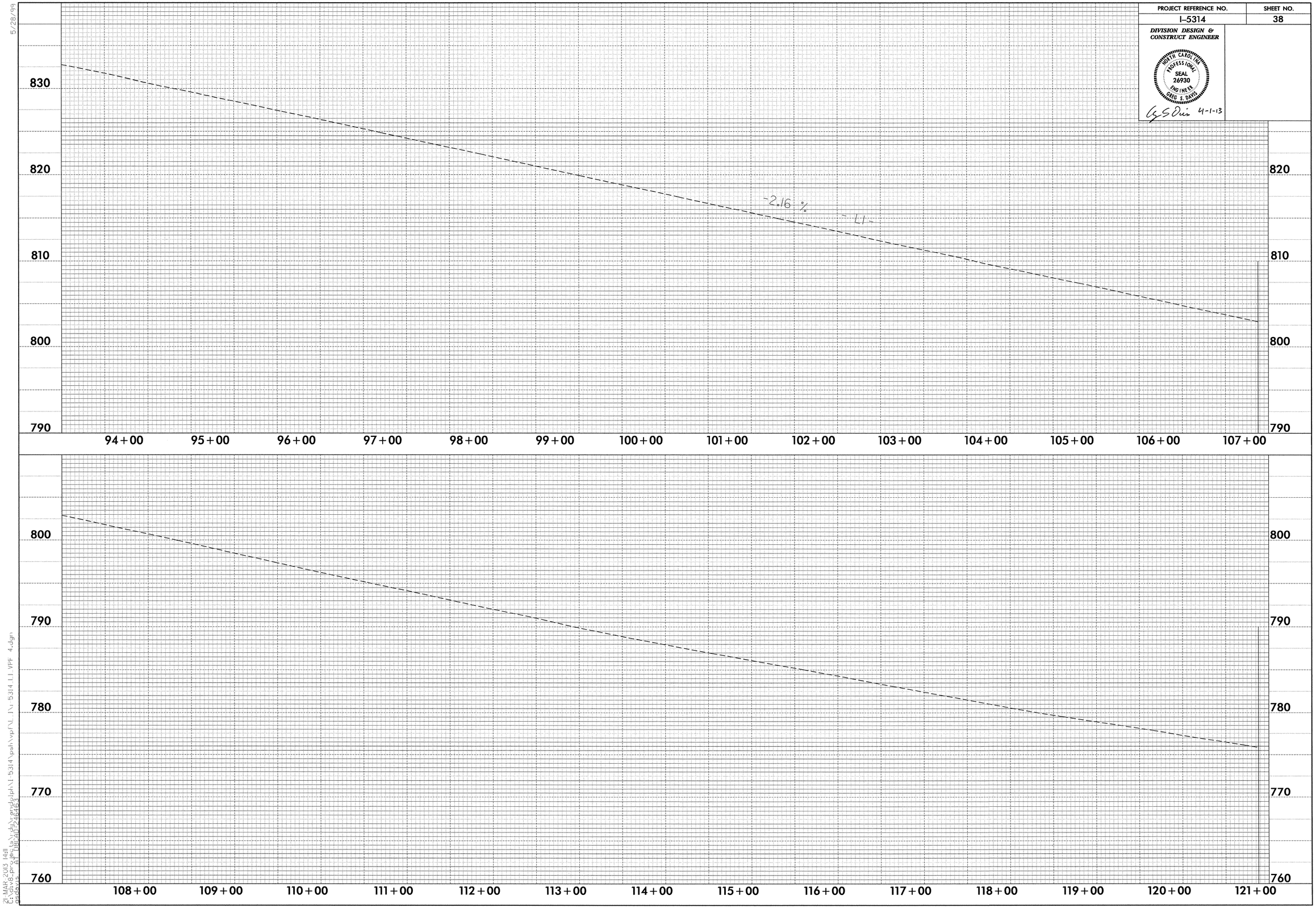
21-MAR-2013 14:11
C:\div8_projects\rdu\randolph\I-5314\psh\vpf\L1 & L2 cl_vpf_report.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	38

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

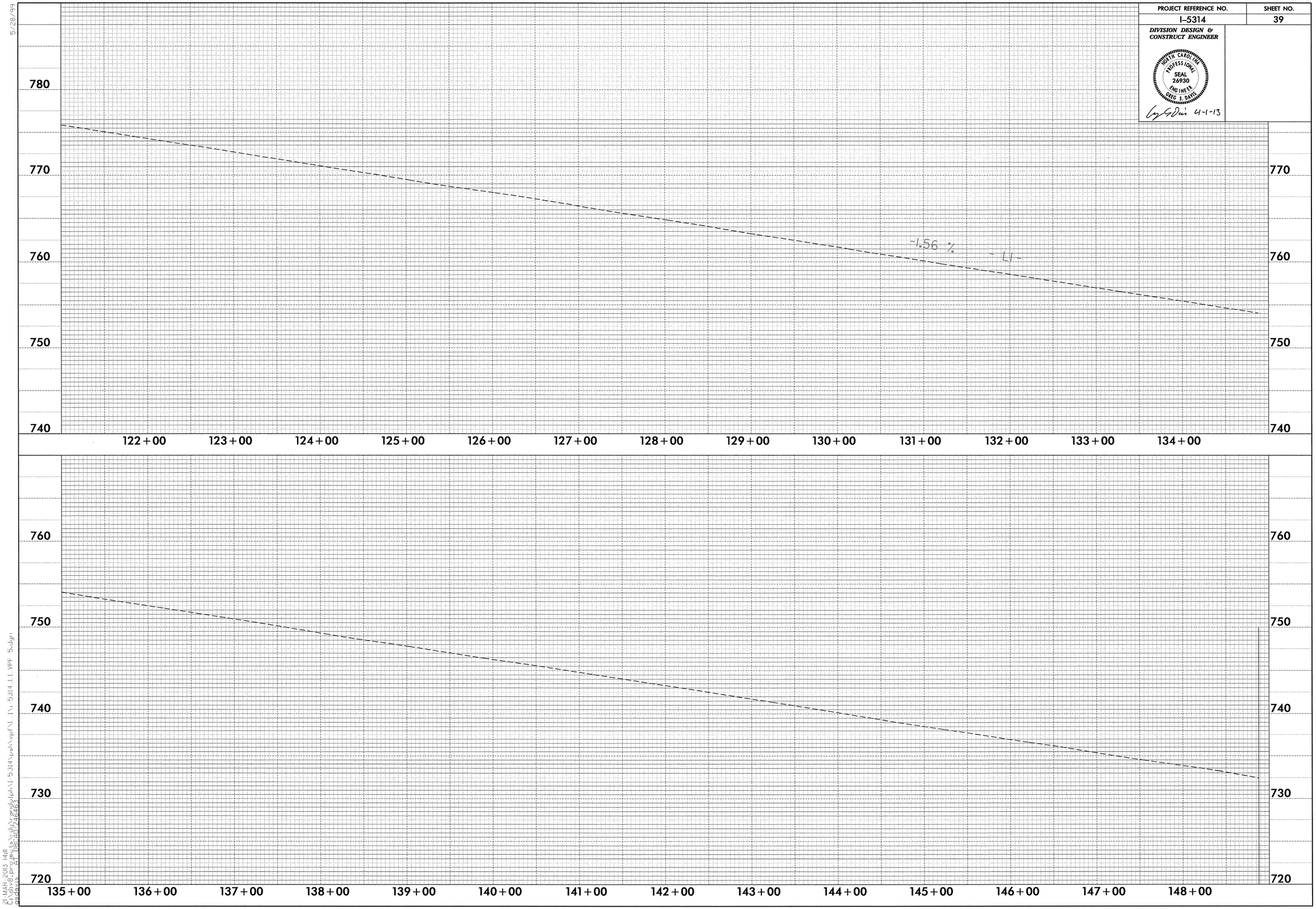
21-MAR-2013 14:11
C:\div8_projects\rdy\rendolph\I-5314\psh\vpf\L_I\I-5314_L1_VPF_4.dgn
gsdavis AT 08CAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	39

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

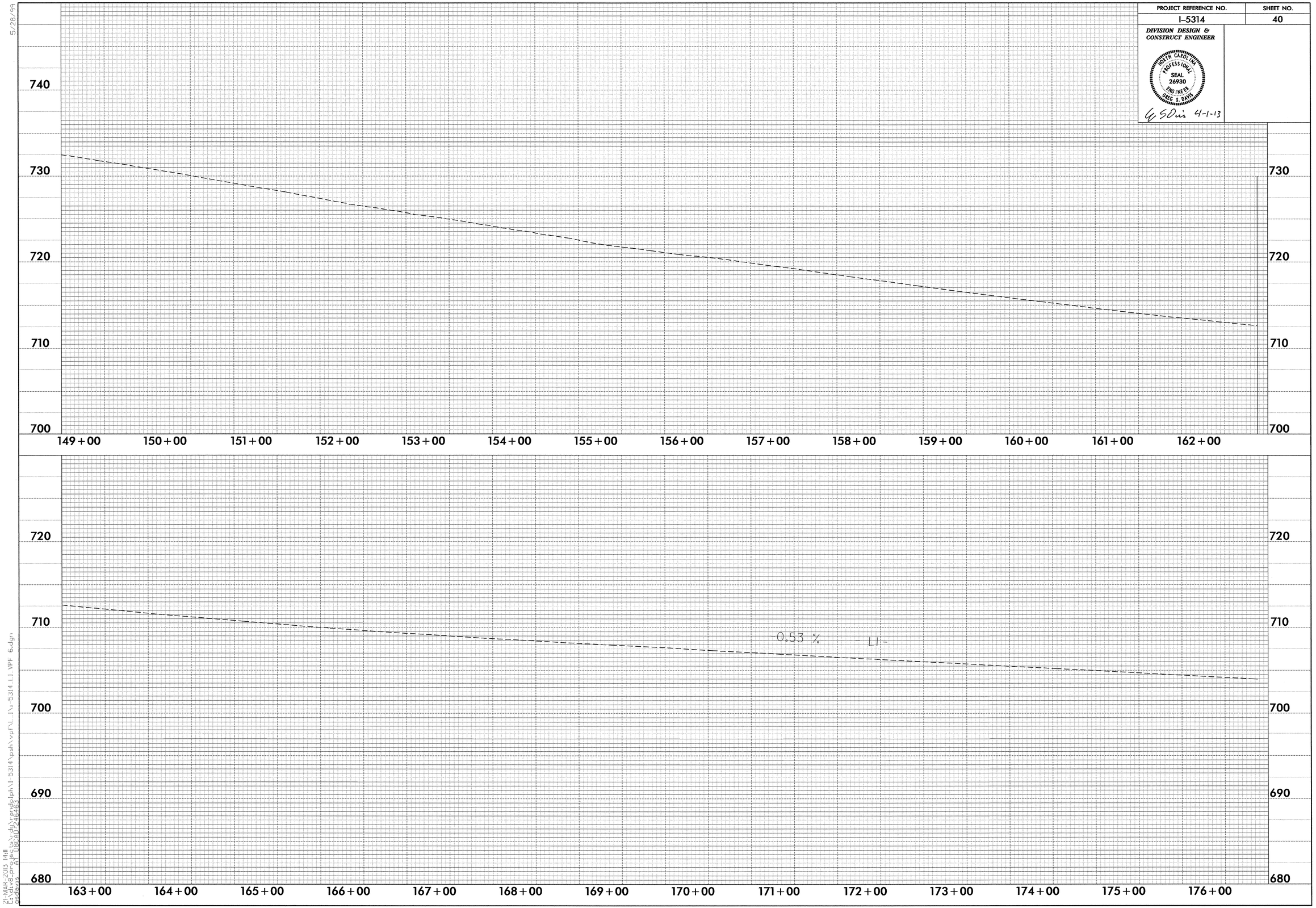
21-MAR-2013 14:11
C:\div8_projects\rdy\randolph\I-5314\psh\vpf\L_1\I-5314_L1_VPF_5.dgn
gsdavis AT 08CAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	40

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

G S Davis 4-1-13



5/28/99

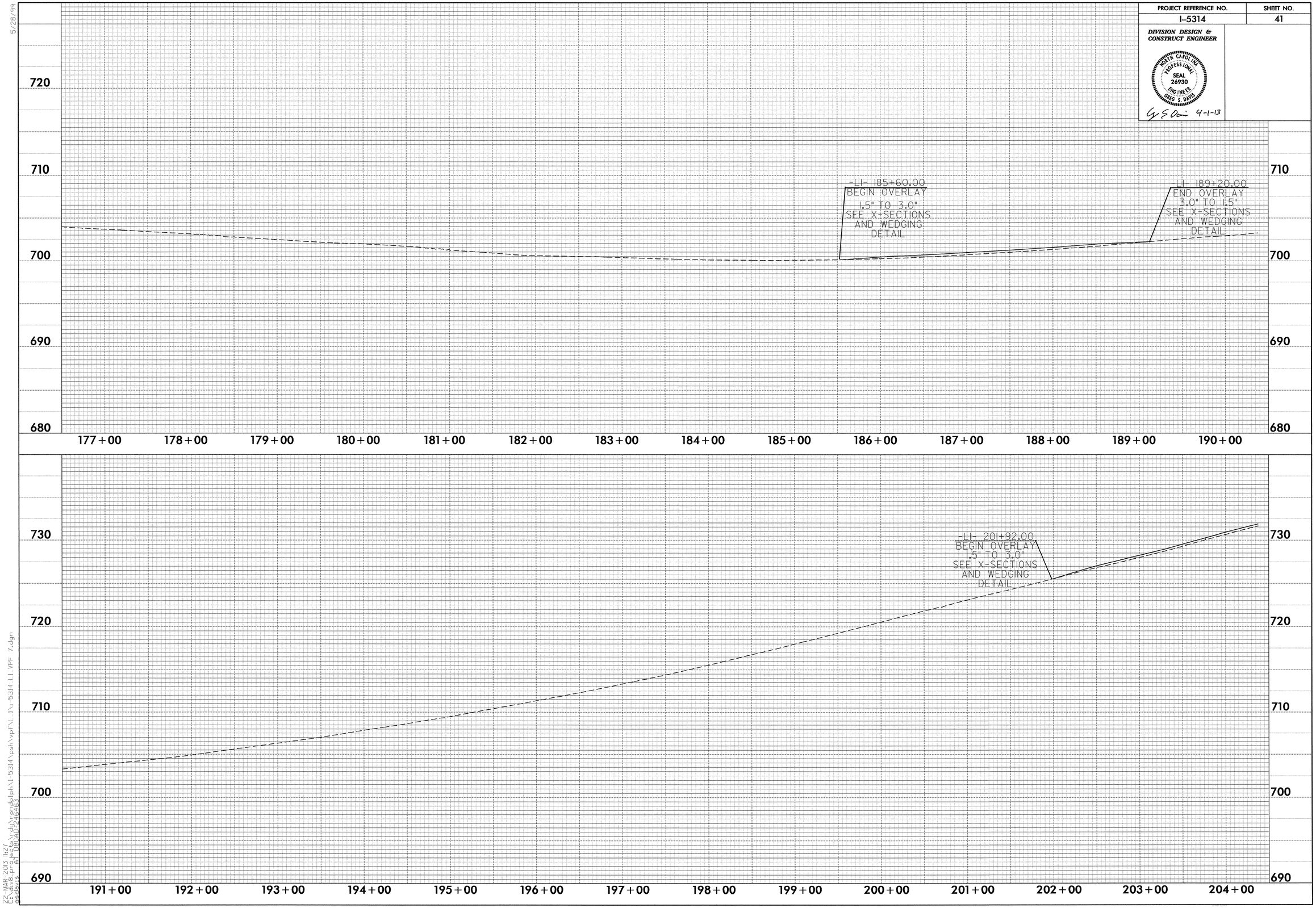
21-MAR-2013 14:11
C:\dv8_projects\rdy\randolph\I-5314\psh\vpf\L_I\I-5314_L1_VPF_6.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	41

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

G S Davis 4-1-13



5/28/99

22-MAR-2013 11:27
C:\div8_projects\rdy\rondolph\I-5314\psh\vpf\L_1\I-5314_L1_VPF_7.dgn
gsdavis A1 D8CAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	42
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

Elevation Profile L1existing Even 10 185+60.00 To 189+20.00

Elev at 185+60.00 = 700.1385
Elev at 185+70.00 = 700.1554
Elev at 185+80.00 = 700.1812
Elev at 185+90.00 = 700.2072
Elev at 186+00.00 = 700.2395
Elev at 186+10.00 = 700.2587
Elev at 186+20.00 = 700.2950
Elev at 186+30.00 = 700.3210
Elev at 186+40.00 = 700.3659
Elev at 186+50.00 = 700.4043
Elev at 186+60.00 = 700.4489
Elev at 186+70.00 = 700.4934
Elev at 186+80.00 = 700.5440
Elev at 186+90.00 = 700.6097
Elev at 187+00.00 = 700.6597
Elev at 187+10.00 = 700.7262
Elev at 187+20.00 = 700.7825
Elev at 187+30.00 = 700.8276
Elev at 187+40.00 = 700.8773
Elev at 187+50.00 = 700.9284
Elev at 187+60.00 = 700.9898
Elev at 187+70.00 = 701.0576
Elev at 187+80.00 = 701.1268
Elev at 187+90.00 = 701.1897
Elev at 188+00.00 = 701.2581
Elev at 188+10.00 = 701.3236
Elev at 188+20.00 = 701.4000
Elev at 188+30.00 = 701.4737
Elev at 188+40.00 = 701.5440
Elev at 188+50.00 = 701.6184
Elev at 188+60.00 = 701.6996
Elev at 188+70.00 = 701.7976
Elev at 188+80.00 = 701.8924
Elev at 188+90.00 = 701.9787
Elev at 189+00.00 = 702.0687
Elev at 189+10.00 = 702.1483
Elev at 189+20.00 = 702.2349

Elevation Profile L1proposed Even 10 185+60.00 To 189+20.00

Elev at 185+60.00 = 700.1385
Elev at 185+70.00 = 700.1971
Elev at 185+80.00 = 700.2645
Elev at 185+90.00 = 700.3322
Elev at 186+00.00 = 700.4062
Elev at 186+10.00 = 700.4670
Elev at 186+20.00 = 700.5449
Elev at 186+30.00 = 700.5710
Elev at 186+40.00 = 700.6159
Elev at 186+50.00 = 700.6543
Elev at 186+60.00 = 700.6989
Elev at 186+70.00 = 700.7434
Elev at 186+80.00 = 700.7940
Elev at 186+90.00 = 700.8597
Elev at 187+00.00 = 700.9097
Elev at 187+10.00 = 700.9762
Elev at 187+20.00 = 701.0325
Elev at 187+30.00 = 701.0776
Elev at 187+40.00 = 701.1273
Elev at 187+50.00 = 701.1784
Elev at 187+60.00 = 701.2398
Elev at 187+70.00 = 701.3076
Elev at 187+80.00 = 701.3768
Elev at 187+90.00 = 701.4397
Elev at 188+00.00 = 701.5081
Elev at 188+10.00 = 701.5736
Elev at 188+20.00 = 701.6500
Elev at 188+30.00 = 701.7237
Elev at 188+40.00 = 701.7940
Elev at 188+50.00 = 701.8684
Elev at 188+60.00 = 701.9496
Elev at 188+70.00 = 702.0059
Elev at 188+80.00 = 702.0591
Elev at 188+90.00 = 702.1037
Elev at 189+00.00 = 702.1520
Elev at 189+10.00 = 702.1900
Elev at 189+20.00 = 702.2348

Elevation Profile L1existing Increment 10.000000 201+92.00 To 205+52.00

Elev at 201+92.00 = 725.4808
Elev at 202+02.00 = 725.7375
Elev at 202+12.00 = 726.0120
Elev at 202+22.00 = 726.2642
Elev at 202+32.00 = 726.5225
Elev at 202+42.00 = 726.7728
Elev at 202+52.00 = 726.9966
Elev at 202+62.00 = 727.2358
Elev at 202+72.00 = 727.4627
Elev at 202+82.00 = 727.7042
Elev at 202+92.00 = 727.9439
Elev at 203+02.00 = 728.1824
Elev at 203+12.00 = 728.4181
Elev at 203+22.00 = 728.6683
Elev at 203+32.00 = 728.9355
Elev at 203+42.00 = 729.2040
Elev at 203+52.00 = 729.4920
Elev at 203+62.00 = 729.7780
Elev at 203+72.00 = 730.0626
Elev at 203+82.00 = 730.3380
Elev at 203+92.00 = 730.6023
Elev at 204+02.00 = 730.8565
Elev at 204+12.00 = 731.1121
Elev at 204+22.00 = 731.3674
Elev at 204+32.00 = 731.6199
Elev at 204+42.00 = 731.8696
Elev at 204+52.00 = 732.1194
Elev at 204+62.00 = 732.3690
Elev at 204+72.00 = 732.6283
Elev at 204+82.00 = 732.8683
Elev at 204+92.00 = 733.1180
Elev at 205+02.00 = 733.3692
Elev at 205+12.00 = 733.6361
Elev at 205+22.00 = 733.8846
Elev at 205+32.00 = 734.1291
Elev at 205+42.00 = 734.3851
Elev at 205+52.00 = 734.6263

Elevation Profile L1proposed Increment 10.000000 201+92.00 To 205+52.00

Elev at 201+92.00 = 725.4808
Elev at 202+02.00 = 725.7791
Elev at 202+12.00 = 726.0954
Elev at 202+22.00 = 726.3919
Elev at 202+32.00 = 726.6891
Elev at 202+42.00 = 726.9796
Elev at 202+52.00 = 727.2460
Elev at 202+62.00 = 727.4860
Elev at 202+72.00 = 727.7127
Elev at 202+82.00 = 727.9522
Elev at 202+92.00 = 728.1939
Elev at 203+02.00 = 728.4322
Elev at 203+12.00 = 728.6681
Elev at 203+22.00 = 728.9183
Elev at 203+32.00 = 729.1820
Elev at 203+42.00 = 729.4540
Elev at 203+52.00 = 729.7365
Elev at 203+62.00 = 730.0280
Elev at 203+72.00 = 730.3144
Elev at 203+82.00 = 730.5880
Elev at 203+92.00 = 730.8517
Elev at 204+02.00 = 731.1065
Elev at 204+12.00 = 731.3621
Elev at 204+22.00 = 731.6242
Elev at 204+32.00 = 731.8699
Elev at 204+42.00 = 732.1196
Elev at 204+52.00 = 732.3694
Elev at 204+62.00 = 732.6190
Elev at 204+72.00 = 732.8783
Elev at 204+82.00 = 733.1183
Elev at 204+92.00 = 733.3668
Elev at 205+02.00 = 733.5775
Elev at 205+12.00 = 733.8028
Elev at 205+22.00 = 734.0068
Elev at 205+32.00 = 734.2206
Elev at 205+42.00 = 734.4248
Elev at 205+52.00 = 734.6263

NOTE:
ELEVATIONS DO NOT INCLUDE 5/8 INCH UBWC COURSE

REVISIONS

8/17/99

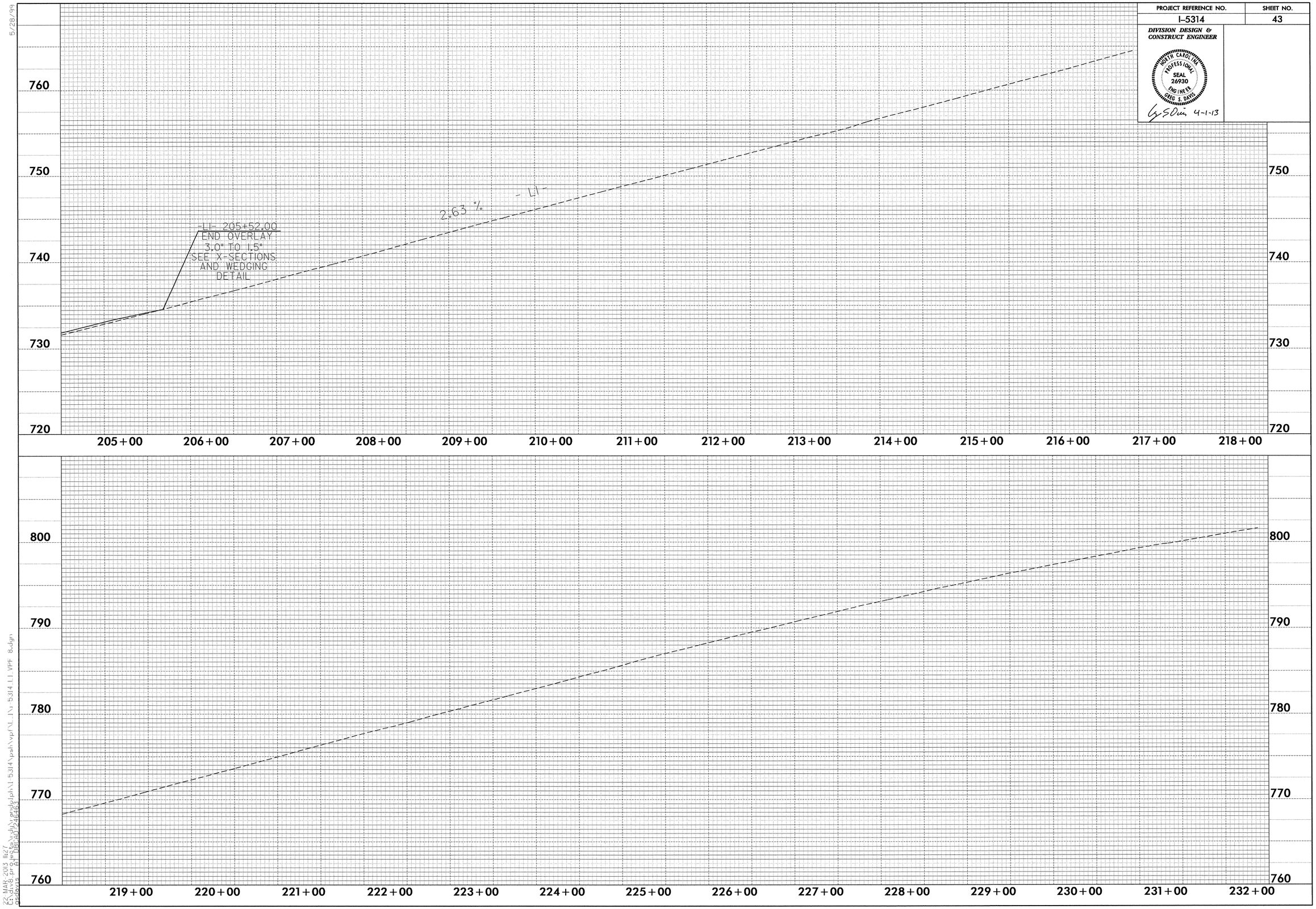
21-MAR-2013 14:11
c:\div8-projects\randolph\I-5314\psh\vpf\L1 & L2 cl_vpf_report.dgn
osdavis AT DBRDP246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	43

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

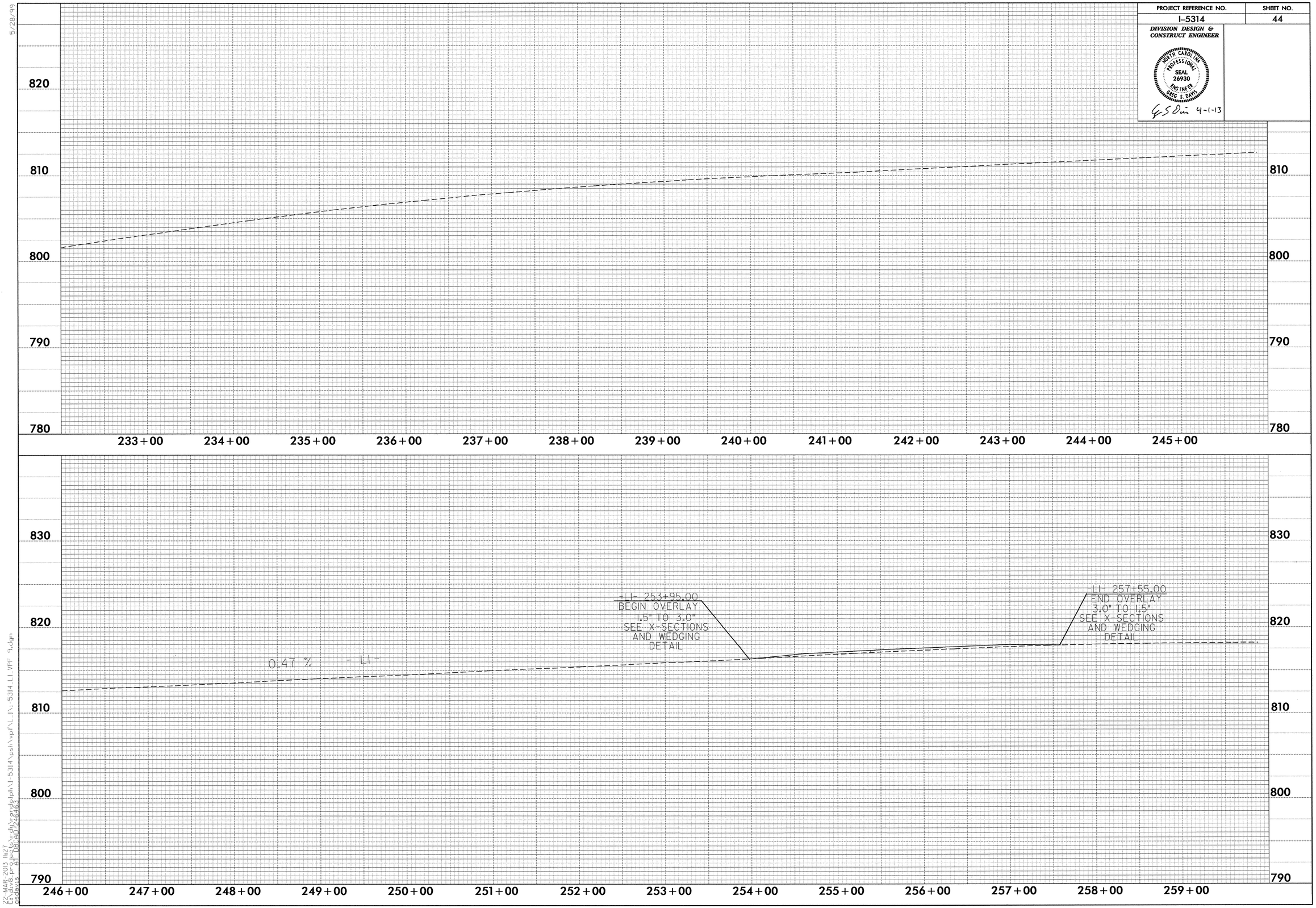
22-MAR-2013 11:27
C:\div8.projects\dj\randolph\I-5314\psh\vpf\L_1\I-5314_L1_VPF_8.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	44

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

G S Davis 4-1-13



5/28/99

22-MAR-2013 11:27
C:\div8_projects\rdj\randolph\I-5314\psh\vpf\L_I\I-5314_L1_VPF_9.dgn
gsdavis A1 D8CAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	45
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

Elevation Profile L1existing
Increment 10.000000 253+95.00 To 257+55.00

Elev at 253+95.00 = 816.3431
Elev at 254+05.00 = 816.4008
Elev at 254+15.00 = 816.4485
Elev at 254+25.00 = 816.5044
Elev at 254+35.00 = 816.5557
Elev at 254+45.00 = 816.6134
Elev at 254+55.00 = 816.6697
Elev at 254+65.00 = 816.7325
Elev at 254+75.00 = 816.7862
Elev at 254+85.00 = 816.8291
Elev at 254+95.00 = 816.8755
Elev at 255+05.00 = 816.9140
Elev at 255+15.00 = 816.9695
Elev at 255+25.00 = 817.0102
Elev at 255+35.00 = 817.0525
Elev at 255+45.00 = 817.1098
Elev at 255+55.00 = 817.1489
Elev at 255+65.00 = 817.2030
Elev at 255+75.00 = 817.2441
Elev at 255+85.00 = 817.2765
Elev at 255+95.00 = 817.3127
Elev at 256+05.00 = 817.3454
Elev at 256+15.00 = 817.3882
Elev at 256+25.00 = 817.4270
Elev at 256+35.00 = 817.4666
Elev at 256+45.00 = 817.5077
Elev at 256+55.00 = 817.5445
Elev at 256+65.00 = 817.5813
Elev at 256+75.00 = 817.6142
Elev at 256+85.00 = 817.6648
Elev at 256+95.00 = 817.7042
Elev at 257+05.00 = 817.7348
Elev at 257+15.00 = 817.7734
Elev at 257+25.00 = 817.8012
Elev at 257+35.00 = 817.8309
Elev at 257+45.00 = 817.8640
Elev at 257+55.00 = 817.8863

Elevation Profile L1proposed
Increment 10.000000 253+95.00 To 257+55.00

Elev at 253+95.00 = 816.3416
Elev at 254+05.00 = 816.4425
Elev at 254+15.00 = 816.5344
Elev at 254+25.00 = 816.6298
Elev at 254+35.00 = 816.7223
Elev at 254+45.00 = 816.8218
Elev at 254+55.00 = 816.9197
Elev at 254+65.00 = 816.9825
Elev at 254+75.00 = 817.0393
Elev at 254+85.00 = 817.0791
Elev at 254+95.00 = 817.1252
Elev at 255+05.00 = 817.1640
Elev at 255+15.00 = 817.2195
Elev at 255+25.00 = 817.2647
Elev at 255+35.00 = 817.3025
Elev at 255+45.00 = 817.3599
Elev at 255+55.00 = 817.4054
Elev at 255+65.00 = 817.4530
Elev at 255+75.00 = 817.4928
Elev at 255+85.00 = 817.5265
Elev at 255+95.00 = 817.5627
Elev at 256+05.00 = 817.5909
Elev at 256+15.00 = 817.6382
Elev at 256+25.00 = 817.6791
Elev at 256+35.00 = 817.7166
Elev at 256+45.00 = 817.7577
Elev at 256+55.00 = 817.7944
Elev at 256+65.00 = 817.8313
Elev at 256+75.00 = 817.8743
Elev at 256+85.00 = 817.9148
Elev at 256+95.00 = 817.9537
Elev at 257+05.00 = 817.9432
Elev at 257+15.00 = 817.9400
Elev at 257+25.00 = 817.9262
Elev at 257+35.00 = 817.9143
Elev at 257+45.00 = 817.9026
Elev at 257+55.00 = 817.8863

NOTE:
ELEVATIONS DO NOT INCLUDE 5/8 INCH UBWC COURSE

REVISIONS

8/17/99

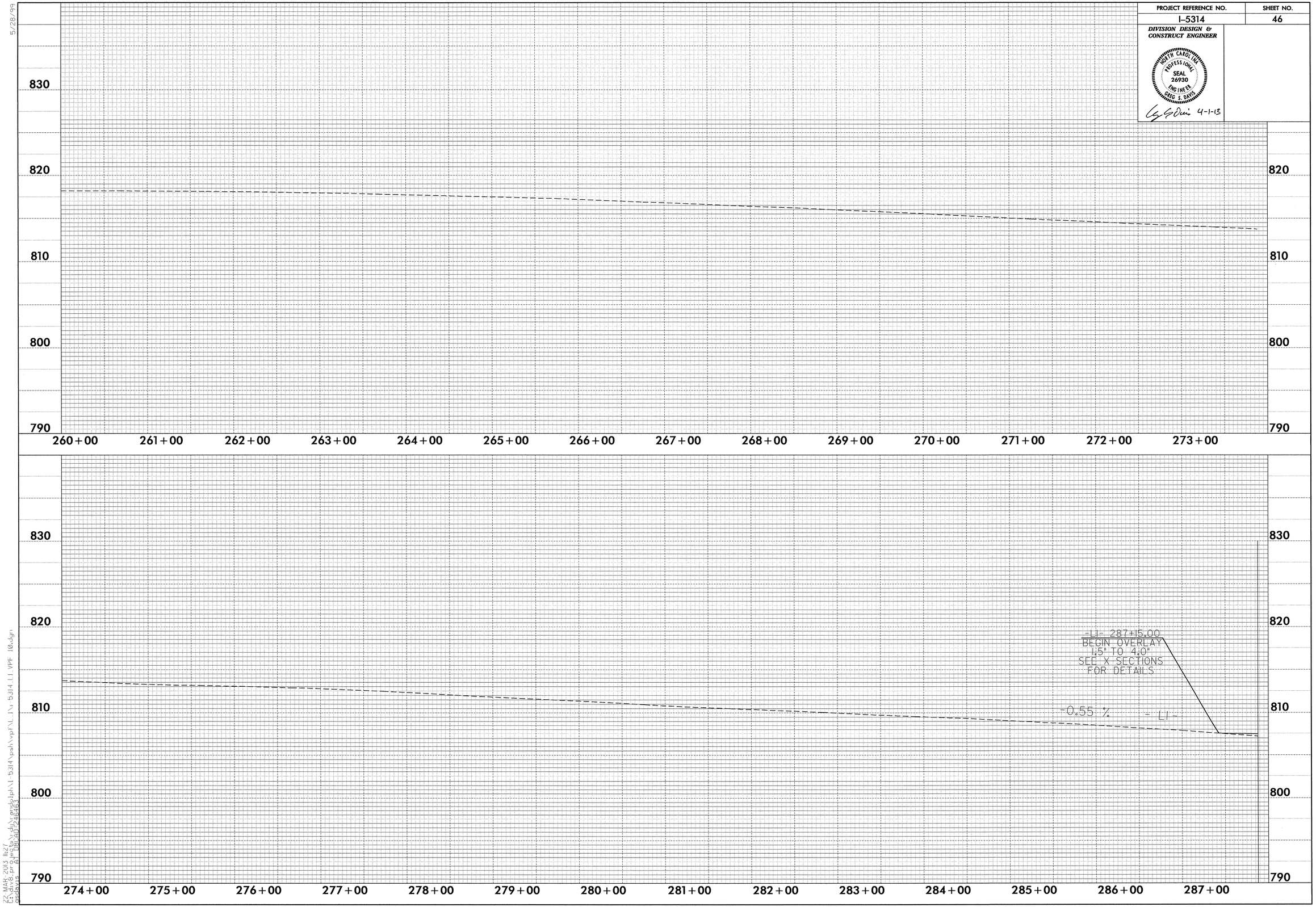
21-MAR-2013 14:11
C:\div8-projects\rdy\randolph\I-5314\psh\vpf\L1 & L2 cl_vpf_report.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	46

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

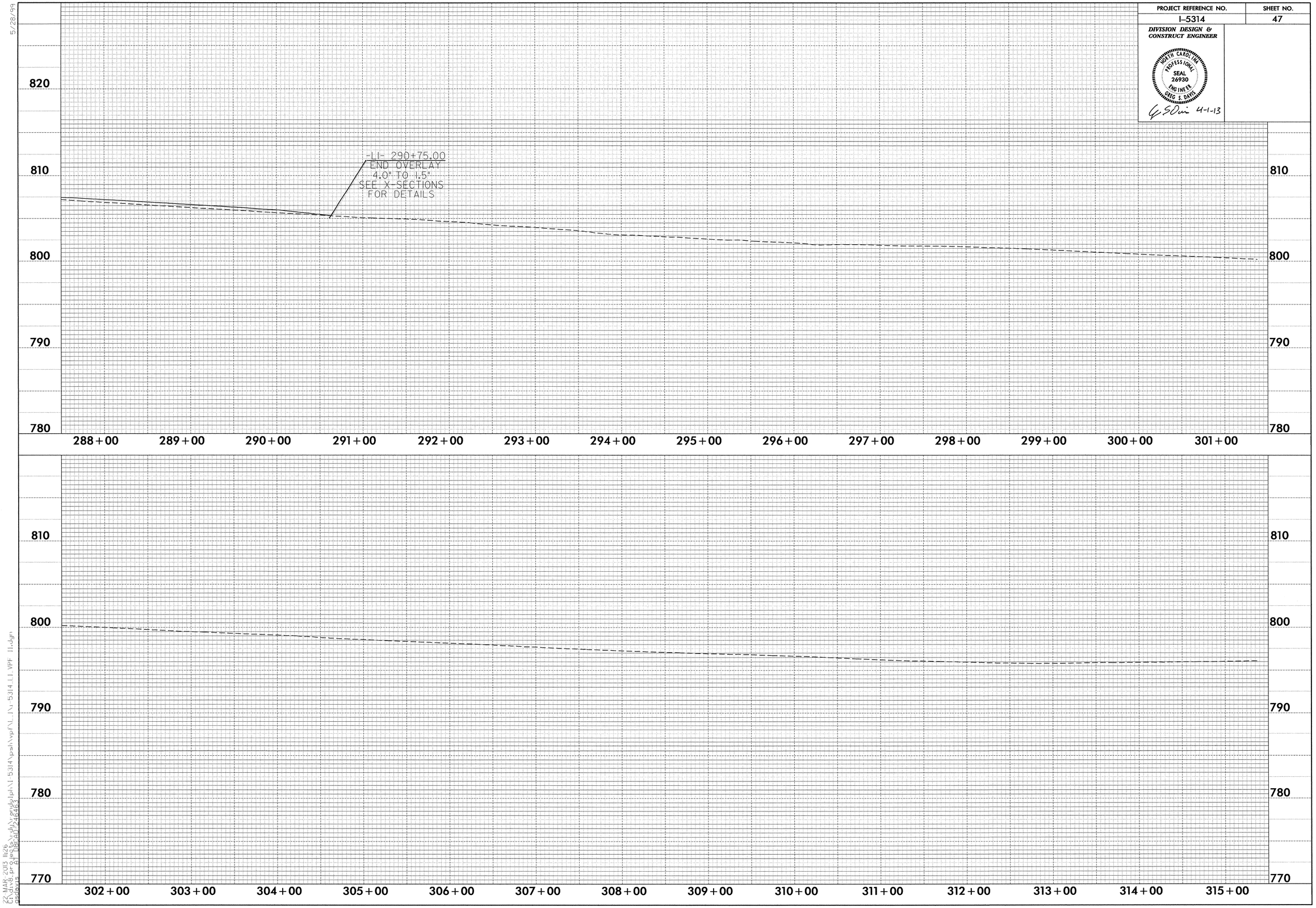
22-MAR-2013 11:27
C:\div8_projects\rdy\randolph\I-5314\psh\vpf\L_I\I-5314_L1_VPF_10.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	47

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

G S Davis 4-1-13



5/28/99

22-MAR-2013 11:26
C:\div8.projects\rdy\randolph\I-5314\psh\vpf\L_I\I-5314_L1_VPF_11.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	48
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER CHARLES S. DAVIS

4-1-13

Elevation Profile L1existing
Increment 10.000000 287+15.00 To 290+75.00

Elev at 287+15.00 = 807.5204
Elev at 287+25.00 = 807.4371
Elev at 287+35.00 = 807.3704
Elev at 287+45.00 = 807.3085
Elev at 287+55.00 = 807.2257
Elev at 287+65.00 = 807.1533
Elev at 287+75.00 = 807.0717
Elev at 287+85.00 = 806.9991
Elev at 287+95.00 = 806.9375
Elev at 288+05.00 = 806.8801
Elev at 288+15.00 = 806.8244
Elev at 288+25.00 = 806.7717
Elev at 288+35.00 = 806.7117
Elev at 288+45.00 = 806.6528
Elev at 288+55.00 = 806.5950
Elev at 288+65.00 = 806.5349
Elev at 288+75.00 = 806.4843
Elev at 288+85.00 = 806.4276
Elev at 288+95.00 = 806.3602
Elev at 289+05.00 = 806.3032
Elev at 289+15.00 = 806.2461
Elev at 289+25.00 = 806.1926
Elev at 289+35.00 = 806.1388
Elev at 289+45.00 = 806.0870
Elev at 289+55.00 = 806.0217
Elev at 289+65.00 = 805.9709
Elev at 289+75.00 = 805.9177
Elev at 289+85.00 = 805.8369
Elev at 289+95.00 = 805.7667
Elev at 290+05.00 = 805.7181
Elev at 290+15.00 = 805.6533
Elev at 290+25.00 = 805.5870
Elev at 290+35.00 = 805.5325
Elev at 290+45.00 = 805.4875
Elev at 290+55.00 = 805.4183
Elev at 290+65.00 = 805.3630
Elev at 290+75.00 = 805.2860

Elevation Profile L1proposed
Increment 10.000000 287+15.00 To 290+75.00

Elev at 287+15.00 = 807.5180
Elev at 287+25.00 = 807.4926
Elev at 287+35.00 = 807.4839
Elev at 287+45.00 = 807.4752
Elev at 287+55.00 = 807.4479
Elev at 287+65.00 = 807.4307
Elev at 287+75.00 = 807.4056
Elev at 287+85.00 = 807.3324
Elev at 287+95.00 = 807.2708
Elev at 288+05.00 = 807.2096
Elev at 288+15.00 = 807.1577
Elev at 288+25.00 = 807.1050
Elev at 288+35.00 = 807.0450
Elev at 288+45.00 = 806.9863
Elev at 288+55.00 = 806.9283
Elev at 288+65.00 = 806.8646
Elev at 288+75.00 = 806.8176
Elev at 288+85.00 = 806.7602
Elev at 288+95.00 = 806.6946
Elev at 289+05.00 = 806.6359
Elev at 289+15.00 = 806.5794
Elev at 289+25.00 = 806.5259
Elev at 289+35.00 = 806.4721
Elev at 289+45.00 = 806.4203
Elev at 289+55.00 = 806.3550
Elev at 289+65.00 = 806.3042
Elev at 289+75.00 = 806.2510
Elev at 289+85.00 = 806.1702
Elev at 289+95.00 = 806.1000
Elev at 290+05.00 = 806.0481
Elev at 290+15.00 = 805.9874
Elev at 290+25.00 = 805.8648
Elev at 290+35.00 = 805.7548
Elev at 290+45.00 = 805.6533
Elev at 290+55.00 = 805.5294
Elev at 290+65.00 = 805.4185
Elev at 290+75.00 = 805.2964

NOTE:
ELEVATIONS DO NOT INCLUDE 5/8 INCH UBWC COURSE

REVISIONS

8/17/99

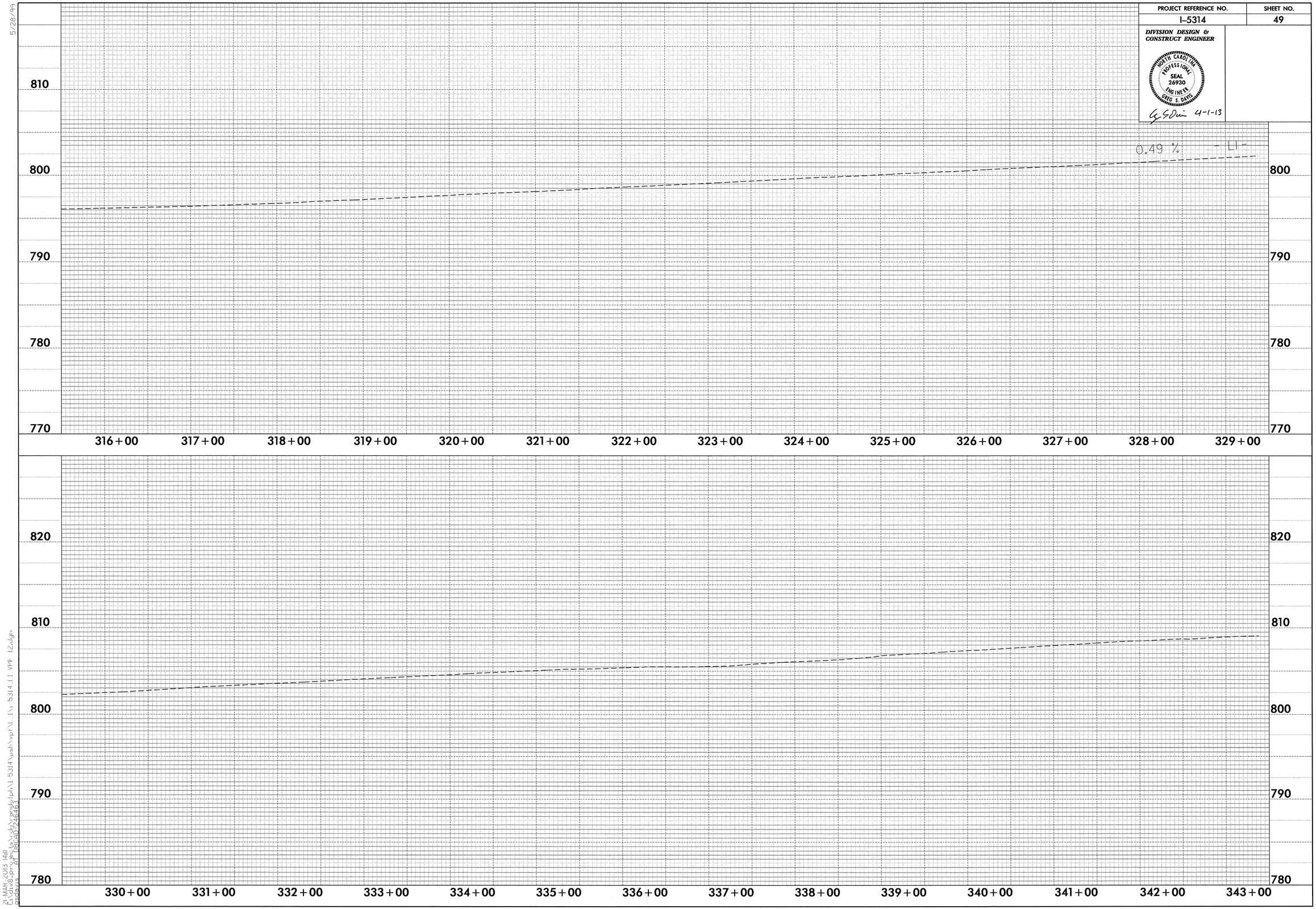
21-MAR-2013 14:11
C:\div8_projects\rdu\randolph\I-5314\psh\vpf\L1 & L2 cl-vpf_report.dgn
psdavis AT DAR-0025463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	49

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

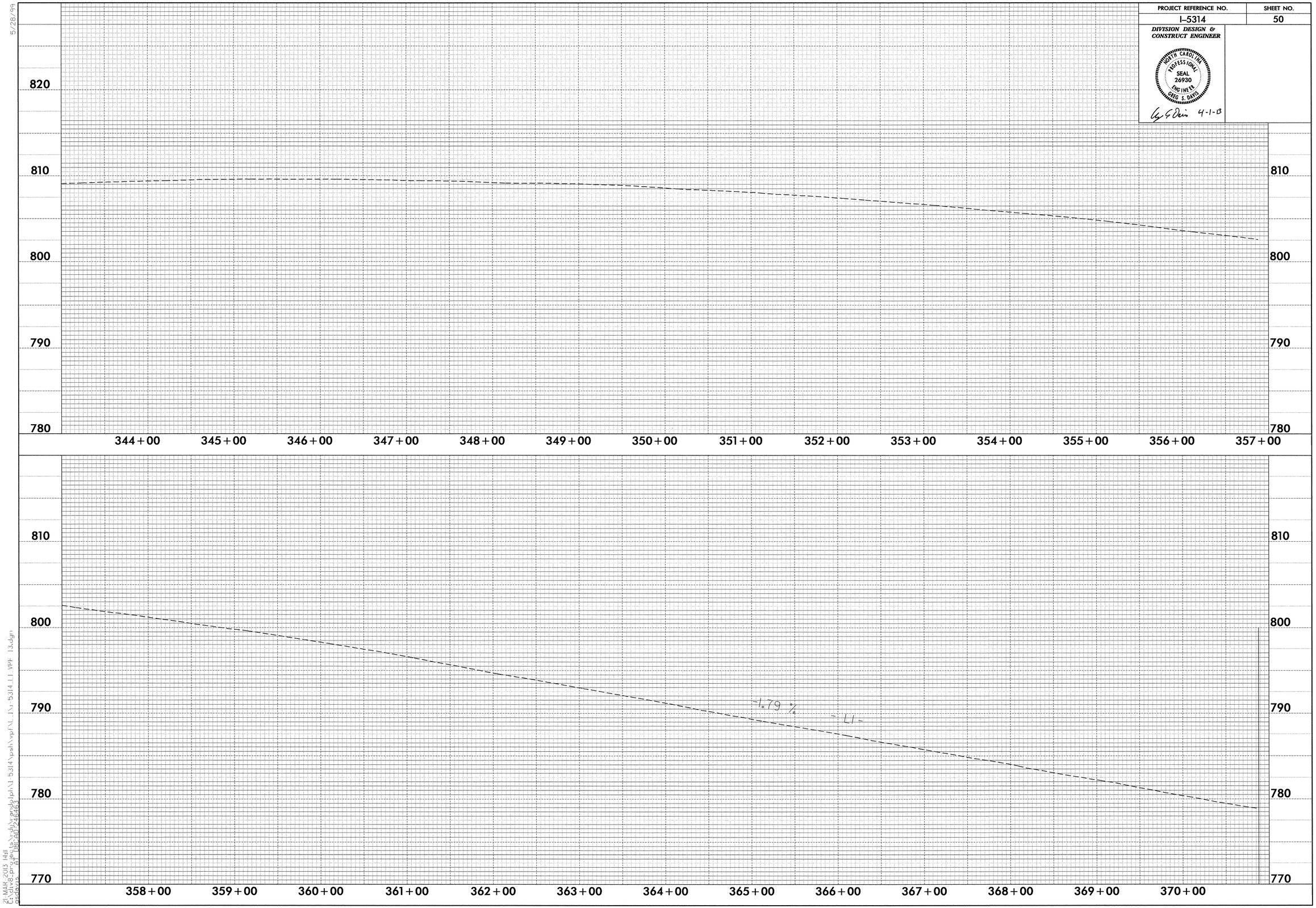
21-MAR-2013 14:11
C:\div8_projects\rdy\randolph\I-5314\psh\vpf\L_I\I-5314_L1_VPF_12.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	50

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

21-MAR-2013 14:11
C:\div8_projects\rdy\randolph\I-5314\psh\vpf\L_1\I-5314_L1_VPF_13.dgn
gsdavis AT 08CAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	51

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

G S Davis 4-1-13

5/28/99

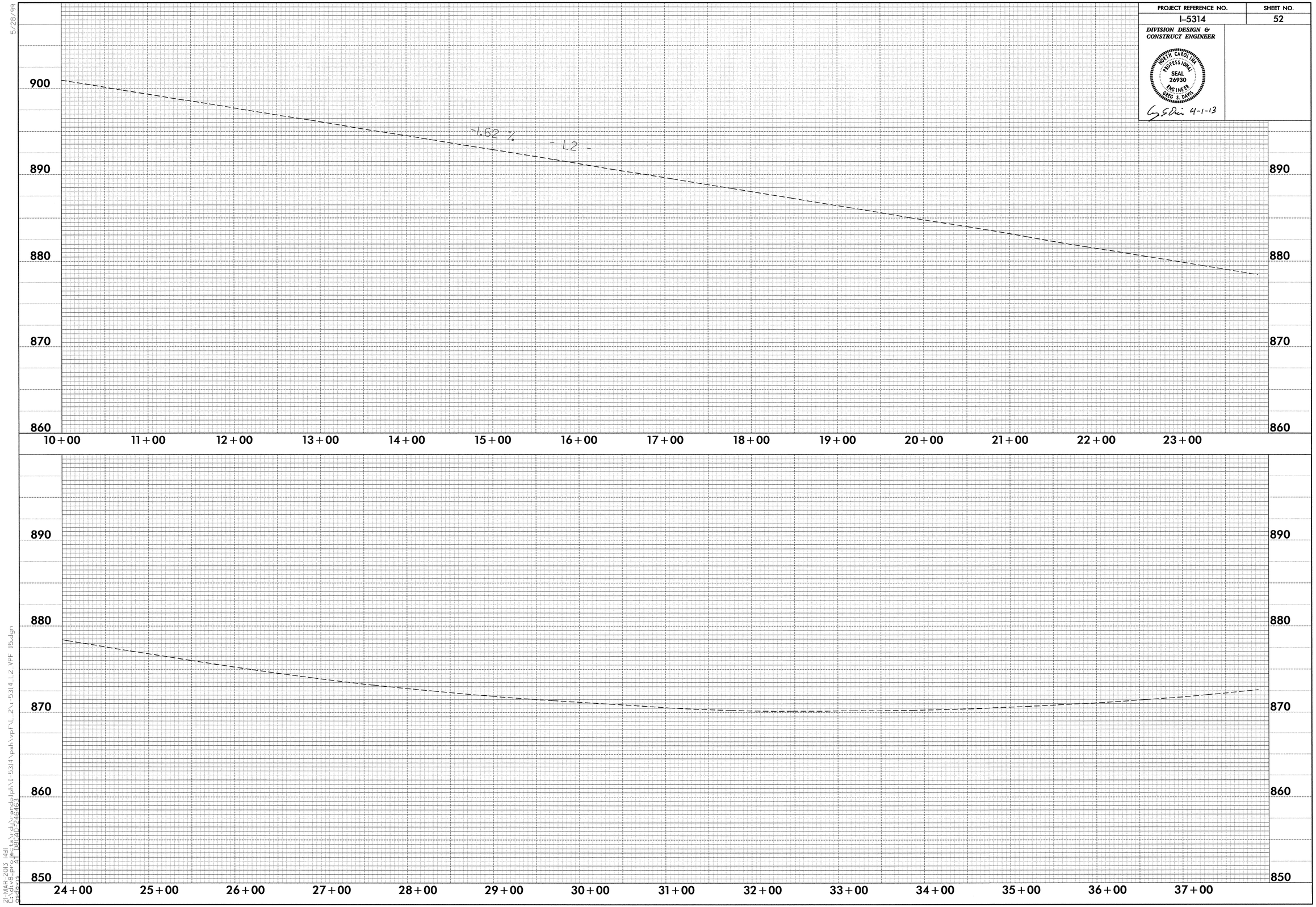
21-MAR-2013 14:11
C:\div8_projects\rdy\randolph\I-5314\psh\vpf\L_I\I-5314_L1_VPF_14.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	52

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

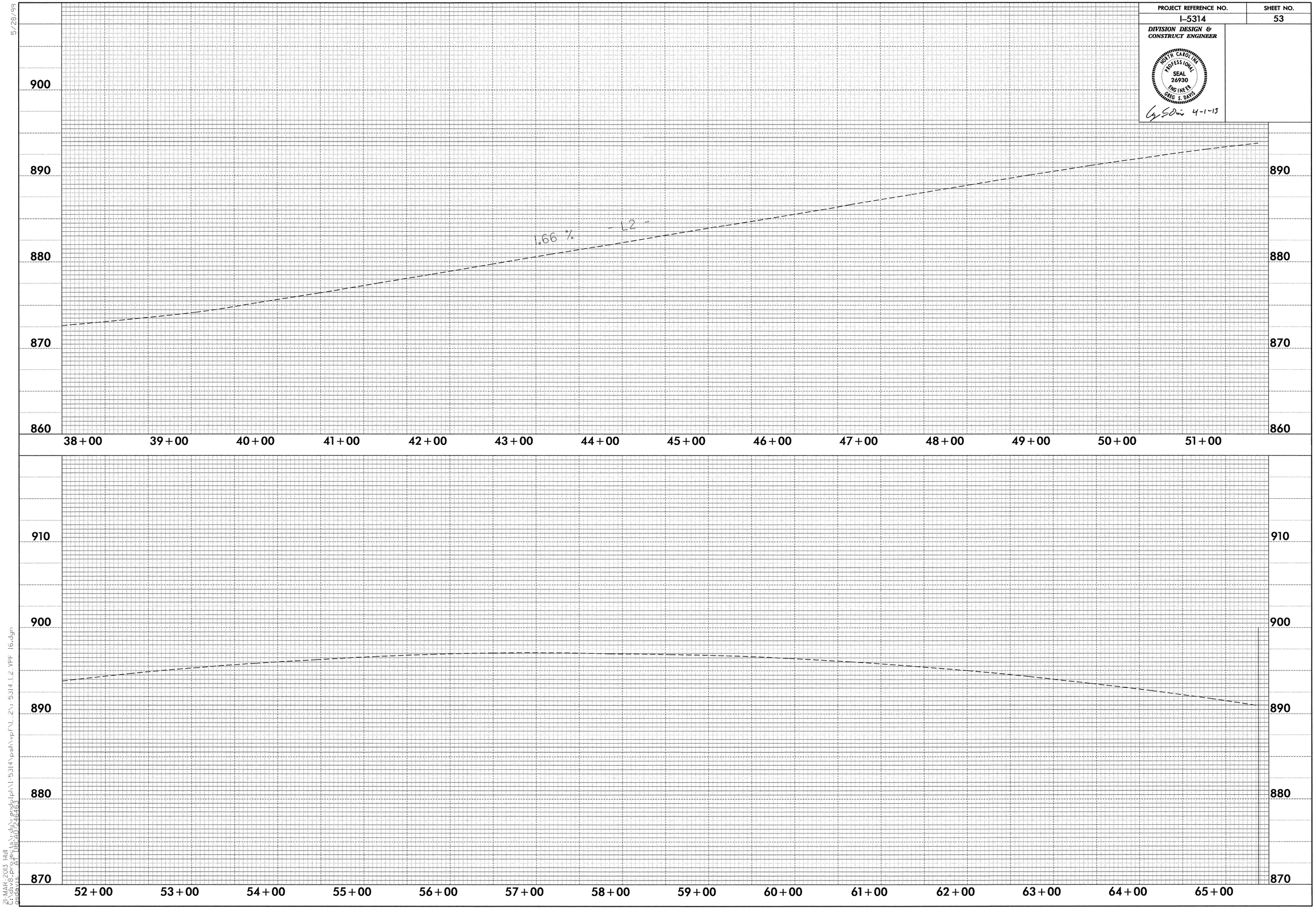
21-MAR-2013 14:11
C:\div8_projects\rdy\randolph\I-5314\psh\vpf\L_2\i-5314_L2_VPF_15.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	53

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

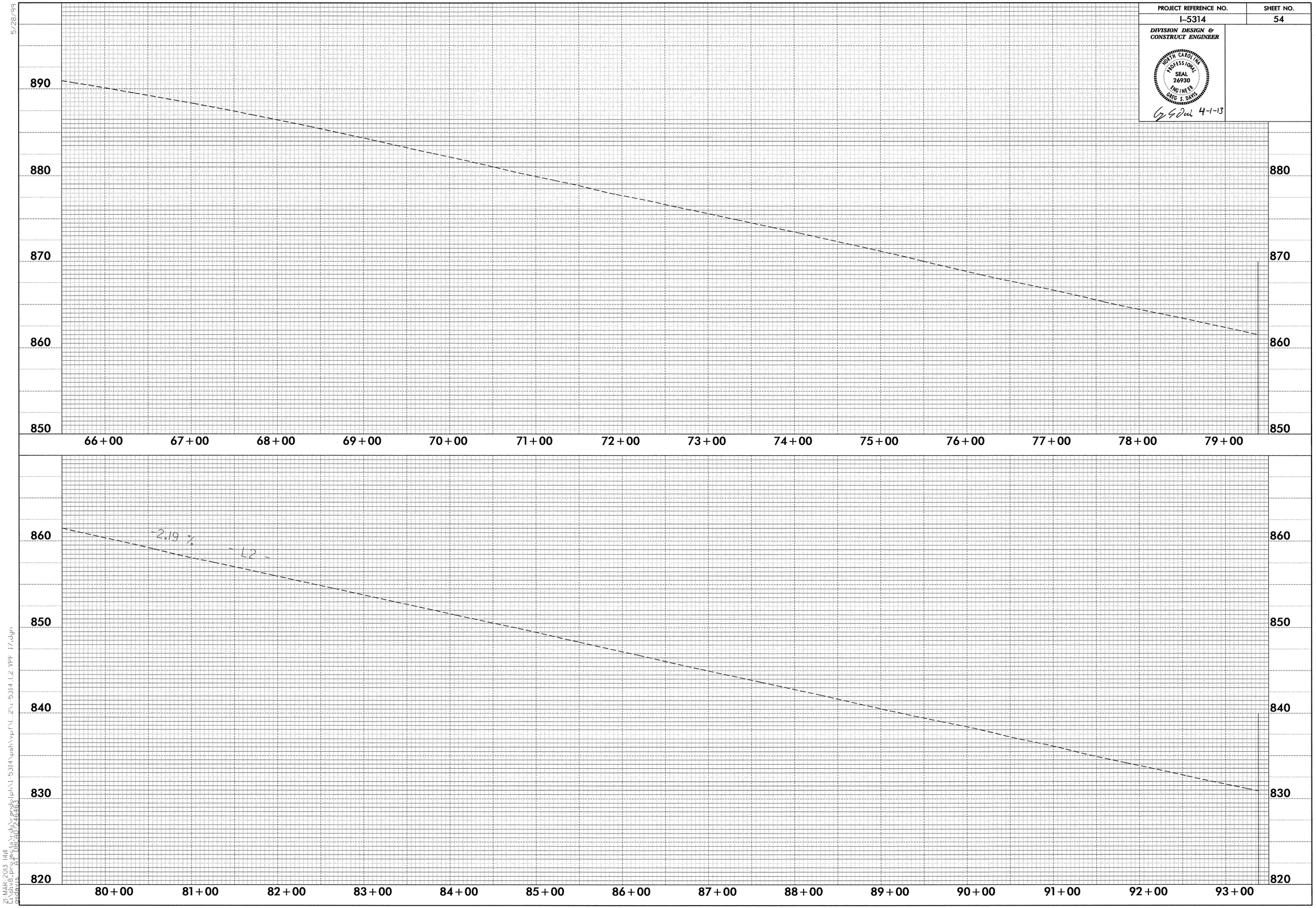
21-MAR-2013 14:11
C:\div8_projects\rdy\randolph\I-5314\psh\vpf\L_2\i-5314_L2_VPF_16.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	54

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

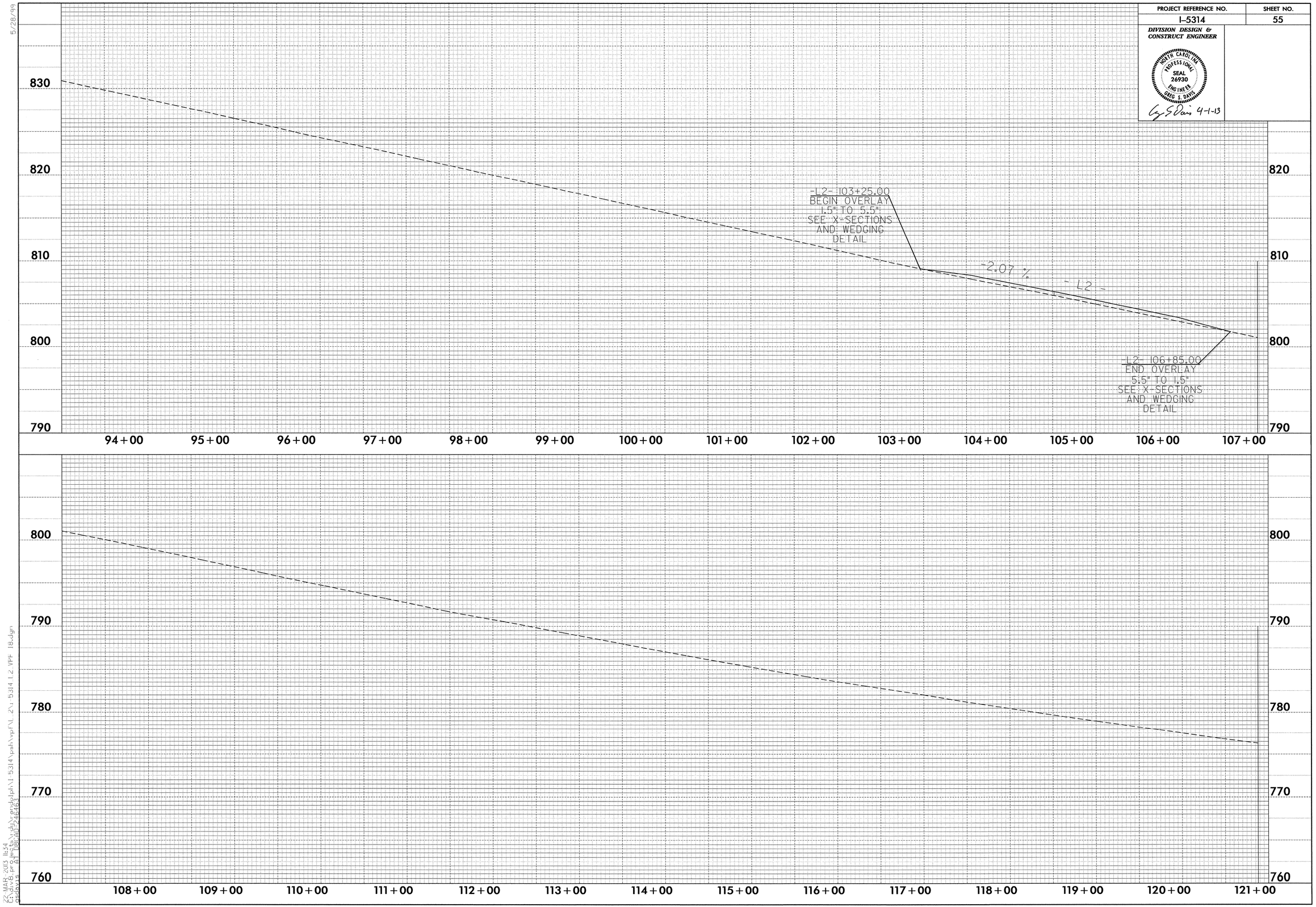
21-MAR-2013 14:11
C:\div8_projects\rdy\randolph\I-5314\psh\vpf\L_2\i-5314_L2_VPF_17.dgn
gsdavis AT DOAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	55

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

Greg S Davis 4-1-13



5/28/99

22-MAR-2013 11:34
C:\div8_projects\rdy\rondolph\I-5314\psh\vpf\L_2\I-5314_L2_VPF_18.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	56
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

Elevation Profile L2 existing
Increment 10.000000 103+25.00 To 106+85.00

Elev at 103+25.00 = 809.0967
Elev at 103+35.00 = 808.8928
Elev at 103+45.00 = 808.6862
Elev at 103+55.00 = 808.4848
Elev at 103+65.00 = 808.2810
Elev at 103+75.00 = 808.0778
Elev at 103+85.00 = 807.8646
Elev at 103+95.00 = 807.6526
Elev at 104+05.00 = 807.4508
Elev at 104+15.00 = 807.2504
Elev at 104+25.00 = 807.0504
Elev at 104+35.00 = 806.8502
Elev at 104+45.00 = 806.6598
Elev at 104+55.00 = 806.4632
Elev at 104+65.00 = 806.2604
Elev at 104+75.00 = 806.0477
Elev at 104+85.00 = 805.8572
Elev at 104+95.00 = 805.6507
Elev at 105+05.00 = 805.4510
Elev at 105+15.00 = 805.2426
Elev at 105+25.00 = 805.0361
Elev at 105+35.00 = 804.8250
Elev at 105+45.00 = 804.6108
Elev at 105+55.00 = 804.3942
Elev at 105+65.00 = 804.1877
Elev at 105+75.00 = 803.9808
Elev at 105+85.00 = 803.7665
Elev at 105+95.00 = 803.5558
Elev at 106+05.00 = 803.3436
Elev at 106+15.00 = 803.1353
Elev at 106+25.00 = 802.9253
Elev at 106+35.00 = 802.7160
Elev at 106+45.00 = 802.5044
Elev at 106+55.00 = 802.2966
Elev at 106+65.00 = 802.0983
Elev at 106+75.00 = 801.8982
Elev at 106+85.00 = 801.6926

Elevation Profile L2 proposed
Increment 10.000000 103+25.00 To 106+85.00

Elev at 103+25.00 = 809.0967
Elev at 103+35.00 = 808.9692
Elev at 103+45.00 = 808.8390
Elev at 103+55.00 = 808.7140
Elev at 103+65.00 = 808.5866
Elev at 103+75.00 = 808.4598
Elev at 103+85.00 = 808.3216
Elev at 103+95.00 = 808.1109
Elev at 104+05.00 = 807.9091
Elev at 104+15.00 = 807.7087
Elev at 104+25.00 = 807.5087
Elev at 104+35.00 = 807.3085
Elev at 104+45.00 = 807.1181
Elev at 104+55.00 = 806.9215
Elev at 104+65.00 = 806.7187
Elev at 104+75.00 = 806.5060
Elev at 104+85.00 = 806.3155
Elev at 104+95.00 = 806.1090
Elev at 105+05.00 = 805.9093
Elev at 105+15.00 = 805.7009
Elev at 105+25.00 = 805.4944
Elev at 105+35.00 = 805.2833
Elev at 105+45.00 = 805.0691
Elev at 105+55.00 = 804.8525
Elev at 105+65.00 = 804.6460
Elev at 105+75.00 = 804.4391
Elev at 105+85.00 = 804.2248
Elev at 105+95.00 = 804.0141
Elev at 106+05.00 = 803.8019
Elev at 106+15.00 = 803.5936
Elev at 106+25.00 = 803.3836
Elev at 106+35.00 = 803.0980
Elev at 106+45.00 = 802.8100
Elev at 106+55.00 = 802.5258
Elev at 106+65.00 = 802.2510
Elev at 106+75.00 = 801.9746
Elev at 106+85.00 = 801.6926

NOTE:
ELEVATIONS DO NOT INCLUDE 5/8 INCH UBWC COURSE

REVISIONS

8/17/99

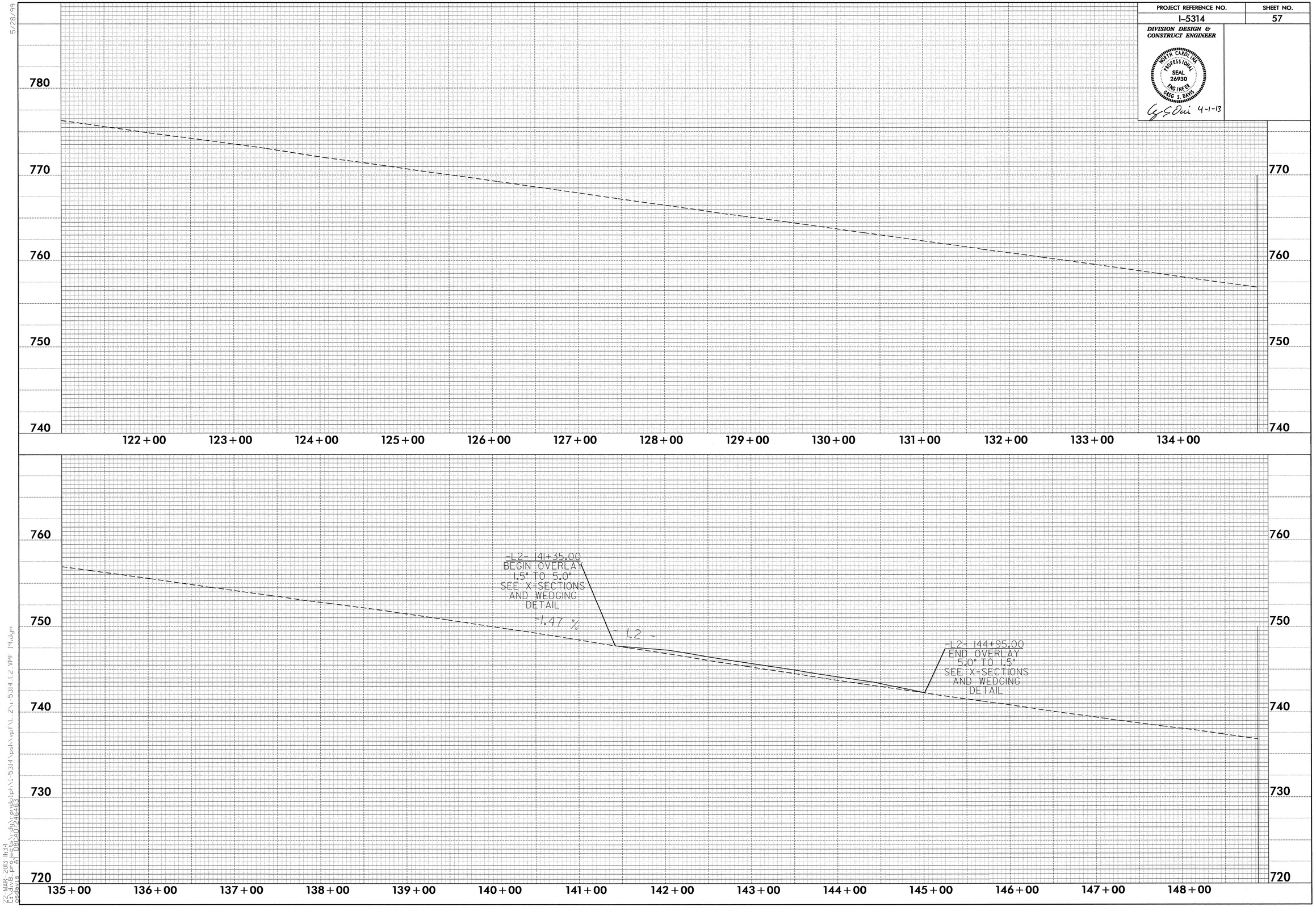
21-MAR-2013 14:11
C:\div8_projects\rdu\randolph\I-5314\psh\vpf\L1 & L2 cl_vpf_report.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	57

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

22-MAR-2013 11:34
C:\div8_projects\rdy\randolph\I-5314\psh\vpf\L_2\I-5314_L2_VPF_19.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	58
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

Elevation Profile L2 existing
Increment 10.000000 141+35.00 To 144+95.00

Elev at 141+35.00 = 747.7379
Elev at 141+45.00 = 747.5848
Elev at 141+55.00 = 747.4362
Elev at 141+65.00 = 747.2764
Elev at 141+75.00 = 747.1298
Elev at 141+85.00 = 746.9803
Elev at 141+95.00 = 746.8259
Elev at 142+05.00 = 746.6721
Elev at 142+15.00 = 746.5157
Elev at 142+25.00 = 746.3499
Elev at 142+35.00 = 746.1760
Elev at 142+45.00 = 746.0102
Elev at 142+55.00 = 745.8460
Elev at 142+65.00 = 745.6945
Elev at 142+75.00 = 745.5332
Elev at 142+85.00 = 745.3872
Elev at 142+95.00 = 745.2325
Elev at 143+05.00 = 745.0864
Elev at 143+15.00 = 744.9381
Elev at 143+25.00 = 744.7941
Elev at 143+35.00 = 744.6401
Elev at 143+45.00 = 744.4878
Elev at 143+55.00 = 744.3126
Elev at 143+65.00 = 744.1560
Elev at 143+75.00 = 743.9875
Elev at 143+85.00 = 743.8307
Elev at 143+95.00 = 743.6834
Elev at 144+05.00 = 743.5366
Elev at 144+15.00 = 743.3820
Elev at 144+25.00 = 743.2326
Elev at 144+35.00 = 743.0843
Elev at 144+45.00 = 742.9291
Elev at 144+55.00 = 742.7767
Elev at 144+65.00 = 742.6363
Elev at 144+75.00 = 742.4920
Elev at 144+85.00 = 742.3509
Elev at 144+95.00 = 742.2017

Elevation Profile L2 proposed
Increment 10.000000 141+35.00 To 144+95.00

Elev at 141+35.00 = 747.7379
Elev at 141+45.00 = 747.6542
Elev at 141+55.00 = 747.5751
Elev at 141+65.00 = 747.4847
Elev at 141+75.00 = 747.4076
Elev at 141+85.00 = 747.3276
Elev at 141+95.00 = 747.2425
Elev at 142+05.00 = 747.0888
Elev at 142+15.00 = 746.9324
Elev at 142+25.00 = 746.7666
Elev at 142+35.00 = 746.5927
Elev at 142+45.00 = 746.4269
Elev at 142+55.00 = 746.2627
Elev at 142+65.00 = 746.1112
Elev at 142+75.00 = 745.9499
Elev at 142+85.00 = 745.8039
Elev at 142+95.00 = 745.6492
Elev at 143+05.00 = 745.5031
Elev at 143+15.00 = 745.3548
Elev at 143+25.00 = 745.2108
Elev at 143+35.00 = 745.0568
Elev at 143+45.00 = 744.9045
Elev at 143+55.00 = 744.7293
Elev at 143+65.00 = 744.5727
Elev at 143+75.00 = 744.4042
Elev at 143+85.00 = 744.2474
Elev at 143+95.00 = 744.1001
Elev at 144+05.00 = 743.9533
Elev at 144+15.00 = 743.7987
Elev at 144+25.00 = 743.6493
Elev at 144+35.00 = 743.4990
Elev at 144+45.00 = 743.2764
Elev at 144+55.00 = 743.0545
Elev at 144+65.00 = 742.8447
Elev at 144+75.00 = 742.6309
Elev at 144+85.00 = 742.4203
Elev at 144+95.00 = 742.2017

NOTE:
ELEVATIONS DO NOT INCLUDE 5/8 INCH UBWC COURSE

REVISIONS

8/17/99

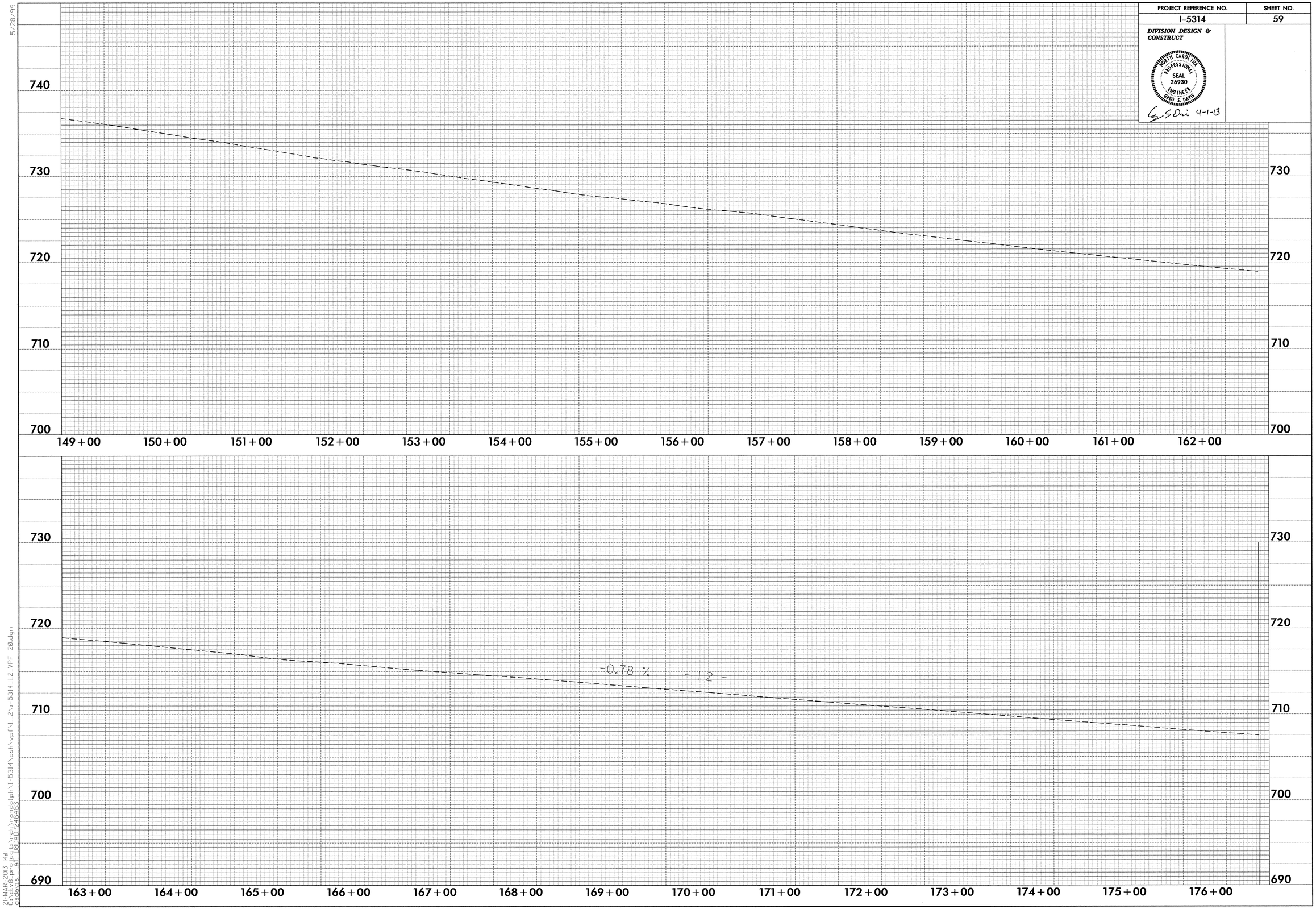
21-MAR-2013 14:11
C:\div8_projects\rdu\randolph\I-5314\psh\vpf\L1 & L2 cl_vpf_report.dgn
osdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	59

DIVISION DESIGN & CONSTRUCT

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

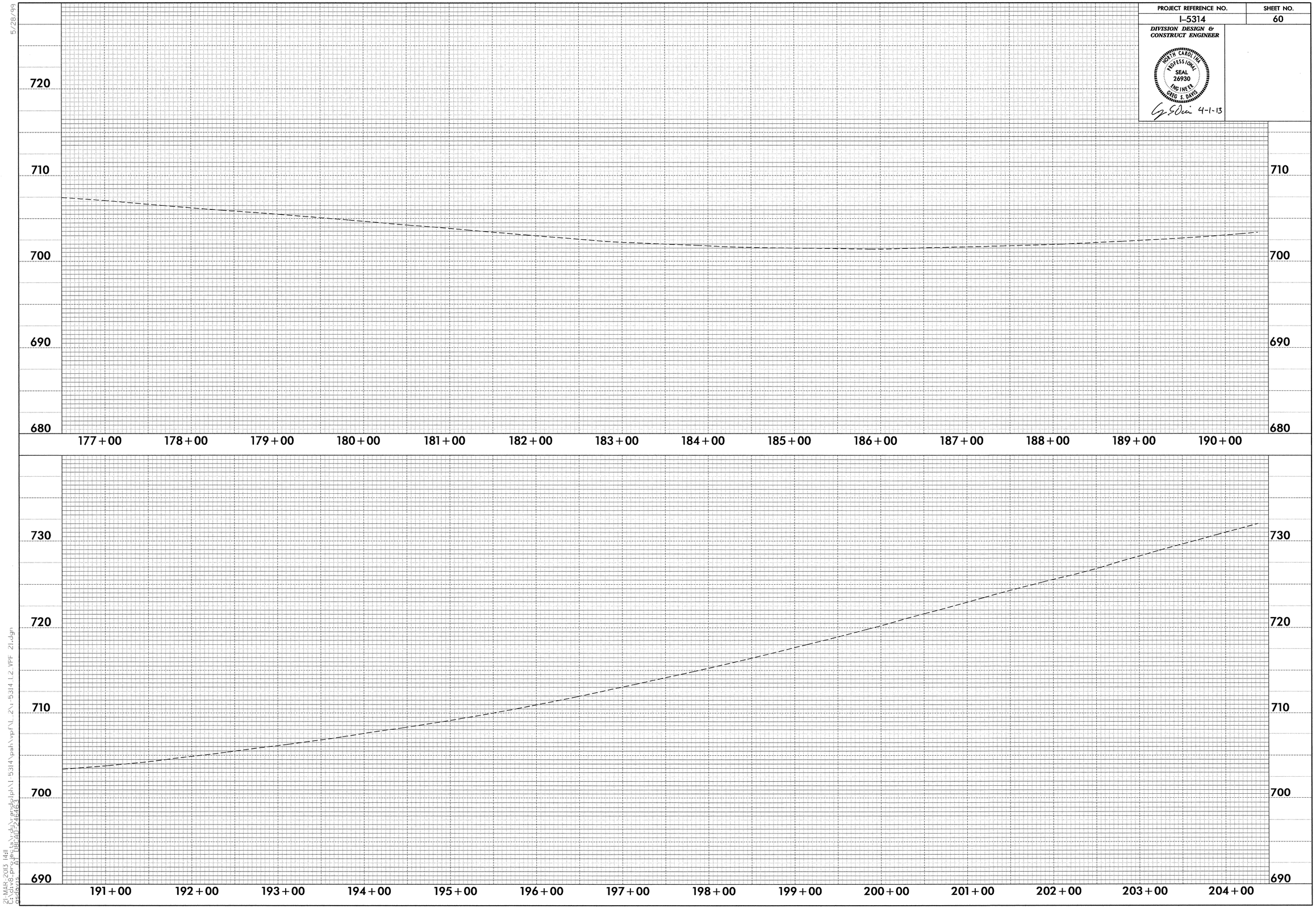
21-MAR-2013 14:11
C:\div8_projects\rdy\randolph\I-5314\psh\vpf\L_2\i-5314_L2_VPF_20.dgn
gsdavis AT DOCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	60

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

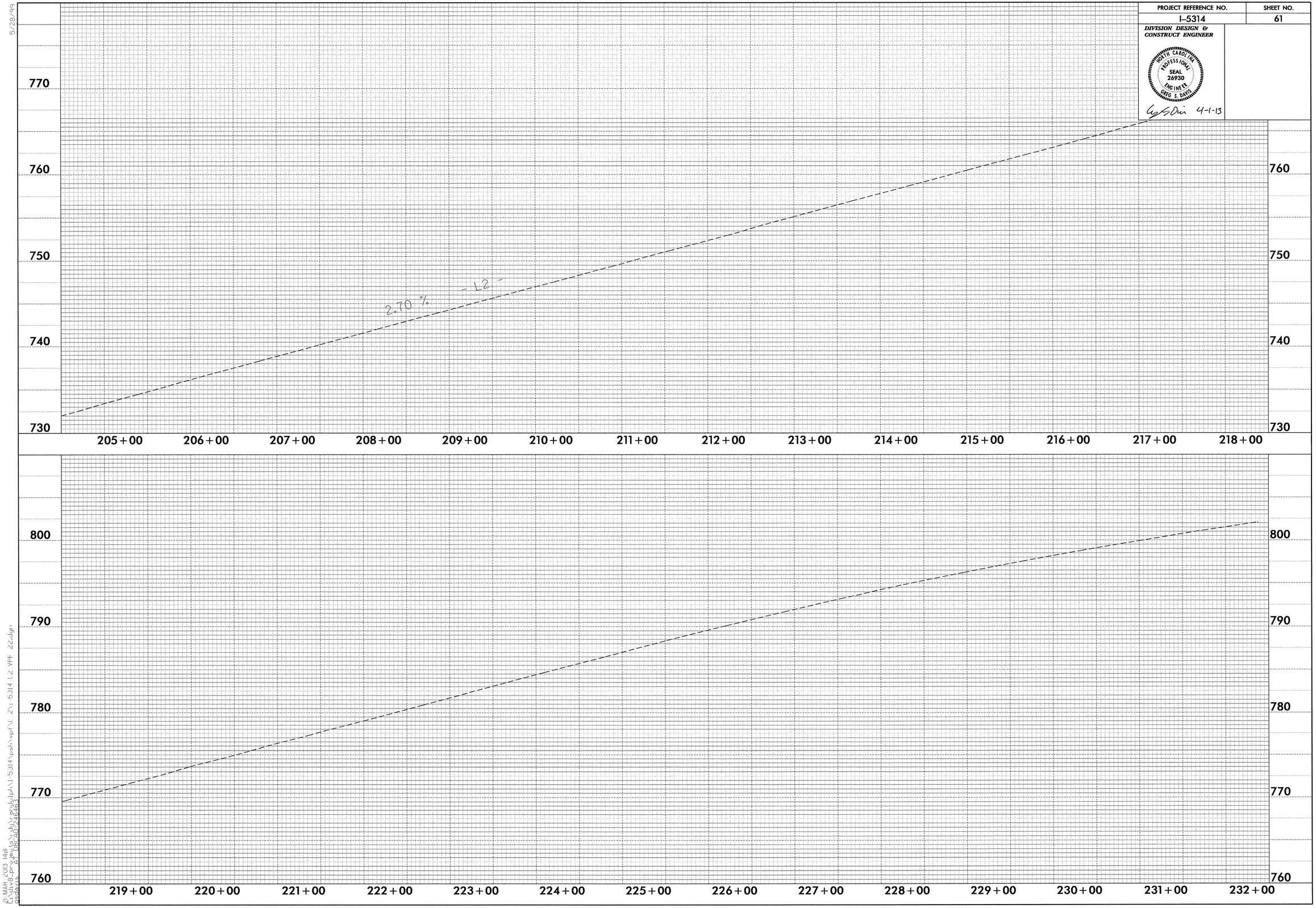
21-MAR-2013 14:11
C:\div8_projects\rdy\randolph\I-5314\psh\vpf\L_2\i-5314_L2_VPF_21.dgn
gsdavis AT 08CAD-24646.3

PROJECT REFERENCE NO.	SHEET NO.
I-5314	61

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

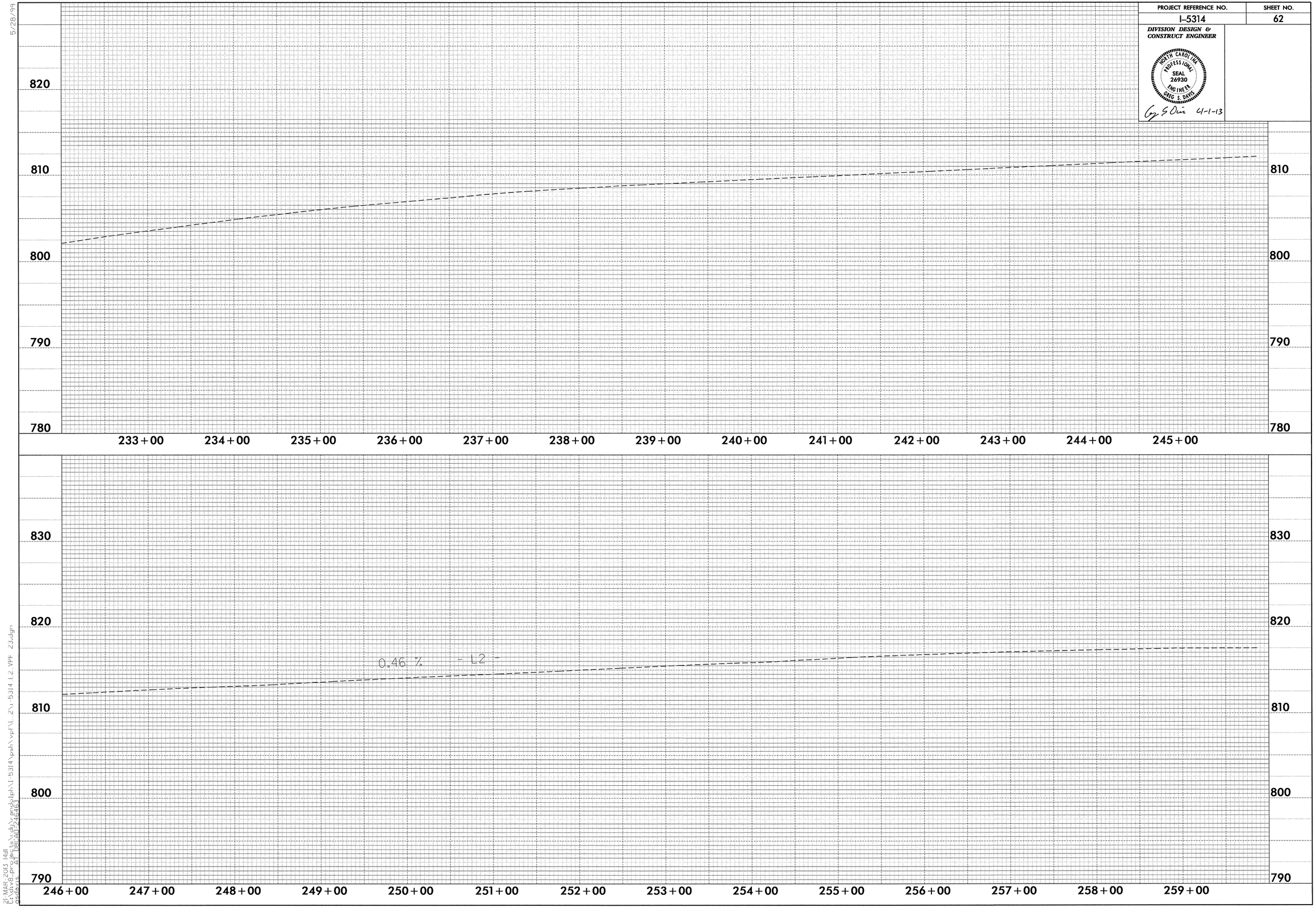
21-MAR-2013 14:11
C:\div8_projects\rdy\randolph\I-5314\psh\vpf\L_2\I-5314_L2_VPF_22.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	62

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

Greg S Davis 4-1-13



5/28/99

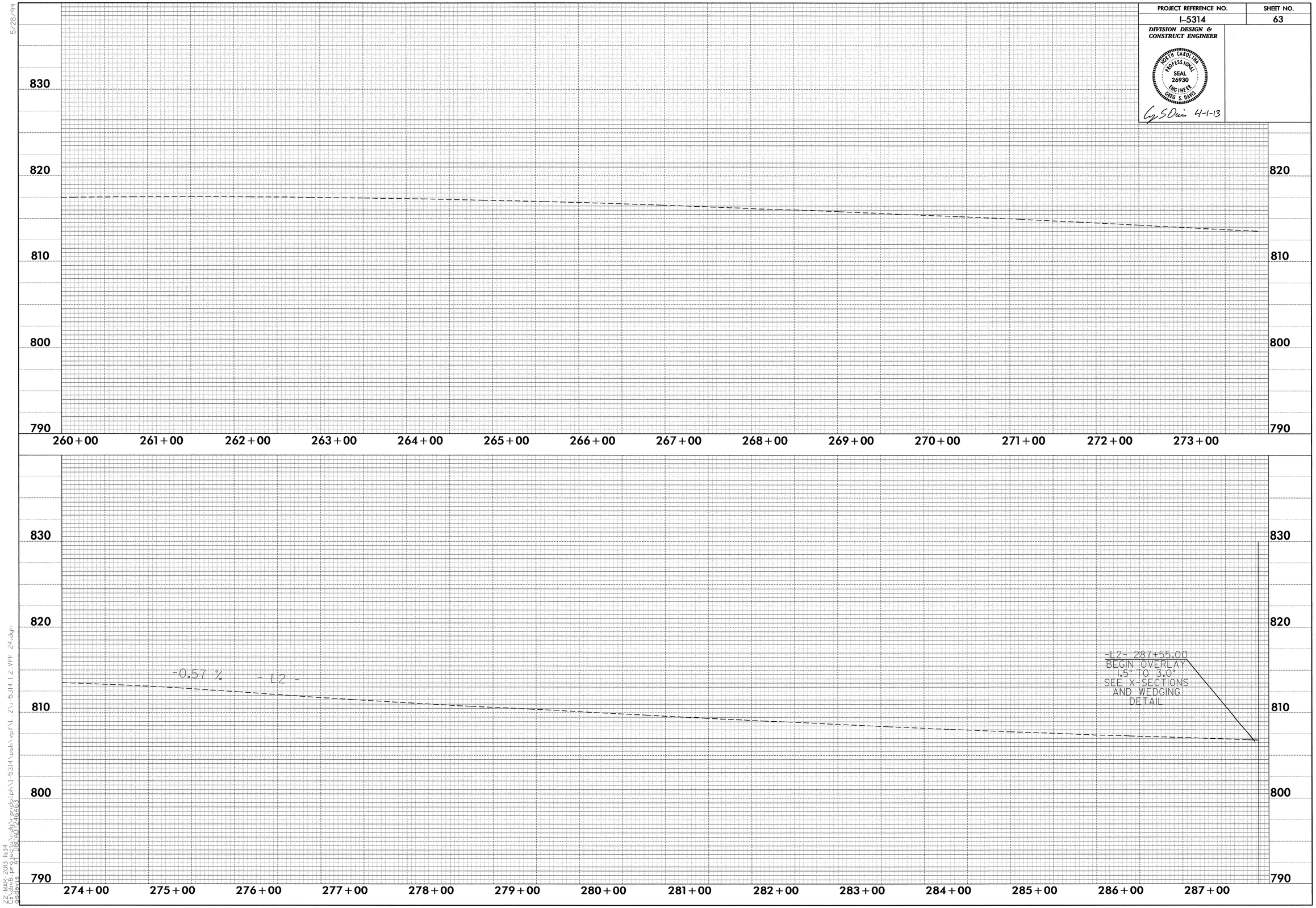
21-MAR-2013 14:11
C:\div8_projects\rdu\randolph\I-5314\psh\vpf\L_2\I-5314_L2_VPF_23.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	63

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

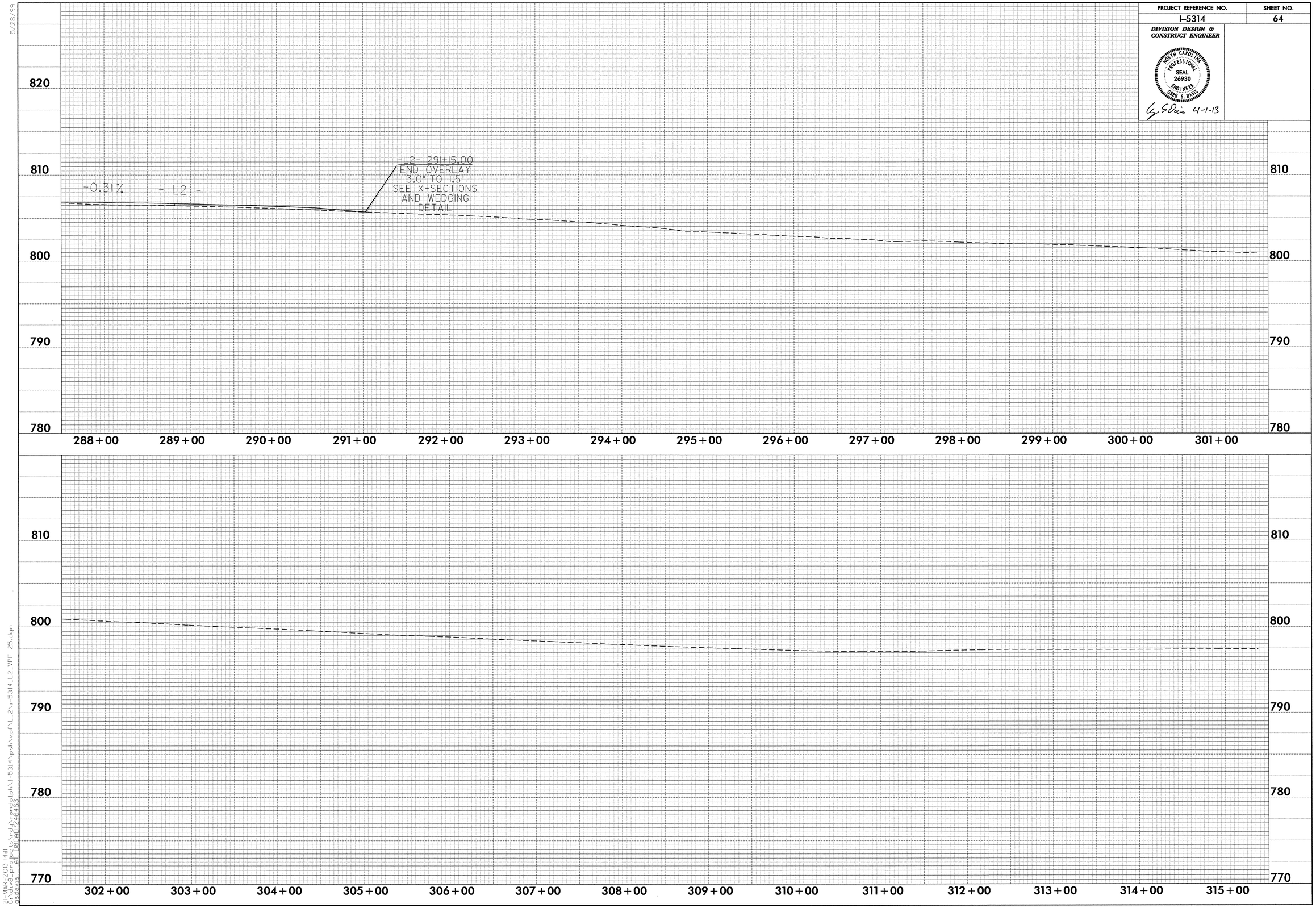
22-MAR-2013 11:34
C:\div8_projects\rdy\randolph\I-5314\psh\vpf\L_2\I-5314_L2_VPF_24.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	64

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

21-MAR-2013 14:11
C:\div8_projects\rdy\randolph\I-5314\psh\vpf\L_2\I-5314_L2_VPF_25.dgn
gsdavis AT D8CAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	65
R/W SHEET NO.	
DIVISION DESIGN & CONSTRUCT ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13

Elevation Profile L2 existing
Increment 10.000000 287+55.00 To 291+15.00

Elev at 287+55.00 = 806.7951
Elev at 287+65.00 = 806.7526
Elev at 287+75.00 = 806.7047
Elev at 287+85.00 = 806.6590
Elev at 287+95.00 = 806.6179
Elev at 288+05.00 = 806.5882
Elev at 288+15.00 = 806.5605
Elev at 288+25.00 = 806.5390
Elev at 288+35.00 = 806.5277
Elev at 288+45.00 = 806.5199
Elev at 288+55.00 = 806.5067
Elev at 288+65.00 = 806.5005
Elev at 288+75.00 = 806.4815
Elev at 288+85.00 = 806.4583
Elev at 288+95.00 = 806.4273
Elev at 289+05.00 = 806.4025
Elev at 289+15.00 = 806.3793
Elev at 289+25.00 = 806.3574
Elev at 289+35.00 = 806.3276
Elev at 289+45.00 = 806.2985
Elev at 289+55.00 = 806.2735
Elev at 289+65.00 = 806.2451
Elev at 289+75.00 = 806.2158
Elev at 289+85.00 = 806.1864
Elev at 289+95.00 = 806.1545
Elev at 290+05.00 = 806.1218
Elev at 290+15.00 = 806.0831
Elev at 290+25.00 = 806.0451
Elev at 290+35.00 = 806.0053
Elev at 290+45.00 = 805.9769
Elev at 290+55.00 = 805.9327
Elev at 290+65.00 = 805.8900
Elev at 290+75.00 = 805.8456
Elev at 290+85.00 = 805.7941
Elev at 290+95.00 = 805.7607
Elev at 291+05.00 = 805.7266
Elev at 291+15.00 = 805.6893

Elevation Profile L2 proposed
Increment 10.000000 287+55.00 To 291+15.00

Elev at 287+55.00 = 806.7951
Elev at 287+65.00 = 806.7943
Elev at 287+75.00 = 806.7881
Elev at 287+85.00 = 806.7840
Elev at 287+95.00 = 806.7846
Elev at 288+05.00 = 806.7965
Elev at 288+15.00 = 806.8092
Elev at 288+25.00 = 806.7890
Elev at 288+35.00 = 806.7777
Elev at 288+45.00 = 806.7699
Elev at 288+55.00 = 806.7567
Elev at 288+65.00 = 806.7505
Elev at 288+75.00 = 806.7315
Elev at 288+85.00 = 806.7086
Elev at 288+95.00 = 806.6773
Elev at 289+05.00 = 806.6525
Elev at 289+15.00 = 806.6293
Elev at 289+25.00 = 806.6074
Elev at 289+35.00 = 806.5774
Elev at 289+45.00 = 806.5485
Elev at 289+55.00 = 806.5235
Elev at 289+65.00 = 806.4955
Elev at 289+75.00 = 806.4658
Elev at 289+85.00 = 806.4364
Elev at 289+95.00 = 806.4045
Elev at 290+05.00 = 806.3718
Elev at 290+15.00 = 806.3331
Elev at 290+25.00 = 806.2950
Elev at 290+35.00 = 806.2553
Elev at 290+45.00 = 806.2269
Elev at 290+55.00 = 806.1827
Elev at 290+65.00 = 806.0984
Elev at 290+75.00 = 806.0122
Elev at 290+85.00 = 805.9191
Elev at 290+95.00 = 805.8441
Elev at 291+05.00 = 805.7683
Elev at 291+15.00 = 805.6893

NOTE:
ELEVATIONS DO NOT INCLUDE 5/8 INCH UBWC COURSE

REVISIONS

8/17/99

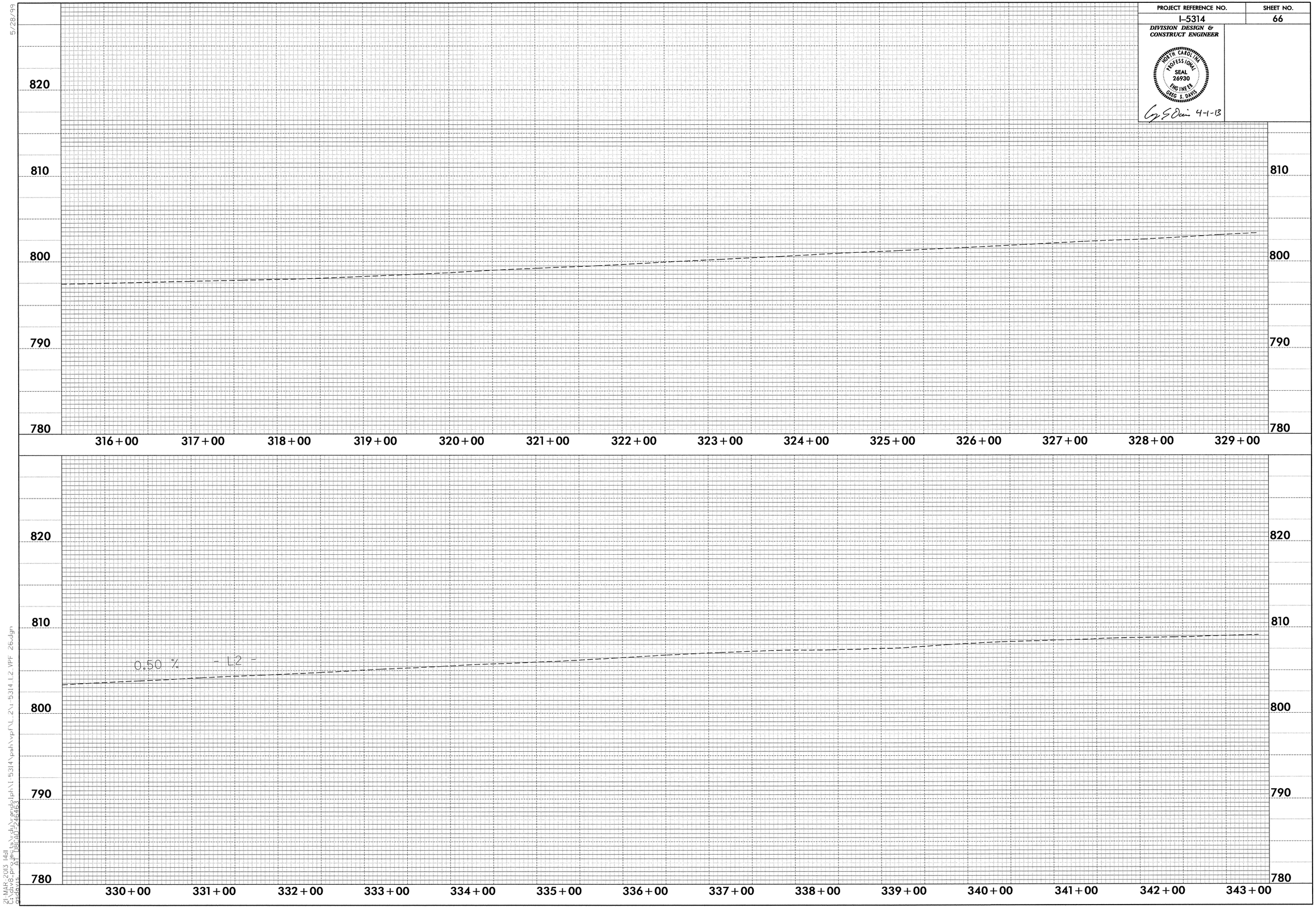
21-MAR-2013 14:11
C:\div8_projects\rdy\randolph\I-5314\psh\vpf\L1 & L2 cl_vpf_report.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	66

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

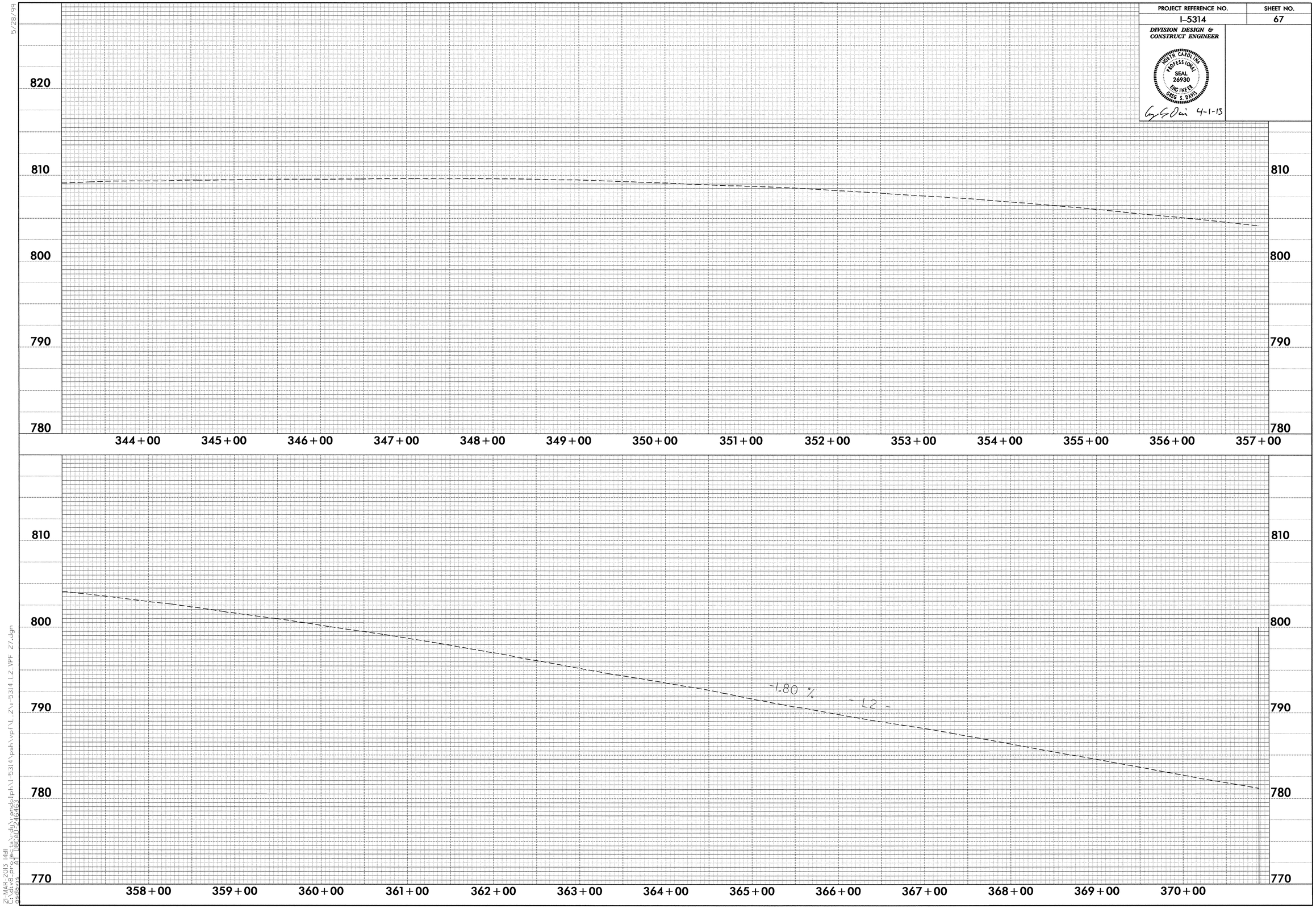
21-MAR-2013 14:11
C:\div8_projects\rdy\randolph\I-5314\psh\vpf\L_2\I-5314_L2_VPF_26.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	67

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

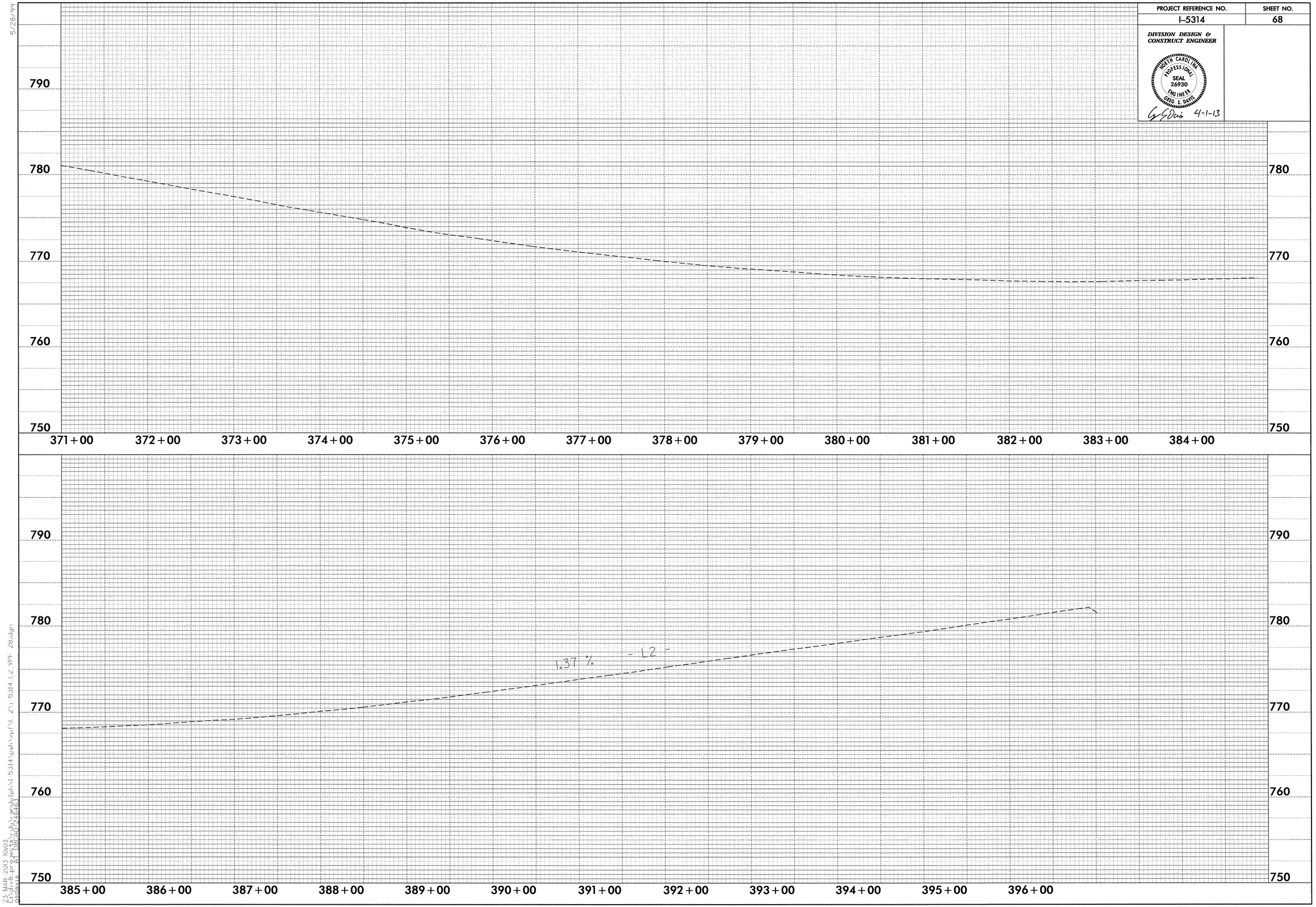
21-MAR-2013 14:11
C:\div8_projects\rdu\randolph\I-5314\psh\vpf\L_2\I-5314_L2_VPF_27.dgn
gsdavis AT DBCAD-246463

PROJECT REFERENCE NO.	SHEET NO.
I-5314	68

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-1-13



5/28/99

23-MAR-2013 10:03
C:\div8_projects\dy\randolph\I-5314\psh\vpf\L_2\I-5314_L2_VPF_28.dgn
gsdavis AT DBCAD-246463