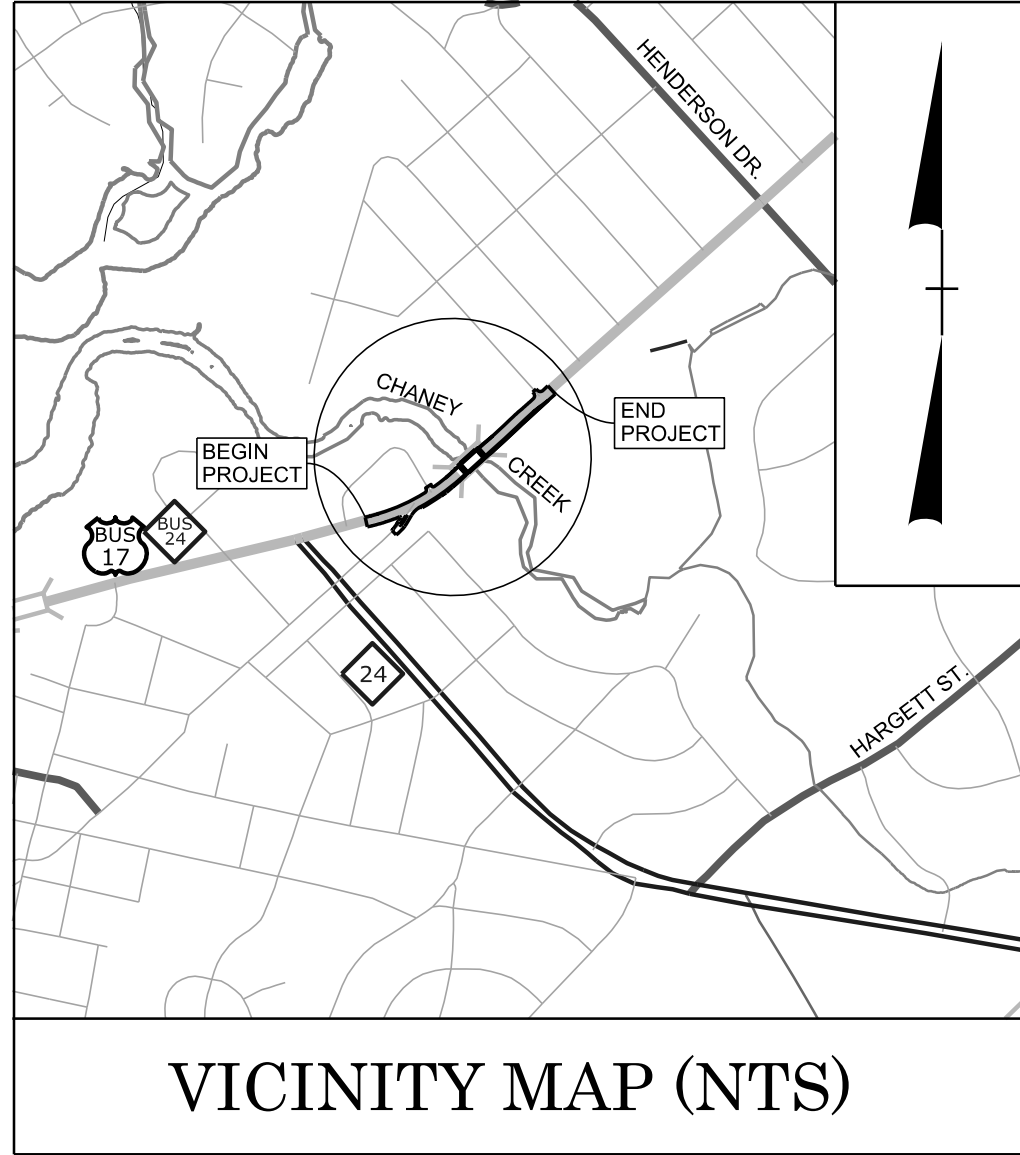


TIP PROJECT: BR-0194

CONTRACT:

See Sheet 1A For Index of Sheets



VICINITY MAP (NTS)

DESIGN RECOMMENDATION
PLANS SET

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ONSLOW COUNTY

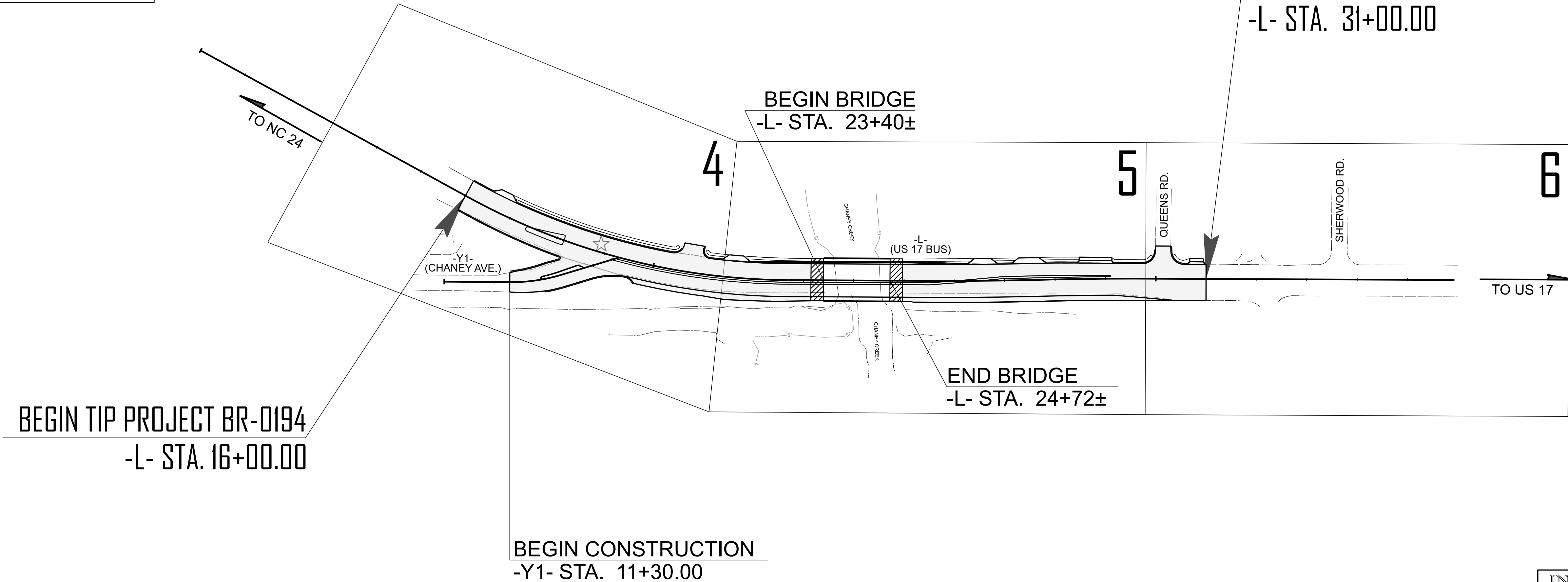
LOCATION: *REPLACE BRIDGE NO. 29 OVER CHANEY CREEK
ON US 17 BUS (MARINE BLVD.)*

TYPE OF WORK: *GRADING, PAVING, DRAINAGE, STRUCTURES
SIGNALS*

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0194	11	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
67194.1.1		P.E.	



END TIP PROJECT BR-0194
-L- STA. 31+00.00



BEGIN TIP PROJECT BR-0194
-L- STA. 16+00.00

END BRIDGE
-L- STA. 24+72±

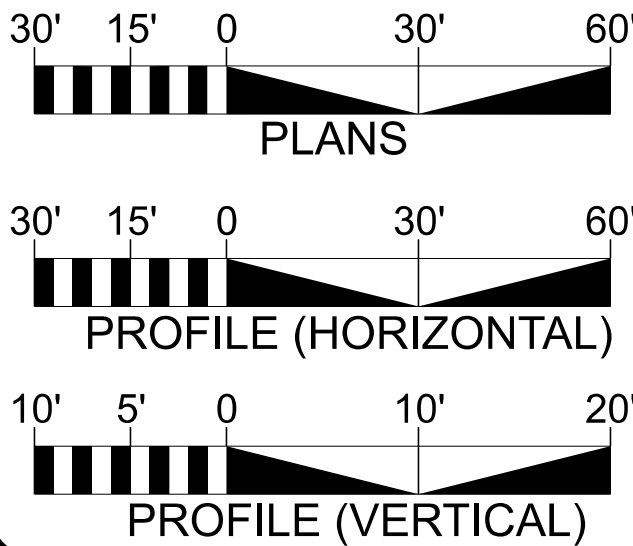
BEGIN CONSTRUCTION
-Y1- STA. 11+30.00

THIS PROJECT IS LOCATED WITHIN THE MUNICIPAL BOUNDARY OF JACKSONVILLE.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY MODIFIED METHOD III.

☆ = EXISTING SIGNAL TO BE UPGRADED

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2027 = 40,200
ADT 2045 = 63,500
K = %
D = %
T = 12 % *
V = 50 MPH
* TTST = DUAL
FUNC CLASS =
PRINCIPAL ARTERIAL
STATEWIDE TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT BR-0194 = 0.259 MILES
LENGTH OF STRUCTURE TIP PROJECT BR-0194 = 0.025 MILE
TOTAL LENGTH OF TIP PROJECT BR-0194 = 0.284 MILES



Prepared in the Office of:
HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116
FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
APRIL 21, 2025

LETTING DATE:
APRIL 20, 2027

GREG MYERS, PE
PROJECT ENGINEER

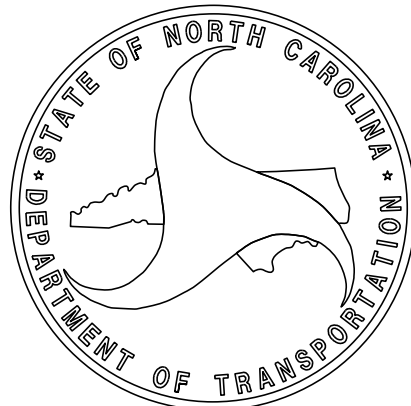
KYLE HIPPI, PE
PROJECT DESIGN ENGINEER

ERIC MURRAY
NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: P.E.
ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.



Note: Not to Scale

BOUNDARIES AND PROPERTY:

State Line	
County Line	
Township Line	
City Line	
Reservation Line	
Property Line	
Existing Iron Pin (EIP)	
Computed Property Corner	
Existing Concrete Monument (ECM)	
Parcel / Sequence Number	
Existing Fence Line	
Proposed Woven Wire Fence	
Proposed Chain Link Fence	
Proposed Barbed Wire Fence	
Existing Wetland Boundary	
Proposed Wetland Boundary	
Existing Endangered Animal Boundary	
Existing Endangered Plant Boundary	
Existing Historic Property Boundary	
Known Contamination Area: Soil	
Potential Contamination Area: Soil	
Known Contamination Area: Water	
Potential Contamination Area: Water	
Contaminated Site: Known or Potential	

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	
Sign	
Well	
Small Mine	
Foundation	
Area Outline	
Cemetery	
Building	
School	
Church	
Dam	

HYDROLOGY:

Stream or Body of Water	
Hydro, Pool or Reservoir	
Jurisdictional Stream	
Buffer Zone 1	
Buffer Zone 2	
Flow Arrow	
Disappearing Stream	
Spring	
Wetland	
Proposed Lateral, Tail, Head Ditch	
False Sump	

RAILROADS:

Standard Gauge	
RR Signal Milepost	
Switch	
RR Abandoned	
RR Dismantled	

RIGHT OF WAY & PROJECT CONTROL:

Primary Horiz Control Point	
Primary Horiz and Vert Control Point	
Secondary Horiz and Vert Control Point	
Vertical Benchmark	
Existing Right of Way Monument	
Proposed Right of Way Monument (Rebar and Cap)	
Proposed Right of Way Monument (Concrete)	
Existing Permanent Easement Monument	
Proposed Permanent Easement Monument (Rebar and Cap)	
Existing C/A Monument	
Proposed C/A Monument (Rebar and Cap)	
Proposed C/A Monument (Concrete)	
Existing Right of Way Line	
Proposed Right of Way Line	
Existing Control of Access Line	
Proposed Control of Access Line	
Proposed ROW and CA Line	
Existing Easement Line	
Proposed Temporary Construction Easement	
Proposed Temporary Drainage Easement	
Proposed Permanent Drainage Easement	
Proposed Permanent Drainage/Utility Easement	
Proposed Permanent Utility Easement	
Proposed Temporary Utility Easement	
Proposed Aerial Utility Easement	

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	
Existing Curb	
Proposed Slope Stakes Cut	
Proposed Slope Stakes Fill	
Proposed Curb Ramp	
Existing Metal Guardrail	
Proposed Guardrail	
Existing Cable Guiderail	
Proposed Cable Guiderail	
Equality Symbol	
Pavement Removal	
VEGETATION:	
Single Tree	
Single Shrub	
Hedge	

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS
CONVENTIONAL PLAN SHEET SYMBOLS

Woods Line	
Orchard	
Vineyard	

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	
Bridge Wing Wall, Head Wall and End Wall	
MINOR:	
Head and End Wall	
Pipe Culvert	
Footbridge	
Drainage Box: Catch Basin, DI or JB	
Paved Ditch Gutter	
Storm Sewer Manhole	
Storm Sewer	

UTILITIES:

* SUE - Subsurface Utility Engineering
LOS - Level of Service - A,B,C or D (Accuracy)

POWER:	
Existing Power Pole	
Proposed Power Pole	
Existing Joint Use Pole	
Proposed Joint Use Pole	
Power Manhole	
Power Line Tower	
Power Transformer	
U/G Power Cable Hand Hole	
H-Frame Pole	
U/G Power Line Test Hole (SUE - LOS A)*	
U/G Power Line (SUE - LOS B)*	
U/G Power Line (SUE - LOS C)*	
U/G Power Line (SUE - LOS D)*	

TELEPHONE:

Existing Telephone Pole	
Proposed Telephone Pole	
Telephone Manhole	
Telephone Pedestal	
Telephone Cell Tower	
U/G Telephone Cable Hand Hole	
U/G Telephone Test Hole (SUE - LOS A)*	
U/G Telephone Cable (SUE - LOS B)*	
U/G Telephone Cable (SUE - LOS C)*	
U/G Telephone Cable (SUE - LOS D)*	
U/G Telephone Conduit (SUE - LOS B)*	
U/G Telephone Conduit (SUE - LOS C)*	
U/G Telephone Conduit (SUE - LOS D)*	
U/G Fiber Optics Cable (SUE - LOS B)*	
U/G Fiber Optics Cable (SUE - LOS C)*	
U/G Fiber Optics Cable (SUE - LOS D)*	

WATER:

Water Manhole	
Water Meter	
Water Valve	
Water Hydrant	
U/G Water Line Test Hole (SUE - LOS A)*	
U/G Water Line (SUE - LOS B)*	
U/G Water Line (SUE - LOS C)*	
U/G Water Line (SUE - LOS D)*	
Above Ground Water Line	

TV:

TV Pedestal	
TV Tower	
U/G TV Cable Hand Hole	
U/G TV Test Hole (SUE - LOS A)*	
U/G TV Cable (SUE - LOS B)*	
U/G TV Cable (SUE - LOS C)*	
U/G TV Cable (SUE - LOS D)*	
U/G Fiber Optic Cable (SUE - LOS B)*	
U/G Fiber Optic Cable (SUE - LOS C)*	
U/G Fiber Optic Cable (SUE - LOS D)*	

GAS:

Gas Valve	
Gas Meter	
U/G Gas Line Test Hole (SUE - LOS A)*	
U/G Gas Line (SUE - LOS B)*	
U/G Gas Line (SUE - LOS C)*	
U/G Gas Line (SUE - LOS D)*	
Above Ground Gas Line	

SANITARY SEWER:

Sanitary Sewer Manhole	
Sanitary Sewer Cleanout	
U/G Sanitary Sewer Line	
Above Ground Sanitary Sewer	
SS Force Main Line Test Hole (SUE - LOS A)*	
SS Force Main Line (SUE - LOS B)*	
SS Force Main Line (SUE - LOS C)*	
SS Force Main Line (SUE - LOS D)*	

MISCELLANEOUS:

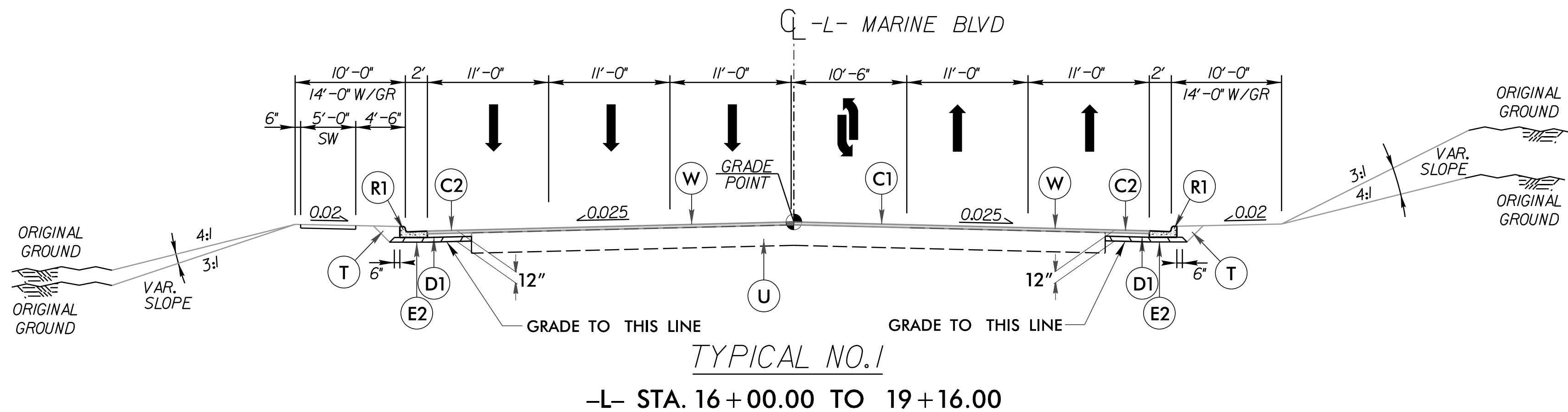
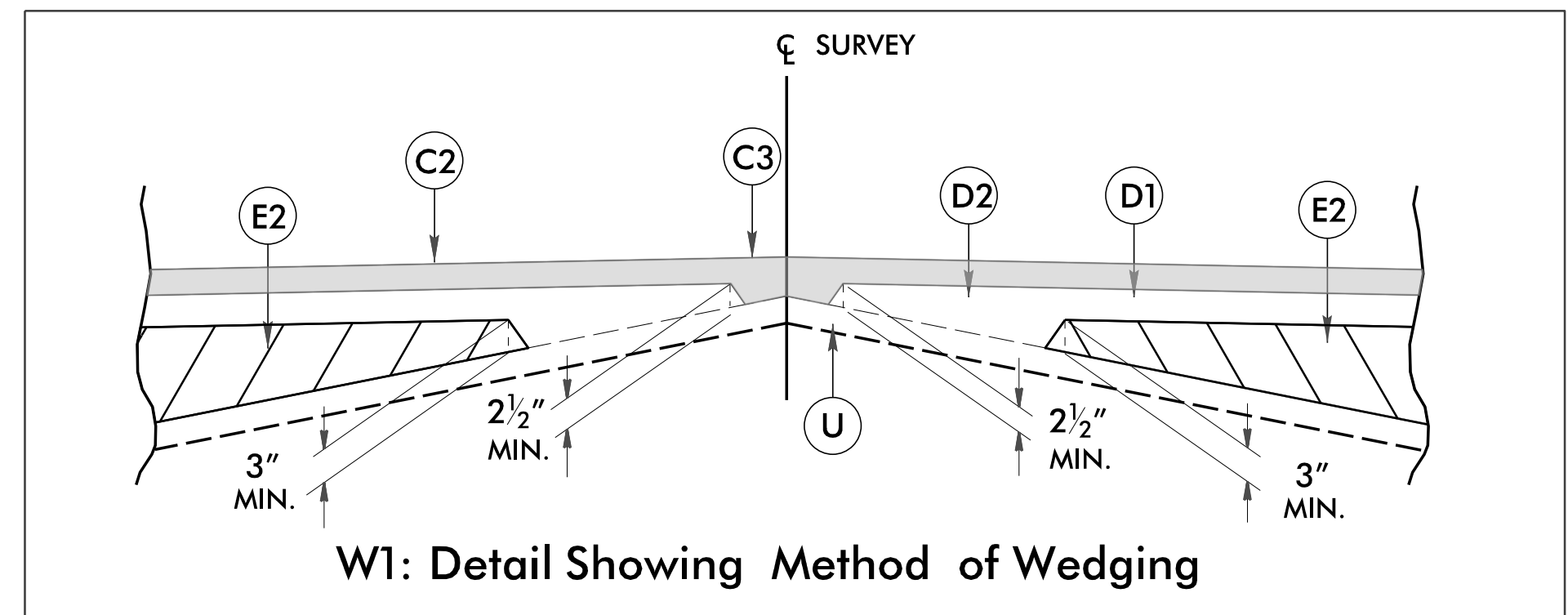
Utility Pole	
Utility Pole with Base	
Utility Located Object	
Utility Traffic Signal Box	
Utility Unknown U/G Line (SUE - LOS B)*	
U/G Tank; Water, Gas, Oil	
Underground Storage Tank, Approx. Loc.	
A/G Tank; Water, Gas, Oil	
Geoenviromental Boring	
Abandoned According to Utility Records	
End of Information	

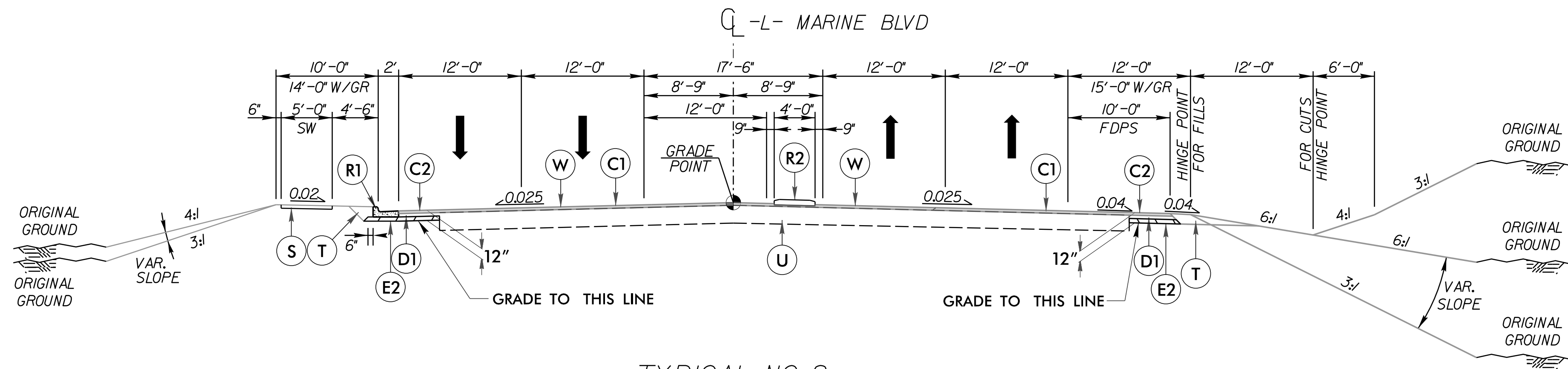


PAVEMENT SCHEDULE

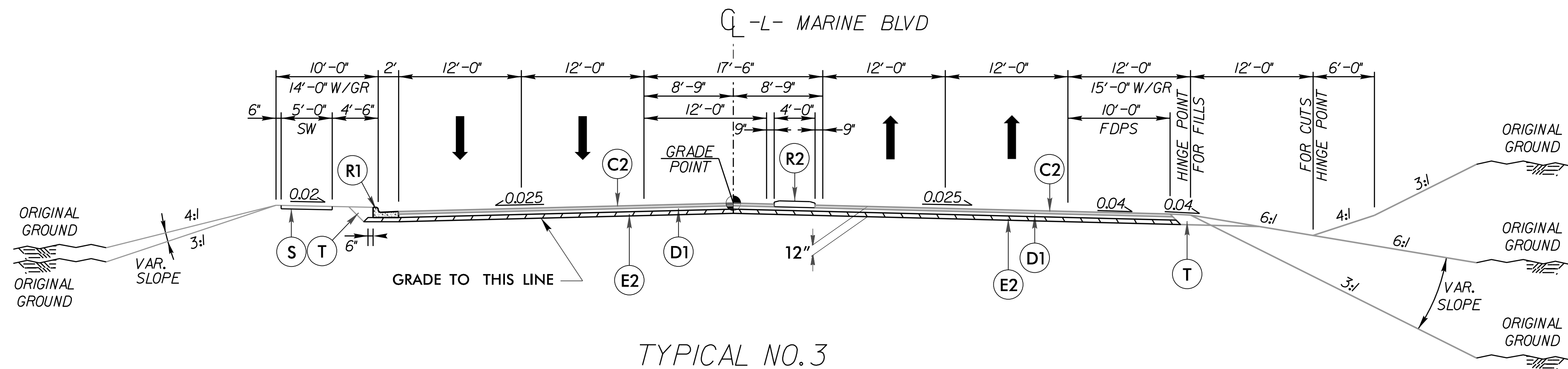
(PRELIMINARY PAVEMENT DESIGN)

C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	R1	CONCRETE SHOULDER BERM GUTTER
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 LAYERS.	R2	MONOLITHIC CONCRETE ISLAND (KEYED-IN)
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 TO EXCEED 2" IN DEPTH.	S	4" CONCRETE SIDEWALK
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	T	EARTH MATERIAL.
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 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.	U	EXISTING PAVEMENT.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL).
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" IN DEPTH OR GREATER THAN 5½" IN DEPTH.	NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.	





TYPICAL NO. 2
 -L- STA. 19+16.00 TO 21+25.00
 -L- STA. 26+25.00 TO 31+00.00



TYPICAL NO. 3
 -L- STA. 21+25.00 TO 23+40.00 +/- (BEGIN BRIDGE)
 -L- STA. 24+72.00 +/- (END BRIDGE) TO 26+25.00

ASSUMED PAVEMENT SCHEDULE	
C1	1.5" S9.5C
C2	3" S9.5C
C3	VAR. S9.5C
D1	4" I19.0C
D2	VAR. I19.0C
E1	5" B25.0C
E2	VAR. B25.0C
R1	2'-6" CURB & GUTTER
R2	CONCRETE ISLAND
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	VAR. DEPTH ASPHALT PAVEMENT

BR-0194

2A-2

NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 ONSLOW COUNTY

ROADWAY DESIGN UNIT
 ROADWAY DESIGN ENGINEER

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

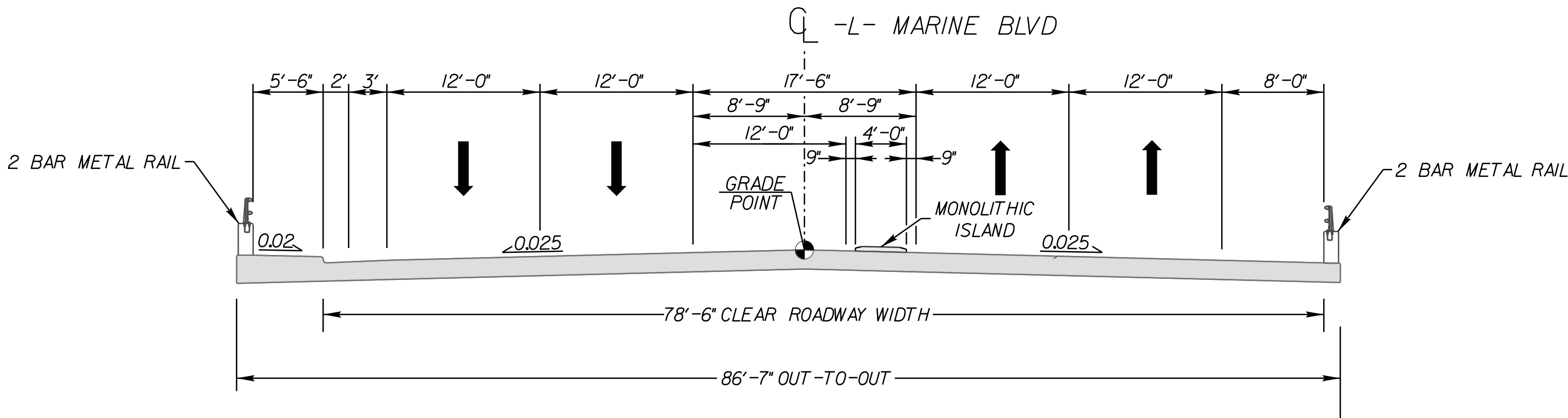
HYDRAULICS ENGINEER

INCOMPLETE PLANS
 DO NOT USE FOR CONSTRUCTION

PREPARED BY

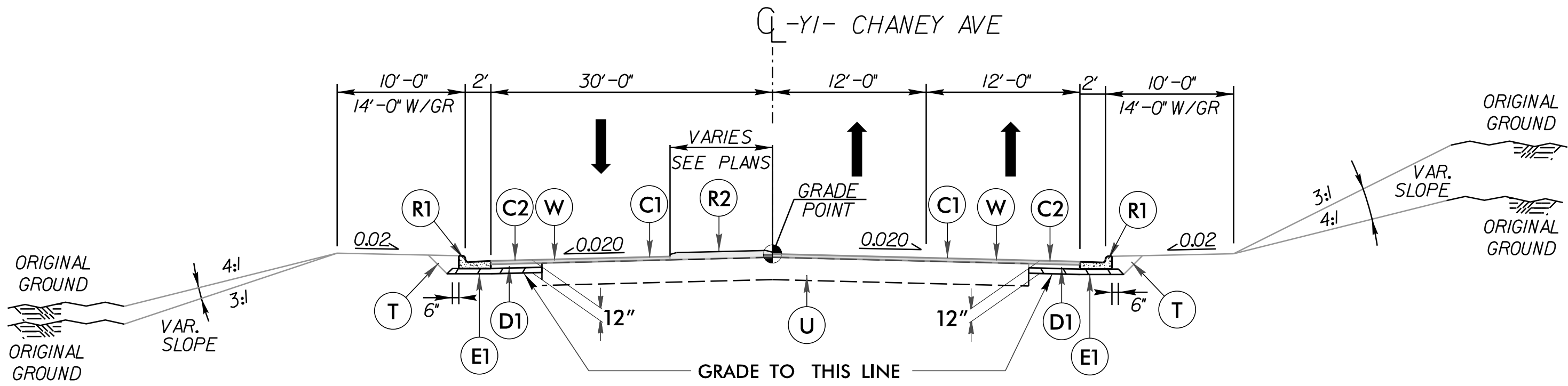
HDR Engineering, Inc. of the Carolinas
 205 Fayetteville St., Suite 100, Raleigh, N.C. 27601
 N.C.B.E.L.S. License Number: F-21116

REVISIONS



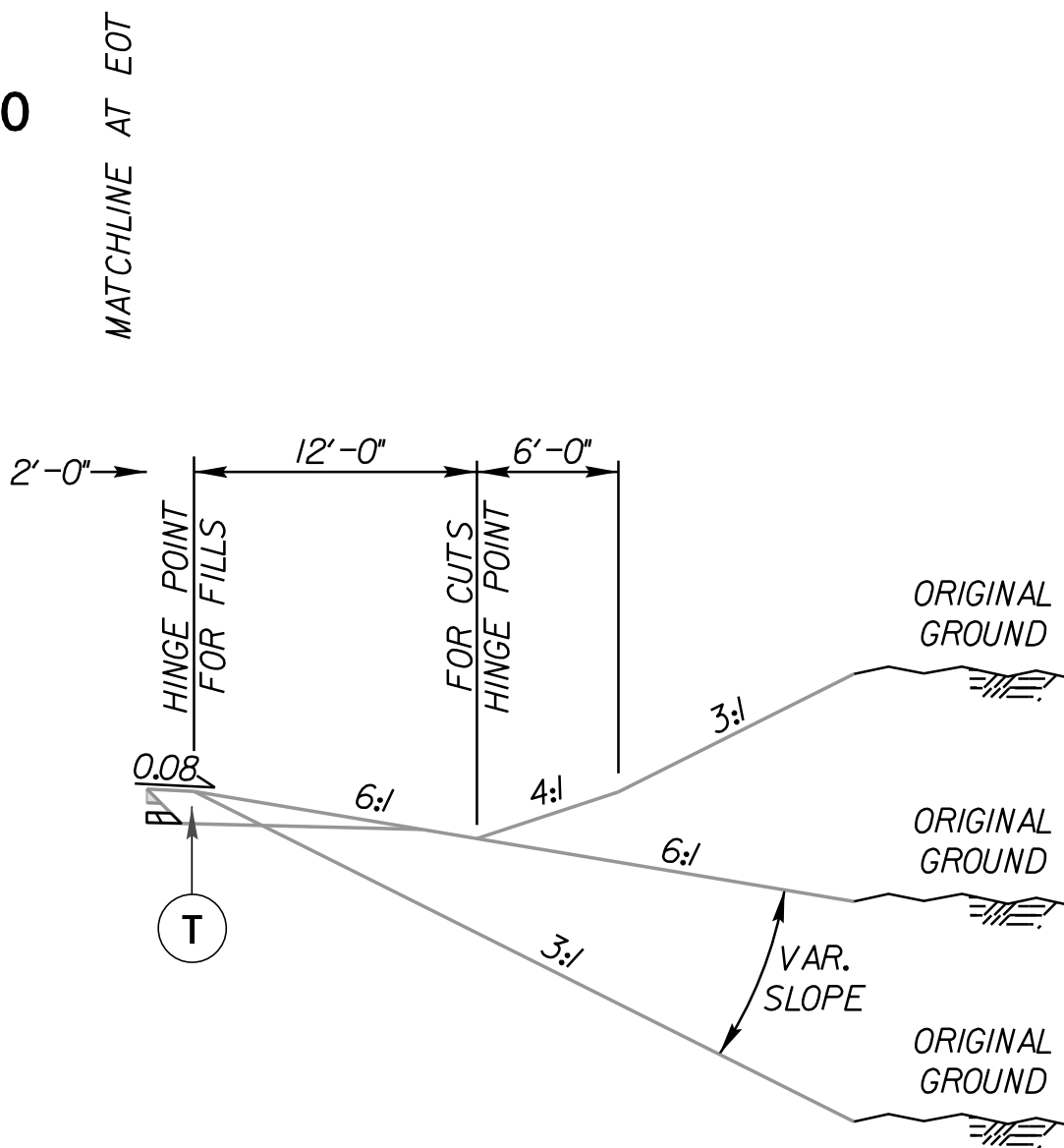
TYPICAL NO.4

-L- STA. 23+40.00 +/- (BEGIN BRIDGE) TO 24+72.00 +/- (END BRIDGE)



TYPICAL NO.5

-YI- STA. 11+30.00 TO 12+93.00



TYPICAL DETAIL NO.5A

-YI- STA. 11+30.00 TO 11+94.91

ASSUMED PAVEMENT SCHEDULE		BR-0194 2A-3
C1	1.5" S9.5C	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION ONslow COUNTY ROADWAY DESIGN UNIT ROADWAY DESIGN ENGINEER
C2	3" S9.5C	
C3	VAR. S9.5C	
D1	4" I19.0C	
D2	VAR. I19.0C	
E1	5" B25.0C	DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED HYDRAULICS ENGINEER
E2	VAR. B25.0C	
R1	2'-6" CURB & GUTTER	
R2	CONCRETE ISLAND	
S	4" SIDEWALK	
T	EARTH MATERIAL	INCOMPLETE PLANS DO NOT USE FOR CONSTRUCTION PREPARED BY HR HR Engineering, Inc. of the Carolinas 255 Fayetteville St. Suite 100 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-2116
U	EXIST. PAVEMENT	
W	VAR. DEPTH ASPHALT PAVEMENT	

REVISIONS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

Station	Station	Uncl. Excav.	Embank. +%	Borrow	Waste
-L- Sta. 16+00.00	-L- Sta. 23+40.00	232	2,258	2,026	
-Y1- Sta. 11+30.00	-Y1- Sta. 12+75.00	87	91	4	
SUBTOTALS:		319	2,349	2,030	
-L- Sta. 24+72.00	-L- Sta. 31+00.00	408	1,756	1,348	
SUBTOTALS:		408	1,756	1,348	
TOTALS:		727	4,105	3,378	
PROJECT TOTALS:		727	4,105	3,378	
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT				169	
GRAND TOTALS:		727	4,105	3,547	
SAY:		750		3,950	

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

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



CUR DATA -L-
Plc 19+45.15
 $\Delta c = 28^\circ 24' 41.1''$ (LT)
 $D = 04^\circ 16' 32.9''$
 $L_c = 664.47$
 $T_c = 339.21$
 $R = 1,340$
 $SE = 0.040$
 $V = 50$ mph

BEGIN TIP #BR-0194
STA. -L- POT 16+00.00
-L- PC 16+05.94

CUR DATA -Y1-
Plc 11+83.24
 $\Delta c = 17^\circ 08' 03.5''$ (LT)
 $D = 16^\circ 33' 34.1''$
 $L_c = 103.47$
 $T_c = 52.12$
 $R = 346$
 $SE = \text{SEE PLANS}$
 $V = 30$ mph

BAILEY FAMILY VENTURES, LLC
DB 5758 PG 301
PB 81 PG 212

BAILEY FAMILY VENTURES, LLC
DB 5758 PG 301
PB 81 PG 212

STA. -Y1- POT 10+00.00

-Y1- PC 11+31.12

-Y1- PT 12+34.59
AHD BRG N31°03'21.0E

-L- POC 19+29.79 =
-Y1- POT 13+53.64

☆ = EXISTING SIGNAL TO BE UPGRADED

FOR -L- AND -Y1- PROFILES SEE SHEETS 007 & 008

MATCH LINE -L- STA 21+40.00 SEE SHEET 005

BR-0194

004

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
ONSLOW COUNTY

ROADWAY DESIGN UNIT

ROADWAY DESIGN
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

HYDRAULICS
ENGINEER

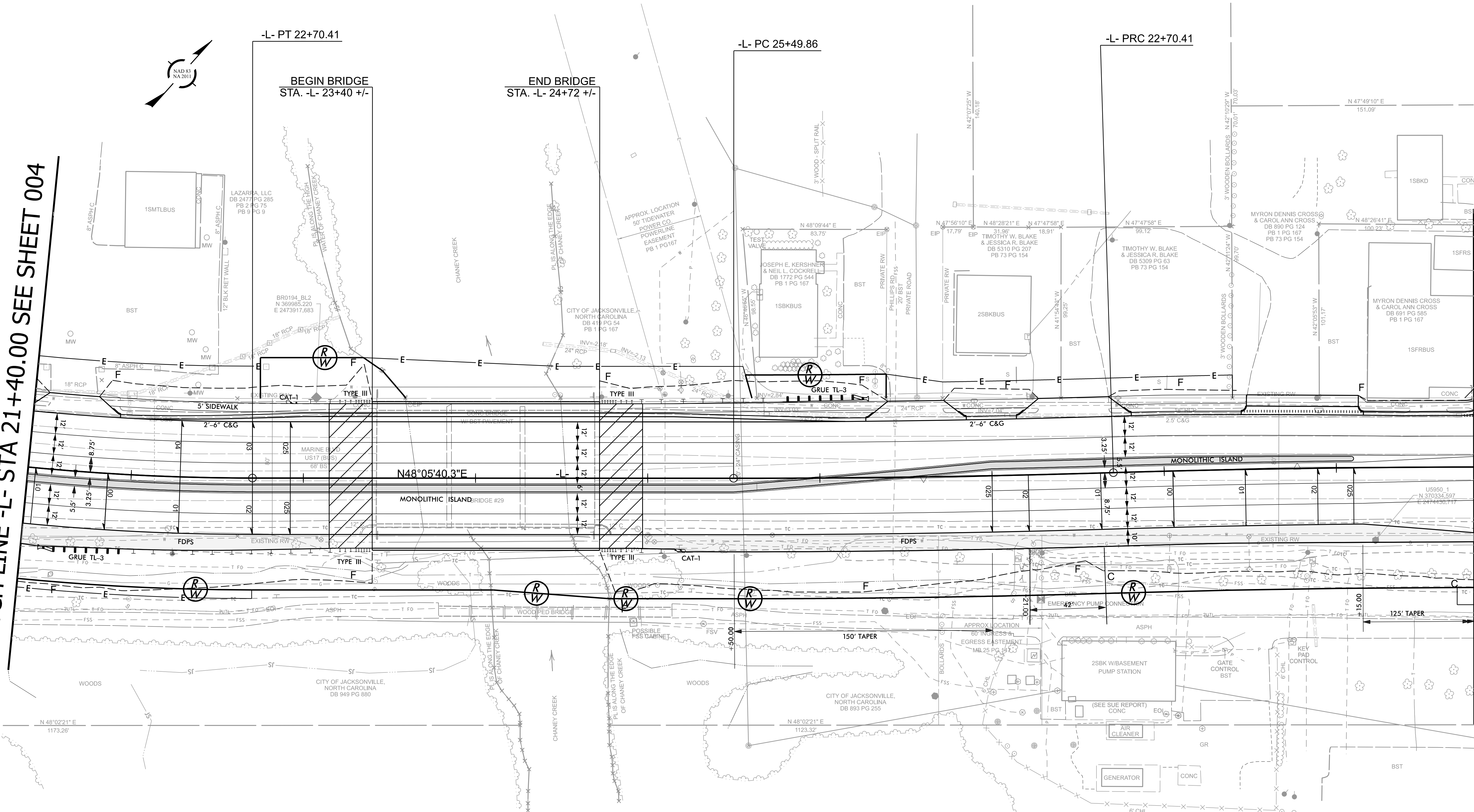
INCOMPLETE PLANS

PREPARED BY

HDR Engineering, Inc. of the Carolinas
255 Fayetteville St., Suite 900 Raleigh, NC 27601
N.C.B.E.L.S. License Number: F-6116

REVISIONS

MATCH LINE -L- STA 21+40.00 SEE SHEET 004



CUR DATA -L-
Pc 26+60.18
 $\Delta c = 01^\circ 45' 02.6''$ (LT)
 $D = 00^\circ 47' 36.9''$
 $L_c = 220.61$
 $T_c = 110.32$
 $R = 7,220$
 $SE = NC$
 $V = 50$ mph

CUR DATA -L-
Pc 28+77.31
 $\Delta c = 01^\circ 41' 43.7''$ (RT)
 $D = 00^\circ 47' 36.9''$
 $L_c = 213.65$
 $T_c = 106.83$
 $R = 7,220$
 $SE = NC$
 $V = 50$ mph

FOR -L- PROFILE SEE SHEET 007

MATCH LINE -L- STA 29+80.00 SEE SHEET 006

BR-0194

005

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
ONSLOW COUNTY

ROADWAY DESIGN UNIT
ROADWAY DESIGN
ENGINEER

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HYDRAULICS
ENGINEER

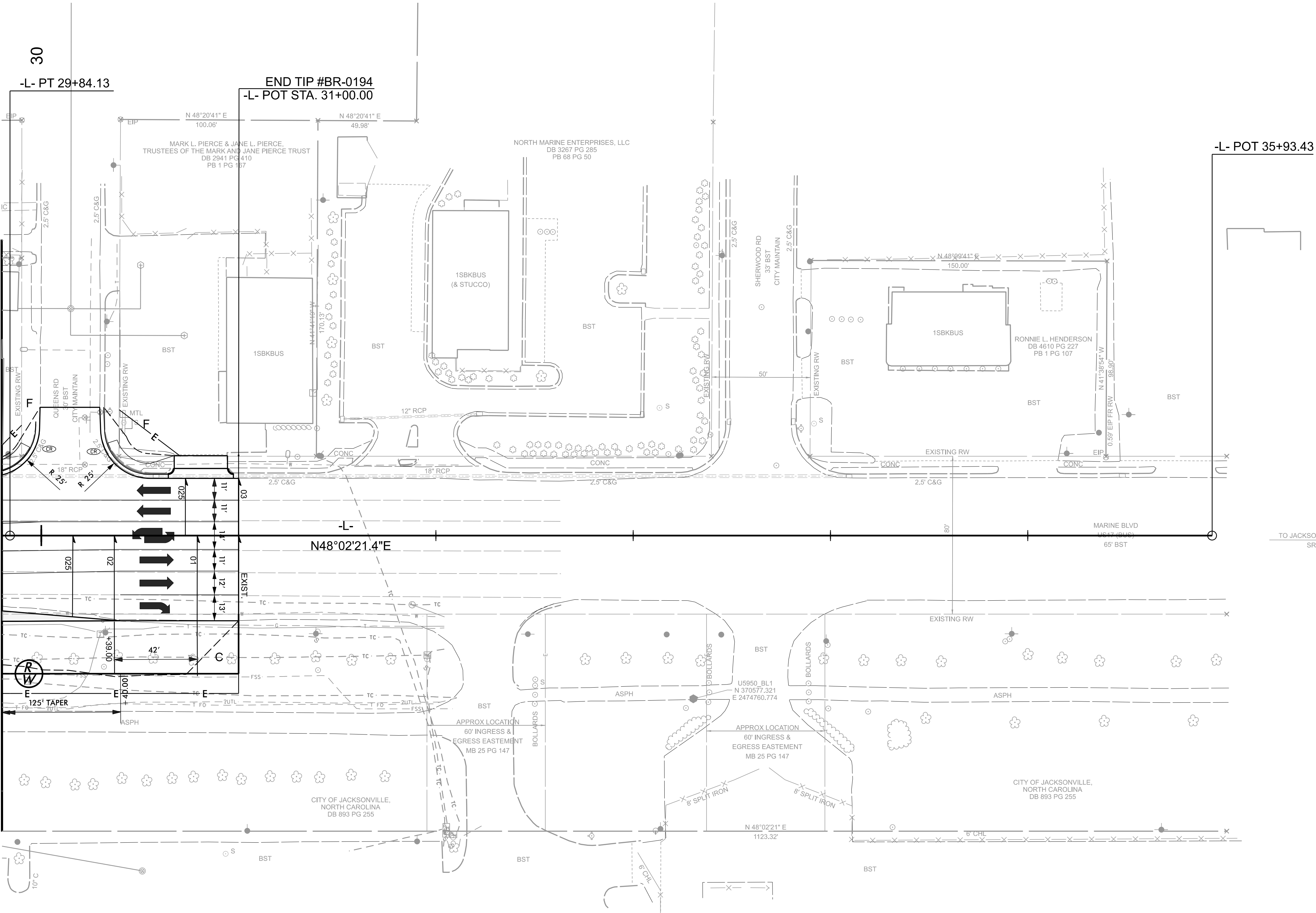
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255 Fayetteville St., Suite 900 Raleigh, NC 27601
N.C. E.L.S. License Number: F-6716

REVISIONS

MATCH LINE -L- STA 29+80.00 SEE SHEET 005



FOR -L- PROFILE SEE SHEET 008

BR-0194

006

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
ONSLOW COUNTY

ROADWAY DESIGN UNIT
ROADWAY DESIGN
ENGINEER

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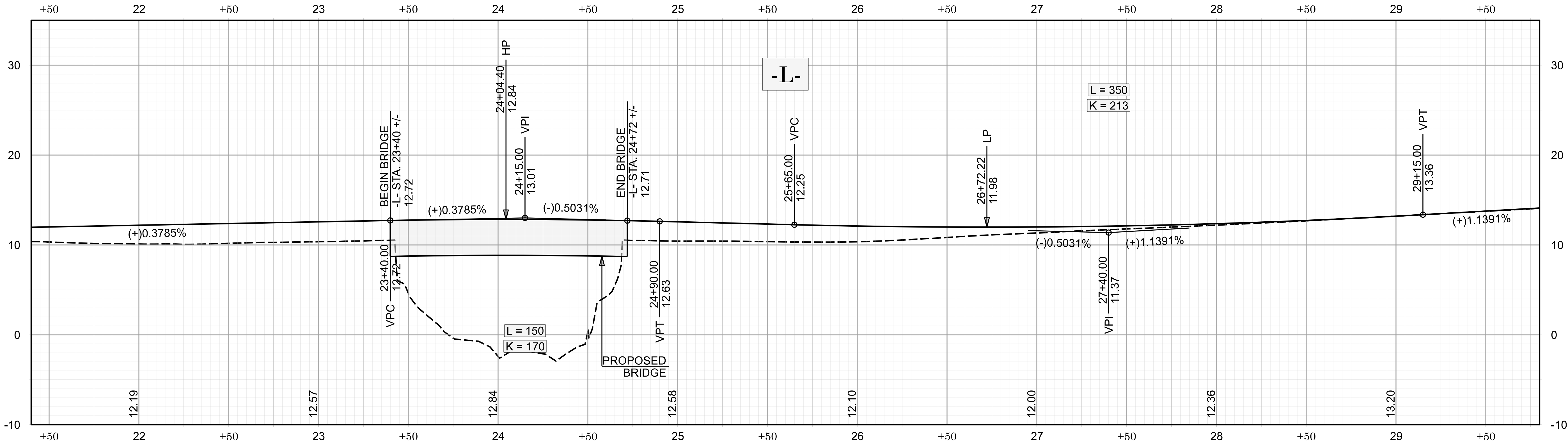
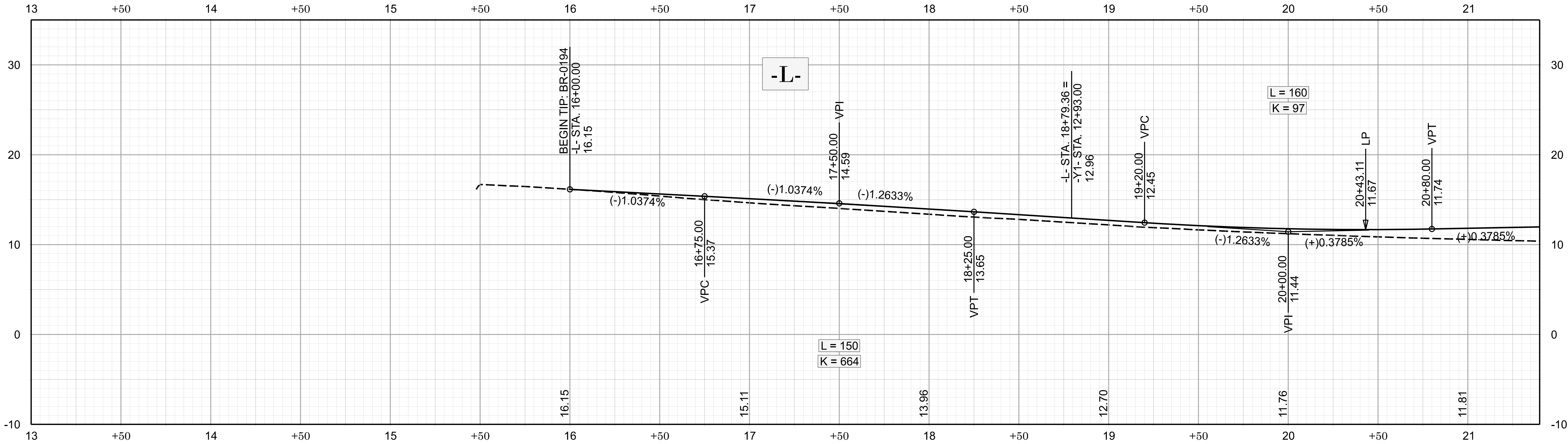
HYDRAULICS
ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR CONSTRUCTION

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REVISIONS

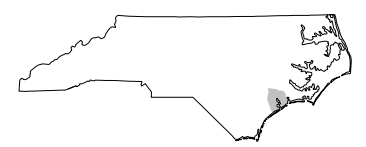


FOR -L- PLAN SEE SHEETS 004 & 005

BR-0194

007

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
ONSLOW COUNTY



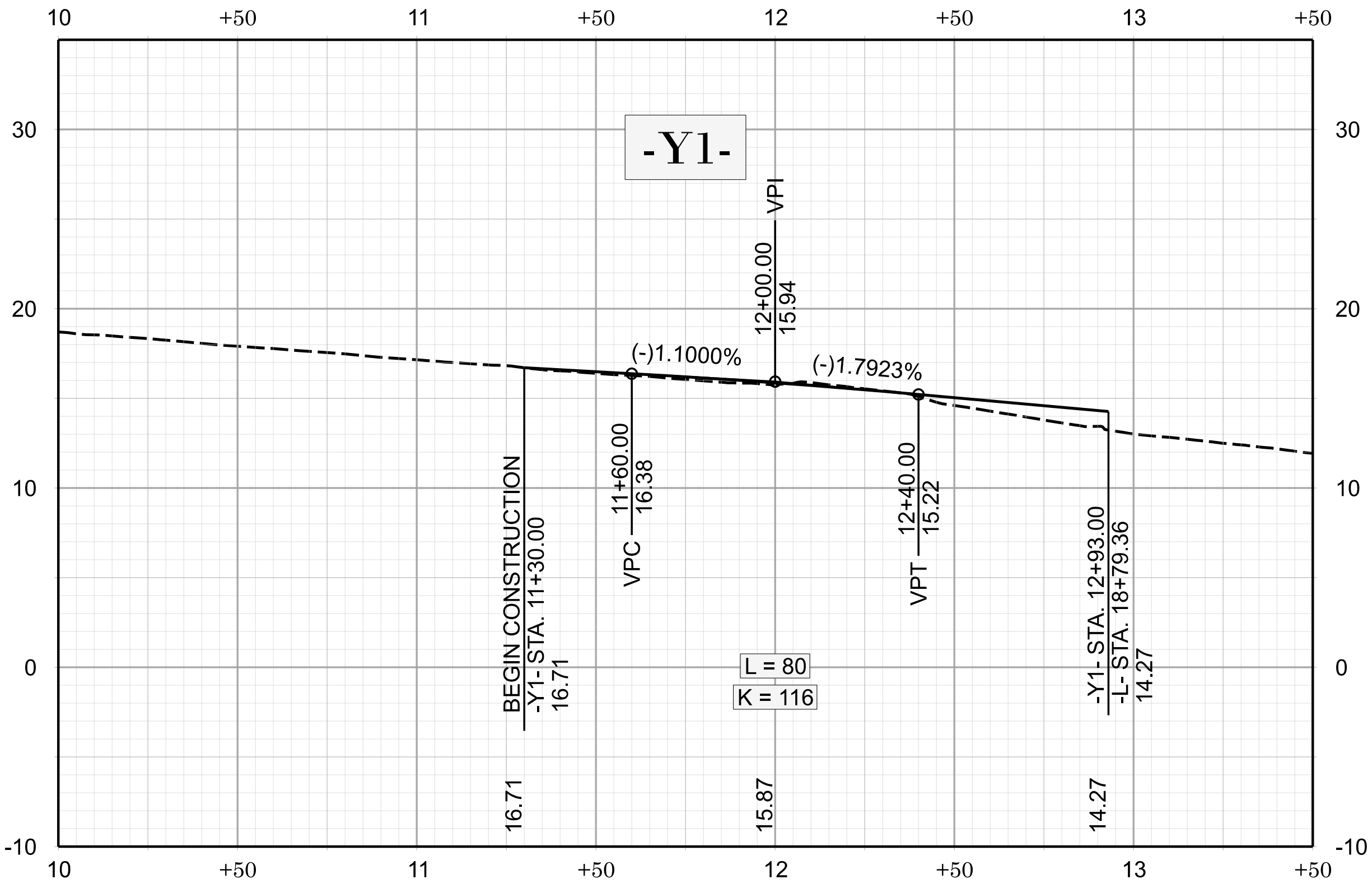
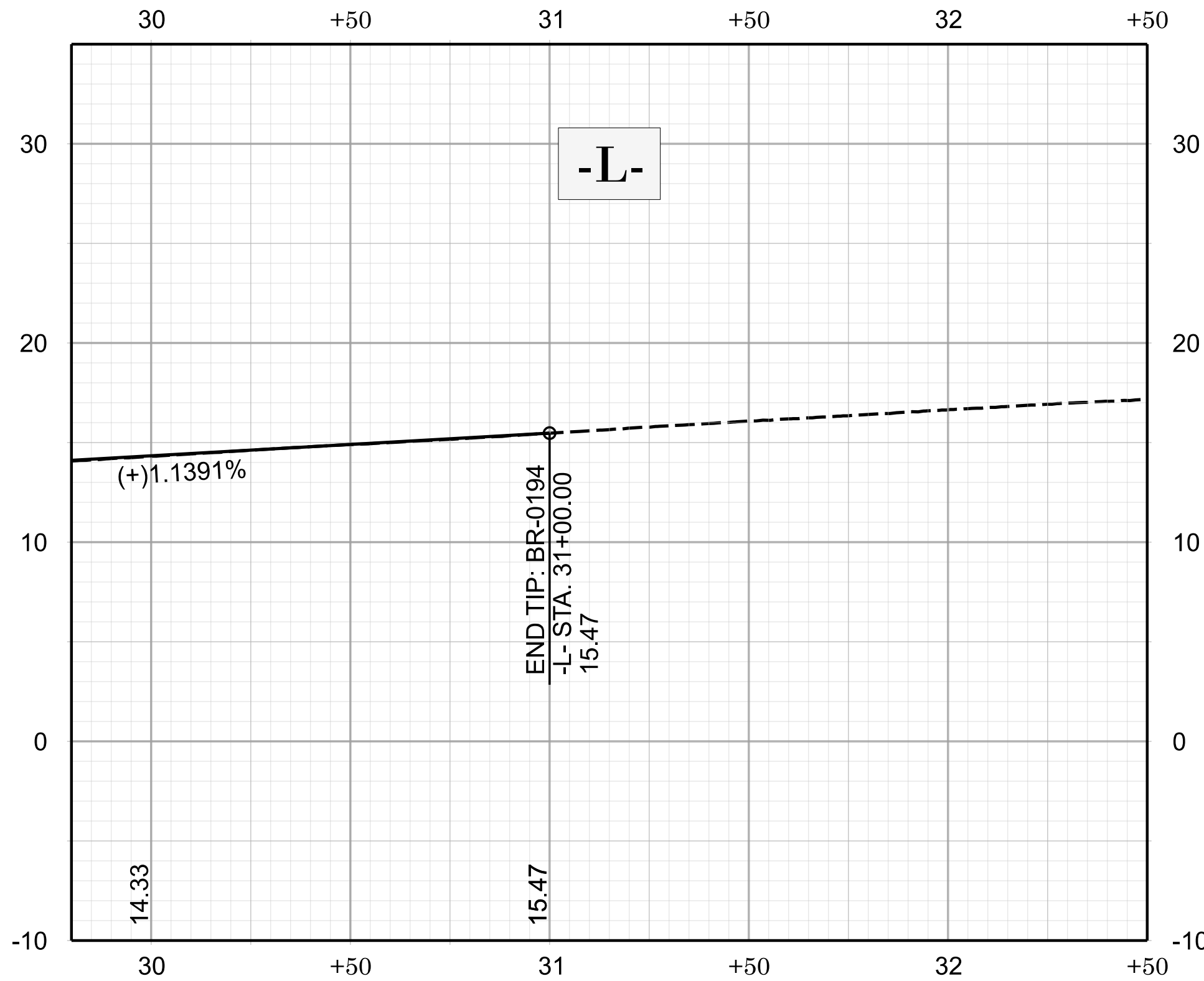
ROADWAY DESIGN UNIT
ROADWAY DESIGN
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED
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ENGINEER

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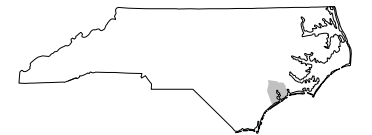
REVISIONS



BR-0194

008

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
ONSLOW COUNTY



ROADWAY DESIGN UNIT
ROADWAY DESIGN
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

HYDRAULICS
ENGINEER

INCOMPLETE PLANS
DO NOT BE FOR F.W. ACQUISITION

PREPARED BY

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255 Fayetteville St., Suite 900, Raleigh, N.C. 27601
N.C. B.E.L.S. License Number: F-67116

REVISIONS

FOR -L- PLAN SEE SHEET 006; FOR -Y1- PLAN SEE SHEET 004