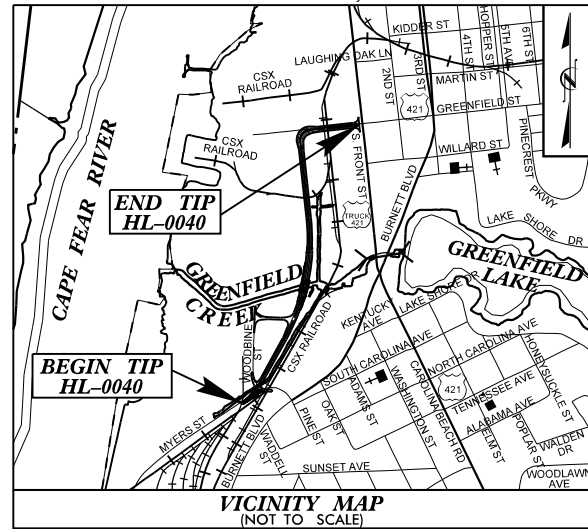


09/08/99

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



15% PLAN SET

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

NEW HANOVER COUNTY

**LOCATION: GREENFIELD STREET FROM US 117 (SHIPYARD BLVD.)
TO US 421 TRUCK (SOUTH FRONT STREET)**
TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNAL, AND STRUCTURES

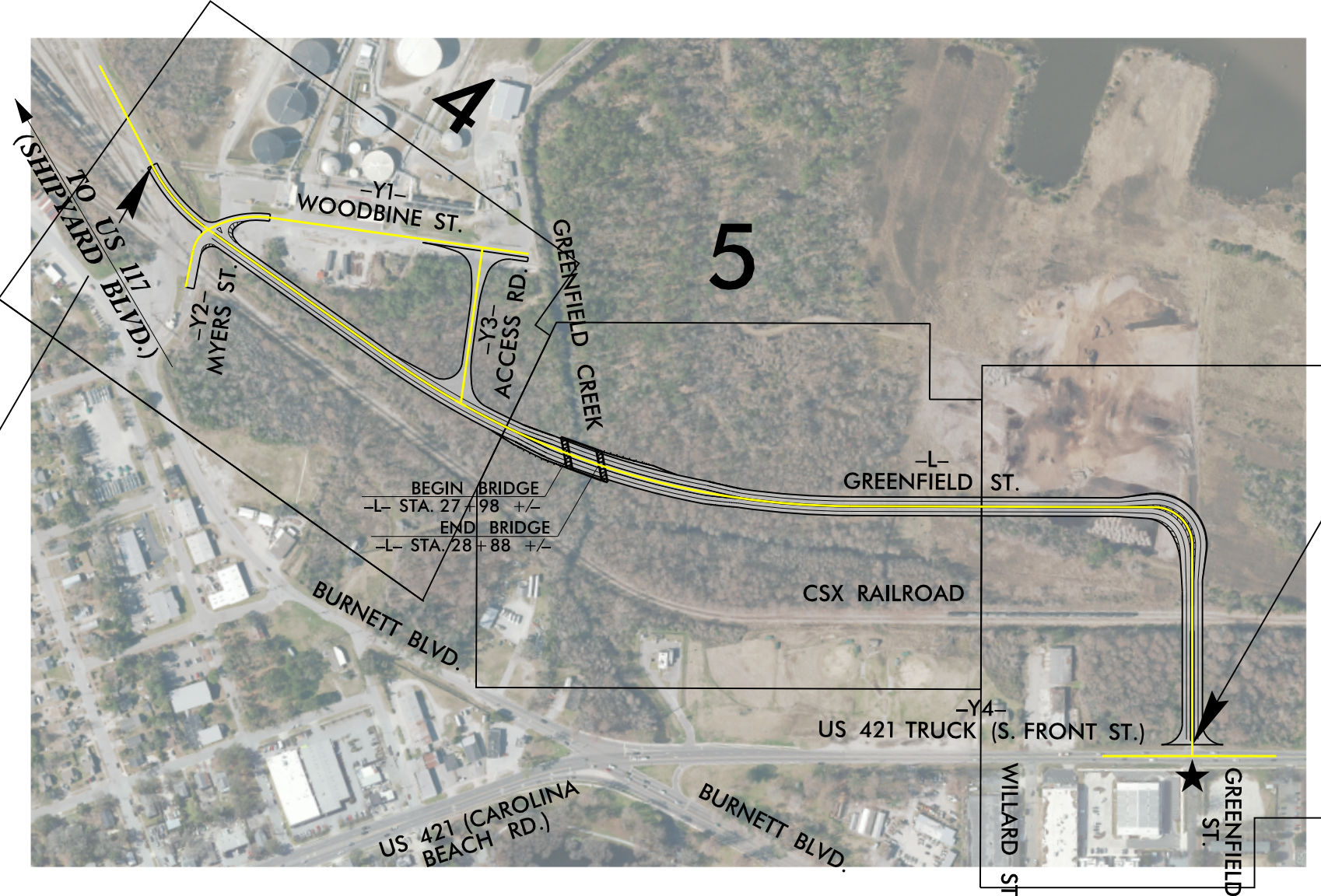
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HL-0040	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
HL-0040	N/A	P.E.	



TIP PROJECT: HL-0040

**BEGIN TIP
PROJECT HL-0040
-L - STA. 13 + 24.83**

**END TIP
PROJECT HL-0040
-L- STA. 52 + 40.94**

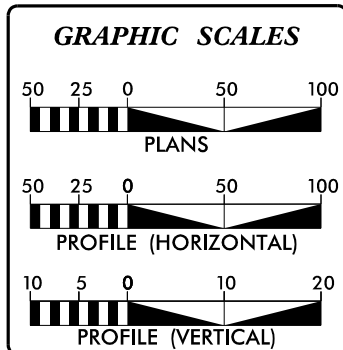


6
**TO DOWNTOWN
WILMINGTON**

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

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

CONTRACT:



DESIGN DATA
V (-L-) = 25 MPH
FUNC CLASS (-L-) = LOCAL REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT HL-0040 = 0.725 MILES
TOTAL STRUCTURES TIP PROJECT HL-0040 = 0.017 MILES
TOTAL LENGTH TIP PROJECT HL-0040 = 0.742 MILES

NC PORTS CONTACT:	MARK BLAKE, PE
NCDOT CONTACT:	NCDOT DIVISION 3

Prepared in the Office of:
HDR 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

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:	PHILLIP ROGERS, PE PROJECT ENGINEER
LETTING DATE:	ADAM SATTLER, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



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TIME: 2:58:42 PM

DATE: 2/7/2023

12/2/2016

HR 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

PROJECT REFERENCE NO.	SHEET NO.
HL-0040	1A-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

INDEX OF SHEETS

<u>SHEET NUMBER</u>	<u>SHEET</u>
1	TITLE SHEET
1A-1	INDEX OF SHEETS
1B-1	CONVENTIONAL SYMBOLS
2A-1 TO 2A-2	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
4 TO 6	PLAN SHEETS
7 TO 8	PROFILE SHEETS

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

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	①23
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	WLB
Proposed Wetland Boundary	WLB
Existing Endangered Animal Boundary	EAB
Existing Endangered Plant Boundary	EPB
Existing Historic Property Boundary	HPB
Known Contamination Area: Soil	⊗-s-⊗-s-
Potential Contamination Area: Soil	⊗-s-⊗-s-
Known Contamination Area: Water	⊗-w-⊗-w-
Potential Contamination Area: Water	⊗-w-⊗-w-
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	JS
Buffer Zone 1	BZ 1
Buffer Zone 2	BZ 2
Flow Arrow	←
Disappearing Stream	→
Spring	○
Wetland	⊗
Proposed Lateral, Tail, Head Ditch	-----
False Sump	▽

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○
Switch	□
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY & 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	E
Proposed Temporary Drainage Easement	TDE
Proposed Permanent Drainage Easement	PDE
Proposed Permanent Drainage/Utility Easement	DUE
Proposed Permanent Utility Easement	PUE
Proposed Temporary Utility Easement	TUE
Proposed Aerial Utility Easement	AUE

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	C
Proposed Slope Stakes Fill	F
Proposed Curb Ramp	CR
Existing Metal Guardrail	T T T
Proposed Guardrail	T T T
Existing Cable Guiderail	□ □ □
Proposed Cable Guiderail	□ □ □
Equality Symbol	⊕
Pavement Removal	⊗
VEGETATION:	
Single Tree	⊗
Single Shrub	⊗
Hedge	-----

Woods Line	-----
Orchard	⊗
Vineyard	⊗

EXISTING STRUCTURES:

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

UTILITIES:

* 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	PH
H-Frame Pole	●
U/G Power Line Test Hole (SUE - LOS A)*	⊕
U/G Power Line (SUE - LOS B)*	P
U/G Power Line (SUE - LOS C)*	P
U/G Power Line (SUE - LOS D)*	P

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Pedestal	⊞
Telephone Cell Tower	⊞
U/G Telephone Cable Hand Hole	PH
U/G Telephone Test Hole (SUE - LOS A)*	⊕
U/G Telephone Cable (SUE - LOS B)*	T
U/G Telephone Cable (SUE - LOS C)*	T
U/G Telephone Cable (SUE - LOS D)*	T
U/G Telephone Conduit (SUE - LOS B)*	TC
U/G Telephone Conduit (SUE - LOS C)*	TC
U/G Telephone Conduit (SUE - LOS D)*	TC
U/G Fiber Optics Cable (SUE - LOS B)*	TF
U/G Fiber Optics Cable (SUE - LOS C)*	TF
U/G Fiber Optics Cable (SUE - LOS D)*	TF

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	A/G Water

TV:

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

GAS:

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

SANITARY SEWER:

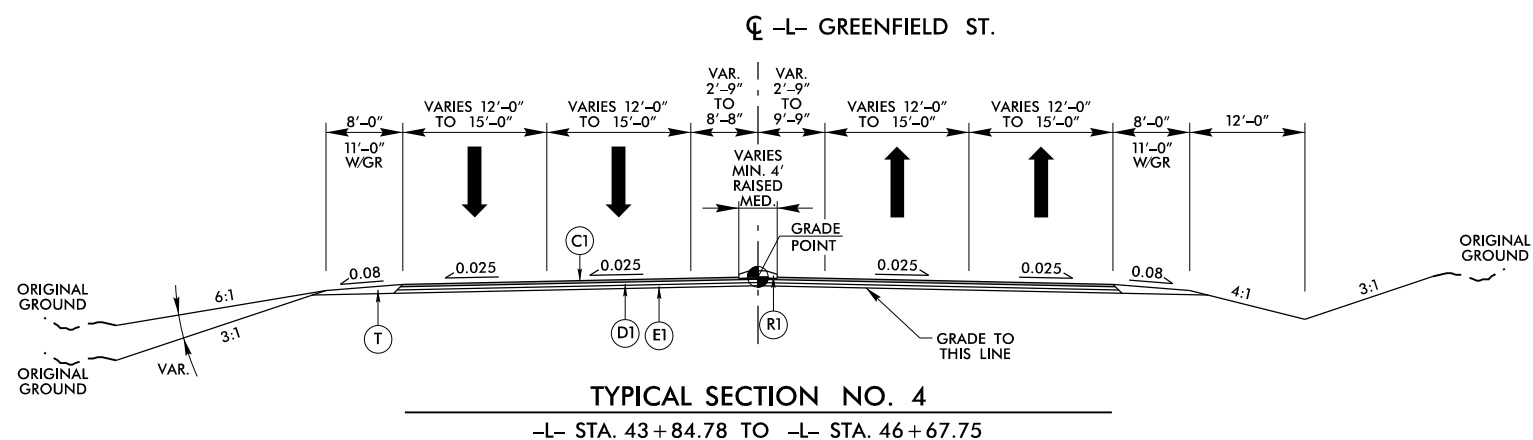
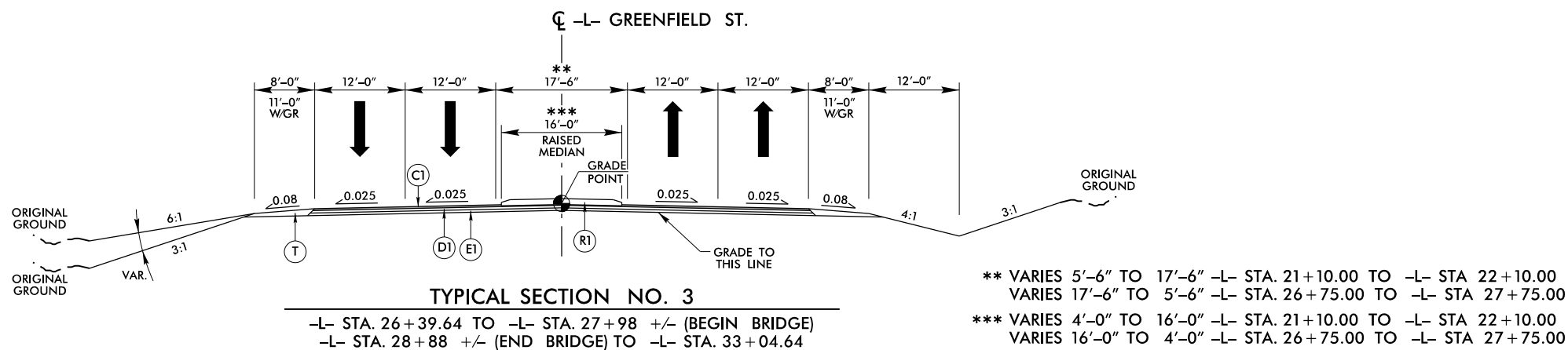
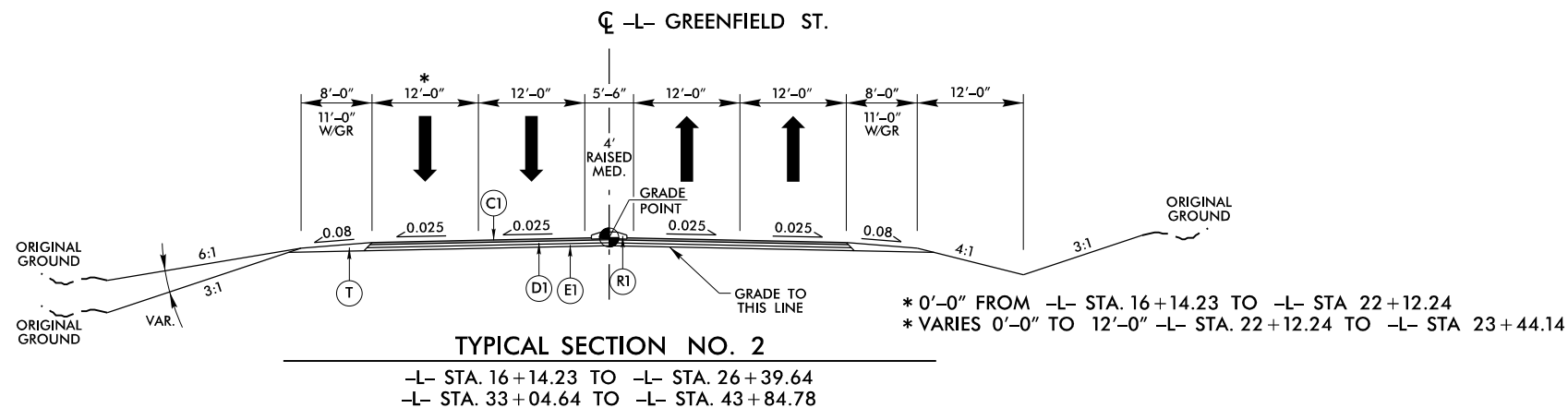
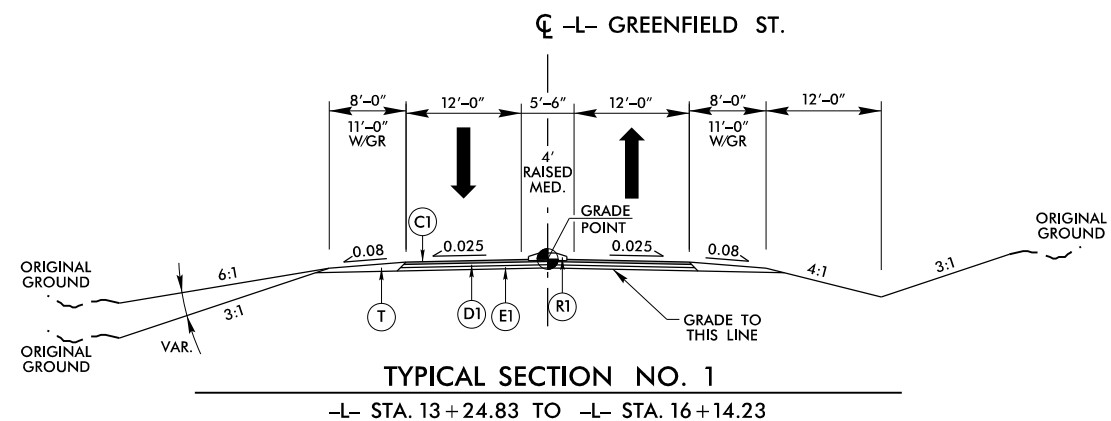
Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	SS
Above Ground Sanitary Sewer	A/G Sanitary Sewer
SS Force Main Line Test Hole (SUE - LOS A)*	⊕
SS Force Main Line (SUE - LOS B)*	FSS
SS Force Main Line (SUE - LOS C)*	FSS
SS Force Main Line (SUE - LOS D)*	FSS

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊞
Utility Unknown U/G Line (SUE - LOS B)*	UTL
U/G Tank; Water, Gas, Oil	⊞
Underground Storage Tank, Approx. Loc.	UST
A/G Tank; Water, Gas, Oil	⊞
Geoenvironmental Boring	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

PAVEMENT SCHEDULE (PRELIMINARY PAVEMENT DESIGN)	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE
R1	5" MONOLITHIC CONCRETE ISLAND (KEYED IN)
R2	1'-6" CONCRETE CURB AND GUTTER
T	EARTH MATERIAL

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



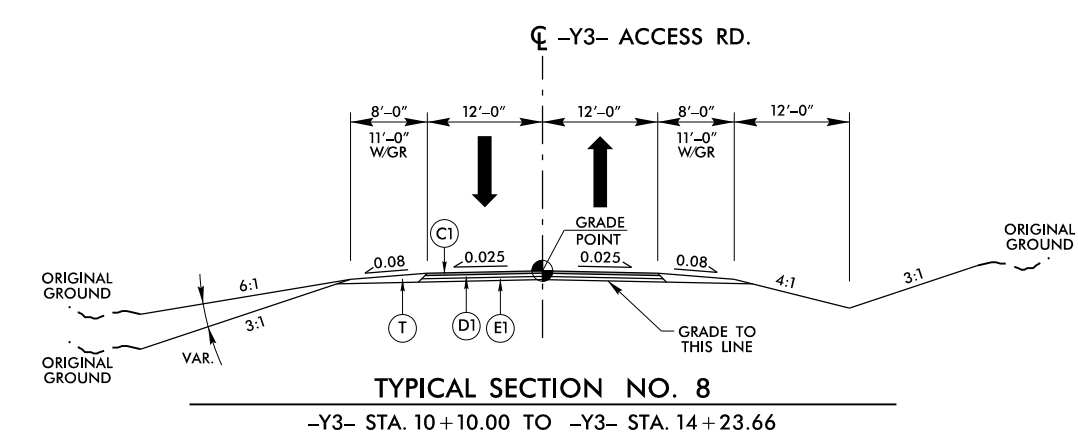
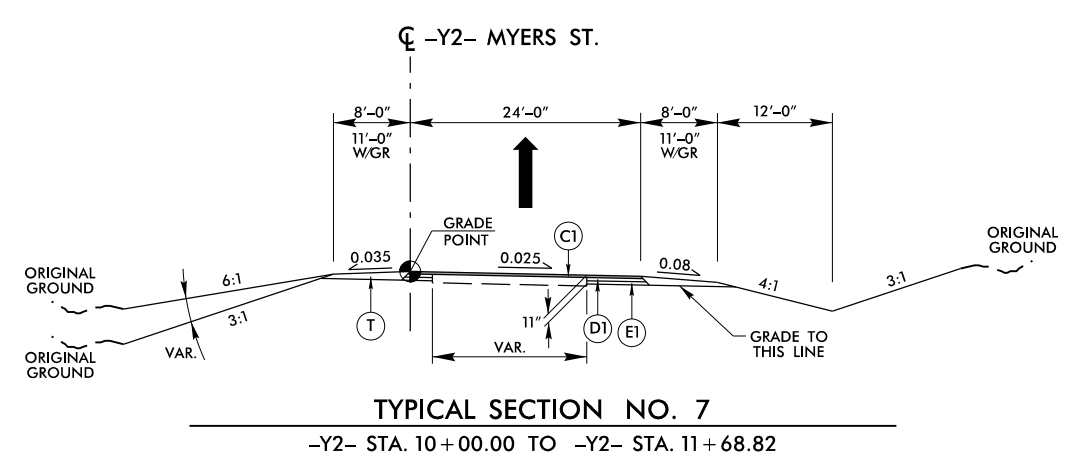
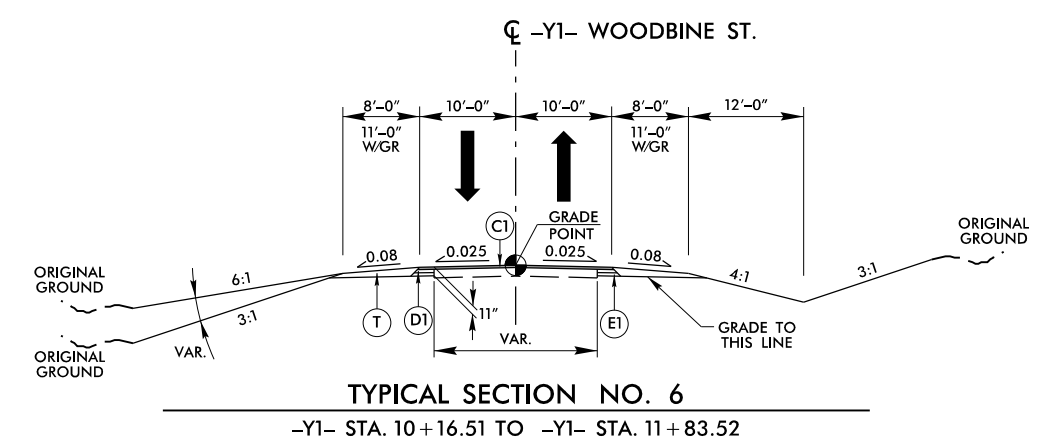
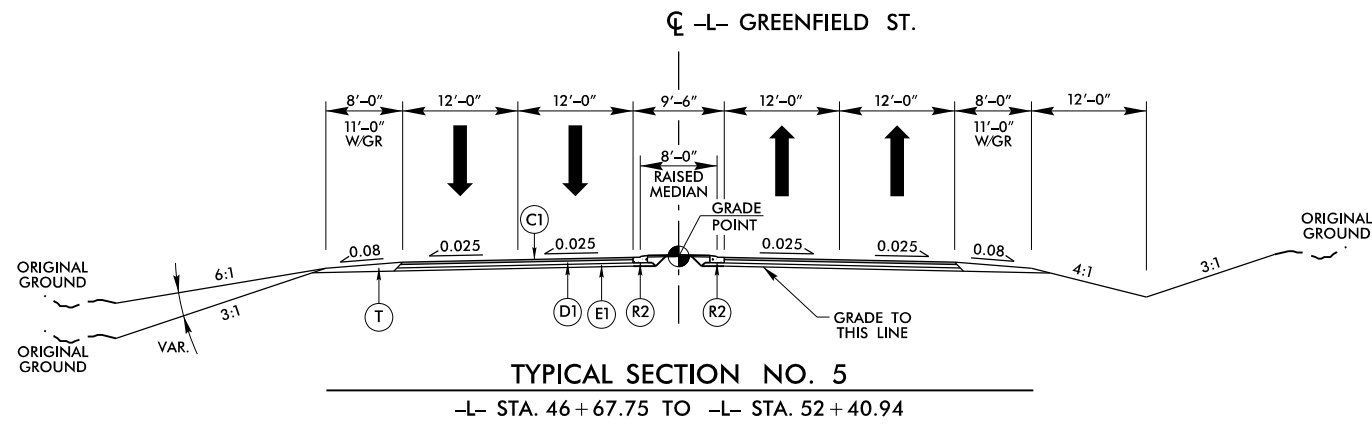
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St. Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	

PLOT DRIVER: NCDOT_color_eng_100.plt
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REVISIONS

PAVEMENT SCHEDULE (PRELIMINARY PAVEMENT DESIGN)	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE
R1	5" MONOLITHIC CONCRETE ISLAND (KEYED IN)
R2	1'-6" CONCRETE CURB AND GUTTER
T	EARTH MATERIAL

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



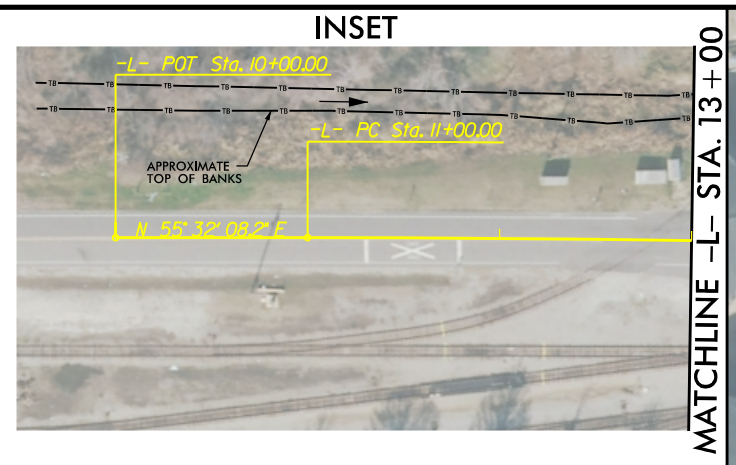
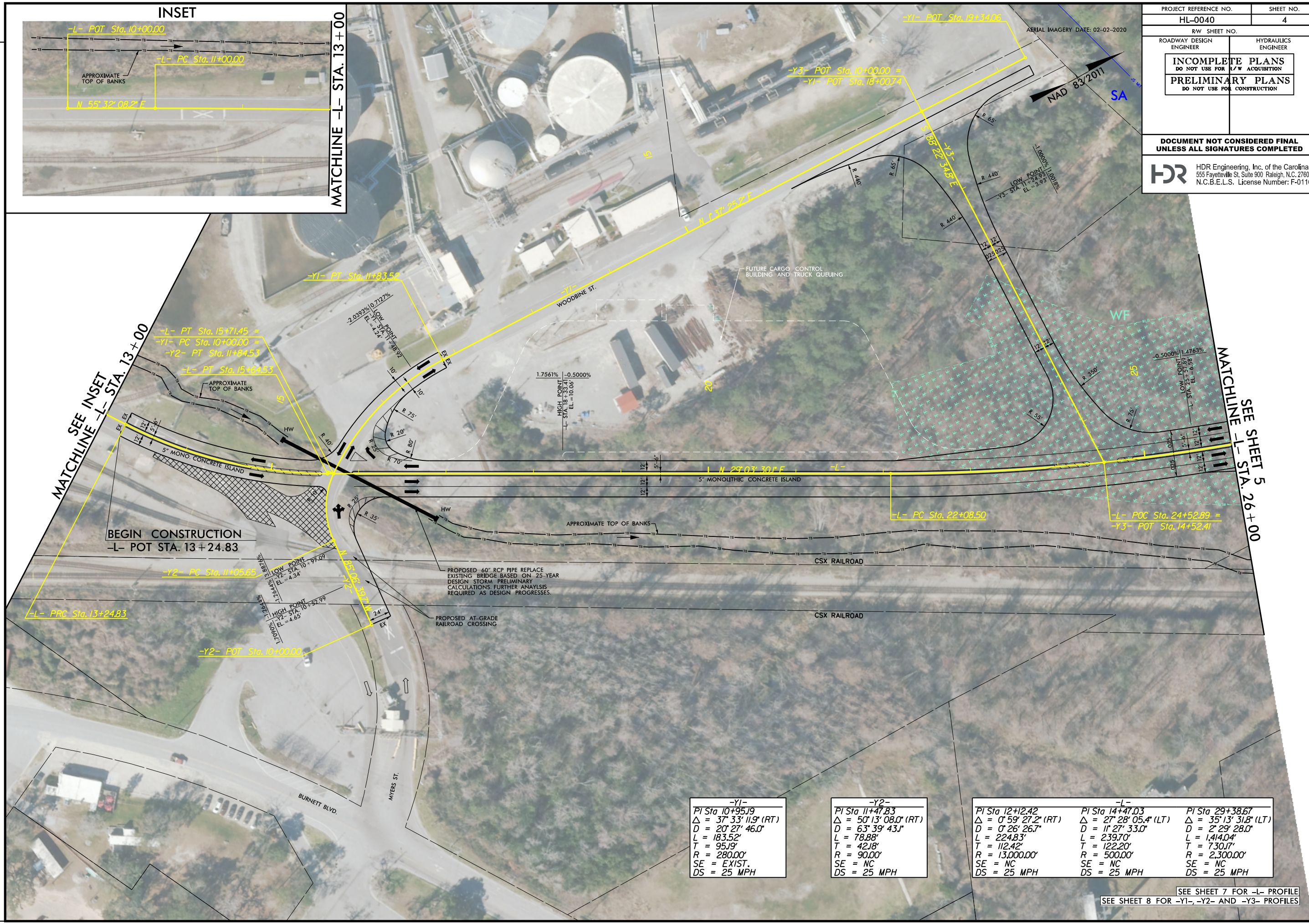
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RW SHEET NO.	
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INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St. Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	

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REVISIONS

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REVISIONS



PROJECT REFERENCE NO. HL-0040	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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	

-Y1-
PI Sta 10+95.19
$\Delta = 37^{\circ} 33' 11.9"$ (RT)
D = 20' 27' 46.0"
L = 183.52'
T = 95.19'
R = 280.00'
SE = EXIST.
DS = 25 MPH

-Y2-
PI Sta 11+47.83
$\Delta = 50^{\circ} 13' 08.0"$ (RT)
D = 63' 39' 43.1"
L = 78.88'
T = 42.18'
R = 90.00'
SE = NC
DS = 25 MPH

-L-
PI Sta 12+24.2
$\Delta = 0^{\circ} 59' 27.2"$ (RT)
D = 0' 26' 26.7"
L = 224.83'
T = 112.42'
R = 13,000.00'
SE = NC
DS = 25 MPH


-L-
PI Sta 14+47.03
$\Delta = 27^{\circ} 28' 05.4"$ (LT)
D = 11' 27' 33.0"
L = 239.70'
T = 122.20'
R = 500.00'
SE = NC
DS = 25 MPH

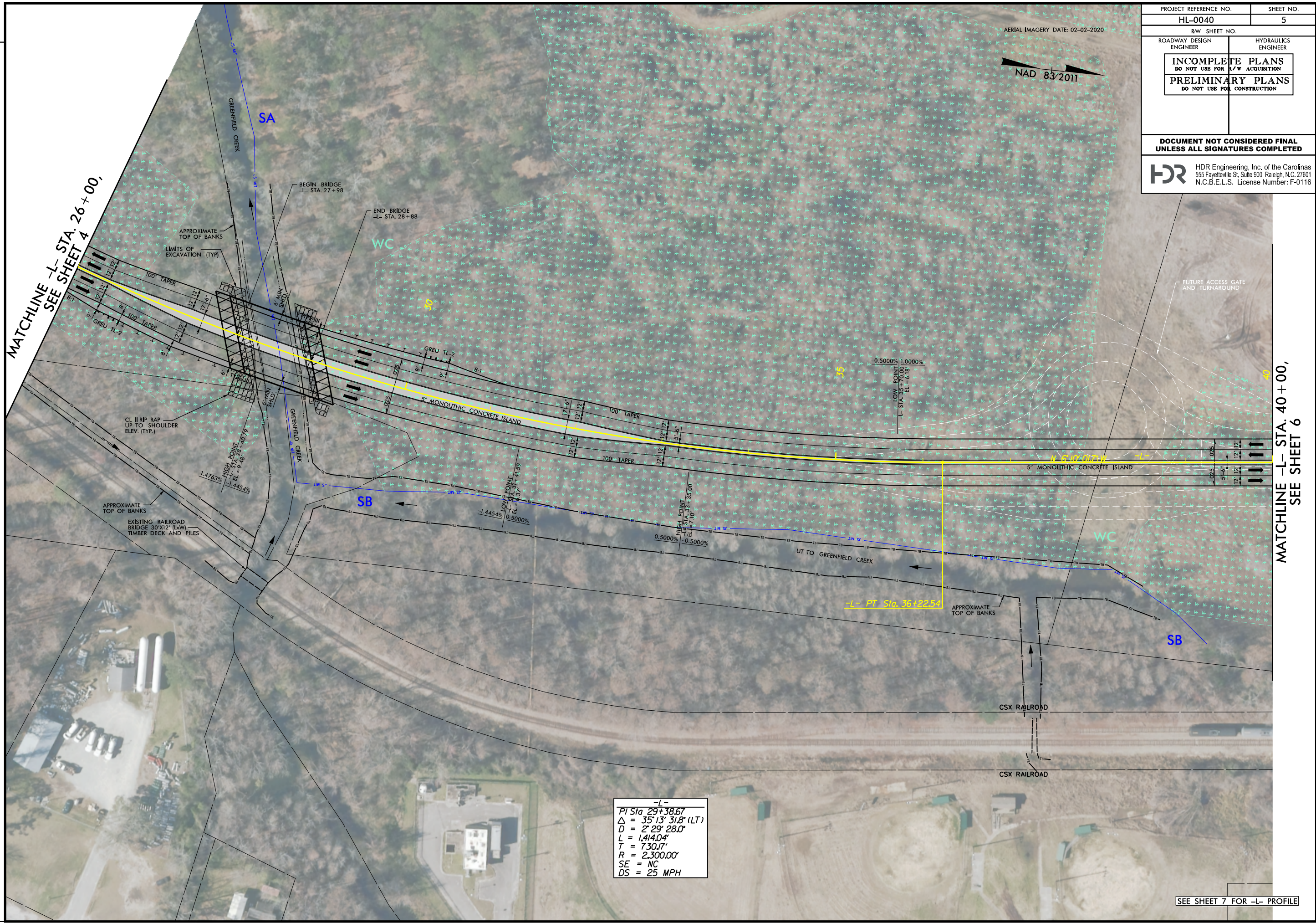
PI Sta 29+38.67
$\Delta = 35^{\circ} 13' 31.8"$ (LT)
D = 2' 29' 28.0"
L = 1,414.04'
T = 730.17'
R = 2,300.00'
SE = NC
DS = 25 MPH

SEE SHEET 7 FOR -L- PROFILE
 SEE SHEET 8 FOR -Y1-, -Y2- AND -Y3- PROFILES

PLOT DRIVER: NCDOT_color_eng_100.plt
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REVISIONS

PROJECT REFERENCE NO. HL-0040	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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-L-
PI Sta 29+38.67
$\Delta = 35^{\circ}13'31.8"$ (LT)
$D = 2^{\circ}29'28.0"$
$L = 1,414.04'$
$T = 730.17'$
$R = 2,300.00'$
SE = NC
DS = 25 MPH

SEE SHEET 7 FOR -L- PROFILE

MATCHLINE -L- STA. 26+00,
SEE SHEET 4

MATCHLINE -L- STA. 40+00,
SEE SHEET 6

PLOT DRIVER: NCDOT_color_eng_100.plt
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REVISIONS

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DATE: 2/7/2023

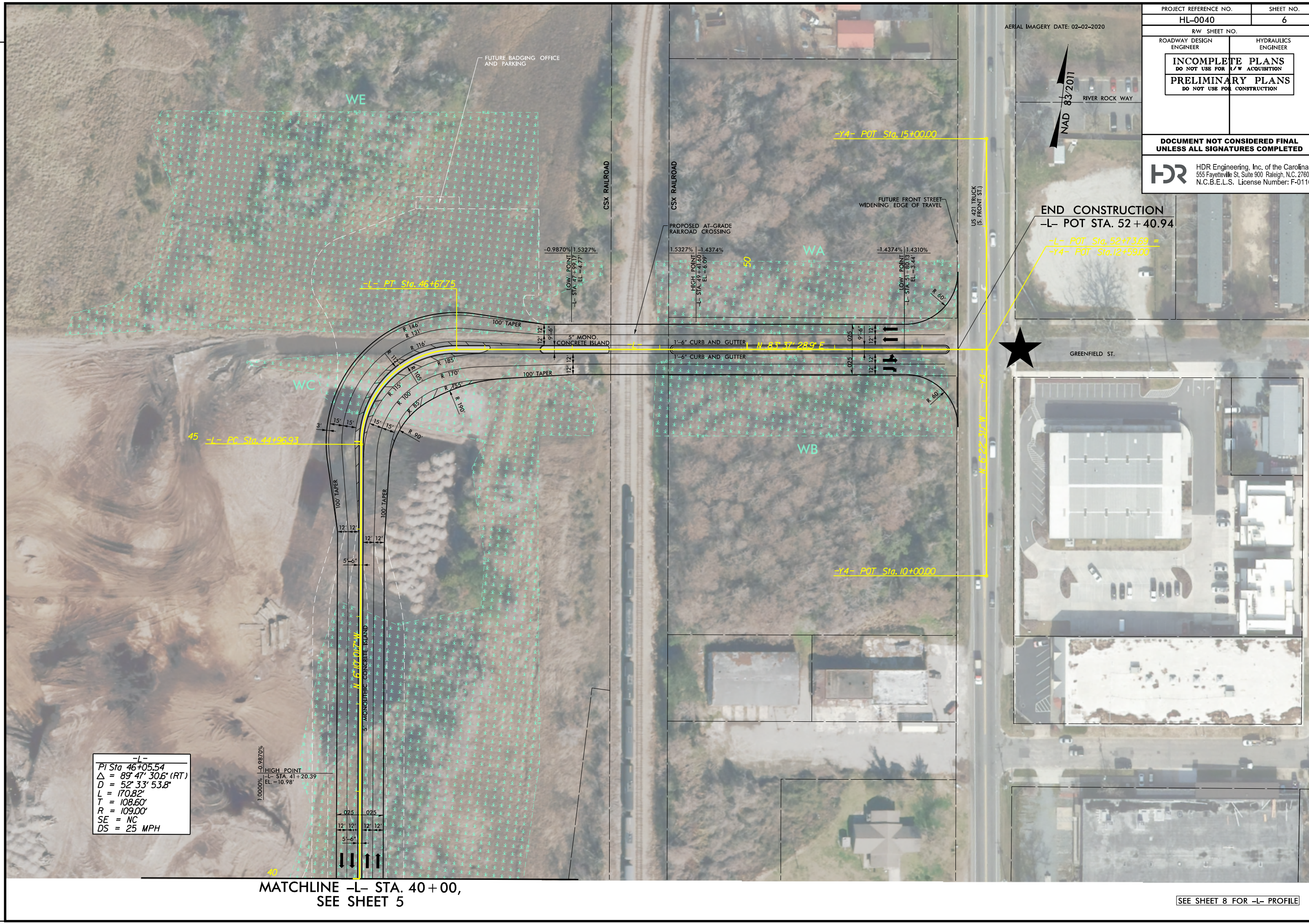
-L-
 PI Sta 46+05.54
 $\Delta = 89^\circ 47' 30.6" (RT)$
 $D = 52' 33" 53.8"$
 $L = 170.82'$
 $T = 108.60'$
 $R = 109.00'$
 SE = NC
 DS = 25 MPH

1.0000%
 HIGH POINT
 L STA. 41+20.39
 EL = 10.98'

MATCHLINE -L- STA. 40+00,
 SEE SHEET 5

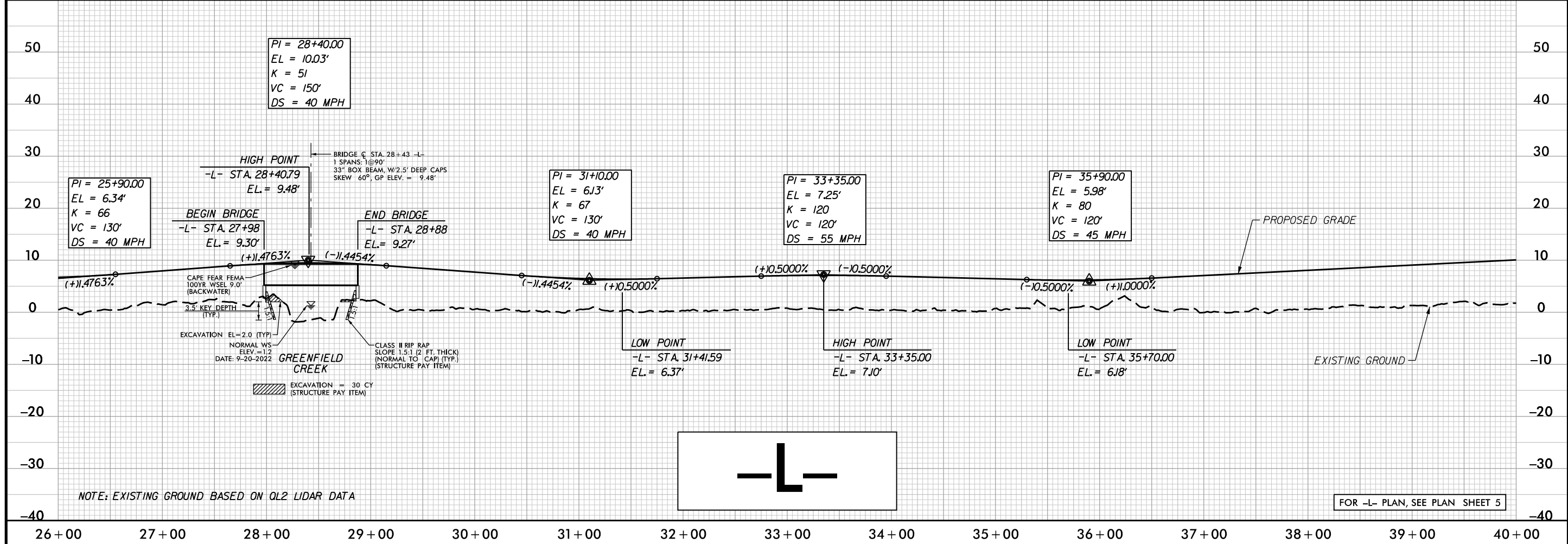
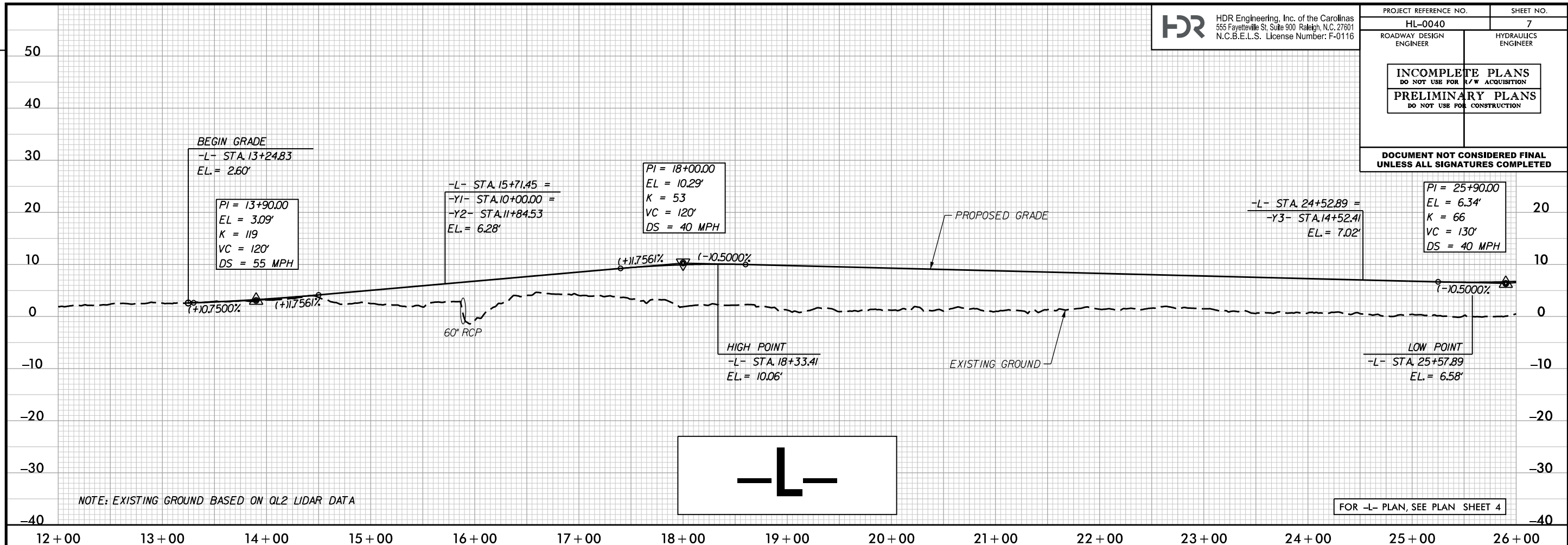
PROJECT REFERENCE NO. HL-0040	SHEET NO. 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	

AERIAL IMAGERY DATE: 02-02-2020
 NAD 83/2011



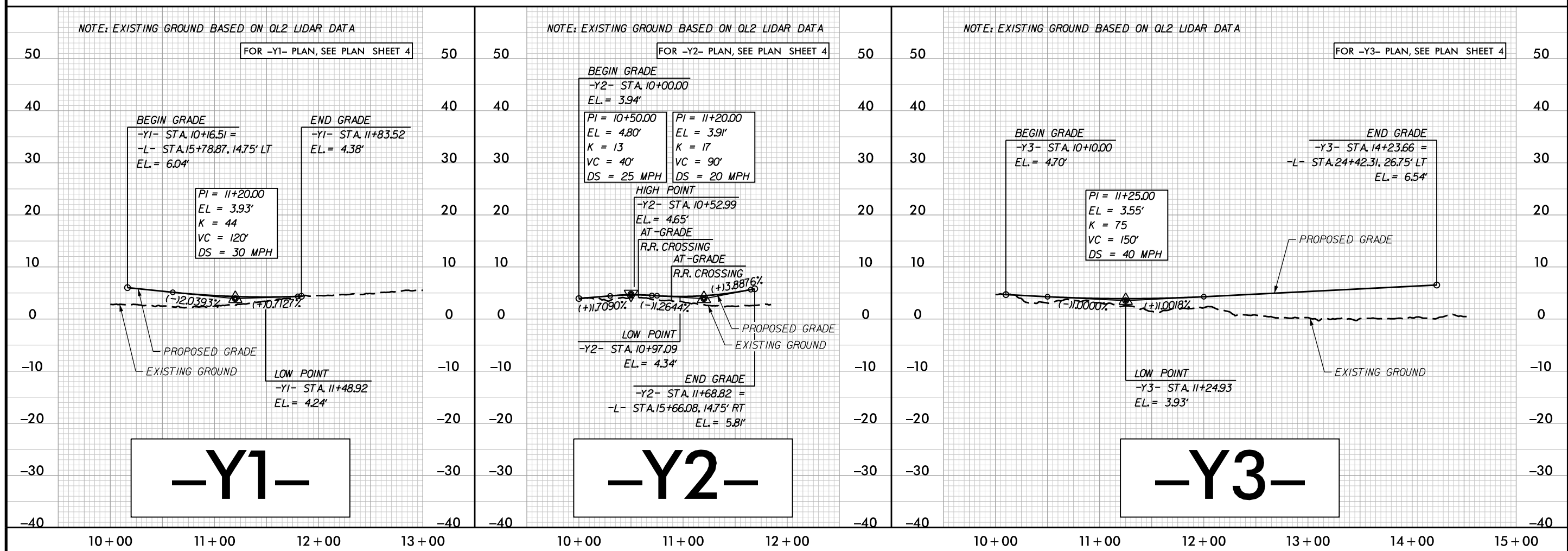
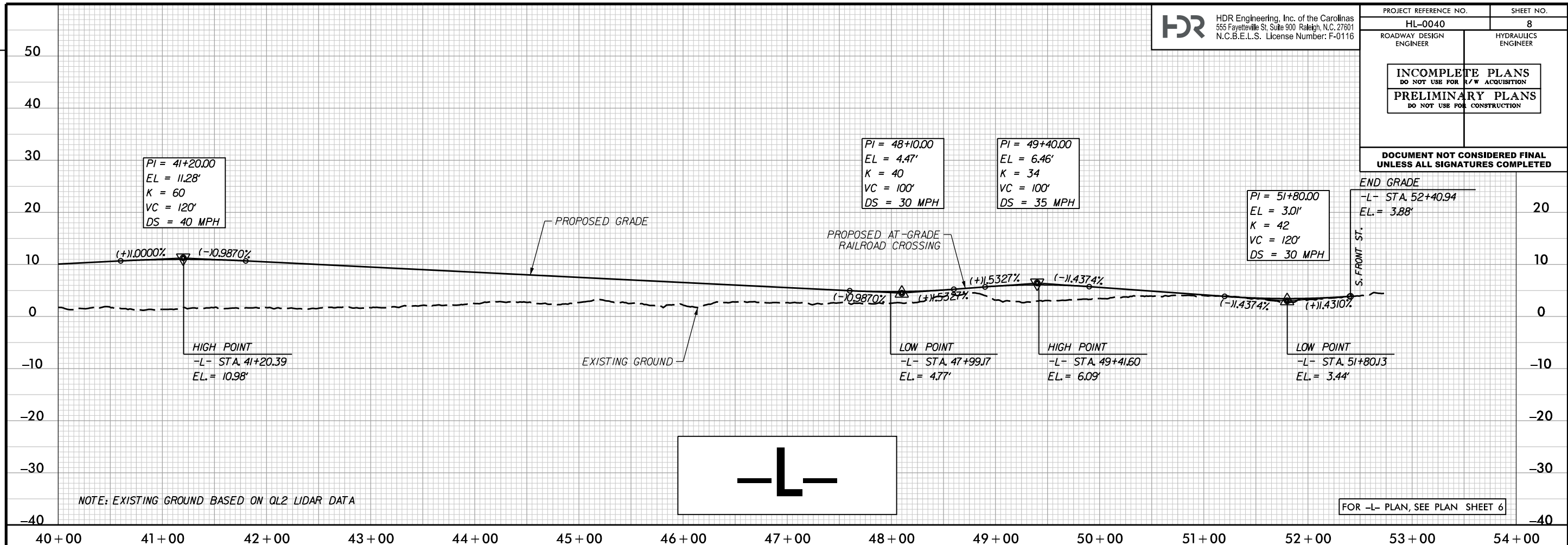
SEE SHEET 8 FOR -L- PROFILE

PROJECT REFERENCE NO. HL-0040	SHEET NO. 7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



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REVISIONS



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