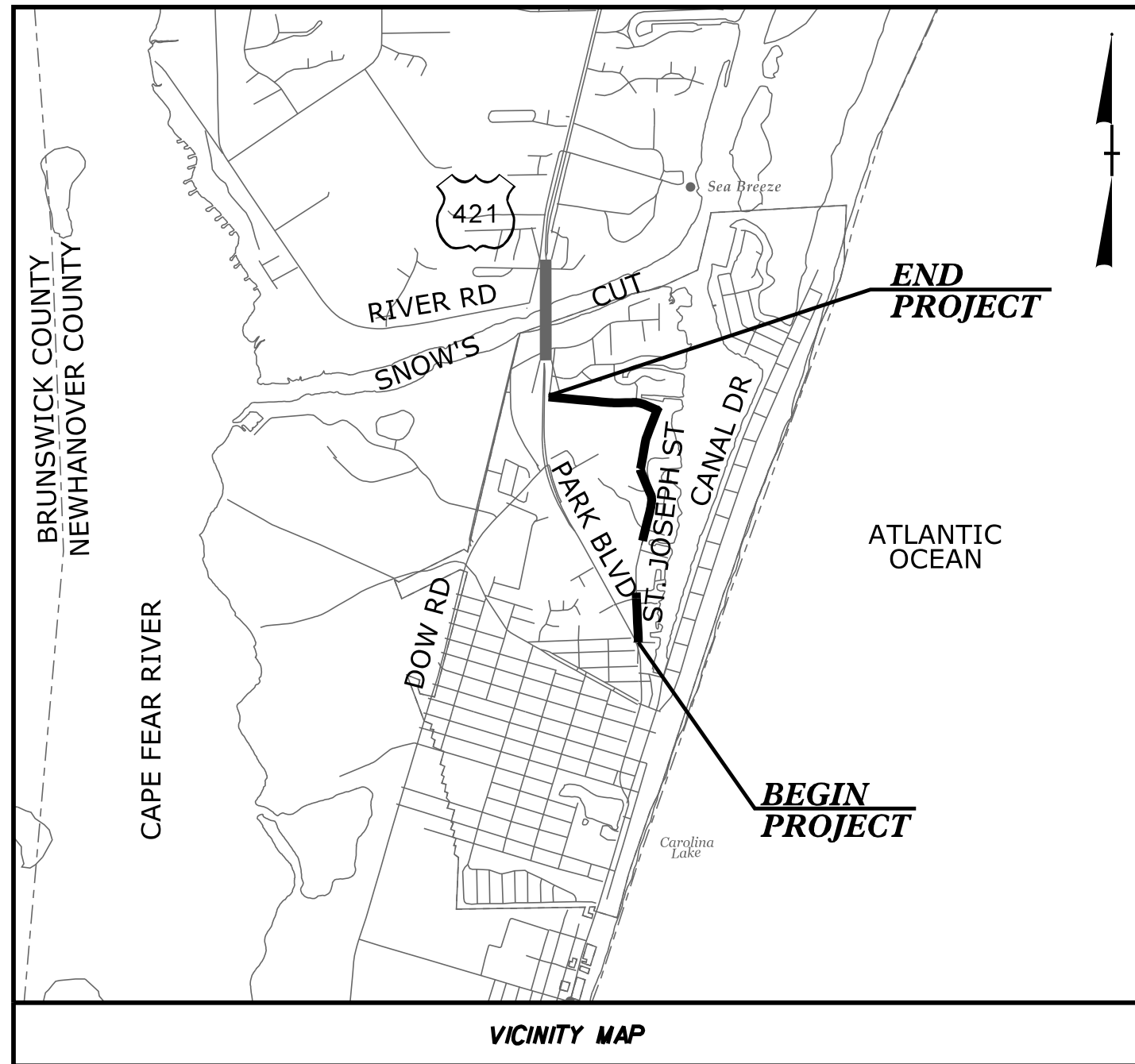


TIP PROJECT: EB-6039



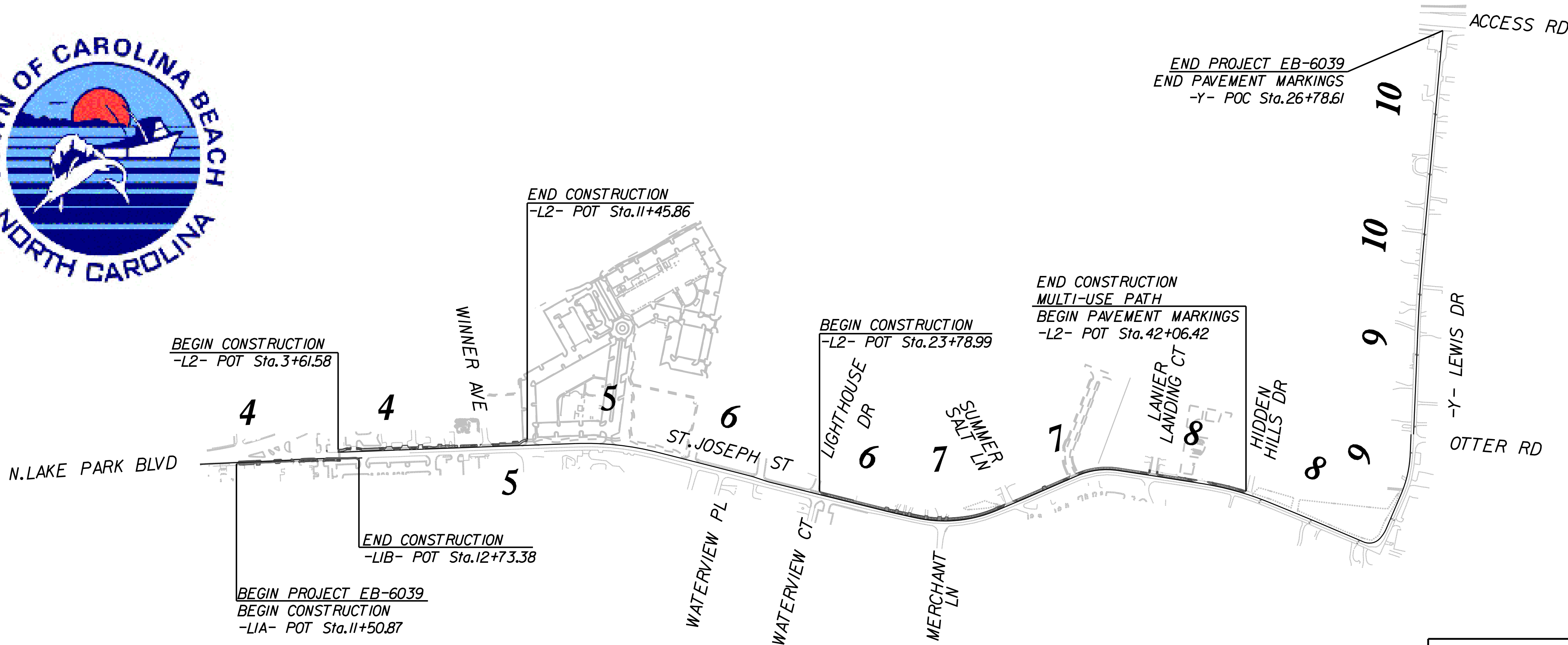
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
NEW HANOVER COUNTY

**LOCATION: ST. JOSEPH STREET FROM N. LAKE PARK BOULEVARD (US 421)
TO THE INTERSECTION OF LEWIS DR. AND ACCESS RD**

**TYPE OF WORK: GRADING, CURB AND GUTTER, DRAINAGE, PAVING, SIDEWALK,
AND PAVEMENT MARKINGS**

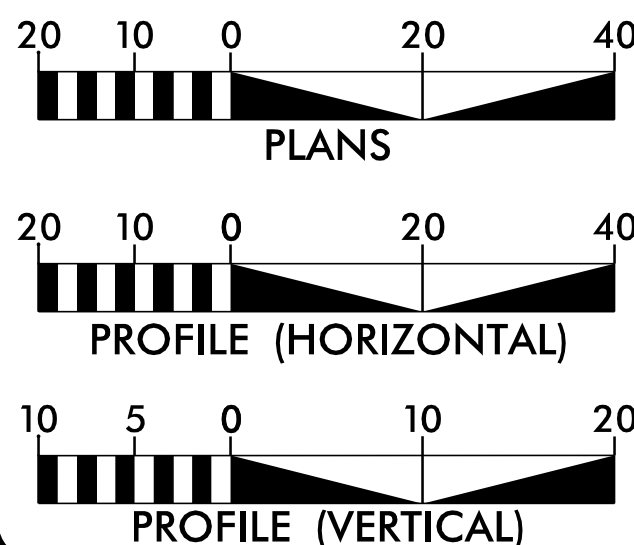
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	EB-6039	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
48928.1.1	0332148	P.E.	
48928.3.1	0332148	RIGHT-OF-WAY CONSTRUCTION	

90% PLANS



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

N/A

PROJECT LENGTH

TOTAL LENGTH TIP PROJECT EB-6039 = 1.320 MILES

PLANS PREPARED FOR
THE TOWN OF CAROLINA BEACH
BY:

Kimley»Horn

NO. LICENSE #47115
PROJECT/VALE STREET, SUITE 601
1401 S.W. 10TH AVENUE, SUITE 601
PHOENIX, ARIZONA 85001

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
NOVEMBER 14, 2025

LETTING DATE:
FEBURARY 11, 2026

EVAN PARROTT, PE
PROJECT ENGINEER

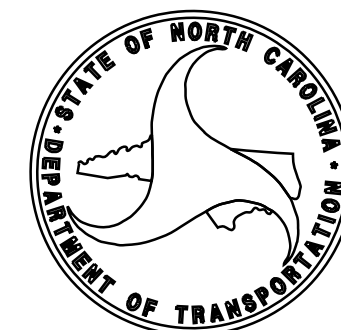
SPENCER STRINGFELLOW, PE
PROJECT DESIGN ENGINEER

BEN MEISTER
CAROLINA BEACH PROJECT MANAGER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.
ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



EB-6039
NEW HANOVER COUNTY

INDEX OF SHEETS

SHEET NUMBER

SHEET

1

TITLE SHEET

1A

INDEX OF SHEETS, GENERAL NOTES, AND
STANDARD DRAWINGS

1B

CONVENTIONAL SYMBOLS

2A-1 THRU 2A-3

PAVEMENT SCHEDULE AND TYPICAL SECTIONS

2B-1 THRU 2B-2

MULTI-USE PATH DETAILS

2C-1

SUMMARIES

2D-1 THRU 2D-2

DRAINAGE DETAILS

3D-1

DRAINAGE SUMMARY SHEET

3P-1

PARCEL INDEX SHEET

4 THRU 10

PLAN SHEETS

ROW-1 THRU ROW-7

RIGHT OF WAY SHEETS

TMP-1 THRU TMP-2

TRAFFIC MANAGEMENT PLANS

PSP-1 THRU PSP-8

PAVEMENT MARKING AND SIGNING PLANS

EC-1 THRU EC-10

EROSION CONTROL PLANS

UO-1 THRU UO-10

UTILITIES BY OTHER PLANS

W-1 THRU W-3

RETAINING WALL PLANS

X-0

CROSS-SECTION SUMMARY SHEET

X-1 THRU X-10

CROSS-SECTIONS

2024 SPECIFICATIONS

EFFECTIVE: 01-01-24

SIDE ROADS:
THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

UTILITIES:
UTILITY OWNERS ON THIS PROJECT ARE:

DUKE ENERGY PROGRESS - ALEX CRAIG - ALEXANDER.CRAIG@DUKE-ENERGY.COM - (919) 412-7276

AT&T - ELIZABETH PATE - EP5957@ATT.COM - (919) 788-2752

CHARTER/SPECTRUM - STEVE BARNETTE - STEVE.BARNETTE@CHARTER.COM - (910) 772-5755

NC DEPARTMENT OF TRANSPORTATION - RON VAN CLEEF - RVANCLEEF@NCDOT.GOV - (910) 341-2000

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

CURB RAMPS:
CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS AND WILL NEED TO BE CONFIRMED IN THE FIELD. THE CONSTRUCTION OF ALL CURB RAMPS SHALL BE IN ACCORDANCE WITH TOWN DETAILS OR DETAILS SHOWN ON THE PLANS. THE MAXIMUM SLOPE IS 12:1 FOR ALL CURB RAMPS. TOWN INSPECTOR TO REVIEW ALL RAMP FORMS BEFORE CONCRETE POURS. CURB RAMP WIDTH SHALL MATCH THE WIDTH OF THE SIDEWALK.

SAFETY:
PEDESTRIAN AND BICYCLE SAFETY MUST BE MAINTAINED AT ALL TIMES BY ADEQUATE PROJECT LIMITS, FENCING, AND SIGNAGE.

EROSION CONTROL:
THE FINAL SIZE AND LOCATION OF ALL EROSION CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER IN THE FIELD. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO PLACING EROSION CONTROL MEASURES. SEE EROSION CONTROL PLANS.

TRAFFIC CONTROL:
TRAFFIC CONTROL GENERAL NOTES, DETAILS, AND A LIST OF STANDARDS ARE INCLUDED IN THIS PLAN SET. ALL TRAFFIC CONTROL DEVICES AND OPERATIONS SHALL CONFORM TO NCDOT 2024 ROADWAY STANDARD DRAWINGS FOR TRAFFIC CONTROL. SEE TRAFFIC MANAGEMENT PLANS.

OTHER:
CONTRACTOR TO CONTACT THE TOWN OF CAROLINA BEACH COMMUNITY DEVELOPMENT DEPARTMENT (910-458-2999) TO SCHEDULE A PRECONSTRUCTION MEETING.

CONTRACTOR SHALL COORDINATE WITH THE TOWN OF CAROLINA BEACH FOR TOWN INSTALLATION OR MODIFICATION OF SIGNING FOR PROJECT. (I.E. PARKING SIGNING STREET SIGNS)

CONTRACTOR SHALL MAINTAIN SAFE ACCESS TO EACH BUSINESS, RESIDENCES, BARRICADES, ETC. SHALL BE UTILIZED TO SAFELY CHANNELIZE PEDESTRIAN TRAFFIC THROUGH A WORK ZONE. THIS WORK SHALL BE INCIDENTAL TO THE PROJECT AND THERE WILL BE NO PAY ITEM FOR THIS WORK.

THE CONTRACTOR SHALL KEEP THE ROADWAY AND SIDEWALKS CLEAN OF DEBRIS THROUGHOUT THE ENTIRE DURATION OF THE PROJECT. THE TOWN WILL INSPECT THE STREETS AND SIDEWALKS PERIODICALLY TO ENSURE THIS IS BEING COMPLETED. THIS WORK WILL BE INCIDENTAL TO THE PROJECT AND THERE WILL BE NO PAY ITEM FOR THIS WORK.

CONTRACTOR SHALL COORDINATE WATER AND SEWER WORK WITH THE CITY OF CAROLINA BEACH PUBLIC WORKS UTILITY DEPT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH PRIVATE UTILITIES AND ANY ADDITIONAL SUPPORT OF EXISTING POLES AS REQUIRED FOR TRENCH EXCAVATION. ALL COSTS OF SUCH WORK SHALL BE PAID BY THE CONTRACTOR.

ALL PAVEMENT CUTS SHALL BE SAW CUT ALONG A STRAIGHT CONTINUOUS LINE. CURBS AND CONCRETE DRIVEWAYS SHALL BE REPLACED TO THE FIRST EXPANSION JOINT BEYOND THE TRENCH EXCAVATION LIMITS AND TO THE FULL WIDTH. CURBS AND CONCRETE DRIVEWAYS SHALL MATCH EXISTING.

ALL MATERIAL CLEARED AND GRUBBED BY THE CONTRACTOR IN ORDER TO CONSTRUCT THE WORK, SUCH AS TREES, VEGETATION, FENCING, ETC., SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF-SITE AT A STATE APPROVED DISPOSAL SITE. THE CONTRACTOR SHALL RECEIVE TOWN APPROVAL FOR ANY LANDSCAPE REMOVAL NOT SHOWN ON PLANS.

CONTRACTOR SHALL MAINTAIN A MEANS FOR INGRESS/EGRESS TO EACH PROPERTY AT ALL TIMES.

CONTRACTOR SHALL NOTIFY BUSINESSES AT LEAST 7 DAYS PRIOR TO CONSTRUCTION THAT CONSTRUCTION ACTIVITY WILL TAKE PLACE IN THEIR AREA.

WHERE THE CONTRACTOR DETERMINES THAT ENCROACHMENT ONTO PRIVATE PROPERTY IS NECESSARY, AND AN EASEMENT HAS NOT BEEN PROVIDED, THE CONTRACTOR SHALL CONTACT INDIVIDUAL PROPERTY OWNERS AND OBTAIN WRITTEN APPROVAL FOR THAT ENCROACHMENT. A COPY OF THIS APPROVAL SHALL BE PROVIDED TO THE ENGINEER.

2024 ROADWAY ENGLISH STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" HIGHWAY DESIGN BRANCH - N. C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N. C., DATED JANUARY, 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:





















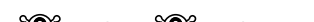

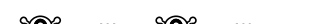
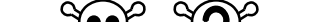
STD.NO.

TITLE












200.02	METHOD OF CLEARING - METHOD II
654.01	PAVEMENT REPAIRS - FOR SUPERPAVE MIX TYPES
846.01	CONCRETE CURB, GUTTER AND CURB & GUTTER
848.01	CONCRETE SIDEWALK
848.06	CURB RAMP
876.02	GUIDE FOR RIP RAP AT PIPE OUTLETS
903.10	GROUND MOUNTED SIGN SUPPORTS
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D' 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS
1101.01	WORK ZONE ADVANCE WARNING SIGNS FOR TWO-WAY UNDIVIDED FACILITIES
1101.02	TEMPORARY LANE CLOSURES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUMS
1135.01	CONES
1150.01	FLAGGERS
1180.01	SKINNY DRUMS
1205.07	PEDESTRIAN CROSSWALKS
1205.16	BICYCLE FACILITIES

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	


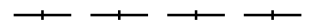
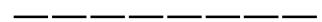
BUILDINGS AND OTHER CULTURE:

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




















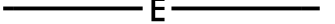





HYDROLOGY:

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	

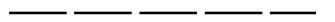













RAILROADS:




Standard Gauge	
RR Signal Milepost	
Switch	
RR Abandoned	
RR Dismantled	

RIGHT OF WAY & PROJECT CONTROL:





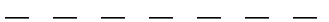




Primary Horiz Control Point	
Primary Horiz and Vert Control Point	
Secondary Horiz and Vert Control Point	
Vertical Benchmark	
Existing Right of Way Monument	
Proposed Right of Way Monument (Rebar and Cap)	
Proposed Right of Way Monument (Concrete)	
Existing Permanent Easement Monument	
Proposed Permanent 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	














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:








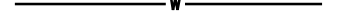

* SUE – Subsurface Utility Engineering
LOS – Level of Service – A,B,C or D (Accuracy)

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)*	




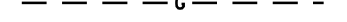
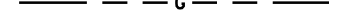
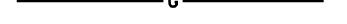

WATER:

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	
Geoenvironmental Boring	
Abandoned According to Utility Records	
End of Information	

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

PROJECT REFERENCE NO.

EB-6039

SHEET NO.

2A-1

ROADWAY DESIGN
ENGINEER

PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PAVEMENT DESIGN	
CI	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
D	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
J	PROPOSED 4" AGGREGATE BASE COURSE
R	8"x12" CONCRETE CURB
RI	2'-6" CURB AND GUTTER
S	PROPOSED 4" CONCRETE SIDEWALK
SI	PROPOSED 4" CONCRETE MULTI-USE PATH
T	PROPOSED COMPACTED EARTH MATERIAL
U	EXISTING ASPHALT PAVEMENT
V	PROPOSED 1.5" MILLING

TYPICAL SECTION NOTES:

- SEE INSETS FOR EXCEPTIONS TO STATION LIMITS
- PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE NOTED
- SEE CROSS SECTIONS FOR SPECIAL DITCH ELEVATIONS
- SEE CROSS SECTIONS AND PLAN SHEETS FOR VARIABLE SUPERELEVATIONS
- SAWCUT 1' MINIMUM SEE DETAIL 1 ON SHEET 2A-1.
- SEE SHEETS WITHRU W3 FOR RETAINING WALL DETAILS
- SEE CROSS SECTIONS FOR VARIABLE SLOPES.
- SEE SHEET 2D-2 FOR SPECIAL HEADWALL DETAIL
- SEE PLAN SHEETS FOR DRIVEWAY AND SAWCUT LOCATIONS

TYPICAL SECTION NO. 1

-LIA- STA 11+50.87 TO STA 13+85.65

TYPICAL SECTION NO. 2

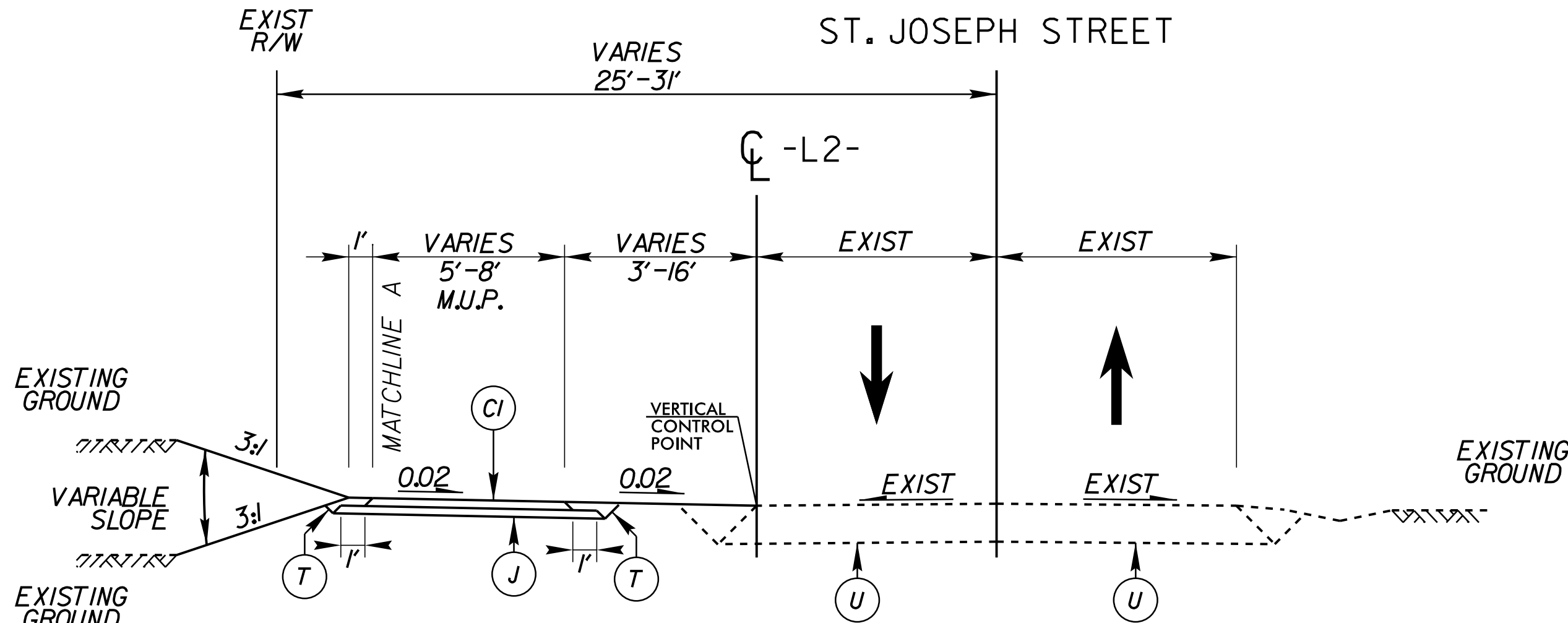
-LIB- STA 10+27.13 TO STA 11+02.26

-LIB- STA 11+26.18 TO STA 12+73.38

INSET NO. 2A

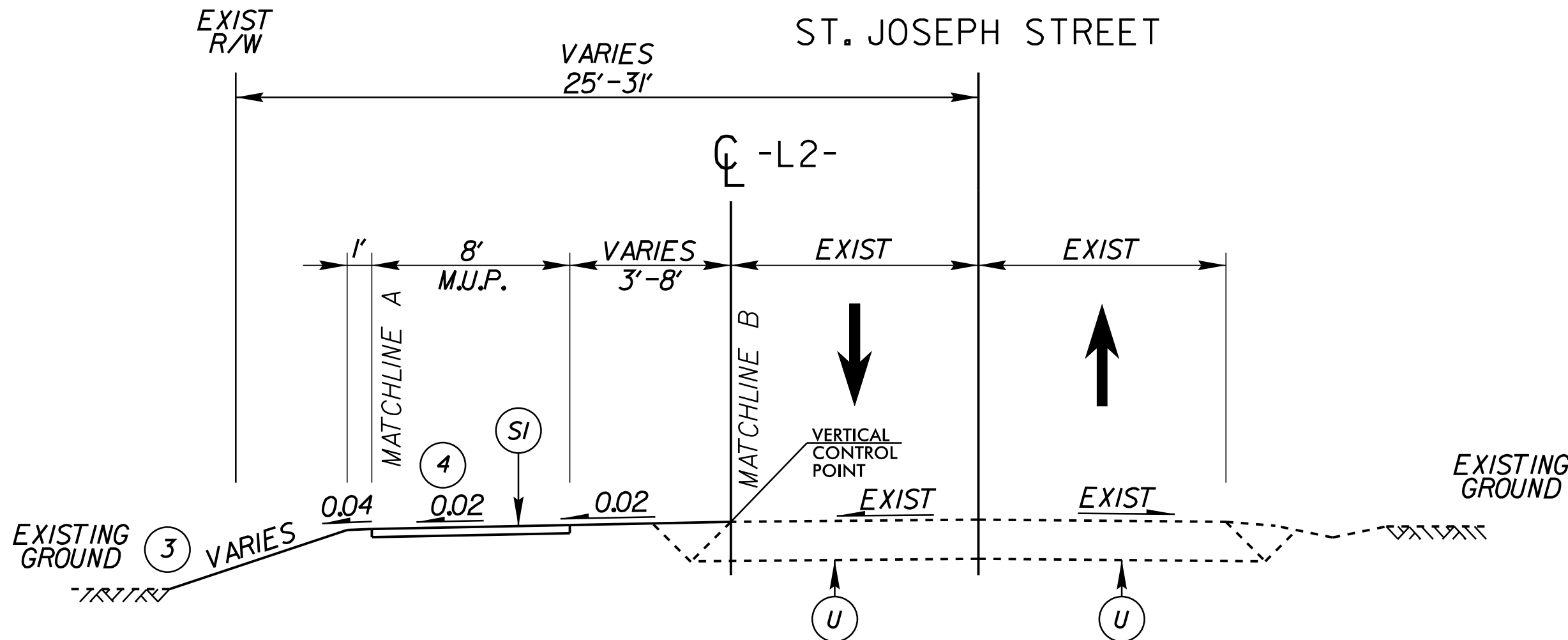
-LIB- STA 12+00.00 TO STA 12+73.38

DETAIL 1 SHOWING METHOD OF SAWCUT
NOT TO SCALE



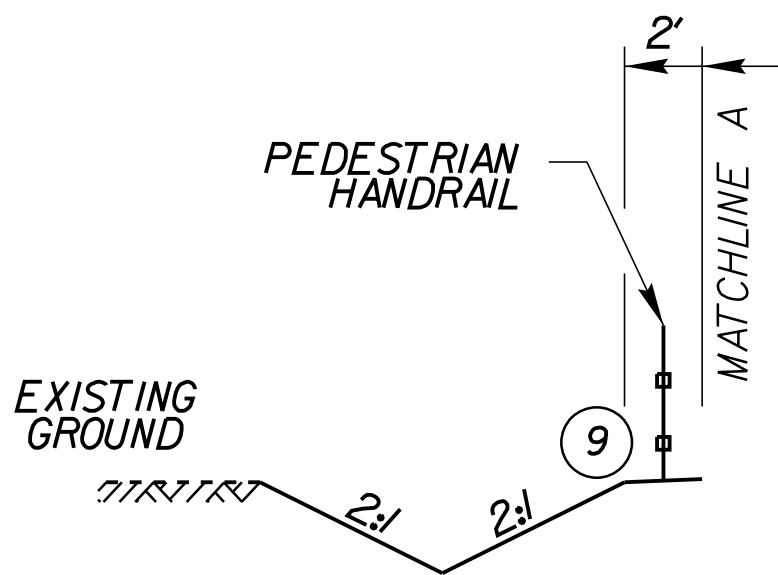
TYPICAL SECTION NO. 3

-L2- STA 3+61.58 TO STA 4+55.00
-L2- STA 7+11.06 TO STA 8+56.42
-L2- STA 9+97.28 TO STA 11+45.86



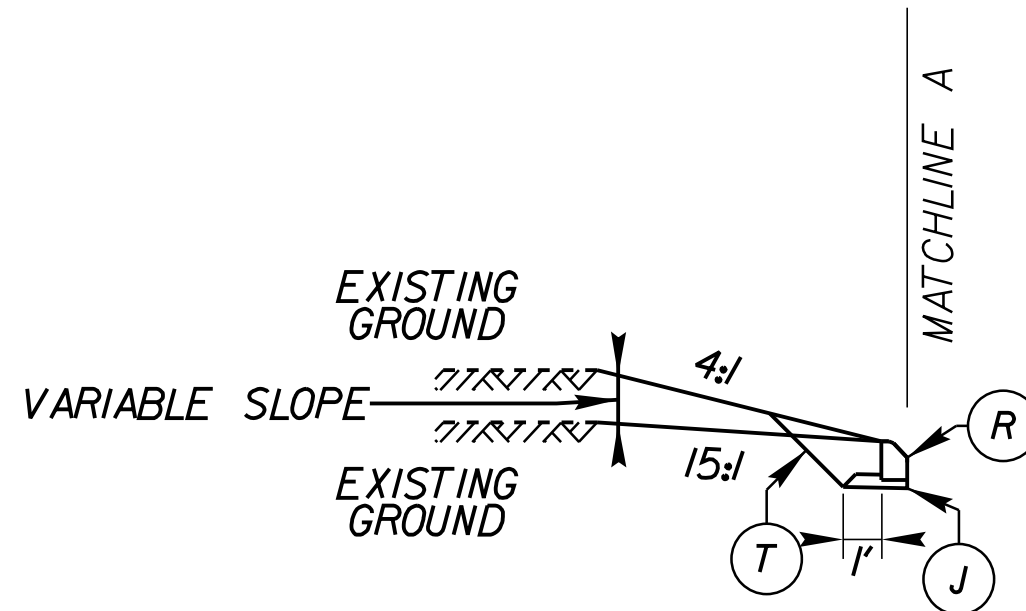
TYPICAL SECTION NO. 4

-L2- STA 4+55.00 TO STA 6+95.31
-L2- STA 29+60.00 TO STA 31+76.24
-L2- STA 32+11.48 TO STA 33+34.00
-L2- STA 35+30.00 TO STA 37+05.00
-L2- STA 39+30.00 TO STA 42+06.42



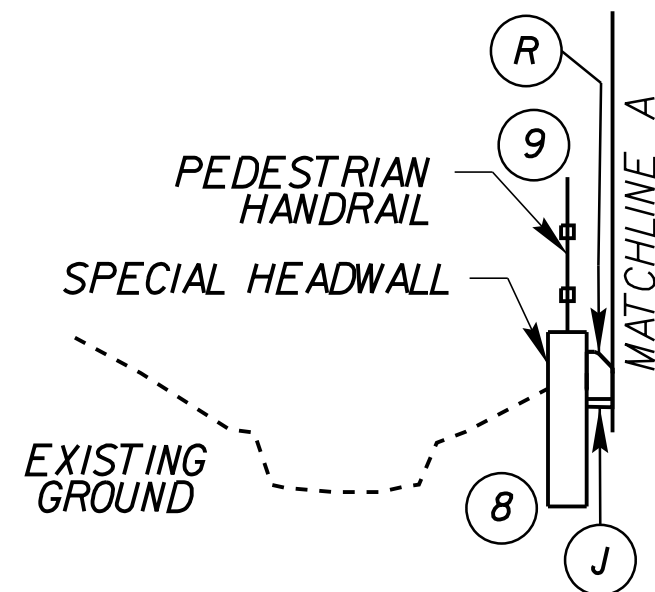
INSET NO. 4B

-L2- STA 39+20.00 TO STA 40+09.00
-L2- STA 40+44.00 TO STA 42+02.00



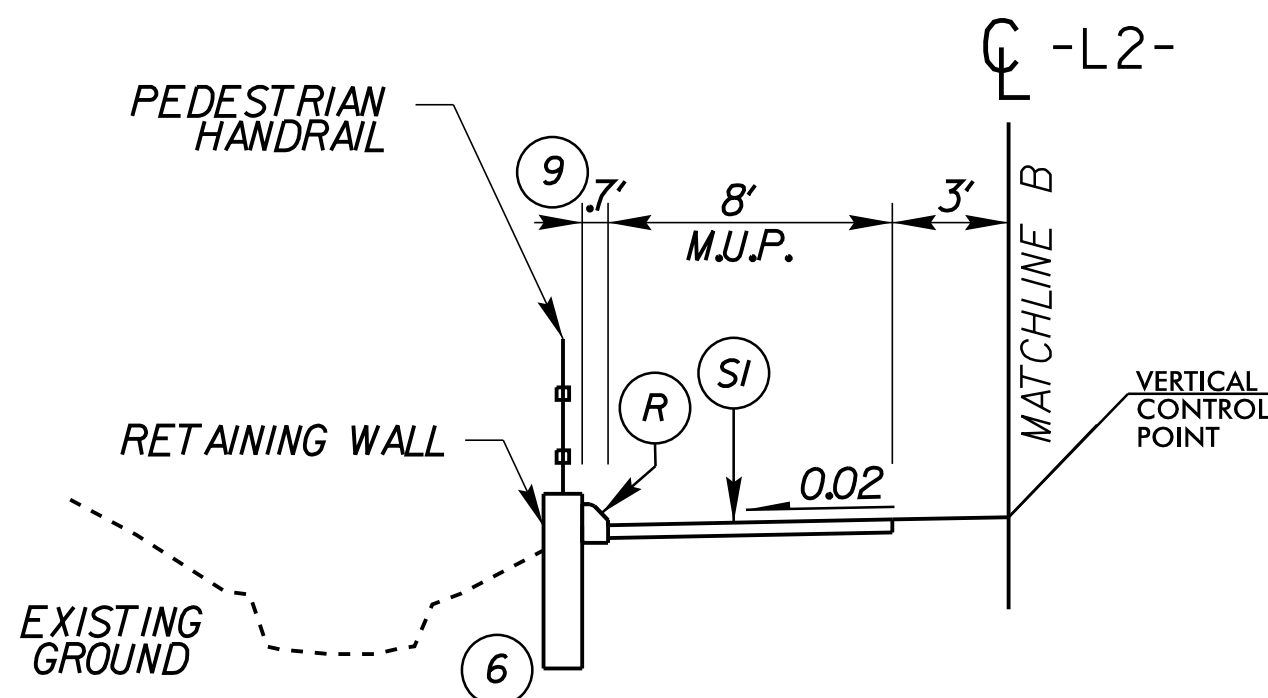
INSET NO. 3A

-L2- STA 3+61.58 TO STA 4+02.00
-L2- STA 4+66.02 TO STA 5+39.00



INSET NO. 4A

-L2- STA 5+39.00 TO STA 5+57.00



INSET NO. 4C

-L2- STA 31+31.00 TO STA 31+53.50
-L2- STA 42+02.00 TO STA 42+06.42

Kimley » Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

PROJECT REFERENCE NO.

EB-6039

SHEET NO.

2A-2

ROADWAY DESIGN
ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

PAVEMENT DESIGN

C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
D	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
J	PROPOSED 4" AGGREGATE BASE COURSE
R	8"x12" CONCRETE CURB
RI	2'-6" CURB AND GUTTER
S	PROPOSED 4" CONCRETE SIDEWALK
SI	PROPOSED 4" CONCRETE MULTI-USE PATH
T	PROPOSED COMPACTED EARTH MATERIAL
U	EXISTING ASPHALT PAVEMENT
V	PROPOSED 1.5" MILLING

TYPICAL SECTION NOTES:

1. SEE INSETS FOR EXCEPTIONS TO STATION LIMITS
2. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE NOTED
3. SEE CROSS SECTIONS FOR SPECIAL DITCH ELEVATIONS
4. SEE CROSS SECTIONS AND PLAN SHEETS FOR VARIABLE SUPERELEVATIONS
5. SAWCUT 1' MINIMUM SEE DETAIL 1 ON SHEET 2A-1.
6. SEE SHEETS WITHRU W3 FOR RETAINING WALL DETAILS
7. SEE CROSS SECTIONS FOR VARIABLE SLOPES.
8. SEE SHEET 2D-2 FOR SPECIAL HEADWALL DETAIL
9. SEE SHEET 2B-2 FOR PEDESTRIAN HANDRAIL DETAIL.

Kimley »Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

PROJECT REFERENCE NO.
EB-6039

SHEET NO.
2A-3

ROADWAY DESIGN
ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PAVEMENT DESIGN	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
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T	PROPOSED COMPACTED EARTH MATERIAL
U	EXISTING ASPHALT PAVEMENT
V	PROPOSED 1.5" MILLING

TYPICAL SECTION NOTES:

- SEE INSETS FOR EXCEPTIONS TO STATION LIMITS
- PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE NOTED
- SEE CROSS SECTIONS FOR SPECIAL DITCH ELEVATIONS
- SEE CROSS SECTIONS AND PLAN SHEETS FOR VARIABLE SUPERELEVATIONS
- SAWCUT 1' MINIMUM SEE DETAIL 1 ON SHEET 2A-1.
- SEE SHEETS WITHRU W3 FOR RETAINING WALL DETAILS
- SEE CROSS SECTIONS FOR VARIABLE SLOPES.
- SEE SHEET 2D-2 FOR SPECIAL HEADWALL DETAIL
- SEE SHEET 2B-2 FOR PEDESTRIAN HANDRAIL DETAIL.

The drawing consists of a main plan view and three detail views labeled A, B, and C.

- Plan View:** Shows a rectangular area divided into a grid of squares. The overall width is labeled as 4' - 6". The overall length is labeled as 6' - 6". The grid is composed of three vertical sections, each 1' - 1.5" wide, and three horizontal sections, each 1' - 6" wide. The bottom section is labeled "EQ". The bottom edge of the plan view shows a cross-section of the sidewalk structure, including a "FINISHED GRADE" line, a "CONCRETE FOOTING" layer, and a "GRAVEL BASE" layer. The total width of the sidewalk is labeled as 1'.
- Detail View A:** A corner detail showing the intersection of two sidewalks. It includes a circular manhole cover and a rectangular concrete footing.
- Detail View B:** A detail showing a sidewalk crossing over a road or another sidewalk. It includes a circular manhole cover and a rectangular concrete footing.
- Detail View C:** A detail showing a sidewalk crossing over a road or another sidewalk. It includes a circular manhole cover and a rectangular concrete footing.

Labels and dimensions include:

- 4' - 6"
- 6' - 6"
- EQ
- 1' - 1.5"
- 1' - 6"
- 4"
- 1'
- FINISHED GRADE
- CONCRETE FOOTING
- GRAVEL BASE
- PROPOSED CONC OR ASPHALT SIDEWALK AS SHOWN ON PLANS

-

DETAIL 3 CURB TRANSITION HEADER CURB to 2'-6" C&G

Diagram illustrating the side section view of a bollard assembly, showing the components and dimensions:

- BOLLARD TO BE CENTERED ON TRAIL**
- GALVANIZED AND POWDER COATED YELLOW**
- TACK WELD PIN CAP TYP.**
- PROVIDE ADEQUATE DRAINAGE AT TOP OF FOOTER. PITCH CONCRETE AS NEEDED TO FACILITATE ADEQUATE DRAINAGE. EDGE OF FOOTER SHALL BE FLUSH WITH ADJACENT FINISHED GRADE.**
- HOLE FOR LOCK $\frac{1}{2}$ " DIAMETER**
- FINISHED GRADE 2" MIN.**
- 1" X 10" STEEL LOCK PIN**
- 1" X 10" STEEL HINGE PIN**
- 3" X 13" X 1" STEEL PLATE**
- 2" X $1\frac{1}{2}$ " X $\frac{1}{4}$ " X 3" LONG STEEL ANGLE**
- 1'-6" SQUARE CLASS 'AA' @4500 PSI CONCRETE FOOTER**
- 4" GRAVEL BASE**
- SIDE SECTION VIEW (WITHOUT SIGN)**

Dimensions and specifications shown in the diagram:

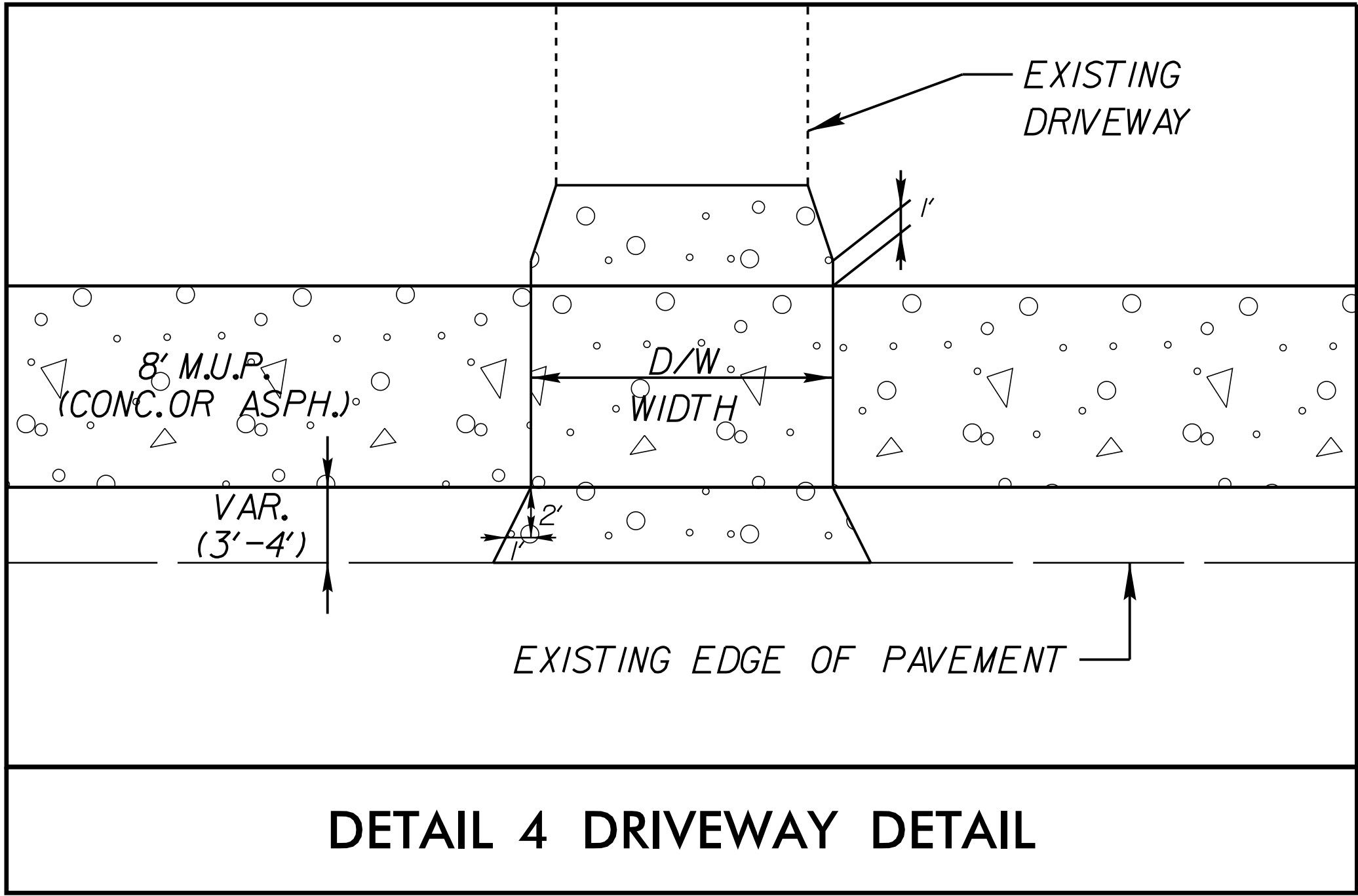
- Overall height: 1'-6"
- Top section height: 5"
- Top section width: 7"
- Top section thickness: $\frac{1}{4}$ "
- Top section material: GALVANIZED AND POWDER COATED YELLOW
- Top section fastener: TACK WELD PIN CAP TYP.
- Top section drainage: PROVIDE ADEQUATE DRAINAGE AT TOP OF FOOTER. PITCH CONCRETE AS NEEDED TO FACILITATE ADEQUATE DRAINAGE. EDGE OF FOOTER SHALL BE FLUSH WITH ADJACENT FINISHED GRADE.
- Top section hole: HOLE FOR LOCK $\frac{1}{2}$ " DIAMETER
- Top section fastener: 1" X 10" STEEL LOCK PIN
- Top section fastener: 1" X 10" STEEL HINGE PIN
- Top section plate: 3" X 13" X 1" STEEL PLATE
- Top section angle: 2" X $1\frac{1}{2}$ " X $\frac{1}{4}$ " X 3" LONG STEEL ANGLE
- Top section footer: 1'-6" SQUARE CLASS 'AA' @4500 PSI CONCRETE FOOTER
- Top section base: 4" GRAVEL BASE
- Top section finish: FINISHED GRADE 2" MIN.
- Top section view: SIDE SECTION VIEW (WITHOUT SIGN)

[illegible]

FRONT SECTION VIEW
(WITH SIGN)

HINGED BOLLARD DETAIL

SECTION



PROJECT REFERENCE NO.		SHEET NO.	
EB-6039		2B-2	
ROADWAY DESIGN ENGINEER			
<div>PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION</div>			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

Kimley»Horn
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RALEIGH, NC 27601

PROJECT REFERENCE NO.
EB-6039

SHEET NO.
2C-1

Kimley»Horn
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RALEIGH, NC 27601

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SUMMARY OF EARTHWORK

IN CUBIC YARDS

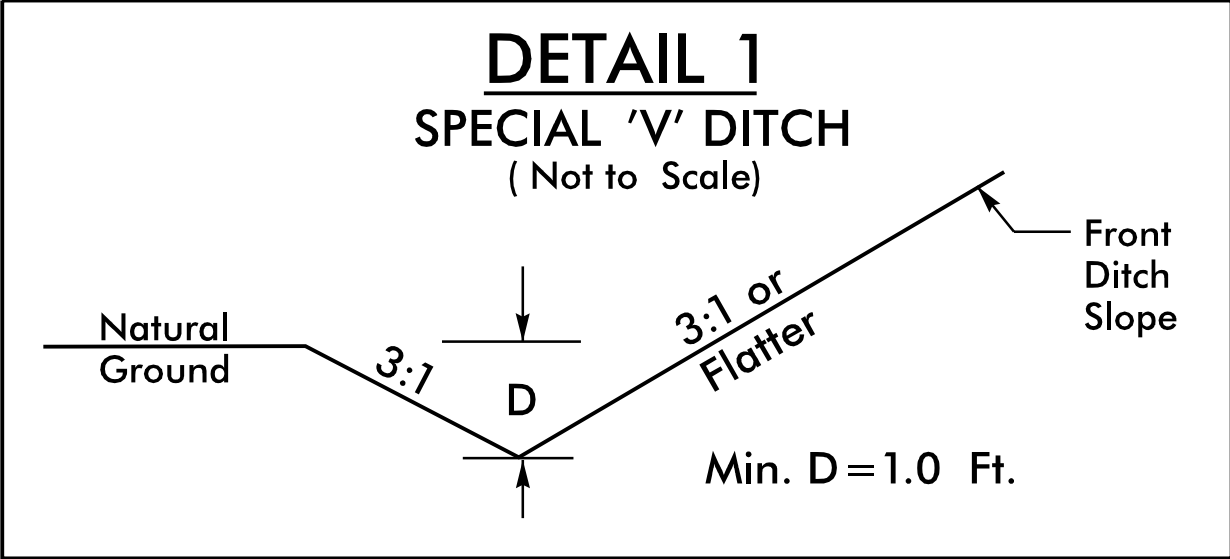
LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT EXCAVATION	EMBANKMENT + 25%	BORROW	TOTAL WASTE
SECTIONS					
-L1A- 11+50.00 TO 13+80.00	11				
-L1B- 10+00.00 TO 12+50.00	42		5		11
-L2- 3+65.58 TO 42+00.00	335		423	68	38
TOTAL	409		428	68	49
MATERIAL FOR SHOULDER CONSTRUCTION					
LOSS DUE TO CLEARING & GRUBBING	-250			250	
ADDITIONAL UNDERCUT FROM GEOTECH RECS		200	250	250	200
SELECT GRANULAR MATERIAL IN LIEU OF BORROW			200	250	
WASTE IN LIEU OF BORROW					-49
PROJECT TOTAL	159	200	928	769	200
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT				38	
GRAND TOTAL	159	200	928	807	200
SAY	200	200		900	
EST. DDE= 0 CUBIC YARDS					
EST. SHALLOW UNDERCUT= 100 CUBIC YARDS					
CLASS IV SUBGRADE STABILIZATION= 200 TONS					

GEOTECHNICAL SUMMARY

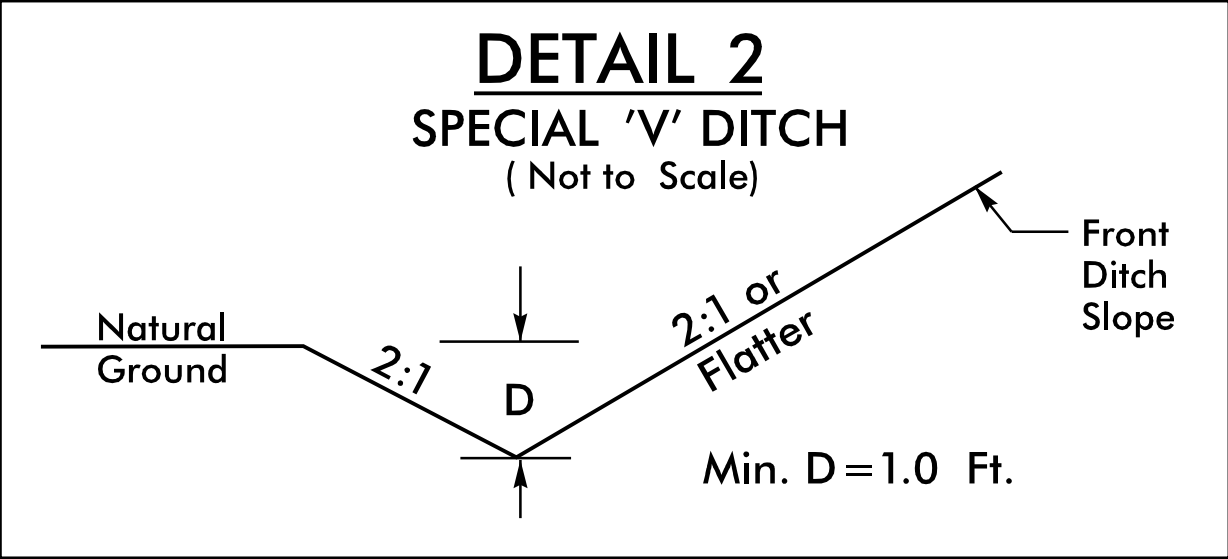
PAY ITEM	NCDOT SPEC BOOK No.	ALIGNMENT	BEGIN STA.	END STA.	QUANTITY
6" PERFORATED SUBDRAIN PIPE	815 - SUBSURFACE DRAINAGE	CONTINGENCY	N/A	N/A	500LF
GRAND TOTAL					500LF
SAY					500LF

SUMMARY OF PEDESTRIAN RAILING

STATION TO STATION	LT.or RT.	LENGTH LF	NOTES
-L2- STA. 5+29.00 to -L2- STA. 5+60.00	LT	31'	RAILING WILL BE MOUNTED TO SPECIAL HEADWALL. -L2- STA.
-L2- STA. 31+31.00 to -L2- STA. 31+53.50	LT	22.5'	MOUNT PEDESTRIAN RAILING TO RETAINING WALL #1
-L2- STA. 39+20.00 to -L2- STA. 39+99.00	LT	79'	
-L2- STA. 40+44.00 to -L2- STA. 42+02.00	LT	158'	RAILING WILL BE MOUNTED TO SPECIAL HEADWALL. -L2- STA. 41+66.00 TO -L2- STA. 42+02.00
NOTE: LT. OR RT. INDICATES LEFT OR RIGHT OF THE ALIGNMENT SPECIFIED.	TOTAL	209.5'	
	SAY	210'	



FROM -L2- STA. 6+56 TO STA. 6+90 LT
FROM -L2- STA. 32+25 TO STA. 33+30 LT
FROM -L2- STA. 35+40 TO STA. 37+05 LT



FROM -L2- STA. 39+30 TO STA. 41+70 LT

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RALEIGH, NC 27601

PROJECT REFERENCE NO.

EB-6039

SHEET NO.

2D-1

ROADWAY DESIGN
ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

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PROJECT REFERENCE NO.

EB-6039

SHEET NO.

2D-2

ROADWAY DESIGN

ENGINEER

PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION

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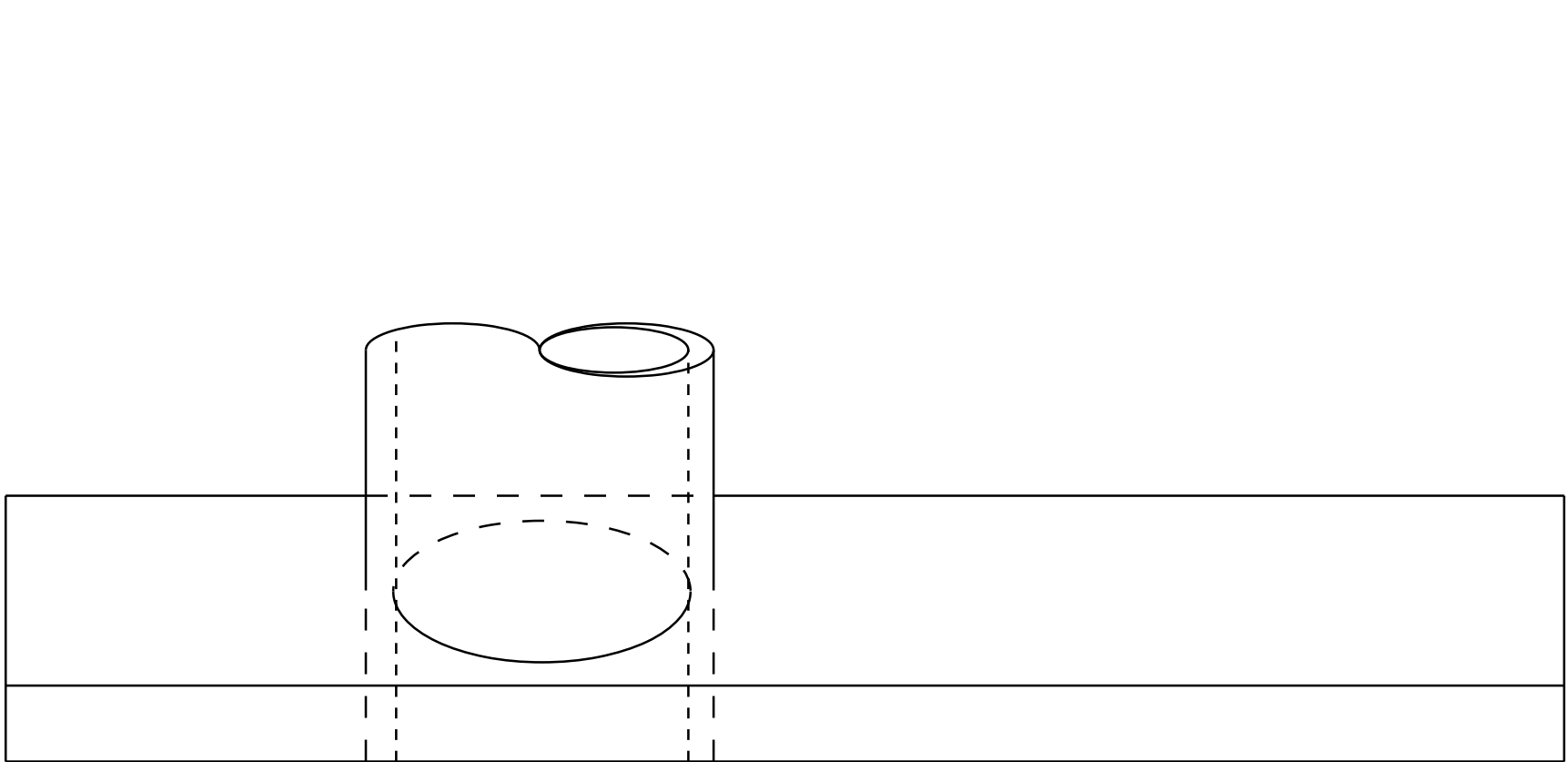
421 FAYETTEVILLE STREET, SUITE 600

RALEIGH, NC 27601

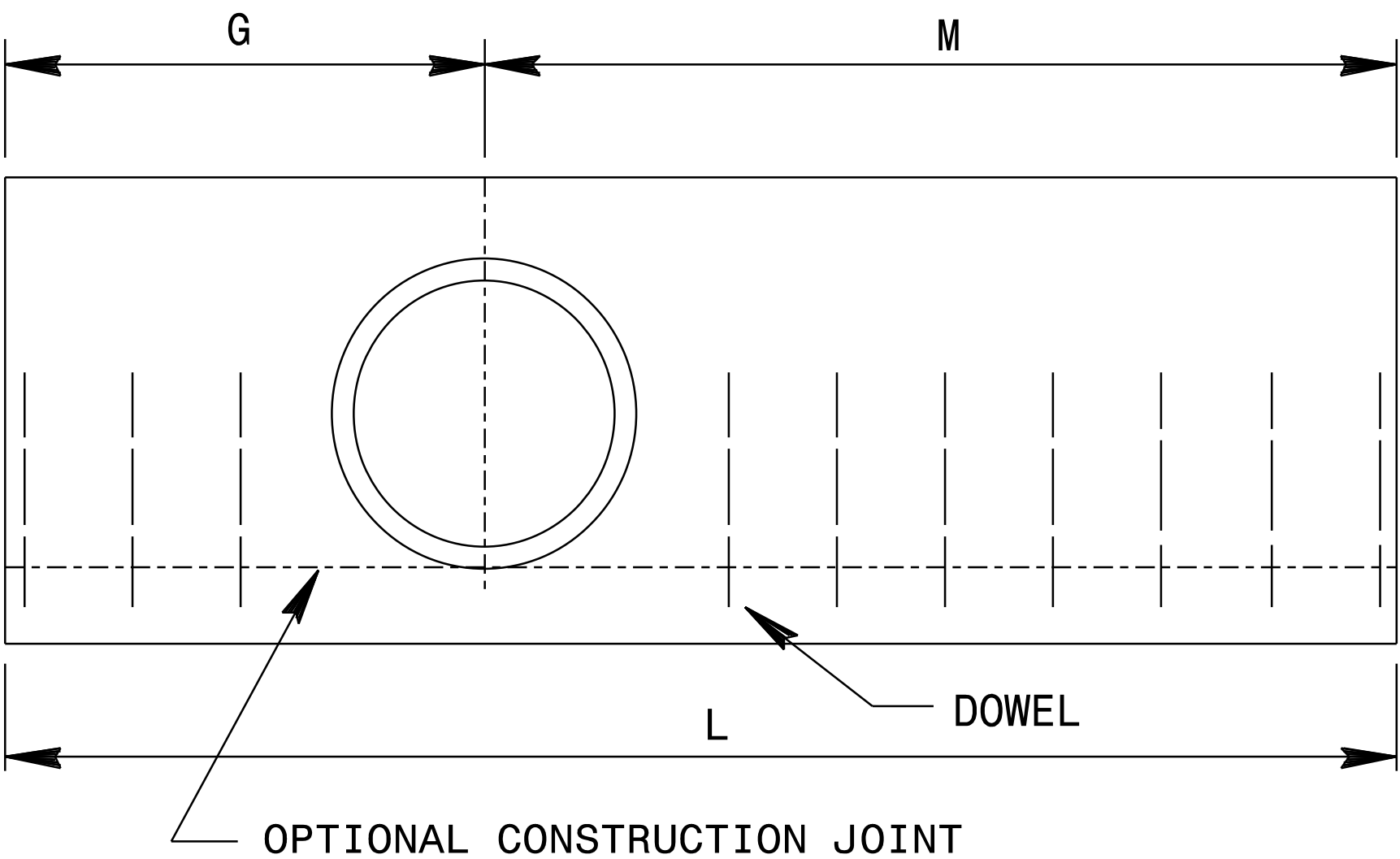
SPECIAL HEADWALL

- L2- STA 5+39.00 TO 5+57.00

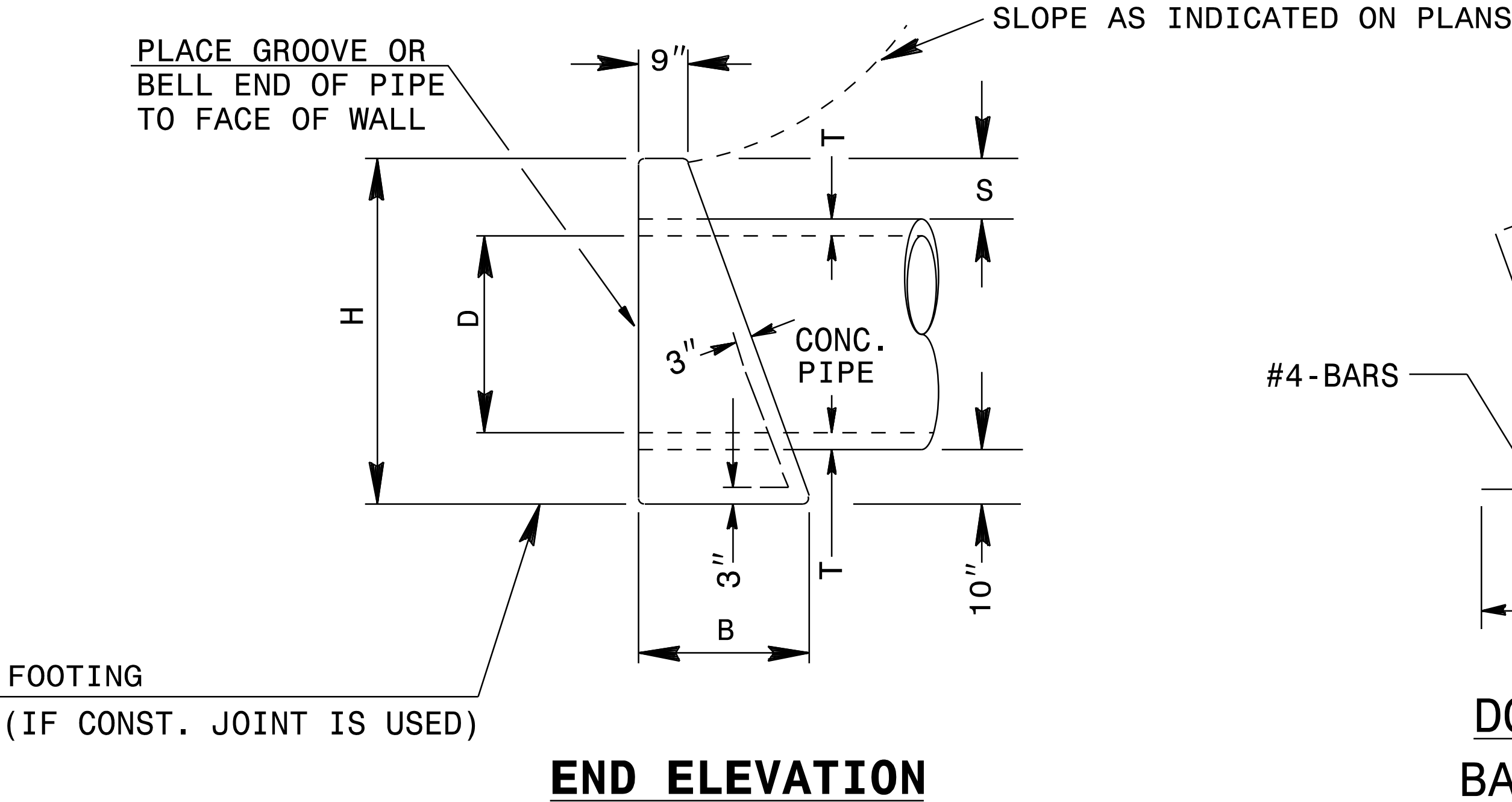
15" PIPES - 90° SKEW



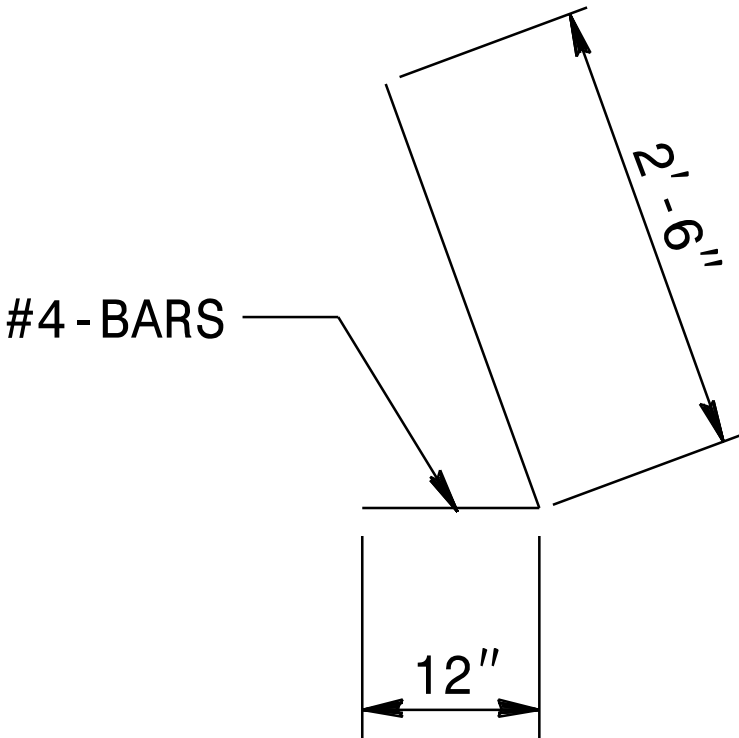
PLAN



ELEVATION



END ELEVATION



DOWEL
BAR - "X"

DOWELS IN ENDWALL WITH REINFORCED CONCRETE PIPE			
LOC.	PIPE	SINGLE PIPE	
	DIA.	15"	
	BARS	"X"	Y*
G	QTY.	3	2
M	QTY.	7	
TOTAL LBS.		62	

DIMENSIONS AND CONCRETE QUANTITIES								
USING CONCRETE PIPE								
	COMMON DIMENSIONS						SINGLE PIPE	
D	H	B	G	M	T	S	L	YD³
15"	3'-7"	1'-10"	7'	11'	2½"	10"	18'	3.0

GENERAL NOTES:

CHAMFER ALL CORNERS 1" OR HAVE A RADIUS OF 1".

PLACE 2 #6 "Y" BARS IN THE TOP OF ALL ENDWALL FOR PIPE CULVERTS 42" AND OVER WITH A MINIMUM OF 3" COVER AND A LENGTH OF 6" LESS THAN ENDWALL LENGTH.

CONSTRUCT BOTTOM SLABS WITH FORMS.

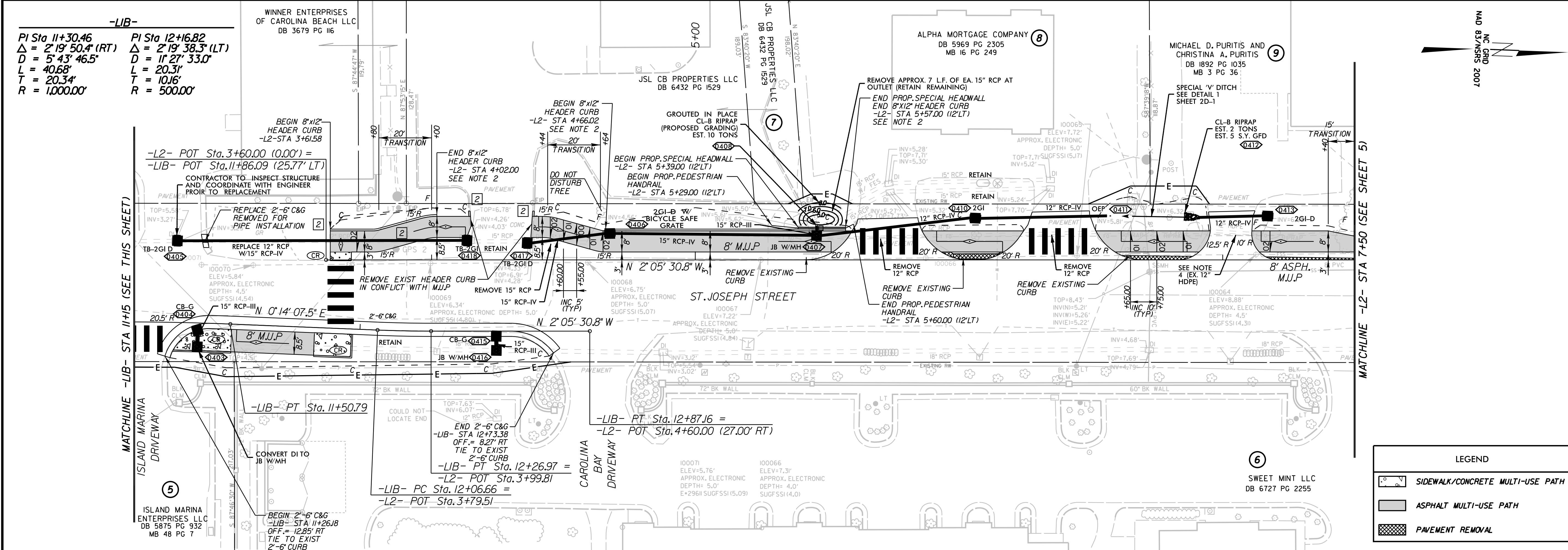
DO NOT INTERPRET WALL THICKNESS (T) SHOWN FOR THE THICKNESS ACCEPTABLE, BUT IS USED IN COMPUTING ENDWALL QUANTITIES.




WHEN THE CONTRACTOR ELECTS TO USE A CONSTRUCTION JOINT AT THE BOTTOM OF THE PIPE, PLACE BAR "X" DOWELS IN THE BASE AS SHOWN ON PLANS. SPACE BARS APPROXIMATELY ON 12" CENTER LINES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

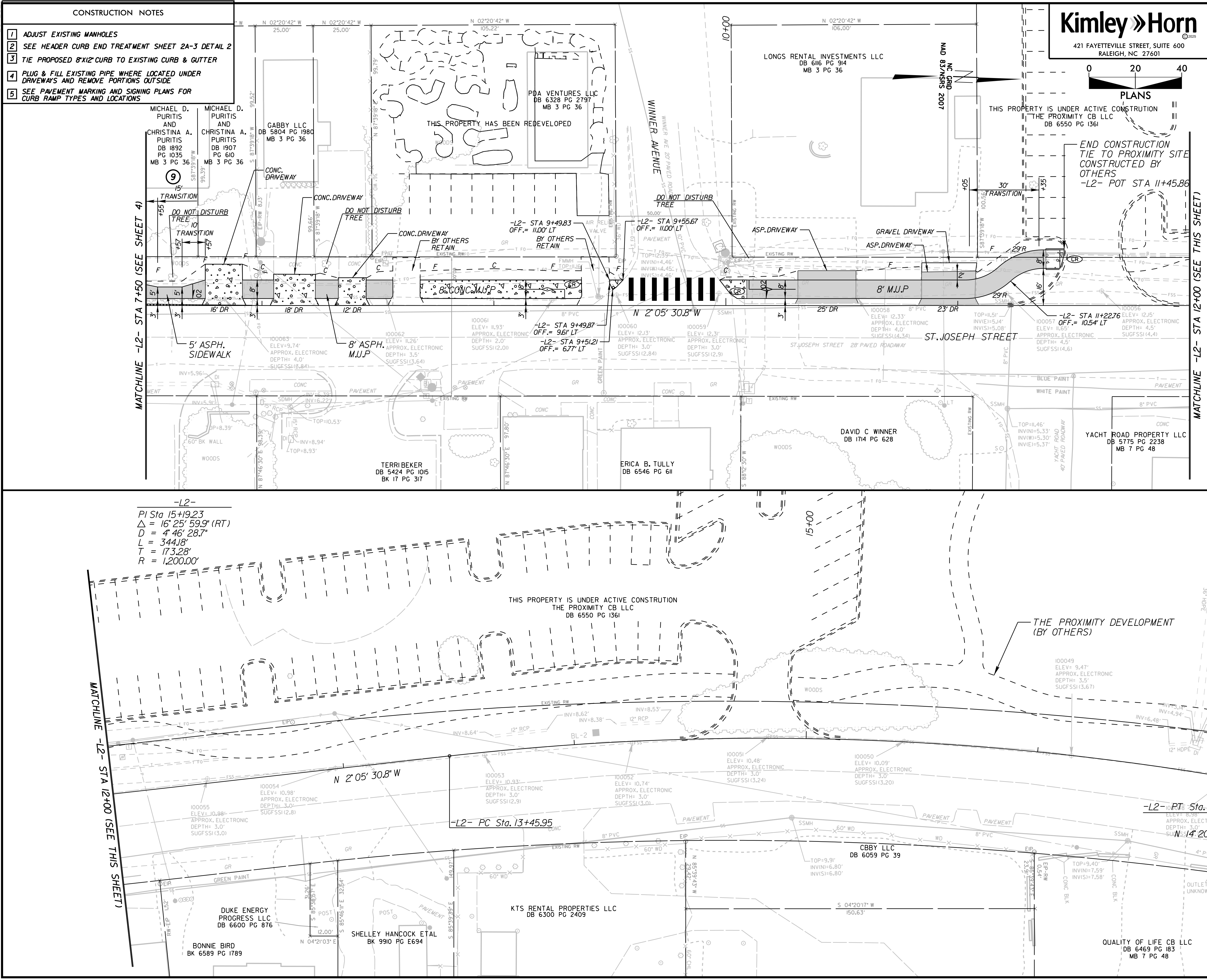
WHEN THE CONTRACTOR ELECTS TO USE A CONSTRUCTION JOINT AT THE BOTTOM OF THE PIPE AND POUR THE BASE SEPARATELY LEAVE THE POOR ROUGH.

USE CLASS "B" CONCRETE.

<h1 style="margin: 0;">Kimley » Horn</h1> <p style="margin: 0;">421 FAYETTEVILLE STREET, SUITE 600 RALEIGH, NC 27601</p> <p style="margin: 0; font-size: small;">© 2025</p>	PROJECT REFERENCE NO.	SHEET NO.
	EB-6039	4
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		
<div style="border: 2px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <h2 style="margin: 0;">PRELIMINARY PLANS</h2> <p style="margin: 0;">DO NOT USE FOR CONSTRUCTION</p> </div>		

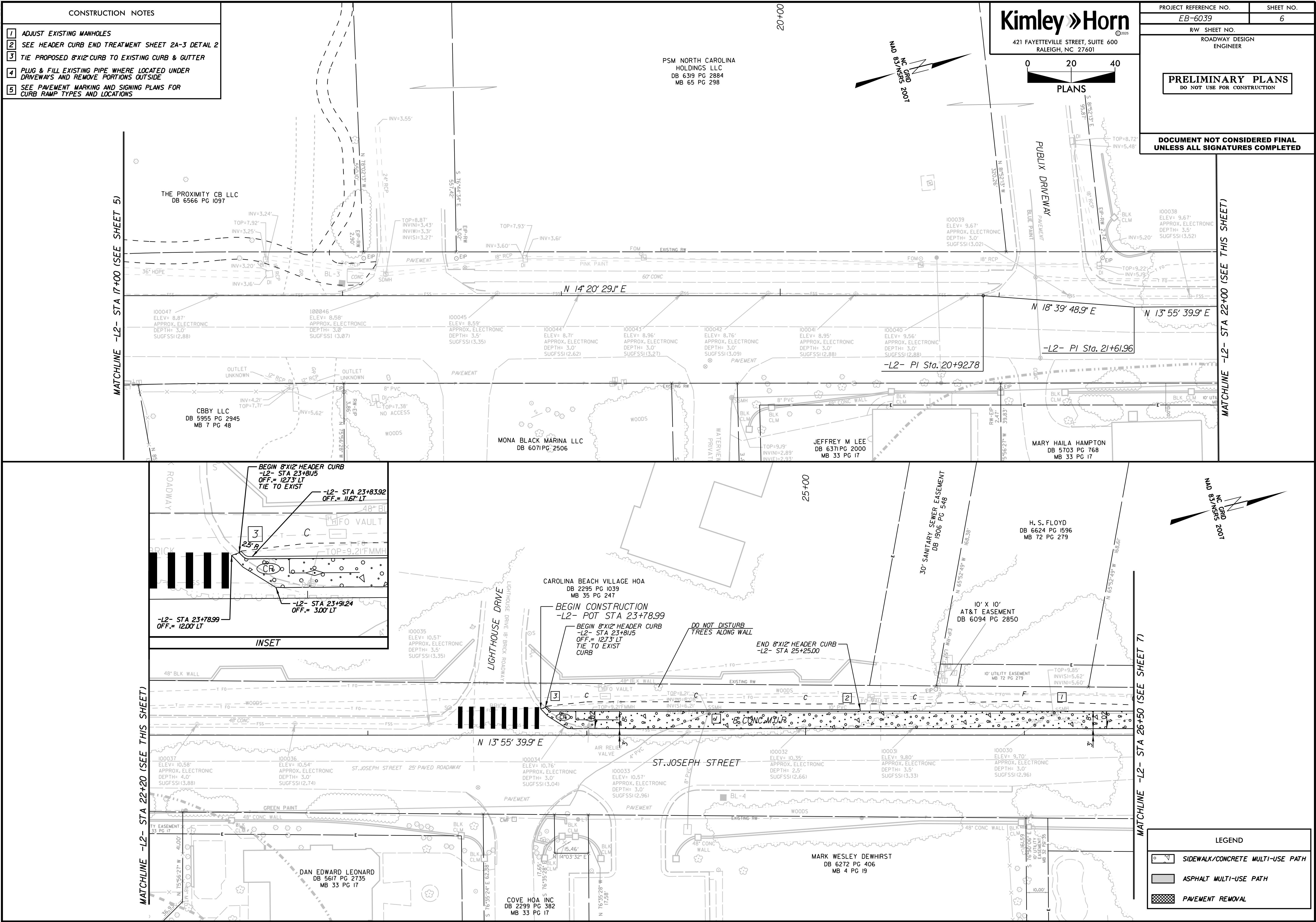


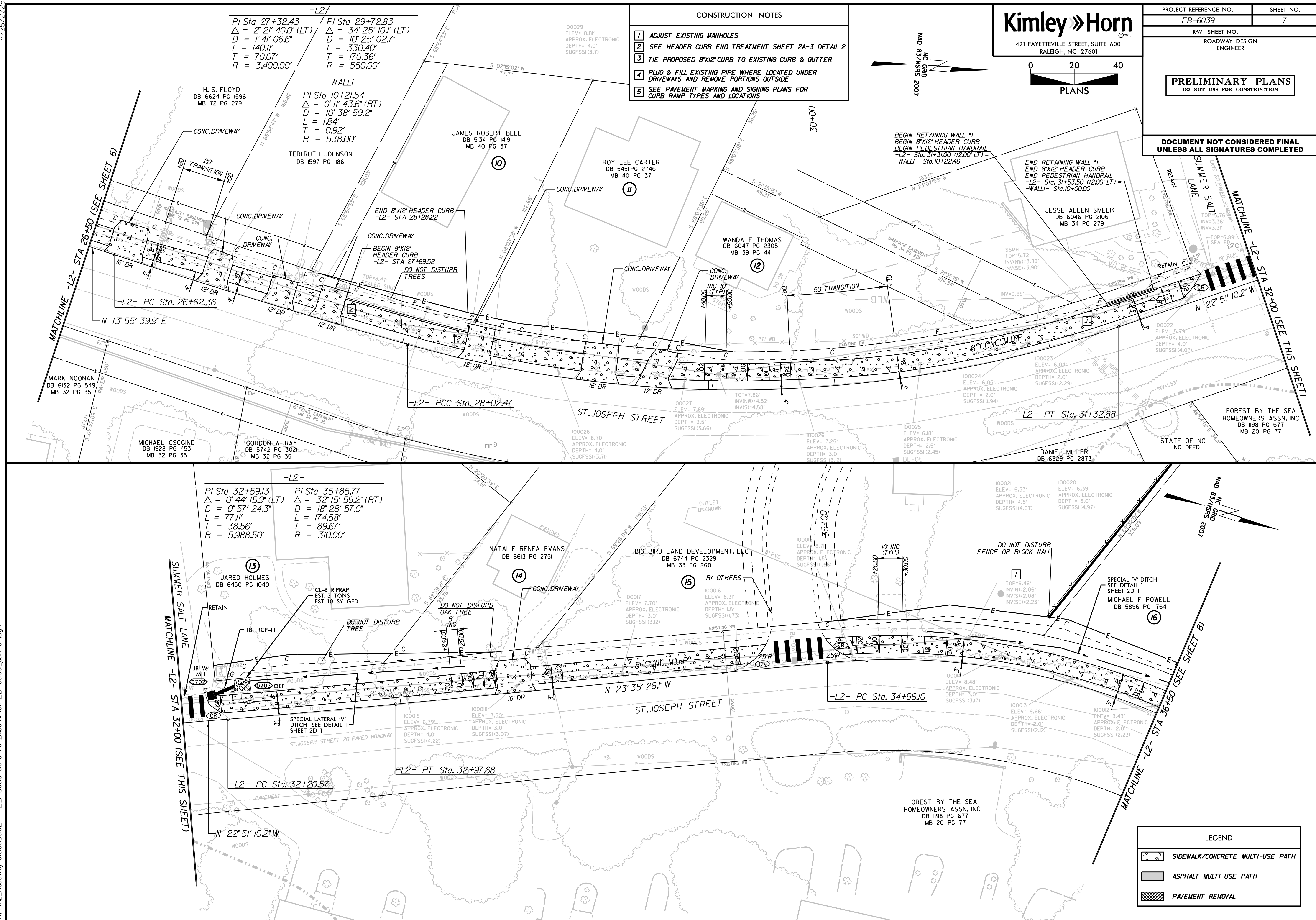
LEGEND	
	SIDEWALK/CONCRETE MULTI-USE PATH
	ASPHALT MULTI-USE PATH
	PAVEMENT REMOVAL

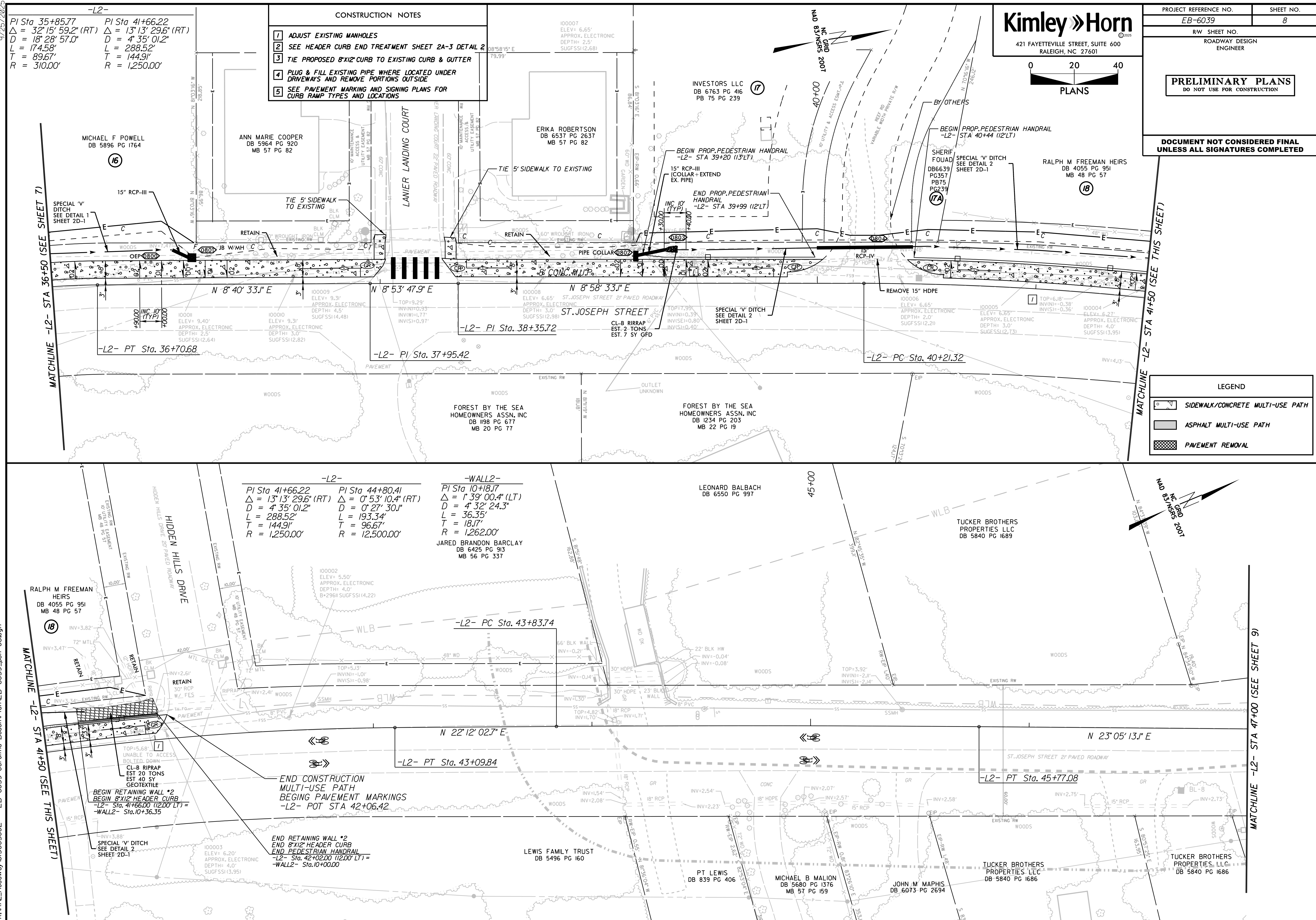


9/25/2025

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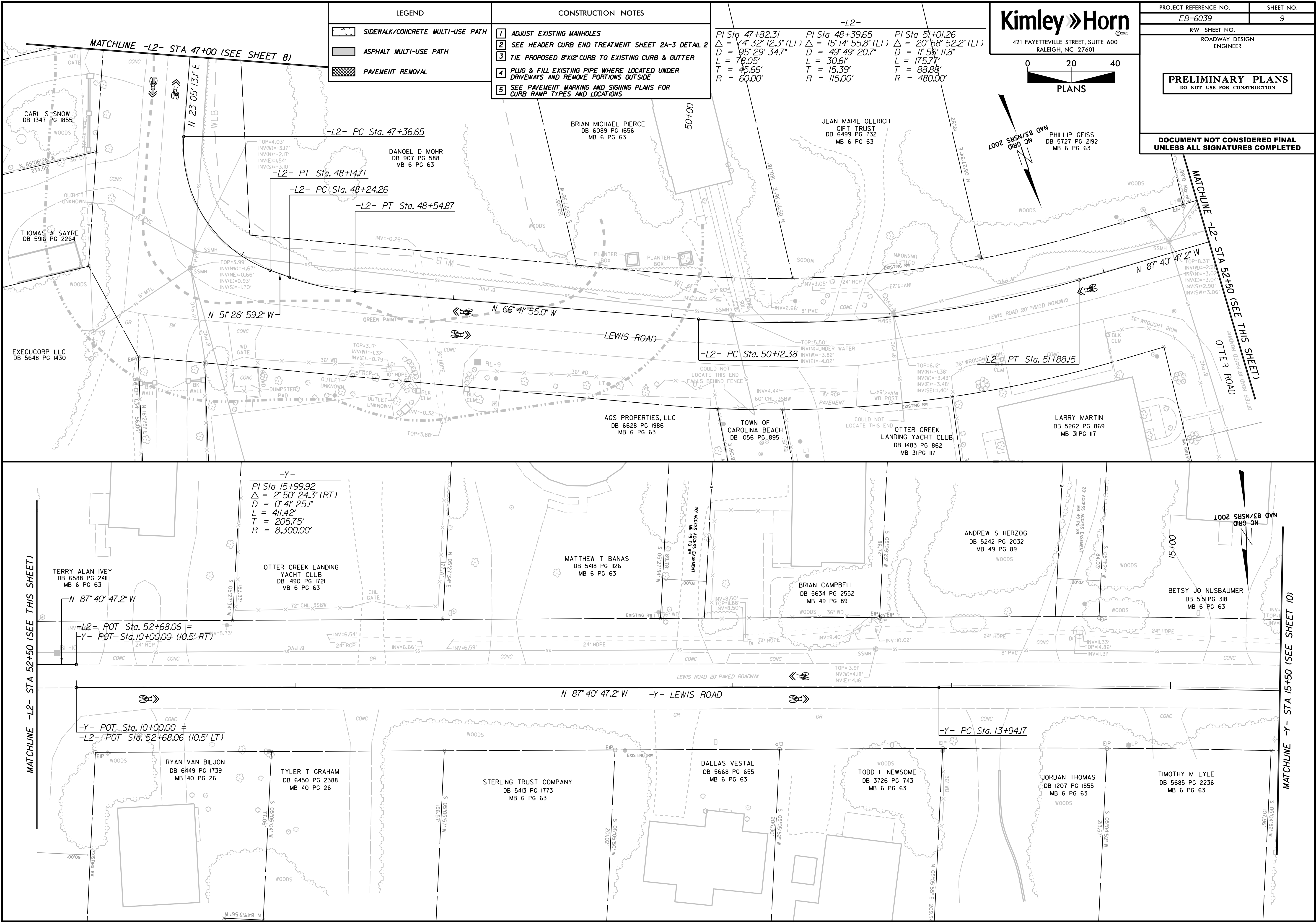


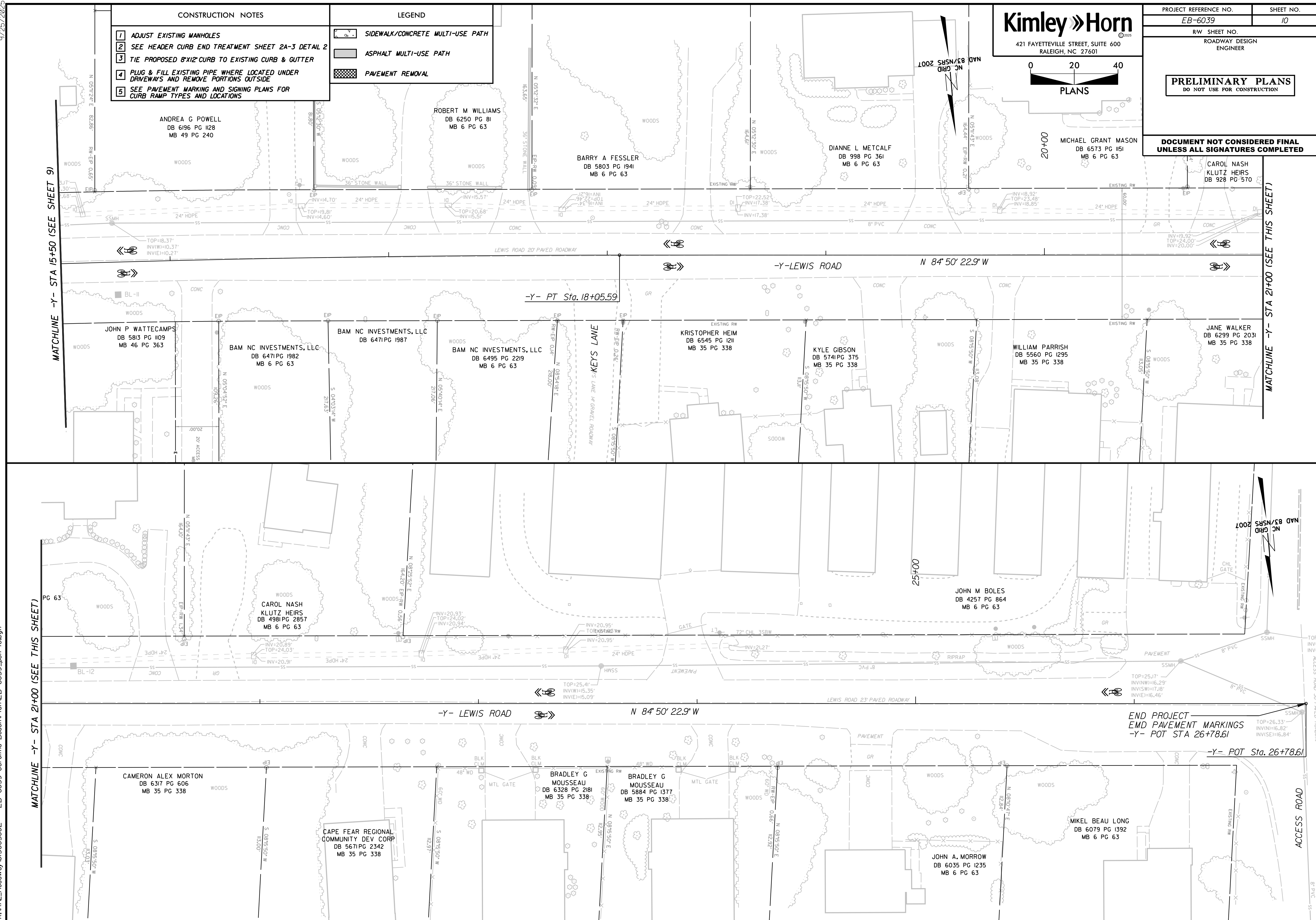


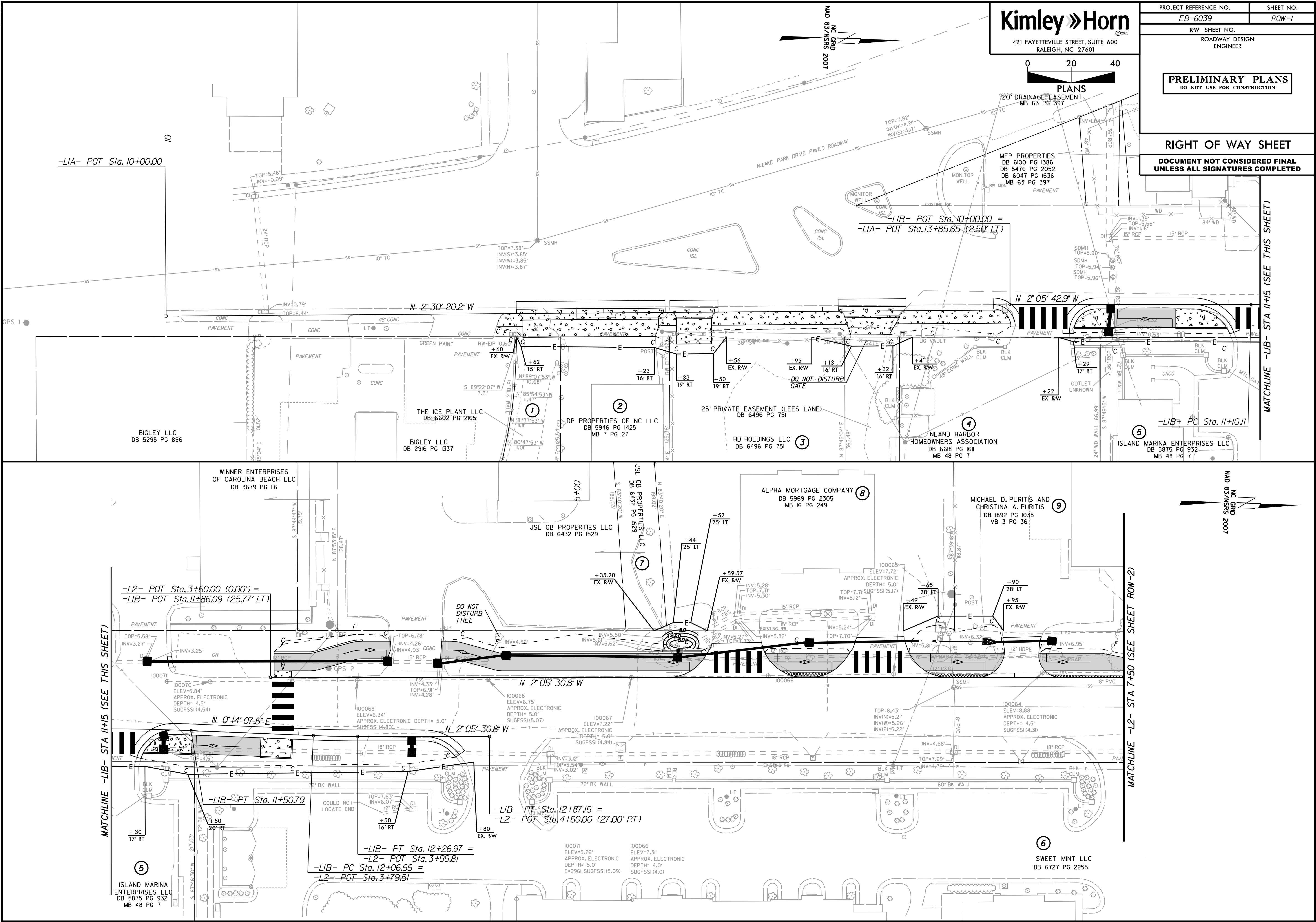


9/25/2025

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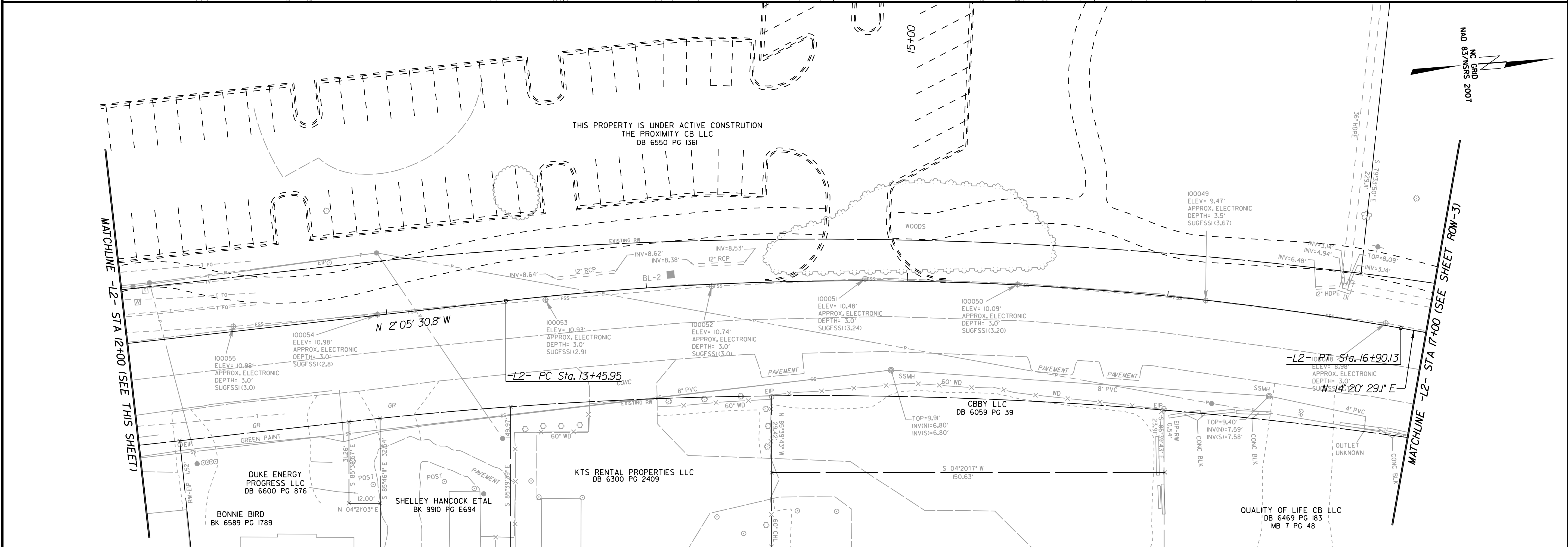
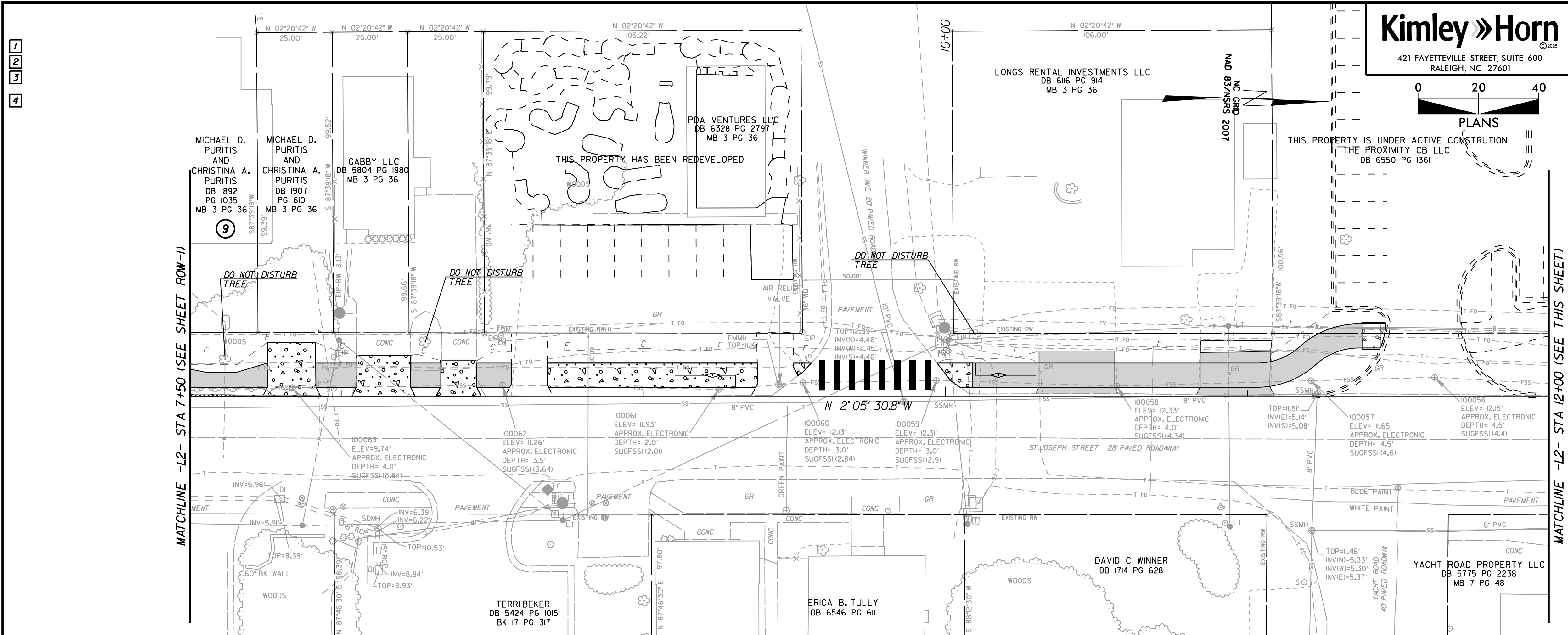


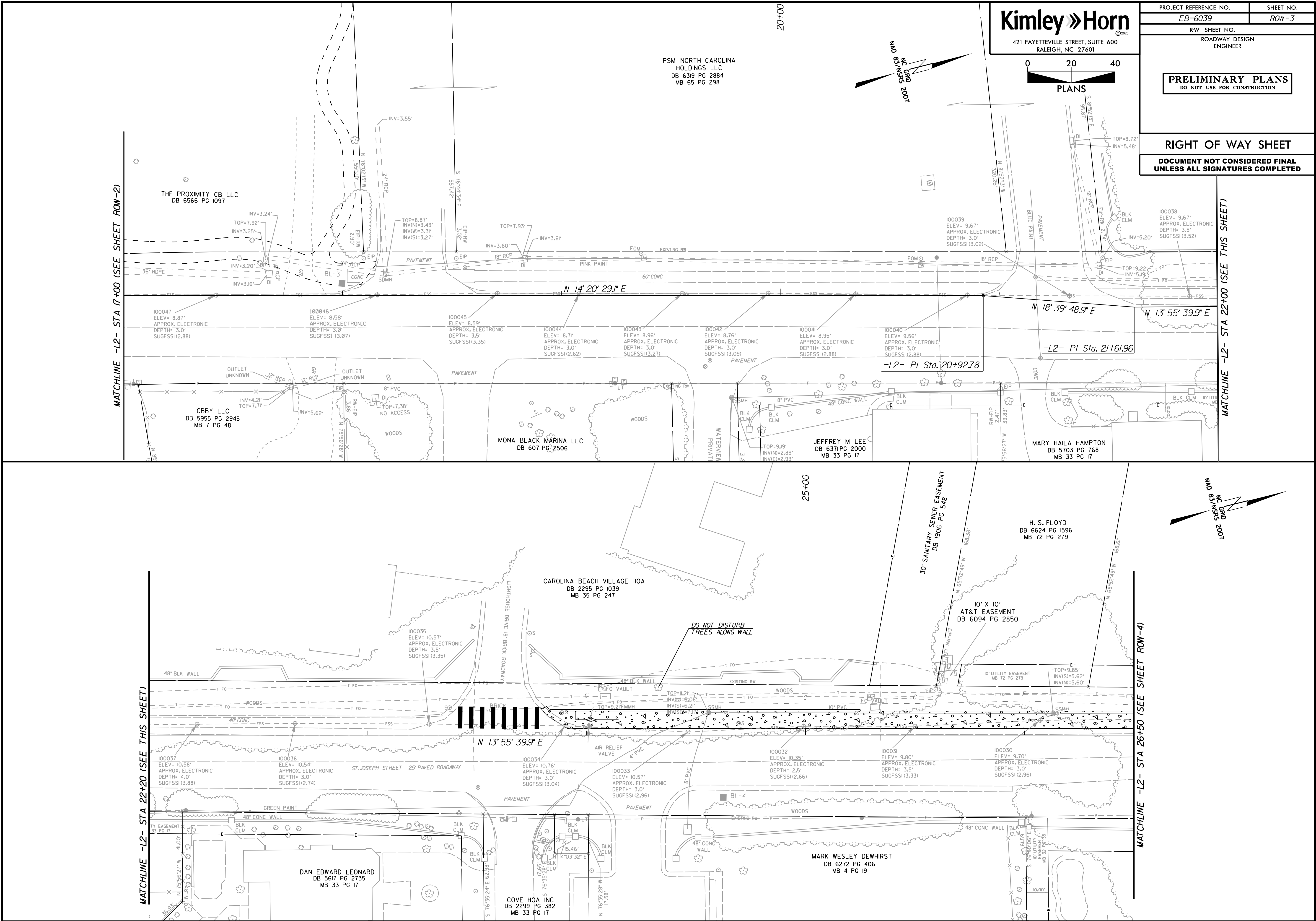


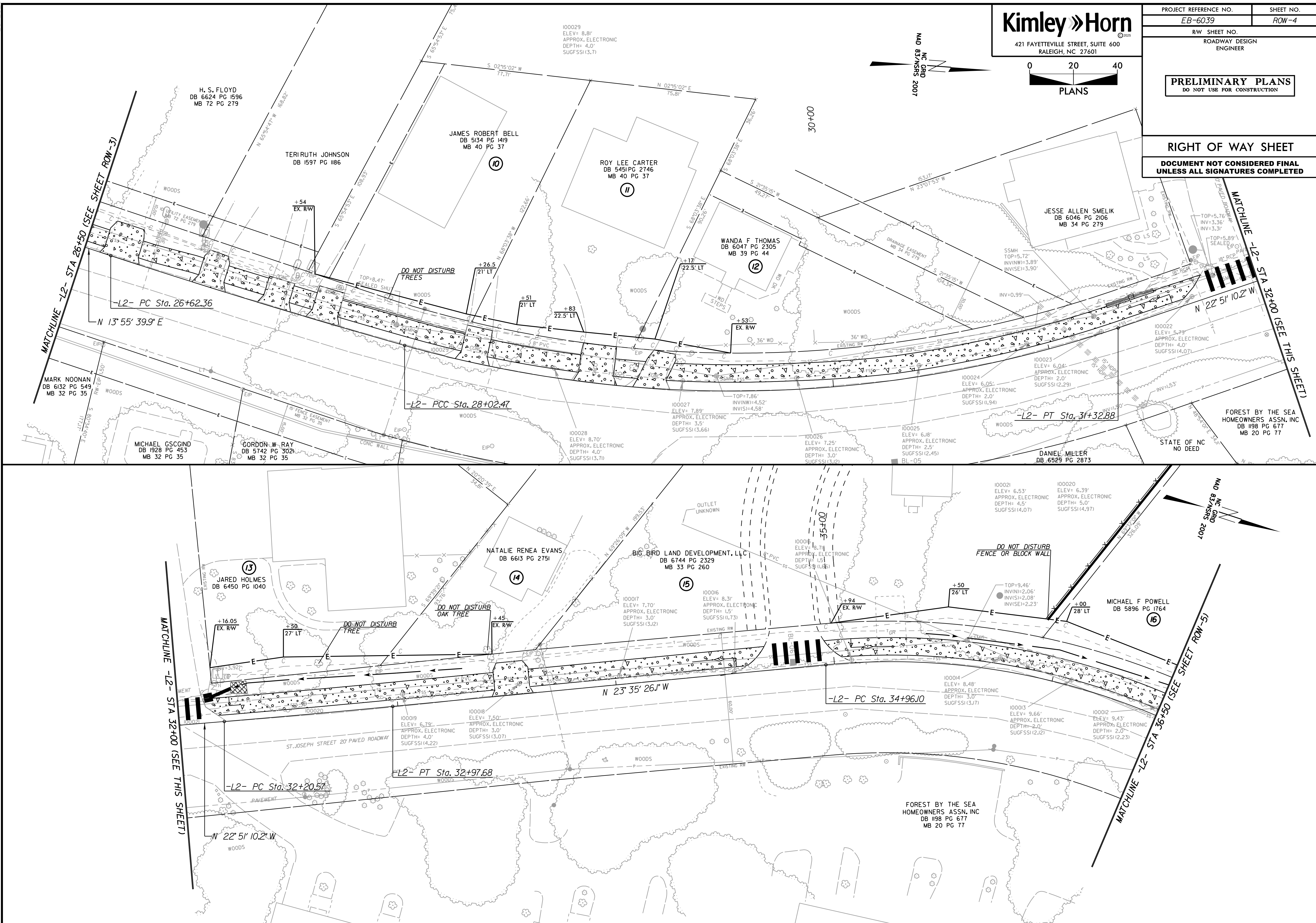
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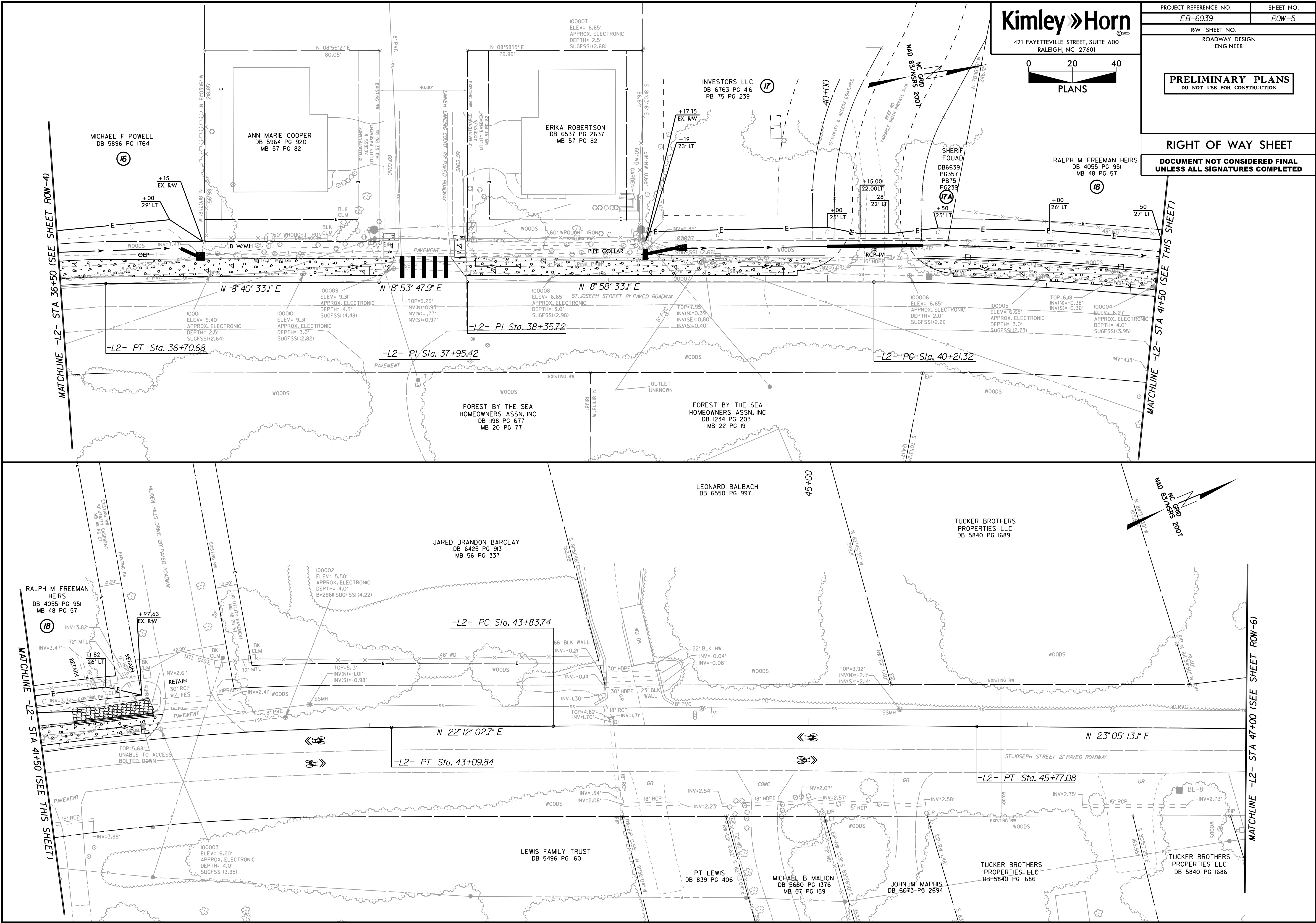
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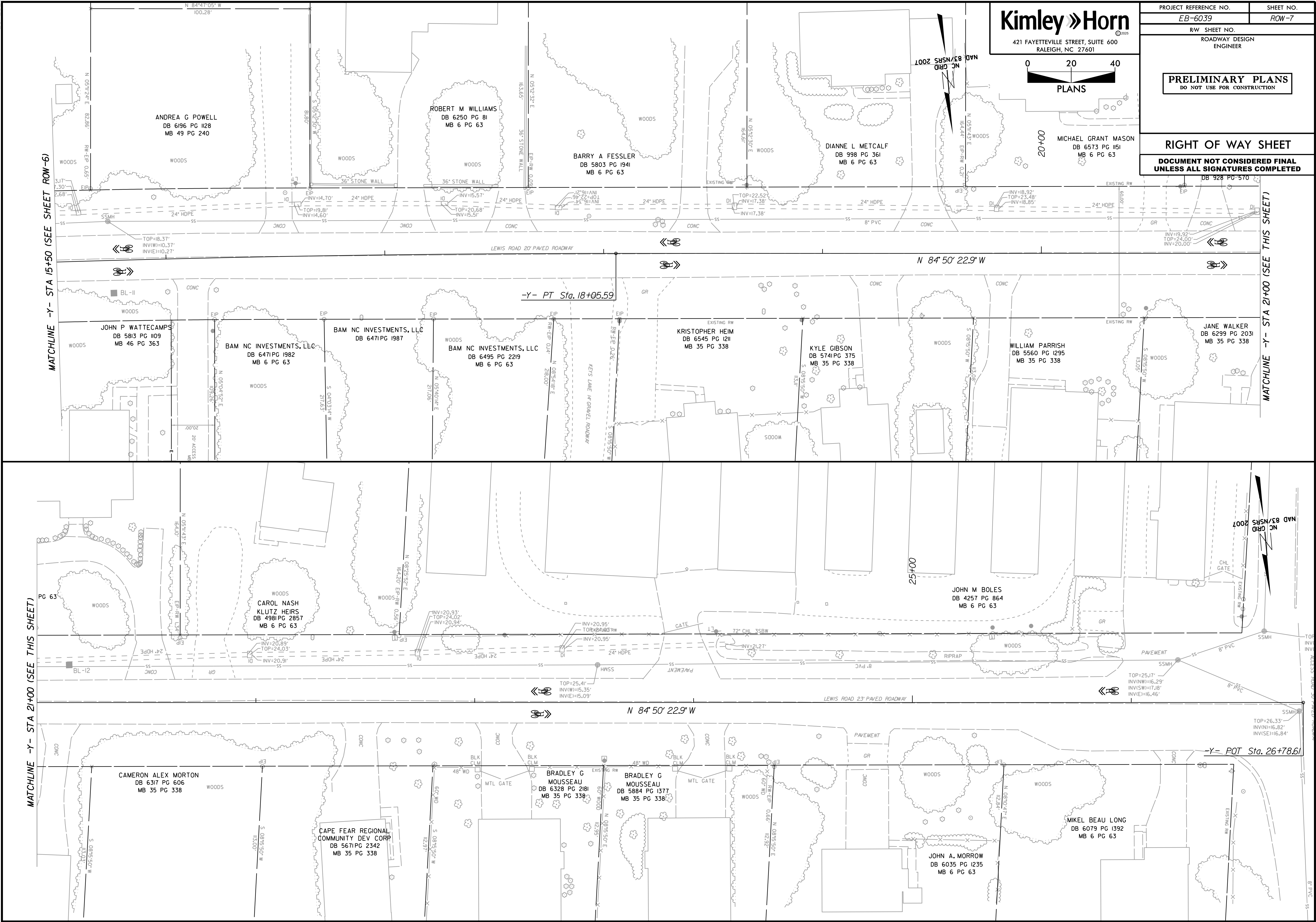
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421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

0 20 40
PLANS

PROJECT REFERENCE NO.	SHEET NO.
EB-6039	ROW-5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
RIGHT OF WAY SHEET	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



PROJECT REFERENCE NO.	SHEET NO.
<i>EB-6039</i>	<i>ROW-6</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
<div style="border: 1px solid black; padding: 10px; text-align: center;">PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION</div>	
ROW-6	
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TRANSPORTATION MANAGEMENT PLAN

EB-6039

ST JOSEPH STREET BIKE & PEDESTRIAN IMPROVEMENTS

NEW HANNOVER COUNTY

INDEX OF SHEETS

<u>SHEET NO.</u>	<u>TITLE</u>
TMP-1	TITLE SHEET, INDEX OF SHEETS, AND GENERAL NOTES
TMP-2	PHASING NOTES AND TYPICAL SECTIONS

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRE

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS:

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

<u>ROAD NAME</u>	<u>DAY AND TIME RESTRICTIONS</u>
ST. JOSEPH STEET LEWIS DRIVE	6:00AM TO 9:00AM AND 4:00PM TO 7:00PM MONDAY THRU SUNDAY

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

<u>ROAD NAME</u>
ST. JOSEPH STEET LEWIS DRIVE

HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 7:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 P.M. THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 7:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 7:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 7:00 P.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

LANE AND SHOULDER CLOSURE REQUIREMENTS:

C) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.

D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 6-15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

PAVEMENT EDGE DROP OFF REQUIREMENTS:

F) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

- BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.
- BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.
- BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

TRAFFIC PATTERN ALTERATIONS:

G) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING:

- H) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- I) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES:

J) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES), AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

MISCELLANEOUS:

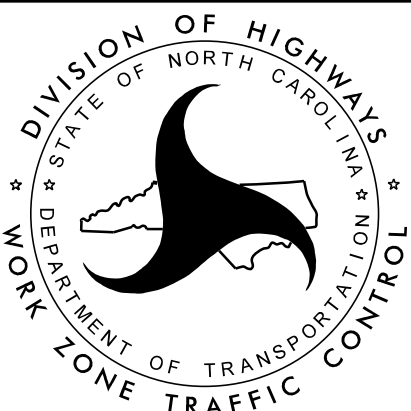
- K) ALL CURB RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING SHOWN ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE TOWN.
- L) CONTRACTOR TO MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES DURING CONSTRUCTION.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

APPROVED:DATE:

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

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



TEMPORARY TRAFFIC
CONTROL PLAN

Kimley»Horn

K:\RAL_Roadway\013005002 - EB-6039 Carolina Beach\Work Zone Traffic Control\EB-6039_rdy_imp.dgn 9/25/2025

PROJ. REFERENCE NO.	SHEET NO.
EB-6039	TMP-2

ST. JOSEPH STEET

PHASING NOTES

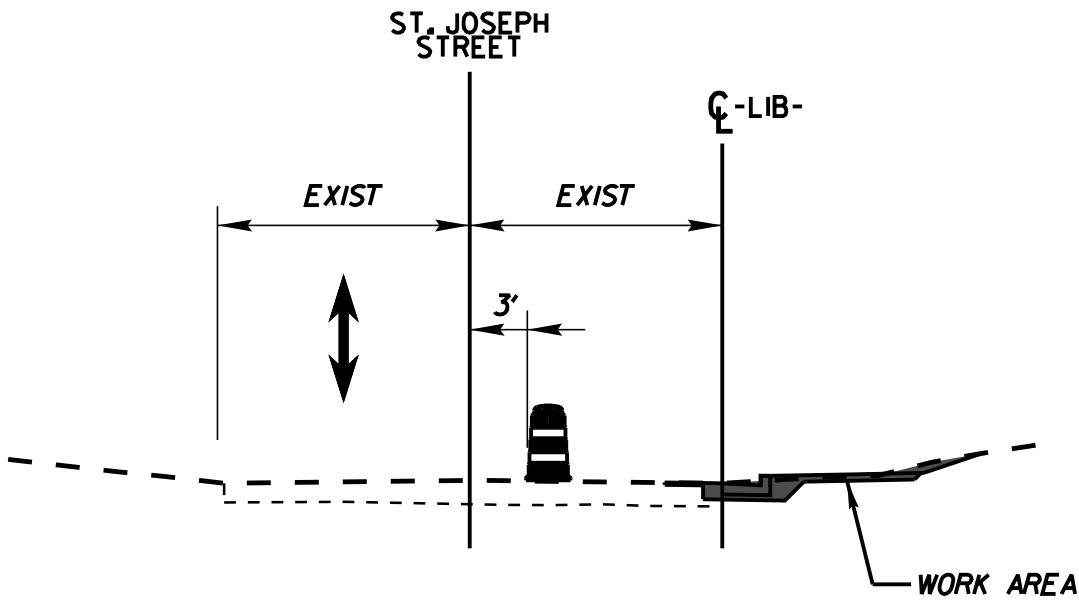
STEP 1

THE CONTRACTOR SHALL PLACE ALL ADVANCE WARNING SIGNS PRIOR TO BEGINNING WORK ACCORDING TO NCDOT STANDARD DRAWING NO. 1101.01. SIGNS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.

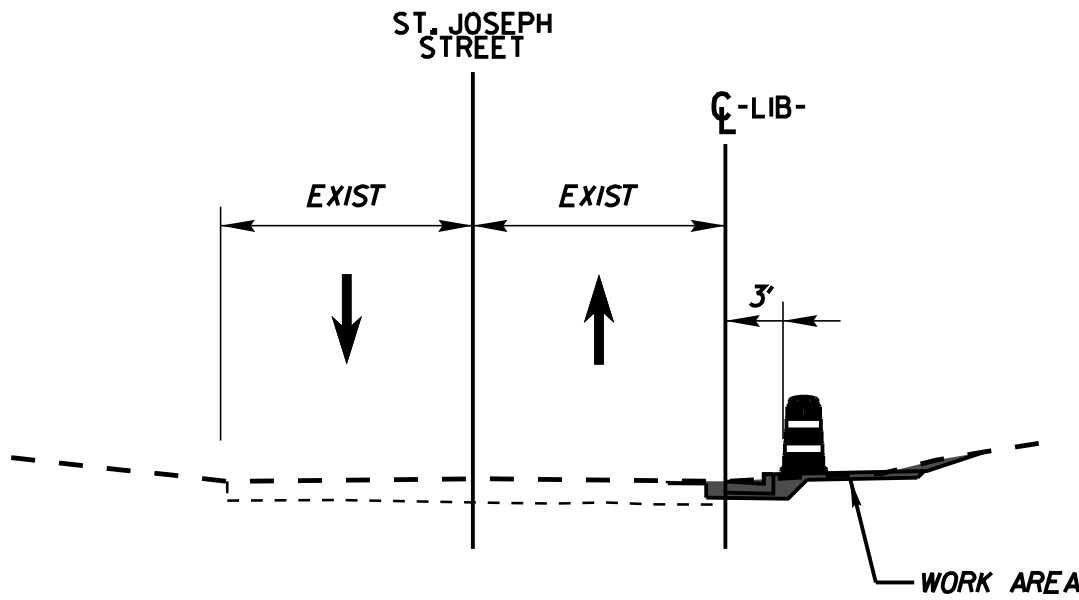
STEP 2

WHILE MAINTAINING EXISTING TRAFFIC AND USING NCDOT STANDARD DRAWING 1101.02 FOR TEMPORARY LANE CLOSURES WITH FLAGGER OPERATIONS AS NEEDED, THE CONTRACTOR SHALL CONSTRUCT PROPOSED IMPROVEMENTS ON ST JOSEPH STREET INCLUDING, BUT NOT LIMITED TO, GRADING, WALL CONSTRUCTION, PAVING, DRAINAGE INSTALLATION, PAVEMENT MARKING, AND SIGNING.

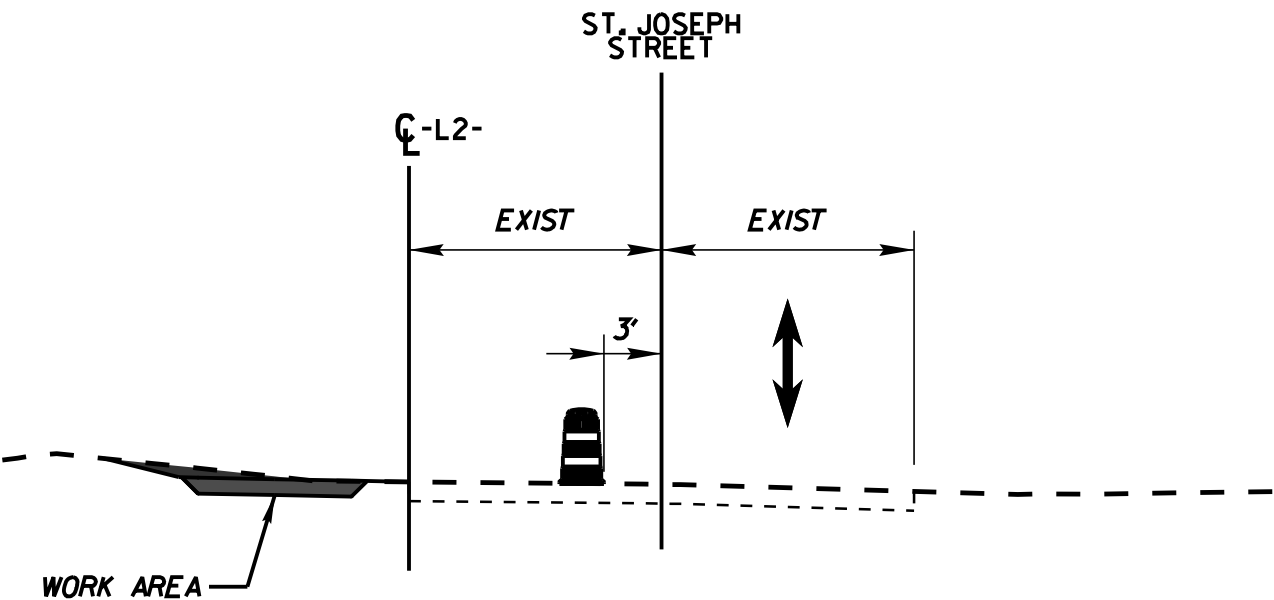
TEMPORARY LANE CLOSURE
TRAFFIC PATTERN
(NCDOT STD. 1101.02)



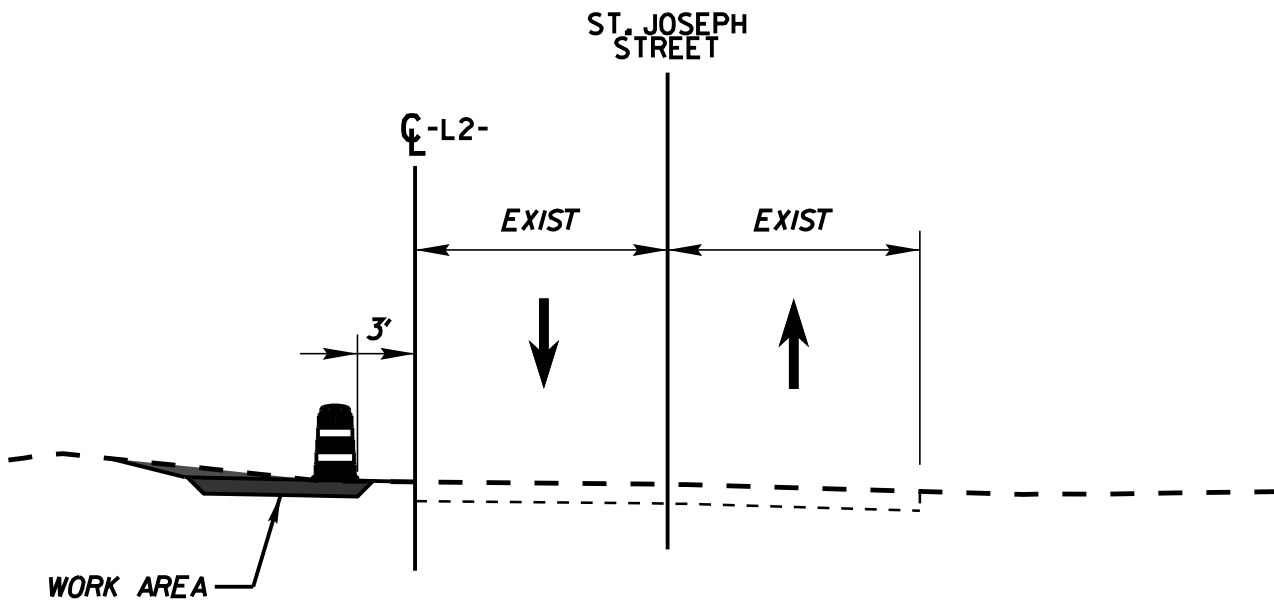
"END OF DAY"
TRAFFIC PATTERN



TEMPORARY LANE CLOSURE
TRAFFIC PATTERN
(NCDOT STD. 1101.02)



"END OF DAY"
TRAFFIC PATTERN

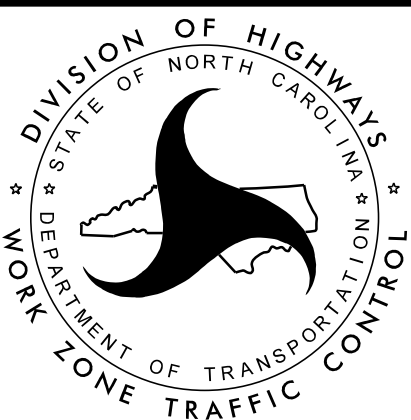


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APPROVED: DATE:

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



TEMPORARY TRAFFIC
CONTROL PLAN

TIP PROJECT: EB-6039

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING & SIGNING PLAN
NEW HANNOVER COUNTY

LOCATION: MULTIUSE TRAIL ALONG THE EASTWEST SIDE OF ST.JOSEPH STREET
FROM N.LAKE PARK BOULEVARD TO ACCESS ROAD

TIP NO.
EB-6039

SHEET NO.
PSP-1

APPROVED: _____
DATE: _____

SEAL

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

Kimley»Horn
421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

INDEX

SHEET NO.	DESCRIPTION
PSP-1	PAVEMENT MARKING PLAN AND SCHEDULE SHEET
PSP-3 THRU 8	PAVEMENT MARKING & SIGNING DESIGN

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
848.06	CURB RAMP
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALK
1205.16	PAVEMENT MARKINGS - BICYCLE FACILITIES

EB-6039 PAVEMENT
MARKING SCHEDULE

SYMBOL	DESCRIPTION
	FINAL PAVEMENT MARKINGS
T2	THERMOPLASTIC (4", 90 MILS) WHITE SOLID LANE LINE
T53	THERMOPLASTIC (12", 90 MILS) WHITE SOLID LANE LINE
T61	THERMOPLASTIC (24", 90 MILS) WHITE STOPBAR
T62	THERMOPLASTIC (24", 90 MILS) WHITE CROSSWALK LINE
T94	THERMOPLASTIC PAVEMENT MARKING SYMBOLS (90 MILS) SHARROW

GENERAL NOTES

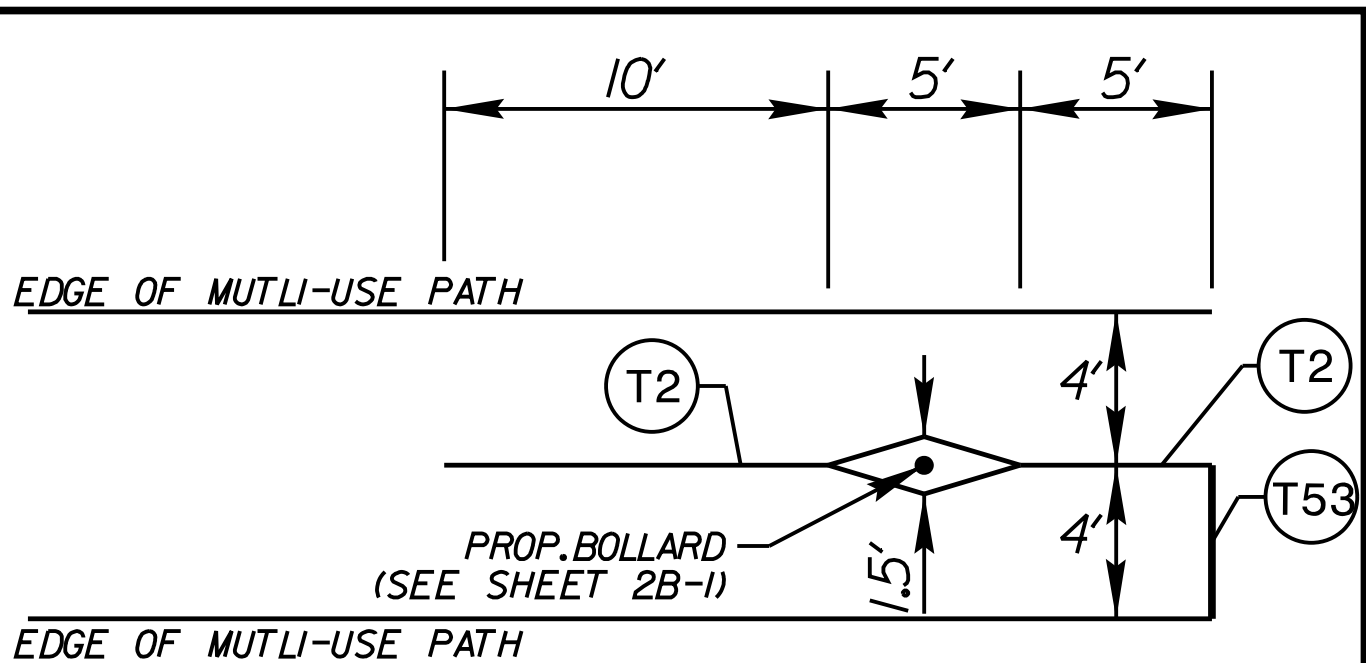
- THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.
- A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:
- | ROAD NAME | MARKING | MARKER |
|-----------|---------------|--------|
| ALL | THERMOPLASTIC | N/A |
- B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
- D) STOP BAR LOCATION AT NON-SIGNALIZED INTERSECTIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.
- E) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM. ALTHOUGH IT IS REQUIRED THAT UJ AND UK SHALL BE PLACED USING HEATED-IN-PLACE METHOD ONLY.

SIGNING LEGEND

- ⬡ DENOTES EXISTING SIGN
- ┆ DENOTES NEW U-CHANNEL POST/PROPOSED SIGN LOCATION
- ⊙ DENOTES EXISTING U-CHANNEL POST/EXISTING SIGN LOCATION

SIGNING NOTES

- DISPOSAL OF SUPPORT, U-CHANNEL
- SIGN ERECTION, TYPE E
- SIGN ERECTION, RELOCATE TYPE E ON NEW U-CHANNEL SUPPORT
- DISPOSE OF SIGN SYSTEM, U-CHANNEL



BOLLARD PAVEMENT MARKING DETAIL

PLAN PREPARED BY: Kimley-Horn and Associates

EVAN PARROTT, PE PROJECT DESIGN ENGINEER
SPENCER STRINGFELLOW, PE DESIGNER

Kimley»Horn

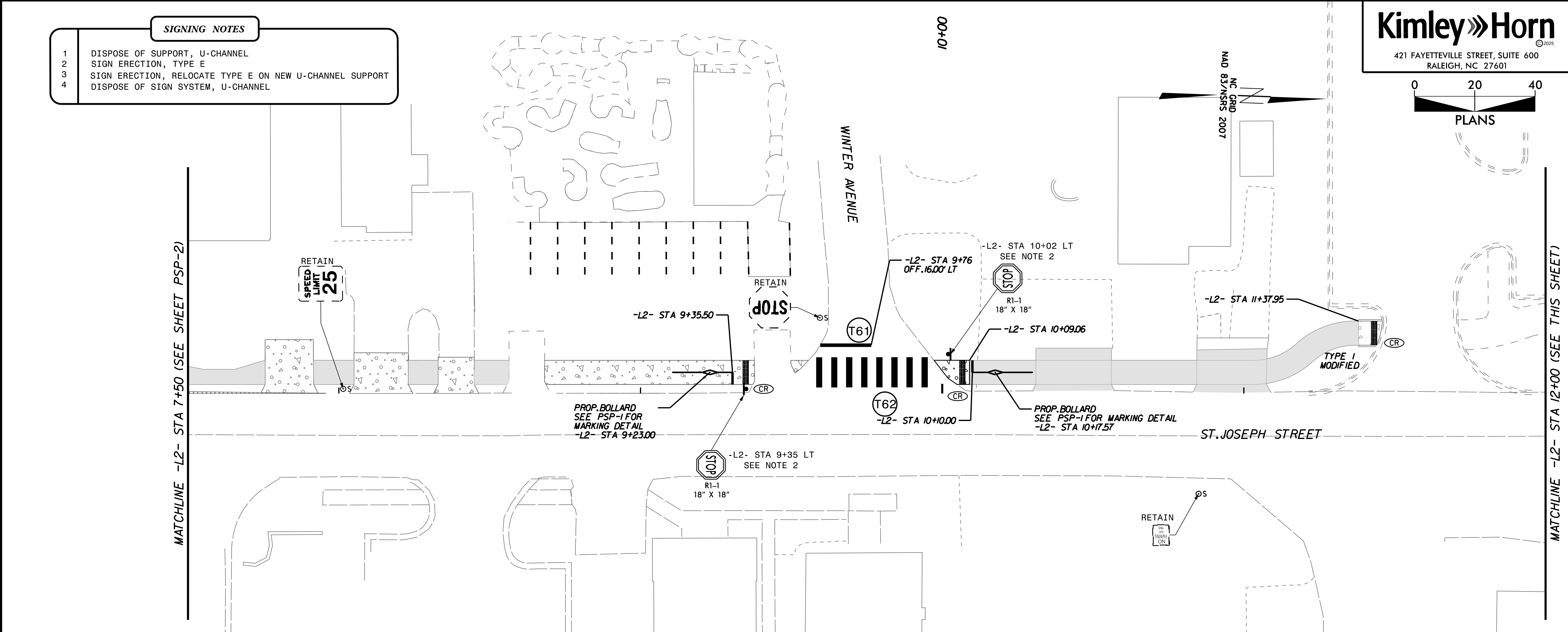
- SIGNING NOTES
- 1

DISPOSE OF SUPPORT, U-CHANNEL
- 2

SIGN ERECTION, TYPE E
- 3

SIGN ERECTION, RELOCATE TYPE E ON NEW U-CHANNEL SUPPORT
- 4

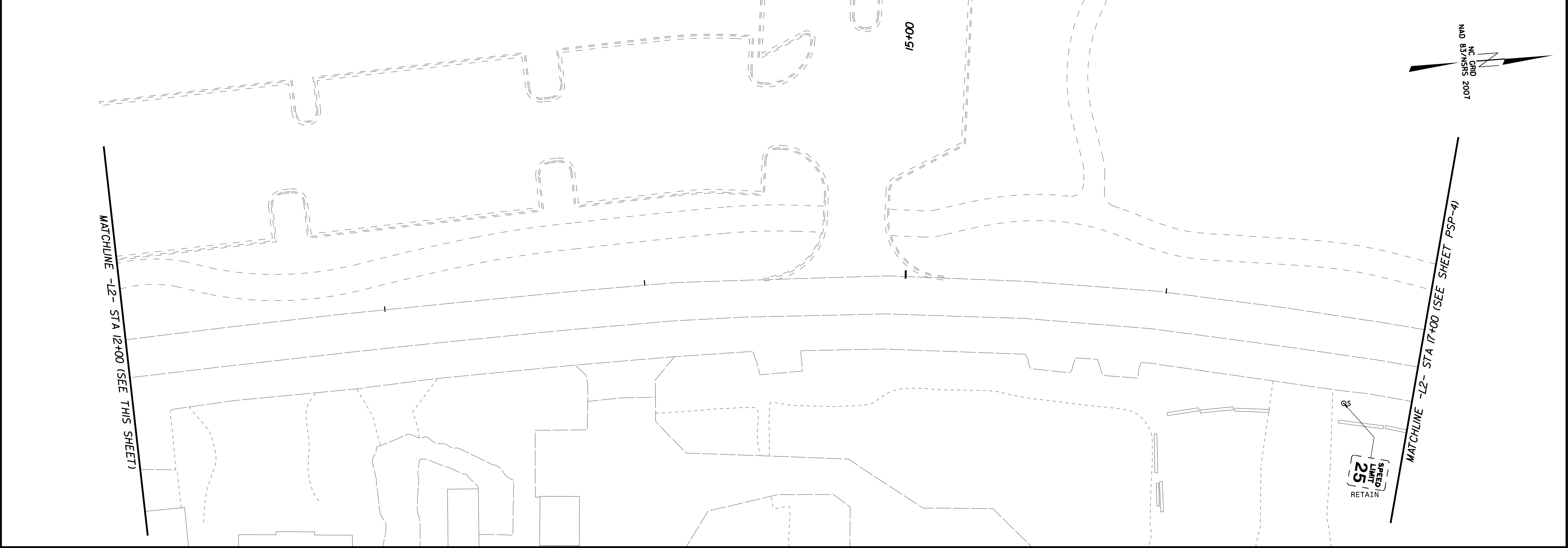
DISPOSE OF SIGN SYSTEM, U-CHANNEL



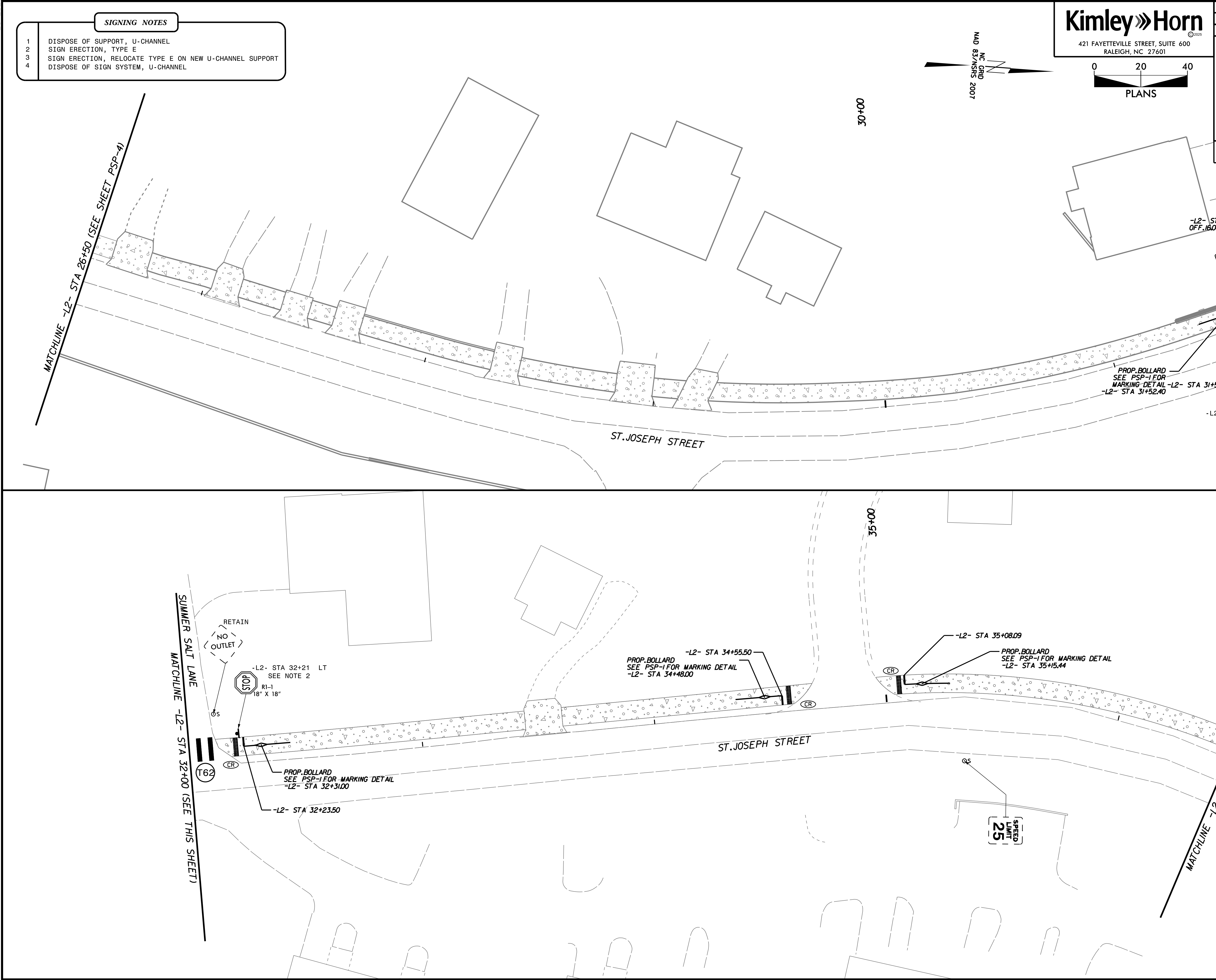
Kimley»Horn
421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

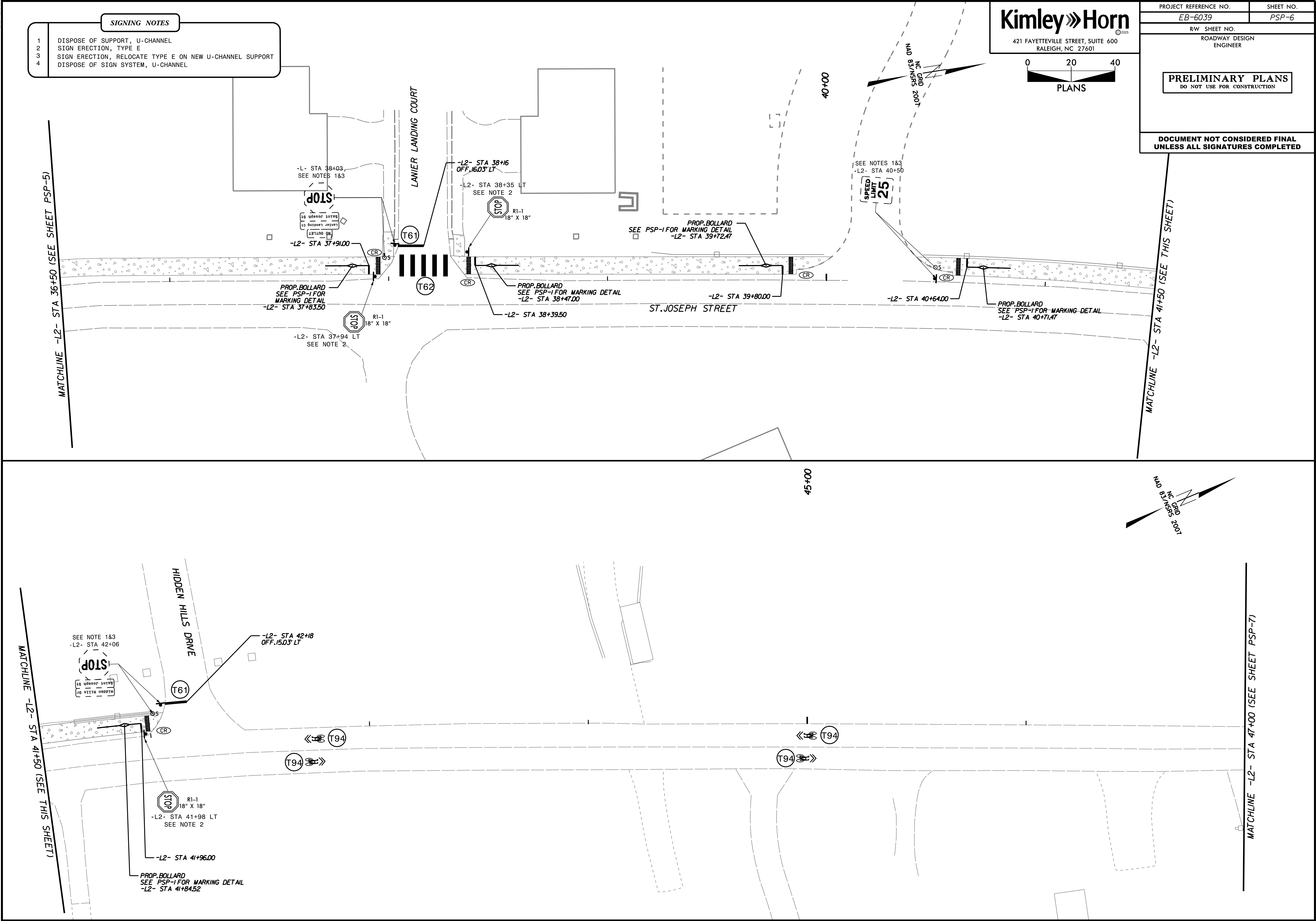
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PLANS

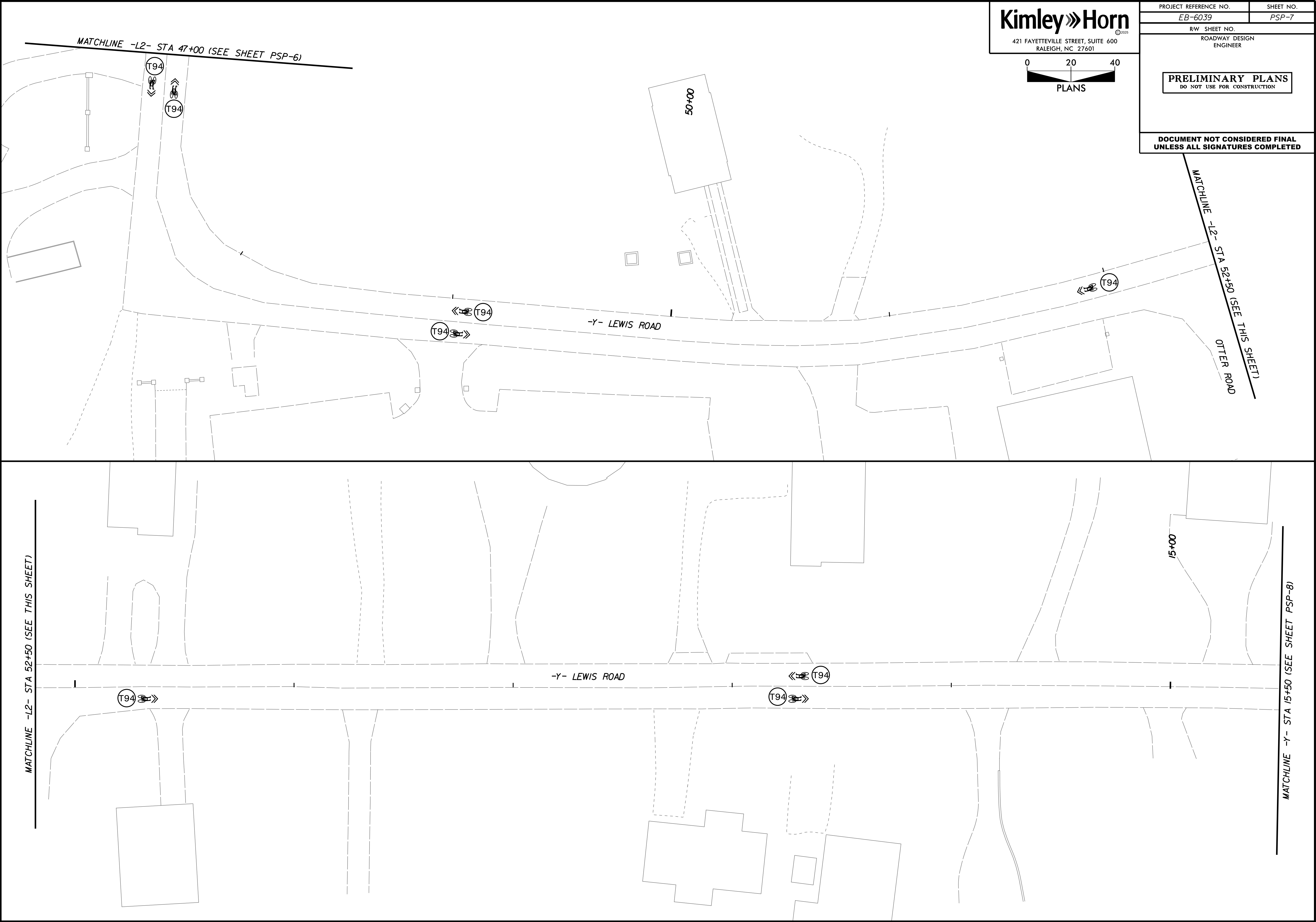
PROJECT REFERENCE NO.	SHEET NO.
EB-6039	PSP-3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	









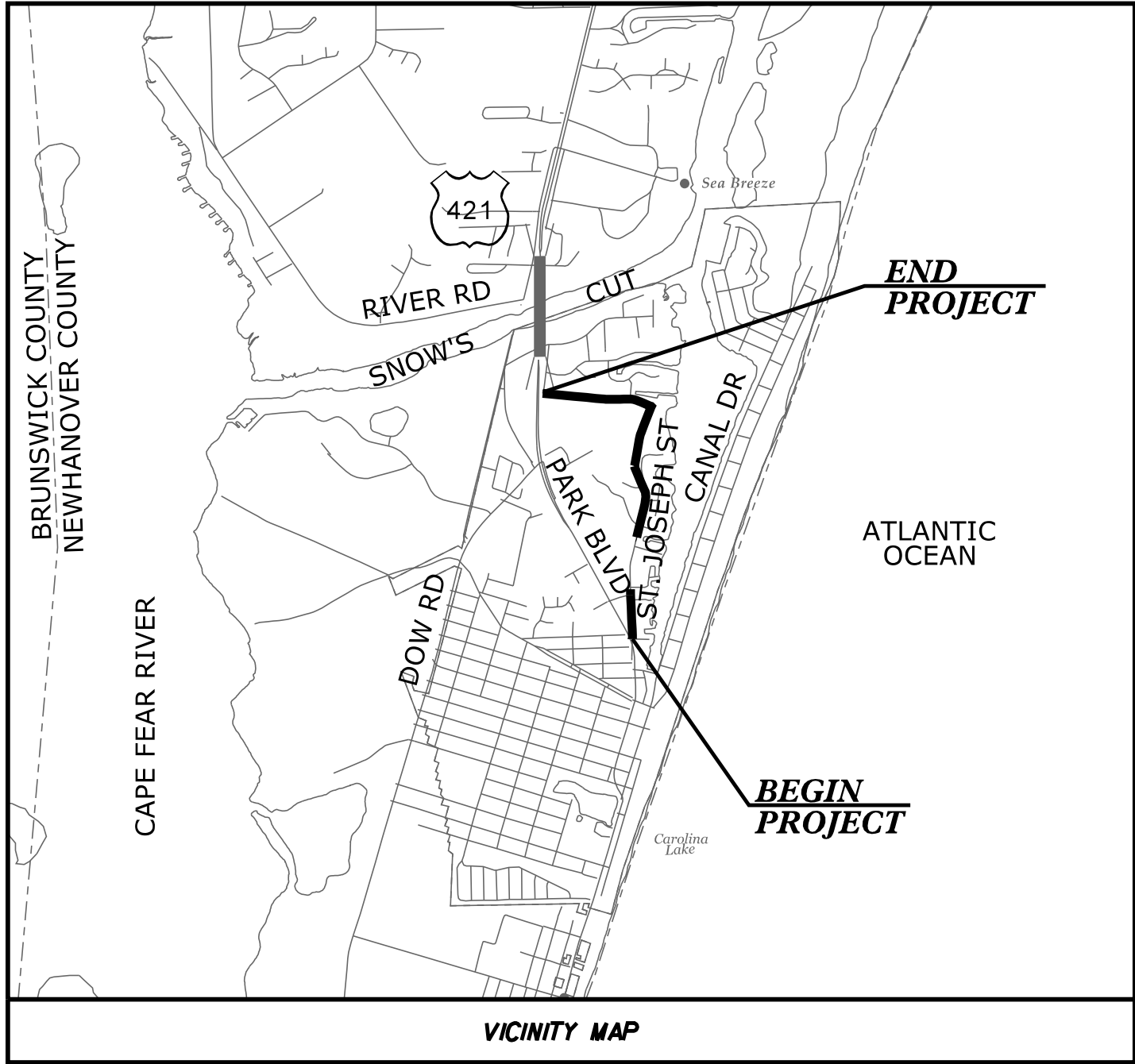


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421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

0 20 40
PLANS

PROJECT REFERENCE NO.	SHEET NO.
EB-6039	PSP-7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

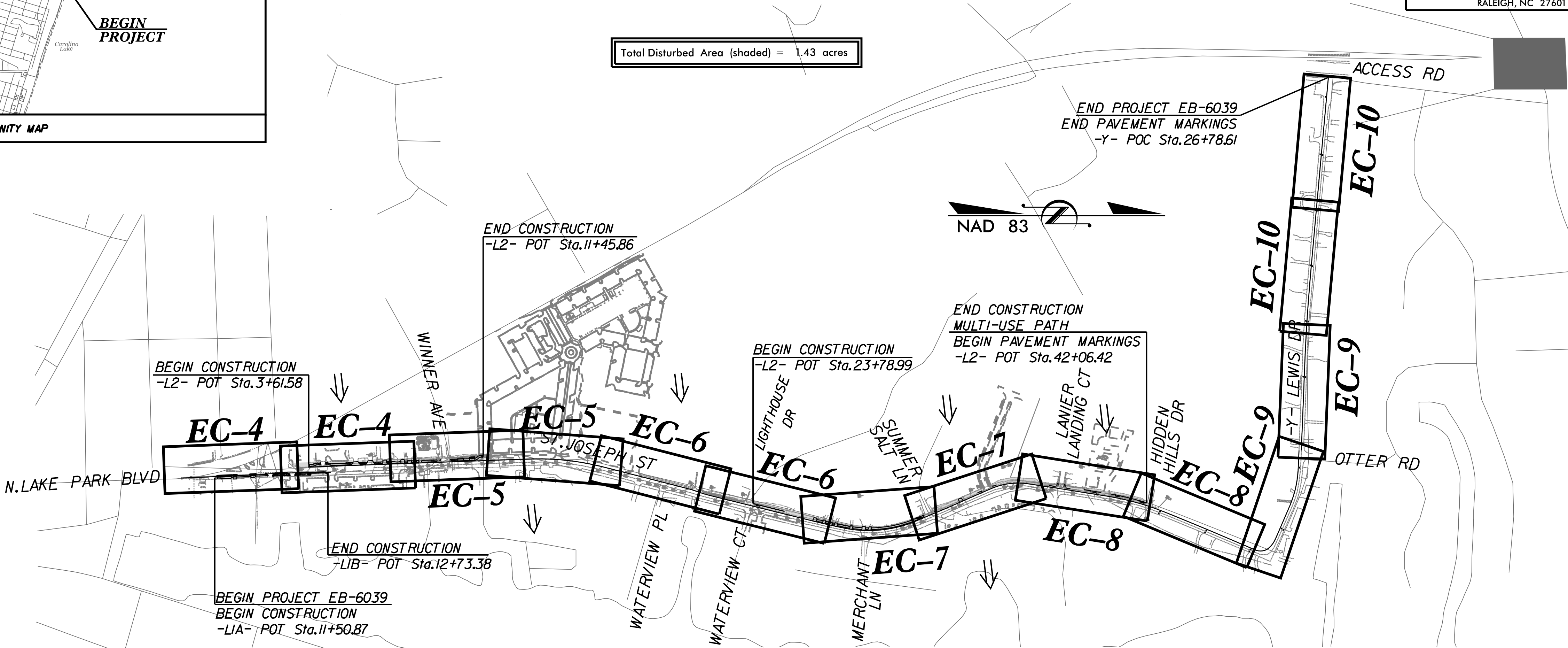




STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN
NEW HANNOVER COUNTY

LOCATION: MULTIUSE TRAIL ALONG THE EAST/WEST SIDE OF ST. JOSEPH STREET
FROM N. LAKE PARK BOULEVARD TO ACCESS ROAD



Total Disturbed Area (shaded) = 1.43 acres



IMPERVIOUS AND PERVIOUS SURFACES IN MULTI-USE PATH DISTURBED AREAS
PROPOSED IMPERVIOUS SURFACE = 0.84 AC PROPOSED PERVIOUS SURFACE = 0.59 AC

Project Description
The Town of Carolina Beach Proposes to construct an approximately 1.32-mile long pedestrian and bicycle enhancements along St. Joseph Street from N. Lake Park Boulevard to the Intersection of Lewis Drive and along Lewis Drive up to the Intersection of Lewis Drive and Access Road. The North Carolina Department of Transportation Indicates that the project will consist of a multiuse trail along the east side of St. Joseph Street from N. Lake Park Boulevard to Hidden Hills Dr. Enhancements to improve the safety of pedestrians and bicyclists will be incorporated.

Site Description
The site is generally flat and contains a few drainage systems along St. Joseph Street. Land use along the project is mostly developed and includes a mixture of residential houses and multi-family units. Drainage from the project site sheet flows or makes its way through a series of storm drain systems and eventually flows into bays or the Atlantic Ocean. No new drainage patterns will be introduced.

Soils
The soil types throughout the project limits are mostly sandy soils.
(Kr & Le).

GENERAL NOTES (TYPICAL ALL SHEETS):

1) ALL EROSION CONTROL MEASURES TO BE WITHIN LIMITS OF DISTURBANCE.
2) CONTRACTOR TO ENSURE THAT ALL ROADWAYS, PARKING LOTS, AND CURB LINES ADJACENT TO THIS PROJECT ARE FREE OF DEBRIS, DIRT, AND EQUIPMENT DURING THE PROJECT DURATION UNLESS DIRECTED BY TOWN ENGINEER. ANY DAMAGE TO EXISTING CURB AND GUTTER, ROADS, OR PARKING LOTS AT CONSTRUCTION ENTRANCES MUST BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
3) PIPES SHALL BE INSTALLED/REPLACED IN THE DRY WITH A MIN. 3 DAYS OF DRY WEATHER DURING INSTALLATION. CONTRACTOR SHALL PLAN TO ISOLATE AND DEWATER EXCAVATED AREAS AS NEEDED USING SILT BAGS AND/OR COFFER DAM AND PUMP AROUND. IF SILT BAGS ARE UTILIZED, CONTRACTOR TO INSPECT BAG FOR DAMAGE AND BLOCKAGE. REPLACE BAG WHEN 3/4 FULL OF SEDIMENT, AND PROVIDE A SUFFICIENT QUANTITY OF BAGS TO CONTAIN SILT FROM PUMPED EFFLUENT DURING CONSTRUCTION. IF COFFER DAMS ARE UTILIZED, A COFFER DAM DETAIL MUST BE SUBMITTED FOR APPROVAL PRIOR TO CONSTRUCTION.
4) WHERE SILT FENCES ARE LOCATED BELOW STORM DRAIN OUTLETS, THEIR LOCATIONS MUST BE MODIFIED AS THE STORM DRAINS ARE INSTALLED SO THAT THE FENCES WILL PASS OVER THE PIPE OUTLETS.
5) SILT FENCE OUTLET MUST BE ADDED IN THE FIELD WHENEVER LOW POINTS ARE ENCOUNTERED ALONG SILT FENCE RUNS.
6) INSTALL ANY ADDITIONAL EROSION CONTROL MEASURES AS NECESSARY TO PREVENT SEDIMENT RUNOFF.
7) NO BURNING WILL BE ALLOWED ON THE PROJECT.
8) SEE SHEET SHEET EC-2 FOR GENERAL CONSTRUCTION SCHEDULE/SEQUENCE.
9) INLET PROTECTION TO BE INSTALLED AND MAINTAINED WHEN UNSTABLE AND SEDIMENT LADEN SOIL IS DRAINING TO STRUCTURES. MANY VERSIONS OF INLET PROTECTION HAVE BEEN PROPOSED ON THIS PROJECT DUE TO THE URBAN NATURE OF THE SITE. CONTRACTOR TO COORDINATE WITH TOWN INSPECTOR TO DETERMINE THE BEST METHOD TO USE AT A GIVEN TIME.
10) WATTLE DAMS TO BE INSTALLED AND MAINTAINED WHEN UNSTABLE AND SEDIMENT LADEN SOIL IS DRAINING IN DITCHES. CONTRACTOR TO COORDINATE WITH TOWN INSPECTOR TO DETERMINE WHEN ROCK CHECK DAMS MAY BE REPLACED BY WATTLES UPON PARTIAL STABILIZATION OF SOIL.
11) USE ROLLED EROSION CONTROL PRODUCTS ON ALL CUT/FILL SLOPES WITHOUT RIP RAP INCLUDING BASINS AS NECESSARY FOR STABILIZATION.
12) DO NOT ALLOW CONCRETE DUST/WASTE/SEWAGE INTO STORM DRAIN OR OFF-SITE. ALL SEDIMENT MUST BE CLEANED OFF THE ROADWAY BY DRY SWEEPING METHODS ONLY. WATER MUST NOT BE USED TO WASH SEDIMENT OFF OF ROADS, DRIVEWAYS, OR PARKING LOTS.

NPDES GENERAL STORMWATER PERMIT SOIL STABILIZATION TIMEFRAMES		
SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HOW ZONES.

TIP NO.
EB-6039

SHEET NO.
EC-1

APPROVED: _____

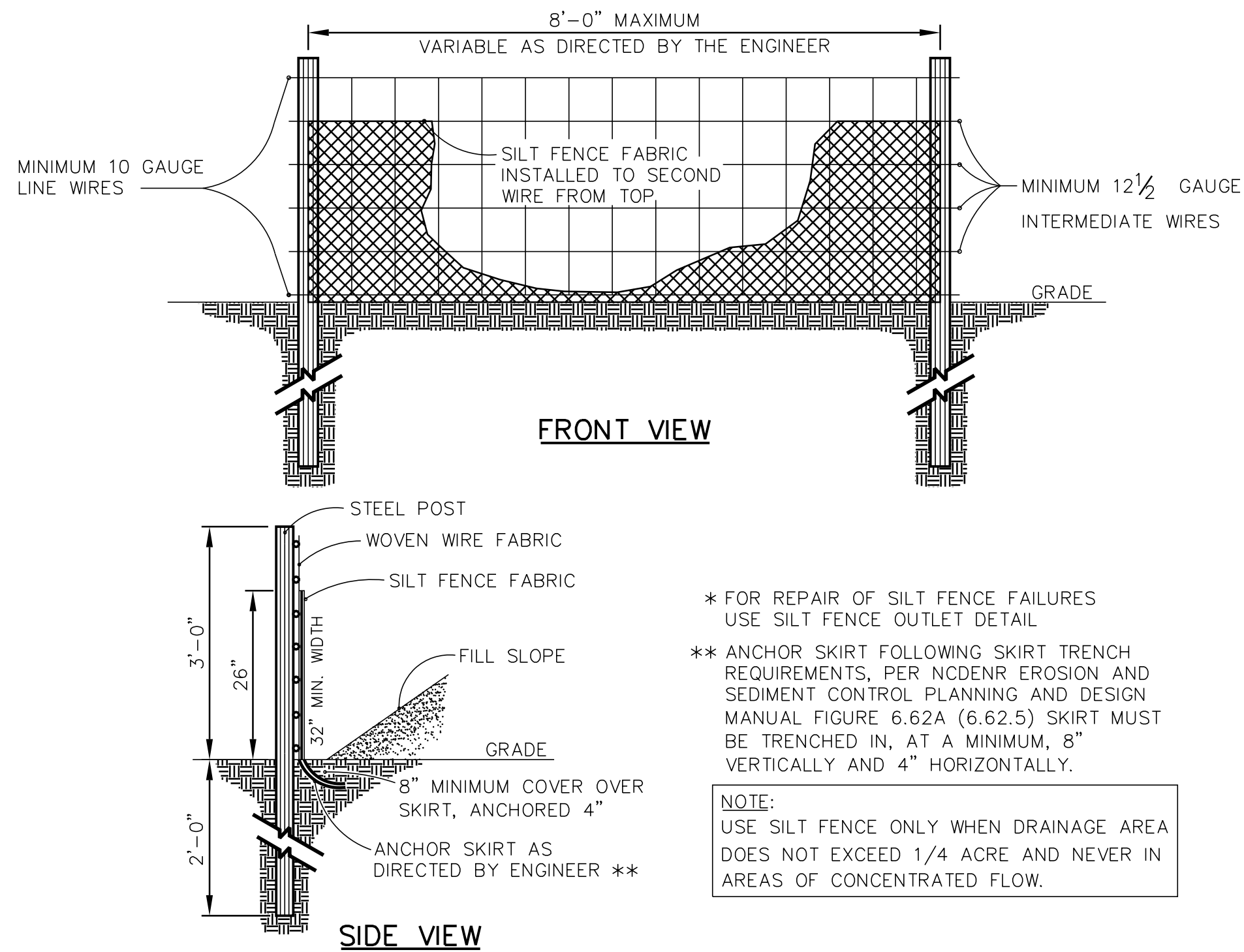
DATE: _____

SEAL

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

Kimley»Horn
421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601



STANDARD TEMPORARY SILT FENCE

CONSTRUCTION SPECIFICATIONS

1. Use a synthetic filter fabric of at least 95% by weight of polyolefins or polyester, which is certified by the manufacturer or supplier as conforming to the requirements in ASTM D 6461, which is shown in part in Table 6.62b.

Synthetic filter fabric should contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0 to 120° F.

2. Ensure that posts for sediment fences are 1.25 lb/linear ft minimum steel with a minimum length of 5 feet. Make sure that steel posts have projections to facilitate fastening the fabric.

3. For reinforcement of standard strength 7/8" fabric, use wire fence with a minimum 14 gauge and a maximum mesh spacing of 6 inches.

CONSTRUCTION

1. Construct the sediment barrier of standard strength or extra strength synthetic filter fabrics.

2. Ensure that the height of the sediment fence does not exceed 24 inches above the ground surface. (Higher fences may impound volumes of water sufficient to cause failure of the structure.)

3. Construct the filter fabric from a continuous roll cut to the length of the barrier to avoid joints. When joints are necessary, securely fasten the filter cloth only at a support post with 4 feet minimum overlap to the next post.

4. Support standard strength filter fabric by wire mesh fastened securely to upslope side of the posts. Extend the wire mesh support to the bottom of the trench. Fasten the wire reinforcement, then fabric on the upslope side of ..

5. When a wire mesh support fence is used, space posts a maximum of 8 feet apart. Support posts should be driven securely into the ground a minimum of 24 inches.

6. Extra strength filter fabric with 6 feet post spacing does not require wire mesh support fence. Securely fasten the filter fabric directly to posts. Wire or plastic zip ties should have minimum 50 pound tensile strength.

7. Excavate a trench approximately 4 inches wide and 8 inches deep along the proposed line of posts and upslope from the barrier (Figure 6.62a).

8. Place 12 inches of the fabric along the bottom and side of the trench.

9. Backfill the trench with soil placed over the filter fabric and compact. Thorough compaction of the backfill is critical to all fence performance.

10. Do not attach filter fabric to existing trees.

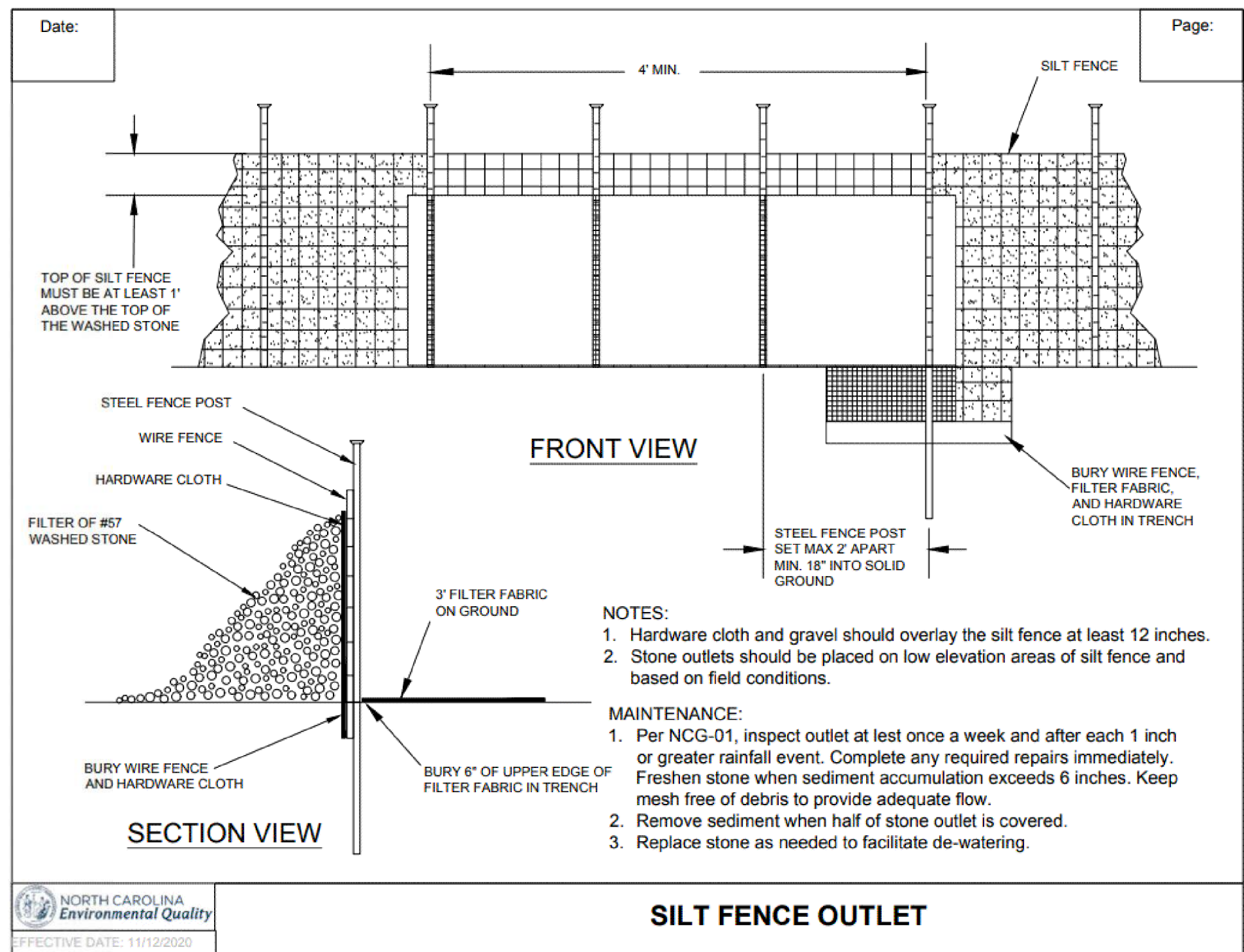
MAINTENANCE

Inspect sediment fences and fence outlets at least once a week and after each rainfall. Make any required repairs immediately.

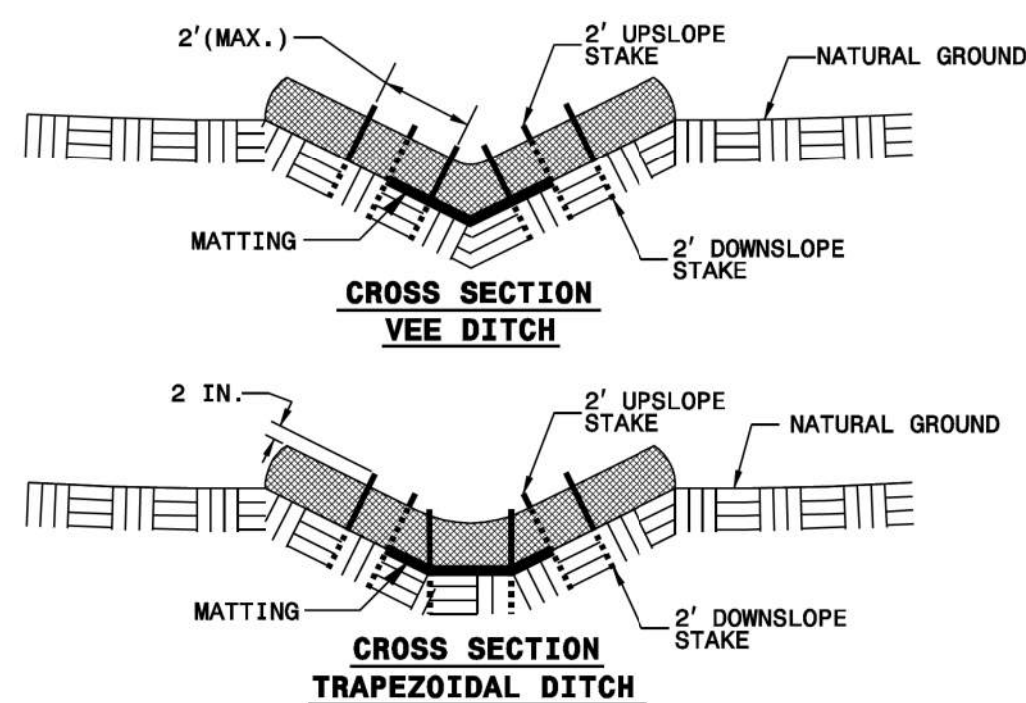
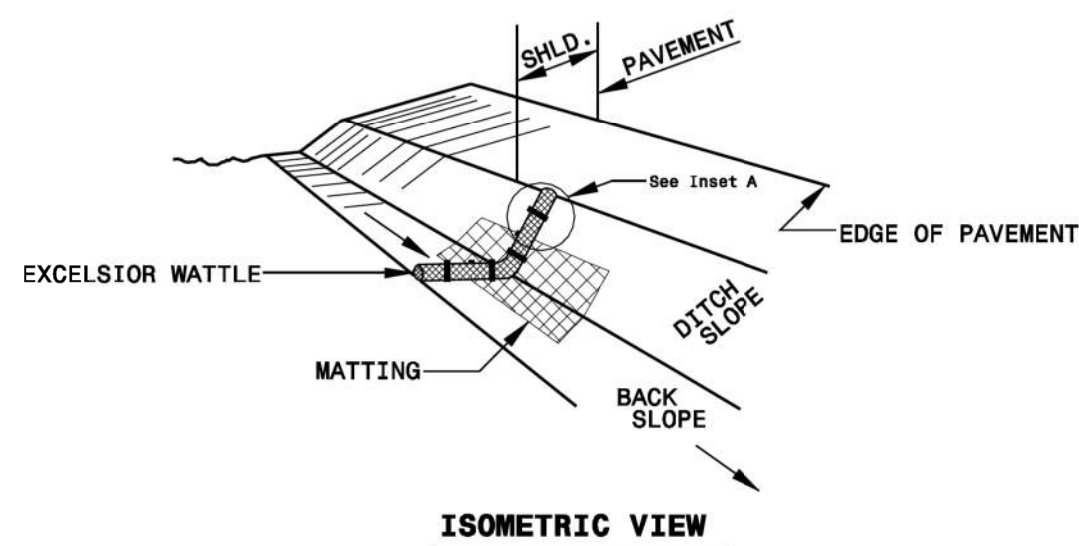
Should the fabric of a sediment fence collapse, tear, decompose or become ineffective, replace it promptly. Replace burlap every 60 days.

Remove sediment deposits as necessary to provide adequate storage volume for the next rain and to reduce pressure on the fence. Take care to avoid undermining the fence during cleanout.

Remove all fencing materials and unstable sediment deposits and bring the area to grade and stabilize it after the contributing drainage area has been properly stabilized.



WATTLE DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

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

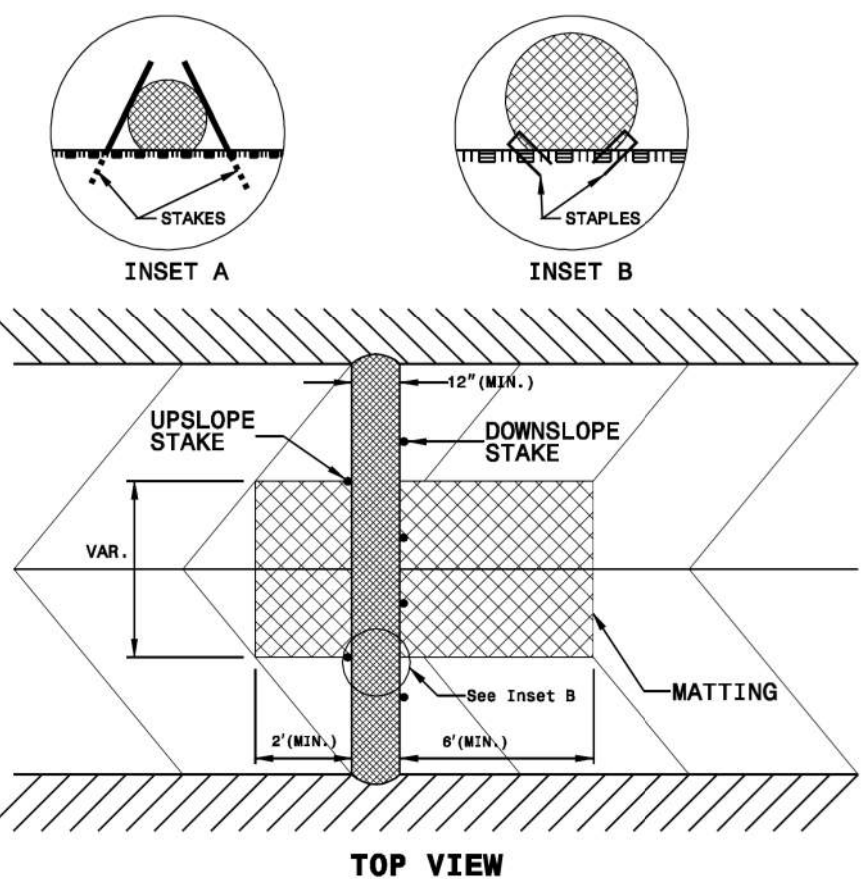
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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

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

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

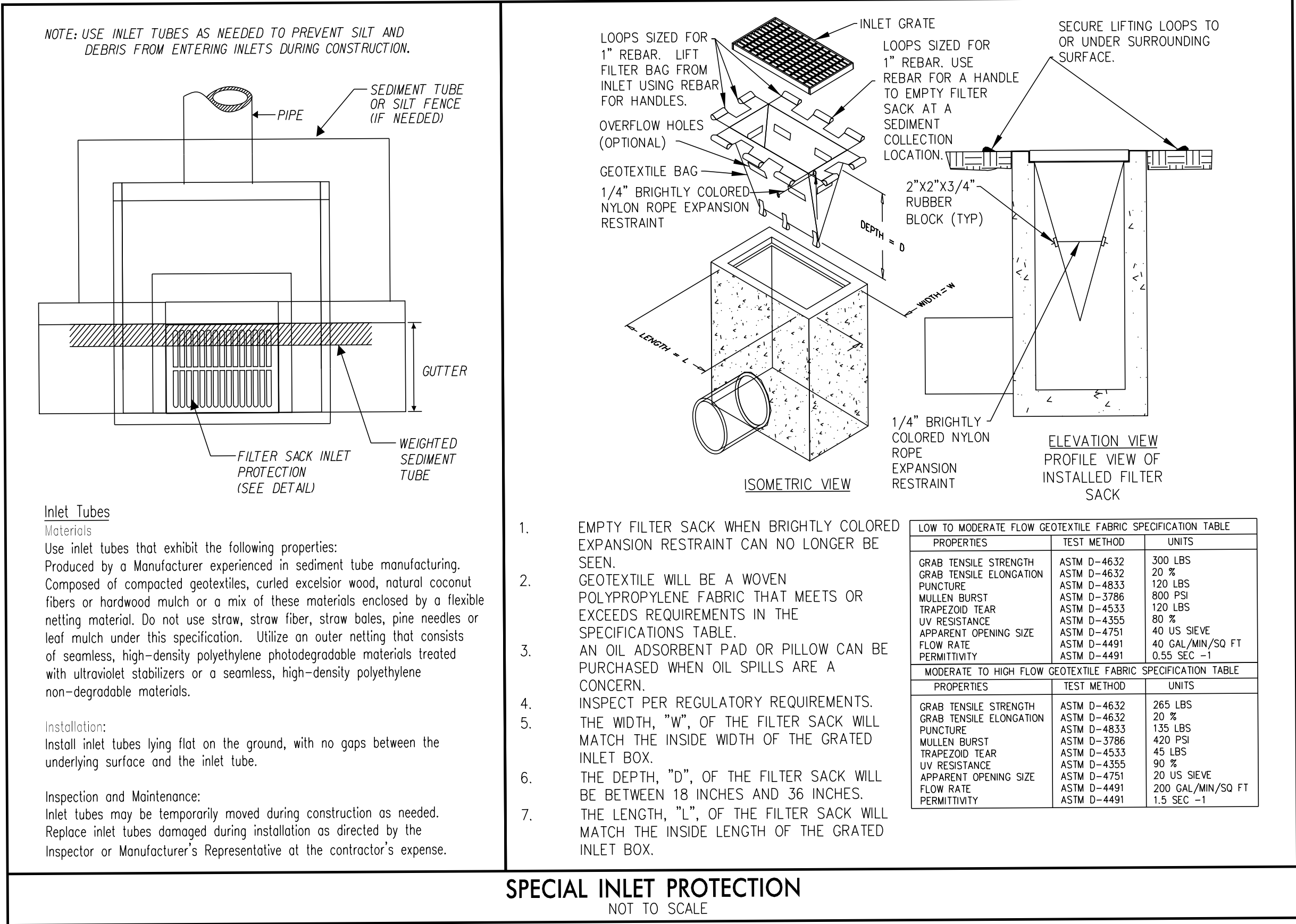
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE
STANDARD SPECIFICATIONS.



TOP VIEW

MAINTENANCE:

CONTRACTOR SHALL MAINTAIN THE WATTLES UNTIL THE PROJECT IS ACCEPTED OR UNTIL THE WATTLES ARE REMOVED. CONTRACTOR SHALL PLACE WATTLES AS SHOWN ON PLANS AND ADD AS NEEDED. CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT THE WATTLES TO MAINTAIN EFFECTIVENESS. USE ALL EXCAVATED MATERIALS IN THE CONSTRUCTION OF ROADWAY/GREENWAY EMBANKMENTS EXCEPT WHERE OTHERWISE DIRECTED. DISPOSE OF MATERIALS, WHICH ARE NOT USED IN THE CONSTRUCTION OF ROADWAY EMBANKMENTS IN WASTE AREAS.



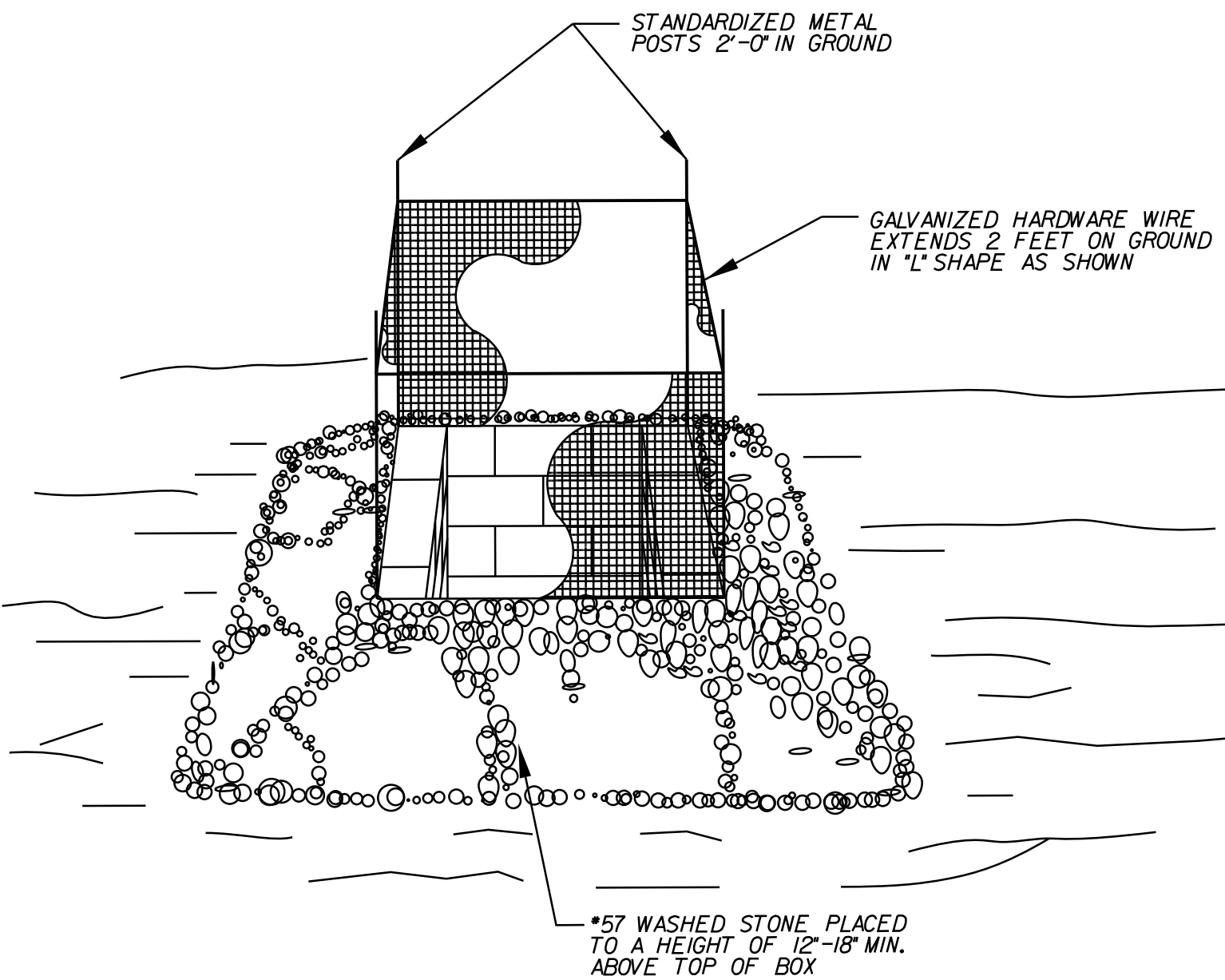
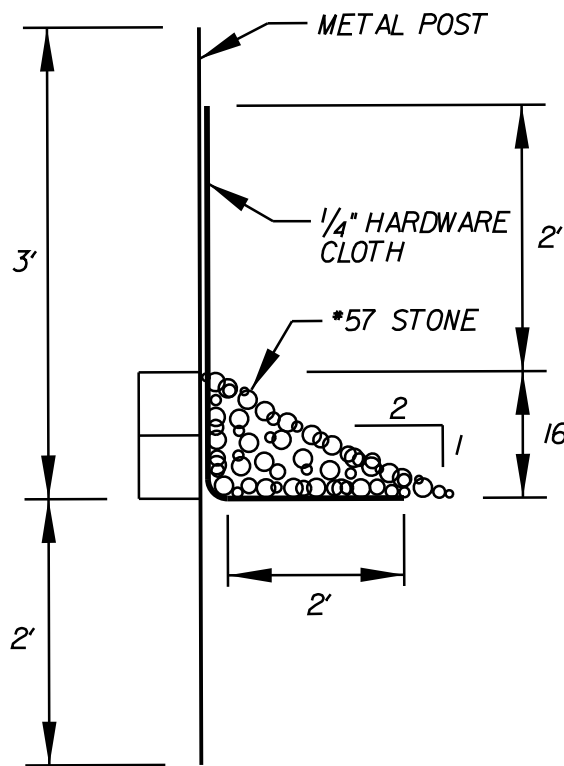
HARDWARE CLOTH AND GRAVEL INLET PROTECTION DETAIL (6.51)

CONSTRUCTION SPECIFICATIONS

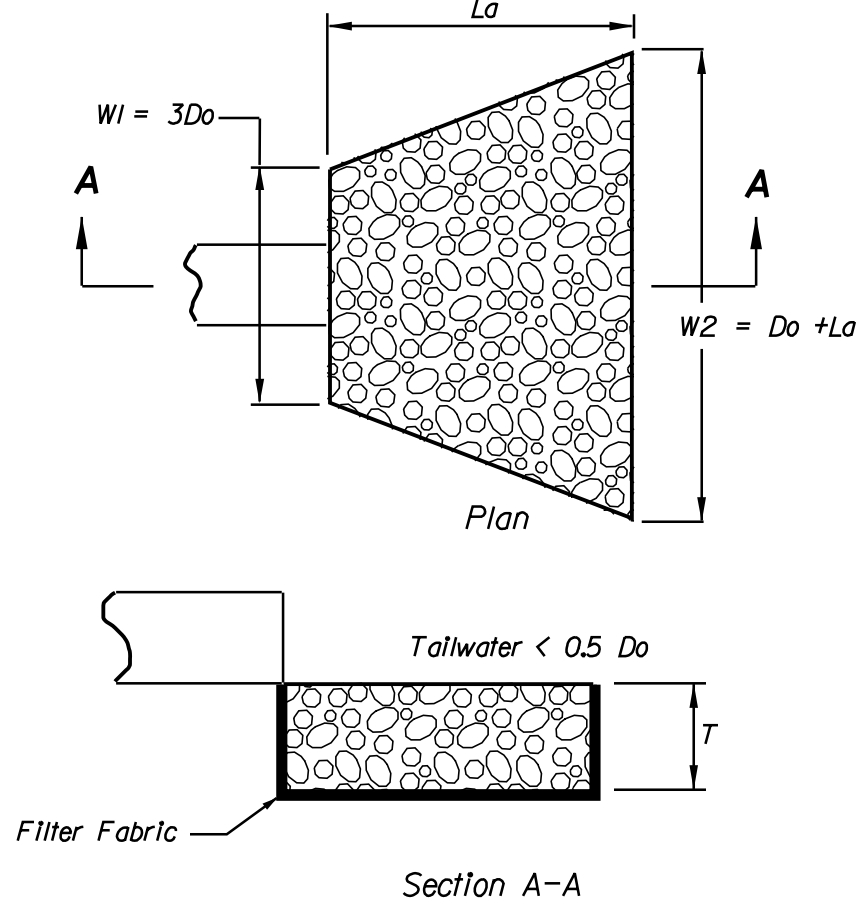
1. As synthetic fabric, use a previous sheet of nylon, polyester, or ethylene yarn - extra strength (50 lb/1 inch minimum) - that contains ultraviolet ray inhibitors and stabilizers. Fabric should be sufficiently porous to provide adequate drainage of the temporary sediment pool. Burlap may be used for short-term applications. It must be replaced every 60 days.
2. Cut fabric from a continuous roll to eliminate joints.
3. For stakes, use 5-foot steel posts.
4. Space stakes evenly around the perimeter of the inlet a maximum of 4 ft apart, and securely drive them into the ground, approximately 24 inches deep.
5. Place a 2 foot flap of wire mesh under the gravel for anchoring.
6. Fasten fabric securely to the stakes and frame. Joints must be overlapped to the next stake.
7. The top of the frame and fabric must be well below the ground elevation downslope from the drop inlet to keep runoff from bypassing the inlet. If it may be necessary to build a temporary dike on the down slope side of the structure to prevent bypass flow, material from within the sediment pool may be used for diking.
8. *57 washed stone shall be paid for at the contract unit price per ton "Sediment Control Stone."

MAINTENANCE

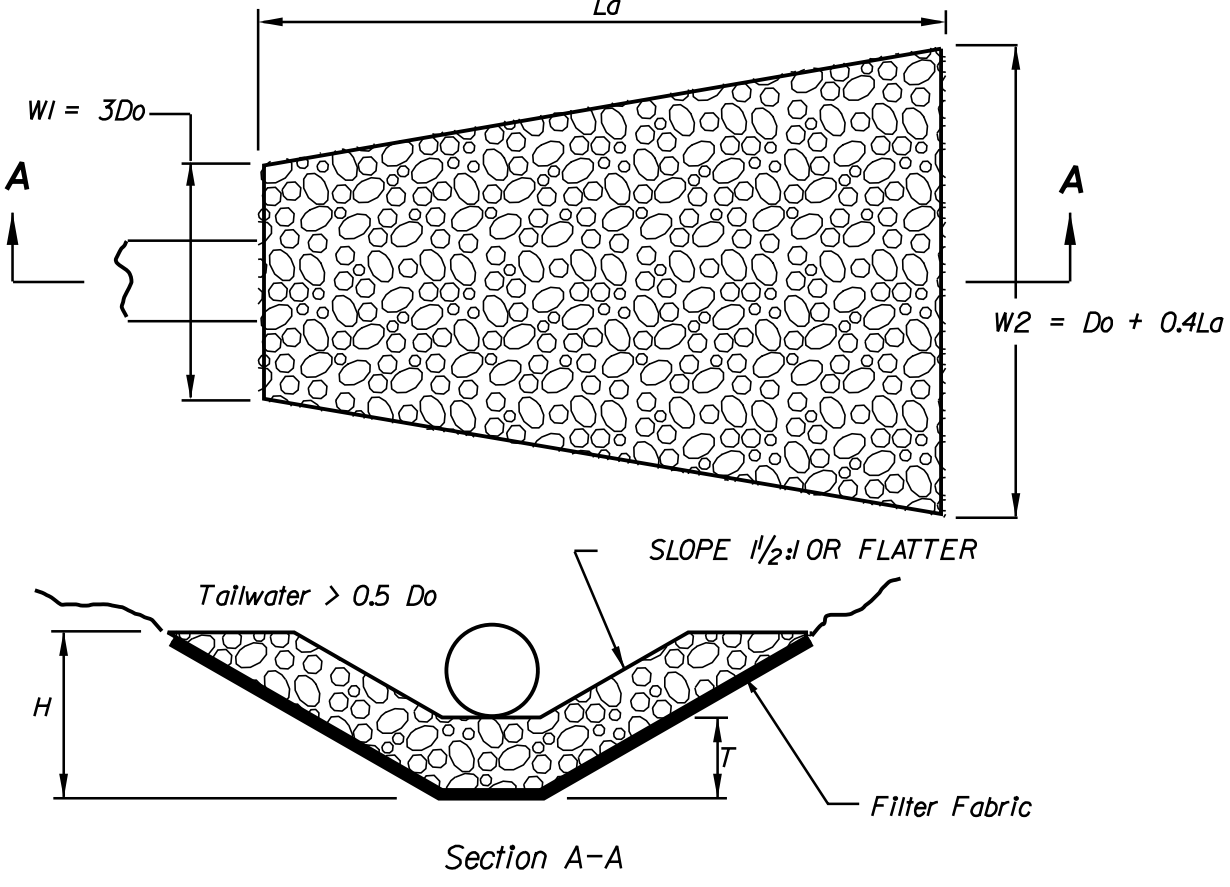
Inspect the fabric barrier after each rain and make repairs as needed.
Remove sediment from the pool area as necessary to provide adequate storage volume for the next rain. Take care not to damage or undercut the fabric during sediment removal.



OUTLET STABILIZATION STRUCTURE DETAIL
DETAIL A
DETAIL B



Pipe Outlet To Flat Area
With No Defined Channel



Pipe Outlet to Well-Defined Channel

CONSTRUCTION SPECIFICATIONS

1. Ensure that the subgrade for the filter and riprap follows the required lines and grades shown in the plan. Compact any fill required in the subgrade to the density of the surrounding undisturbed material. Low areas in the subgrade on undisturbed soil may also be filled by increasing the riprap thickness.
2. The riprap and gravel filter must conform to the specified grading limits shown on the plans.
3. Filter cloth, when used, must meet design requirements and be properly protected from punching or tearing during installation. Repair any damage by removing the riprap and placing another piece of filter cloth over the damaged area. All connecting joints should overlap a minimum of 1 foot. If damage is extensive, replace the entire filter cloth.
4. Riprap may be placed by equipment, but take care to avoid damaging the filter.
5. The minimum thickness of the riprap should be 1.5 times the maximum stone diameter.

6. Riprap may be field stone or rough quarry stone. It should be hard, angular, highly weather-resistant and well graded.
 7. Construct the apron on zero grade with no overfall at the end. Make the top of the riprap at the downstream end level with the receiving area or slightly below it.
 8. Ensure that the apron is properly aligned with the receiving stream and preferably straight throughout its length. If a curve is needed to fit site conditions, place it in the upper section of the apron.
 9. Immediately after construction, stabilize all disturbed areas with vegetation.
- MAINTENANCE**
Inspect riprap outlet structures after heavy rains to see if any erosion around or below the riprap has taken place or if stones have been dislodged. Immediately make all needed repairs to prevent further damage.

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none">Temporary grass seed covered with straw or other mulches and tackifiersHydroseedingRolled erosion control products with or without temporary grass seedAppropriately applied straw or other mulchPlastic sheeting	<ul style="list-style-type: none">Permanent grass seed covered with straw or other mulches and tackifiersGeotextile fabrics such as permanent soil reinforcement mattingHydroseedingShrubs or other permanent plantings covered with mulchUniform and evenly distributed ground cover sufficient to restrain erosionStructural methods such as concrete, asphalt or retaining wallsRolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated Stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

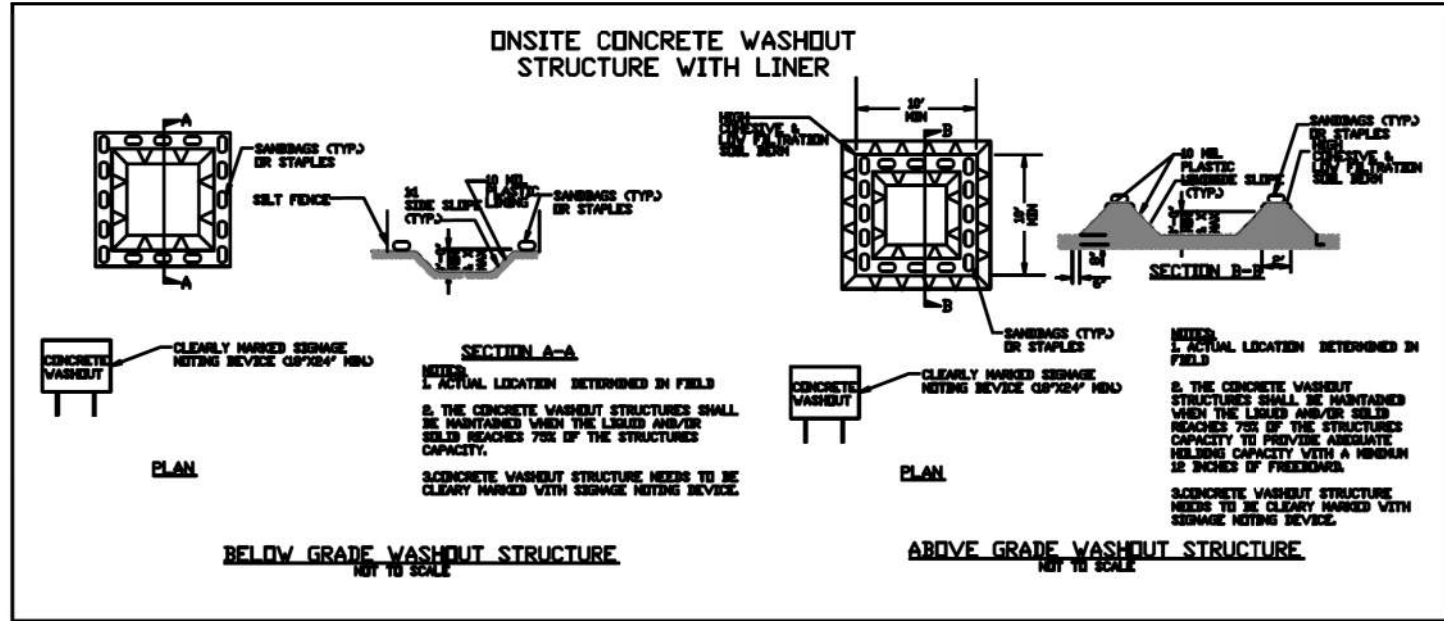
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



CONCRETE WASHOUTS

- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.

PART III

SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those un-attended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDCs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART II, SECTION G, ITEM (4)

DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a)

The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,

(b)

The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,

(c)

Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,

(d)

Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,

(e)

Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and

(f)

Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

PART III

SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a)

This General Permit as well as the Certificate of Coverage, after it is received.

(b)

Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III

SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a)

Visible sediment deposition in a stream or wetland.

(b)

Oil spills if:

- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c)

Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d)

Anticipated bypasses and unanticipated bypasses.

(e)

Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none">Within 24 hours, an oral or electronic notification.Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis.If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	<ul style="list-style-type: none">Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none">A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none">Within 24 hours, an oral or electronic notification.Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	<ul style="list-style-type: none">Within 24 hours, an oral or electronic notification.Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6).Division staff may waive the requirement for a written report on a case-by-case basis.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

LEGEND
(APPLIES TO ALL SHEETS)

LIMITS OF DISTURBANCE
(SHADED ON PLANS)

TEMPORARY SILT FENCE
(SEE DETAIL SHEET EC-2A)

TEMPORARY CONSTRUCTION
ENTRANCE (SEE DETAIL SHEET
EC-2A)

CONSTRUCTION LIMIT

OUTLET PROTECTION
(SEE DETAIL SHEET EC-2B)

WATTLE CHECK
(SEE DETAIL SHEET EC-2A)

STORM DRAIN INLET PROTECTION
(SEE DETAIL SHEETS EC-2B)

SPECIAL SEDIMENT CONTROL FENCE/
SILT FENCE OUTLET
(SEE DETAIL SHEET EC-2A)

EXISTING CONTOUR

Kimley » Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

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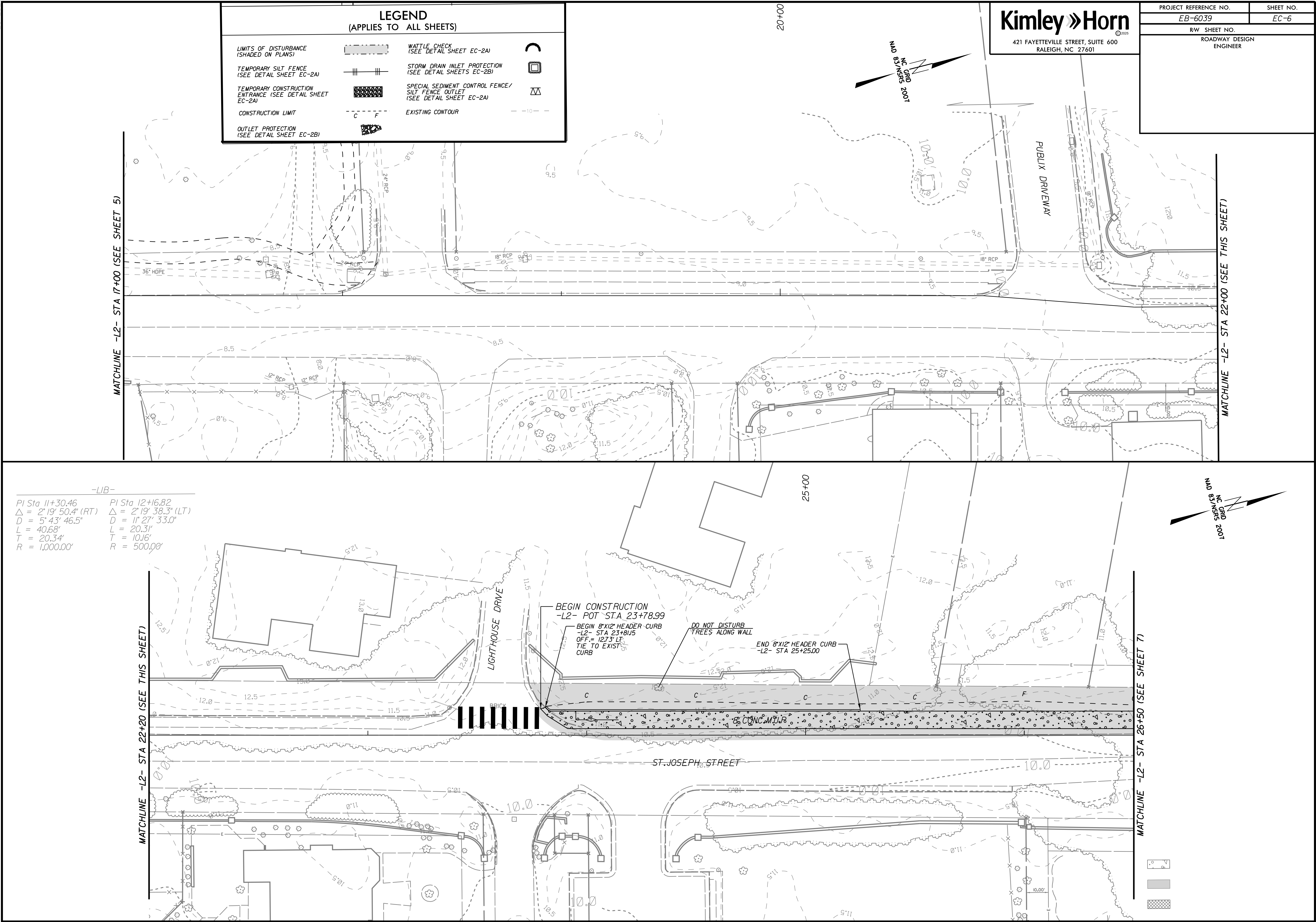
PLANS

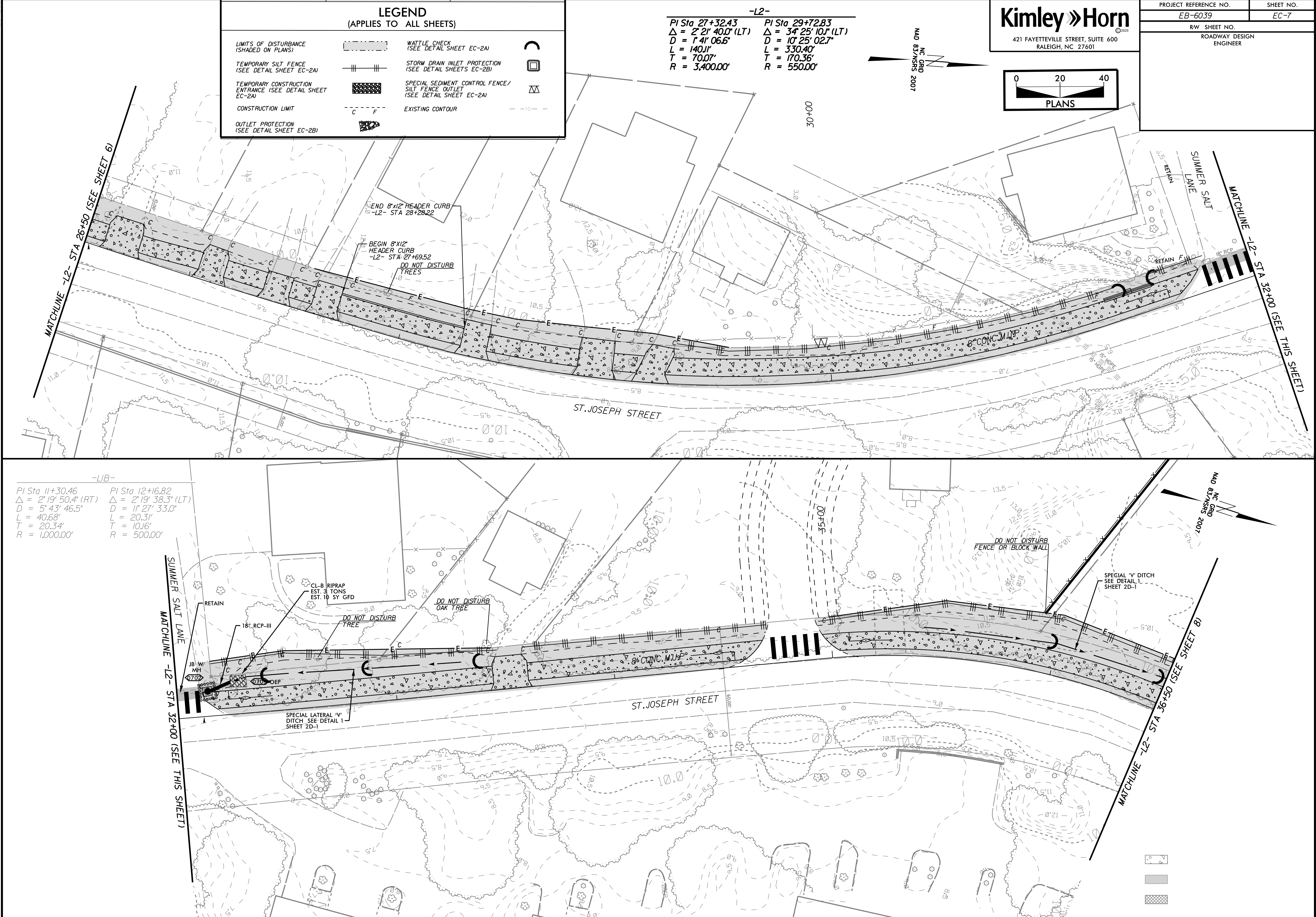
PROJECT REFERENCE NO.	SHEET NO.
EB-6039	EC-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	

Plan view of the roadway project. Key features include North Lake Park Drive, St. Joseph Street, and Inland Harbor Condo Driveway. Stationing ranges from STA 11+50.87 to STA 15+00. Elevation points are marked throughout. Engineering notes include: "SAWCUT PER DETAIL SHEET 2A-LAND REPLACE WITH DRIVEWAY APRONTYP", "RETAIN EXIST C&G", "DO NOT DISTURB GATE CONC. DRIVEWAY", "BEGIN 2'-6" C&G -LIA- STA 13+17.97 OFF. = 2.5' LT", "END 2'-6" C&G -LIB- STA 10+02.38", "BEGIN 2'-6" C&G -LIB- STA 10+27.13 OFF. = 13.25' RT", "END 2'-6" C&G -LIB- STA 11+02.26 OFF. = 12.72' RT TIE TO EXIST", "CONVERT DITO JB W/MH", "INLAND HARBOR CONDO DRIVEWAY", "ISLAND MARINA DRIVEWAY", "MATCHLINE -LI- STA 15+00 (SEE THIS SHEET)".

Profile view of the roadway project. Key features include the 8' M.U.P., 12' RCP, and 15' RCP. Stationing ranges from STA 11+30.46 to STA 15+50. Elevation points are marked throughout. Engineering notes include: "PI Sta 11+30.46 Δ = 2'19" 50.4" (RT) D = 5'43' 46.5" L = 40.68' T = 20.34' R = 1,000.00'", "PI Sta 12+16.82 Δ = 2'19" 38.3" (LT) D = 11'27' 33.0" L = 20.31' T = 10.16' R = 500.00'", "BEGIN 8'x12" HEADER CURB -L2- STA 3+61.58", "END 8'x12" HEADER CURB -L2- STA 4+02.00 SEE NOTE 2", "REPLACE 2'-6" C&G REMOVED FOR PIPE INSTALLATION", "REPLACE 12" RCP W/15" RCP-IV", "REMOVE 15" RCP", "REMOVE 12" RCP", "REMOVE EXISTING CURB", "REMOVE APPROX. 7. LF. OF EA. 15" RCP AT OUTLET (RETAIN REMAINING)", "SPECIAL 'V' DITCH SEE DETAIL 1 SHEET 2D-1", "CL-B RIPRAP EST. 5 S.Y. GFD", "8' ASPH. M.U.P.", "MATCHLINE -L2- STA 15+50 (SEE SHEET 5)", "MATCHLINE -LI- STA 15+00 (SEE THIS SHEET)".

9/25/2025

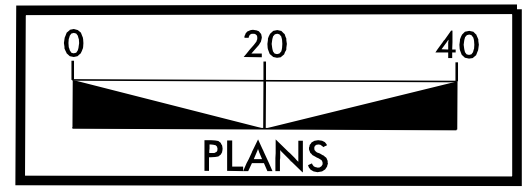




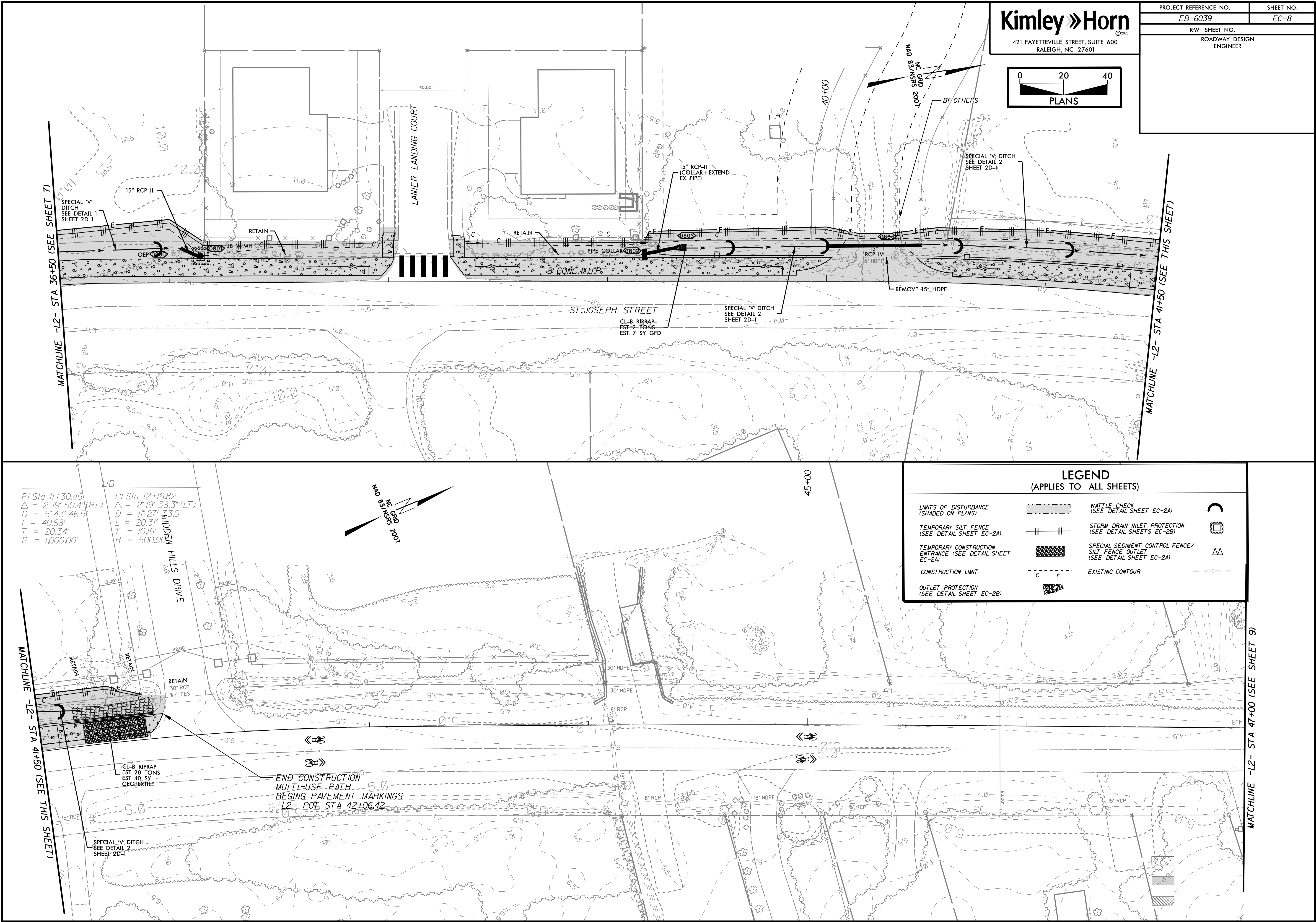
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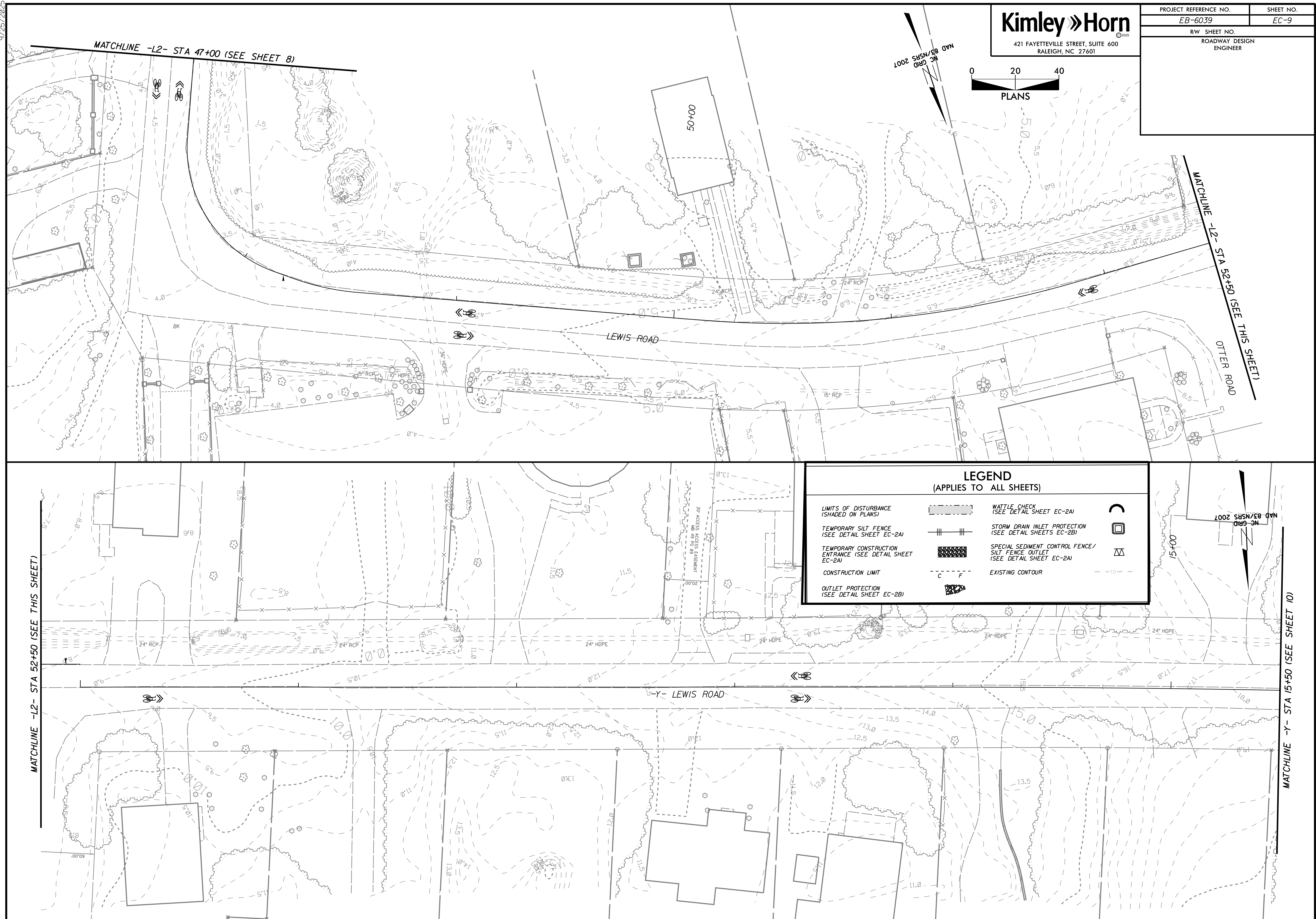
Kimley » Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601



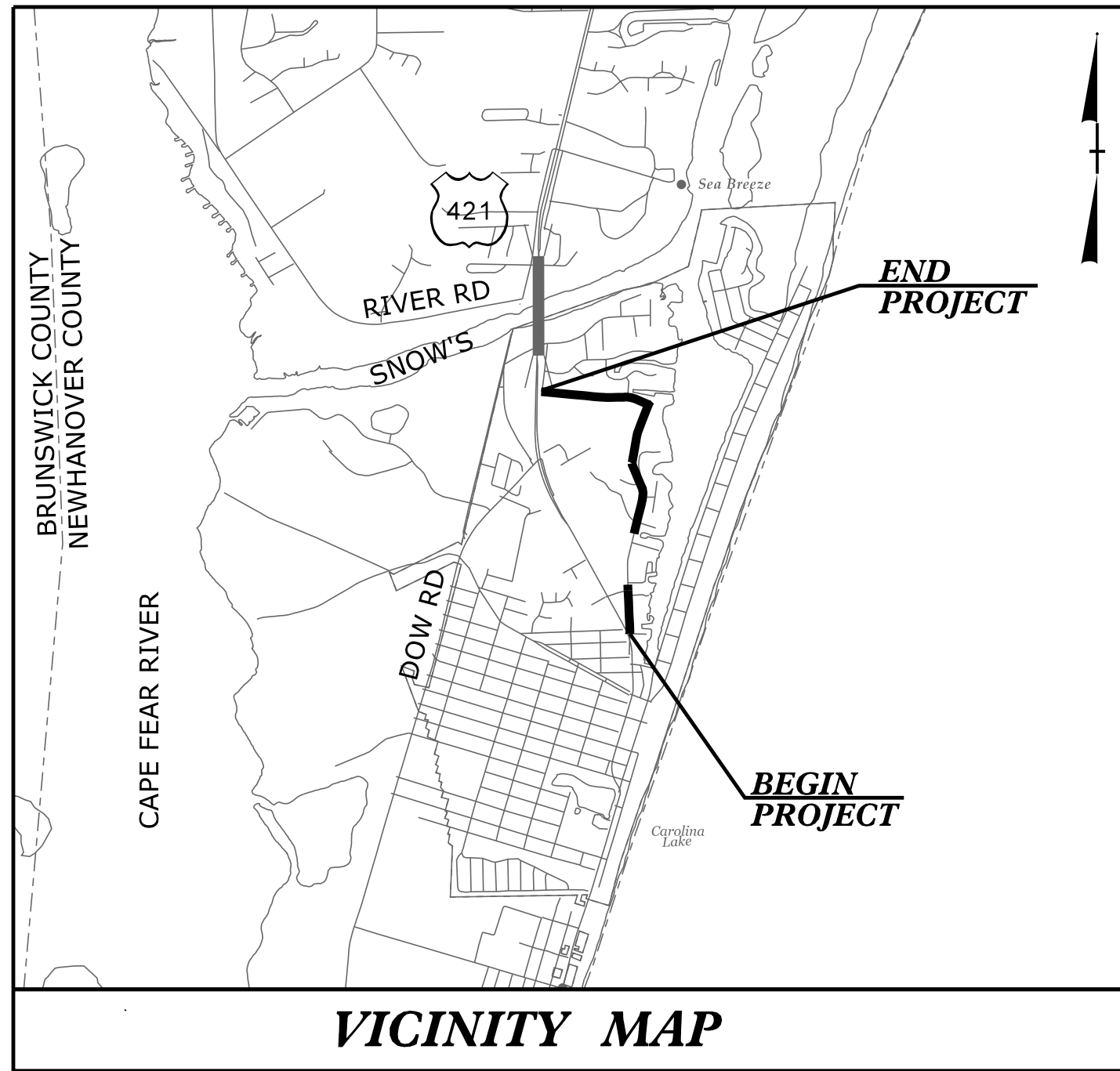
PROJECT REFERENCE NO.	SHEET NO.
EB-6039	EC-8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	





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TIP PROJECT: EB-6039

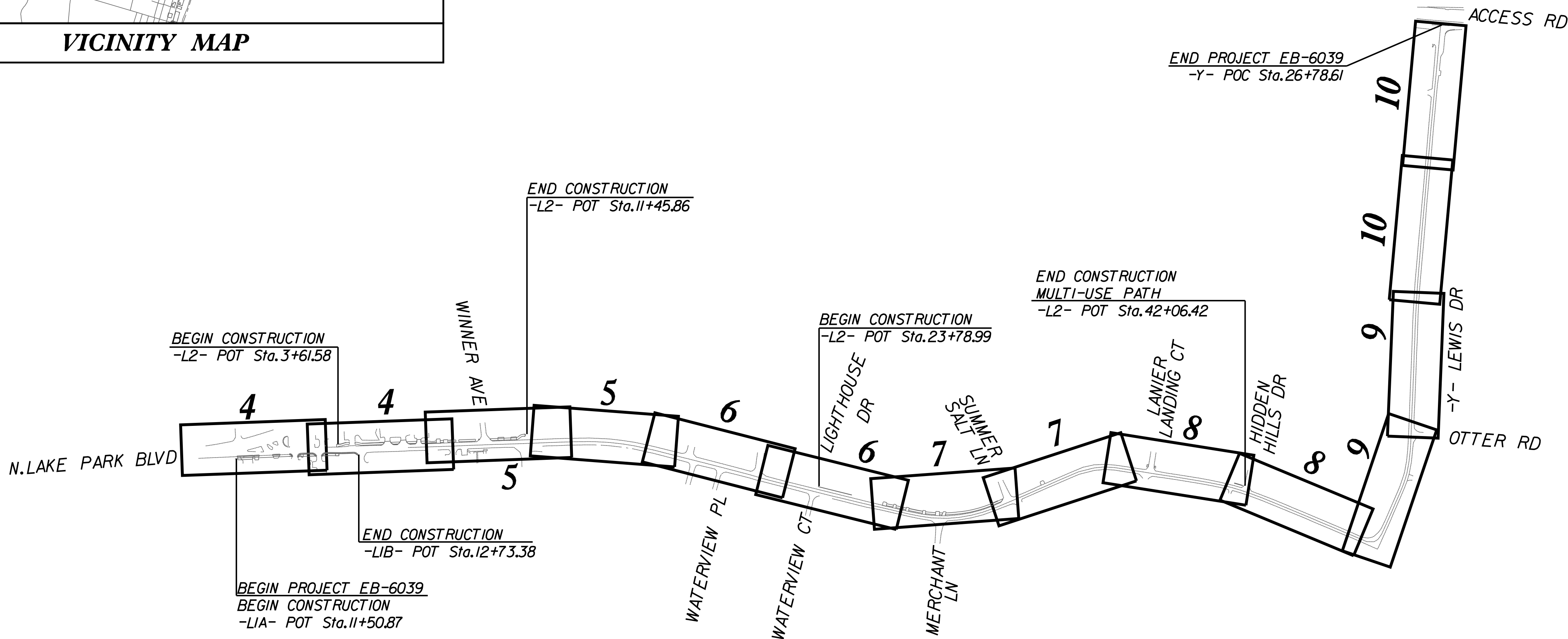


VICINITY MAP

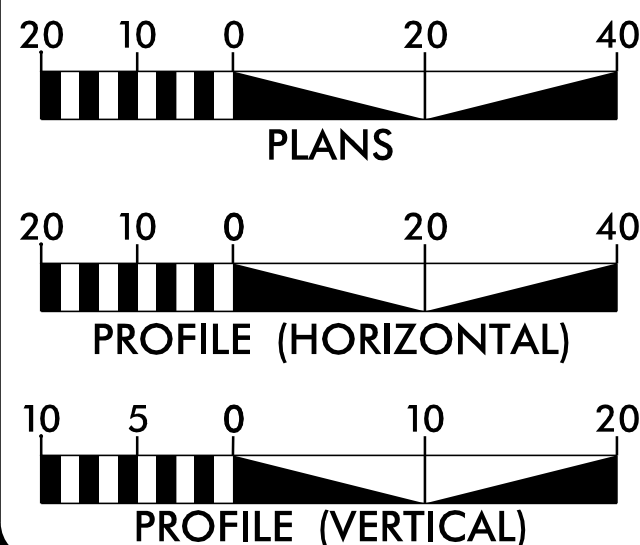
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
UTILITIES BY OTHERS PLANS
NEW HANOVER COUNTY

LOCATION: ST. JOSEPH STREET FROM N. LAKE PARK BOULEVARD (US 421)
TO THE INTERSECTION OF LEWIS DR. AND ACCESS RD

TYPE OF WORK: COMMUNICATIONS RELOCATIONS BY OTHERS



GRAPHIC SCALE



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-6	UTILITIES BY OTHERS PLAN SHEETS

UTILITY OWNERS WITH CONFLICTS

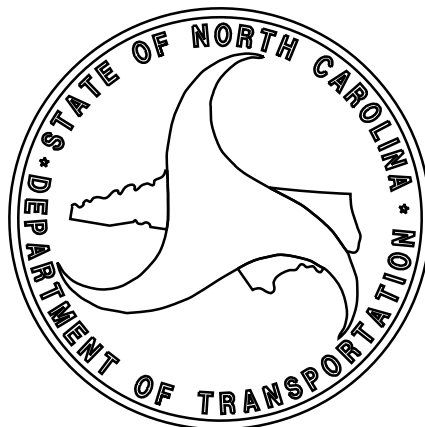
- (A) POWER - DUKE ENERGY
(B) COMM - AT&T
(C) COMM - CHARTER

PREPARED IN THE OFFICE OF:

Kimley » Horn

NC LICENSE #F-41102
421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NORTH CAROLINA 27601
PHONE: (919) 977-2000

EVAN G. PARROTT, PE CONSULTANT CONTACT #1
JESSE G. PARKER, EI CONSULTANT CONTACT #2



NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.

T.I.P. NO.	SHEET NO.
EB-6039	UO-1

PROJECT REFERENCE NO.	SHEET NO.
EB-6039	UO-4

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.

UTILITIES BY OTHERS

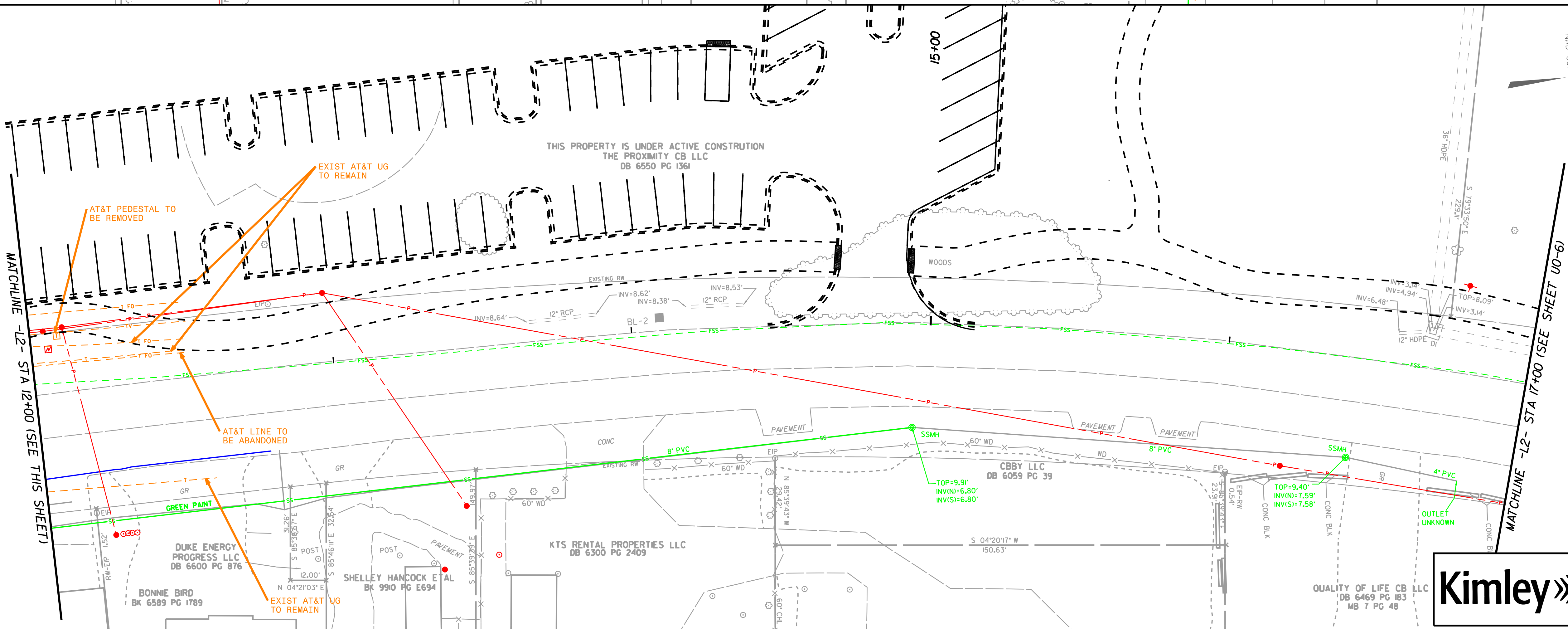
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EB-6039	UO-5

UTILITIES BY OTHERS

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PLANS



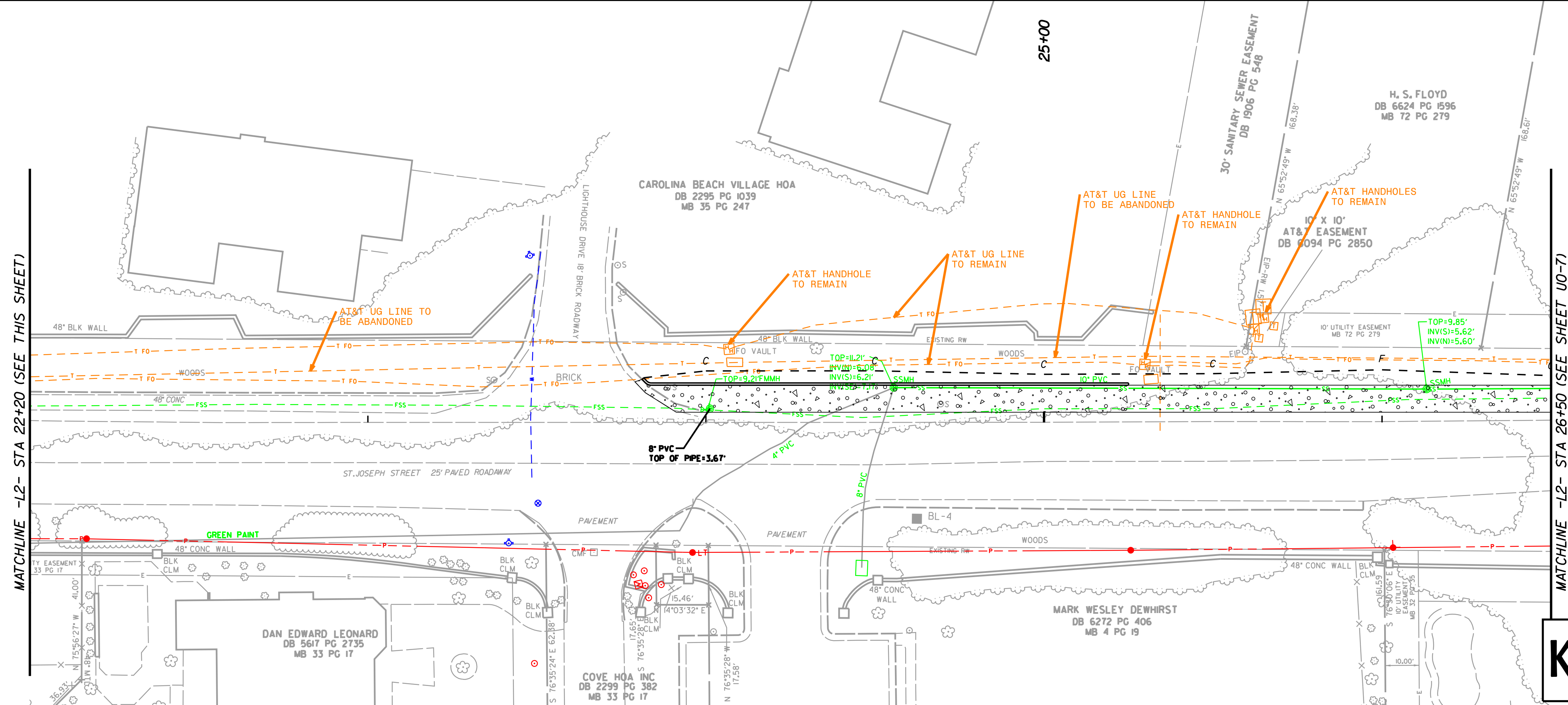
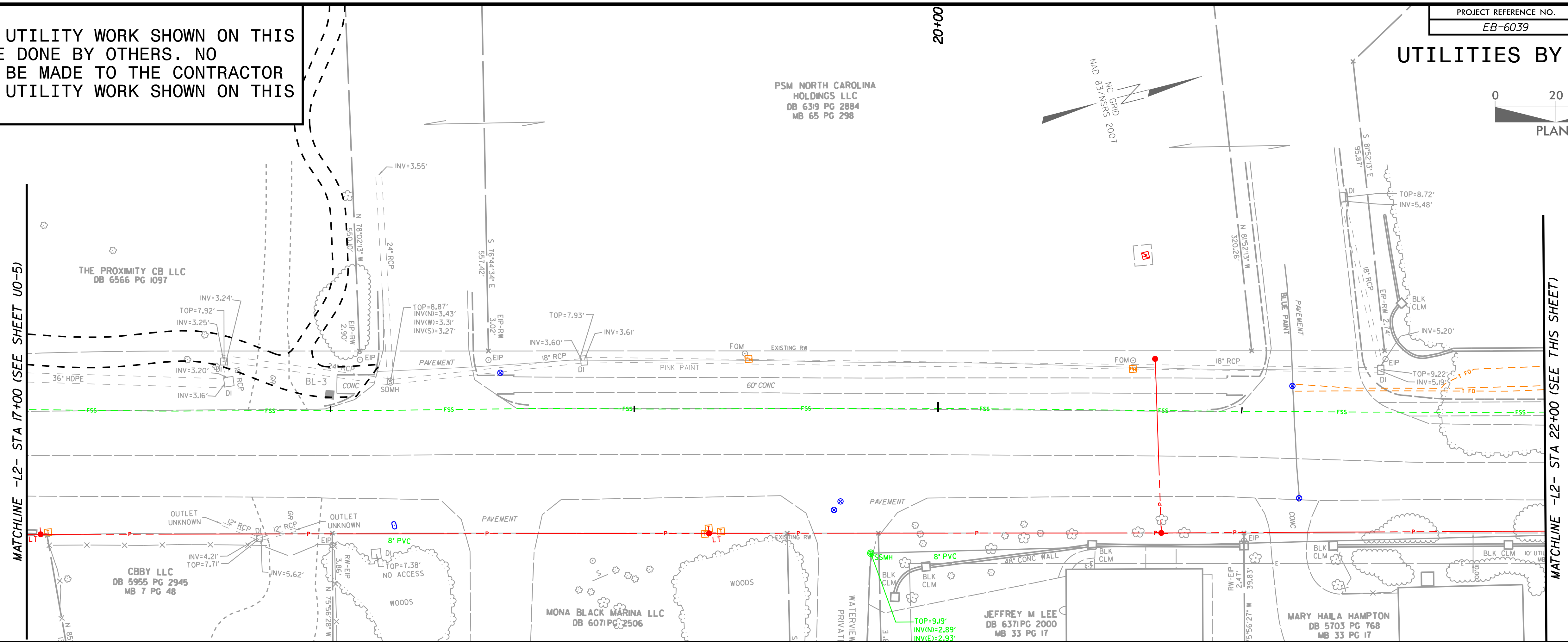
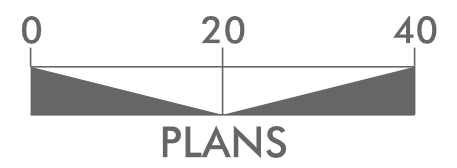
Kimley»»Horn

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NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS
SHEET WILL BE DONE BY OTHERS. NO
PAYMENT WILL BE MADE TO THE CONTRACTOR
FOR PROPOSED UTILITY WORK SHOWN ON THIS
SHEET.

PROJECT REFERENCE NO.	SHEET NO.
EB-6039	UO-6

UTILITIES BY OTHERS



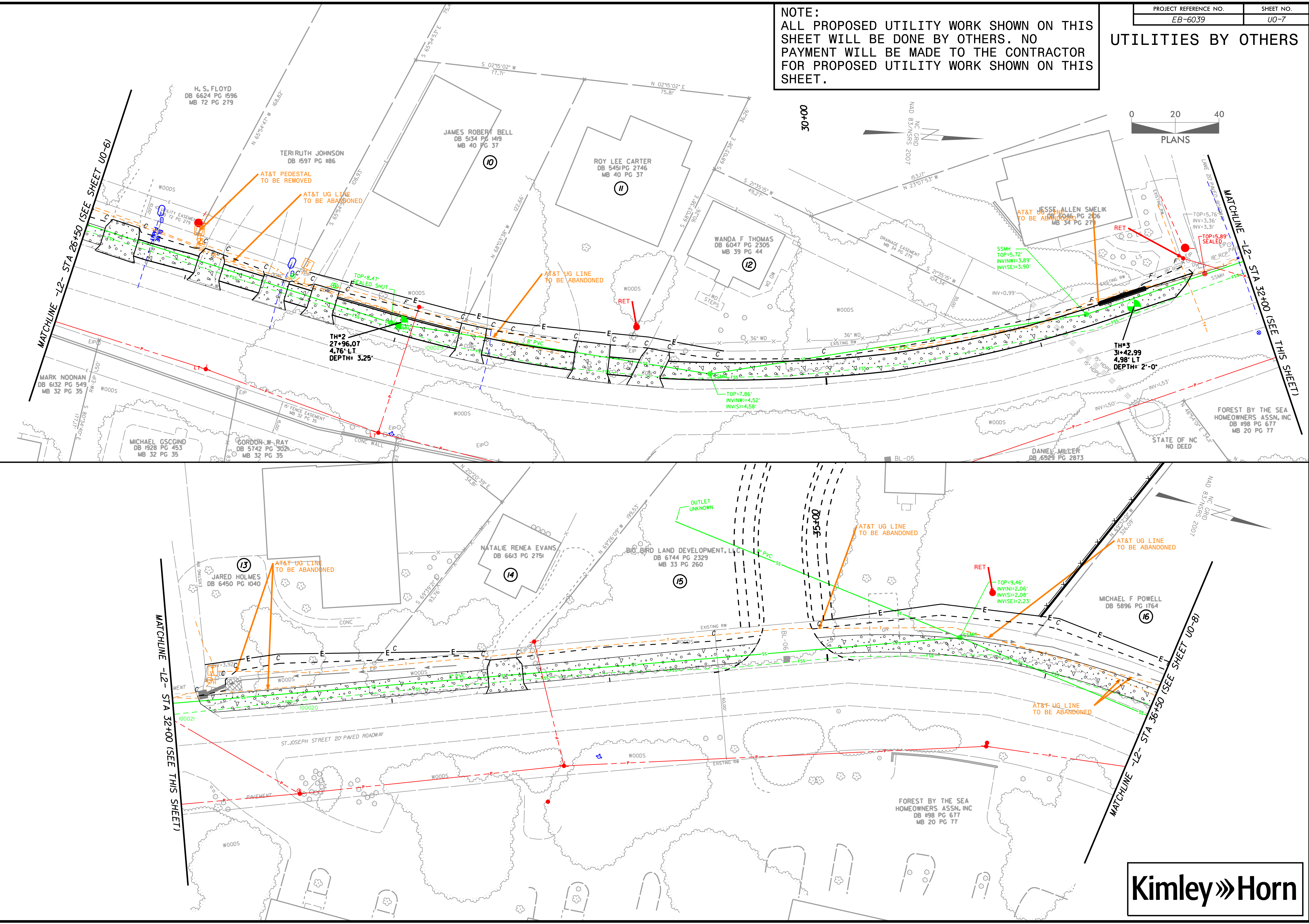
Kimley»»Horn

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NOTE:
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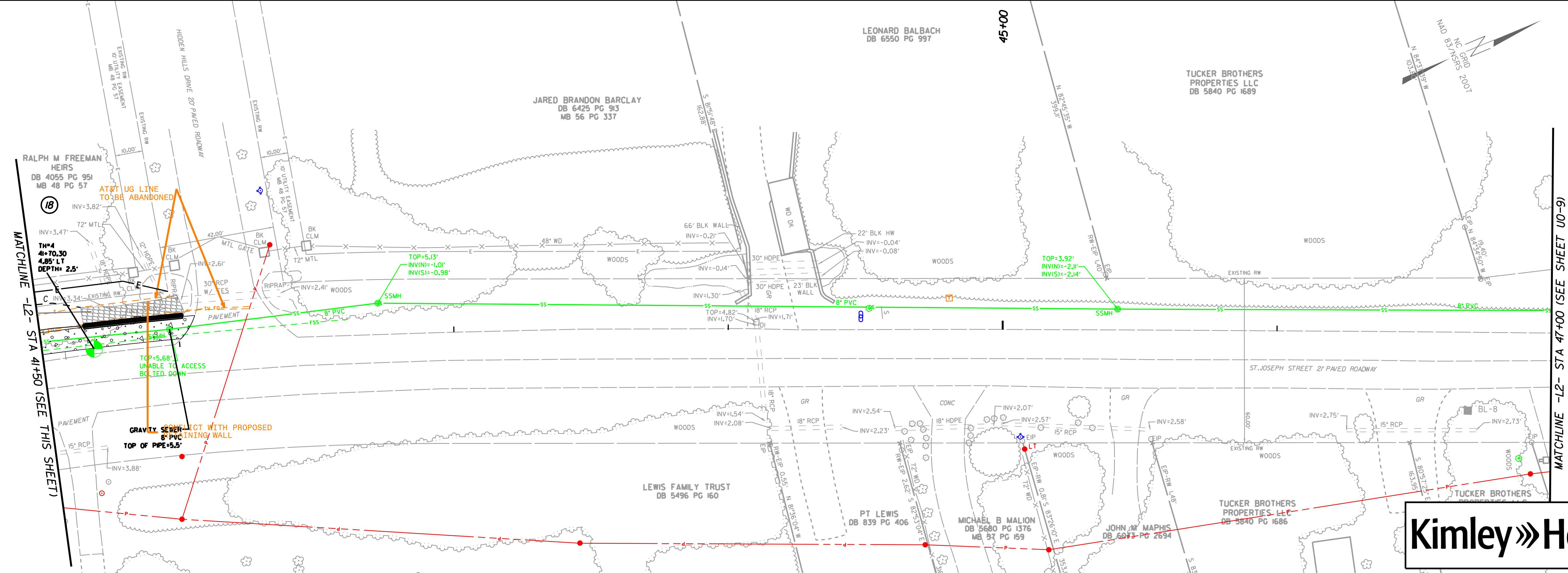
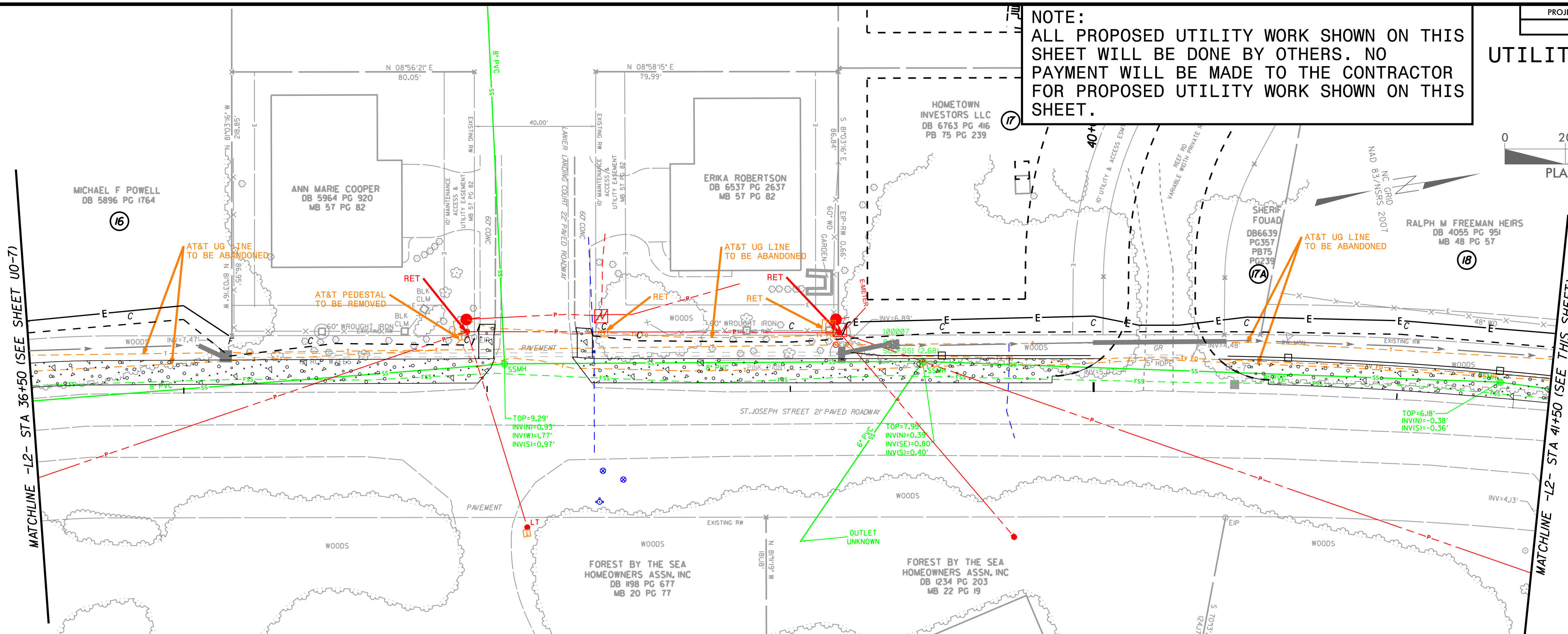
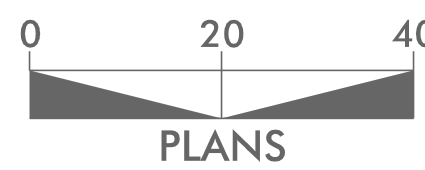
PROJECT REFERENCE NO.	SHEET NO.
EB-6039	U0-7
UTILITIES BY OTHERS	



Kimley»Horn

UTILITIES BY OTHERS

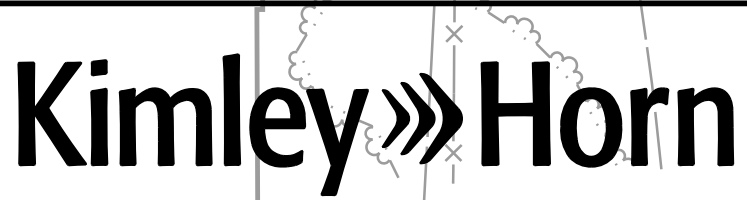
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ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



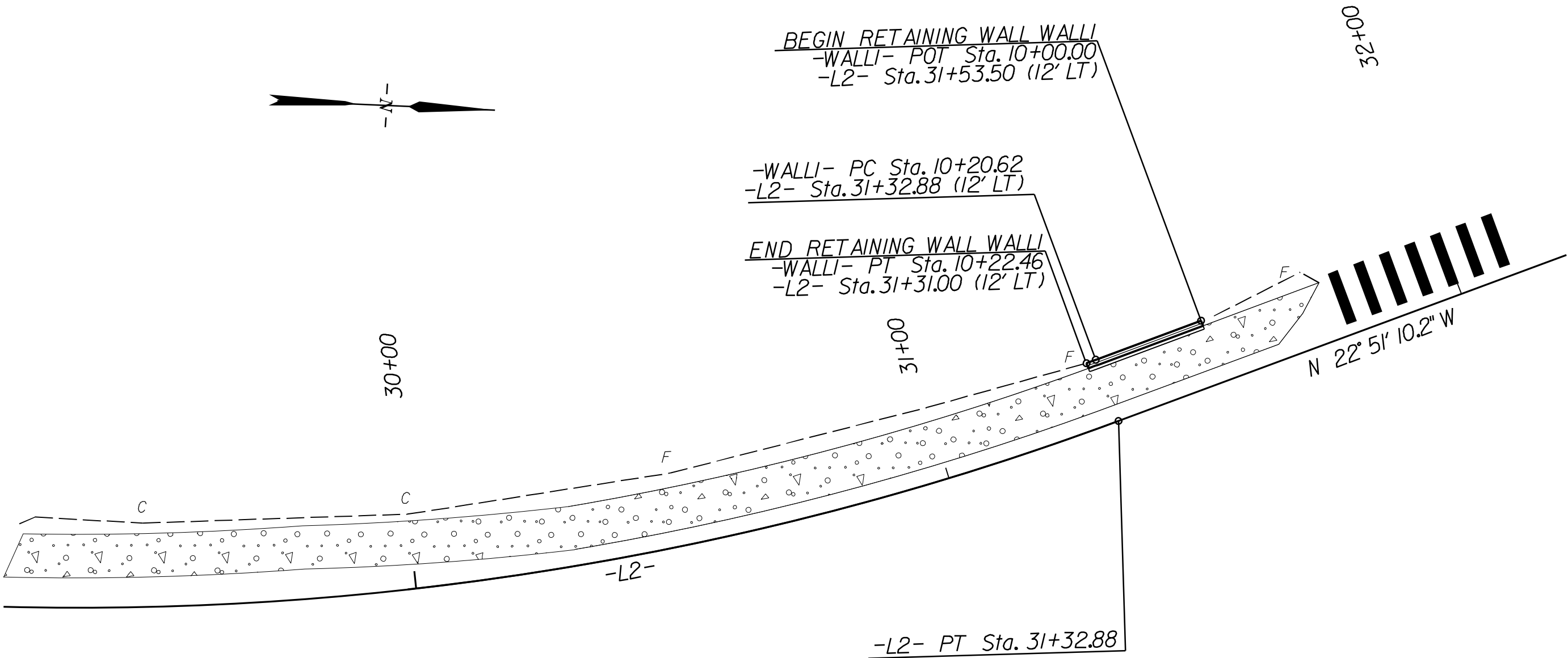
Kimley»Horn

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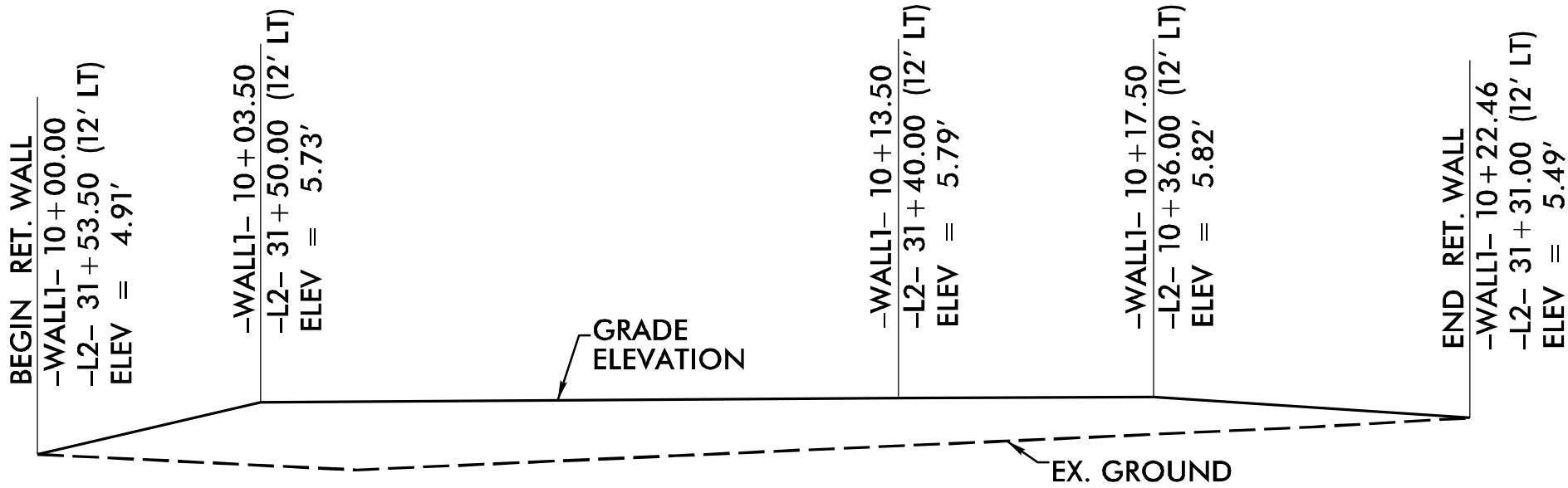
PROJECT REFERENCE NO.	SHEET NO.
EB-6039	UO-10



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RETAINING WALL WALL1 PLAN
NOT TO SCALE



RETAINING WALL WALL1 ENVELOPE
DIMENSIONS OF WALL TAKEN ALONG FRONT FACE OF MSE WALL
NOT TO SCALE

GEOTECHNICAL
ENGINEER

DocuSigned by:
Stephen Crockett
9/23/2025

ENGINEER

SIGNATURE
DATE

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

ESTIMATED CIP GRAVITY WALL
WALL QUANTITIES

RETAINING WALL NO.	CIP GRAVITY RETAINING WALLS (SQUARE FEET)
WALL1	35

NOTE: WALL QUANTITY INCLUDES WALL EMBEDMENT.

PROJECT NO.: EB-6039
NEW HANOVER COUNTY
STATION: -L2- 31+31.00 to 31+53.50
SHEET 1 OF 3 WALL ID WALL1

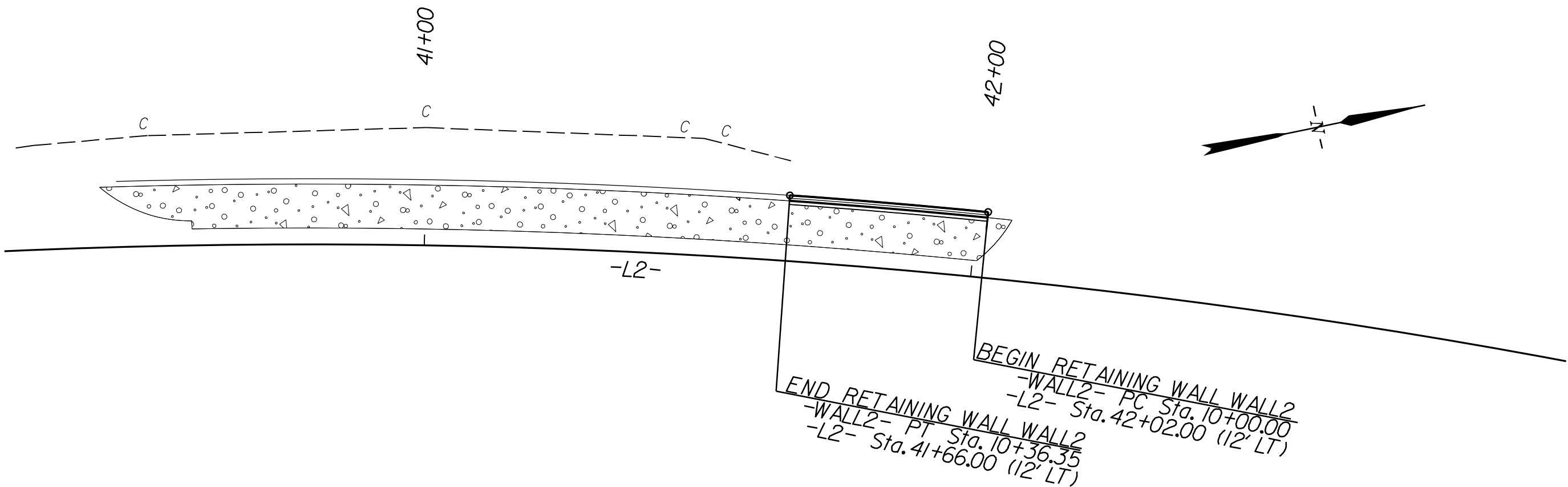
PREPARED BY: S. CROCKETT	DATE: 05/25
REVIEWED BY: J. HAMM	DATE: 05/25

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GEOTECHNICAL
ENGINEERING UNIT

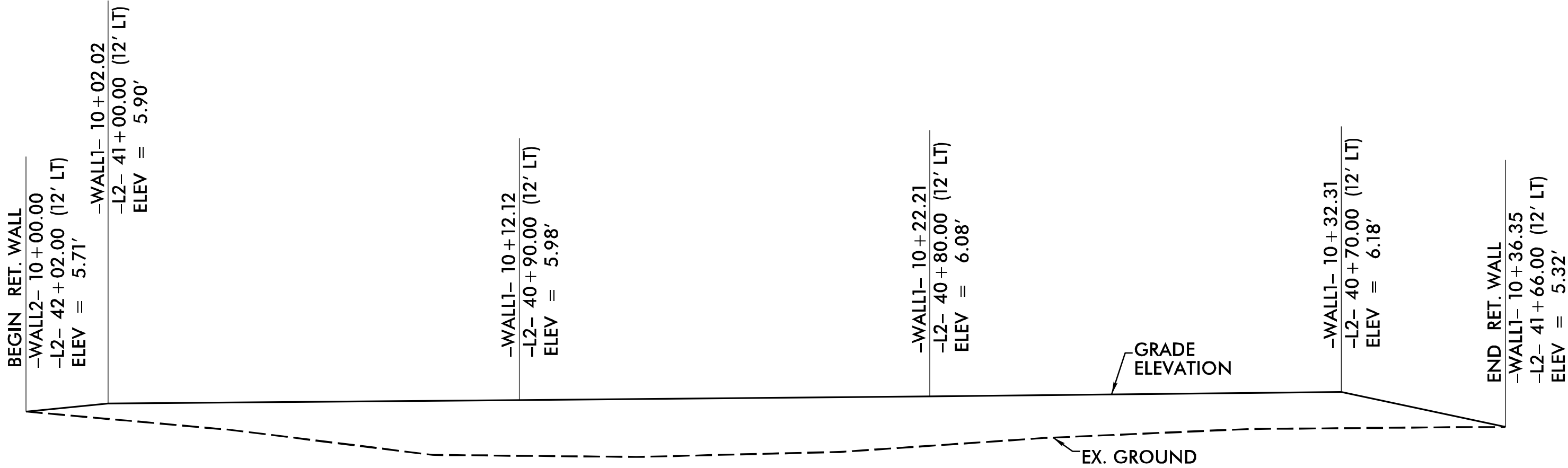
RETANINING WALL WALL1
WALL PLAN AND ENVELOPE

REVISIONS						SHEET NO. W1
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			



RETAINING WALL WALL2 PLAN

NOT TO SCALE



RETAINING WALL WALL2 ENVELOPE

DIMENSIONS OF WALL TAKEN ALONG FRONT FACE OF MSE WALL

NOT TO SCALE

GEOTECHNICAL
ENGINEER

SEAL

048207

ENGINEER

STEPHEN C. CROCKETT

DocuSigned by:
Stephen C. Crockett

9/23/2025

CROCKETT
SIGNATURE

DATE

ENGINEER

SIGNATURE

DATE

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

ESTIMATED CIP GRAVITY WALL WALL QUANTITIES	
RETAINING WALL NO.	CIP GRAVITY RETAINING WALLS (SQUARE FEET)
WALL2	65

NOTE: WALL QUANTITY INCLUDES WALL EMBEDMENT.

PREPARED BY: S. CROCKETT	DATE: 05/25
REVIEWED BY: J. HAMM	DATE: 05/25

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GEOTECHNICAL
ENGINEERING UNIT

PROJECT NO.: EB-6039

NEW HANOVER COUNTY

STATION: -L2- 41+66.00 to 42+02.00

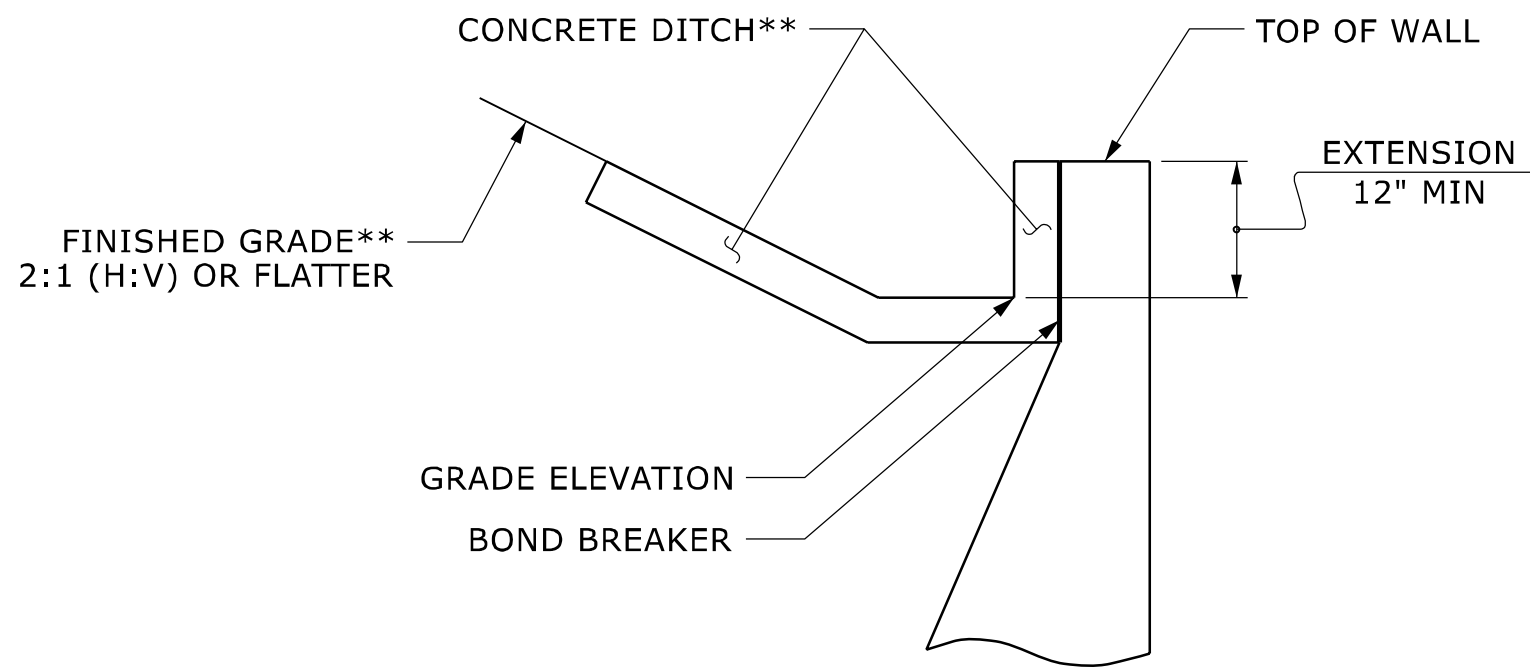
SHEET 2 OF 3 WALL ID WALL2

RETANINING WALL WALL2
WALL PLAN AND ENVELOPE

REVISIONS

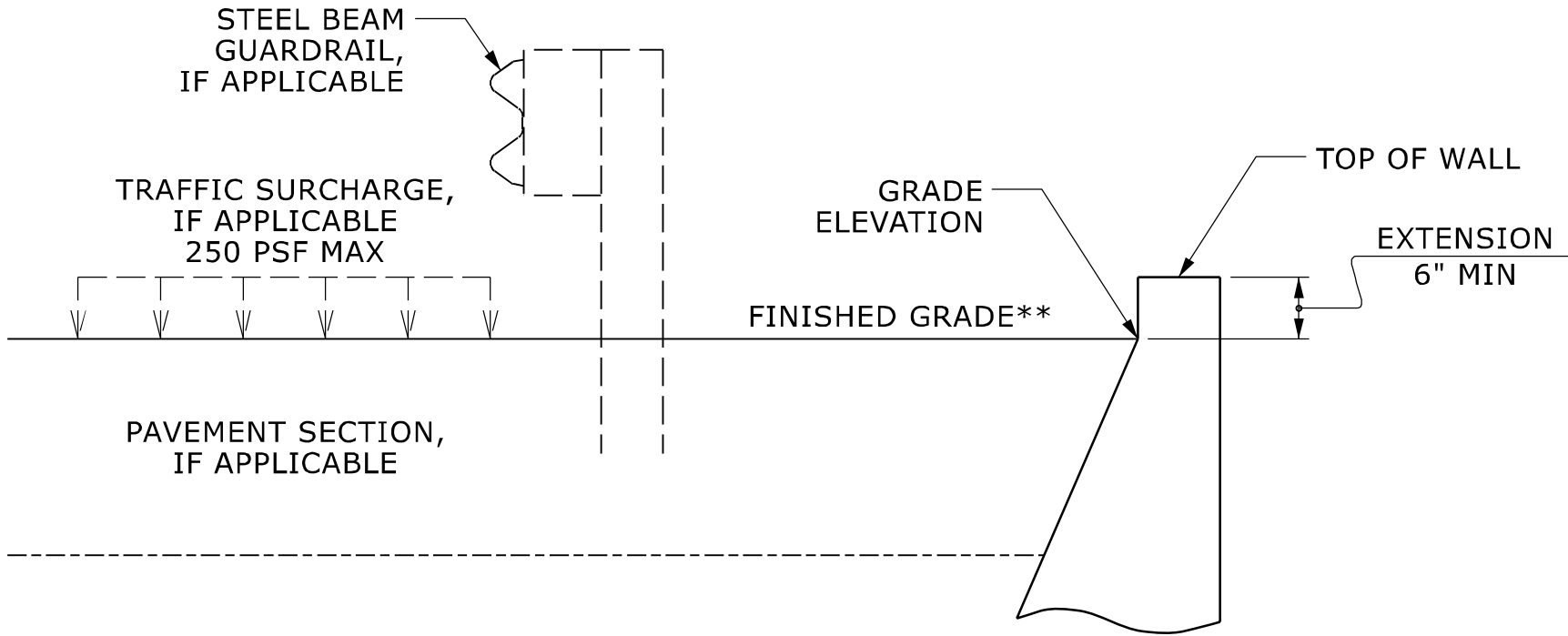
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

SHEET
NO.
W2



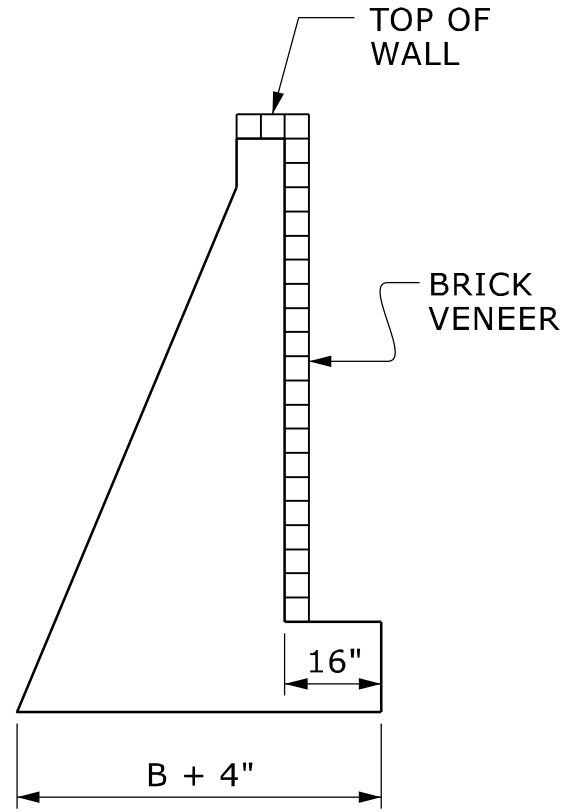
SLOPE CASE

**SEE ROADWAY PLANS FOR CONCRETE DITCH AND FINISHED GRADE DETAILS.




NO SLOPE CASE

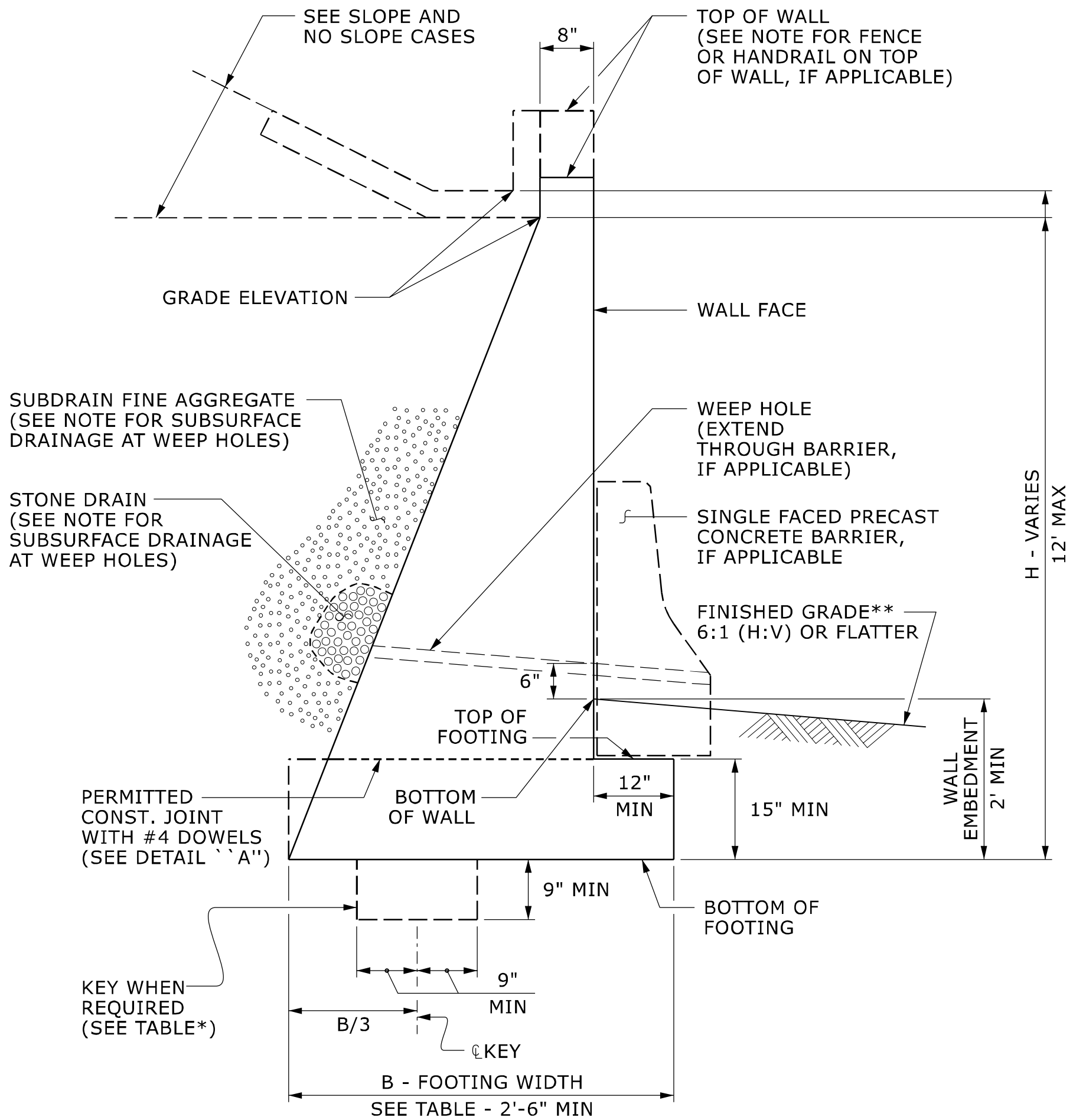
**SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.



BRICK VENEER DETAIL

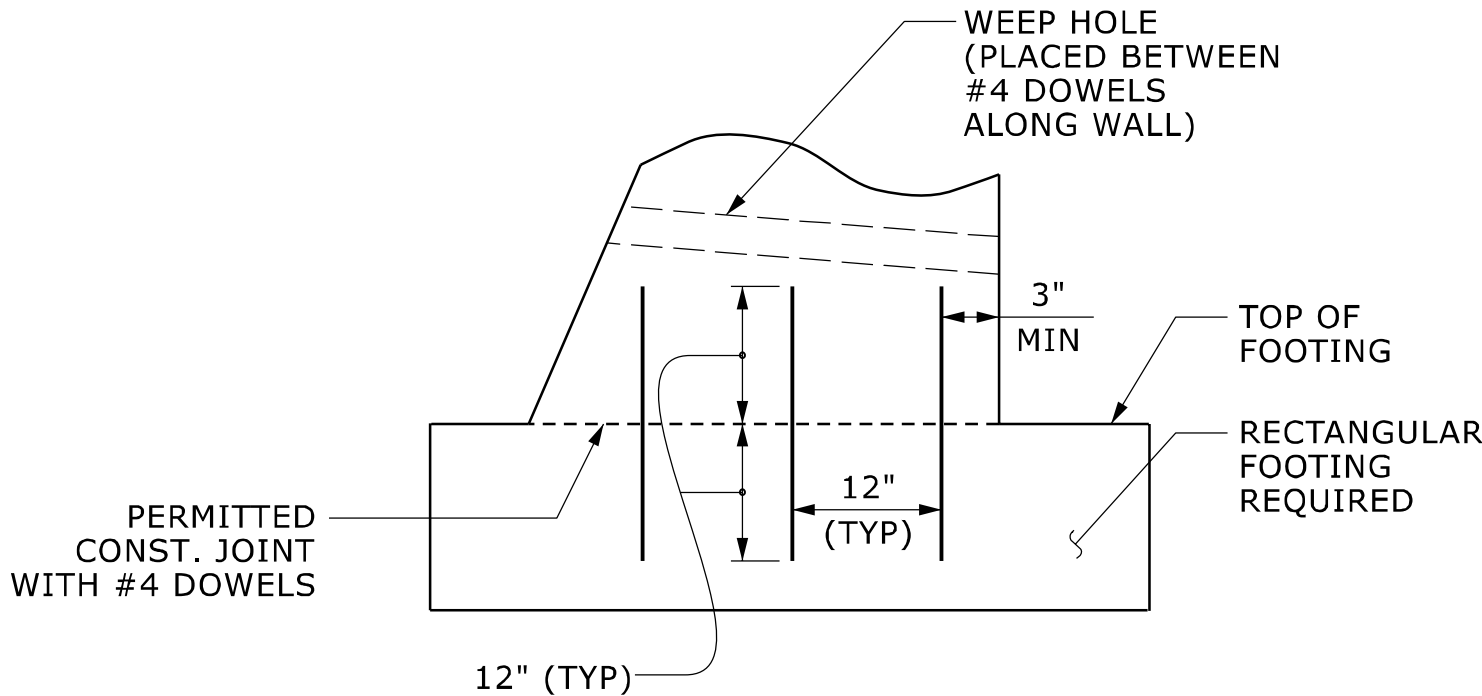
(WHEN APPLICABLE)

<div>GEOTECHNICAL ENGINEER</div> <div></div> <div>DocuSigned by: <i>Stephen Crockett</i> CS/CAS/EP/BS/MS SIGNATURE</div>	<div>ENGINEER</div> <div></div> <div>SIGNATURE</div> <div>DATE</div>
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



STANDARD CIP GRAVITY WALL

**SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.



DETAIL "A"

H (FT)	3 - < 6	6 - 9	> 9 - 12
SLOPE CASE	.66	.70*	.75*
NO SLOPE CASE WITH TRAFFIC SURCHARGE	.80	.75*	.70*
NO SLOPE CASE WITHOUT TRAFFIC SURCHARGE	.60	.60	.60

B/H RATIO (B = 2'-6" MIN)

*KEY IS REQUIRED FOR "SLOPE CASE" OR "NO SLOPE CASE WITH TRAFFIC SURCHARGE" WHEN H IS 6' OR GREATER.

NOTES:

FOR STANDARD CIP GRAVITY RETAINING WALLS, SEE SECTION 453 OF THE STANDARD SPECIFICATIONS.

FOR STEEL BEAM GUARDRAIL, SEE ROADWAY PLANS AND SECTION 862 OF THE STANDARD SPECIFICATIONS.

FOR SINGLE FACED PRECAST CONCRETE BARRIER, SEE ROADWAY PLANS AND SECTION 857 OF THE STANDARD SPECIFICATIONS.

FOR FENCES OR HANDRAILS ON TOP OF WALLS, SEE ROADWAY PLANS FOR FENCE OR HANDRAIL ATTACHMENT DETAILS.

FOR SUBSURFACE DRAINAGE AT WEEP HOLES, SEE ARTICLE 414-8 OF THE STANDARD SPECIFICATIONS.

STANDARD CIP GRAVITY WALLS ARE BASED ON THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
UNIT WEIGHT, γ = 120 PCF
FRICTION ANGLE, ϕ = 35 DEGREES (GROUNDWATER WITHIN 7' OF BOTTOM OF FOOTING)
FRICTION ANGLE, ϕ = 30 DEGREES (GROUNDWATER MORE THAN 7' BELOW BOTTOM OF FOOTING)
COHESION, c = 0 PSF

DO NOT USE STANDARD CIP GRAVITY WALLS IF ASSUMED SOIL PARAMETERS ARE NOT APPLICABLE OR GROUNDWATER IS ABOVE BOTTOM OF FOOTING.

DO NOT USE STANDARD CIP GRAVITY WALLS WHEN VERY LOOSE OR SOFT SOIL OR MUCK IS BELOW WALLS.

BEFORE BEGINNING STANDARD CIP GRAVITY WALL CONSTRUCTION, SURVEY WALL LOCATIONS AND SUBMIT WALL PROFILE VIEWS (WALL ENVELOPES) FOR REVIEW. FOR WALL ENVELOPES, INCLUDE BOTTOM OF WALL, EXISTING GROUND AND GRADE ELEVATIONS AND OTHER ELEVATIONS AS NEEDED AT INTERVALS OF 25' OR LESS ALONG WALLS. DO NOT START WALL CONSTRUCTION UNTIL WALL ENVELOPES ARE ACCEPTED.

FOR BRICK VENEERS, SUBMIT BRICK SAMPLES FOR APPROVAL BEFORE BEGINNING STANDARD CIP GRAVITY WALL CONSTRUCTION.

DO NOT PLACE CONCRETE FOR FOOTINGS UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.

WHEN CONSTRUCTING STANDARD CIP GRAVITY WALLS WITH A CONSTRUCTION JOINT AS SHOWN IN DETAIL "A", PROVIDE A MINIMUM OF 3 EQUALLY SPACED #4 DOWELS AT INTERVALS OF 1'-6" ALONG WALLS.

PROJECT NO.: EB-6039

NEW HANOVER COUNTY

STATION: VARIES

SHEET 3 OF 3

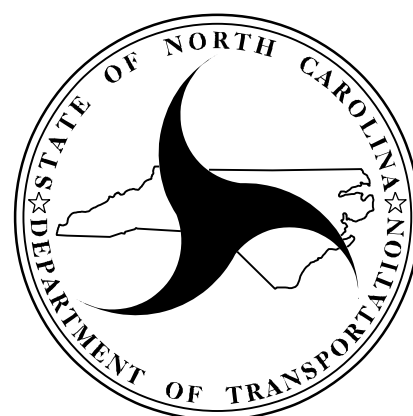
WALL ID WALL1 & WALL2

STANDARD DETAIL NO. 453.01

**STANDARD
CIP GRAVITY
RETAINING WALL**

DATE: 02-18-2025

SHEET
NO.
W3



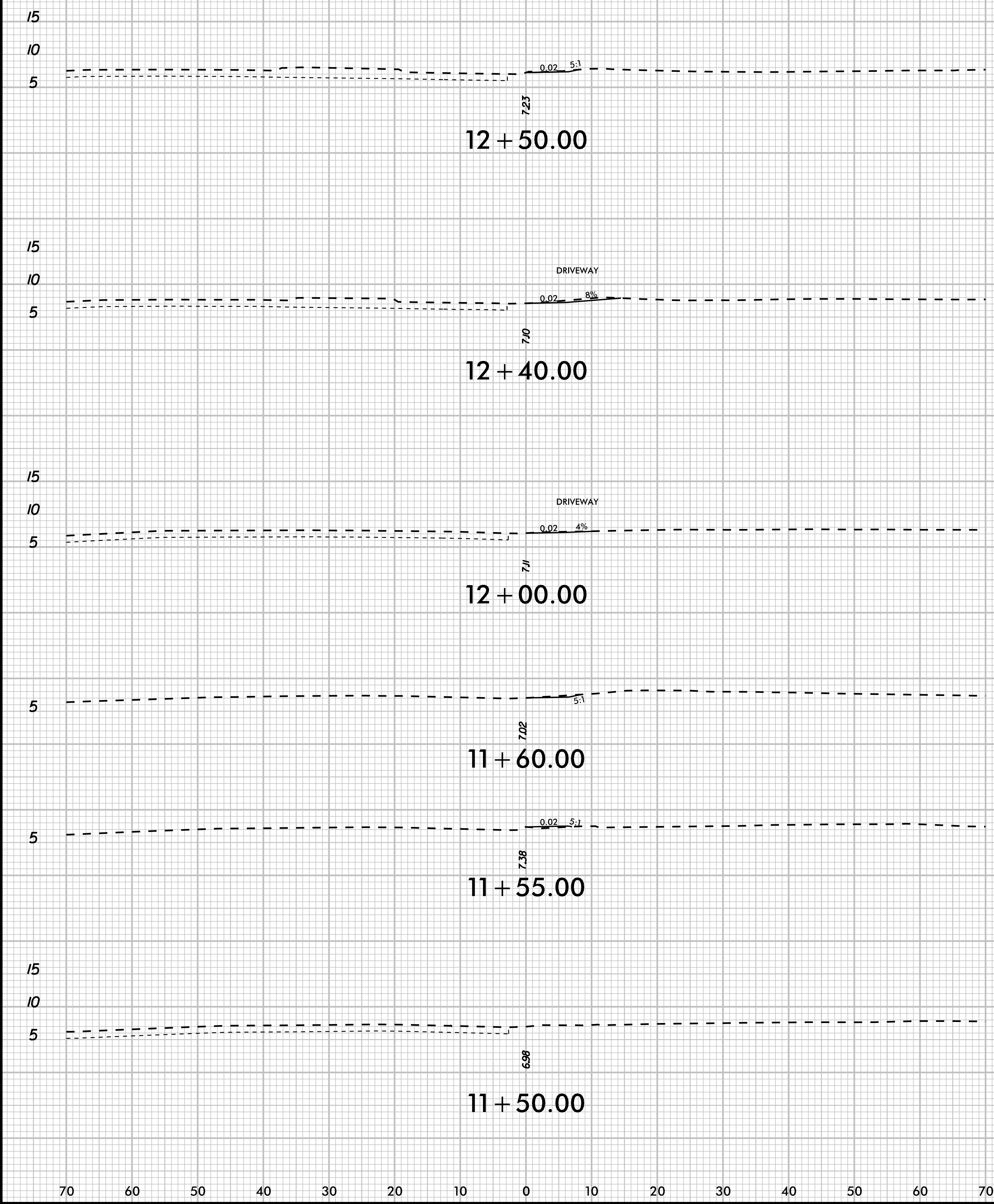
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**GEOTECHNICAL
ENGINEERING UNIT**

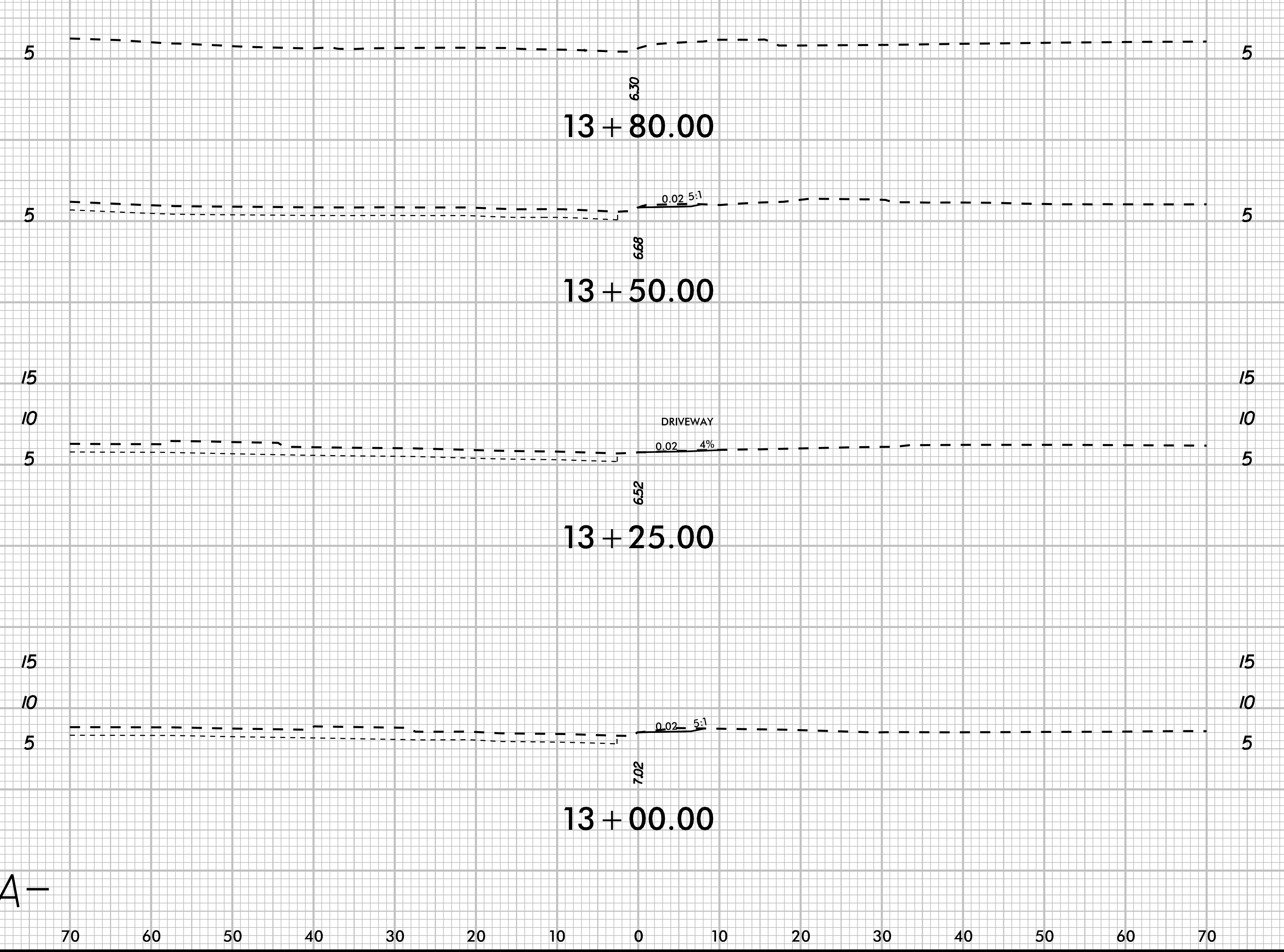
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EB-6039	X-0

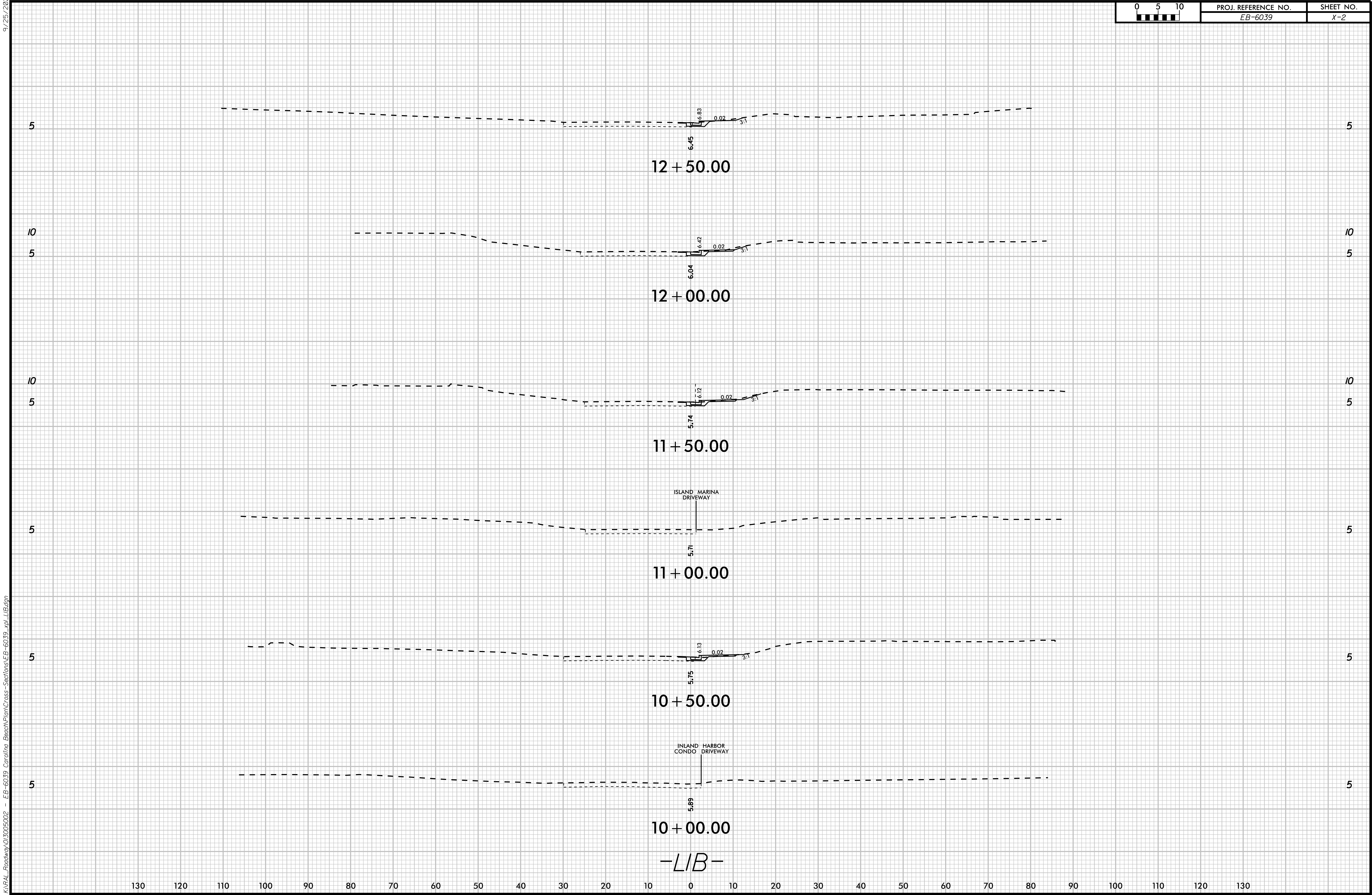
EB-6039
CROSS SECTION INDEX

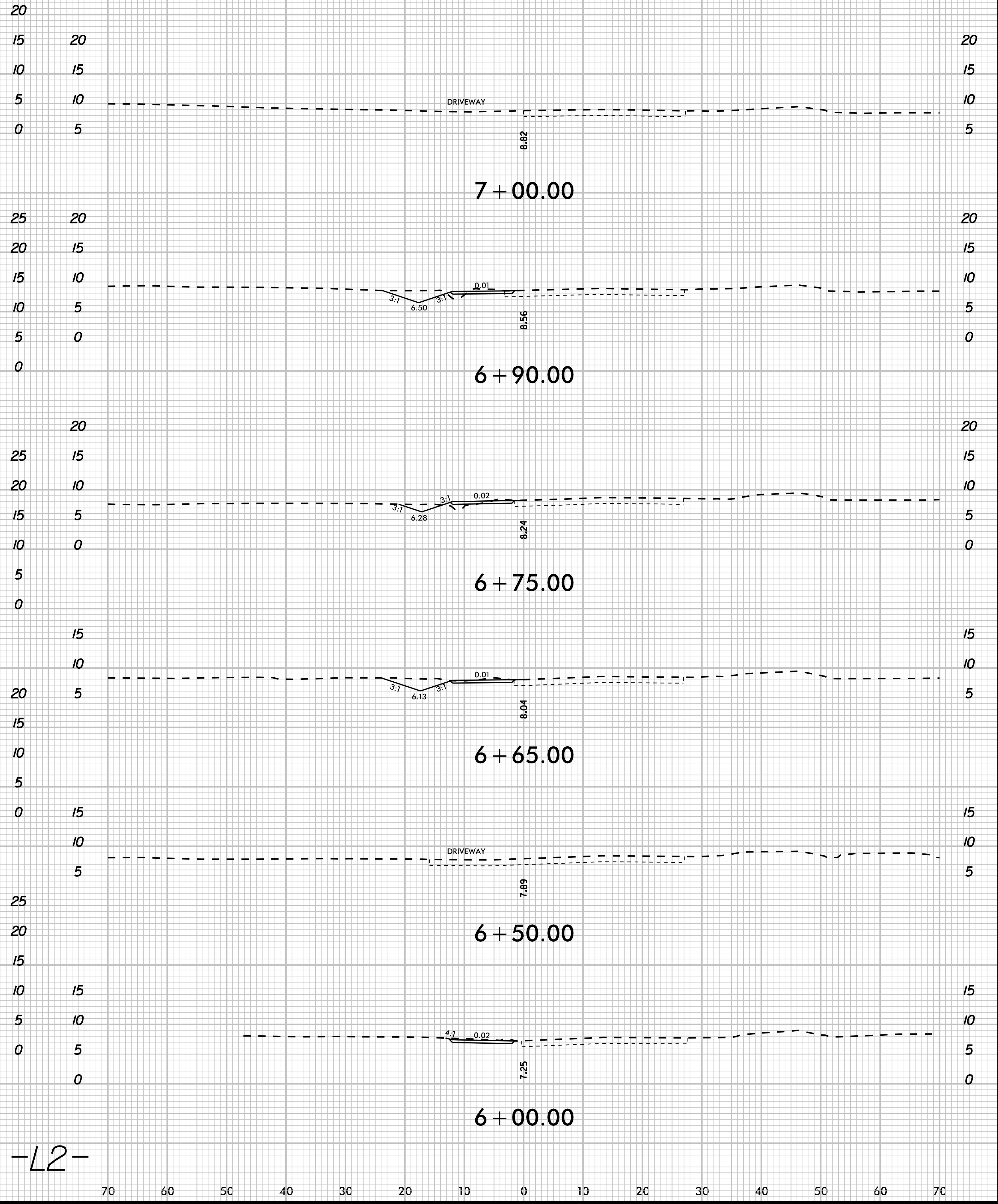
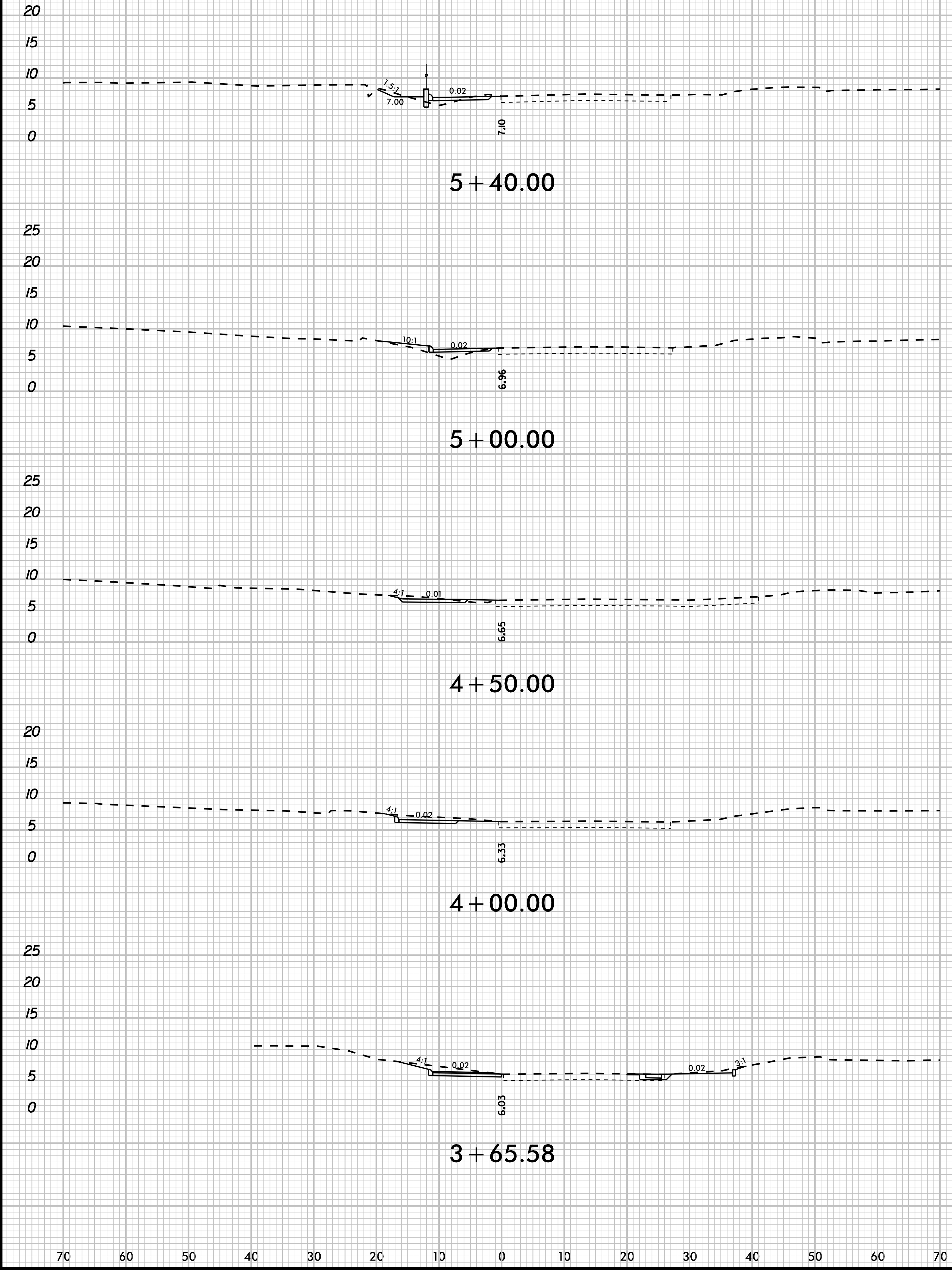
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-LIB-	X-2
-L2-	X-3 THRU X-10

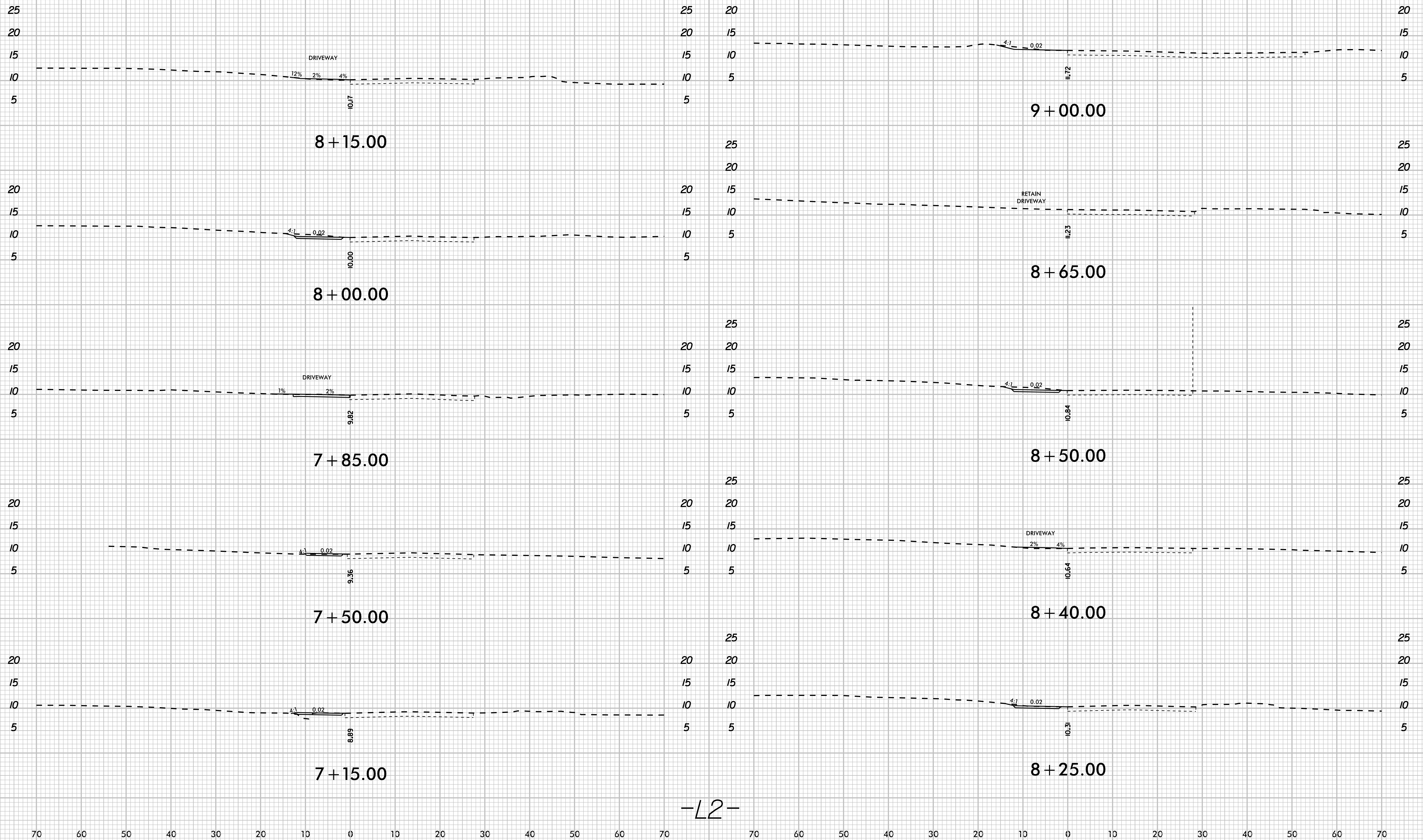


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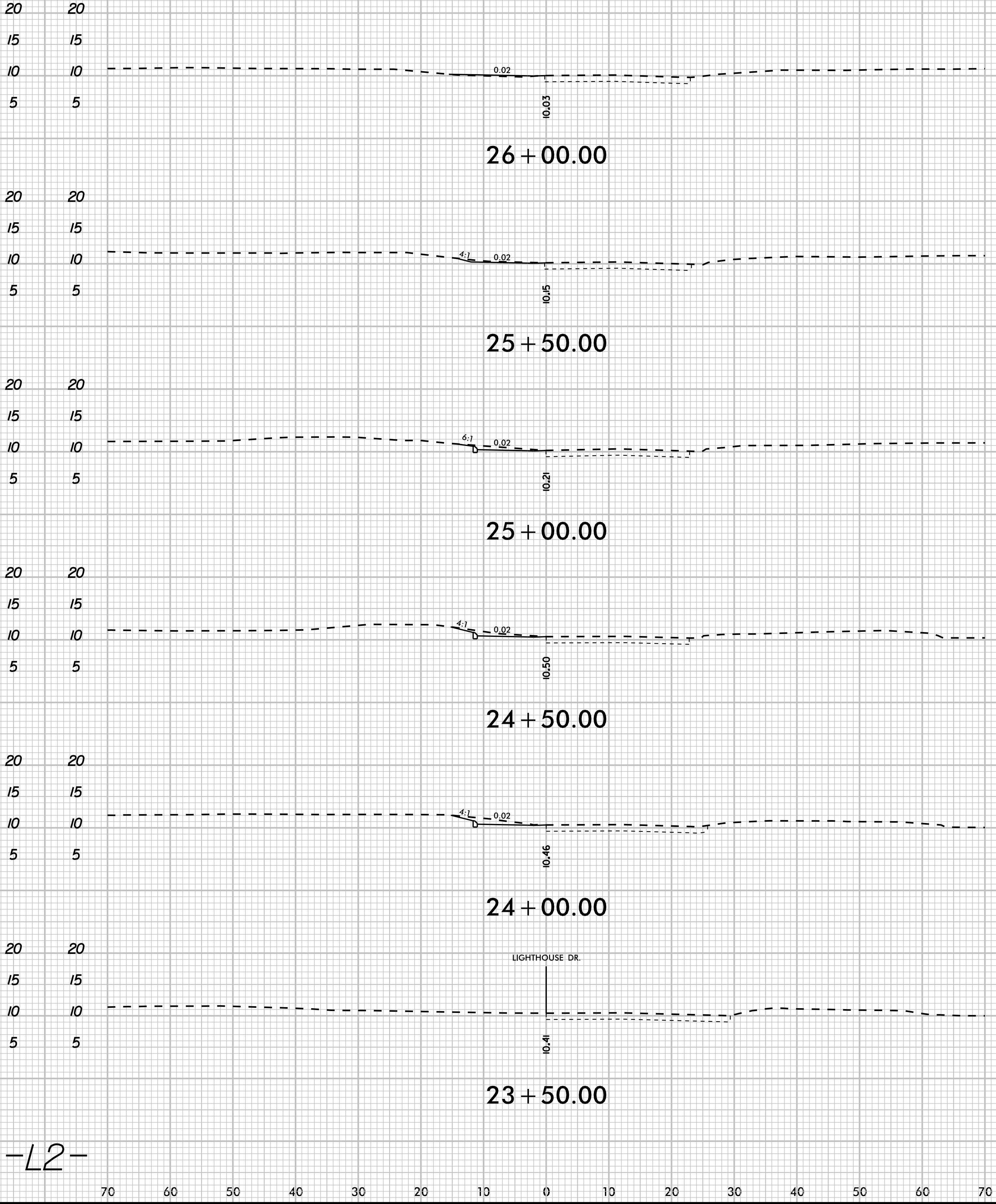
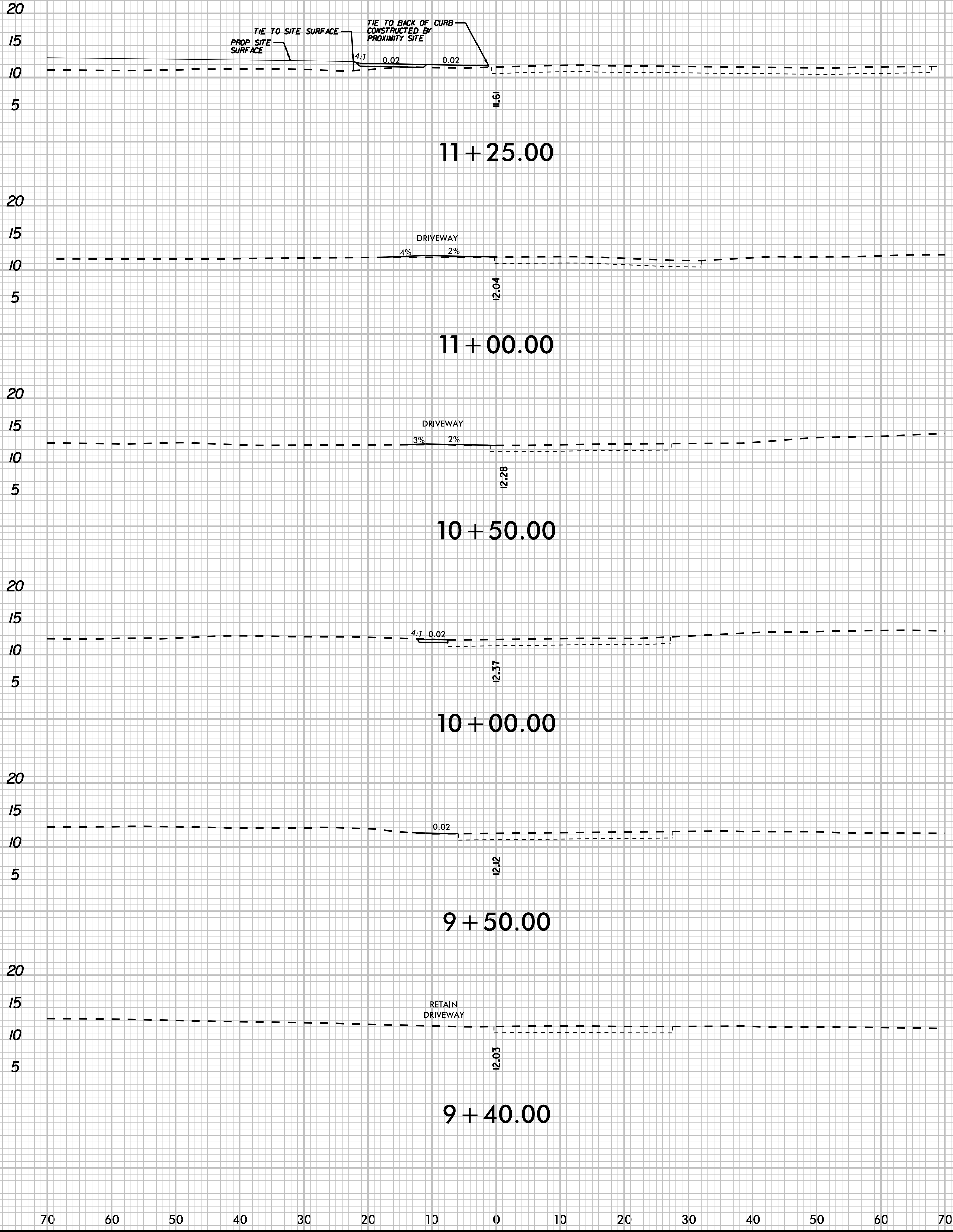




9/25/2025

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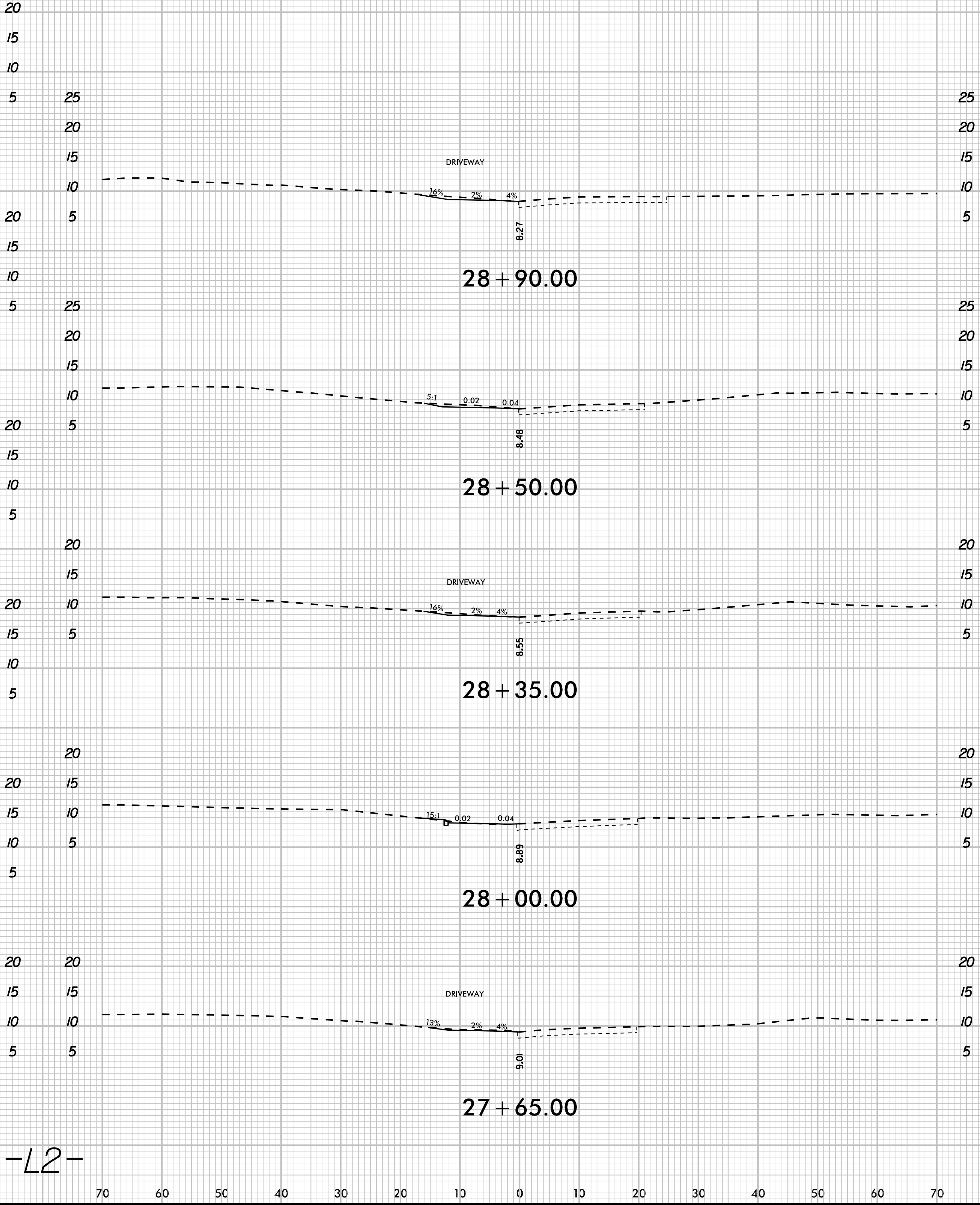
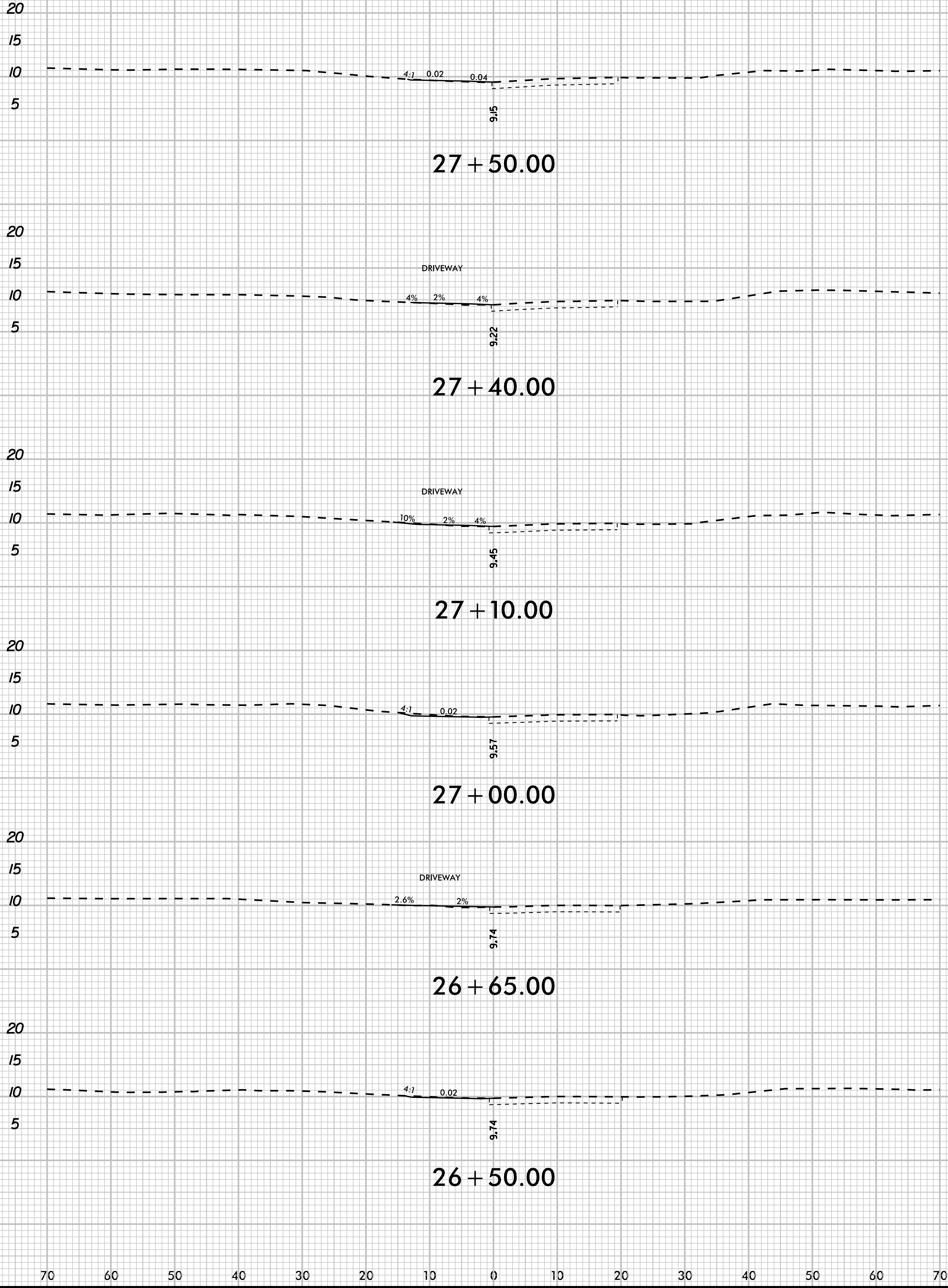


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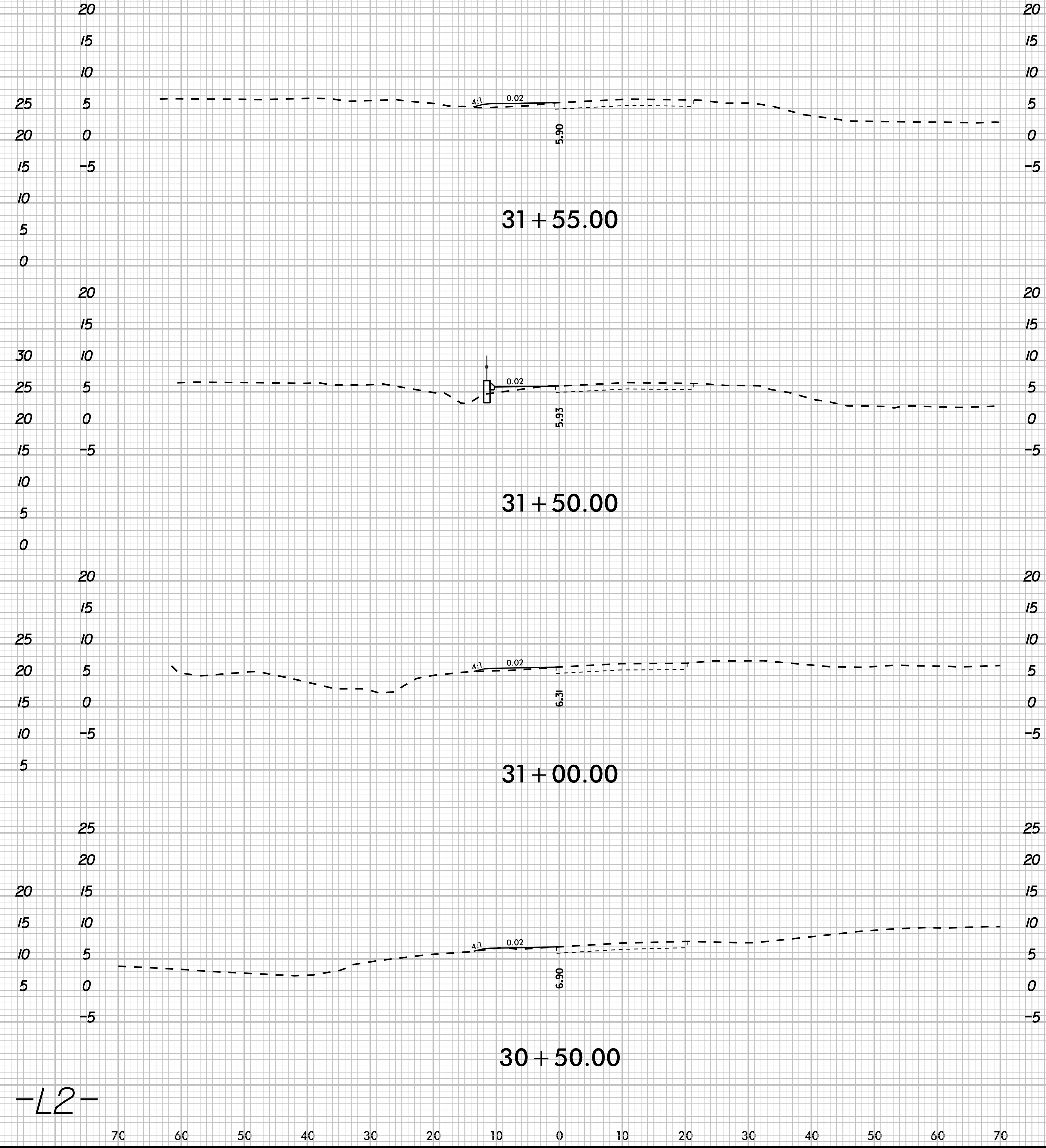
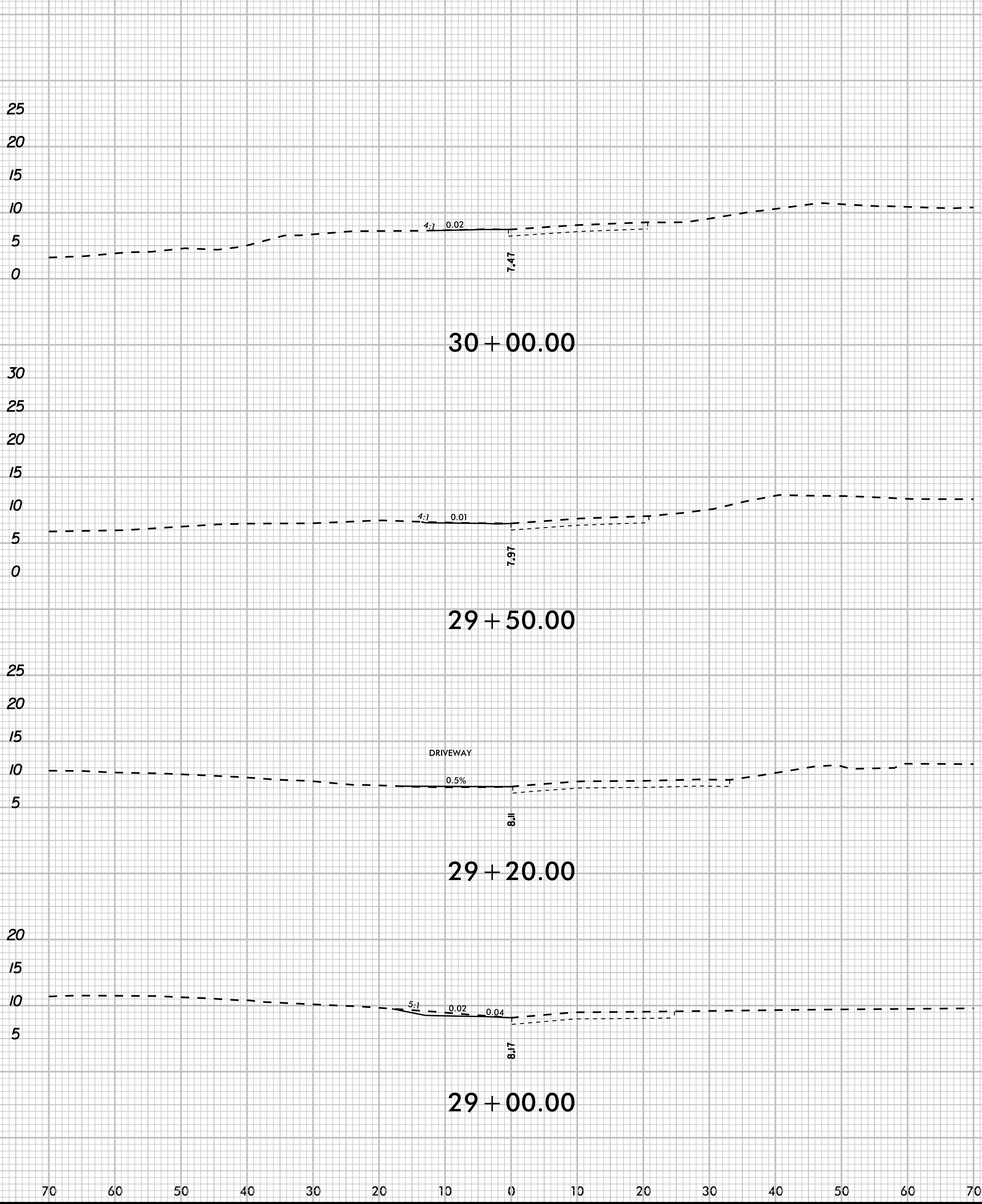
9/25/2025

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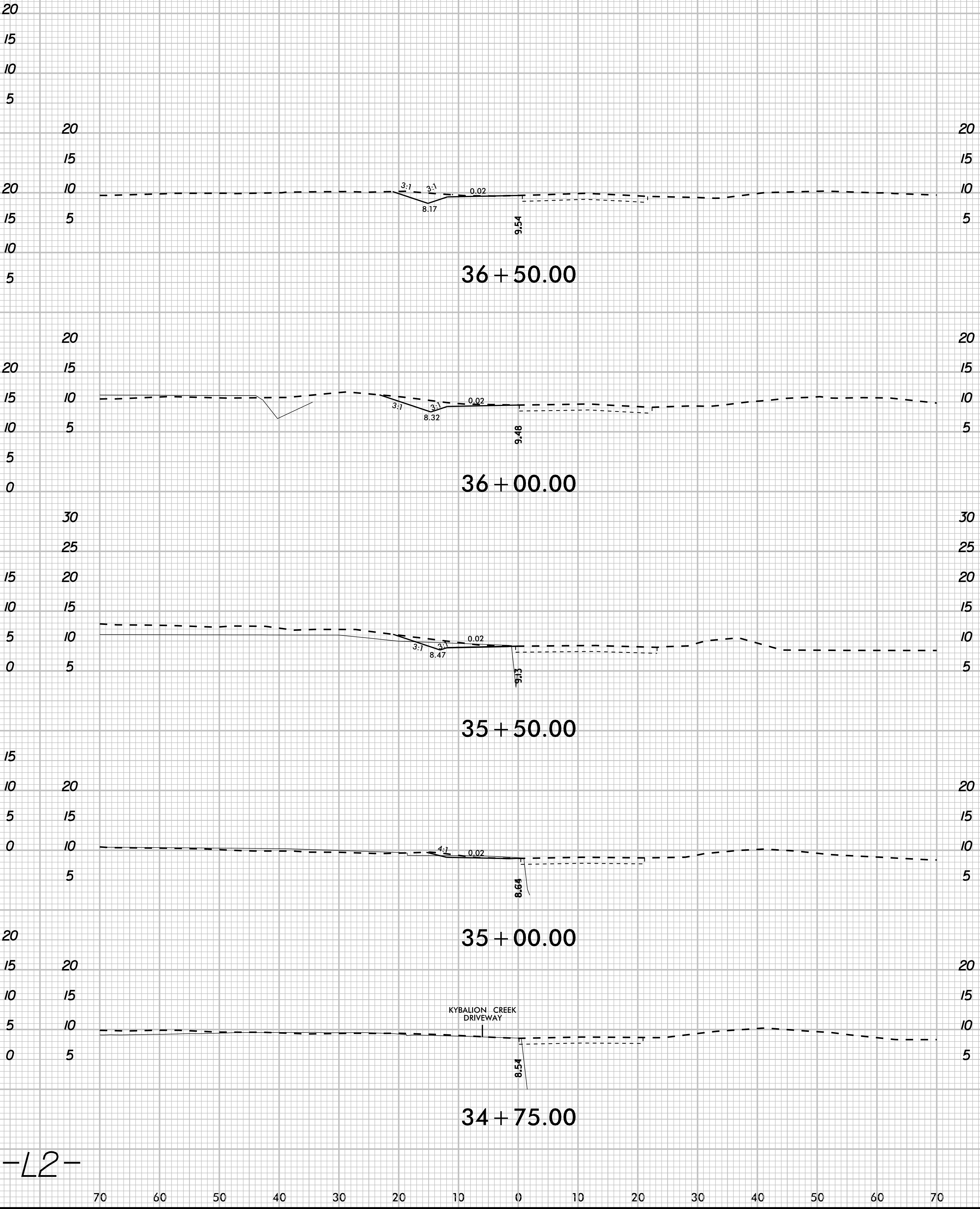
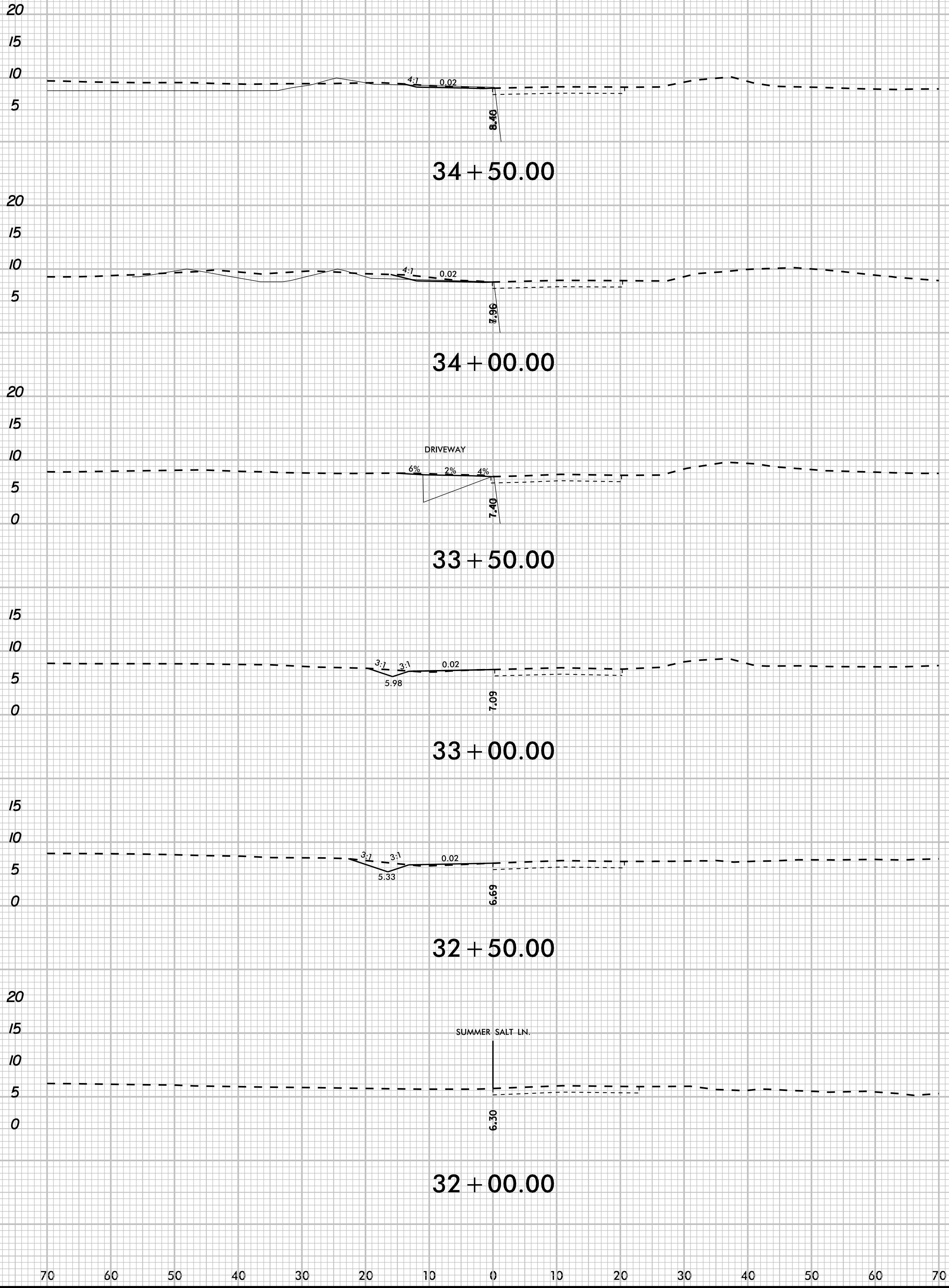
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9/25/2025

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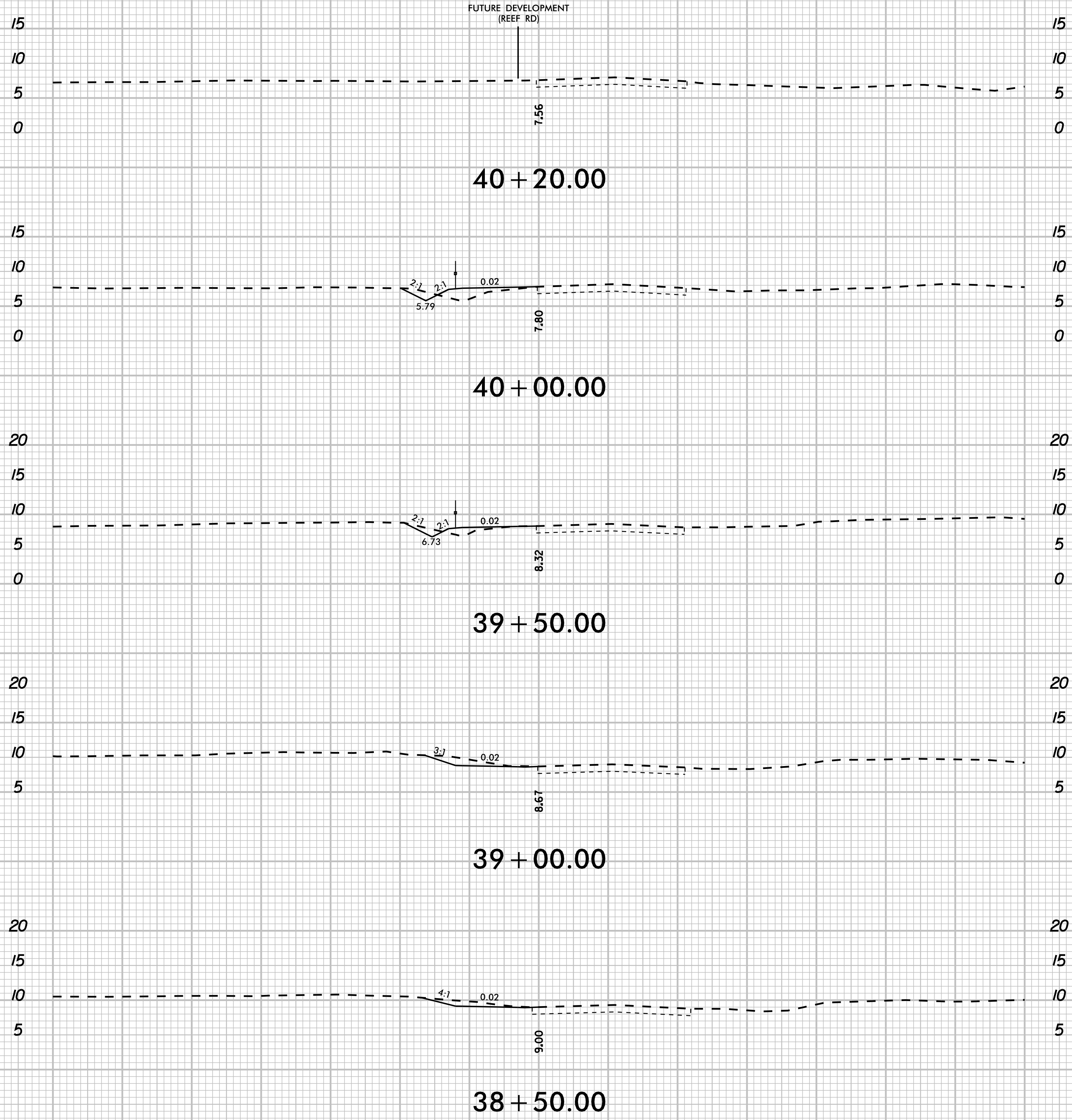
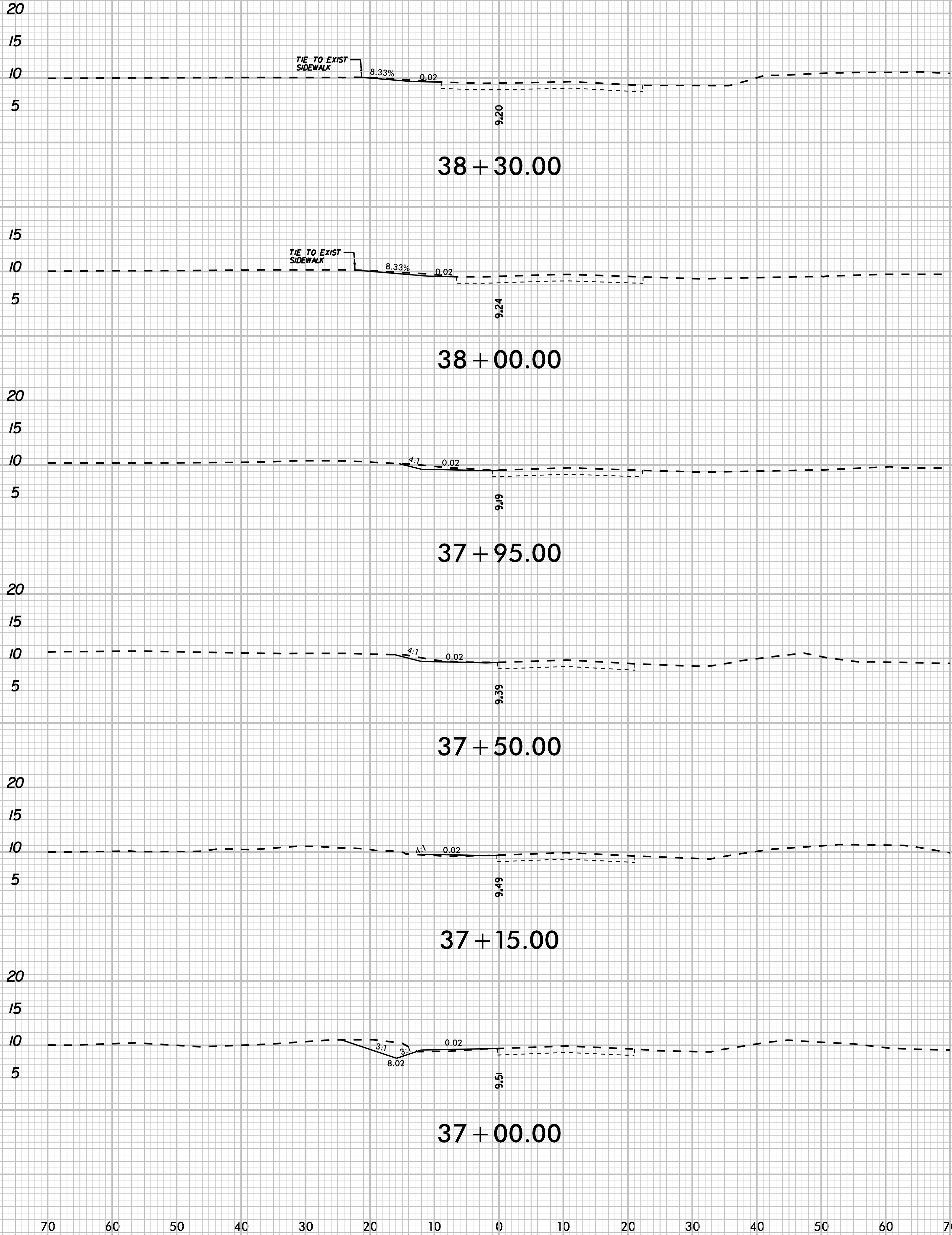


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9/25/2025

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-L2-

