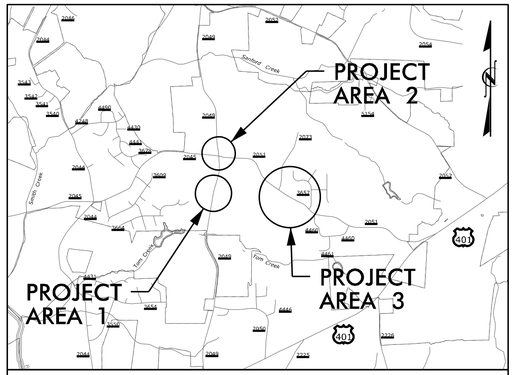
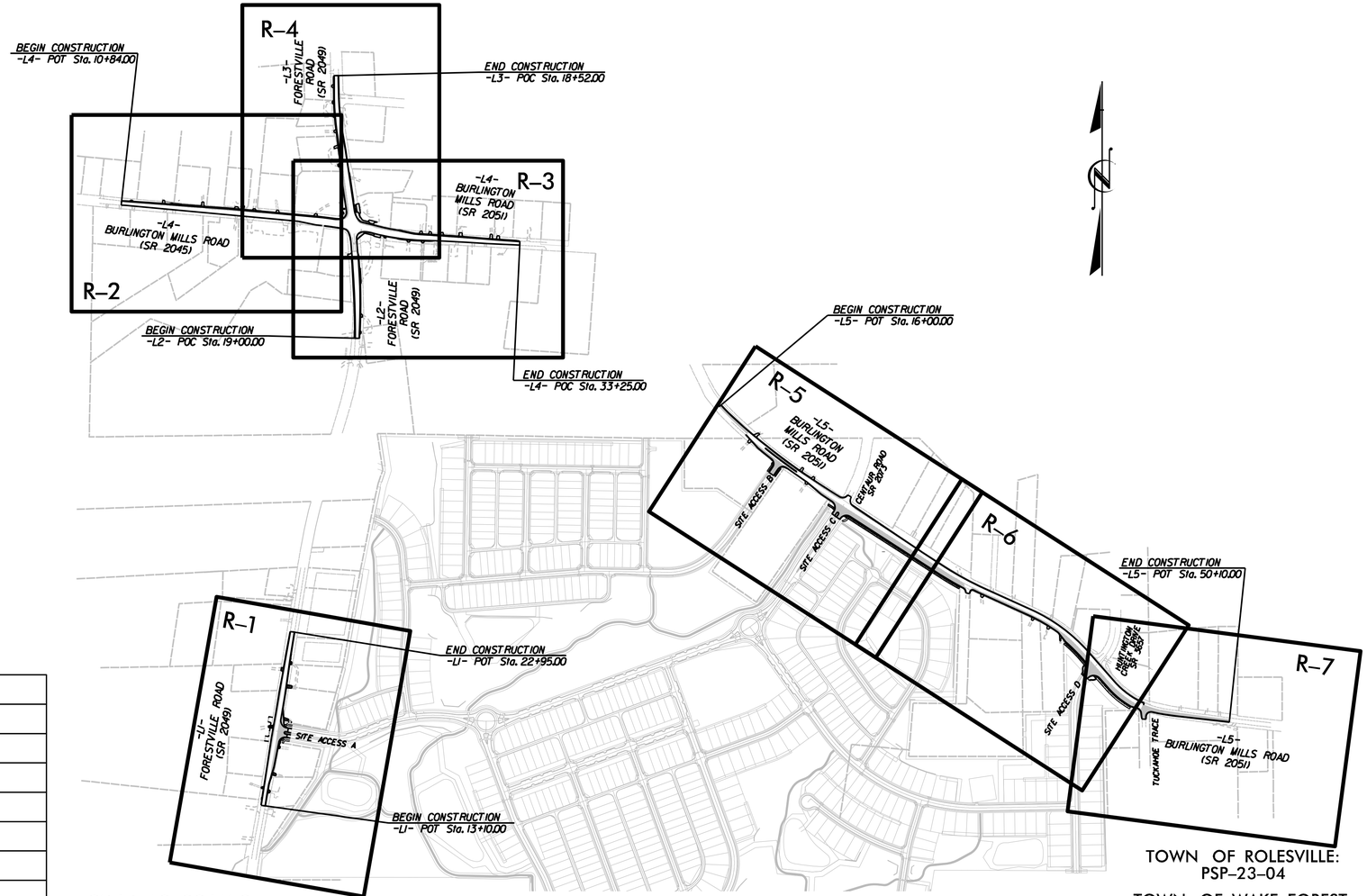


VICINITY MAP

ROADWAY CONSTRUCTION PLANS FOR

PEARCE FARM ROADWAY IMPROVEMENTS

SR 2049 (FORESTVILLE ROAD) AND SR 2045/SR 2051 (BURLINGTON MILLS ROAD)
ROLESVILLE, NORTH CAROLINA



TOWN OF ROLESVILLE:
PSP–23–04

TOWN OF WAKE FOREST:
PSP–XX–XX

CLIENT

Stanley Martin Homes
4020 Westchase Blvd, Suite 470
Raleigh, NC 27607
919–724–0624
Attn: Brian Ketchem

SURVEYOR

Bass, Nixon & Kennedy, Inc.
6310 Chapel Hill Rd, Suite 250
Raleigh, NC 27604
919–851–4422
Attn: Dan Gregory, PLS

SITE ENGINEER

McAdams
2905 Meridian Parkway
Durham, NC 27713
919–475–6439
Attn: Todd O'Daniel, PE

ROADWAY ENGINEER

Exult Engineering
24 Cabarrus Avenue East, Suite 3000
Concord, NC 28025
980–495–2249
Attn: Elizabeth Lynch, PE

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	CONVENTIONAL SYMBOLS
3	PROJECT NOTES
4A thru 4C	TYPICAL SECTIONS
5A thru 5D	DETAILS
6	TRAFFIC MANAGEMENT PLAN
EX–1 thru EX–7	EXISTING CONDITIONS SHEETS
R–1 thru R–7	PLAN SHEETS
R–8 thru R–12	PROFILE SHEETS
SD–1 thru SD–4	INTERSECTION SIGHT DISTANCE SHEETS
EC–1 thru EC–19	EROSION CONTROL SHEETS
PM–1 thru PM–7	PAVEMENT MARKING AND SIGNING SHEETS
X–1 thru X–46	ROADWAY CROSS SECTIONS

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

NOTE: PLANS ARE BEING REVIEWED BY TOWN OF ROLESVILLE. PLANS AND CALCULATIONS ARE BEING REVIEWED BY WAKE COUNTY FOR EROSION AND SEDIMENTATION CONTROL.

I. All public facilities, including utilities, sidewalks, and handicap ramps, are to be constructed on all streets as specified by NCDOT, Town of Rolesville and Town of Wake Forest standards. Such facilities approved by the Town of Wake Forest shall be installed as approved, unless a change is approved by the Town of Wake Forest.
II. Execution of these Construction Plans by the review engineer for the Town of Wake Forest in no way limits the responsibility of the owner and engineer of record with regard to compliance with all federal, state, and local standards and/or conditions.
III. Owner hereby certifies and agrees to take such action as may be required by the Town of Wake Forest to correct any errors, omissions, or noncompliance with Town standards and/or conditions described in these Construction Plans, including resubmission or re-execution of these Construction Plans with the appropriate corrections and/or revisions.

Owner Date

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

Electronic Approval: This approval is being issued electronically. This approval is valid upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification of this approval once issued will invalidate this approval.

City of Raleigh Development Approval:

Raleigh Water Review Officer

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Public Works/Engineering

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Planning

EXULT® ENGINEERING
301 S. Main Street
Kannapolis, NC 28081
980.495.2250
www.exultengineering.com
NC License #C-4445

PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

TITLE SHEET

SEAL
NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH

SIGNATURE DATE

DESIGNED BY:	G. BOYLE
REVIEWED BY:	E. LYNCH
JOB NO.:	00103002
DATE:	102824
SCALE:	

INIT.	DATE	REVISIONS

SHEET NO.
1

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale **S.U.E. = Subsurface Utility Engineering*

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Computed Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Existing Historic Property Boundary — HPB
- Known Contamination Area: Soil — S
- Potential Contamination Area: Soil — S
- Known Contamination Area: Water — W
- Potential Contamination Area: Water — W
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

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

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY & PROJECT CONTROL:

- Secondary Horiz and Vert Control Point
- Primary Horiz Control Point
- Primary Horiz and Vert Control Point
- Exist Permanent Easment Pin and Cap
- New Permanent Easement Pin and Cap
- Vertical Benchmark
- Existing Right of Way Marker
- Existing Right of Way Line
- New Right of Way Line — RW
- New Right of Way Line with Pin and Cap — RW
- New Right of Way Line with Concrete or Granite R/W Marker — RW
- New Control of Access Line with Concrete C/A Marker — CA
- Existing Control of Access — CA
- New Control of Access — CA
- Existing Easement Line — E
- New Temporary Construction Easement — E
- New Temporary Drainage Easement — TDE
- New Permanent Drainage Easement — PDE
- New Permanent Drainage / Utility Easement — DUE
- New Permanent Utility Easement — PUE
- New Temporary Utility Easement — TUE
- New Aerial Utility Easement — AUE

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub

- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H–Frame Pole
- U/G Power Line LOS B (S.U.E.*) — P
- U/G Power Line LOS C (S.U.E.*) — P
- U/G Power Line LOS D (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- U/G Telephone Cable LOS B (S.U.E.*) — T
- U/G Telephone Cable LOS C (S.U.E.*) — T
- U/G Telephone Cable LOS D (S.U.E.*) — T
- U/G Telephone Conduit LOS B (S.U.E.*) — TC
- U/G Telephone Conduit LOS C (S.U.E.*) — TC
- U/G Telephone Conduit LOS D (S.U.E.*) — TC
- U/G Fiber Optics Cable LOS B (S.U.E.*) — T FO
- U/G Fiber Optics Cable LOS C (S.U.E.*) — T FO
- U/G Fiber Optics Cable LOS D (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line LOS B (S.U.E*) — W
- U/G Water Line LOS C (S.U.E*) — W
- U/G Water Line LOS D (S.U.E*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- U/G TV Cable LOS B (S.U.E.*) — TV
- U/G TV Cable LOS C (S.U.E.*) — TV
- U/G TV Cable LOS D (S.U.E.*) — TV
- U/G Fiber Optic Cable LOS B (S.U.E.*) — TV FO
- U/G Fiber Optic Cable LOS C (S.U.E.*) — TV FO
- U/G Fiber Optic Cable LOS D (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line LOS B (S.U.E.*) — G
- U/G Gas Line LOS C (S.U.E.*) — G
- U/G Gas Line LOS D (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- SS Forced Main Line LOS B (S.U.E.*) — FSS
- SS Forced Main Line LOS C (S.U.E.*) — FSS
- SS Forced Main Line LOS D (S.U.E.*) — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line LOS B (S.U.E.*) — PUTL
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole LOS A (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

EXULT® ENGINEERING
301 S. Main Street
Kannapolis, NC 28081
(704) 455-2520
www.exultengineering.com
NC License #C-4445

PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

CONVENTIONAL SYMBOLS

DEPARTMENT OF TRANSPORTATION • STATE OF NORTH CAROLINA •

JOB NO.:	0010302
DATE:	102324
SCALE:	
REVISIONS	
DESIGNED BY:	R. MANK
REVIEWED BY:	E. LYNCH
INIT.	
DATE	

SHEET NO.
2

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
225.02	Guide for Grading Subgrade – Secondary and Local
225.04	Method of Obtaining Superelevation – Two Lane Pavement
225.06	Method of Grading Sight Distance at Intersections
300.01	Method of Pipe Installation
310.02	Parallel Pipe End Section – Precast Concrete Section for 15" to 24" Pipe
310.03	Cross Pipe End Section – Precast Concrete Section for 18" to 30" Pipe
310.10	Driveway Pipe Construction
560.01	Method of Shoulder Construction – High Side of Superelevated Curve – Method I
654.01	Pavement Repairs
700.05	Tying Proposed Pavement to Existing
838.01	Concrete Endwall for Single and Double Pipe Culverts – 15" thru 48" Pipe 90 Skew
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin – 12" thru 54" Pipe
840.02	Concrete Catch Basin – 12" thru 54" Pipe
840.03	Frame, Grates and Hood – for Use on Standard Catch Basin
840.04	Concrete Open Throat Catch Basin – 12" thru 48" Pipe
840.05	Brick Open Throat Catch Basin – 12" thru 48" Pipe
840.14	Concrete Drop Inlet – 12" thru 30" Pipe
840.15	Brick Drop Inlet – 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates – for use with Std. Dwg 840.14 and 840.15
840.17	Concrete Grated Drop Inlet Type 'A' – 12" thru 72" Pipe
840.18	Concrete Grated Drop Inlet Type 'B' – 12" thru 36" Pipe
840.19	Concrete Grated Drop Inlet Type 'D' – 12" thru 36" Pipe
840.31	Concrete Junction Box – 12" thru 66" Pipe
840.32	Brick Junction Box – 12" thru 66" Pipe
840.34	Traffic Bearing Junction Box – for Use with Pipes 42" and Under
840.35	Traffic Bearing Grated Drop Inlet – for Cast Iron Double Frame and Grates
840.36	Traffic Bearing Grated Drop Inlet – for Steel (840.37) Double Frame and Grates
840.37	Steel Grate and Frame
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.51	Brick Manhole – 12" thru 36" Pipe
840.52	Precast Manhole – 4', 5' and 6' Diameter
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
840.71	Concrete and Brick Pipe Plug
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.02	Driveway Turnout – Radius Type
848.03	Driveway Turnout – Drop Curb Type
848.04	Street Turnout
848.05	Curb Ramp – Proposed Curb & Gutter
850.01	Concrete Paved Ditches
852.01	Concrete Islands
852.02	Concrete Mountable Median – for Use with Rigid or Flexible Pavement
852.04	Method for Placement of Drop Inlets in Grassed Median – Using 1'–6" Curb and Gutter
852.05	Median Curb for Catch Basin – for Use with 1'–6" Curb and Gutter
852.10	Median Construction – with Curb and Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
862.04	Anchoring End of Guardrail – B–77 and B–83 Anchor Units
876.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets

GENERAL NOTES

1. CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THESE PLANS, THE LATEST EDITIONS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) STANDARD DRAWINGS AND STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL HANDBOOK AND REGULATIONS, AND THE STANDARDS, SPECIFICATIONS AND GENERAL DESIGN STANDARDS OF THE LOCAL MUNICIPALITY AND AMENDMENTS OR SUPPLEMENTS THERETO. WHERE CONFLICTS EXIST BETWEEN ANY OF THESE STANDARDS, SPECIFICATIONS, OR PLANS, THE MOST STRINGENT SHALL APPLY UNLESS OTHERWISE NOTED IN THESE PLANS.

2. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL ENVIRONMENTAL REGULATIONS, AND SHALL VERIFY OR OBTAIN ALL NECESSARY PERMITS AND APPROVALS PRIOR TO COMMENCING CONSTRUCTION. NCDOT ENCROACHMENTS SHALL BE OBTAINED BY THE ENGINEER. CONTRACTOR IS RESPONSIBLE FOR ADHERING TO ALL PROVISIONS SET FORTH IN THE THE APPROVED NCDOT DRIVEWAY PERMIT AND ENCROACHMENT AGREEMENTS.

3. THE CONTRACTOR SHALL BE SOLELY RESPONSBILE FOR TRAFFIC MANAGEMENT ON ALL PUBLIC STREETS AND FOR ALL JOBSITE SAFETY THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL DEVICES, LANE CLOSURES, ROAD CLOSURES, POSITIVE PROTECTION AND/OR ANY OTHER WARNING OR POSITIVE PROTECTION DEVICES NECESSARY FOR THE SAFETY OF ROAD USERS DURING CONSTRUCTION AND ANY SUBSEQUENT MAINTENANCE. THIS SHALL BE PERFORMED IN CONFORMANCE WITH THESE PLANS AND THE LATEST NCDOT ROADWAY STANDARD DRAWINGS AND SPECIFICATIONS FOR ROADS AND STRUCTURES AND AMENDMENTS OR SUPPLEMENTS THERETO AND AS FURTHER DIRECTED BY THE LOCAL MUNICIPALITY AND STATE INSPECTORS. WHEN THERE IS NO GUIDANCE PROVIDED IN THE ROADWAY STANDARD DRWAINGS OR SPECIFICATIONS, COMPLY WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND AMENDMENTS OR SUPPLEMENTS THERETO. NOW WORK SHALL BE PERFORMED IN THE RIGHT OF WAY UNLESS THIS REQUIREMENT IS SATISFIED. THE CONTRACTOR SHALL NOT MAKE ANY LANES CLOSURES OR CHANGES TO THE EXISTING TRAVEL PATTERNS ON ANY PUBLIC STREET WITHOUT PRIOR APPROVAL FROM THE NCDOT AND THE LOCAL MUNICIPALITY.

4. ANY PROPRIETARY PRODUCTS OR APPROVED ALTERNATES SPECIFIED IN THESE PLANS SHALL BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.

5. ENGINEER MUST BE NOTIFIED IN WRITING IMMEDIATELY OF ANY VARIATIONS OR AMBIGUITIES BETWEEN THE PLANS AND SPECIFCATIONS AND ACTUAL SITE CONDITIONS. ANY WORK DONE BY THE CONTRACTOR AFTER HIS DISCOVERY OF SUCH INCONSISTENCIES OR AMBIGUITIES IS AT THE CONTRACTOR'S RISK.

6. THE CONTRACTOR SHALL CONDUCT A PRE–CONSTRUCTION CONFERENCE WITH NCDOT AND THE LOCAL MUNICIPALITY PRIOR TO COMMENCING CONSTRUCTION.

DEMOLITION AND GRADING NOTES

1. THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACE AT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AND EXISTING PAVEMENT AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE–IN.

2. THE CONTRACTOR SHALL REMOVE ALL TREES, STUMPS AND VEGETATIVE MATERIAL FROM THE RIGHT OF WAY AND DISPOSE OF IN A LICENSED LANDFILL OR DISPOSAL SITE UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL CONFORM TO ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS REGARDING THE REMOVAL AND DISPOSAL OF MATERIALS AND DEBRIS.

3. ALL MATERIALS USED FOR BACKFILL SHALL BE FREE OF WOOD, ROOTS, ROCKS, BOULDRES, OR ANY OTHER NON–COMPATIBLE SOIL TYPE MATERIAL. UNSATISFACTORY MATERIALS ALSO INCLUDE MAN–MADE FILLS AND REFUSE DEBRIS DERIVED FROM ANY SOURCE.

4. BACKFILL MATERIAL IS TO BE PLACED AT A MAXIMUM OF 6 INCH LOOSE LAYERS AND EACH LAYER THOROUGHLY COMPACTED. ALL EMBANKMENT BACKFILL SHALL BE COMPACTED TO 95% DENSITY AND ALL SUBGRADE TO 100% DENSITY IN ACCORDANCE WITH AASHTO T–99 AS MODIFIED BY NCDOT. CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT AND MOISTURE CONDITION ALL FILL PER THE GEOTECHNICAL ENGINEER'S SPECIFICATIONS AND ALL FILL MATERIAL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.

5. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING DRAINAGE PATTERNS AND PROVIDING POSITIVE DRAINAGE AT ALL TIME THROUGHOUT PROJECT CONSTRUCTION. THE CONTRACTOR SHALL USE INTERIM SILT FENCES, DIVERSION DITCHES, BERMS, OR OTHER METHODS AS REQUIRED TO DIRECT DRAINAGE TO BEST UTILIZE THE EROSION CONTROL DEVICES IN PLACE, AND TO PREVENT SILT AND CONSTRUCTION RUNOFF FROM DRAINING TO PROPERTIES OFFSITE. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL EROSION CONTROL AND CONSERVATION ORDINANCES.

6. TEMPORARY EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION. REFER TO EROSION CONTOL PLANS FOR THE CLEARING LIMITS AND LOCATION AND TYPE OF DEVICES.

PAVING/CURBING

1. PROVIDE 10* TRANSITION TO TIE PROPOSED CURB AND GUTTER TO THE EXISTING HEIGHT, WIDTH AND SHAPE OF EXISTING CURB AND GUTTER AT TIE–IN POINTS.

2. THE CONTRACTOR IS RESPONSIBLE FOR ENGINEERING AND SURVEY WORK REQUIRED FOR LINE AND GRADE CONTROL POINTS REQUIRED FOR EARTHWORK AND FOR STAKING OUT PAVEMENT AND ALL OTHER ITEMS IN THE PLANS.

3. ALL CURB JOINTS SHALL EXTEND THROUGH THE CURB AND ALL JOINTS SHALL BE SEALED WITH JOINT SEALANT.

4. REMOVE EXISTING CONCRETE (WHERE REQUIRED) TO THE FIRST COLD JOINT OR SAW CUT TO OBTAIN A CLEAN EDGE FOR NEW CONSTRUCTION. SAW CUT EXISTING ASPHALT DRIVE AT LIMITS OF NEW CURBING TO OBTAIN A CLEAN EDGE.

5. PAVING SHALL BE IN ACCORDANCE WITH THE 2024 STANDARD SPECIFICATIONS SECTIONS 610, 1012 AND 1020. THE CONTRACTOR SHALL FOLLOW ALL PROCEDURES IN THE QUALITY MANAGMENT SYSTEM (QMS) FOR ASPHALT PAVEMENT AND MUST ADHERE TO ALL TESTING REQUIREMENTS AND QUALITY CONTROL REQUIREMENTS SPECIFIED IN THE ENCROACHMENT AND/OR DRIVEWAY PERMIT. THE NOMINATION OF THE TESTING LABORATORY AND THE PAYMENT OF SUCH TESTING SERVICES SHALL BE MADE BY THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SHOW STANDARD TESTING PROCEDURES THAT THE WORK CONSTRUCTED DOES MEET THE REQUIREMENTS OF THE NCDOT SPECIFICATIONS.

6. ALL RAMPS SHALL COMPLY WITH THE LATEST NCDOT STANDARDS AND ADA REQUIREMENTS. CURB RAMPS ARE SHOWN ON THE PLANS AT THE APPROXIMATE LOCATIONS.

7. ALL CURVES ARE TO BE SUPERELEVATED IN ACCORDANCE WITH STD. 225.04 AND 225.05 USING THE RATE OF SUPERELEVATION RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

UTILITY NOTES

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION (SHOWN OR NOT SHOWN) OF UTILITIES WITHIN THE PROJECT LIMITS. EXISTING UTILITY LOCATIONS AND SIZES SHOWN HAVE BEEN PROVIDED BY OTHERS AND ARE APPROXIMATE ONLY.

2. CONTRACTOR SHALL NOTIFY THE NORTH CAROLINA 811 AT 1–800–632–4949 AT LEAST 72 HOURS PRIOR TO ANY DEMOLITION, GRADING OR CONSTRUCTION ACTIVITY FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE SITE. CONTRACTOR TO CONTACT LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF NORTH CAROLINA 811.

3. RELOCATION OF EXISTING UTILITIES TO BE COORDINATED WITH LOCAL UTILITY PROVIDER(S).

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY OWNERS AND FOR PROVIDING PROTECTION AND SAFEGUARDS TO PREVENT DAMAGE OR INTERRUPTION TO EXISTING FACILITIES AND TO MAINTAIN ACCESSIBILITY TO EXISTING UTILITIES. THE CONTRACTOR SHALL REPAIR, AT HIS OWN EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.

5. WATER VALVE BOXES AND WATER METER BOXES THAT ARE ENCOUNTERED WITHIN THE PROJECT LIMITS ARE TO BE RAISED OR LOWERED TO MATCH THE ADJACENT FINISHED WORK (SEE SECTION 858–1 AND 1510 NCDOT SPECIFICATIONS).

TOWN OF ROLESVILLE:
PSP–23–04

TOWN OF WAKE FOREST:
PSP–XX–XX

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

Electronic Approval: This approval is being issued electronically. This approval is valid upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification of this approval once issued will invalidate this approval.

City of Raleigh Development Approval:

____
Raleigh Water Review Officer

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Public Works/Engineering

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Planning

EXULT® ENGINEERING
301 S. Main Street
Kannapolis, NC 28081
980.495.2250
www.exultengineering.com
NC License #C-4445

PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

GENERAL NOTES

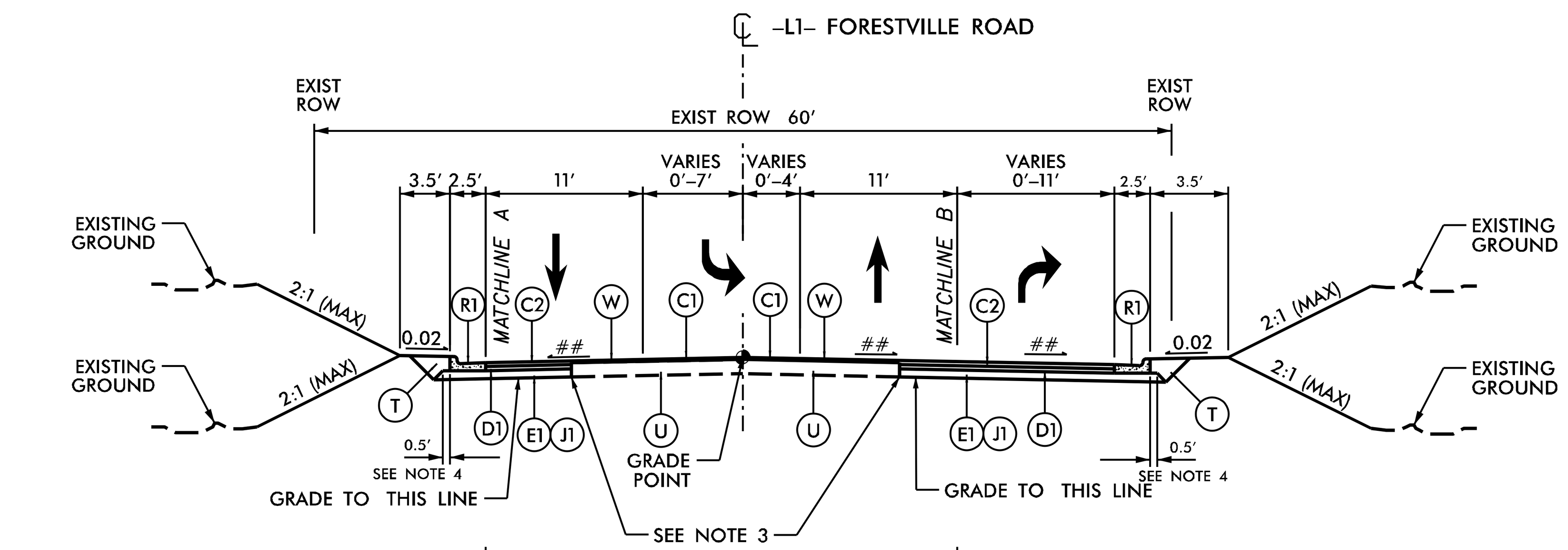
SEAL
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER ELIZABETH W. LYNCH
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SIGNATURE DATE

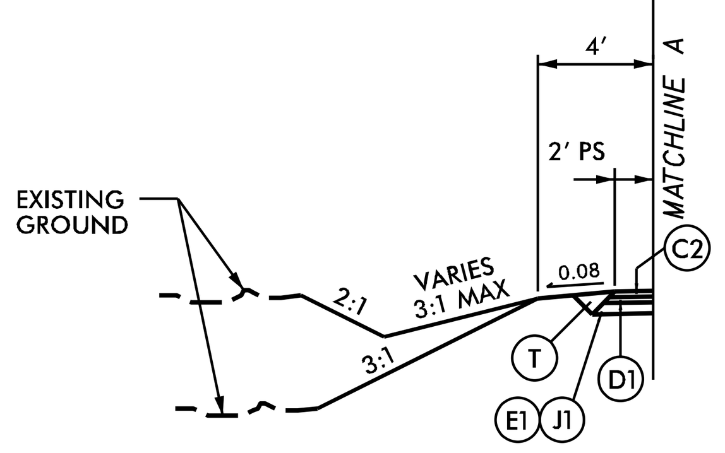
JOB NO.: 00103002
DATE: 102324
SCALE:
DESIGNED BY: R. MANK
REVIEWED BY: E. LYNCH

REVISIONS	INIT.	DATE

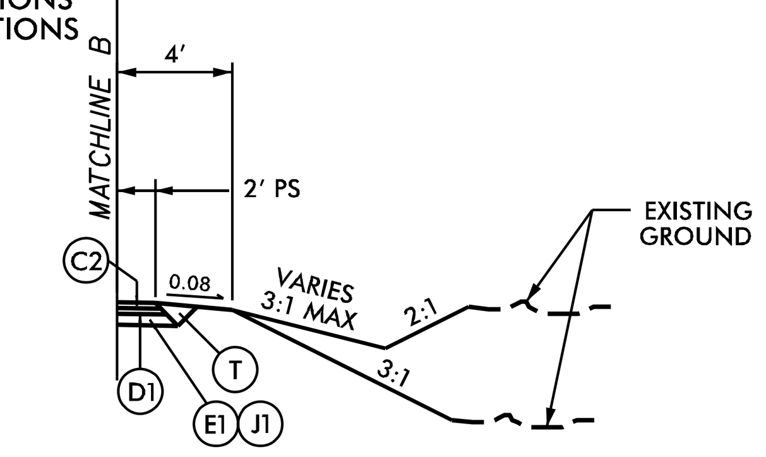
SHEET NO.
3



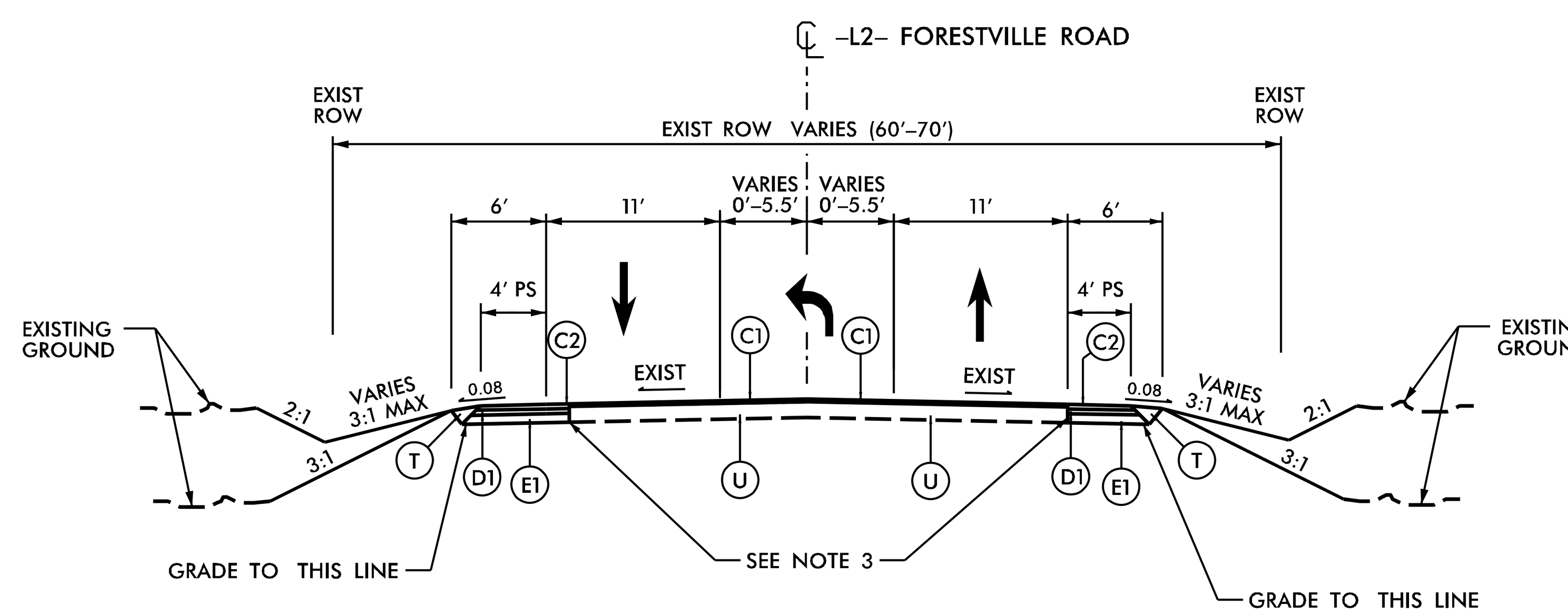
TYPICAL SECTION NO. 1
-L1- STA 13+10.00 TO 22+95.00
REFER TO CROSS SECTIONS FOR MODIFIED SUPERELEVATIONS



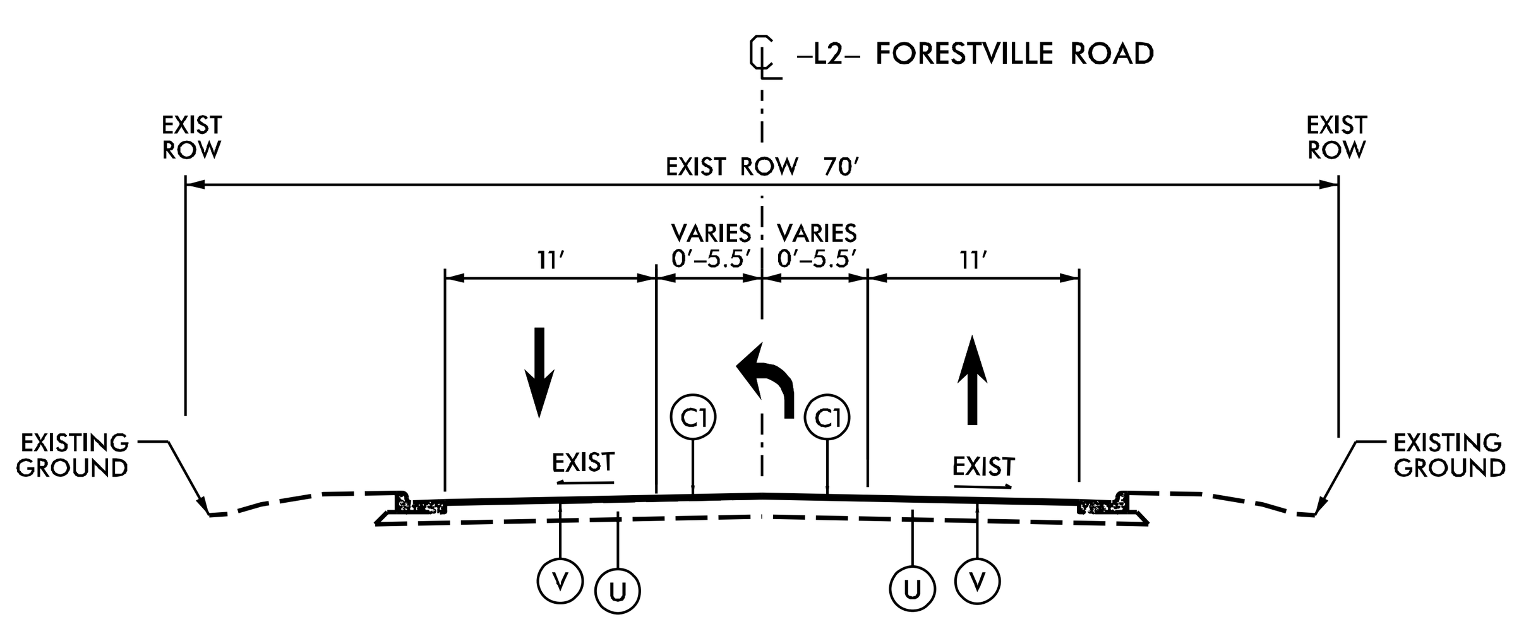
TYPICAL SECTION NO. 1A
STA. 13+10.00 TO 13+60.00
STA. 20+61.59 TO 22+95.00



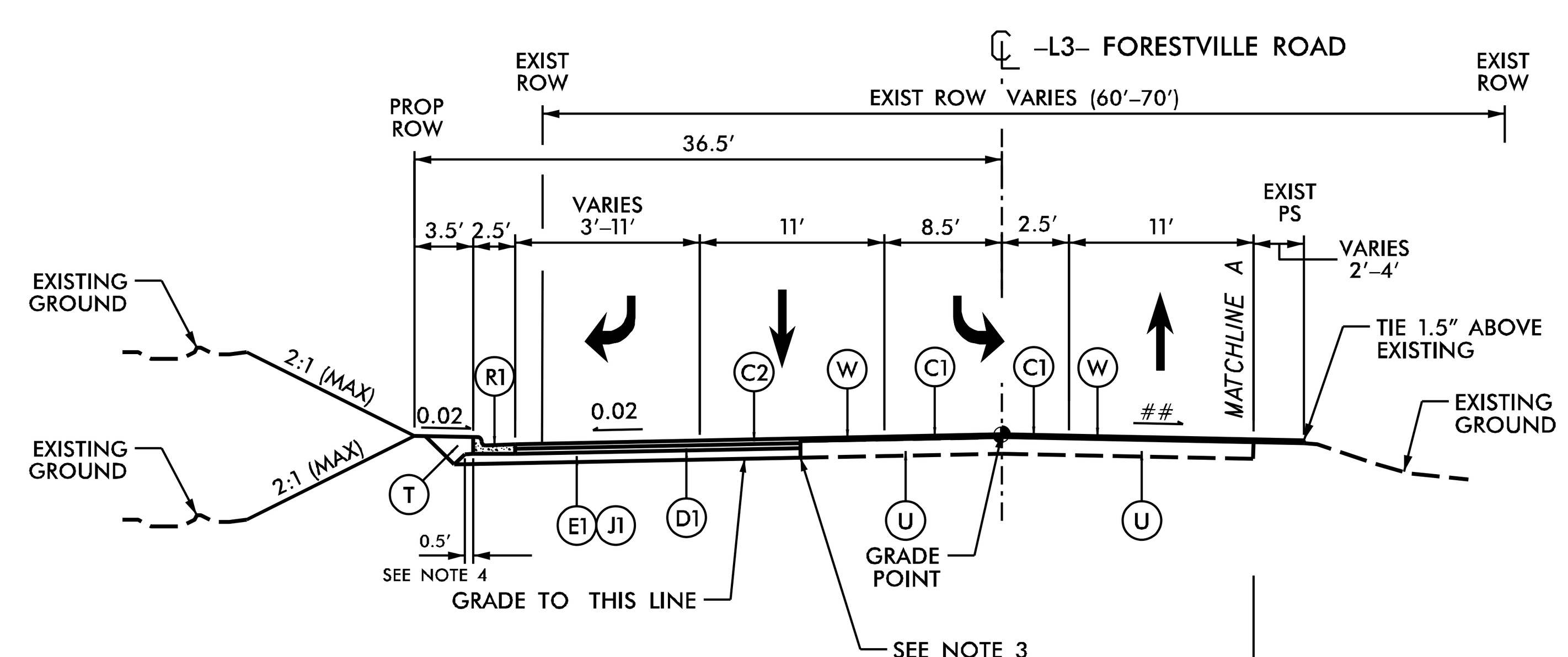
TYPICAL SECTION NO. 1B
STA. 13+10.00 TO 14+84.00
STA. 21+33.34 TO 22+95.00



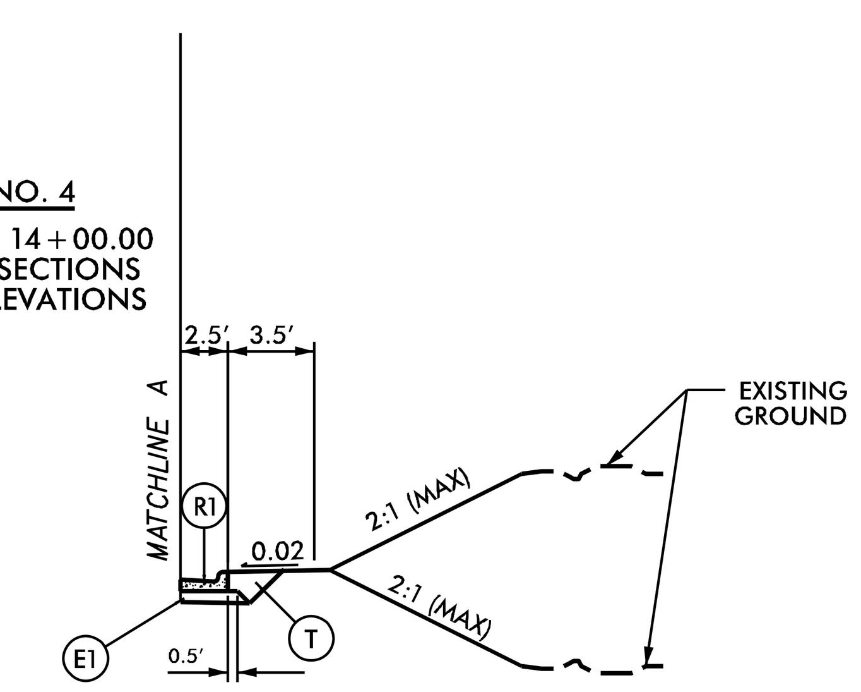
TYPICAL SECTION NO. 2
-L2- STA 19+00.00 TO 23+86.56



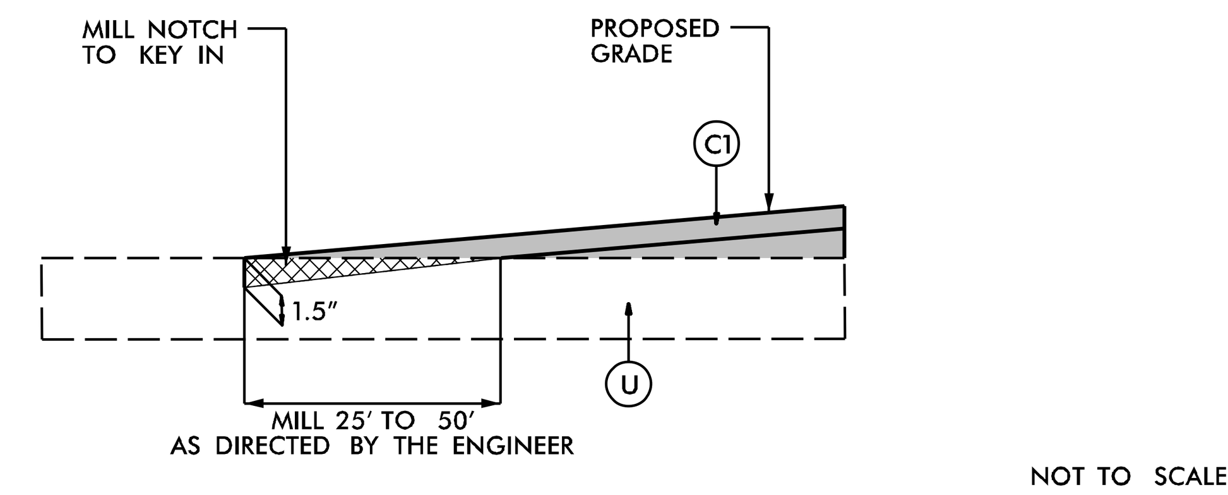
TYPICAL SECTION NO. 3
-L2- STA 23+86.56 TO 25+26.70



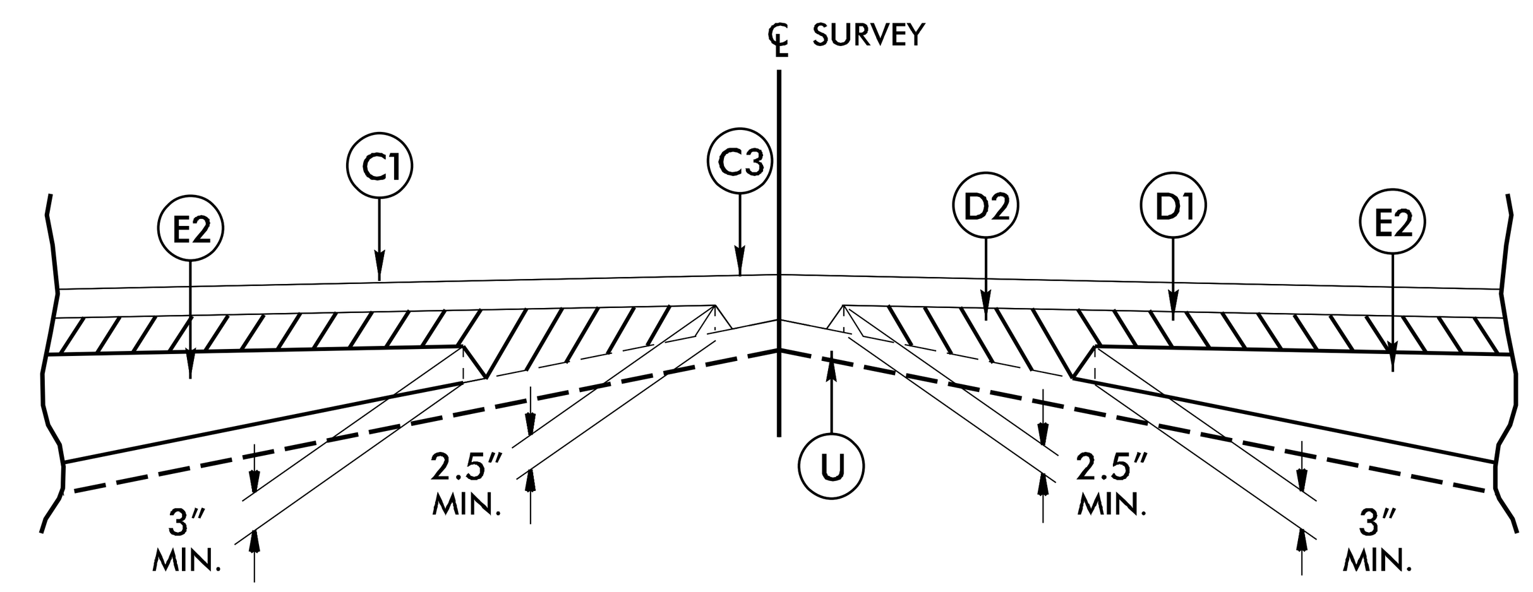
TYPICAL SECTION NO. 4
-L3- STA 10+00.00 TO 14+00.00
REFER TO CROSS SECTIONS FOR MODIFIED SUPERELEVATIONS



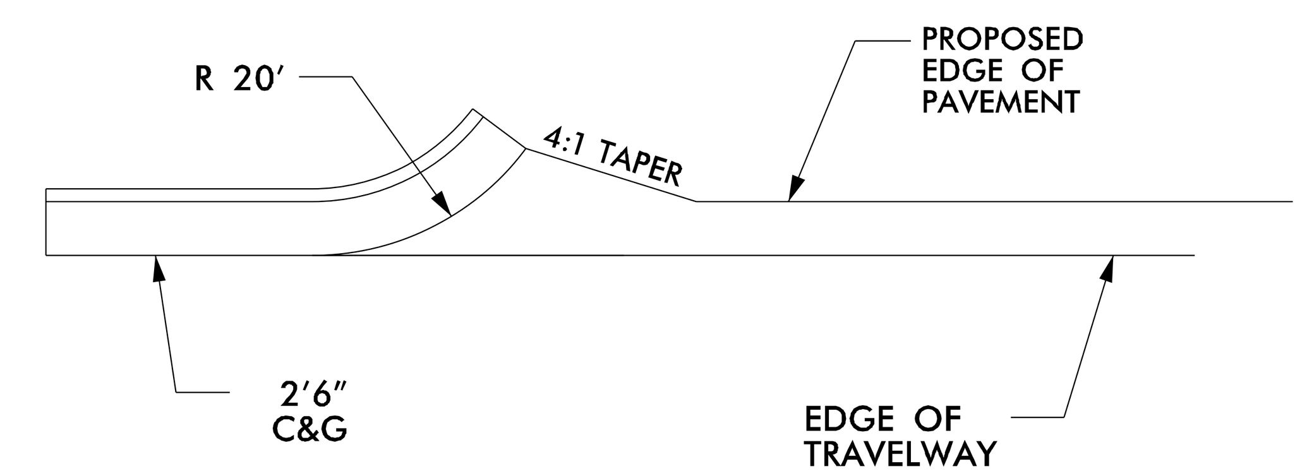
TYPICAL SECTION NO. 4A
STA. 10+50.00 TO 11+33.00



DETAIL 1 - INCIDENTAL MILLING DETAIL



METHOD OF WEDGING



CURB RETURN DETAIL

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
J1	PROP. 10" AGGREGATE BASE COURSE (MAY BE SUBSTITUTED FOR E1 IN AREAS WIDER THAN 6')
R1	PROP. 2'-6" CONCRETE CURB & GUTTER (NCDOT STD. 846.01)
S	PROPOSED 4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING ASPHALT PAVEMENT, 1.5" DEPTH
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL THIS SHEET)

NOTES:
1. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
2. REFER TO PLAN SHEETS FOR VARIABLE WIDTHS.
3. SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT TO PROVIDE 1' MINIMUM FULL DEPTH ASPHALT PAVEMENT.
4. WHEN E1 IS USED, USE 6" FROM BACK OF CURB TO 1:1 EDGE SLOPE. WHEN J1 IS USED, USE 12" FROM BACK OF CURB TO 1:1 EDGE SLOPE.

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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Planning

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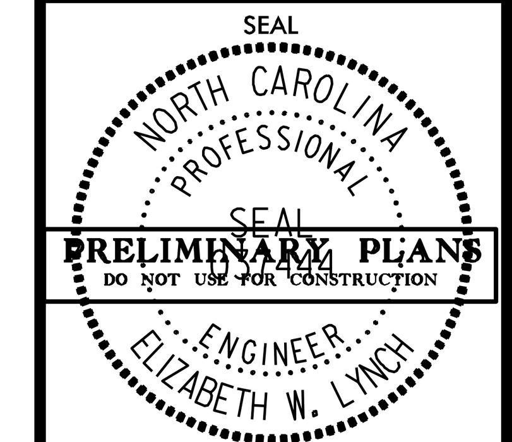
PEARCE FARM ROADWAY IMPROVEMENTS ROLESVILLE, NORTH CAROLINA

TYPICAL SECTIONS

SEAL



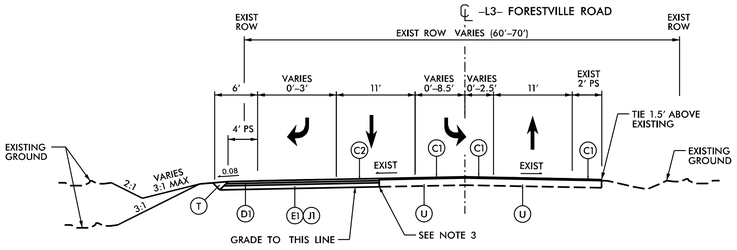
SIGNATURE DATE

DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH

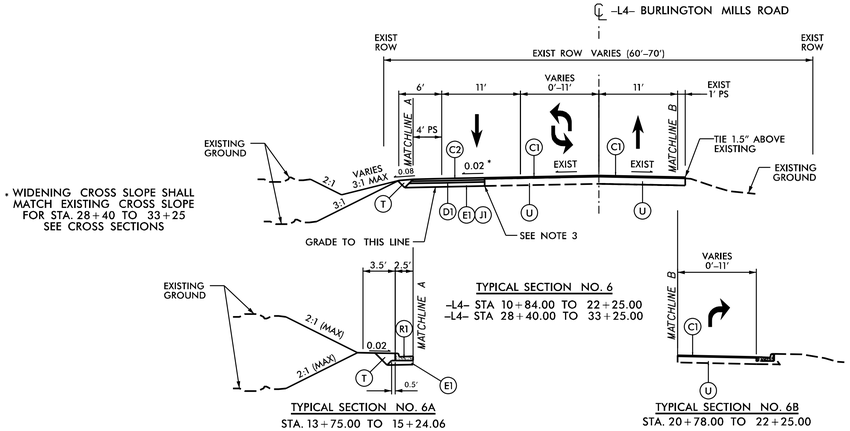
JOB NO.: 00103002
DATE: 102324
SCALE: 1" = 50'

REVISIONS | INIT. | DATE

SHEET NO.
4A



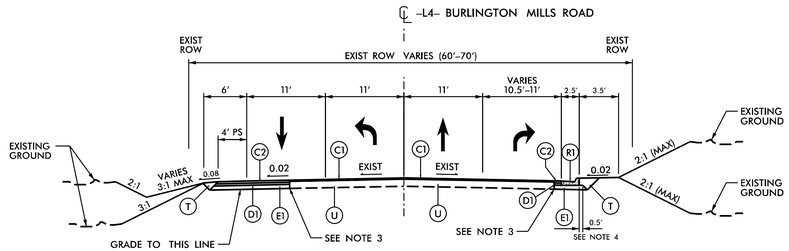
TYPICAL SECTION NO. 5
–L3– STA. 14+00.00 TO 18+52.00



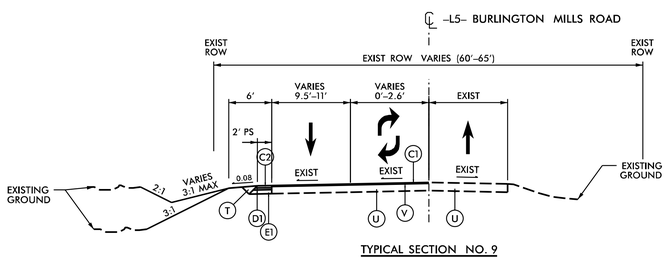
TYPICAL SECTION NO. 6
–L4– STA 10+84.00 TO 22+25.00
–L4– STA 28+40.00 TO 33+25.00

TYPICAL SECTION NO. 6A
STA. 13+75.00 TO 15+24.06

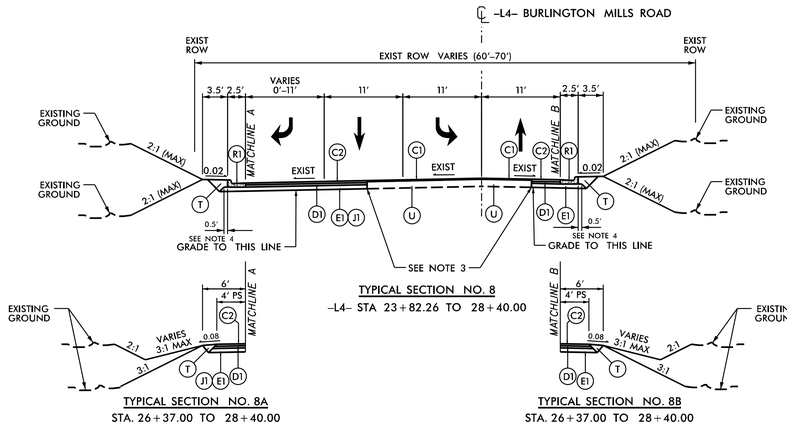
TYPICAL SECTION NO. 6B
STA. 20+78.00 TO 22+25.00



TYPICAL SECTION NO. 7
–L4– STA 22+25.00 TO 23+82.26



TYPICAL SECTION NO. 9
–L5– STA 16+00.00 TO 18+15.00



TYPICAL SECTION NO. 8
–L4– STA 23+82.26 TO 28+40.00

TYPICAL SECTION NO. 8A
STA. 26+37.00 TO 28+40.00

TYPICAL SECTION NO. 8B
STA. 26+37.00 TO 28+40.00

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
J1	PROP. 10" AGGREGATE BASE COURSE (MAY BE SUBSTITUTED FOR E1 IN AREAS WIDER THAN 6')
R1	PROP. 2'-6" CONCRETE CURB & GUTTER (NCDOT STD. 846.01)
S	PROPOSED 4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL SHEET 4A)

NOTES:
1. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
2. REFER TO PLAN SHEETS FOR VARIABLE WIDTHS.
3. SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT TO PROVIDE 1' MINIMUM FULL DEPTH ASPHALT PAVEMENT.
4. WHEN E1 IS USED, USE 6" FROM BACK OF CURB TO 1:1 EDGE SLOPE. WHEN J1 IS USED, USE 12" FROM BACK OF CURB TO 1:1 EDGE SLOPE.

TOWN OF ROLESVILLE:
PSP–23–04

TOWN OF WAKE FOREST:
PSP–XX–XX

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Planning

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www.exultengineering.com
NC License #C-4445

PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

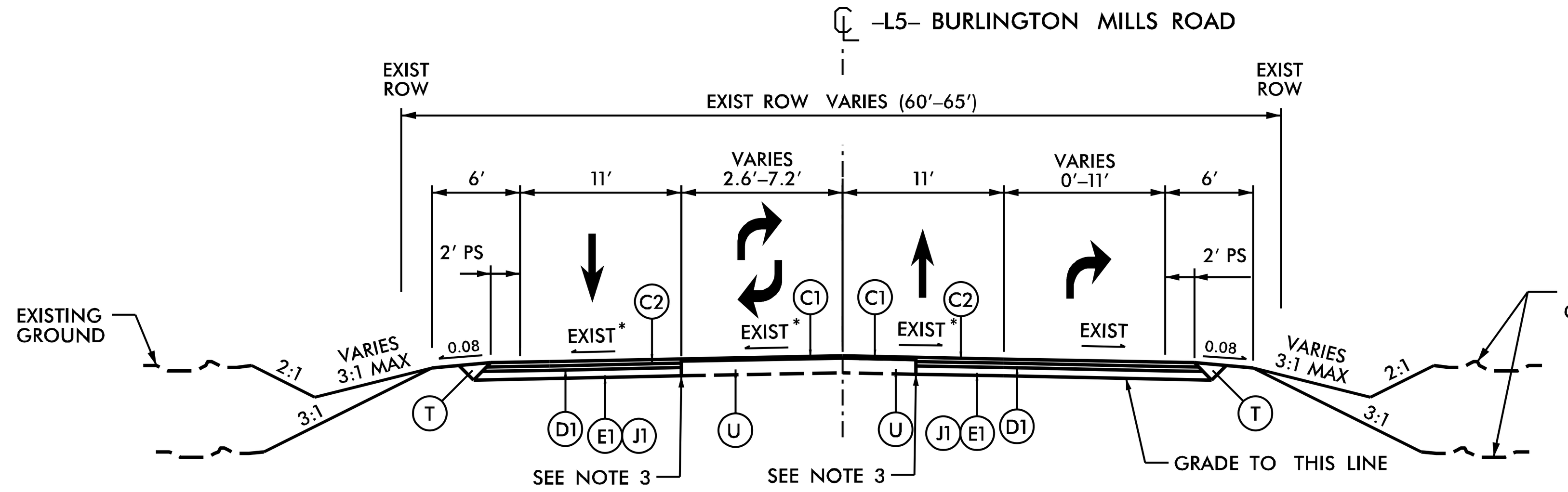
TYPICAL SECTIONS

SEAL
NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH
SIGNATURE DATE

DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH
JOB NO.: 0010302
DATE: 102324
SCALE: 1" = 50'
REVISIONS
INIT: DATE

SHEET NO.
4B

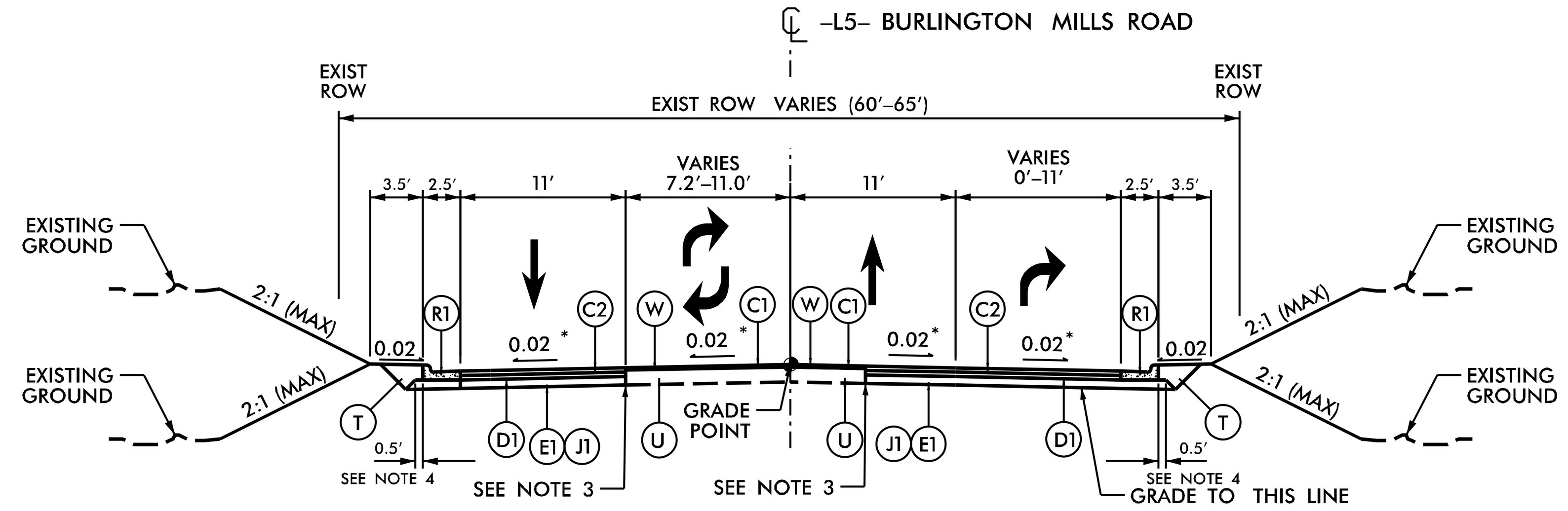
10/28/2024
Z:\Shared\0 Projects_4 Roadway\00\03002 Pearce Farm Roadway and Signal Design\10 CAD\Roadway\Proj\Pearce Farm_rdy_04B typ.dgn



TYPICAL SECTION NO. 10

-L5- STA 18+15.00 TO 22+50.00

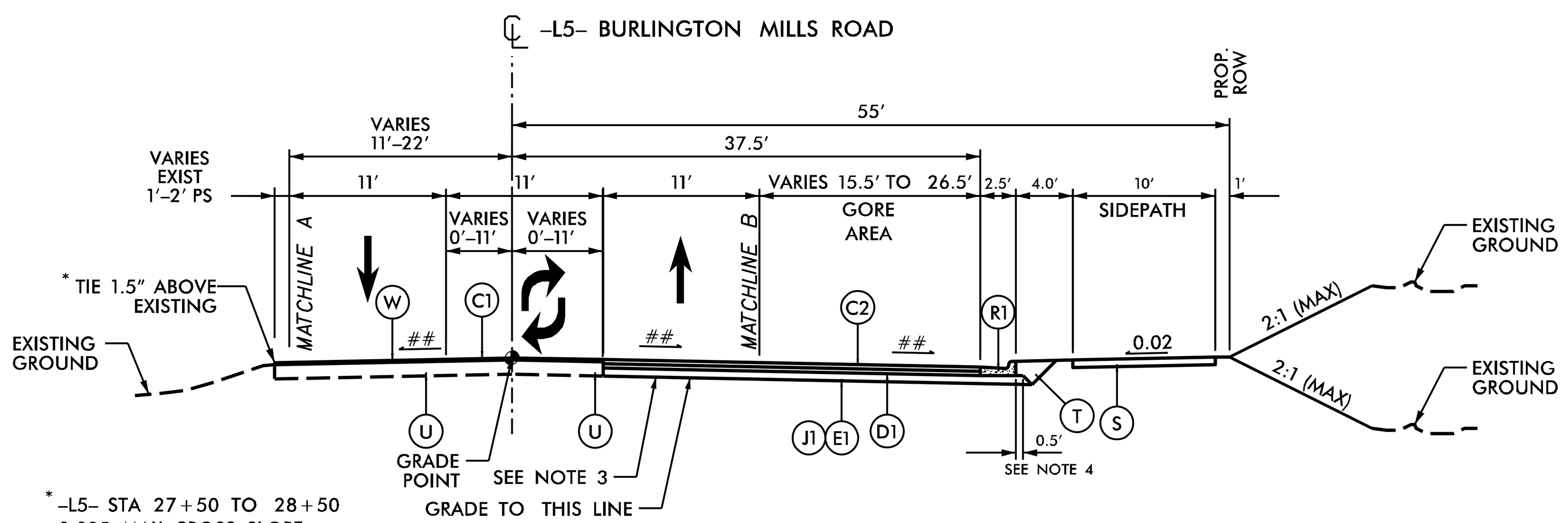
* PROFILE GRADE BEGINS AT -L5- STA 22+05. TRANSITION FROM EXISTING CROSS SLOPE TO 2% BETWEEN STA 22+05 TO 22+65 RT AND 22+05 TO 22+86 LT. SEE CROSS SECTIONS



TYPICAL SECTION NO. 11

-L5- STA 22+50.00 TO 24+40.00

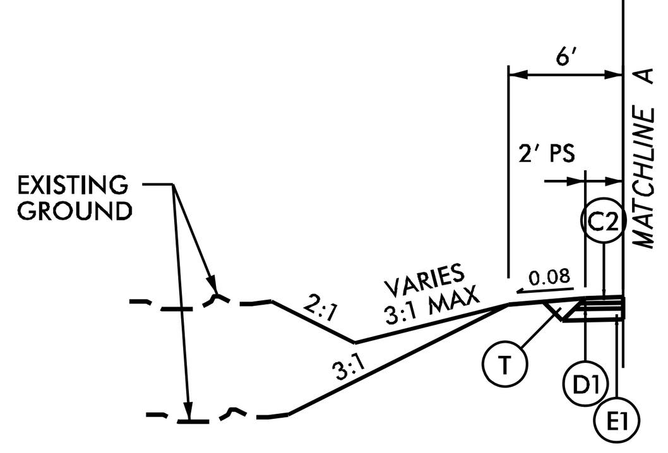
* PROFILE GRADE BEGINS AT -L5- STA 22+05. TRANSITION FROM EXISTING CROSS SLOPE TO 2% BETWEEN STA 22+05 TO 22+65 RT AND 22+05 TO 22+86 LT. SEE CROSS SECTIONS



* -L5- STA 27+50 TO 28+50 0.035 MAX CROSS SLOPE

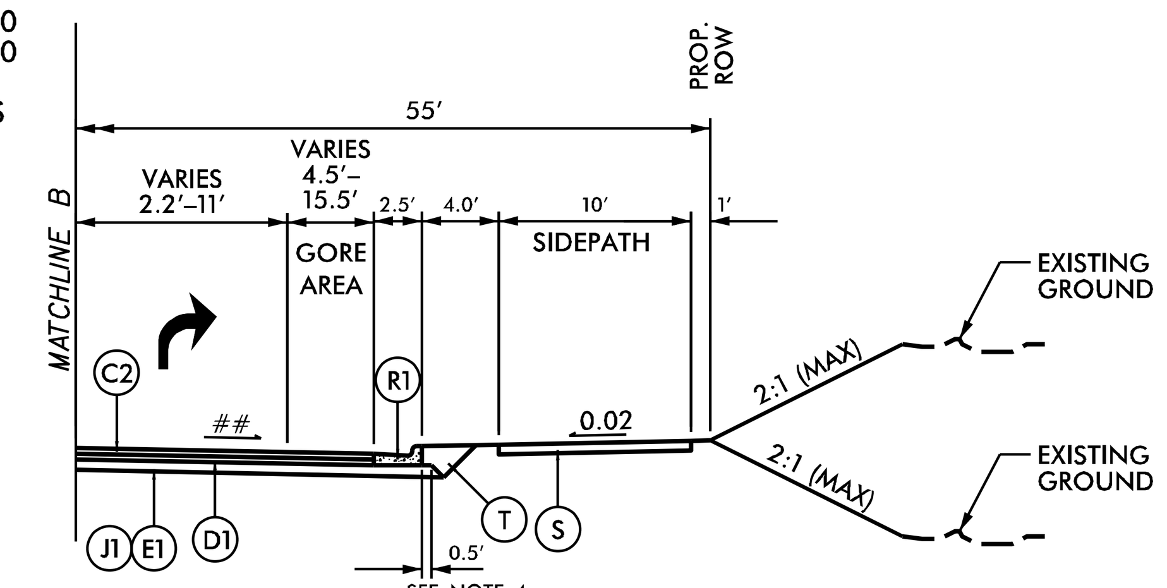
TYPICAL SECTION NO. 12

-L5- STA 24+40.00 TO 32+80.00
-L5- STA 39+55.00 TO 45+20.00
REFER TO CROSS SECTIONS FOR MODIFIED SUPERELEVATIONS



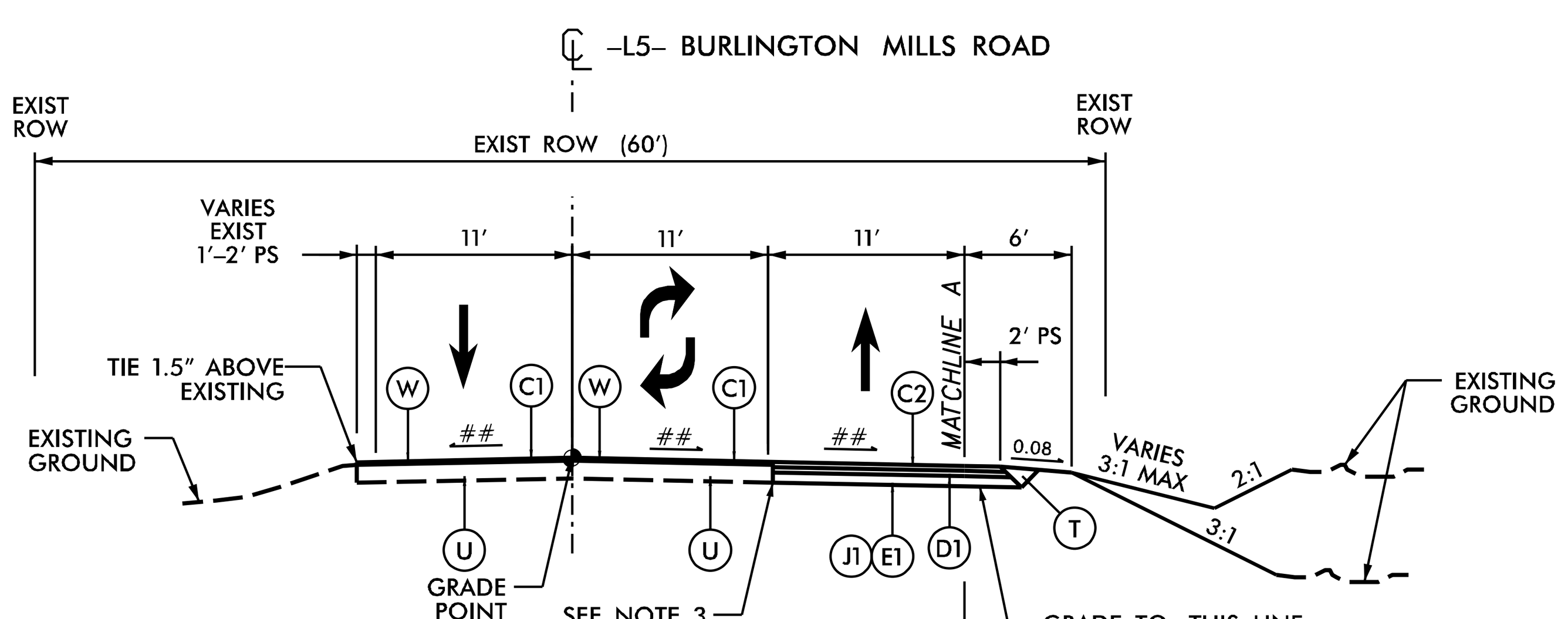
TYPICAL SECTION NO. 12A

STA. 24+40.00 TO 29+90.00



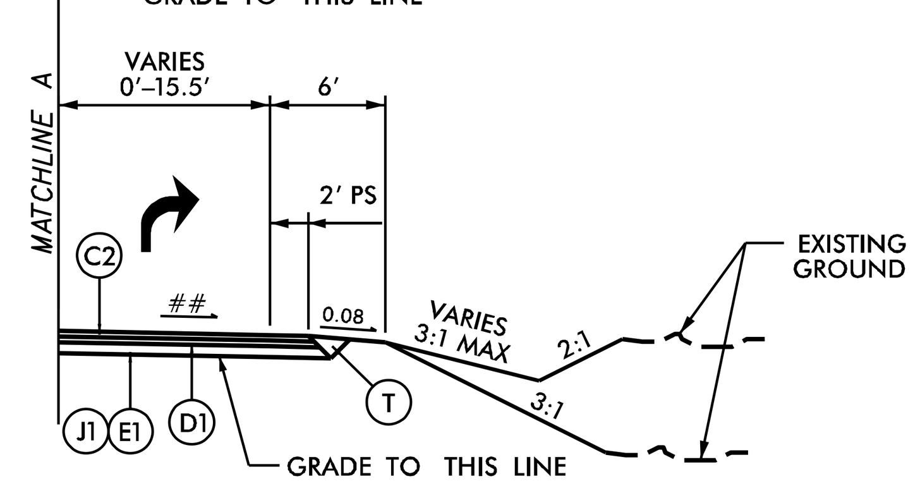
TYPICAL SECTION NO. 12B

STA. 39+55.00 TO 41+35.00



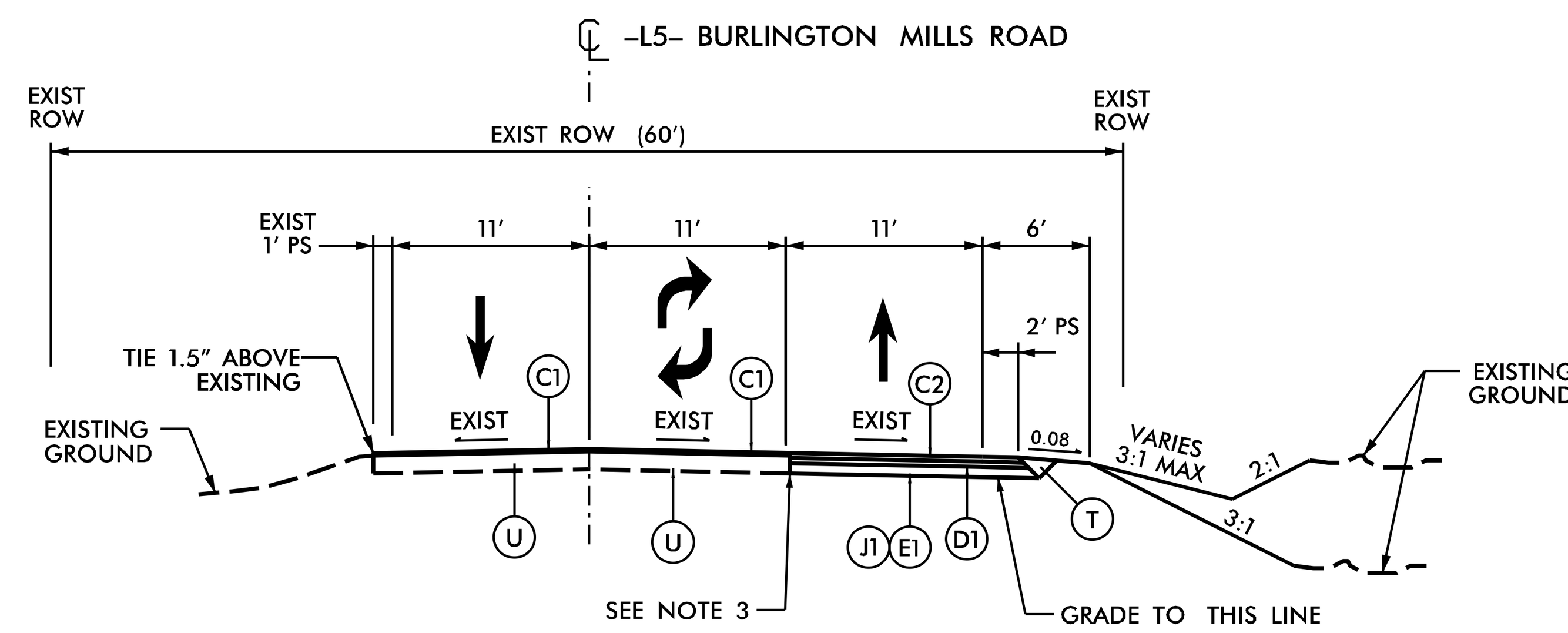
TYPICAL SECTION NO. 14

-L5- STA 37+50.00 TO 39+55.00
REFER TO CROSS SECTIONS FOR MODIFIED SUPERELEVATIONS



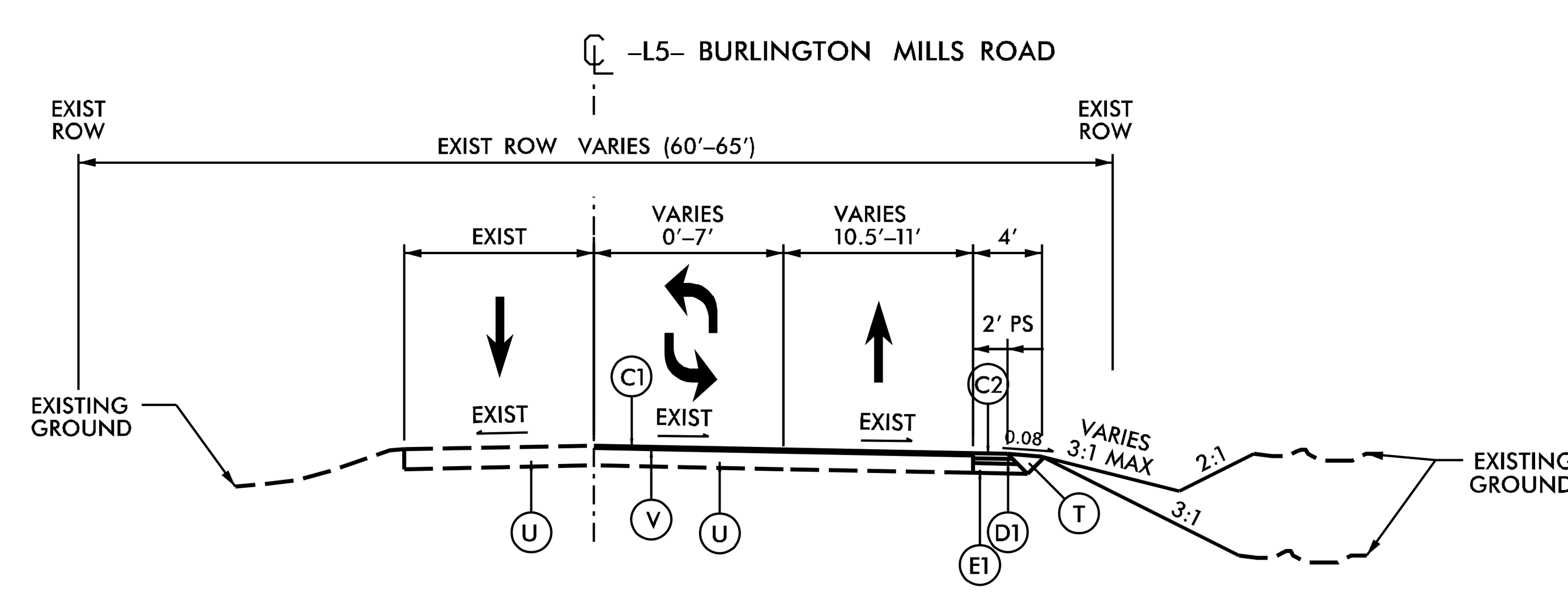
TYPICAL SECTION NO. 14A

STA. 39+35.00 TO 39+55.00



TYPICAL SECTION NO. 13

-L5- STA 32+80.00 TO 37+50.00



TYPICAL SECTION NO. 15

-L5- STA 45+20.00 TO 50+10.00

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
J1	PROP. 10" AGGREGATE BASE COURSE (MAY BE SUBSTITUTED FOR E1 IN AREAS WIDER THAN 6')
R1	PROP. 2'-6" CONCRETE CURB & GUTTER (NCDOT STD. 846.01)
S	PROPOSED 4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING ASPHALT PAVEMENT, 1.5" DEPTH
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL SHEET 4A)

NOTES:
1. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
2. REFER TO PLAN SHEETS FOR VARIABLE WIDTHS.
3. SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT TO PROVIDE 1' MINIMUM FULL DEPTH ASPHALT PAVEMENT.
4. WHEN E1 IS USED, USE 6" FROM BACK OF CURB TO 1:1 EDGE SLOPE. WHEN J1 IS USED, USE 12" FROM BACK OF CURB TO 1:1 EDGE SLOPE.

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

TYPICAL SECTIONS

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL ELIZABETH W. LYNCH
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION
SIGNATURE DATE

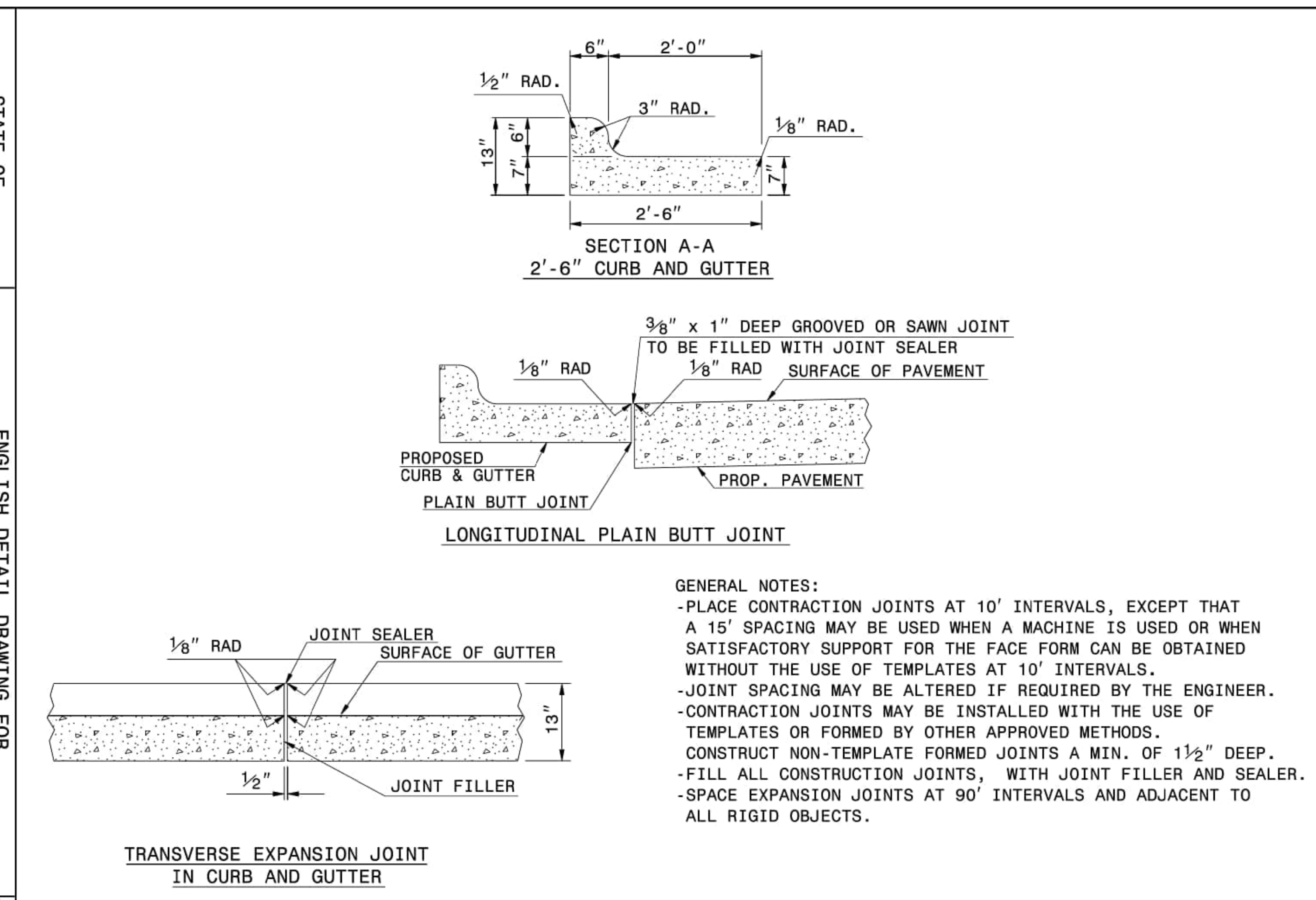
DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 102324
SCALE: 1" = 50'
REVISIONS
INIT.
DATE

SHEET NO.
4C

10/28/2024
Z:\Shared\0 Projects_4 Roadway\00103002 Pearce Farm Roadway and SignalDesign\0 CAD\Roadway\Proj\Pearce Farm_rdy_04C_typ.dgn

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

ENGLISH DETAIL DRAWING FOR
SPECIAL CURB & GUTTER 2'-6"



GENERAL NOTES:

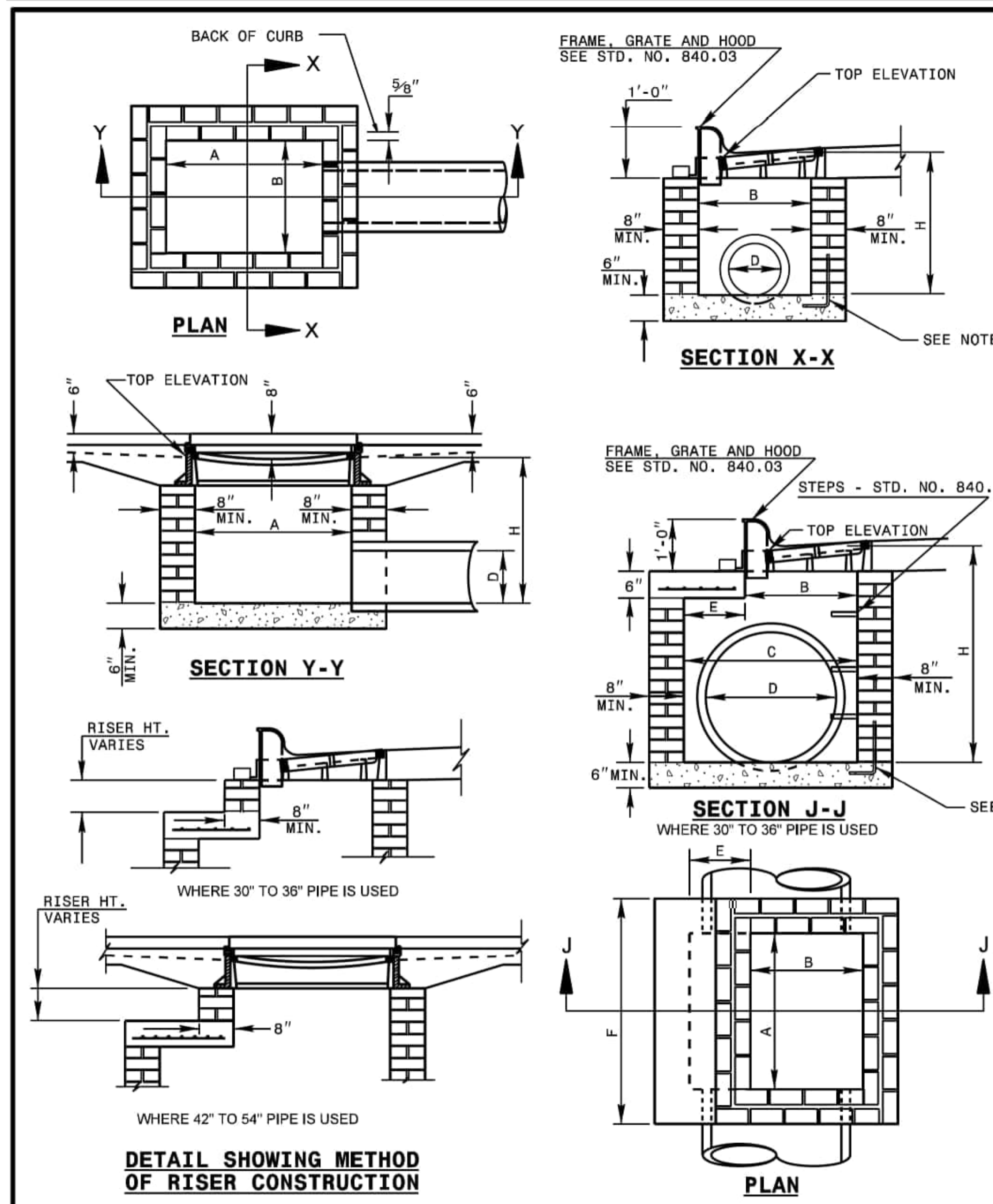
- PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.
- JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.
- CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1½" DEEP.
- FILL ALL CONSTRUCTION JOINTS, WITH JOINT FILLER AND SEALER.
- SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.

SHEET 1 OF 1
846d01

CONTRACT STANDARDS AND DEVELOPMENT UNIT

SEE PLATE FOR TITLE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

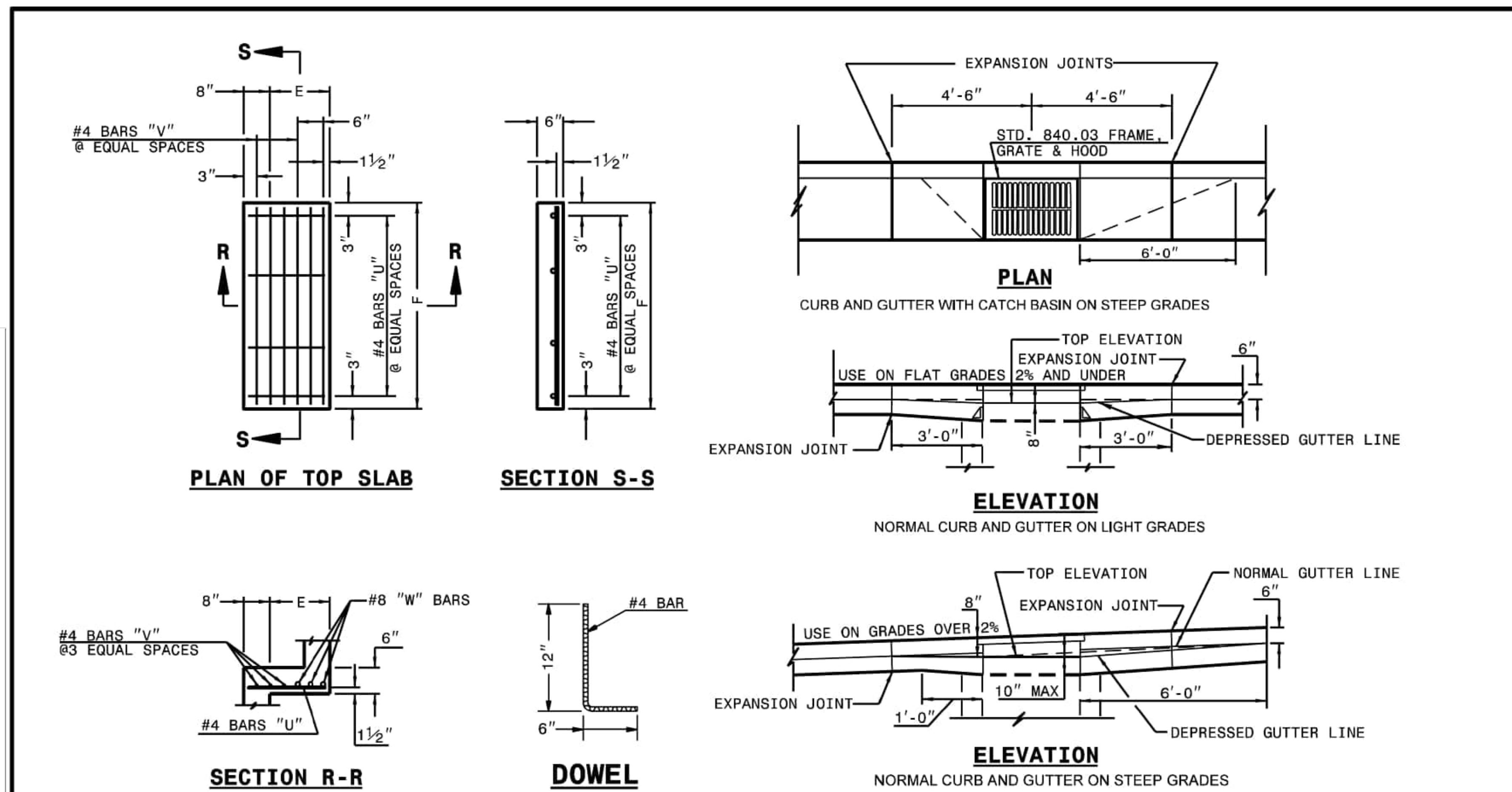


NOTES: MORTAR JOINTS ½" +/- ⅛" THICK.
USE CLASS "B" CONCRETE THROUGHOUT.
USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB.
DEDUCT FOR PIPE(S) FROM TOTAL CU. YDS. OF BRICK MASONRY.
USE #4 BAR DOWELS AT 12" CENTERS FOR ALL PIPE SIZES.
PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.
USE BRICK OR CONCRETE BLOCK WHICH COMPLIES WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
FOR 8'-0" IN HEIGHT OR LESS, USE 8" WALL. OVER 8'-0" IN HEIGHT, USE 12" WALL TO 6'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 6'-0". QUANTITES TO BE ADJUSTED ACCORDINGLY.
MAXIMUN DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12'-0". STD. NO. 840.45 CONTROLS MAXIMUM DEPTH OF PRECAST BOX IF USED.
CONSTRUCT WITH PIPE CROWNS MATCHING.
CHAMFER ALL EXPOSED CORNERS 1".
DRAWING NOT TO SCALE.

1-24
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
BRICK CATCH BASIN
12" THRU 54" PIPE

SHEET 1 OF 2
840.01



MINIMUM DIMENSIONS AND QUANTITIES FOR BRICK CATCH BASIN(BASED ON MIN. HEIGHT, H, WITH NO RISER)*

DIMENSIONS OF BOX AND PIPE						TOP SLAB DIMENSIONS									CU.YDS. CONC. IN BOX			BRICK MASONRY		DEDUCTIONS ONE PIPE	
PIPE	SPAN	WIDTH	WIDTH	SPAN	MIN. HEIGHT			BARS-U		BARS-V		BARS-W		TOTAL LBS.	TOP SLAB	BOTTOM SLAB	TOTAL CONC.	BRICK MSNR. IN WALLS	TOTAL BRICK AND CONCRETE		
D	A	B	C	G	H	E	F	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH							C.M.	R.C.
12"	3'-0"	2'-2"	--	--	2'-9"	--	--	--	--	--	--	--	--	--	--	0.281	0.281	0.883	1.164	0.020	0.042
15"	3'-0"	2'-2"			3'-0"											0.281	0.281	0.963	1.244	0.031	0.047
18"	3'-0"	2'-2"			3'-3"											0.281	0.281	1.043	1.324	0.044	0.065
24"	3'-0"	2'-2"			3'-9"											0.281	0.281	1.204	1.485	0.078	0.121
30"	3'-0"	2'-2"	3'-4"		4'-3"	1'-2"	4'-4"	4	1'-6"	3	4'-1"	3	4'-1"	45	0.147	0.374	0.521	1.606	2.217	0.122	0.184
36"	3'-0"	2'-2"	3'-10"		4'-9"	1'-8"	4'-4"	4	2'-0"	4	4'-1"	3	4'-1"	49	0.187	0.415	0.602	1.914	2.516	0.176	0.261
42"	3'-0"	2'-2"		4'-5"	5'-3"	1'-5"	3'-6"	4	1'-9"	3	3'-3"	3	3'-3"	38	0.135	0.373	0.508	2.152	2.660	0.240	0.371
48"	3'-0"	2'-2"		5'-0"	5'-9"	2'-0"	3'-6"	4	2'-6"	4	3'-3"	3	3'-3"	41	0.173	0.410	0.583	2.415	2.998	0.313	0.477
54"	3'-0"	2'-2"		5'-7"	6'-3"	2'-7"	3'-6"	4	3'-0"	6	3'-3"	3	3'-3"	47	0.211	0.448	0.659	2.806	3.465	0.396	0.595

* RISER HAS .321 CUBIC YARDS OF BRICK MASONRY PER FOOT HEIGHT

1-24
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
BRICK CATCH BASIN
12" THRU 54" PIPE

SHEET 2 OF 2
840.01

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

Electronic Approval: This approval is being issued electronically. This approval is valid upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification of this approval once issued will invalidate this approval.

City of Raleigh Development Approval:

Raleigh Water Review Officer

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Public Works/Engineering

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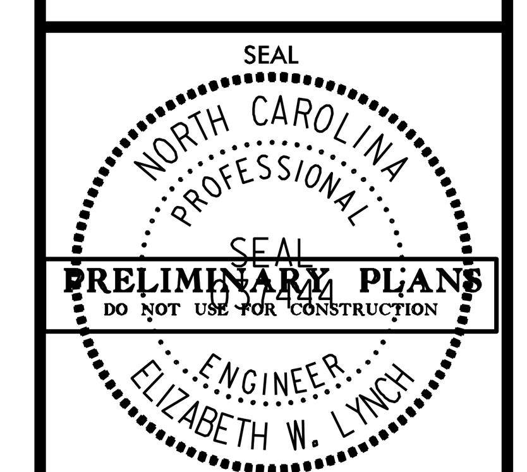
PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

DETAILS

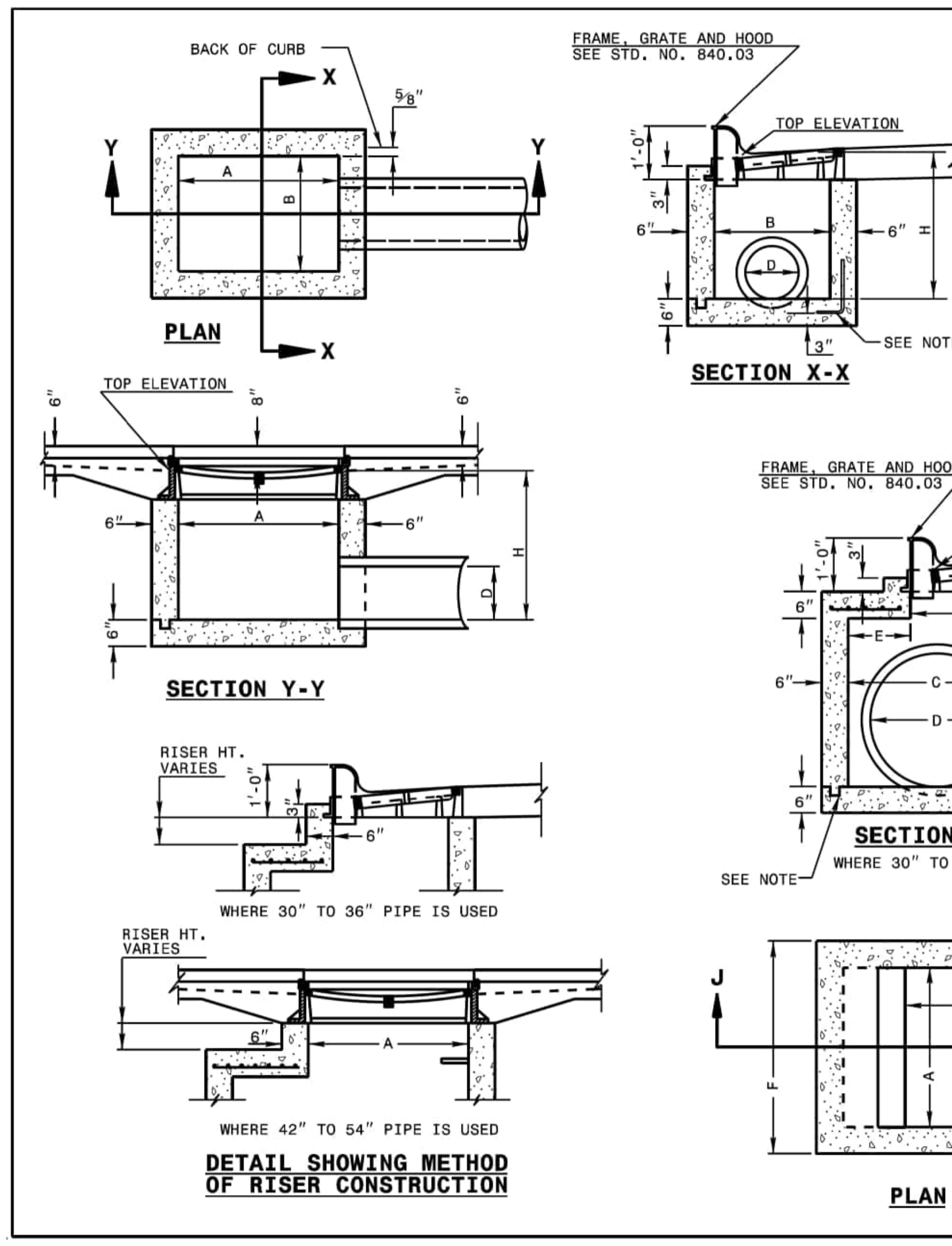
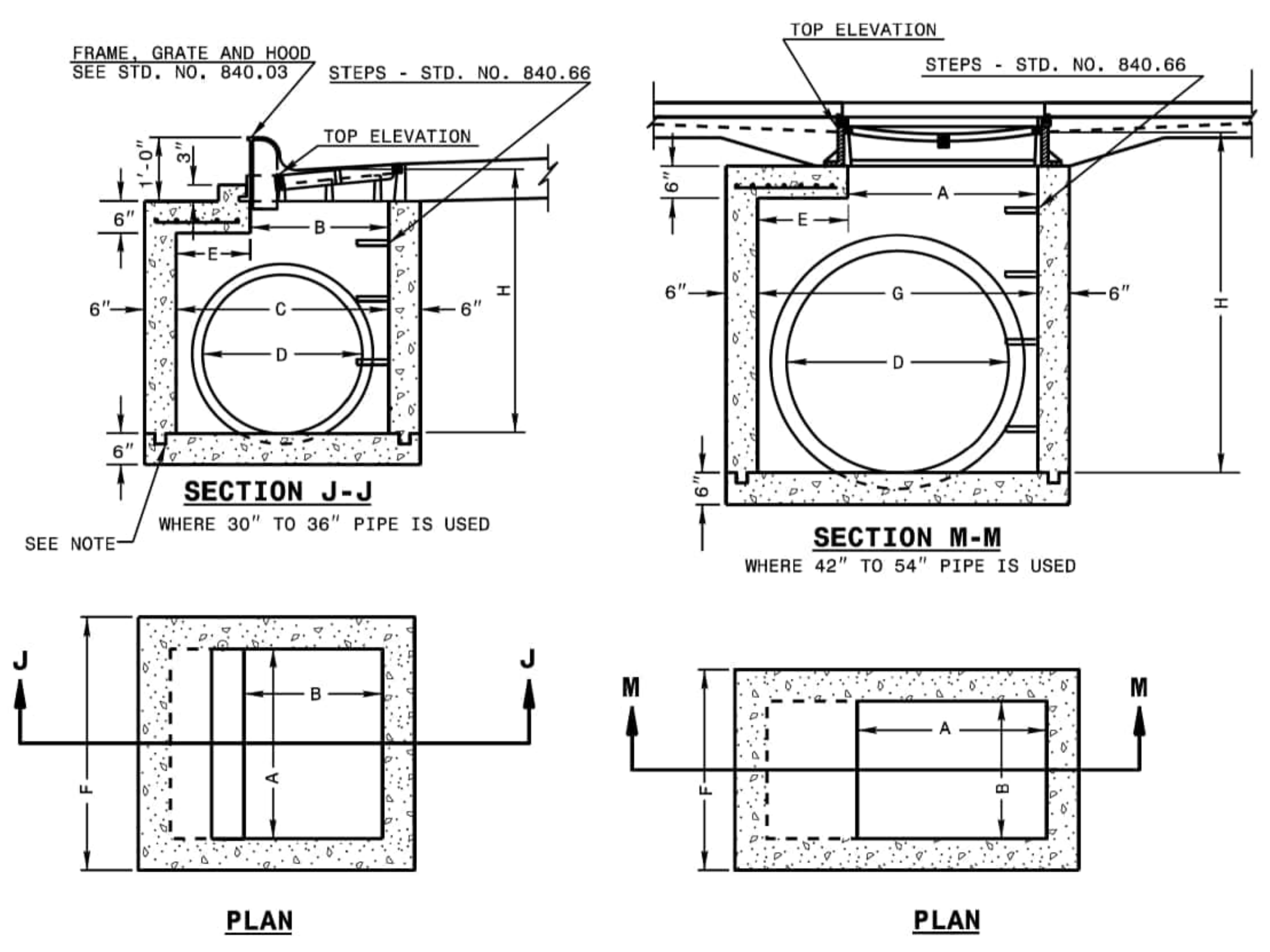
SEAL



SIGNATURE DATE

DESIGNED BY: R. MANK
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 102324
SCALE:
REVISIONS

SHEET NO.
5A

GENERAL NOTES:

USE CLASS "B" CONCRETE THROUGHOUT.

PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.

OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.

IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.

USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.

FOR 8'-0" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB. OVER 8'-0" TO 16'-0" IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.

MAXIMUM DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 16'-0". STD. NO. 840.45 CONTROLS MAXIMUM DEPTH IF PRECAST BOX IS USED.

CONSTRUCT WITH PIPE CROWNS MATCHING.

CHAMFER ALL EXPOSED CORNERS 1".

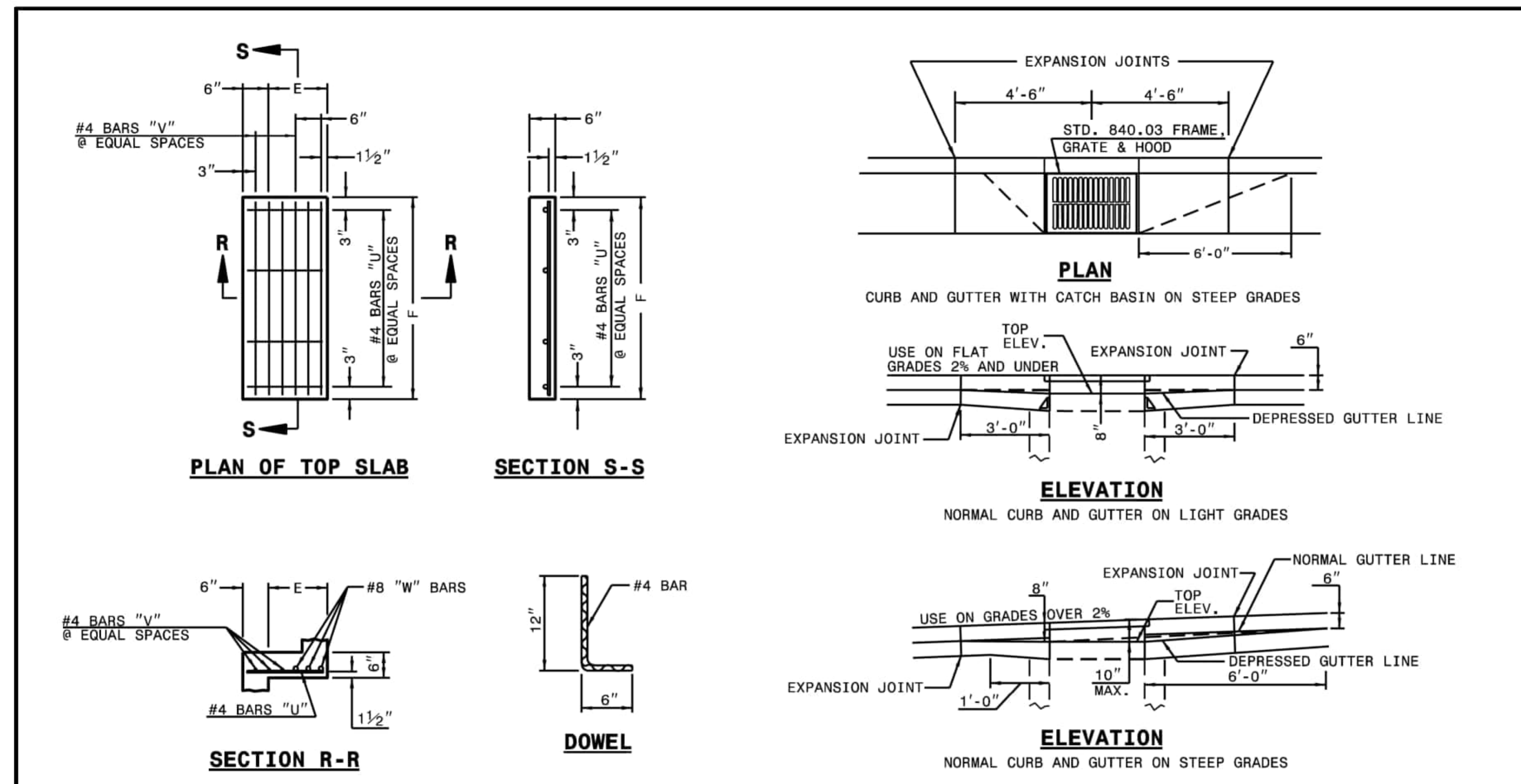
DRAWING NOT TO SCALE.

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

1-24

ROADWAY STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE

SHEET 1 OF 2
840.02



MINIMUM DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN(BASED ON MIN. HEIGHT, H, WITH NO RISER) *

DIMENSIONS OF BOX AND PIPE						COVER DIMENSION		BARS-U		BARS-V		BARS-W		TOTAL LBS.	CU.YDS. CONC. IN BOX			DEDUCTIONS ONE PIPE	
PIPE D	SPAN A	WIDTH B	WIDTH C	SPAN G	MIN. HEIGHT H	E	F	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH		TOP SLAB	BOTTOM SLAB	TOT. CONC. FOR MINIMUM HEIGHT, H	C.M.	R.C.
12"	3'-0"	2'-2"	--	--	2'-9"	--	--	--	--	--	--	--	--	--	--	0.235	0.772	0.015	0.026
15"	3'-0"	2'-2"			3'-0"											0.235	0.829	0.023	0.036
18"	3'-0"	2'-2"			3'-3"											0.235	0.887	0.033	0.049
24"	3'-0"	2'-2"			3'-9"											0.235	1.001	0.059	0.085
30"	3'-0"	2'-2"	3'-4"		4'-3"	1'-2"	4'-0"	4	1'-5"	2	3'-9"	3	3'-9"	39	0.123	0.321	1.433	0.092	0.127
36"	3'-0"	2'-2"	3'-10"		4'-9"	1'-8"	4'-0"	4	1'-11"	3	3'-9"	3	3'-9"	43	0.161	0.358	1.714	0.132	0.178
42"	3'-0"	2'-2"		4'-5"	5'-3"	1'-5"	3'-2"	4	1'-8"	2	2'-11"	3	2'-11"	32	0.112	0.318	1.738	0.180	0.243
48"	3'-0"	2'-2"		5'-0"	5'-9"	2'-0"	3'-2"	4	2'-3"	3	2'-11"	3	2'-11"	35	0.145	0.352	2.052	0.235	0.317
54"	3'-0"	2'-2"		5'-7"	6'-3"	2'-7"	3'-2"	4	2'-10"	5	2'-11"	3	2'-11"	41	0.180	0.386	2.387	0.297	0.401

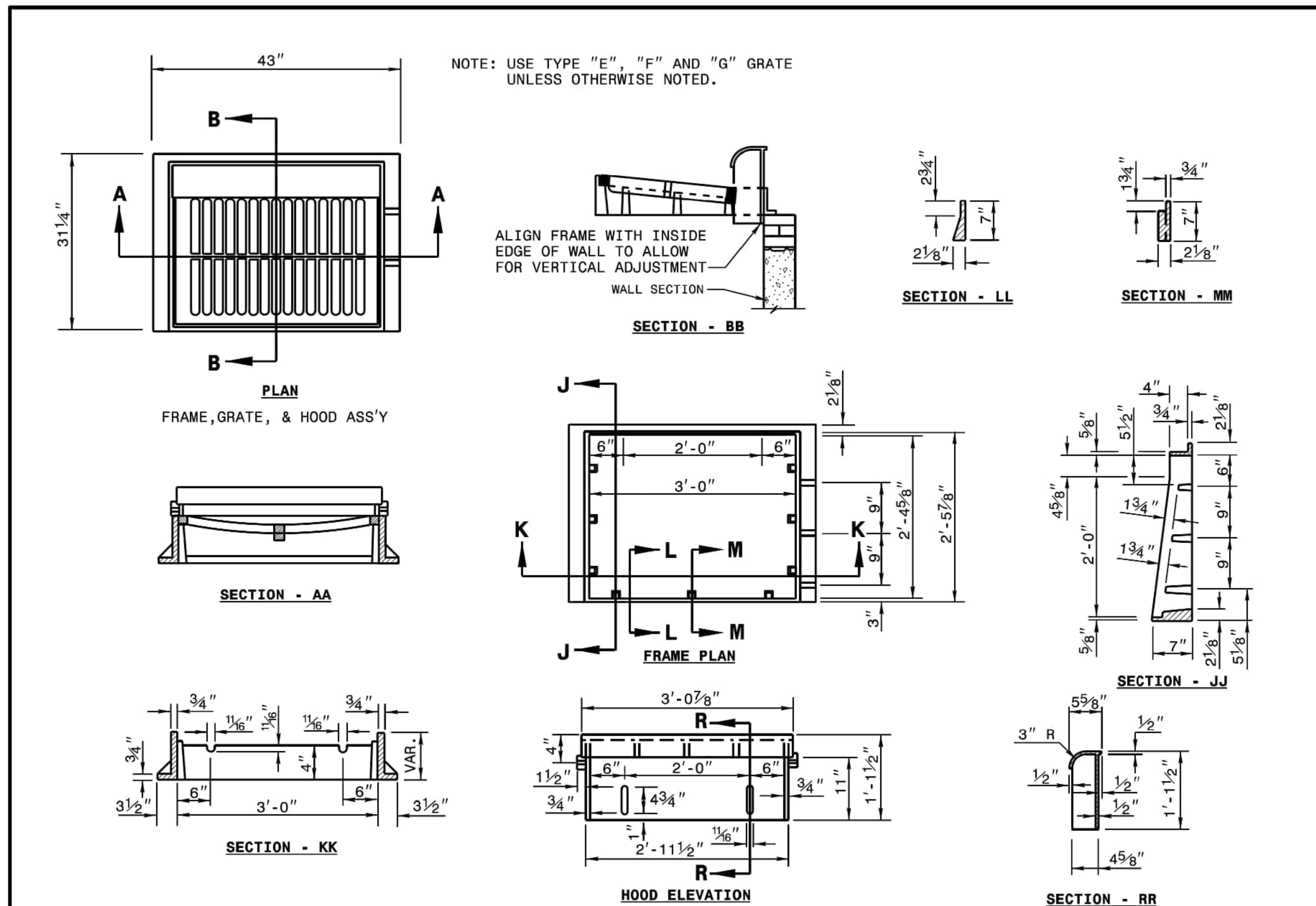
* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

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

1-24

ROADWAY STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE

SHEET 2 OF 2
840.02

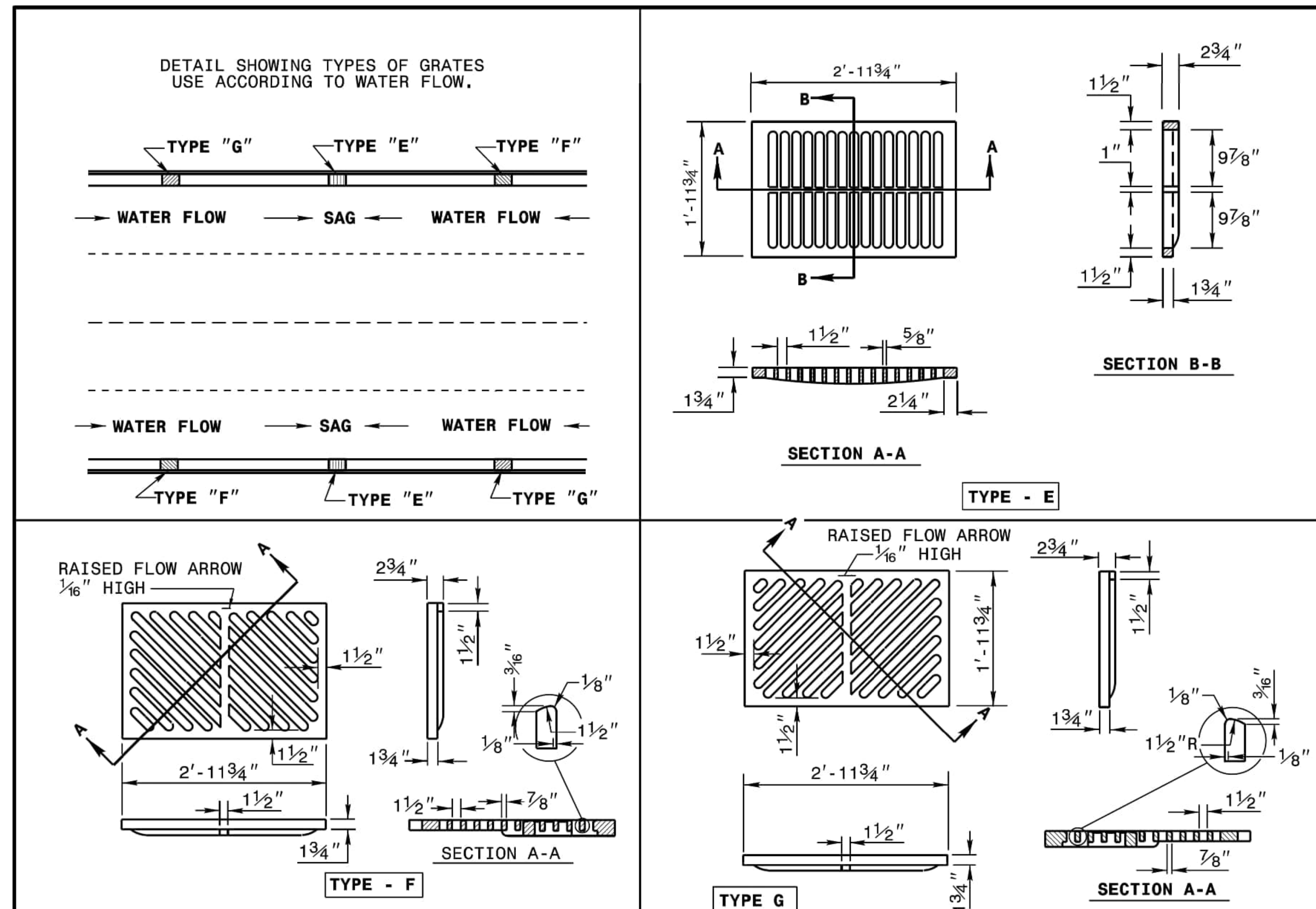


STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

ROADWAY STANDARD DRAWING FOR
FRAME, GRATES, AND HOOD
FOR USE ON STANDARD CATCH BASIN

SHEET 1 OF 2
840.03



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

1-24

ROADWAY STANDARD DRAWING FOR
FRAME, GRATES, AND HOOD
FOR USE ON STANDARD CATCH BASIN

SHEET 2 OF 2
840.03

TOWN OF ROLESVILLE:
PSP–23–04

TOWN OF WAKE FOREST:
PSP–XX–XX

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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Planning

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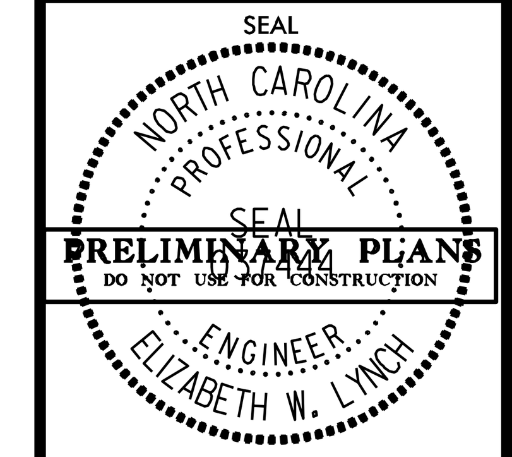
PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

DETAILS

SEAL



SIGNATURE DATE

DESIGNED BY: R. MANK
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 102324
SCALE:
REVISIONS
INIT. DATE

SHEET NO.
5B

10/25/2024
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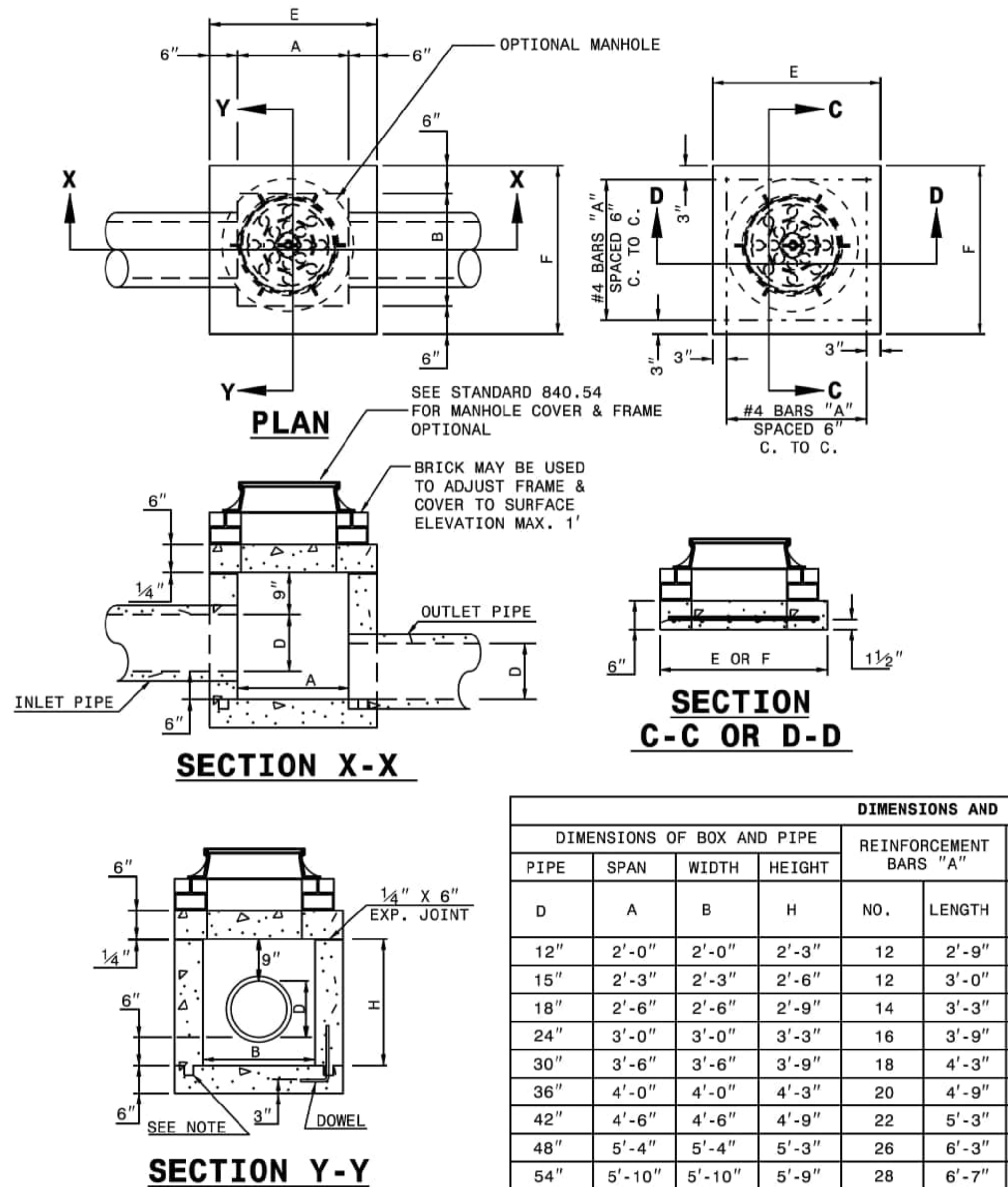
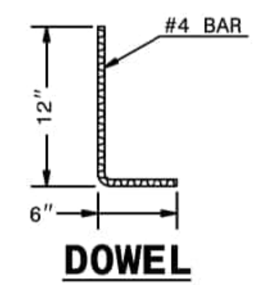




GENERAL NOTES:

CHAMFER ALL EXPOSED CORNERS 1".

USE CLASS "B" CONCRETE THROUGHOUT.

OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

USE FORMS TO CONSTRUCT THE BOTTOM SLAB.

IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN ON STANDARD NO. 840.00.

PROVIDE ALL JUNCTION BOXES OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTERS IN ACCORDANCE WITH STD. NO. 840.66.

ADJUST THE STEEL, CONCRETE AND BRICK MASONRY QUANTITIES TO INCLUDE THE ADDITION OF THE MANHOLE (I.E. DIAGONAL BARS SHORTENED AROUND OPENING IN TOP SLAB, ADDITIONAL VARIABLE HEIGHT BRICK MASONRY, OPENING IN TOP SLAB.)

MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12'-0". STANDARD DRAWING 840.45 OR 840.46 CONTROLS MAXIMUM DEPTH IF PRECAST BOX IS USED.

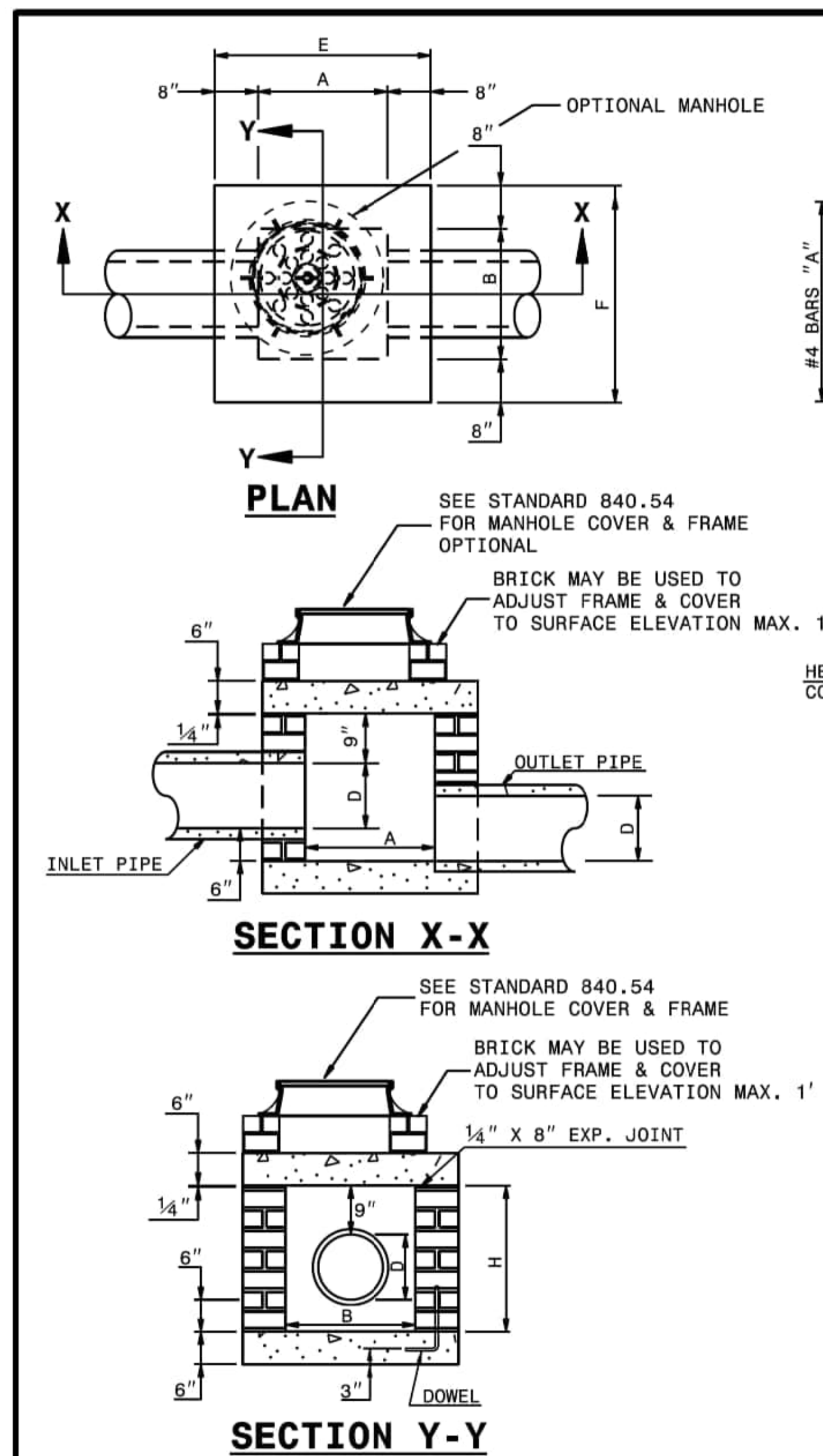
DIMENSIONS AND QUANTITIES FOR CONCRETE JUNCTION BOXES

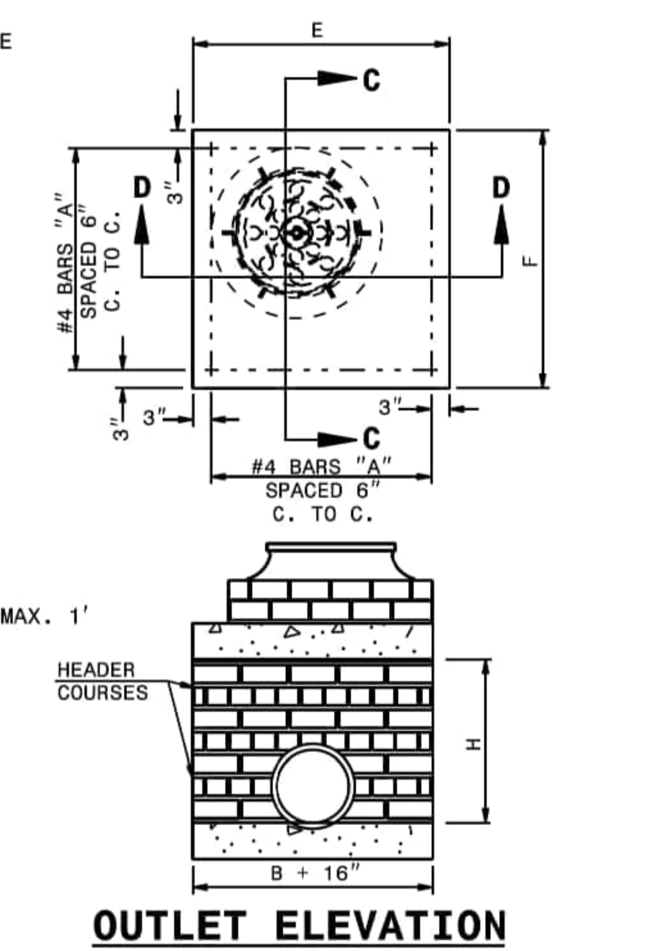
DIMENSIONS OF BOX AND PIPE				REINFORCEMENT BARS "A"		TOP SLAB DIMENSIONS		CUBIC YARDS IN BOX			TOTAL QUANTITIES BOX AND SLABS		DEDUCTIONS FOR ONE PIPE CU.YDS.	
PIPE	SPAN	WIDTH	HEIGHT											
D	A	B	H	NO.	LENGTH	E	F	TOP SLAB	BOTTOM SLAB	WALL/ FT. OF HT.	LBS. REINF	CU. YDS. MIN. "H"	C.S.	R.C.
12"	2'-0"	2'-0"	2'-3"	12	2'-9"	3'-0"	3'-0"	0.167	0.167	0.185	22	0.750	0.015	0.024
15"	2'-3"	2'-3"	2'-6"	12	3'-0"	3'-3"	3'-3"	0.196	0.196	0.204	24	0.902	0.023	0.036
18"	2'-6"	2'-6"	2'-9"	14	3'-3"	3'-6"	3'-6"	0.227	0.227	0.222	30	1.065	0.033	0.049
24"	3'-0"	3'-0"	3'-3"	16	3'-9"	4'-0"	4'-0"	0.296	0.296	0.259	40	1.434	0.059	0.085
30"	3'-6"	3'-6"	3'-9"	18	4'-3"	4'-6"	4'-6"	0.375	0.375	0.296	51	1.860	0.092	0.127
36"	4'-0"	4'-0"	4'-3"	20	4'-9"	5'-0"	5'-0"	0.463	0.463	0.333	64	2.341	0.132	0.178
42"	4'-6"	4'-6"	4'-9"	22	5'-3"	5'-6"	5'-6"	0.560	0.560	0.370	77	2.878	0.180	0.243
48"	5'-4"	5'-4"	5'-3"	26	6'-3"	6'-4"	6'-4"	0.743	0.743	0.407	111	3.623	0.235	0.317
54"	5'-10"	5'-10"	5'-9"	28	6'-7"	6'-10"	6'-10"	0.865	0.865	0.444	126	4.283	0.297	0.401
60"	6'-6"	6'-6"	6'-3"	30	7'-3"	7'-6"	7'-6"	1.042	1.042	0.481	145	5.090	0.367	0.495
66"	7'-1"	7'-1"	6'-9"	32	7'-10"	8'-1"	8'-1"	1.210	1.210	0.518	169	5.917	0.444	0.589

1-24
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CONCRETE JUNCTION BOX
12" THRU 66" PIPE

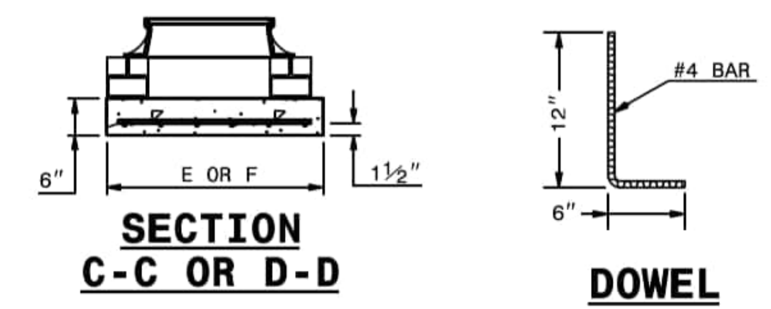
SHEET 1 OF 1
840.31





GENERAL NOTES:

CHAMFER ALL EXPOSED CORNERS 1".
USE CLASS "B" CONCRETE THROUGHOUT.
USE #4 BAR DOWELS AT 12" CENTERS.
MORTAR JOINTS ½" ± ⅛" THICK.
CONCAVE TOO ALL EXPOSED JOINTS.
USE FORMS TO CONSTRUCT THE BOTTOM SLAB.
JUMBO BRICK WILL BE PERMITTED. CONCRETE BRICK OR 4" SOLID CONCRETE BLOCKS MAY BE USED IN LIEU OF CLAY BRICK.
FOR 8'-0" IN HEIGHT OR LESS, USE 8" WALL. OVER 8'-0" IN HEIGHT, USE 12" WALL TO 6'-0" FROM TOP OF WALL, AND 8" WALL FOR THE REMAINING 6'-0". ADJUST DIMENSIONS AND QUANTITIES ACCORDINGLY.
IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN ON STANDARD NO. 840.00.
PROVIDE ALL JUNCTION BOXES OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTERS IN ACCORDANCE WITH STD. NO. 840.66.
ADJUST THE STEEL, CONCRETE AND BRICK MASONRY QUANTITIES TO INCLUDE THE ADDITION OF THE MANHOLE (I.E. DIAGONAL BARS SHORTENED AROUND OPENING IN TOP SLAB, ADDITIONAL VARIABLE HEIGHT BRICK MASONRY, OPENING IN TOP SLAB.)
MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12'-0". STANDARD DRAWING 840.45 OR 840.46 CONTROLS MAXIMUM DEPTH IF PRECAST BOX IS USED.



DIMENSIONS AND QUANTITIES FOR BRICK JUNCTION BOXES

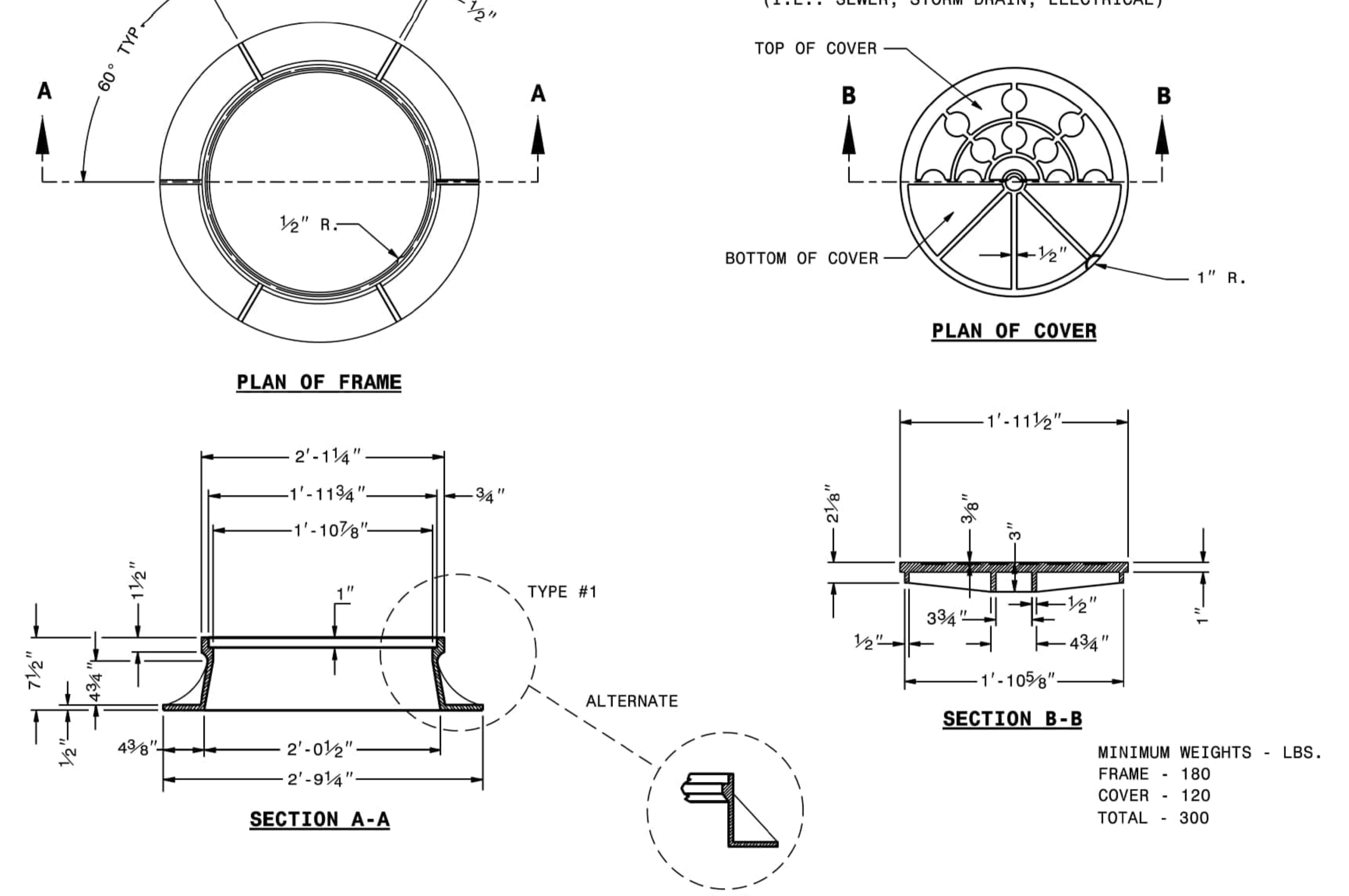
DIMENSIONS OF BOX AND PIPE				REINFORCEMENT BARS		TOP SLAB DIMENSIONS		CUBIC YARDS			DEDUCTIONS FOR ONE PIPE CU.YDS.	
PIPE	SPAN	WIDTH	HEIGHT					CONC.	BRICK MASONRY			
D	A	B	H	NO.	LENGTH	E	F	TOP & BOTTOM CU. YD.	MIN. HEIGHT CU. YD.	WALL PER FT. HT. CU. YD.	C.S.	R.C.
12"	2'-0"	2'-0"	2'-3"	12	3'-1"	3'-4"	3'-4"	0.412	0.591	0.263	0.020	0.032
15"	2'-0"	2'-0"	2'-6"	12	3'-1"	3'-4"	3'-4"	0.412	0.657	0.263	0.031	0.047
18"	2'-4"	2'-4"	2'-9"	14	3'-5"	3'-8"	3'-8"	0.498	0.814	0.296	0.044	0.065
24"	3'-0"	3'-0"	3'-3"	16	4'-1"	4'-4"	4'-4"	0.695	1.176	0.362	0.078	0.113
30"	3'-4"	3'-4"	3'-9"	16	4'-5"	4'-8"	4'-8"	0.807	1.481	0.395	0.122	0.170
36"	4'-0"	4'-0"	4'-3"	20	5'-1"	5'-4"	5'-4"	1.053	1.959	0.461	0.176	0.238
42"	4'-8"	4'-8"	4'-9"	22	5'-9"	6'-0"	6'-0"	1.333	2.503	0.527	0.240	0.323
48"	5'-4"	5'-4"	5'-3"	26	6'-5"	6'-8"	6'-8"	1.646	2.940	0.560	0.313	0.422
54"	5'-10"	5'-10"	5'-9"	28	6'-11"	7'-2"	7'-2"	1.902	3.502	0.609	0.396	0.535
60"	6'-6"	6'-6"	6'-3"	30	7'-7"	7'-10"	7'-10"	2.272	4.113	0.658	0.489	0.660
66"	7'-1"	7'-1"	6'-9"	32	8'-2"	8'-5"	8'-5"	2.624	4.778	0.708	0.591	0.798

1-24
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
BRICK JUNCTION BOX
12" THRU 66" PIPE

SHEET 1 OF 1
840.32

SOLID COVER SHOWN PERFORATED. PERFORATED AVAILABLE IF SPECIFIED.
STATE USE OF SYSTEM ON COVER
(I.E.: SEWER, STORM DRAIN, ELECTRICAL)

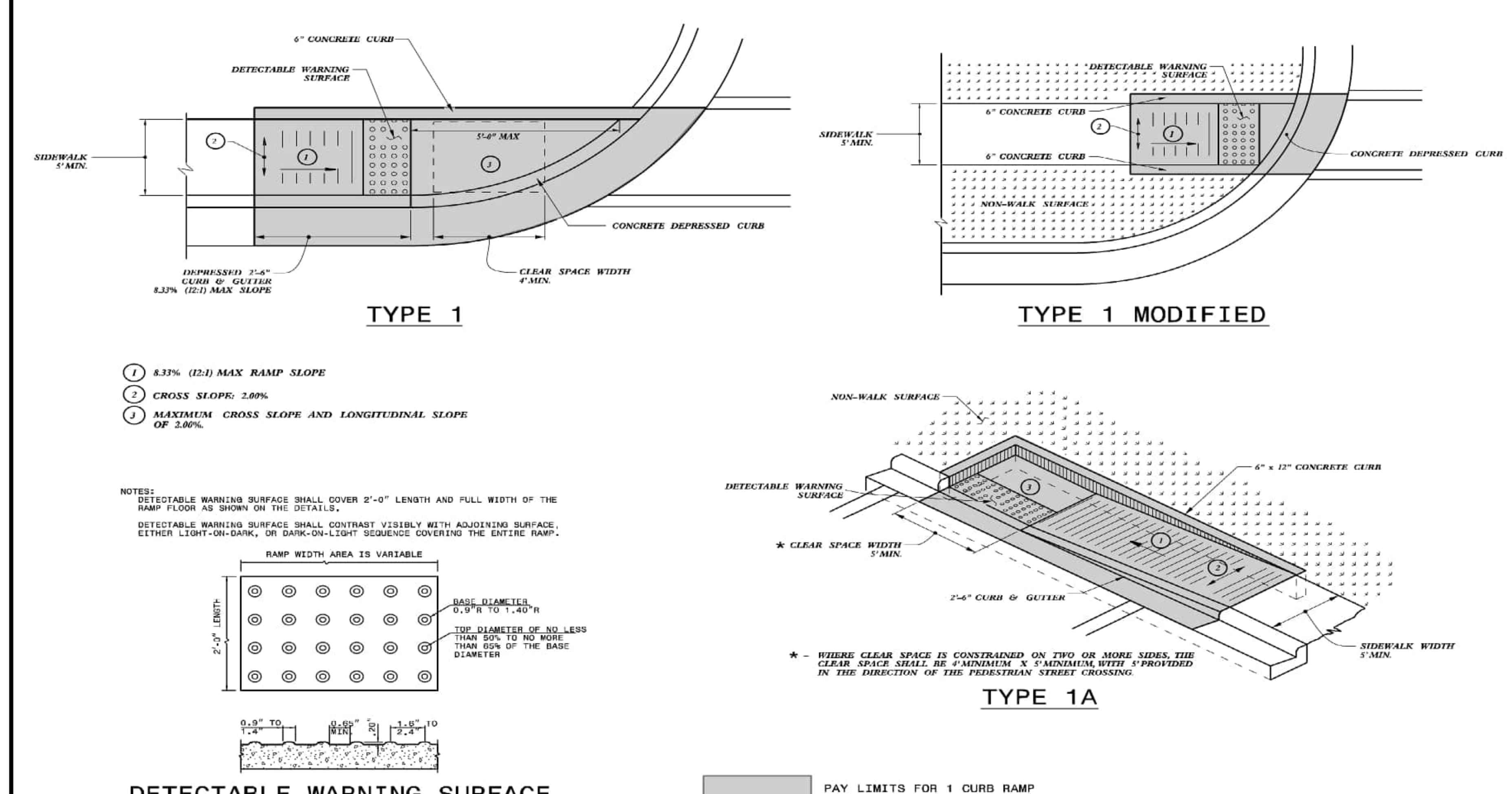


MINIMUM WEIGHTS - LBS.
FRAME - 180
COVER - 120
TOTAL - 300

1-24
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
MANHOLE FRAME AND COVER

SHEET 1 OF 1
840.54



1-24
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CURB RAMP
DIRECTIONAL RAMP

SHEET 6 OF 13
848.06

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

DETAILS

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL
ELIZABETH W. LYNCH
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
SIGNATURE DATE

DESIGNED BY:	R. MANK
REVIEWED BY:	E. LYNCH
JOB NO.:	00103002
DATE:	102324
SCALE:	

REVISIONS | INIT. | DATE

SHEET NO.
5C

10/25/2024
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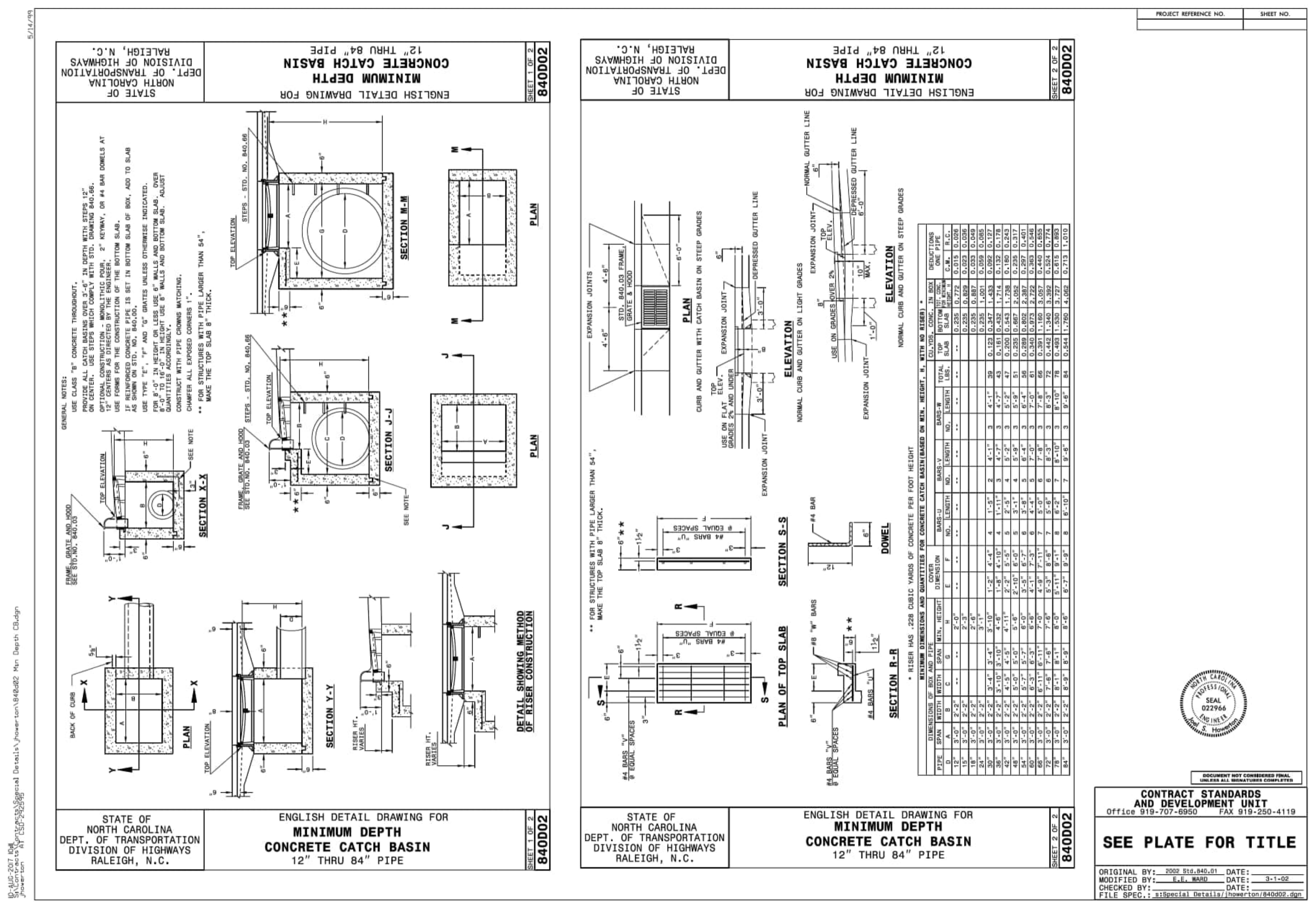

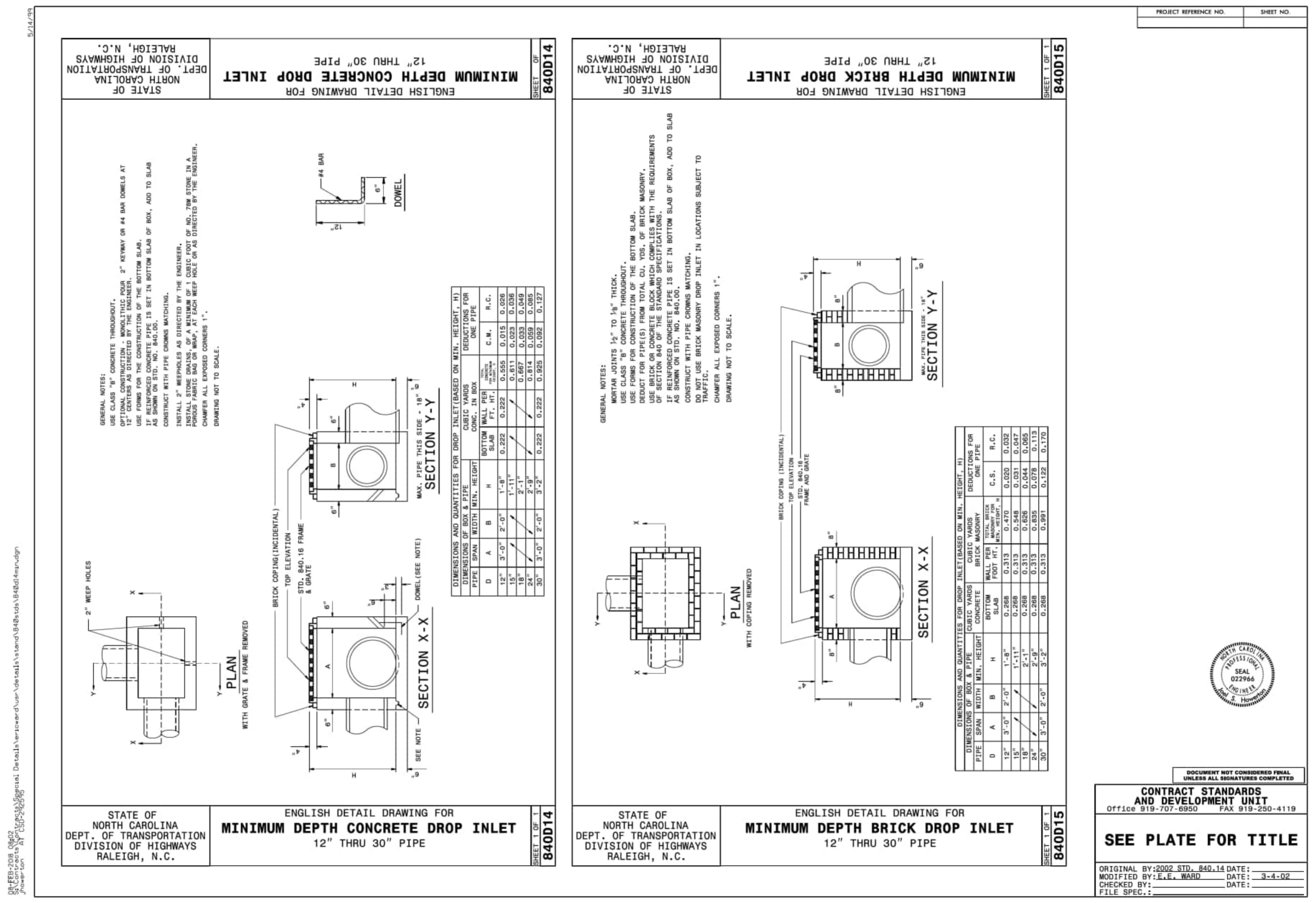

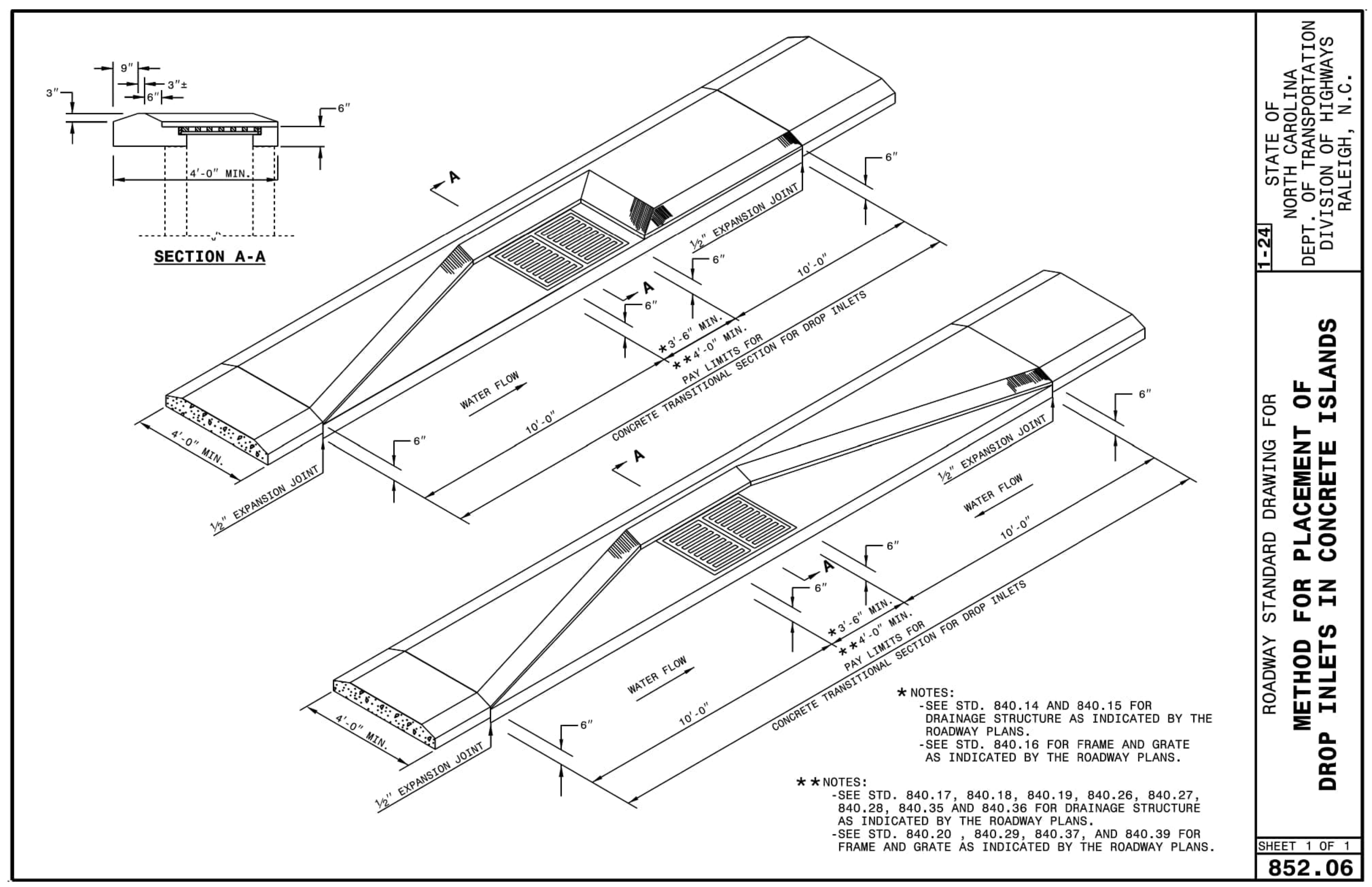

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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Public Works/Engineering

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Planning

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

DETAILS

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
ELIZABETH W. LYNCH
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
SIGNATURE DATE

DESIGNED BY: R. MANK
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 102324
SCALE:
REVISIONS | INIT. | DATE

SHEET NO.
5D

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

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

TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
SR 2049 (FORESTVILLE ROAD)	6:00 AM TO 9:00 AM
SR 2045/2051 (BURLINGTON MILLS ROAD)	4:00 PM TO 7:00 PM MONDAY THRU FRIDAY

B) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
SR 2049 (FORESTVILLE ROAD)	6:00 AM TO 9:00 AM
SR 2045/2051 (BURLINGTON MILLS ROAD)	4:00 PM TO 7:00 PM MONDAY THRU FRIDAY

C) DO NOT STOP TRAFFIC FOR MORE THAN 15 MINUTES WITHIN THE PROJECT LIMITS.

LANE AND SHOULDER CLOSURE REQUIREMENTS

D) 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.

E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 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.

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND 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.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDEDFACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1191,92 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONELL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

H) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

I) 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.

J) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 350 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

SIGNING

K) 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.

WHEN NO WORK IS BEING CONDUCTED FOR A PERIOD LONGER THAN ONE WEEK, REMOVE OR COVER ALL ADVANCE WORK ZONE WARNING SIGNS, AS DIRECTED BY THE ENGINEER.

L) PROVIDE PERMANENT SIGNING.

M) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500' IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

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

TRAFFIC CONTROL DEVICES

O) 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.

PAVEMENT MARKINGS AND MARKERS

P) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE OF ROADWAY AS SHOWN IN THE PAVEMENT MARKING AND SIGNING PLANS.

Q) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

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

S) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

PEDESTRIAN AND BICYCLIST SAFETY

T) PEDESTRIAN AND BICYCLIST SAFETY MUST BE MAINTAINED AT ALL TIMES BY ADEQUATE PROJECT LIMITS, FENCING, AND SIGNAGE.

MISCELLANEOUS

U) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

V) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 200 FT AND 200 FT RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

W) ALL CURB RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING SHOWN ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE SIGNING AND DELINEATION UNIT.

X) CONTRACTOR SHALL MAINTAIN SIDEWALK ACCESS AT ALL TIMES AS STATED IN THE PHASING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY SIDEWALKS (CONCRETE, ASPHALT, OR OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER) AT ALL LOCATIONS WHERE THE OPEN PEDESTRIAN TRAVELWAY HAS BEEN REMOVED FOR CONSTRUCTION OPERATIONS (UTILITIES, DRAINAGE, ETC.).

Y) EMERGENCY VEHICLE ACCESS SHALL BE MAINTAINED THROUGH THE PROJECT CONSTRUCTION AREA FOR THE DURATION OF THE PROJECT.

Z) ACCESS SHALL BE MAINTAINED TO ALL RESIDENCES AND BUSINESSES AT ALL TIMES.

PHASING NOTES

PHASE 1:

THE CONTRACTOR SHALL PLACE ALL ADVANCE WARNING SIGNS PRIOR TO BEGINNING WORK ACCORDING TO NCDOT STANDARD DRAWING NO. 1101.01(SHEET 3 OF 3). SIGNS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.

WHILE MAINTAINING EXISTING TRAFFIC AND USING NCDOT STANDARD DRAWING NO. 1101.02 (SHEET 1 OF 19) FOR TEMPORARY LANE CLOSURES AS NEEDED, THE CONTRACTOR SHALL CONSTRUCT THE PROPOSED IMPROVEMENTS ALONG SR 2049 (FORESTVILLE ROAD) AND SR 2045/2051 (BURLINGTON MILLS ROAD) INCLUDING:

1. GRADING ALONG THE SHOULDER
2. INSTALL DRAINAGE
3. INSTALL INSTALL CURB AND GUTTER, SIDEWALK, MULTI-USE PATH, SIGNAL MODIFICATION, ASPHALT BASE COURSE, INTERMEDIATE COURSE AND SURFACE COURSE UP TO BUT NOT INCLUDING THE FINAL 1.5" OF SURFACE COURSE ALONG WIDENED PORTION.

PHASE 2:

WHILE MAINTAINING EXISTING TRAFFIC AND USING NCDOT STANDARD DRAWING NO. 1101.02 (SHEET 1 OF 19) FOR TEMPORARY LANE CLOSURES AS NEEDED, THE CONTRACTOR SHALL:

1. INSTALL THE FINAL 1.5 INCH LAYER OF SURFACE COURSE
2. INSTALL 4' MONOLITHIC CONCRETE ISLAND
3. INSTALL FINAL THERMOPLASTIC PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS.
4. GRIND/REMOVE/ADJUST EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED.
5. PLACE TRAFFIC ONTO FINAL PATTERN.
6. REMOVE ALL TRAFFIC CONTROL DEVICES AND SIGNAGE.

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT 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
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGERS
1160.01	TEMPORARY CRASH CUSHION
1180.01	SKINNY - DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMPS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1205.11	PAVEMENT MARKINGS - RAILROAD CROSSINGS
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

TOWN OF ROLESVILLE:
PSP–23–04

TOWN OF WAKE FOREST:
PSP–XX–XX

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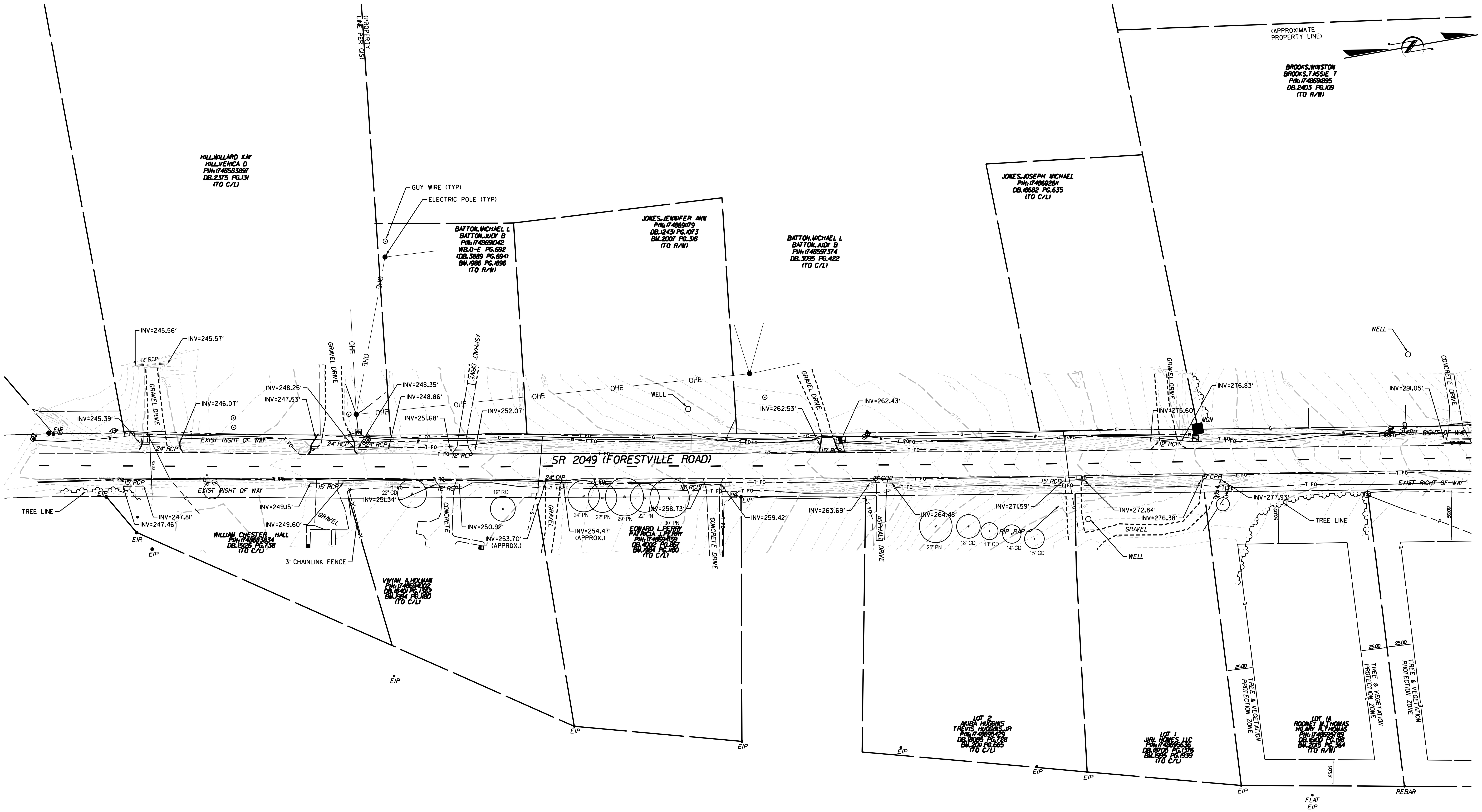
PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

TRAFFIC MANAGEMENT PLAN

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 037444 ENGINEER ELIZABETH W. LYNCH
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
SIGNATURE DATE

DESIGNED BY: R. MANK
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 10/23/24
SCALE: 1" = 50'
REVISIONS | INIT. | DATE

SHEET NO.
6



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PEARCE FARM ROADWAY IMPROVEMENTS ROLESVILLE, NORTH CAROLINA

EXISITNG CONDITIONS PLAN SHEET

SEAL
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER ELIZABETH W. LYNCH
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION
SIGNATURE DATE

DESIGNED BY: R. MANK
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 10/23/24
SCALE: 1" = 50'
REVISIONS | INIT. | DATE

SHEET NO.
EX-1

10/25/2024
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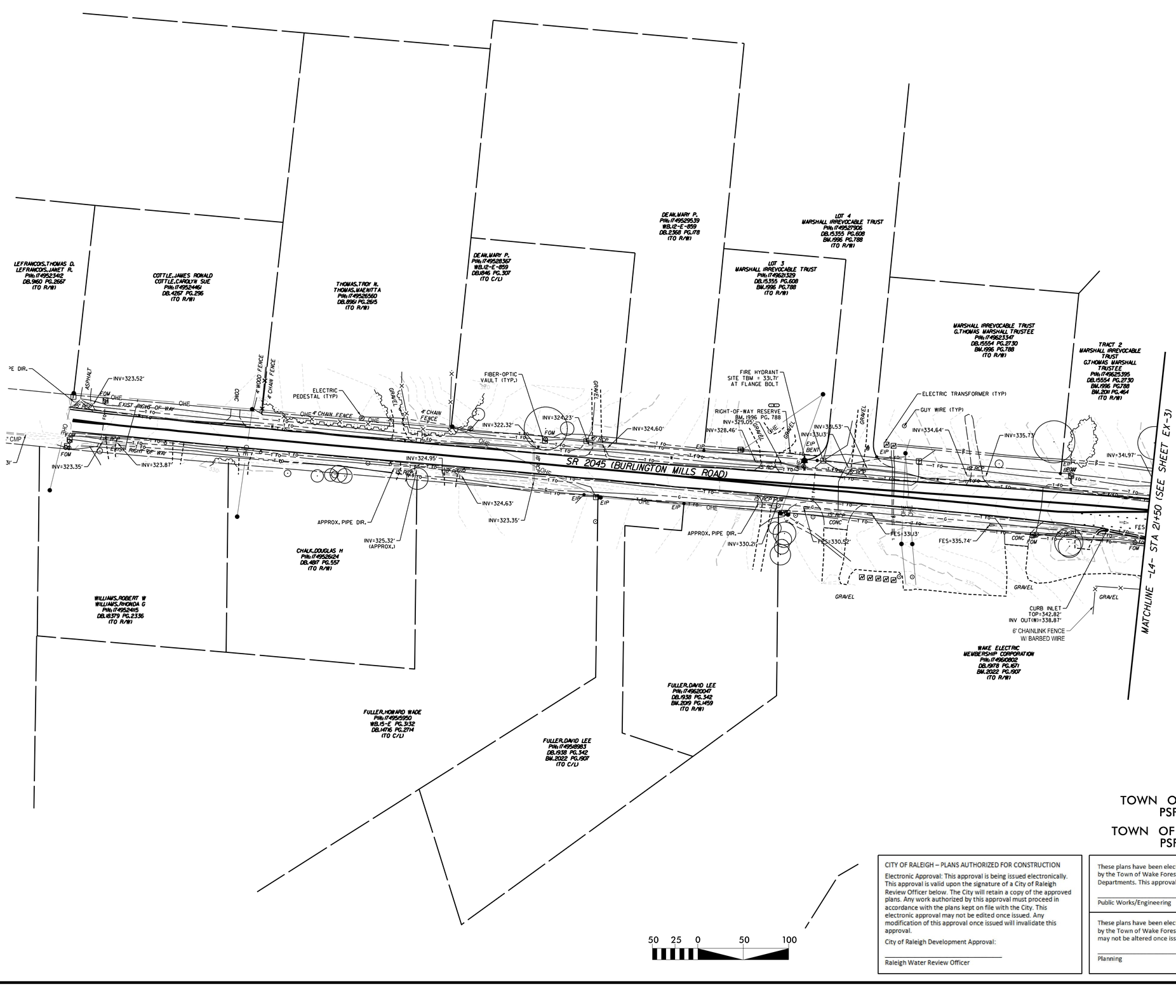

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ROLESVILLE, NORTH CAROLINA

EXISITNG CONDITIONS
PLAN SHEET

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NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH
SIGNATURE DATE

DESIGNED BY: J. PACE
REVIEWED BY: E. LYNCH
INIT: DATE

JOB NO.: 0010302
DATE: 10/23/24
SCALE: 1" = 50'
REVISIONS

SHEET NO.
EX–2

10/25/2024
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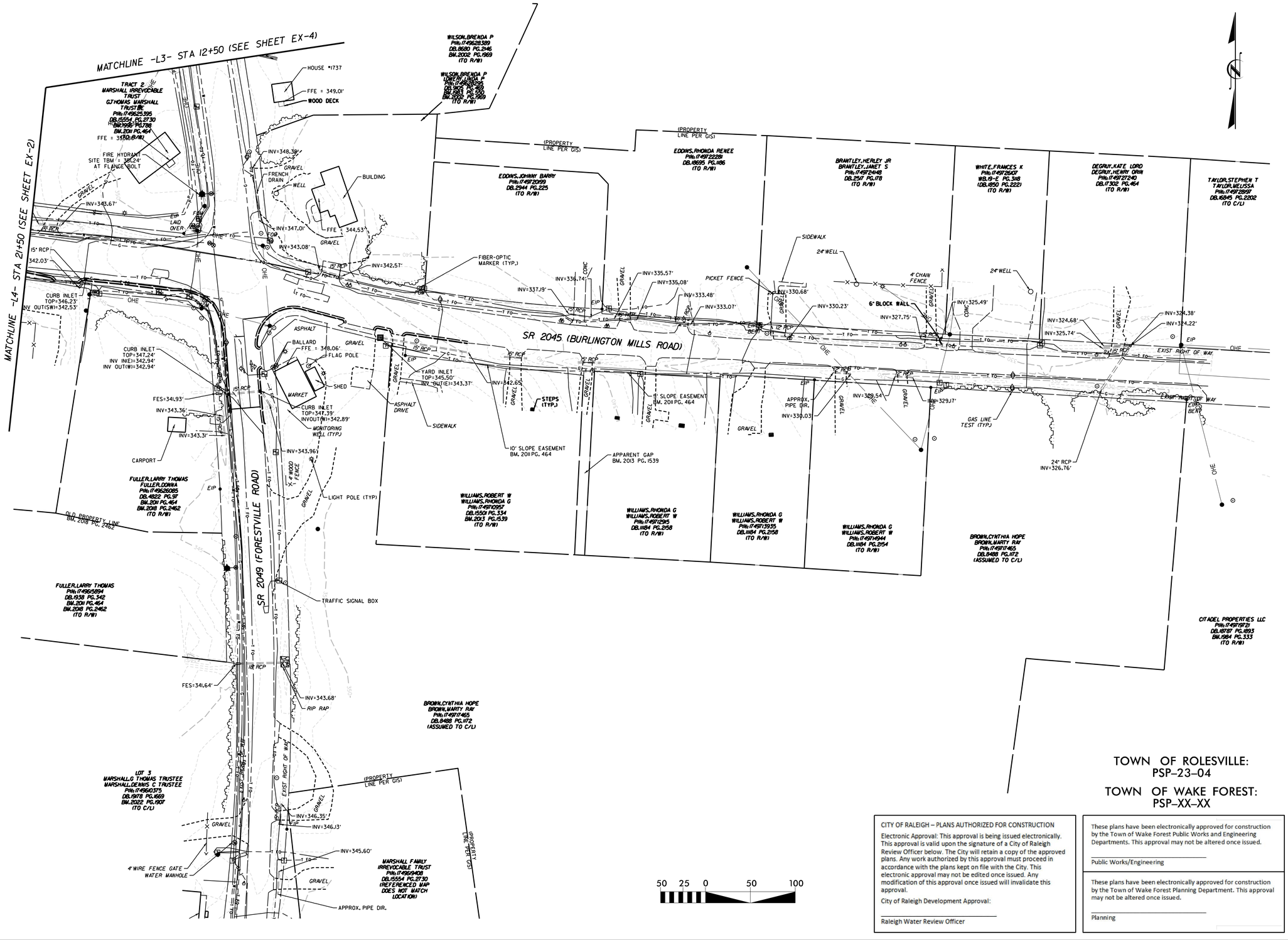

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ROLESVILLE, NORTH CAROLINA

EXISITNG CONDITIONS
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ENGINEER
ELIZABETH W. LYNCH
SIGNATURE DATE

DESIGNED BY: J. PACE
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 102324
SCALE: 1" = 50'
REVISIONS | INIT. | DATE

SHEET NO.
EX–3

10/25/2024
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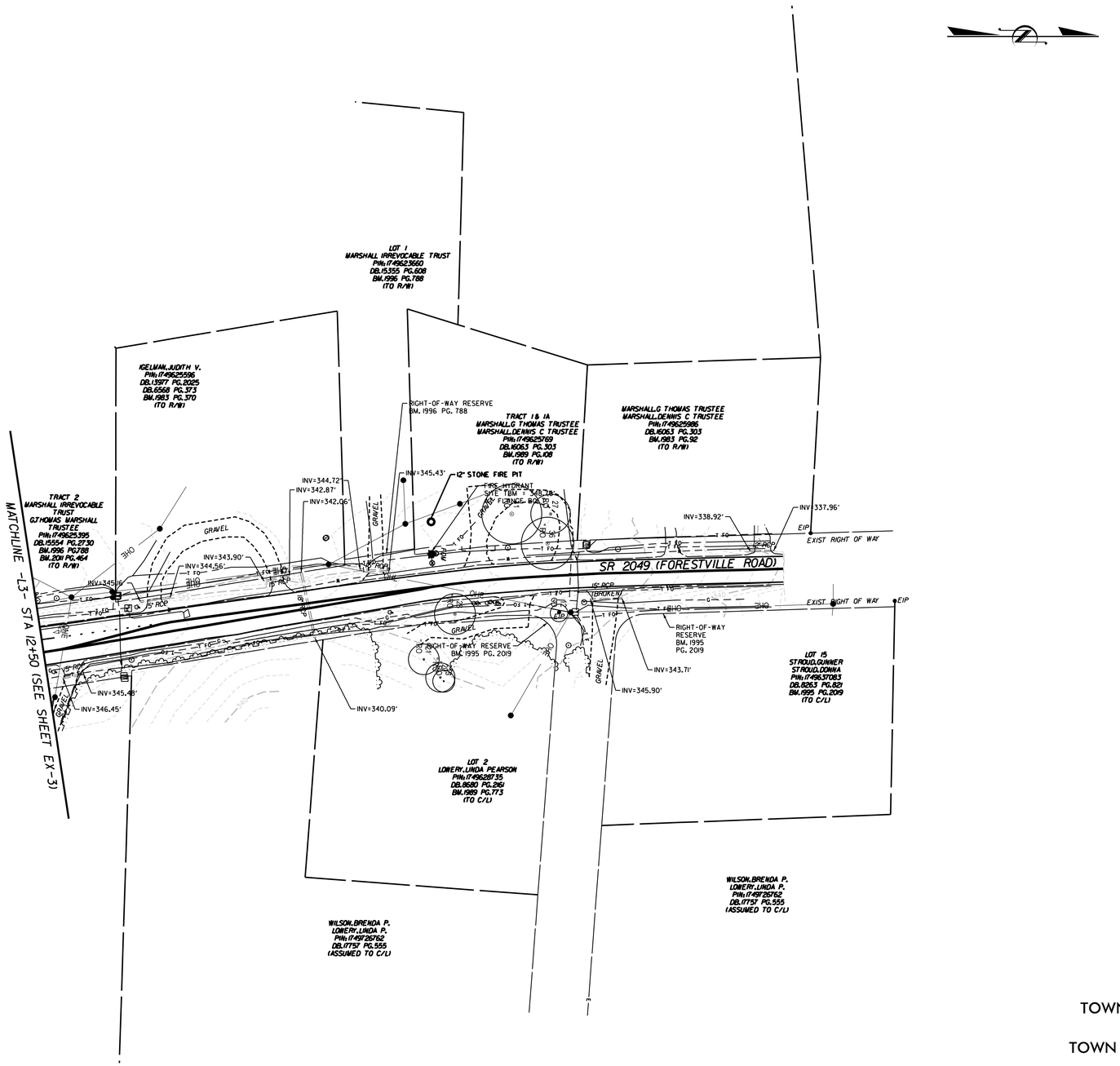

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ROLESVILLE, NORTH CAROLINA

EXISITNG CONDITIONS PLAN SHEET

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DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH
SIGNATURE DATE

JOB NO.:	0103002
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REVISIONS	
DESIGNED BY:	J. PACE
REVIEWED BY:	E. LYNCH
INIT:	DATE

SHEET NO.
EX–4

10/25/2024
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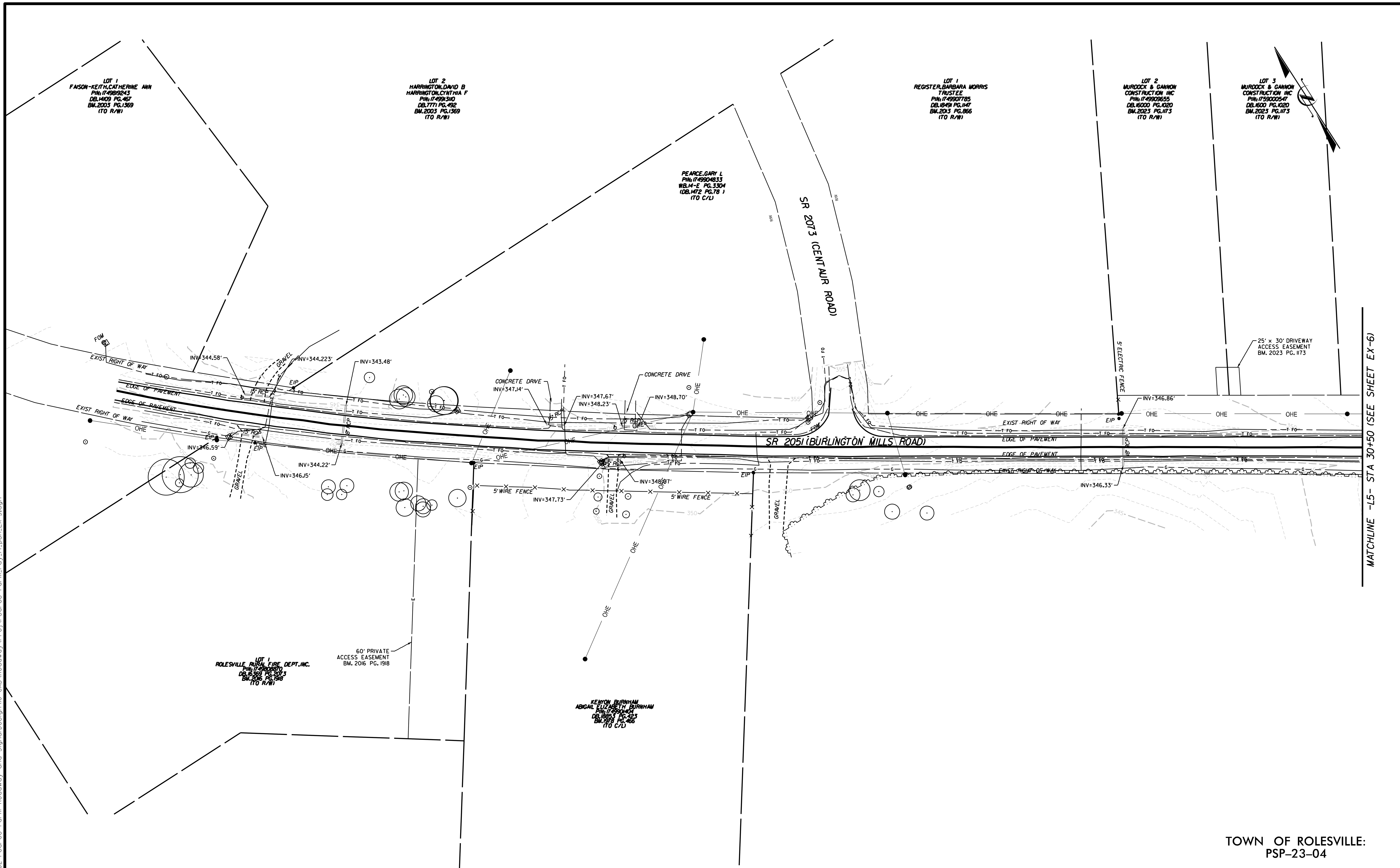

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PEARCE FARM ROADWAY IMPROVEMENTS ROLESVILLE, NORTH CAROLINA

EXISTING CONDITIONS PLAN SHEET

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INIT. DATE

SHEET NO.
EX-5

10/25/2024
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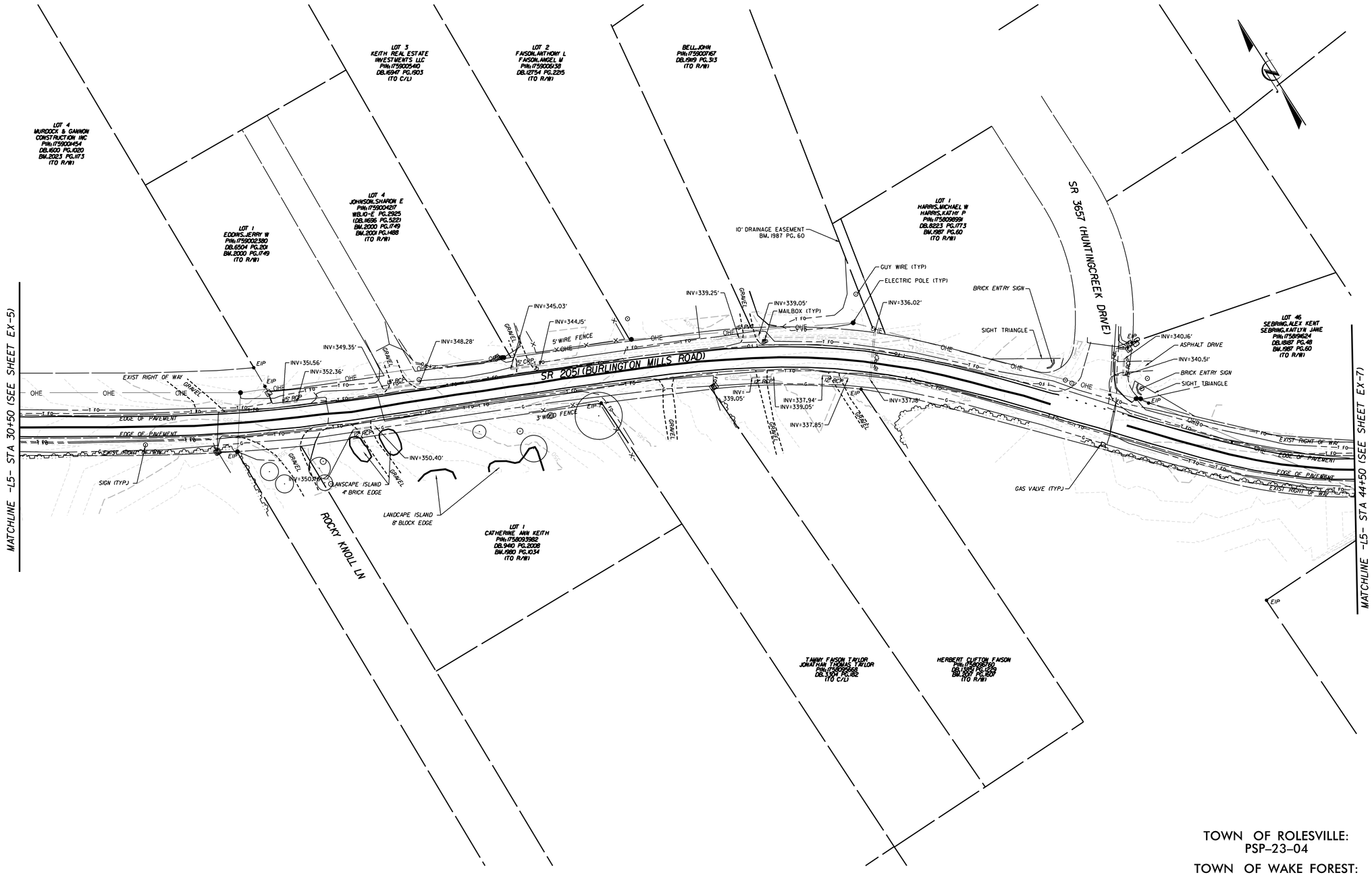

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ROLESVILLE, NORTH CAROLINA

EXISTING CONDITIONS PLAN SHEET

SEAL
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ENGINEER
ELIZABETH W. LYNCH
SIGNATURE DATE

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DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH

REVISIONS	INIT.	DATE

SHEET NO.
EX–6

10/25/2024
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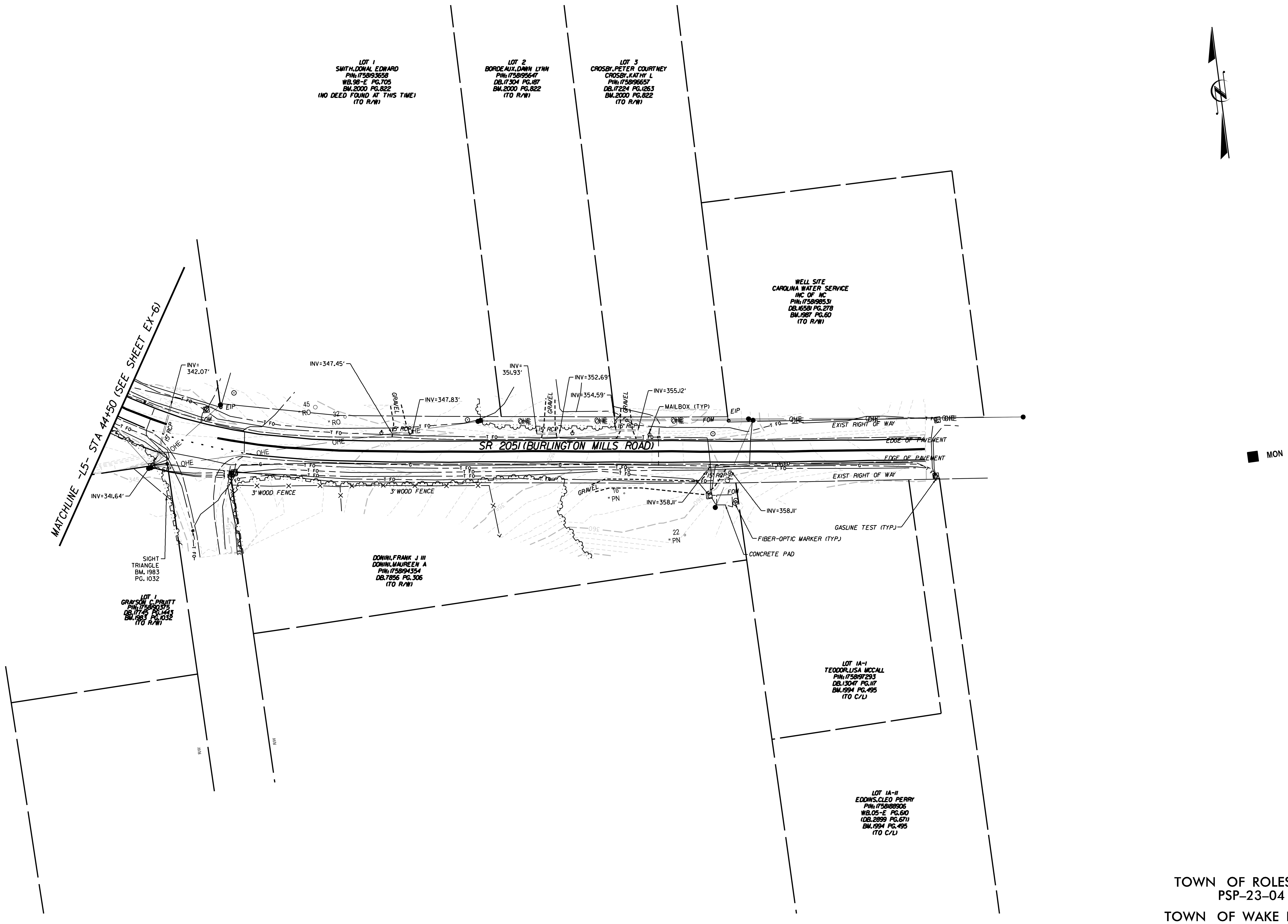

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

50 25 0 50 100

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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City of Raleigh Development Approval:

Raleigh Water Review Officer

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Public Works/Engineering

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Planning

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www.exultengineering.com
NC License #C-4445

PEARCE FARM ROADWAY IMPROVEMENTS ROLESVILLE, NORTH CAROLINA

EXISITNG CONDITIONS PLAN SHEET

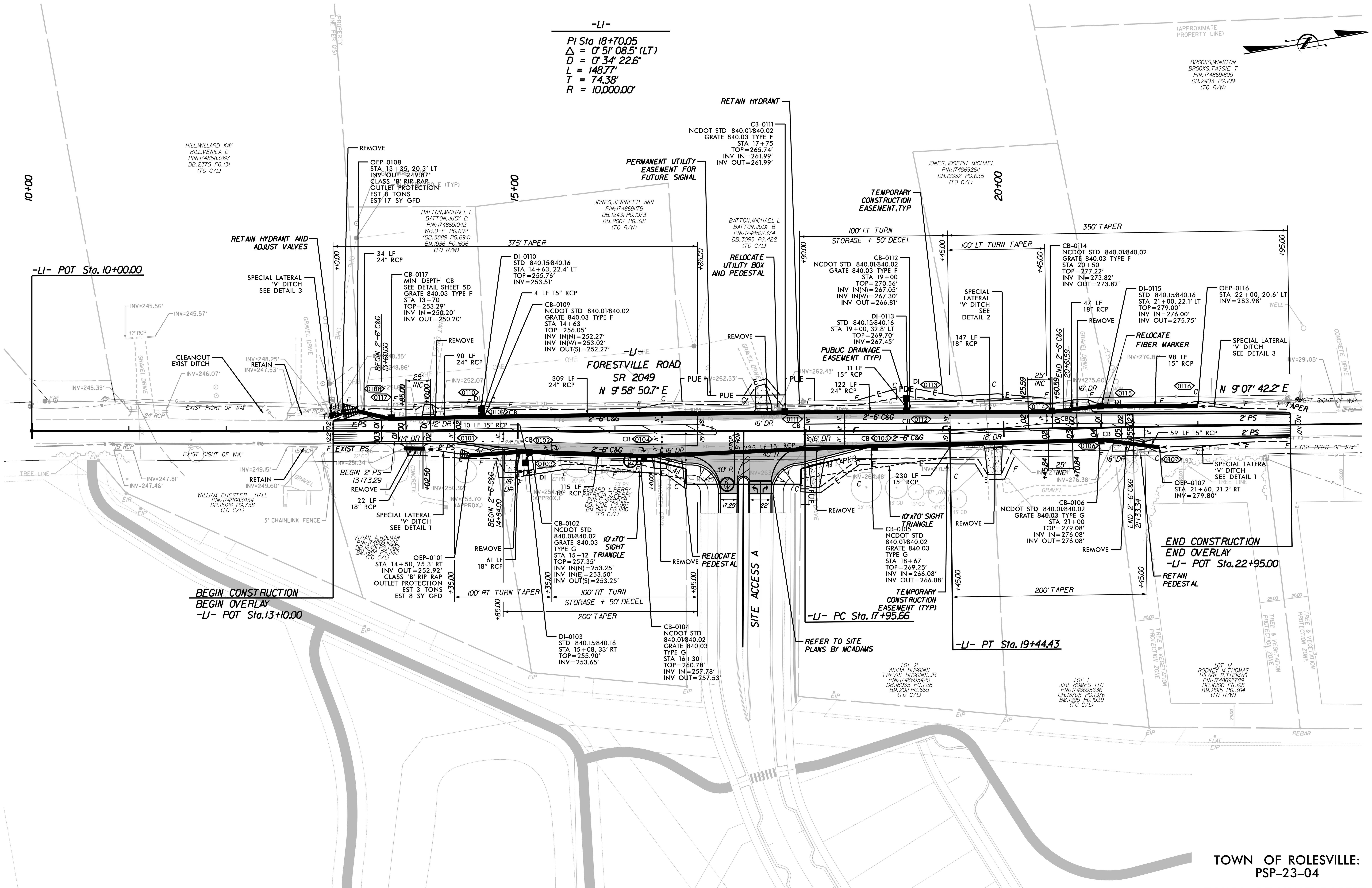
SEAL
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER ELIZABETH W. LYNCH
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION
SIGNATURE DATE

DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 102324
SCALE: 1" = 50'

REVISIONS	INIT.	DATE

SHEET NO.
EX-7

10/25/2024
Z:\Shared\0 Projects_4 Roadway\00103002 Pearce Farm Roadway and Signal Design\0 CAD\Roadway\Proj\Pearce Farm_rdy_16_psh_EX-7.dgn



PEARCE FARM ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

PLAN SHEET

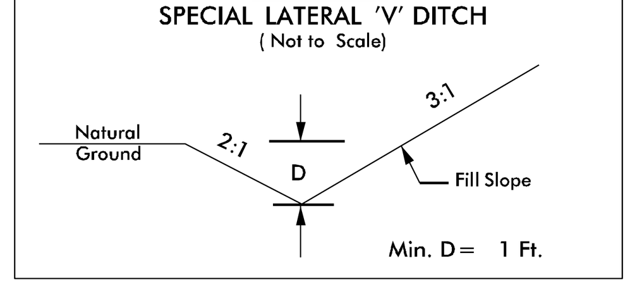
TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

INCIDENTAL MILLING
ROADWAY WIDENING/ FULL-DEPTH PAVEMENT
MILL AND OVERLAY
CONCRETE

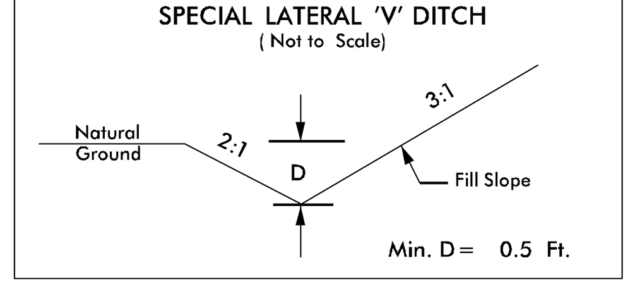
NOTES:
1. RADII DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED (APPLIES TO ALL SHEETS).
2. ALL DRIVEWAYS ALONG -L1- WILL BE 6' CONCRETE RADIUS TYPE DRIVEWAY TURNOUTS OR 6' CONCRETE WITH 10' RADII AS SHOWN ON PLANS.
3. RELOCATE EXISTING COMMUNICATION AND FIBER OPTIC UTILITY LINES OUTSIDE THE LIMITS OF THE PROPOSED WIDENING.

DETAIL 1
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



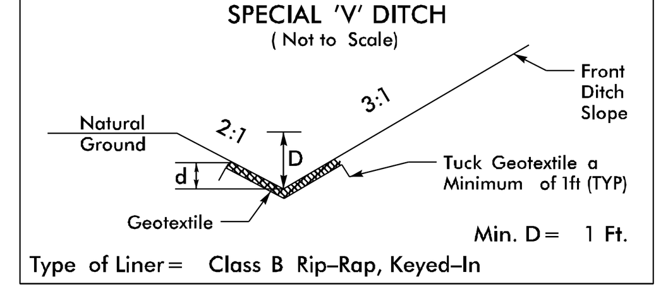
FROM -L1- STA. 14+05 TO STA. 14+50 RT
FROM -L1- STA. 21+60 TO STA. 22+50 RT

DETAIL 2
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



FROM -L1- STA. 19+00 TO STA. 20+00 LT

DETAIL 3
SPECIAL 'V' DITCH
(Not to Scale)



FROM -L1- STA. 13+05 TO STA. 13+35 LT
FROM -L1- STA. 22+00 TO STA. 22+50 LT

50 25 0 50 100

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL
ELIZABETH W. LYNCH
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
SIGNATURE DATE

JOB NO. 00103002
DATE: 10/2/24
SCALE: 1" = 50'
DESIGNED BY: R. MANK
REVIEWED BY: E. LYNCH
REVISIONS
INIT.
DATE

SHEET NO.
R-1

10/30/2024
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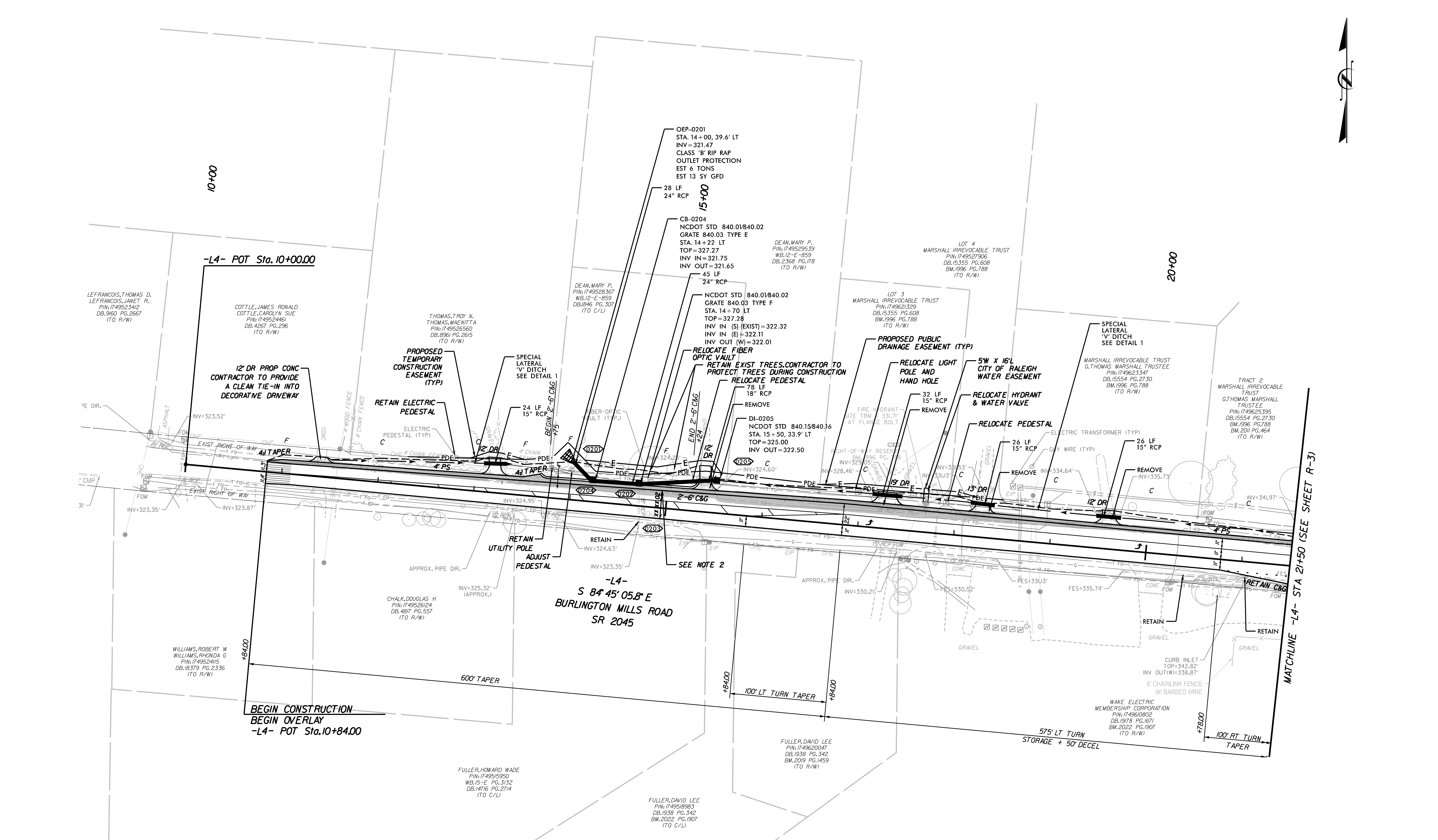


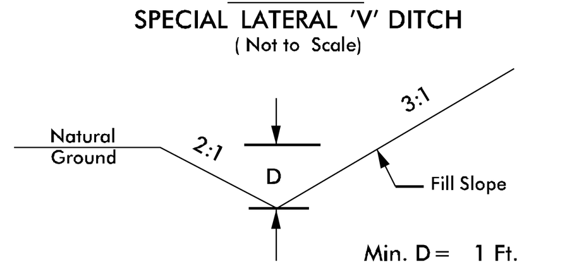
[hatched symbol]	INCIDENTAL MILLING
[shaded symbol]	ROADWAY WIDENING/ FULL-DEPTH PAVEMENT
[hatched symbol]	MILL AND OVERLAY
[stippled symbol]	CONCRETE

NOTES:

1. RADII DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED (APPLIES TO ALL SHEETS).
2. CROSS SLOPES VARY ALONG -L4-. MATCH EXISTING CROSS SLOPES. WIDEN USING A 2% CROSS SLOPE FROM -L4- STA 10+84 TO 23+32 LT. REFER TO CROSS SECTIONS.
3. UNLESS OTEHRWISE NOTED DRIVEWAY MATERIAL WILL BE ASPHALT WITH 10' TURNING RADII. ASPHALT DRIVEWAYS SHALL BE 2" S9.5C ON 8" AGGREGATE BASE COURSE.
4. RELOCATE EXISTING COMMUNICATION AND FIBER OPTIC UTILITY LINES OUTSIDE THE LIMITS OF THE PROPOSED WIDENING.

DETAIL 1

SPECIAL LATERAL 'V' DITCH (Not to Scale)



FROM -L4- STA. 11+50 TO STA. 13+50 LT
FROM -L4- STA. 15+50 TO STA. 21+50 LT

50 25 0 50 100

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City of Raleigh Development Approval:

Raleigh Water Review Officer

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

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Public Works/Engineering

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Planning

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PEARCE FARM ROADWAY IMPROVEMENTS ROLESVILLE, NORTH CAROLINA

PLAN SHEET

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL ELIZABETH W. LYNCH

PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

SIGNATURE DATE

JOB NO.	00103002
DATE:	10/23/24
SCALE:	1" = 50'
DESIGNED BY:	J. PACE
REVIEWED BY:	E. LYNCH
REVISIONS	
INIT.	
DATE	

SHEET NO.

R-2

10/30/2024
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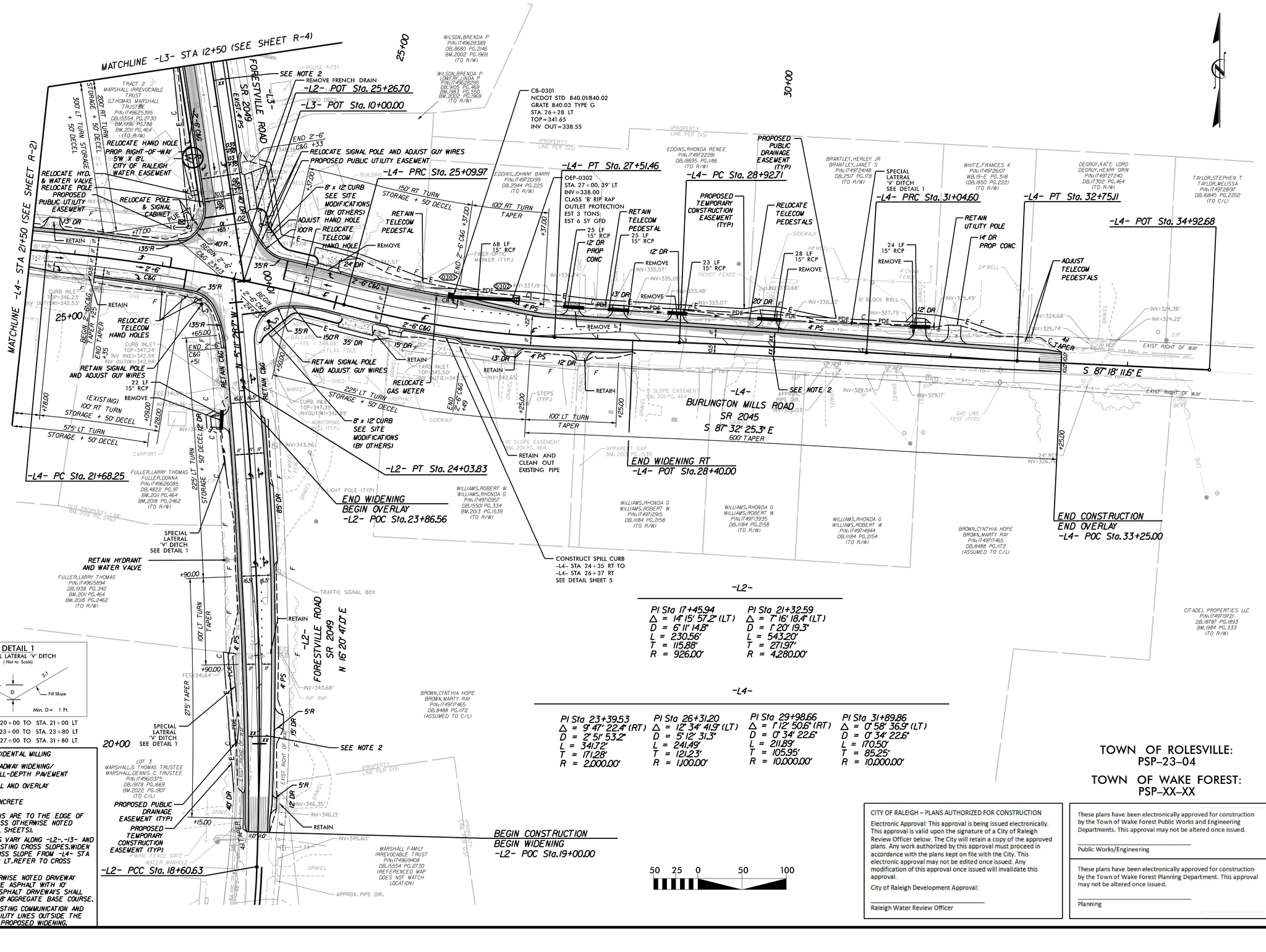

-L2-

PI Sta 17+45.94
Δ = 14° 15′ 57.2″ (LT)
D = 6° 11′ 14.8″
L = 230.56′
T = 115.88′
R = 926.00′

PI Sta 21+32.59
Δ = 7° 16′ 18.4″ (LT)
D = 1° 20′ 19.3″
L = 543.20′
T = 271.97′
R = 4,280.00′

-L4-

PI Sta 23+39.53
Δ = 9° 47′ 22.4″ (RT)
D = 2° 51′ 53.2″
L = 341.72′
T = 171.28′
R = 2,000.00′

PI Sta 26+31.20
Δ = 12° 34′ 41.9″ (LT)
D = 5° 12′ 31.3″
L = 241.49′
T = 121.23′
R = 1,100.00′

PI Sta 29+98.66
Δ = 1° 12′ 50.6″ (RT)
D = 0° 34′ 22.6″
L = 211.89′
T = 105.95′
R = 10,000.00′

PI Sta 31+89.86
Δ = 0° 58′ 36.9″ (LT)
D = 0° 34′ 22.6″
L = 170.50′
T = 85.25′
R = 10,000.00′

DETAIL 1

SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground
2:1
3:1
D
Fill Slope
Min. D = 1 Ft.

FROM -L2- STA. 20+00 TO STA. 21+00 LT
FROM -L2- STA. 23+00 TO STA. 23+80 LT
FROM -L4- STA. 27+00 TO STA. 31+80 LT

▥	INCIDENTAL MILLING
▇	ROADWAY WIDENING/ FULL-DEPTH PAVEMENT
▨	MILL AND OVERLAY
⁘	CONCRETE

NOTES:

1. RADII DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED (APPLIES TO ALL SHEETS).
2. CROSS SLOPES VARY ALONG -L2-.-13- AND -L4-.MATCH EXISTING CROSS SLOPES.WIDEN USING A 2% CROSS SLOPE FROM -L4- STA 10+84 TO 23+32 LT.REFER TO CROSS SECTIONS.
3. UNLESS OTEHRWISE NOTED DRIVEWAY MATERIAL WILL BE ASPHALT WITH 10' TURNING RADII.ASPHALT DRIVEWAYS SHALL BE 2" S9.5C ON 8" AGGREGATE BASE COURSE.
4. RELOCATE EXISTING COMMUNICATION AND FIBER OPTIC UTILITY LINES OUTSIDE THE LIMITS OF THE PROPOSED WIDENING.

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

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#C-4445

PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

PLAN SHEET

SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
037444
ELIZABETH W. LYNCH

SIGNATURE
DATE

DESIGNED BY: J. PACE
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 10/23/24
SCALE: 1" = 50'

REVISIONS	INIT.	DATE

SHEET NO.
R-3

10/28/2024
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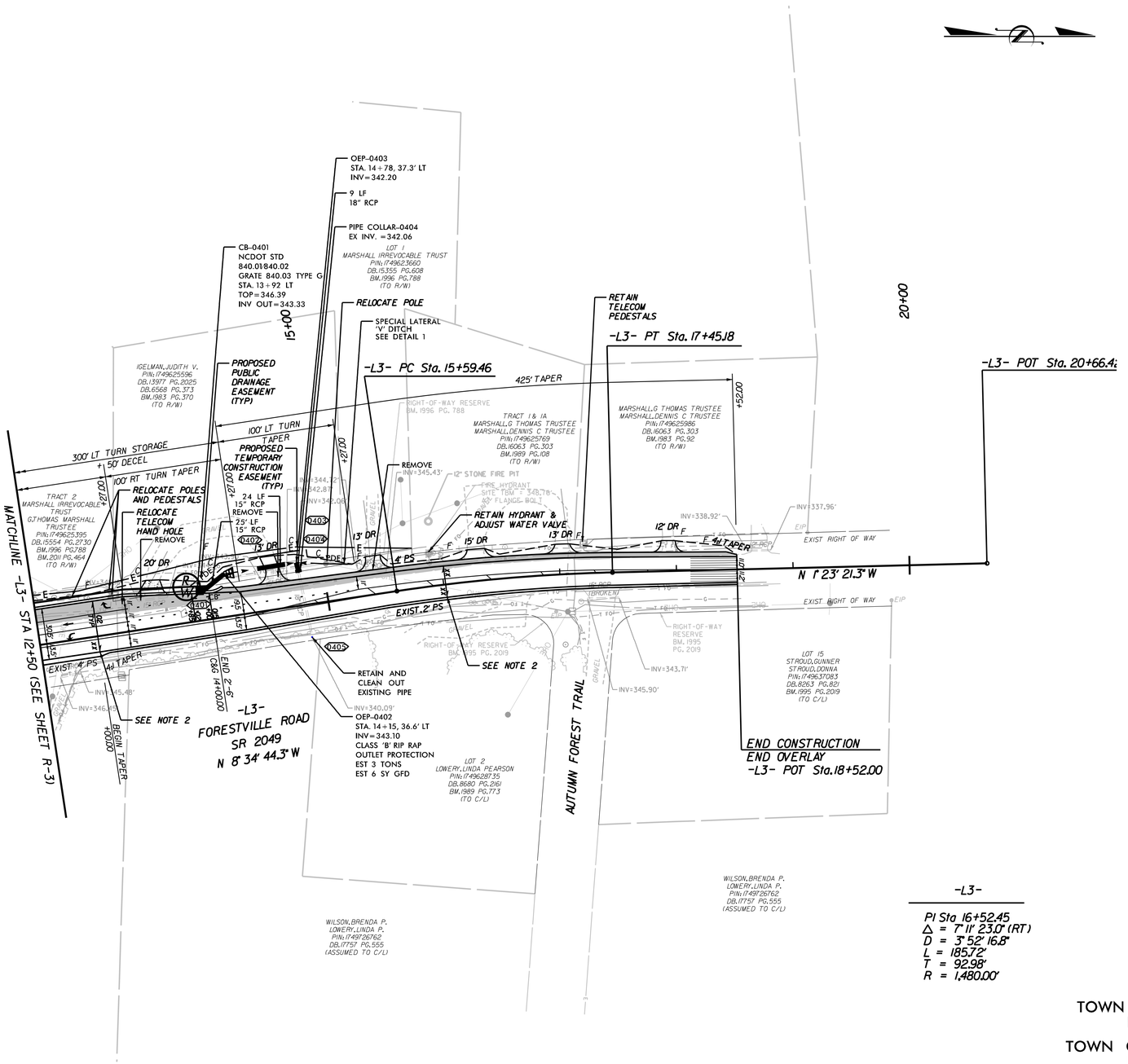

INCIDENTAL MILLING

ROADWAY WIDENING/ FULL-DEPTH PAVEMENT

MILL AND OVERLAY

CONCRETE

NOTES:

1. RADII DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED (APPLIES TO ALL SHEETS).
2. CROSS SLOPES VARY ALONG -L3- IN SHOULDER SECTIONS. REFER TO TYPICAL TYPICAL SECTION AND CROSS SECTIONS.
3. UNLESS OTEHRWISE NOTED DRIVEWAY MATERIAL WILL BE ASPHALT WITH 10' TURNING RADII. ASPHALT DRIVEWAYS SHALL BE 2' S9.5C ON 8' AGGREGATE BASE COURSE.
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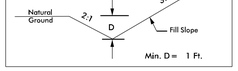
DETAIL 1
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



FROM -L3- STA. 14+15 TO STA. 15+25 LT

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

PLAN SHEET

SEAL
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER ELIZABETH W. LYNCH
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SIGNATURE DATE

JOB NO.:	0103002
DATE:	10/25/24
SCALE:	1" = 50'
DESIGNED BY:	J. PACE
REVIEWED BY:	E. LYNCH

REVISIONS	INIT:	DATE

SHEET NO.
R-4

10/25/2024
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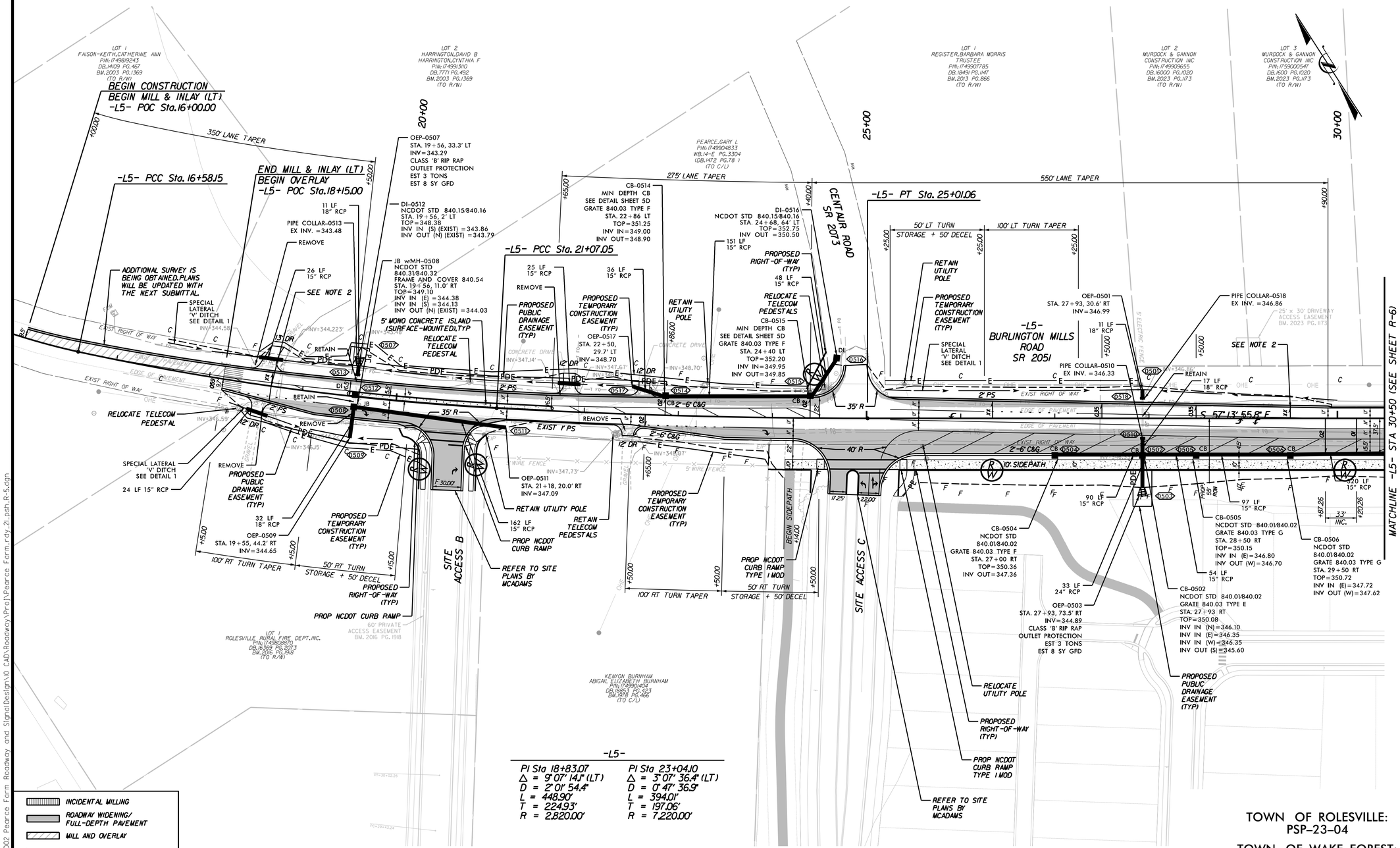

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

PLAN SHEET

SEAL
NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH
SIGNATURE DATE

DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 10/23/24
SCALE: 1" = 50'
REVISIONS INIT. DATE

SHEET NO.
R-5

10/28/2024
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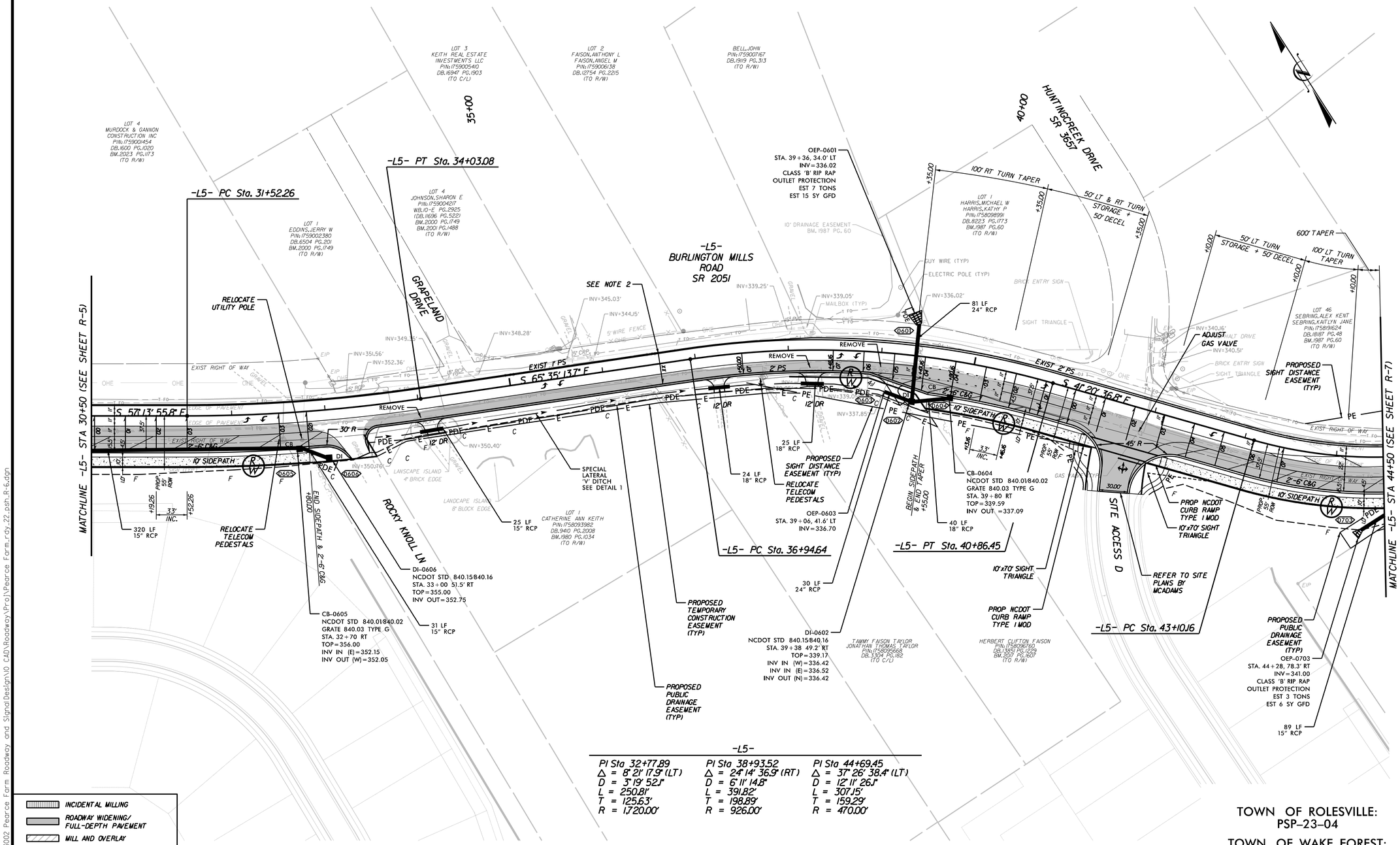

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Planning

TOWN OF ROLESVILLE: PSP-23-04

TOWN OF WAKE FOREST: PSP-XX-XX

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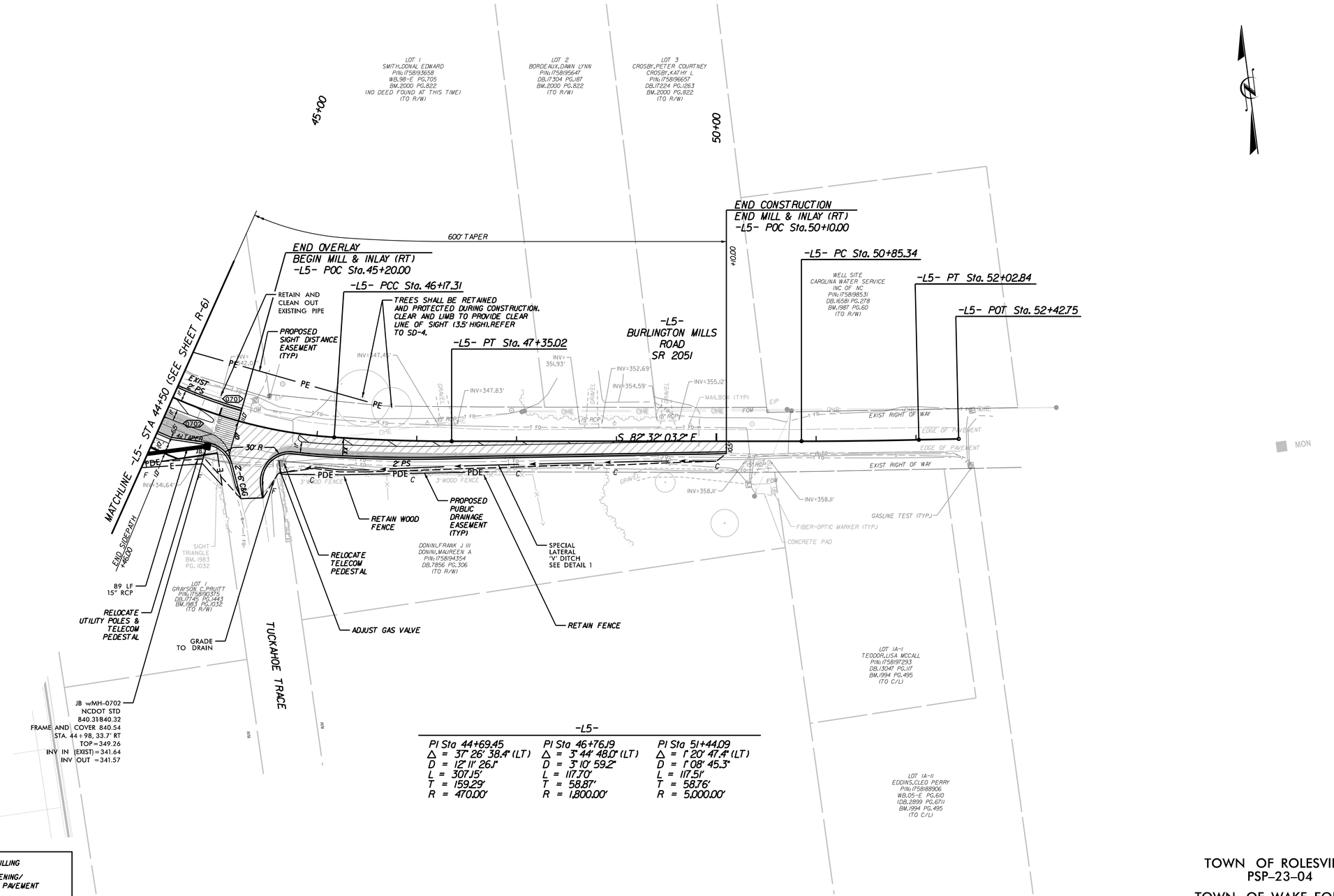
PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

PLAN SHEET

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ELIZABETH W. LYNCH
SIGNATURE DATE

JOB NO.:	00103002
DATE:	102324
SCALE:	1" = 50'
REVISIONS	INIT. DATE
DESIGNED BY:	G. BOYLE
REVIEWED BY:	E. LYNCH

SHEET NO.
R-6



TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

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NC License #C-4445

PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

PLAN SHEET

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NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH
SIGNATURE DATE

DESIGNED BY: G. BOYLE
REVIEWED BY: E LYNCH
JOB NO.: 00103002
DATE: 102324
SCALE: 1" = 50'

REVISIONS	INIT.	DATE

SHEET NO.
R-7

10/28/2024
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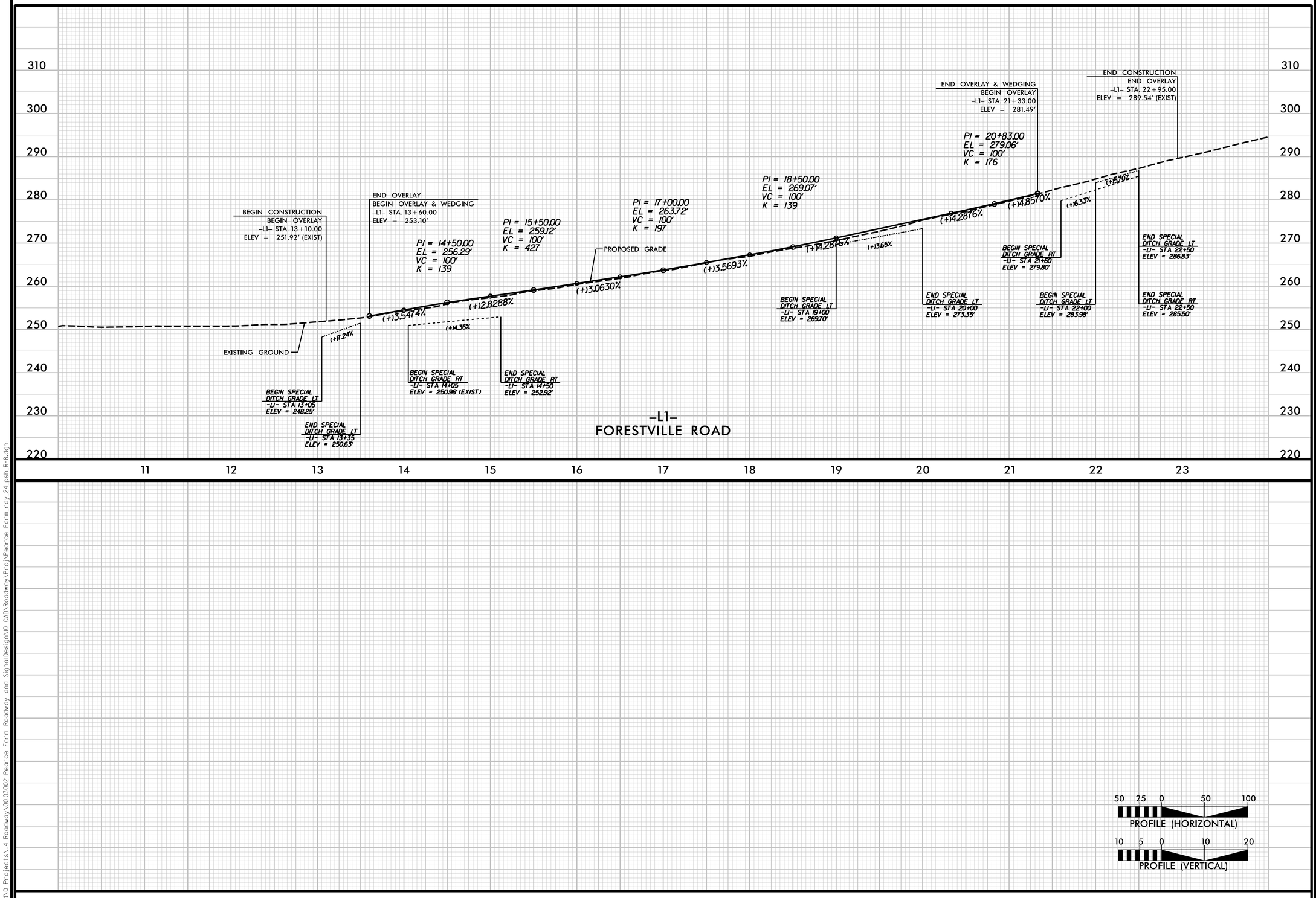

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

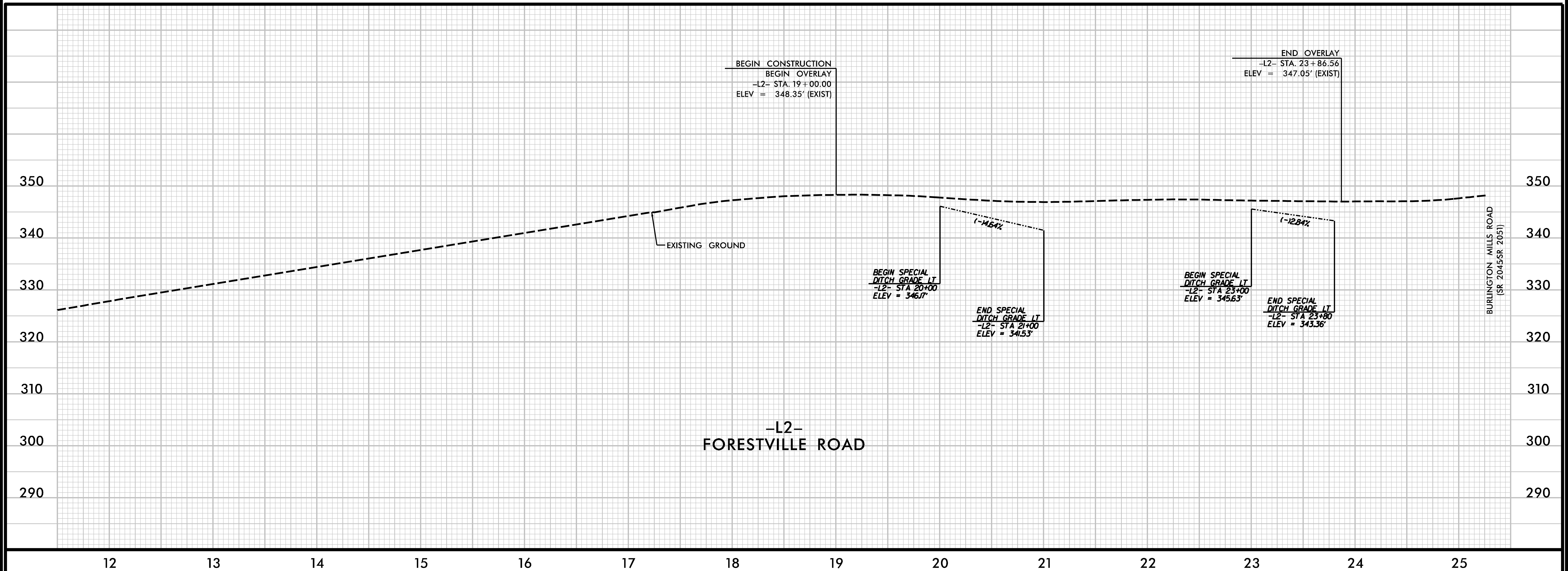
PROFILE SHEET

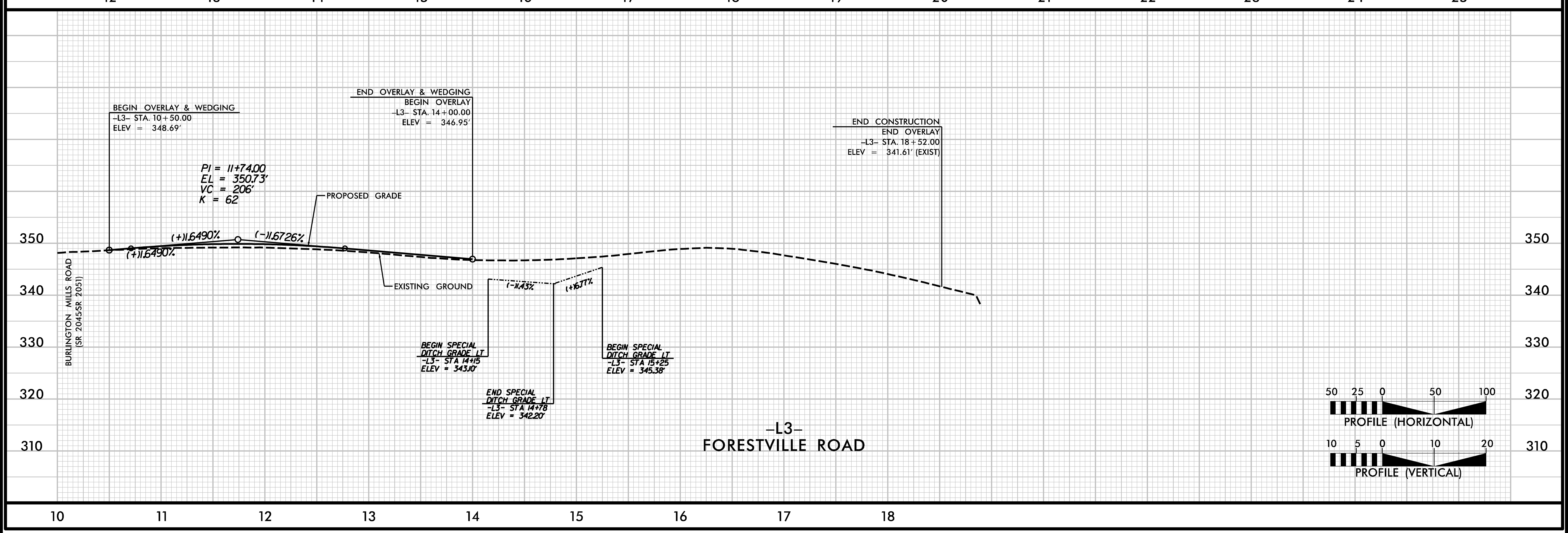
SEAL
NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH
SIGNATURE DATE

JOB NO.: 00103002
DATE: 102324
SCALE: 1" = 50'
DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH
REVISIONS
INIT. DATE

SHEET NO.
R–8

10/25/2024
Z:\Shared\0 Projects_4 Roadway\00103002 Pearce Farm Roadway and Signal Design\0 CAD\Roadway\Pro\Pearce Farm rdy 24 psh R-8.dgn





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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

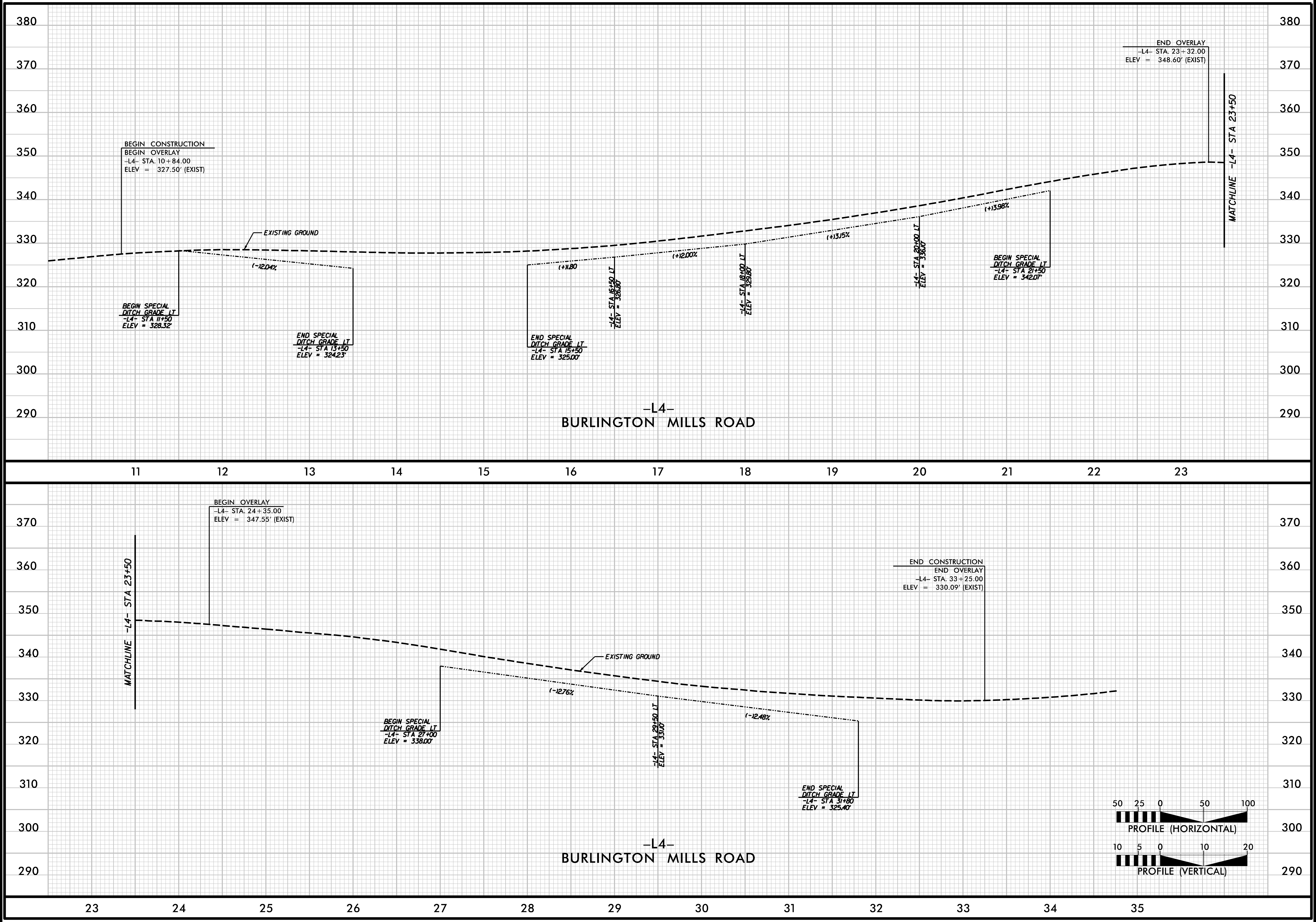
PROFILE SHEET

SEAL
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER ELIZABETH W. LYNCH
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION
SIGNATURE DATE

DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 102324
SCALE: 1" = 50'
REVISIONS
INIT. DATE

SHEET NO.
R-9

10/25/2024
Z:\Shared\0 Projects_4 Roadway\00103002 Pearce Farm Roadway and Signal Design\0 CAD\Roadway\Proj\Pearce Farm_rdy_25_psh_R-9.dgn



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PEARCE FARM ROADWAY IMPROVEMENTS ROLESVILLE, NORTH CAROLINA

PROFILE SHEET

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER ELIZABETH W. LYNCH

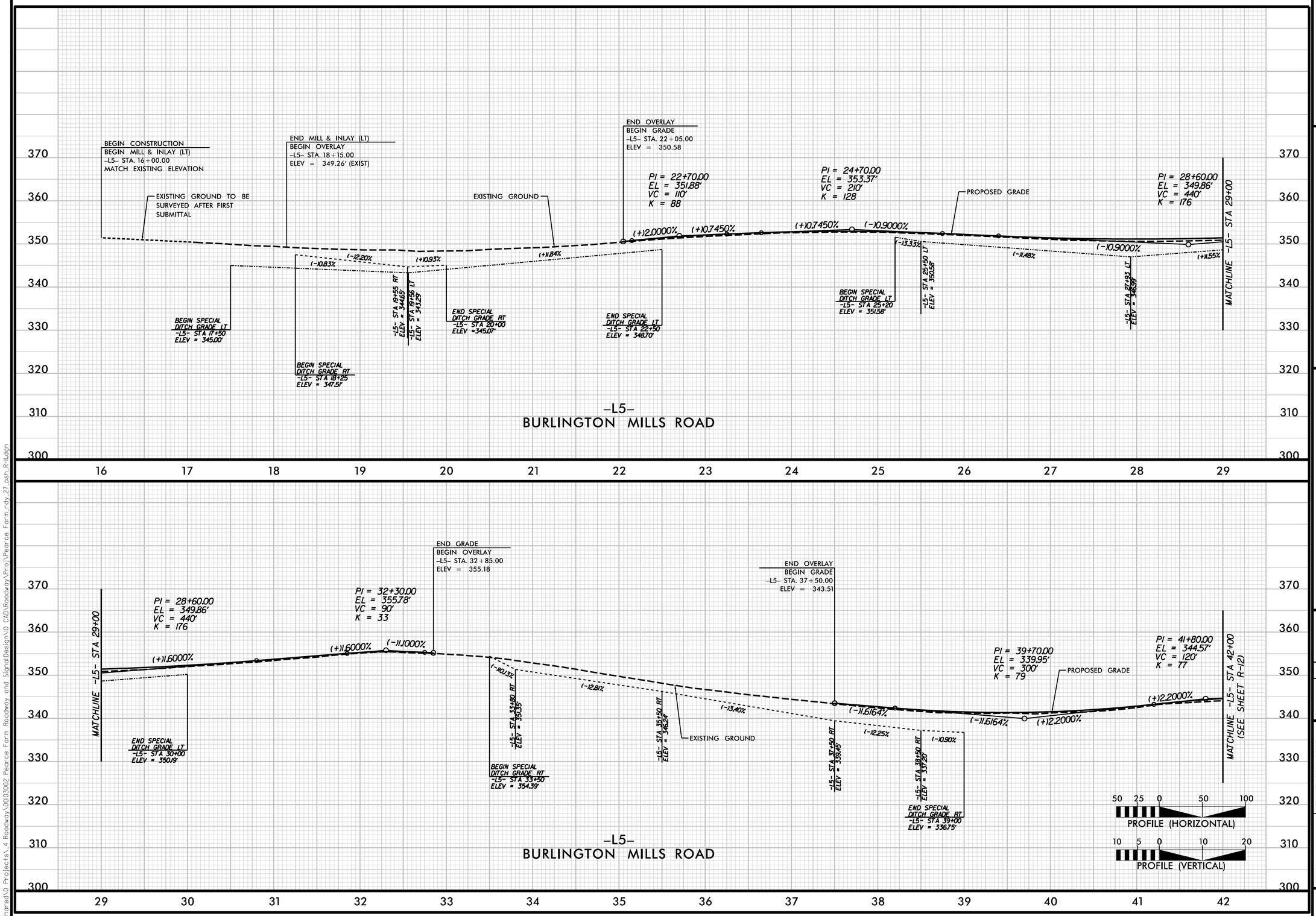
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SIGNATURE DATE

DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 10/23/24
SCALE: 1" = 50'

REVISIONS	INIT.	DATE

SHEET NO.
R-10



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NC License #C-4445

PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

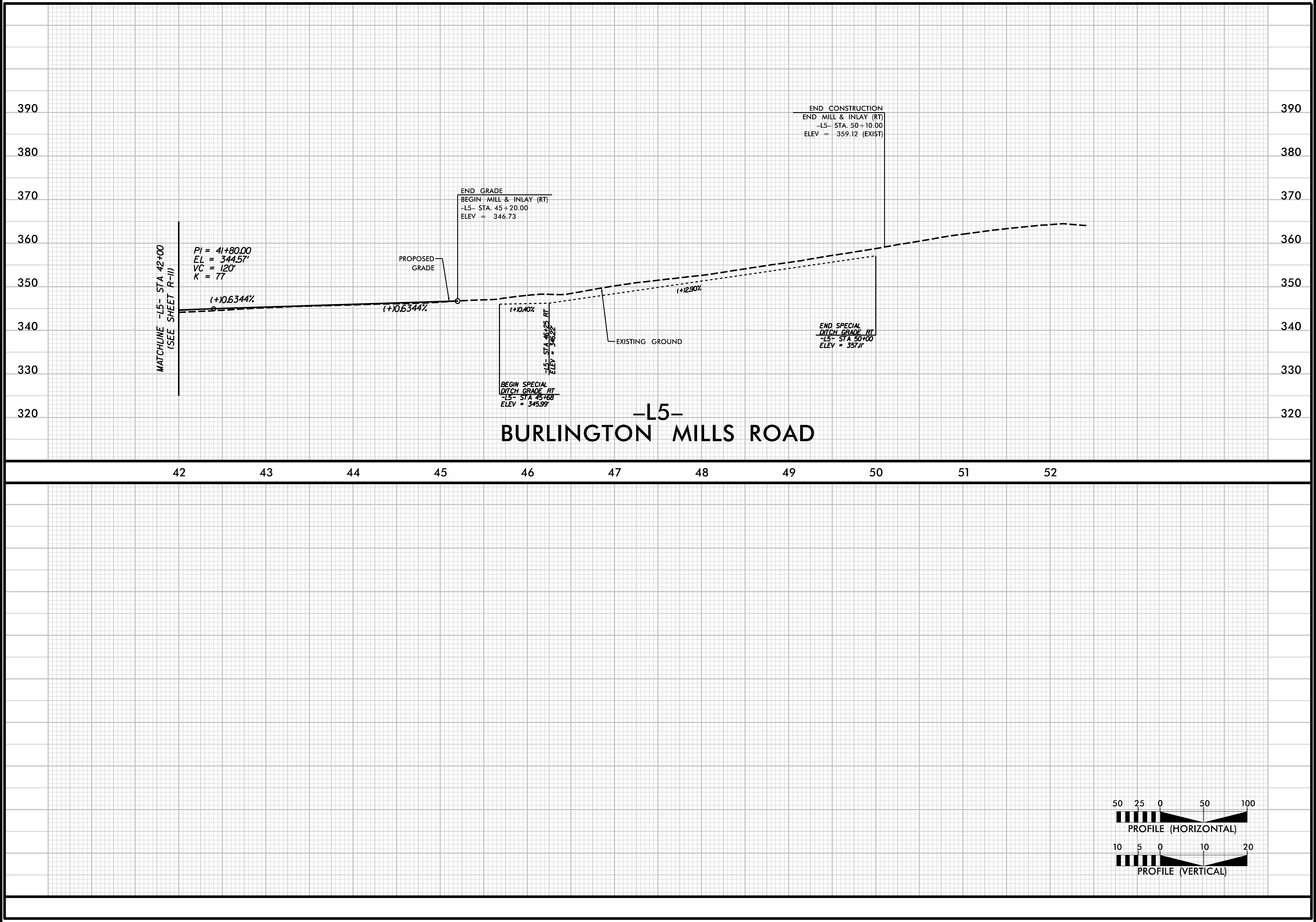
PROFILE SHEET

SEAL
NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH
SIGNATURE DATE

JOB NO.:	00103002
DATE:	102324
SCALE:	1" = 50'
REVISIONS	
DESIGNED BY:	G. BOYLE
REVIEWED BY:	E. LYNCH
INIT.	DATE

SHEET NO.
R-11

10/25/2024
Z:\Shared\0 Projects_4 Roadway\00103002 Pearce Farm Roadway and Signal\Design\10 CAD\Roadway\Prof\Pearce Farm rdy_27 psh R-ildgn



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PEARCE FARM ROADWAY IMPROVEMENTS ROLESVILLE, NORTH CAROLINA

PROFILE SHEET

SEAL
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER ELIZABETH W. LYNCH
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SIGNATURE DATE

DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 10/23/24
SCALE: 1" = 50'

REVISIONS	INIT.	DATE

SHEET NO.
R–12

10/25/2024
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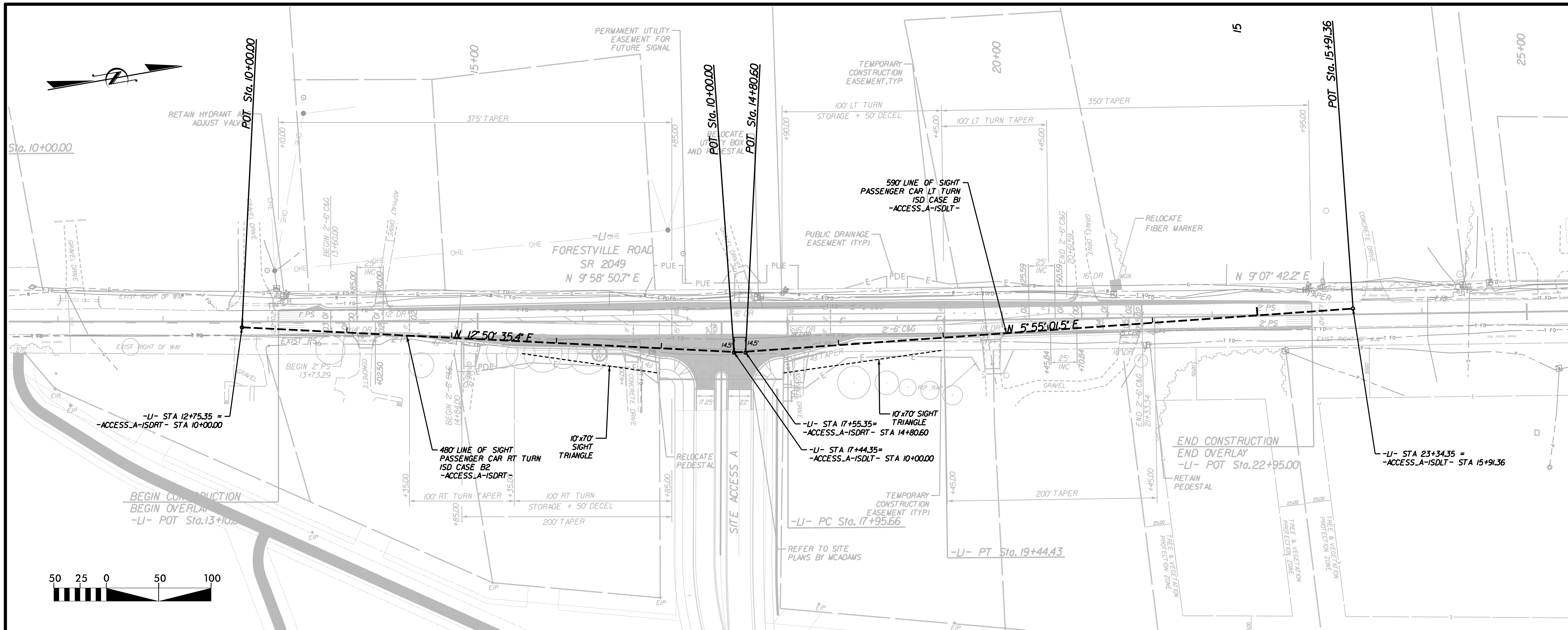

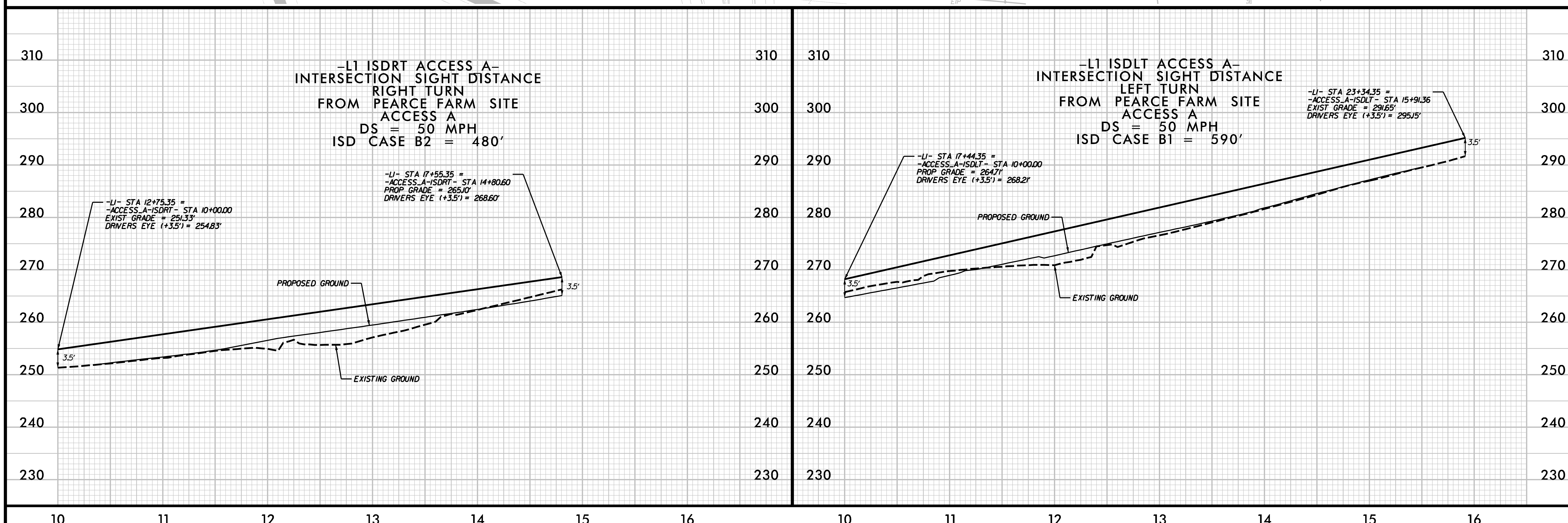

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PEARCE FARM ROADWAY IMPROVEMENTS ROLESVILLE, NORTH CAROLINA

ACCESS A INTERSECTION SIGHT DISTANCE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER ELIZABETH W. LYNCH
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION
SIGNATURE DATE

JOB NO.	00103002
DATE:	102324
SCALE:	
DESIGNED BY:	G. BOYLE
REVIEWED BY:	E. LYNCH
REVISIONS	INIT. DATE

SHEET NO.
SD-1

10/25/2024
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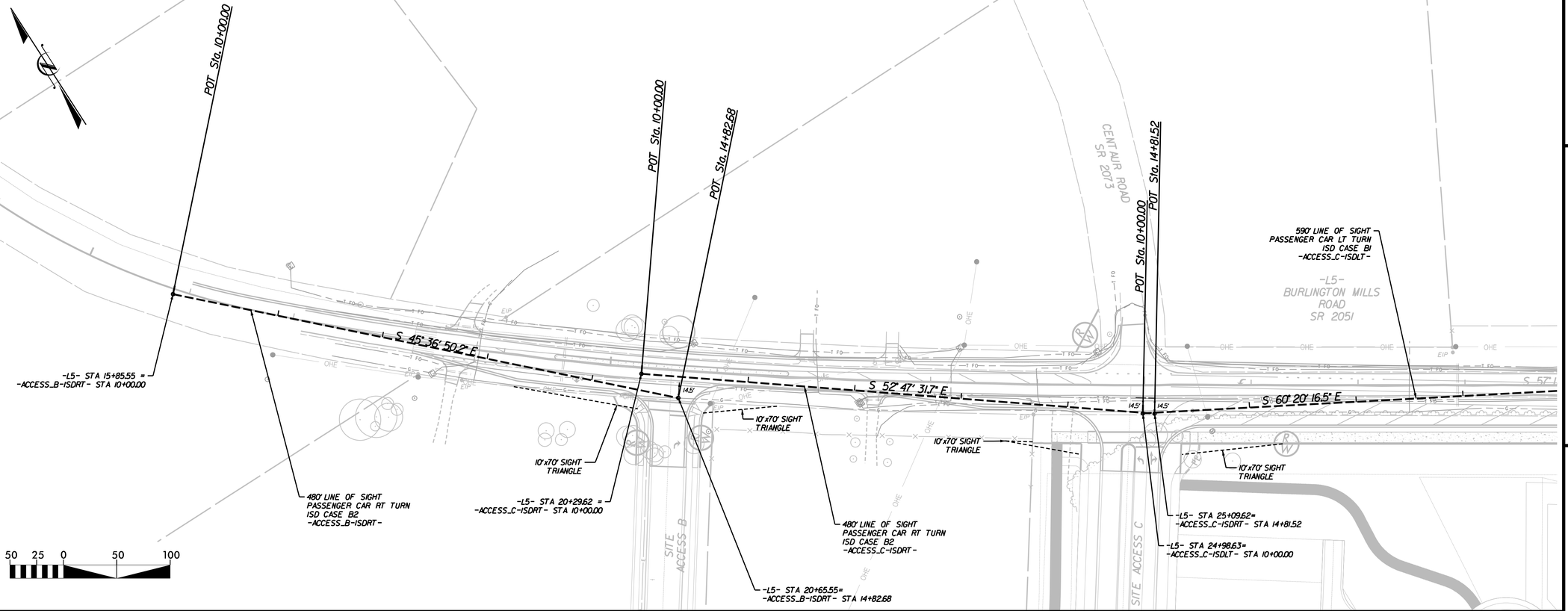

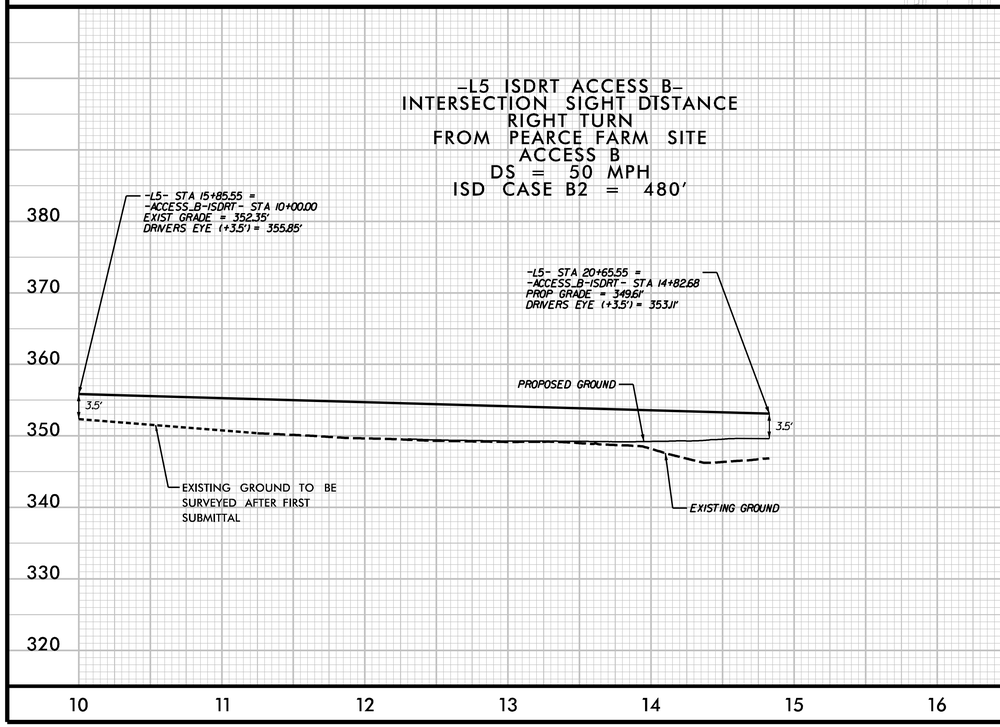

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#C-4445

PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

ACCESS B
INTERSECTION
SIGHT DISTANCE

SEAL
NORTH CAROLINA
PROFESSIONAL
SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH
SIGNATURE
DATE

JOB NO.:	00103002
DATE:	10/23/24
SCALE:	
DESIGNED BY:	G. BOYLE
REVIEWED BY:	E. LYNCH

REVISIONS	INIT.	DATE

SHEET NO.
SD-2

10/25/2024
Z:\Shared\0 Projects_4 Roadway\00\03002 Pearce Farm Roadway and Signal\Design\0 CAD\Roadway\Proj\Pearce Farm_rdy_30.dgn
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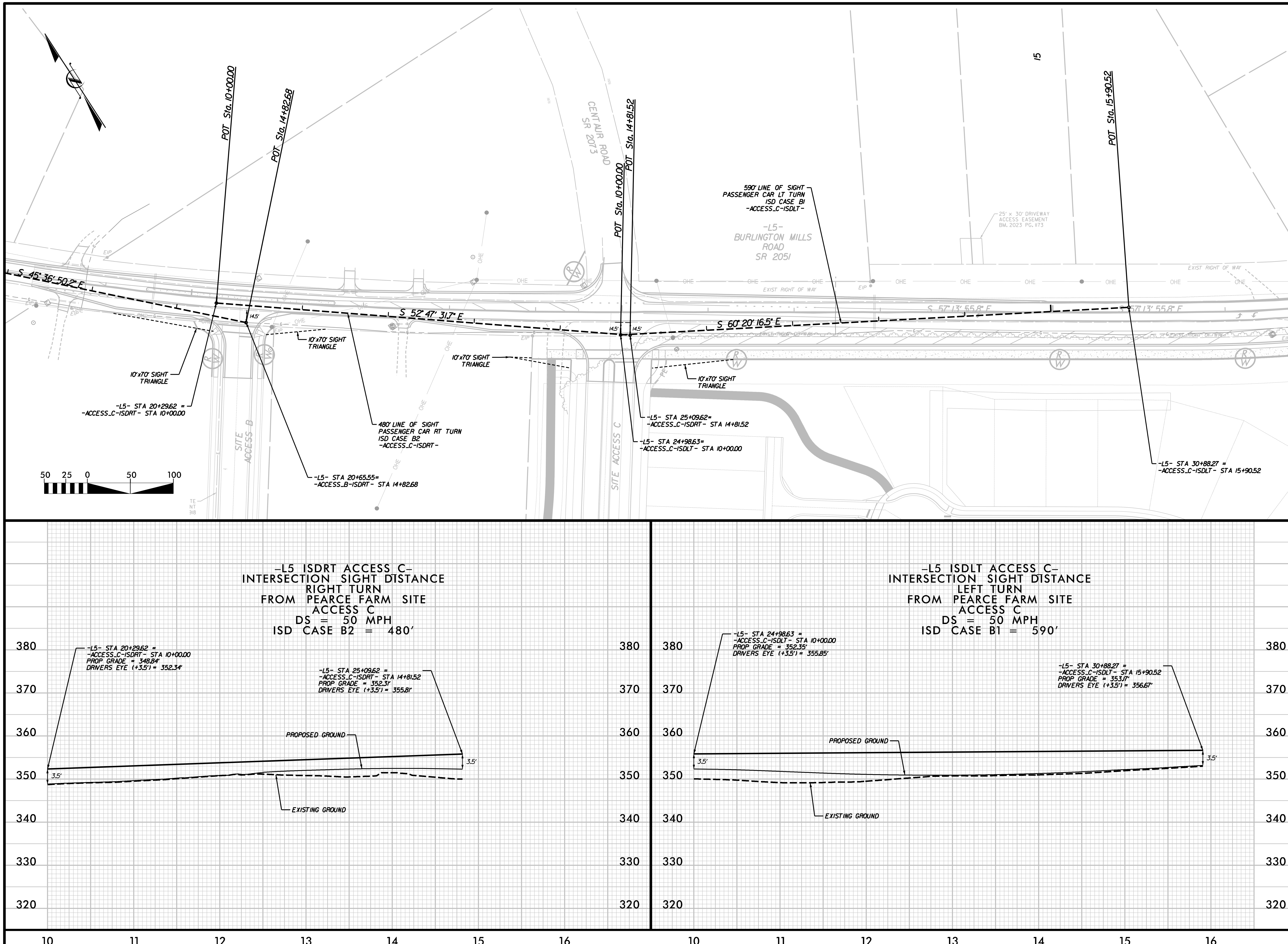

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

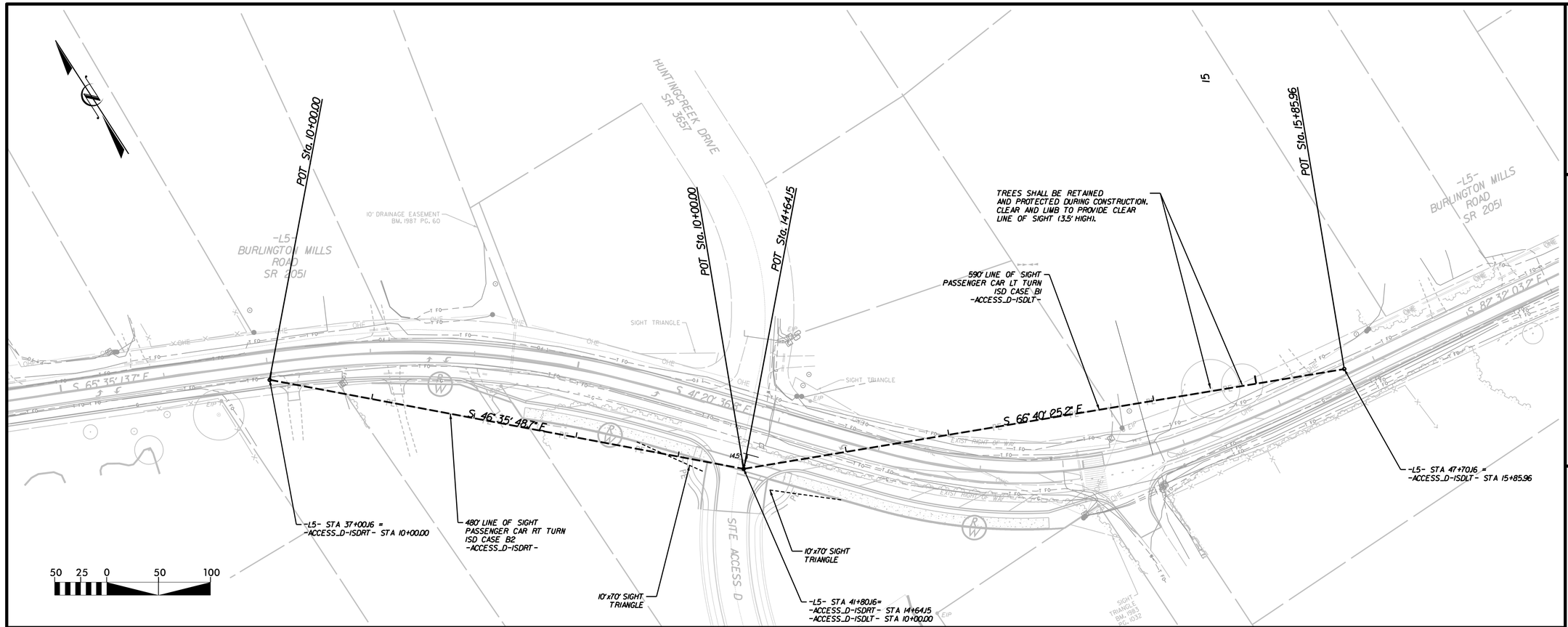
ACCESS C
INTERSECTION
SIGHT DISTANCE

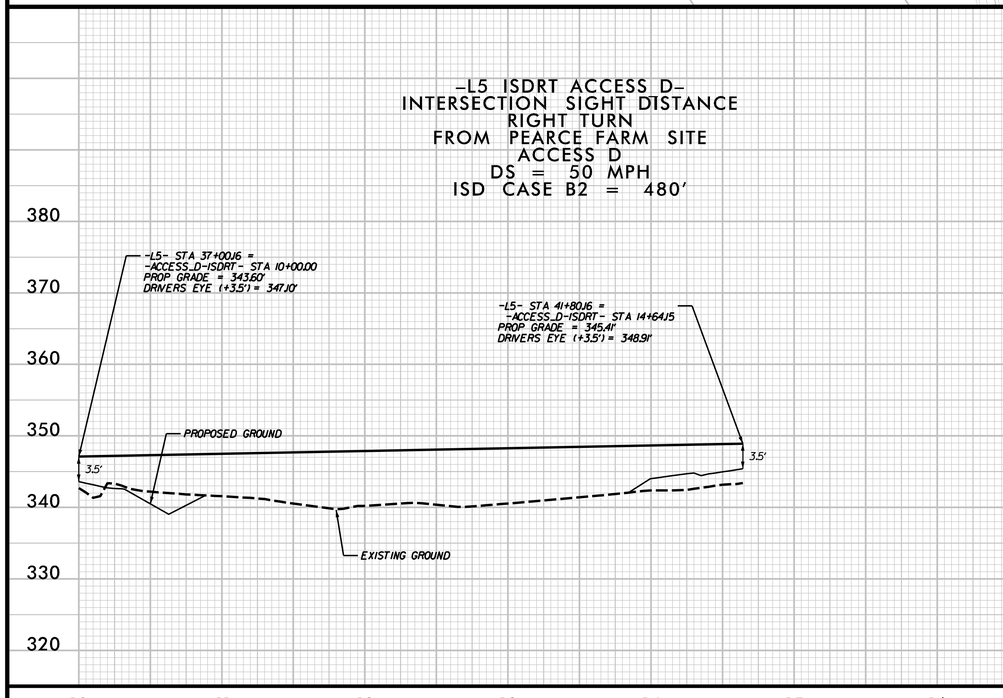
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL
ELIZABETH W. LYNCH
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
SIGNATURE DATE

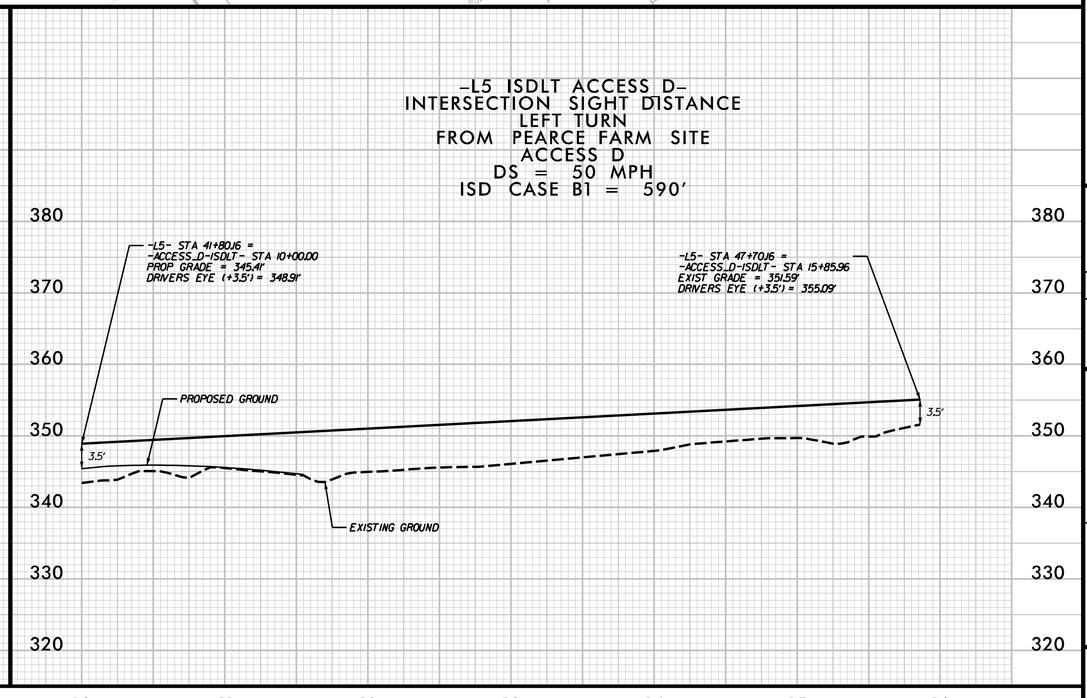
DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH
JOB NO. 00103002
DATE: 102324
SCALE:
REVISIONS
INIT. DATE

SHEET NO.
SD-3

10/25/2024
Z:\Shared\0 Projects_4 Roadway\00103002 Pearce Farm Roadway and Signal Design\0 CAD\Roadway\Proj\Pearce Farm_rdy_31_psh_SD-3.dgn







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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

ACCESS D
INTERSECTION
SIGHT DISTANCE

SEAL
NORTH CAROLINA
PROFESSIONAL
SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH
SIGNATURE
DATE

DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH
INIT.
DATE
JOB NO.: 00103002
DATE: 10/23/24
SCALE:
REVISIONS

SHEET NO.
SD-4

10/28/2024
Z:\Shared\0 Projects_4 Roadway\00\03002 Pearce Farm Roadway and Signal\Design\10 CAD\Roadway\Proj\Pearce Farm_rdy_32.dgn
Pearce Farm_rdy_32_psh_SD-4.dgn

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

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

CLEARING AND GRUBBING
EROSION CONTROL

50 25 0 50 100

SYMBOL	NCDOT STD DWG	DESCRIPTION
╫	1605.01	TEMPORARY SILT FENCE
⊠	1606.01	SPECIAL SEDIMENT CONTROL FENCE
▣	1632.03	ROCK INLET SEDIMENT TRAP,TYPE C
▩	1633.01	TEMPORARY ROCK SILT CHECK,TYPE A
➤	1633.02	TEMPORARY ROCK SILT CHECK,TYPE B
(	SPECIAL DETAIL	WATTLE
— TPF —	SPECIAL DETAIL	TREE PROTECTION FENCE

EROSION CONTROL MEASURES

TOWN OF ROLESVILLE:
PSP–23–04

TOWN OF WAKE FOREST:
PSP–XX–XX

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PEARCE FARM ROADWAY IMPROVEMENTS ROLESVILLE, NORTH CAROLINA

EROSION CONTROL PLAN

SEAL
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER ELIZABETH W. LYNCH
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION
SIGNATURE DATE

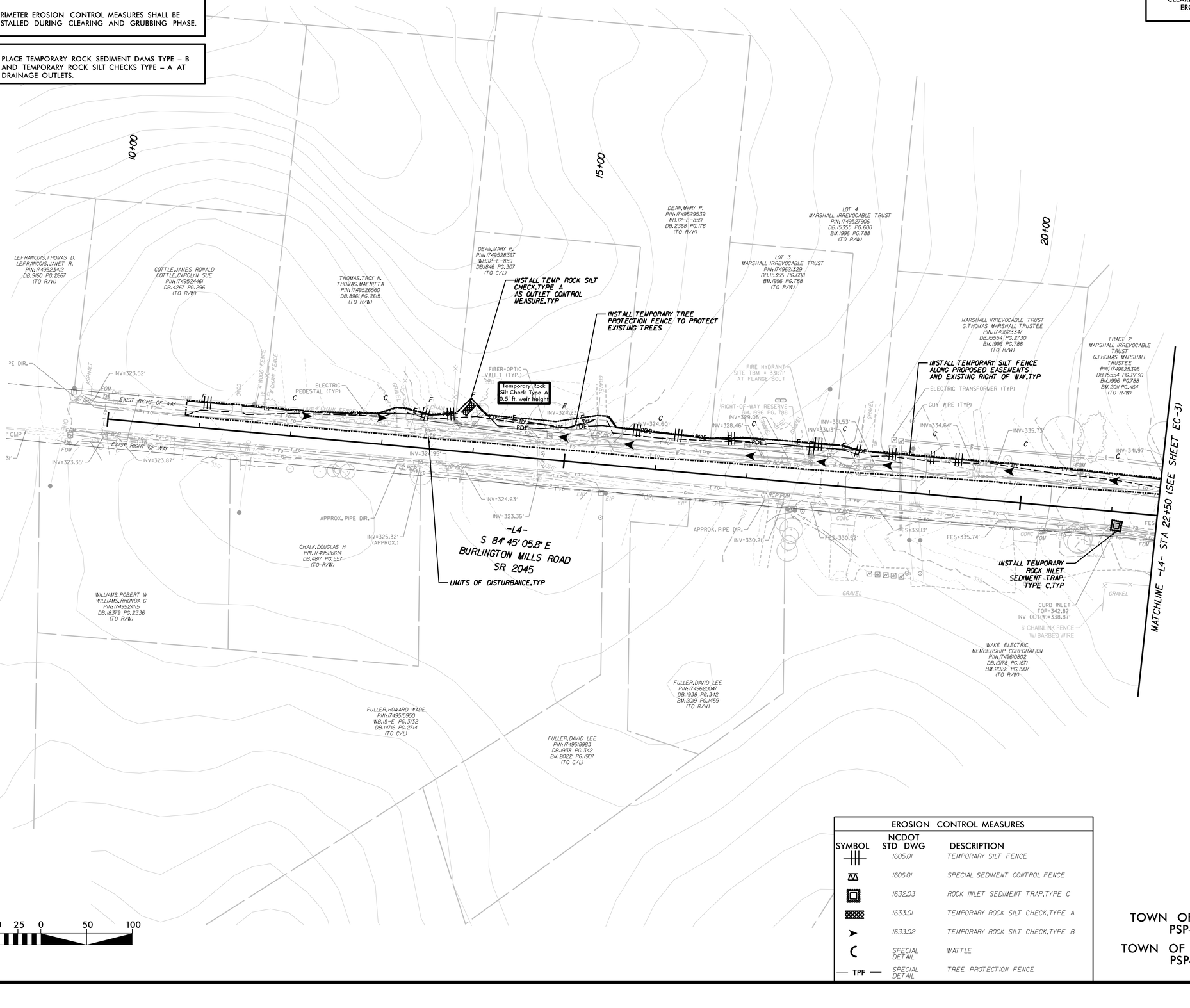
DESIGNED BY: R. MANK
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 102324
SCALE:
REVISIONS | INIT. | DATE

SHEET NO.
EC–1

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

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

CLEARING AND GRUBBING
EROSION CONTROL



EROSION CONTROL MEASURES		
SYMBOL	NCDOT STD DWG	DESCRIPTION
	1605.01	TEMPORARY SILT FENCE
	1606.01	SPECIAL SEDIMENT CONTROL FENCE
	1632.03	ROCK INLET SEDIMENT TRAP,TYPE C
	1633.01	TEMPORARY ROCK SILT CHECK,TYPE A
	1633.02	TEMPORARY ROCK SILT CHECK,TYPE B
C	SPECIAL DETAIL	WATTLE
— TPF —	SPECIAL DETAIL	TREE PROTECTION FENCE

TOWN OF ROLESVILLE:
PSP–23–04

TOWN OF WAKE FOREST:
PSP–XX–XX

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

EROSION CONTROL PLAN

SEAL
NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH
SIGNATURE DATE

JOB NO.: 0010302	DESIGNED BY: J. PACE	INIT.	DATE
DATE: 102324	REVIEWED BY: E. LYNCH		
SCALE:			
REVISIONS			

SHEET NO.
EC–2

10/25/2024
Z:\Shared\0 Projects_4 Roadway\0010302 Pearce Farm Roadway and Signal Design\0 CAD\Roadway\Proj\Pearce Farm rdy_34.dgn EC-2.dgn

CLEARING AND GRUBBING
EROSION CONTROL

MATCHLINE -L3- STA 12+50 (SEE SHEET EC-4)

MATCHLINE -L4- STA 22+50 (SEE SHEET EC-2)

25+00

10+00

30+00

20+00

TRACT 2
MARSHALL IRREVOCABLE TRUST
G.T.HOMAS MARSHALL TRUSTEE
PIN:1749625395
DB.15554 PG.2730
BM.1996 PG.786
BM.2011 PG.464
(TO R/W)

WILSON,BRENDA P
PIN:1749628389
DB.8680 PG.2145
BM.2002 PG.1969
(TO R/W)

WILSON,BRENDA P
LOWERY,LINDA P
PIN:1749628295
DB.9105 PG.469
BM.1983 PG.550
BM.2002 PG.1969
(TO R/W)

EDDINS,JOHNNY BARRY
PIN:1749720199
DB.2944 PG.225
(TO R/W)

EDDINS,RHONDA RENEE
PIN:1749722281
DB.18695 PG.1186
(TO R/W)

BRANTLEY,HERLEY JR
BRANTLEY,JANET S
PIN:1749724148
DB.2517 PG.178
(TO R/W)

WHITE,FRANCES K
PIN:1749726107
WB.19-E PG.318
(DB.1850 PG.222)
(TO R/W)

DEGRUY,KATE LORD
DEGRUY,HENRY ORIN
PIN:1749727240
DB.17302 PG.464
(TO R/W)

TAYLOR,STEPHEN T
TAYLOR,MELISSA
PIN:1749728159
DB.16845 PG.2202
(TO C/L)

FULLER,LARRY THOMAS
FULLER,DONNA
PIN:1749626085
DB.4822 PG.97
BM.2011 PG.464
BM.2018 PG.2462
(TO R/W)

FULLER,LARRY THOMAS
PIN:1749615894
DB.1938 PG.342
BM.2011 PG.464
BM.2018 PG.2462
(TO R/W)

LOT 3
MARSHALL,G THOMAS TRUSTEE
MARSHALL,DENNIS C TRUSTEE
PIN:1749610375
DB.1918 PG.1669
BM.2022 PG.1907
(TO C/L)

WILLIAMS,ROBERT W
WILLIAMS,RHONDA G
PIN:1749710957
DB.15501 PG.334
BM.2013 PG.1539
(TO R/W)

WILLIAMS,RHONDA G
WILLIAMS,ROBERT W
PIN:1749712915
DB.11184 PG.2158
(TO R/W)

WILLIAMS,RHONDA G
WILLIAMS,ROBERT W
PIN:1749713935
DB.11184 PG.2158
(TO R/W)

WILLIAMS,RHONDA G
WILLIAMS,ROBERT W
PIN:1749714944
DB.11184 PG.2154
(TO R/W)

BROWN,CYNTHIA HOPE
BROWN,MARTY RAY
PIN:1749717465
DB.8488 PG.1172
(ASSUMED TO C/L)

CITADEL PROPERTIES LLC
PIN:1749719721
DB.18787 PG.1893
BM.1984 PG.333
(TO R/W)

MARSHALL FAMILY IRREVOCABLE TRUST
PIN:1749619408
DBU5554 PG.2730
(REFERENCED MAP DOES NOT MATCH LOCATION)

Temporary Rock Silt Check Type A 1 ft. weir height

Temporary Rock Silt Check Type A 0.5 ft. weir height

INSTALL SPECIAL SEDIMENT CONTROL FENCE AT SILT FENCE OUTLETS,TYP

INSTALL TEMPORARY SILT FENCE ALONG PROPOSED EASEMENTS AND EXISTING RIGHT OF WAY,TYP

INSTALL TEMP ROCK SILT CHECK,TYPE A AS OUTLET CONTROL MEASURE,TYP

INSTALL J-HOOK AND REINFORCED SILT FENCE AS NEEDED TO DIFFUSE FLOW ALONG SILT FENCE

INSTALL TEMPORARY ROCK INLET SEDIMENT TRAP, TYPE C,TYP

INSTALL TEMPORARY ROCK SILT CHECK, TYPE B IN DITCH LINE,TYP

LIMITS OF DISTURBANCE,TYP

EXIST RIGHT OF WAY

50 25 0 50 100

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

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

EROSION CONTROL MEASURES

SYMBOL	NCDOT STD DWG	DESCRIPTION
	1605.01	TEMPORARY SILT FENCE
	1606.01	SPECIAL SEDIMENT CONTROL FENCE
	1632.03	ROCK INLET SEDIMENT TRAP,TYPE C
	1633.01	TEMPORARY ROCK SILT CHECK,TYPE A
	1633.02	TEMPORARY ROCK SILT CHECK,TYPE B
C	SPECIAL DETAIL	WATTLE
— TPF —	SPECIAL DETAIL	TREE PROTECTION FENCE

TOWN OF ROLESVILLE:
PSP–23–04

TOWN OF WAKE FOREST:
PSP–XX–XX

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

EROSION CONTROL PLAN

SEAL
NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH

SIGNATURE DATE

DESIGNED BY: J. PACE	INIT.	DATE	
REVIEWED BY: E. LYNCH			
JOB NO.: 00102002	REVISIONS		
DATE: 10/23/24			
SCALE:			

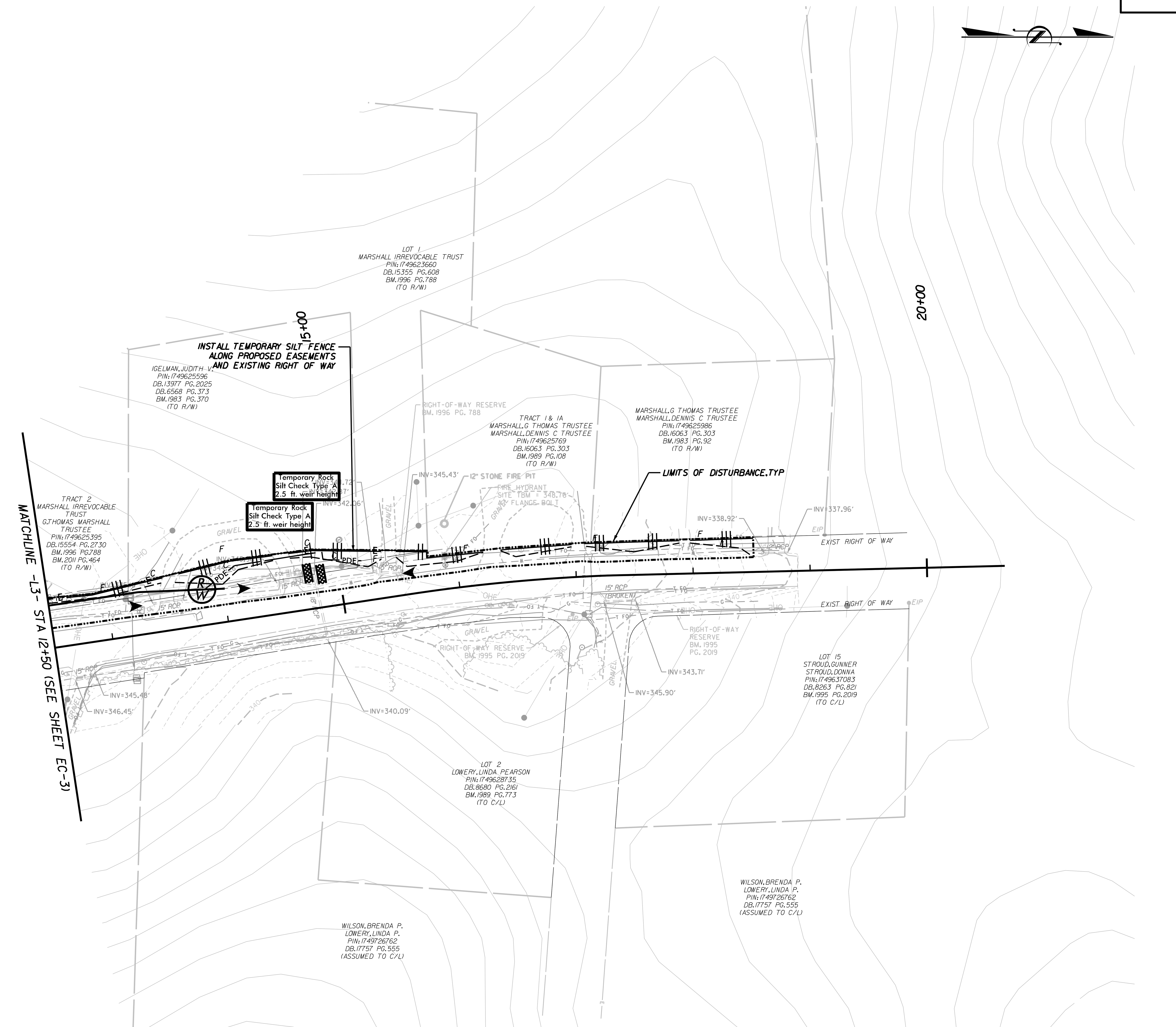
SHEET NO.
EC-3

10/25/2024
Z:\Shared\0 Projects_4 Roadway\00\03002 Pearce Farm Roadway and Signal\Design\10 CAD\Roadway\Proj\Pearce Farm_rdy 35_psh EC-3.dgn

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

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

CLEARING AND GRUBBING
EROSION CONTROL



EROSION CONTROL MEASURES		
SYMBOL	NCDOT STD DWG	DESCRIPTION
	1605.01	TEMPORARY SILT FENCE
	1606.01	SPECIAL SEDIMENT CONTROL FENCE
	1632.03	ROCK INLET SEDIMENT TRAP,TYPE C
	1633.01	TEMPORARY ROCK SILT CHECK,TYPE A
	1633.02	TEMPORARY ROCK SILT CHECK,TYPE B
	SPECIAL DETAIL	WATTLE
— TPF —	SPECIAL DETAIL	TREE PROTECTION FENCE

50 25 0 50 100

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

EROSION CONTROL PLAN

SEAL
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER ELIZABETH W. LYNCH
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

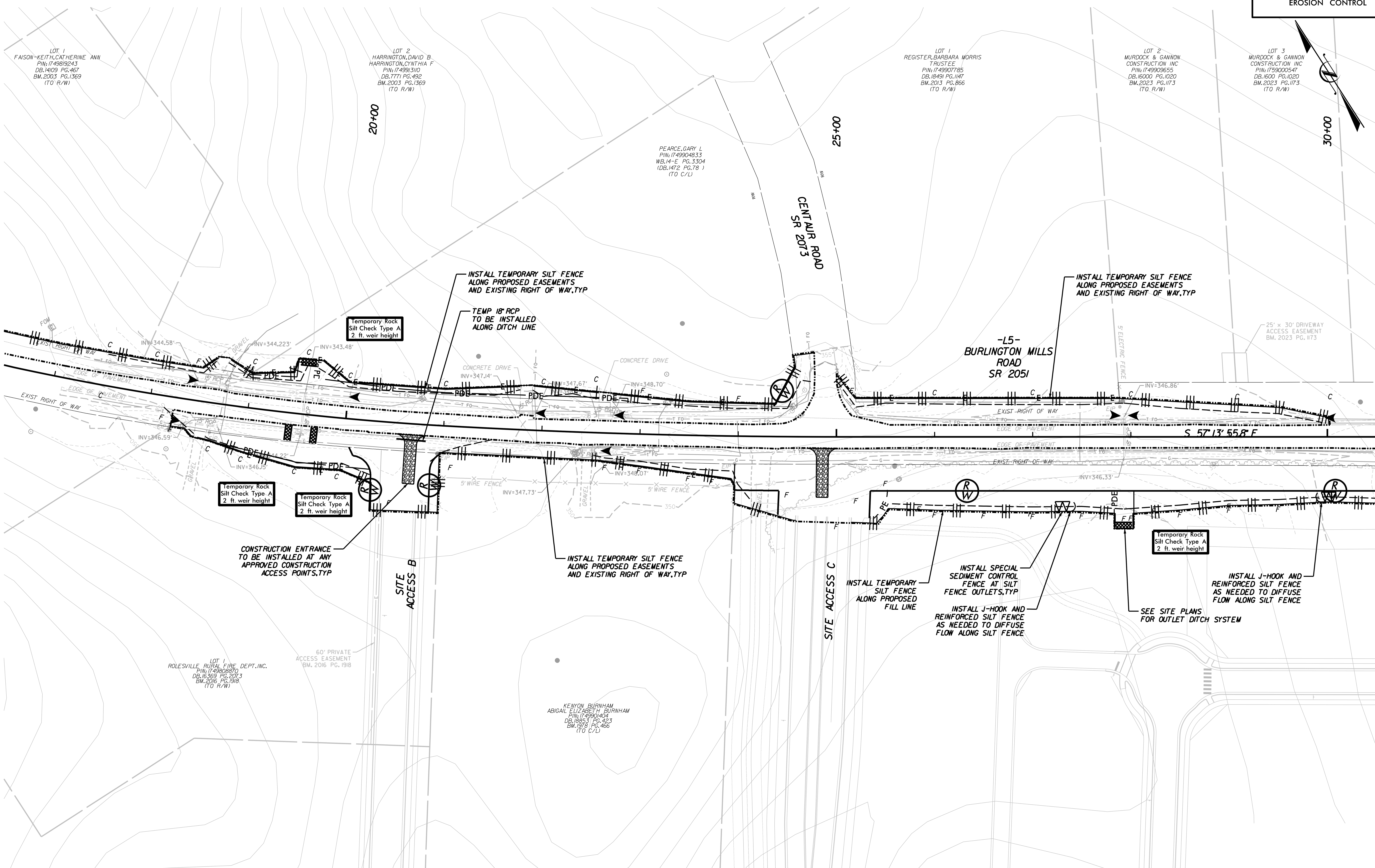
SIGNATURE DATE

JOB NO.: 00103002
DATE: 102324
SCALE:
DESIGNED BY: J. PACE
REVIEWED BY: E. LYNCH
REVISIONS | INIT. | DATE

SHEET NO.
EC–4

10/25/2024
Z:\Shared\0_Projects_4 Roadway\00103002 Pearce Farm Roadway and Signal Design\0_CAD\Roadway\Proj\Pearce Farm_rdy_36_psh_EC-4.dgn

CLEARING AND GRUBBING
EROSION CONTROL



LOT 1
FAISON-KEITH,CATHERINE ANN
LOT 2
HARRINGTON,DAVID B.
HARRINGTON,CYNTHIA F
20+00
PEARCE,GARY L
LOT 1
REGISTER,BARBARA MORRIS
TRUSTEE
25+00
CENTAUR ROAD
SR 2073
LOT 2
MURDOCK & GANNON
CONSTRUCTION INC
LOT 3
MURDOCK & GANNON
CONSTRUCTION INC
30+00
INSTALL TEMPORARY SILT FENCE
ALONG PROPOSED EASEMENTS
AND EXISTING RIGHT OF WAY,TYP
TEMP 18" RCP
TO BE INSTALLED
ALONG DITCH LINE
Temporary Rock
Silt Check Type A
2 ft. weir height
-L5-
BURLINGTON MILLS
ROAD
SR 2051
S 57°13'55.8" E
MATCHLINE -L5- STA 30+50 (SEE SHEET EC-6)
CONSTRUCTION ENTRANCE
TO BE INSTALLED AT ANY
APPROVED CONSTRUCTION
ACCESS POINTS,TYP
SITE
ACCESS B
SITE ACCESS C
INSTALL TEMPORARY
SILT FENCE
ALONG PROPOSED
FILL LINE
INSTALL SPECIAL
SEDIMENT CONTROL
FENCE AT SILT
FENCE OUTLETS,TYP
INSTALL J-HOOK AND
REINFORCED SILT FENCE
AS NEEDED TO DIFFUSE
FLOW ALONG SILT FENCE
SEE SITE PLANS
FOR OUTLET DITCH SYSTEM
LOT 1
ROLESVILLE RURAL FIRE DEPT.,INC.
KENYON BURNHAM
ABIGAIL ELIZABETH BURNHAM
50 25 0 50 100

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

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

EROSION CONTROL MEASURES

SYMBOL	NCDOT STD DWG	DESCRIPTION
	1605.01	TEMPORARY SILT FENCE
	1606.01	SPECIAL SEDIMENT CONTROL FENCE
	1632.03	ROCK INLET SEDIMENT TRAP,TYPE C
	1633.01	TEMPORARY ROCK SILT CHECK,TYPE A
	1633.02	TEMPORARY ROCK SILT CHECK,TYPE B
	SPECIAL DETAIL	WATTLE
— TPF —	SPECIAL DETAIL	TREE PROTECTION FENCE

TOWN OF ROLESVILLE:
PSP–23–04

TOWN OF WAKE FOREST:
PSP–XX–XX

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PEARCE FARM ROADWAY IMPROVEMENTS ROLESVILLE, NORTH CAROLINA

EROSION CONTROL PLAN

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL ELIZABETH W. LYNCH
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

SIGNATURE DATE

JOB NO.: 00103002
DATE: 102324
SCALE:
DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH
REVISIONS | INIT. | DATE

SHEET NO.
EC–5

10/25/2024
Z:\Shared\0 Projects_4 Roadway\00103002 Pearce Farm Roadway and Signal Design\0 CAD\Roadway\Proj\Pearce Farm_rdy_37_psh_EC-5.dgn

CLEARING AND GRUBBING
EROSION CONTROL

LOT 4
MURDOCK & GANNON CONSTRUCTION INC
PIN:1759004454
DB.1600 PG.1020
BM.2023 PG.117
(TO R/W)

LOT 1
EDDINS, JERRY W
PIN:1759002380
DB.6504 PG.201
BM.2000 PG.1749
(TO R/W)

LOT 4
JOHNSON, SHARON E
PIN:1759004217
WB.10-E PG.2925
(DB.1696 PG.522)
BM.2000 PG.1749
BM.2001 PG.1488
(TO R/W)

LOT 3
KEITH REAL ESTATE INVESTMENTS LLC
PIN:1759005410
DB.16947 PG.1903
(TO C/L)

LOT 2
FAISON, ANTHONY L
FAISON, ANGEL M
PIN:1759006138
DB.12754 PG.2215
(TO R/W)

BELL, JOHN
PIN:1759007167
DB.1919 PG.313
(TO R/W)

LOT 1
HARRIS, MICHAEL W
HARRIS, KATHY P
PIN:1758098991
DB.8223 PG.1773
BM.1987 PG.60
(TO R/W)

LOT 46
SEBRING, ALEX KENT
SEBRING, KAITLYN JANE
PIN:1758191624
DB.18187 PG.48
BM.1987 PG.60
(TO R/W)

LOT 1
CATHERINE ANN KEITH
PIN:1758093982
DB.9410 PG.2008
BM.1980 PG.1034
(TO R/W)

TAMMY FAISON TAYLOR
JONATHAN THOMAS TAYLOR
PIN:1758095668
DB.5304 PG.182
(TO C/L)

HERBERT CLIFTON FAISON
PIN:1758096760
DB.1391 PG.1229
BM.2017 PG.1607
(TO R/W)

MATCHLINE -L5- STA 30+50 (SEE SHEET EC-5)

MATCHLINE -L5- STA 44+50 (SEE SHEET EC-7)

35+00

40+00

INSTALL TEMPORARY ROCK SILT CHECK, TYPE B IN DITCH LINE, TYP

INSTALL TEMP ROCK SILT CHECK, TYPE A AS OUTLET CONTROL MEASURE, TYP

Temporary Rock Silt Check Type A 1 ft. weir height

TEMP 18" RCP TO BE INSTALLED ALONG DITCH LINE

CLEAR AND LIMB TREES FOR SIGHT DISTANCE (SEE ROADWAY PLANS)

CONSTRUCTION ENTRANCE WITH TO BE INSTALLED AT ALL SITE DRIVEWAYS, TYP

SEE SITE PLANS FOR OUTLET DITCH SYSTEM

10' DRAINAGE EASEMENT BM. 1987 PG. 60

EXIST RIGHT OF WAY

EDGE OF PAVEMENT

LANDSCAPE ISLAND 4' BRICK EDGE

LANDSCAPE ISLAND 8' BLOCK EDGE

50 25 0 50 100

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

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

EROSION CONTROL MEASURES

SYMBOL	NCDOT STD DWG	DESCRIPTION
	1605.01	TEMPORARY SILT FENCE
	1606.01	SPECIAL SEDIMENT CONTROL FENCE
	1632.03	ROCK INLET SEDIMENT TRAP, TYPE C
	1633.01	TEMPORARY ROCK SILT CHECK, TYPE A
	1633.02	TEMPORARY ROCK SILT CHECK, TYPE B
C	SPECIAL DETAIL	WATTLE
— TPF —	SPECIAL DETAIL	TREE PROTECTION FENCE

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

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www.exultengineering.com
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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

EROSION CONTROL PLAN

SEAL
NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH
SIGNATURE DATE

JOB NO.:	00103002
DATE:	10/23/24
SCALE:	
DESIGNED BY:	G. BOYLE
REVIEWED BY:	E. LYNCH
REVISIONS	INIT. DATE

SHEET NO.
EC-6

10/25/2024
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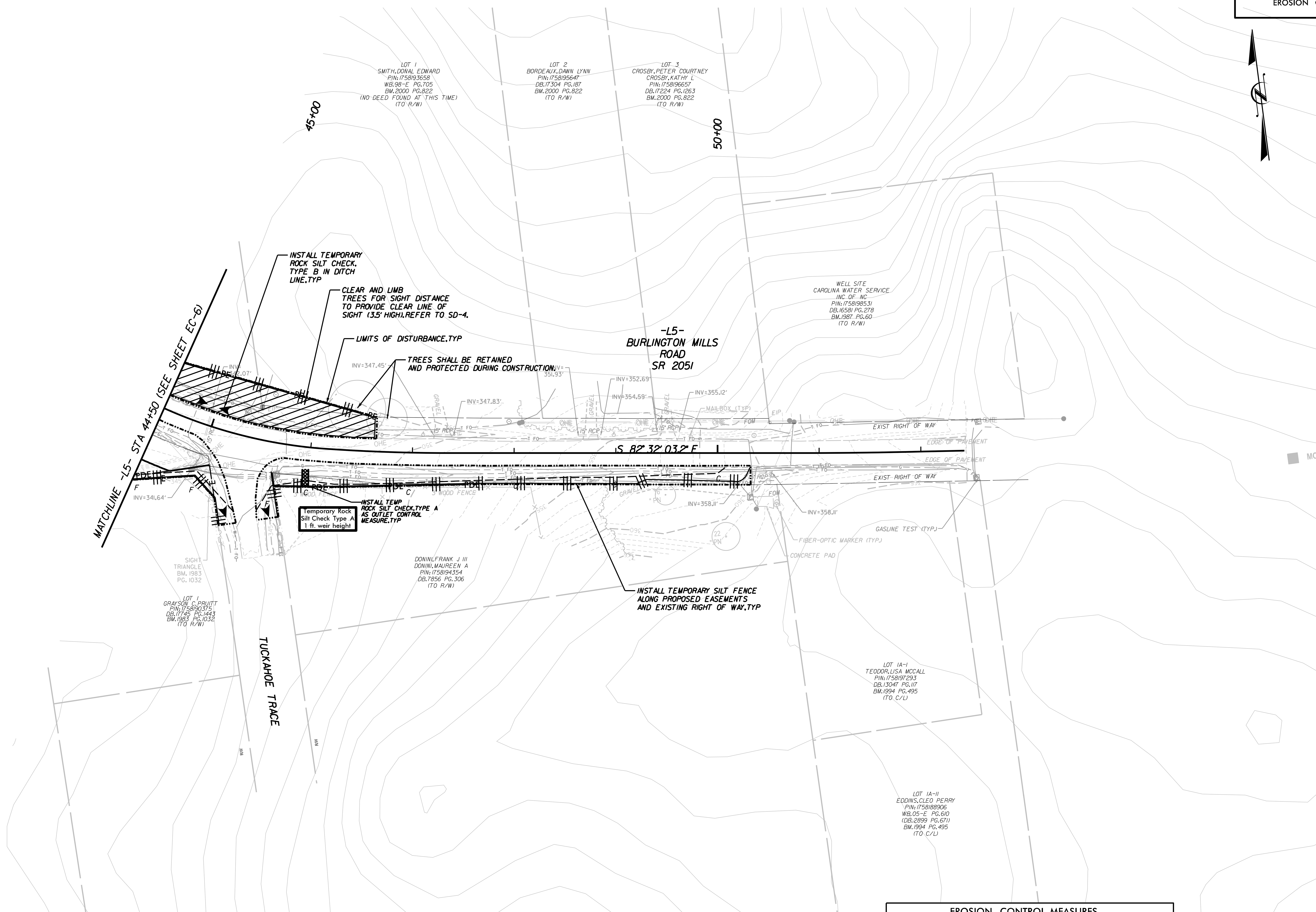
CLEARING AND GRUBBING
EROSION CONTROL



NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

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

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(	SPECIAL DETAIL	WATTLE
— TPF —	SPECIAL DETAIL	TREE PROTECTION FENCE

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

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PEARCE FARM
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SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL
ELIZABETH W. LYNCH
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
SIGNATURE DATE

DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 102324
SCALE:
REVISIONS INIT. DATE

SHEET NO.
EC-7

10/28/2024
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EROSION CONTROL MEASURES		
SYMBOL	NCDOT STD DWG	DESCRIPTION
≠	1605.01	TEMPORARY SILT FENCE
⧋	1606.01	SPECIAL SEDIMENT CONTROL FENCE
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C	SPECIAL DETAIL	WATTLE
— TPF —	SPECIAL DETAIL	TREE PROTECTION FENCE

TOWN OF ROLESVILLE: PSP-23-04

TOWN OF WAKE FOREST: PSP-XX-XX

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PEARCE FARM
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EROSION CONTROL PLAN

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NORTH CAROLINA PROFESSIONAL SEAL ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ELIZABETH W. LYNCH
SIGNATURE DATE

JOB NO.: 00103002	DESIGNED BY: R. MANK
DATE: 102324	REVIEWED BY: E. LYNCH
SCALE:	

REVISIONS	INIT.	DATE

SHEET NO.
EC-8

10/25/2024
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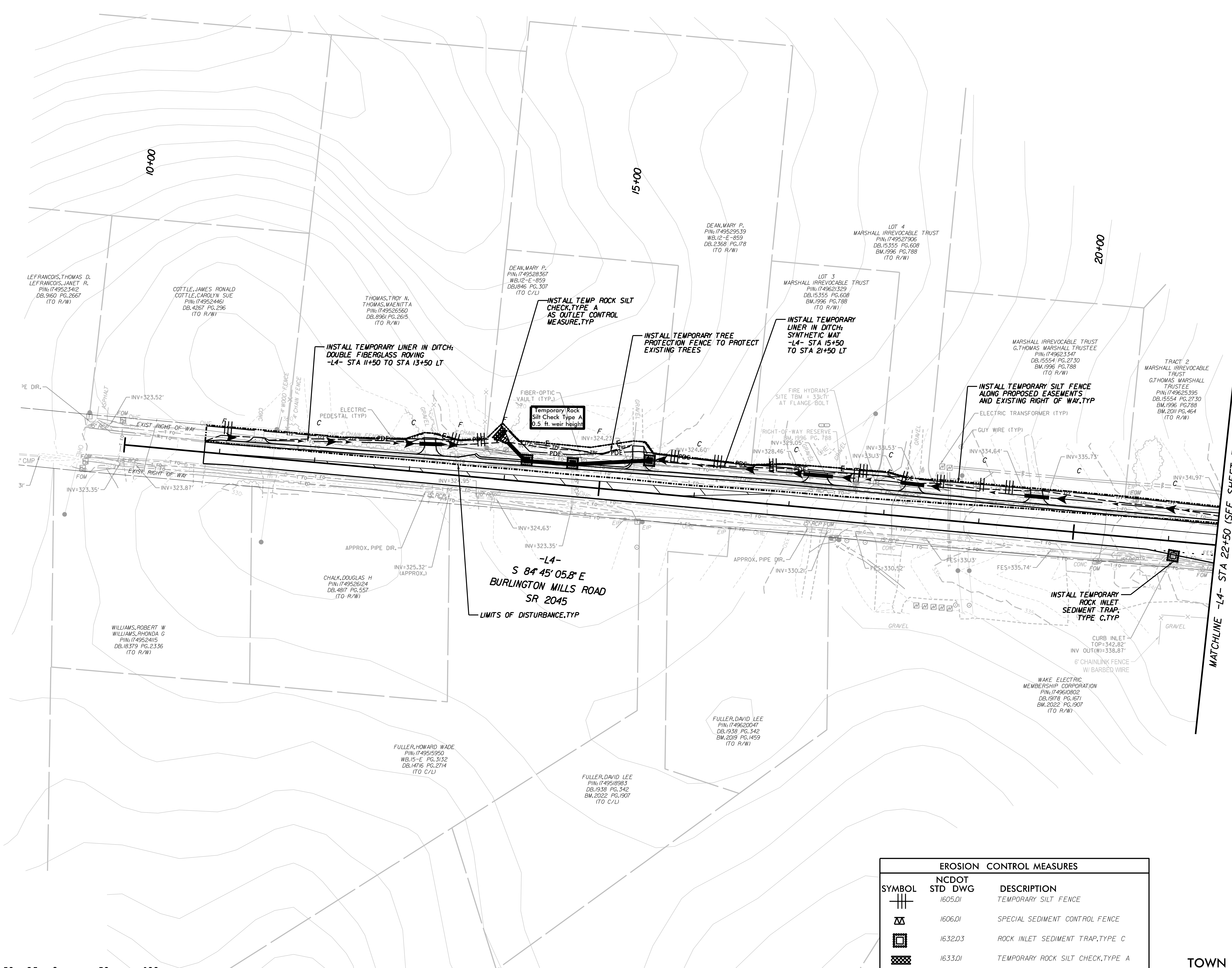

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Table: EROSION CONTROL MEASURES

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

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EROSION CONTROL PLAN

SEAL
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER ELIZABETH W. LYNCH
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION
SIGNATURE DATE

JOB NO.: 00103002
DATE: 102324
SCALE:
DESIGNED BY: J. PACE
REVIEWED BY: E. LYNCH
REVISIONS | INIT. | DATE

SHEET NO.
EC-9

10/25/2024
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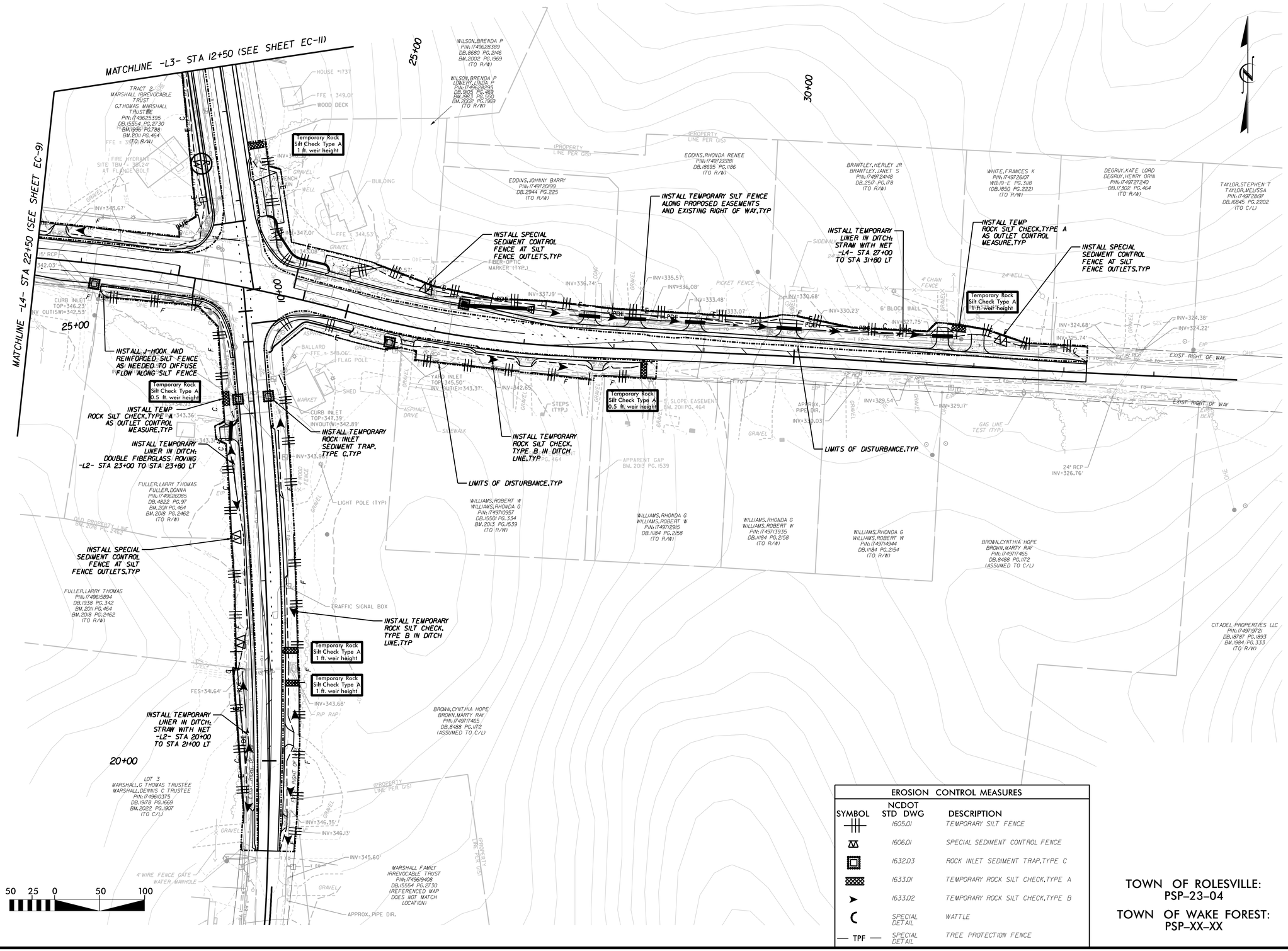

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C	SPECIAL DETAIL	WATTLE
— TPF —	SPECIAL DETAIL	TREE PROTECTION FENCE

TOWN OF ROLESVILLE: PSP-23-04

TOWN OF WAKE FOREST: PSP-XX-XX

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ENGINEER
ELIZABETH W. LYNCH

SIGNATURE _____ DATE _____

JOB NO.: 0103002	DESIGNED BY: J. PACE
DATE: 10/23/24	REVIEWED BY: E. LYNCH
SCALE:	

REVISIONS	INIT.	DATE

SHEET NO.
EC-10

10/25/2024
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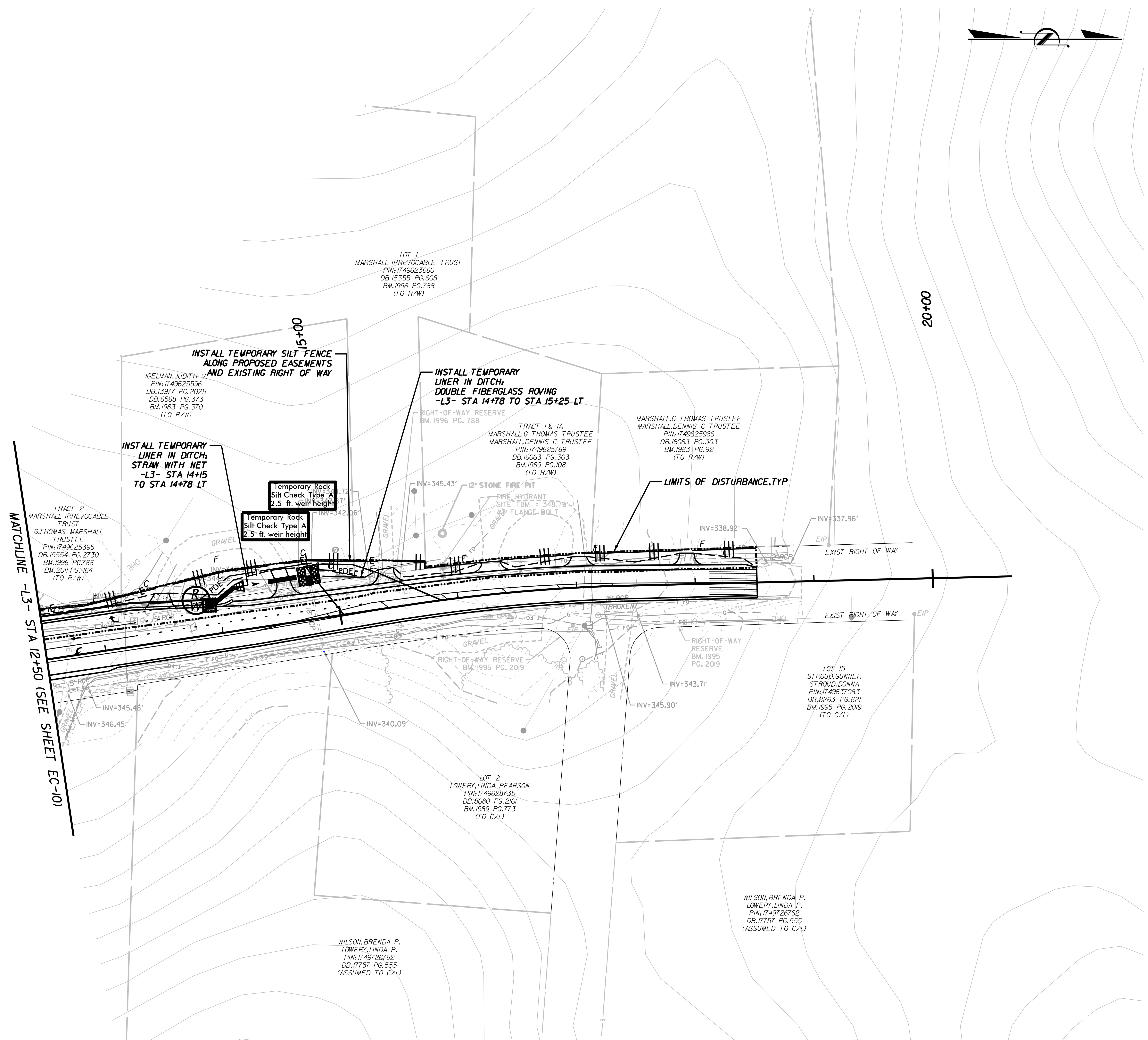

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	SPECIAL DETAIL	WATTLE
— TPF —	SPECIAL DETAIL	TREE PROTECTION FENCE

50 25 0 50 100

TOWN OF ROLESVILLE:
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TOWN OF WAKE FOREST:
PSP-XX-XX

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PEARCE FARM ROADWAY IMPROVEMENTS ROLESVILLE, NORTH CAROLINA

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JOB NO.: 00103002
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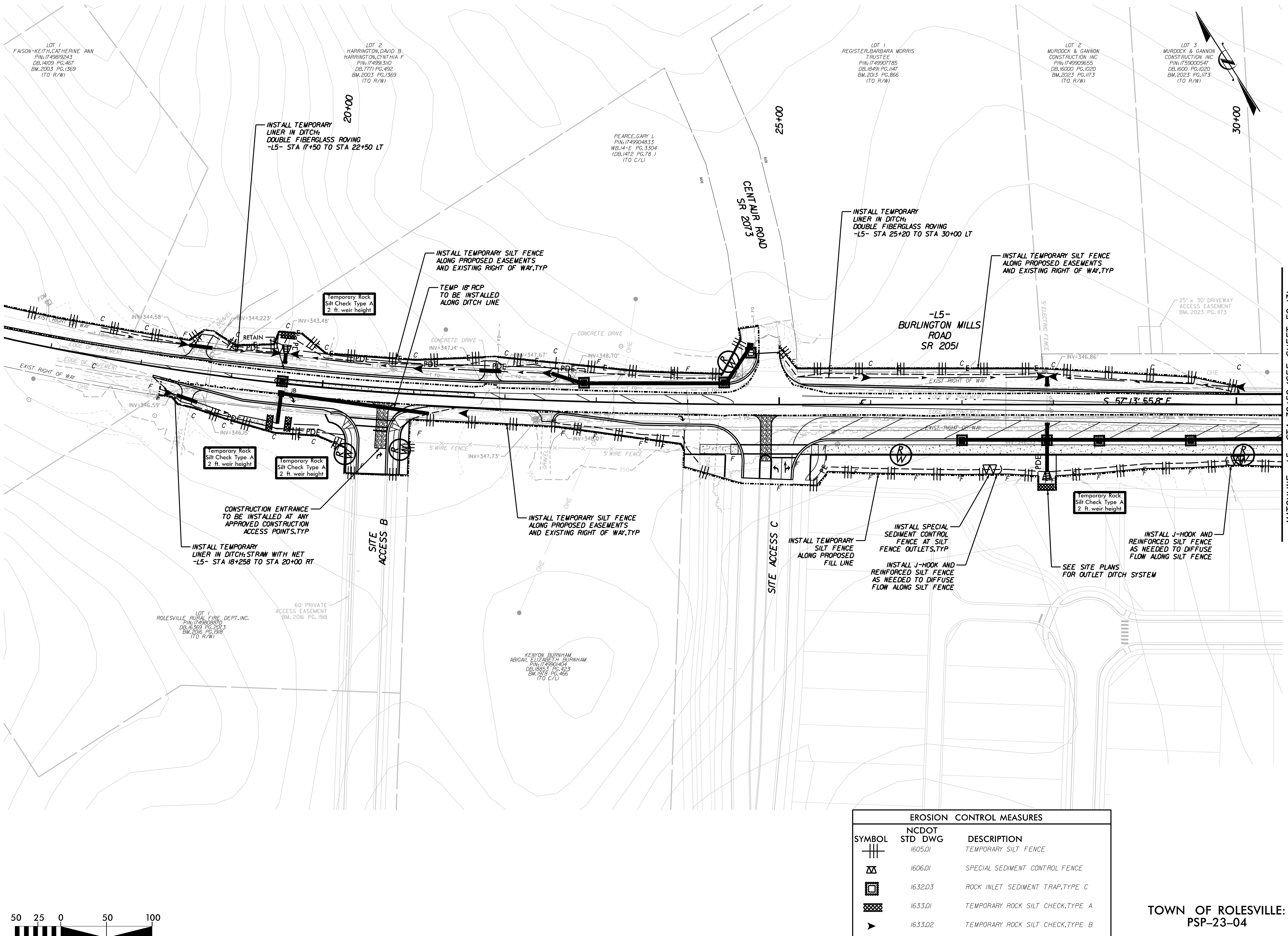
SCALE:
DESIGNED BY: J. PACE
REVIEWED BY: E. LYNCH
REVISIONS
INIT. DATE

SHEET NO.
EC-11



EROSION CONTROL MEASURES

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TOWN OF ROLESVILLE:
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TOWN OF WAKE FOREST:
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EROSION CONTROL PLAN

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PRELIMINARY PLANS
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SIGNATURE DATE

DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH
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SHEET NO.
EC-12

10/25/2024
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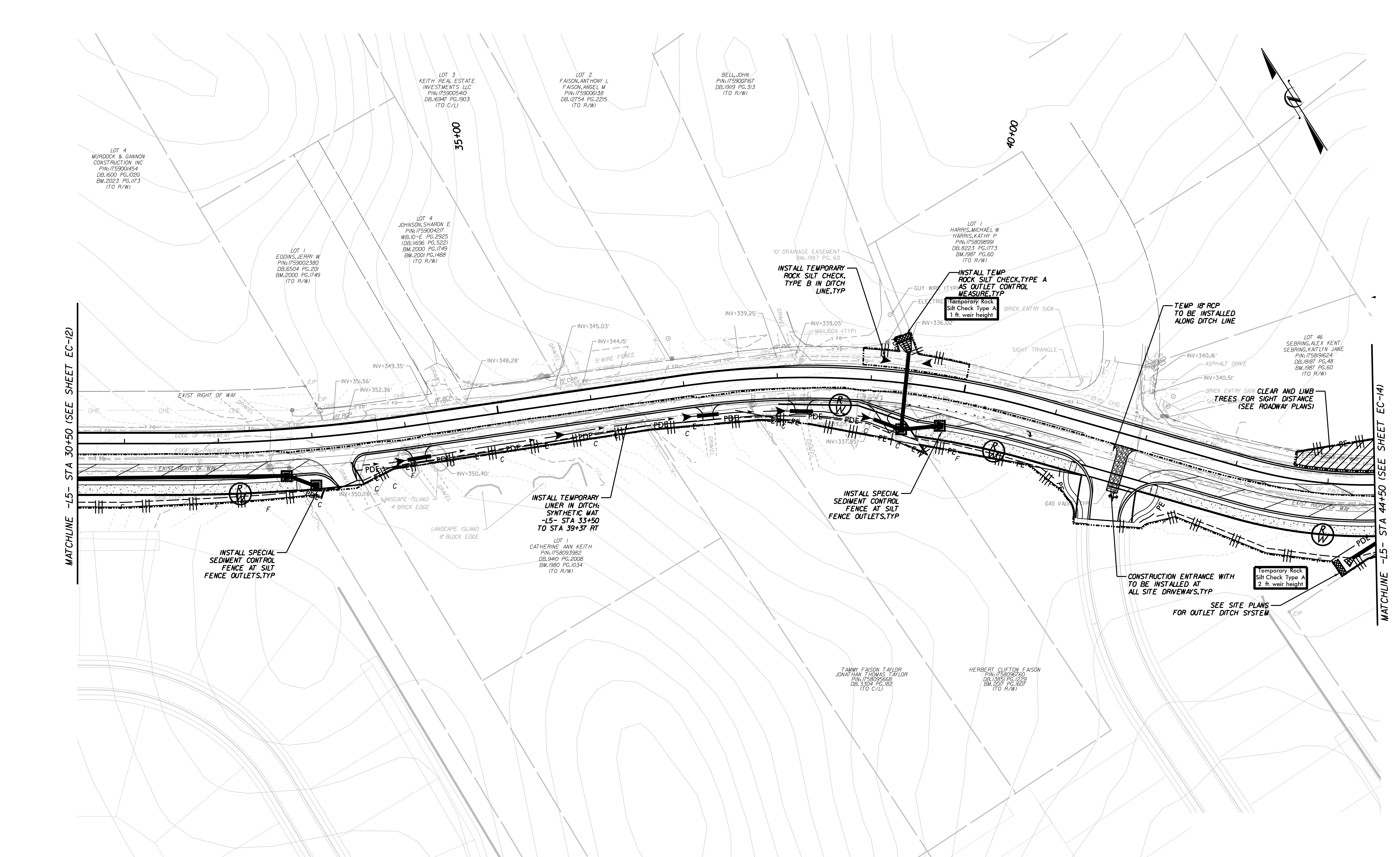

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(	SPECIAL DETAIL	WATTLE
— TPF —	SPECIAL DETAIL	TREE PROTECTION FENCE

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

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EROSION CONTROL PLAN

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ELIZABETH W. LYNCH
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DATE: 102324
SCALE:
REVISIONS | INIT. | DATE

SHEET NO.
EC-13

10/25/2024
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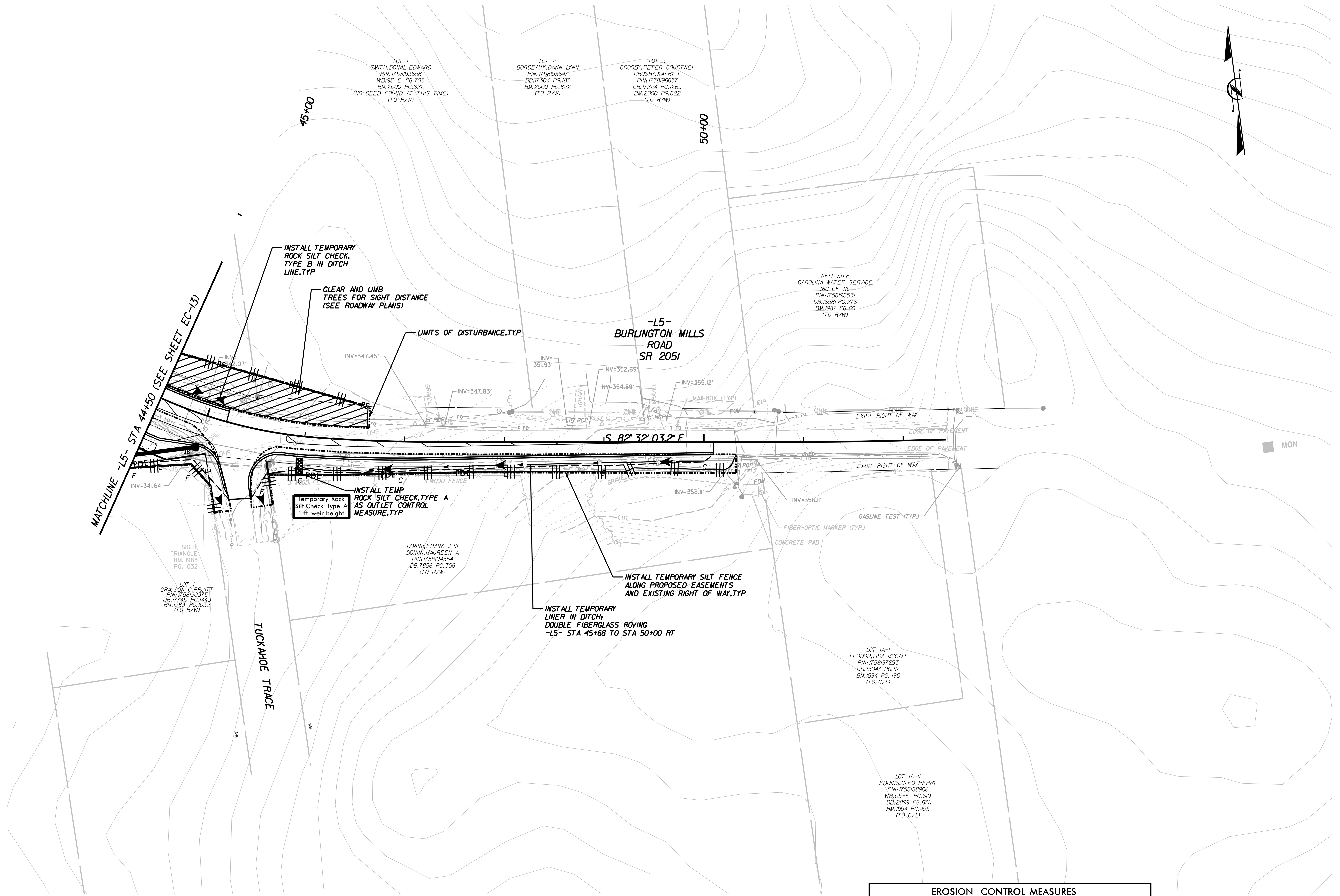

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EROSION CONTROL MEASURES		
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— TPF —	SPECIAL DETAIL	TREE PROTECTION FENCE

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

10/25/2024
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SHEET NO.
EC-14

CONSTRUCTION NARRATIVE

PROJECT DESCRIPTION

The proposed Pearce Farm roadway improvements are located along Forestville Road (SR 2049) and Burlington Mills Road (SR 2045/SR 2051) in Rolesville and Wake Forest, North Carolina. The project includes a site driveway along Forestville Rd with the improvements at the site driveway, 3 site driveways along Burlington Mills Rd with frontage widening and improvements at each site driveway and intersection improvements at Forestville Rd and Burlington Mills Rd. The existing roadway has an existing shoulder section with roadside ditches and that typical section will remain the same for portions of the widening beyond the site frontage. A curb and gutter section will be constructed along the site frontage and in areas where the right of way and easements will be minimized.

The site is generally flat and contains some drainage ways that are bordered by moderate slopes. Land use along the roadways is commerical and residential. The drainage from this site makes its way through a series of roadside ditches and cross pipes and mostly drains to Tom's Creek with the exception of a portion of the drainage north of Burlington Mills Road that drains to Sanford Creek. The soil types within the project limits are primarily sandy loams (RgB, RgC, and WfB).

The total disturbed area is approximately 8.1 acres.

CONSTRUCTION SEQUENCE

CONSTRUCTION SPECIFICATIONS

1. Request preconstruction meeting with the Environmental Consultant. Hold preconstruction meeting at least one week prior to starting construction and invite a representative from NCDEMLR LQS, contact number is (919) 791-4200.

2. No land disturbing activities, including timbering or demolition activities, are allowed without first obtaining a sediment and erosion control plan approval and Certificate of Coverage.

3. Erosion and Sediment Control (E&SC) permit and a Certificate of Coverage (COC) must be obtained before any land disturbing activities (including timbering and demolition) occur.

4. Flag the work limits and mark the trees to remain and buffer area for protection.

5. Per NPDES requirements, a rain gauge, self-inspections records, permit, Certificate of Coverage, and S&E plan are required to be maintained on site and accessible during inspection. It is recommended that these items be placed in a permits box at the beginning or entrance of project.

6. Install erosion control measures as shown on the approved plan including, but not limited to gravel construction pad, silt fence, inlet protection, and check dams. Clear only as necessary to install these devices. Seed temporary diversions, berms and basins immediately after installation.

7. Stockpiles, laydown or waste areas, concrete washouts, portable toilets, and fuels must be located at least 50 feet away from any open water conveyances, such as basins, ditches, storm drain inlets, etc. The location of these activities may be field adjusted if the distance requirements are met.

8. Call Environmental Consultant for an onsite inspection by the Environmental Consultant to obtain a Certificate of Compliance.

9. Begin clearing and grubbing. Maintain devices as needed. Rough grade site.

10. Per the NPDES Permit, ground stabilization will be applied within 14 calendar days from last land disturbing activity. For steep slopes, that area must be stabilized within 7 calendar days.

11. Install storm sewer, if shown, and protect inlets with inlet protection devices, wattles, or other approved measures as shown on the plan.

12. If dewatering is required, it is to be done through silt bags with a floating intake that is constantly monitored while in use.

13. Begin construction and stabilize site as areas are brought up to finish grade with vegetation, paving, erosion control matting, etc. Seed and mulch denuded areas per Ground Stabilization Time Frames.

14. When construction is complete and all areas are stabilized completely, call Environmental Consultant for an inspection.

15. After site is approved, remove temporary diversions, silt fence, inlet protection, etc., and seed out or stabilize any resulting bare areas. All remaining permanent erosion control devices, such as velocity dissipators, should now be installed.

16. When vegetation has become established, call for a final site inspection by the Environmental Consultant. Obtain a Certificate of Completion.

17. When the project is complete, the permittee shall contact DEMLR to close out the E&SC Plan.

18. Estimated time for before final stabilization – 14 months.

MAINTENANCE

Follow the construction sequence throughout project development. Adequate erosion and sediment control devices shall be in place and adjusted as needed based on the clearing & grubbing, construction, and permanent vegetation phases. All devices shall be maintained in accordance with the devices specific maintenance requirements and remain in place until permanent vegeation on the project is established and a Certificate of Completion is obtained.

Notification of Land Resources Sediment and Erosion Control Self-Inspection Program:

The self-inspection program is separate from the weekly self-monitoring program of the NPDES Stormwater Permit for Construction Activities. The focus of the self-inspection report is the installation and maintenance of erosion and sedimentation control measures according to the approved plan. The inspections must be conducted after each phase of the project and continue until permanent ground cover is established in accordance with NCGS 113A-54.1 and 15A NCAC 4B.0131.

The self-inspection Report form is available from https://deq.nc.gov/about/divisions/energy-mineral-land-resources/erosion-sediment-control/forms.

If you have questions or cannot access the form, please contact NCDEMLR Divsion of Energy, Mineral and Land Resources at (919)791-4200.

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
1605.01	Temporary Silt Fence
1606.01	Special Sediment Control Fence
1607.01	Gravel Construction Entrance
1622.01	Guide for Temporary Berms and Slope Drains
1630.03	Temporary Silt Ditch
1630.05	Temporary Diversion
1630.06	Special Stilling Basin
1631.01	Matting Installation
1632.01	Rock Inlet Sediment Trap Type A
1632.02	Rock Inlet Sediment Trap Type B
1632.03	Rock Inlet Sediment Trap Type C
1633.01	Temporary Rock Silt Check Type A
1633.02	Temporary Rock Silt Check Type B
1635.01	Rock Pipe Inlet Sediment Trap Type A
1635.02	Rock Pipe Inlet Sediment Trap Type B
1636.01	Wattle Check
1640.01	Coir Fiber Baffle
1645.01	Temporary Stream Crossing

EROSION CONTROL NOTES

1. All construction activities are requried to follow the NCG01 Permit Issued by NCDEQ. Refer to sheet EC-17 and EC-18.

2. Before beginning work, the contractor is required to meet with the town at the site to review all work procedures, access routes, storage areas, and tree protection measures.

3. Temporary fences and/or silt fence should be erected to protect trees to be preserved. Fences define a specific protection zone for each tree or group of trees. Fences are to remain until all site work has been completed. Fences may not be relocated or removed without the written permission of the town.

4. Control sediment on site and prevent from washing onto adjacent roadways. Provide inlet protection at inlets throughout construction and silt fencing or NCDOT #57 stone piled 1' high by 2' wide at base as applicable to prevent sediment from leaving the sites or entering adjacent storm drainage systems. All erosion control measures shall be installed per the local municipality standard details or 2024 NCDOT roadway standard drawings as noted on the plans. Maintenance of erosion control measures is incidental to erosion control.

5. At the start of grading involving the lowering of the existing grade around a tree or stripping of topsoil, a clean, sharp, vertical cut shall be made at the edge of the tree save area at the same time as other erosion control measures are installed.

6. No storage of materials, dumping of waste materials, fill, or parking of equipment/vehicles shall be allowed within the tree protection zone.

7. If existing trees to be retained are damaged or destroyed, the contractor shall replace tree matching existing species and size at no additional cost to the owner. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the town so that appropriate treatments can be applied. Any roots damaged during grading or construction shall be exposed to sound tissue and cut cleanly with a saw.

8. Additional tree pruning required for clearance during construction must be performed by a qualified arborist and not by construction personnel. (incidental to other items in the contract)

9. All underground utilities and drain lines shall be routed outside of the tree protection zone. If lines must traverse the protection area, they shall be tunneled or bored under the tree.

10. Any herbicides placed under paving materials must be safe for use around trees and labeled for that use. Any pesticides used on site must be tree-safe and not easily transported by water.

11. If temporary haul or access roads must pass over the root area of trees to be retained, a road bed of 6 inches of mulch or gravel shall be created to protect the soil. The road bed material shall be replenished as necessary to maintain a 6-inch depth.

MAINTENANCE PLAN

1. The contractor shall install and maintain a rain gauge in good working order on site at all times. Additionally, the Contractor is responsible for inspecting all erosion and sediment control practices for stability and operation following every runoff-producing rainfall (1/2" or greater in a 24-hr period), but in no case less than once every week. Both the rain gauge and inspection/maintenance of practices shall be maintained in accordance with the NCG01 Self-Inspection requirements, shown on page EC-6.

2. The contractor shall remove sediment from sediment basin, sediment traps, and gravel inlet protection devices when storage capacity has been approximately 50% filled. Gravel will be cleaned or replaced when the sediment pool no longer drains properly.

3. The contractor shall remove sediment from behind silt fence when it becomes 0.5 feet deep at the fence. Silt fence will be repaired as necessary to maintain a barrier.

4. The contractor shall fertilize, reseed, as necessary and mulch according to specifications in the vegetative plan to maintain a vigorous, dense, vegetative cover.

5. The contractor must inspect outlets where stormwater runoff leaves the site and evaluate the effect on nearby streams or wetlands. Corrective action must be taken if sediment is deposited off site or into stream or wetlands, or causes a visible increase in turbidity of any water body.

6. The contractor shall provide ground cover on exposed slopes or other areas within the timeframes specified in the stabilization table or sooner of completion of any phase of grading.

7. Contact Brian Ketchem at 919-724-0624 should erosion and sediment control issues arise during land-disturbing activity.

8. The following are specific maintenance requirements for each proposed erosion and sedimentation control device:

STANDARD TEMPORARY SILT FENCE/STANDARD SILT FENCE OUTLET/J-HOOKS:
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. 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.

STANDARD CATCH BASIN/YARD INLET PROTECTION:
Inspect inlets at least weekly and after each significant (one-half inch or greater rainfall event.) Clear the mesh wire of any debris or other objects to provide adequate flow for subsequent rains. Take care not to damage or undercut the wire mesh during sediment removal. Replace stone as needed.

STANDARD INLET SEDIMENT CONTROL DEVICE:
Inspect sediment sack weekly and after each significatn rainfall event (1/2 inch or greater). Remove accumulated sediment and any debris. The sediment sack must be replaced if clogged or torn. If ponding becomes excessive, the sediment sack shall may need to be checked daily and replaced more frequently. The sediment sack shall be inspected until land disturbance is complete and teh area above the measure has been permanently stabilized.

OUTLET STABILIZATION STRUCTURE:
Inspect riprap outlet structures weekly and after significant (1/2 or greater) rainfall events to see if any erosion around or below the riprap has taken place or if stones have been dislodged. Immediantly make all needed repairs to prevent further damage.

TREE PROTECTION FENCE:
Inspect tree protection fences at least once a week and after each rainfall. Make any required repairs immediately. Should the fabric of a tree protection fence collapse, tear, decompose or become ineffective, replace it promptly.

STANDARD CONSTRUCTION ENTRANCE:
Maintain the stone pad in a condition to prevent mud or sediment from leaving the construction site. This may require periodic topdressing with 2-inch stone. After each rainfall, inspect any structure used to trap sediment and clean it out as necessary. Immediately remove all objectionable materials spilled, washed, or tracked onto public roadways.

TEMPORARY ROCK SILT CHECK DAMS, TYPE A AND B:
Inspect check dams and channels at least weekly and after each significant (1/2 inch or greater) rainfall event and repair immediately. Clean out sediment, straw, limbs, or other debris that could clog the channel when needed. Anticipate submergence and deposition above the check dam and erosion from high flows around the edges of the dam. Correct all damage immediately. If significant erosion occurs between dams, additional measures can be taken such as, installing a protective riprap liner in that portion of the channel (Practice 6.31, Riprap-lined and Paved Channels.) Remove sediment accumulated behind the dams as needed to prevent damage to channel vegetation, allow the channel to drain through the stone check dam, and prevent large glows from carrying sediment over the dam. Add stones to dams as needed to maintain design height and cross section.

SPECIAL STILLING BASIN (SEDIMENT FILTER BAG WITH GRAVEL PAD):
The special stilling basin shall be disposed of and replaced when it is 3/4 full of sediment or when it is impractical for the bag to filter the sediment out at a reasonable flow rate. The inlet of the bag should be inspected periodically for damage and/or blockage. The float intake shall be constantly monitored while in use. Sediment control stone shall be replaced if damaged by high flows or bag failure.

WATTLES (COMPOST SOCK):
Inspect wattles weekly and after each significant rainfall event (1/2 inch or greater). Remove accumulated sediment and any debris. The watte must be replaced if clogged or torn. If ponding becomes excessive, the wattle may need to be replaced with a larger diameter or different measure. The wattle needs to be reinstalled if undermined or dislodged. The wattler shall be inspected until land disturbance is complete and the area above the measure has been permanently stabilized.

GROUNDWATER DEWATERING:
The pump shall be monitored 24/7 until construction activity is complete.

CONCRETE WASHOUT:
Inspect after each significant rainfall event. Stormwater acumulated within the washout may not be pumped into or discharged to the storm drainage system or receiving waters. Liquid waste musth be pumped out and removed from the project. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structure components when no longer functional.

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

Electronic Approval: This approval is being issued electronically. This approval is valid upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification of this approval once issued will invalidate this approval.

City of Raleigh Development Approval:

Raleigh Water Review Officer

These plans have been electronically approved for construction by the Town of Wake Forest Public Works and Engineering Departments. This approval may not be altered once issued.

Public Works/Engineering

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Planning

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

EROSION CONTROL
NOTES AND DETAILS

SEAL
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER ELIZABETH W. LYNCH
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
SIGNATURE DATE

DESIGNED BY:
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 10/23/24
SCALE: 1" = 50'
REVISIONS
INIT.
DATE

SHEET NO.
EC-15

10/25/2024
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LAND GRADING (NCDENR 6.02)

CONSTRUCTION SPECIFICATIONS

1. Construct and maintain all erosion and sedimentation control practices and measures in accordance with the approved sedimentation control plan and construction schedule.

2. Remove good topsoil from areas to be graded and filled, and preserve it for use in finishing the grading of all critical areas.

3. Scarify areas to be topsoiled to a minimum depth of 2 inches before placing topsoil (Practice 6.04, Topsoiling).

4. Clear and grub areas to be filled by removing trees, vegetation, roots, or other objectionable material that would affect the planned stability of the fill.

5. Ensure that fill material is free of brush, rubbish, rocks, logs, stumps, building debris, and other materials inappropriate for constructing stable fills.

6. Place all fill in layers not to exceed 9 inches in thickness, and compact the layers as required to reduce erosion, slippage, settlement, or other related problems.

7. Do not incorporate frozen, soft, mucky, or highly compressible materials into fill slopes.

8. Do not place fill on a frozen foundation, due to possible subsidence and slippage.

9. Keep diversions and other water conveyance measures free of sediment during all phases of development.

10. Handle seeps or springs encountered during construction in accordance with approved methods (Practice 6.81, Subsurface Drain).

11. Permanently stabilize all graded areas immediately after final grading is completed on each area in the grading plan. Apply temporary stabilization measures on all graded areas when work is to be interrupted or delayed for 30 working days or longer.

12. Show topsoil stockpiles, borrow areas, and spoil areas on the plans, and make sure they are adequately protected from erosion. Include final stabilization of these areas in the plan.

MAINTENANCE
Periodically, check all graded areas and the supporting erosion and sedimentation control practices, especially after heavy rainfalls. Promptly remove all sediment from diversions and other water-disposal practices. If washouts or breaks occur, repair them immediately. Prompt maintenance of small eroded areas before they become significant gullies is an essential part of an effective erosion and sedimentation control plan.

TOPSOILING (NCDENR 6.04)

CONSTRUCTION SPECIFICATIONS

MATERIALS
Determine whether the quality and quantity of available topsoil justifies selective handling. Quality topsoil has the following characteristics:

Texture – loam, sandy loam, and silt loam are best; sandy clay loam, silty clay loam, clay loam, and loamy sand are fair. Do not use heavy clay and organic soils such as peat or muck as topsoil

Organic matter content – (sometimes referred to as "humic matter") should be greater than 1.5% by weight.

Acidity – pH should be greater than 3.6 before liming, and liming is required if it is less than 6.0.

Soluble salts – should be less than 500 ppm.

Sodium – sodium adsorption ratio should be less than 12. The depth of material meeting the above qualifications should be at least 2 inches. Soil factors such as rock fragments, slope, depth to water table, and layer thickness affect the ease of excavation and spreading of topsoil. Generally, the upper part of the soil, which is richest in organic matter, is most desirable; however, material excavated from deeper layers may be worth storing if it meets the other criteria listed above. Organic soils such as mucks and peats do not make good topsoil. They can be identified by their extremely light weight when dry.

TOPSOILING (NCDENR 6.04)

STRIPPING
Strip topsoil only from those areas that will be disturbed by excavation, filling, roadbuilding, or compaction by equipment. A 4–6 inch stripping depth is common, but depth varies depending on the site. Determine depth of stripping by taking soil cores at several locations within each area to be stripped. Topsoil depth generally varies along a gradient from hilltop to toe of the slope. Put sediment basins, diversions, and other controls into place before stripping.

STOCKPILING
Select stockpile location to avoid slopes, natural drainageways, and traffic routes. On large sites, respreading is easier and more economical when topsoil is stockpiled in small piles located near areas where they will be used.

Sediment barriers – Use sediment fences or other barriers where necessary to retain sediment.

Temporary seeding – Protect topsoil stockpiles by temporarily seeding as soon as possible, no more than 21 calendar days after the formation of the stockpile (Practice 6.10, Temporary Seeding).

Permanent vegetation – If stockpiles will not be used within 90 days they must be stabilized with permanent vegetation to control erosion and weed growth (Practice 6.11, Permanent Seeding).

SITE PREPARATION
Before spreading topsoil, establish erosion and sedimentation control practices such as diversions, berms, dikes, waterways, and sediment basins.

Grading – Maintain grades on the areas to be topsoiled according to the approved plan and do not alter them by adding topsoil.

Limit of subsoil – Where the pH of the existing subsoil is 6.0 or less, or the soil is composed of heavy clays, incorporate agricultural limestone in amounts recommended by soil tests or specified for the seeding mixture to be used (Practice 6.11, Permanent Seeding). Incorporate lime to a depth of at least 2 inches by disking.

TOPSOILING (NCDENR 6.04) CONTINUED

SITE PREPORATION CONTINUED
Roughening – Immediately prior to spreading the topsoil, loosen the subgrade by disking or scarifying to a depth of at least 4 inches, to ensure bonding of the topsoil and subsoil. If no amendments have been incorporated, loosen the soil to a depth of at least 6 inches before spreading topsoil.

SPREADING TOPSOIL
Uniformly distribute topsoil to a minimum compacted depth of 2 inches on 3:1 slopes and 4 inches on flatter slopes. To determine the volume of topsoil required for application to various depths, use Table 6.04a. Do not spread topsoil while it is frozen or muddy or when the subgrade is wet or frozen. Correct any irregularities in the surface that result from topsoiling or other operations to prevent the formation of depressions or water pockets.

Compact the topsoil enough to ensure good contact with the underlying soil, but avoid excessive compaction, as it increases runoff and inhibits seed germination. Light packing with a roller is recommended where high-maintenance turf is to be established.

On slopes and areas that will not be mowed, the surface may be left rough after spreading topsoil. A disk may be used to promote bonding at the interface between the topsoil and subsoil.

After topsoil application, follow procedures for seedbed preparation, taking care to avoid excessive mixing of topsoil into the subsoil.

TEMPORARY SEEDING (NCDENR 6.10) & PERMANENT SEEDING (NCDENR 6.11)

TEMPORARY SEEDBED PREPARATION
1. Seedbed preparation is essential to successful plant establishment. A good seedbed is well-pulverized, loose, and uniform. In areas to be planted, soil shall be tilled to a 6-inch depth and all loose rocks, roots and other obstructions should be removed.

2. Apply agricultural limestone uniformly at a rate of 2–3 tons/acre or accordinat to soil test recommendations. Apply a 10-10-10 grade fertilizer at 700–1,000 lb/acre. Both fertilizer and lime should be incorporate into the top 4–6 inches of soil.

3. If recent tillage operations have resulted in a loose surface, additional roughening may not be required, except to break up large clods. If rainfall causes the surface to become sealed or crusted, lossen it just prior to seeding by disking, racking, harrowing, or other suitable methods.

4. Evenly apply seed mix given in table using a cyclone seeder, drill, or cultipacker seeder. Use seed rates give in table. Small grains should be planted no more than 1 inch deep, and grasses and legumes no more than 1/2 inch. Broadcast seed must be coverd by racking or chain dragging, and then lightly firmed with a rooler or cultipacker.

5. Mulch immediately after seeding with small grain straw at a rate of 4,000 lbs per acre. Anchor mulch with asphalt emulsion at 400 gals/acre.

6. Inspect seeded areas and make repairs as needed or reseed within the planting season, if possible.

SHOULDERS, SIDE DITCHES, SLOPES (FOR SLOPES BETWEEN 2:1 AND 3:1)

DATE	TYPE	PLANTING RATE
MARCH 1 – JUNE 1	CENTIPEDEGRASS	10–20 LB/ACRE (SEED) 33 BU/ACRE (SPRIGS)
MARCH 1 – JUNE 1	PANICUM VIRGATUM (SWITCHGRASS) AND	50 LBS/ACRE
MARCH 1 – APRIL 15	ADD TALL FESCUE OR	250 LBS/ACRE
MARCH 1 – JUNE 30	ADD WEEPING LOVEGRASS OR	10 LBS/ACRE
MARCH 1 – JUNE 30	ADD HULLED COMMON BERMUDAGRASS	25 LBS/ACRE
JUNE 1 – SEPT 1	*TALL FESCUE AND *BROWNTOP MILLET OR *SORGHUM-SUDAN HYBRIDS	250 LBS/ACRE 35 LBS/ACRE 30 LBS/ACRE
SEPT 1 – MARCH 1	PANICUM VIRGATUM (SWITCHGRASS) AND TALL FESCUE	70 LBS/ACRE 120 LBS/ACRE
NOV 1 – MARCH 1	ADD ABRUZZI RYE	25 LBS/ACRE

SHOULDERS, SIDE DITCHES, SLOPES (FOR SLOPES 3:1 AND FLATTER)

DATE	TYPE	PLANTING RATE
AUG 15 – NOV 1	TALL FESCUE	300 LBS/ACRE
NOV 1 – MARCH 1	TALL FESCUE AND ABRUZZI RYE	300 LBS/ACRE
MARCH 1 – APRIL 15	TALL FESCUE	300 LBS/ACRE
MARCH 1 – JUNE 1	CENTIPEDEGRASS	10–20 LB/ACRE (SEED) 33 BU/ACRE (SPRIGS)
APRIL 15 – JUNE 30	HULLED COMMON BERMUDAGRASS	25 LBS/ACRE
JULY 15 – AUG 15	TALL FESCUE AND *BROWNTOP MILLET OR *SORGHUM-SUDAN HYBRIDS	35 LBS/ACRE

PERMANENT SEEDING SCHEDULE
WHERE LIMITS OF DISTURBANCE ARE ADJACENT TO EXISTING TURFGRASS AREAS, CONTRACTOR SHALL PROVIDE A PERMANENT SEED BLEND OF TALL FESCUE AND KENTUCKY BLUEGRASS OR ANOTHER SEED MIXTURE AS DIRECTED BY THE OWNER. PROVIDE SOIL AMENDMENTS IN SEEDED AREAS BASED ON SOIL TEST REPORT AND PER SPECIFICATIONS.

WHERE LIMITS OF DISTURBED AREA ARE ADJACENT TO EXISTING FOREST FLOOR/UNDER COVER (NO TURFGRASS PRESENT), CONTRACTOR SHALL PROVIDE HARDWOOD MULCH (4" DEPTH) OUTSIDE OF THE SHOULDER OF THE TRAIL.

FOR PERMANENT SEED, CONTRACTOR SHALL UTILIZE SEED THAT MATCHES THE EXISITNG CONDITIONS. REFER TO THE PROJECT SPECIAL PROVISIONS.

PERMANENT SEEDING OF RIPARIAN & WETLAND AREAS

SPECIES	COMMON NAME	PERCENT
ELYMUS VIRGINICUS	VIRGINIA WILD RYE	20
AGROSTIS PERENNANS	AUTUMN BENTGRASS	15
PANICUM VIRGATUM	SWITCHGRASS	15
RUDBECKIA HIRTA	BLACK-EYED SUSAN	10
COREOPSIS LANCEOLATA	LANCELEAF COREOPSIS	10
ANDROPOGON GERARDII	BIG BLUESTEM	10
JUNCUS EFFUSUS	SOFT RUSH	5
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	5
SORGHASTRUM NUTANS	INDIAN GRASS	5
TRIPSACUM DACTYLOIDES	EASTERN GAMMA	5
		100

PERCENTAGES ARE BY WEIGHT OF PURE LIVE SEED (PLS)

RIP RAP (NCDENR 6.15)

CONSTRUCTION SPECIFICATIONS

Subgrade preparation – Prepare the subgrade for riprap and filter to the required lines and grades shown on the plans. Compact any fill required in the subgrade to a density approximating that of the surrounding undisturbed material or overfill depressions with riprap. Remove brush, trees, stumps, and other objectionable material. Cut the subgrade sufficiently deep that the finished grade of the riprap will be at the elevation of the surrounding area. Channels should be excavated sufficiently to allow placement of the riprap in a manner such that the finished inside dimensions and grade of the riprap meet design specifications.

Sand and gravel filter blanket – Place the filter blanket immediately after the ground foundation is prepared. For gravel, spread filter stone in a uniform layer to the specified depth. Where more than one layer of filter material is used, spread the layers with minimal mixing.

Synthetic filter fabric – Place the cloth filter directly on the prepared foundation. Overlap the edges by at least 12 inches, and space anchor pins every 3 ft along the overlap. Bury the upstream end of the cloth a minimum of 12 inches below ground and where necessary, bury the lower end of the cloth or over lap with the next section as required.

Take care not to damage the cloth when placing riprap. If damage occurs remove the riprap, and repair the sheet by adding another layer of filter material with a minimum overlap of 12 inches around the damaged area. If extensive damage is suspected, remove and replace the entire sheet.

Where large stones are used or machine placement is difficult, a 4-inch layer of fine gravel or sand may be needed to protect the filter cloth.

Stone placement – Placement of riprap should follow immediately after placement of the filter. Place riprap so that it forms a dense, well-graded mass of stone with a minimum of voids. The desired distribution of stones throughout the mass may be obtained by selective loading at the quarry, and controlled dumping during final placement. Place riprap to its full thickness in one operation. Do not place riprap by dumping through chutes or other methods that cause segregation of stone sizes. Take care not to dislodge the underlying base or filter when placing the stones.

The toe of the riprap slope should be keyed to a stable foundation at its base as shown in Figure 6.15b. The toe should be excavated to a depth about 1.5 times the design thickness of the riprap, and should extend horizontally from the slope.

The finished slope should be free of pockets of small stone or clusters of large stones. Hand placing may be necessary to achieve the proper distribution of stone sizes to produce a relatively smooth, uniform surface. The finished grade of the riprap should blend with the surrounding area. No overfall or protrusion of riprap should be apparent.

MAINTENANCE

In general, once a riprap installation has been properly designed and installed it requires very little maintenance. Riprap should be inspected periodically for scour or dislodged stones. Control of weed and brush growth may be needed in some locations.

GRASS-LINED CHANNELS (NCDENR 6.30)

CONSTRUCTION SPECIFICATIONS

1. Remove all trees, brush, stumps, and other objectionable material from the foundation area, and dispose of properly.

2. Excavate the channel, and shape it to neat lines and dimensions shown on the plans plus a 0.2-foot overcut around the channel perimeter to allow for bulking during seedbed preparations and sod buildup.

3. Remove and properly dispose of all excess soil so that surface water may enter the channel freely.

4. The procedure used to establish grass in the channel will depend upon the severity of the conditions and selection of species. Protect the channel with mulch or a temporary liner sufficient to withstand anticipated velocities during the establishment period.

MAINTENANCE

During the establishment period, check grass-lined channels after every rainfall. After grass is established, periodically check the channel; check it after every heavy rainfall event. Immediately make repairs. It is particularly important to check the channel outlet and all road crossings for bank stability and evidence of piping or scour holes. Remove all significant sediment accumulations to maintain the designed carrying capacity. Keep the grass in a healthy, vigorous condition at all times, since it is the primary erosion protection for the channel.

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

EROSION CONTROL
NOTES AND DETAILS

SEAL
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER ELIZABETH W. LYNCH
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
SIGNATURE DATE

DESIGNED BY:
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 10/23/24
SCALE: 1" = 50'
REVISIONS
INIT.
DATE

SHEET NO.
EC-16

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
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

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

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. 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

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. 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.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

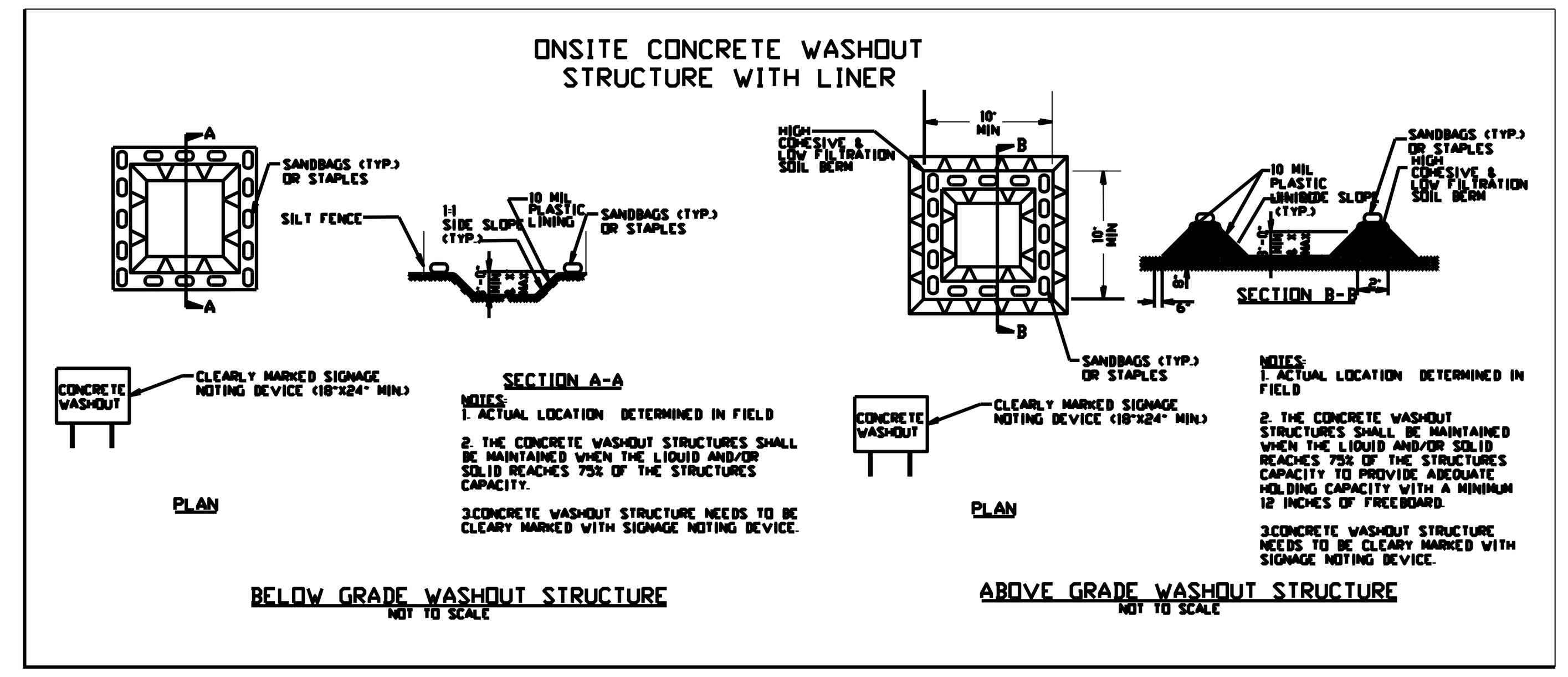
1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled,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

PORTABLE TOILETS

1. 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.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. 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

1. 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.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. 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

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. 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.
3. 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.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

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

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP–XX–XX

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING EFFECTIVE: 04/01/19

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION
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City of Raleigh Development Approval:

Raleigh Water Review Officer

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Public Works/Engineering

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Planning

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

NCDEQ
NCG01 NOTES AND DETAILS

SEAL
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER ELIZABETH W. LYNCH
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION
SIGNATURE DATE

DESIGNED BY:
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 10/23/24
SCALE: 1" = 50'
REVISIONS INIT. DATE

SHEET NO.
EC–17

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 (SDOs)	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 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	• ***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	• ***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)]	• ***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)]	• ***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)]	• ***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.

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.

TOWN OF ROLESVILLE:
PSP–23–04

TOWN OF WAKE FOREST:
PSP–XX–XX

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING EFFECTIVE: 04/01/19

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

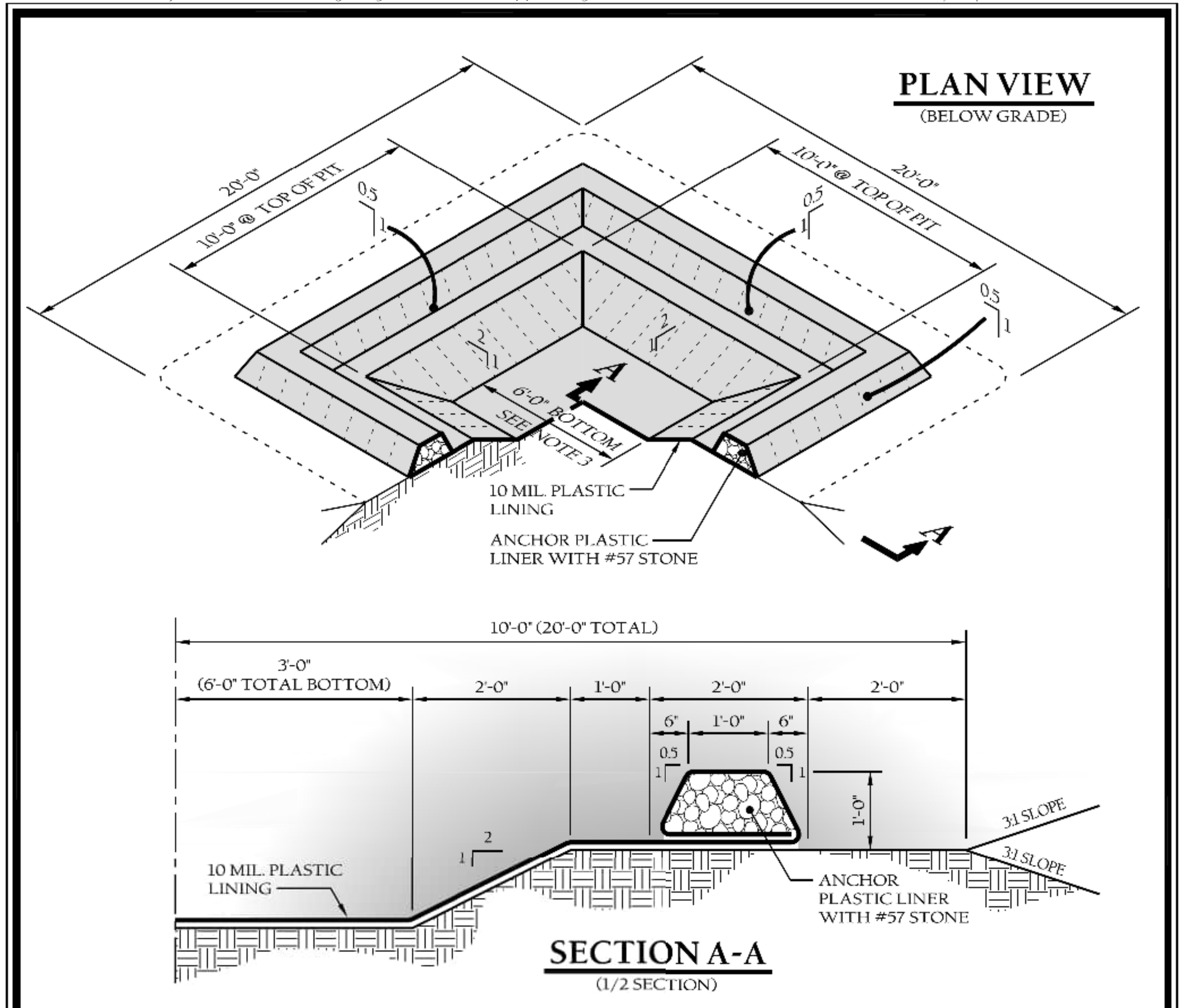
NCDEQ
NCG01 NOTES AND DETAILS

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 037444 ENGINEER ELIZABETH W. LYNCH
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
SIGNATURE DATE

DESIGNED BY:
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 10/23/24
SCALE: 1" = 50'
REVISIONS | INIT. | DATE

SHEET NO.
EC–18

Z:\Shared\0 Projects_4 Roadway\00103002 Pearce Farm Roadway and Signal Design\0 CAD\Roadway\Proj\Pearce Farm_rdy_50_psh_EC-18.dgn
10/25/2024



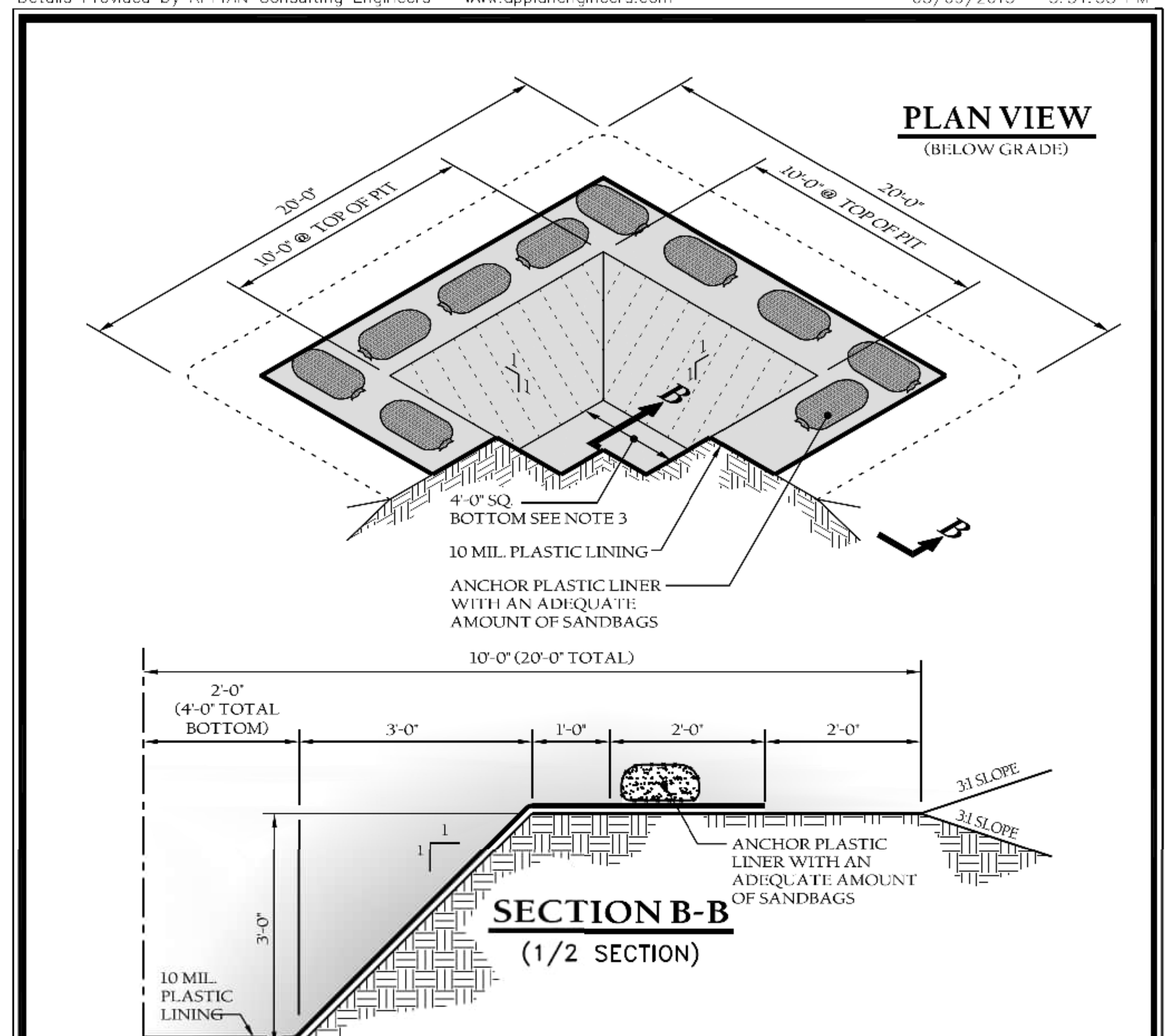
EXCAVATED PIT WITH STONE SUPPORT

NOT TO SCALE

STONE SUPPORT NOTES:

1. Actual layout to be determined in field.
2. The "concrete washout" sign shall be installed within 30 ft of the temporary concrete washout facility.
3. Pit capacity is minimum of 6 cu ft per 10 cu yd of concrete.
4. Contractor to coordinate with usage contracting officer for proper disposal of concrete.

TOWN of WAKE FOREST, NC
Manual of Specifications, Standards and Design
CONCRETE WASHOUT PIT DETAIL
TOWN of WAKE FOREST
Scale: Not To Scale | Detail #: 9.76 | Revision Date: Feb., 2015 | Sheet #: 1 of 4



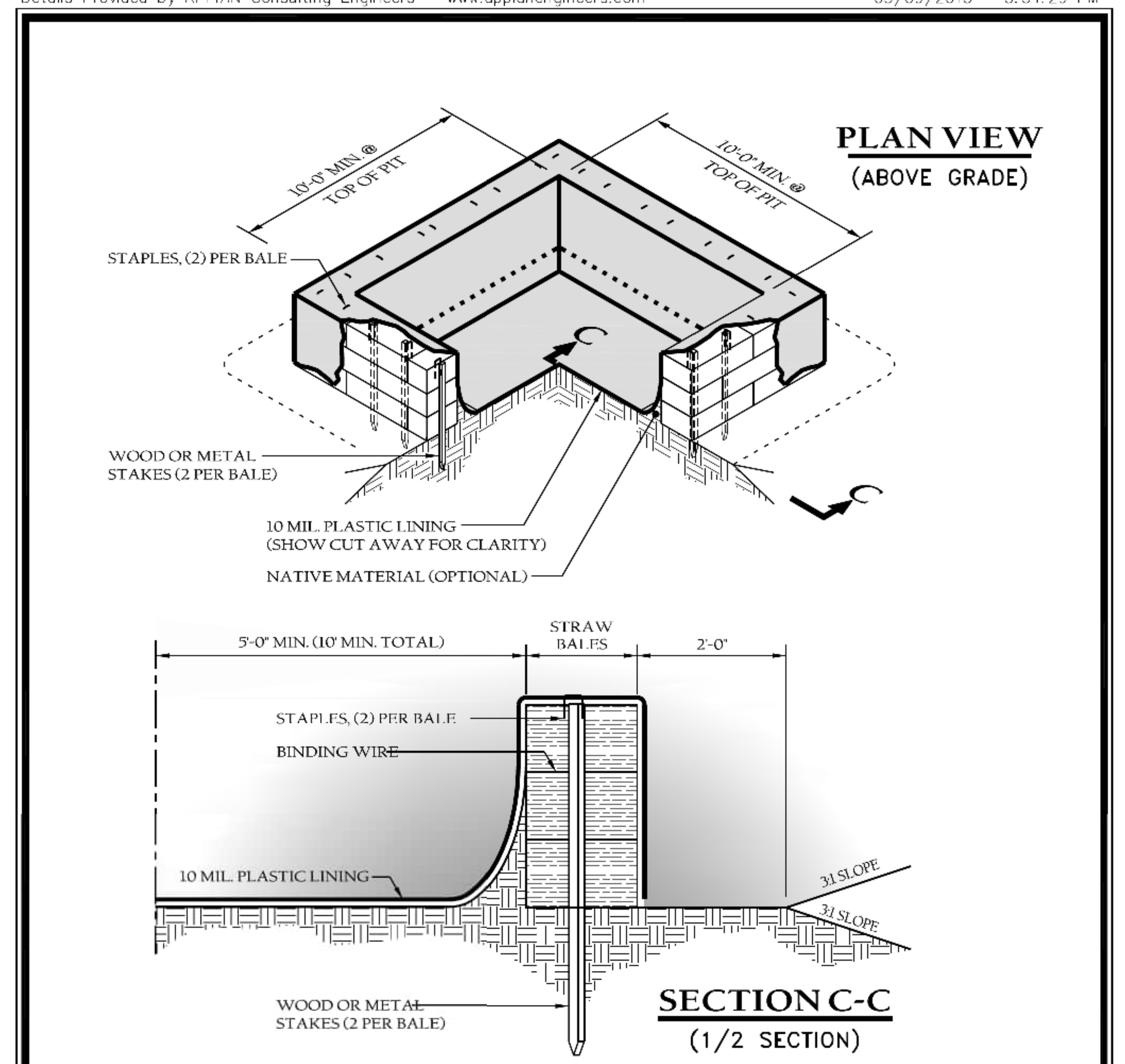
EXCAVATED PIT WITH SAND BAG SUPPORT

NOT TO SCALE

SAND BAG SUPPORT NOTES:

1. Actual layout to be determined in field.
2. The "concrete washout" sign shall be installed within 30 ft of the temporary concrete washout facility.
3. Pit capacity is minimum of 6 cu ft per 10 cu yd of concrete.
4. Contractor to coordinate with usage contracting officer for proper disposal of concrete.

TOWN of WAKE FOREST, NC
Manual of Specifications, Standards and Design
CONCRETE WASHOUT PIT DETAIL
TOWN of WAKE FOREST
Scale: Not To Scale | Detail #: 9.76 | Revision Date: Feb., 2015 | Sheet #: 2 of 4



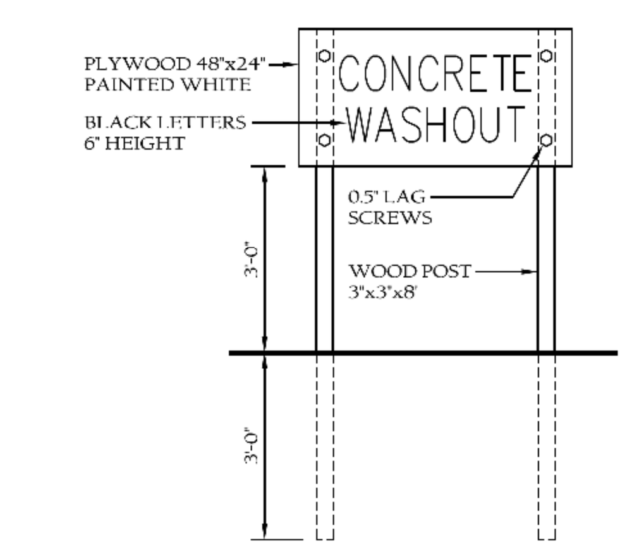
ELEVATED PIT WITH STRAW BALE DETENTION WALLS

NOT TO SCALE

STRAW BALE DETENTION NOTES:

1. Actual layout to be determined in field.
2. The "concrete washout" sign shall be installed within 30 ft of the temporary concrete washout facility.
3. Pit capacity is minimum of 6 cu ft per 10 cu yd of concrete.
4. Contractor to coordinate with usage contracting officer for proper disposal of concrete.

TOWN of WAKE FOREST, NC
Manual of Specifications, Standards and Design
CONCRETE WASHOUT PIT DETAIL
TOWN of WAKE FOREST
Scale: Not To Scale | Detail #: 9.76 | Revision Date: Feb., 2015 | Sheet #: 3 of 4



SIGN DETAIL
(OR EQUIVILANT)

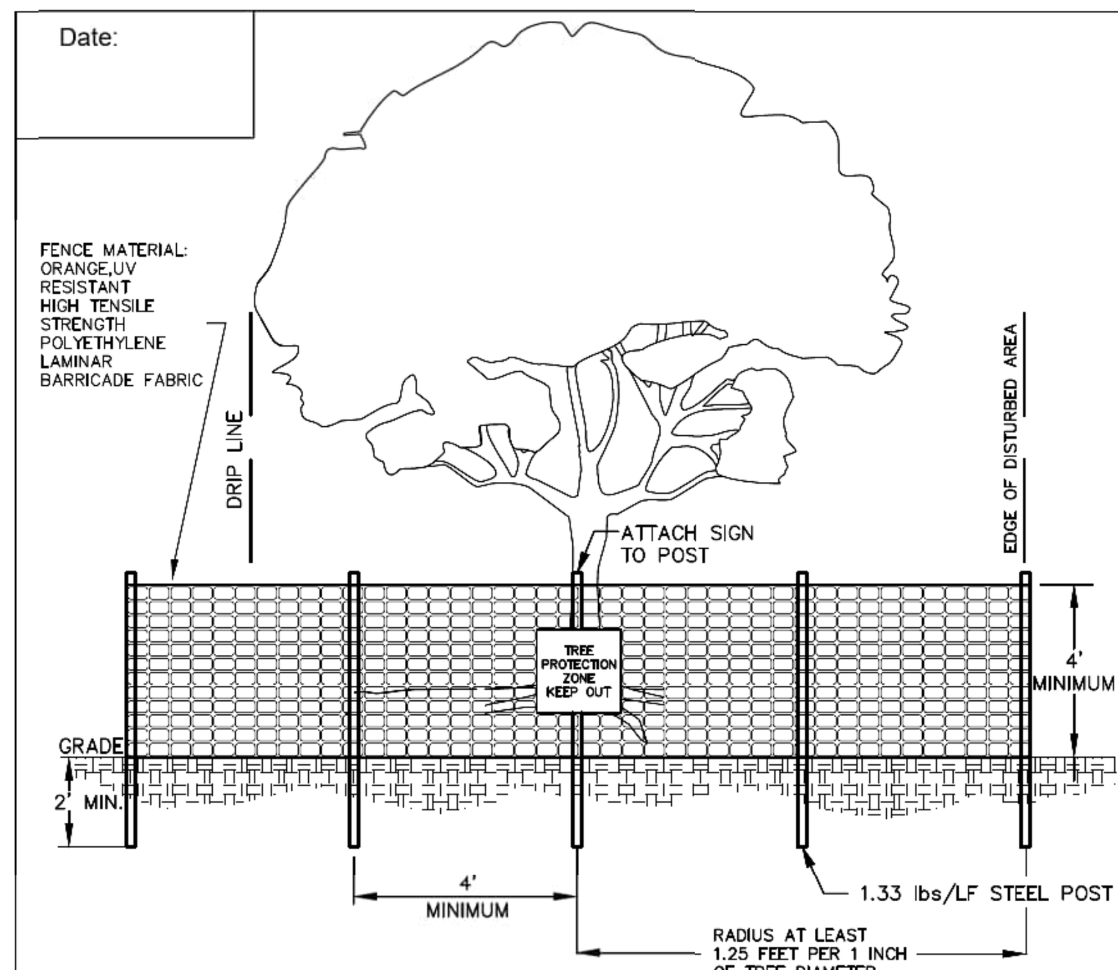
CONCRETE WASHOUT DETAIL NOTES

Concrete washouts are used to contain concrete and liquids when the chutes of concrete mixers and hoppers of concrete pumps are rinsed out after delivery. The washout facilities consolidate solids for easier disposal and prevent runoff of liquids. The wash water is alkaline and contains high levels of chromium, which can leach into the ground and contaminate groundwater. It can also migrate to a storm drain, which can increase the pH of area waters and harm aquatic life. Revised NPDES and NC General Construction Permits require the use of concrete washout areas on all sites using concrete:

1. No concrete or cement slurry shall be discharged from the site.
2. Any hardened concrete residue shall be disposed of, or recycled on site, in accordance with local and state solid waste regulations.
3. Concrete washout area to be minimum 50' from storm drain inlets and surface waters (ie, detention pond, ditches, etc).
4. Prefabricated washout container or pit equal detail provided may be used if approved by Engineer.
5. Install concrete washout pit at all construction entrances used by concrete trucks.
6. Dimensions may be modified to fit topography. Provide minimum 100 Sf. of surface area level.
7. Locations shown on plans are for illustrative purposes only. Contractor shall determine final number of pits required, and their placement.
8. Inspection:
   a. Contractor to check all concrete washout facilities daily to determine if they have been filled to 75% capacity, which is when materials need to be removed.
   b. Both above- and below- ground self-installed washouts should be inspected daily to ensure that plastic linings are intact and sidewalls have not been damaged by construction activities. Contractor to repair plastic lining as needed.
   c. Prefabricated washout containers should be inspected daily as well to ensure the container is not leaking or nearing 75 percent capacity.
   d. Inspectors should also note whether the facilities are being used regularly.
6. Material Removal:
   a. Concrete washouts are designed to promote evaporation where feasible. However, if stored liquids have not evaporated and the washout is nearing capacity, vacuum and dispose of them in an approved manner - check with the local sanitary sewer authority to determine if there are special disposal requirements for concrete wash water.
   b. Remove liquids or cover the structures before predicted rainstorms to prevent overflows. Companies that offer prefabricated and watertight washout containers generally offer a vacuum service to remove the liquid material.
   c. Contractor to remove hardened solids or reuse onsite or haul them away for recycling.
   d. When removing materials from the concrete washout, building a new structure or, if the previous structure is still intact, Contractor is to inspect the structure for signs of weakening or damage and make any necessary repairs. Line the structure with new plastic that is free of holes or tears and replace signage if necessary. It is very important that new plastic is used after every cleaning because pumps and concrete removal equipment can damage the existing liner.
7. At completion of project, washout area to be backfilled and graded to be level with existing grade..
8. General Contractor is to educate concrete subcontractors, post signage indicating the location and designated use of these areas, and provide careful oversight to inspect for evidence of improper dumping of concrete waste and wash water. Contractor should include requirements in contracts with concrete delivery companies that drivers must use designated concrete washout facilities.

TOWN of WAKE FOREST, NC
Manual of Specifications, Standards and Design
CONCRETE WASHOUT PIT DETAIL
TOWN of WAKE FOREST
Scale: Not To Scale | Detail #: 9.76 | Revision Date: Feb., 2015 | Sheet #: 4 of 4

Date: Page:



MATURE TREE PROTECTION ZONE RADIUS

TRUNK DIAMETER	GOOD PROTECTION	BETTER PROTECTION	BEST PROTECTION
8 INCHES	10 FEET	12 FEET	20 FEET
12 INCHES	15 FEET	18 FEET	30 FEET
16 INCHES	20 FEET	24 FEET	40 FEET
20 INCHES	25 FEET	30 FEET	50 FEET

NOTES:

1. Leave critical areas (such as flood plains, steep slopes and wetlands) with desirable trees in their natural condition or only partially cleared.
2. Select trees to be preserved before siting roads, buildings or other structures.
3. Minimize trenching in areas with trees. Place several utilities in the same trench.
4. Prohibit or restrict access to tree protection zones(TPZ). Post "Keep Out" signs on all sides of fencing and do not store construction equipment or materials in TPZ.
5. Monitor trees using a professional or train your staff to monitor tree health during and after construction on a regular, frequent basis.
6. Assign a crew member to weekly TPZ fence integrity checks. Repair and replace TPZ fencing as needed.

MAINTENANCE:

1. Prune any damaged trees. In spite of precautions, some damage to protected trees may occur. In such cases, repair any damage to the crown, trunk, or root system immediately.
2. Repair roots by cutting off the damaged areas and painting them with tree paint. Spread peat moss or moist topsoil over exposed roots.
3. Repair damage to bark by trimming around the damaged area, taper the cut to provide drainage and paint with tree paint.
4. Cut off all damaged tree limbs above the tree collar at the trunk or main branch. Use three separate cuts to avoid peeling bark from healthy areas of the tree.

NORTH CAROLINA Environmental Quality
EFFECTIVE DATE 11/12/2020

TREE PROTECTION

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

EROSION CONTROL
NOTES AND DETAILS

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL ELIZABETH W. LYNCH
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION
SIGNATURE DATE

DESIGNED BY:
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 102324
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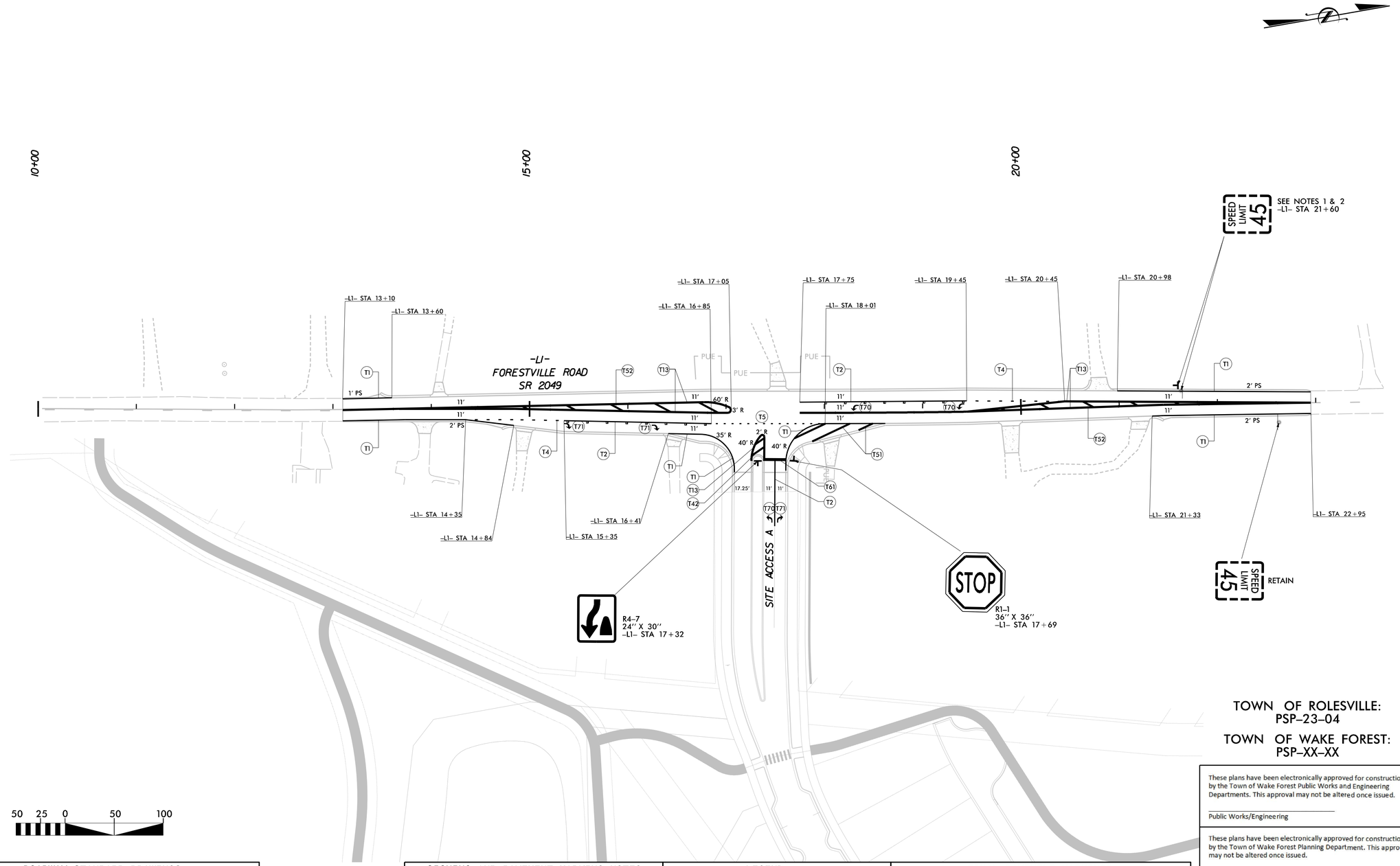
SHEET NO.
EC-19



ROADWAY STANDARD DRAWINGS

STD. NO.	TITLE
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMPS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

SIGNING AND PAVEMENT MARKING NOTES

1. REMOVE AND DISPOSE OF EXISTING "U" CHANNEL POST.
2. ERECT EXISTING SIGN ON NEW "U" CHANNEL POST.
3. REMOVE AND DISPOSE OF EXISTING SIGNS AND "U" CHANNEL POST.
4. THE BACKGROUND FOR TYPE E & F SHALL BE TYPE C REFLECTIVE SHEETING.
5. ALL STREET NAME SIGNS SHALL ADHERE TO 2023 MUTCD. ALL STREET NAME SIGNS SHALL BE APPROVED BY THE TRANPORTATION AND FACILITIES DEPARTMENT STAFF PRIOR TO INSTALLATION.
6. CONTRACTOR TO TIE PROPOSED MARKINGS TO EXISTING MARKINGS AT PROJECT LIMITS.
7. CONTRACTOR SHALL MILL ANY EXISTING MARKINGS OR SYMBOLS IN CONFLICT WITH THE PROPOSED MARKINGS.
8. RAISED REFLECTIVE PAVEMENT MARKERS ARE TO BE PLACED ACCORDING TO NCDOT ROADWAY STANDARD DRAWINGS.

LEGEND

- CRYSTAL/RED PAVEMENT MARKERS
- YELLOW/YELLOW PAVEMENT MARKERS
- EXISTING TRAFFIC SIGNAL
- PROPOSED TRAFFIC SIGNAL
- PROPOSED SIGN LOCATION ON "U" CHANNEL POST
- EXISTING SIGN LOCATION ON "U" CHANNEL POST

FINAL PAVEMENT MARKINGS

PAVEMENT MARKING LINES

T1	- THERMOPLASTIC (4" WHITE, 90 MILS)	EDGELINE
T2	- THERMOPLASTIC (4" WHITE, 90 MILS)	SOLID LANE LINE
T4	- THERMOPLASTIC (4" WHITE, 90 MILS)	3' x 9'/SP MINI-SKIP
T5	- THERMOPLASTIC (4" WHITE, 90 MILS)	2' x 6'/SP MINI-SKIP
T10	- THERMOPLASTIC (4" YELLOW, 90 MILS)	EDGELINE
T11	- THERMOPLASTIC (4" YELLOW, 90 MILS)	SINGLE CENTER LINE
T12	- THERMOPLASTIC (4" YELLOW, 90 MILS)	10' SKIP
T13	- THERMOPLASTIC (4" YELLOW, 90 MILS)	DOUBLE CENTER LINE
T14	- THERMOPLASTIC (4" YELLOW, 90 MILS)	2' x 6'/SP MINI-SKIP
T42	- THERMOPLASTIC (8" YELLOW, 90 MILS)	DIAGONAL
T51	- THERMOPLASTIC (12" WHITE, 90 MILS)	DIAGONAL
T52	- THERMOPLASTIC (12" YELLOW, 90 MILS)	DIAGONAL
T61	- THERMOPLASTIC (24" WHITE, 90 MILS)	STOP BAR
T62	- THERMOPLASTIC (24" WHITE, 90 MILS)	CROSSWALK

PAVEMENT MARKING SYMBOLS

T70	- THERMOPLASTIC (WHITE, 90 MILS)	LEFT TURN ARROW
T71	- THERMOPLASTIC (WHITE, 90 MILS)	RIGHT TURN ARROW
T72	- THERMOPLASTIC (WHITE, 90 MILS)	STRAIGHT ARROW
T74	- THERMOPLASTIC (WHITE, 90 MILS)	RIGHT/STRAIGHT ARROW

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

PAVEMENT MARKING AND SIGNING PLAN

SEAL
NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH
SIGNATURE DATE

DESIGNED BY: T. ROBERTS
REVIEWED BY: E. LYNCH
JOB NO.: 0010302
DATE: 10/23/24
SCALE: 1"=50'
REVISIONS
INIT. DATE

SHEET NO.
PM-1

10/25/2024
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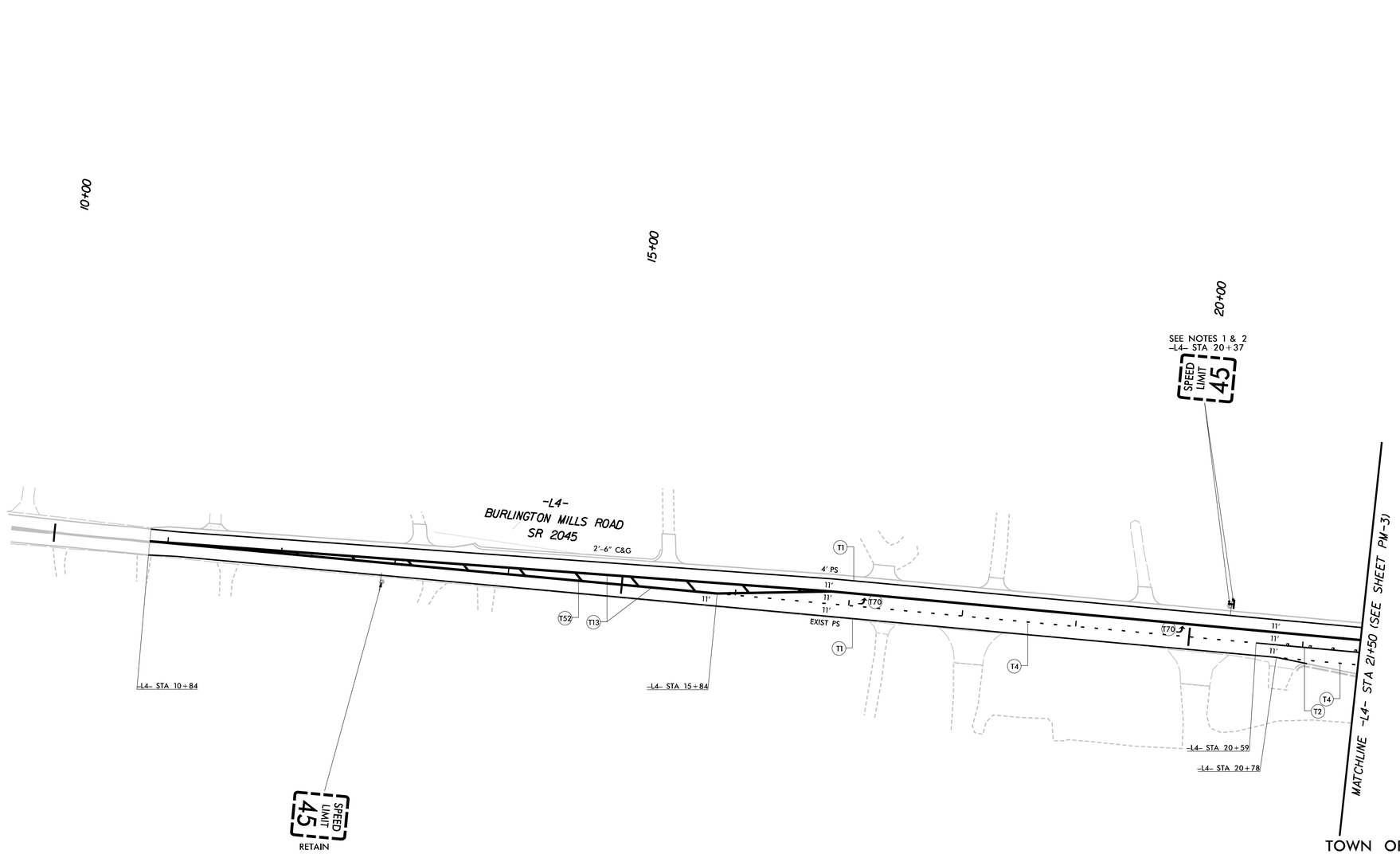

TOWN OF ROLESVILLE:
PSP–23–04

TOWN OF WAKE FOREST:
PSP–XX–XX

ROADWAY STANDARD DRAWINGS	
STD. NO.	TITLE
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMPS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

SIGNING AND PAVEMENT MARKING NOTES

1. REMOVE AND DISPOSE OF EXISTING "U" CHANNEL POST.
2. ERECT EXISTING SIGN ON NEW "U" CHANNEL POST.
3. REMOVE AND DISPOSE OF EXISTING SIGNS AND "U" CHANNEL POST.
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5. ALL STREET NAME SIGNS SHALL ADHERE TO 2023 MUTCD. ALL STREET NAME SIGNS SHALL BE APPROVED BY THE TRANPORTATION AND FACILITIES DEPARTMENT STAFF PRIOR TO INSTALLATION.
6. CONTRACTOR TO TIE PROPOSED MARKINGS TO EXISTING MARKINGS AT PROJECT LIMITS.
7. CONTRACTOR SHALL MILL ANY EXISTING MARKINGS OR SYMBOLS IN CONFLICT WITH THE PROPOSED MARKINGS.
8. RAISED REFLECTIVE PAVEMENT MARKERS ARE TO BE PLACED ACCORDING TO NCDOT ROADWAY STANDARD DRAWINGS.

LEGEND

- CRYSTAL/RED PAVEMENT MARKERS
- YELLOW/YELLOW PAVEMENT MARKERS
- EXISTING TRAFFIC SIGNAL
- PROPOSED TRAFFIC SIGNAL
- PROPOSED SIGN LOCATION ON "U" CHANNEL POST
- EXISTING SIGN LOCATION ON "U" CHANNEL POST

FINAL PAVEMENT MARKINGS

PAVEMENT MARKING LINES

T1 - THERMOPLASTIC (4" WHITE, 90 MILS)	EDGELINE
T2 - THERMOPLASTIC (4" WHITE, 90 MILS)	SOLID LANE LINE
T4 - THERMOPLASTIC (4" WHITE, 90 MILS)	3' x 9'/SP MINI-SKIP
T5 - THERMOPLASTIC (4" WHITE, 90 MILS)	2' x 6'/SP MINI-SKIP
T10 - THERMOPLASTIC (4" YELLOW, 90 MILS)	EDGELINE
T11 - THERMOPLASTIC (4" YELLOW, 90 MILS)	SINGLE CENTER LINE
T12 - THERMOPLASTIC (4" YELLOW, 90 MILS)	10' SKIP
T13 - THERMOPLASTIC (4" YELLOW, 90 MILS)	DOUBLE CENTER LINE
T14 - THERMOPLASTIC (4" YELLOW, 90 MILS)	2' x 6'/SP MINI-SKIP
T42 - THERMOPLASTIC (8" YELLOW, 90 MILS)	DIAGONAL
T51 - THERMOPLASTIC (12" WHITE, 90 MILS)	DIAGONAL
T52 - THERMOPLASTIC (12" YELLOW, 90 MILS)	DIAGONAL
T61 - THERMOPLASTIC (24" WHITE, 90 MILS)	STOP BAR
T62 - THERMOPLASTIC (24" WHITE, 90 MILS)	CROSSWALK

PAVEMENT MARKING SYMBOLS

T70 - THERMOPLASTIC (WHITE, 90 MILS)	LEFT TURN ARROW
T71 - THERMOPLASTIC (WHITE, 90 MILS)	RIGHT TURN ARROW
T72 - THERMOPLASTIC (WHITE, 90 MILS)	STRAIGHT ARROW
T74 - THERMOPLASTIC (WHITE, 90 MILS)	RIGHT/STRAIGHT ARROW

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Public Works/Engineering

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Planning

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

PAVEMENT MARKING AND SIGNING PLAN

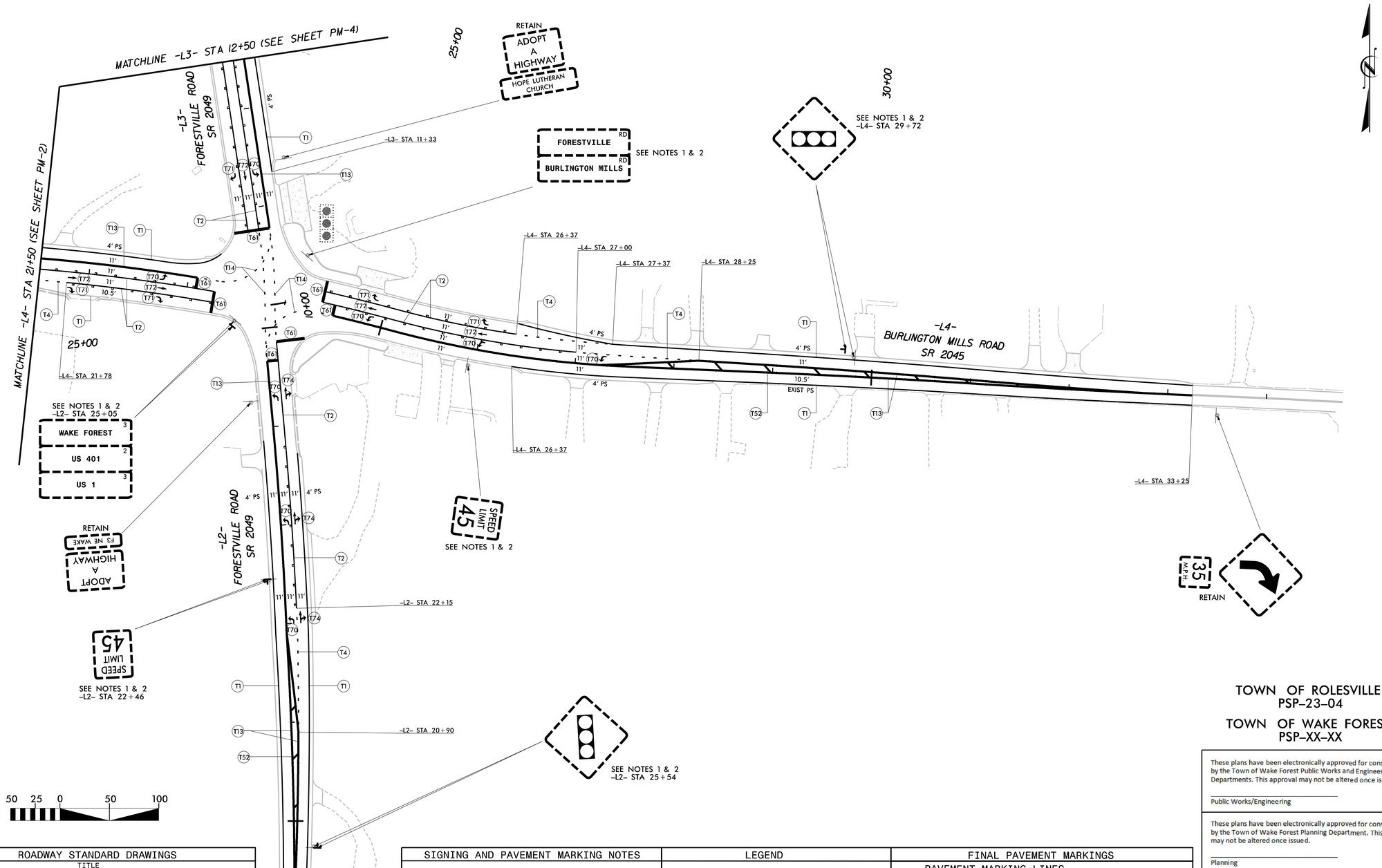
SEAL
NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH
SIGNATURE DATE

JOB NO.:	00102002
DATE:	102324
SCALE:	1"=50'
DESIGNED BY:	T. ROBERTS
REVIEWED BY:	E. LYNCH

REVISIONS	INT.	DATE

SHEET NO.
PM–2

10/25/2024
Z:\Shared\0 Projects\4 Roadway\00003002 Pearce Farm Roadway and Signal\Design\0 CAD\Roadway\Proj\Pearce Farm rdy_53.psh, PM-2.dgn



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TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

PAVEMENT MARKING AND SIGNING PLAN

SEAL
NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH
SIGNATURE DATE

JOB NO.: 0013002
DATE: 10/25/24
SCALE: 1"=50'
REVISIONS
DESIGNED BY: T. ROBERTS
REVIEWED BY: E. LYNCH
INIT. DATE

SHEET NO.
PM-3

10/25/2024
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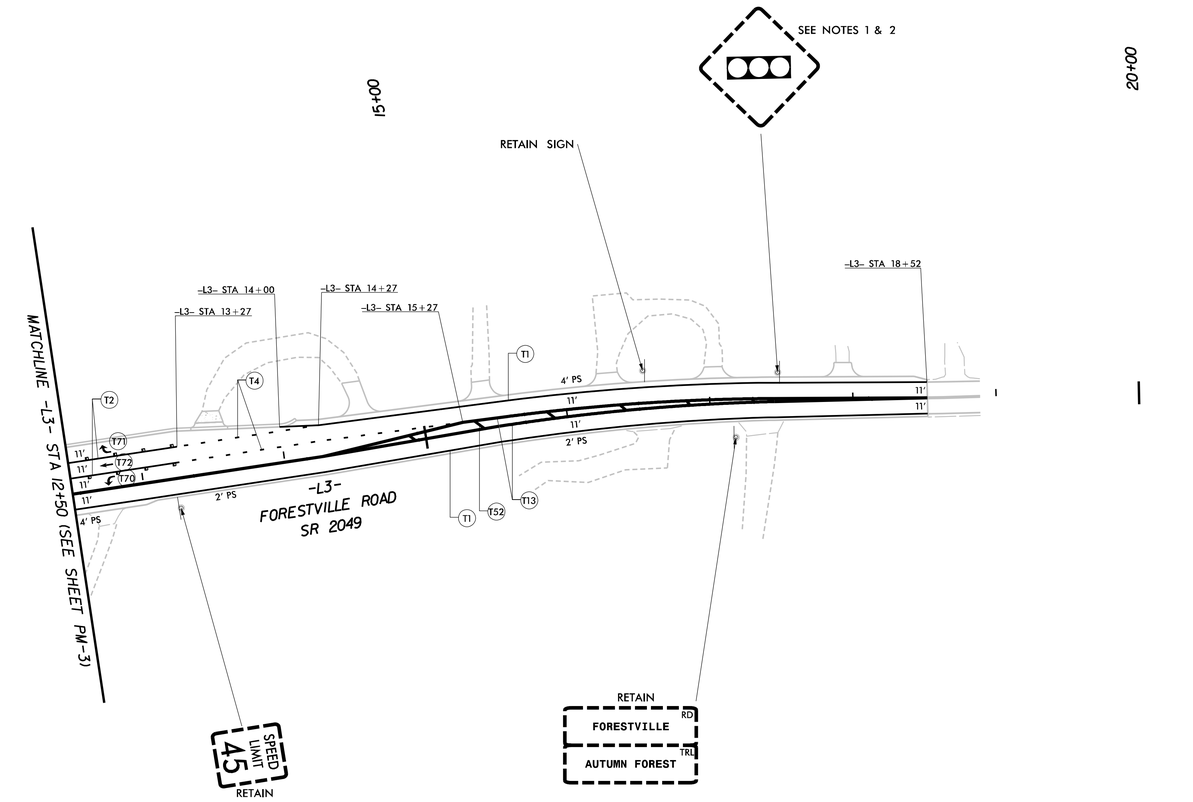

ROADWAY STANDARD DRAWINGS

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LEGEND

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TOWN OF ROLESVILLE:
PSP–23–04

TOWN OF WAKE FOREST:
PSP–XX–XX

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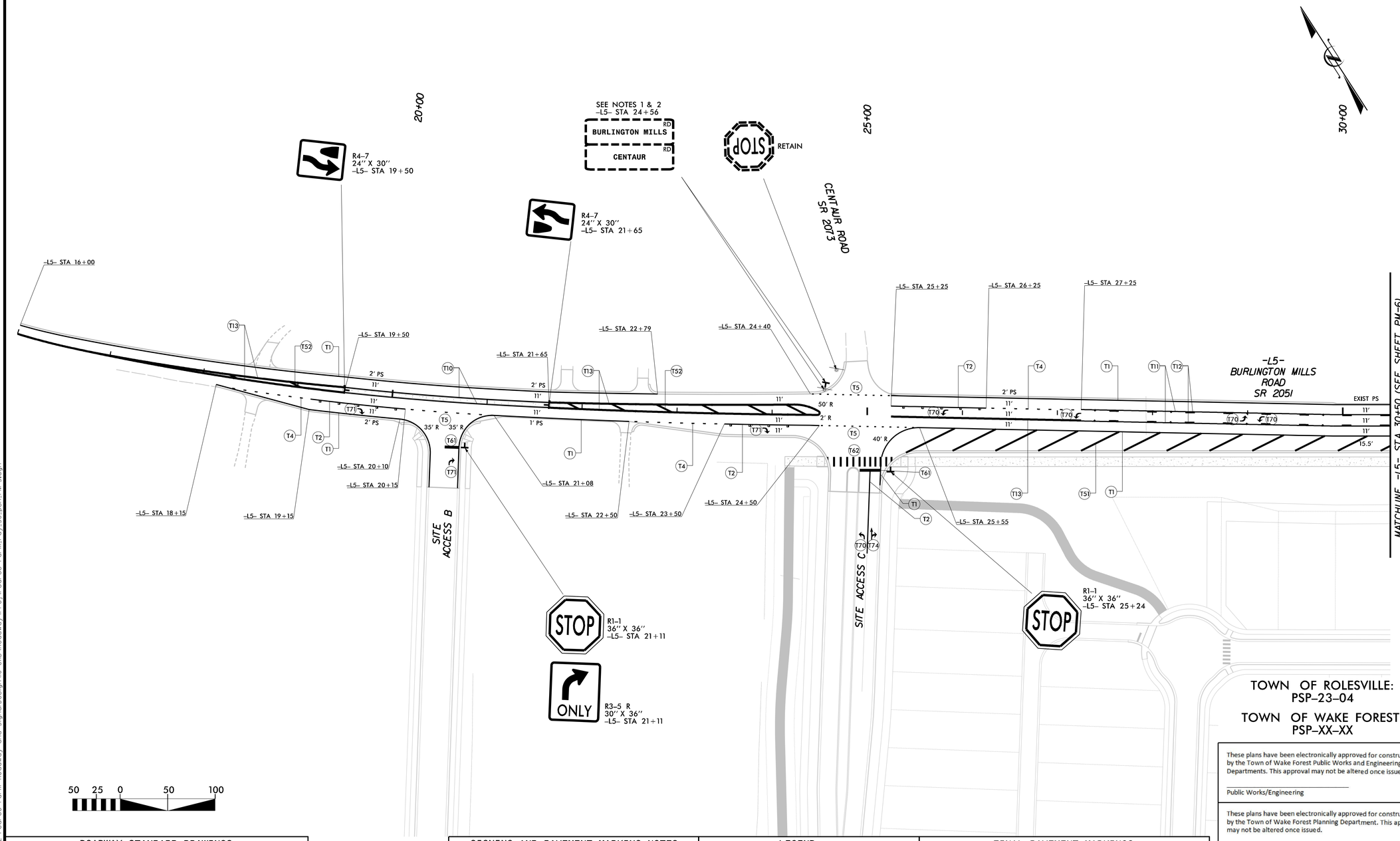
PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

PAVEMENT MARKING AND SIGNING PLAN

SEAL
NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH
SIGNATURE DATE

JOB NO.: 00103002	DESIGNED BY: T ROBERTS			
DATE: 102324	REVIEWED BY: E LYNCH			
SCALE: 1"=50'		INIT:	DATE	
	REVISIONS			

SHEET NO.
PM–4



ROADWAY STANDARD DRAWINGS

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LEGEND

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TOWN OF ROLESVILLE:
PSP–23–04

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

PAVEMENT MARKING AND SIGNING

SEAL
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ENGINEER
ELIZABETH W. LYNCH
SIGNATURE DATE

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DATE:	102324	REVIEWED BY:	E LYNCH
SCALE:	1" = 50'		
REVISIONS		INIT.	DATE

SHEET NO.
PM–5

10/25/2024
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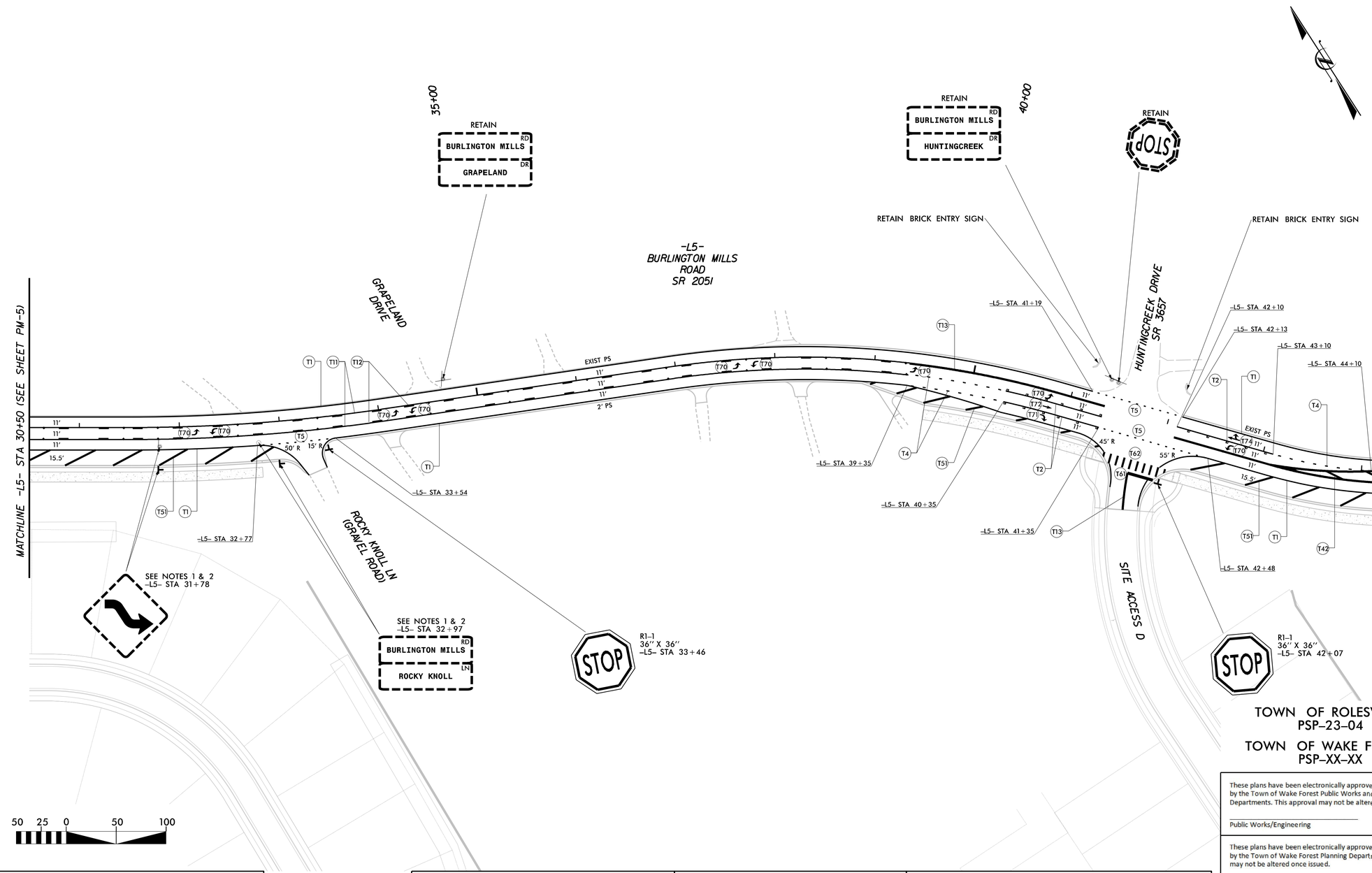

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8. RAISED REFLECTIVE PAVEMENT MARKERS ARE TO BE PLACED ACCORDING TO NCDOT ROADWAY STANDARD DRAWINGS.

LEGEND

- CRYSTAL/RED PAVEMENT MARKERS
- YELLOW/YELLOW PAVEMENT MARKERS
- EXISTING TRAFFIC SIGNAL
- PROPOSED TRAFFIC SIGNAL
- PROPOSED SIGN LOCATION ON "U" CHANNEL POST
- EXISTING SIGN LOCATION ON "U" CHANNEL POST

FINAL PAVEMENT MARKINGS

PAVEMENT MARKING LINES

T1	THERMOPLASTIC (4" WHITE, 90 MILS)	EDGELINE
T2	THERMOPLASTIC (4" WHITE, 90 MILS)	SOLID LANE LINE
T4	THERMOPLASTIC (4" WHITE, 90 MILS)	3' x 9'/SP MINI-SKIP
T5	THERMOPLASTIC (4" WHITE, 90 MILS)	2' x 6'/SP MINI-SKIP
T10	THERMOPLASTIC (4" YELLOW, 90 MILS)	EDGELINE
T11	THERMOPLASTIC (4" YELLOW, 90 MILS)	SINGLE CENTER LINE
T12	THERMOPLASTIC (4" YELLOW, 90 MILS)	10' SKIP
T13	THERMOPLASTIC (4" YELLOW, 90 MILS)	DOUBLE CENTER LINE
T14	THERMOPLASTIC (4" YELLOW, 90 MILS)	2' x 6'/SP MINI-SKIP
T42	THERMOPLASTIC (8" YELLOW, 90 MILS)	DIAGONAL
T51	THERMOPLASTIC (12" WHITE, 90 MILS)	DIAGONAL
T52	THERMOPLASTIC (12" YELLOW, 90 MILS)	DIAGONAL
T61	THERMOPLASTIC (24" WHITE, 90 MILS)	STOP BAR
T62	THERMOPLASTIC (24" WHITE, 90 MILS)	CROSSWALK

PAVEMENT MARKING SYMBOLS

T70	THERMOPLASTIC (WHITE, 90 MILS)	LEFT TURN ARROW
T71	THERMOPLASTIC (WHITE, 90 MILS)	RIGHT TURN ARROW
T72	THERMOPLASTIC (WHITE, 90 MILS)	STRAIGHT ARROW
T74	THERMOPLASTIC (WHITE, 90 MILS)	RIGHT/STRAIGHT ARROW

TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

These plans have been electronically approved for construction by the Town of Wake Forest Public Works and Engineering Departments. This approval may not be altered once issued.

Public Works/Engineering

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Planning

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

Electronic Approval: This approval is being issued electronically. This approval is valid upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification of this approval once issued will invalidate this approval.

City of Raleigh Development Approval:

Raleigh Water Review Officer

EXULT ENGINEERING
301 S. Main Street
Kannapolis, NC 28081
(980) 485-2250
www.exultengineering.com
NC License #C-4445

PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

PAVEMENT MARKING AND SIGNING PLAN

SEAL
NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH
SIGNATURE DATE

JOB NO.:	00103002
DATE:	102324
SCALE:	1" = 50'
DESIGNED BY:	T ROBERTS
REVIEWED BY:	E LYNCH

REVISIONS	INIT.	DATE

SHEET NO.
PM-6

10/25/2024
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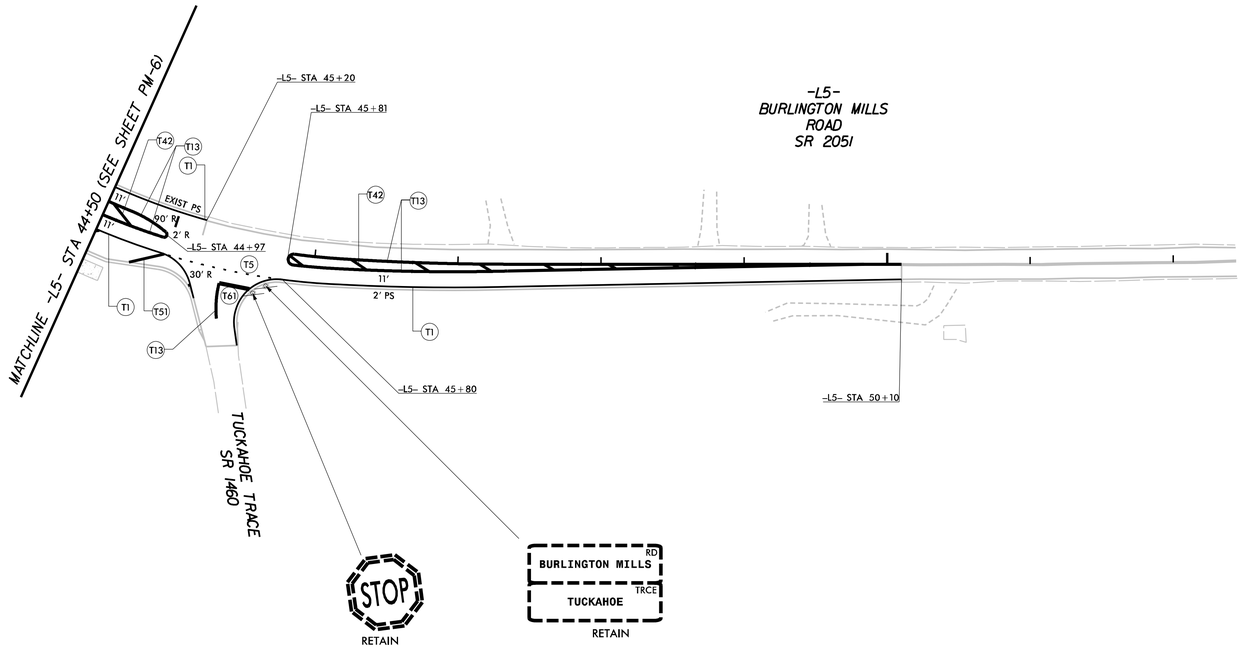

ROADWAY STANDARD DRAWINGS

STD. NO.	TITLE
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMPS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

SIGNING AND PAVEMENT MARKING NOTES

1. REMOVE AND DISPOSE OF EXISTING "U" CHANNEL POST.
2. ERECT EXISTING SIGN ON NEW "U" CHANNEL POST.
3. REMOVE AND DISPOSE OF EXISTING SIGNS AND "U" CHANNEL POST.
4. THE BACKGROUND FOR TYPE E & F SHALL BE TYPE C REFLECTIVE SHEETING.
5. ALL STREET NAME SIGNS SHALL ADHERE TO 2023 MUTCD. ALL STREET NAME SIGNS SHALL BE APPROVED BY THE TRANPORTATION AND FACILITIES DEPARTMENT STAFF PRIOR TO INSTALLATION.
6. CONTRACTOR TO TIE PROPOSED MARKINGS TO EXISTING MARKINGS AT PROJECT LIMITS.
7. CONTRACTOR SHALL MILL ANY EXISTING MARKINGS OR SYMBOLS IN CONFLICT WITH THE PROPOSED MARKINGS.
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LEGEND

- CRYSTAL/RED PAVEMENT MARKERS
- YELLOW/YELLOW PAVEMENT MARKERS
- EXISTING TRAFFIC SIGNAL
- PROPOSED TRAFFIC SIGNAL
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FINAL PAVEMENT MARKINGS

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TOWN OF ROLESVILLE:
PSP-23-04

TOWN OF WAKE FOREST:
PSP-XX-XX

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Raleigh Water Review Officer

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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

PAVEMENT MARKING AND SIGNING PLAN

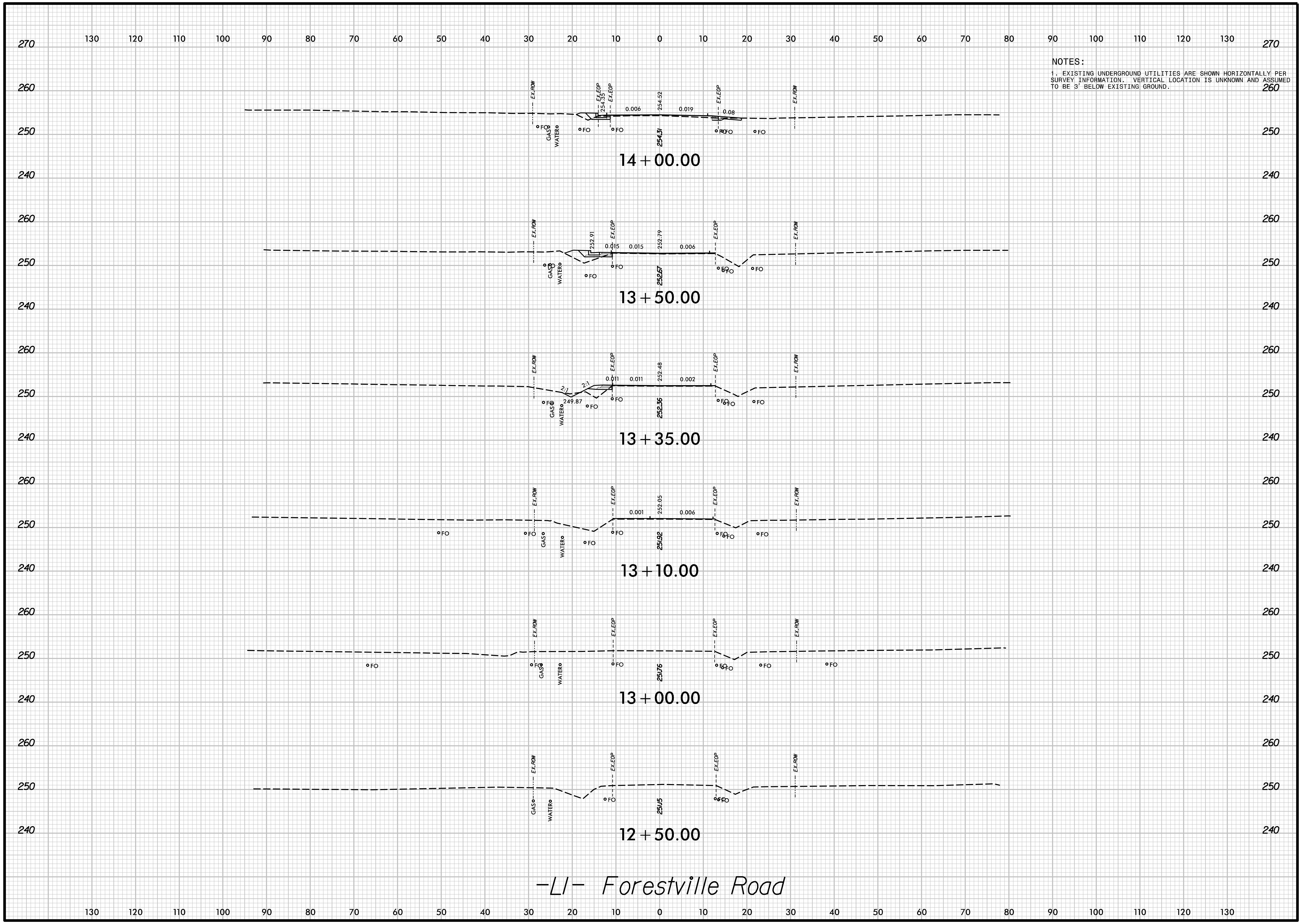
SEAL
NORTH CAROLINA PROFESSIONAL SEAL
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
ENGINEER
ELIZABETH W. LYNCH
SIGNATURE DATE

DESIGNED BY: T. ROBERTS
REVIEWED BY: E. LYNCH
JOB NO.: 0010302
DATE: 10/23/24
SCALE: 1"=50'

REVISIONS	INIT.	DATE

SHEET NO.
PM-7

10/25/2024
Z:\Shared\0 Projects\.4 Roadway\0010302 Pearce Farm Roadway and Signal Design\0 CAD\Roadway\Proj\Pearce Farm_rdy_58_psh_PM-7.dgn



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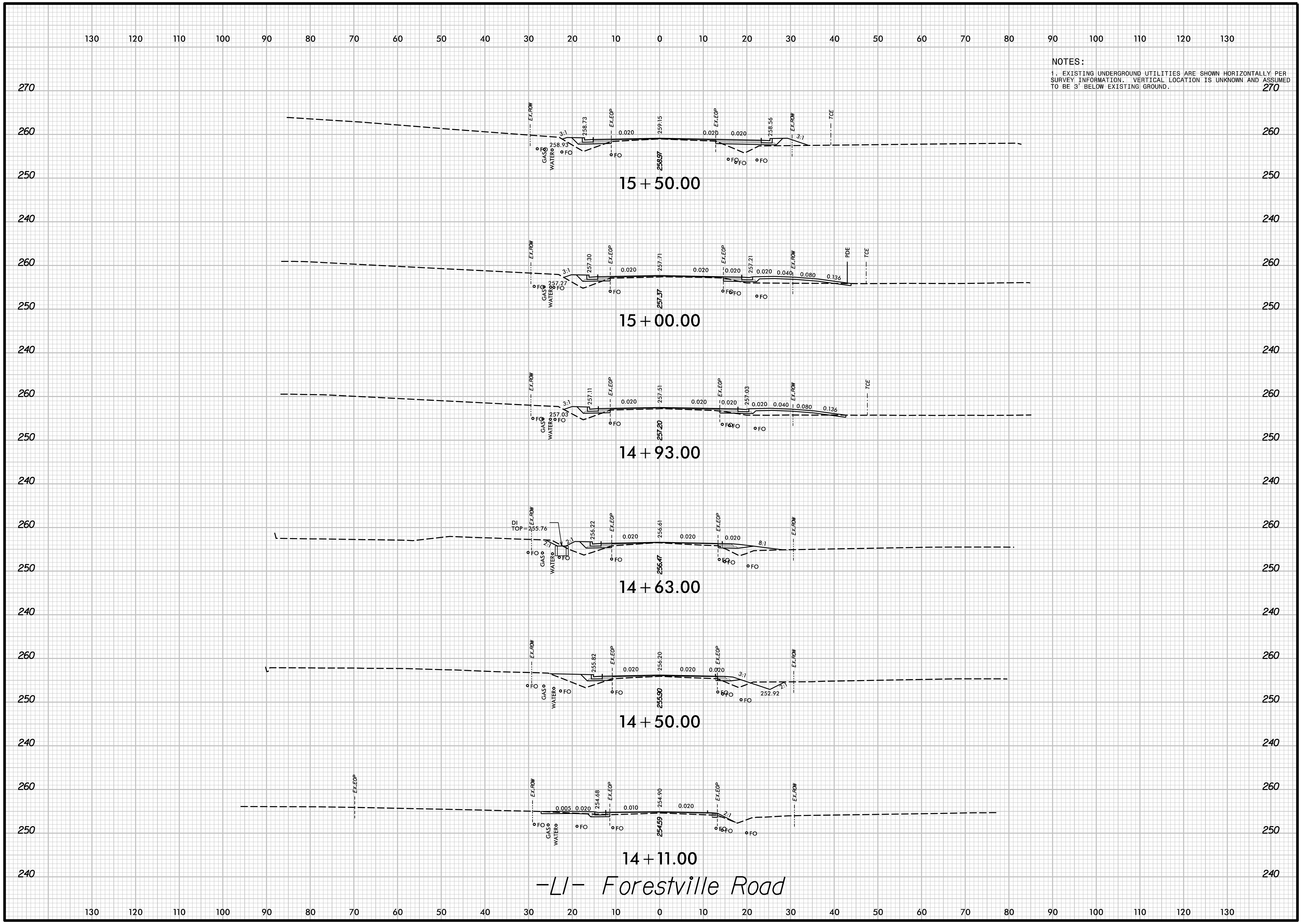
PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

ROADWAY
CROSS SECTIONS

JOB NO.: 00103002	DESIGNED BY: G. BOYLE
DATE: 10/23/24	REVIEWED BY: E. LYNCH
SCALE:	

REVISIONS	INIT.	DATE

SHEET NO.
X-1



NOTES:
1. EXISTING UNDERGROUND UTILITIES ARE SHOWN HORIZONTALLY PER SURVEY INFORMATION. VERTICAL LOCATION IS UNKNOWN AND ASSUMED TO BE 3' BELOW EXISTING GROUND.

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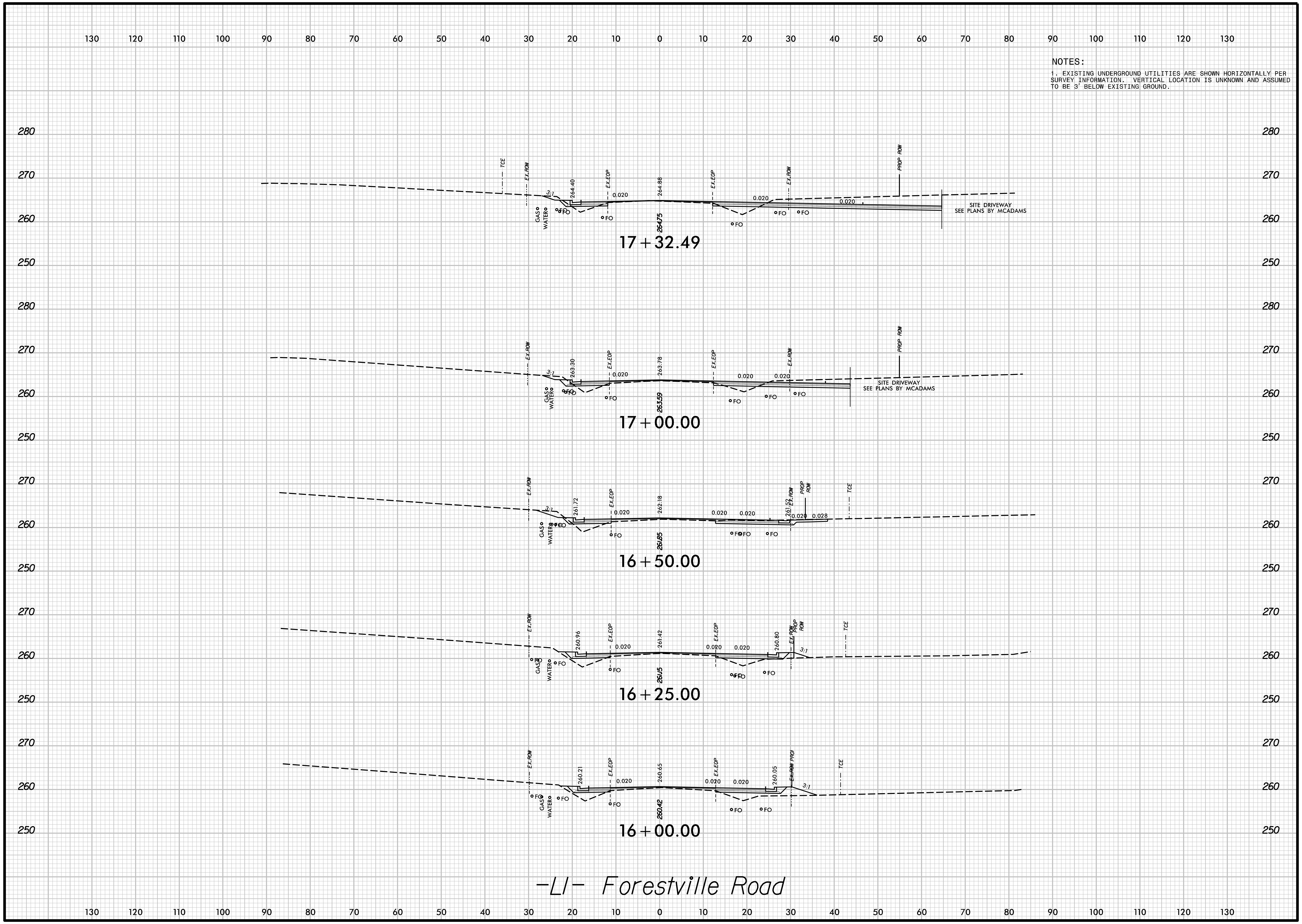
PEARCE FARM ROADWAY IMPROVEMENTS ROLESVILLE, NORTH CAROLINA

ROADWAY CROSS SECTIONS

JOB NO.: 00103002	DESIGNED BY: G. BOYLE
DATE: 10/23/24	REVIEWED BY: E. LYNCH
SCALE:	

REVISIONS	INIT.	DATE

SHEET NO.
X-2



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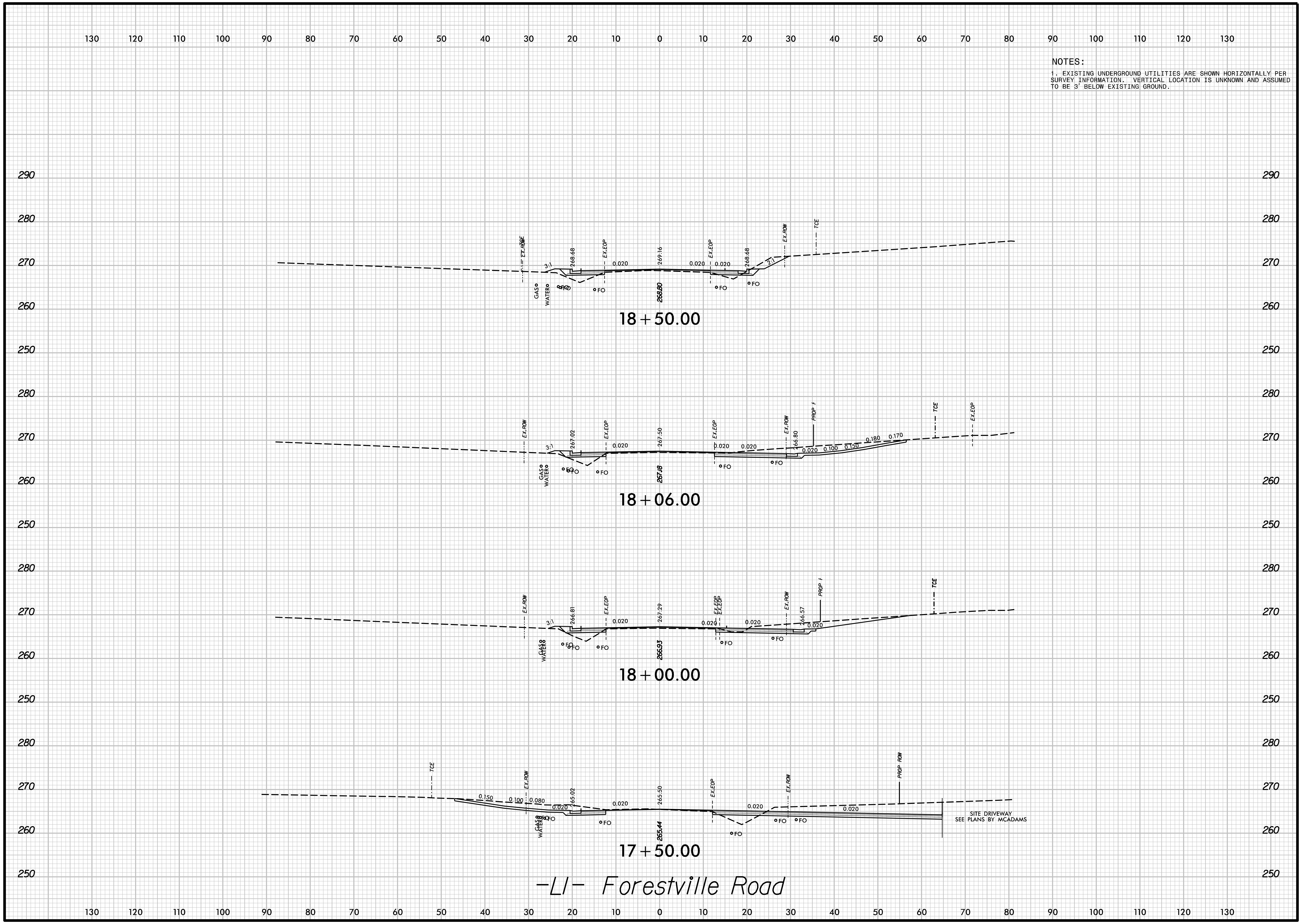
ROLESVILLE, NORTH CAROLINA

ROADWAY
CROSS SECTIONS

JOB NO.: 00103002
DATE: 10/23/24
SCALE:
DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH

REVISIONS	INIT.	DATE

SHEET NO.
X-3



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ROADWAY CROSS SECTIONS

DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH
JOB NO.: 00103002
DATE: 10/23/24
SCALE:

REVISIONS	INIT.	DATE

SHEET NO.
X-4

NOTES:

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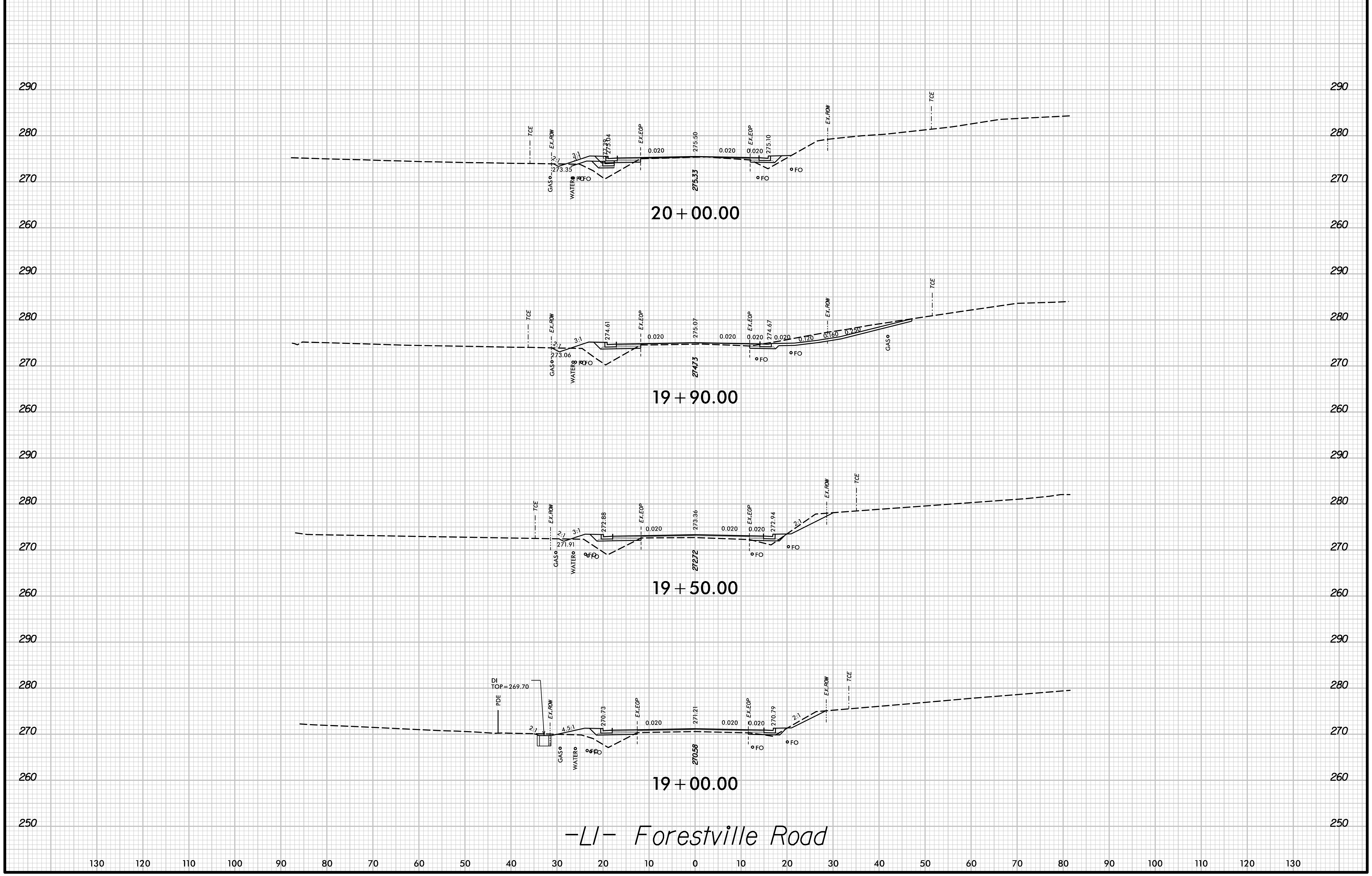

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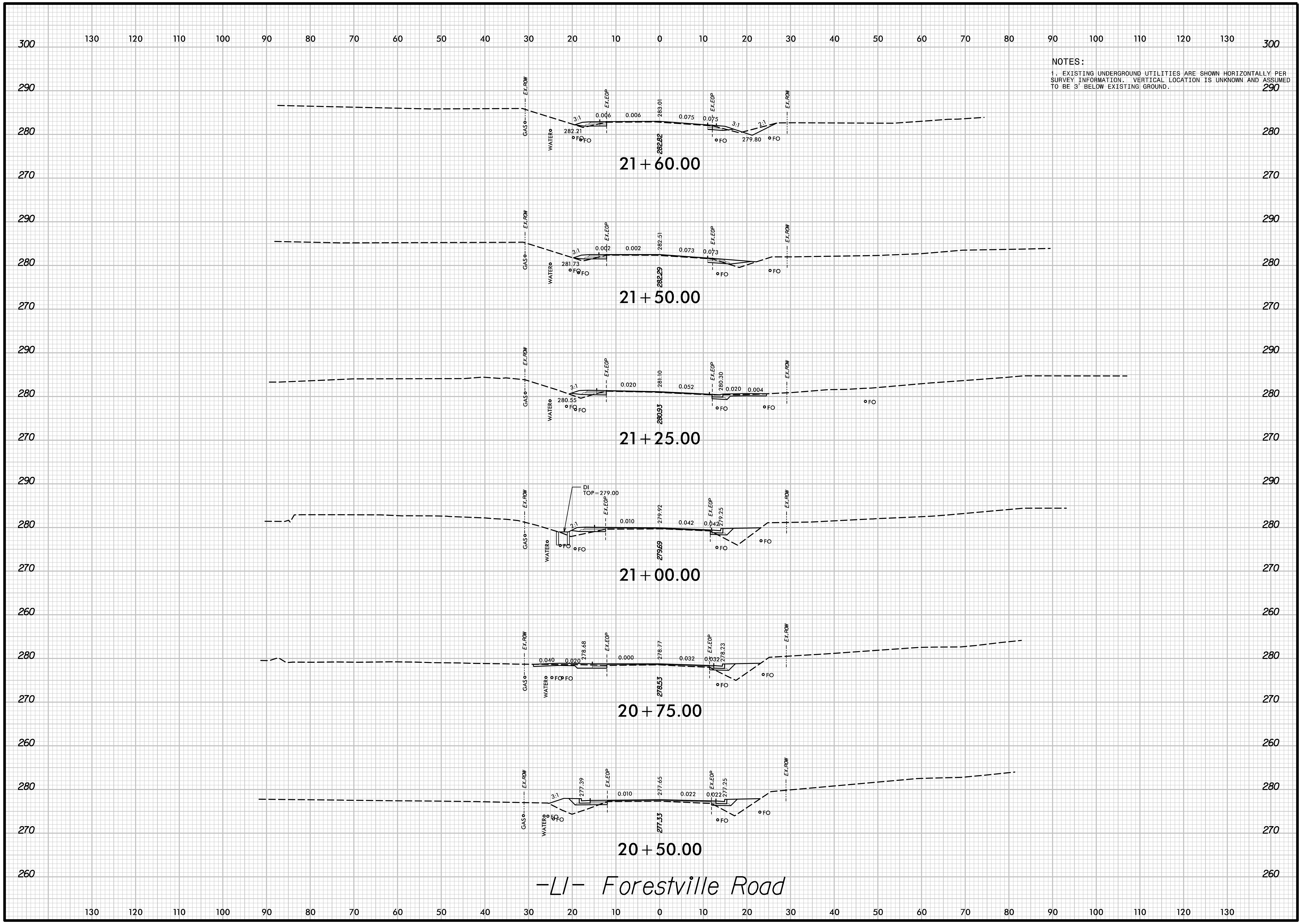
ROLESVILLE, NORTH CAROLINA

ROADWAY
CROSS SECTIONS

JOB NO.: 00103002	DESIGNED BY: G. BOYLE	INIT.	DATE
DATE: 10/23/24	REVIEWED BY: E. LYNCH		
SCALE:			
REVISIONS			

SHEET NO.
X-5



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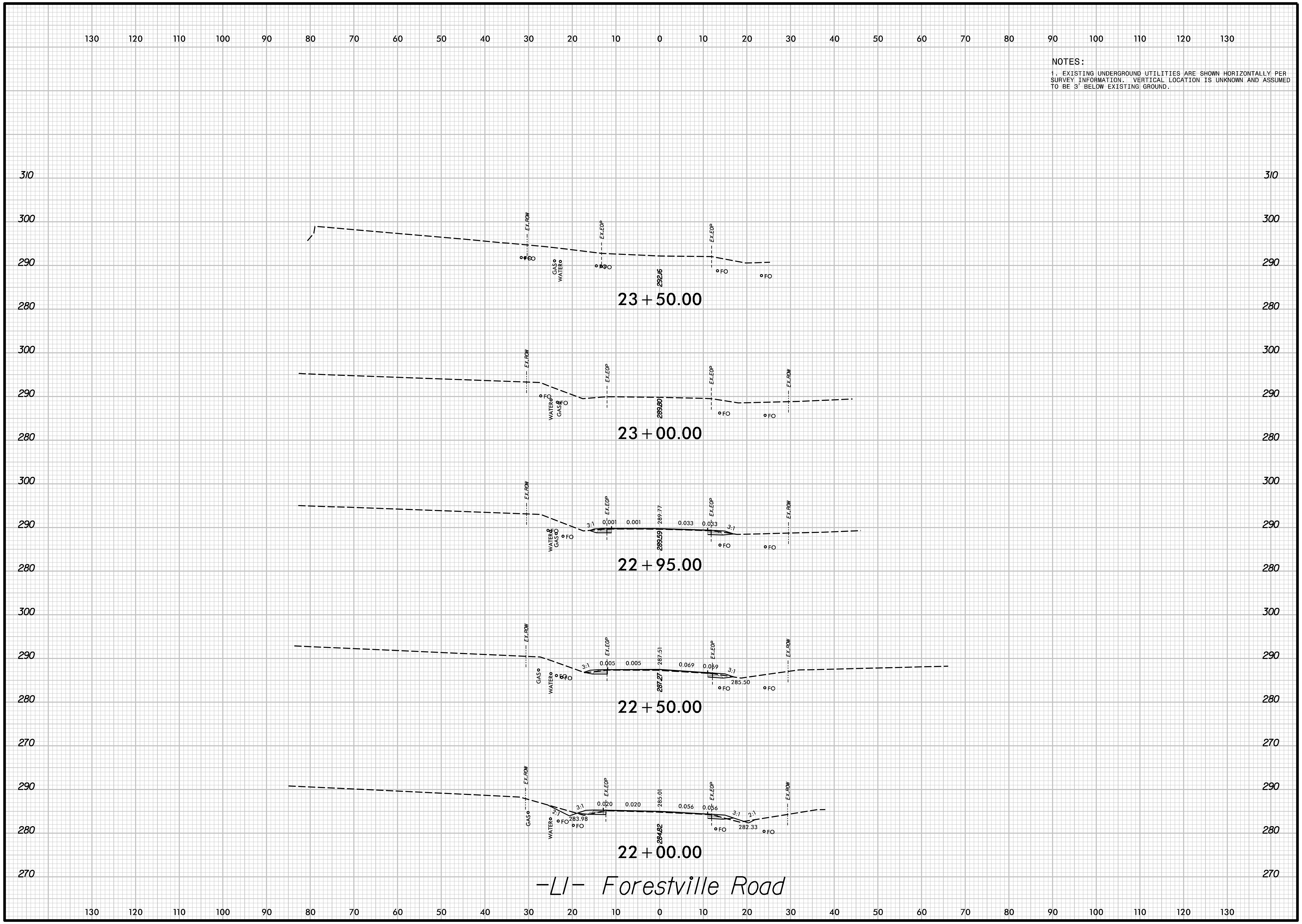
PEARCE FARM ROADWAY IMPROVEMENTS ROLESVILLE, NORTH CAROLINA

ROADWAY CROSS SECTIONS

JOB NO.: 00103002	DESIGNED BY: G. BOYLE
DATE: 10/23/24	REVIEWED BY: E. LYNCH
SCALE:	

REVISIONS	INIT.	DATE

SHEET NO.
X-6



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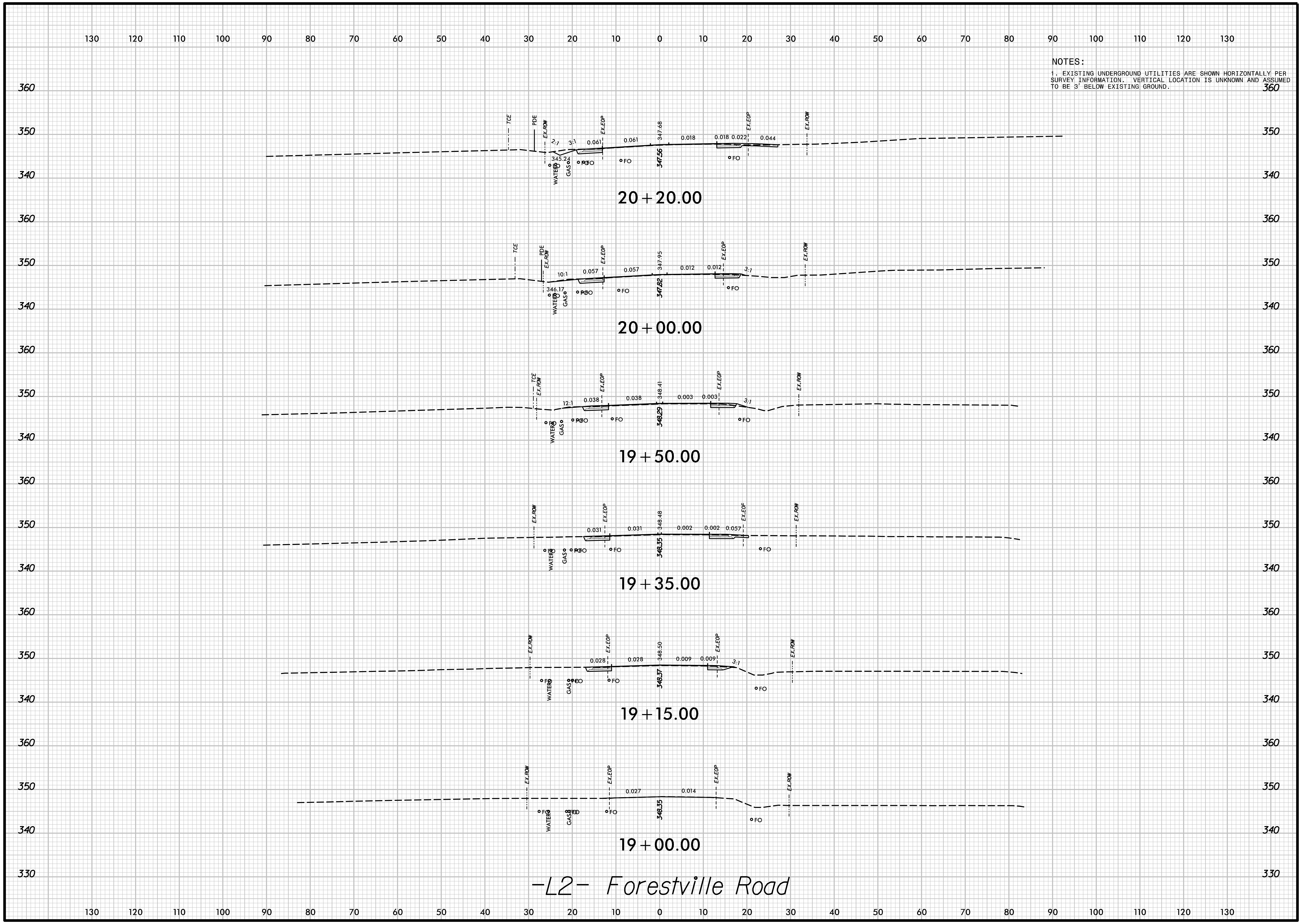
PEARCE FARM ROADWAY IMPROVEMENTS ROLESVILLE, NORTH CAROLINA

ROADWAY CROSS SECTIONS

JOB NO.: 00103002	DESIGNED BY: G. BOYLE
DATE: 10/23/24	REVIEWED BY: E. LYNCH
SCALE:	

REVISIONS	INIT.	DATE

SHEET NO.
X–7



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ROLESVILLE, NORTH CAROLINA

ROADWAY
CROSS SECTIONS

JOB NO. 00103002
DATE: 10/23/24
SCALE:

DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH

REVISIONS | INIT. | DATE

SHEET NO.
X-8

NOTES:

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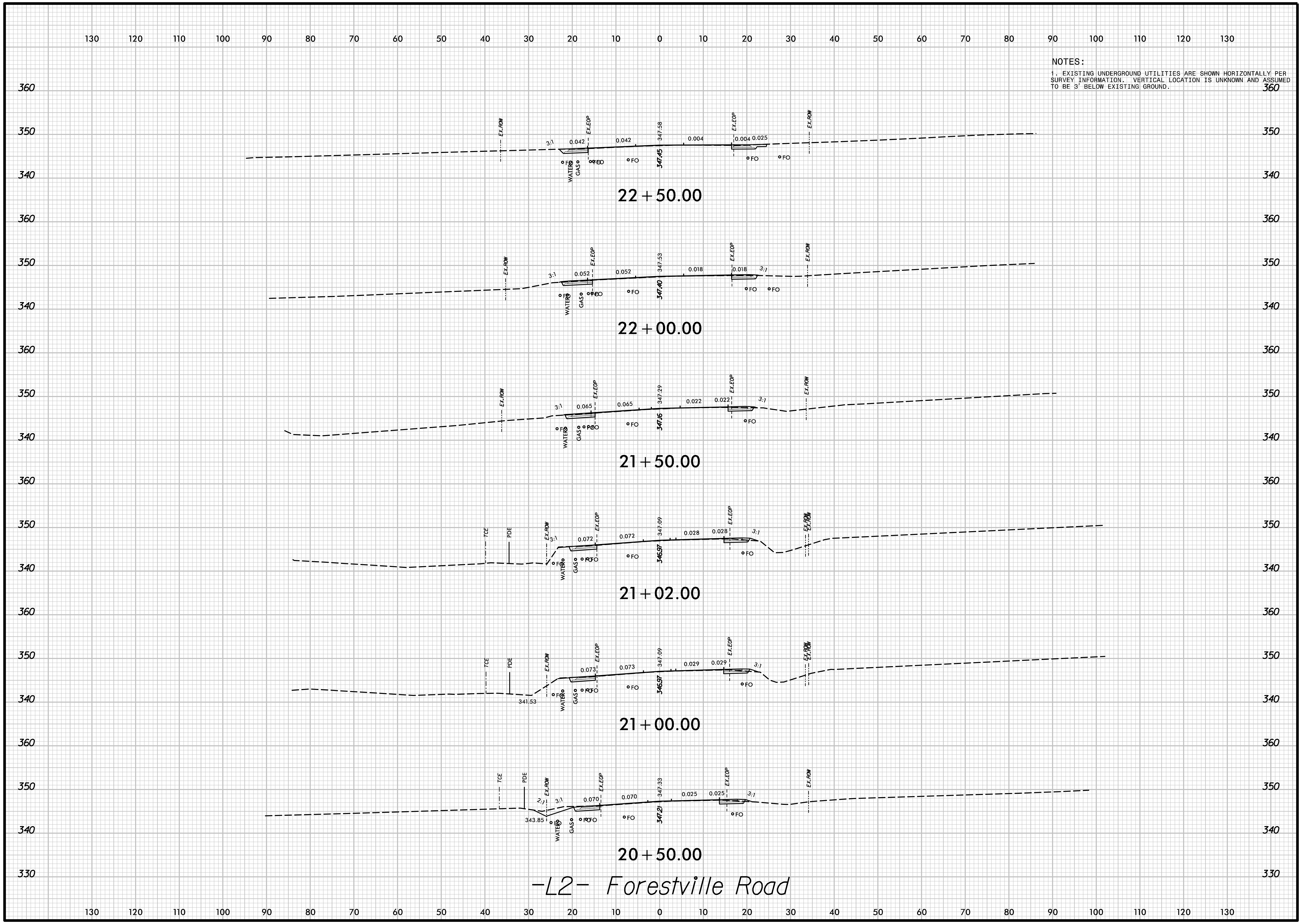

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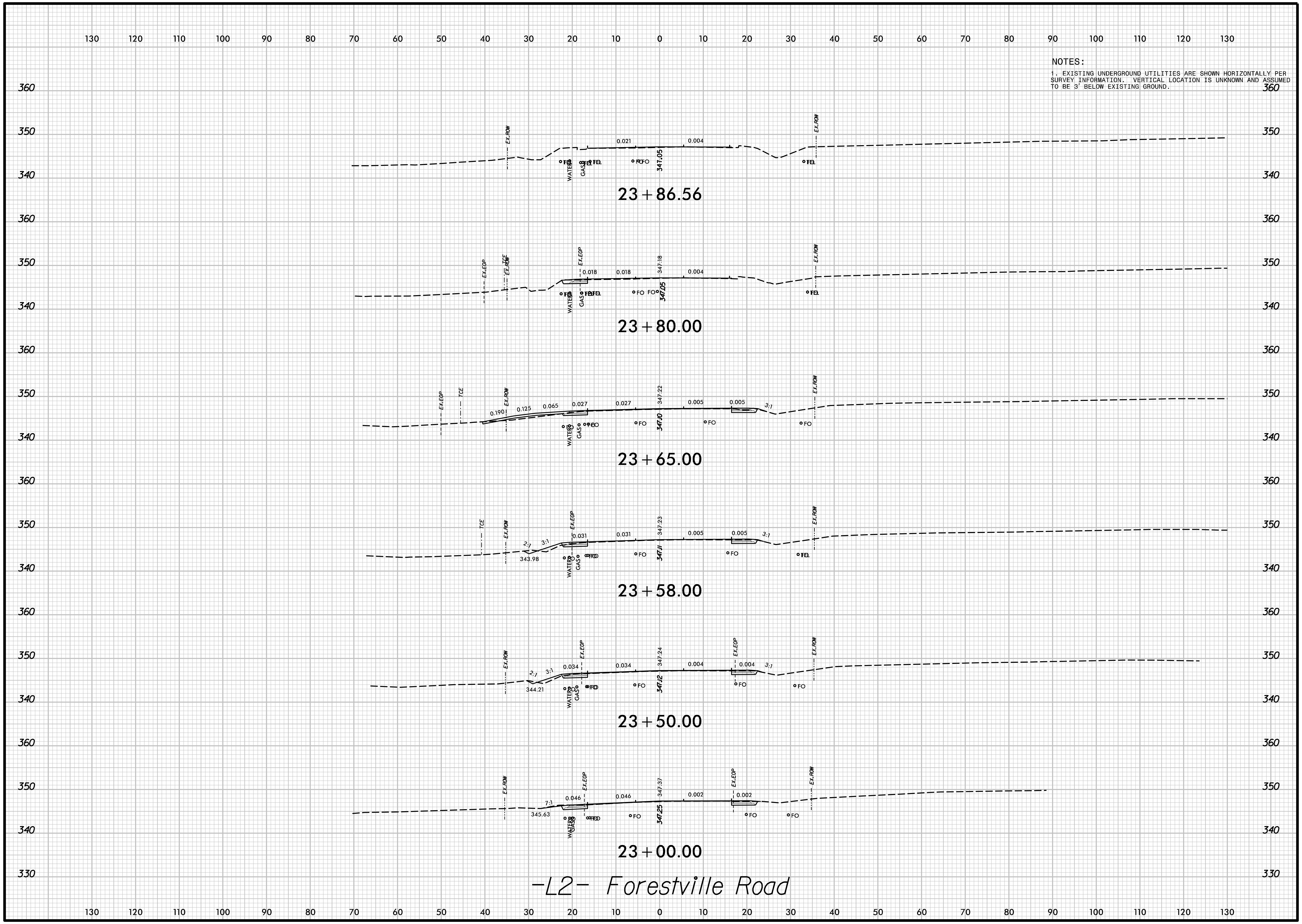
PEARCE FARM ROADWAY IMPROVEMENTS ROLESVILLE, NORTH CAROLINA

ROADWAY CROSS SECTIONS

JOB NO. 00103002
DATE: 10/23/24
SCALE:
DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH

REVISIONS	INIT.	DATE

SHEET NO.
X-9



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PEARCE FARM
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ROLESVILLE, NORTH CAROLINA

ROADWAY
CROSS SECTIONS

JOB NO.: 00103002	DESIGNED BY: G. BOYLE
DATE: 10/23/24	REVIEWED BY: E. LYNCH
SCALE:	

REVISIONS	INIT.	DATE

SHEET NO.
X-10

NOTES:

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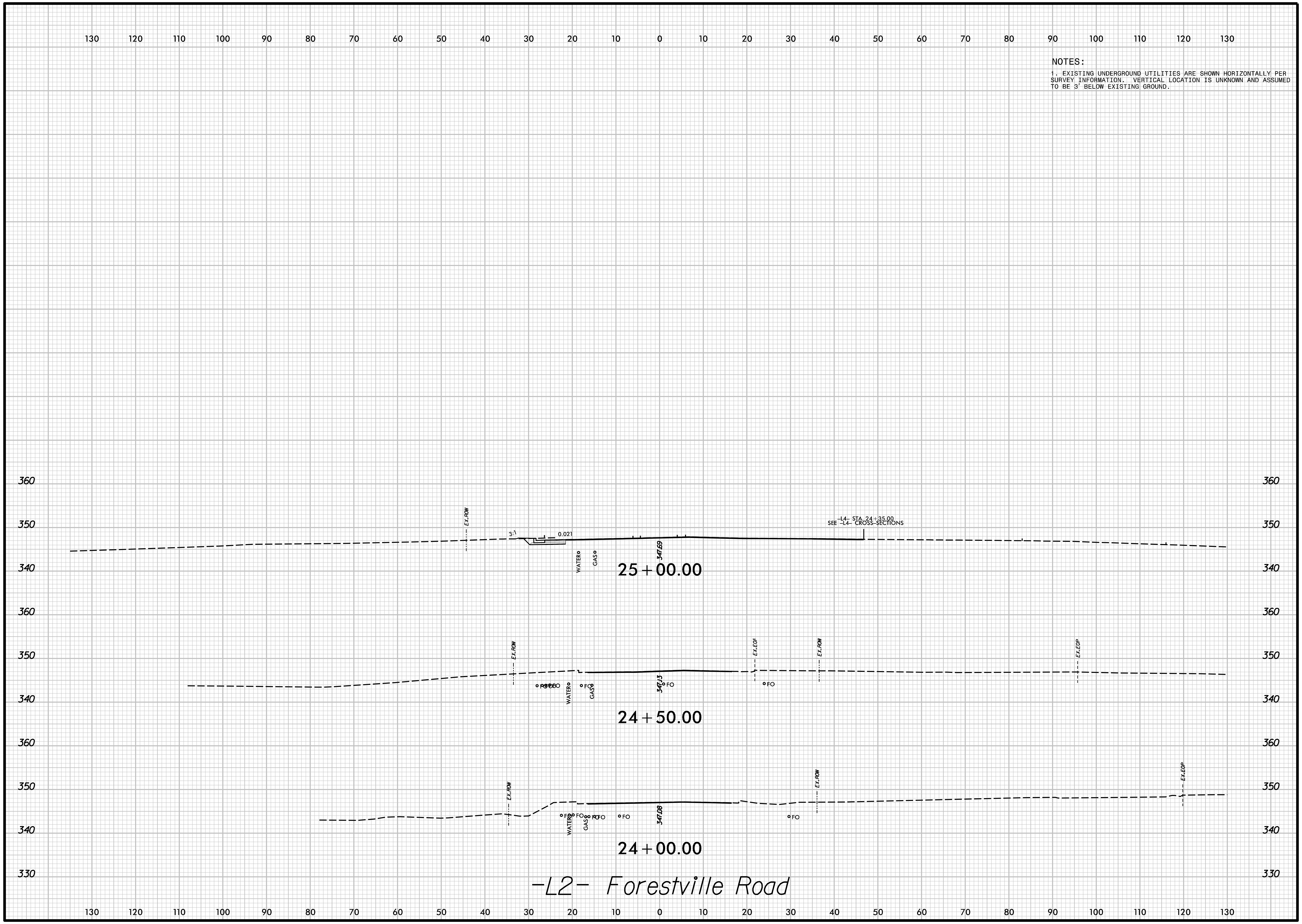

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PEARCE FARM
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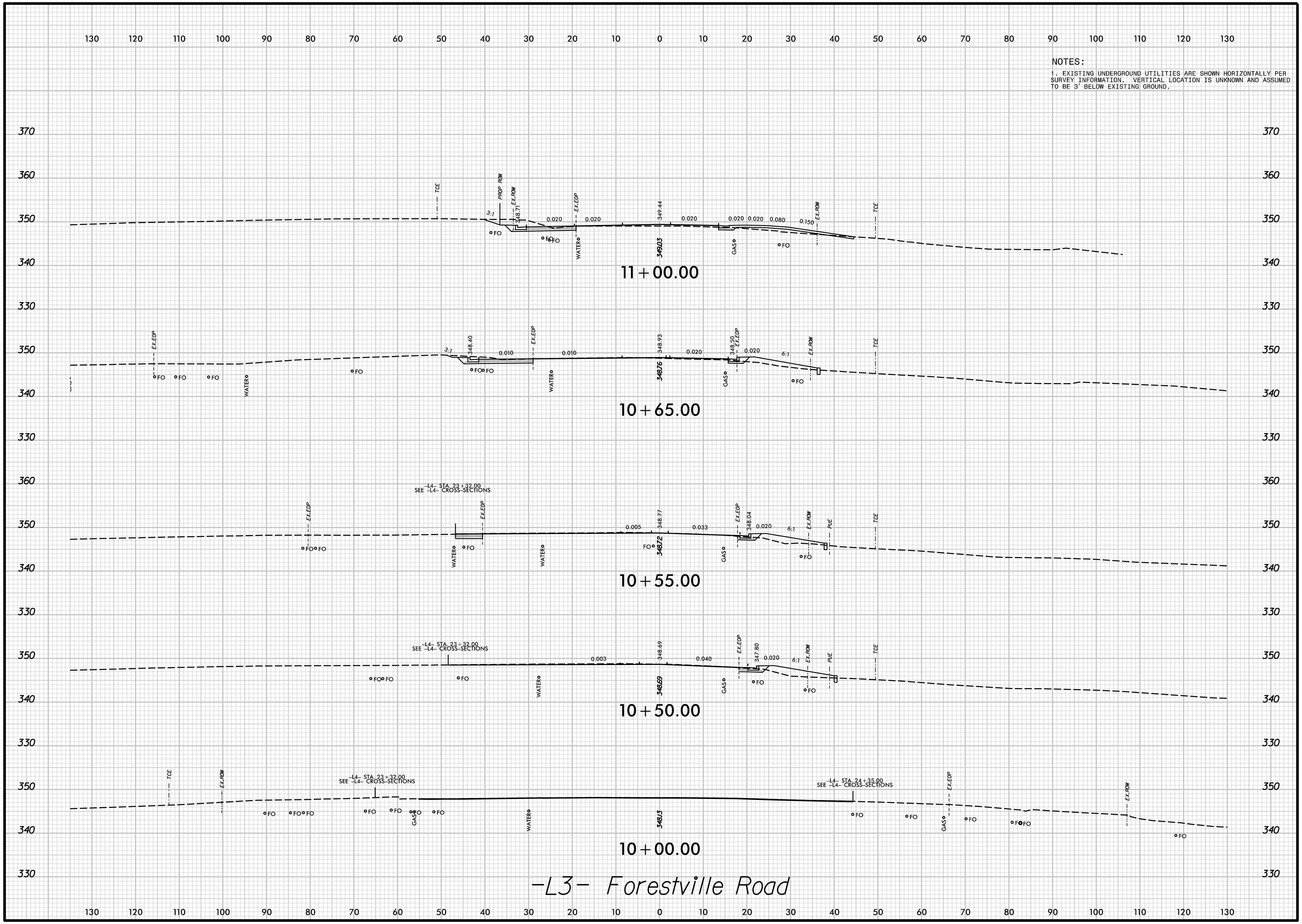
ROLESVILLE, NORTH CAROLINA

ROADWAY
CROSS SECTIONS

JOB NO.: 00103002
DATE: 10/23/24
SCALE:
DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH

REVISIONS | INIT. | DATE

SHEET NO.
X-11



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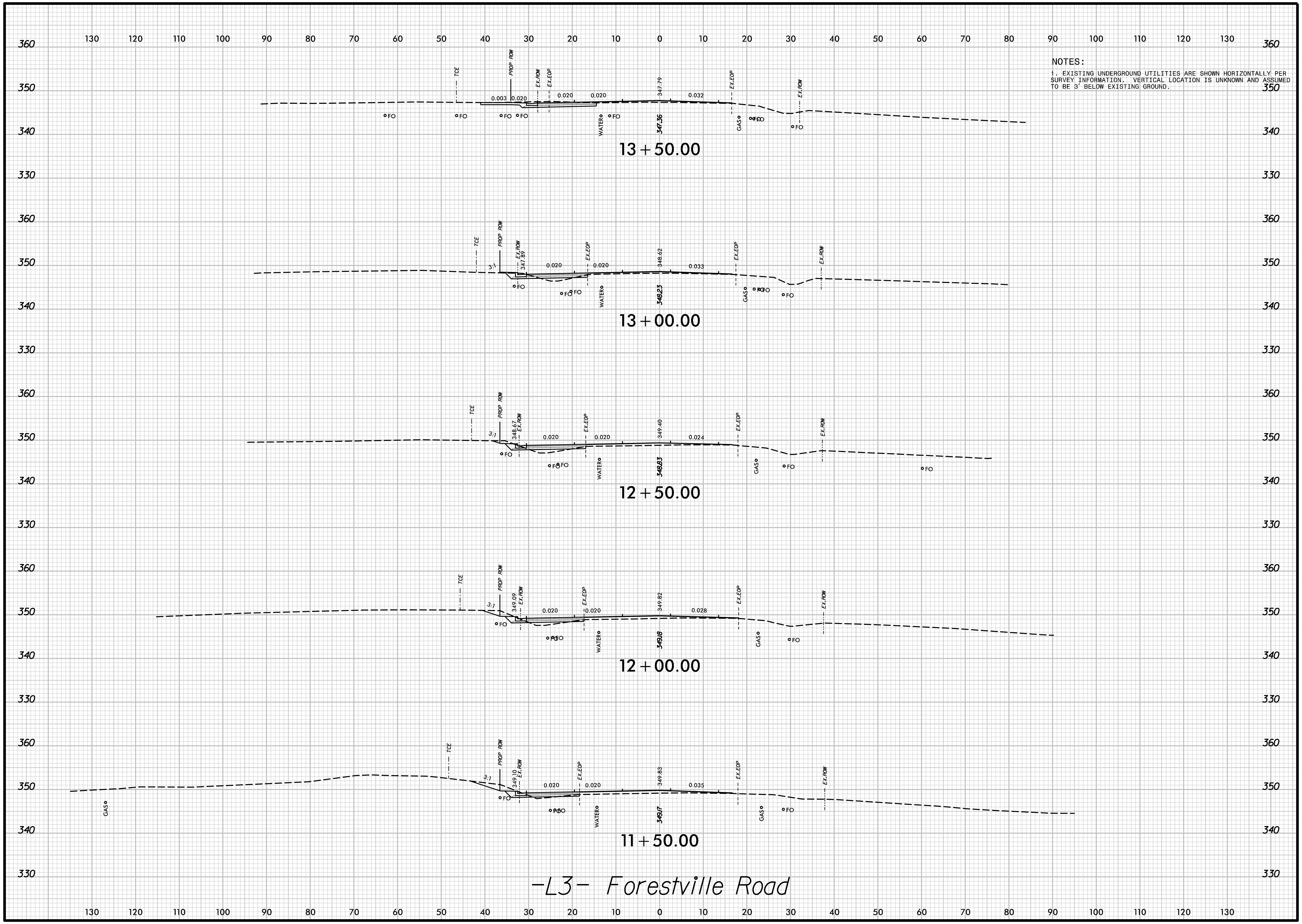
ROADWAY
CROSS SECTIONS

JOB NO.: 00103002	DESIGNED BY: G. BOYLE
DATE: 10/23/24	REVIEWED BY: E. LYNCH
SCALE:	

REVISIONS	INIT.	DATE

SHEET NO.
X–12



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ROADWAY
CROSS SECTIONS

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DATE: 10/23/24
SCALE:
DESIGNED BY: G. BOYLE
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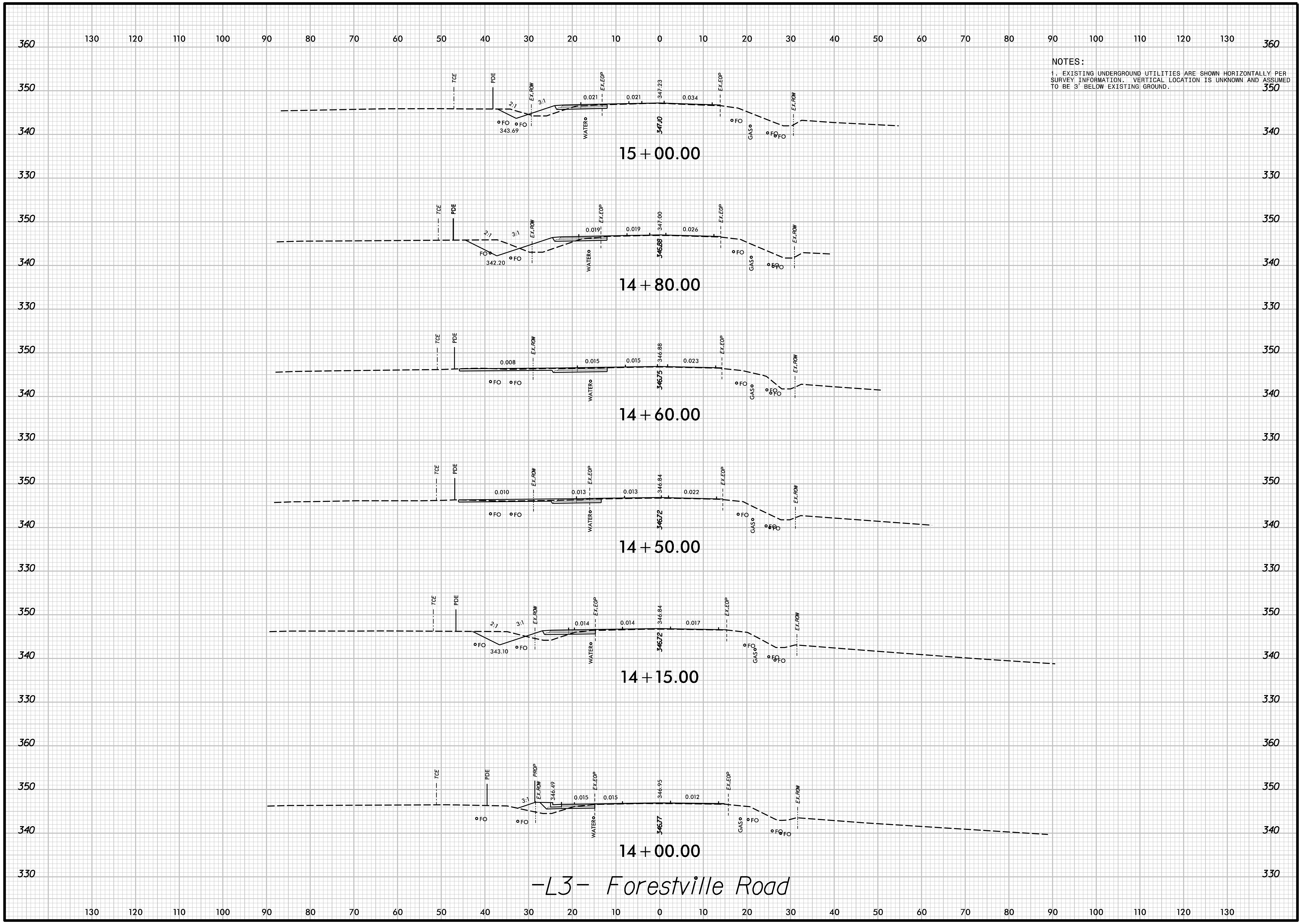
REVISIONS	INIT.	DATE

SHEET NO.
X–13



NOTES:
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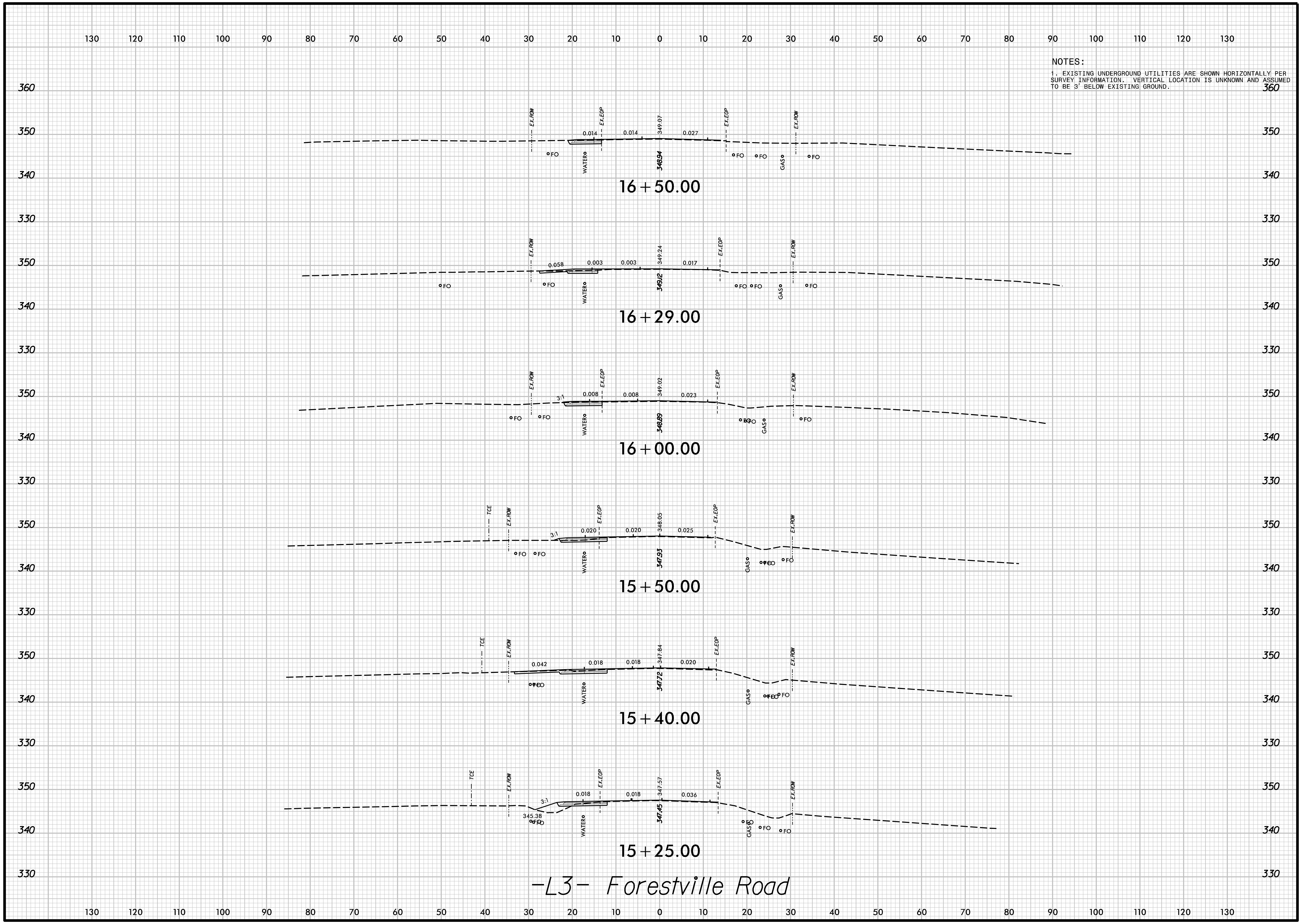
ROADWAY CROSS SECTIONS

JOB NO.	00103002
DATE:	10/23/24
SCALE:	
DESIGNED BY:	G. BOYLE
REVIEWED BY:	E. LYNCH

REVISIONS	INIT.	DATE

SHEET NO.
X–14



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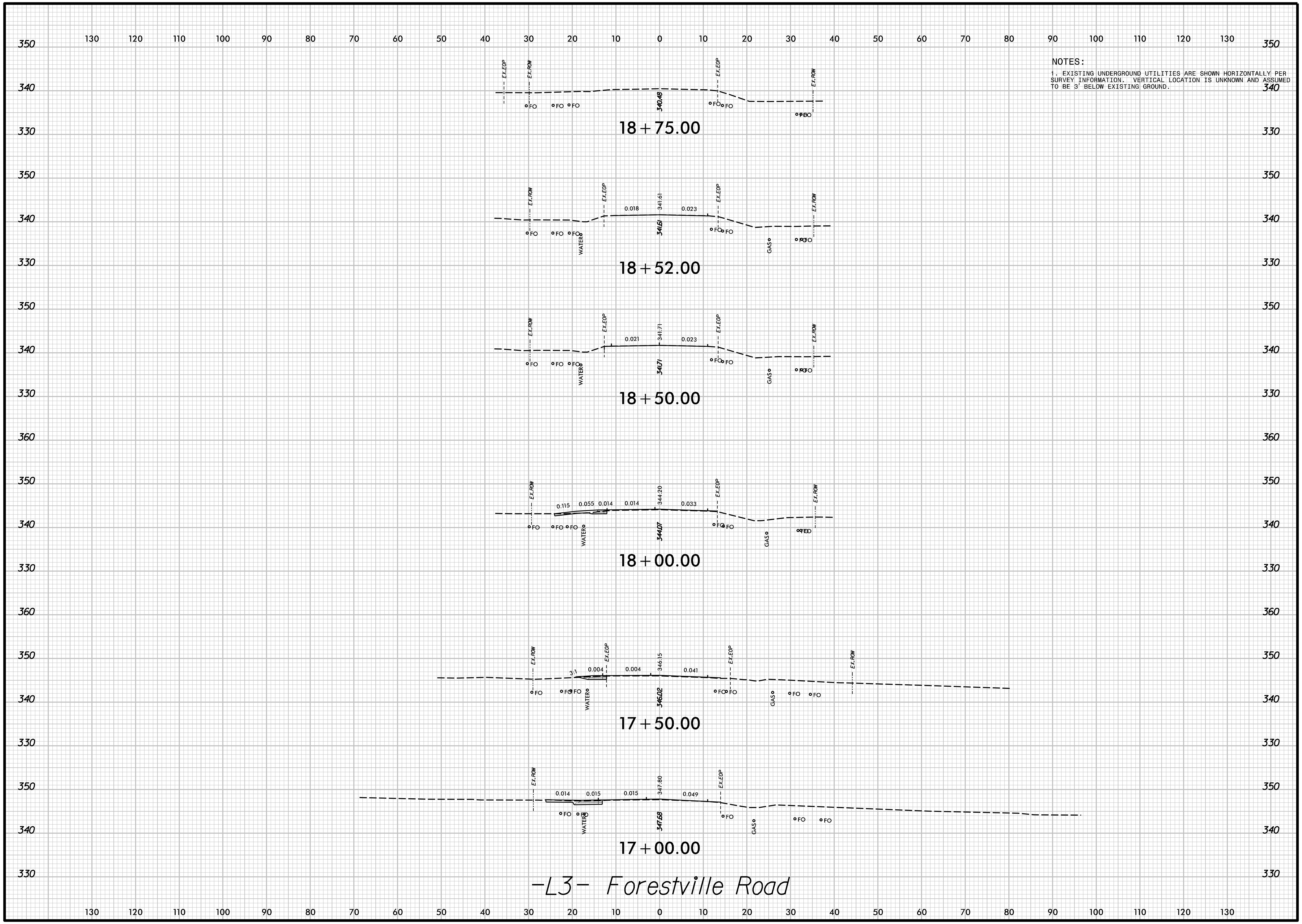
ROADWAY
CROSS SECTIONS

JOB NO. 00103002	DESIGNED BY: G. BOYLE
DATE: 102324	REVIEWED BY: E. LYNCH
SCALE:	

REVISIONS	INIT.	DATE

SHEET NO.
X–15



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PEARCE FARM
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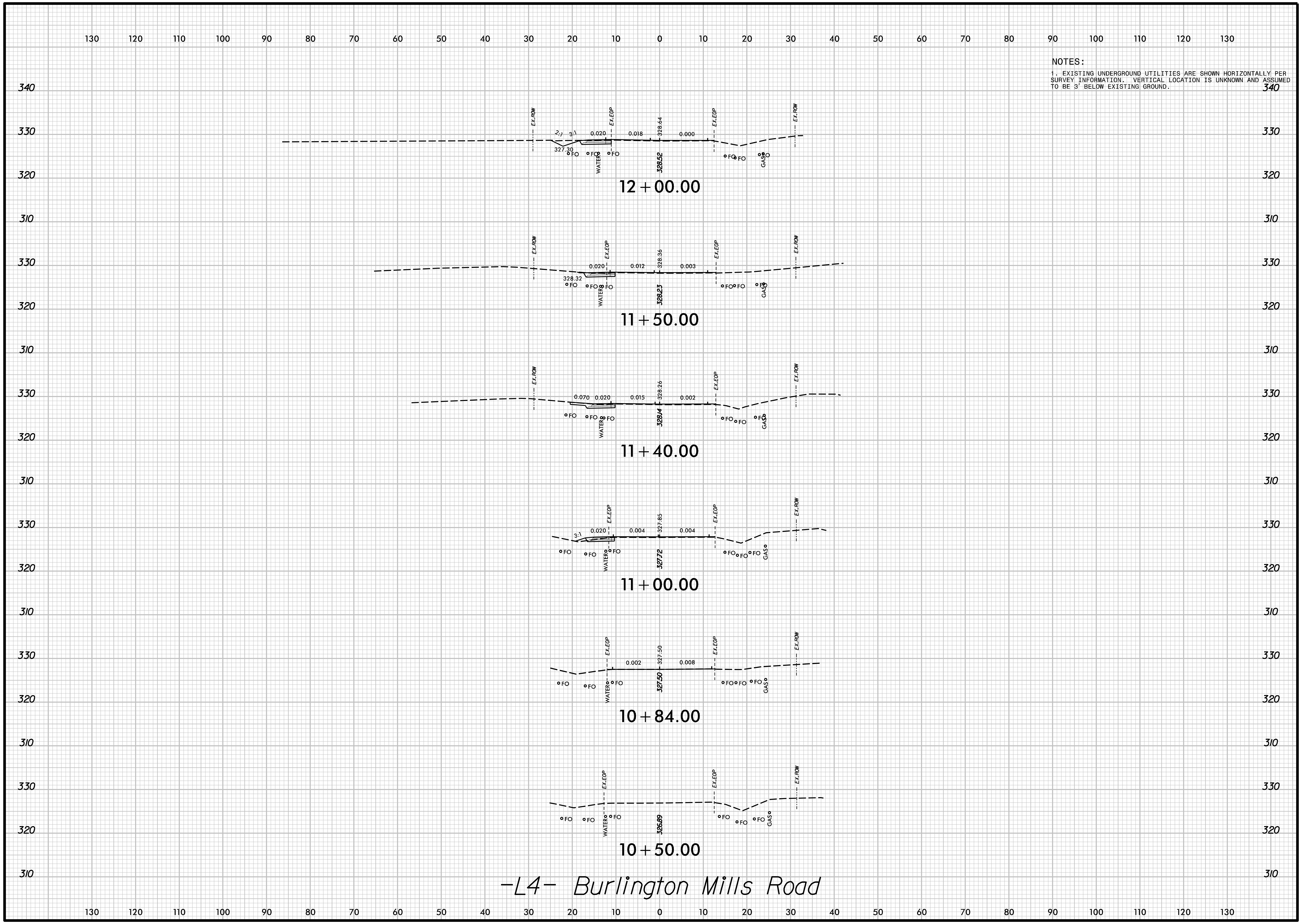
ROLESVILLE, NORTH CAROLINA

ROADWAY
CROSS SECTIONS

JOB NO.: 00103002
DATE: 102324
SCALE:
DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH
REVISIONS | INIT. | DATE

SHEET NO.
X-16

NOTES:
1. EXISTING UNDERGROUND UTILITIES ARE SHOWN HORIZONTALLY PER SURVEY INFORMATION. VERTICAL LOCATION IS UNKNOWN AND ASSUMED TO BE 3' BELOW EXISTING GROUND.



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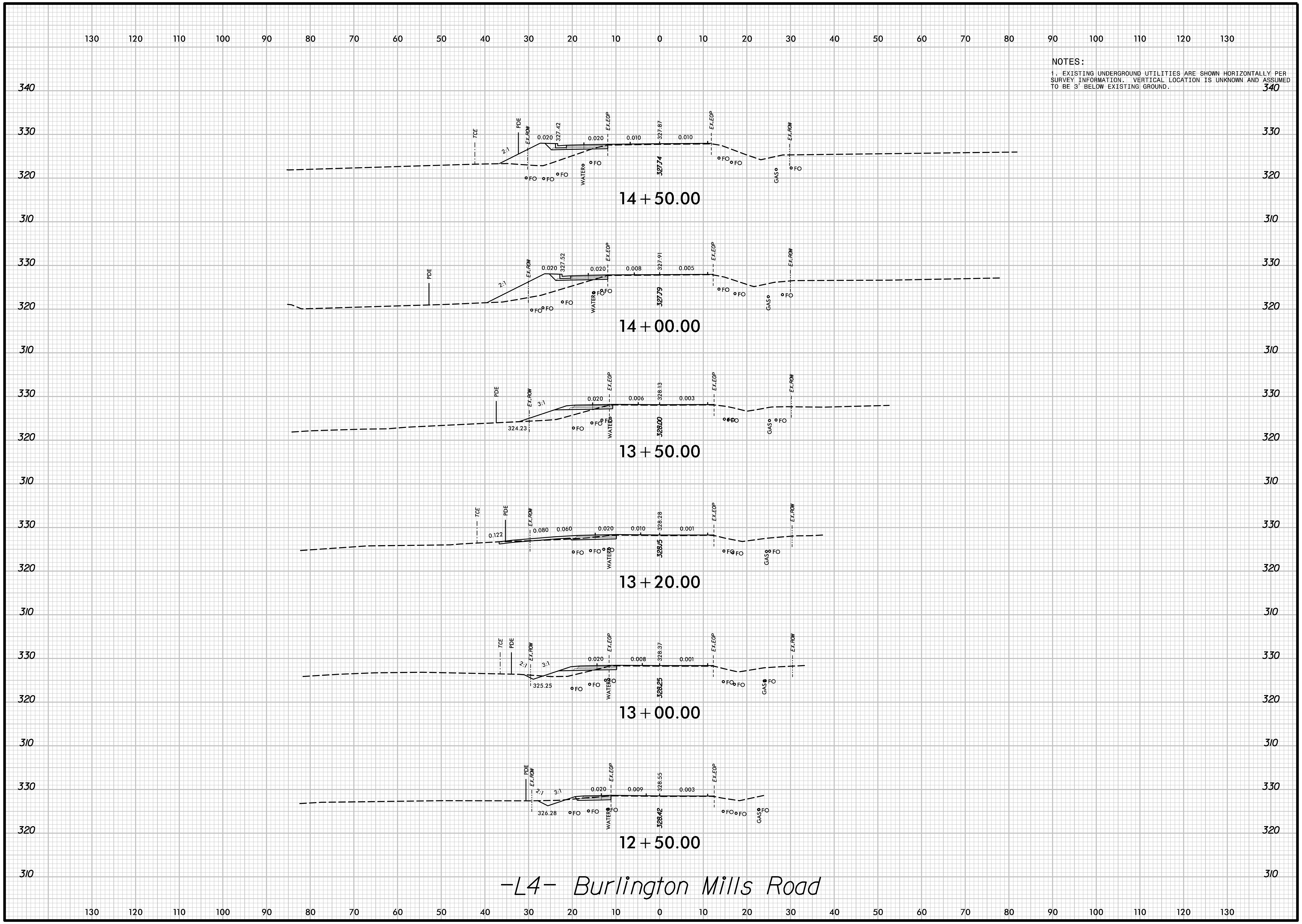
ROADWAY CROSS SECTIONS

JOB NO.: 00103002	DESIGNED BY: G. BOYLE
DATE: 10/23/24	REVIEWED BY: E. LYNCH
SCALE:	

REVISIONS	INIT.	DATE

SHEET NO.
X-17



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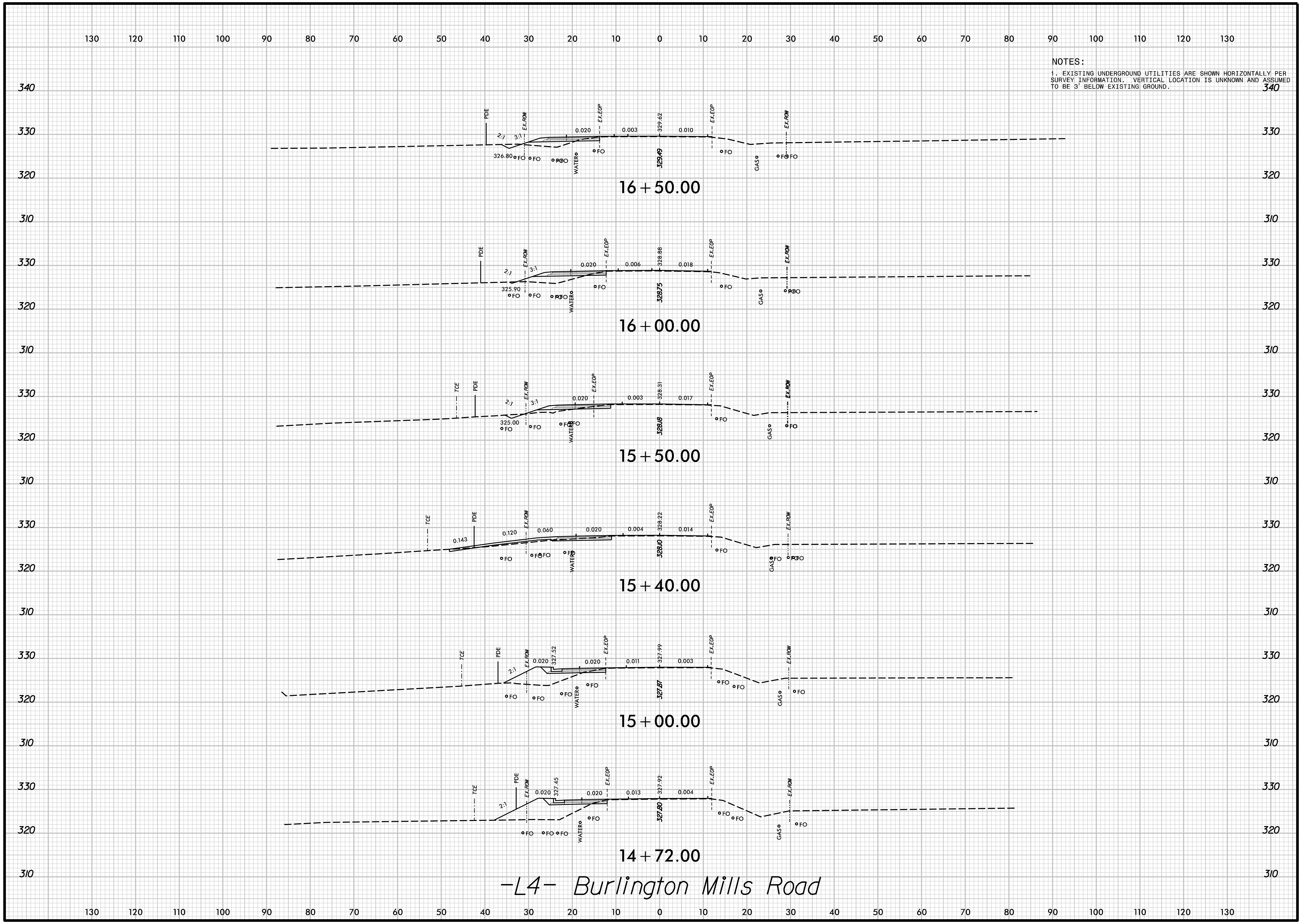
ROLESVILLE, NORTH CAROLINA

ROADWAY
CROSS SECTIONS

JOB NO. 00103002	DESIGNED BY: G. BOYLE
DATE: 10/23/24	REVIEWED BY: E. LYNCH
SCALE:	

REVISIONS	INIT.	DATE

SHEET NO.
X-18



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ROADWAY CROSS SECTIONS

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DATE: 10/23/24	REVIEWED BY: E. LYNCH
SCALE:	

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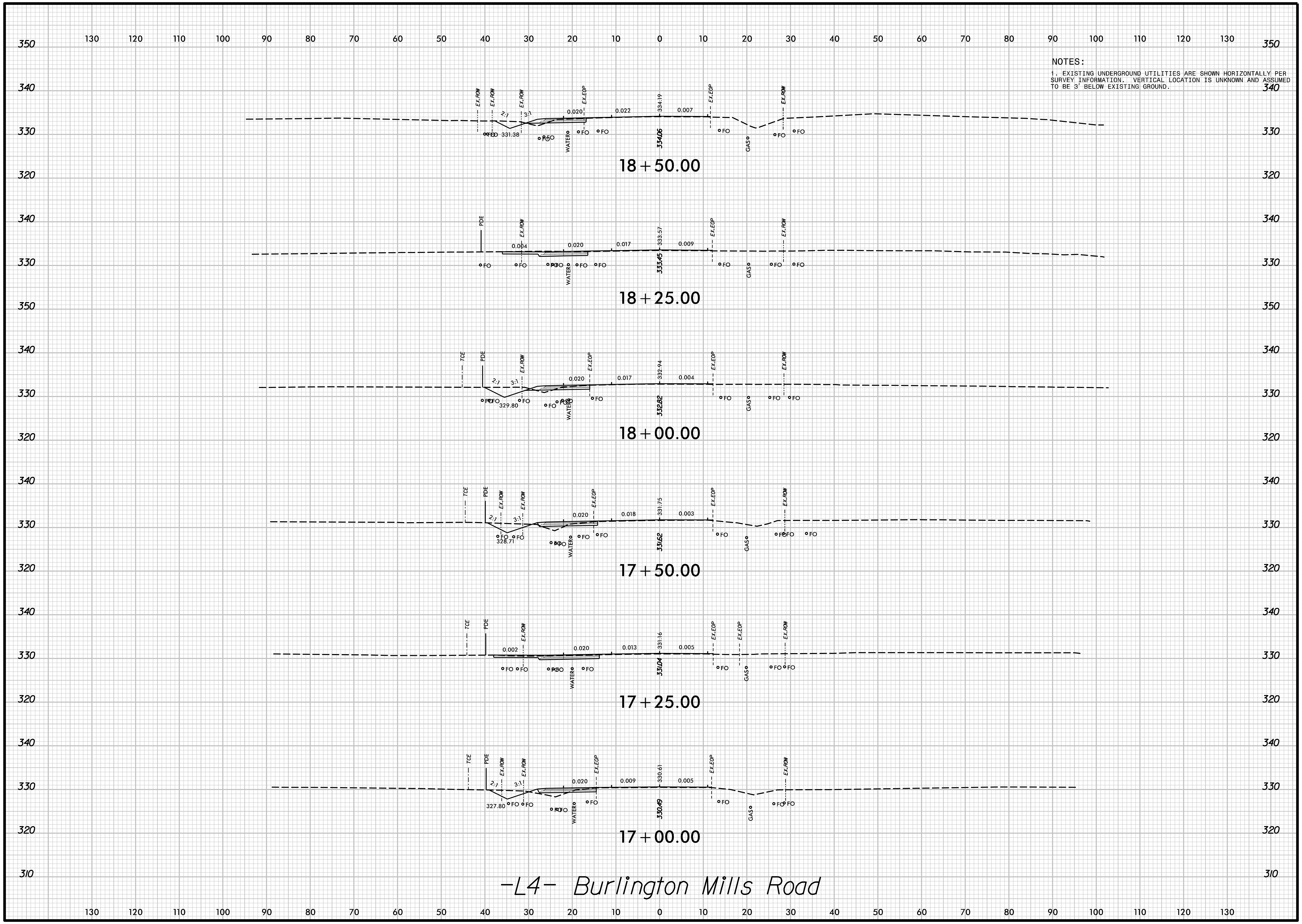
SHEET NO.
X–19



NOTES:

1. EXISTING UNDERGROUND UTILITIES ARE SHOWN HORIZONTALLY PER SURVEY INFORMATION. VERTICAL LOCATION IS UNKNOWN AND ASSUMED TO BE 3' BELOW EXISTING GROUND.

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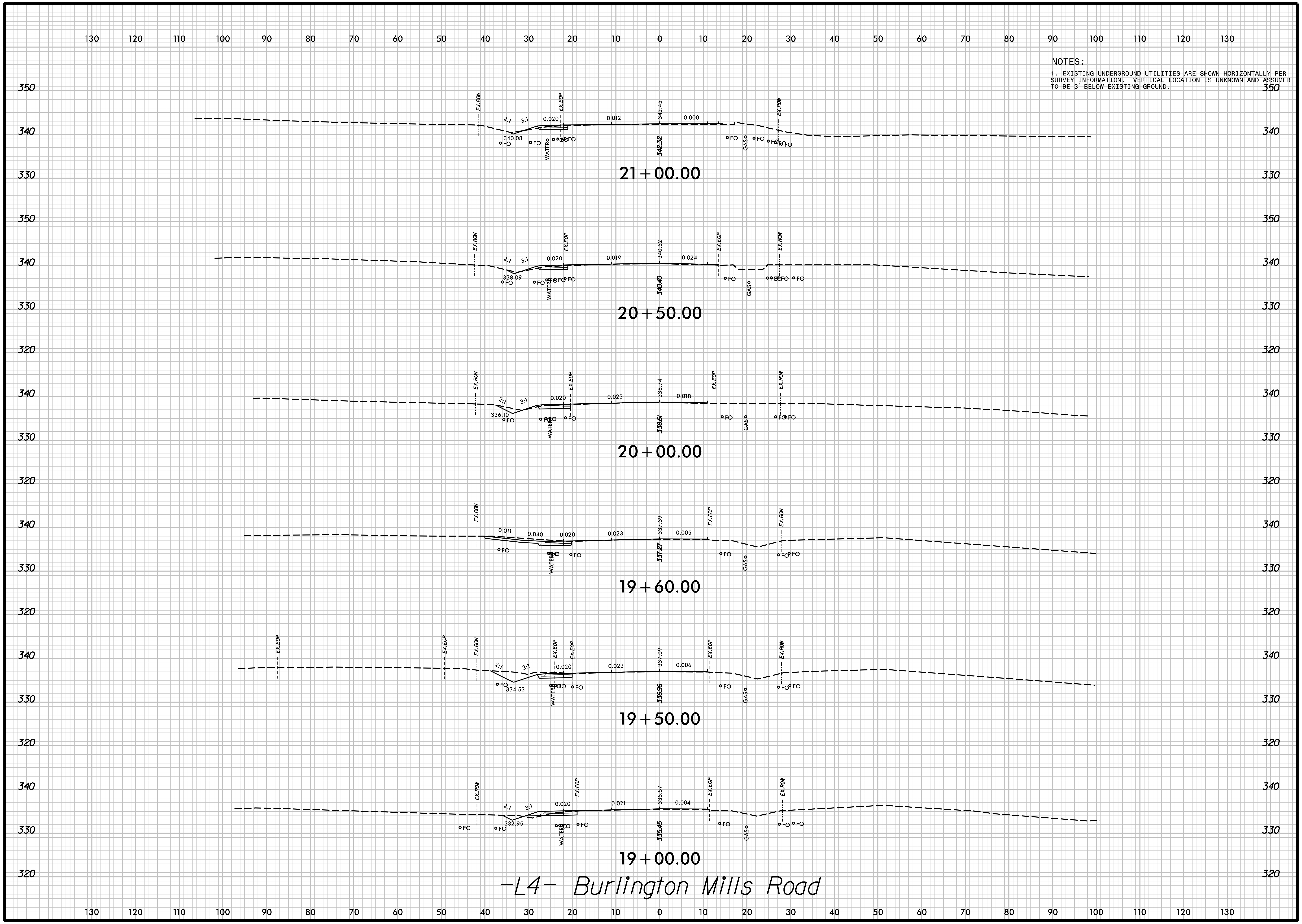
ROADWAY CROSS SECTIONS

JOB NO.: 00103002
DATE: 10/23/24
SCALE:
DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH

REVISIONS	INIT.	DATE

SHEET NO.
X-20



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DATE: 10/23/24	REVIEWED BY: E. LYNCH
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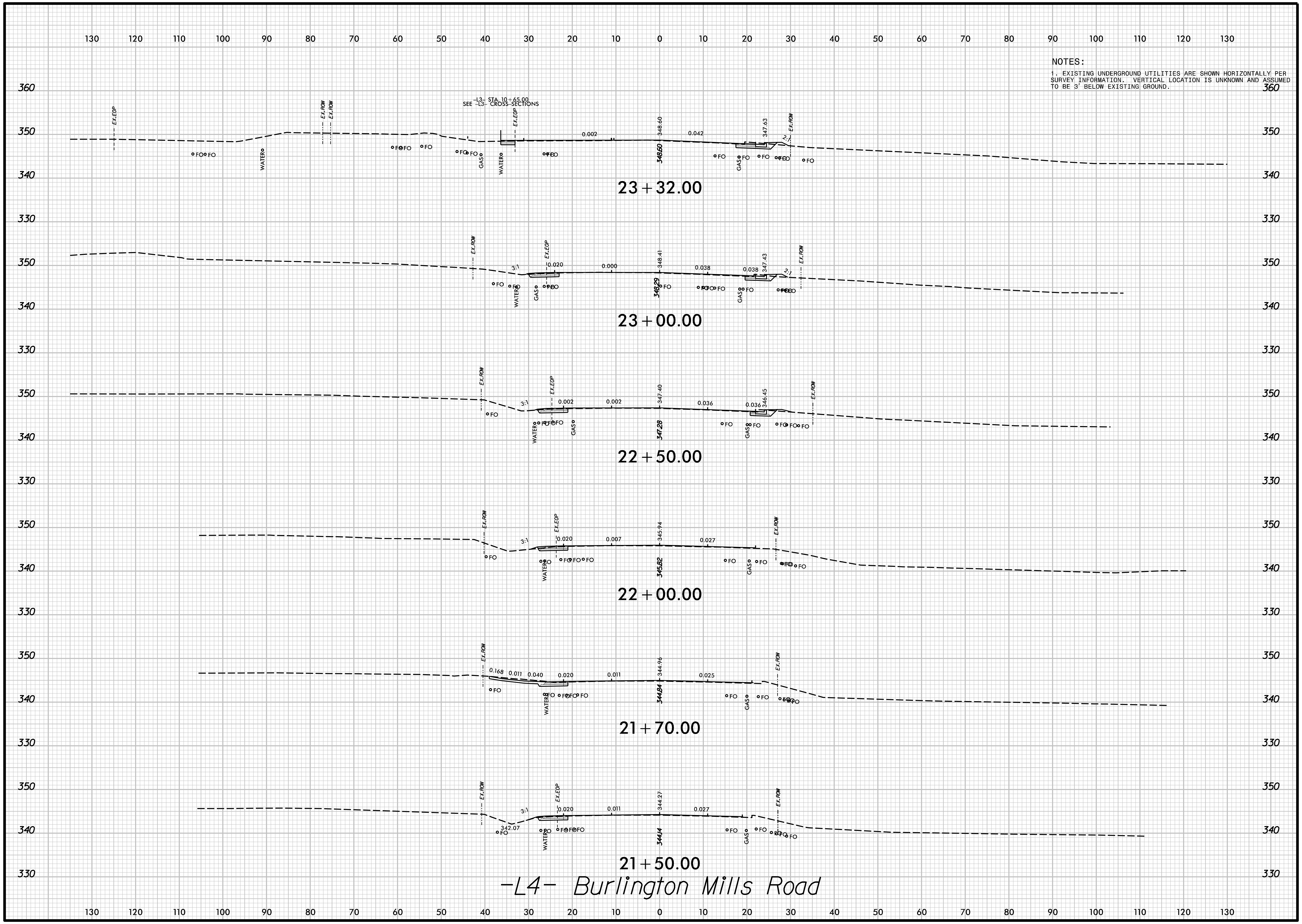
SHEET NO.
X-21



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JOB NO. 00103002
DATE: 10/23/24
SCALE:
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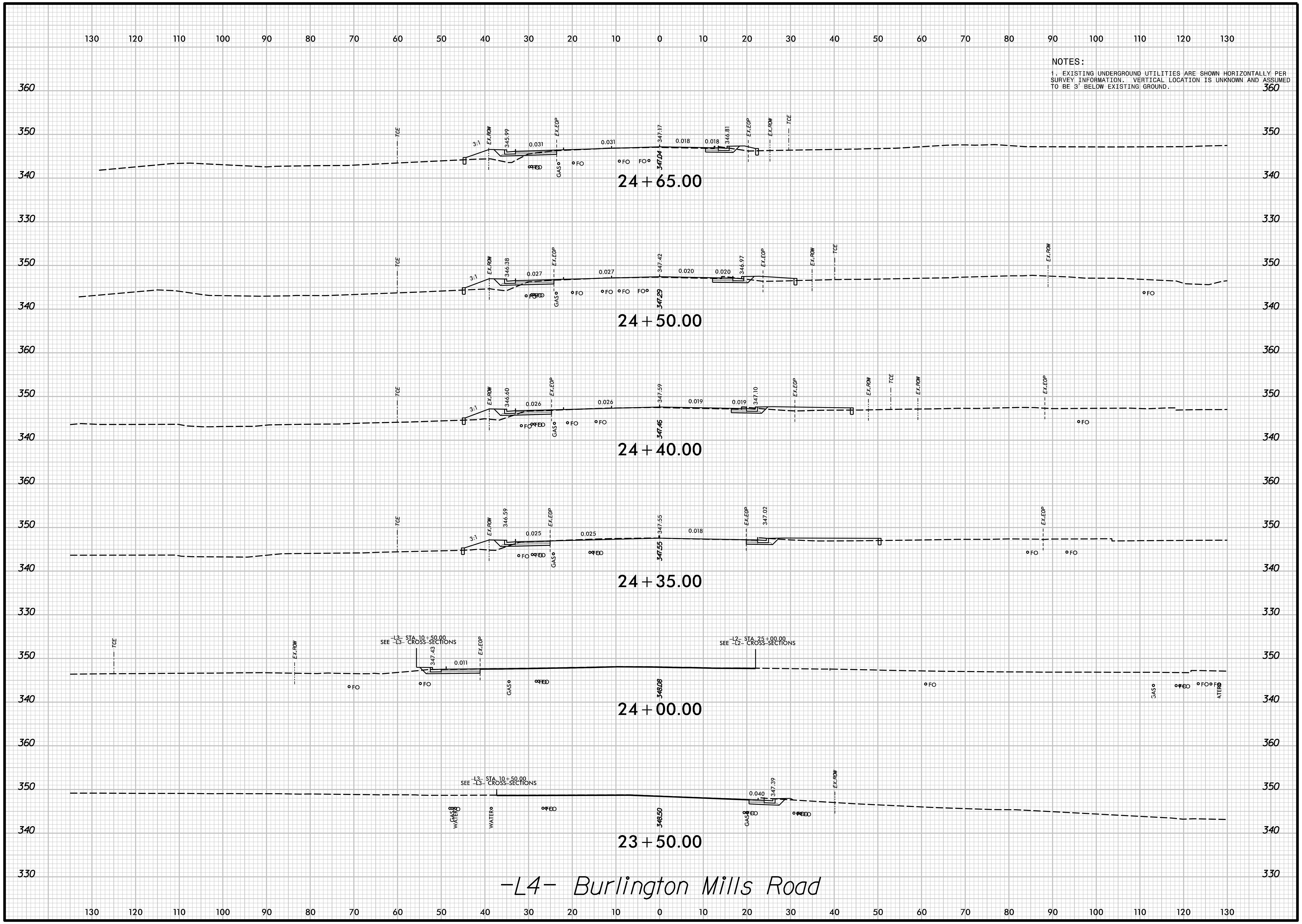
SHEET NO.
X-22



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ROADWAY CROSS SECTIONS

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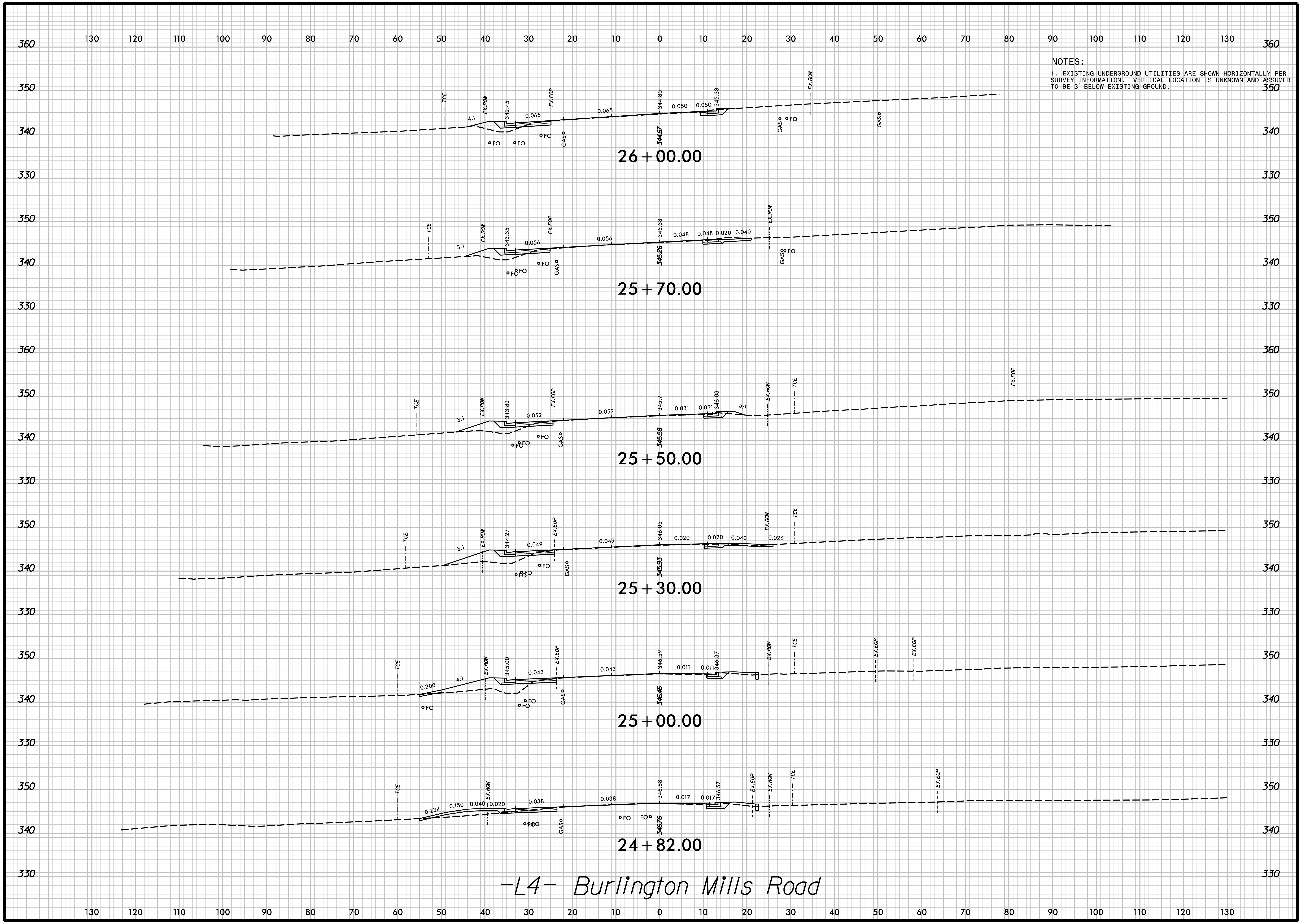
DESIGNED BY:	G. BOYLE
REVIEWED BY:	E. LYNCH

REVISIONS	INIT.	DATE

SHEET NO.
X–23

NOTES:

1. EXISTING UNDERGROUND UTILITIES ARE SHOWN HORIZONTALLY PER SURVEY INFORMATION. VERTICAL LOCATION IS UNKNOWN AND ASSUMED TO BE 3' BELOW EXISTING GROUND.



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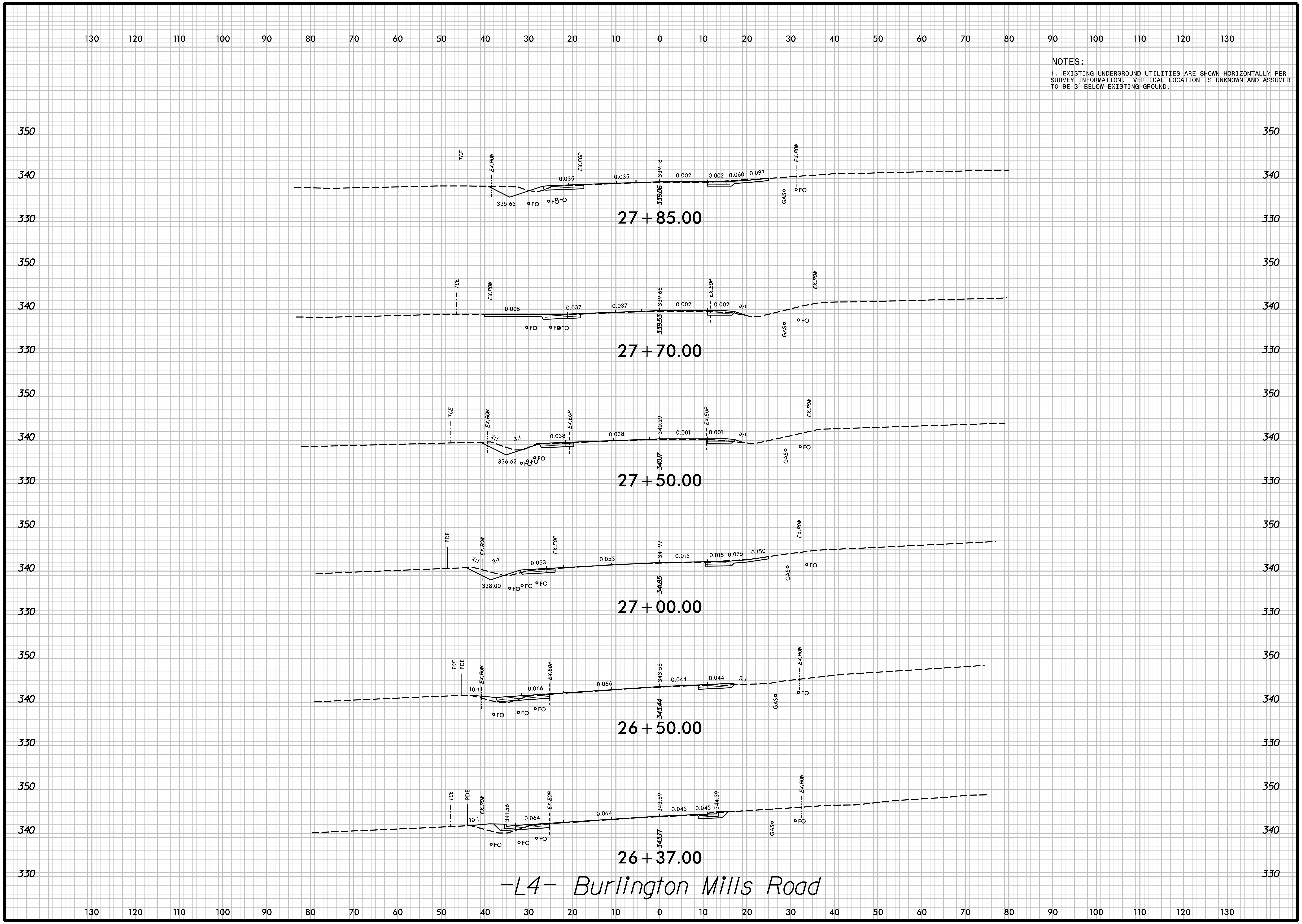
SHEET NO.

X-24



NOTES:
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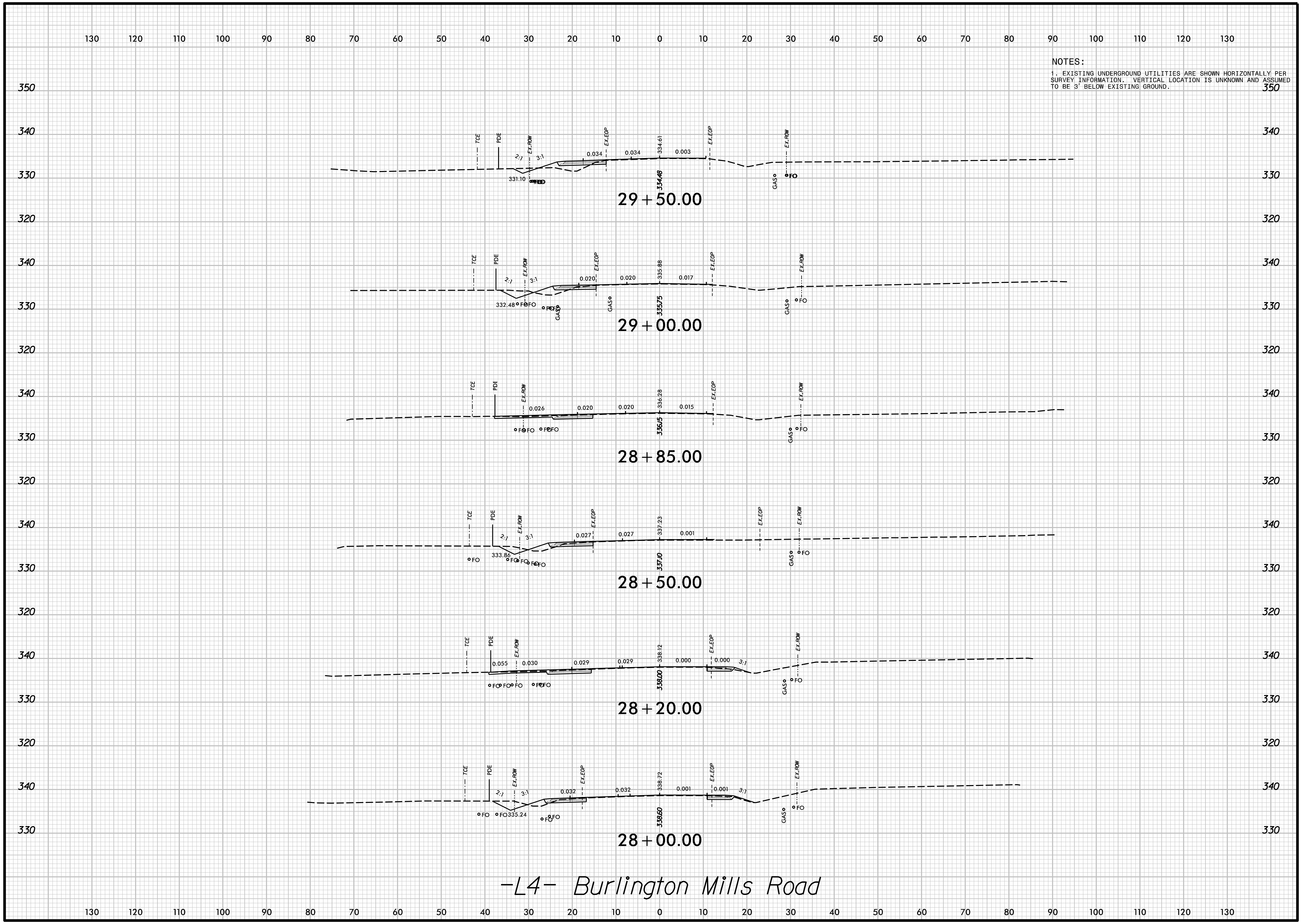
REVISIONS	INIT.	DATE

SHEET NO. X-25

NOTES:

1. EXISTING UNDERGROUND UTILITIES ARE SHOWN HORIZONTALLY PER SURVEY INFORMATION. VERTICAL LOCATION IS UNKNOWN AND ASSUMED TO BE 3' BELOW EXISTING GROUND.



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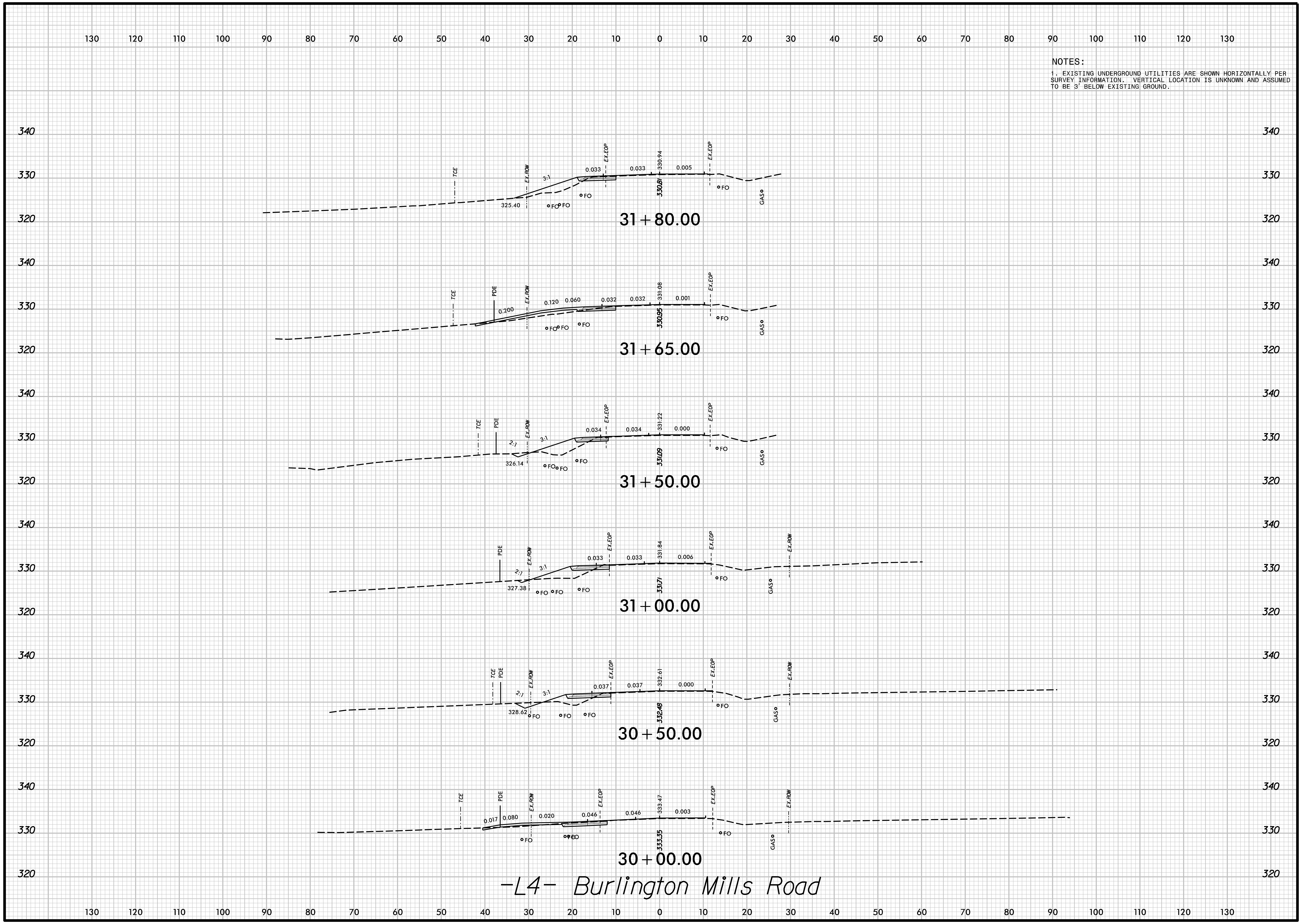
REVISIONS	INIT.	DATE

SHEET NO.
X-26



NOTES:
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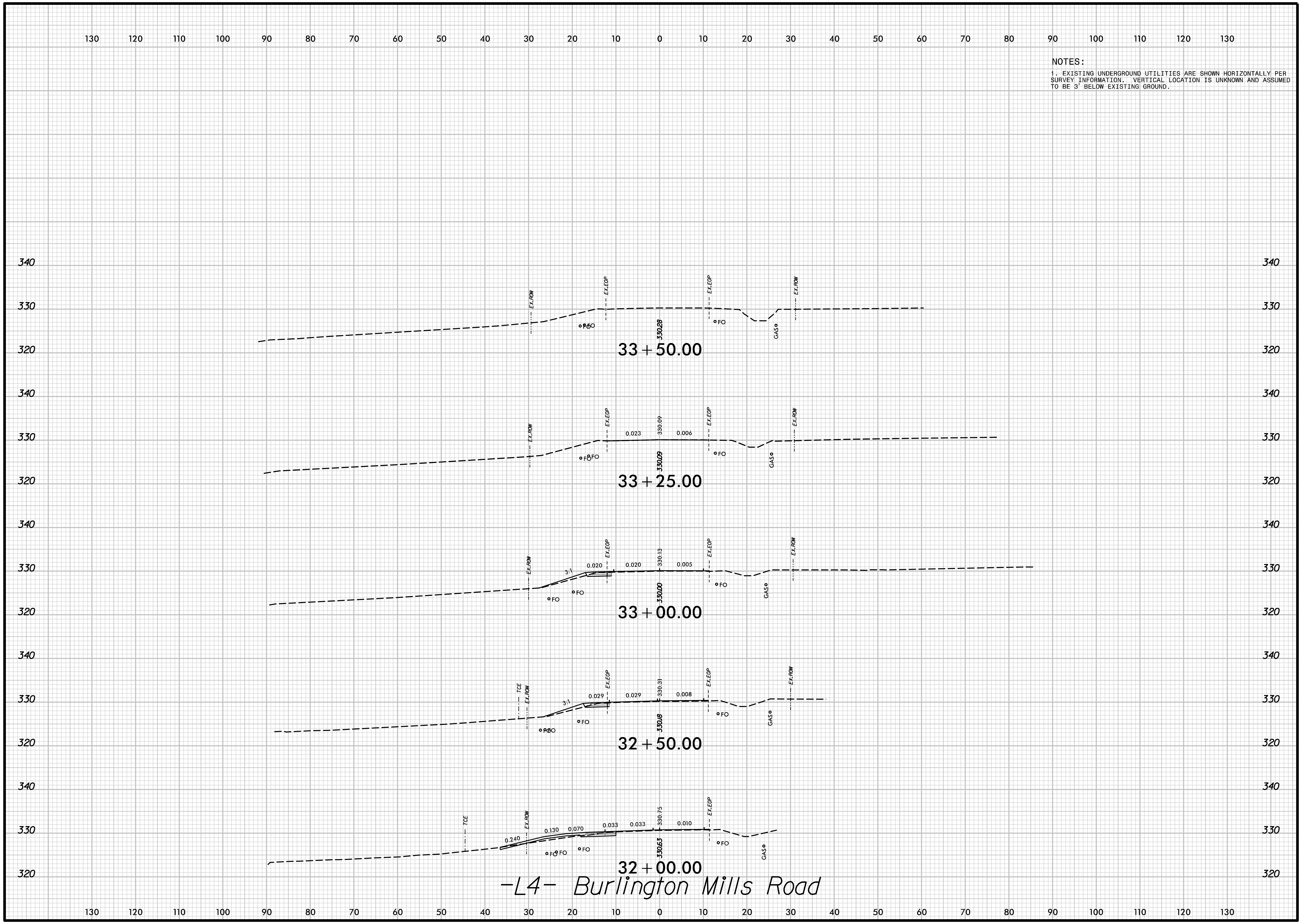
SHEET NO.
X-27



NOTES:
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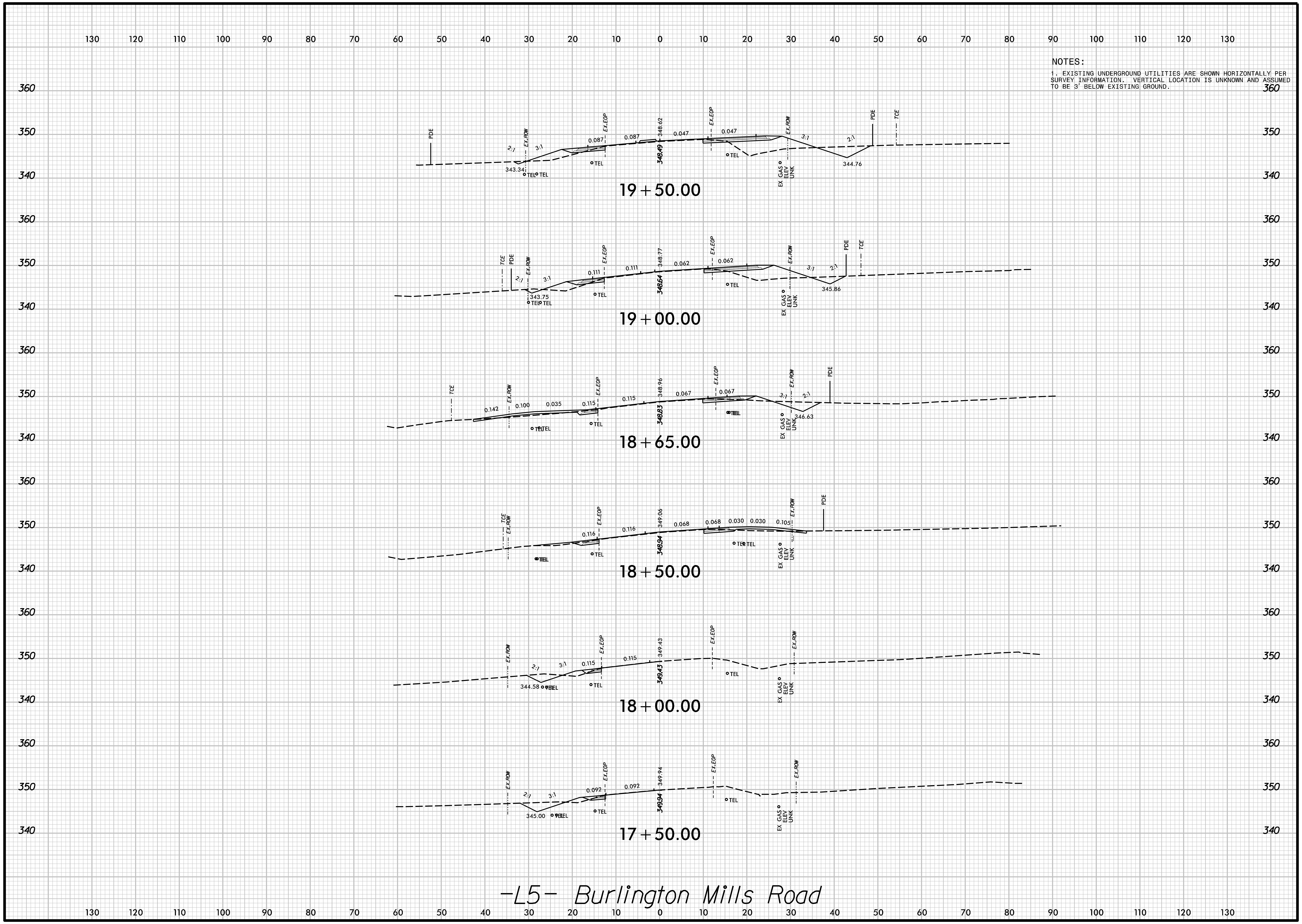
SHEET NO.
X-28



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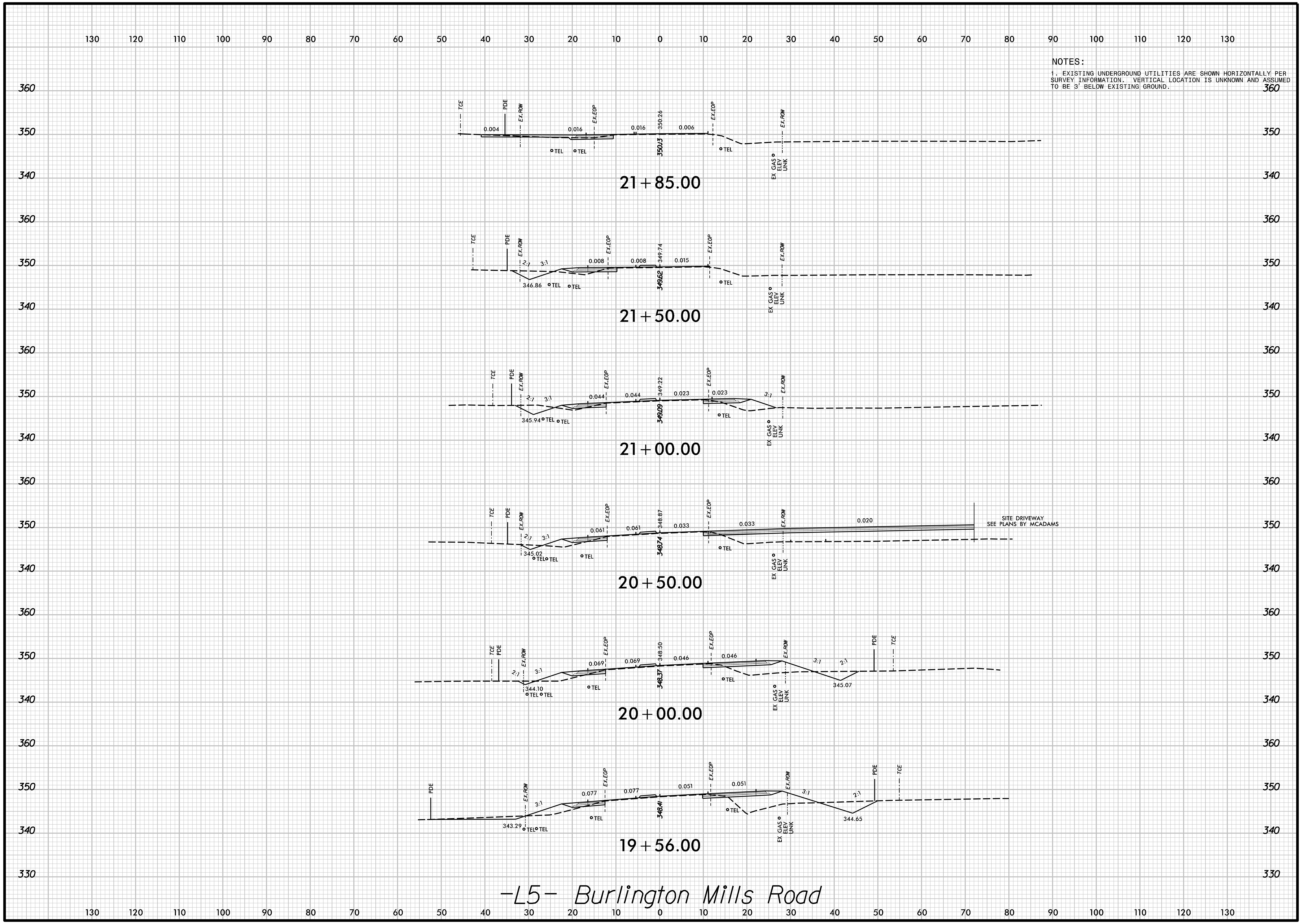
SHEET NO.
X-29



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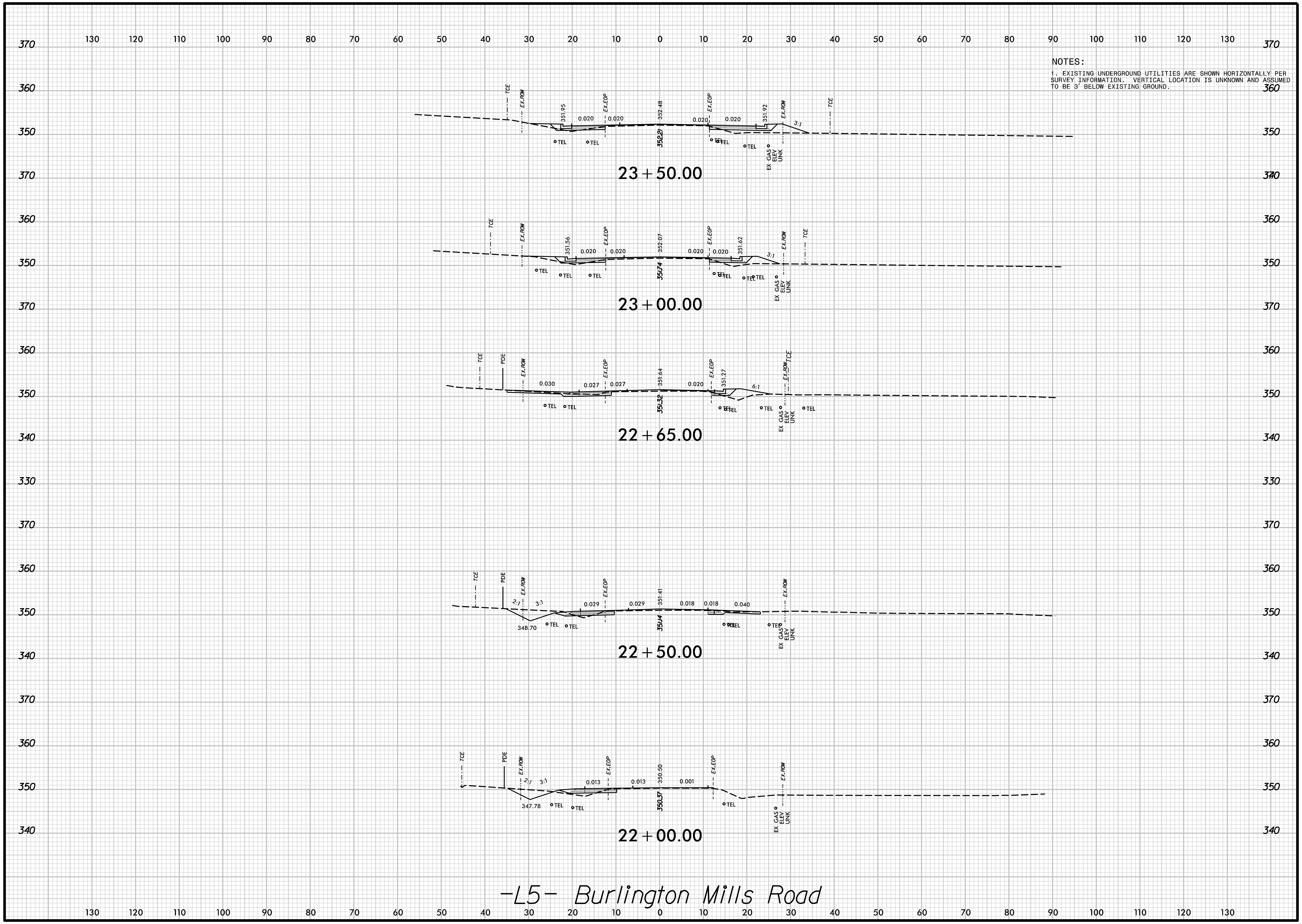
SHEET NO.
X-30



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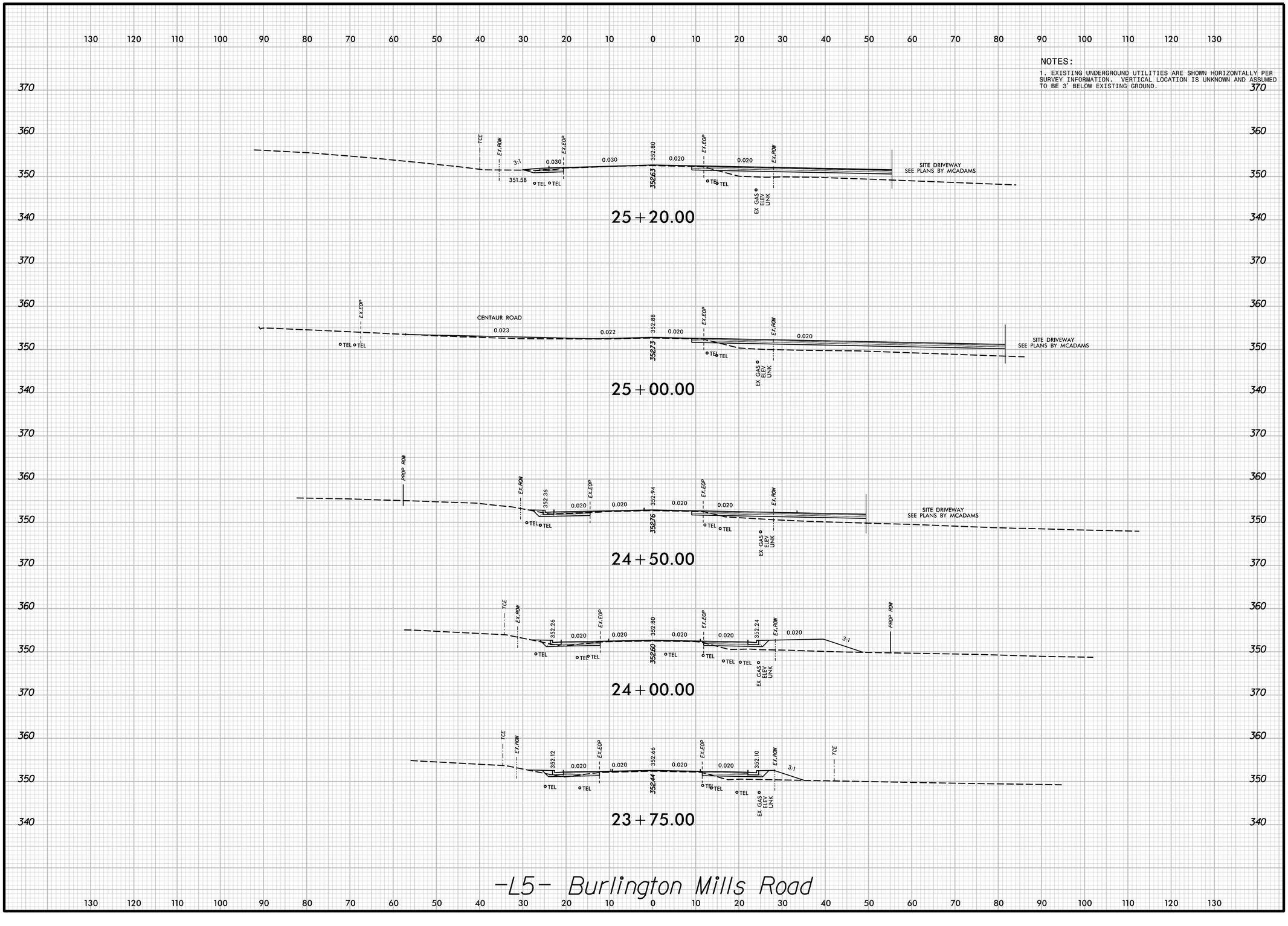
SHEET NO.
X-31

NOTES:

1. EXISTING UNDERGROUND UTILITIES ARE SHOWN HORIZONTALLY PER SURVEY INFORMATION. VERTICAL LOCATION IS UNKNOWN AND ASSUMED TO BE 3' BELOW EXISTING GROUND.



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CROSS SECTIONS

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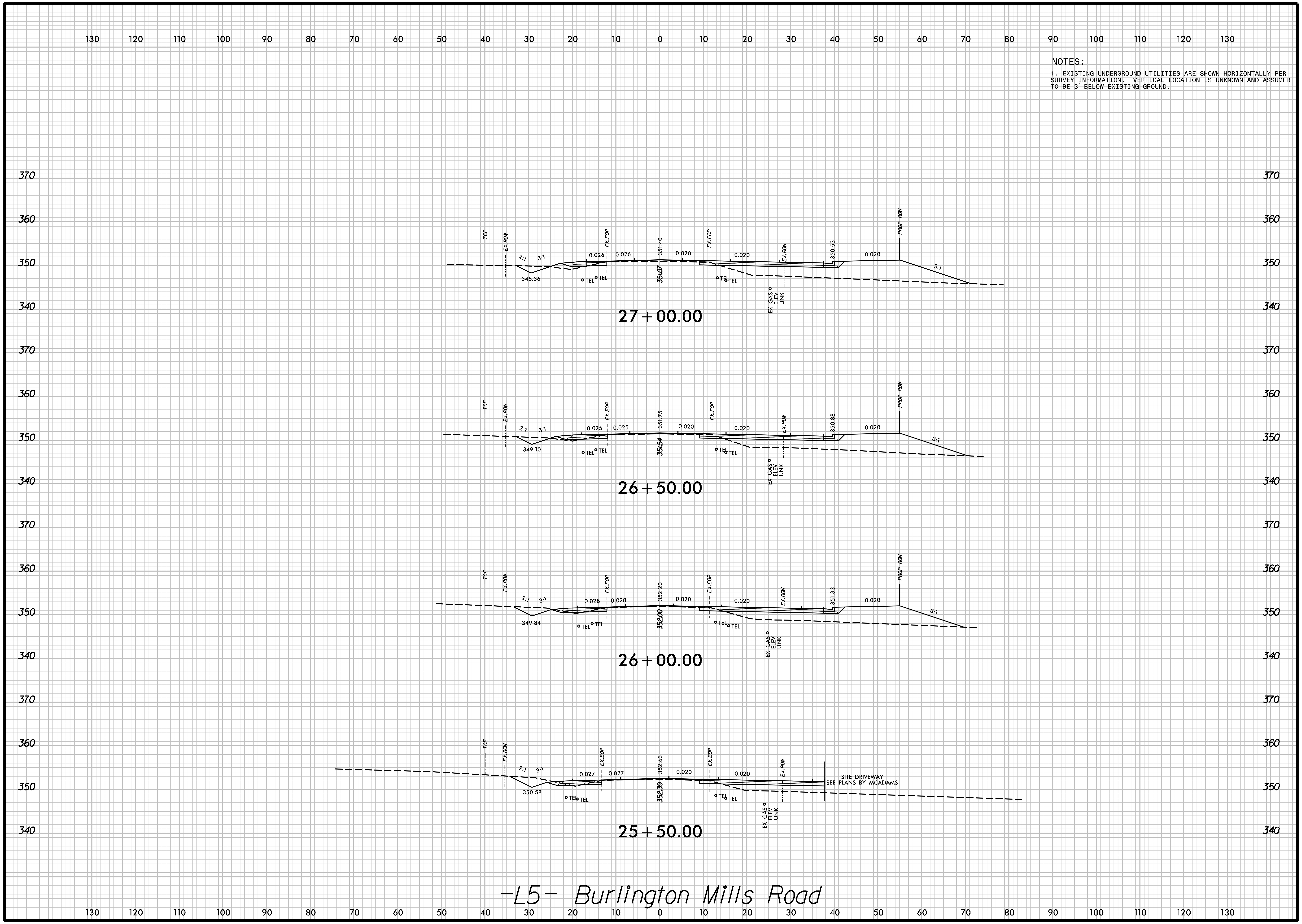
SHEET NO.

X-32

NOTES:
1. EXISTING UNDERGROUND UTILITIES ARE SHOWN HORIZONTALLY PER SURVEY INFORMATION. VERTICAL LOCATION IS UNKNOWN AND ASSUMED TO BE 3' BELOW EXISTING GROUND.



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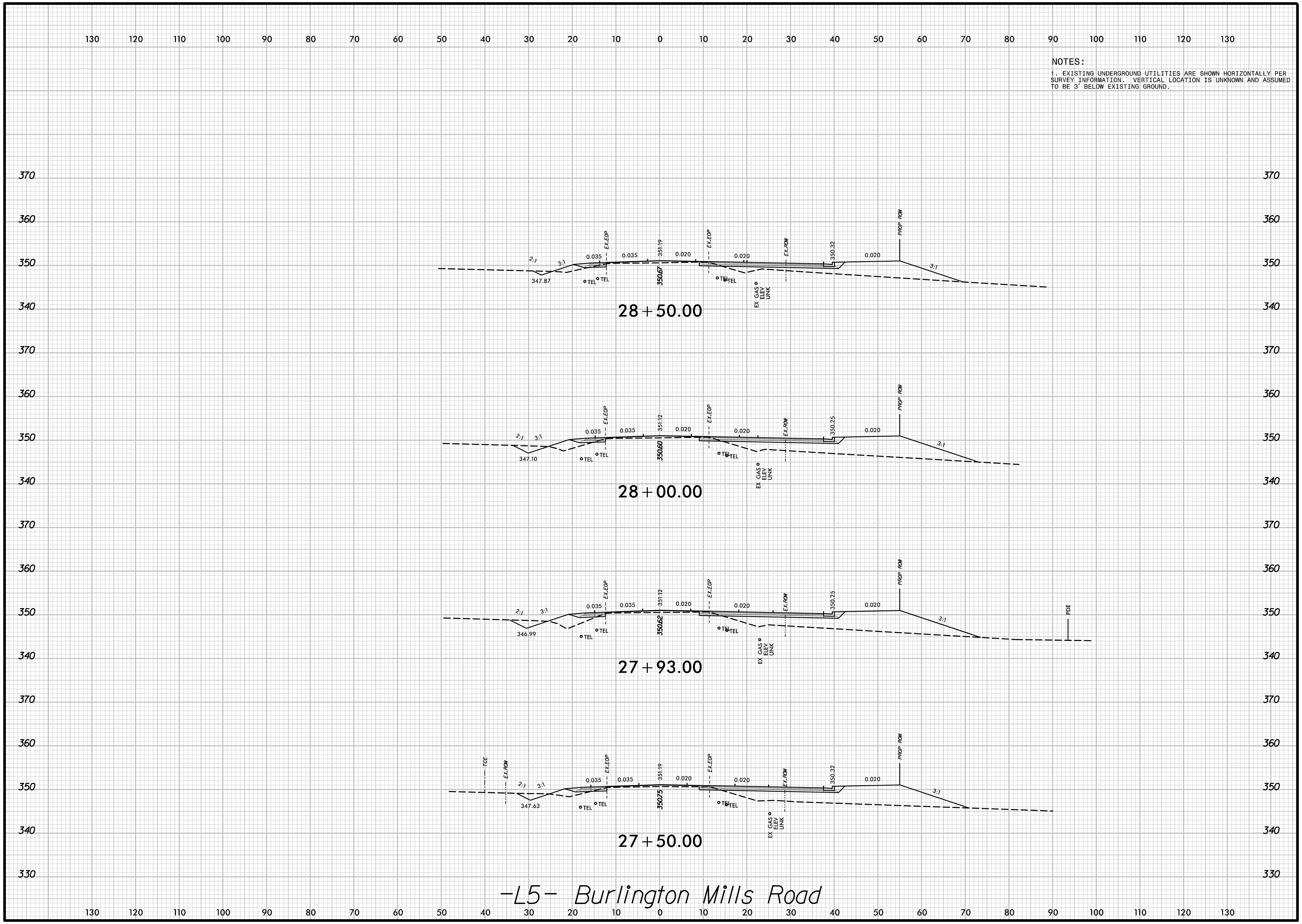
SHEET NO.
X-33



NOTES:
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ROADWAY CROSS SECTIONS

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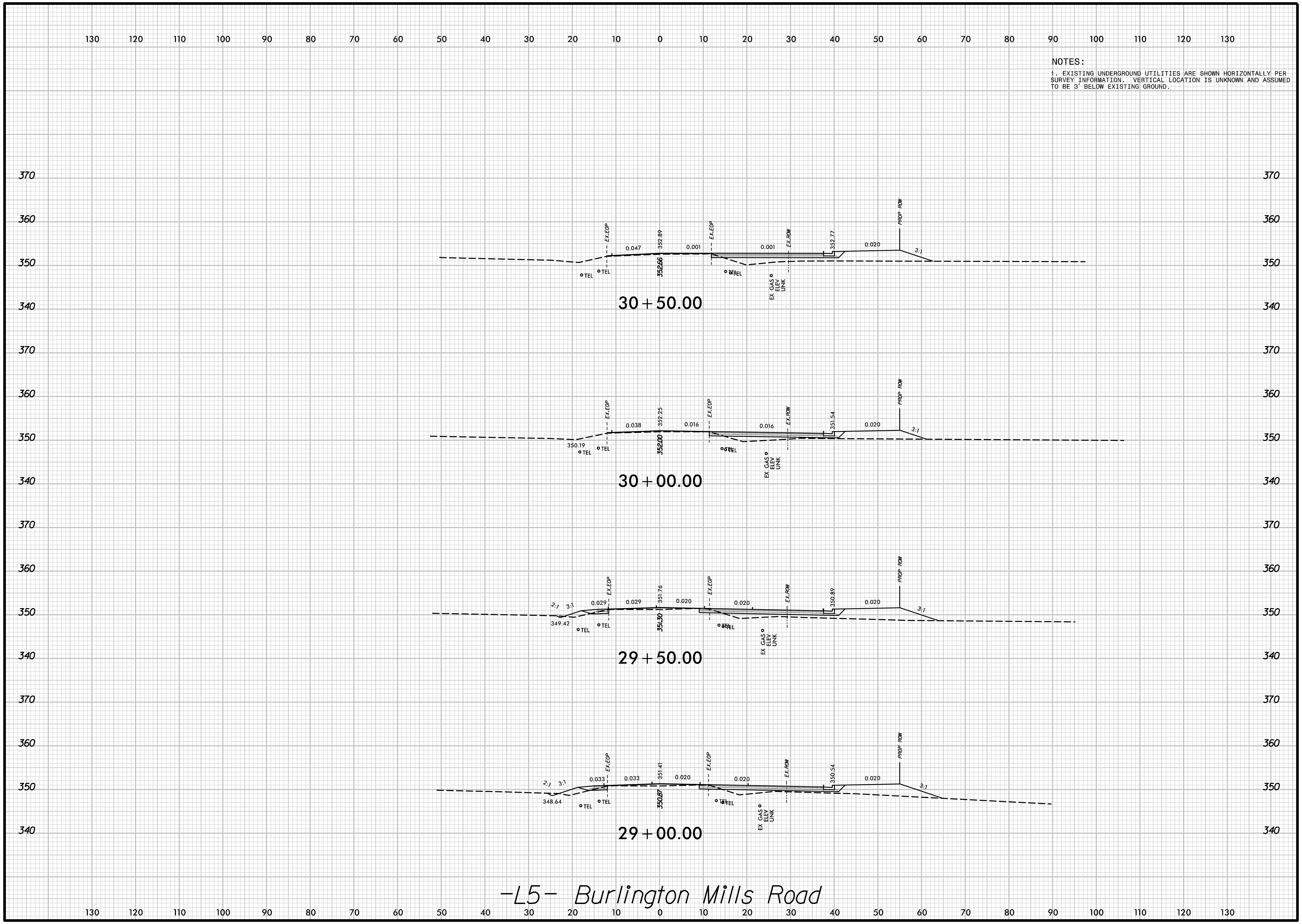
SHEET NO.
X-34



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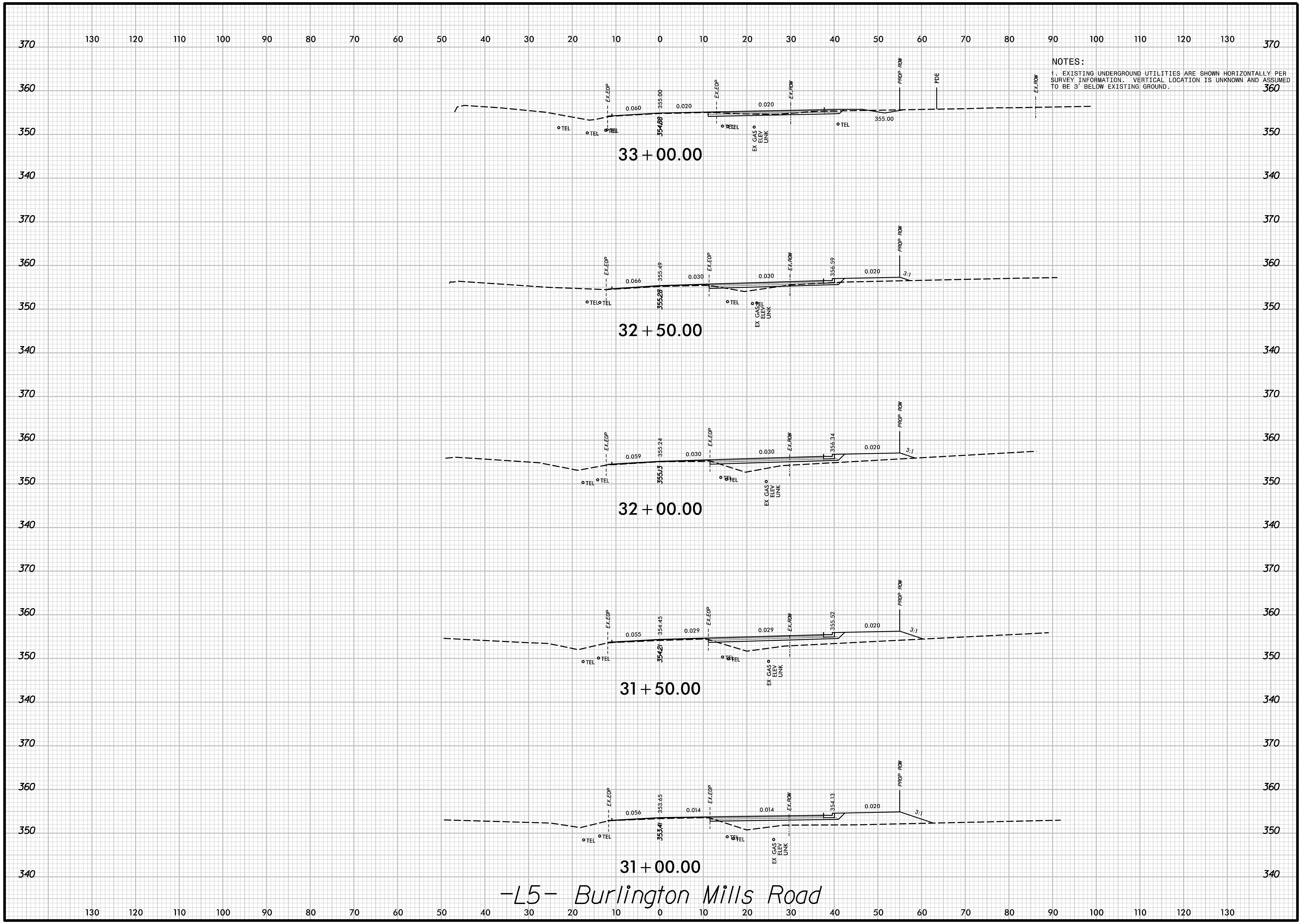
SHEET NO.
X-35



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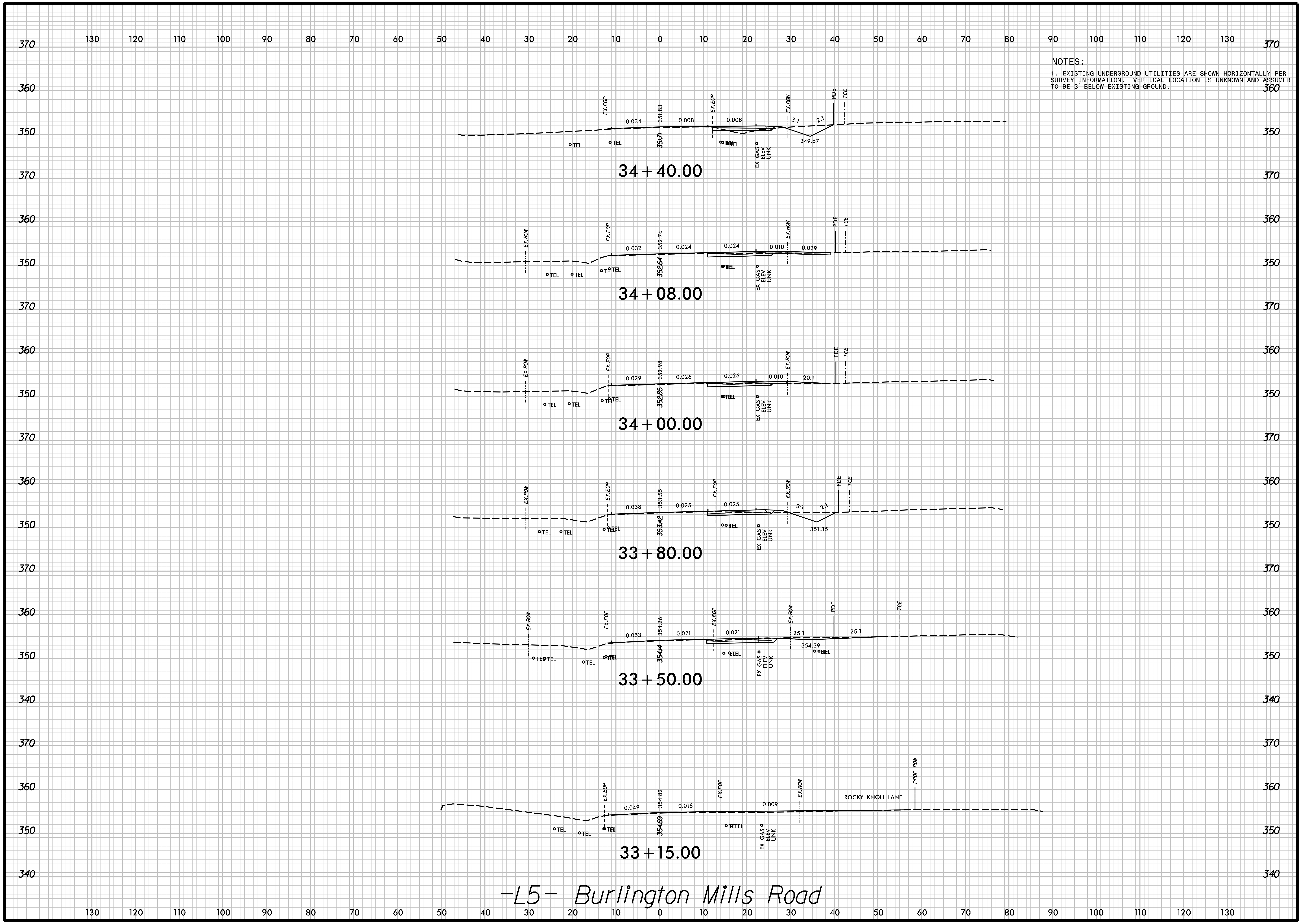
SHEET NO.
X–36



NOTES:
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SHEET NO.
X–37

NOTES:

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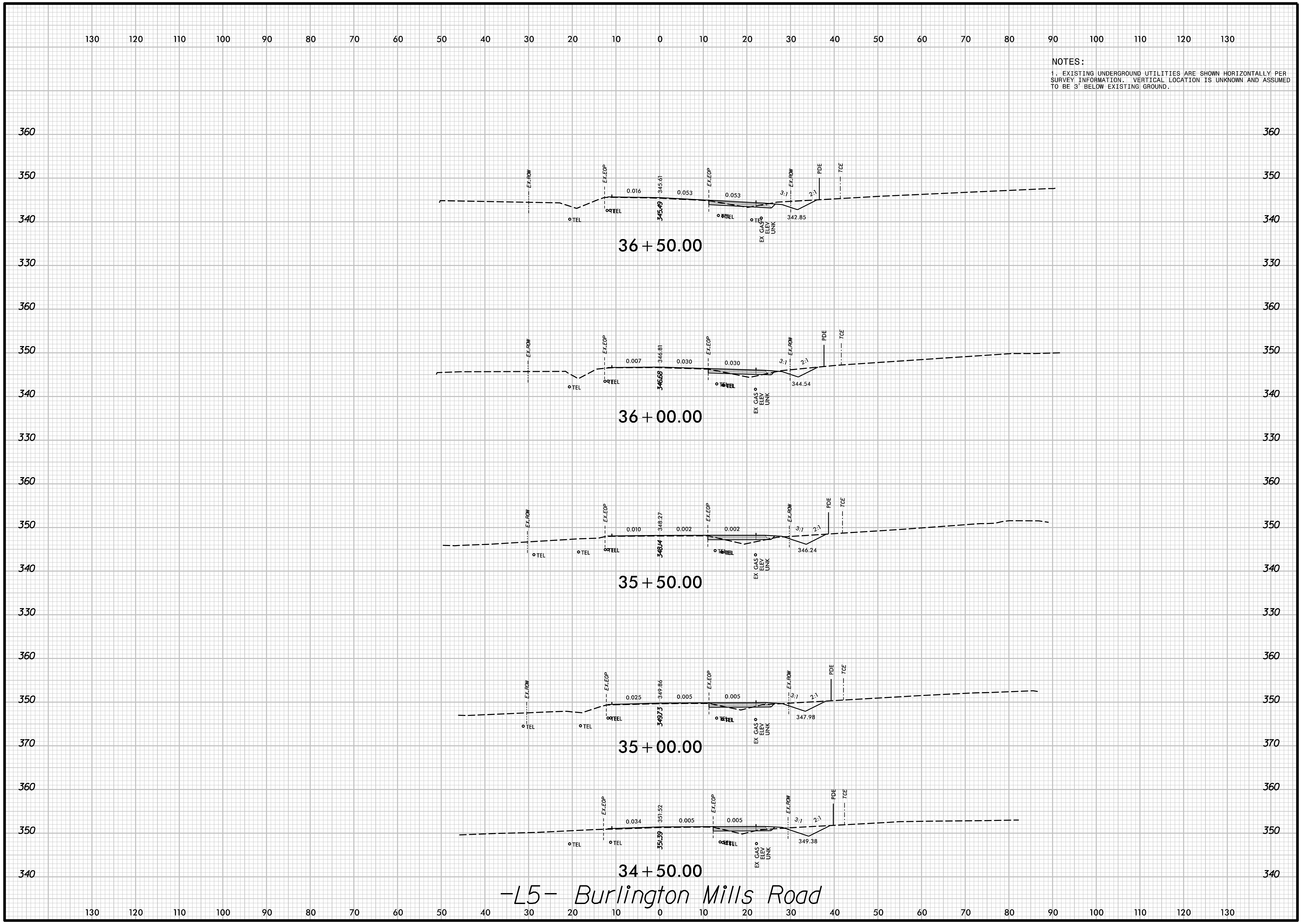

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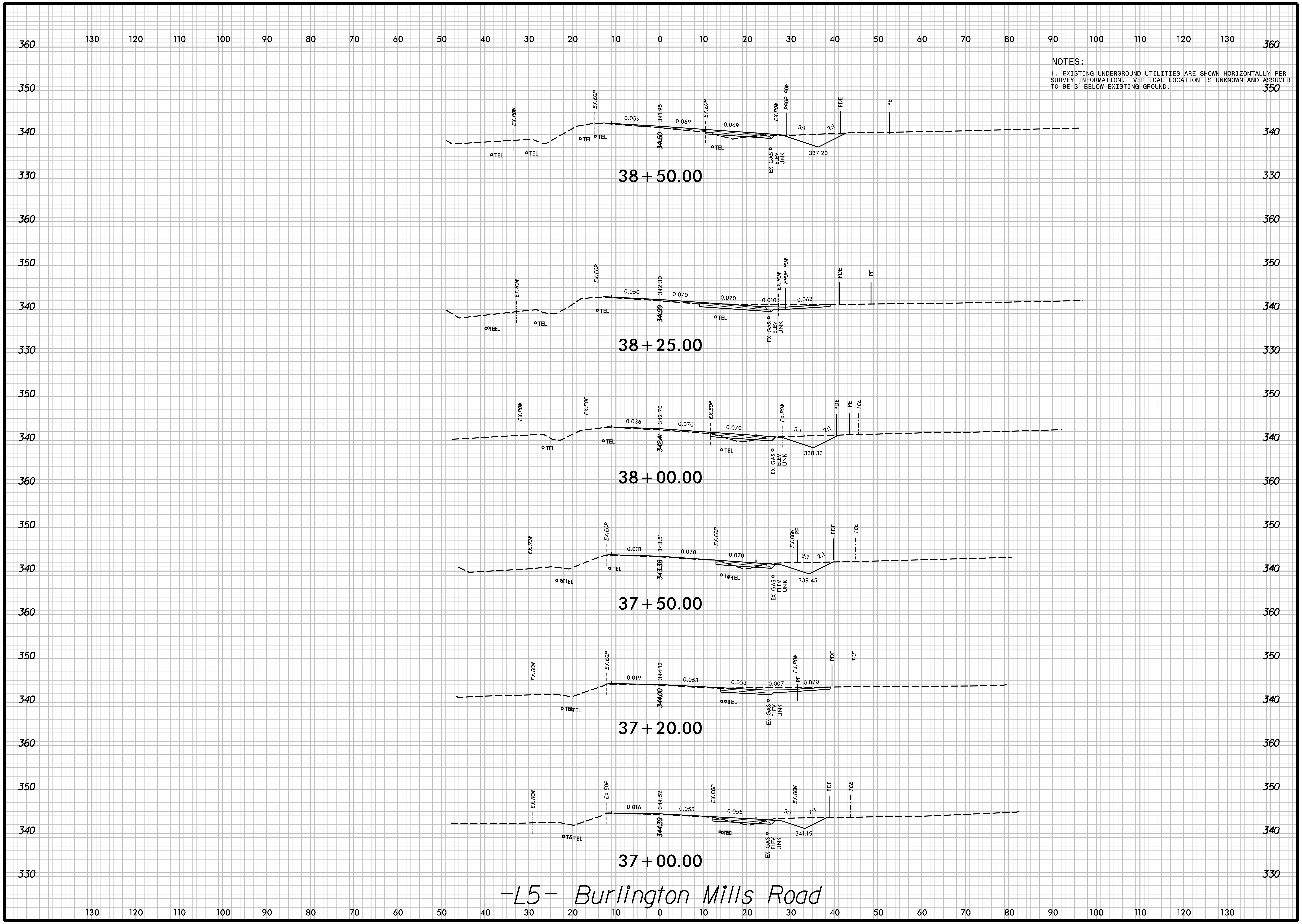
SHEET NO.
X-38



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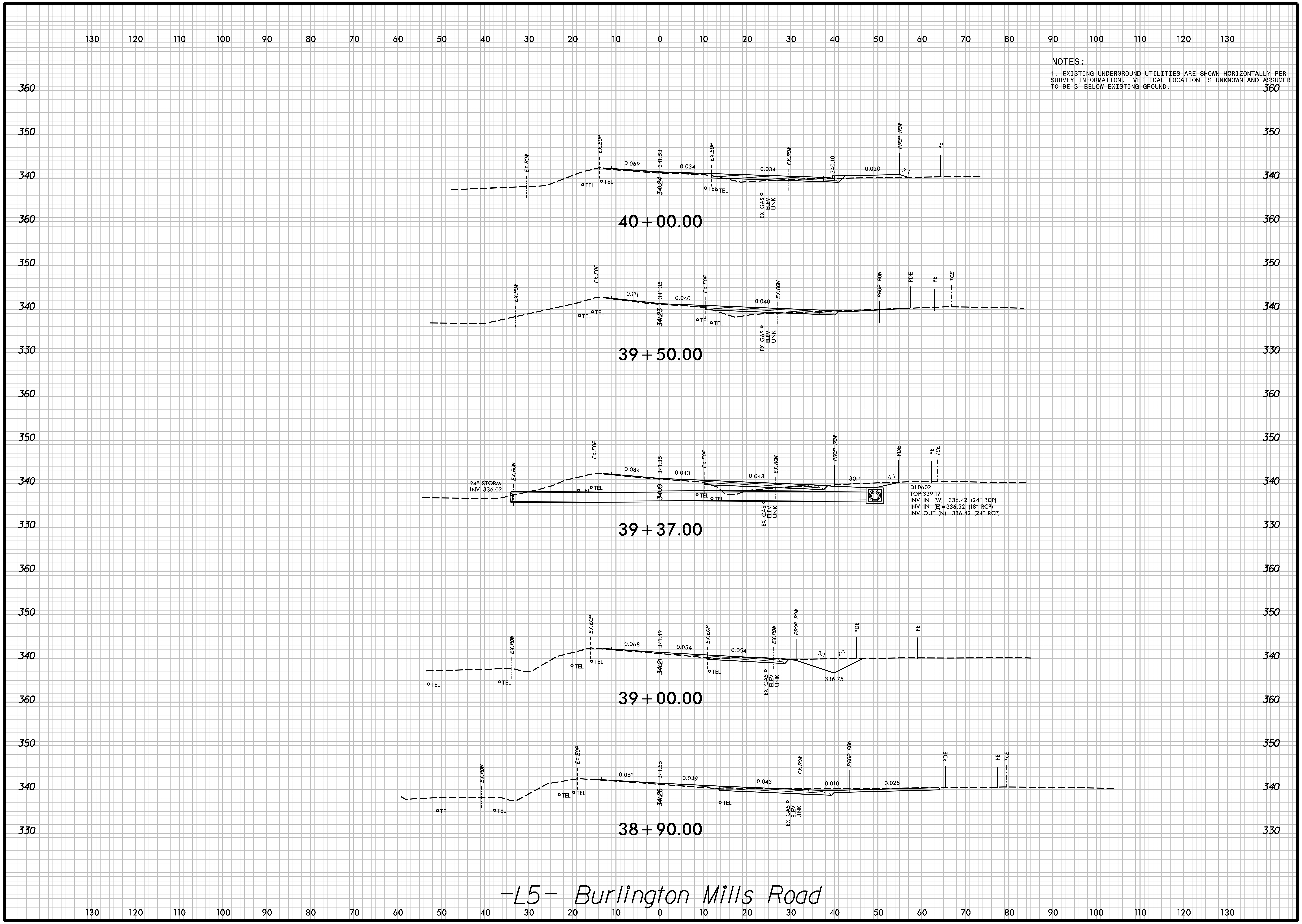
SHEET NO.
X-39

NOTES:

1. EXISTING UNDERGROUND UTILITIES ARE SHOWN HORIZONTALLY PER SURVEY INFORMATION. VERTICAL LOCATION IS UNKNOWN AND ASSUMED TO BE 3' BELOW EXISTING GROUND.



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ROADWAY CROSS SECTIONS

JOB NO. 00103002
DATE: 102324
SCALE:
DESIGNED BY: G. BOYLE
REVIEWED BY: E. LYNCH

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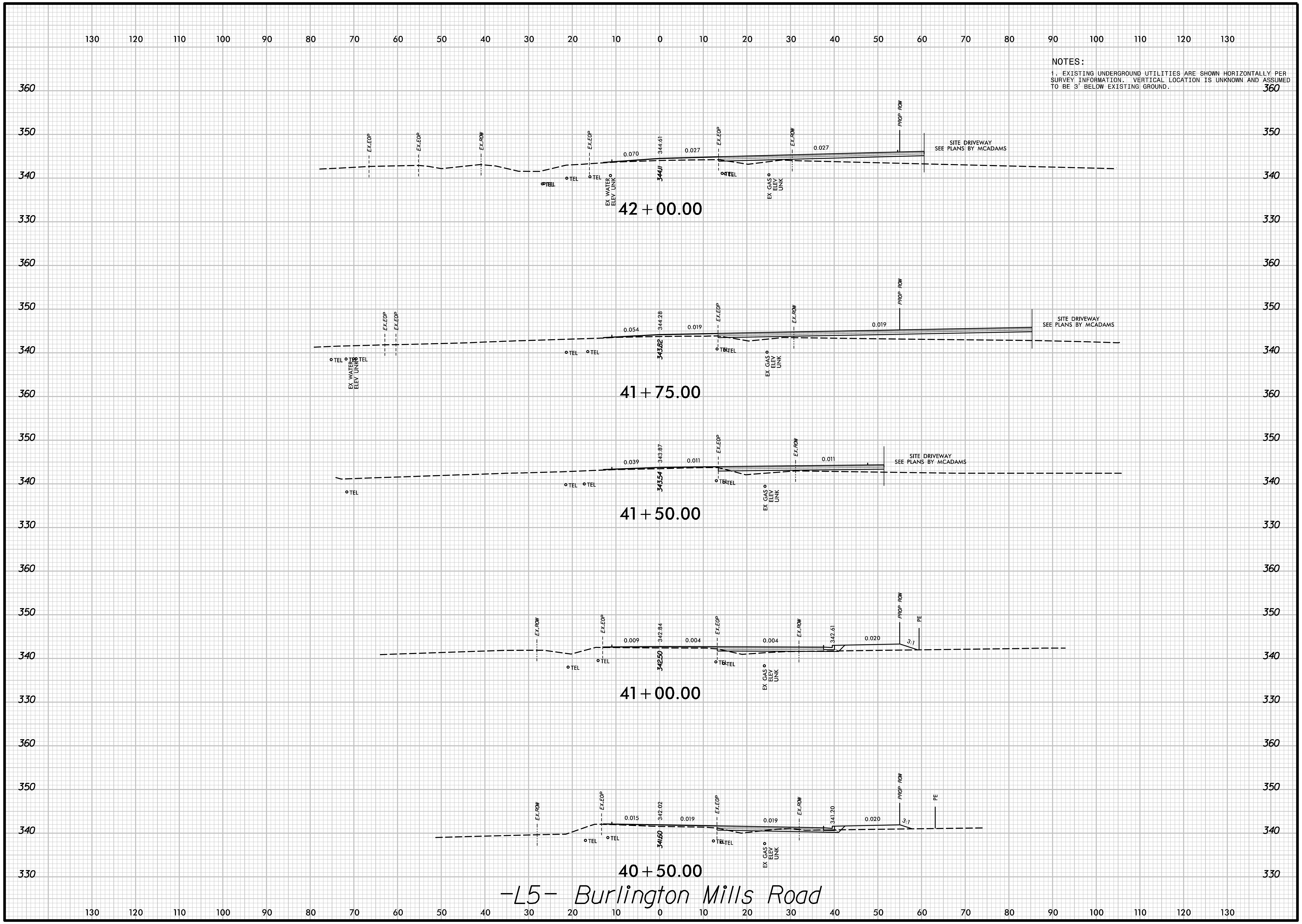
SHEET NO.
X-40



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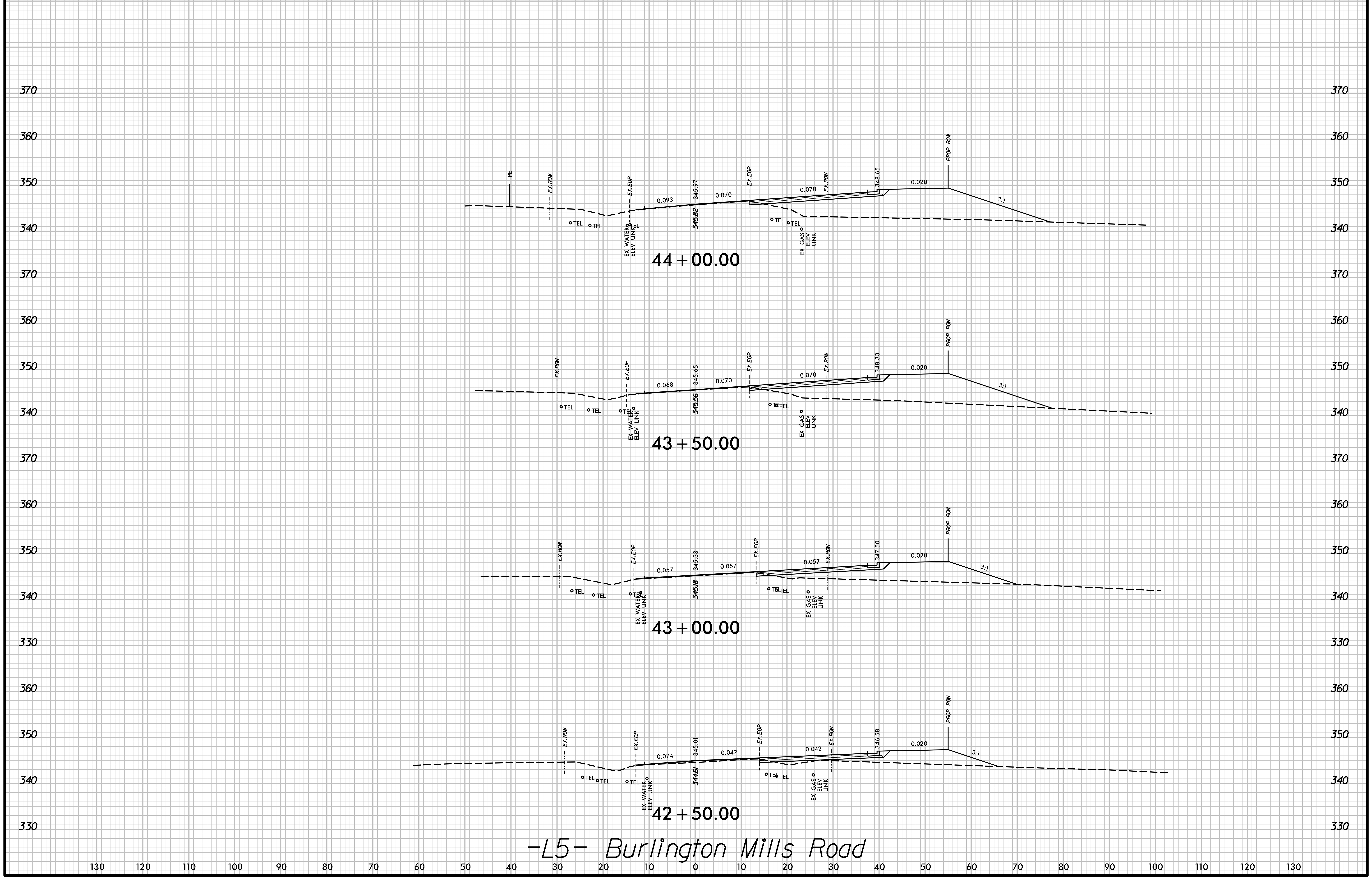
SHEET NO.
X-41

NOTES:

1. EXISTING UNDERGROUND UTILITIES ARE SHOWN HORIZONTALLY PER SURVEY INFORMATION. VERTICAL LOCATION IS UNKNOWN AND ASSUMED TO BE 3' BELOW EXISTING GROUND.



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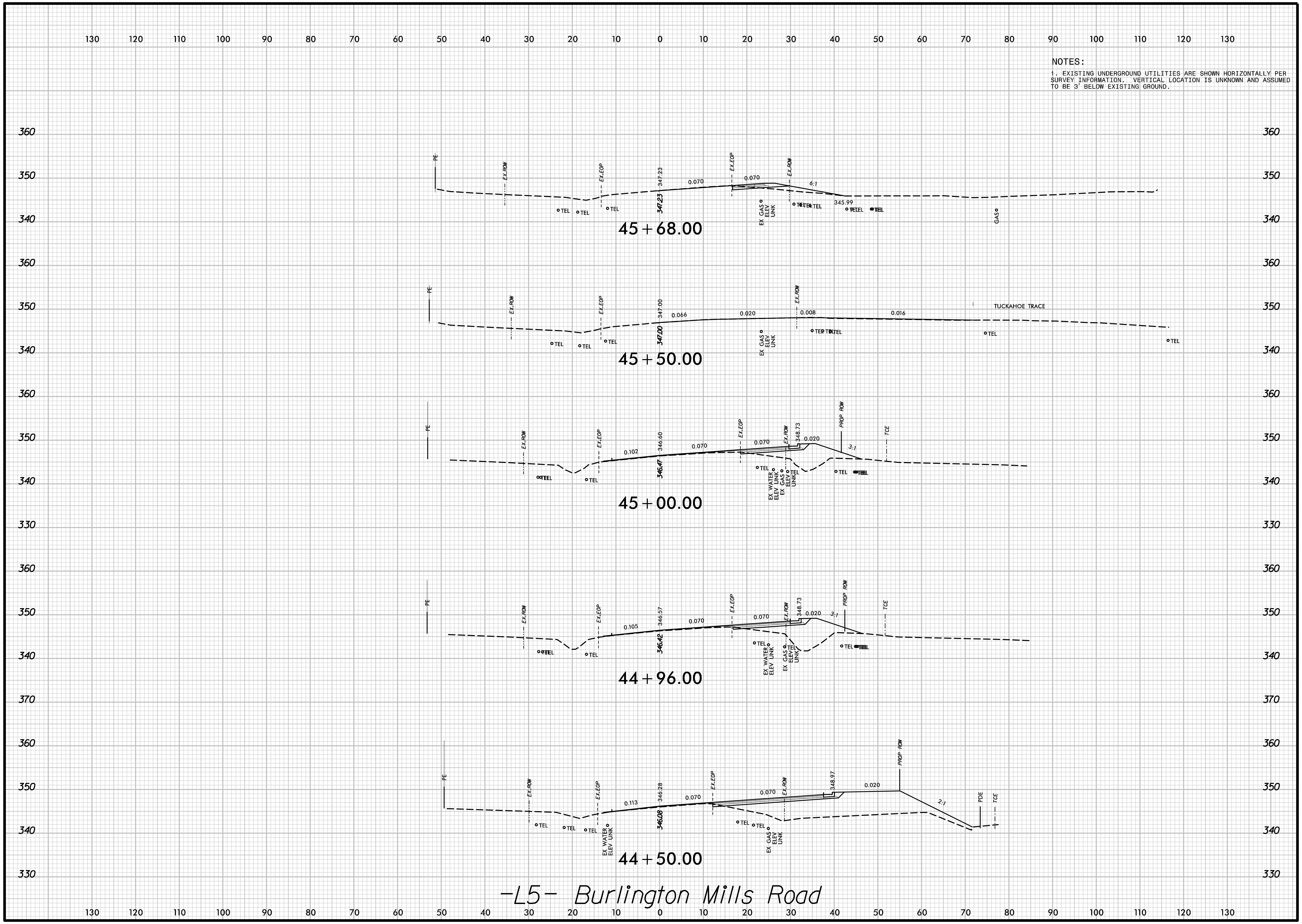
SHEET NO.

X-42



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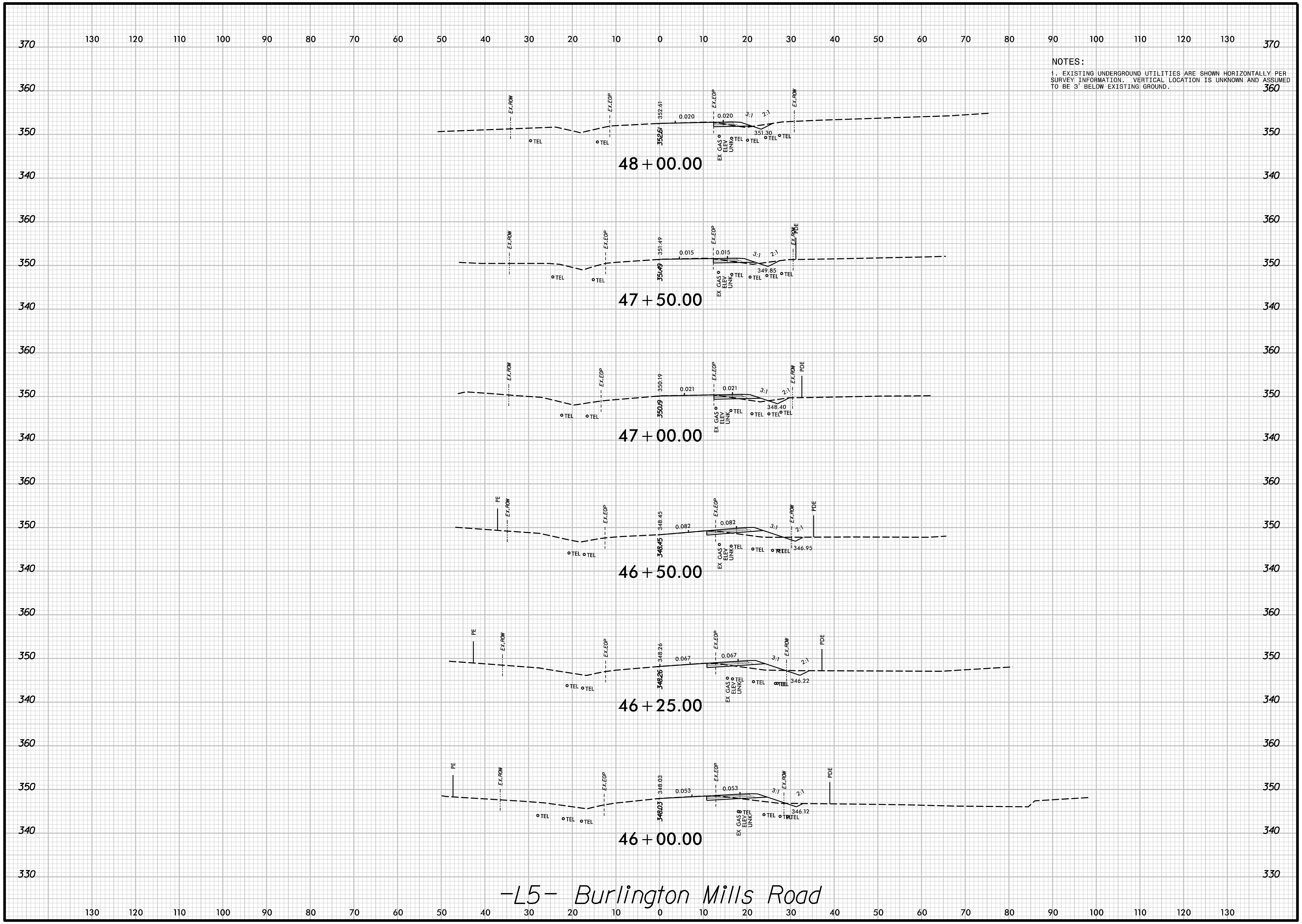
SHEET NO.
X-43



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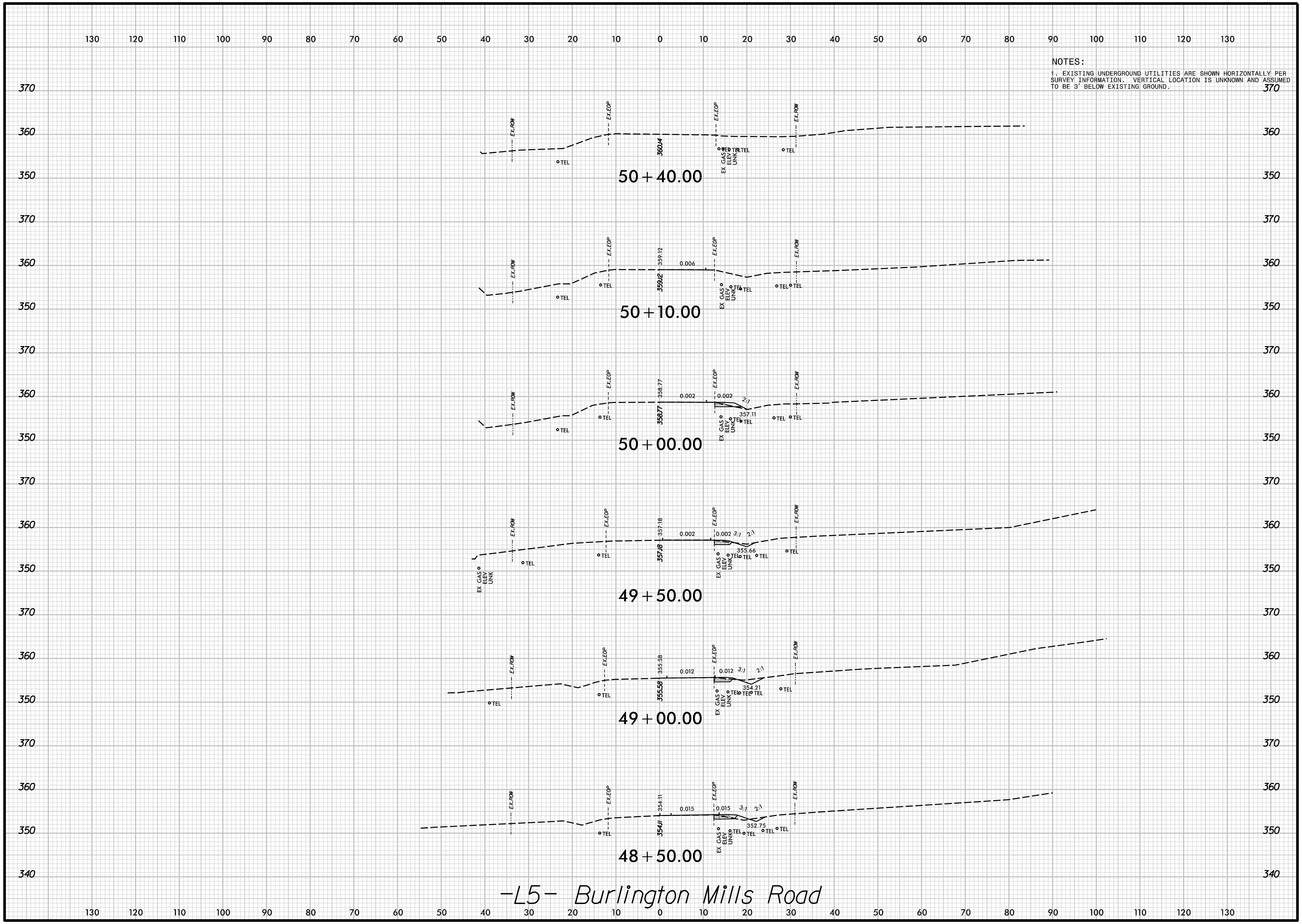
SHEET NO.
X-44



NOTES:
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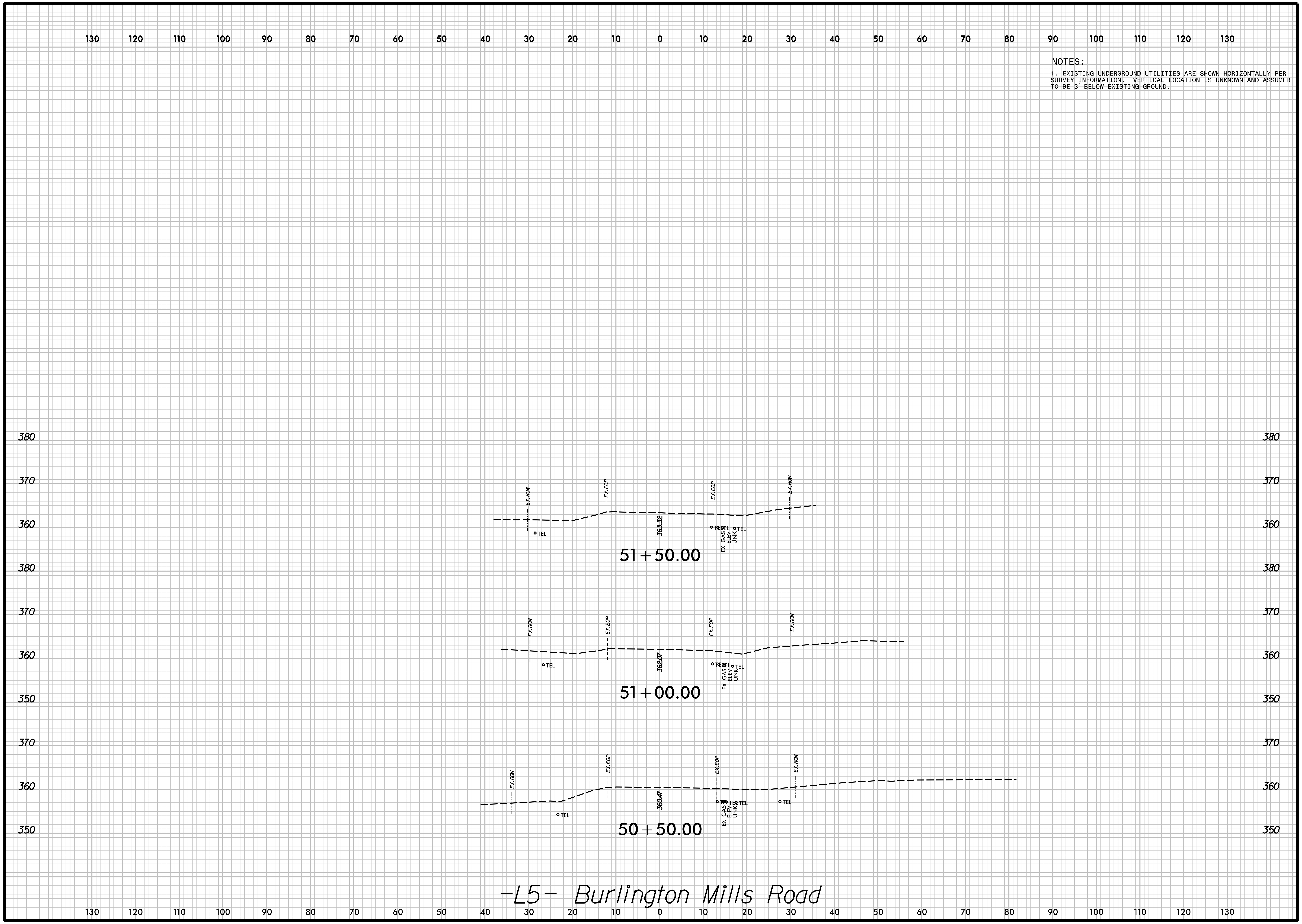
REVISIONS	INIT.	DATE

SHEET NO.
X-45

NOTES:

1. EXISTING UNDERGROUND UTILITIES ARE SHOWN HORIZONTALLY PER SURVEY INFORMATION. VERTICAL LOCATION IS UNKNOWN AND ASSUMED TO BE 3' BELOW EXISTING GROUND.



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PEARCE FARM
ROADWAY IMPROVEMENTS
ROLESVILLE, NORTH CAROLINA

ROADWAY
CROSS SECTIONS

JOB NO.: 00103002	DESIGNED BY: G. BOYLE
DATE: 10/23/24	REVIEWED BY: E. LYNCH
SCALE:	

REVISIONS	INIT.	DATE

SHEET NO.

X–46