Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC

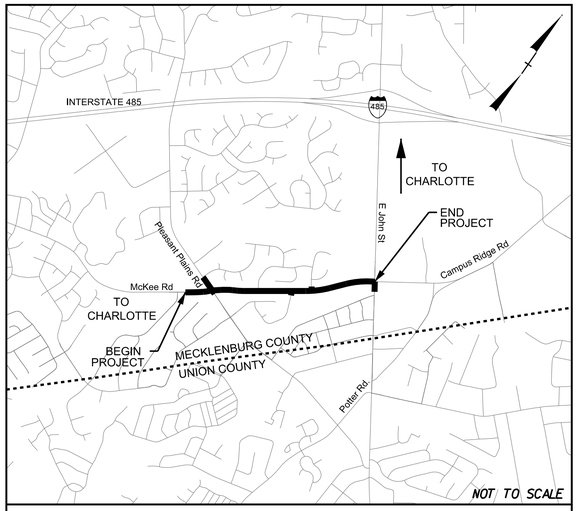
TIP PROJECT: U-4713A

CONTRACT: C204966

7/31/2024

K:\CHL_PRJ\0I\036426 - McKee Rd Ext\Roadway\Proj\U-4713A_rdy_1shdgn

See Sheet 1A For Index Of Sheets
See Sheet 1B For Conventional Symbols



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MECKLENBURG COUNTY

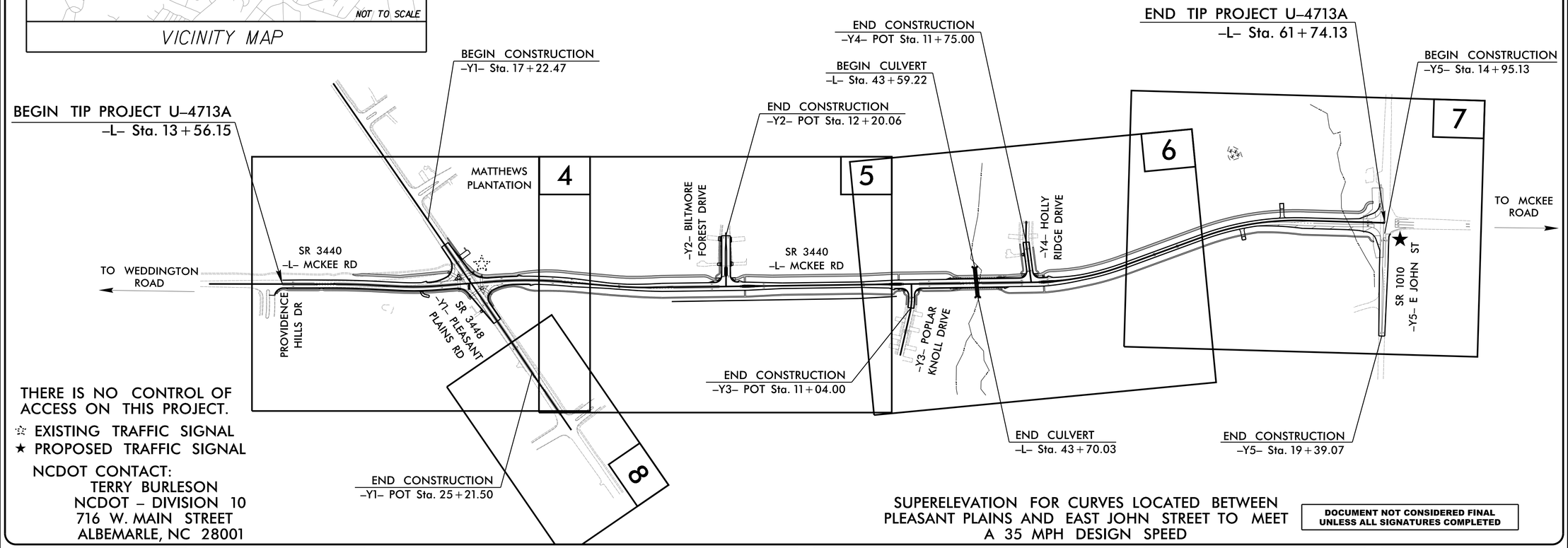
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4713A	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
39077.1.2	N/A	PE
39077.2.4	N/A	UTILITIES
39077.2.2	N/A	R/W
39077.3.2	N/A	CONSTRUCTION

LOCATION: MATTHEWS – SR 3440 MCKEE ROAD EXTENSION FROM SR 3448 (PLEASANT PLAINS ROAD) TO SR 1010 (E. JOHN STREET)

TYPE OF WORK: DRAINAGE, GRADING, PAVING, SIGNALS, CULVERTS AND WALL

NC GRID
NAD 83 NA 2011



THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.

☆ EXISTING TRAFFIC SIGNAL

★ PROPOSED TRAFFIC SIGNAL

NCDOT CONTACT:
TERRY BURLESON
NCDOT – DIVISION 10
716 W. MAIN STREET
ALBEMARLE, NC 28001

SUPERELEVATION FOR CURVES LOCATED BETWEEN PLEASANT PLAINS AND EAST JOHN STREET TO MEET A 35 MPH DESIGN SPEED

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

PLANS: 50 25 0 50 100

PROFILE (HORIZONTAL): 50 25 0 50 100

PROFILE (VERTICAL): 10 5 0 10 20

DESIGN DATA

ADT 2024 = 13,430 VPD
ADT 2044 = 18,090 VPD

K = 8%
D = 45%
T = 3%*
V = 40 MPH

FUNCTIONAL CLASSIFICATION: MINOR COLLECTOR

* 1% TTST 2% DUAL

SUB REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-4713A = 0.912 MILES
TOTAL LENGTH TIP PROJECT U-4713A = 0.912 MILES

PLANS PREPARED FOR THE NCDOT BY:

Kimley»Horn ©2024
NC LICENSE #F-0102
200 SOUTH TRYON STREET, SUITE 200
CHARLOTTE, NORTH CAROLINA 28202
PHONE: (704) 333-5131

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JULY 19, 2019

LETTING DATE:
OCTOBER 15, 2024

FRANK D. MASTERSON, P.E.
PROJECT ENGINEER

ANDREW WEEKS, E.I.
PROJECT DESIGN ENGINEER

TERRY BURLESON
DM-STIP PROJECT MANAGER

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 037615 ENGINEER JASON D. LAWING

DocuSigned by: Jason Lawing 8/9/2024
SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK D. MASTERSON, III

DocuSigned by: Frank Masterson 8/9/2024
60EB2B0ECFF1412...
SIGNATURE: P.E.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	IA

INDEX OF SHEETS

SHEET NUMBER	SHEET
I	TITLE SHEET
IA	INDEX OF SHEETS, GENERAL NOTES AND LIST OF STANDARDS
IB	CONVENTIONAL SYMBOLS SHEET
2A-I THRU 2A-5	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2B-I THRU 2B-4	INTERSECTION DETAIL SHEETS
2C-I	DETAIL TO TRANSITION FROM 2'-6" CURB AND GUTTER TO VALLEY GUTTER
2C-2	DETAIL OF PROPOSED PEDESTRIAN HANDRAIL
2C-3	DETAIL OF INLAID CRADLE MARKER
2C-4	DETAIL OF INLAID RAISED PAVEMENT MARKER
2C-5	DETAIL OF MILLED RUMBLE SKIPS
2C-6	DETAIL OF WOOD RUB RAIL
2D-I	DRAINAGE DETAILS
2N-I	NOISE WALL ENVELOPE
3B-I THRU 3B-2	SUMMARY OF GUARDRAIL AND EARTHWORK SHEETS
3D-I THRU 3D-3	SUMMARY OF DRAINAGE QUANTITIES
3G-I	GEOTECHNICAL SUMMARIES
3P-I	PARCEL INDEX SHEET
4 THRU 8	PLAN SHEETS
9 THRU I2	PROFILE SHEETS
RW02C-I	RIGHT OF WAY PLANS
TMP-I THRU TMP-II	TRANSPORTATION MANAGEMENT PLAN SHEETS
PMP-I THRU PMP-5	PAVEMENT MARKING PLAN SHEETS
EC-I THRU EC-I3	EROSION CONTROL PLAN SHEETS
SIGN-I THRU SIGN-6	SIGNING PLAN SHEETS
SIG. I.0 THRU SIG. 7.3	SIGNAL PLAN
SCP-I THRU SCP-8	CABLE ROUTING PLAN
UC-I THRU UC-I3	UTILITY CONSTRUCTION PLAN
UO-I THRU UO-6	UTILITY BY OTHERS PLAN
X-IA THRU X-IB	CROSS-SECTION SUMMARY SHEETS
X-2 THRU X-32	CROSS-SECTIONS
C-I THRU C-5	CULVERT PLAN SHEETS
SBW-I THRU SBW-3	WALL PLAN SHEETS

GENERAL NOTES

2024 SPECIFICATIONS
EFFECTIVE: 01-16-2024
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

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

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01

SIDE ROADS:

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

BERM DITCHES:

BERM DITCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 240.01 AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

SUBSURFACE DRAINS:

SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3 FOOT RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

STREET TURNOUT:

STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE:

POWER: DUKE
ALAN KEENER (704) 788-4949
rex.keenerjr@duke-energy.com

TELEPHONE: WINDSTREAM
KEITH LLOYD (704)-722-3700
Keith.Lloyd@windstream.com

COMMUNICATIONS: MCNC
PAUL SHAW (919) 248-1467
pshaw@mcnc.org

COMMUNICATIONS: CHARTER
TIMOTHY GODWIN (704) 378-3033
Timothy.Godwin@Charter.com

GAS: PNG
MARCUS CUTHBERTSON (704) 587-6944
marcus.cuthbertson@duke-energy.com

WATER & SEWER: CITY OF CHARLOTTE
BILL DEAL, P.E. (704) 336-1027
wdeal@ci.charlotte.nc.us

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

GENERAL NOTES (CONTINUED)

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

CURB RAMPS

CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. CONSTRUCT ALL CURB RAMPS ACCORDANCE WITH STD 848.06.

ROADWAY STANDARD DRAWINGS

2024 ROADWAY ENGLISH STANDARD DRAWINGS EFF. 01-16-2024

The following Roadway Standards as appear in "Roadway Standard Drawings" Contracts Standards and Development Unit -
N. C. Department of Transportation - Raleigh, N. C., Dated January 16, 2024 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
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
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
838.01	Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.27	Reinforced Concrete Endwall - for Single 60" 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
840.16	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
840.24	Frames and Narrow Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.26	Brick Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.28	Brick Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.34	Traffic Bearing Junction Box - for Use with Pipes 42" and Under
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
840.71	Concrete and Brick Pipe Plug
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.02	Driveway Turnout - Radius Type
848.04	Street Turnout
848.06	Curb Ramp
852.01	Concrete Islands
862.01	Guardrail Placement
862.02	Guardrail Installation
876.01	Rip Rap in Channels and Ditches
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

K:\CHL_PRJ\0I0364426 - McKee Rd Ext\Roadway\Proj\U-4713A_rdy_Ishdgn
8/2/2024

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	1B

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

BOUNDARIES AND PROPERTY:

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

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

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

RAILROADS:

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

RIGHT OF WAY & PROJECT CONTROL:

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

ROADS AND RELATED FEATURES:

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

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard

EXISTING STRUCTURES:

MAJOR:

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

MINOR:

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

UTILITIES:

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

POWER:

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

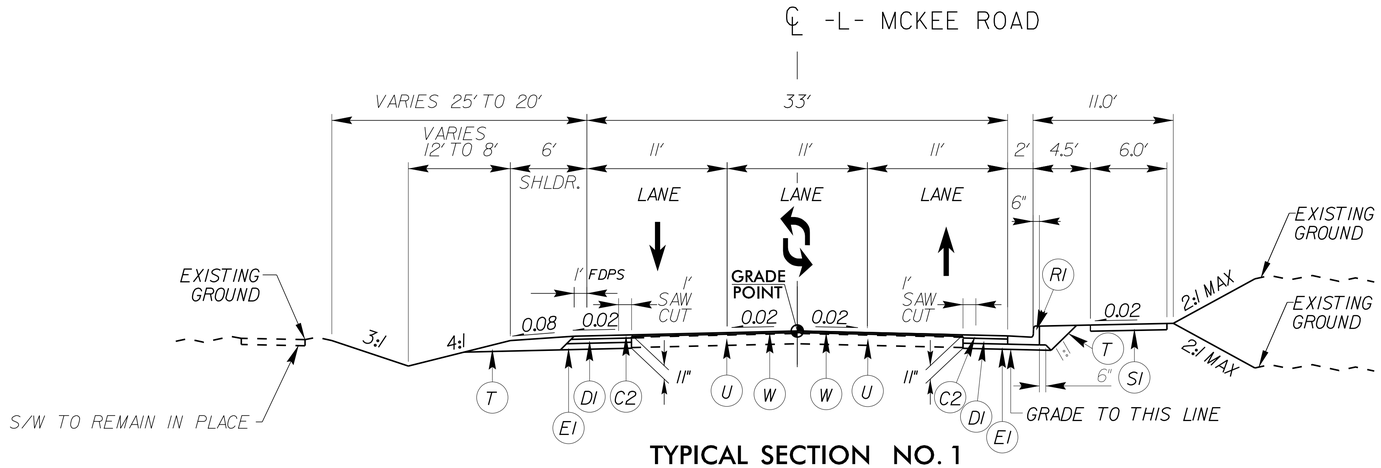
- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line
- Above Ground Sanitary Sewer
- SS Force Main Line Test Hole (SUE – LOS A)*
- SS Force Main Line (SUE – LOS B)*
- SS Force Main Line (SUE – LOS C)*
- SS Force Main Line (SUE – LOS D)*

MISCELLANEOUS:

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

09/10/2021
K:\CHL_PRJ\0II0136426 - McKee Rd Ext\Roadway\Proj\U-4713A_rdy_1shdgn
7/31/2024

Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC

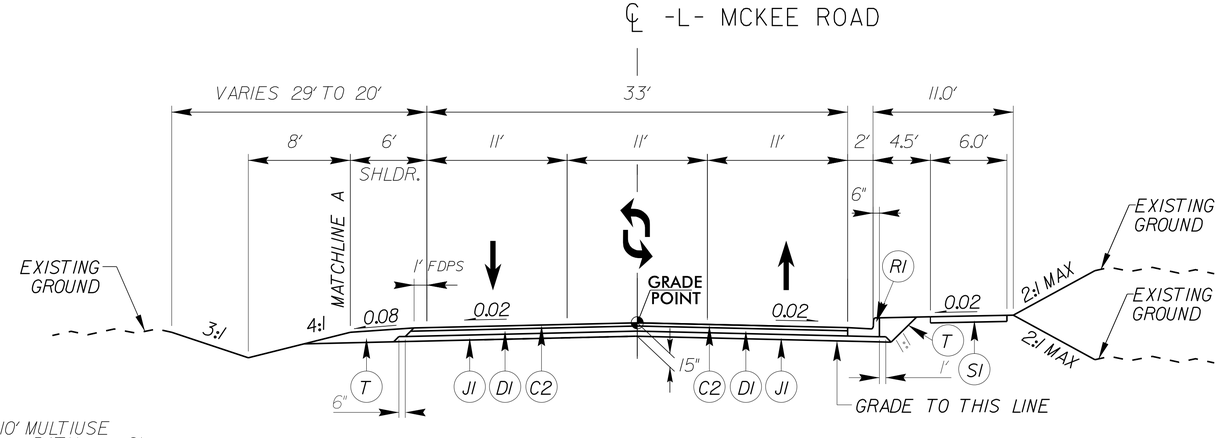


TYPICAL SECTION NO. 1

-L- STA 13+56.15 TO STA 16+30.00

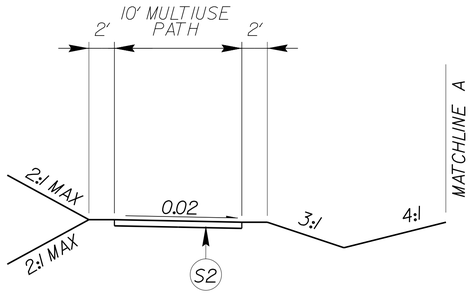
INCIDENTAL MILLING

-L- STA.13+31.03 TO -L- STA.13+56.15
-L- STA.61+30.37 TO -L- STA.61+55.49
-Y1- STA.18+50.89 TO -Y1- STA.18+75.89
-Y1- STA.22+27.14 TO -Y1- STA.22+52.14
-Y2- STA.12+10.06 TO -Y2- STA.12+20.06
-Y3- STA.10+94.00 TO -Y3- STA.10+04.00
-Y4- STA.11+65.00 TO -Y4- STA.11+75.00



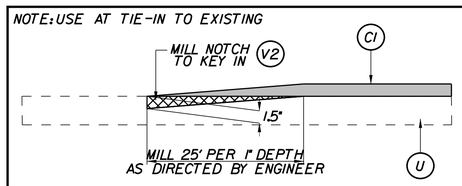
TYPICAL SECTION NO. 2

-L- STA 16+30.00 TO STA 19+89.00

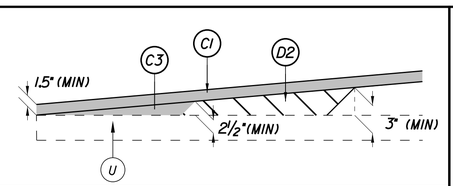


TYPICAL SECTION NO. 2A

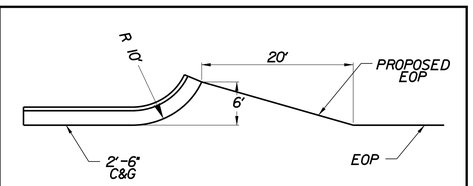
-L- STA 16+59.47 TO STA 19+89.00
REMOVE EX.5' S/W AND REPLACE WITH 10' MUP



INCIDENTAL MILLING DETAIL



DETAIL W SHOWING METHOD OF WEDGING



CURB RETURN DETAIL

NOTES:
1. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE INDICATED
2. REFER TO PLAN SHEETS FOR VARIABLE WIDTHS
3. SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT TO PROVIDE 1' MIN FULL DEPTH ASPHALT PAVEMENT
4. SEE PLAN FOR PEDESTRIAN REFUGE LOCATION

FINAL PAVEMENT SCHEDULE

C1	PROPOSED APPROX 1.5" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ.YD.
C2	PROPOSED APPROX 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ.YD. IN EACH OF TWO LAYERS.
C3	PROPOSED VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ.YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROPOSED APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ.YD.
D2	PROPOSED VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ.YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2.5" OR GREATER THAN 4" IN DEPTH.
E1	PROPOSED APPROX. 4" ASPHALT CONCRETE BASE COURSE TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ.YD.
JI	PROPOSED 8" AGGREGATE BASE COURSE.
R1	PROPOSED 2'-6" CONCRETE CURB & GUTTER
R2	PROPOSED 1'-6" CONCRETE CURB & GUTTER
R3	PROPOSED 4" CONCRETE ISLAND COVER
R4	PROPOSED 2'-0" VALLEY GUTTER
R5	PROPOSED 5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED)
S1	PROPOSED 4" CONCRETE SIDEWALK
S2	PROPOSED 4" CONCRETE SHARED USE PATH W/ WIRE MESH
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	MILLING ASPHALT PAVEMENT, 1.5" DEPTH
V2	INCIDENTAL MILLING
W	WEDGING

Kimley»Horn © 2024
200 S. TRYON ST. • CHARLOTTE, NC 28202
RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	2A-1

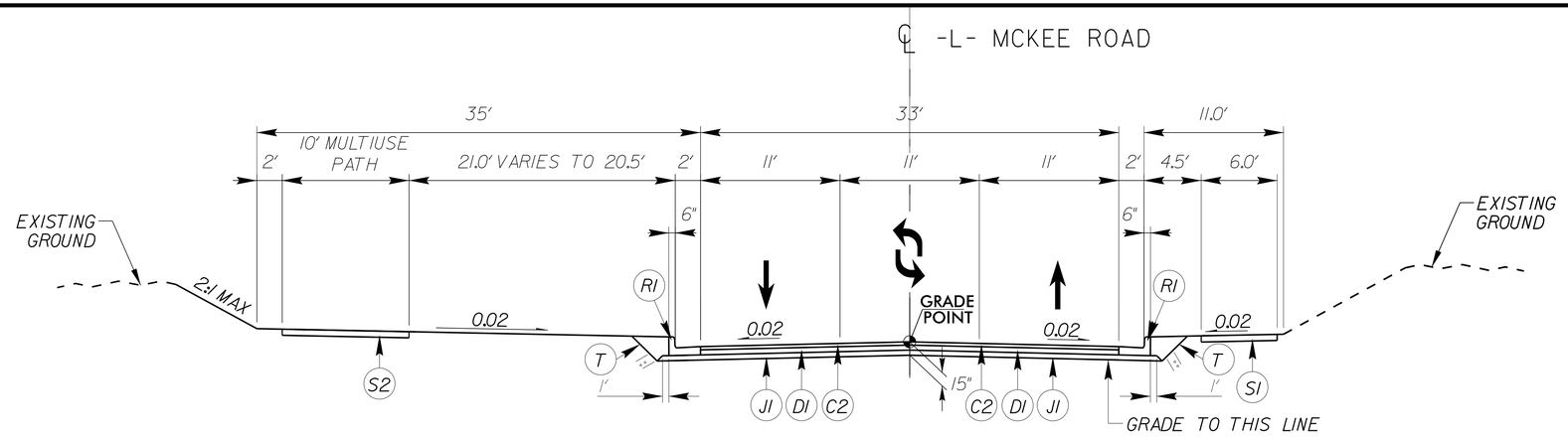
ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK O. MASTERSON, JR.
DocuSigned by: 8/9/2024

PAVEMENT DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 024964 ENGINEER JOSEPH T. HOLLAND
DocuSigned by: 8/9/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

K:\CHL_PRJ\011036426 - McKee Rd Ext\Roadway\Proj\U-4713A_rdy_typ.dgn
8/1/2024

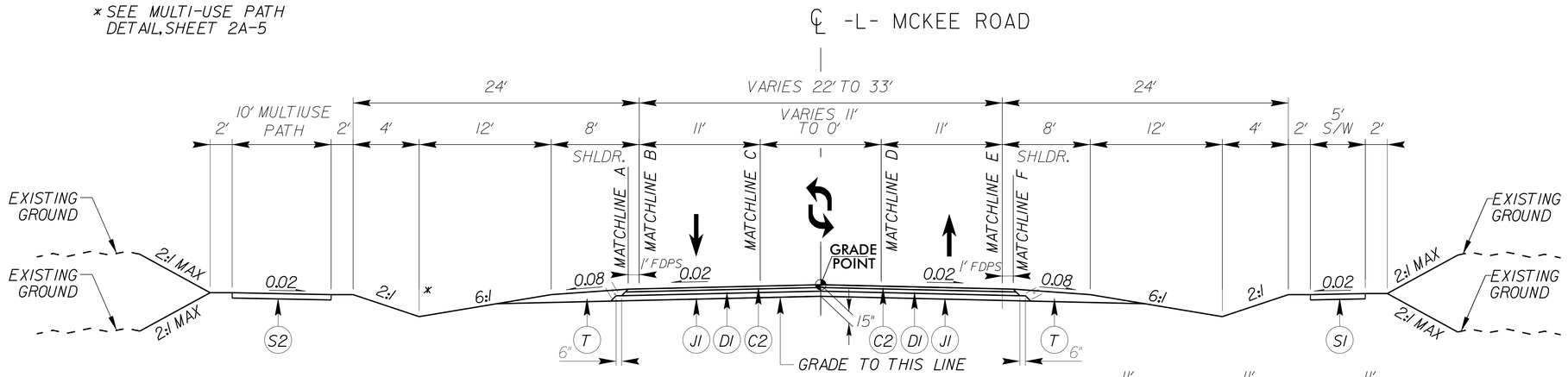
Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC



TYPICAL SECTION NO. 3

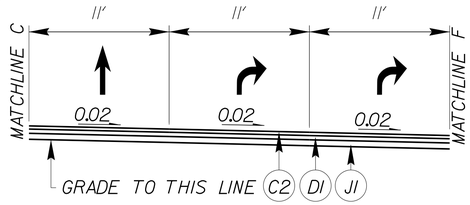
-L- STA 19+89.00 TO STA 21+48.10

* SEE MULTI-USE PATH DETAIL, SHEET 2A-5



TYPICAL SECTION NO. 4

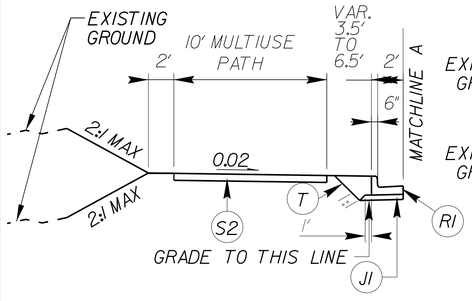
-L- STA 21+96.68 TO STA 42+50.00
-L- STA 44+86.00 TO STA 61+55.37



TYPICAL SECTION NO. 4F

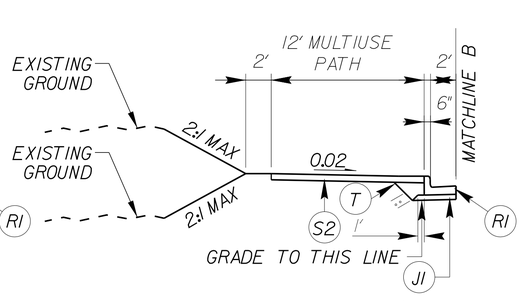
-L- STA 58+20.00 TO STA 61+55.37

NOTES:
1. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE INDICATED
2. REFER TO PLAN SHEETS FOR VARIABLE WIDTHS
3. SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT TO PROVIDE 1' MIN FULL DEPTH ASPHALT PAVEMENT
4. SEE PLAN FOR PEDESTRIAN REFUGE LOCATION



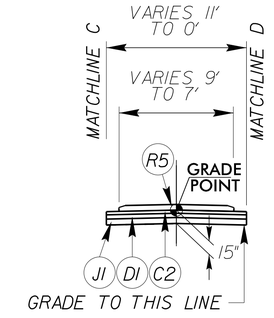
TYPICAL SECTION NO. 4A

-L- STA 44+86.00 TO STA 46+77.00



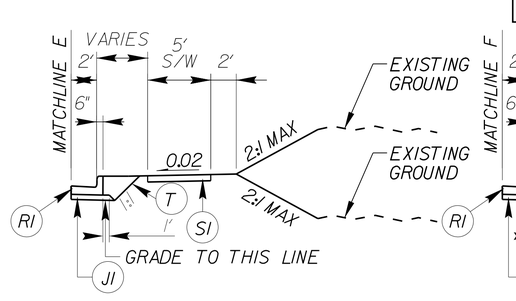
TYPICAL SECTION NO. 4B

-L- STA 21+48.10 TO STA 23+71.29



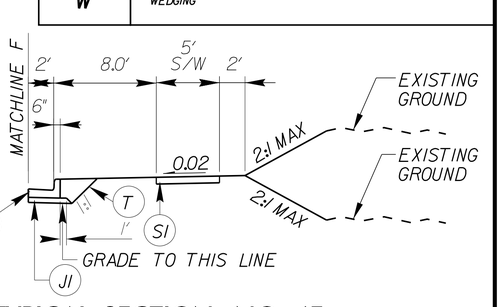
TYPICAL SECTION NO. 4C

-L- STA 33+49.73 TO STA 33+67.23
-L- STA 40+23.76 TO STA 40+41.26
-L- STA 46+44.51 TO STA 46+62.01



TYPICAL SECTION NO. 4D

-L- STA 22+46.91 TO STA 24+24.53



TYPICAL SECTION NO. 4E

-L- STA 41+25.00 TO STA 42+50.00

Kimley»Horn © 2024
200 S. TRYON ST. • CHARLOTTE, NC 28202
RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	2A-2

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK O MASTERSON JR.
Docusigned by: Frank Masterson 8/8/2024

PAVEMENT DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 024964 ENGINEER JOSEPH T HOLLAND
Docusigned by: Josh Holland 8/8/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

FINAL PAVEMENT SCHEDULE

C1	1.5" S9.5B
C2	3" S9.5B
C3	VAR. DEPTH S9.5B
D1	4" ID9.0C
D2	VAR. DEPTH ID9.0C
E1	4" B25.0C
JI	PROPOSED 8" AGGREGATE BASE COURSE.
RI	2'-6" CONCRETE CURB & GUTTER
R2	1'-6" CONCRETE CURB & GUTTER
R3	4" CONCRETE ISLAND COVER
R4	2'-0" VALLEY GUTTER
R5	5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED)
SI	4" CONCRETE SIDEWALK
S2	4" CONCRETE SHARED USE PATH W/ WIRE MESH
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	MILLING ASPHALT PAVEMENT, 1.5" DEPTH
V2	INCIDENTAL MILLING
W	WEDGING

K:\CHL_PRJ\011036426 - McKee Rd Ext\Roadway\Proj\NU-4713A_rdy_typdgn
8/1/2024

Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC

GUARDRAIL * STA. 42+61.38 TO STA. 44+86.32 AREA UNDER GUARDRAIL TO BE CONCRETE

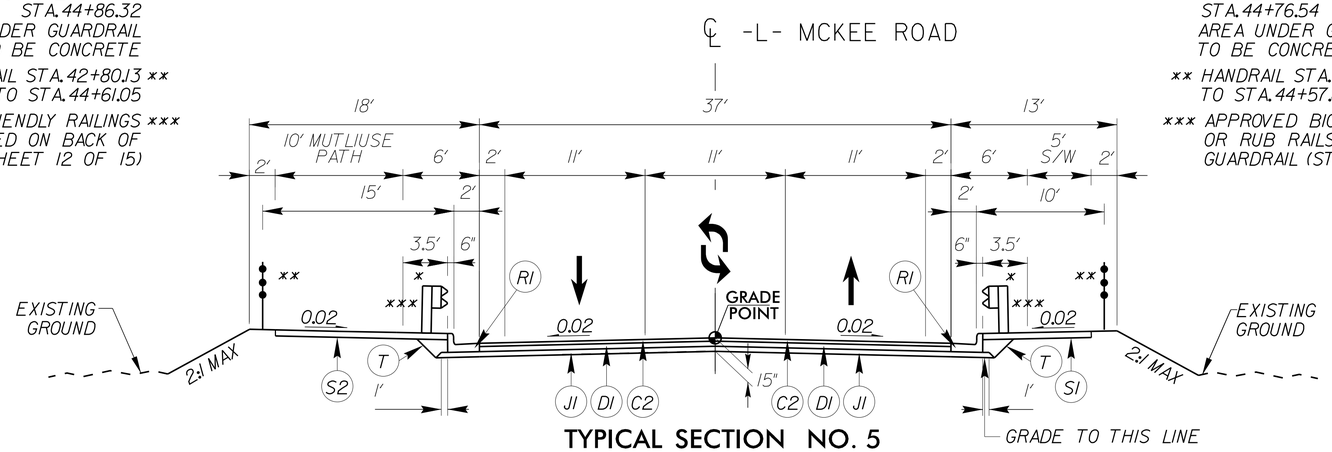
HANDRAIL STA. 42+80.13 ** TO STA. 44+61.05

APPROVED BICYCLE-FRIENDLY RAILINGS *** OR RUB RAILS REQUIRED ON BACK OF GUARDRAIL (STD. 862.01, SHEET 12 OF 15)

* GUARDRAIL STA. 42+51.56 TO STA. 44+76.54 AREA UNDER GUARDRAIL TO BE CONCRETE

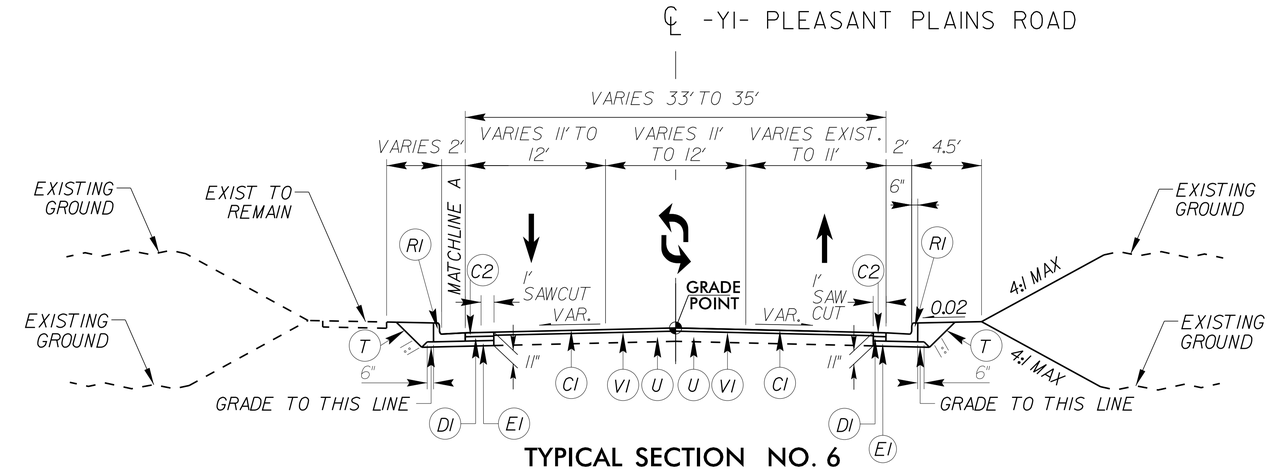
** HANDRAIL STA. 42+82.26 TO STA. 44+57.80

*** APPROVED BICYCLE-FRIENDLY RAILINGS OR RUB RAILS REQUIRED ON BACK OF GUARDRAIL (STD. 862.01, SHEET 12 OF 15)



TYPICAL SECTION NO. 5

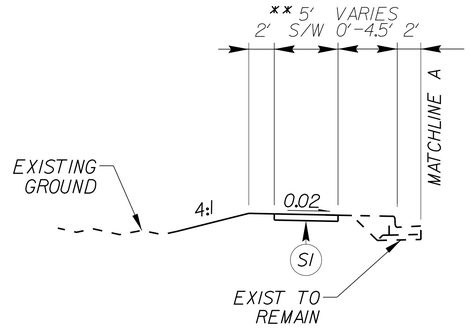
-L- STA 42+50.00 TO STA 44+86.00



TYPICAL SECTION NO. 6

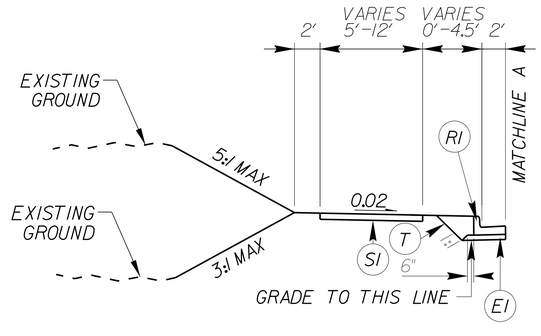
-YI- STA 18+50.89 TO STA 22+52.14

** BEGIN PROPOSED AND TIE TO EXISTING SIDEWALK AT 18+31.66.



TYPICAL SECTION NO. 6A

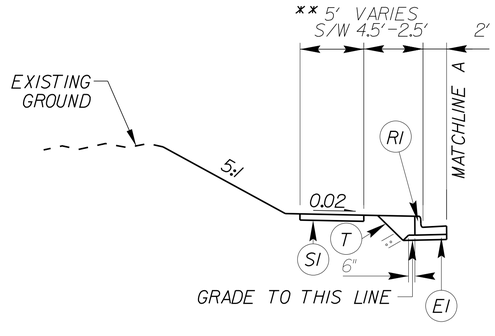
-YI- STA 18+31.66 TO STA 18+50.89



TYPICAL SECTION NO. 6B

-YI- STA 18+50.89 TO STA 19+93.64

** END PROPOSED AND TIE TO EXISTING SIDEWALK AT 21+88.82.



TYPICAL SECTION NO. 6C

-YI- STA 21+68.80 TO STA 21+88.82

Kimley»Horn © 2024
200 S. TRYON ST. • CHARLOTTE, NC 28202
RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	2A-3

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK O MASTERSON, JR.
Docusigned by: Frank Masterson 8/8/2024

PAVEMENT DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 024964 ENGINEER JOSEPH T HOLLAND
Docusigned by: Josh Holland 8/8/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

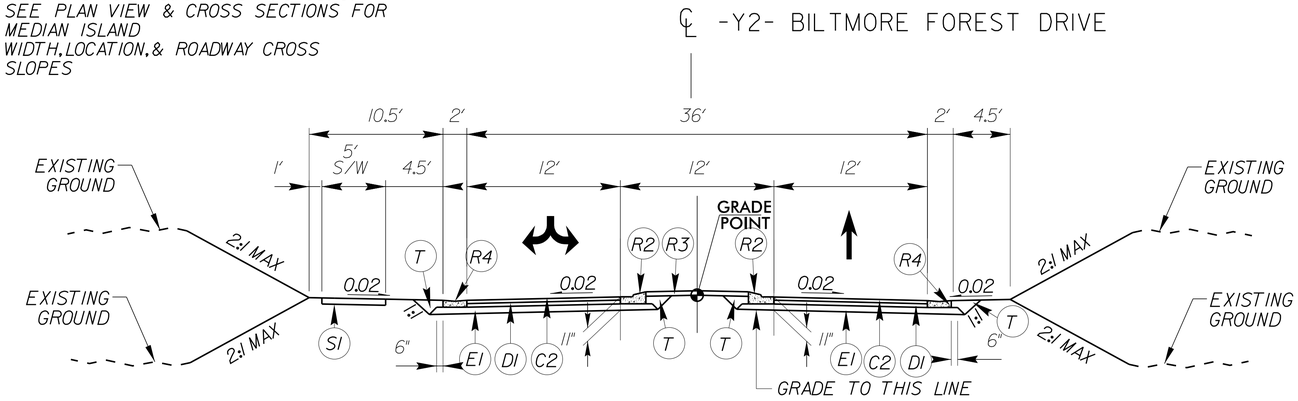
FINAL PAVEMENT SCHEDULE

CI	1.5" S9.5B
C2	3" S9.5B
C3	VAR. DEPTH S9.5B
DI	4" I19.0C
D2	VAR. DEPTH I19.0C
EI	4" B25.0C
JI	PROPOSED 8" AGGREGATE BASE COURSE.
RI	2'-6" CONCRETE CURB & GUTTER
R2	1'-6" CONCRETE CURB & GUTTER
R3	4" CONCRETE ISLAND COVER
R4	2'-0" VALLEY GUTTER
R5	5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED)
SI	4" CONCRETE SIDEWALK
S2	4" CONCRETE SHARED USE PATH W/ WIRE MESH
T	EARTH MATERIAL
U	EXISTING PAVEMENT
VI	MILLING ASPHALT PAVEMENT, 1.5" DEPTH
V2	INCIDENTAL MILLING
W	WEDGING

NOTES:
1. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE INDICATED
2. REFER TO PLAN SHEETS FOR VARIABLE WIDTHS
3. SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT TO PROVIDE 1' MIN FULL DEPTH ASPHALT PAVEMENT
4. SEE PLAN FOR PEDESTRIAN REFUGE LOCATION

Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC

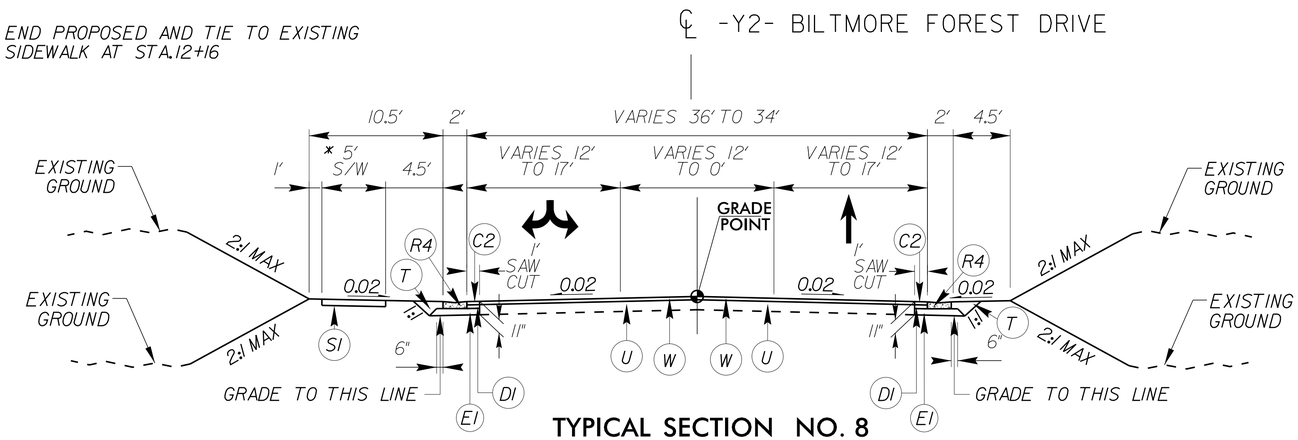
MEDIAN STA.10+43.79 TO STA.10+85.79.
SEE PLAN VIEW & CROSS SECTIONS FOR MEDIAN ISLAND WIDTH, LOCATION, & ROADWAY CROSS SLOPES



TYPICAL SECTION NO. 7

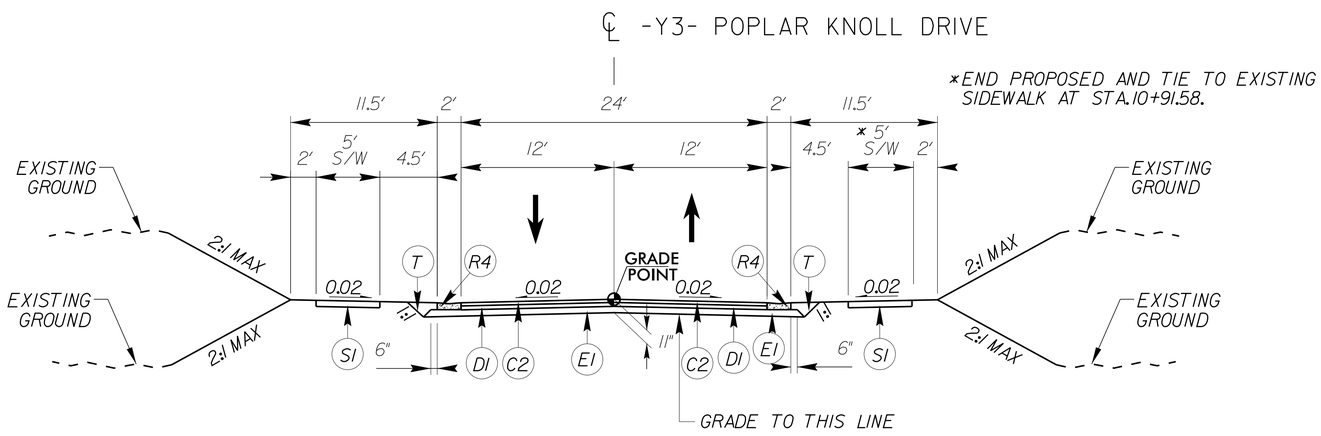
-Y2- STA 10+18.50 TO STA 10+89.65

* END PROPOSED AND TIE TO EXISTING SIDEWALK AT STA.12+16



TYPICAL SECTION NO. 8

-Y2- STA 10+89.65 TO STA 12+20.06



TYPICAL SECTION NO. 9

-Y3- STA 10+18.50 TO STA 10+76.59

Kimley»Horn © 2024
200 S. TRYON ST. • CHARLOTTE, NC 28202

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	2A-4

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK O. MASTERSON, JR.
DocuSigned by: 8/9/2024

PAVEMENT DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 024964 ENGINEER JOSEPH T. HOLLAND
DocuSigned by: 8/8/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

FINAL PAVEMENT SCHEDULE

C1	1.5" S9.5B
C2	3" S9.5B
C3	VAR.DEPTH S9.5B
D1	4" 119.0C
D2	VAR.DEPTH 119.0C
E1	4" B25.0C
J1	PROPOSED 8" AGGREGATE BASE COURSE.
R1	2'-6" CONCRETE CURB & GUTTER
R2	1'-6" CONCRETE CURB & GUTTER
R3	4" CONCRETE ISLAND COVER
R4	2'-0" VALLEY GUTTER
R5	5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED)
S1	4" CONCRETE SIDEWALK
S2	4" CONCRETE SHARED USE PATH W/ WIRE MESH
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	MILLING ASPHALT PAVEMENT, 1.5" DEPTH
V2	INCIDENTAL MILLING
W	WEDGING

NOTES:
1. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE INDICATED
2. REFER TO PLAN SHEETS FOR VARIABLE WIDTHS
3. SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT TO PROVIDE 1' MIN FULL DEPTH ASPHALT PAVEMENT
4. SEE PLAN FOR PEDESTRIAN REFUGE LOCATION

K:\CHL_PRJ\011036426 - McKee Rd Ext\Roadway\Pro\NU-4713A_rdy_typ.dgn
8/1/2024

Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC

Kimley»Horn © 2024
200 S. TRYON ST. • CHARLOTTE, NC 28202

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	2A-5

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK O. MASTERSON, JR.

DocuSigned by: Frank Masterson 8/7/2024

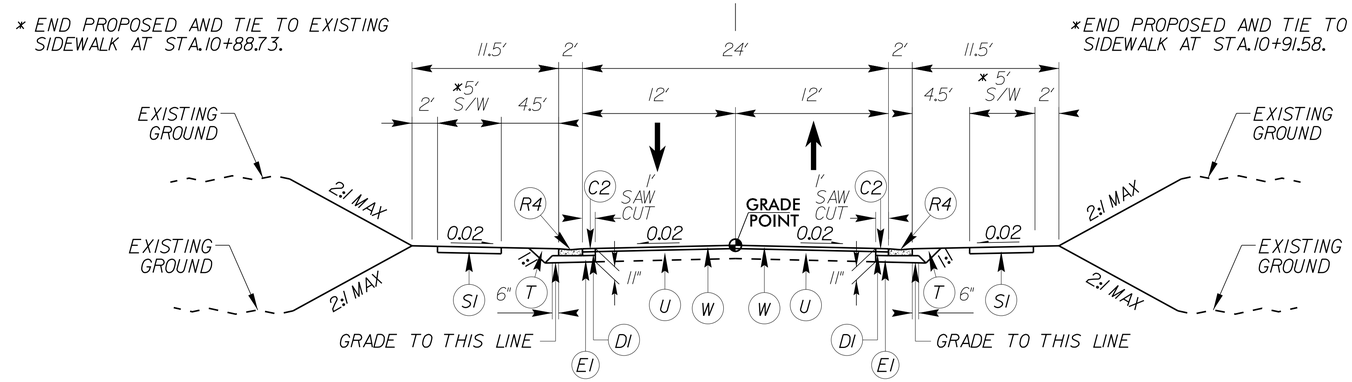
PAVEMENT DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 024964 ENGINEER JOSEPH T. HOLLAND

DocuSigned by: Josh Holland 8/8/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

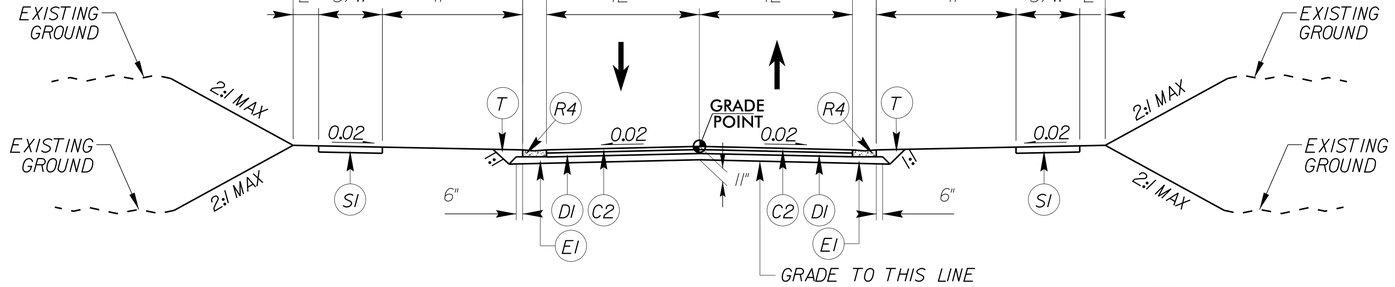
℄ -Y3- POPLAR KNOLL DRIVE



TYPICAL SECTION NO. 10

-Y3- STA 10+76.59 TO STA 11+04.00

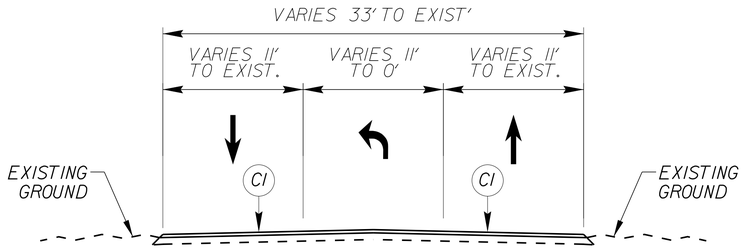
℄ -Y4- HOLLY RIDGE DRIVE



TYPICAL SECTION NO. 11

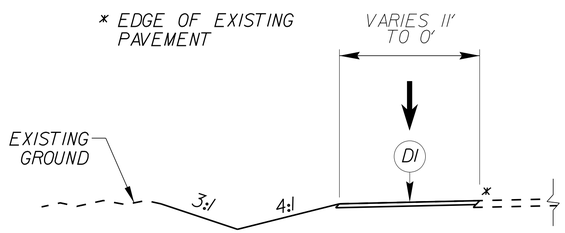
-Y4- STA 10+18.61 TO STA 11+75.00

℄ -Y5- E JOHN STREET



TYPICAL SECTION NO. 12

-Y5- STA 14+95.13 TO STA 19+39.07



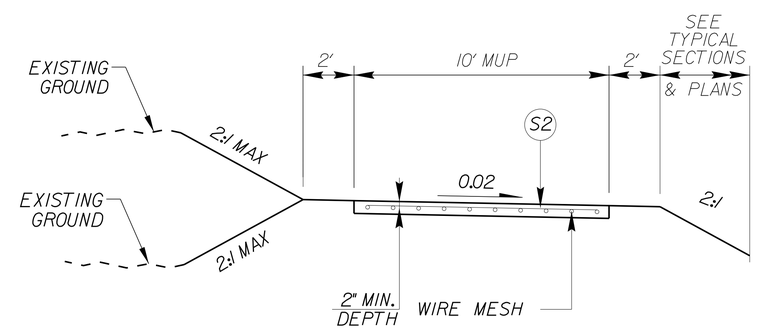
TYPICAL SECTION NO. 13

TMP PHASES 2 & 3
-L- STA 16+34.03 TO STA 20+60.46

FINAL PAVEMENT SCHEDULE

C1	1.5" S9.5B
C2	3" S9.5B
C3	VAR.DEPTH S9.5B
D1	4" ConcC
D2	VAR.DEPTH ConcC
E1	4" B25.0C
JI	PROPOSED 8" AGGREGATE BASE COURSE.
R1	2'-6" CONCRETE CURB & GUTTER
R2	1'-6" CONCRETE CURB & GUTTER
R3	4" CONCRETE ISLAND COVER
R4	2'-0" VALLEY GUTTER
R5	5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED)
SI	4" CONCRETE SIDEWALK
S2	4" CONCRETE SHARED USE PATH W/ WIRE MESH
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	MILLING ASPHALT PAVEMENT, 1.5" DEPTH
V2	INCIDENTAL MILLING
W	WEDGING

NOTES:
1. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE INDICATED
2. REFER TO PLAN SHEETS FOR VARIABLE WIDTHS
3. SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT TO PROVIDE 1" MIN FULL DEPTH ASPHALT PAVEMENT
4. SEE PLAN FOR PEDESTRIAN REFUGE LOCATION



NOTE: SEE PLAN SHEETS FOR LOCATION OF MULTI-USE PATH

TYPICAL MULTI-USE PATH SECTION

K:\CHL_PRJ\01036426 - McKee Rd Ext\Roadway\Proj\U-4713A_rdy_typ.dgn
8/1/2024

Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC

INTERSECTION DETAIL SHEET

Kimley»Horn
© 2024
200 S. TRYON ST. • CHARLOTTE, NC 28202

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	2B-1

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK D. MASTERSON, JR.

DocuSigned by: Frank Masterson 8/9/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

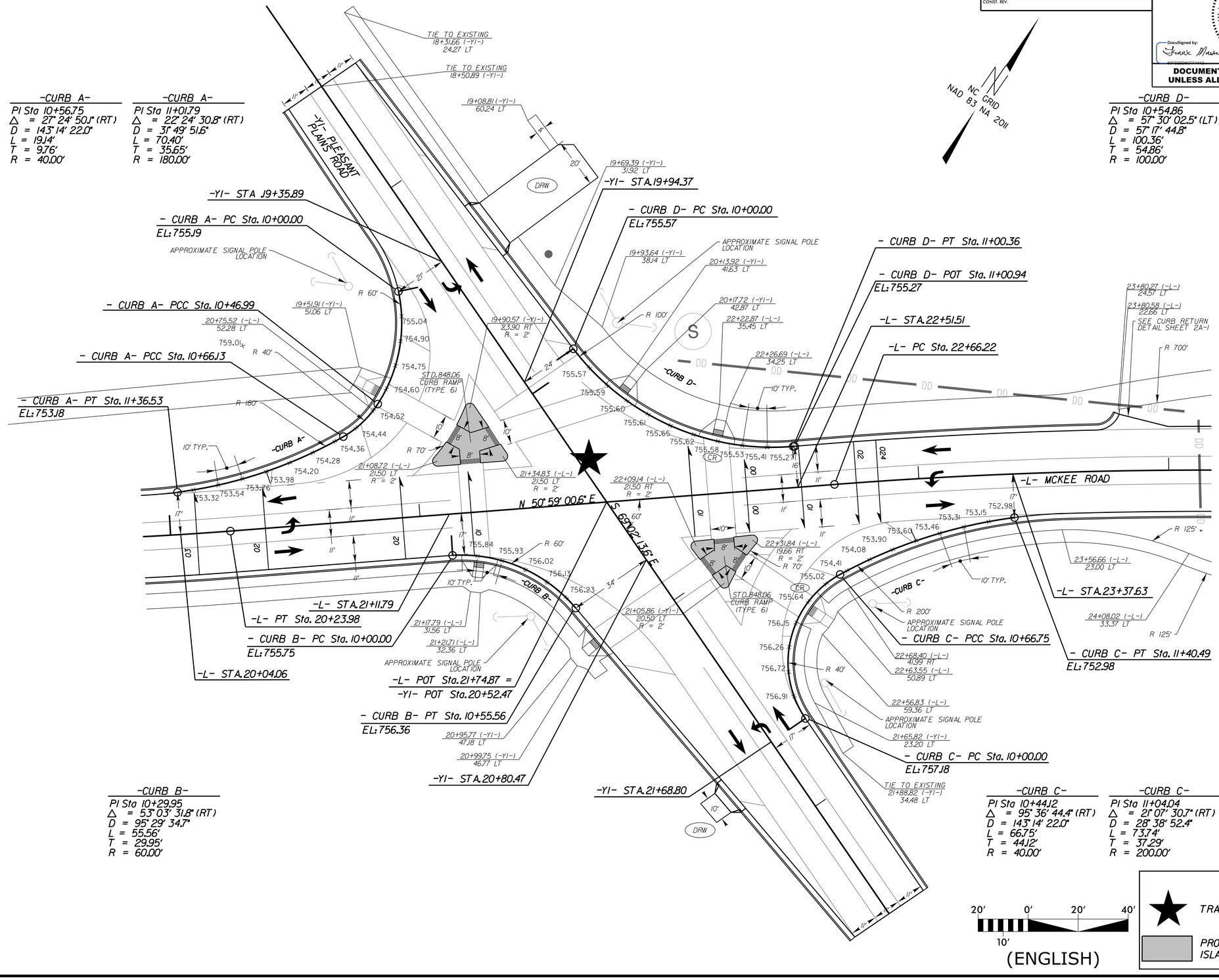
NC GRID NAD 83 NA 2011

-CURB A-
PI Sta 10+24.78
△ = 44° 52' 25.4" (RT)
D = 95° 29' 34.7"
L = 46.99'
T = 24.78'
R = 60.00'

-CURB A-
PI Sta 10+56.75
△ = 27° 24' 50.1" (RT)
D = 143° 14' 22.0"
L = 19.14'
T = 9.76'
R = 40.00'

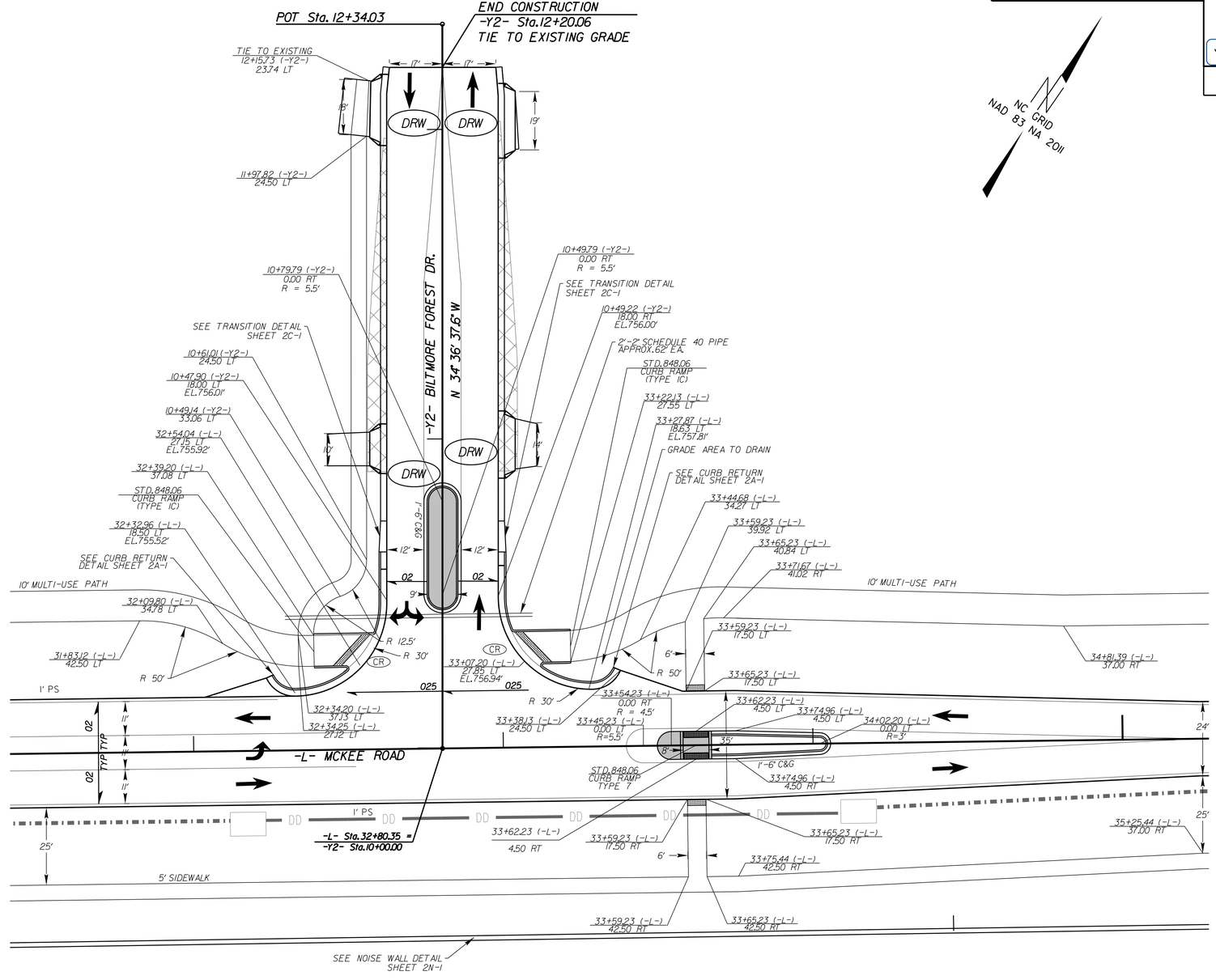
-CURB A-
PI Sta 11+01.79
△ = 22° 24' 30.8" (RT)
D = 31° 49' 51.6"
L = 70.40'
T = 35.65'
R = 180.00'

-CURB D-
PI Sta 10+54.86
△ = 57° 30' 02.5" (LT)
D = 57° 17' 44.8"
L = 100.36'
T = 54.86'
R = 100.00'


TIE TO EXISTING
18+31.66 (-Y1-)
24.27 LT
TIE TO EXISTING
18+50.89 (-Y1-)
19+08.81 (-Y1-)
60.24 LT
-Y1- PLEASANT PLAINS ROAD
19+69.39 (-Y1-)
31.92 LT
-Y1- STA. 19+94.37
-Y1- STA 19+35.89
- CURB A- PC Sta. 10+00.00
EL: 755.19
- CURB D- PC Sta. 10+00.00
EL: 755.57
APPROXIMATE SIGNAL POLE LOCATION
19+93.64 (-Y1-)
38.14 LT
20+13.92 (-Y1-)
41.63 LT
20+17.72 (-Y1-)
42.87 LT
22+22.87 (-L-)
35.45 LT
22+26.69 (-L-)
34.25 LT
- CURB D- PT Sta. 11+00.36
- CURB D- POT Sta. 11+00.94
EL: 755.27
-L- STA. 22+51.51
-L- PC Sta. 22+66.22
23+80.27 (-L-)
24.57 LT
23+80.58 (-L-)
22.66 LT
SEE CURB RETURN DETAIL SHEET 2A-1
R 700'
- CURB A- PCC Sta. 10+46.99
19+51.91 (-Y1-)
51.06 LT
20+75.52 (-L-)
52.28 LT
- CURB A- PCC Sta. 10+66.13
- CURB A- PT Sta. 11+36.53
EL: 753.18
STD. 848.06 CURB RAMP (TYPE 6)
19+90.57 (-Y1-)
23.90 RT
R = 2'
-CURB D-
10' TYP.
-CURB A-
-CURB B-
-CURB C-
DRW
-L- MCKEE ROAD
N 50° 59' 00.6" E
S 69° 02' 13.6" E
-L- STA. 21+11.79
-L- PT Sta. 20+23.98
- CURB B- PC Sta. 10+00.00
EL: 755.75
-L- STA. 20+04.06
21+17.79 (-L-)
31.56 LT
21+21.71 (-L-)
32.36 LT
-L- POT Sta. 21+74.87 =
-Y1- POT Sta. 20+52.47
- CURB B- PT Sta. 10+55.56
EL: 756.36
20+95.77 (-Y1-)
47.18 LT
20+99.75 (-Y1-)
46.77 LT
-Y1- STA. 20+80.47
21+08.72 (-L-)
21.50 LT
R = 2'
21+34.83 (-L-)
21.50 LT
R = 2'
22+09.14 (-L-)
21.50 RT
R = 2'
22+31.84 (-L-)
19.66 RT
R = 2'
21+05.86 (-Y1-)
20.50 LT
R = 2'
-Y1- STA. 21+68.80
TIE TO EXISTING
21+88.82 (-Y1-)
34.48 LT
-L- STA. 23+37.63
23+56.66 (-L-)
23.00 LT
24+08.02 (-L-)
33.37 LT
- CURB C- PCC Sta. 10+66.75
22+68.40 (-L-)
41.99 RT
22+63.55 (-L-)
50.89 LT
22+56.83 (-L-)
59.36 LT
21+65.82 (-Y1-)
23.20 LT
- CURB C- PT Sta. 11+40.49
EL: 752.98
- CURB C- PC Sta. 10+00.00
EL: 757.18
APPROXIMATE SIGNAL POLE LOCATION
R 60'
R 40'
R 180'
R 70'
R 100'
R 200'
R 125'
755.04
754.90
754.75
754.62
754.44
754.36
754.28
754.20
753.98
753.76
753.54
753.32
755.57
755.59
755.60
755.61
755.65
755.62
755.58
755.53
755.41
755.27
753.98
753.60
753.46
753.90
754.08
754.41
755.02
755.64
756.15
756.26
756.72
756.91
755.84
755.93
756.02
756.13
756.23
753.31
753.15
752.98
755.64
755.02
754.41
753.90
753.60
753.46

Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC

INTERSECTION DETAIL SHEET



Kimley»Horn
© 2024
200 S. TRYON ST. • CHARLOTTE, NC 28202

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	2B-2

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK D. MASTERSON, JR.

DocuSigned by: Frank Masterson 6DEB2BDEFEE1412...

8/9/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NC GRID NAD 83 NA 2011

20' 0' 20' 40'
10'
(ENGLISH)

LEGEND

PROPOSED MONOLITHIC ISLAND

7/31/2024 K:\CHL_PRJ\011036426 - McKee Rd Ext\Roadway\Proj\U-4713A_rdy_psh_2B-2.dgn

Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC

Kimley»Horn
© 2024
200 S. TRYON ST. • CHARLOTTE, NC 28202

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	2B-3

ROADWAY DESIGN ENGINEER

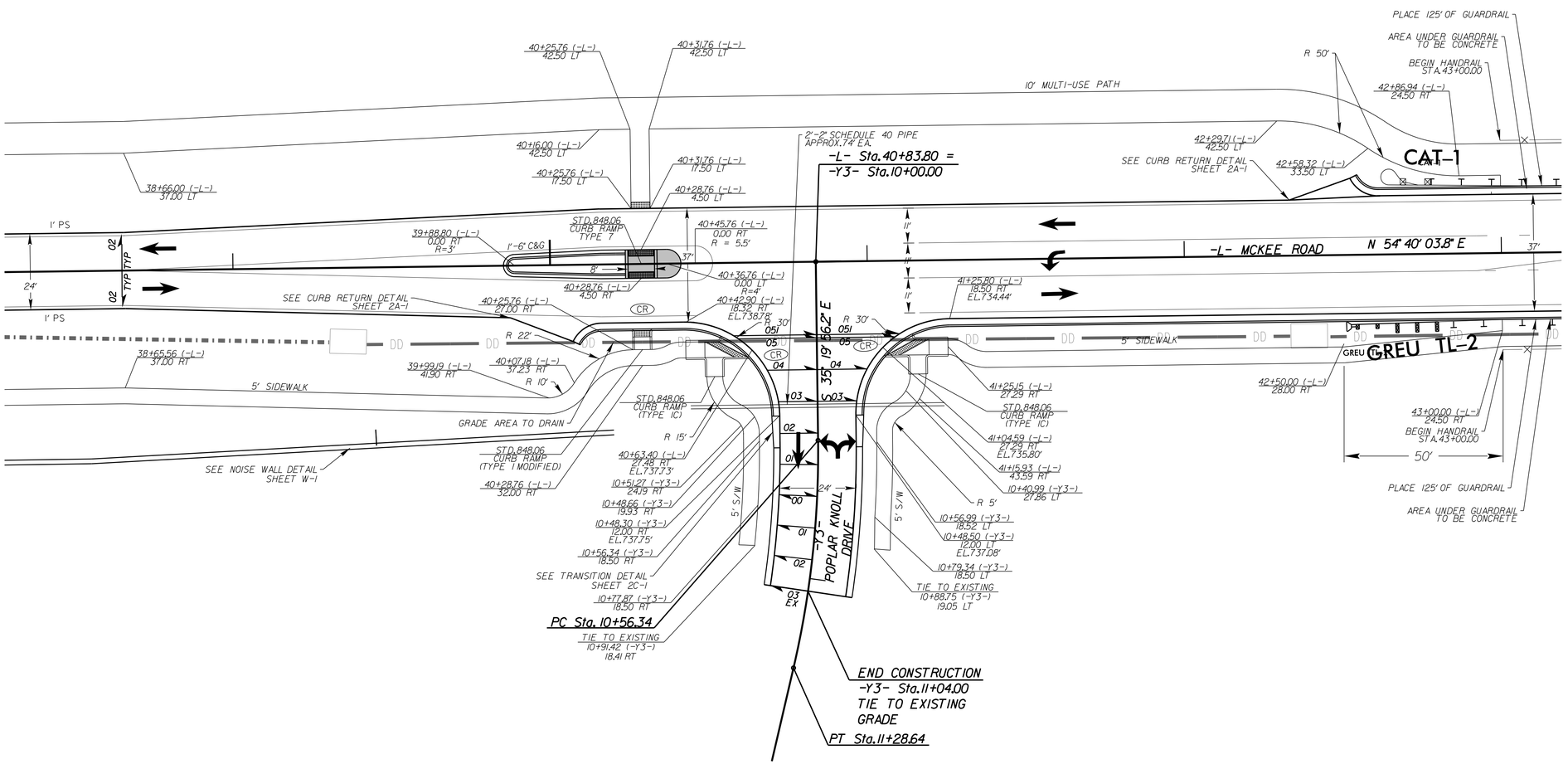
NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK D. MASTERSON, JR.

DocuSigned by: Frank Masterson 8/9/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

INTERSECTION DETAIL SHEET

NC GRID NAD 83 NA 2011



20' 0' 20' 40'
10'
(ENGLISH)

LEGEND

PROPOSED MONOLITHIC ISLAND

K:\CHL_PRJ\011036426 - McKee Rd Ext\Roadway\Pro\NJ-4713A_rdy_psh_2B-3.dgn
7/31/2024

Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC

Kimley»Horn © 2024
200 S. TRYON ST. • CHARLOTTE, NC 28202

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	2B-4

ROADWAY DESIGN ENGINEER

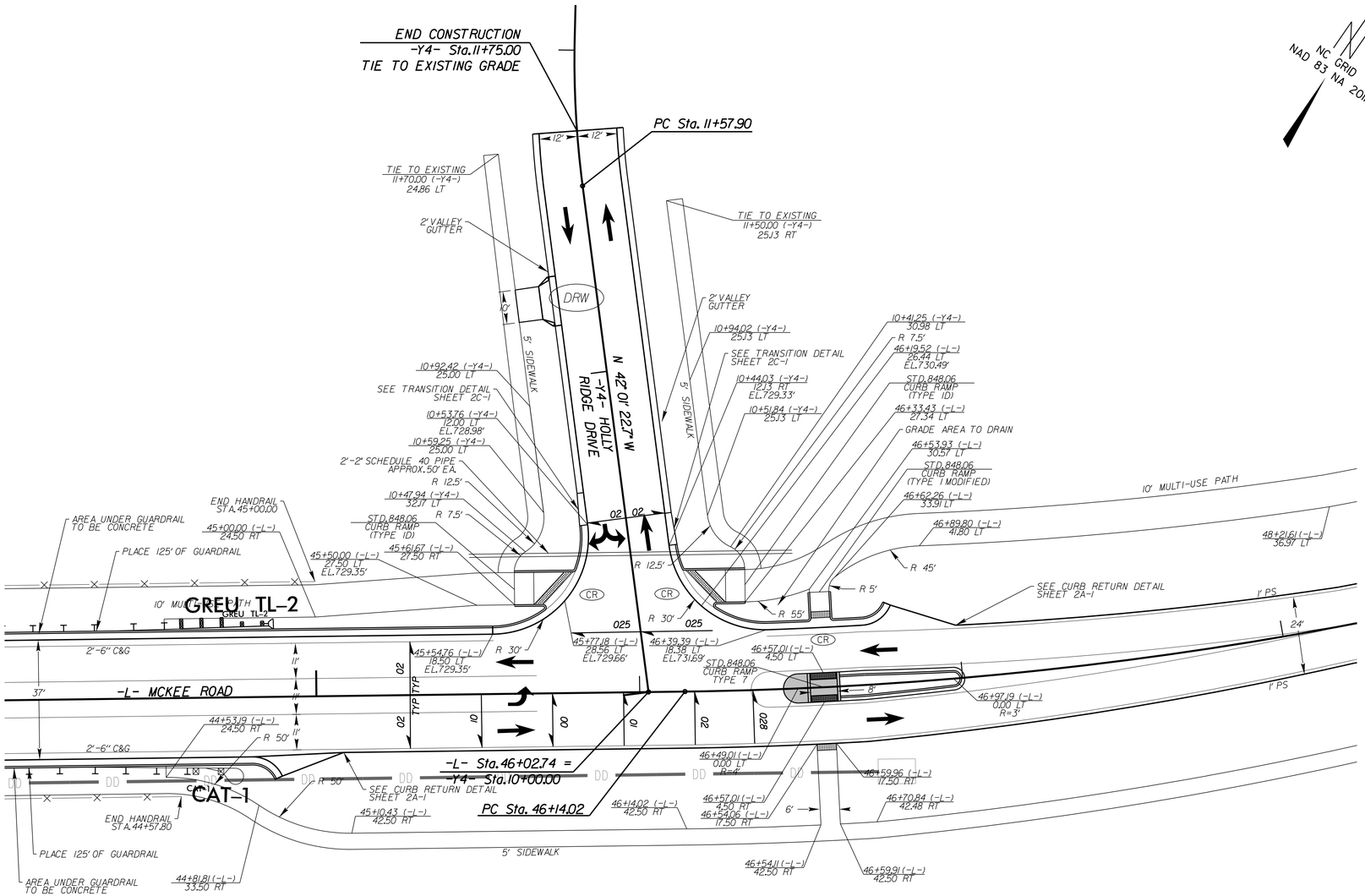
NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK D. MASTERSON, JR.

DocuSigned by: Frank Masterson 8/9/2024
60F82B06CFF1412...

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

INTERSECTION DETAIL SHEET

NC GRID NAD 83 NA 2011



20' 0' 20' 40'
10'
(ENGLISH)

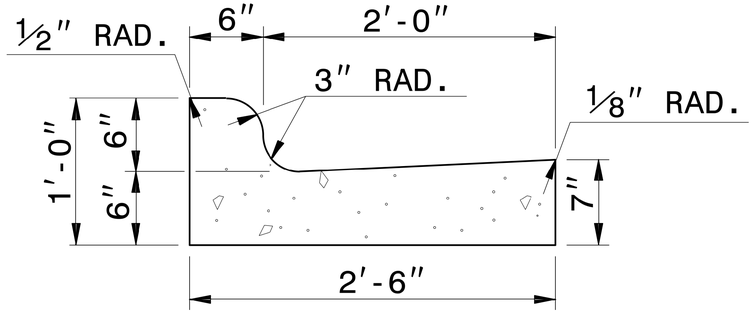
LEGEND

PROPOSED MONOLITHIC ISLAND

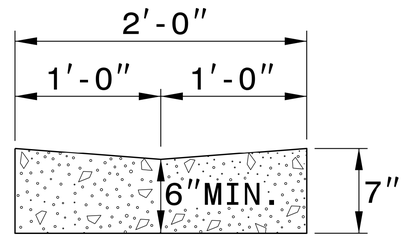
Docusign Envelope ID: 151737E6-A645-4D8A-B630-26AAB16CD433

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	2C-1

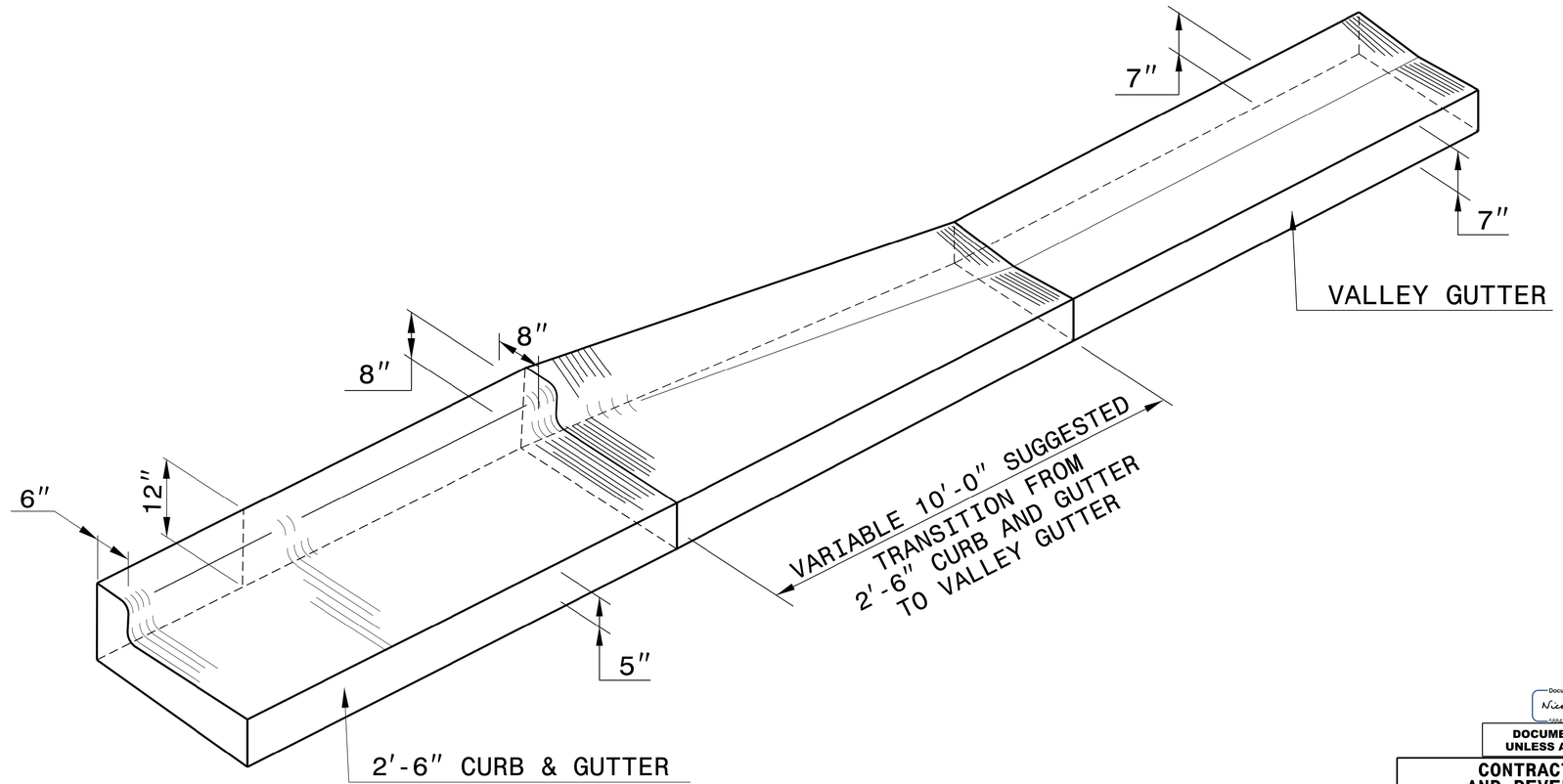
*NOTE: SEE STD. DWG. 846.01
FOR GENERAL NOTES



2'-6" CURB AND GUTTER



VALLEY GUTTER



ISOMETRIC VIEW OF TRANSITION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 33144 NICOLE M. HICKLER

8/8/2024

DocuSigned by:
Nicole M. Hickler
5868320734164C5...

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

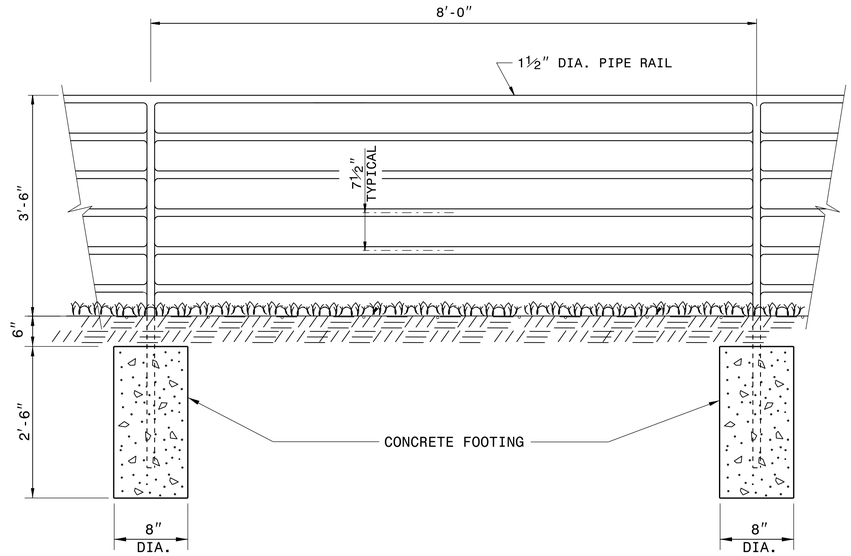
TRANSITION FROM 2'-6" CURB AND GUTTER TO VALLEY GUTTER

ORIGINAL BY: T.S.SPELL DATE: FEB.4,2009
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: w:usr/details/stand/cgtransit.dgn

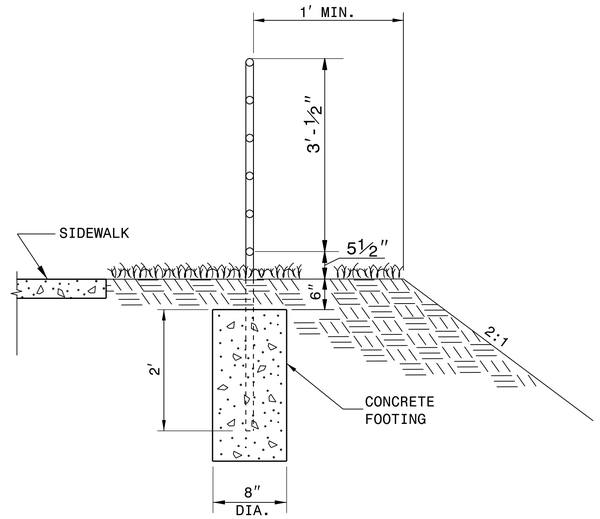
07-SEP-2017 08:20
C:\Contracts\Contracts\Special Details\ericward\usr\details\stand\c&g transition sections.dgn
jhowerton AI CSD-2825695

Docusign Envelope ID: A46401F3-35E0-4AE3-AD96-89F18AEECD63

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	2C-2



ELEVATION



SECTION VIEW

NOTES:

CONSTRUCT PROPOSED STEEL PIPE RAIL OF 1½″ DIAMETER SCHEDULE 40 PLAIN END GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A53.

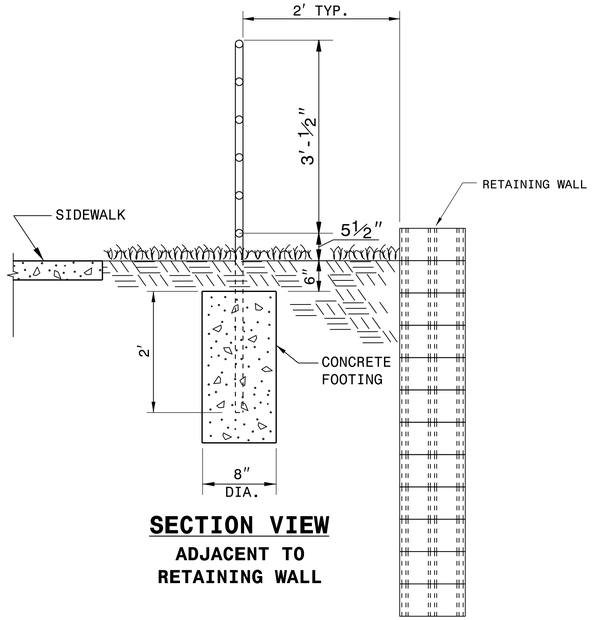
REPAIR GALVANIZING IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS SECTION 1076.

PAINT, IF REQUIRED BY THE ENGINEER, IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS SECTION 1080.

WELD IN ACCORDANCE WITH ARTICLE 1072-18 OF THE STANDARD SPECIFICATIONS.

USE CLASS 'B' CONCRETE FOR HANDRAIL FOOTINGS.

PLACEMENT OF HANDRAIL IN RELATION TO RETAINING WALL AND SIDEWALK MAY BE MODIFIED AS DIRECTED BY THE ENGINEER.



SECTION VIEW
ADJACENT TO RETAINING WALL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033144 NICOLE M. HUCKER

DocuSigned by: Nicole M. Hucker 5884323D3416405...

8/8/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

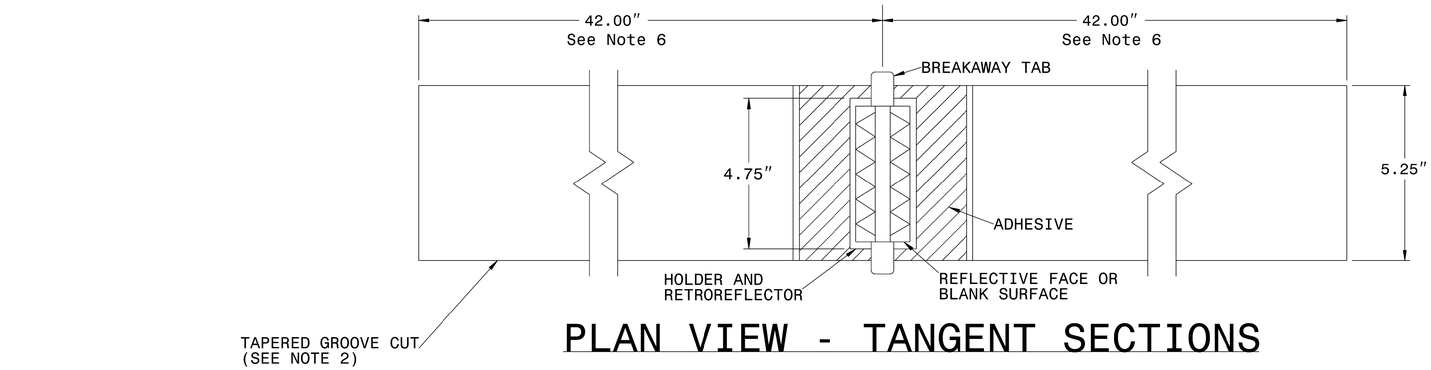
PEDESTRIAN SAFETY RAIL

ORIGINAL BY: _____ DATE: _____
MODIFIED BY: K.A. KEMPF DATE: 7-20-23
CHECKED BY: _____ DATE: _____
FILE SPEC.: details\kkempf\english\safety rails 2024.dgn

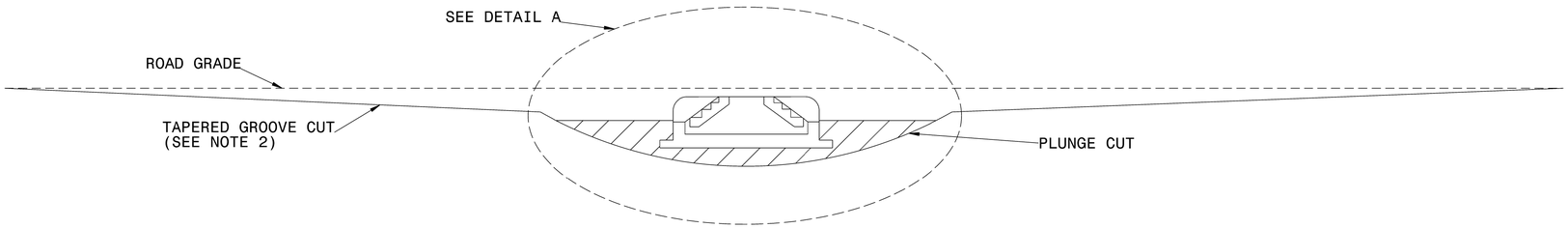
20-JUL-2023 12:35
safety rails 2024.dgn
kkempf AT CSD-320067

Docusign Envelope ID: 151737E6-A645-4D8A-B630-26AAB16CD433

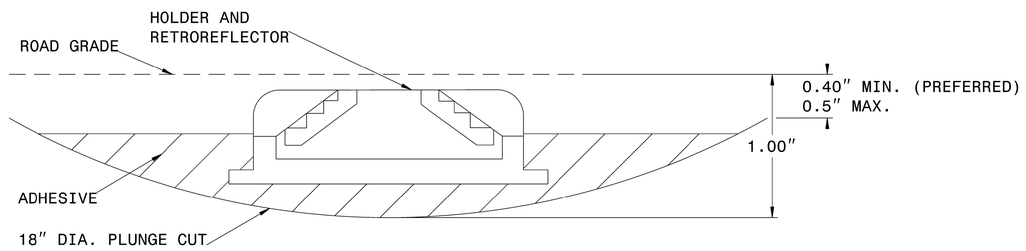
PROJECT REFERENCE NO.	SHEET NO.
U-4713A	2C-3



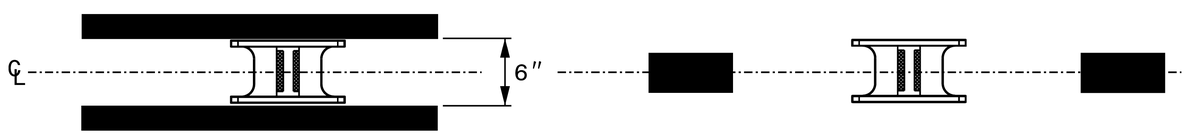
PLAN VIEW - TANGENT SECTIONS



PROFILE VIEW



DETAIL A



MARKER SPACING

NOTES:

1. ALL GROOVE EDGES SHALL BE AT LEAST 2 INCHES FROM ANY SEAM OR PAVEMENT JOINT
2. GROOVE CUTS MAY BE TAPERED OR BEVELED. TAPERED CUTS SHALL START AT ROAD LEVEL ON EACH END AND TAPER AT A FIXED RATE AS SHOWN ON THE PROFILE VIEW. BEVELED GROOVE CUTS SHALL BE 0.5″ MAXIMUM DEPTH (0.4″ PREFERRED), AND SHALL BE 0.4″ MINIMUM DEPTH AT BOTH ENDS OF THE PLUNGE CUT.
3. GROOVE AND PLUNGE CUT SHALL BE CLEAN AND DRY PRIOR TO PLACEMENT OF ADHESIVE.
4. THE EPOXY ADHESIVE SHALL BE THOROUGHLY MIXED UNTIL IT IS UNIFORM IN COLOR, AND APPLIED IN COLOR, AND APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
5. MARKER SHALL BE INSTALLED AS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS WITH THE BREAKWAY TABS RESTING ON THE PAVEMENT SURFACE. THE EPOXY SHALL BE FILLED TO THE LEVEL OF THE TOP OF THE MARKER HOLDER. EPOXY SHALL NOT TOUCH THE RETROREFELCTOR.
6. TOTAL GROOVE LENGTH MAY BE SHORTENED TO 54″ ON SHARP CURVES IF APPROVED BY THE ENGINEER. GROOVES SHALL NOT OVERLAP WITH LOOP DETECTOR WIRES.

NORTH CAROLINA PROFESSIONAL SEAL 33144 ENGINEER NICOLE M. HACKLER

DocuSigned by:
Nicole M. Hackler
5884323D3416405...

8/8/2024

CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-8950 FAX 919-250-4119

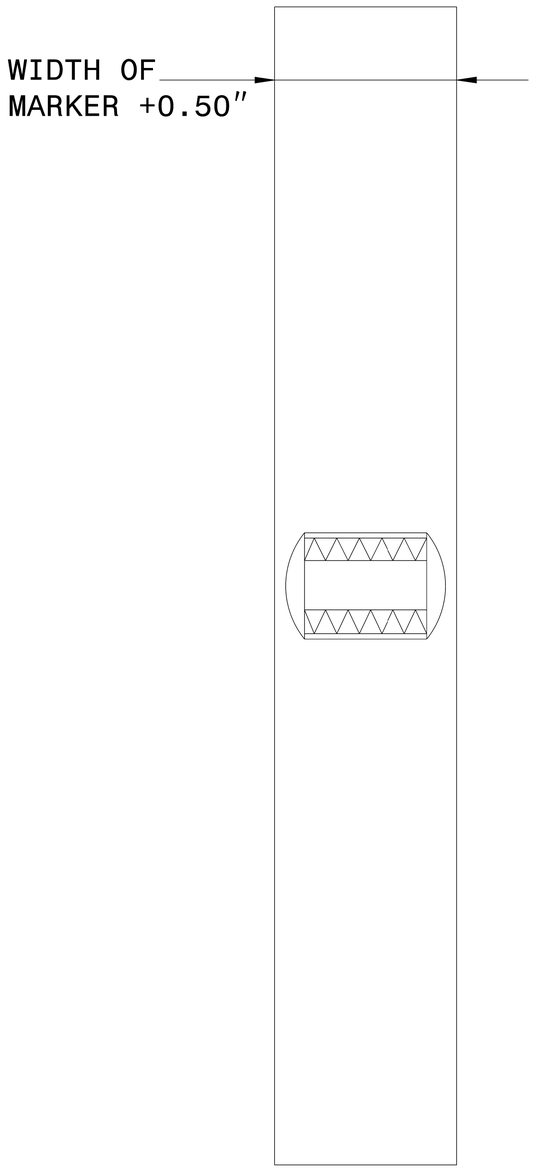
DETAIL OF INLAID CRADLE MARKER

ORIGINAL BY: rgwatson DATE: 02-06-2024
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.:

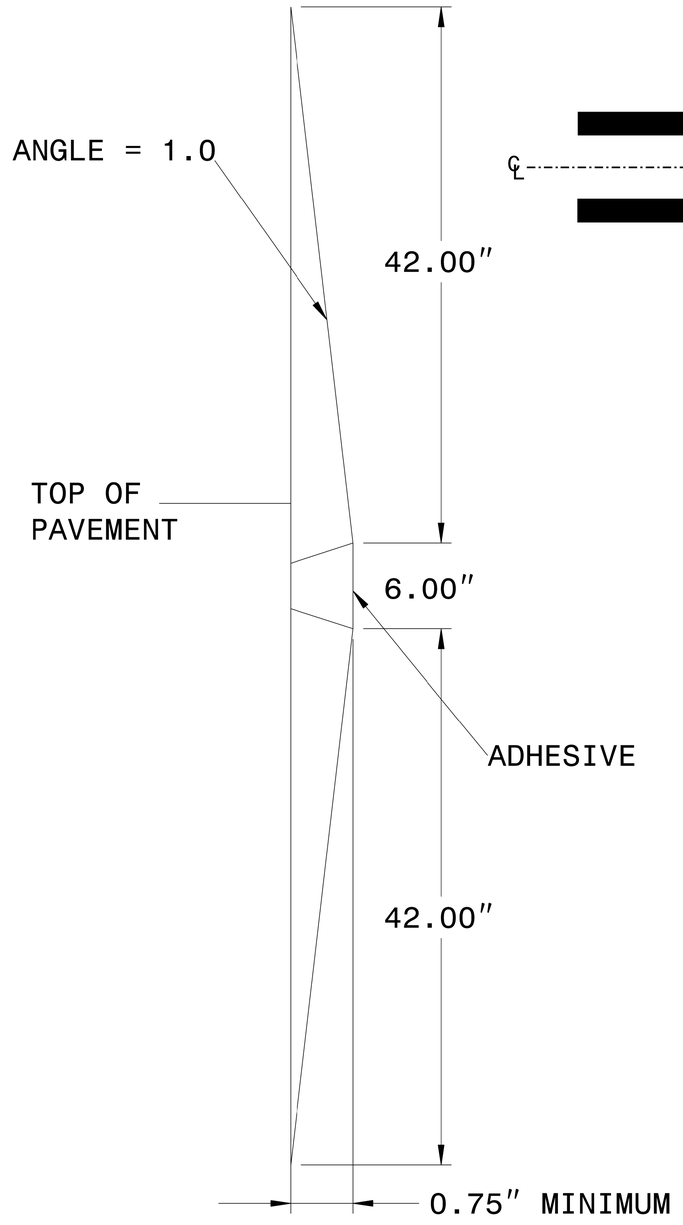
Docusign Envelope ID: 151737E6-A645-4D8A-B630-26AAB16CD433

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	2C-4

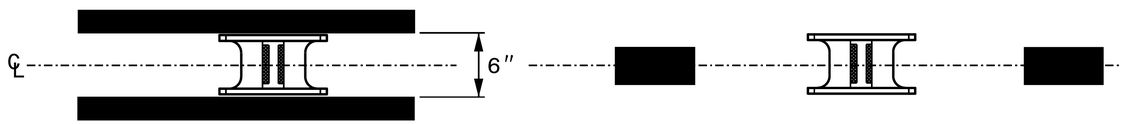
PLAN VIEW



SECTION VIEW



MARKER SPACING



NOTES:

1. THE PAVEMENT SHALL BE SAW CUT TO THE DIMENSIONS SHOWN.
2. THE SAW CUT AREA MUST BE DRY AND FREE OF DUST. DIRT OR ANY MATERIAL WHICH WILL ADVERSELY AFFECT THE BOND OF THE ADHESIVE.
3. INSTALL MARKERS WITH APPROVED ADHESIVE. ADHESIVE SHOULD NOT BE ALLOWED TO BUILD UP IN FRONT OF MARKER LENS.
4. THE MARKER AND THE ADHESIVE PAD SHALL NOT EXCEED THE TOP OF THE PAVEMENT SURFACE. DEPTH = 0.75″ MINIMUM.
5. RECESSED MARKERS INSTALLED ON CONCRETE PAVEMENT SHOULD BE INSTALLED A MINIMUM OF 2″ FROM THE PAVEMENT JOINT OR EDGE

DocuSigned by:
Nicole M. Haalter
588432303416405...
8/8/2024

CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-8950 FAX 919-250-4119

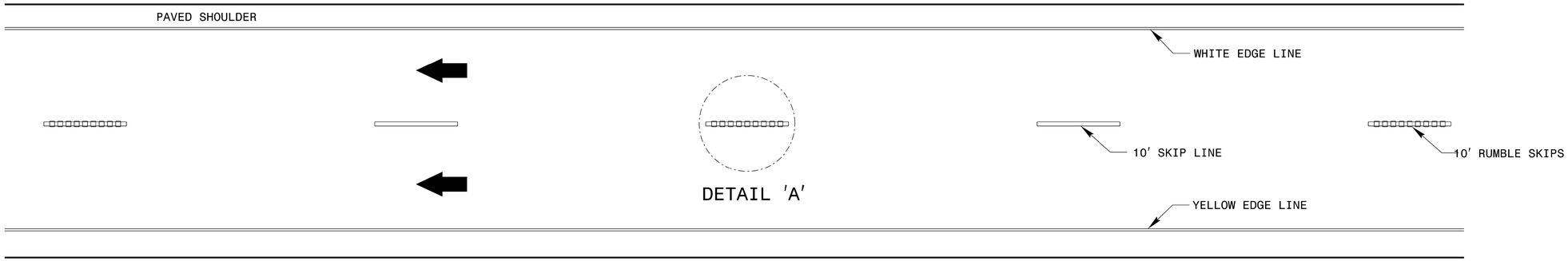
DETAIL OF INLAID RAISED PAVEMENT MARKER

ORIGINAL BY: rgwatson DATE: 02-06-2024
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: _____

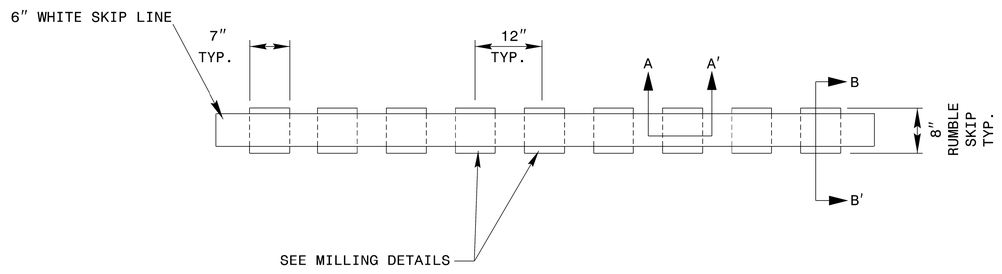
Docusign Envelope ID: 151737E6-A645-4D8A-B630-26AAB16CD433

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	2C-5

LANE TREATMENT

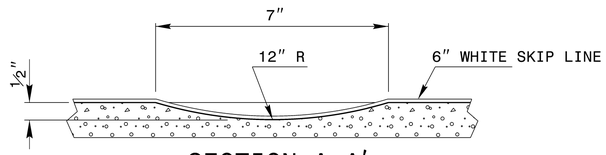


DETAIL 'A'

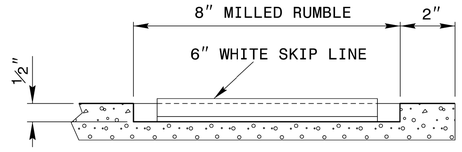


10' RUMBLE SKIP

MILLING/MARKING DETAILS



SECTION A-A'



SECTION B-B'

NOTES:

1) USING A VACUUM IN THE SAME OPERATION, REMOVE ALL DEBRIS FROM THE MILLINGS JUST PRIOR TO PLACING ANY PAVEMENT MARKINGS.

2) ENSURE GLASS BEADS ARE SPREAD UNIFORMLY OVER THE ENTIRE SURFACE OF PAVEMENT MARKING.

3) MILL RUMBLES EVERY OTHER SKIP AS SHOWN.

4) SEE PLANS FOR MARKING THICKNESS

DocuSigned by:
Nicole M. Hacker
5884323D34164C5...
8/8/2024

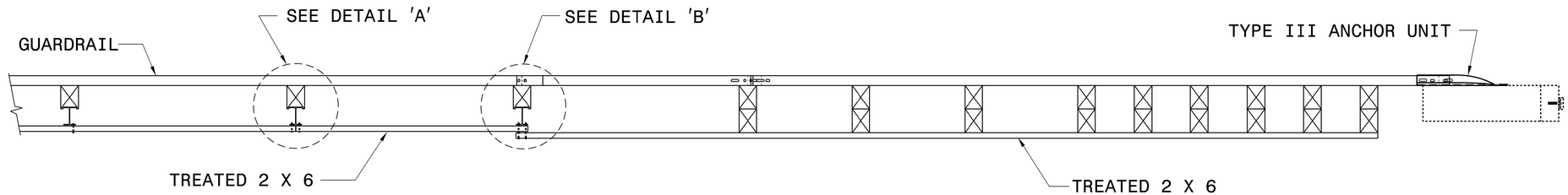
CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-8950 FAX 919-250-4119

DETAIL OF MILLED RUMBLE SKIPS

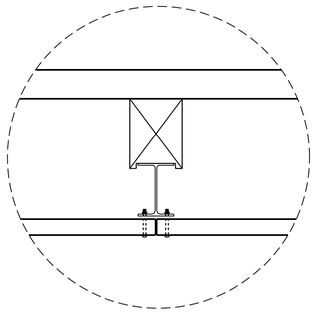
ORIGINAL BY: rgwatson DATE: 02-06-2024
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: _____

Docusign Envelope ID: 151737E6-A645-4D8A-B630-26AAB16CD433

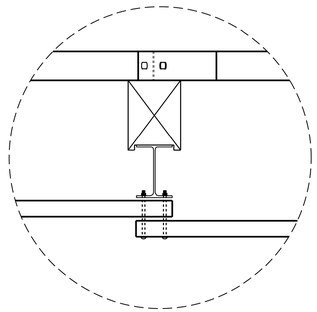
PROJECT REFERENCE NO.	SHEET NO.
U-4713A	2C-6



PLAN

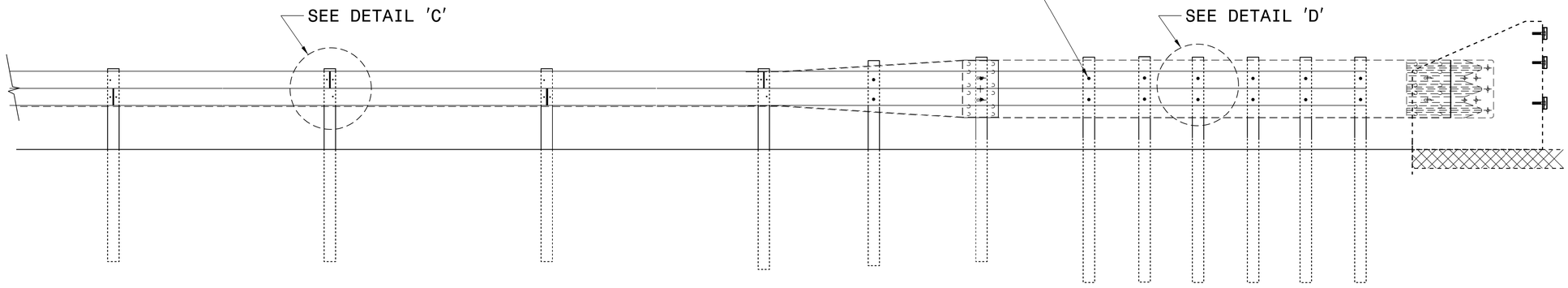


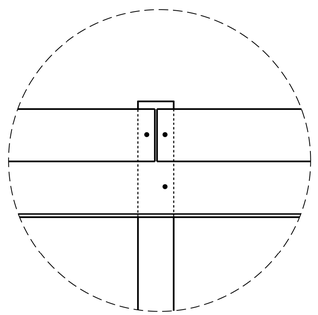
DETAIL 'A'



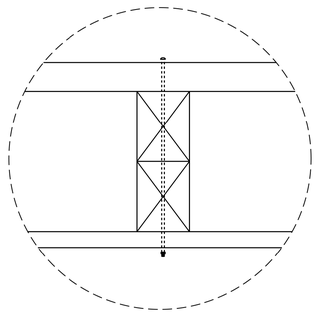
DETAIL 'B'

USE BOLTS AND NUTS FROM TYPE III ANCHOR UNIT TO FASTEN 2 X 6 WOOD RAILS TO THE WOOD POSTS - BOLTS MAY NEED TO BE LENGTHENED TO ACCOMMODATE FOR THE 2 X 6 WOOD RAILS.





DETAIL 'C'



DETAIL 'D'

ELEVATION

NOTES:

1. USE #2 SYP TREATED 2 X 6 FOR WOOD RAIL.
2. USE GUARDRAIL BOLTS TO FASTEN WOOD RAIL TO GUARDRAIL POSTS. SEE ROADWAY STD.NO.862.02.
3. THE MOUNTING HEIGHT OF THE WOOD RAIL TO BE DETERMINED IN THE FIELD.
4. PLACE THE TREATED 2 X 6 WOOD RAIL AS DIRECTED BY THE ENGINEER.
5. DO NOT PLACE WOOD RAIL WITHIN THE PAY LIMITS OF THE GREU.

NORTH CAROLINA PROFESSIONAL SEAL 33144 ENGINEER NICOLE M HACKLER

DocuSigned by: Nicole M. Hackler 588432303416405...

8/8/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT
PLANS AND STANDARDS SECTION
Office 919-707-6950 FAX 919-250-4119

DETAIL OF WOOD RUB RAIL

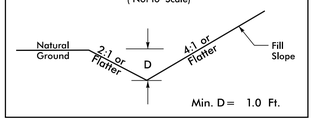
ORIGINAL BY: STD.862 DATE: 1-25-12
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: jhowerton/Wood Rail on Back of Guardrail

23-AUG-2018 09:52
S:\Contracts\Contracts\Special Details\jhowerton\Wood Rail on the Back of Guardraildgn
jhowerton AT CSD-212975

Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC

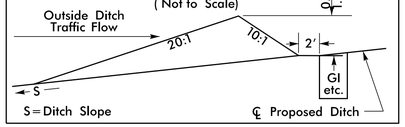
5/14/99

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



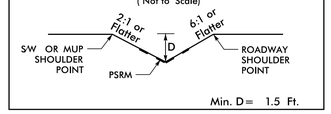
FROM STA. 13+56 TO STA. 15+25 –L– (LT)
FROM STA. 15+25 TO STA. 17+00 –L– (LT)
FROM STA. 54+00 TO STA. 56+50 –L– (RT)
FROM STA. 56+50 TO STA. 57+50 –L– (RT)

DETAIL 2
FALSE SUMP
(Not to Scale)



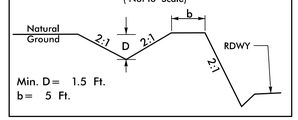
STA. 26+68 –L– (LT)
STA. 30+28 –L– (RT)

DETAIL 3
CUT DITCH w/ PSRM
(Not to Scale)



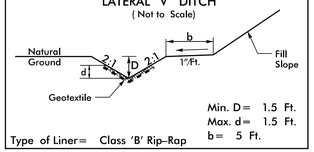
FROM STA. 38+00 TO STA. 42+40 –L– (LT)

DETAIL 4
BERM 'V' DITCH
(Not to Scale)



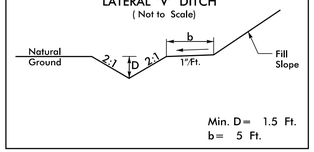
FROM STA. 25+00 TO STA. 28+70 –L– (RT)
FROM STA. 28+70 TO STA. 30+00 –L– (RT)
FROM STA. 30+00 TO STA. 30+40 –L– (RT)
FROM STA. 51+50 TO STA. 54+00 –L– (RT)

DETAIL 5
LATERAL 'V' DITCH
(Not to Scale)



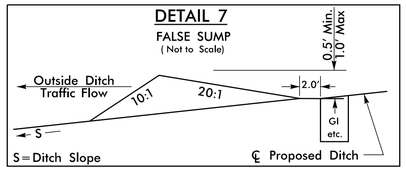
FROM STA. 42+75 TO STA. 43+55 –L– (LT)
FROM STA. 42+50 TO STA. 44+75 –L– (RT)
FROM STA. 43+67 TO STA. 45+50 –L– (LT)

DETAIL 6
LATERAL 'V' DITCH
(Not to Scale)



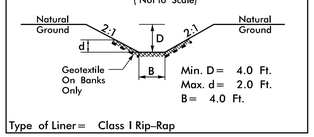
FROM STA. 57+75 TO STA. 59+85 –L– (LT)

DETAIL 7
FALSE SUMP
(Not to Scale)



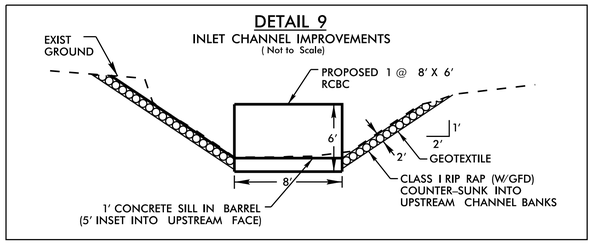
STA. 30+28 –L– (LT)
STA. 36+15 –L– (RT)

DETAIL 8
STANDARD BASE DITCH
(Not to Scale)



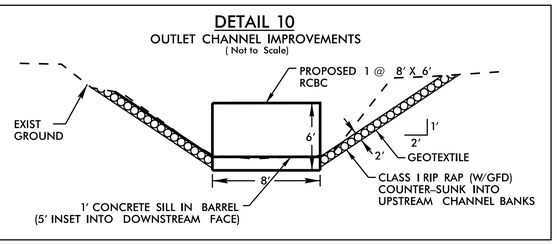
STA. 60+50 –L– (RT)

DETAIL 9
INLET CHANNEL IMPROVEMENTS
(Not to Scale)



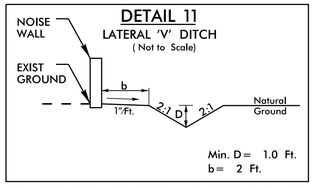
STA. 43+70 –L– (RT)

DETAIL 10
OUTLET CHANNEL IMPROVEMENTS
(Not to Scale)



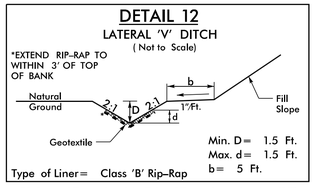
STA. 43+55 –L– (LT)

DETAIL 11
LATERAL 'V' DITCH
(Not to Scale)



FROM STA. 30+40 TO STA. 34+50 –L– (RT)
FROM STA. 34+50 TO STA. 35+95 –L– (RT)
FROM STA. 35+95 TO STA. 37+50 –L– (RT)
FROM STA. 37+50 TO STA. 40+25 –L– (RT)

DETAIL 12
LATERAL 'V' DITCH
(Not to Scale)



FROM STA. 42+00 TO STA. 42+50 –L– (RT)

Kimley»Horn © 2024
200 S. TRYON ST. • CHARLOTTE, NC 28202

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	2D-1

RW SHEET NO.

RIGHT-OF-WAY REV.

CONST. REV.

ROADWAY ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK D. MASTERSON, JR.
DocuSigned by: Frank Masterson 8/9/2024

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 032615 ENGINEER JASON D. LAWING
DocuSigned by: Jason Lawing 8/9/2024

DocuSigned by: 60FB2BD...

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

K:\CHL_PRJ\011036426 - McKee Rd Ext\Roadway\Pro\U-4713A_rdy_dsh_2D-1.dgn

7/31/2024

NOISE WALL DETAIL SHEET

Kimley»Horn ©2024
200 S. TRYON ST. • CHARLOTTE, NC 28202

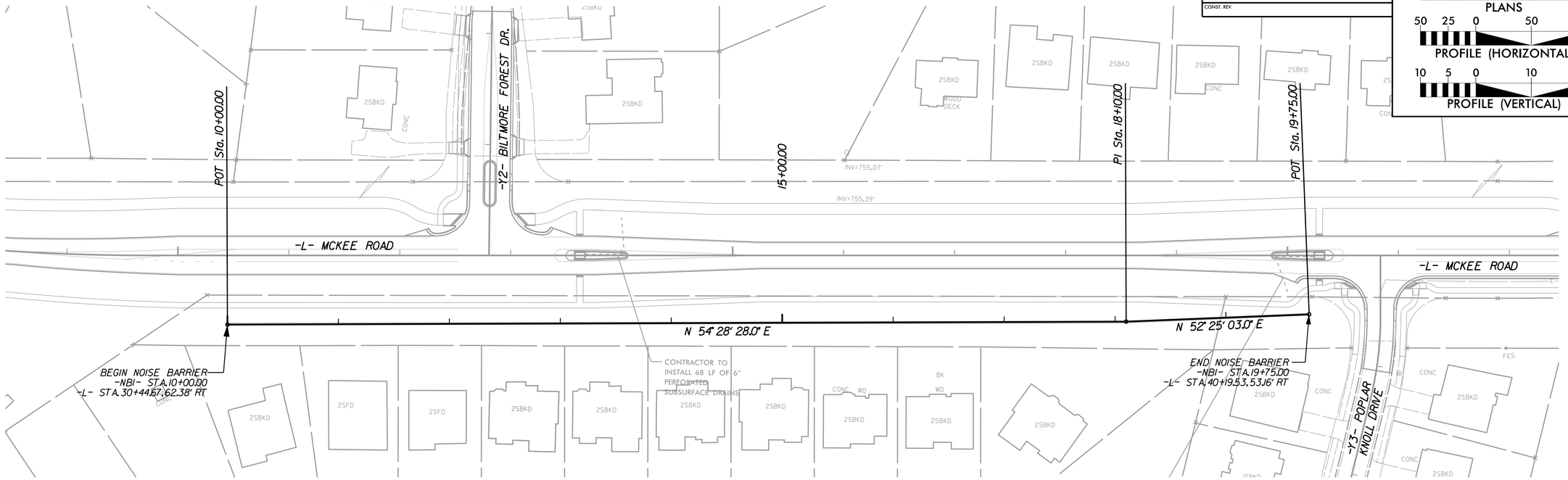
RIGHT-OF-WAY REV.

CONST. REV.

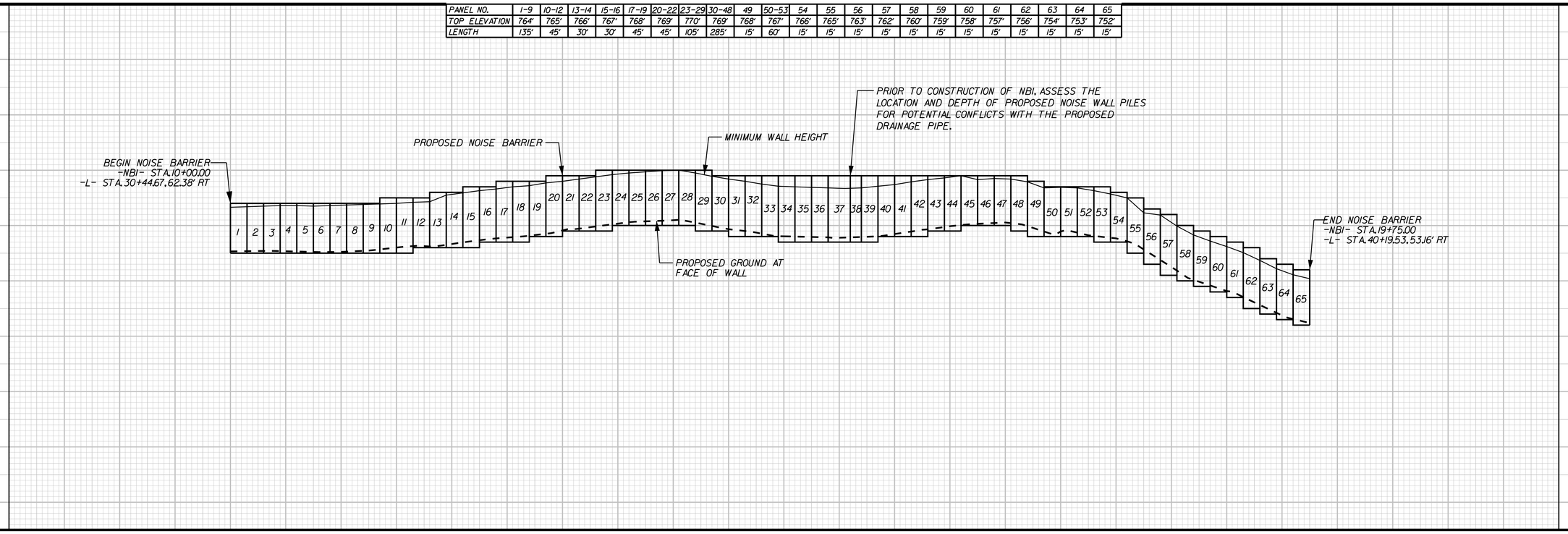
PROJECT REFERENCE NO.	SHEET NO.
U-4713A	2N-1

R/W SHEET NO.

50 25 0 50 100
PLANS
50 25 0 50 100
PROFILE (HORIZONTAL)
10 5 0 10 20
PROFILE (VERTICAL)



PANEL NO.	1-9	10-12	13-14	15-16	17-19	20-22	23-29	30-48	49	50-53	54	55	56	57	58	59	60	61	62	63	64	65
TOP ELEVATION	764'	765'	766'	767'	768'	769'	770'	769'	768'	767'	766'	765'	763'	762'	760'	759'	758'	757'	756'	754'	753'	752'
LENGTH	135'	45'	30'	30'	45'	45'	105'	285'	15'	60'	15'	15'	15'	15'	15'	15'	15'	15'	15'	15'	15'	15'



K:\CHL_PRJ\011036426 - McKee Rd Ext\Roadway\Pro\Noise Wall\U-4713A_Noise Wall Envelope.dgn

7/31/2024

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	3B-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

"N" = DISTANCE FROM FACE OF CURB TO FACE OF GUARDRAIL.
TOTAL BERM WIDTH = DISTANCE FROM FACE OF CURB TO HINGE POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.

GUARDRAIL SUMMARY

G = GATING IMPACT ATTENUATOR TL-3 OR TL-2
NG = NON-GATING IMPACT ATTENUATOR TL-3 OR TL-2

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM FOC	TOTAL BERM WIDTH	FLARE LENGTH		W		ANCHORS								IMPACT ATTENUATOR		SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	XI MOD	XI	GREU, TL-2	GREU, MEDIAN	TYPE III	CAT-1	VI MOD	BIC	AT-1	G	NG			
-L-	42+62.2	44+86.97	LT	225			43+46.16	43+71.74	0	16	50	50	1	1			1			1								
-L-	42+50.91	44+77.19	RT	225			43+57.22	43+82.78	0	11	50	50	1	1			1			1								
-L- (TMP)	19+17.00	19+50.00	RT	0							50	50	1	1											1			TEMPORARY IMPACT ATTENUATORS
-L- (TMP)	19+64.00	19+96.00	RT	0							50	50	1	1											1			TEMPORARY IMPACT ATTENUATORS
			SUBTOTAL	450																								
	LESS ANCHOR	DEDUCTIONS																										
	GREU TL-2	2 @ 25.00'	=	50																								
	CAT-1	2 @ 6.25'	=	12.5																								
			TOTAL	387.5													2			2					2			
			SAY	400													2			2					2			

ADDITIONAL GUARDRAIL POSTS = 5

PAVEMENT REMOVAL SUMMARY

IN SQUARE YARDS

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD^2
-L-	STA 17+44.00	STA 20+97.00	LT	1839
-Y2-	STA 10+89.00	STA 12+03.00	LT/RT	109
-L- (TMP)	STA 16+52.34	STA 20+47.01	LT	336
TOTAL:				2284
SAY:				2300

CONCRETE SIDEWALK REMOVAL SUMMARY

IN SQUARE YARDS

LINE	STATION TO STATION	LOCATION	YD^2
-L-	16+59.47 TO 20+98.55	LT	246
TOTAL			246
SAY			250

NOTE: APPROXIMATE QUANTITIES ONLY. FINE GRADING, CLEARING AND GRUBBING, AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING."

7/31/2024 K:\CHL_PRJ\DII\0364426 - McKee Rd Ext\Roadway\Proj\U-4713A_rdy_psh_sum.dgn

COMPUTED BY: A.WEEKS DATE: 01/15/24
CHECKED BY: F. MASTERSON DATE: 01/15/24

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	3B-2

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK
IN CUBIC YARDS

LOCATION				UNCLASSIFIED EXCAVATION	UNDERCUT EXCAVATION	EMBANKMENT + %	BORROW	TOTAL WASTE
SUMMARY (PHASE 1)								
–L– (LT/RT)	22+50.00	TO	61+00.00	33,706	1,350	22,400	0	12,656
-Y2– (LT/RT)	10+16.50	TO	12+20.00	275	0	39	0	236
-Y3– (LT/RT)	10+16.50	TO	11+04.00	265	0	2	0	263
-Y4– (LT/RT)	10+16.50	TO	11+75.00	73	0	357	284	0
SUBTOTAL				34,319	1,350	22,798	284	13,155
SUMMARY (PHASE 2)								
–L– (LT/RT)	21+50.00	TO	22+50.00	184	0	0	0	184
–Y1– (LT)	18+50.89	TO	22+50.00	96	0	146	50	0
–L– (LT)	13+56.15	TO	20+50.00	760	0	5	0	755
–CURB C–	10+00.00	TO	11+40.00	233	0	0	0	233
–CURB D–	10+00.00	TO	11+00.00	68	0	31	0	37
SUBTOTAL				1,341	0	182	50	1,209
SUMMARY (PHASE 3)								
–L– (RT)	13+56.15	TO	21+50.00	2,392	0	107	0	2,285
–Y1– (RT)	21+00.00	TO	22+50.00	242	0	0	0	242
–CURB B–	10+00.00	TO	10+50.00	136	0	0	0	136
SUBTOTAL				2,770	0	107	0	2,663
SUMMARY (PHASE 4)								
–L– (LT)	17+00.00	TO	22+50.00	3,563	0	0	0	3,563
–Y1– (RT)	18+50.89	TO	21+00.00	50	0	2	0	48
SUBTOTAL				3,613	0	2	0	3,611
TOTAL				42,043	1,350	23,089	334	20,638
ADDITIONAL UNDERCUT				0	2,250	2,588	2,588	2,250
LOSS DUE TO CLEARING AND GRUBBING				–3800	0	0	0	–3800
WASTE IN LIEU OF BORROW				0	0	0	–2,921	–2,921
PROJECT TOTALS:				38,243	3,600	25,676	0	16,167
GRAND TOTALS:				38,243		25,676		16,167
SAY:				39,000				
* UNCLASSIFIED EXCAVATION – ACCEPTABLE, BUT NOT TO BE USED IN TOP 3' OF EMBANKMENT OR BACKFILL (1,200 CY):								
–L– 29+00.00 TO –L– 30+50.00 (800 CY)								
–L– 41+50.00 TO –L– 42+00.00 (400 CY)								
ESTIMATED SELECT GRANULAR MATERIAL				3,350	CY			
ESTIMATED SHALLOW UNDERCUT EXCAVATION				1,250	CY			

ESTIMATED GEOTEXTILE FOR SOIL STABILIZATION	3,350	SY	(CONTINGENCY, AS DIRECTED BY THE ENGINEER)
ESTIMATED GEOTEXTILE FOR SOIL STABILIZATION	1,400	SY	(TOTAL FROM EROSION CONTROL PLANS)
ESTIMATED GEOTEXTILE FOR SUBGRADE STABILIZATION	21,000	SY	(CONTINGENCY, AS DIRECTED BY THE ENGINEER)
ESTIMATED STABILIZER AGGREGATE	250	TONS	(CONTINGENCY, AS DIRECTED BY THE ENGINEER)
ESTIMATED CLASS IV SUBGRADE STABILIZATION	2,500	TONS	(CONTINGENCY, AS DIRECTED BY THE ENGINEER)

NOTE: EARTHWORK QUANTITIES ARE CALCULATED BY THE ROADWAY DESIGN UNIT. THESE EARTHWORK QUANTITIES ARE BASED IN PART ON SUBSURFACE DATA PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT.

NOTE: APPROXIMATE QUANTITIES ONLY. CLEARING AND GRUBBING, FINE GRADING, AND REMOVAL OF ASPHALT PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING".

8/5/2024 K:\CHL_PRJ\01I036426 – McKee Rd Ext\Roadway\Proj\U-4713A_rdy_dsh_sum.dgn

LL26834

COMPUTED BY: ANDREW J WEEKS DATE: 02/16/2024

CHECKED BY: JASON LAWING, PE DATE: 02/16/2024

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
U-4713A	3D-1

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

| LINE & STATION | OFFSET | | STRUCTURE NUMBER FROM | STRUCTURE NUMBER TO | TOP ELEVATION FT. | INVERT ELEVATION FT. | INVERT ELEVATION FT. | MINIMUM REQUIRED SLOPE % | Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) SIZE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | DO NOT USE RCP | DO NOT USE CSP | DO NOT USE CAAP | DO NOT USE HDPE | DO NOT USE PVC | C. S. PIPE THICKNESS OR GAUGE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS IV 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS V 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY | QUANTITIES FOR DRAINAGE STRUCTURES NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B) A 0' THRU 5' EACH | B 5' THRU 10' LIN. FT. | B 10' AND ABOVE LIN. FT. | C.B. STD. 840.01 OR STD. 840.02 | FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E | F | G | CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06 | C.B. STD. 852.05 | OPEN THROAT C.B. STD. 840.04 OR STD. 840.05 | CONCRETE BRIDGE APPROACH D.I. STD. 840.13 | D.I. STD. 840.14 OR STD. 840.15 | D.I. FRAME AND GRATES STD. 840.16 | G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26 | G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27 | G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28 | G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20 | G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22 | G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24 | G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29 | DRIVEWAY D.I. STD. 840.30 | FRAME W/ GRATE FOR DRIVEWAY STD. 840.30 | J.B. STD. 840.31 OR STD. 840.32 | ANGLED VANE GRATES AND FRAMES STD. 840.33 | T.B.J.B. STD. 840.34 | T.B.D.I. STD. 840.35 | SPRING BOX STD. 840.41 | M.H. STD. 840.51, STD. 840.52, OR STD. 840.53 | M.H. FRAME AND COVER STD. 840.54 | ADJUST D.I. | G.D.I. TYPE "A" STD. 840D17 | 15" C.S. ELBOW | FLOWABLE FILL CY | CONCRETE COLLARS CL. "B" STD. 840.72 CY | CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY | PIPE REMOVAL LIN. FT. | REMARKS |
|---|---|---

LL26834

COMPUTED BY:	ANDREW J WEEKS	DATE:	02/16/2024
CHECKED BY:	JASON LAWING, PE	DATE:	02/16/2024

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
U-4713A	3D-2

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

| LINE & STATION | OFFSET | | STRUCTURE NUMBER FROM | STRUCTURE NUMBER TO | TOP ELEVATION FT. | INVERT ELEVATION FT. | INVERT ELEVATION FT. | MINIMUM REQUIRED SLOPE % | Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) SIZE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | DO NOT USE RCP | DO NOT USE CSP | DO NOT USE CAAP | DO NOT USE HDPE | DO NOT USE PVC | C. S. PIPE SIZE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS IV SIZE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS V SIZE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY | QUANTITIES FOR DRAINAGE STRUCTURES NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B) A: 0' THRU 5' EACH | B: 5' THRU 10' LIN. FT. | B: 10' AND ABOVE LIN. FT. | C.B. STD. 840.01 OR STD. 840.02 | FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E | F | G | CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06 | C.B. STD. 852.05 | OPEN THROAT C.B. STD. 840.04 OR STD. 840.05 | CONCRETE BRIDGE APPROACH D.I. STD. 840.13 | D.I. STD. 840.14 OR STD. 840.15 | D.I. FRAME AND GRATES STD. 840.16 | G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26 | G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27 | G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28 | G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20 | G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22 | G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24 | G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29 | DRIVEWAY D.I. STD. 840.30 | FRAME W/ GRATE FOR DRIVEWAY STD. 840.30 | J.B. STD. 840.31 OR STD. 840.32 | ANGLED VANE GRATES AND FRAMES STD. 840.33 | T.B.J.B. STD. 840.34 | T.B.D.I. STD. 840.35 | SPRING BOX STD. 840.41 | M.H. STD. 840.51, STD. 840.52, OR STD. 840.53 | M.H. FRAME AND COVER STD. 840.54 | ADJUST D.I. | G.D.I. TYPE "A" STD. 840D17 | 15" C.S. ELBOW | FLOWABLE FILL CY | CONCRETE COLLARS CL. "B" STD. 840.72 CY | CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY | PIPE REMOVAL LIN. FT. | REMARKS |
|---|---|---|---

LL26834

COMPUTED BY: ANDREW J WEEKS DATE: 02/16/2024

CHECKED BY: JASON LAWING, PE DATE: 02/16/2024

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
U-4713A	3D-3

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 54 INCHES & OVER)

| LINE & STATION | OFFSET | STRUCTURE NUMBER FROM | STRUCTURE NUMBER TO | TOP ELEVATION FT. | INVERT ELEVATION FT. | INVERT ELEVATION FT. | MINIMUM REQUIRED SLOPE % | Side Drain Pipe (RCP, CSP, CAAP, HDPE, or PVC) SIZE: 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | Side Drain Pipe THICKNESS OR GAUGE: DO NOT USE RCP | DO NOT USE CSP | DO NOT USE CAAP | DO NOT USE HDPE | DO NOT USE PVC | C. S. PIPE SIZE: 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | C. S. PIPE THICKNESS OR GAUGE: .064 | .064 | .064 | .079 | .079 | .109 | .109 | R. C. PIPE CLASS III SIZE: 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | R. C. PIPE CLASS IV SIZE: 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS V SIZE: 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | ENDWALLS STD. 838.11, 838.13 (UNLESS NOTED OTHERWISE) CY | REINFORCED ENDWALLS CY | DRAINAGE STRUCTURE MASONRY CY | QUANTITIES FOR DRAINAGE STRUCTURES NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B) 0' THRU 5' EACH | A 5' THRU 10' LIN. FT. | B 10' AND ABOVE LIN. FT. | C.B. STD. 840.01 OR STD. 840.02 | FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E | F | G | CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06 | C.B. STD. 852.05 | OPEN THROAT C.B. STD. 840.04 OR STD. 840.05 | CONCRETE BRIDGE APPROACH D.I. STD. 840.13 | D.I. STD. 840.14 OR STD. 840.15 | D.I. FRAME AND GRATES STD. 840.16 | G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26 | G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27 | G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28 | G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20 | G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20 | T.B.D.I. STD. 840.35 | T.B.D.I. FOR STEEL GRATES STD. 840.36 | M.H. STD. 840.51, STD. 840.52, OR STD. 840.53 | M.H. FRAME AND COVER STD. 840.54 | FLOWABLE FILL CY | CONCRETE COLLARS CL. "B" STD. 840.72 CY | CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY | PIPE REMOVAL LIN. FT. | REMARKS |
|---|---|---

COMPUTED BY: A. Recker	DATE: 6/25/2024
CHECKED BY: F. Masterson	DATE: 6/25/2024

(5-15-18)

PROJECT NO.	SHEET NO.
39077.1.2 (U-4713A)	3G-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
-L-	33+67	34+02	CL	SD	68
-L-	39+89	4023	CL	SD	68
-L-	46+63	46+97	CL	SD	64
CONTINGENCY					500
				TOTAL LF:	700

*UD = Underdrain
*BD = Blind Drain
*SD = Subsurface Drain

SUMMARY OF GEOTEXTILE FOR SUBGRADE STABILIZATION

LINE	Station	Station	Geotextile for Subgrade Stabilization SY	Class IV Subgrade Stabilization TONS
-L-	16+50	61+50	17250	
CONTINGENCY, PDI			2250	
CONTINGENCY, GEOTECH. REC.			1500	
		TOTAL SY/TONS:	21000	

*Total tons of "Class IV Subgrade Stabilization" is only the estimated quantity for pavement stabilization and may only represent a portion of the subgrade stabilization quantity shown in the Item Sheets of the Proposal.

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

LINE	Station	Station	Aggregate Type* ASU(1/2)/ AST	Aggregate Thickness INCHES [8" for ASU(2)]	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Soil Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
-L-	Varies	Varies					1350		
EROSION CONTROL PLANS TOTAL							1400		
CONTINGENCY, PDI					750	1500		250	
CONTINGENCY, GEOTECH. REC.			ASU (1)	12	500	1000	2000		
			TOTAL CY/TONS/SY:		1250	2500**	4750**	250	0

*ASU(1/2) = Aggregate Subgrade (Type 1 or 2)
*AST = Aggregate Stabilization
**Total tons of "Class IV Subgrade Stabilization" and total square yards of "Geotextile for Soil Stabilization" are only the estimated quantities for ASU(1/2)/AST and may only represent a portion of the subgrade stabilization and geotextile quantities shown in the Item Sheets of the Proposal.

7/8/2024 K:\CHL_PRJ\0II0364\26 - McKee Rd Ext\Roadway\Proj\U-4713A_rdy_psh_sum.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	3P-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PARCEL INDEX SHEET

PARCEL NO.	SHEET NO.	PROPERTY OWNERS NAMES
1	4	Michael Donihee & Laura D. Donihee
2	4,8	Town of Matthews
3	4	Christopher M. Cobb & Katherine P. Cobb
4	4	Patricia G. Willis & Kenneth W. Zoeller
5	4	Trotter Properties, LLC
6	4,5,6,8	Equitable Holdings, LLC
7	4,5	Matthews Plantation Homeowners Association
7B	5	Matthews Plantation Homeowners Association
7C	5, 6	Matthews Plantation Homeowners Association
8	4	Winston L. Armentrout, Jr. & Susan A. Armentrout
9	4	David S. Souza Duarte & Selena Lynn Ducharme
10	4,5	Stephen R. Vaughn & Moira C. Vaughn
11	5,6	Poplar Forest Owners Association
12	5	Stuart L. A. Moffat & Julie H. Moffat
15	5	Gerald Coleman Broomer & Donna Fay Broomer
16	6	2015-3 IH2 Borrower, LP
17	6	William P. Jacobson & Amanda A. Kohout
18	6	Martin Phillip Perkins, Jr. & Carol Melton Perkins
19	6	Gavin J. Candish & Sherry J. Candish
20	6,7	Withrow Ventures-Monroe Road, LLC
21	6	Henry J. Nicholson, Jr. & Frances Jeanette Nicholson
22	7	Trotter Properties, LLC
24	7	Withrow Ventures-Monroe Road, LLC
25	7	Withrow Ventures-Monroe Road, LLC
26	8	Zhimin Chen & Yifan Deng
27	4,5	C Edward Barefoot & Cathy G Barefoot
28	5	Joshua Chad Fisher & Lauren E Fisher
29	5	Michael L. Lavelle & Audrey A. Lavelle
30	5	Travis G. Klein & Audry Karppinen Klein
31	5	Robert D. Cox & Donna J. Cox
33	5,6	Katina Moore Holden
35	8	Everette Brown & Beverly Brown

K:\CHL_PRJ\011036426 - McKee Rd Ext\Roadway\Pro\NU-4713A_rdy_psh_3P-1.dgn
7/8/2024

Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	4
RW SHEET NO.	

Kimley»Horn © 2024
200 S. TRYON ST. • CHARLOTTE, NC 28202

RIGHT-OF-WAY REV.

CONST. REV.

ROADWAY ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK D. MASTERSON, JR.
Docusigned by: Frank Masterson 8/9/2024

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 032615 ENGINEER JASON D. LAWING
Docusigned by: Jason Lawing 8/9/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83 NC GRID NA 2011

-L-

PI Sta 16+54.35	PI Sta 19+43.93	PI Sta 24+27.48
△ = 2° 44' 26.5" (RT)	△ = 7° 17' 25.1" (LT)	△ = 2° 44' 08.5" (RT)
D = 1° 33' 09.8"	D = 4° 32' 50.2"	D = 2° 58' 07.3"
L = 176.51'	L = 160.32'	L = 321.77'
T = 88.27'	T = 80.27'	T = 161.26'
R = 3,690.00'	R = 1,260.00'	R = 1,930.00'
DS = 50 MPH	DS = 50 MPH	DS = 40 MPH
SE = 2.40	SE = 3.80	SE = 2.60
RO = 55	RO = 55	RO = 47

BEGIN CONSTRUCTION
-L- Sta.12+73.00

BEGIN PROJECT U-4713A
-L- Sta.13+56.15

15+00

MATCHLINE -Y1- STA 18+00 (SEE SHEET 8)

BEGIN CONSTRUCTION
-Y1- Sta.18+50.89

-L- POT Sta.21+74.87 =
-Y1- POT Sta.20+52.47

-L- PC Sta. 22+66.22

-L- PT Sta. 17+42.59

-L- PC Sta. 15+66.08

-L- PC Sta. 18+63.66

-L- PT Sta. 20+23.98

20+00

25+00

-L- PT Sta. 25+87.99

26+00 (SEE SHEET 5)

-L- MCKEE ROAD

PROVIDENCE HILLS DRIVE

END CONSTRUCTION
-Y1- POT Sta.22+52.14

-Y1- PI Sta. 23+15.37

MATCHLINE -Y1- STA 24+00 (SEE SHEET 8)

TROTTER PROPERTIES, LLC
DB 19840 PG 566

DAVID S. SOUZA DUARTE & SELENA LYNN DUCHARME
MB 23 PG 99I
DB 31526 PG 276

C EDWARD BAREFOOT & CATHY G BAREFOOT

WINSTON L. ARMENTROUT, JR. SUSAN A. ARMENTROUT
MB 23 PG 99I
DB 7788 PG 538

STEPHEN R. VAUGHN & MOIRA C. VAUGHN
MB 23 PG 99I
DB 30426 PG 582

MATTHEWS PLANTATION HOMEOWNERS ASSOCIATION
DB 6924 PG 853
MB 23 PG 99I

TOWN OF MATTHEWS
DB 29150 PG 416
MB 57 PG 411

MICHAEL DONIHEE & LAURA D. DONIHEE
DB 10439 PG 722
MB 30 PG 671

GREGORY L. NORMAN & CARLA A. NORMAN
DB 14324 PG 138
MB 32 PG 565

CHRISTOPHER M. COBB & KATHERINE P. COBB
DB 29035 PG 506
MB 32 PG 565

DOUGLAS R. GUNSON BLYTHE E. GUNSON
DB 12733 PG 243
MB 32 PG 565

PATRICIA G. WILLIS KENNETH W. ZOELLER
DB 20347 PG 110
MB 9 PG 41

EQUITABLE HOLDINGS, LLC
DB 28892 PG 960
MB 3 PG 360

JOYCE V. CHAMPION
DB 9998 PG 160
MB 31PG 703

EVERETTE BROWN BEVERLY BROWN
DB 10726 PG 300
MB 31PG 703

SPECIAL LATERAL 'V' DITCH SEE DETAIL 1, SHEET 2D-1

SEE CURB RETURN DETAIL SHEET 2A-1

SEE CURB RETURN DETAIL SHEET 2A-1

RETAIN EXST. 18" RCP TIE TO EXISTING SIDEWALK STA. 18+31.66

RETAIN EXST. 15" RCP

REMOVE EXST. CB AND REPLACE W/TB JB W/MH

DIRECTIONAL DRILL CONDUIT

RETAIN EXST. 15" RCP

RETAIN EXST. 12" HDPE

REMOVE EXST. 18" RCP

RETAIN AND ADJUST EXST. DI

RETAIN EXST. 24" RCP AND TIE ADJUSTED DI INTO EXST. 24" RCP

TRANSITION FROM EXISTING 24" RCP-IV TO 15" RCP

RETAIN EXST. DI

RETAIN EXST. 15" RCP

DO NOT DISTURB WALL

DO NOT DISTURB FENCE

DO NOT DISTURB FENCE

DO NOT DISTURB FENCE OR AREA INSIDE OF FENCE

TIE EXST. OFFSITE DITCH INTO PROPOSED ROADWAY DITCH

PROPOSED WATERLINE SEE UTILITY PLAN THIS PLAN SET

TIE PROP. TBJB INTO EXST. 15" RCP

REMOVE EXST. 32 LF OF 15" PIPE

REMOVE EXST. 15" RCP

TIE PROP. CB TO EXST. 15" RCP

RETAIN EXST. 15" RCP

RETAIN EXST. CB

BERM 'V' DITCH SEE DETAIL 4, SHEET 2D-1

CLASS 'B' RIP-RAP OUTLET PROTECTION EST. 2 TONS, EST. 7 SY GFD

CLASS 'B' RIP-RAP OUTLET PROTECTION EST. 2 TONS, EST. 7 SY GFD

APPROXIMATE LOCATION FOR PROPOSED CONDUIT & CABLE PATH

FOR SIGNAL DESIGN, SEE SIGNAL PLANS

140' TAPER

100' BAY TAPER

85' TAPER

10' MULTI-USE PATH

12' MULTI-USE PATH

NOTES:
INCIDENTAL MILL APPROX.25' AT EACH TIE IN TO PROVIDE A SMOOTH TRANSITION TO THE EXISTING ASPHALT PAVEMENT

SEE SHEET 2A-5 FOR MULTI-USE PATH DETAIL

PROPOSED SIDEWALK & MONOLITHIC ISLANDS

REMOVAL OF EXISTING ASPHALT PAVEMENT

★ TRAFFIC SIGNAL

RADII DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED

SEE SHEET 2B-1 FOR -L- & -Y1- INTERSECTION DETAIL

SEE SHEET 9 FOR -L- PROFILE
SEE SHEET 11 FOR -Y1- PROFILE

-L-

PI Sta 16+54.35	PI Sta 19+43.93	PI Sta 24+27.48
△ = 2° 44' 26.5" (RT)	△ = 7° 17' 25.1" (LT)	△ = 9° 33' 08.5" (RT)
D = 1° 33' 09.8"	D = 4° 32' 50.2"	D = 2° 58' 07.3"
L = 176.51'	L = 160.32'	L = 321.77'
T = 88.27'	T = 80.27'	T = 161.26'
R = 3,690.00'	R = 1,260.00'	R = 1,930.00'
DS = 50 MPH	DS = 50 MPH	DS = 40 MPH
SE = 2.40%	SE = 3.80%	SE = 2.40%.(35 MPH)
RO = 66'	RO = 104'	RO = 53'

K:\CHL_PRJ\0110364426 - McKee Rd E.xr\Roadway\Pro]\U-4713A_rdy_psh.4.dgn

7/31/2024

Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC

Kimley»Horn © 2024
200 S. TRYON ST. • CHARLOTTE, NC 28202

RIGHT-OF-WAY REV.

CONST. REV.

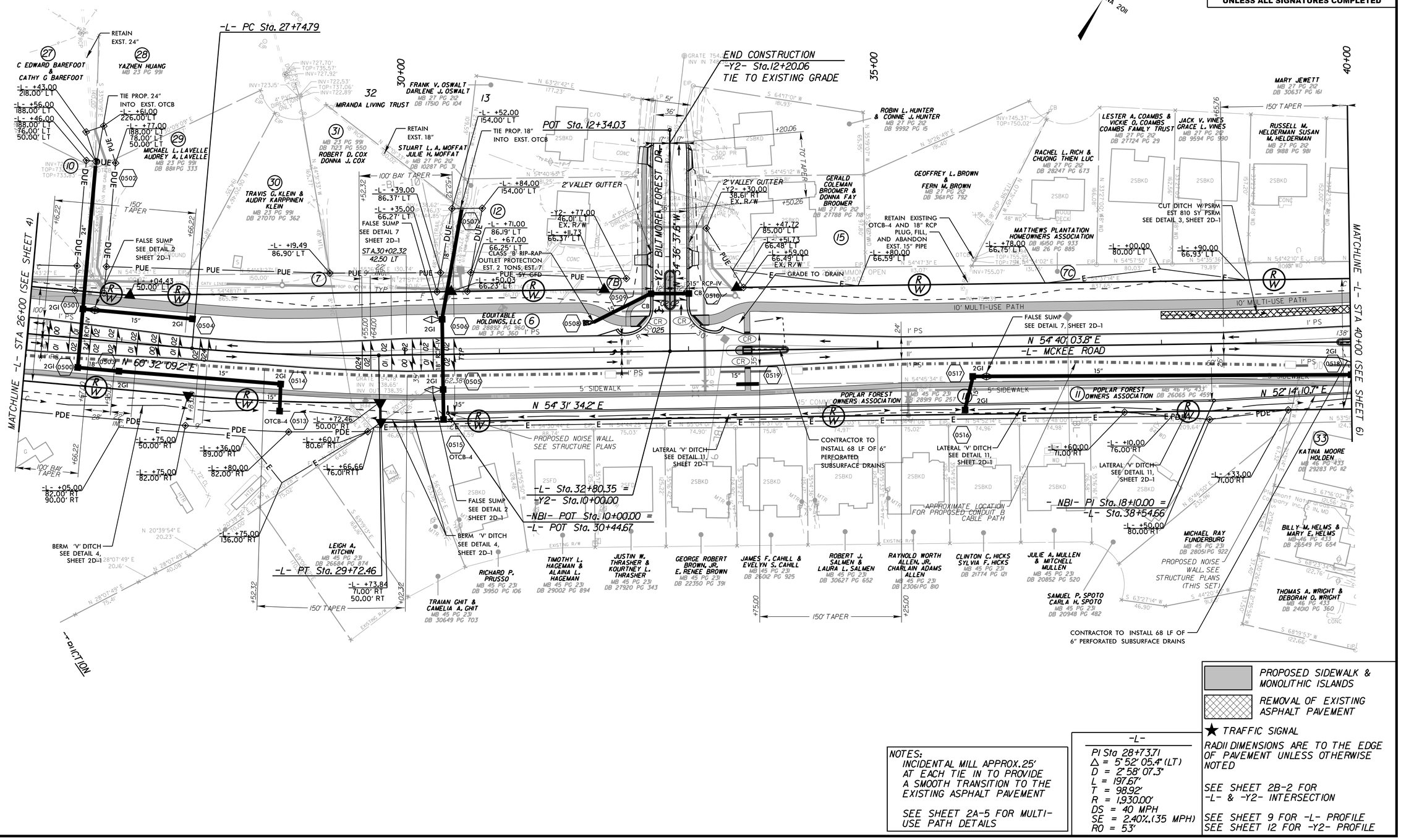
PROJECT REFERENCE NO.	SHEET NO.
U-4713A	5
R/W SHEET NO.	

ROADWAY ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK D. WATTERSON JR.
Docusigned by: Frank Watterson 8/9/2024

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 032615 ENGINEER JASON D. LAWING
Docusigned by: Jason Lawing 8/9/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NC GRID NAD 83 NA 2011



NOTES:
INCIDENTAL MILL APPROX. 25' AT EACH TIE IN TO PROVIDE A SMOOTH TRANSITION TO THE EXISTING ASPHALT PAVEMENT

SEE SHEET 2A-5 FOR MULTI-USE PATH DETAILS

-L-
PI Sta 28+73.71
Δ = 5° 52' 05.4" (LT)
D = 2° 58' 07.3"
L = 197.67'
T = 98.92'
R = 1,930.00'
DS = 40 MPH
SE = 2.40%, (35 MPH)
RO = 53'

PROPOSED SIDEWALK & MONOLITHIC ISLANDS

REMOVAL OF EXISTING ASPHALT PAVEMENT

★ TRAFFIC SIGNAL

RADII DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED

SEE SHEET 2B-2 FOR -L- & -Y2- INTERSECTION

SEE SHEET 9 FOR -L- PROFILE
SEE SHEET 12 FOR -Y2- PROFILE

K:\CHL_PRJ\011036426 - McKee Rd Ext\Roadway\Pro]\U-4713A_rdy_dsh_5.dgn
7/31/2024

Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC

Kimley»Horn ©2024
200 S. TRYON ST. • CHARLOTTE, NC 28202

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	6
R/W SHEET NO.	

RIGHT-OF-WAY REV.

CONST. REV.

ROADWAY ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK D. WATTERSON, JR.

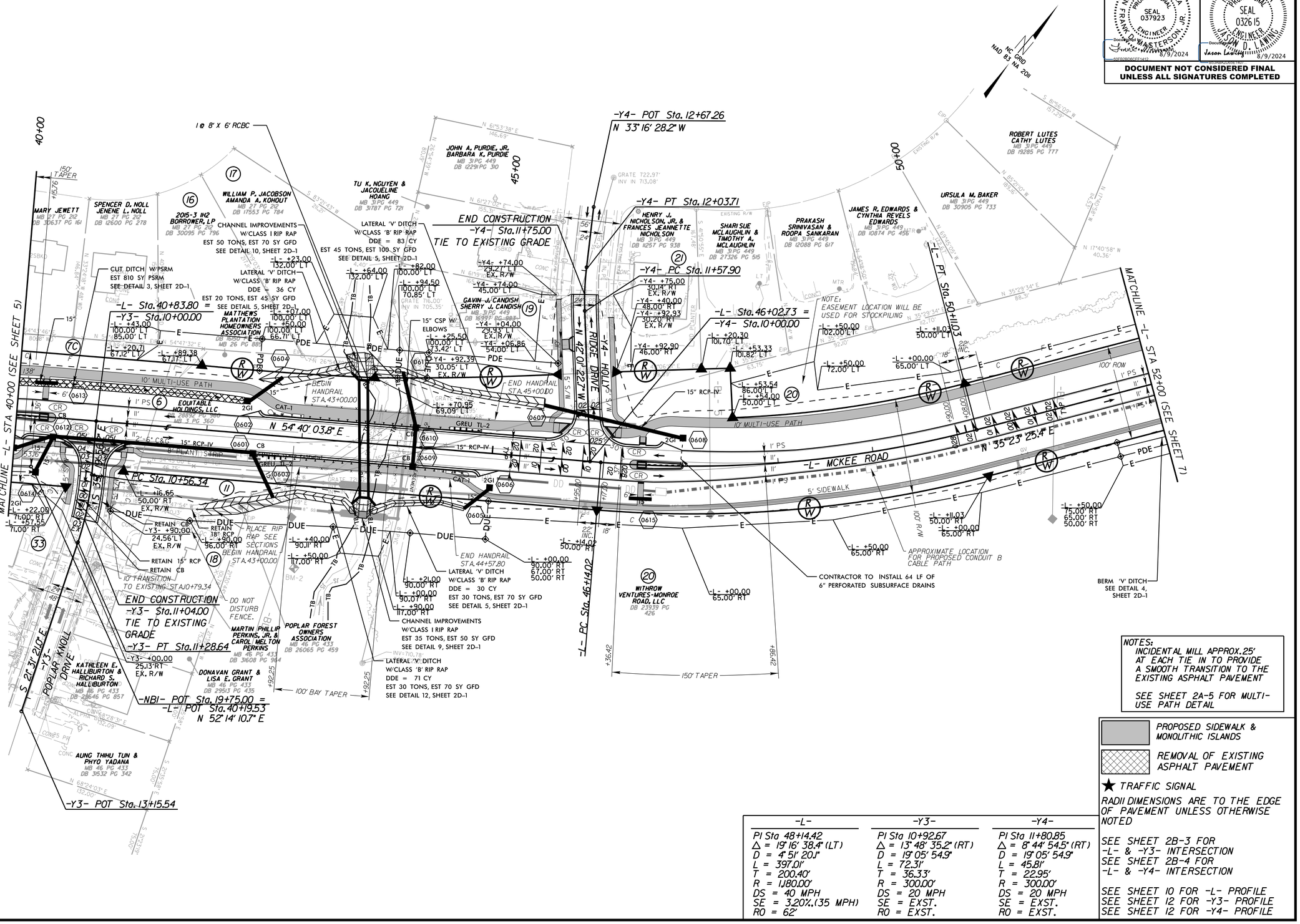
Frank Watterson
8/9/2024

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 032615 ENGINEER JASON D. LAWING

Jason Lawing
8/9/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



NOTES:
INCIDENTAL MILL APPROX.25' AT EACH TIE IN TO PROVIDE A SMOOTH TRANSITION TO THE EXISTING ASPHALT PAVEMENT

SEE SHEET 2A-5 FOR MULTI-USE PATH DETAIL

PROPOSED SIDEWALK & MONOLITHIC ISLANDS

REMOVAL OF EXISTING ASPHALT PAVEMENT

★ TRAFFIC SIGNAL

RADII DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED

SEE SHEET 2B-3 FOR -L- & -Y3- INTERSECTION
SEE SHEET 2B-4 FOR -L- & -Y4- INTERSECTION

SEE SHEET 10 FOR -L- PROFILE
SEE SHEET 12 FOR -Y3- PROFILE
SEE SHEET 12 FOR -Y4- PROFILE

-L-	-Y3-	-Y4-
PI Sta 48+14.42	PI Sta 10+92.67	PI Sta 11+80.85
Δ = 19° 16' 38.4" (LT)	Δ = 13° 48' 35.2" (RT)	Δ = 8° 44' 54.5" (RT)
D = 4° 51' 20.1"	D = 19° 05' 54.9"	D = 19° 05' 54.9"
L = 397.01'	L = 72.31'	L = 45.81'
T = 200.40'	T = 36.33'	T = 22.95'
R = 1,180.00'	R = 300.00'	R = 300.00'
DS = 40 MPH	DS = 20 MPH	DS = 20 MPH
SE = 3.20%.(35 MPH)	SE = EXST.	SE = EXST.
RO = 62'	RO = EXST.	RO = EXST.

7/31/2024 K:\CHL_PRJ\011036426 - McKee Rd Ext\Roadway\Proj\U-4713A_rdy_psh_6.dgn

Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC

Kimley»Horn © 2024
200 S. TRYON ST. • CHARLOTTE, NC 28202

RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	7
RW SHEET NO.	

ROADWAY ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK D MASTERSON JR
Docusigned by: Frank Masterson 5/9/2024

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 032615 ENGINEER JASON D LAWING
Docusigned by: Jason Lawing 5/9/2024

GP BOUNDARY REV.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83 NC GRID NA 2011

55+00
60+00
MATCHLINE -L- STA 52+00 (SEE SHEET 6)
-L- PC Sta. 53+75.00
-L- PT Sta. 58+22.26
-L- +91.69 92.96' LT
-L- +09.32 50.00' LT
-L- +75.00 50.00' LT
-L- +50.00 65.00' LT
-L- +00.00 65.00' RT
-L- +75.00 50.00' RT
-L- +23.86 66.00' RT
-L- +75.00 65.00' RT
-L- +66.97 70.34' RT
-L- +68.32 73.17' RT
-L- +00.00 50.00' RT
-L- +75.00 50.00' RT
-L- +00.00 65.00' RT
N 35° 23' 25.4" E
S 62°18'00" W 310.24'
N 62°23'30" W 84.44'
N 33°03'34" E 85.00'
S 33°03'19" W 85.37'
N 33°09'45" E 82.96'
S 33°11'37" W 85.00'
N 33°11'37" E 85.00'
S 33°11'37" W 85.00'
N 33°15'07" E 307.46'
S 56°48'29" E 350.03'
N 57° 06' 27.0" E
S 62°23'30" E 84.44'
S 56°51'26" E 70.08'
N 62°23'30" W 86.74'
S 33°15'07" W 166.15'
S 33°15'07" W 307.46'
S 62°18'00" W 310.24'
N 33°07'44" W 124.24'
S 62°23'30" E 84.44'
S 62°23'30" E

Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC

Kimley»Horn
© 2024
200 S. TRYON ST. • CHARLOTTE, NC 28202

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	8
RW SHEET NO.	

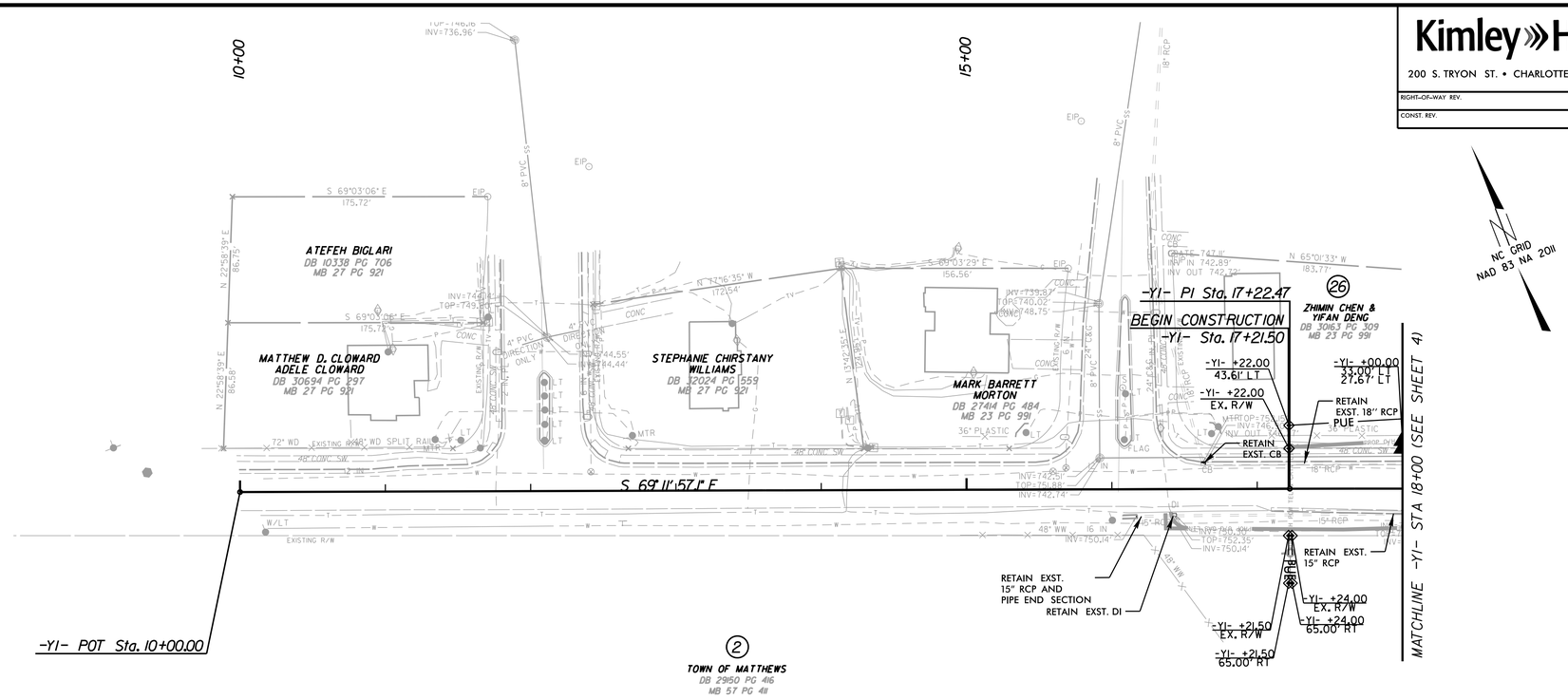
ROADWAY ENGINEER

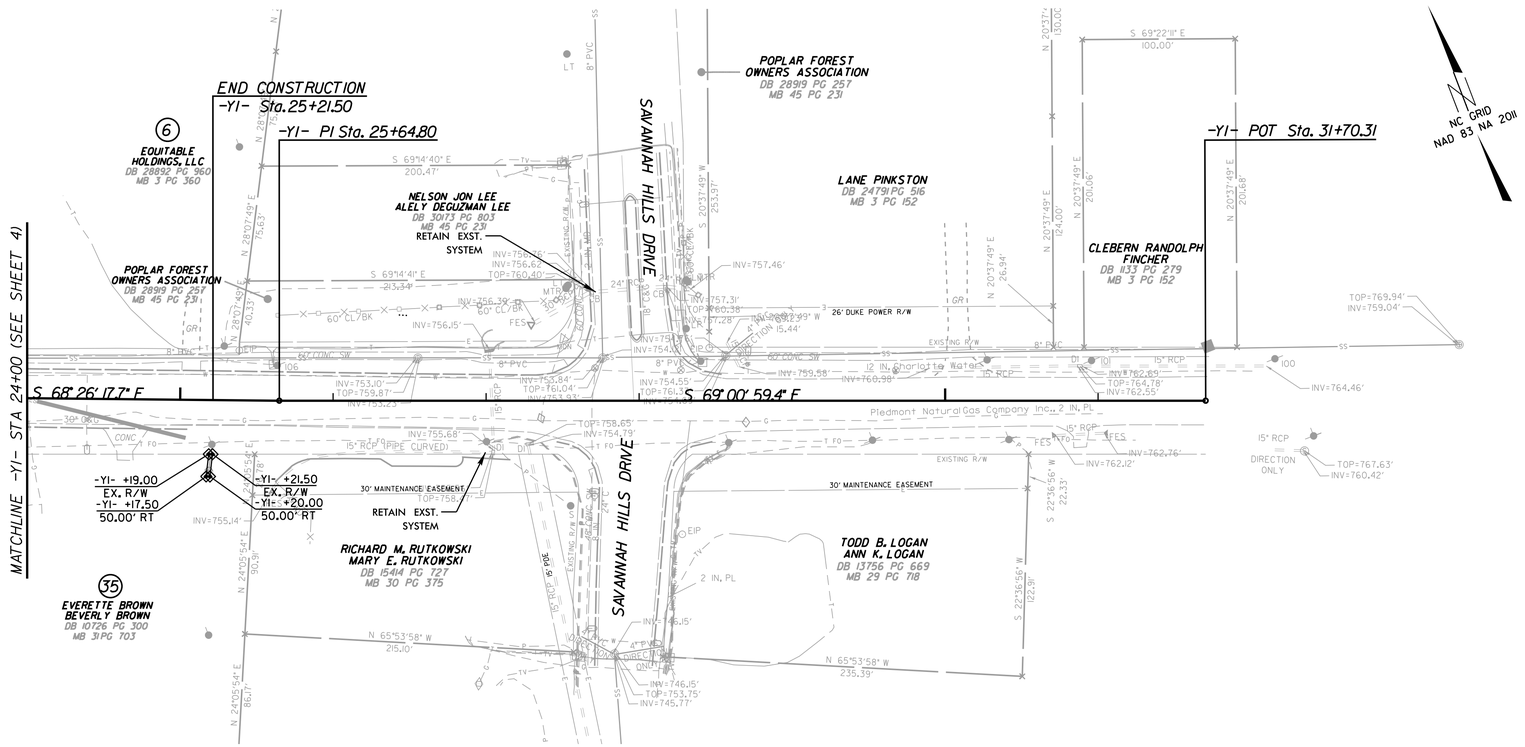
NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK D. MASTERSON III
Docusigned by: Frank Masterson III 6EFB2B9DECFE1412...
8/9/2024

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 032615 ENGINEER JASON D. LAWING
Docusigned by: Jason Lawing 3D7A3D0D0F7B4D1...
8/9/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED





NOTES:
INCIDENTAL MILL APPROX. 25' AT EACH TIE IN TO PROVIDE A SMOOTH TRANSITION TO THE EXISTING ASPHALT PAVEMENT

SEE SHEET 2A-5 FOR SIDEWALK & MULTI-USE PATH DETAILS

PROPOSED SIDEWALK & MONOLITHIC ISLANDS

★ TRAFFIC SIGNAL

RADII DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED

SEE SHEET 11 FOR -Y1- PROFILE

K:\CHL_PRJ\011036426 - McKee Rd Ext\Roadway\Pro\NU-4713A_rdy_psh_8.dgn

7/31/2024

Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC

Kimley»Horn ©2024
200 S. TRYON ST. • CHARLOTTE, NC 28202

RIGHT-OF-WAY REV.

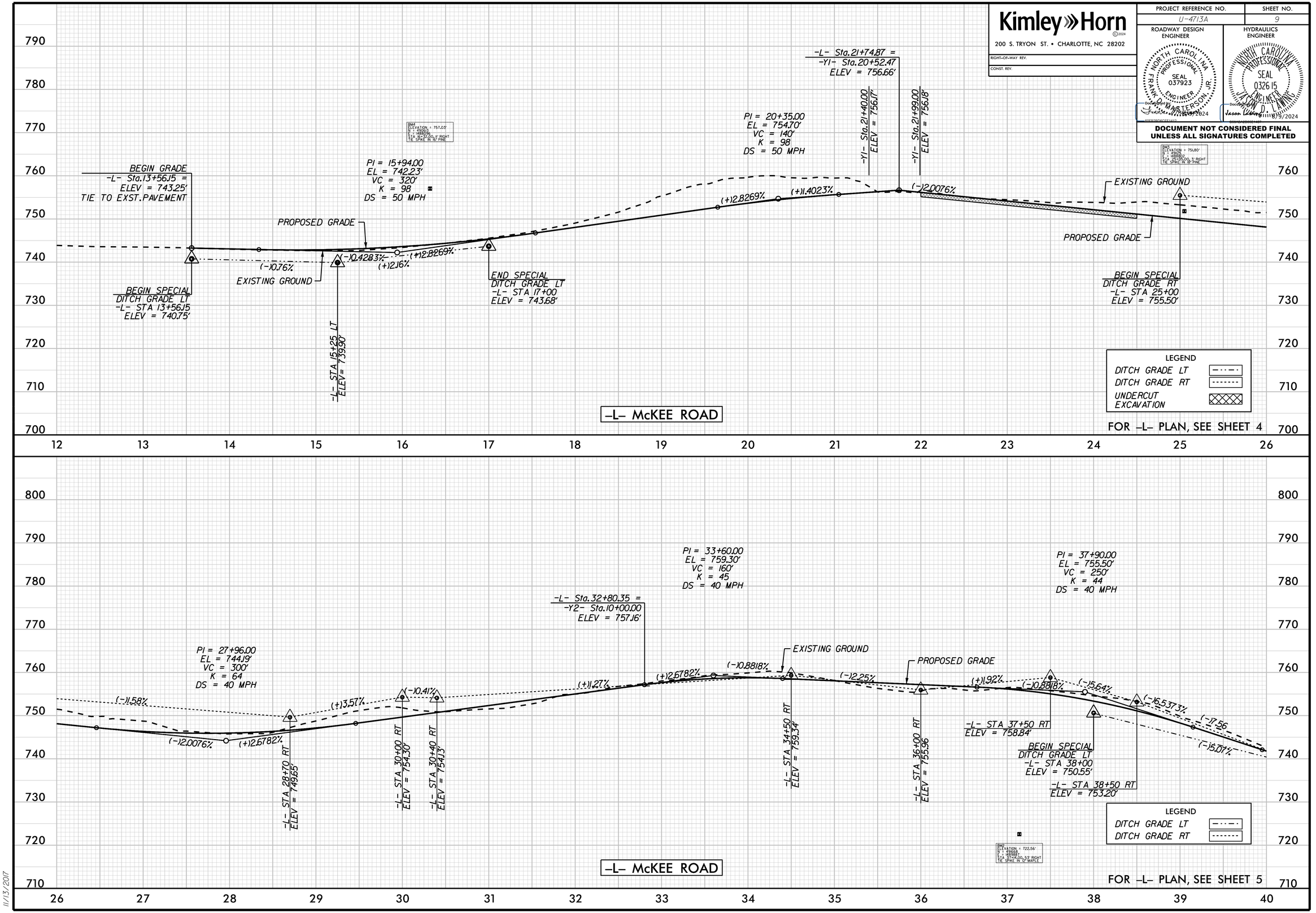
CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	9

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK M. PETERSON, JR.
Docusigned by: Frank M. Peterson, Jr. 11/9/2024

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 032615 ENGINEER JASON D. LANKFORD
Docusigned by: Jason Lankford 11/9/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



11/13/2017

Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC

Kimley»Horn © 2024
200 S. TRYON ST. • CHARLOTTE, NC 28202

RIGHT-OF-WAY REV.

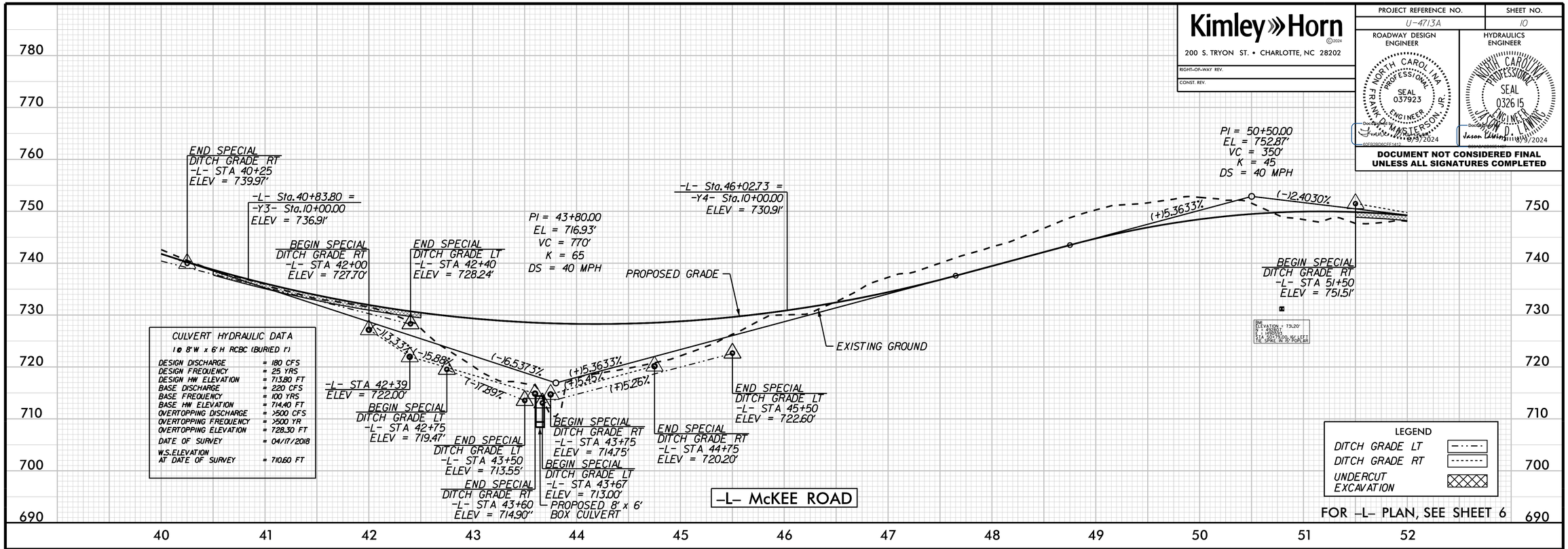
CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	10

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK M. PETERSON, JR.
Docusigned by: Frank M. Peterson 8/9/2024

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 032615 ENGINEER JASON D. LAWING
Docusigned by: Jason Lawing 8/9/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



11/13/2017

Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC

Kimley»Horn ©2024
200 S. TRYON ST. • CHARLOTTE, NC 28202

RIGHT-OF-WAY REV.

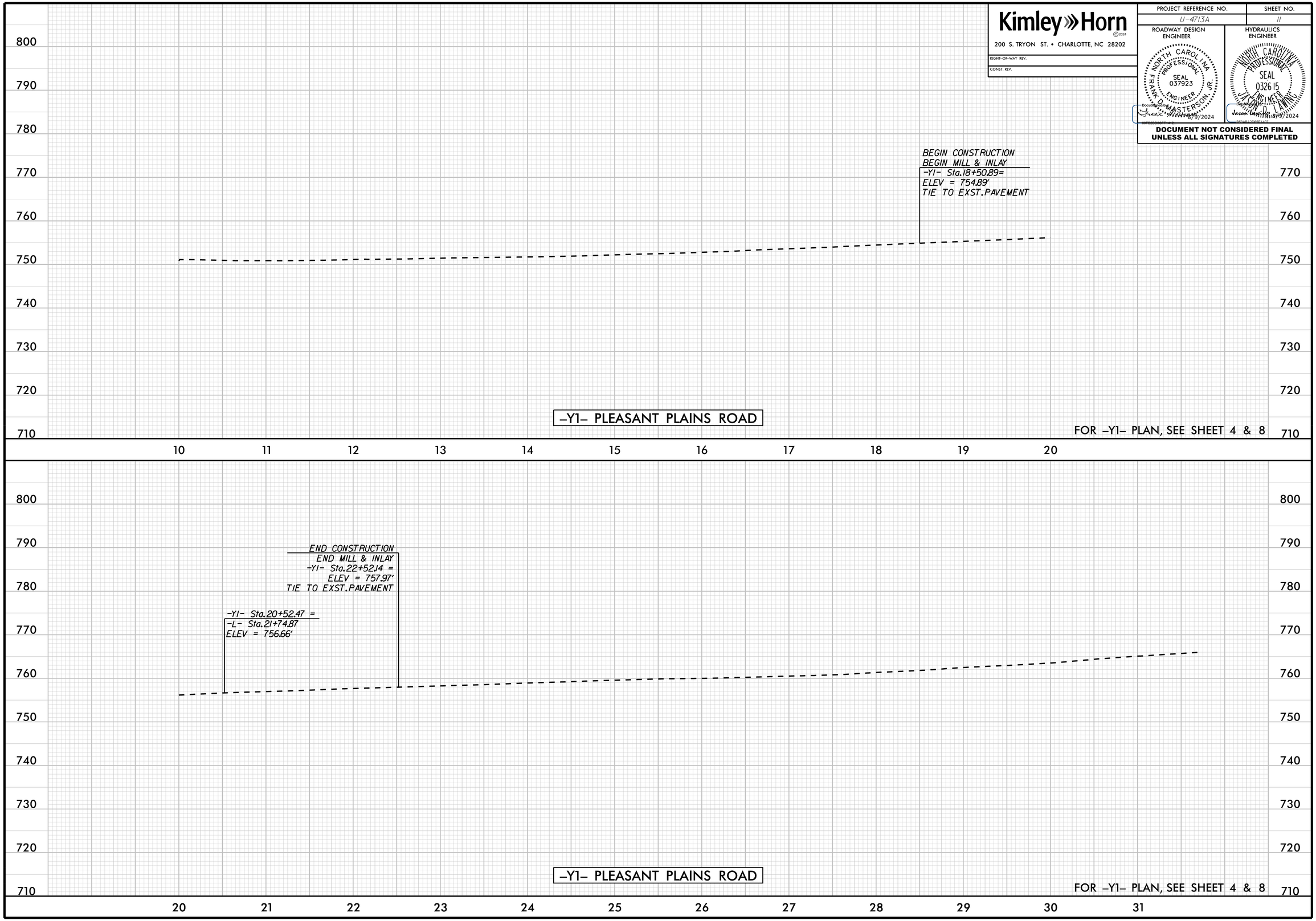
CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	11

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK O MASTERSON JR.
Docusigned by: Frank Masterson 8/9/2024

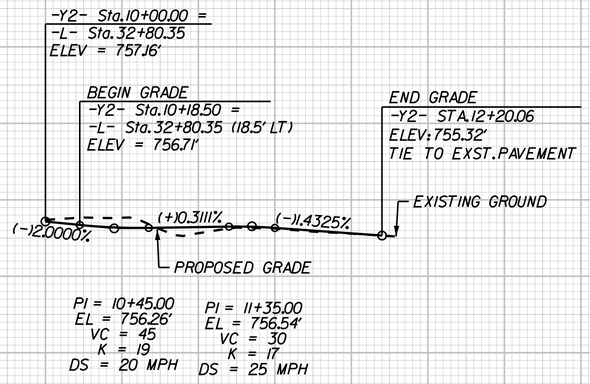
HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 032615 ENGINEER JASON D LAMBE
Docusigned by: Jason Lambe (8/9/2024)

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



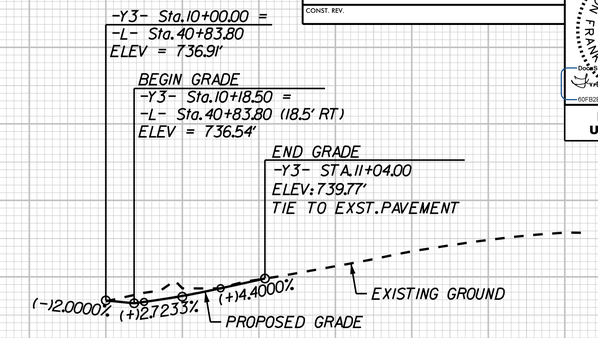
11/13/2017

Docusign Envelope ID: 8A15617E-4E2A-4D41-9B16-6A37E3FA2CFC



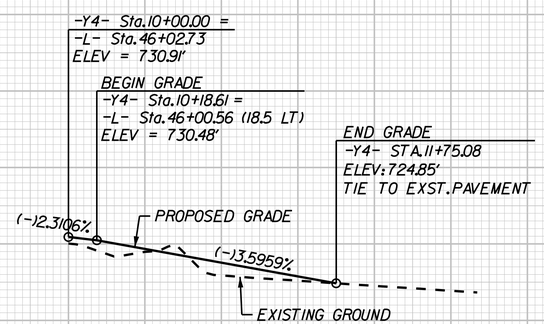
-Y2- BILTMORE FOREST DRIVE

FOR -Y2- PLAN, SHEET 5



-Y3- POPLAR KNOLL DRIVE

FOR -Y3- PLAN, SHEET 6



-Y4- HOLLY RIDGE DRIVE

FOR -Y4- PLAN, SHEET 6

THIS SPACE INTENTIONALLY LEFT BLANK

Kimley»Horn ©2024
200 S. TRYON ST. • CHARLOTTE, NC 28202

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
U-4713A	12

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 037923 ENGINEER FRANK M. PETERSON, JR.
Docusigned by: Frank M. Peterson
8/9/2024

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 032615 ENGINEER JASON D. KING
Docusigned by: Jason King
8/9/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

11/13/2017