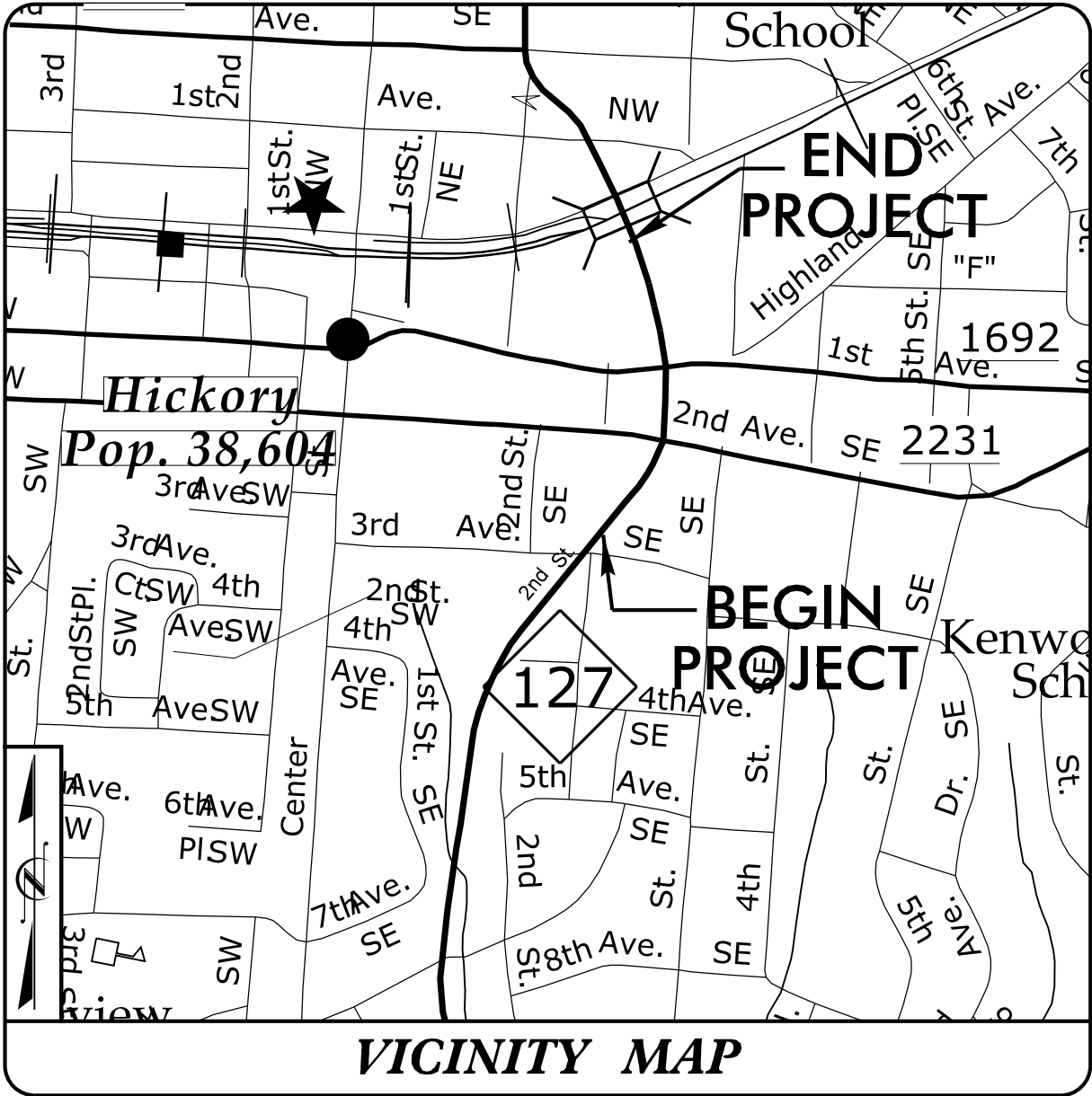


09.08/299

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



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CATAWBA COUNTY

LOCATION: NC 127 - 1ST AVENUE SE TO 2ND AVENUE SE.
ADD TURN LANES.

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5777	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
50189.1.1	5018901	PE	
50189.2.1	5018901	ROW	
50189.2.2	5018901	UTIL	
50189.3.1	5018901	CONST	

TIP PROJECT: U-5777

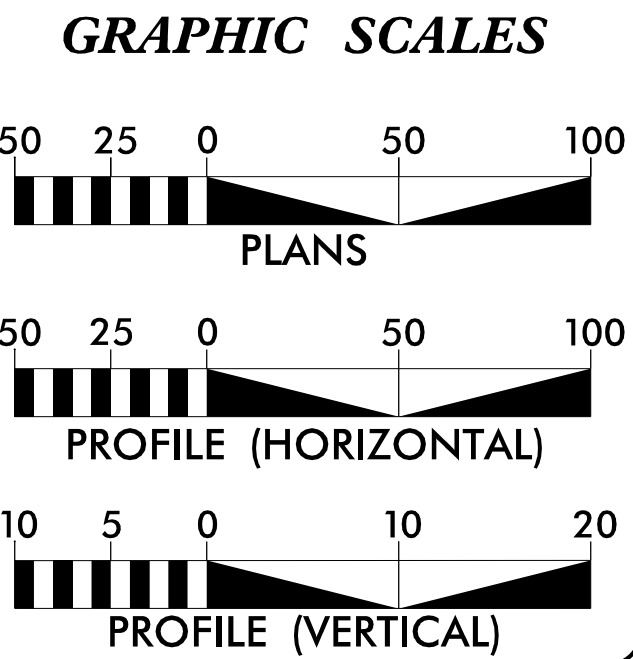
CONTRACT: C205043

BEGIN PROJECT U-5777
-L- POT STA 10+00.00

HISTORIC
BOUNDARY
LINE

EXISTING SIGNAL

NOTE:
1. A DESIGN EXCEPTION WILL BE REQUIRED FOR ONE VERTICAL CURVE AS INDICATED ON -L- PROFILE.



DESIGN DATA
ADT 2025 = 25,450
ADT 2045 = 28,450
K = 9 %
D = 54 %
T = 4 % *
V = 40 MPH
* TTST=1% DUAL=3%
FUNC CLASS =
PRINCIPAL ARTERIAL
REGIONAL TIER

PROJECT LENGTH
LENGTH OF ROADWAY T.I.P. PROJECT U-5777 = 0.264 MILES
TOTAL LENGTH OF T.I.P. PROJECT U-5777 = 0.264 MILES
LENGTH BASED ON -L- CENTERLINE

PREPARED IN THE OFFICE OF:
HNTB
HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St.
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554
FOR NCDOT DIVISION 12

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JUNE 27, 2019

LETTING DATE:
MAY 20, 2025

J. MATTHEW PICKENS, PE
PROJECT ENGINEER

TATYANA GIBBS, EI
PROJECT DESIGN ENGINEER

BRYAN SOWELL, PE
NCDOT CONTACT

NAD 83
NA 2011

END PROJECT U-5777
-L- POC STA 23+95.00

BEGIN CONSTRUCTION
-Y2- POT STA 11+50.00

BEGIN CONSTRUCTION
-Y1- POC STA 10+00.00

BEGIN CONSTRUCTION
-Y- POT STA 10+75.00

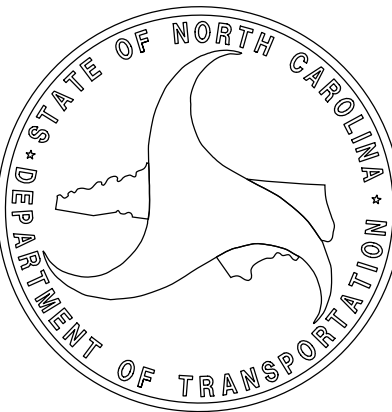
END CONSTRUCTION
-Y- POT STA 14+50.00

END CONSTRUCTION
-Y1- POC STA 14+53.00
END GRADE
-Y1- POC STA 14+25.00

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

HYDRAULICS ENGINEER

SIGNATURE: [Signature]
ROADWAY DESIGN ENGINEER
SIGNATURE: [Signature]



8/17/99

20-FEB-2025 14:47
C:\p00009\p00009\U5777_RDY_PSH_01A.dgn
HNTB

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A-1 THRU 2A-3	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2B-1 THRU 2B-2	ROADWAY DETAILS
2C-1	DETAIL OF TEMPORARY 1" STEEL COVER OVER DRAINAGE STRUCTURE
2C-2	DETAIL OF CURB RAMP (TYPE 3 & TYPE 3 MODIFIED)
2C-3	DETAIL OF CONCRETE SIDEWALK
2C-4	METHOD OF PIPE INSTALLATION RIGID PIPE
3B-1	ROADWAY SUMMARIES
3D-1 THRU 3D-3	DRAINAGE SUMMARIES
3G-1	GEOTECHNICAL SUMMARIES
3P-1	PARCEL INDEX SHEET
4 THRU 7	PLAN AND PROFILE SHEETS
RW01	RIGHT OF WAY TITLE SHEET
RW02D-1	PROPOSED ALIGNMENT CONTROL SHEET
RW02E-1	RIGHT OF WAY CONTROL SHEET
RW04 THRU RW05	RIGHT OF WAY SHEETS
TMP-1 THRU TMP-9	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-4	PAVEMENT MARKING PLANS
EC-1 THRU EC-7	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-4	SIGNING PLANS
SIG 1.0 THRU SIG 13.5	SIGNAL PLANS
SCP.1 THRU SCP.3	SIGNAL COMMUNICATION PLANS
UC-1 THRU UC-8	UTILITIES CONSTRUCTION PLANS
UO-1 THRU UO-3	UTILITIES BY OTHERS PLANS
X-1	CROSS-SECTION INDEX
X-1A	CROSS-SECTION SUMMARY SHEET
X-2 THRU X-20	CROSS-SECTIONS

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 III.

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.

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.

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.

TEMPORARY SHORING:

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE POWER - DUKE ENERGY,
TELECOMM - BRIGHTSPEED, TELECOMM - AT&T, TELCOMM - SPIRIT/SEAGRA,
GAS - PNG, WATER/SEWER - CITY OF HICKORY
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

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 OR SPECIAL DETAILS.



HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St.
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO.
U-5777

SHEET NO.
1A

ROADWAY DESIGN
ENGINEER



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

EFF. 01-16-2024
REV.

2024 ROADWAY ENGLISH STANDARD DRAWINGS

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	
200.03	Method of Clearing - Method III
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
815.02	Subsurface Drain
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
840.14	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
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
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
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
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
852.06	Method for Placement of Drop Inlets in Concrete Islands
876.02	Guide for Rip Rap at Pipe Outlets

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	
End of Information	

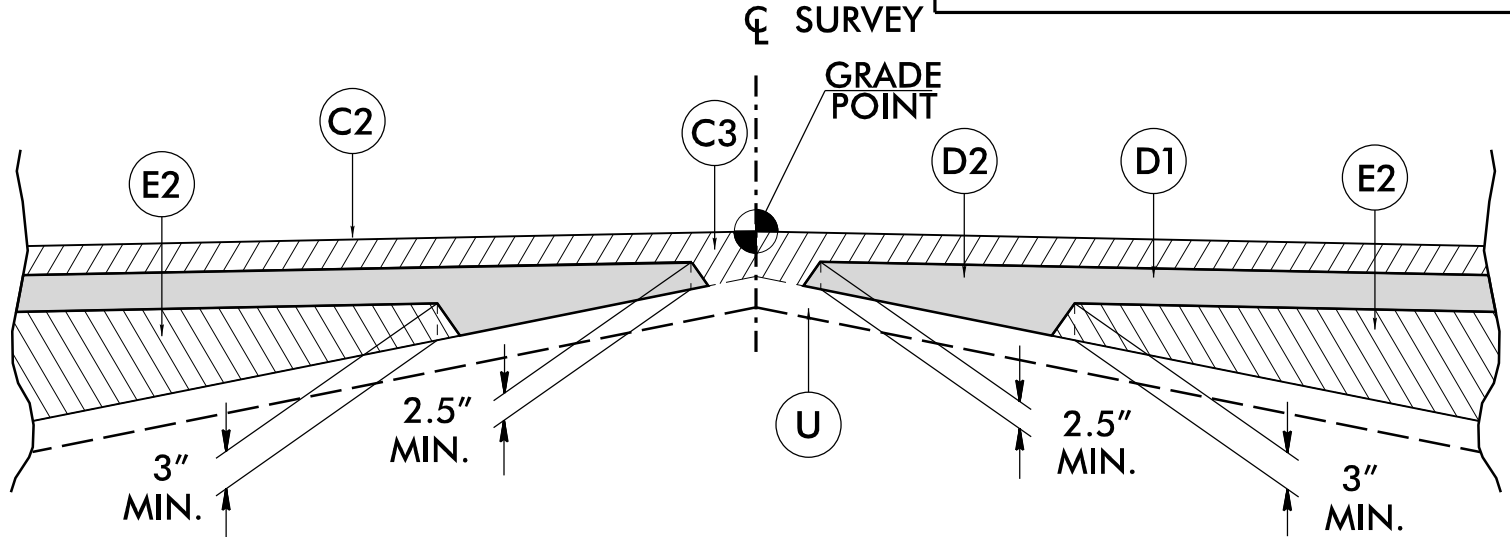
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HNTB

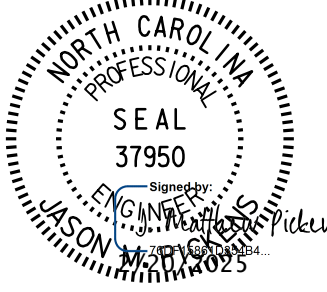
FINAL PAVEMENT SCHEDULE			
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.	R2	5" MONOLITHIC CONCRETE ISLAND (KEYED IN).
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. PLACED IN TWO LAYERS.	R3	8"X18" CONCRETE CURB.
C3	PROP. 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 LESS THAN 1" IN DEPTH AND NOT GREATER THAN 1.5" IN DEPTH.	S1	4" CONCRETE SIDEWALK.
C4	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B (LEVELING COURSE), AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1" IN DEPTH AND NOT GREATER THAN 1.5" IN DEPTH.	T	EARTH MATERIAL.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	U	EXISTING PAVEMENT.
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.	V	INCIDENTAL MILLING
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	W	VARIABLE DEPTH ASPHALT PAVEMENT. (SEE DETAIL SHOWING METHOD OF WEDGING No. 1. THIS SHEET)
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.		
R1	2'-6" CONCRETE CURB AND GUTTER.		

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

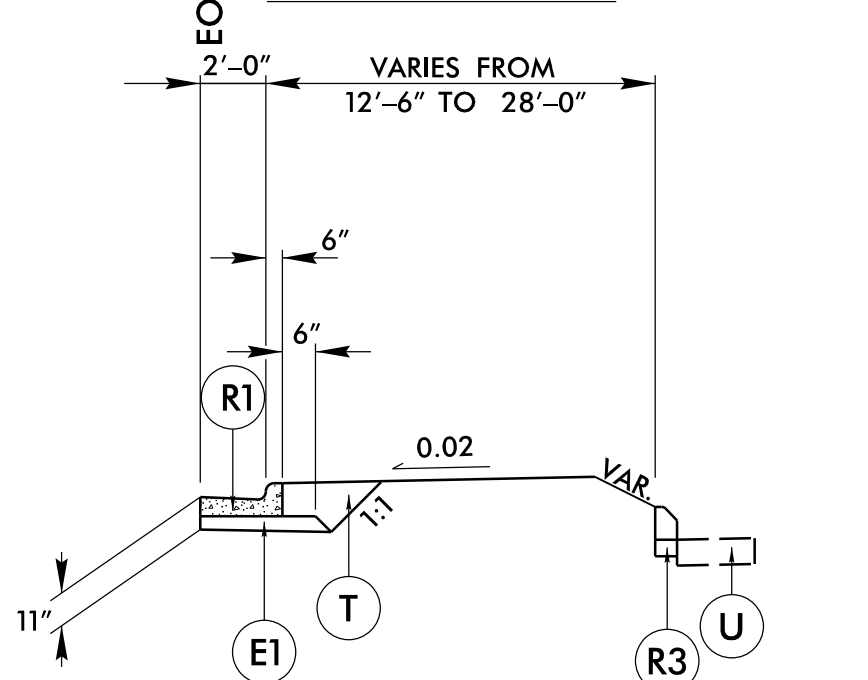
HNTB
HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St.
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554



Detail Showing Method of Wedging No. 1

PROJECT REFERENCE NO.		SHEET NO.	
U-5777		2A-1	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

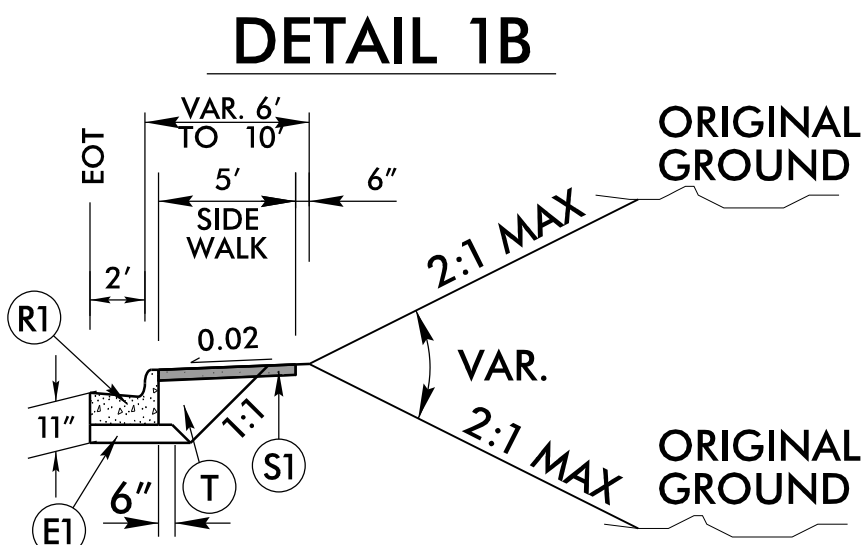
DETAIL 1A



USE DETAIL 1A IN CONJUNCTION WITH:
TYPICAL 1 & 2 (THIS SHEET), TYPICALS 4 (SHEET 2A-2),
AND TYPICAL 5 (SHEET 2A-3)
SEE PLANS FOR LOCATIONS

USE TYPICAL SECTION NO. 1

*-L- STA. 10+00.00 TO STA 15+30.00
-L- STA. 15+30.00 TO STA 21+00.00

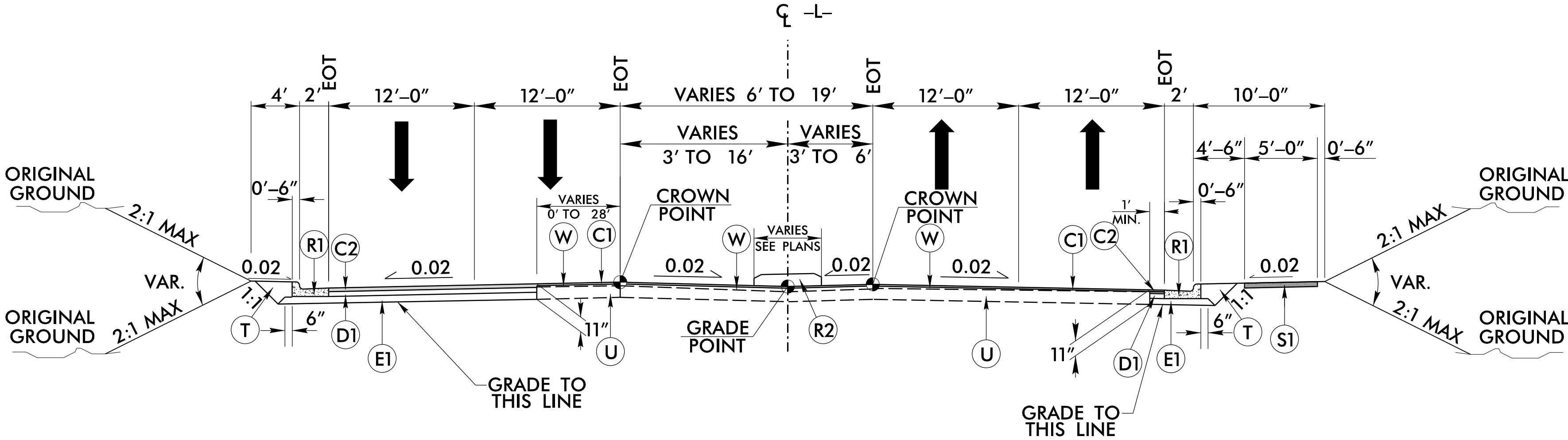


USE DETAIL 1B IN CONJUNCTION
WITH TYPICAL SECTION NO. 1 AT THE
FOLLOWING LOCATIONS

-L- STA. 10+00.00 TO 12+00.00 LT/RT

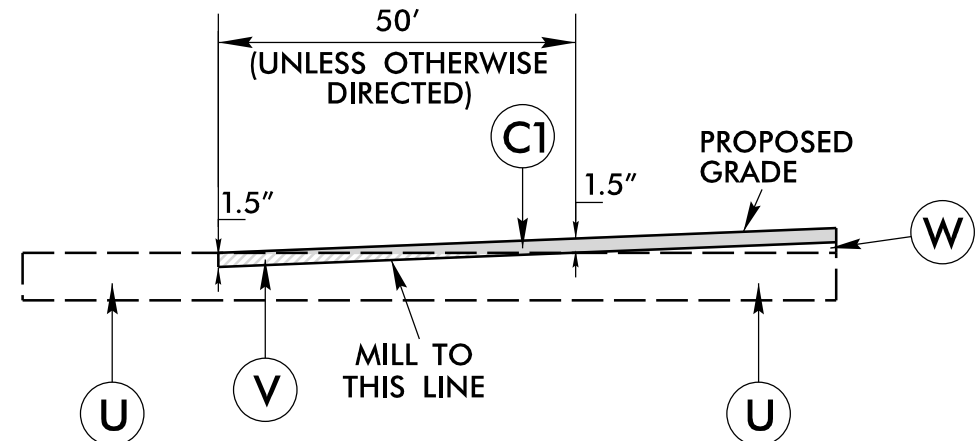
TYPICAL SECTION NO. 1

-L- NC 127



TYPICAL SECTION NO. 2

-L- NC 127



DETAIL FOR INCIDENTAL MILLING

-L- STA. 10+00.00 TO STA 10+50.00
-L- STA. 23+45.00 TO STA 23+95.00
-Y- STA. 10+75.00 TO STA. 11+25.00
-Y- STA. 14+00.00 TO STA. 14+50.00
-Y1- STA. 10+00.00 TO STA. 10+50.00
-Y1- STA. 13+75.00 TO STA. 14+25.00
-Y2- STA. 11+50.00 TO STA. 12+00.00

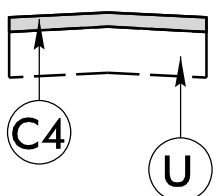
USE TYPICAL SECTION NO. 2

-L- STA. 21+00.00 TO STA 23+95.00

NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, MONOLITHIC ISLANDS, CURB AND GUTTER, AND LANE TAPER LOCATIONS.

NOTE: SAWCUT WHEN PROPOSED CURB & GUTTER IS WITHIN 1' OF EXISTING PAVEMENT

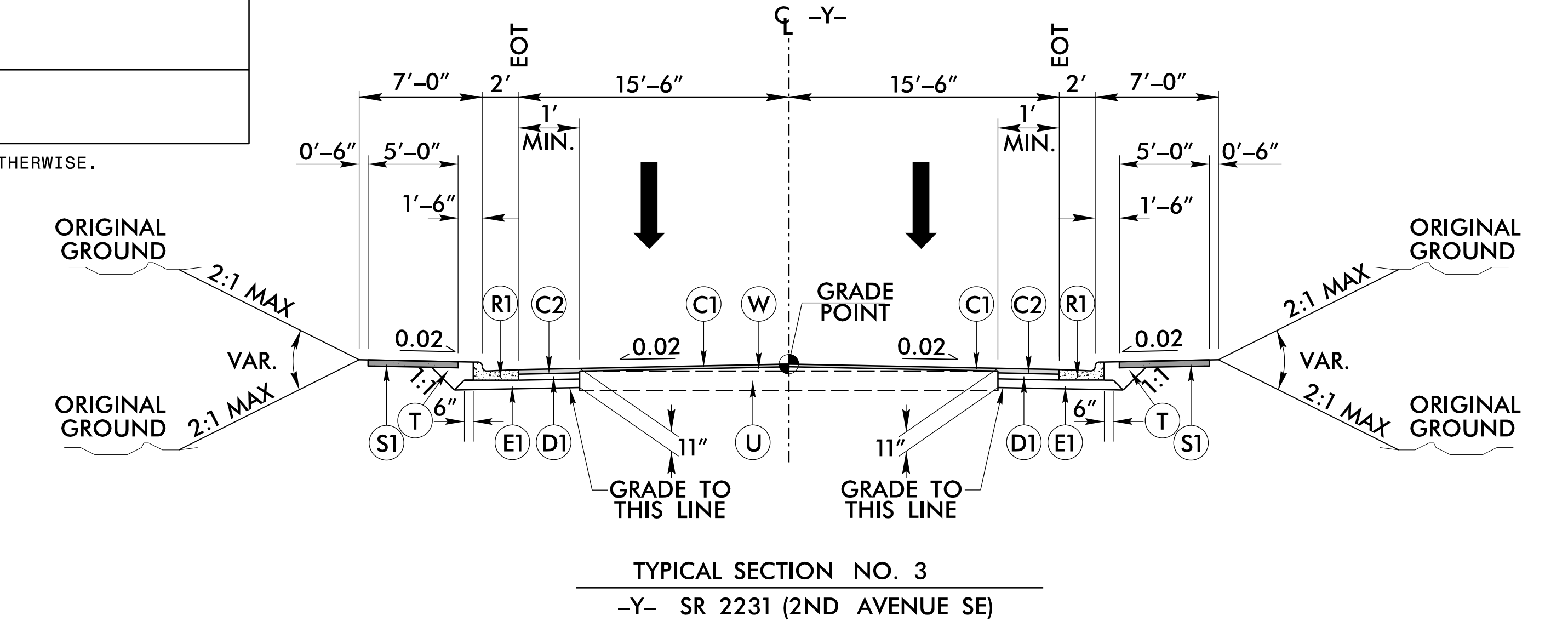
TEMPORARY PAVEMENT DESIGN
(SEE TMP SHEETS FOR ADDITIONAL INFORMATION)



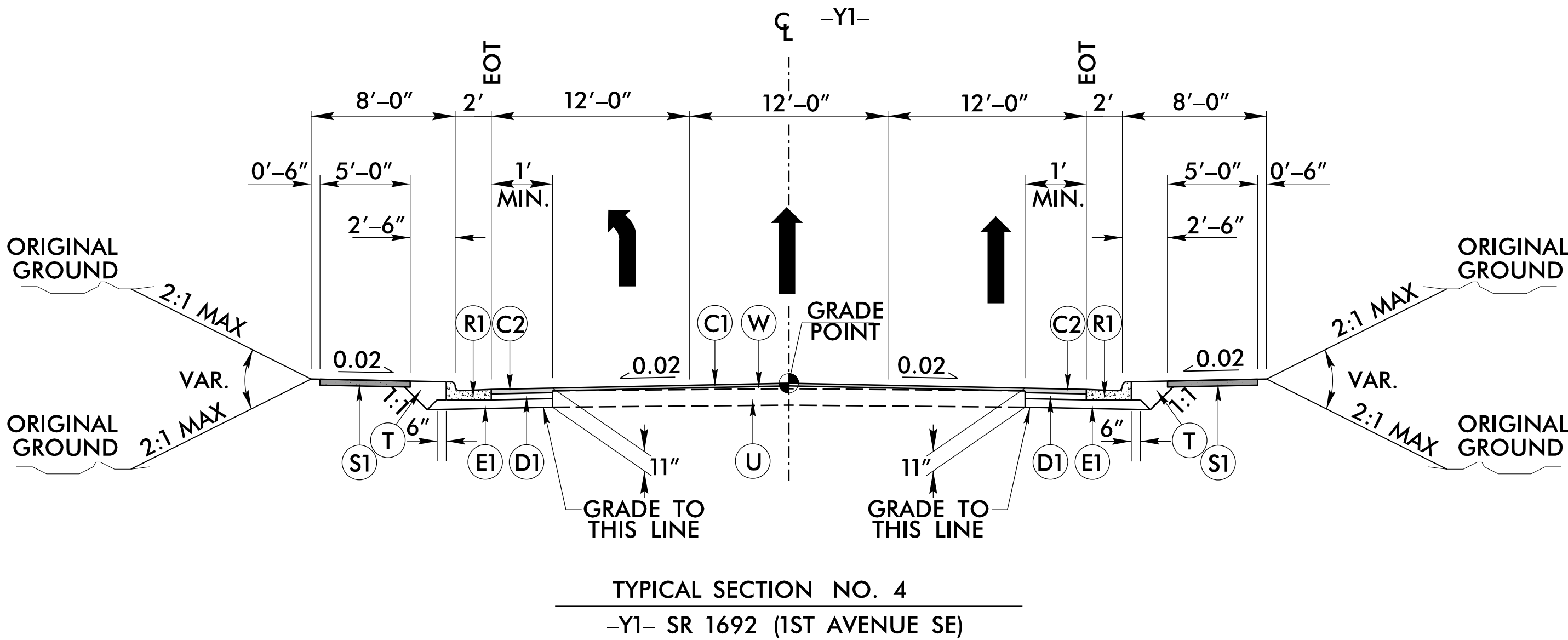
-L- STA. 12+30 TO -L- STA. 15+00
-L- STA. 15+50 TO -L- STA. 16+50
-L- STA. 16+50 TO -L- STA. 17+80
-L- STA. 18+50 TO -L- STA. 19+53

FINAL PAVEMENT SCHEDULE			
C1	PROP. APPROX. 1.5" ACSC, TYPE S9.5B	R2	5" MONOLITHIC CONCRETE ISLAND (KEYED IN)
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B	R3	8"X18" CONCRETE CURB.
C3	PROP. VAR. DEPTH ACSC, TYPE S9.5B	S1	4" CONCRETE SIDEWALK.
C4	PROP. VAR. DEPTH ACSC, TYPE S9.5B (LEVELING COURSE)	T	EARTH MATERIAL.
D1	PROP. APPROX. 4" ACIC, TYPE I19.0C	U	EXISTING PAVEMENT.
D2	PROP. VAR. DEPTH ACIC, TYPE I19.0C	V	INCIDENTAL MILLING
E1	PROP. APPROX. 4" ACBC, TYPE B25.0C	W	VARIABLE DEPTH ASPHALT PAVEMENT. (SEE DETAIL SHOWING METHOD OF WEDGING No. 1. ON SHEET 2A-1)
E2	PROP. VAR. DEPTH ACBC, TYPE B25.0C		
R1	2'-6" CONCRETE CURB AND GUTTER.		

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



TYPICAL SECTION NO. 3
-Y- SR 2231 (2ND AVENUE SE)



TYPICAL SECTION NO. 4
-Y1- SR 1692 (1ST AVENUE SE)

HNTB

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4000 Center at North Hills St.
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO.

2A-2

U-5777

ROADWAY DESIGN ENGINEER

PAVEMENT DESIGN ENGINEER

SEAL 024964

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UNLESS ALL SIGNATURES COMPLETED

USE TYPICAL SECTION NO. 3

-Y- STA. 10+75.00 TO STA. 12+55.82

-Y- STA. 13+45.99 TO STA. 14+50.00

USE TYPICAL SECTION NO. 4

-Y1- STA. 10+00.00 TO STA. 12+13.96

NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, MONOLITHIC ISLANDS, CURB AND GUTTER, AND LANE TAPER LOCATIONS.

NOTE: SAWCUT WHEN PROPOSED CURB & GUTTER IS WITHIN 1' OF EXISTING PAVEMENT

FINAL PAVEMENT SCHEDULE			
C1 PROP. APPROX. 1.5" ACSC, TYPE S9.5B		R2	5" MONOLITHIC CONCRETE ISLAND (KEYED IN)
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B	R3	8"X18" CONCRETE CURB.
C3	PROP. VAR. DEPTH ACSC, TYPE S9.5B	S1	4" CONCRETE SIDEWALK.
C4	PROP. VAR. DEPTH ACSC, TYPE S9.5B (LEVELING COURSE)	T	EARTH MATERIAL.
D1	PROP. APPROX. 4" ACIC, TYPE I19.0C	U	EXISTING PAVEMENT.
D2	PROP. VAR. DEPTH ACIC, TYPE I19.0C	V	INCIDENTAL MILLING
E1	PROP. APPROX. 4" ACBC, TYPE B25.0C	W	VARIABLE DEPTH ASPHALT PAVEMENT. (SEE DETAIL SHOWING METHOD OF WEDGING No. 1. ON SHEET 2A-1)
E2	PROP. VAR. DEPTH ACBC, TYPE B25.0C		
R1	2'-6" CONCRETE CURB AND GUTTER.		

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

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PROJECT REFERENCE NO.

U-5777

SHEET NO.

2A-3

ROADWAY DESIGN ENGINEER

PAVEMENT DESIGN ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

TYPICAL SECTION NO. 5
-Y1- SR 1692 (1ST AVENUE SE)

USE TYPICAL SECTION NO. 5
-Y1- STA. 13+03.74 TO STA. 14+25.00

TYPICAL SECTION NO. 6
-Y2- (MAIN AVENUE WAY NE)

USE TYPICAL SECTION NO. 6
-Y2- STA. 11+50.00 TO STA. 12+04.29

NOTE: SEE PLANS FOR SUPERELEVATIONS, TURN LANES, MONOLITHIC ISLANDS, CURB AND GUTTER, AND LANE TAPER LOCATIONS.
NOTE: SAWCUT WHEN PROPOSED CURB & GUTTER IS WITHIN 1' OF EXISTING PAVEMENT

8/17/99

19-FEB-2025 12:42
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HNTB

DETAIL OF INTERSECTIONS OF -L- AT -Y-, -L- AT -Y1-, & -L- AND -Y2-

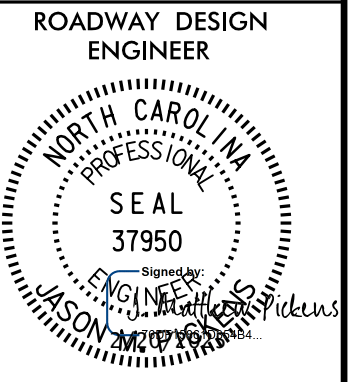


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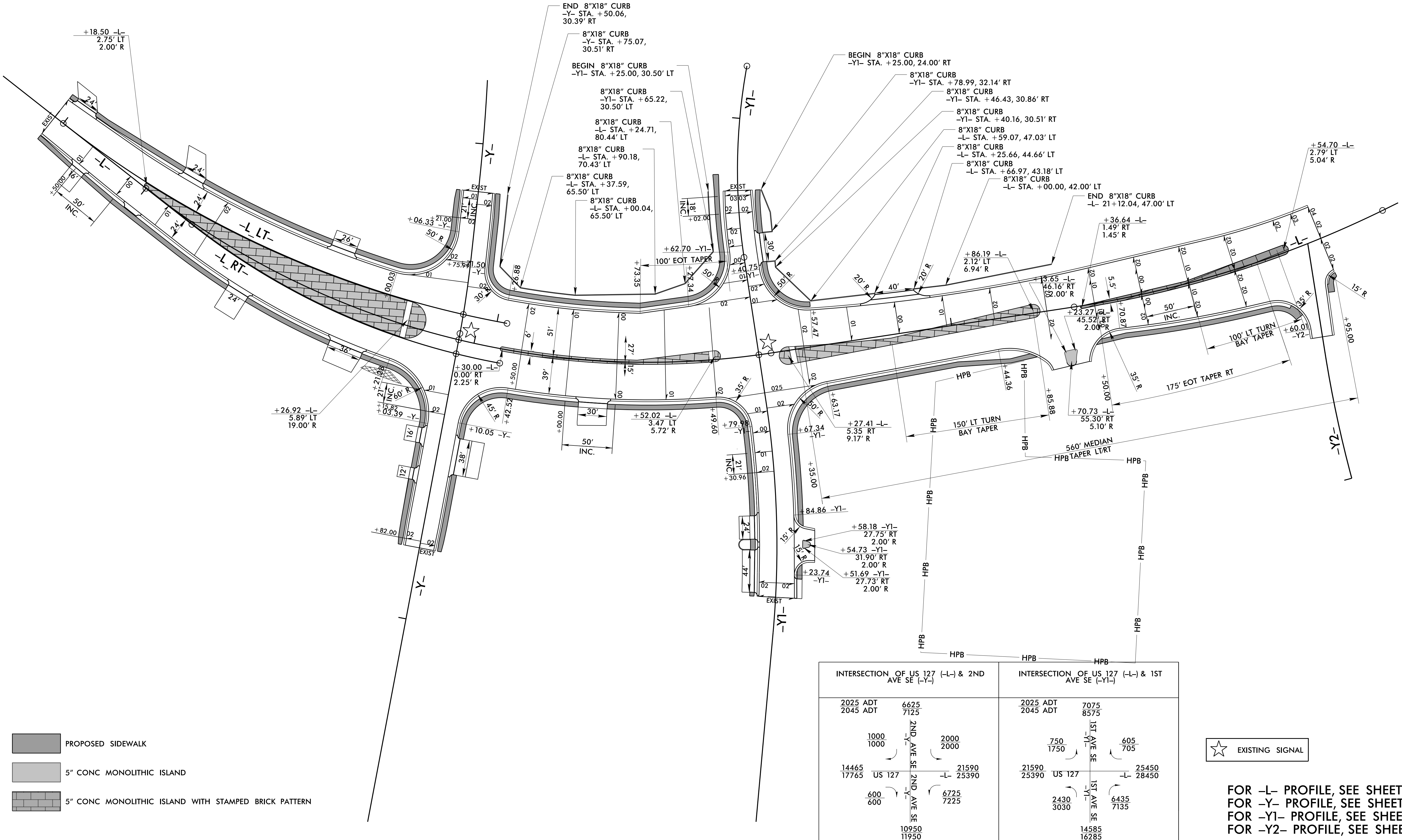
PROJECT REFERENCE NO.
U-5777

SHEET NO.
2B-1

ROADWAY DESIGN
ENGINEER



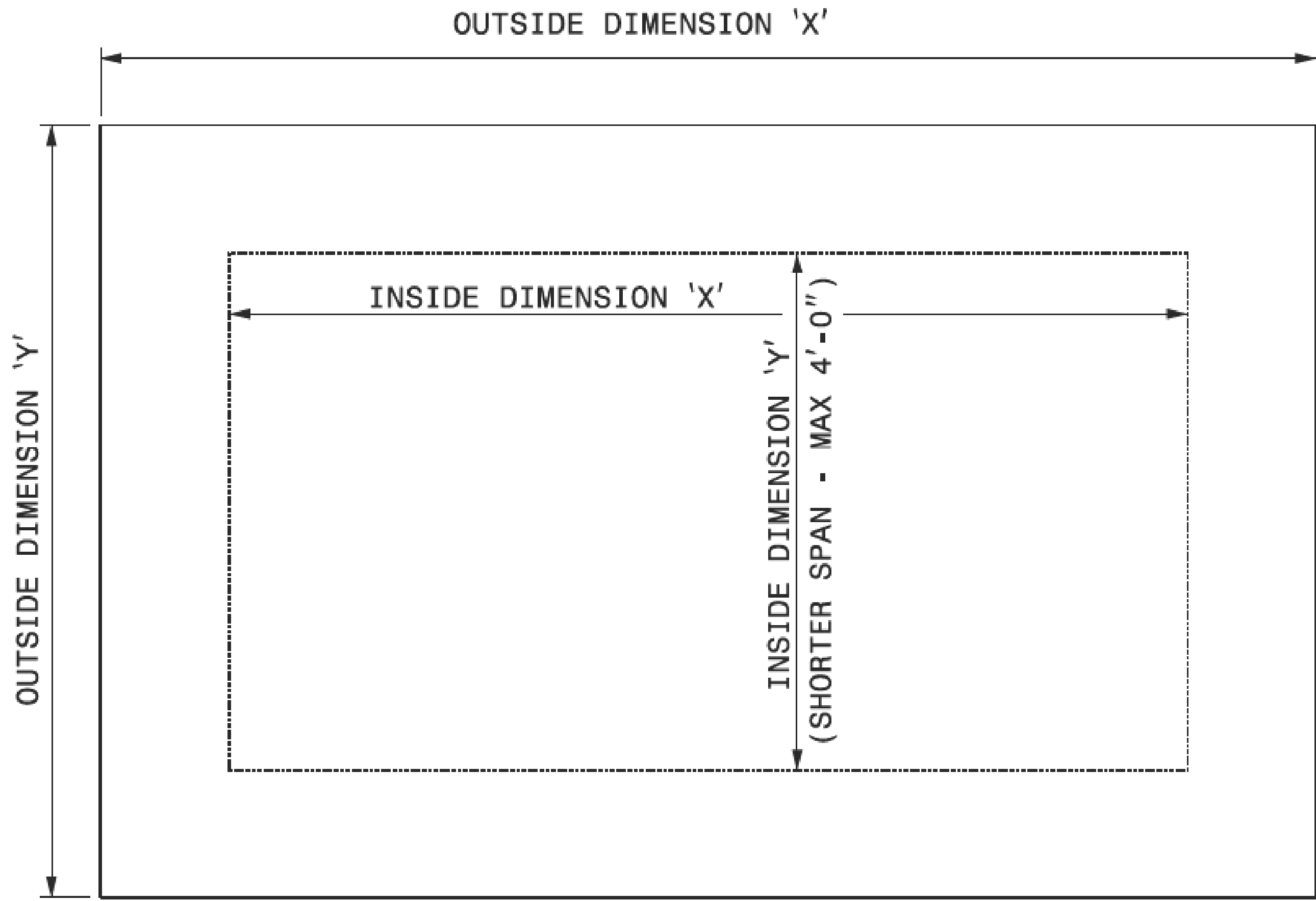
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



HNTB HNTB NORTH CAROLINA, P.C. 4000 Center at North Hills St. Suite 500 Raleigh, North Carolina 27609 NC License No: C-1554	PROJECT REFERENCE NO. U-5777	SHEET NO. 2B-2
	ROADWAY DESIGN ENGINEER	

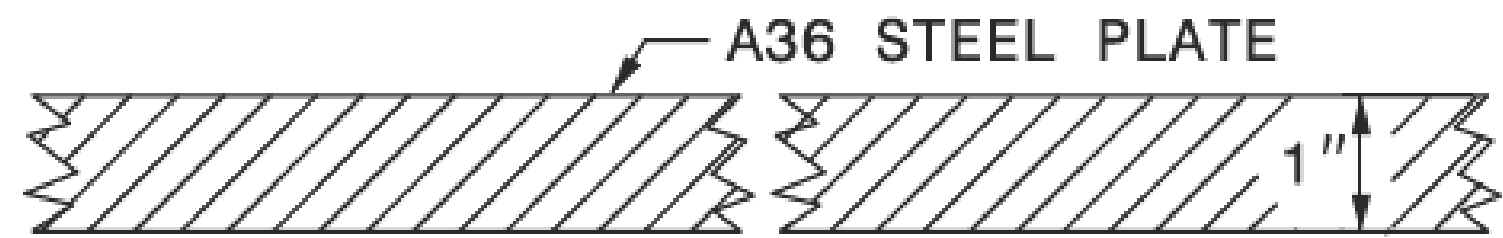


PROJECT REFERENCE NO.	SHEET NO.
U-5777	2C-1



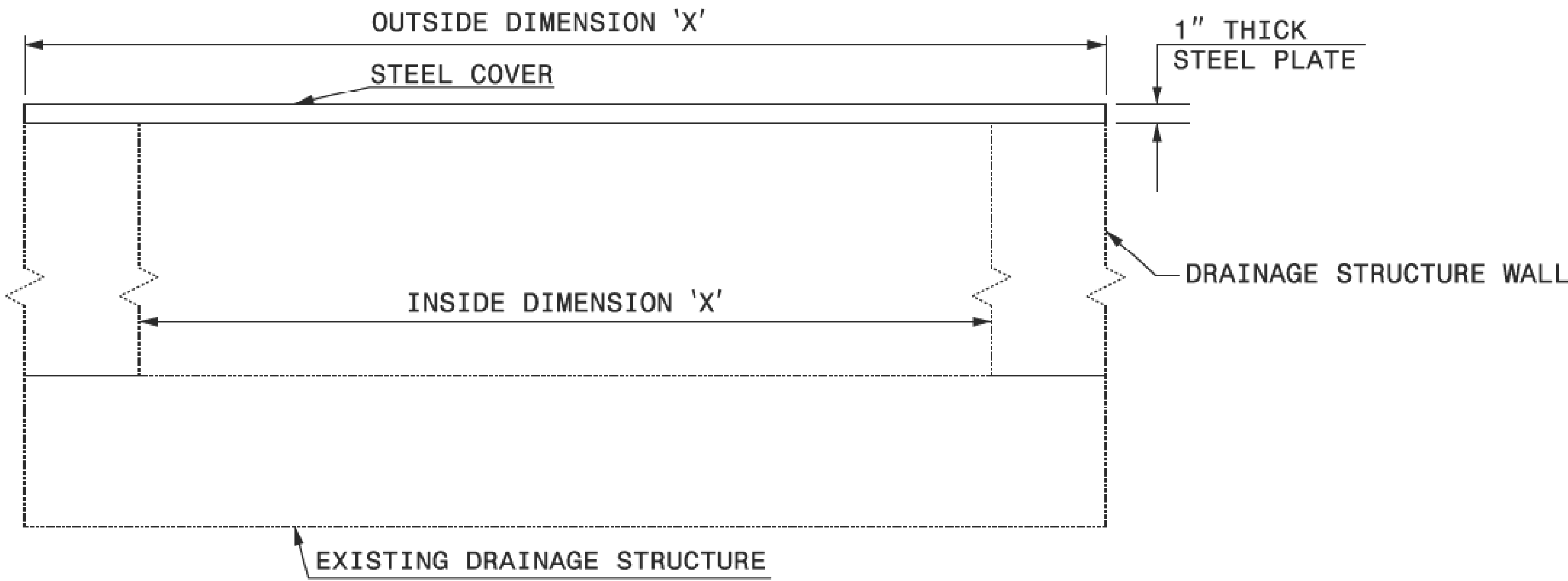
GENERAL NOTES:

- USE GRADE A36 STEEL
- STEEL COVERS ARE FOR TEMPORARY USE DURING PHASE CONSTRUCTION.
- FILL SHALL BE PLACED DIRECTLY OVER THE STEEL PLATES.
- SEE ROADWAY PLANS AND PROVISIONS FOR LOCATIONS
- QUANTITIES TO BE PAID FOR AT THE UNIT PRICE BID PER EACH.

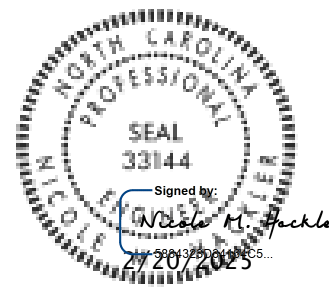


SECTION VIEW OF STEEL TOP PLATE

PLAN VIEWS



ELEVATION VIEWS



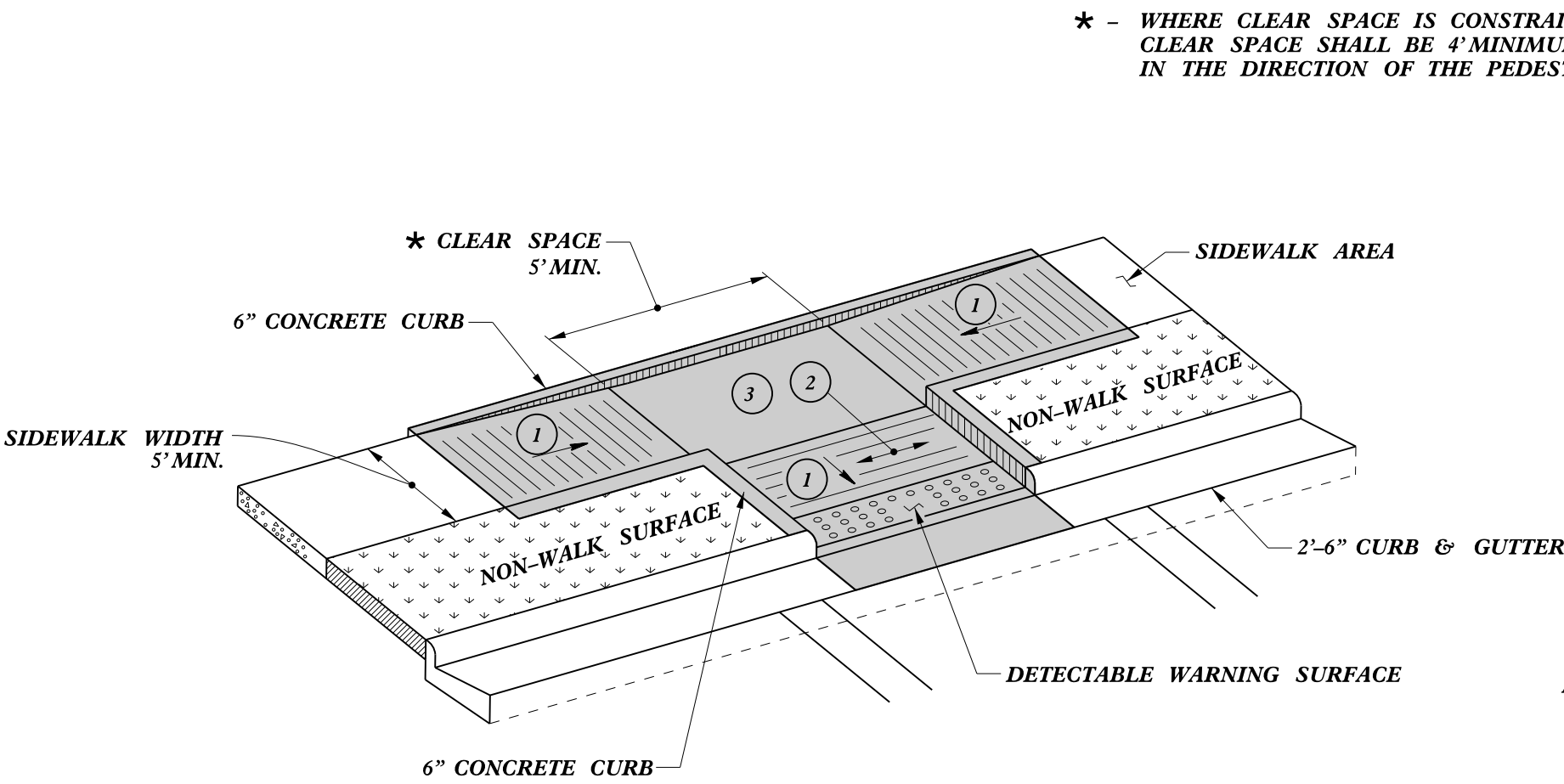
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

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

DETAIL OF TEMPORARY
1" STEEL COVER
OVER DRAINAGE STRUCTURE

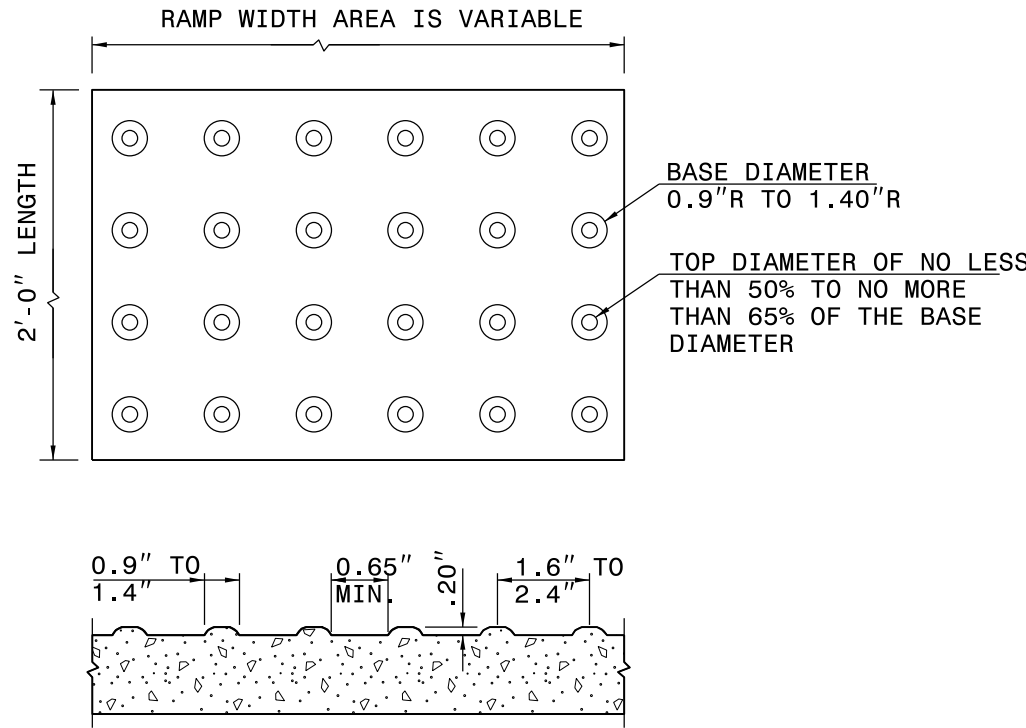
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PROJECT REFERENCE NO.	SHEET NO.
U-5777	2C-2

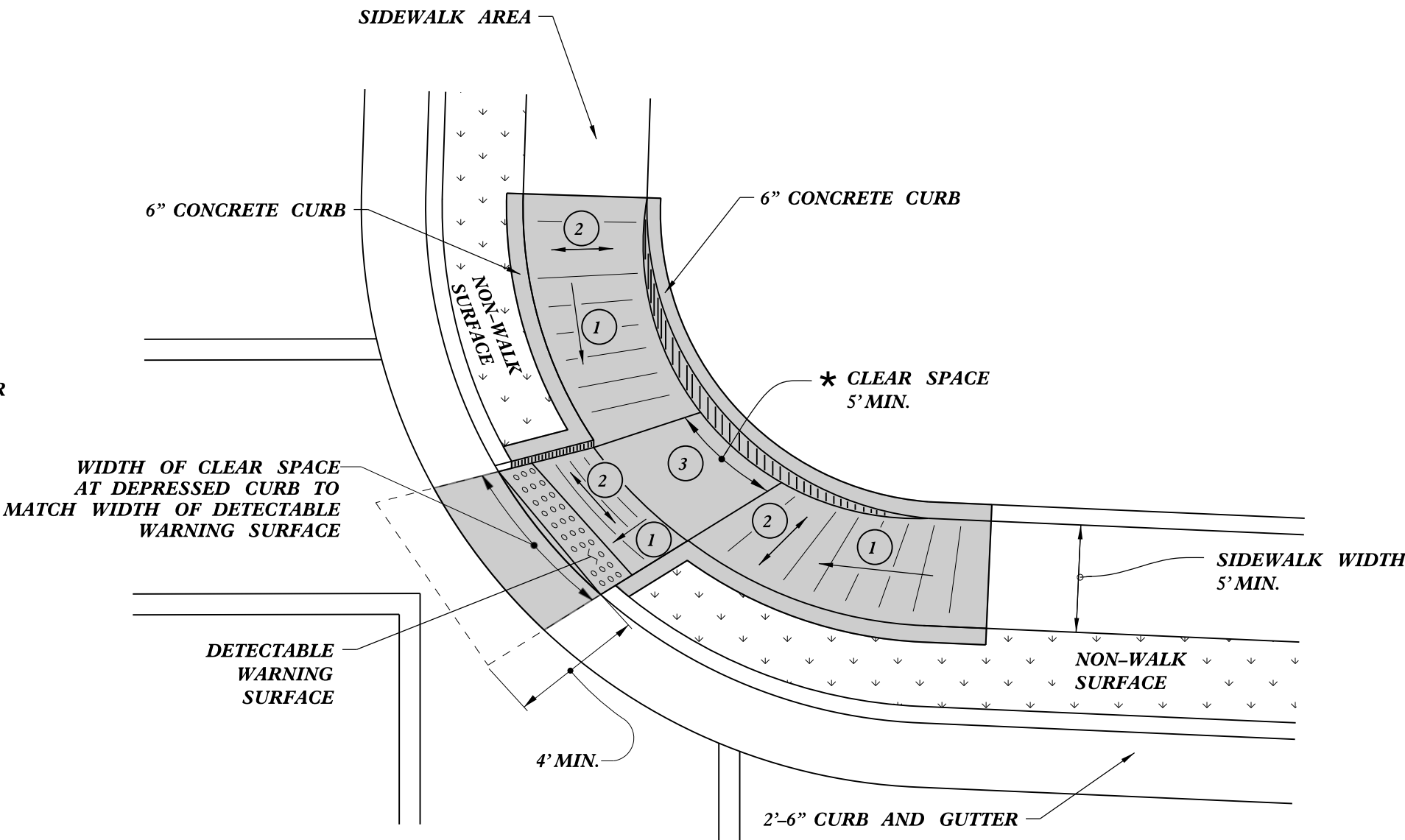


TYPE 3

NOTES:
DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING SURFACE



TYPE 3 MODIFIED
INSTALLATION IN A RADIUS

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00%.

PAY LIMITS FOR 1 CURB RAMP

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

ROADWAY DETAIL DRAWING FOR
CURB RAMP
PARALLEL RAMP

SHEET 9 OF 13
848D06



DOCUMENT NOT CONSIDERED FINAL
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CONTRACTS STANDARDS
AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

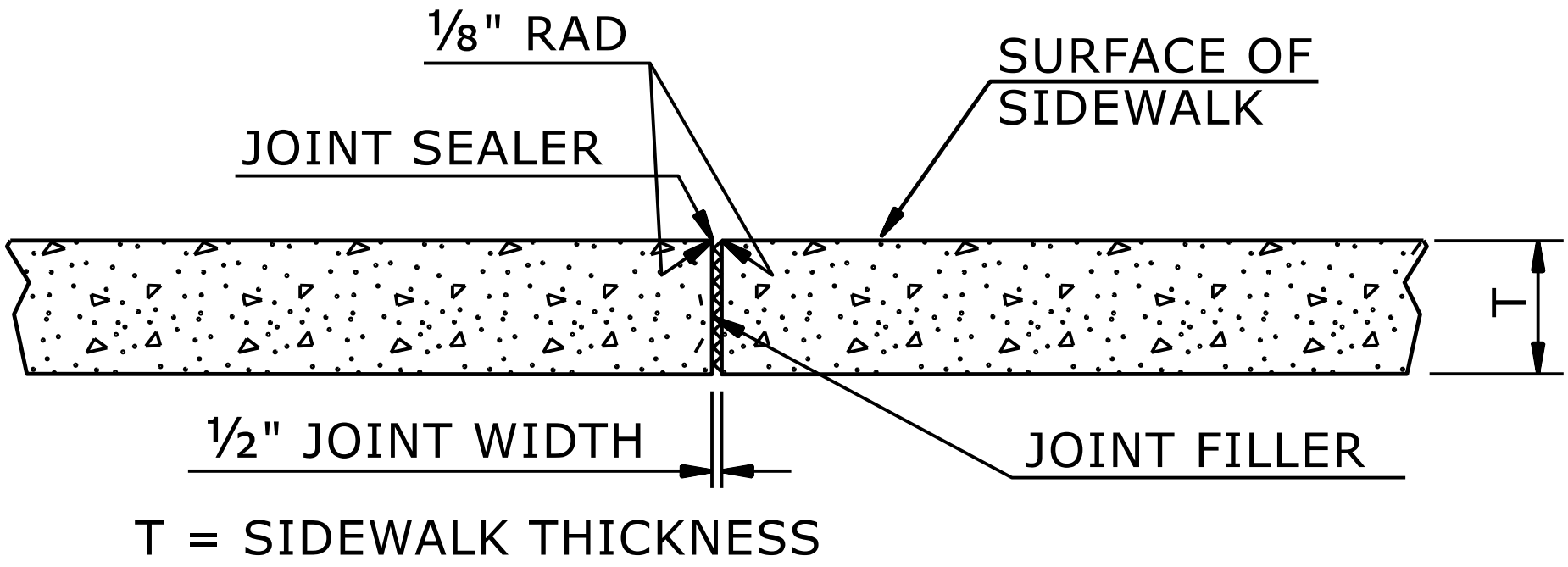
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MODIFIED BY: DATE:
CHECKED BY: DATE:
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NOTES:

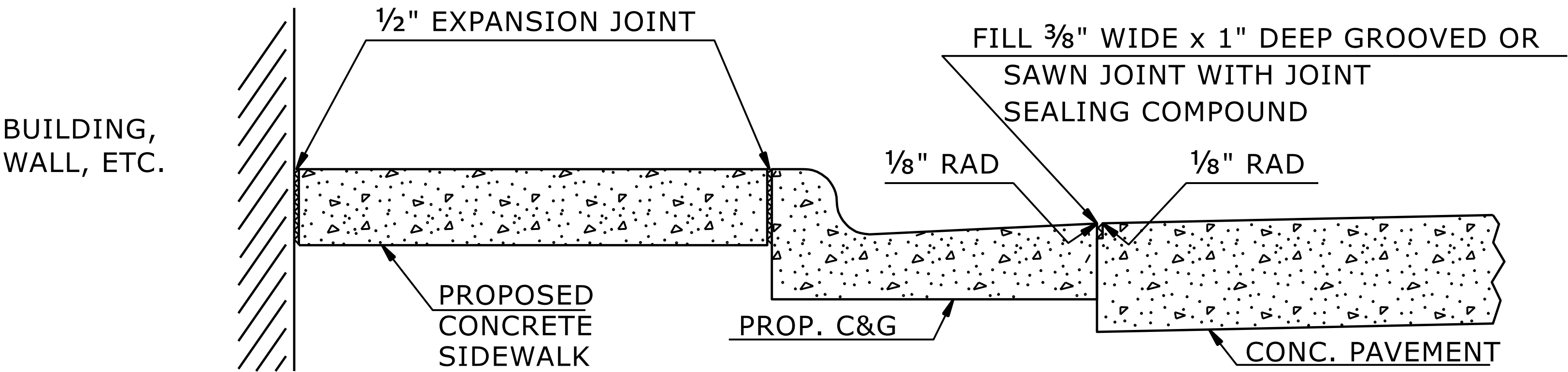
CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

PLACE A GROOVE JOINT 1" DEEP WITH 1/8" RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

SEE STD. DWG. 848.06 FOR CURB RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.



TRANSVERSE EXPANSION JOINT
IN SIDEWALK



DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

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

ROADWAY DETAIL DRAWING FOR
CONCRETE SIDEWALK



SHEET 1 OF 1

848D01

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**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**

Office 919-707-6950

FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN	DATE: 7-25-2024
MODIFIED BY: _____	DATE: _____
CHECKED BY: _____	DATE: _____
FILE SPEC.: _____	

12/06/07

COMPUTED BY: J. MATTHEW PICKENS	DATE: 11/08/2023
CHECKED BY: ANDREW J. MCOMBER	DATE: 11/08/2023

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HNTB

HNTB NORTH CAROLINA, P.C.

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Raleigh, North Carolina 27609

NC License No: C-1554

PROJECT REFERENCE NO.	SHEET NO.
U-5777	3B-1

SUMMARY OF EARTHWORK

STATION	STATION	UNCL. EXCAV.	EMBANK + %	BORROW	WASTE
-L- 10+00.00	-L- 23+95.00	1,957	3,128	1,171	
-Y- 10+75.00	-Y- 12+50.00	37	403	366	
-Y- 13+50.00	-Y- 14+75.00	125	29		96
-Y1- 10+00.00	-Y1- 12+00.00	69	124	55	
-Y1- 13+25.00	-Y1- 14+25.00	39	75	36	
-Y2- 11+50.00	-Y2- 12+00.00	45	11		34
TOTALS:		2,272	3,770	1,628	130
WASTE IN LIEU OF BORROW				-130	-130
PROJECT TOTALS:		2,272	3,770	1,498	
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT				75	
GRAND TOTALS:		2,272	3,770	1,573	
SAY:		2,300		1,600	

DRAINAGE DITCH EXCAVATION: 25 CY

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

Earthwork quantities are calculated by the roadway designer. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

REMOVAL OF EXISTING
ASPHALT PAVEMENT
SUMMARY

SURVEY LINE	STATION	STATION	SQUARE YARDS
-L-, RT	10+00	11+00	12.65
-L-, LT	10+00	10+31	3.56
-L-, RT	11+79	14+67	386.08
-L-, RT	15+02	17+82	538.84
-L-, RT	18+26	21+00	378.05
-L-, LT	20+64	23+95	68.84
-L-, RT	21+34	22+09	18.50
-L-, RT	22+56	23+55	27.11
-L-, RT	23+77	23+95	3.46
-Y-, LT	10+75	12+18	28.11
-Y-, RT	10+75	12+11	28.94
-Y-, RT	13+61	14+50	18.55
-Y-, LT	13+93	14+50	10.58
-Y1-, LT	10+00	11+80	32.36
-Y1-, RT	10+00	11+79	27.05
-Y1-, RT	13+27	14+25	19.90
-Y1-, LT	13+50	14+25	16.02
-Y2-, LT	11+50	11+60	2.17
-Y2-, RT	11+50	11+95	11.11
		TOTAL:	1,631.89
		SAY:	1,650

4.04/06

COMPUTED BY: JCK DATE: DEC 2020
CHECKED BY: SCC DATE: DEC 2020
COMPUTED BY: J. B. Barfield DATE: 10/15/19
CHECKED BY: _____ DATE: _____

PROJECT NO.	SHEET NO.
50189 (U-5777)	3G-1

(12-17-19)

STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
CONTINGENCY				SD	200
				TOTAL LF:	200

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

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

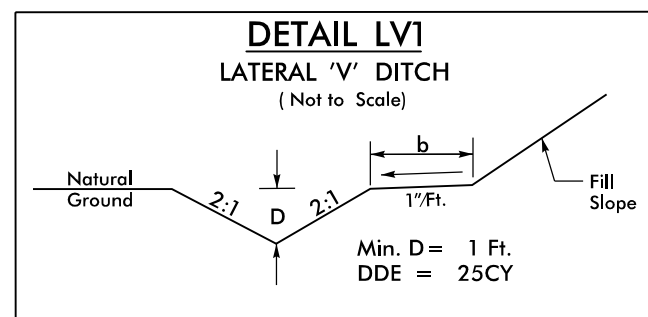
LINE	Station	Station	Aggregate Type* ASU(1/2)/ AST	Aggregate Thickness INCHES [8" for ASU(2)]	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Subgrade Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
CONTINGENCY (PDI)			AST					50	
CONTINGENCY (PDI)			ASU(1)	12	200	400	600		
CONTINGENCY			ASU(1)	12	100	200	500		
			TOTAL CY/TONS/SY:		300	600**	1100**	50	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 Subgrade 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.

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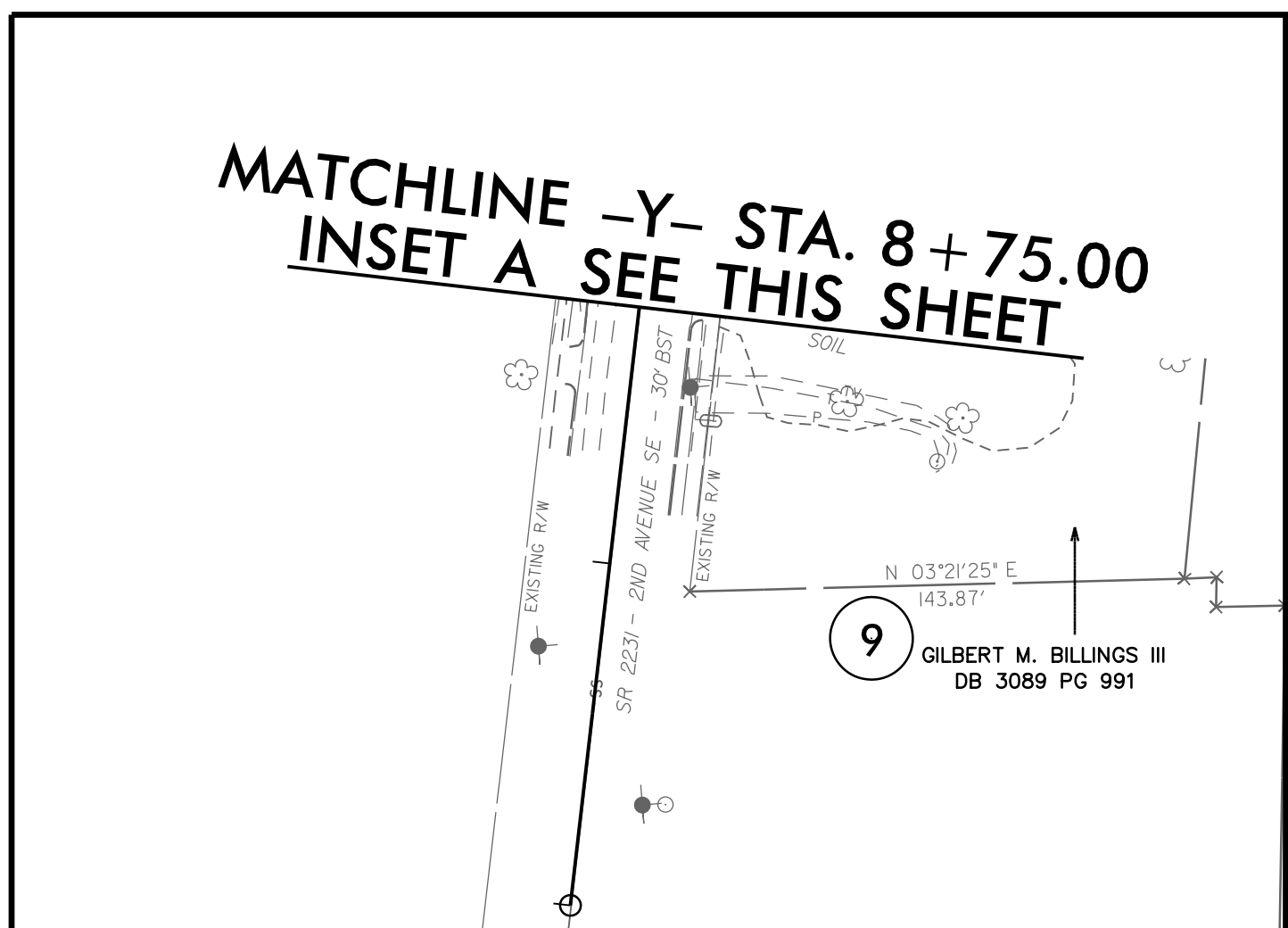
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BEGIN PROJECT U-5777
-L- POT STA 10+00.00



PARCEL NO.	PARCEL OWNER	DEED BOOK/PAGE
21	FRANCISCAN TERRACE APARTMENTS, LLC	DB 3234 PG 228

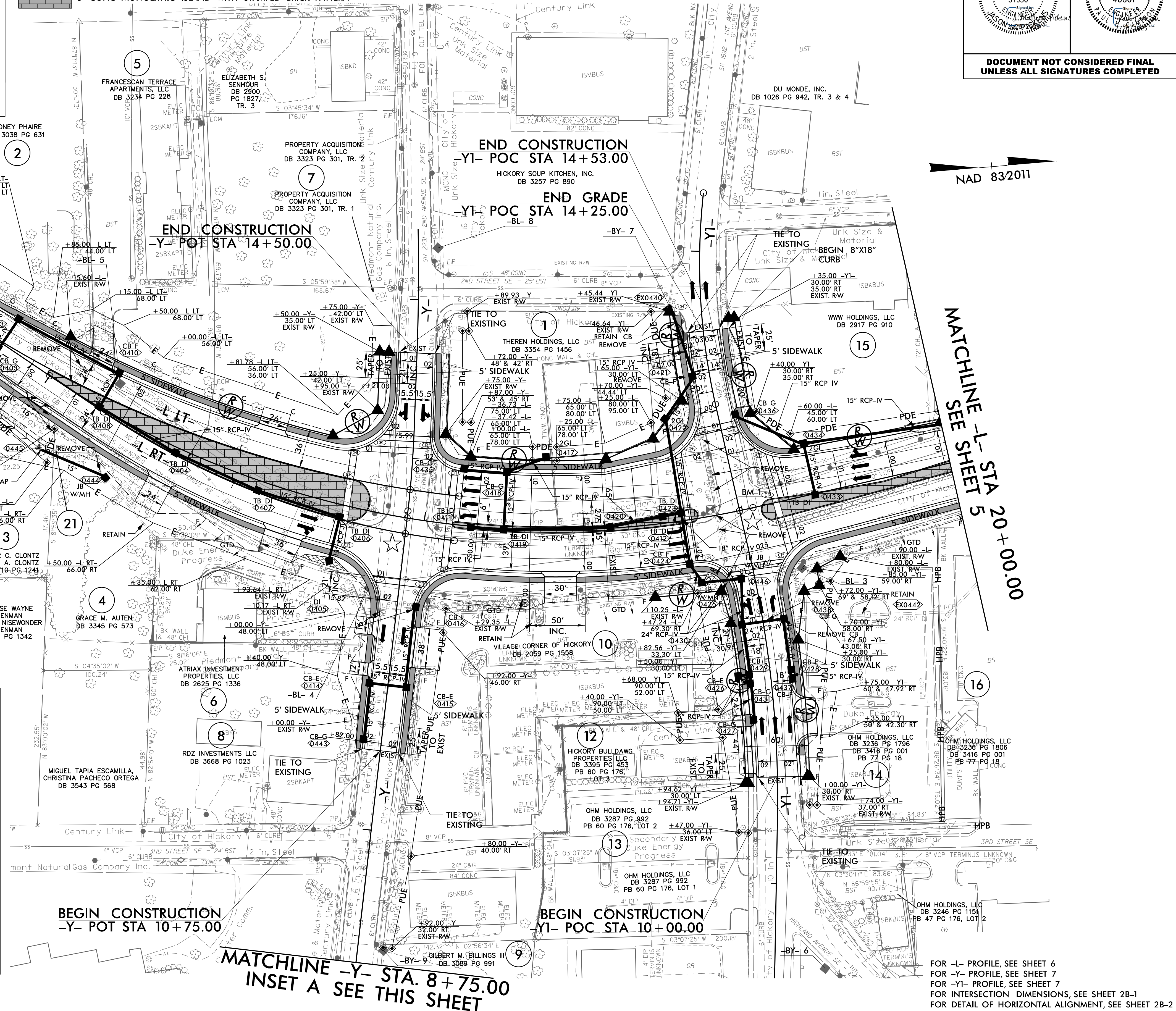
MATCHLINE -Y- STA. 8+75.00
INSET A SEE THIS SHEET



★ EXISTING SIGNAL

5" CONC MONOLITHIC ISLAND

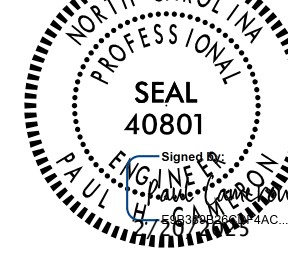
5" CONC MONOLITHIC ISLAND WITH STAMPED BRICK PATTERN



NAD 83/2011

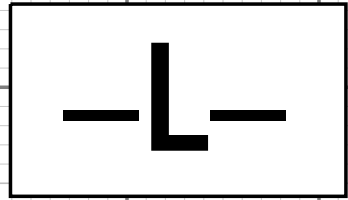
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STA 5
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MATCHLINE SEE SHEET

FOR -L- PROFILE, SEE SHEET 6
FOR -Y- PROFILE, SEE SHEET 7
FOR -YI- PROFILE, SEE SHEET 7
FOR INTERSECTION DIMENSIONS, SEE SHEET 2B-1
FOR DETAIL OF HORIZONTAL ALIGNMENT, SEE SHEET 2B-2

PROJECT REFERENCE NO.	SHEET NO.
U-5777	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
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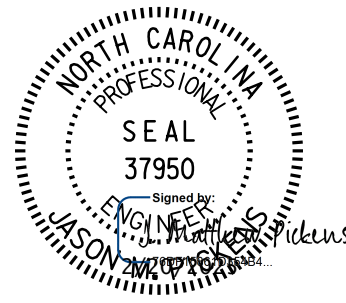




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PROJECT REFERENCE NO.

U-5777

ROADWAY DESIGN
ENGINEER

SHEET NO.

7

HYDRAULICS
ENGINEER



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