

09.08/2019

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols
See Sheet 1C For Survey Control Sheet

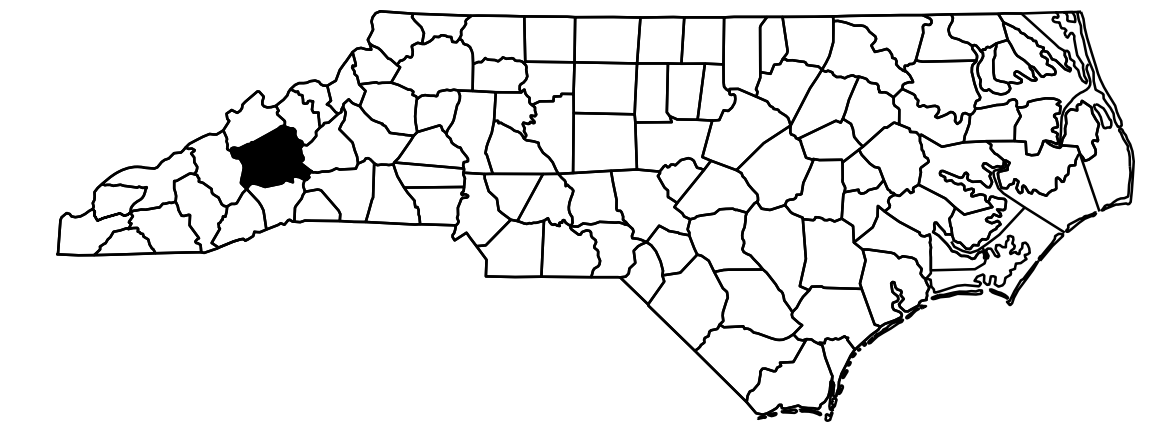
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BUNCOMBE COUNTY

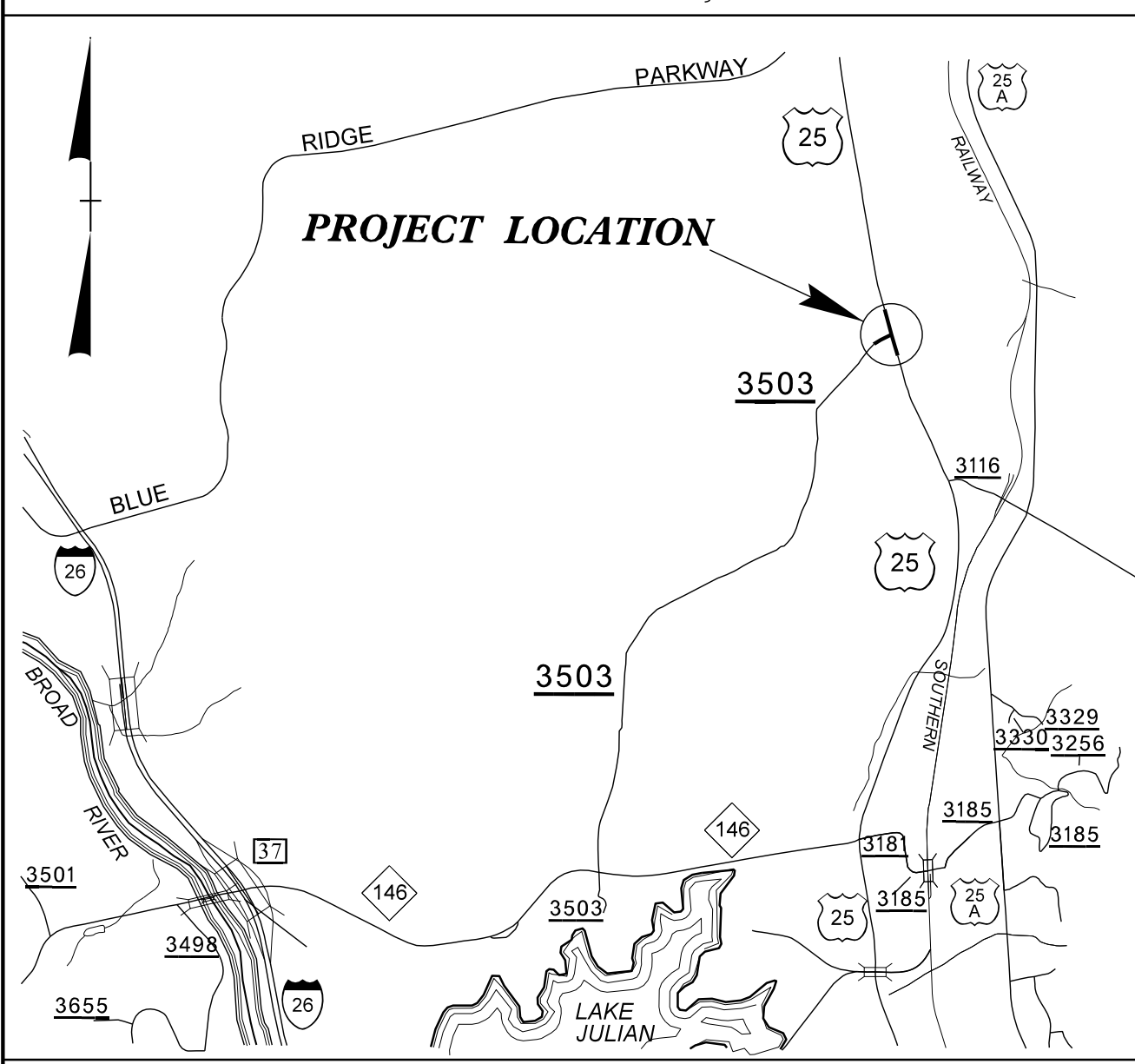
LOCATION: US 25 AND SR 3503 (OVERLOOK RD)

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

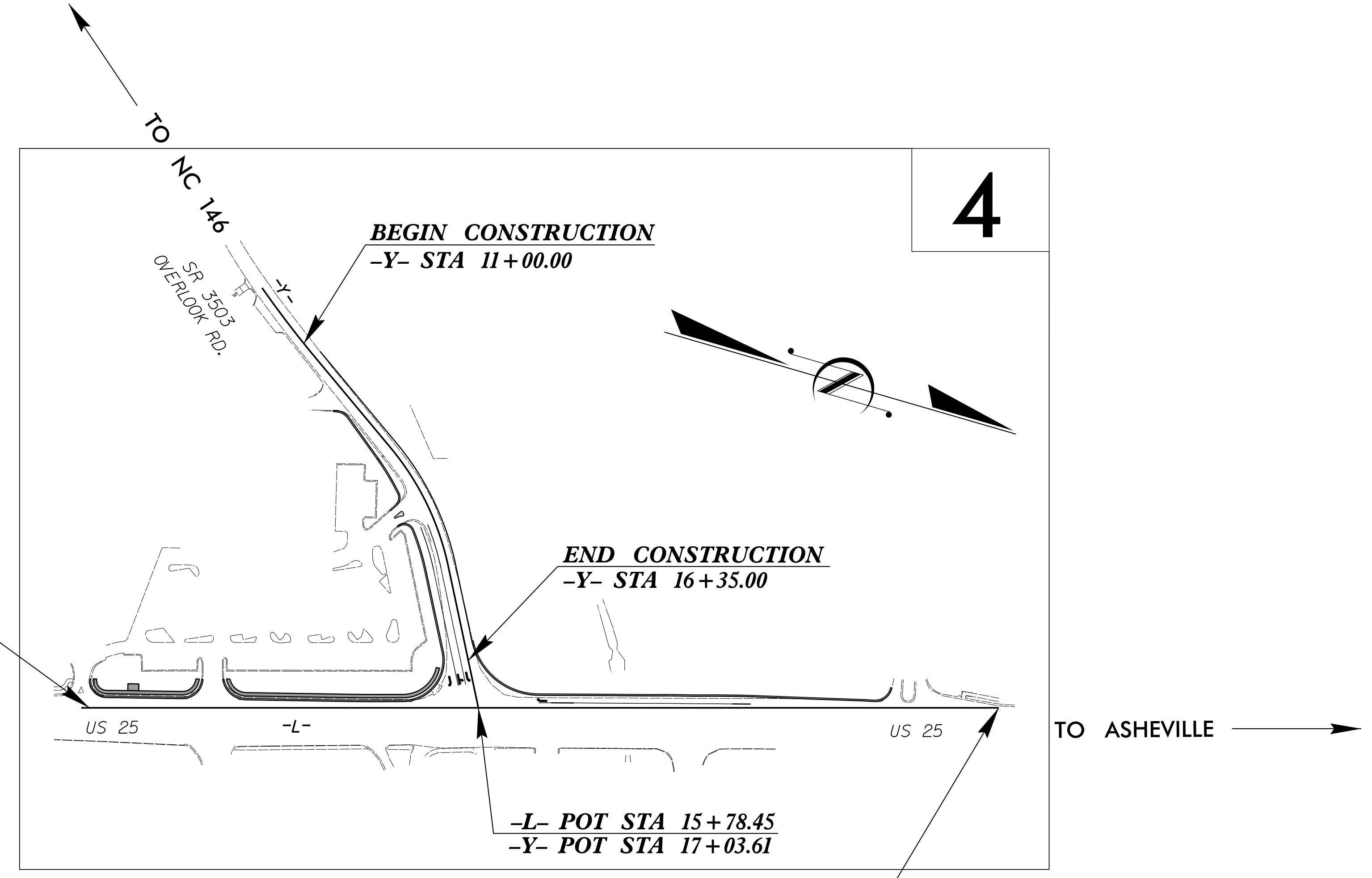
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	SM-5713D	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
47716.1.1		PE	
47716.2.1		ROW	
47716.3.1		CONST.	
47875			



PROJECT: SM-5713D
CONTRACT: DM00376



VICINITY MAP

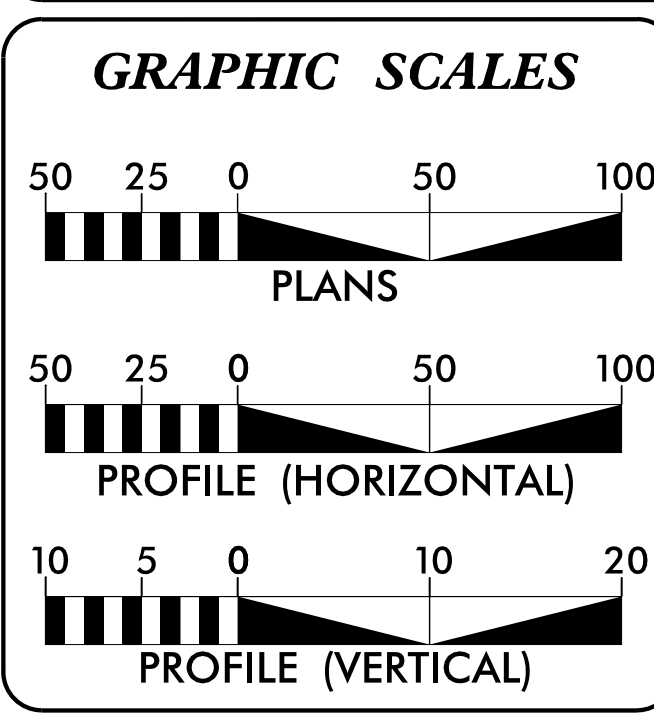


BEGIN TIP PROJECT -L- STA 10+17.00

END TIP PROJECT -L- STA 21+81.00

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



DESIGN DATA

ADT 2017 = 35000

V = 45 MPH

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT SM-5713D = 0.22 MILES

Prepared In the Office of:
NCDOT DIVISION 13
55 Orange Street Asheville NC, 28801

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MAY 24, 2019

LETTING DATE: MAY 18, 2022

EDDIE DOUGLAS
PROJECT ENGINEER

STEVE CANNON, P.E.
DIVISION PROJECT DEVELOPMENT ENGINEER

HYDRAULICS ENGINEER

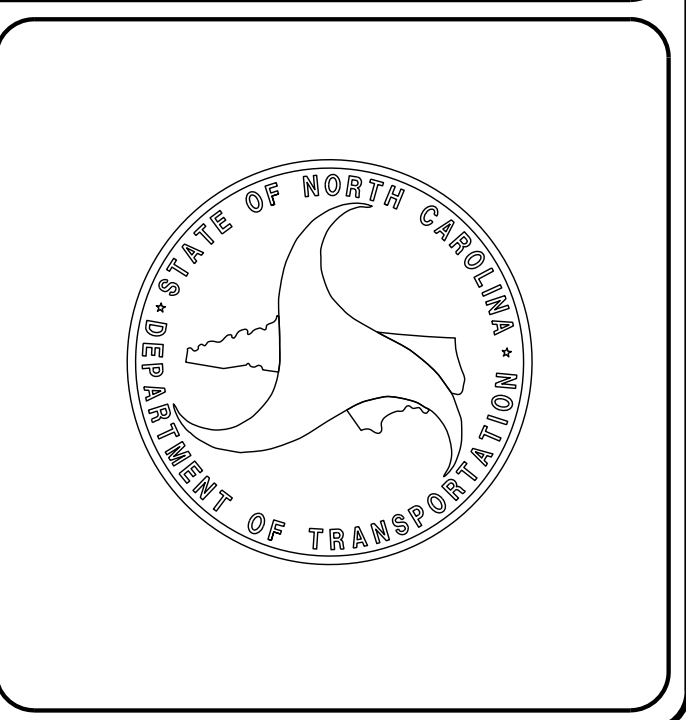
04/25/2022

DocuSigned by: Marc Shanon
SIGNATURE: Marc Shanon P.E.

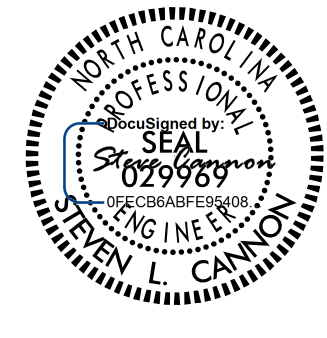
DIVISION PROJECT DEVELOPMENT ENGINEER

04/26/2022

DocuSigned by: Steve Cannon
SIGNATURE: Steve Cannon P.E.



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\$\$\$\$\$USERNAME\$\$\$\$\$

PROJECT REFERENCE NO. <i>SM-5713D</i>	SHEET NO. <i>1-A</i>
ROADWAY DESIGN ENGINEER	
	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

	INDEX OF SHEETS
SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2C-1 THRU 2C-4	SPECIAL DETAILS
3B-1	ROADWAY SUMMARIES
3D-1	DRAINAGE SUMMARIES
4 THRU 5	PLAN AND PROFILE SHEET
EC-1 THRU EC-5	EROSION CONTROL PLANS
TMP-1 THRU TMP-2	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-2	PAVEMENT MARKING PLANS
RW01 THRU RW04	SURVEY CONTROL AND ROW SHEETS
SIGN-1 THRU SIGN-2	SIGNING PLANS
SIG-1.0 THRU SIG-2.1	SIGNAL PLANS
X-A THRU X-B	CROSS-SECTION SUMMARY SHEET
X-1 THRU X-20	CROSS-SECTIONS

GENERAL NOTES: 2018 SPECIFICATIONS
EFFECTIVE: 01-16-2018
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 11.

DRIVEWAYS:
DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.03 AT LOCATIONS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

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.

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

SUBSURFACE PLANS:
NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

UTILITIES:
UTILITY OWNERS ON THIS PROJECT ARE
AT&T
Duke Energy
Charter
City of Asheville
Traffic Services
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

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

CURB RAMPS
CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. CONSTRUCT ALL CURB RAMPS ACCORDANCE WITH STD 848.05 and/or 848.06.

2018 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2018 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
225.06	Method of Grading Sight Distance at Intersections
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.30	Driveway Drop Inlet
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.05	Curb Ramp - Proposed Curb & Gutter
848.06	Curb Ramp - Existing Curb & Gutter
852.01	Concrete Islands
862.01	Guardrail Placement
862.02	Guardrail Installation
876.02	Guide for Rip Rap at Pipe Outlets

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

BOUNDARIES AND PROPERTY:

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

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

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

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ MILEPOST 35
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	◆
Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	●
Exist Permanent Easement Pin and Cap	◇
New Permanent Easement Pin and Cap	◇
Vertical Benchmark	⊠
Existing Right of Way Marker	△
Existing Right of Way Line	-----
New Right of Way Line	-----
New Right of Way Line with Pin and Cap	-----
New Right of Way Line with Concrete or Granite RW Marker	-----
New Control of Access Line with Concrete C/A Marker	-----
Existing Control of Access	-----
New Control of Access	-----
Existing Easement Line	----- E
New Temporary Construction Easement	----- E
New Temporary Drainage Easement	----- TDE
New Permanent Drainage Easement	----- PDE
New Permanent Drainage / Utility Easement	----- DUE
New Permanent Utility Easement	----- PUE
New Temporary Utility Easement	----- TUE
New Aerial Utility Easement	----- AUE

ROADS AND RELATED FEATURES:

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

VEGETATION:

Single Tree	☼
Single Shrub	☼

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

Hedge	-----
Woods Line	-----
Orchard	-----
Vineyard	-----

EXISTING STRUCTURES:

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

UTILITIES:

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 LOS B (S.U.E.*)	----- P
U/G Power Line LOS C (S.U.E.*)	----- P
U/G Power Line LOS D (S.U.E.*)	----- P

TELEPHONE:

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

WATER:

Water Manhole	⊙
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
U/G Water Line LOS B (S.U.E.*)	-----
U/G Water Line LOS C (S.U.E.*)	-----
U/G Water Line LOS D (S.U.E.*)	-----
Above Ground Water Line	----- A/G Water

TV:

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

GAS:

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

SANITARY SEWER:

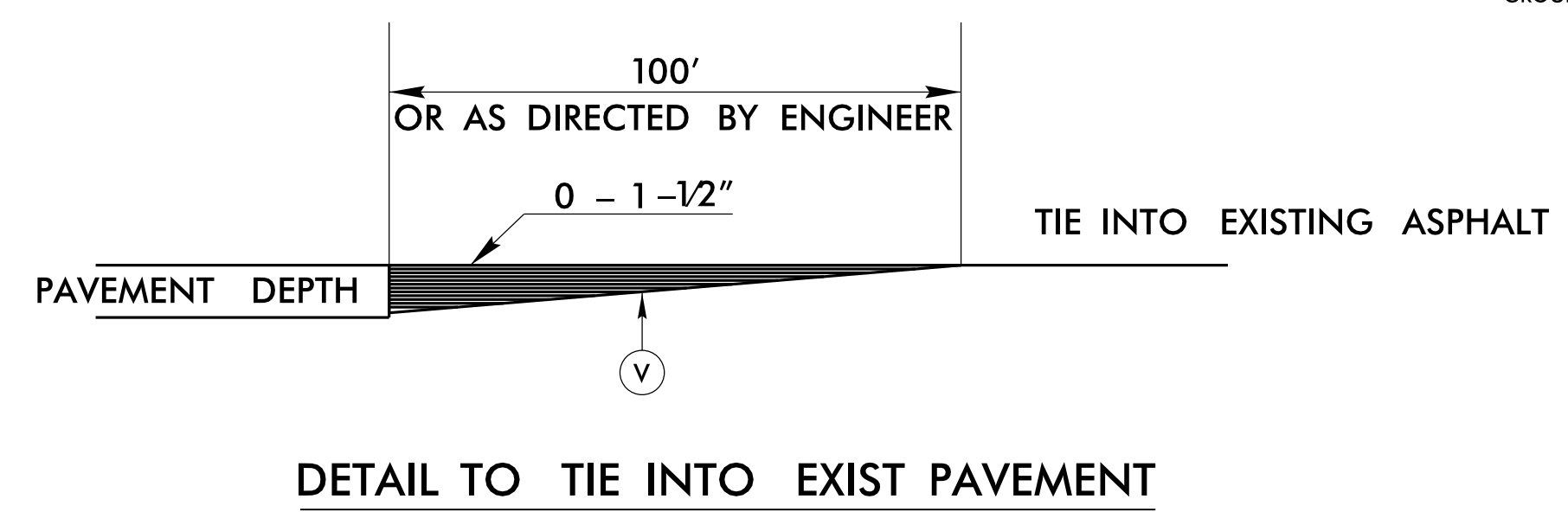
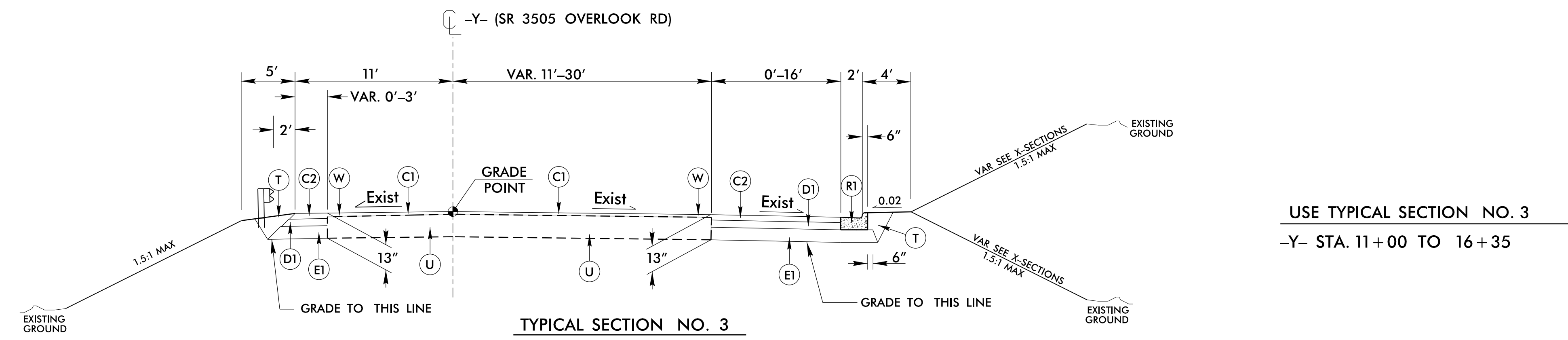
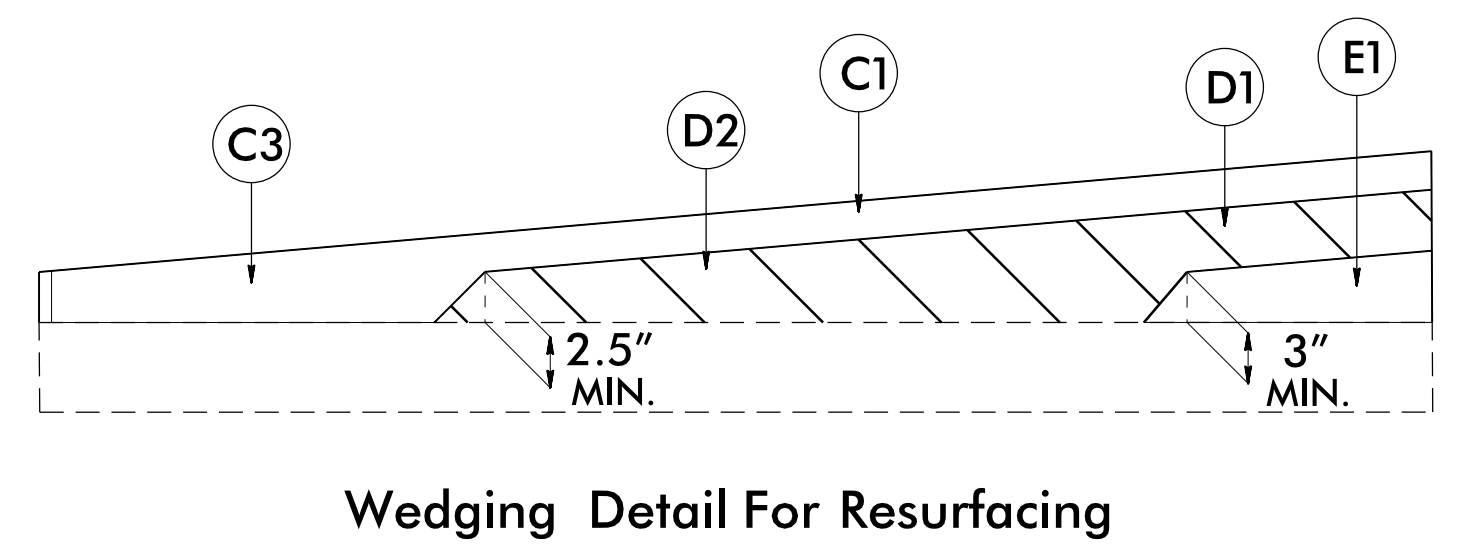
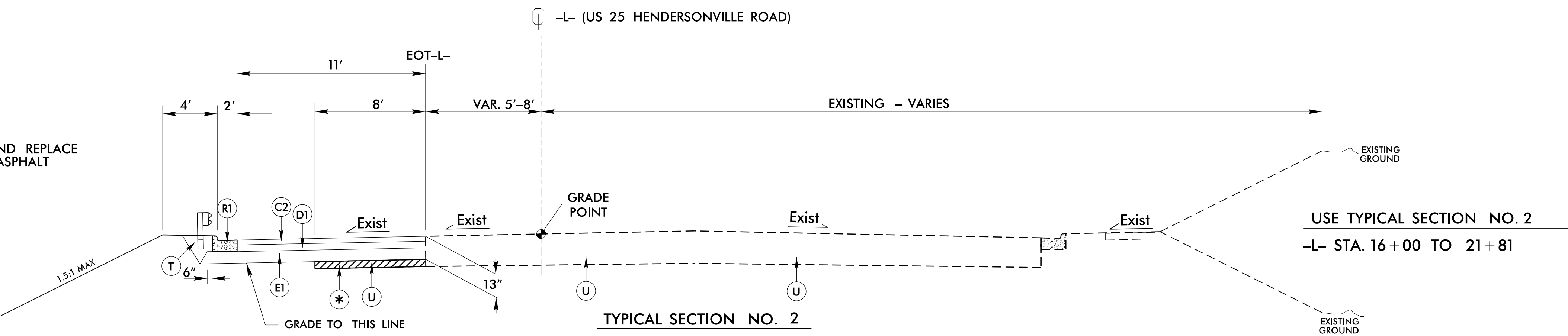
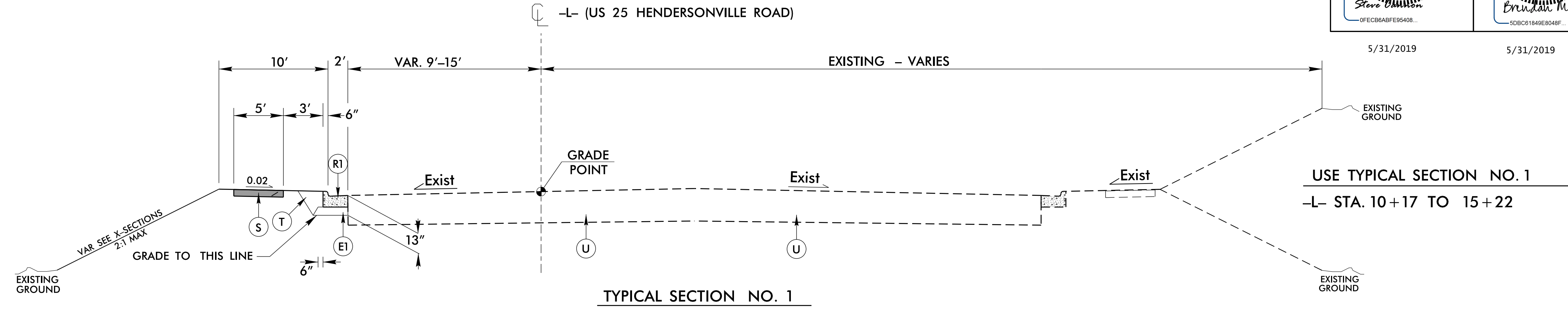
Sanitary Sewer Manhole	⊙
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	----- SS
Above Ground Sanitary Sewer	----- A/G Sanitary Sewer
SS Forced Main Line LOS B (S.U.E.*)	----- FSS
SS Forced Main Line LOS C (S.U.E.*)	----- FSS
SS Forced Main Line LOS D (S.U.E.*)	----- FSS

MISCELLANEOUS:

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

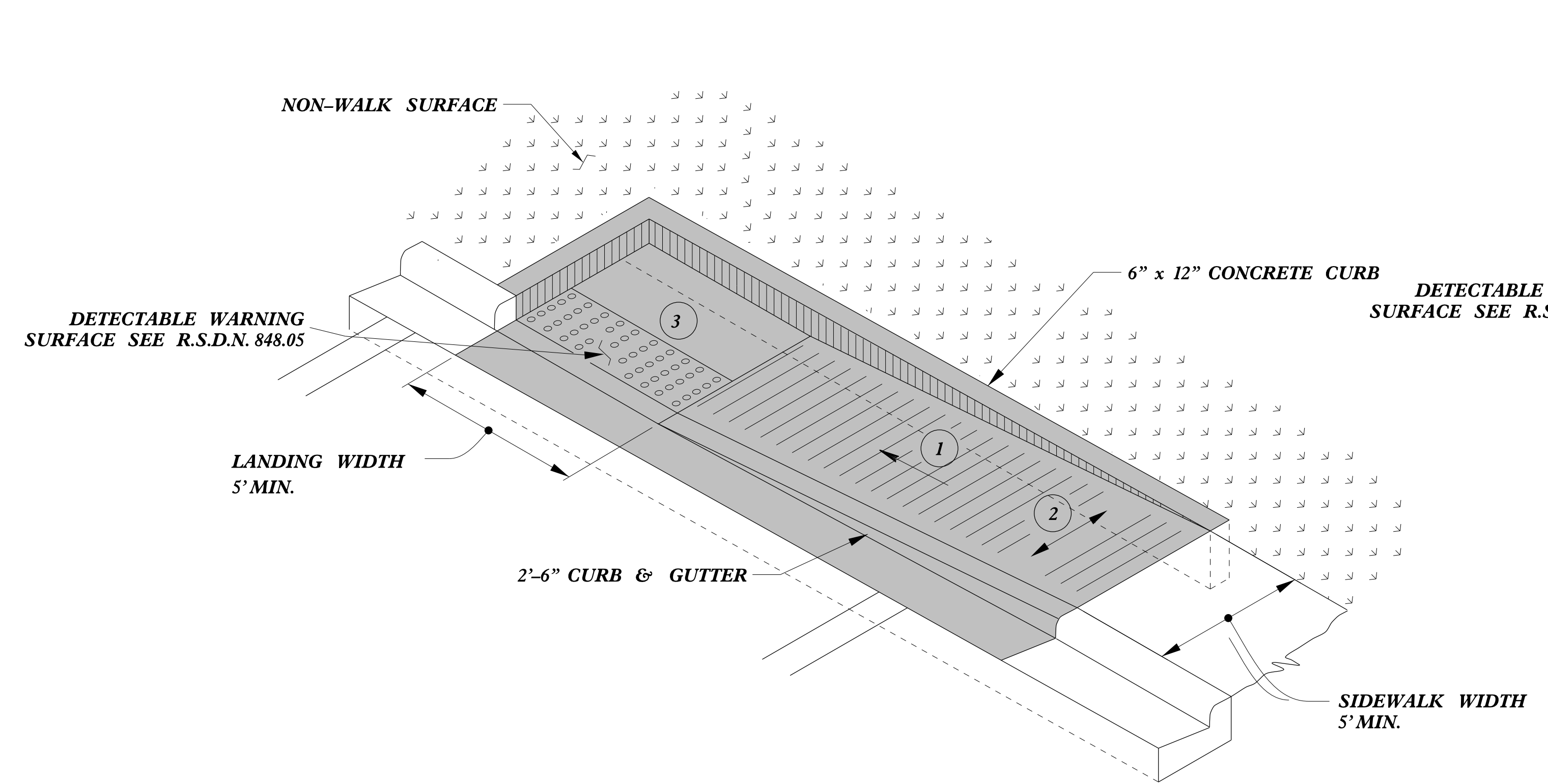
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 336 LBS. PER SQ. YARD
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YARD PER 1" DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 4" IN DEPTH.
E1	PROP. APPROX. 6" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
R1	2'-6" CURB AND GUTTER
S	5' SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	INCIDENTAL MILLING
W	WEDGING

REVISIONS

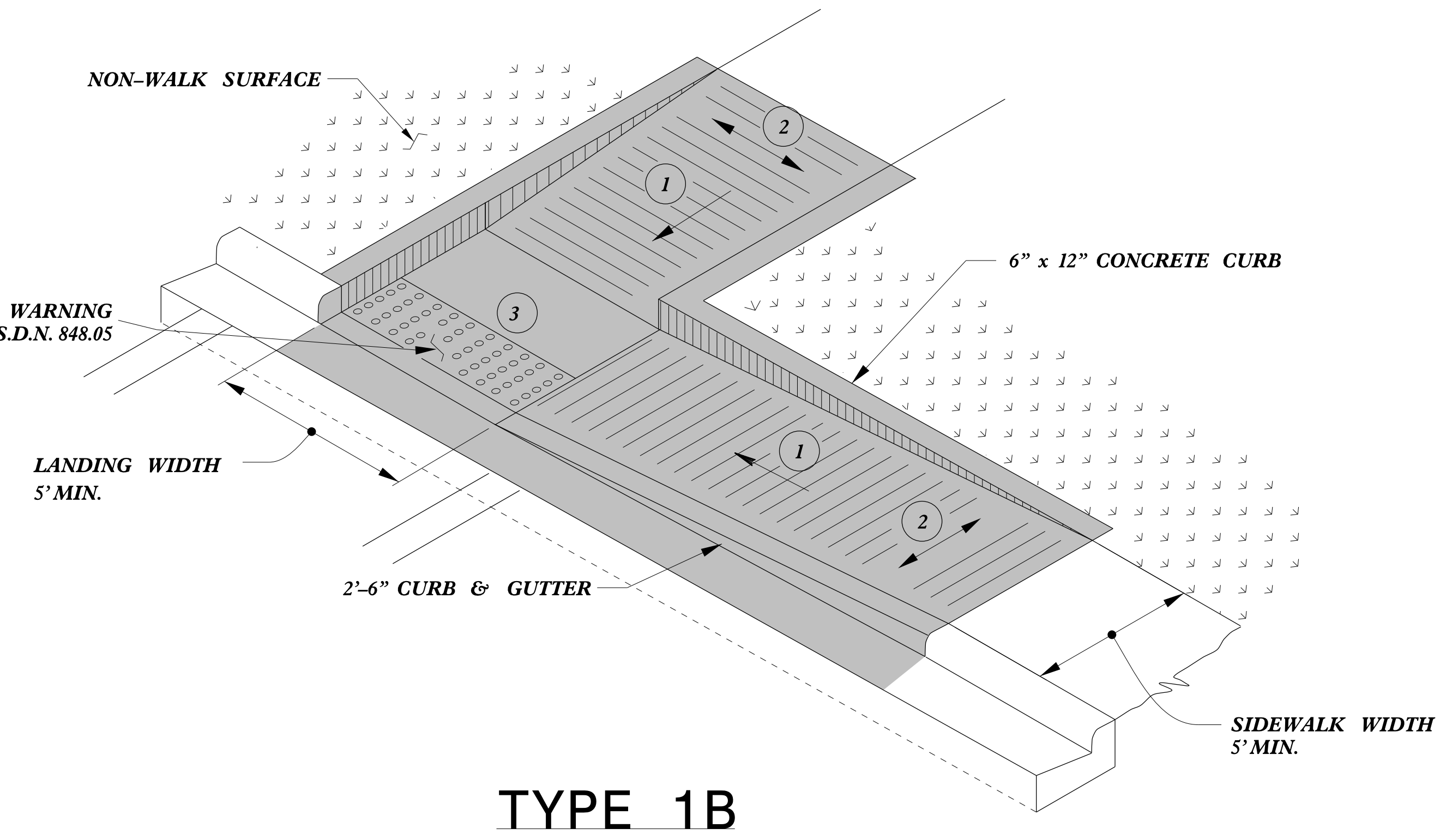


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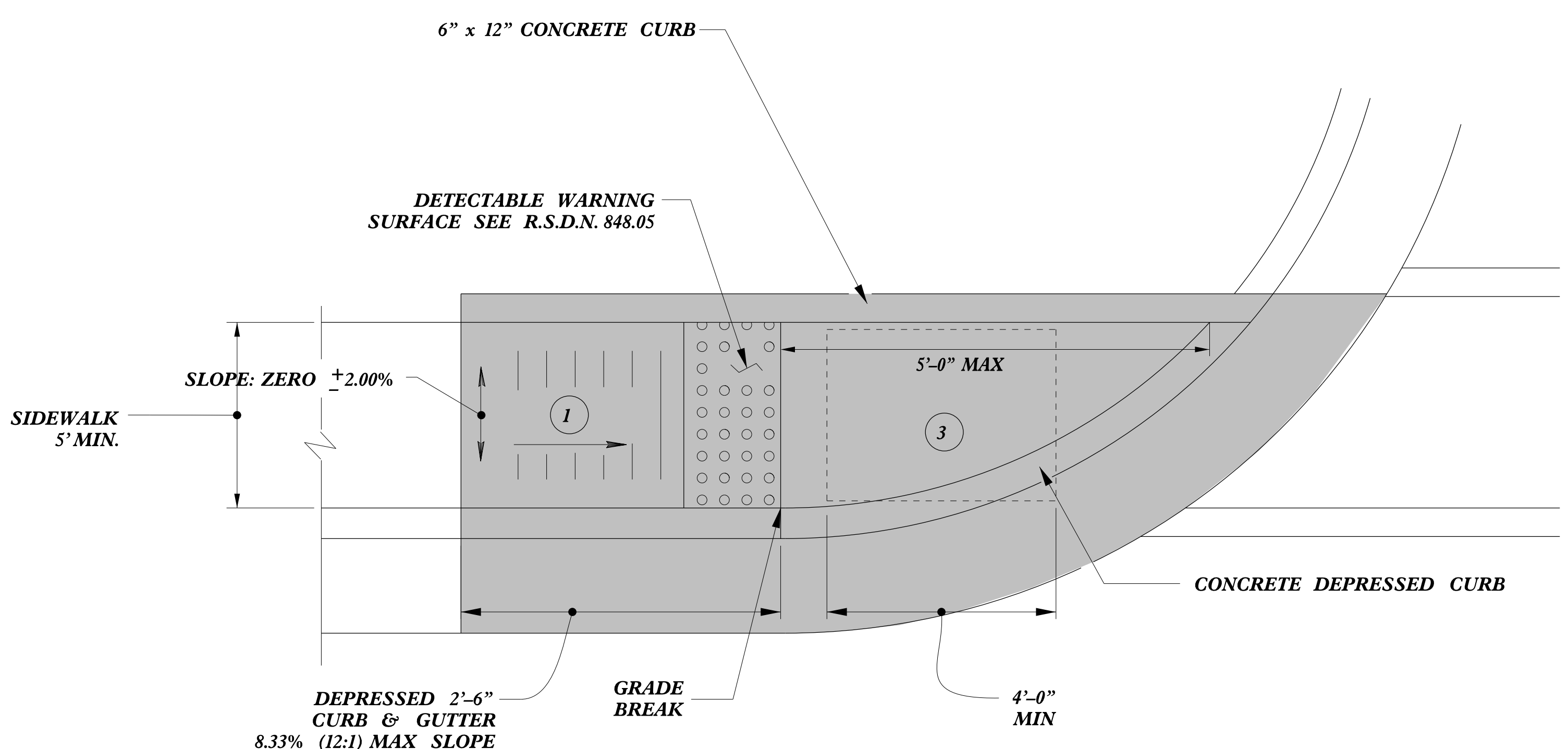
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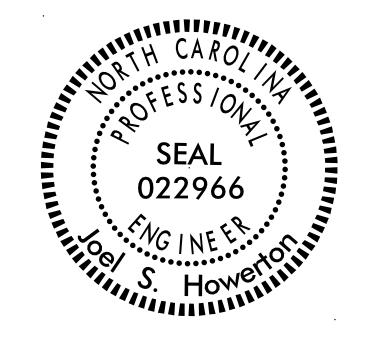
TYPE 1B

PAY LIMITS FOR 1 CURB RAMP

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.



TYPE 1




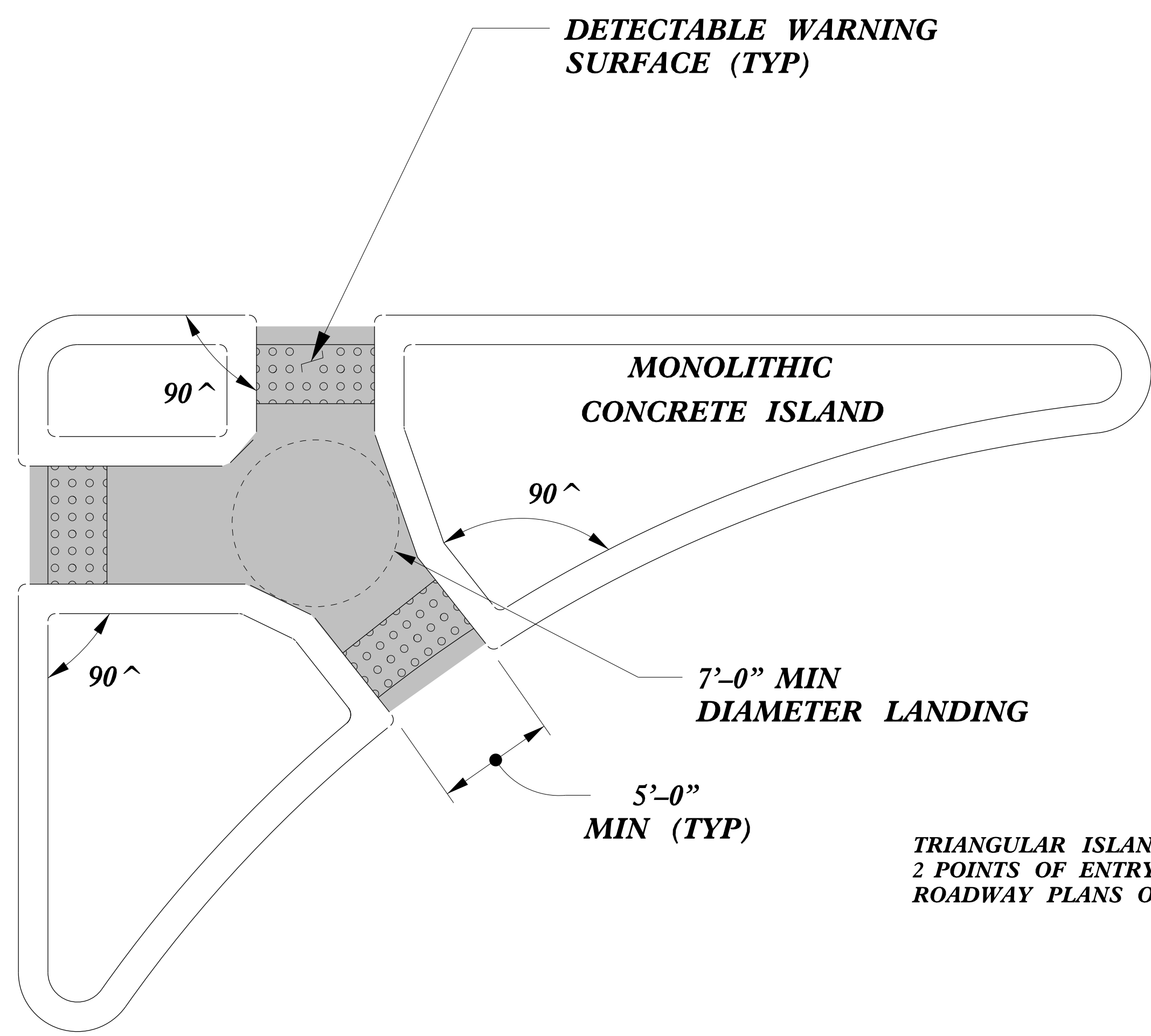
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CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
CURB RAMPS	
Directional Ramps	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC: stds/2012CurbRamp/CurbRampDetails.dgn	

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

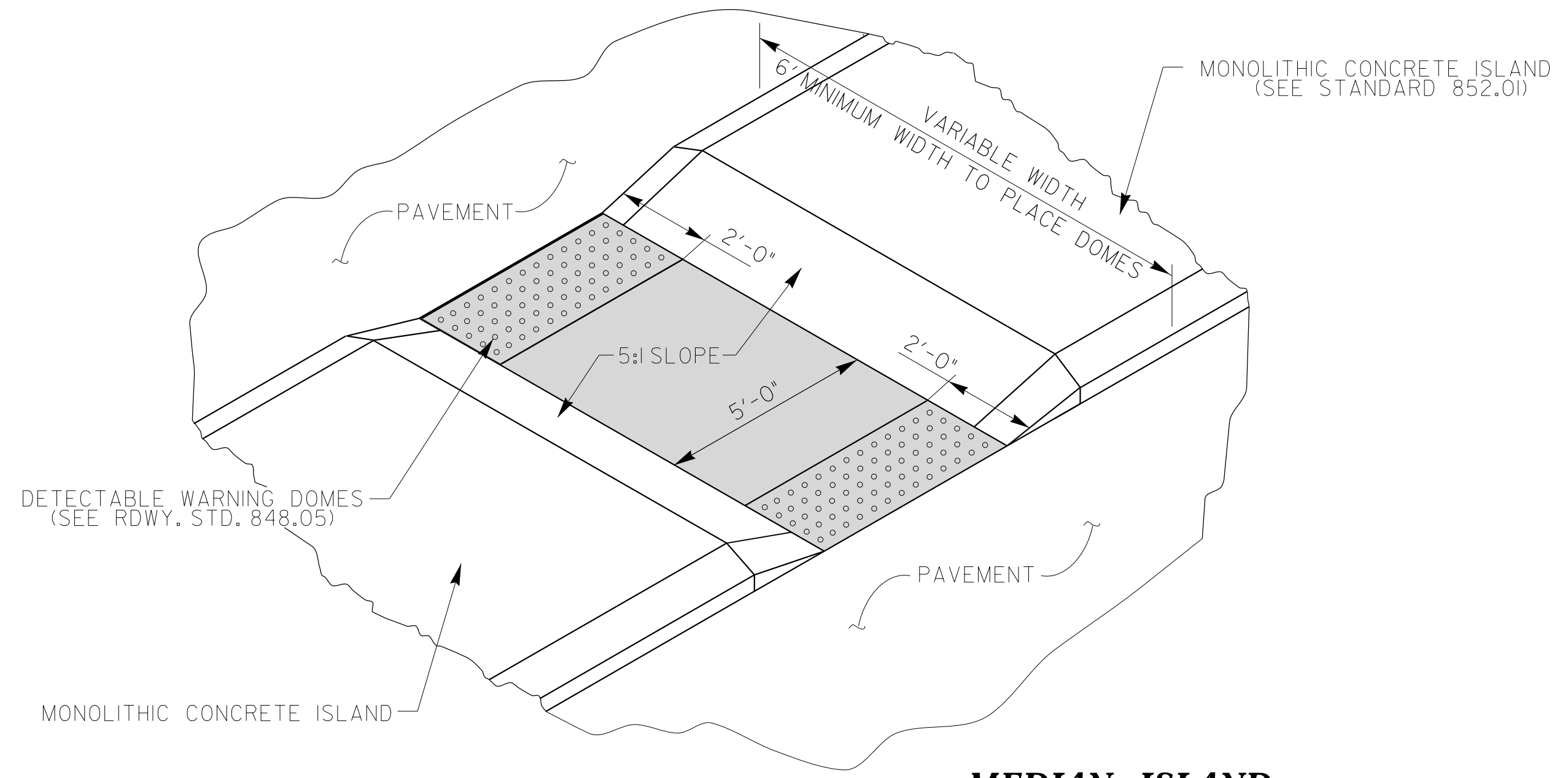
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 PAY LIMITS FOR 2 OR 3 CURB RAMPS
(CALCULATE BASED ON NUMBER OF
SETS OF TRUNCATED DOMES)

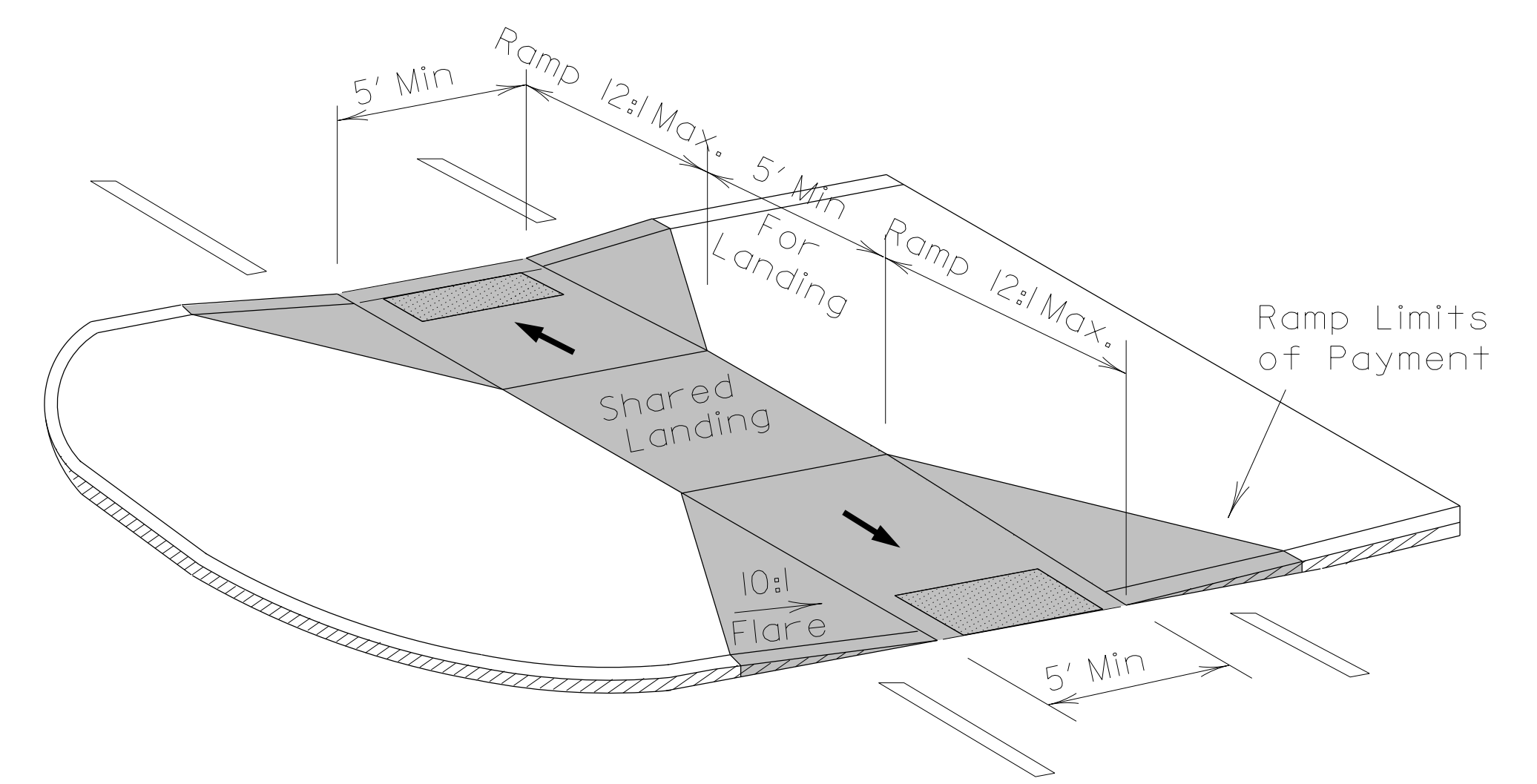


TRIANGULAR ISLANDS MAY BE CONSTRUCTED WITH ONLY
2 POINTS OF ENTRY AND EXIT AS SHOWN IN THE
ROADWAY PLANS OR AS DIRECTED BY THE ENGINEER.

**TRIANGULAR ISLAND
WITH CUT THROUGH**

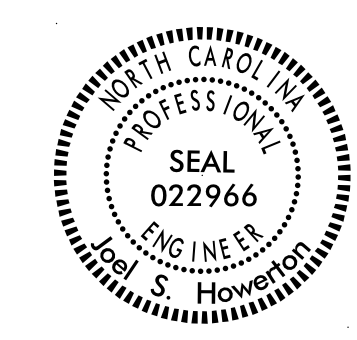


**MEDIAN ISLAND
WITH CUT THROUGH**



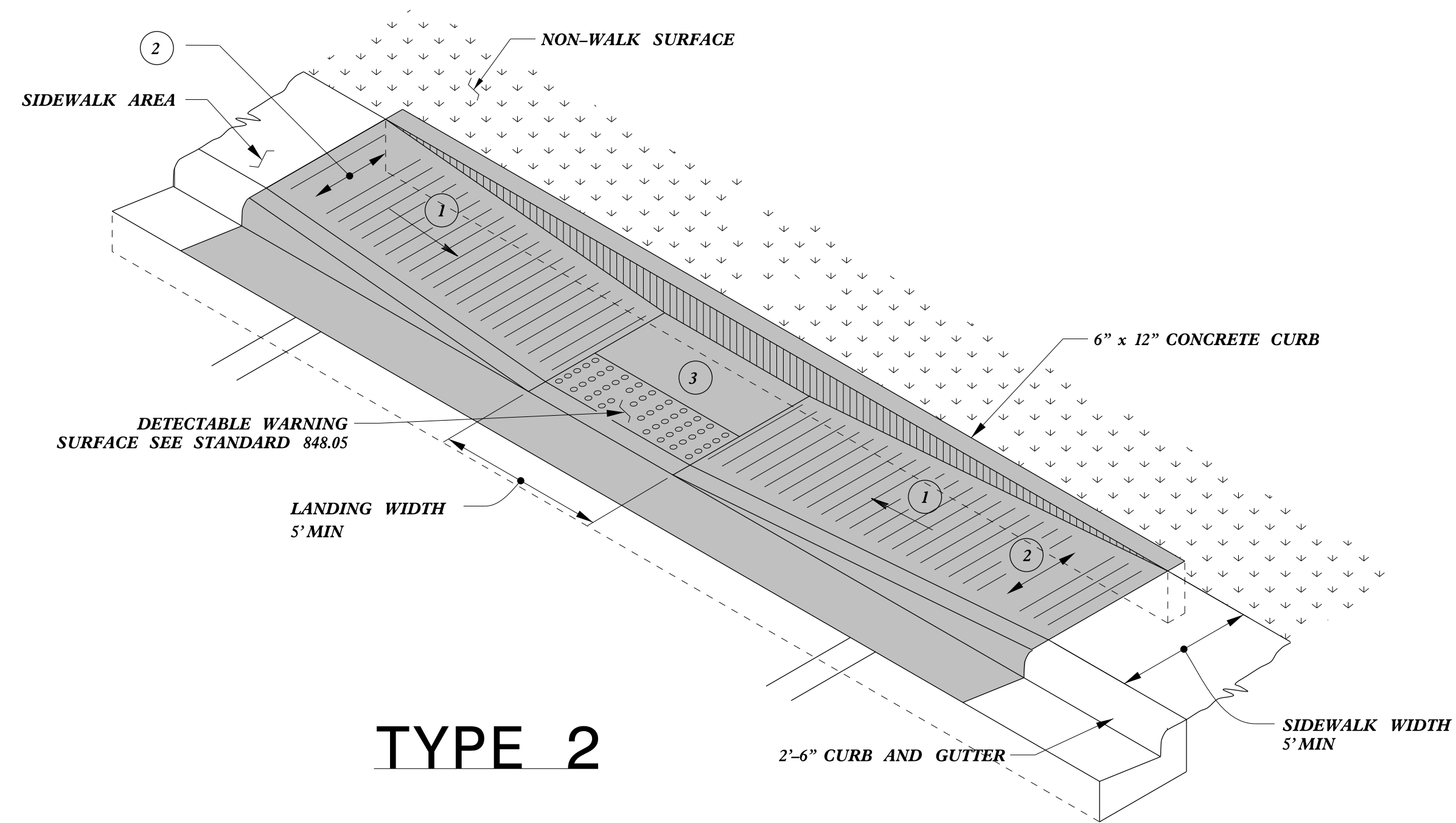
**MEDIAN ISLAND
CURB RAMPS**

5/14/99
C:\TIME\SSS\CON\SSS\USER\NAME\SSS



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

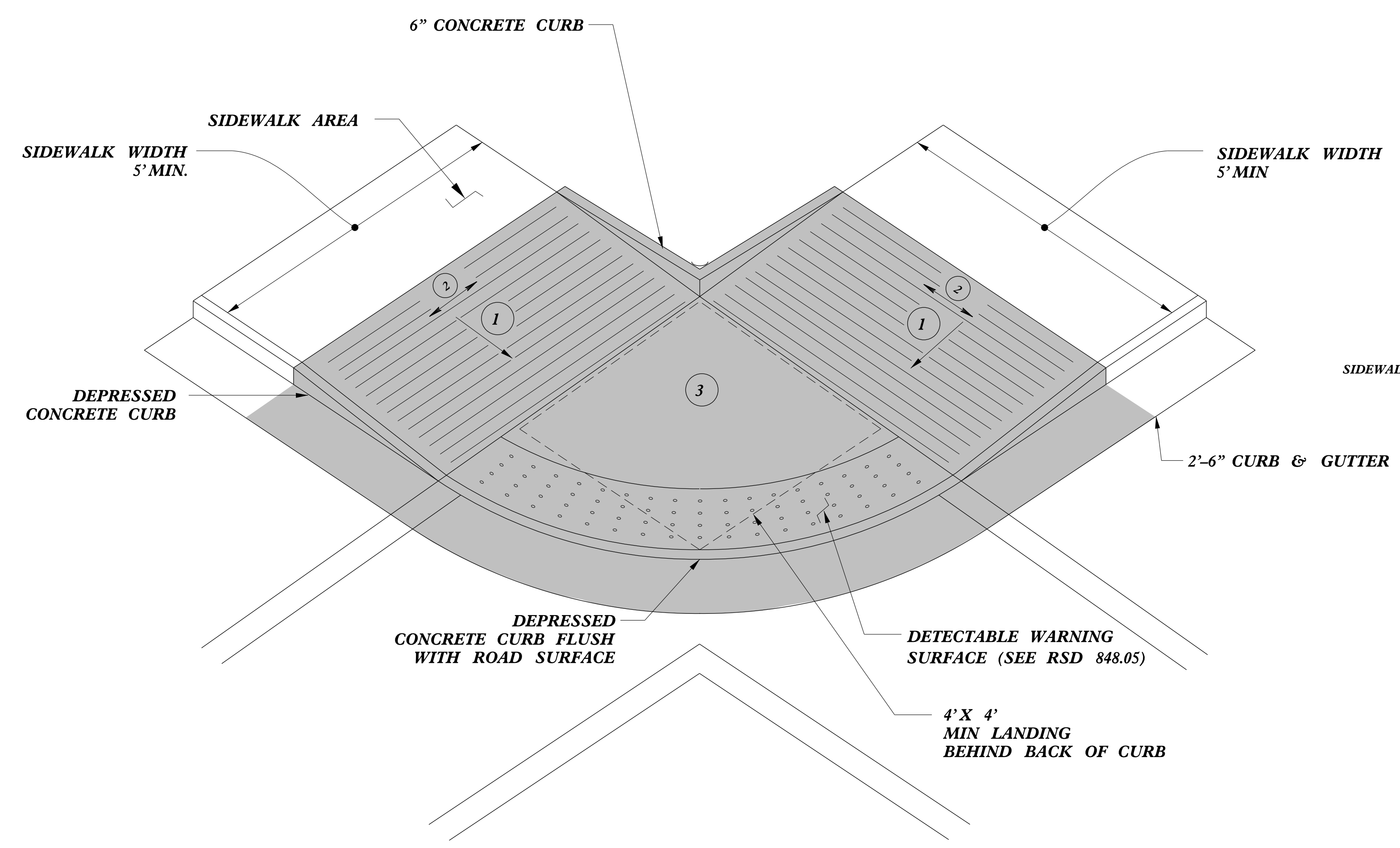
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
CURB RAMPS	
Median or Turn Lane Islands	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.: stds/2012CurbRamp/CurbRampDetails.dgn	



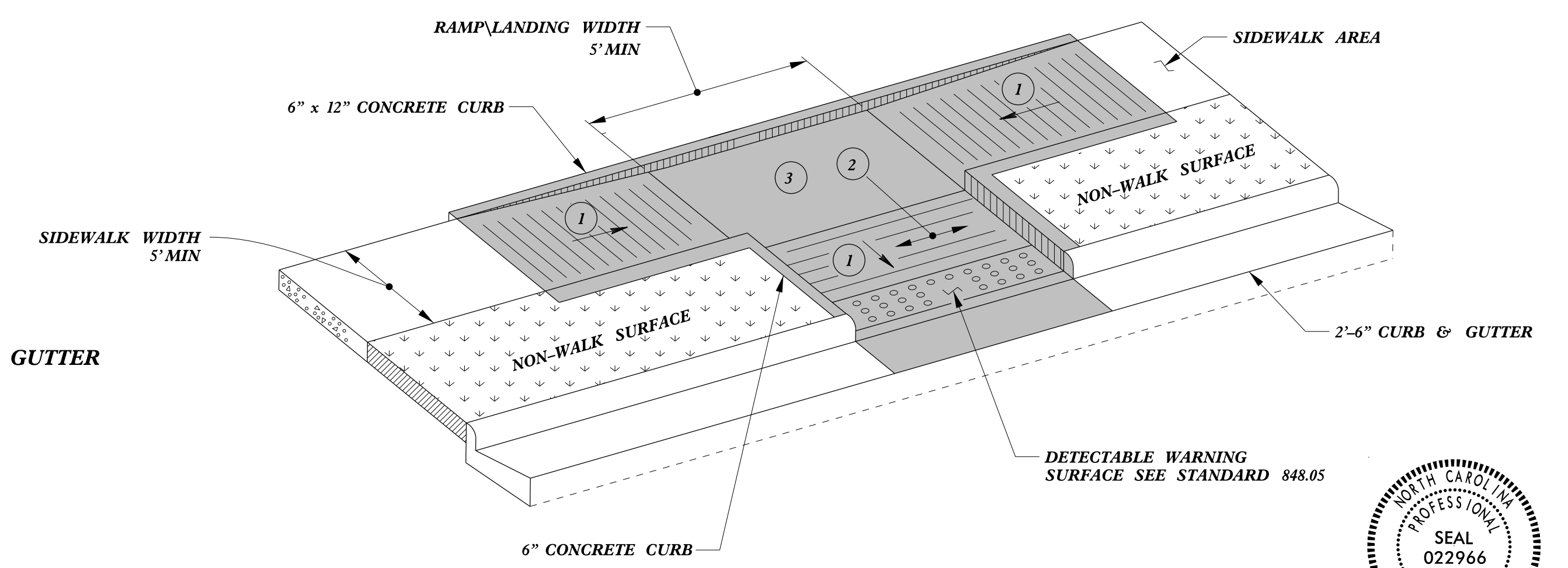
TYPE 2

PAY LIMITS FOR 1 CURB RAMP

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.



TYPE 2A



TYPE 3

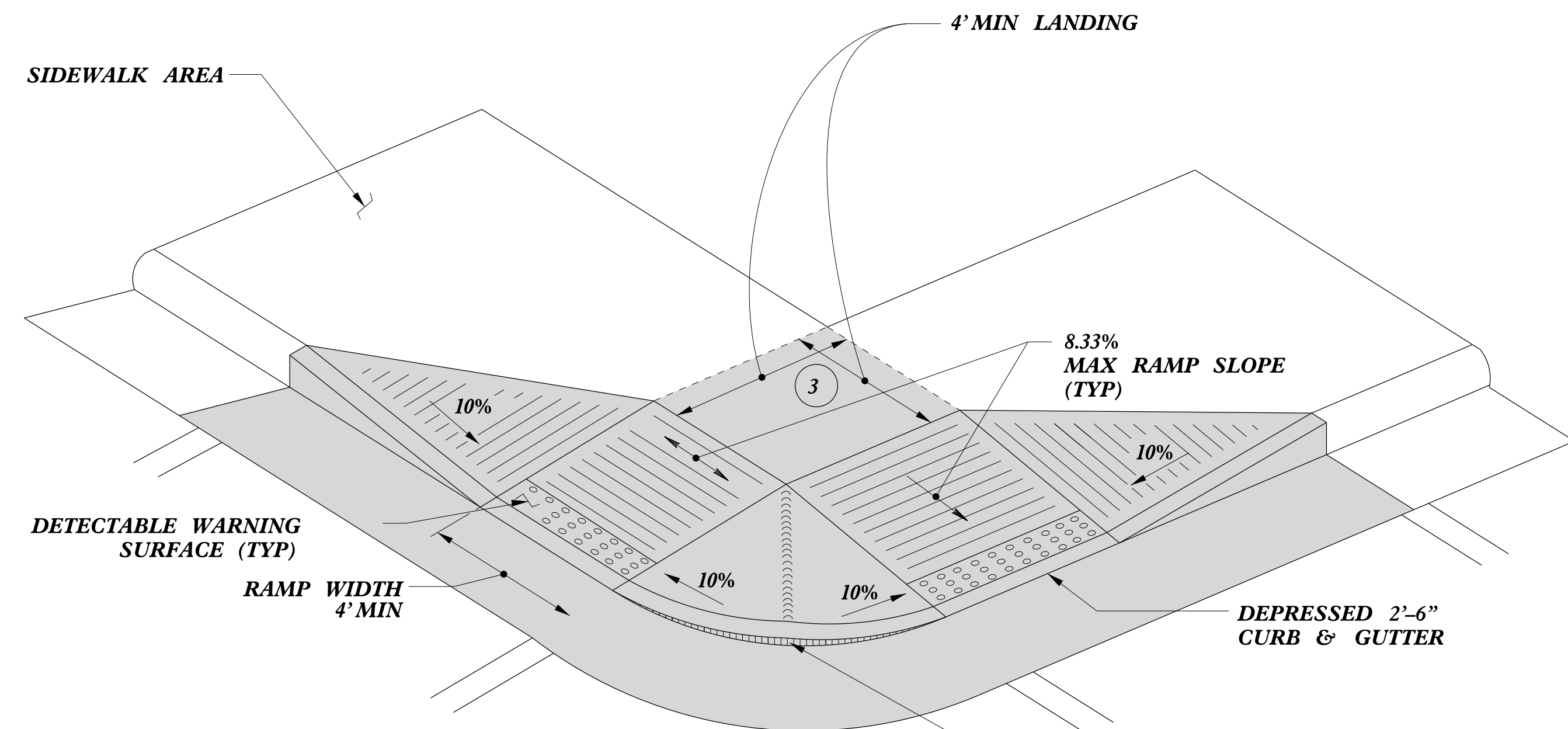


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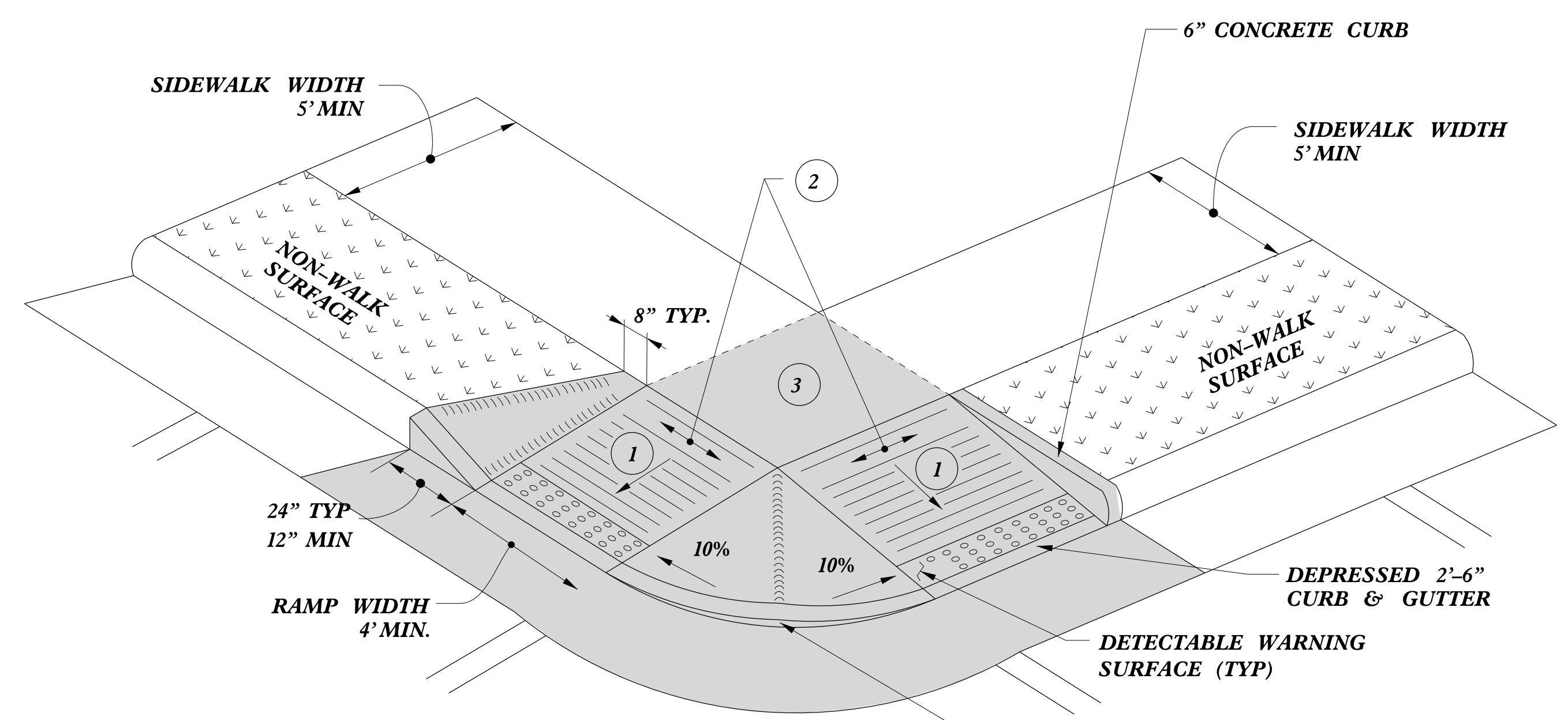
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
CURB RAMPS Parallel Ramps	
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MODIFIED BY:	DATE:
CHECKED BY:	DATE:
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REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

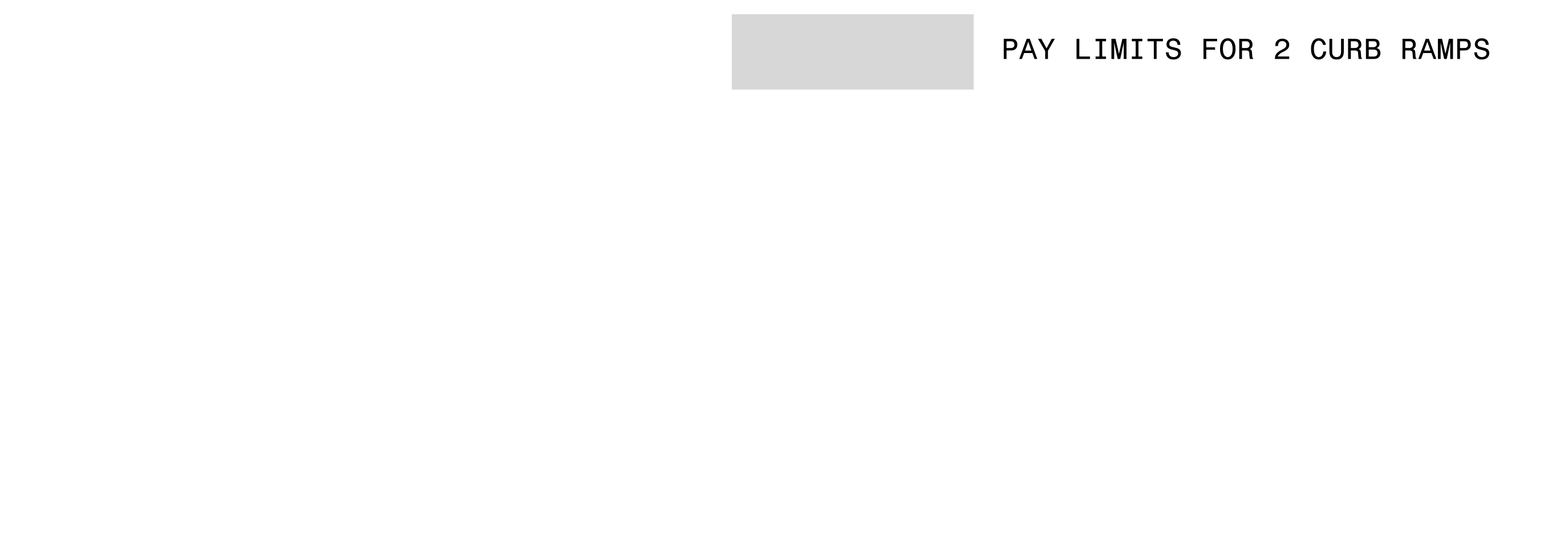
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TYPE 4



TYPE 4A



TYPE 5

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

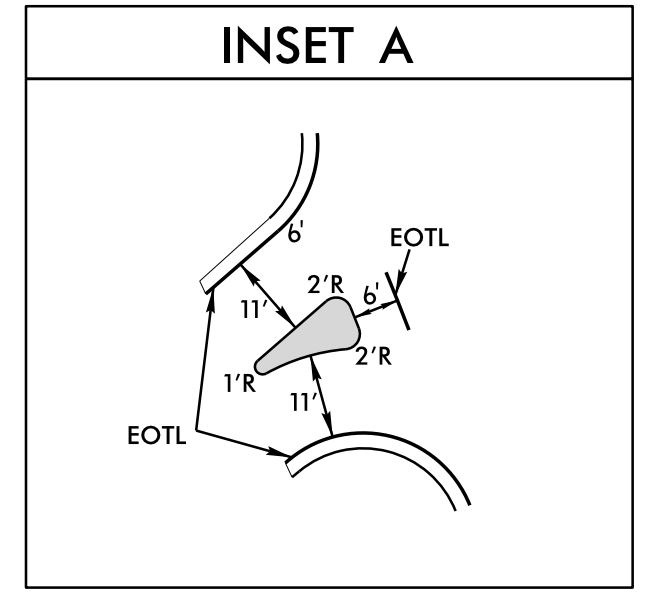


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
CURB RAMPS	
Shared Landing	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
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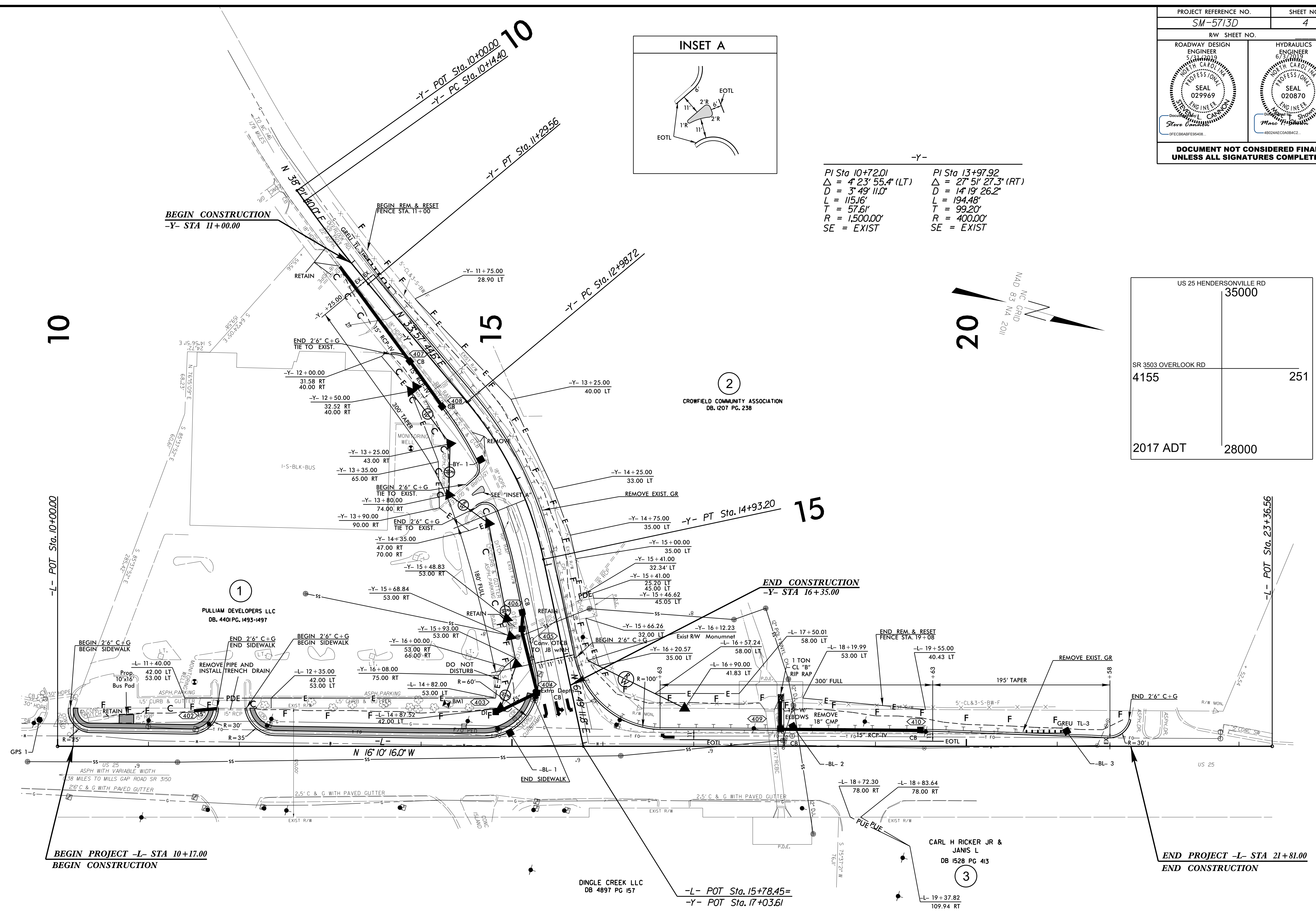
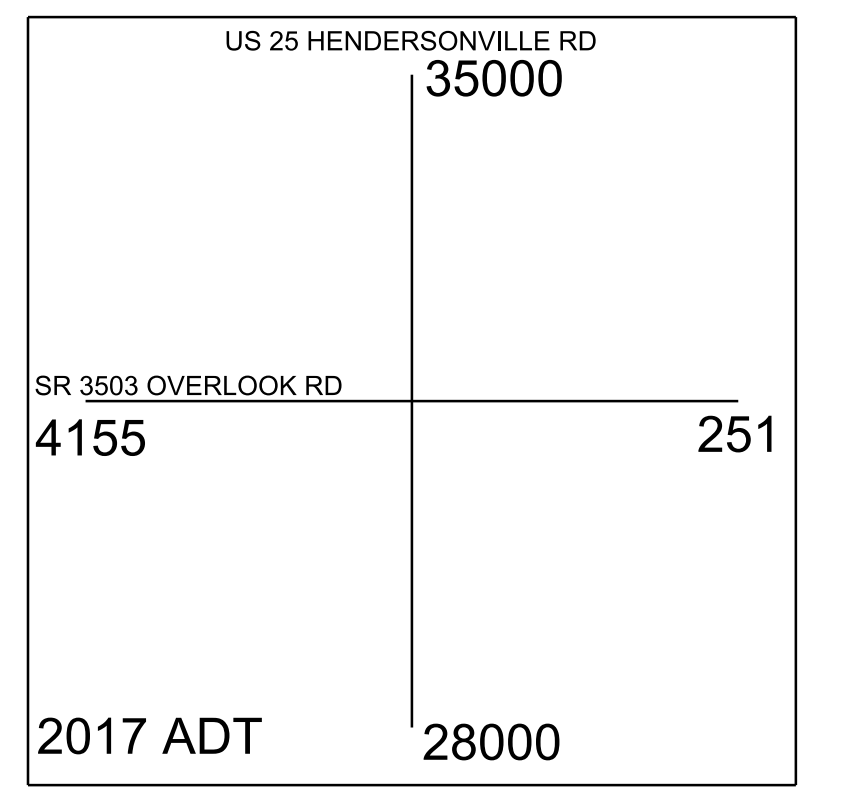
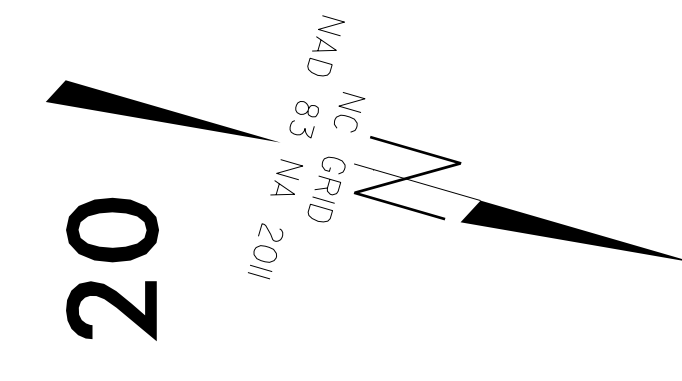
REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

5/14/99
C:\TIME\CON\CON\USER\NAME



-Y-

PI Sta 10+72.01	PI Sta 13+97.92
$\Delta = 4' 23' 55.4''$ (LT)	$\Delta = 27' 51' 27.3''$ (RT)
D = 3' 49' 11.0"	D = 14' 19' 26.2"
L = 115.16'	L = 194.48'
T = 57.61'	T = 99.20'
R = 1,500.00'	R = 400.00'
SE = EXIST	SE = EXIST



2
CROWFIELD COMMUNITY ASSOCIATION
DB. I207 PG. 238

1
PULLIAM DEVELOPERS LLC
DB. 440 PG. 1493-1497

3
DINGLE CREEK LLC
DB 4897 PG 157

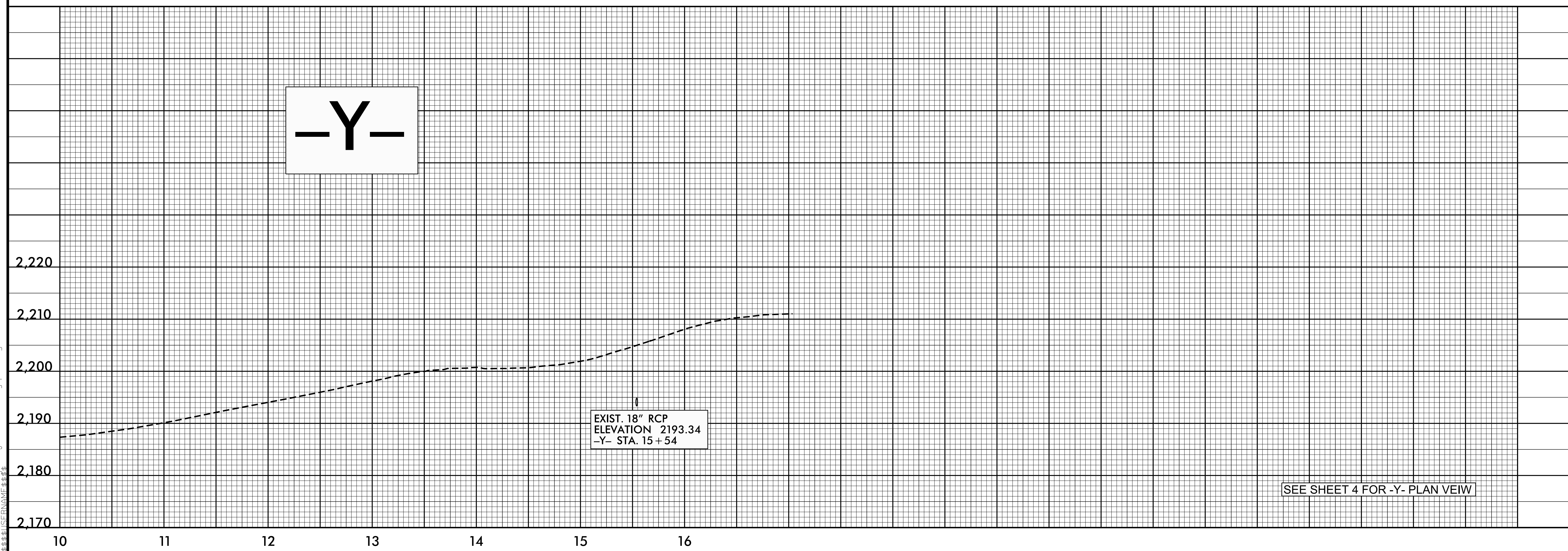
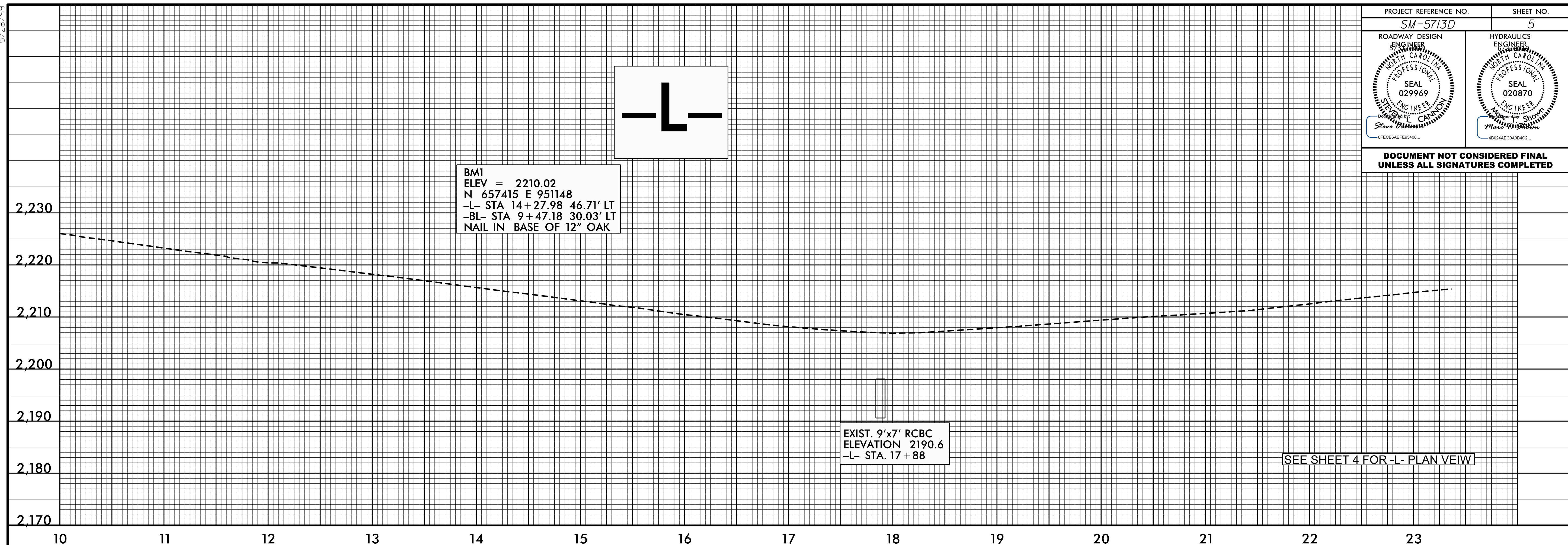
CARL H RICKER JR &
JANIS L
DB 1528 PG 413

FOR -L- AND -Y- PROFILES, SEE SHEET NO. 5

PROJECT REFERENCE NO. SM-5713D	SHEET NO. 5
ROADWAY DESIGN ENGINEER SEAL 029969 STEVEN L. CANNON MEMBER STATE OF NORTH CAROLINA	HYDRAULICS ENGINEER SEAL 020870 MARCUS H. HANCOCK MEMBER STATE OF NORTH CAROLINA

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

5/28/99



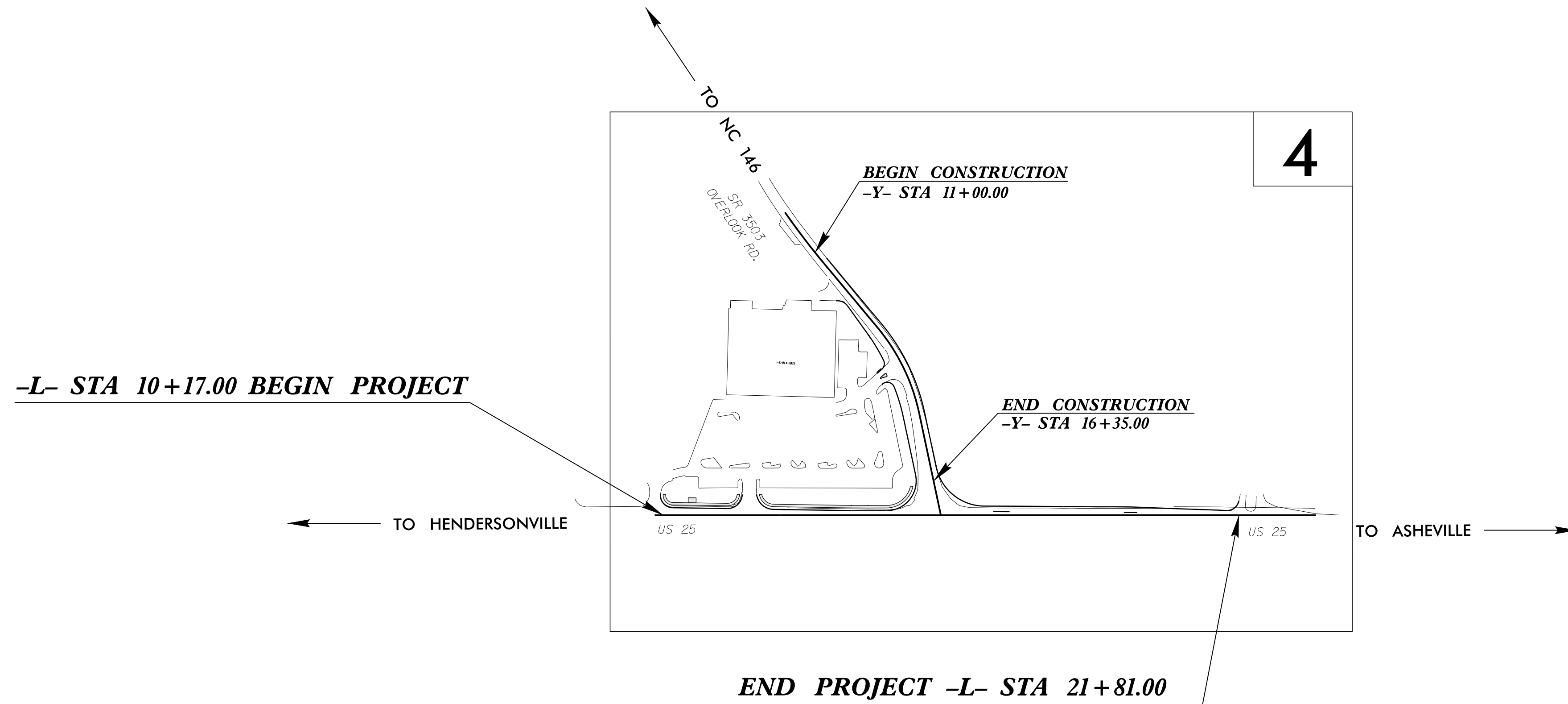
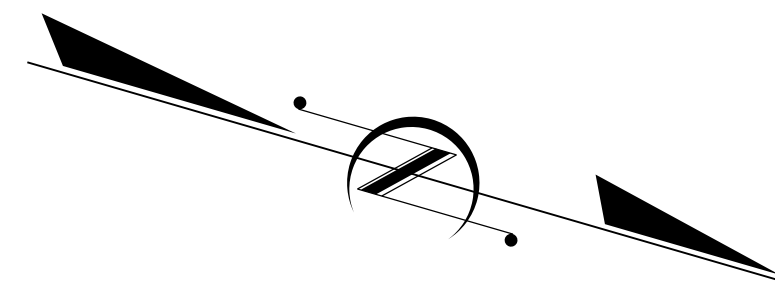
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TIP PROJECT: SM-5713D

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
 PLAN FOR PROPOSED
 HIGHWAY EROSION CONTROL
BUNCOMBE COUNTY

LOCATION: US 25 AND SR 3503 (OVERLOOK RD)

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



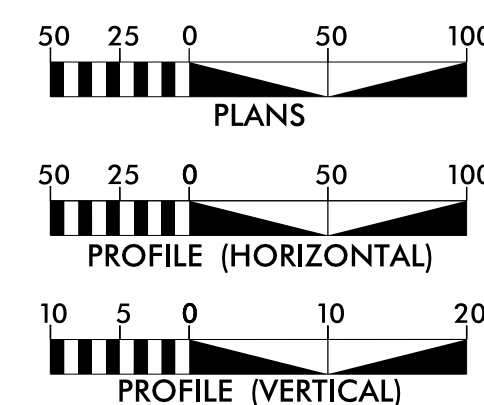
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	SM-5713D	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
47716.1.1		PE	
47716.2.1		ROW	
47716.3.1		CONST.	
47875			

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	III III III
1606.01	Special Sediment Control Fence	X X X X X X
1622.01	Temporary Berms and Slope Drains	TD
1630.02	Silt Basin Type B	SB
1633.01	Temporary Rock Silt Check Type-A	RS
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	RS-PAM
1633.02	Temporary Rock Silt Check Type-B	RS
	Wattle/Coir Fiber Wattle	W
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	W-PAM
1634.01	Temporary Rock Sediment Dam Type-A	RD
1634.02	Temporary Rock Sediment Dam Type-B	RD
1635.01	Rock Pipe Inlet Sediment Trap Type-A	RPI
1635.02	Rock Pipe Inlet Sediment Trap Type-B	RPI
1630.04	Stilling Basin	SB
1630.06	Special Stilling Basin	SSB
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	SK
	Tiered Skimmer Basin	TSK
	Infiltration Basin	IB

THIS PROJECT CONTAINS
 EROSION CONTROL PLANS
 FOR CLEARING AND
 GRUBBING PHASE OF
 CONSTRUCTION.

GRAPHIC SCALE



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 1, 2016 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared in the Office of:
DIVISION DESIGN & CONSTRUCT
 55 Orange St.
 Asheville, NC 28801
 2018 STANDARD SPECIFICATIONS

Designed by:
HT Fletcher 3382
 NAME LEVEL III CERTIFICATION NO.

Prepared in the Office of:
ROADSIDE ENVIRONMENTAL UNIT
 693 Mountain Rd.
 Hendersonville, NC 28791
 2018 STANDARD SPECIFICATIONS

Reviewed by:
Reid Whitehead PE, CPESC

Roadway Standard Drawings
 The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2018 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.
 1605.01 Temporary Silt Fence
 1606.01 Special Sediment Control Fence
 1622.01 Temporary Slope Drain
 1631.01 Matting Installation
 1632.03 Rock Inlet Sediment Trap Type C
 1633.01 Temporary Rock Silt Check Type A

PROJECT REFERENCE NO. <i>SM-5713D</i>	SHEET NO. <i>EC-2</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATTING INSTALLATION DETAIL



MATTING IN DITCHES

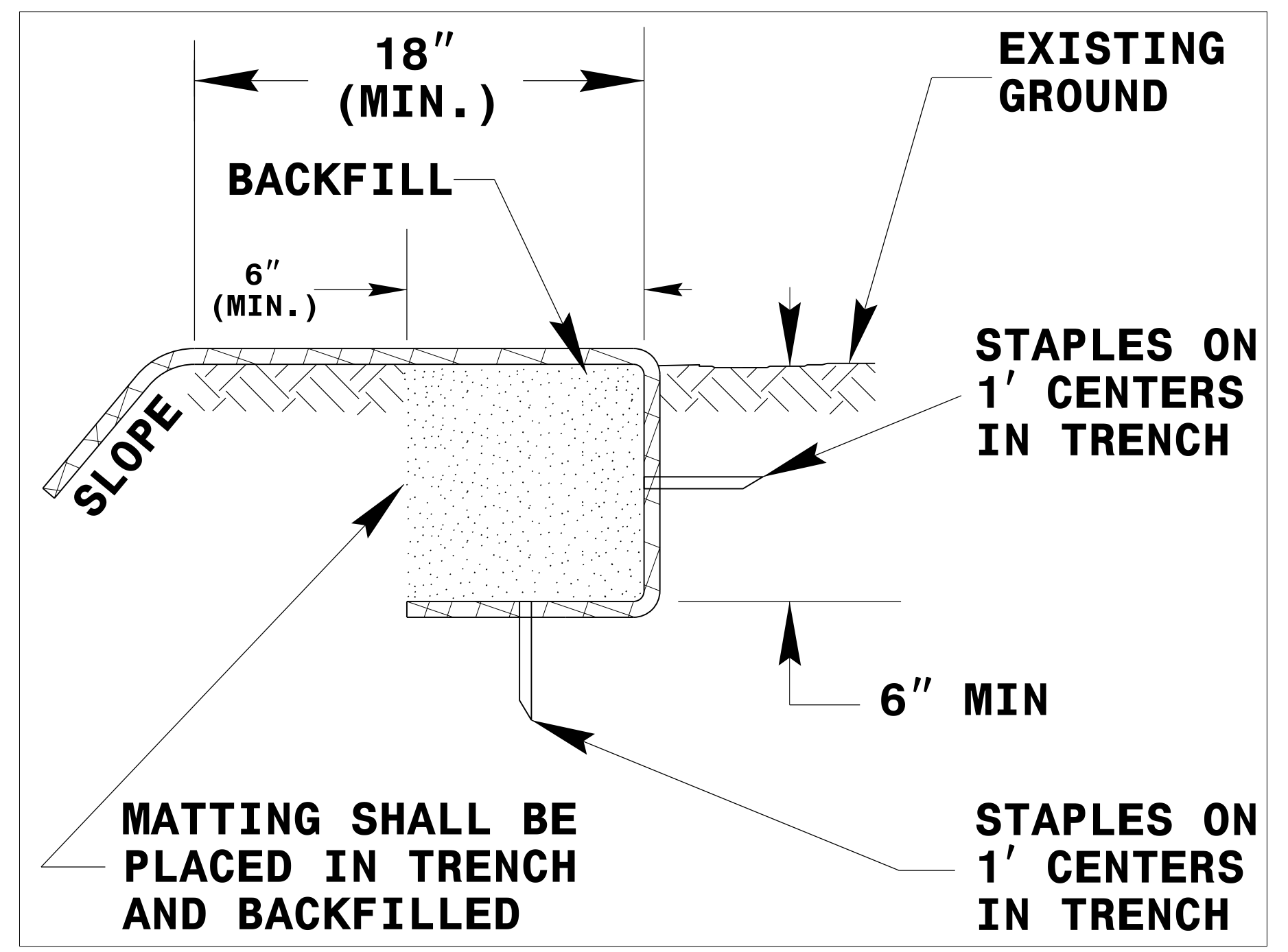
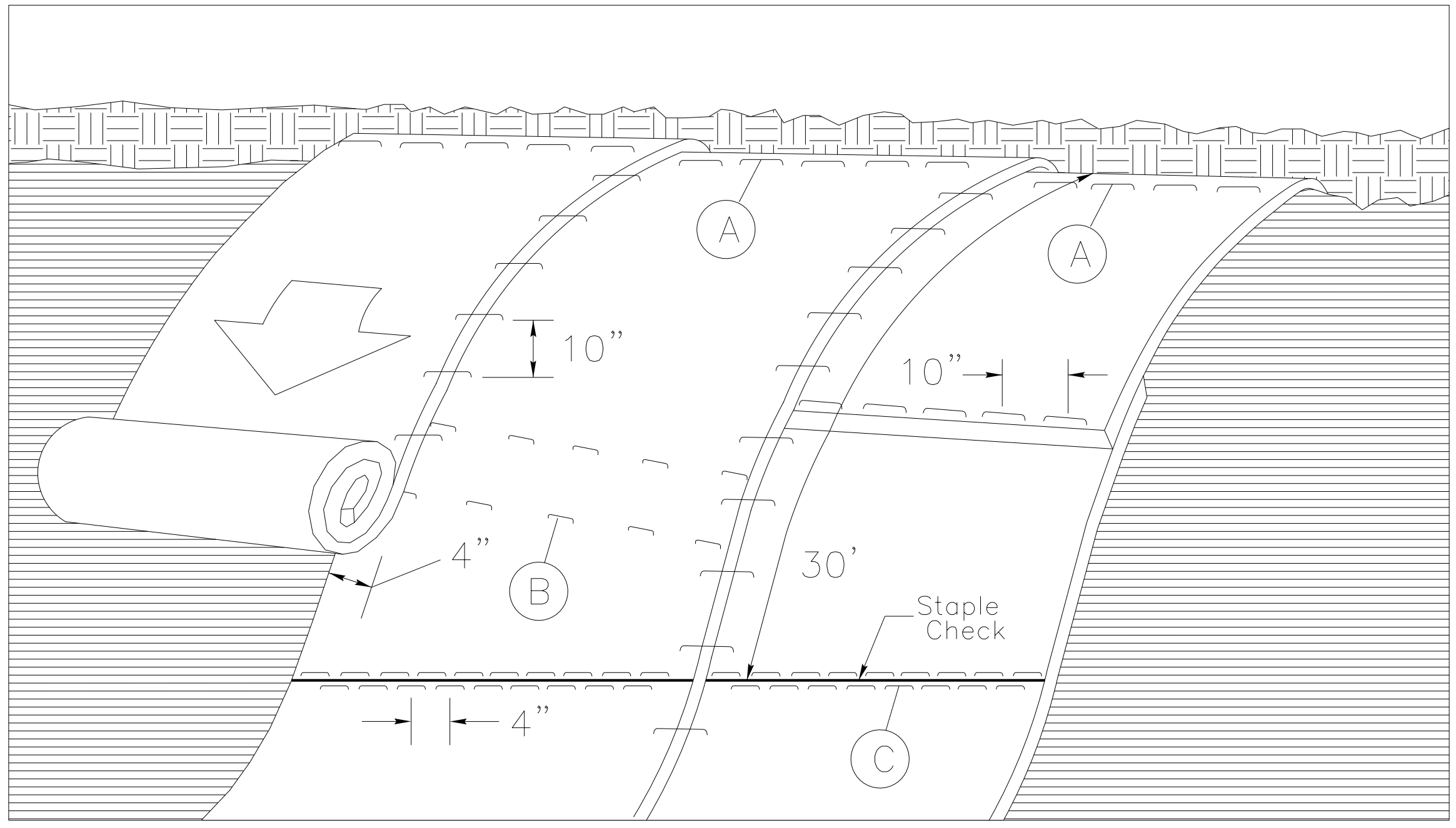


DIAGRAM (A)



MATTING ON SLOPES

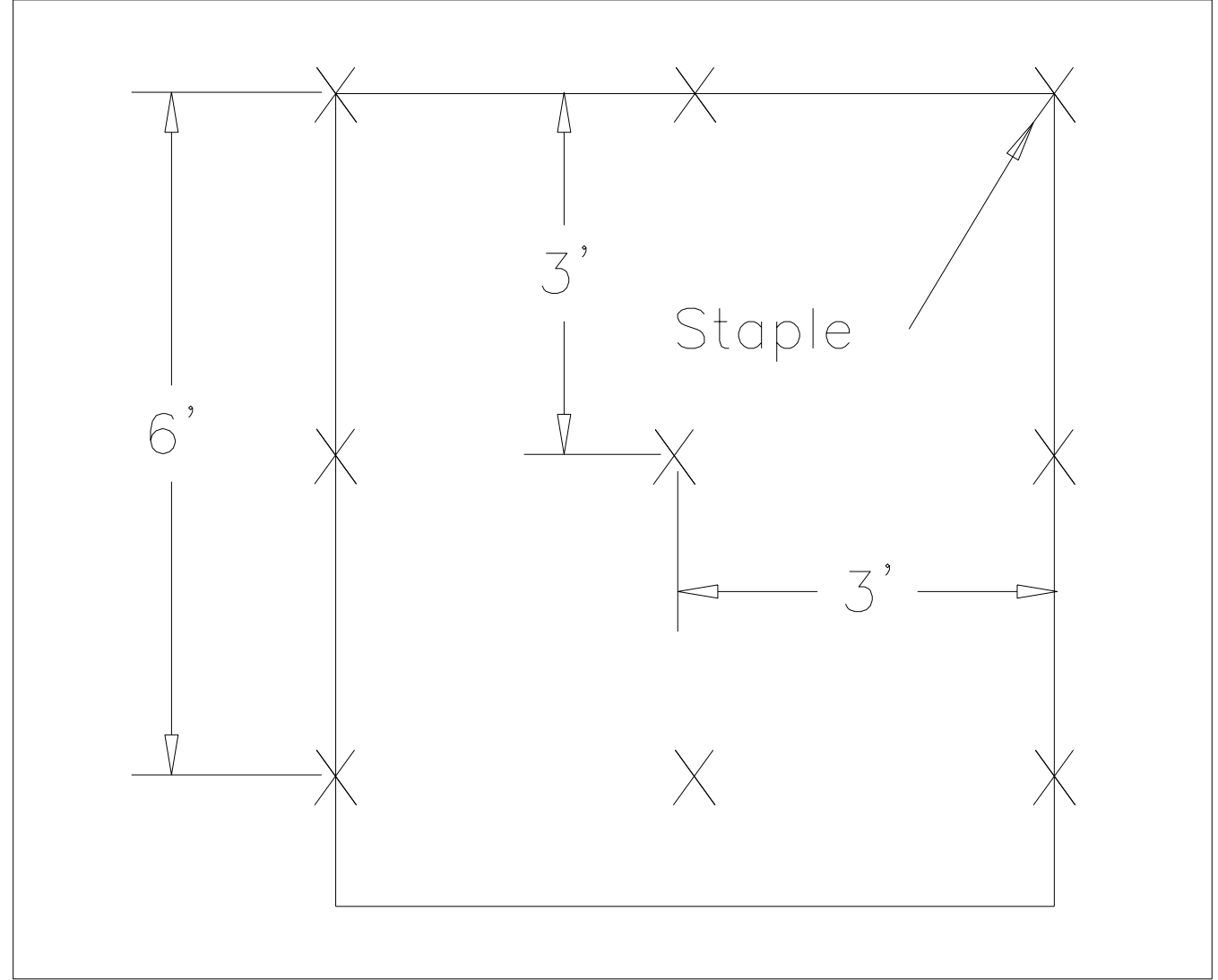


DIAGRAM (B)

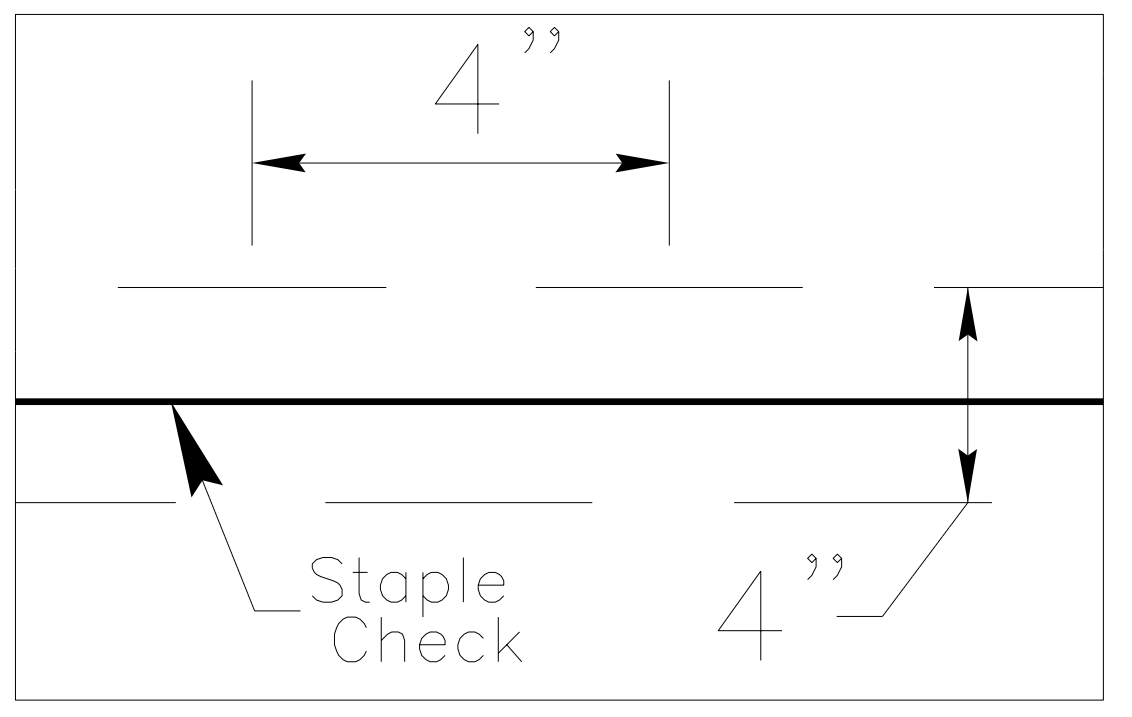


DIAGRAM (C)

NOTES:

THIS DETAIL APPLIES TO STRAW, EXCELSIOR, AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION.
 STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 1 INCH AND NOT LESS THAN 6 INCHES IN LENGTH.

NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

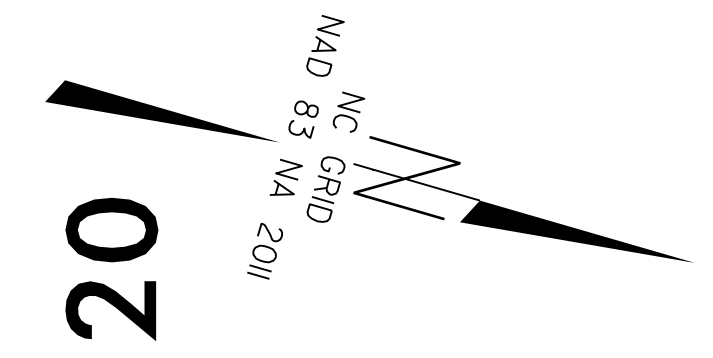
PROJECT REFERENCE NO. <i>SM-5713D</i>	SHEET NO. <i>EC-3A</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION TIMEFRAMES

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

PROJECT REFERENCE NO.	SHEET NO.
SM-5713D	EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

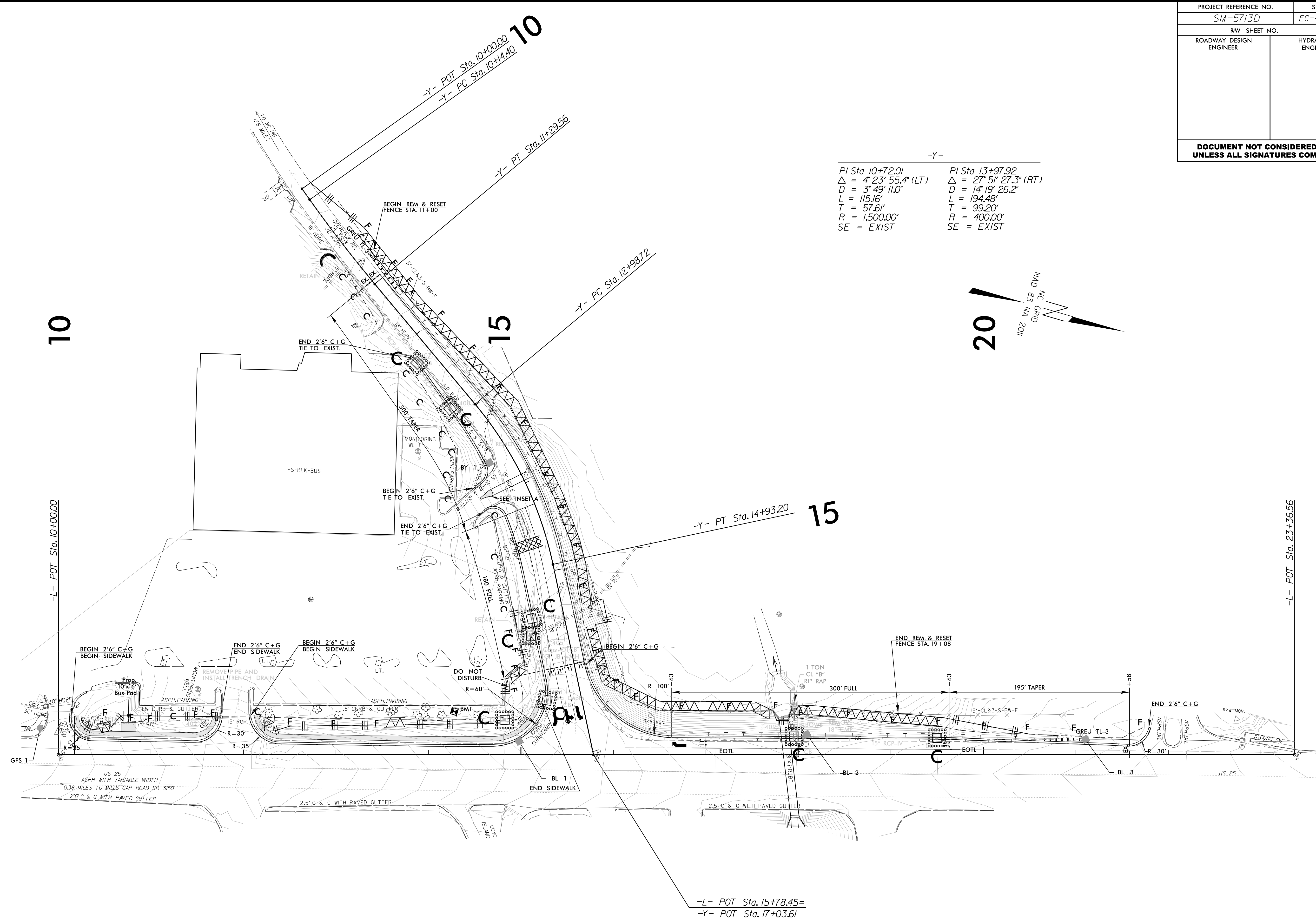
-Y-	
PI Sta 10+72.01	PI Sta 13+97.92
$\Delta = 4' 23' 55.4"$ (LT)	$\Delta = 27' 51' 27.3"$ (RT)
D = 3' 49' 11.0"	D = 14' 19' 26.2"
L = 115.16'	L = 194.48'
T = 57.61'	T = 99.20'
R = 1,500.00'	R = 400.00'
SE = EXIST	SE = EXIST



8/17/99

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REVISIONS



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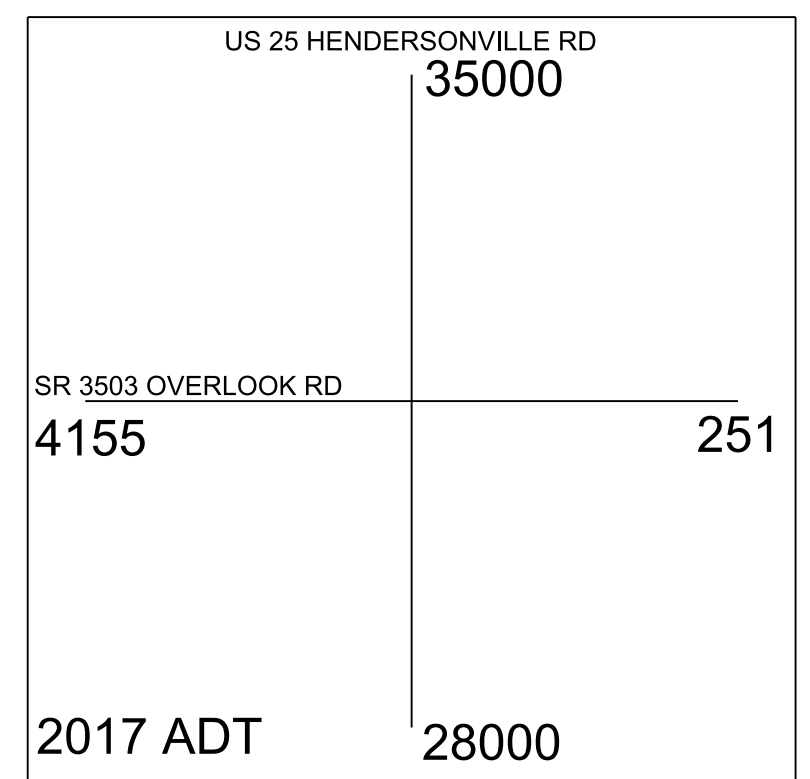
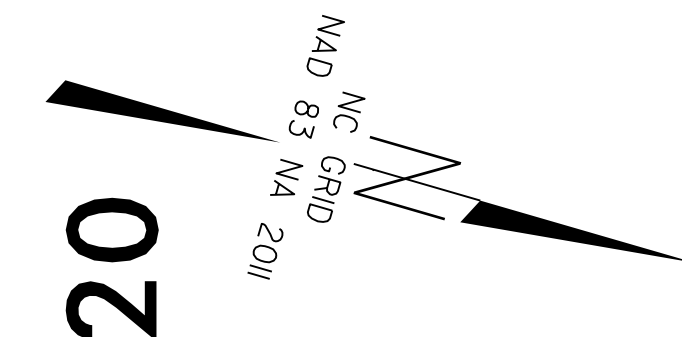
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PROJECT REFERENCE NO.	SHEET NO.
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

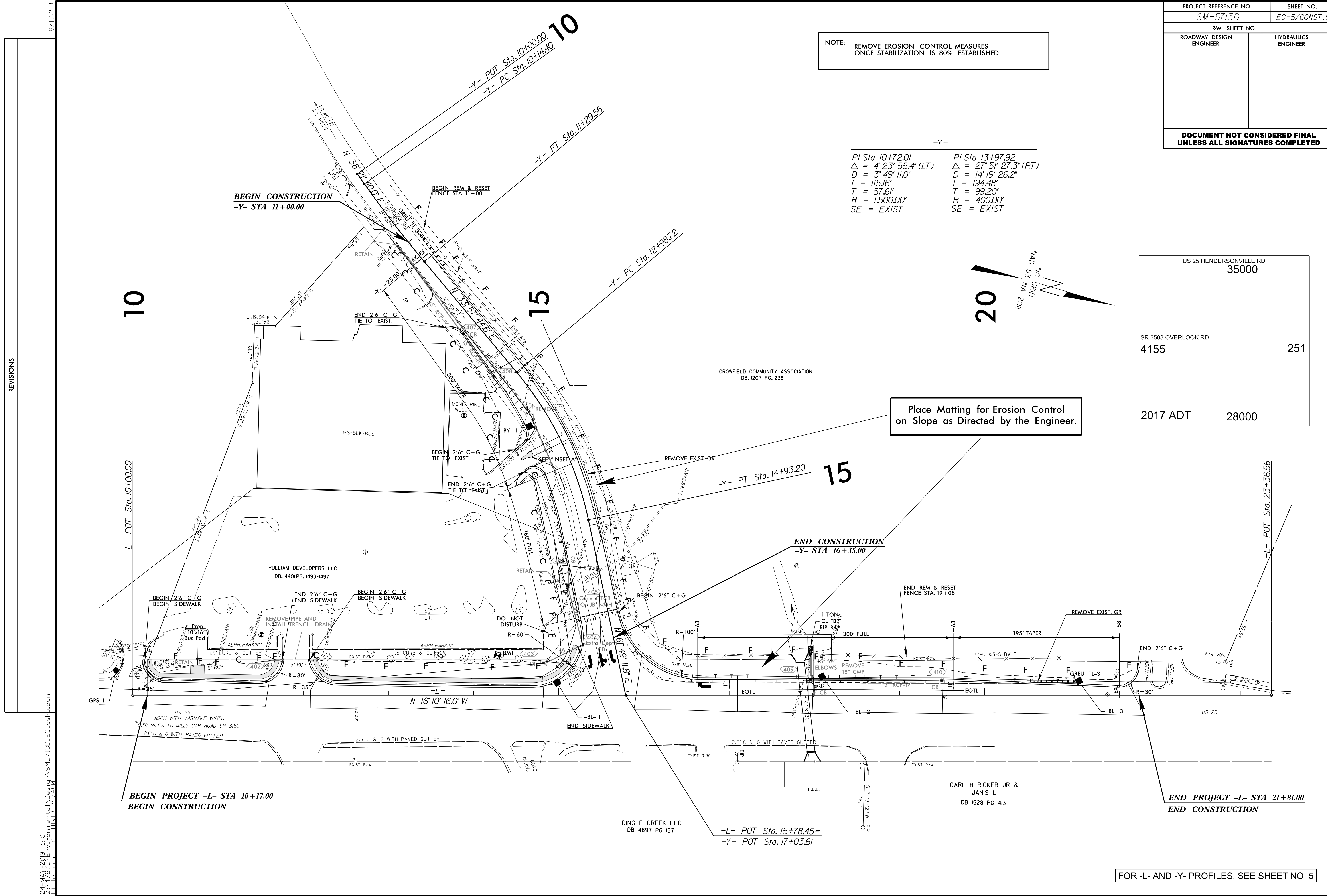
NOTE: REMOVE EROSION CONTROL MEASURES ONCE STABILIZATION IS 80% ESTABLISHED

-Y-

PI Sta 10+72.01	PI Sta 13+97.92
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$D = 3' 49' 11.0"$	$D = 14' 19' 26.2"$
$L = 115.16'$	$L = 194.48'$
$T = 57.61'$	$T = 99.20'$
$R = 1,500.00'$	$R = 400.00'$
SE = EXIST	SE = EXIST



Place Matting for Erosion Control on Slope as Directed by the Engineer.



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 jgarcia

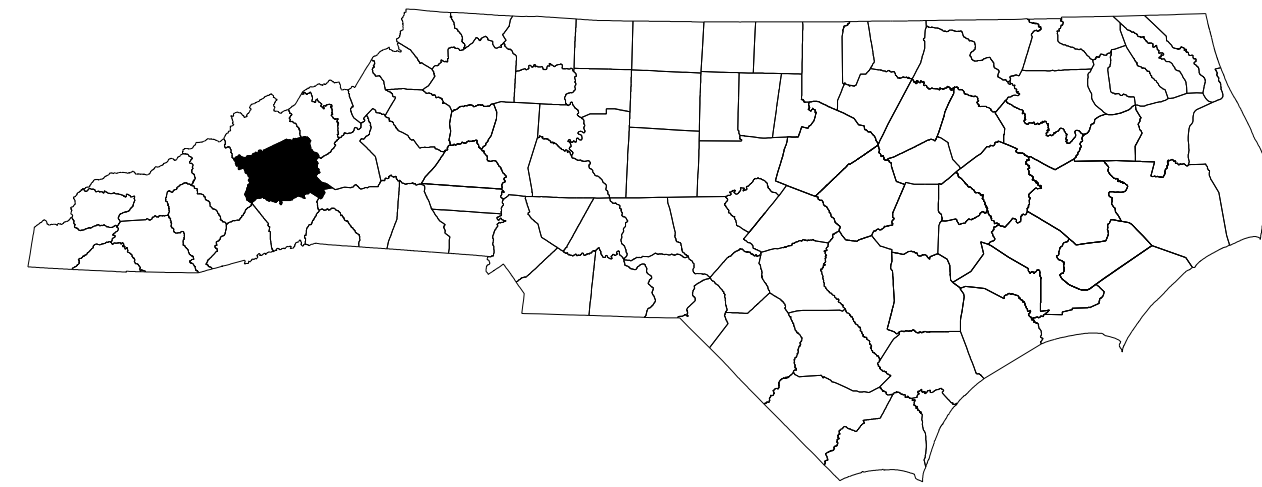
REVISIONS

FOR -L- AND -Y- PROFILES, SEE SHEET NO. 5

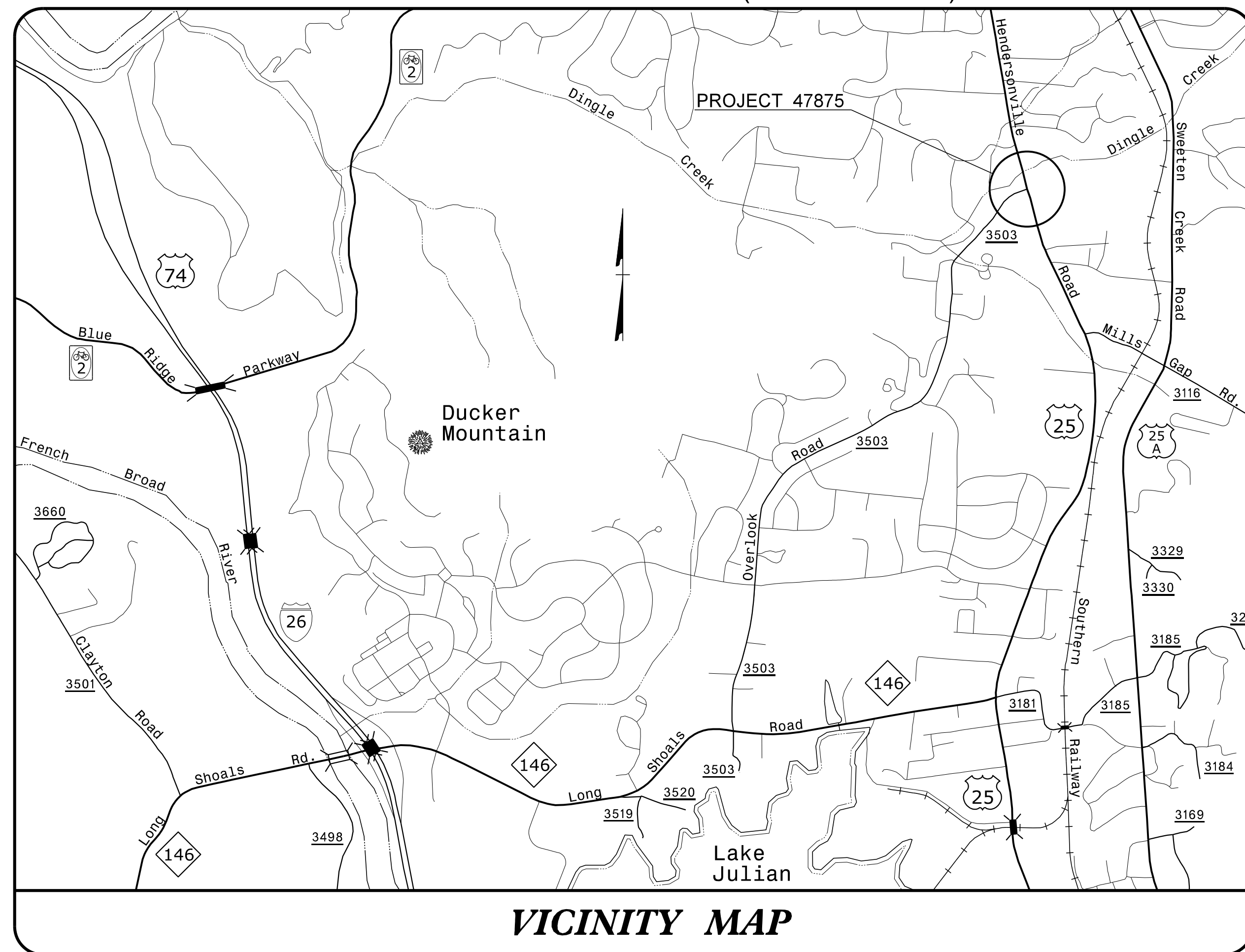
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

BUNCOMBE COUNTY



LOCATION: US 25 AND SR 3503 (OVERLOOK RD.)



VICINITY MAP

INDEX OF SHEETS

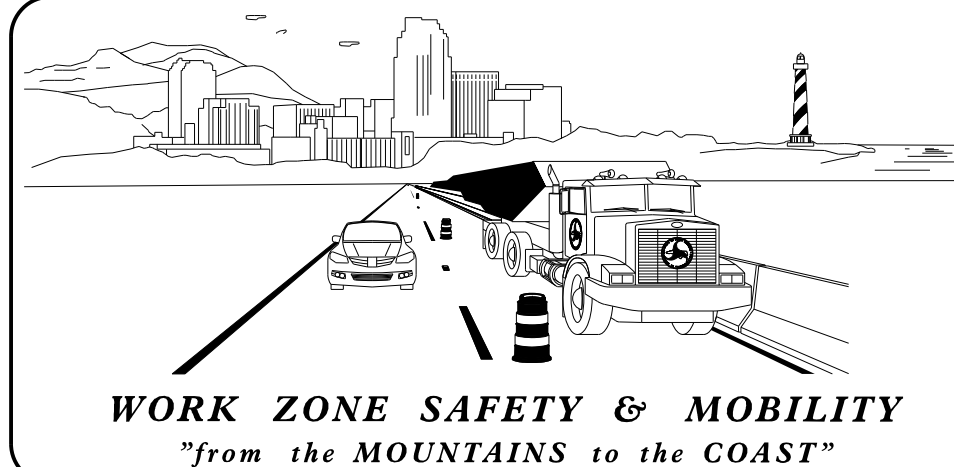
SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES AND PHASING)
TMP-2	PHASE I DETAILS

SHEET NO.
TMP-1

47875

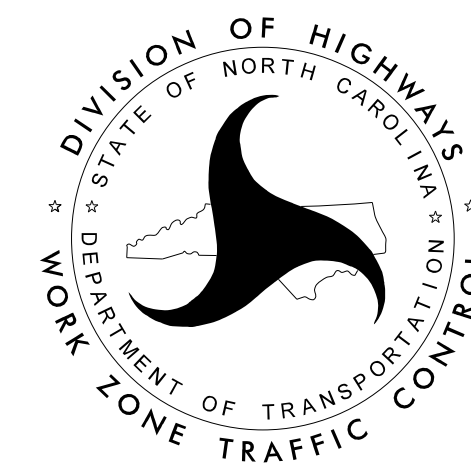
TIP PROJECT:

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05\Division\3\47875\TrafficControl\CP\47875_TC_GEN_TMP01.dgn
User:snrgreen2



PLANS PREPARED BY:
D. A. PARKER, P.E.
 TRAFFIC CONTROL PROJECT ENGINEER
Z. T. CLARK, P.E.
 TRAFFIC CONTROL PROJECT DESIGN ENGINEER
S. N. GREEN
 TRAFFIC CONTROL DESIGN ENGINEER

NCDOT CONTACTS:
D. A. PARKER, P.E.
 PROJECT ENGINEER
R. M. GARRETT
 PROJECT DESIGN ENGINEER



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

APPROVED: Don A. Parker
DocuSigned by:
Don A. Parker
40482862818410
 DATE: 01/05/2022

SEAL



ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUM
1145.01	BARRICADES
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)

- WORK AREA
- REMOVAL
- USER DEFINED (IF NEEDED)
- USER DEFINED (IF NEEDED)

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM
- SKINNY DRUM
- TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

PA - WHITE EDGELINE - 4" - PAINT

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APPROVED: DATE: 01/05/2022			<p style="text-align: center;">ROADWAY STANDARD DRAWINGS & LEGEND</p>
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			

PROJECT NOTES

MANAGEMENT STRATEGIES

PROJECT 47875 IS THE CONSTRUCTION OF ROADWAY IMPROVEMENTS ON US 25 (-L-) AND SR 3503 (-Y-).

TO MINIMIZE DELAY TO US 25 TRAFFIC, LANE CLOSURES SHALL ONLY BE PERMITTED AT NIGHT BETWEEN 7:00 PM AND THE FOLLOWING 7:00 AM. IN ADDITION MATERIAL DELIVERY FROM US 25 WILL ONLY BE PERMITTED DURING THIS SAME TIME PERIOD.

GENERAL NOTES

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

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

TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
US 25 (-L-)	MONDAY THRU SUNDAY 7:00 A.M. TO 7:00 P.M.
SR 3503 (-Y-)	MONDAY THRU SUNDAY 7:00 A.M. TO 7:00 P.M.

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

ROAD NAME
US 25 (-L-)
SR 3503 (-Y-)

HOLIDAY

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

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

C) DO NOT CLOSE ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

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

E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

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

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

H) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

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

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

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

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

L) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

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

N) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 350 FT. IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

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

P) SKINNY DRUMS SHALL NOT BE USED ON US 25 FOR ANY TRAFFIC CONTROL SET-UP, INCLUDING LANE CLOSURES OCCURRING AT NIGHT.

PAVEMENT MARKINGS AND MARKERS

Q) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
US 25 (-L-)	PAINT	N/A
SR 3503 (-Y-)	PAINT	N/A

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

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

PHASING

NOTE: BEFORE BEGINNING CONSTRUCTION THE CONTRACTOR SHALL PLACE ADVANCE WORK ZONE WARNING SIGNS ALONG -L- LINE (US 25) AND -Y- LINE, SR 3503 (OVERLOOK RD.), (SEE RSD 1101.01, SHEET 2 OF 3)

PHASE I

THE FOLLOWING NOTES ARE APPLICABLE FOR PHASE I.

NOTE: CONTRACTOR SHALL CONSTRUCT ALL PAVEMENT (TEMPORARY AND/OR PROPOSED) TO MAINTAIN DRAINAGE AND NOT POND WATER IN THE TRAFFIC LANES.

NOTE: CONTRACTOR SHALL PLACE TRAFFIC BACK INTO THE EXISTING PATTERN AT THE END OF EACH WORK PERIOD.

NOTE: WHEN CONSTRUCTING DRAINAGE STRUCTURES ADJACENT TO TRAFFIC, INSTALL TEMPORARY STEEL PLATES, AS DIRECTED BY THE ENGINEER. MAY WORK EACH LOCATION INDEPENDENTLY OR CONCURRENTLY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. WORK IN A CONTINUOUS MANNER TO PERFORM THE WORK IN THE FOLLOWING SEQUENCE, IN STEPS 'A' THRU 'E'.

A: CLOSE THE APPROPRIATE TRAVEL LANE TO TRAFFIC USING ROADWAY STANDARD DRAWING NO. 1101.02 SHEETS 1 & 3 OF 14.

B: CONSTRUCT PROPOSED DRAINAGE STRUCTURE OR INSTALL PRE-CAST DRAINAGE STRUCTURE AS SHOWN IN THE CONSTRUCTION PLANS AND COVER WITH STEEL PLATES TO PROTECT STRUCTURE DURING CURING.

C: OPEN TRAVEL LANE TO EXISTING TRAFFIC PATTERN BY THE END OF EACH WORK PERIOD.

D: WHEN PROPERLY CURED, CLOSE THE APPROPRIATE TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEETS 1 & 3 OF 14. BACKFILL & PAVE, IF REQUIRED, UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT (SEE CONSTRUCTION PLANS).

E: OPEN TRAVEL LANE TO EXISTING TRAFFIC PATTERN BY THE END OF THE WORK PERIOD.

STEP 1. USING RSD 1101.02 (SHEETS 1 AND 3 OF 14), CONSTRUCT WIDENING OF US 25 (-L-) AND SR 3503 (-Y-), INCLUDING SHOULDERS, CURB AND GUTTER, DRAINAGE, CONCRETE ISLANDS, AND PERMANENT GUARDRAIL UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS (SEE CONSTRUCTION PLANS AND TMP-2):

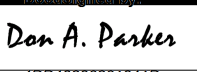
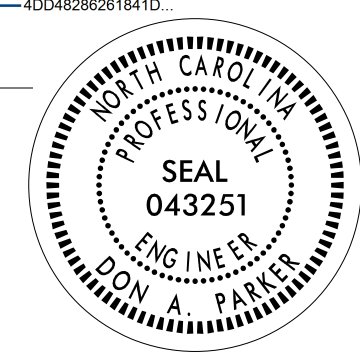

- STA. 10+17+/- -L- TO STA. 15+22+/- -L-
- STA. 16+00+/- -L- TO STA. 21+81+/- -L-
- STA. 11+25+/- -Y- TO STA. 16+35+/- -Y-

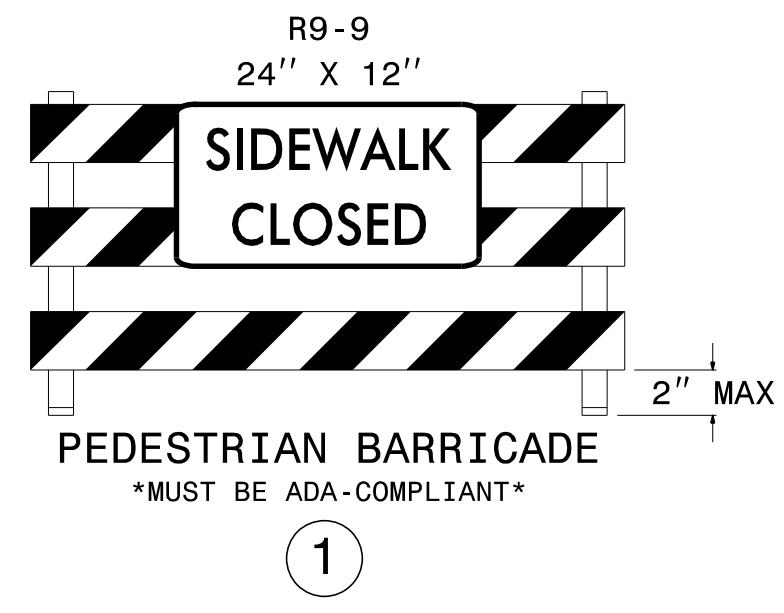
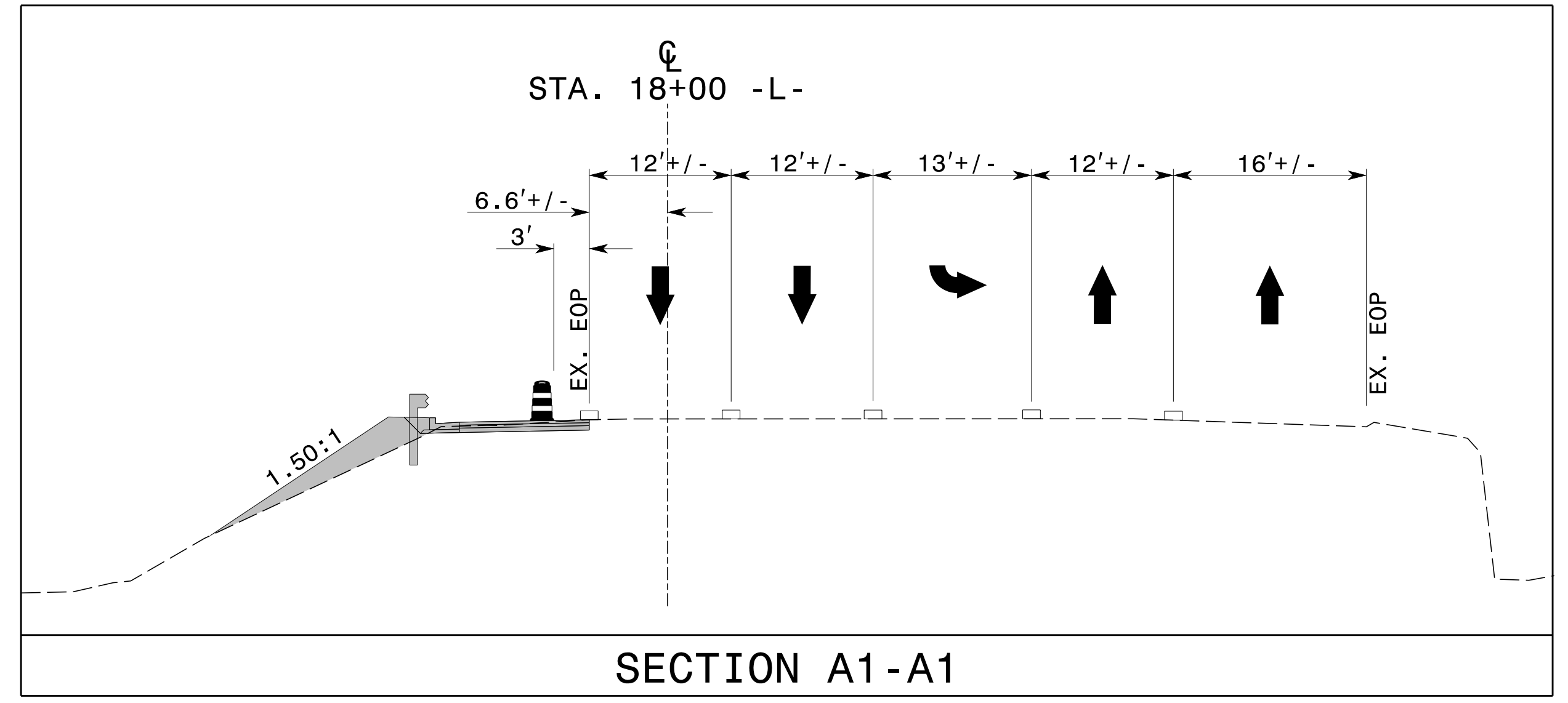
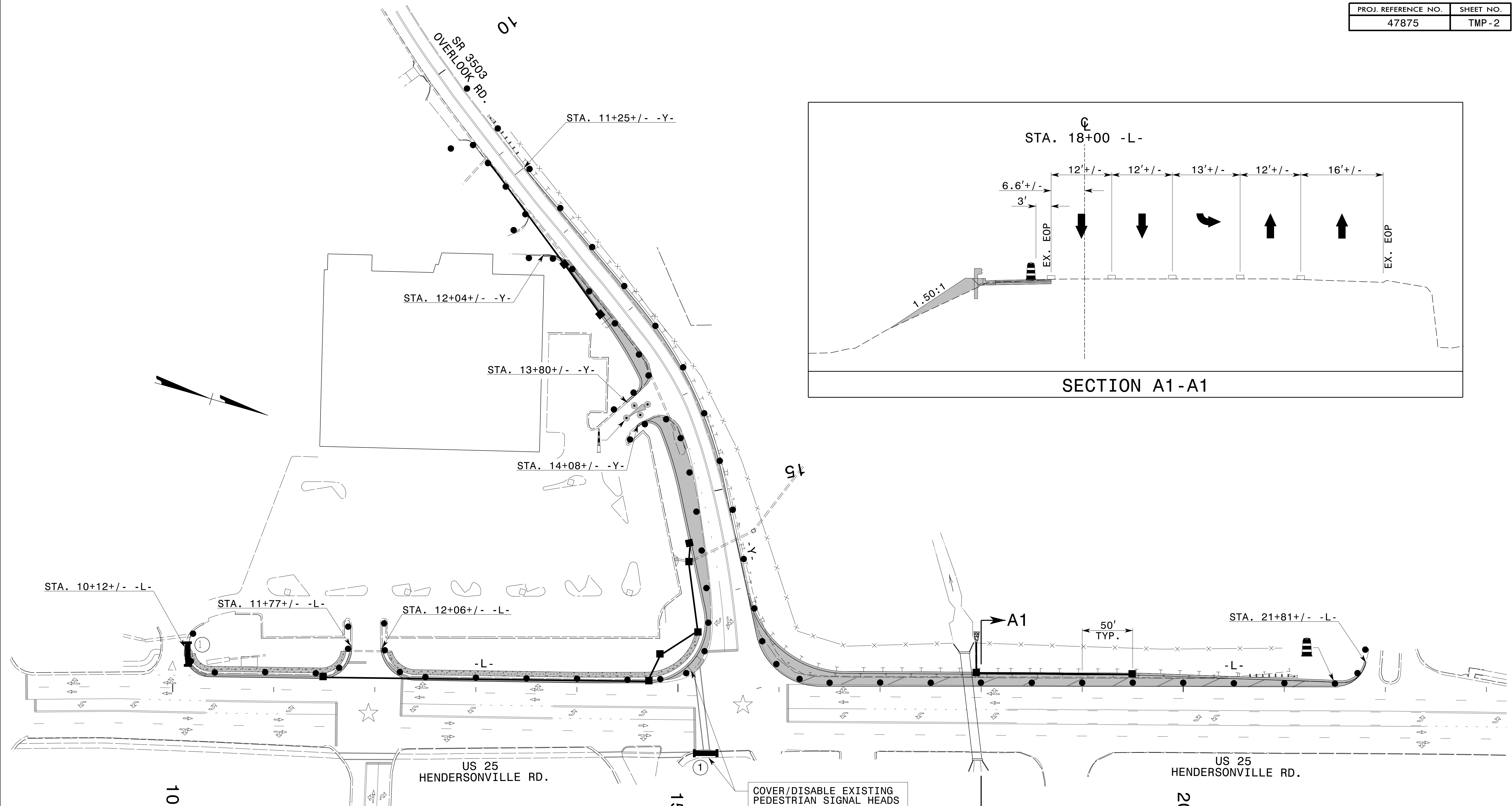
PHASE II

STEP 1. USING RSD NO. 1101.02 (SHEET 1 AND 3 OF 14), PAVE THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:

- STA. 16+00+/- -L- TO STA. 21+81+/- -L-
- STA. 11+25+/- -Y- TO STA. 16+95+/- -Y-
- DRIVEWAYS

STEP 2. USING RSD NO. 1101.02 (SHEET 1 AND 3 OF 14), PLACE FINAL PAVEMENT MARKINGS AND MARKERS FOR -L- AND -Y- LINES (SEE FINAL PAVEMENT MARKING PLANS) AND REMOVE ALL TRAFFIC CONTROL DEVICES.

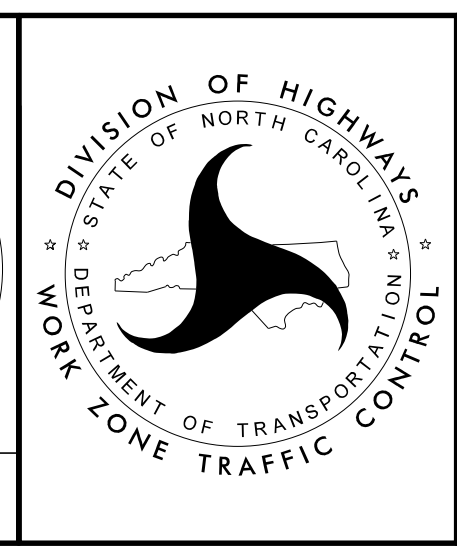
APPROVED:  DATE: 01/05/2022			<h1 style="margin: 0;">TRANSPORTATION OPERATIONS PLAN</h1>
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



APPROVED: Don A. Parker
40C48262918410...

DATE: 01/05/2022

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



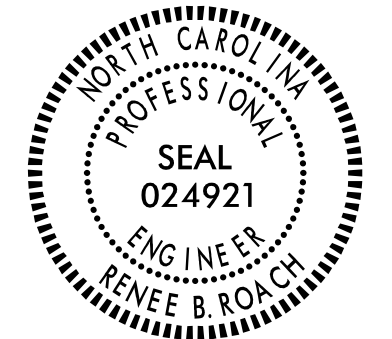
PHASE I DETAILS

I:\5\2022
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 User: sngreen2

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
BUNCOMBE COUNTY**

LOCATION: US 25 AND SR 3503 (OVERLOOK RD)

<small>TIP NO.</small> SM5713D	<small>SHEET NO.</small> PMP - 1
<small>DocuSigned by:</small> <i>Renee B. Roach</i> <small>3E84306D316431</small>	
<small>APPROVED:</small>	
<small>DATE:</small> 5/20/2019	
<small>SEAL</small>	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

<u>STD. NO.</u>	<u>TITLE</u>
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1253.01	RAISED PAVEMENT MARKERS - SNOWPLOWABLE

GENERAL NOTES

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

- A) STATE FORCES WILL INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

<u>ROAD NAME</u>	<u>MARKING</u>	<u>MARKER</u>
OVERLOOK RD	POLYUREA	SNOWPLOWABLE
NORTH US-25	POLYUREA	SNOWPLOWABLE

- B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
 C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
 D) PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.
 E) STOP BAR LOCATION AT NON-SIGNALIZED INTERSECTIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.
 F) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.
 G) SEE ROADWAY PLANS FOR ALTERNATE CURB RAMP DESIGNS WHEN INDICATED ON PAVEMENT MARKING DETAIL SHEETS.

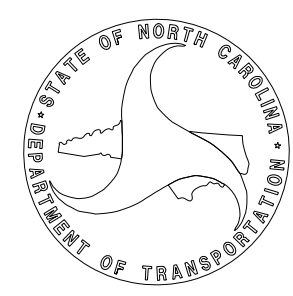
**PAVEMENT MARKING
SCHULDE**

<u>SYMBOLS</u>	<u>DESCRIPTION</u>
T2	STOPBAR (24" 90MIL)
V8	2FT-6FT/SP WHITE MINISKIP (4" 90MIL)
VC	10FT WHITE SKIP (4" 90MIL)
VD	3FT-9FT SP WHITE MINISKIP (4" 90MIL)
VE	WHITE SOLID LANE LINE (4" 90MIL)
VF	10FT YELLOW SKIP (4" 90MIL)
VH	YELLOW SINGLE CENTER (4" 90MIL)
VI	YELLOW DOUBLE CENTER (4" 90MIL)
UA	LEFT TURN ARROW (90MIL)
UB	RIGHT TURN ARROW (90MIL)
UC	STRAIGHT ARROW (90MIL)
UD	COMBO LEFT/STRAIGHT ARROW (90MIL)
<u>MARKERS</u>	
ME	SNOWPLOWABLE MARKER (YELLOW & YELLOW)
MF	SNOWPLOWABLE MARKER (CRYSTAL & RED)

T.I.P.: SM5713D

PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

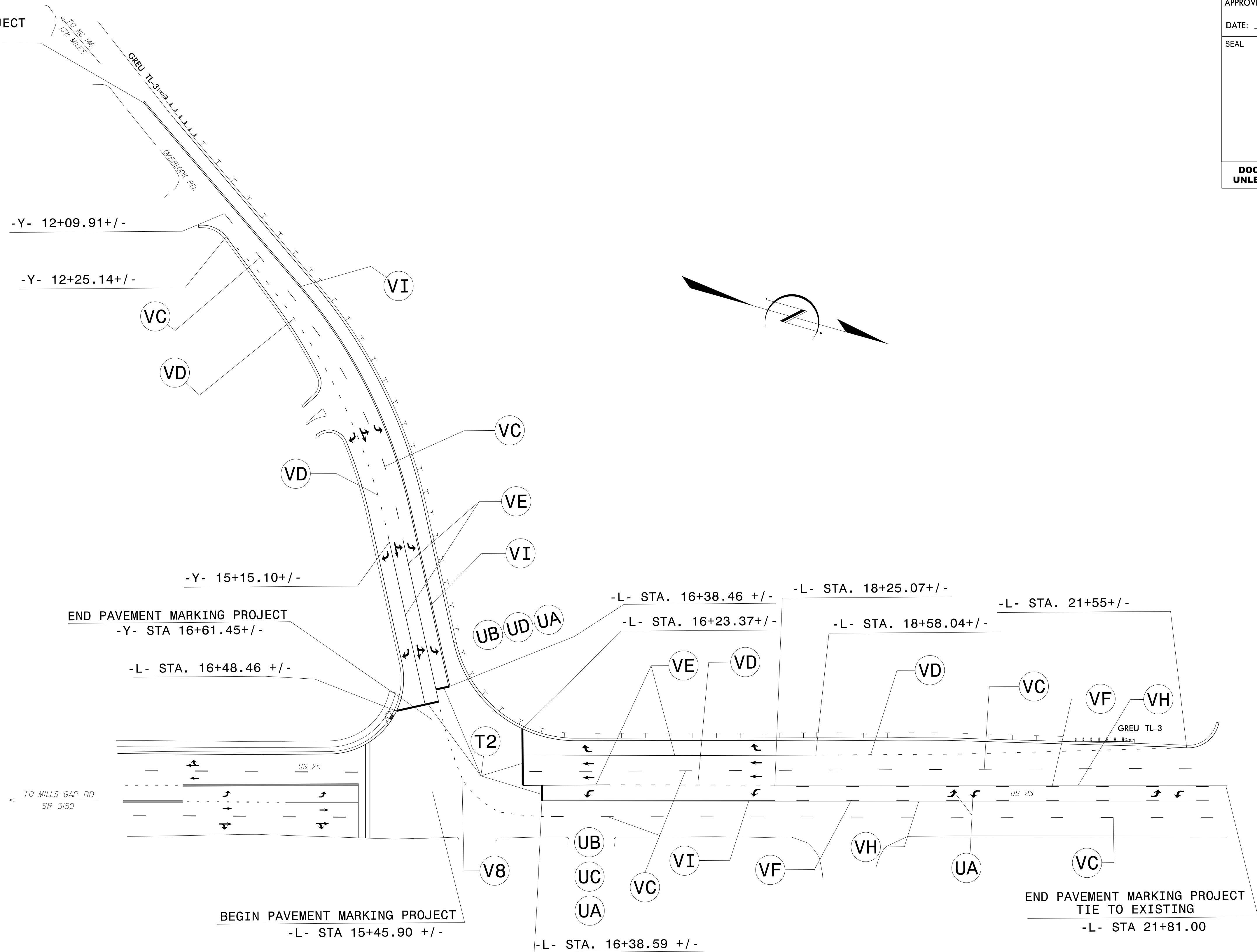
KELVIN JORDAN SIGNING & DELINEATION REGIONAL ENGINEER
WALTER JOHNSON SIGNING & DELINEATION PROJECT DESIGN ENGINEER



INDEX

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
PMP-1	PAVEMENT MARKING PLAN TITLE AND SCHEDULE SHEET
PMP-2	PAVEMENT MARKING DETAIL

BEGIN PAVEMENT MARKING PROJECT
TIE TO EXISTING
-Y- STA 11+00.00



PAVEMENT MARKING DETAIL

05/20/19
 S:\S&J\Western Region\Walter\SM5713D US 25 and Over-look Rd\Signing\CADD\MP\SM5713D US 25 and Over-look Rd_Sgn_PMP-2.dgn
 User: walterjohnson

09/06/99

TIP PROJECT: SM5713D

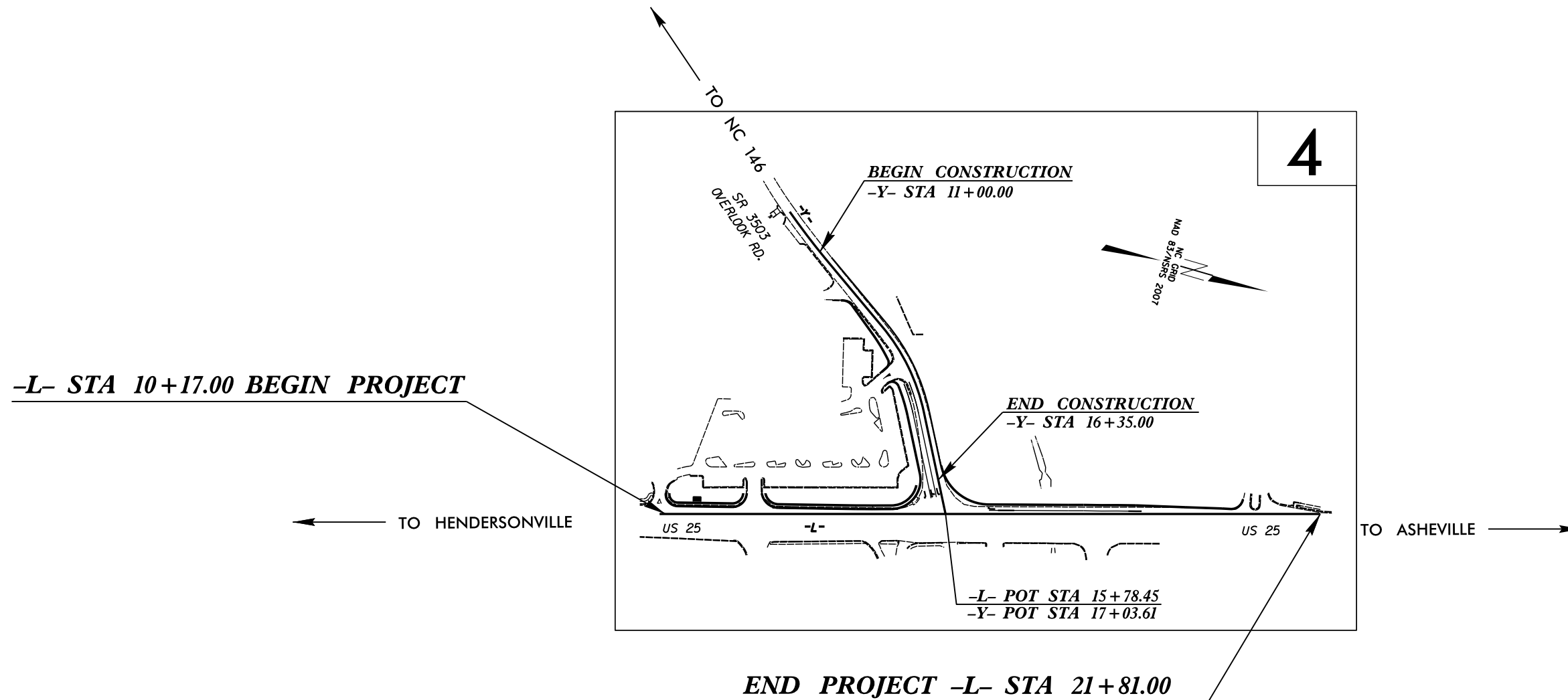
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	SM5713D	RW01	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SURVEY CONTROL, EXISTING CENTERLINES,
RIGHT OF WAY, EASEMENTS AND PROPERTY TIES

BUNCOMBE COUNTY

LOCATION: US 25 AND SR 3503 (OVERLOOK RD)



-L- STA 10+17.00 BEGIN PROJECT

TO HENDERSONVILLE

TO ASHEVILLE

-L- POT STA 15+78.45
-Y- POT STA 17+03.61

END PROJECT -L- STA 21+81.00

GRAPHIC SCALE



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS1" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 656,989.515(ft) EASTING: 951,290.033(ft) ELEVATION: 2,227.460(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99978066 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS1" TO -L- STATION 10+17.00 IS N 22-12'02.0" E 47.02(ft) ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

Prepared in the Office of:

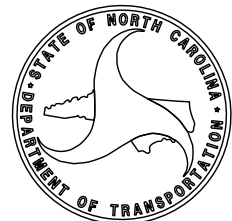
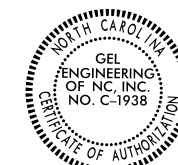
GEL SOLUTIONS

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:

PROFESSIONAL LAND SURVEYOR



Signature: *Paul H. Denton*

2019.06.11
07:14:13 -04'00'

SIGNATURE:

Date:

\$\$\$\$\$ SYSTEM \$\$\$\$\$\$
\$\$\$\$\$ DDN \$\$\$\$\$\$
\$\$\$\$\$ USERNAME \$\$\$\$\$\$

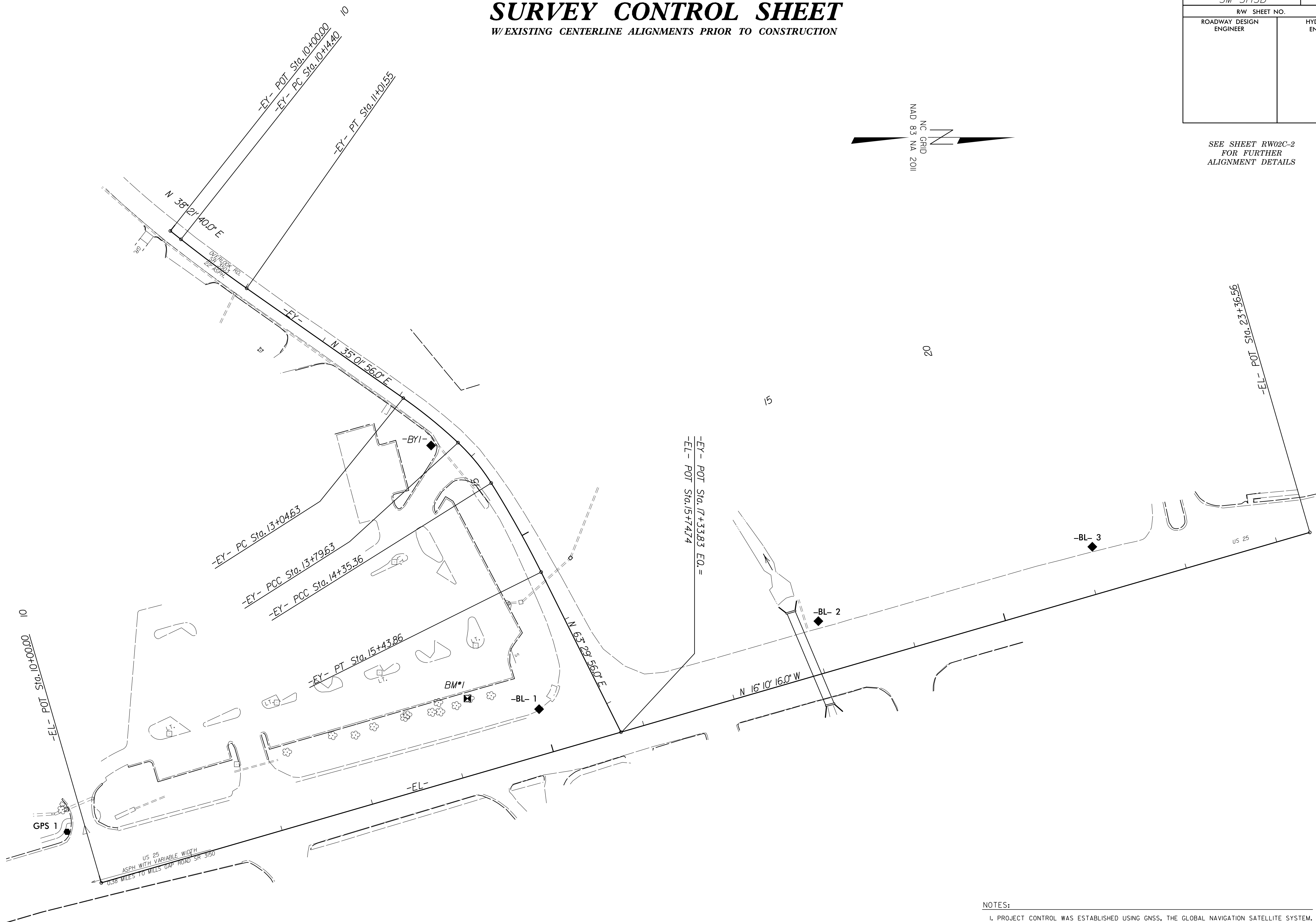
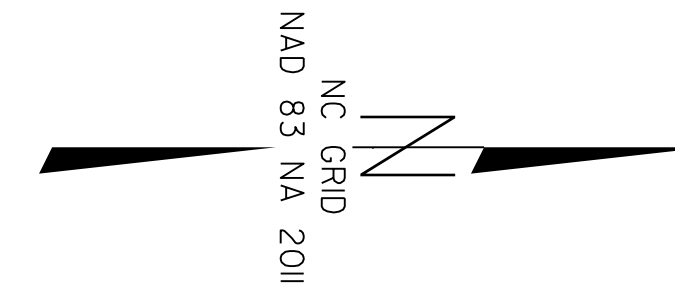
8/17/99

SURVEY CONTROL SHEET

W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. SM-5713D	SHEET NO. RW02C-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SEE SHEET RW02C-2
FOR FURTHER
ALIGNMENT DETAILS



03 JUN 2018 15:43 N:\p\o\j\SM5713D.DDC.rw02c-1.dgn
4,548.00 USER:WALTON

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

PROJECT REFERENCE NO.		SHEET NO.	
SM5713D		RW02C-2	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

BL	POINT	DESC.	NORTH	EAST	ELEVATION
GPS1		GPS1	656989.5150	951290.0330	2227.46
1		BL1	657490.9520	951159.7030	2212.68
2		BL2	657787.5882	951066.2172	2205.88
3		BL3	658078.5765	950987.2361	2210.38
BY1		BY1	657376.2385	950879.6240	2200.12


 BM1 ELEVATION = 2210.02
 N 657414 E 951148
 BM1 IS SPIKE SET IN BASE OF 12' OAK

EL				
POINT	N	E	BEARING	DIST
POT	657025.915	951344.227		
LINE			N 16°10'16.0" W	1336.56
POT	658309.590	950971.987		

EY									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	657099.251	950651.724							
LINE			N 38°21'40.0" E	14.40					
PC	657110.545	950660.663							
CURVE			N 36°41'48.0" E	87.14	03°19'44.0"(LT)	03°49'11.0"	87.15	43.59	1500.00
PT	657180.413	950712.734							
LINE			N 35°01'56.0" E	203.08					
PC	657346.697	950829.307							
CURVE			N 39°07'57.3" E	74.94	08°12'02.6"(RT)	10°56'03.5"	75.00	37.56	524.00
PCC	657404.824	950876.600							
CURVE			N 50°35'26.4" E	55.58	14°42'55.5"(RT)	26°24'12.9"	55.73	28.02	217.00
PCC	657440.109	950919.543							
CURVE			N 60°43'25.0" E	108.46	05°33'01.9"(RT)	05°06'56.5"	108.50	54.29	1120.00
PT	657493.147	951014.147							
LINE			N 63°29'56.0" E	189.97					
POT	657577.916	951184.158							

NOTES:
 1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
 2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

PROPOSED ALIGNMENT CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
SM5713D	RW02D-1
Location and Surveys	
	

L			
TYPE	STATION	NORTH	EAST
POT	10+00.00	657016.7249	951312.5354
POT	23+36.56	658300.3998	950940.2951

Y			
TYPE	STATION	NORTH	EAST
POT	10+00.00	657099.2514	950651.7237
PC	10+14.40	657110.5451	950660.6625
PT	11+29.56	657203.4961	950728.5971
PC	12+98.72	657343.7926	950823.0943
PT	14+93.20	657472.9204	950965.9586
POT	17+03.61	657572.2878	951151.4331

REVISIONS



NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE PROPOSED ALIGNMENT CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATINO REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

6/2/19
 07-MAY-2019 15:19
 Z:\Projects\2019\19-05-19-RANCDT\NCDT - 2019 Projects\19-05-19-RANCDT\con.gel\file from NCDOT\sm5713d.LS.rw02d-1.dgn
 Andy Smith

6/2/19

RIGHT OF WAY CONTROL SHEET

PROJECT REFERENCE NO. SM5713D	SHEET NO. RW03E-1
Location and Surveys	
GEL SOLUTIONS	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
L	14-87.52	-42.00	657473.2593	951136.4179
L	16-90.00	-41.83	657667.7735	951080.1870

REBAR AND CAP FOUND

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y	12-50.00	32.52	657285.2232	950822.8485
Y	12-50.00	40.00	657281.0422	950829.0559
Y	13-25.00	43.00	657338.7836	950872.4938
Y	13-80.00	74.00	657353.2736	950926.7886
Y	14-35.00	47.00	657404.0352	950944.8033
Y	15-48.83	53.00	657452.4767	951040.0295
Y	15-68.84	53.00	657461.9254	951057.6660
Y	16-00.00	53.00	657476.6394	951085.1304

P.K. NAIL SET
P.K. NAIL SET

I, PARKS H ICENHOUR, JR., a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work item(s) (Base map Compilation, R/W Staking) performed under my responsible charge meet NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines and procedures.

I further certify that the data compiled came from available surveys/mapping performed by others and provided to me by NCDOT and do not certify to the accuracy or quality of the individual data sources.

I further certify that the right of way and permanent easement points shown herein and outlined in the tables shown hereon (localized coordinates, station/offset) have been checked and are accurate representations of the right of way and permanent easement points depicted on the corresponding highway plans. I also certify that the right of way and permanent easement points shown herein have been field monumented under my supervision from existing survey control provided by others; that the depicted property data shown herein were surveyed by others; and these monuments denote the right of way and easement boundaries at the time of staking which may be subject to change due to right of way revisions (See deeds for final determination).

Witness my original signature, registration number and seal this 15th day of May, 2019.

Parks H. Icenhour, Jr. 2019.05.21
07:01:49 -04'00'
Professional Land Surveyor L-3996
PLS # Seal

PERMANENT EASEMENT IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
L	11-40.00	-42.00	657139.4878	951233.2040
L	11-40.00	-53.00	657136.4248	951222.6414
L	12-35.00	-53.00	657227.6661	951196.1832
L	12-35.00	-42.00	657230.7291	951206.7461
L	18-72.30	78.00	657876.2337	951144.5053
L	18-83.64	78.00	657887.1292	951141.3458
L	19-37.82	109.94	657948.0597	951156.9353

P.K. NAIL FOUND
P.K. NAIL FOUND

PERMANENT EASEMENT IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y	15-41.00	-25.20	657517.7061	950996.1952
Y	15-41.00	-45.00	657535.1609	950986.8439
Y	15-46.62	-45.05	657537.8601	950991.7715



REVISIONS

15-MAY-2019 12:48
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Andy Smith

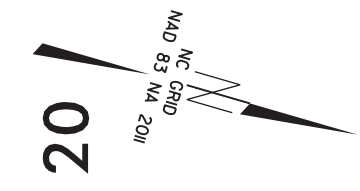
NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

PROJECT REFERENCE NO. SM5713D	SHEET NO. RW04
Location and Surveys	
GEL SOLUTIONS	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

-Y-	-Y-
PI Sta 10+72.01	PI Sta 13+97.92
$\Delta = 4^{\circ} 23' 55.4" (LT)$	$\Delta = 27^{\circ} 51' 27.3" (RT)$
$D = 3^{\circ} 49' 11.0"$	$D = 14^{\circ} 19' 26.2"$
$L = 115.16'$	$L = 194.48'$
$T = 57.61'$	$T = 99.20'$
$R = 1,500.00'$	$R = 400.00'$
SE = EXIST	SE = EXIST



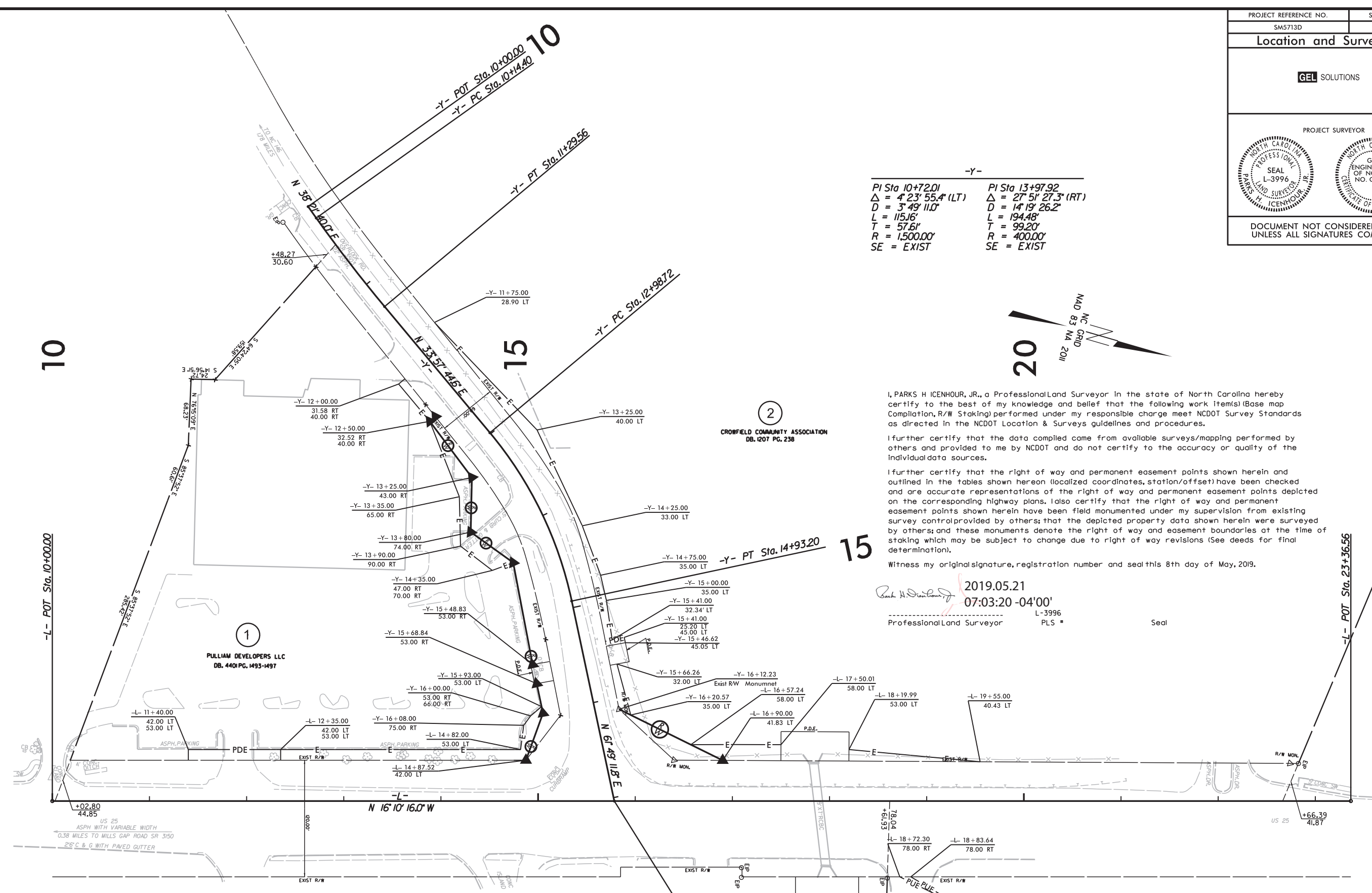
I, PARKS H ICENHOUR, JR., a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work (Items) (Base map Compilation, R/W Staking) performed under my responsible charge meet NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines and procedures.

I further certify that the data compiled came from available surveys/mapping performed by others and provided to me by NCDOT and do not certify to the accuracy or quality of the individual data sources.

I further certify that the right of way and permanent easement points shown herein and outlined in the tables shown hereon (localized coordinates, station/offset) have been checked and are accurate representations of the right of way and permanent easement points depicted on the corresponding highway plans. I also certify that the right of way and permanent easement points shown herein have been field monumented under my supervision from existing survey control provided by others; that the depicted property data shown herein were surveyed by others; and these monuments denote the right of way and easement boundaries at the time of staking which may be subject to change due to right of way revisions (See deeds for final determination).

Witness my original signature, registration number and seal this 8th day of May, 2019.

Parks H. Icenhour, Jr.
 2019.05.21
 07:03:20 -04:00'
 Professional Land Surveyor L-3996 PLS # Seal



- NOTES:**
- IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
 - PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

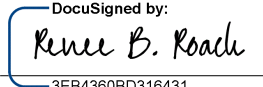

REVISIONS

6/2/19 08 MAY 2019 13:33 RANCDT\NCDOT - 2019 Projects\ncdot\4219 sm5713d.con.gel\file from NCDOT\SM5713D.ls.rw04.dgn

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**SIGNING PLAN
BUNCOMBE COUNTY**

LOCATION: US 25 AND SR 3503 (OVERLOOK RD)

PROJECT REFERENCE NO. SM-5713D	SHEET NO. SIGN-1
APPROVED:  RENEE B. ROACH	
DATE: 5/20/2019	
SEAL 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

T.I.P.: SM-5713D

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:



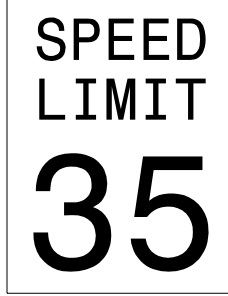
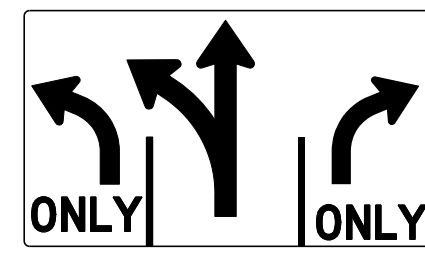
STD. NO.	TITLE
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4072000000	903	SUPPORTS, 3 LB STEEL U-CHANNEL	100	L.F.
4102000000	904	SIGN ERECTION, TYPE E	4	EA.
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	5	EA.

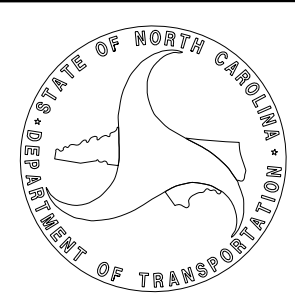
GENERAL NOTES

- . SIGNS FURNISHED BY STATE
- . CONFIRM IN WRITING AT LEAST 4 MONTHS IN ADVANCE, THE ACTUAL DATE THE DEPARTMENT FURNISHED SIGNS WILL BE REQUIRED.
- . IF REMOVAL OR RELOCATION OF SIGNS ON PRIVATE STREET (NON-STATE MAINTAINED) IS REQUIRED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL INFORM THE ENGINEER. THE WORK WILL BE COMPLETED BY OTHERS.
- . WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER
- . ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.
- . WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.
- . THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.
- . SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.

<p>401 QUANTITY REQ'D <u>1</u></p>  <p>36" X 36" R1-1</p> <p>ONE "U" POST PER SIGN</p>	<p>402 QUANTITY REQ'D <u>1</u></p>  <p>24" X 30" R2-1</p> <p>ONE "U" POST PER SIGN</p>
<p>403 QUANTITY REQ'D <u>1</u></p>  <p>24" X 30" R2-1</p> <p>ONE "U" POST PER SIGN</p>	<p>404 QUANTITY REQ'D <u>1</u></p>  <p>48" X 30" R3-8a</p> <p>TWO "U" POST PER SIGN</p>

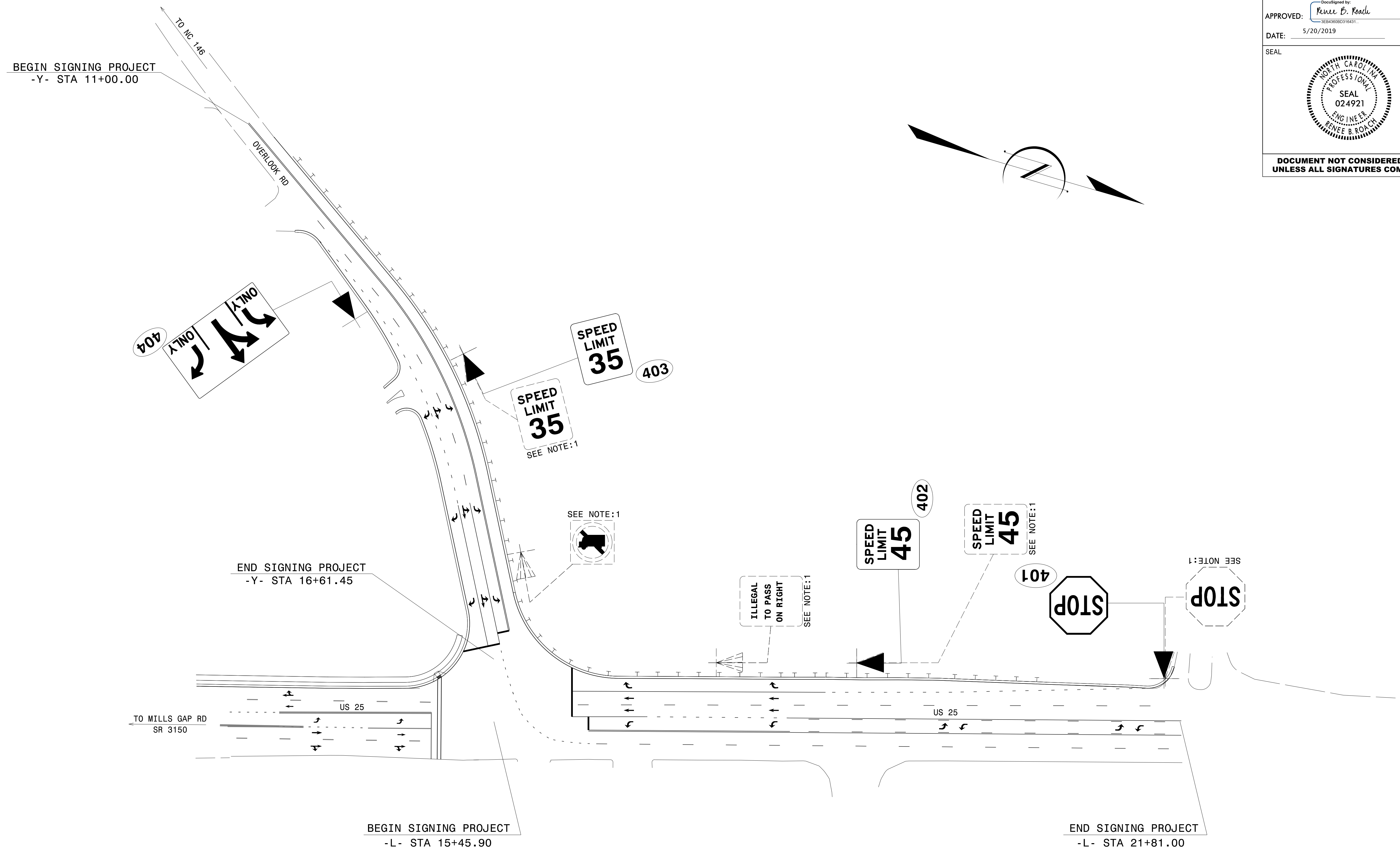
PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

KELVIN JORDAN SIGNING & DELINEATION REGIONAL ENGINEER
WALTER JOHNSON SIGNING & DELINEATION PROJECT DESIGN ENGINEER



INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET, E SIGNS
SIGN-2	SIGN DETAIL SHEET

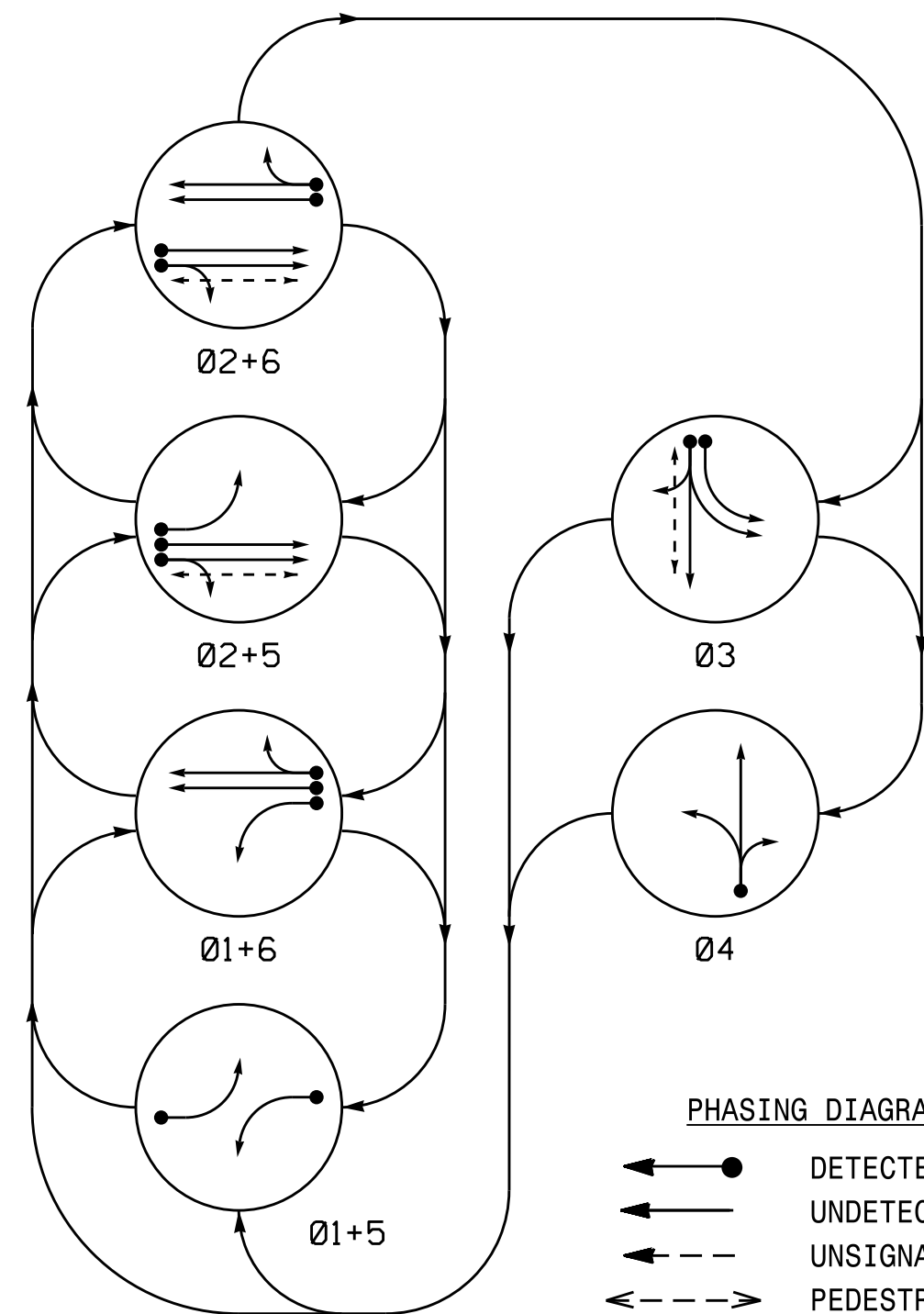


1. DISPOSAL OF SIGN SYSTEM, U-CHANNEL

SIGN DETAIL

05/20/19
 S:\S&U\Western Region\Walter\SM5713D US 25 and Over-look Rd\Signing\CADD\Signing Layout Plans\SM5713D US 25 and Over-look Rd_Sgn_SDN_Sign-2.dgn
 User: walterjohnson

PHASING DIAGRAM



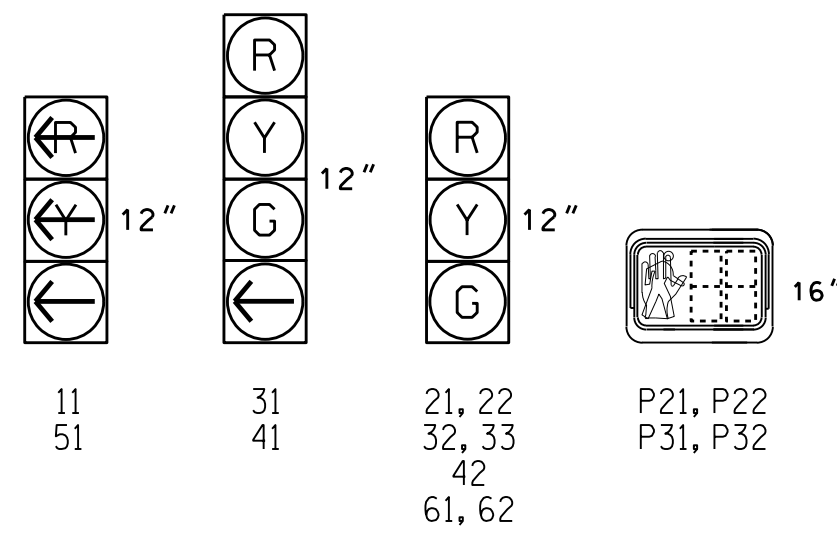
PHASING DIAGRAM DETECTION LEGEND

- ←●→ DETECTED MOVEMENT
- ←○→ UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- ←- - -> PEDESTRIAN MOVEMENT

SIGNAL FACE	PHASE					
	Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3	Ø4
11	←	←	←	←	←	←
21, 22	R	R	G	G	R	R
31	R	R	R	R	G	R
32, 33	R	R	R	R	G	R
41	R	R	R	R	G	R
42	R	R	R	R	G	R
51	←	←	←	←	←	←
61, 62	R	G	R	G	R	R
P21, P22	DW	DW	W	W	DW	DRK
P31, P32	DW	DW	DW	DW	W	DRK

SIGNAL FACE I.D.

All Heads L.E.D.



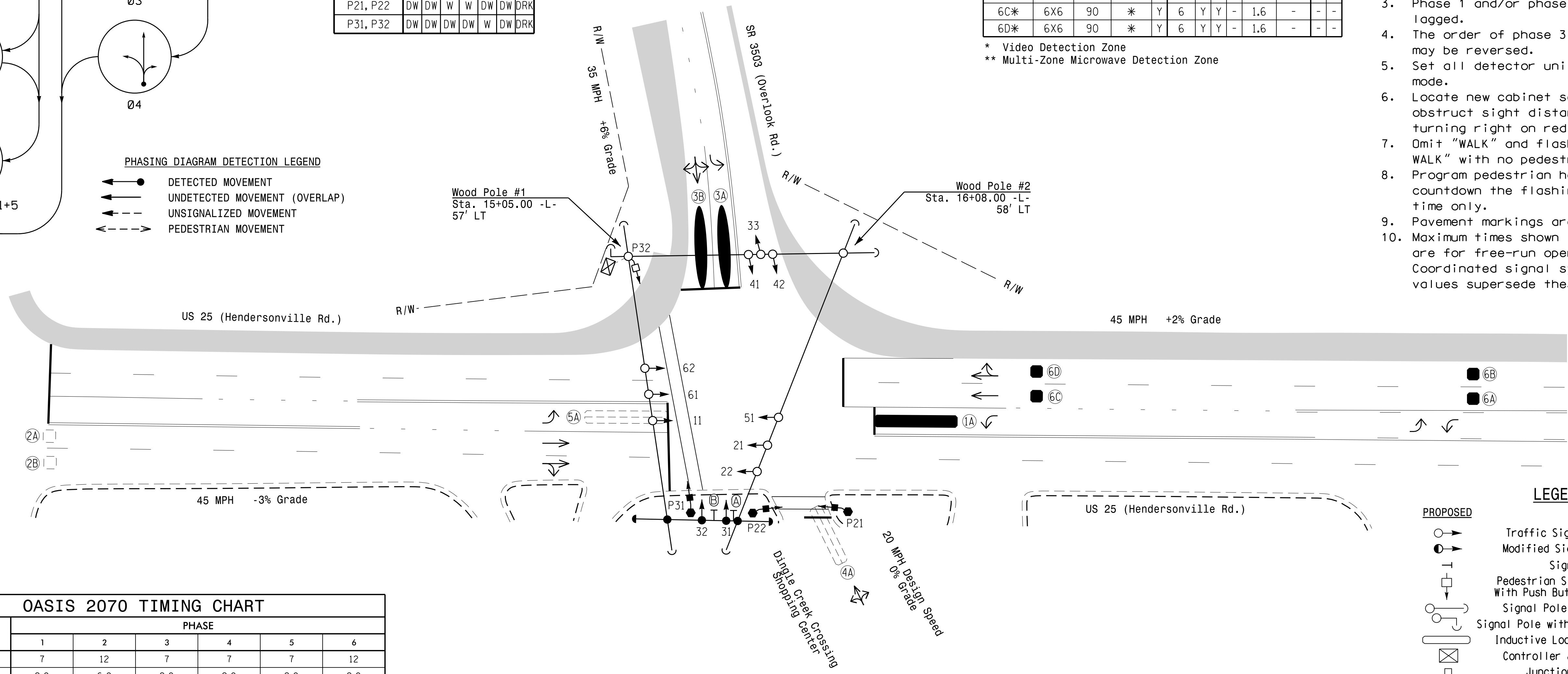
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART											
INDUCTIVE LOOPS						DETECTOR PROGRAMMING					
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP
1A*	6X40	0	*	Y	1	Y	Y	-	-	3	-
2A	6X6	295	EXIST	-	2	Y	Y	-	-	-	-
2B	6X6	295	EXIST	-	2	Y	Y	-	-	-	-
3A**	6X40	0	**	Y	3	Y	Y	-	-	3	-
3B**	6X40	0	**	Y	3	Y	Y	-	-	10	-
4A	6X30	+5	2-4-2	-	4	Y	Y	-	-	10	-
5A	6X40	+5	2-4-2	-	5	Y	Y	-	-	3	-
6A*	6X6	300	*	Y	6	Y	Y	-	-	-	-
6B*	6X6	300	*	Y	6	Y	Y	-	-	-	-
6C*	6X6	90	*	Y	6	Y	Y	-	1.6	-	-
6D*	6X6	90	*	Y	6	Y	Y	-	1.6	-	-

* Video Detection Zone
** Multi-Zone Microwave Detection Zone

6 Phase Fully Actuated Asheville Signal System

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be lagged.
- The order of phase 3 and phase 4 may be reversed.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Pavement markings are existing.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



OASIS 2070 TIMING CHART						
FEATURE	PHASE					
	1	2	3	4	5	6
Min Green 1 *	7	12	7	7	7	12
Extension 1	2.0	6.0	2.0	2.0	2.0	2.0
Max Green 1 *	15	90	30	20	15	90
Yellow Clearance	3.0	4.8	3.5	3.0	3.0	4.8
Red Clearance	2.1	1.3	2.8	3.6	1.9	1.3
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0
Walk 1 *	-	7	7	-	-	-
Don't Walk 1	-	4	29	-	-	-
Seconds Per Actuation *	-	1.5	-	-	-	-
Max Variable Initial *	-	34	-	-	-	-
Time Before Reduction *	-	15	-	-	-	-
Time To Reduce *	-	30	-	-	-	-
Minimum Gap	-	3.0	-	-	-	-
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW
Dual Entry	-	-	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

LEGEND

- | | | | |
|--|--|--|--|
| | PROPOSED Traffic Signal Head | | EXISTING Traffic Signal Head |
| | PROPOSED Modified Signal Head | | EXISTING Modified Signal Head |
| | PROPOSED Pedestrian Signal Head | | EXISTING Pedestrian Signal Head |
| | PROPOSED Signal Pole with Guy | | EXISTING Signal Pole with Guy |
| | PROPOSED Signal Pole with Sidewalk Guy | | EXISTING Signal Pole with Sidewalk Guy |
| | PROPOSED Inductive Loop Detector | | EXISTING Inductive Loop Detector |
| | PROPOSED Controller & Cabinet | | EXISTING Controller & Cabinet |
| | PROPOSED Junction Box | | EXISTING Junction Box |
| | PROPOSED 2-in Underground Conduit | | EXISTING 2-in Underground Conduit |
| | PROPOSED Right of Way | | EXISTING Right of Way |
| | PROPOSED Directional Arrow | | EXISTING Directional Arrow |
| | PROPOSED Video Detection Zone | | EXISTING Video Detection Zone |
| | PROPOSED Multi-Zone Microwave Detection Zone | | EXISTING Multi-Zone Microwave Detection Zone |
| | PROPOSED Construction Zone | | EXISTING Construction Zone |

SIGNS

- | | | | |
|--|---|--|---|
| | PROPOSED Left Arrow "ONLY" Sign (R3-5L) | | EXISTING Left Arrow "ONLY" Sign (R3-5L) |
| | PROPOSED Dual Turn Arrows Sign (R3-18) | | EXISTING Dual Turn Arrows Sign (R3-18) |

Signal Upgrade - Temporary Design

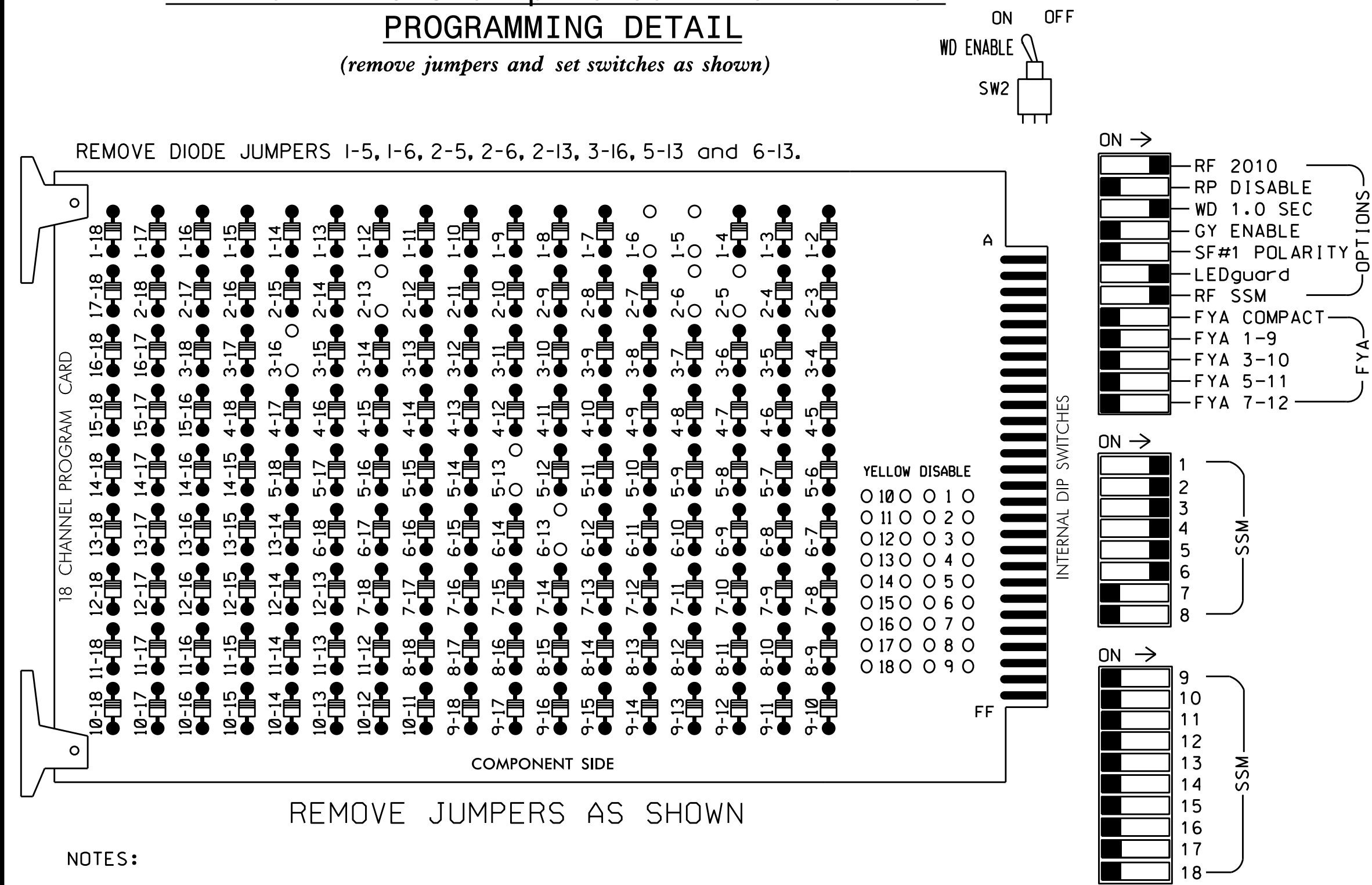
Prepared in the Offices of:

 US 25 (Hendersonville Rd.) at SR 3503 (Overlook Rd.)/ Dingle Creek Crossing Shopping
 Division 13 Buncombe County Asheville
 PLAN DATE: May 2019 REVIEWED BY: T.J. Williams
 PREPARED BY: R.N. Zinser REVIEWED BY:
 SCALE: 1"=30'
 DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
 SEAL: R. N. Zinser, Professional Engineer, No. 043914, State of North Carolina
 DATE: 5/21/2019
 SIG. INVENTORY NO. 13-0584T

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**EDI MODEL 2018ECLip-NC CONFLICT MONITOR
PROGRAMMING DETAIL**

(remove jumpers and set switches as shown)



NOTES:

- Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
- Ensure that Red Enable is active at all times during normal operation.
- Integrate monitor with Ethernet network in cabinet.

NOTES

- To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
- Enable Simultaneous Gap-Out for all phases.
- Program phase 2 for Variable Initial and Gap Reduction.
- Program phases 2 and 6 for Start Up In Green.
- Program phases 2 and 3 for 'STARTUP PED CALL'.
- Program phases 2 and 6 for Yellow Flash.
- The cabinet and controller are part of the Asheville Signal System.

EQUIPMENT INFORMATION

CONTROLLER.....2070E
 CABINET.....332 W/ AUX
 SOFTWARE.....ECONOLITE OASIS
 CABINET MOUNT.....BASE
 OUTPUT FILE POSITIONS...18 WITH AUX.
 OUTPUT FILE LOAD SWITCHES USED.....S1,S2,S3,S4,S5,S7,S8,S12
 PHASES USED.....1,2,3,4,5,6,2 PED,3 PED
 OVERLAPS.....NONE

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6
CMU CHANNEL NO.	1	2	13	3	4	14	5	6	15	7	8	16	9	10	17	11	12	18
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	3 PED	OLA	OLB	SPARE	OLC	OLD	SPARE
SIGNAL HEAD NO.	11	21,22	P21, P22	31	32,33	41	42	NU	51	61,62	NU	NU	NU	P31, P32	NU	NU	NU	NU
RED	128		116	116	101	101			134									
YELLOW	129		117	117	102	102			135									
GREEN	130		118	118	103	103			136									
RED ARROW	125								131									
YELLOW ARROW	126								132									
GREEN ARROW	127		118		103				133									
Hand icon			113									110						
Person icon			115									112						

NU = Not Used

PED 3 PROGRAMMING DETAIL

(program controller as shown below)

CHANGING OUTPUT ASSIGNMENTS

- FROM MAIN MENU SELECT '6' (OUTPUTS), THEN '1' (OUTPUT ASSIGNMENTS)
- ENTER 17 (PHASE 8 DW) FOR OUTPUT ASSIGNMENT #.
- SCROLL DOWN TO 'PEDESTRIAN PHASE' AND ENTER 'Y' REGARDLESS OF DEFAULT PROGRAMMING
- ENTER '3' FOR 'SELECT PEDESTRIAN PHASE'. NO CHANGE NEEDED FOR 'SELECT COLOR'
- BACKUP TO 'OUTPUT ASSIGNMENTS AND SETTINGS MENU:' BY PRESSING THE 'ESC' BUTTON ON KEYBOARD.
- SELECT '1' (OUTPUT ASSIGNMENTS)
- ENTER 18 (PHASE 8 W) FOR OUTPUT ASSIGNMENT #.
- REPEAT STEPS # 3 AND # 4.

CHANGING INPUT ASSIGNMENTS

- FROM MAIN MENU SELECT '7' (DETECTORS), THEN '2' (PEDESTRIAN DETECTOR ASSIGNMENTS)
- CYCLE TO PED DETECTOR #8 BY REPEATEDLY DEPRESSING '+' KEY
- MODIFY PHASE ASSIGNED TO PED DETECTOR # 8 FROM PHASE 8 TO PHASE 3

PROGRAMMING COMPLETE

INPUT FILE POSITION LAYOUT

(front view)

FILE	1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	∅ 2	∅ 2	∅ 2	∅ 2	∅ 2	∅ 2	∅ 4	∅ 2	∅ 2	∅ 2	∅ 2	∅ 2	∅ 2	∅ 2
L	2A	2B					4A							
U	∅ 5	∅ 5	∅ 5	∅ 5	∅ 5	∅ 5	∅ 5	∅ 5	∅ 5	∅ 5	∅ 5	∅ 5	∅ 5	∅ 5
L	5A													

EX.: 1A, 2A, ETC. = LOOP NO.'S

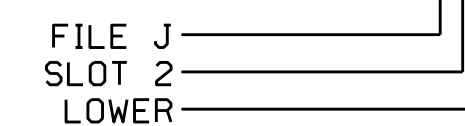
FS = FLASH SENSE
 ST = STOP TIME

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT ASSIGNMENT NO.	DETECTOR NO.	NEMA PHASE	CALL	EXTEND	FULL TIME DELAY	STRETCH TIME	DELAY TIME
2A	TB2-5,6	I2U	39	1	2	2	Y	Y			
2B	TB2-7,8	I2L	43	5	12	2	Y	Y			
4A	TB6-1,2	I7U	65	27	34	4	Y	Y			10
5A	TB3-1,2	J1U	55	17	5	5	Y	Y			3
PED PUSH BUTTONS											
P21,P22	TB8-4,6	I12U	67	29	PED 2	2 PED					
P31,P32	TB8-8,9	I13L	70	32	PED 8	3 PED					

NOTE:
 INSTALL DC ISOLATORS IN INPUT FILE SLOTS 112 AND 113.

INPUT FILE POSITION LEGEND: J2L



SPECIAL DETECTOR NOTE

For loops 1A, 6A, 6B, 6C and 6D install a video detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer-approved mounting locations to accomplish the detection schemes shown on the Signal Design Plans.

SPECIAL DETECTOR NOTE

For loops 3A and 3B, install a microwave detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer-approved mounting locations to accomplish the detection schemes shown on the Signal Design Plans.

COUNTDOWN PEDESTRIAN SIGNAL OPERATION

Countdown Ped Signals are required to display timing only during Ped Clearance Interval. Consult Ped Signal Module user's manual for instructions on selecting this feature.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 13-0584T
 DESIGNED: May 2019
 SEALED: 05/21/19
 REVISED: N/A

Electrical Detail - Temporary Design

US 25 (Hendersonville Road) at SR 3503 (Overlook Road) / Dingle Creek Crossing Shopping

Division 13 Buncombe County Asheville

PLAN DATE: May 2019 REVIEWED BY:

PREPARED BY: James Peterson REVIEWED BY:

REVISIONS INIT. DATE

750 N. Greenfield Pkwy, Garner, NC 27529

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL

RYAN W. HOUGH PROFESSIONAL ENGINEER

SEAL 036833

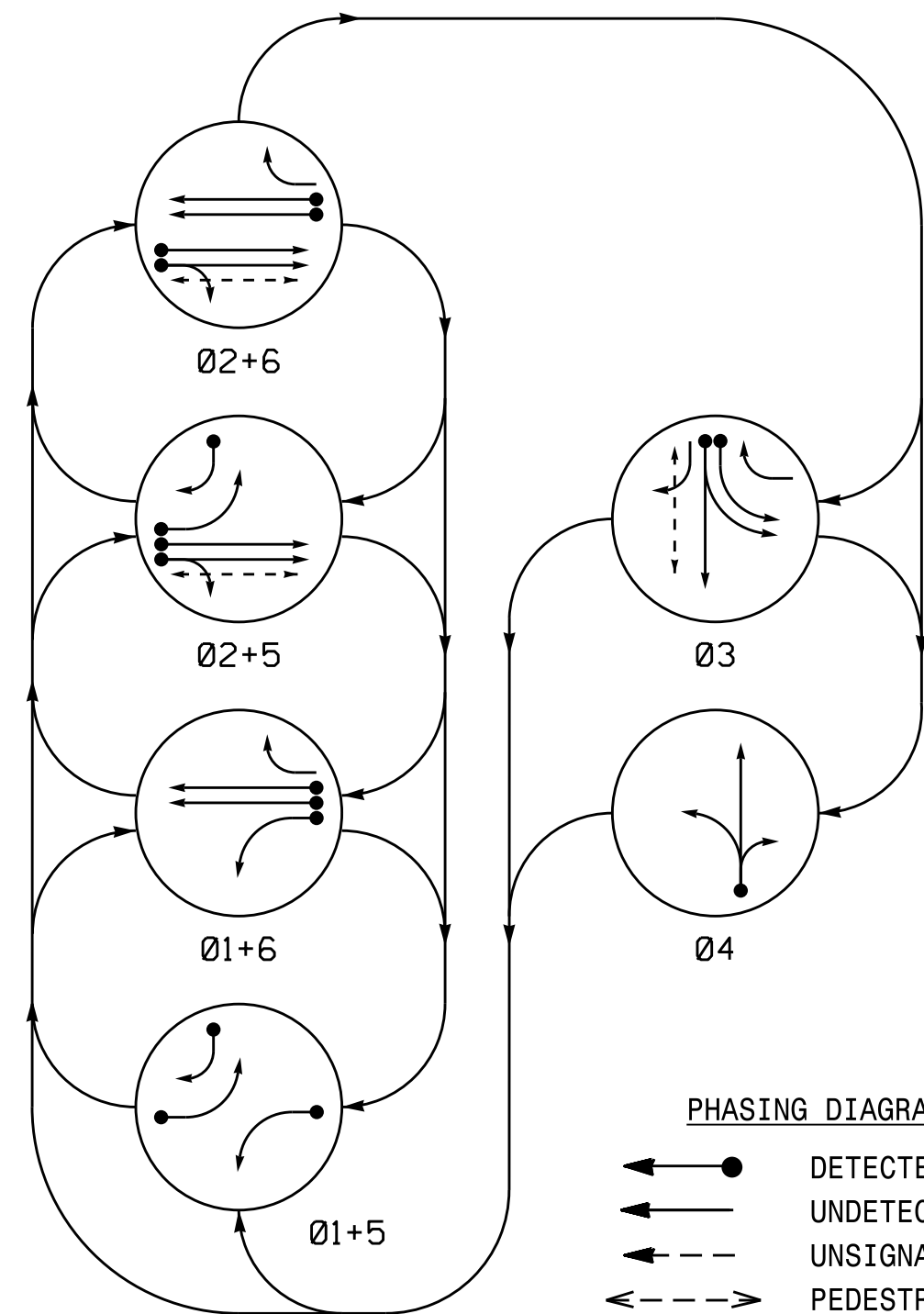
RYAN W. HOUGH ENGINEER

5/21/2019

SIG. INVENTORY NO. 13-0584T

1:4:40
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PHASING DIAGRAM



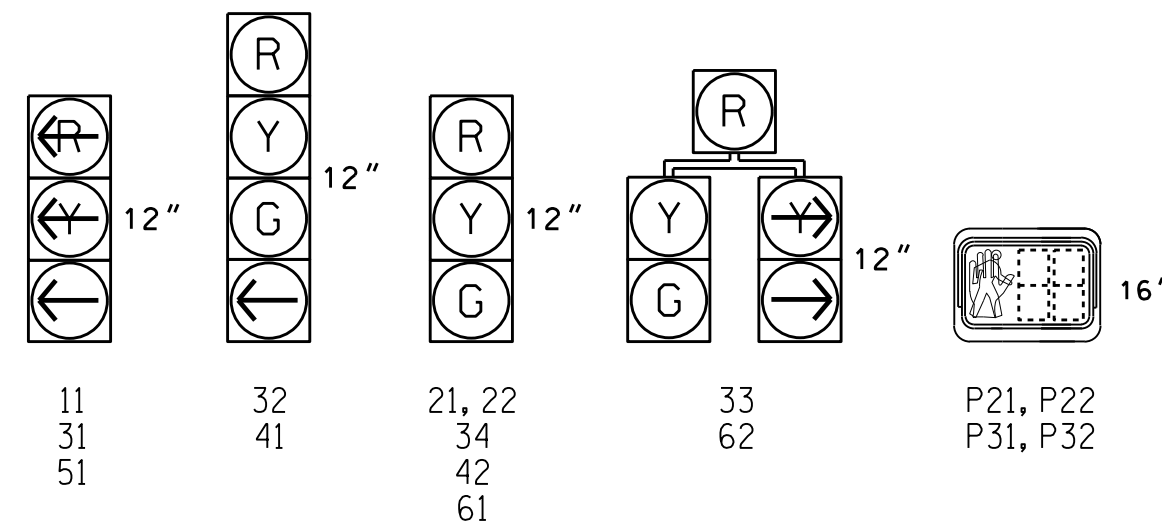
PHASING DIAGRAM DETECTION LEGEND

- ←●→ DETECTED MOVEMENT
- ←○→ UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

SIGNAL FACE	PHASE					
	Ø 1+5	Ø 1+6	Ø 2+5	Ø 2+6	Ø 3	Ø 4
11	←	←	←	←	←	←
21, 22	R	R	G	G	R	R
31	←	←	←	←	←	←
32	R	R	R	R	G	R
33	←	←	←	←	G	R
34	R	R	R	R	G	R
41	R	R	R	R	G	R
42	R	R	R	R	R	G
51	←	←	←	←	←	←
61	R	G	R	G	R	R
62	R	G	R	G	R	R
P21, P22	DW	DW	W	W	DW	DRK
P31, P32	DW	DW	DW	W	DW	DRK

SIGNAL FACE I.D.

All Heads L.E.D.

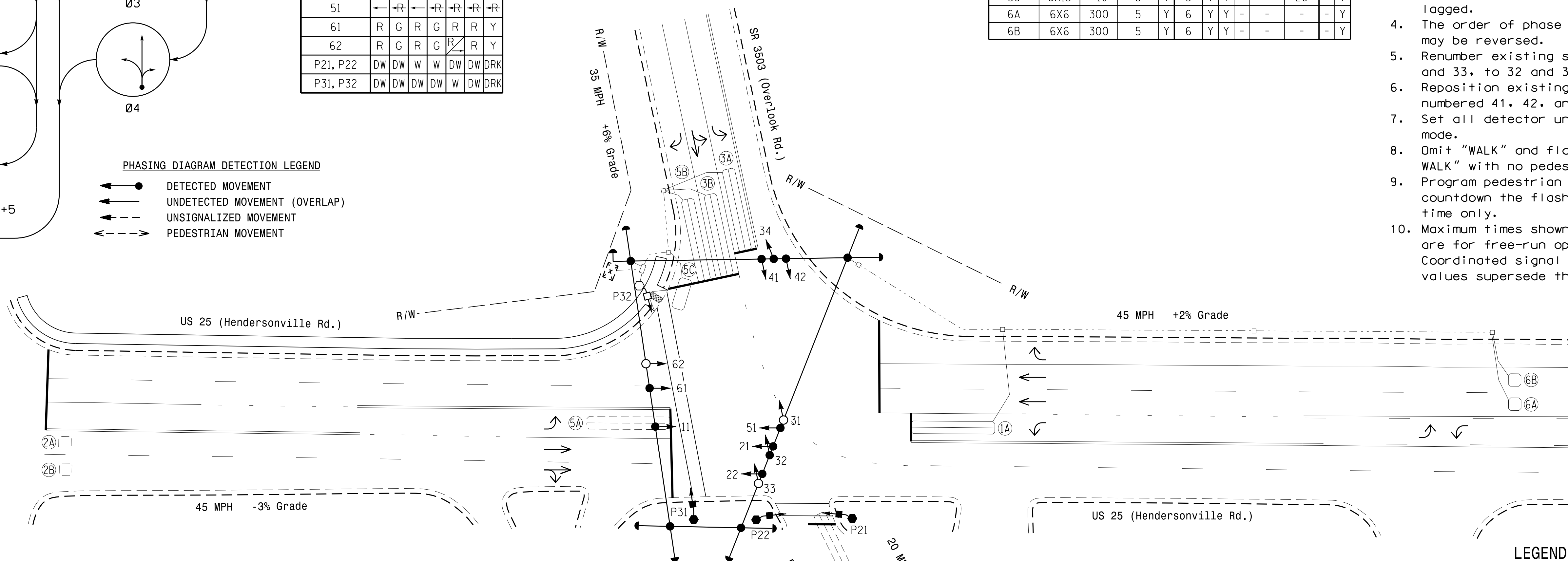


LOOP	SIZE (FT)	INDUCTIVE LOOPS			DETECTOR PROGRAMMING				SYSTEM LOOP	NEW CARD		
		DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY			STRETCH TIME	DELAY TIME
1A	6X40	0	2-4-2	Y	1	Y	Y	-	-	3	-	Y
2A	6X6	295	EXIST	-	2	Y	Y	-	-	-	-	-
2B	6X6	295	EXIST	-	2	Y	Y	-	-	-	-	-
3A	6X40	0	2-4-2	Y	3	Y	Y	-	-	3	-	Y
3B	6X40	0	2-4-2	Y	3	Y	Y	-	-	-	-	Y
4A	6X30	+5	2-4-2	-	4	Y	Y	-	-	10	-	-
5A	6X40	0	2-4-2	-	5	Y	Y	-	-	3	-	-
5B	6X40	0	2-4-2	-	5	Y	Y	-	-	15	-	-
5C	6X15	+10	3	Y	5	Y	Y	-	-	20	-	-
6A	6X6	300	5	Y	6	Y	Y	-	-	-	-	-
6B	6X6	300	5	Y	6	Y	Y	-	-	-	-	-

6 Phase Fully Actuated Asheville Signal System

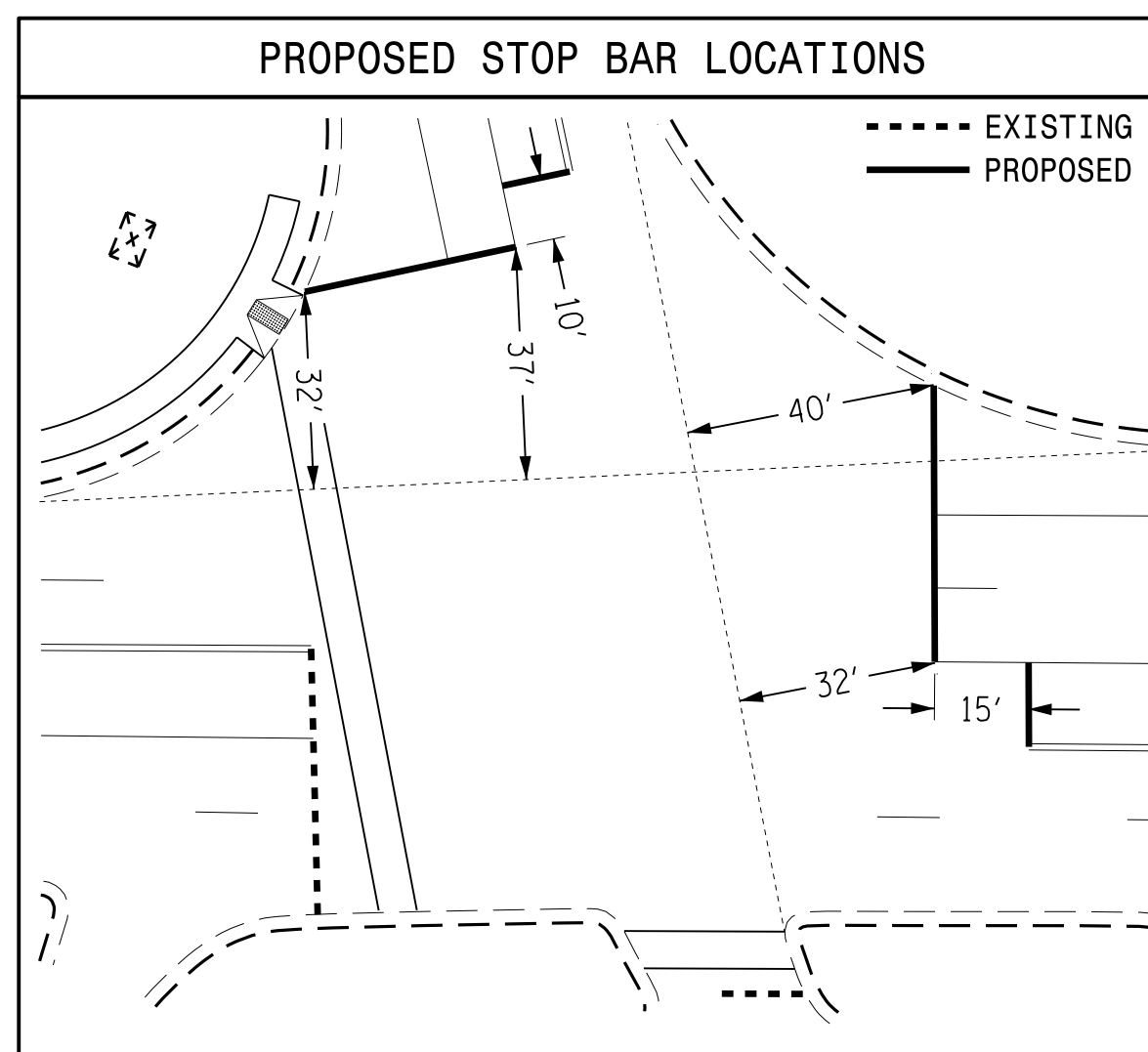
NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be lagged.
- The order of phase 3 and phase 4 may be reversed.
- Renumber existing signal heads 31 and 33, to 32 and 34, respectively.
- Reposition existing signal heads numbered 41, 42, and 61.
- Set all detector units to presence mode.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



FEATURE	PHASE					
	1	2	3	4	5	6
Min Green 1 *	7	12	7	7	7	12
Extension 1	2.0	6.0	2.0	2.0	2.0	6.0
Max Green 1 *	15	90	30	20	15	90
Yellow Clearance	3.0	4.8	3.5	3.0	3.0	4.8
Red Clearance	2.4	1.5	2.8	3.6	2.4	1.5
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0
Walk 1 *	-	7	7	-	-	-
Don't Walk 1	-	4	24	-	-	-
Seconds Per Actuation *	-	1.5	-	-	-	1.5
Max Variable Initial *	-	34	-	-	-	34
Time Before Reduction *	-	15	-	-	-	15
Time To Reduce *	-	30	-	-	-	30
Minimum Gap	-	3.0	-	-	-	3.0
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW
Dual Entry	-	-	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.



PROPOSED		EXISTING	
○→	Traffic Signal Head	●→	N/A
○→	Modified Signal Head	○→	N/A
○→	Sign	○→	N/A
○→	Pedestrian Signal Head With Push Button & Sign	○→	N/A
○→	Signal Pole with Guy	○→	N/A
○→	Signal Pole with Sidewalk Guy	○→	N/A
○→	Inductive Loop Detector	○→	N/A
○→	Controller & Cabinet	○→	N/A
○→	Junction Box	○→	N/A
○→	2-in Underground Conduit	○→	N/A
○→	Right of Way	○→	N/A
○→	Directional Arrow	○→	N/A
○	Type II Signal Pedestal	○	N/A

Signal Upgrade - Final Design

Prepared in the Offices of:
 Transportation Mobility and Safety Solutions
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 Signal Design Section

US 25 (Hendersonville Rd.)
 at
 SR 3503 (Overlook Rd.)/
 Dingle Creek Crossing Shopping

Division 13 Buncombe County Asheville

PLAN DATE: May 2019 REVIEWED BY: T.J. Williams
 PREPARED BY: R.N. Zinser REVIEWED BY:

750 N. Greenfield Pkwy, Garner, NC 27529

SCALE: 1" = 30'

REVISIONS: INIT. DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

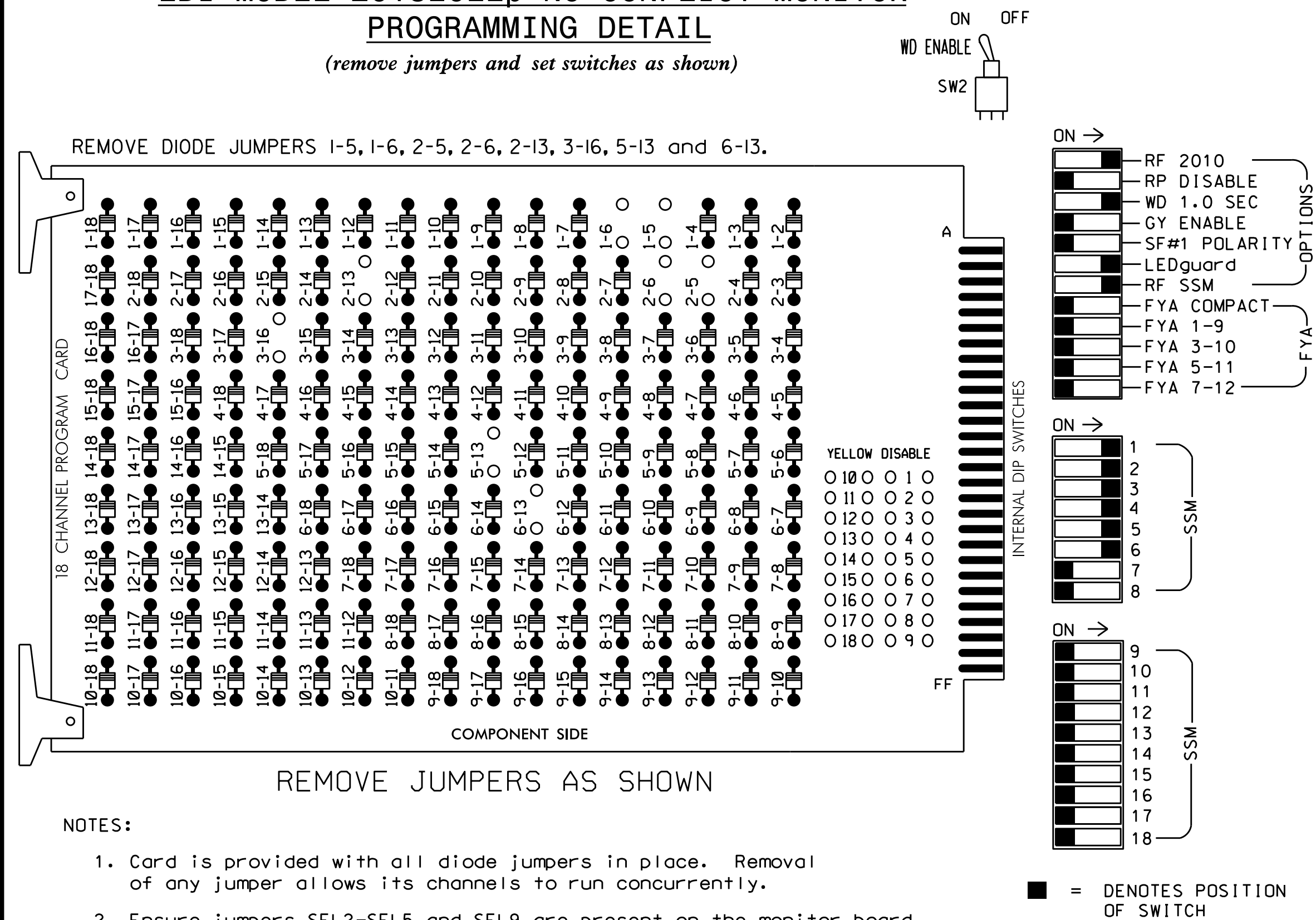
SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 043914
 RICHARD N. ZINER

DATE: 5/21/2019
 DATE: 5/21/2019
 SIG. INVENTORY NO. 13-0584

22-MAY-2019 08:08
 S:\IT\565\0415\Sigmal\as\Sigmal_Reg\Con401.v-13\565M-5713 D-M 30584.asig.dgn-2019mddt.dgn
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**EDI MODEL 2018ECLip-NC CONFLICT MONITOR
PROGRAMMING DETAIL**

(remove jumpers and set switches as shown)



NOTES

- To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
- Enable Simultaneous Gap-Out for all Phases.
- Program phases 2 and 6 for Variable Initial and Gap Reduction.
- Program phases 2 and 6 for Startup In Green.
- Program phases 2 and 3 for Startup Ped Call.
- Program phases 2 and 6 for Yellow Flash.
- The cabinet and controller are part of the Asheville Signal System.

EQUIPMENT INFORMATION

CONTROLLER.....2070
CABINET.....332 W/ AUX
SOFTWARE.....ECONOLITE OASIS
CABINET MOUNT.....BASE
OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
LOAD SWITCHES USED.....S1,S2,S3,S4,S5,S7,S8,S12
PHASES USED.....1,2,3,4,5,6,2 PED,3 PED
OVERLAPS.....NOT USED

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6
CMU CHANNEL NO.	1	2	13	3	4	14	5	6	15	7	8	16	9	10	17	11	12	18
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	3 PED	OLA	OLB	SPARE	OLC	OLD	SPARE
SIGNAL HEAD NO.	11	21,22	P21, P22	31	32	33,34	62	41	42	NU	33	51	61,62	NU	NU	NU	NU	NU
RED		128		116	116	101	101						134					
YELLOW		129		117	117	102	102						135					
GREEN		130		118	118	103	103						136					
RED ARROW	125			116									131					
YELLOW ARROW	126			117		117						132	132					
GREEN ARROW	127			118	118	118	103					133	133					
Hand			113														110	
Person																		112

NU = Not Used

* Denotes install load resistor. See load resistor installation detail this sheet.

PED 3 PROGRAMMING DETAIL

(program controller as shown below)

CHANGING OUTPUT ASSIGNMENTS

- FROM MAIN MENU SELECT '6' (OUTPUTS), THEN '1' (OUTPUT ASSIGNMENTS)
- ENTER 17 (PHASE 8 DW) FOR OUTPUT ASSIGNMENT #.
- SCROLL DOWN TO 'PEDESTRIAN PHASE' AND ENTER 'Y' REGARDLESS OF DEFAULT PROGRAMMING
- ENTER '3' FOR 'SELECT PEDESTRIAN PHASE'. NO CHANGE NEEDED FOR 'SELECT COLOR'
- BACKUP TO 'OUTPUT ASSIGNMENTS AND SETTINGS MENU:' BY PRESSING THE 'ESC' BUTTON ON KEYBOARD.
- SELECT '1' (OUTPUT ASSIGNMENTS)
- ENTER 18 (PHASE 8 W) FOR OUTPUT ASSIGNMENT #.
- REPEAT STEPS # 3 AND # 4.

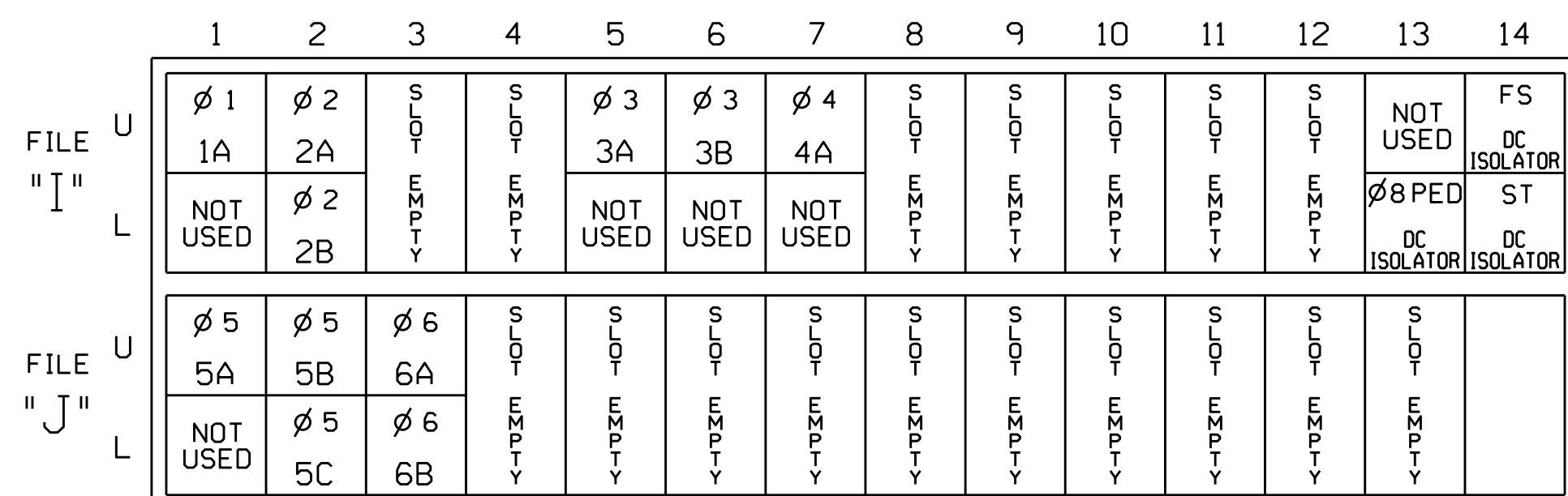
CHANGING INPUT ASSIGNMENTS

- FROM MAIN MENU SELECT '7' (DETECTORS), THEN '2' (PEDESTRIAN DETECTOR ASSIGNMENTS)
- CYCLE TO PED DETECTOR #8 BY REPEATEDLY DEPRESSING '+' KEY
- MODIFY PHASE ASSIGNED TO PED DETECTOR # 8 FROM PHASE 8 TO PHASE 3

PROGRAMMING COMPLETE

INPUT FILE POSITION LAYOUT

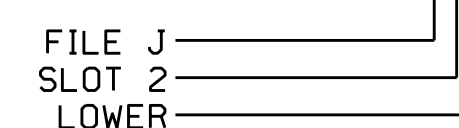
(front view)



INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT ASSIGNMENT NO.	DETECTOR NO.	NEMA PHASE	CALL	EXTEND	FULL TIME DELAY	STRETCH TIME	DELAY TIME
1A	TB2-1,2	I1U	56	18	1	1	Y	Y			3
2A	TB2-5,6	I2U	39	1	2	2	Y	Y			
2B	TB2-7,8	I2L	43	5	12	2	Y	Y			
3A	TB4-5,6	I5U	58	20	3	3	Y	Y			3
3B	TB4-9,10	I6U	41	3	4	3	Y	Y			
4A	TB6-1,2	I7U	65	27	34	4	Y	Y			10
5A	TB3-1,2	J1U	55	17	5	5	Y	Y			3
5B	TB3-5,6	J2U	40	2	6	5	Y	Y			15
5C	TB3-7,8	J2L	44	6	16	5	Y	Y			20
6A	TB3-9,10	J3U	64	26	36	6	Y	Y			
6B	TB3-11,12	J3L	77	39	46	6	Y	Y			
PED PUSH BUTTONS											
P21,P22	TB8-4,6	I12U	67	29	PED 2	2 PED					
P31,P32	TB8-8,9	I13L	70	32	PED 8	3 PED					

INPUT FILE POSITION LEGEND: J2L



THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 13-0584
DESIGNED: May 2019
SEALED: 05-21-19
REVISED: N/A

Electrical Detail - Final Design

US 25 (Hendersonville Road) at SR 3503 (Overlook Road) / Dingle Creek Crossing Shopping

Division 13 Buncombe County Asheville

PLAN DATE: May 2019 REVIEWED BY: Ryan W. Hough

PREPARED BY: James Peterson REVIEWED BY: Ryan W. Hough

REVISIONS

INIT. DATE

DocuSign by: Ryan W. Hough 5/21/2019

SIG. INVENTORY NO. 13-0584

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL

RYAN W. HOUGH

PROFESSIONAL ENGINEER

SEAL 036833

750 N. Greenfield Pkwy, Garner, NC 27529

C:\Users\jpeterson\Documents\2019\13-0584\Sigs\Signal\work\hough\sig\Mon#Peter.som\130584_sml.ele_20190521.dgn

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CROSS SECTION INDEX OF SHEETS		
	CROSS-SECTION SUMMARY	X-B
-L-	10 + 00.00 TO 22 + 00.00	X-1 THRU X-12
-Y-	10 + 00.00 TO 17 + 00.00	X-13 THRU X-20

**STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS**

PROJ. REFERENCE NO.	SHEET NO.
SM-5713D	X-B

Quantities are approximate only. The Resident Engineer will recross-section the work accurately when the project is staked out. These cross-section notes will be used in computing the final quantities for which the contractor will be paid.

NOTE: EMBANKMENT COLUMN INCLUDES BACKFILL FOR UNDERCUT

CROSS-SECTION SUMMARY

Station L	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)	Station Y	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
10+17.00	0	0	11+00.00	0	0
10+25.00	1	0	11+25.00	14	0
10+50.00	4	7	11+50.00	12	0
10+75.00	3	9	11+75.00	8	1
11+00.00	3	8	12+00.00	2	5
11+25.00	3	14	12+25.00	14	10
11+50.00	3	17	12+50.00	26	16
11+75.00	2	16	12+75.00	30	20
12+25.00	5	41	13+00.00	43	26
12+50.00	3	22	13+25.00	63	29
12+75.00	3	18	13+50.00	92	19
13+00.00	3	18	13+75.00	102	7
13+25.00	3	17	14+00.00	47	2
13+50.00	3	18	14+25.00	40	3
13+75.00	3	19	14+50.00	75	6
14+00.00	3	17	14+75.00	64	9
14+25.00	3	17	15+00.00	47	10
14+50.00	3	19	15+25.00	24	7
14+75.00	3	22	15+50.00	8	23
15+00.00	3	23	15+75.00	5	58
			16+00.00	5	79
			16+25.00	4	83
			16+35.00	2	29
Station L	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)			
16+00.00	0	0			
16+25.00	16	48			
16+50.00	7	57			
16+75.00	6	55			
17+00.00	6	55			
17+25.00	6	50			
17+50.00	5	43			
17+75.00	5	39			
18+00.00	6	31			
18+25.00	8	28			
18+50.00	8	34			
18+75.00	7	34			
19+00.00	7	26			
19+25.00	8	21			
19+50.00	7	22			
19+75.00	7	14			
20+00.00	7	5			
20+25.00	7	5			
20+50.00	7	5			
20+75.00	8	3			
21+00.00	8	3			
21+25.00	8	2			
21+50.00	8	0			
21+75.00	11	1			
21+81.00	2	1			

