

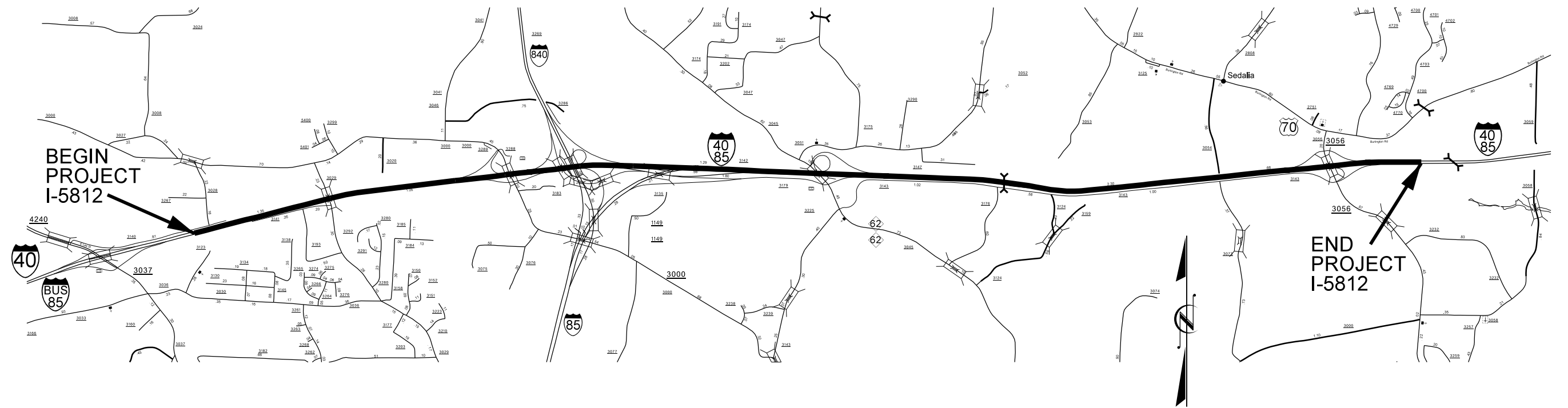
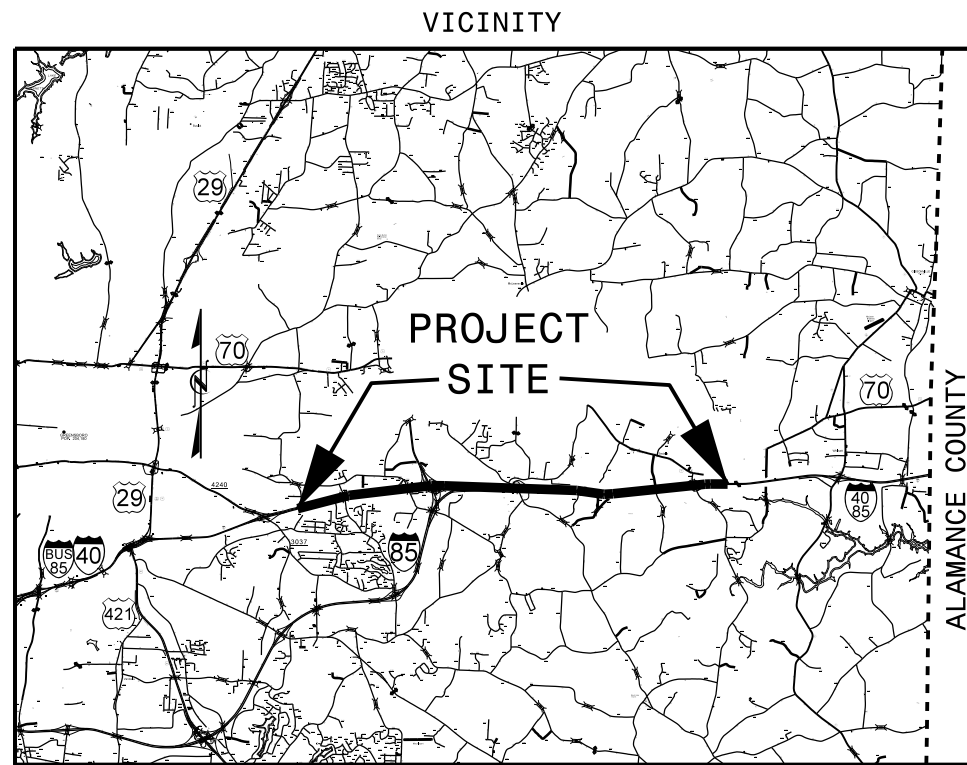
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5812	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50455.1.1	NHPP-0040(024)	I-5812 (PE)	
50455.3.1	NHPP-0040(024)	I-5812 (CONST)	

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

GUILFORD COUNTY

LOCATION: I-40/I-85 FROM EAST OF SR 4240 (E GATE CITY BLVD)/SR 3037 (E LEE STREET) TO EAST OF SR 3056 (ROCK CREEK DAIRY ROAD)

TYPE OF WORK: PAVEMENT REHABILITATION



TIP PROJECT: I-5812

CONTRACT: C203974

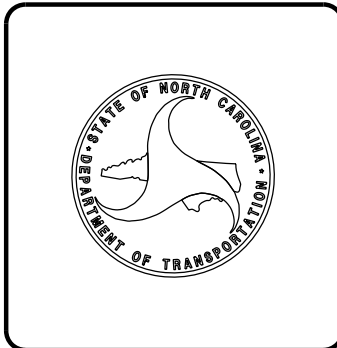
GRAPHIC SCALES
 NOT TO SCALE

DESIGN DATA

PROJECT LENGTH
 I-5812 = 7.2 miles

Prepared in the Office of:
DIVISION OF HIGHWAYS
 1000 Birch Ridge Dr., Raleigh NC, 27610
 2012 STANDARD SPECIFICATIONS

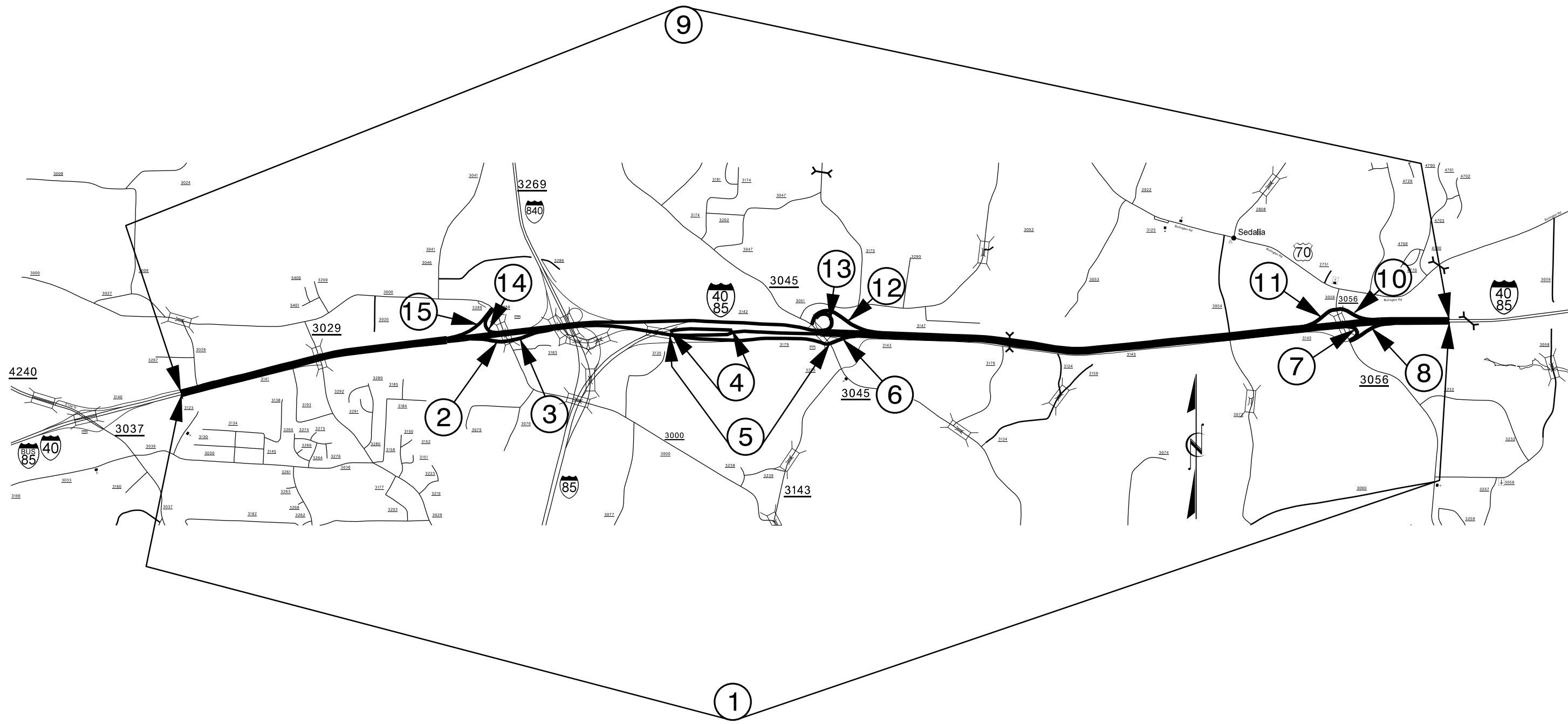
LETTING DATE:
 July 18, 2017



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
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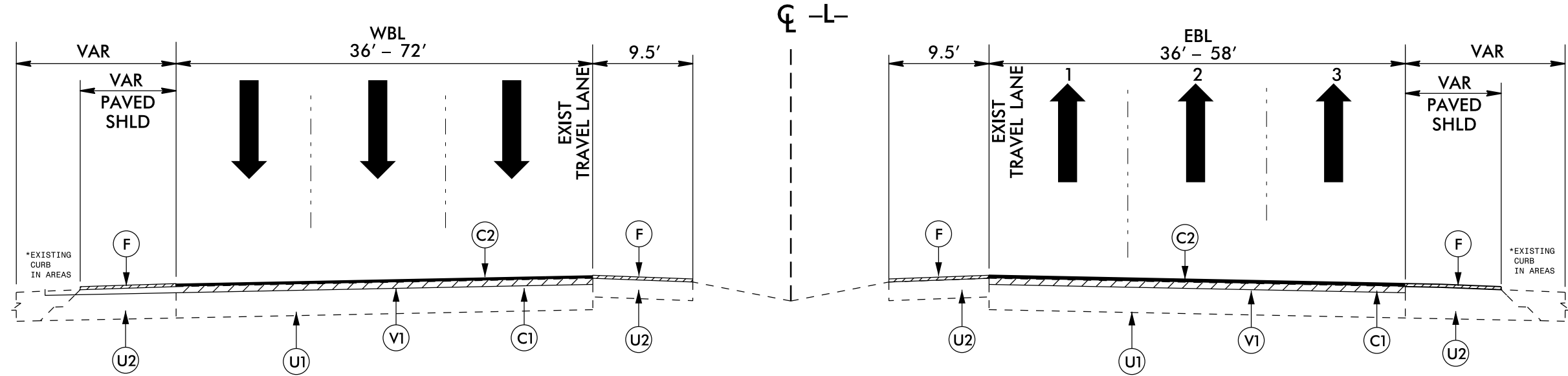
GUILFORD COUNTY

I-5812



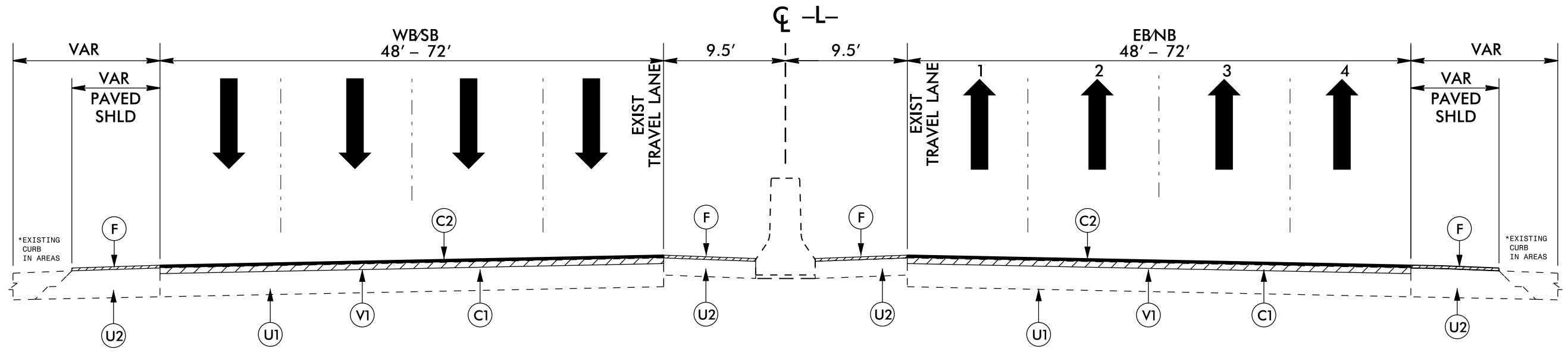
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 pporter AI CSP-292592

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5812	3	



- *NOTE: TYPICAL SECTION CONSTRUCTION SEQUENCE:**
1. MILL TRAVEL LANES 1 1/2" AND FILL WITH 1 1/2" SURFACE COURSE, TYPE S9.5D
 2. OVERLAY TRAVEL LANES WITH 3/4" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED
 3. OVERLAY SHOULDERS WITH FOG SEAL

TYPICAL SECTION NO. 1
 TO BE USED ON MAPS 1, 9
 MAP 1: STA. 0+00 TO STA. 175+89 EB
 MAP 9: STA. 240+41 TO STA. 389+96 WB



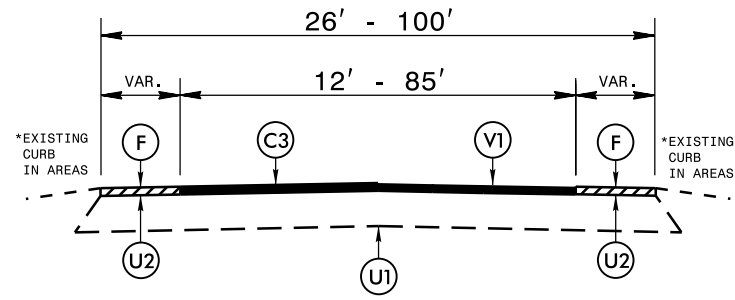
TYPICAL SECTION NO. 2
 TO BE USED ON MAPS 1, 9
 MAP 1: STA. 175+89 TO STA. 390+00 EB/NB
 MAP 9: STA. 10+00 TO STA. 240+41 WB/SB

PAVEMENT SCHEDULE			
C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	F	PROPOSED FOG SEAL TO BE APPLIED TO THE EXISTING SHOULDER
C2	PROP. APPROX. 3/4" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED, AT AN AVERAGE RATE OF 90 LBS PER SQ. YD.	U1	EXISTING TRAVELWAY.
		U2	EXISTING PAVED SHOULDER.
C3	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.		

MILLING SCHEDULE	
V1	MILLING ASPHALT PAVEMENT 1 1/2" DEPTH

5/14/99
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 9: Projects\Division_71-5812 Guilford July 2017\I-5812 Typical sheet 1.dgn
 1-5812-3

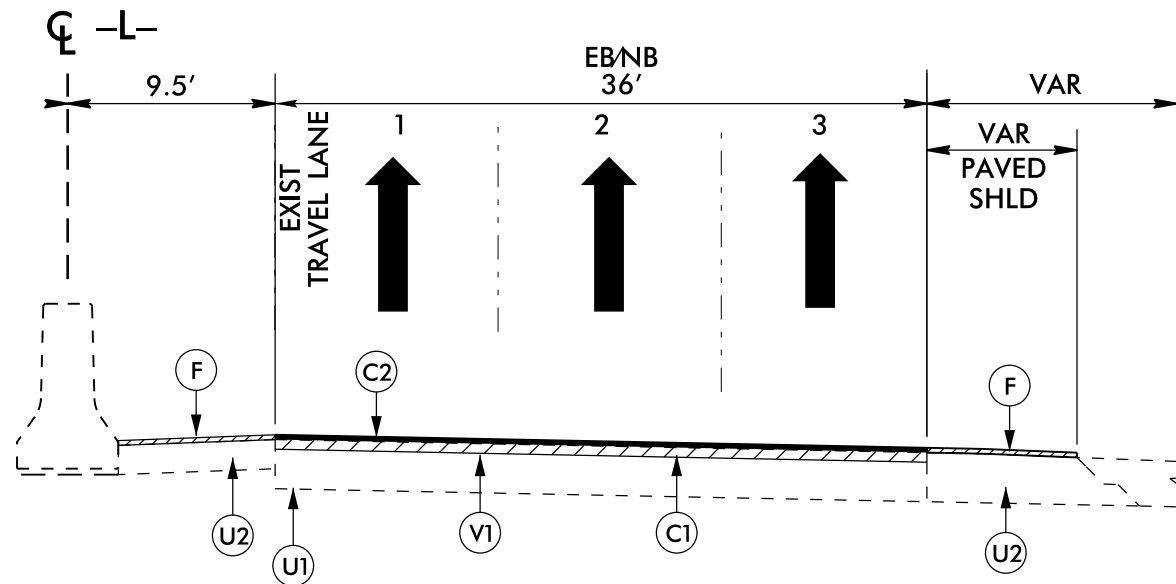
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5812	4	



TYPICAL SECTION NO. 3

TO BE USED ON MAPS 2, 3, 5 THRU 8, 10 THRU 16

- *NOTE: TYPICAL SECTION CONSTRUCTION SEQUENCE:
1. MILL TRAVEL LANES 1½" AND FILL WITH 1½" SURFACE COURSE, TYPE S9.5C
 2. OVERLAY SHOULDERS WITH FOG SEAL



TYPICAL SECTION NO. 4

TO BE USED ON MAP 4

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.		
C2	PROP. APPROX. ¾" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED, AT AN AVERAGE RATE OF 90 LBS PER SQ. YD.		
C3	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.		
F	PROPOSED FOG SEAL TO BE APPLIED TO THE EXISTING SHOULDER		
U1	EXISTING TRAVELWAY.	U2	EXISTING PAVED SHOULDER.

MILLING SCHEDULE

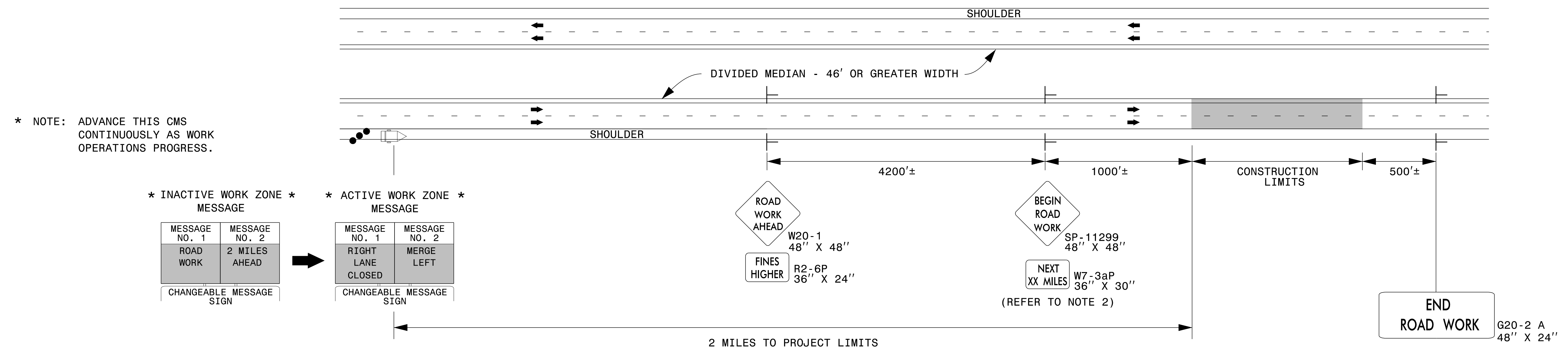
V1	MILLING ASPHALT PAVEMENT 1½" DEPTH		
----	------------------------------------	--	--

PROJECT REFERENCE NO.	SHEET NO.
I-5812	5

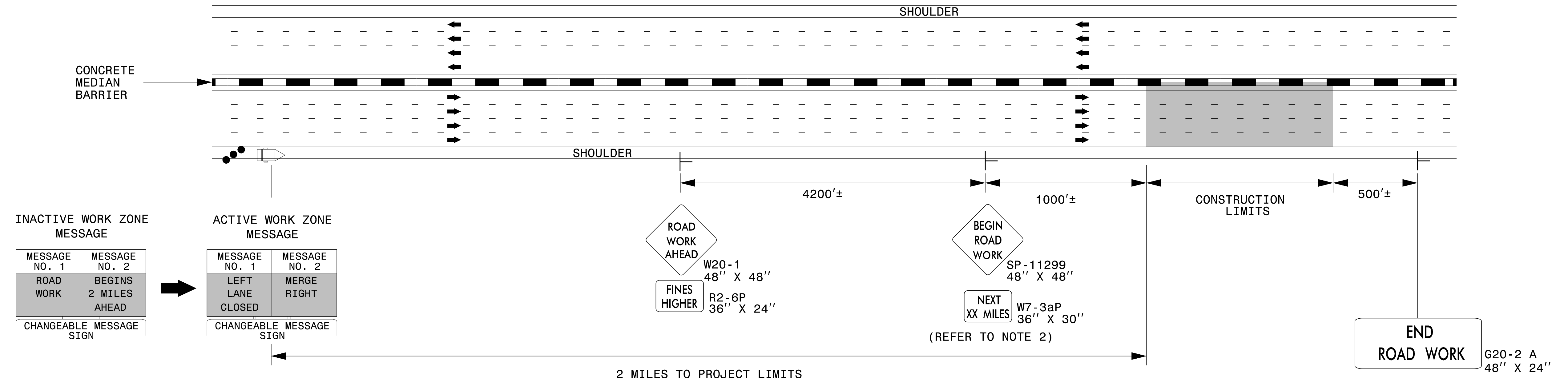
Drainage Structure Repair Summary

PROJECT #	MAP #	STATION	Location	Remove & Replace Concrete Apron	Frame wirh Grate, STD. 840.22	Flowable Fill Excavatable	Repair of Drop Inlet	Comments
			LT, RT or Median	EA	EA	CY	EA	
I-5812	1	14+27	RT				1	Repair block wall
I-5812	1	38+29	RT				1	Repair block wall
I-5812	1	39+95	Median			1		
I-5812	1	86+80	Median			1		
I-5812	1	92+00	Median			1		
I-5812	1	107+50	Median	1				
I-5812	1	116+10	RT	1				
I-5812	1	123+12	RT				1	Repair block wall
I-5812	1	126+30	Median			1		
I-5812	1	328+70	RT	1				
I-5812	1	355+70	RT			2		
I-5812	1	360+05	RT	1	1			
I-5812	1	367+00	RT			2		
MAP 1 TOTALS				4	1	8	3	
I-5812	3	17+25	RT			1		
MAP 3 TOTALS						1		
I-5812	5	41+10	RT	1				
MAP 5 TOTALS				1				
I-5812	9	35+00	RT	1				
I-5812	9	119+60	RT			2		
I-5812	9	122+20	RT	1				
I-5812	9	178+90	RT	1				
I-5812	9	189+15	RT	1				
I-5812	9	303+40	RT	1				
I-5812	9	342+70	RT	1				
I-5812	9	345+30	RT			1		
I-5812	9	382+10	RT	1				
MAP 9 TOTALS				7		3		
I-5812	15	14+10	RT				1	Remove brick invert & pour invert with concrete
MAP 15 TOTALS							1	
PROJECT GRAND TOTALS				12	1	12	4	

DIVIDED MEDIANS WITH WIDTHS 46' OR GREATER



DIVIDED MEDIANS WITH WIDTHS LESS THAN 46' OR WITH PERMANENT MEDIAN BARRIER



NOTES

1. THIS DRAWING IS TO BE USED IN CONJUNCTION WITH THE WORK ZONE VARIABLE SPEED LIMIT USING DIGITAL SPEED LIMIT SIGNS FOR INTERSTATE/FREEWAY RESURFACING PROJECTS DETAIL.
2. FOR SIGN W7-3aP, ROUND TO THE NEAREST MILE.
3. FOR ENTRANCE AND EXIT RAMP, REFER TO RSD 1101.01, SHEET 1, DETAIL B & C.
4. FOR ADDITIONAL NOTES, REFER TO RSD 1101.01, SHEET 1.

LEGEND

- CHANGEABLE MESSAGE SIGN (CMS)
- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW
- TRAFFIC DRUM

APPROVED: *Steve Kite*

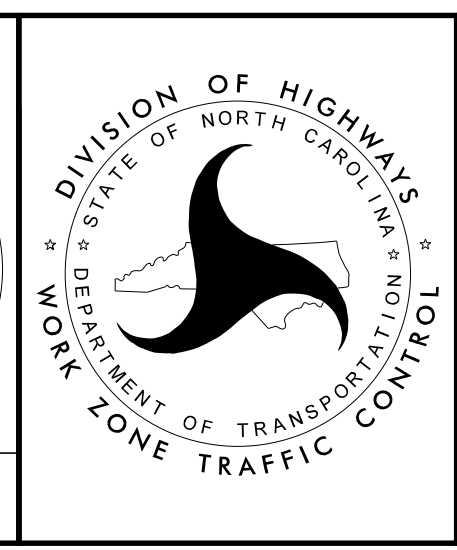
DATE: 2/23/2017

DocuSigned by:
E27CE30E10FC442...

SEAL 022104

JOHN S. KITE, III
ENGINEER

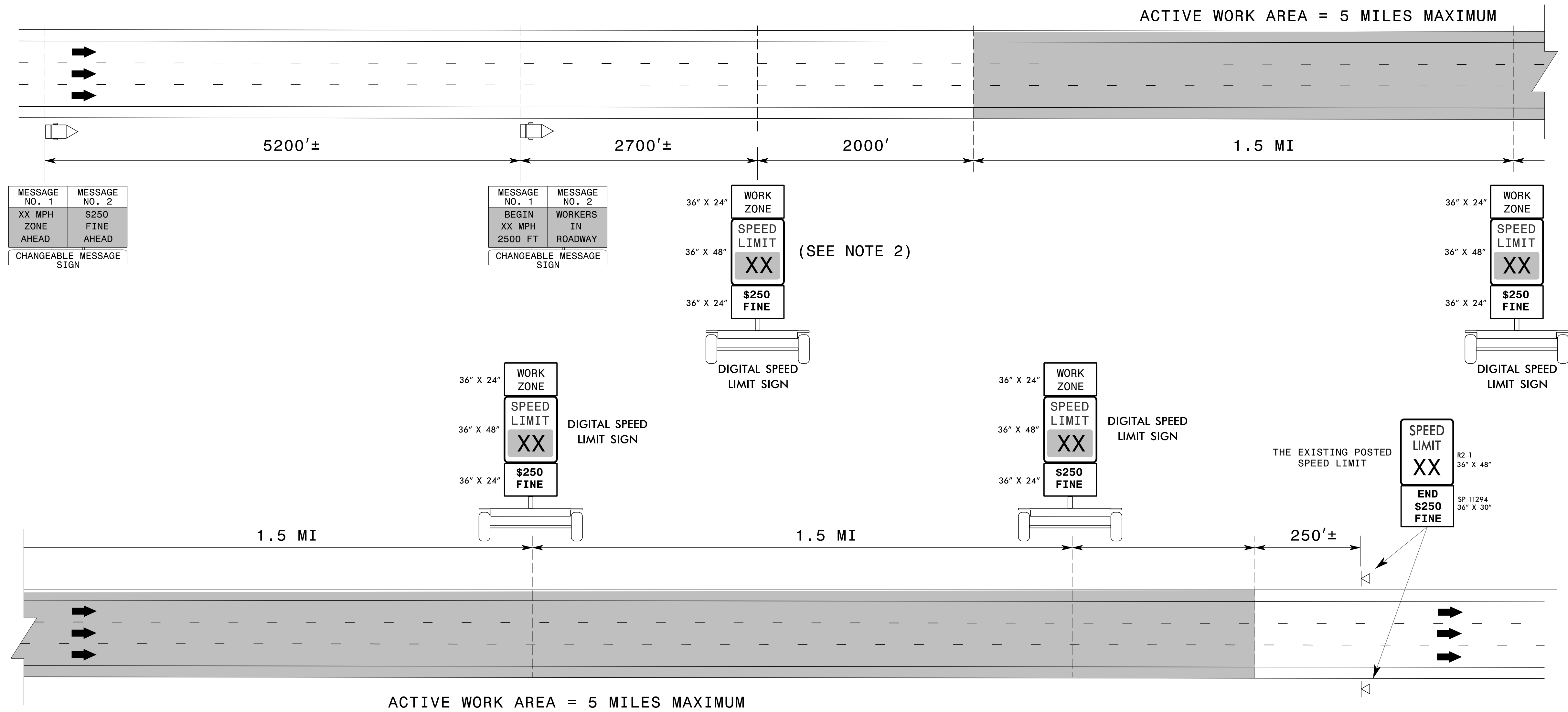
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



STATIONARY ADVANCE WARNING SIGNS FOR INTERSTATE/FREEWAY RESURFACING PROJECTS

2/23/2017 S:\TMD\WZTC\DesignGroup3\Squad3B\0ats\Interstate Resurfacing Provisions and Details\Kpg\Resurfacing_AdvWarn_HSpd.dgn User:kedais

INTERSTATE RESURFACING OPERATIONS WITH DIGITAL SPEED LIMIT SIGNS



WHEN THERE IS NOT ACTIVE WORK IN THE TRAVEL LANE

SPEED LIMIT DISPLAY	CONDITIONS	
	DROP-OFFS BETWEEN OPEN TRAVEL LANES	PAVED SHOULDER DROP-OFFS
USE EXISTING SPEED LIMIT	< 1.0"	≤ 3.0"
REDUCE SPEED LIMIT 5 MPH	1.0" - 2.0"	> 3.0"

DROP-OFFS BETWEEN OPEN TRAVEL LANES SHOULD NOT EXCEED 2.0"

- ### NOTES
1. THE SPEED LIMITS DISPLAYED WITHIN THE ACTIVE WORK AREA MAY VARY BETWEEN 55 MPH AND 70 MPH, DEPENDENT UPON ROAD WORK CONDITIONS AND THE EXISTING SPEED LIMIT. 55 MPH IS ONLY DISPLAYED DURING ACTIVE LANE CLOSURE OPERATIONS.
 2. AT THE FIRST DIGITAL SPEED LIMIT LOCATION, PLACE A DIGITAL SPEED LIMIT SIGN ON BOTH THE INSIDE AND OUTSIDE SHOULDERS, UNLESS DIRECTED OTHERWISE BY THE ENGINEER WHEN THERE IS NOT ENOUGH ROOM ON THE INSIDE SHOULDER DUE TO NARROW MEDIAN AND PERMANENT MEDIAN BARRIER. AT SUBSEQUENT LOCATIONS DOWNSTREAM, PLACE A SINGLE DIGITAL SPEED LIMIT SIGN ON THE OUTSIDE SHOULDER.
 3. THE ENGINEER MAY DETERMINE TO INSTALL THE DIGITAL SPEED LIMIT SIGNS ON THE OUTSIDE SHOULDER OR ON THE MEDIAN SIDE IF THE SIGNS ARE NOT HIGHLY VISIBLE TO ALL MOTORISTS. AT THE FIRST DIGITAL SPEED LIMIT
 4. THIS APPLICATION IS FOR SHORT-TERM ACTIVITIES. THE MAXIMUM ACTIVE WORK AREA IS 5 MILES.
 5. THE DIGITAL SPEED LIMIT SIGNS TAKE PRECEDENCE OVER EXISTING SPEED LIMIT SIGNS. ALL EXISTING SPEED LIMIT SIGNS SHALL BE COVERED OR REMOVED.
 6. THE DIGITAL SPEED LIMITS SIGNS WILL BE INSTALLED (TRAILER MOUNTED OR STATIONARY MOUNTED) IN ADVANCE AND SPACED APPROXIMATELY 1.5 MILES THROUGHOUT THE ACTIVE WORK AREA, UNLESS DIRECTED OTHERWISE.
 7. NCDOT HAS SOLE AUTHORITY OF THE SPEED LIMITS DISPLAYED ON THE DIGITAL SPEED LIMIT SIGNS.
 8. THE WORK ZONE VARIABLE SPEED LIMIT AND THE \$250 SPEEDING PENALTY ARE SEPARATE ORDINANCES THAT MUST BE SIGNED BY THE STATE TRAFFIC ENGINEER TO BE VALID AND ENFORCEABLE. WITHOUT A SIGNED ORDINANCE, THE SPEED LIMIT ON A FACILITY SHALL REMAIN UNCHANGED.

APPROVED: *Steve Kite*
DATE: 2/23/2017

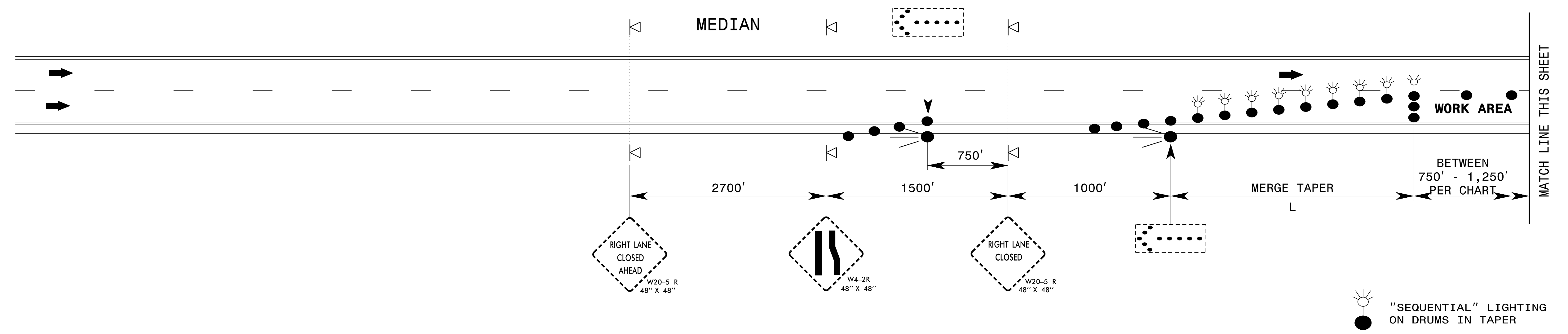
SEAL
022104
STEVE KITE
ENGINEER
NORTH CAROLINA

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

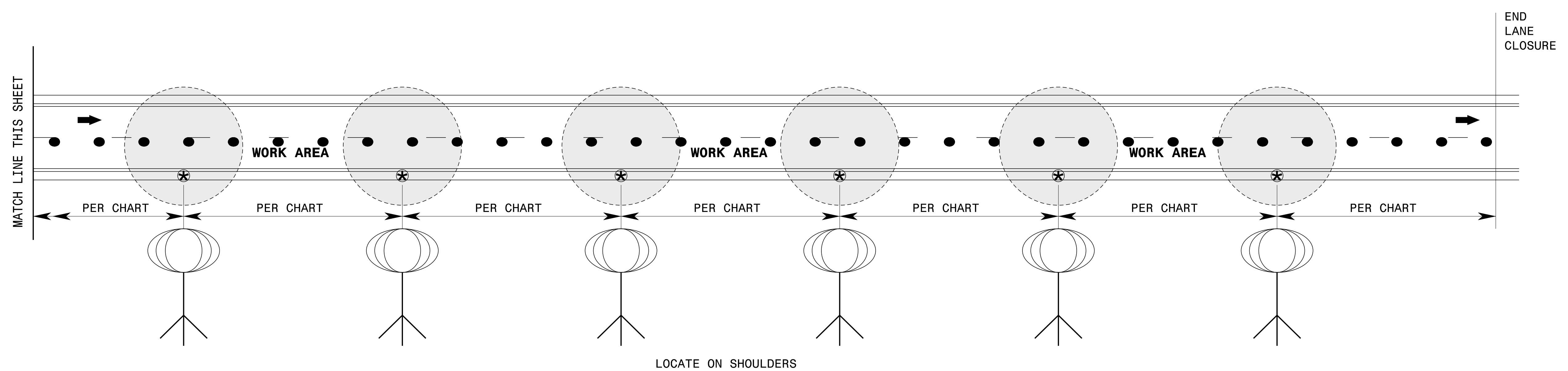
DIVISION OF HIGHWAYS
 NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WORK ZONE TRAFFIC CONTROL

**WORK ZONE "VARIABLE"
SPEED LIMIT USING
DIGITAL SPEED LIMIT
SIGNS FOR INTERSTATE/
FREEWAY RESURFACING
PROJECTS**

ADVANCE WARNING AREA



WORK ZONE AREA



SPACING CHART

LIGHT OUTPUT (LUMENS)	MINIMUM LIGHTED FIXTURE AREA (SQUARE FEET)	MAXIMUM SPACING (FEET)	LIGHT UNITS (PER MILE)
50,000 TO 65,000	5.5	750'	6
66,000 TO 80,000	5.5	1,000'	5
81,000 TO 100,000	36	1,250'	4

NOTES

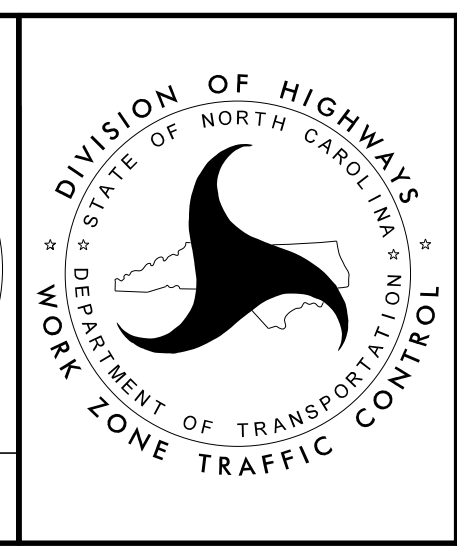
- 1) SPACE LIGHT UNITS ACCORDING TO THE CHART.
- 2) EACH LIGHT UNIT SHALL BE CAPABLE OF ELEVATING TO A MINIMUM HEIGHT OF 14' ABOVE THE PAVEMENT.
- 3) PLACE ON PAVED SHOULDER IF POSSIBLE.

APPROVED: *Steve Kite*
 DATE: 3/17/2017

DocuSigned by:
 E27CE30E1DFC442...

SEAL
 022104
 JOHN S. KITE, II
 ENGINEER

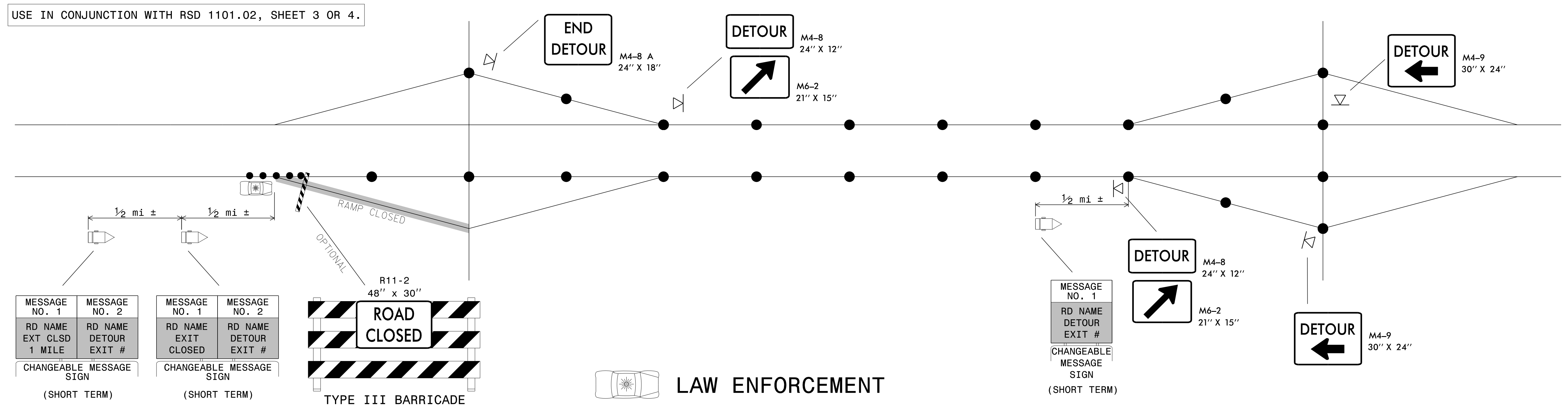
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



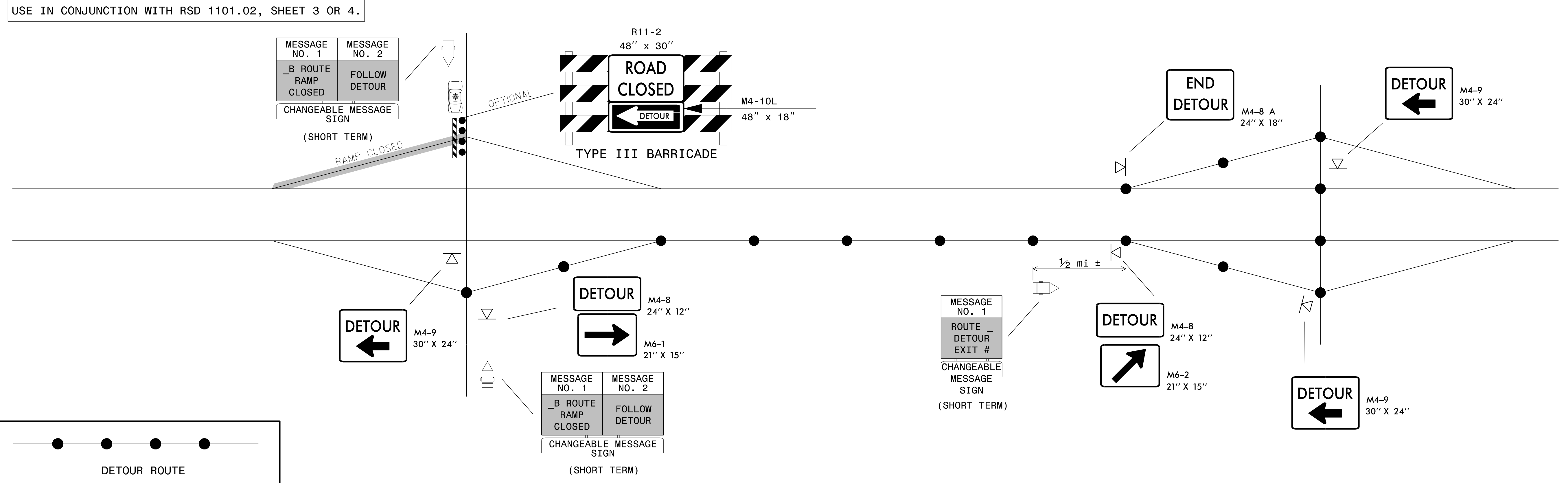
SEQUENTIAL FLASHING WARNING LIGHTS AND WORK ZONE PRESENCE LIGHTING

3/17/2017 S:\TMU\WZTC\DesignGroup3\Squad3B\Drawings\Sequential.and.Presence Lighting_20170227.dgn User:kedais

SHORT TERM CLOSURE AND DETOUR OF OFF-RAMP TO ADJACENT INTERCHANGE



SHORT TERM CLOSURE AND DETOUR OF ON-RAMP TO ADJACENT INTERCHANGE



GENERAL NOTES:

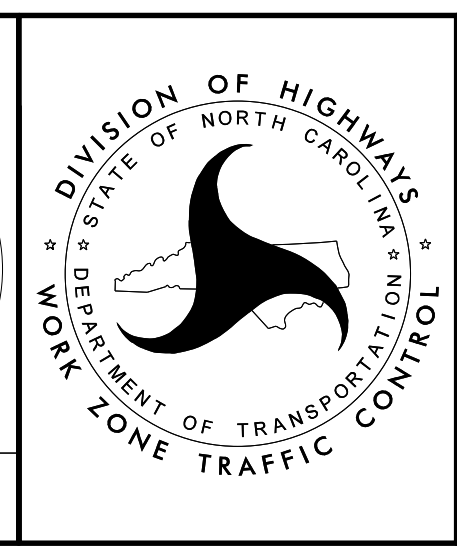
1. THIS DRAWING IS INTENDED FOR USE DURING SHORT TERM CLOSURES OF INTERSTATE AND FREEWAY RAMPS.
2. RAMP CLOSURES SHALL BE APPROVED BY THE ENGINEER.
3. IF RAMP CLOSURE RESTRICTIONS APPLY, SEE SPECIAL PROVISION, "INTERMEDIATE CONTRACT TIMES AND LIQUIDATED DAMAGES".
4. ADDITIONAL CHANGEABLE MESSAGE SIGNS AND POSSIBLE DETOUR SIGNS MAY BE NECESSARY FOR MORE COMPLEX CLOSURES/DETOURS. COMPENSATION FOR ADDITIONAL DEVICES SHALL BE MADE BASED ON THE UNIT BID PRICE FOR THE RESPECTIVE DEVICE.

APPROVED: *Steve Kite*
DATE: 2/23/2017

DocuSigned by:
Steve Kite
E27CE30E10FC442...

SEAL
022104
JOHN S. KITE, II
ENGINEER

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



**SHORT TERM CLOSURE
AND DETOUR OF
INTERSTATE/FREEWAY
RAMPS**

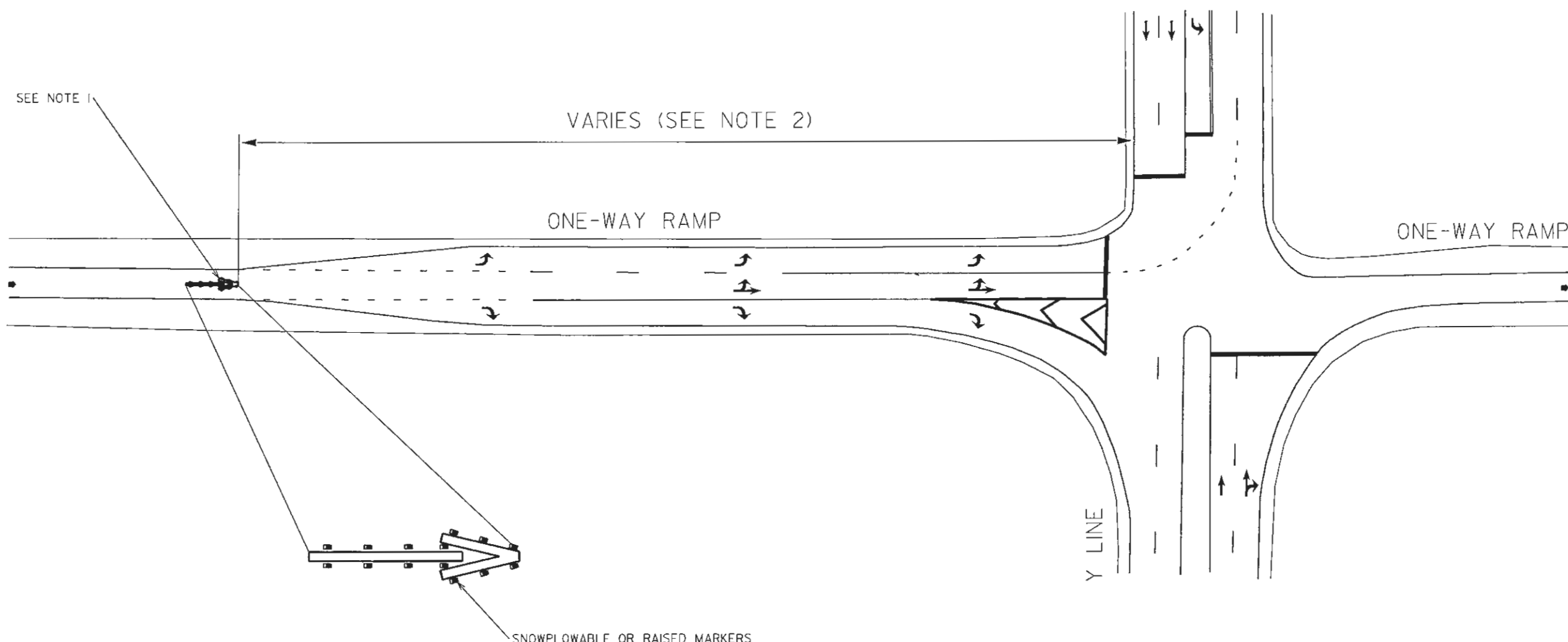
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STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

8-15

ENGLISH STANDARD DETAIL FOR
PAVEMENT MARKINGS
WRONG WAY RAMP ARROW
ONE-LANE EXIT RAMP AT MULTI-LANE APPROACH

ASPHALT TREATMENT



NOTES:

- 1) REFER TO THE 2012 ROADWAY STANDARD DRAWING 1205.09, SHEET 1 OF 8 FOR RAMP ARROW DIMENSION REQUIREMENTS.
- 2) PLACEMENT OF WRONG-WAY RAMP ARROW VARIES AND SHOULD BE LOCATED JUST BEFORE THE MULTI-LANE APPROACH.
- 3) INSTALL MARKERS (SNOWPLOWABLE/RAISED) IN ACCORDANCE TO THE ROADWAY STANDARD DETAIL.
- 4) MARKING SHALL BE THERMOPLASTIC MATERIAL.

LEGEND	
	DIRECTION OF TRAFFIC FLOW
	WRONG WAY RAMP ARROW
	PAVEMENT MARKING SYMBOLS

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

8-15

ENGLISH STANDARD DETAIL FOR
PAVEMENT MARKINGS
WRONG WAY RAMP ARROW
ONE-LANE EXIT RAMP AT MULTI-LANE APPROACH

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

4-16

ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
WRONG WAY RAMP ARROW
ONE-LANE EXIT RAMP AT MULTI-LANE APPROACH

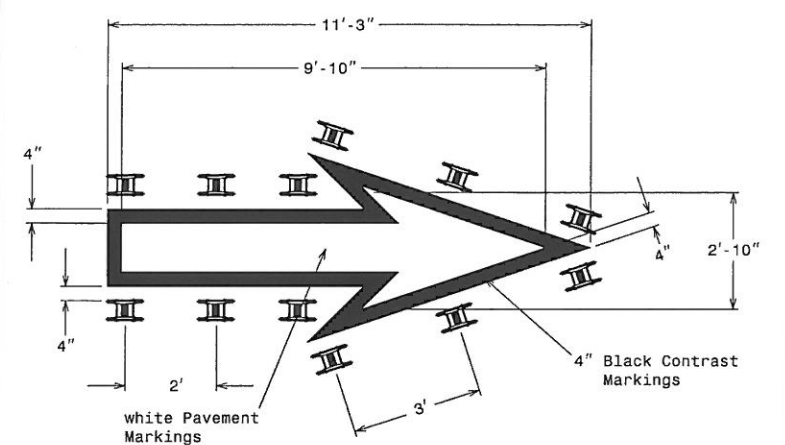
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

4-16

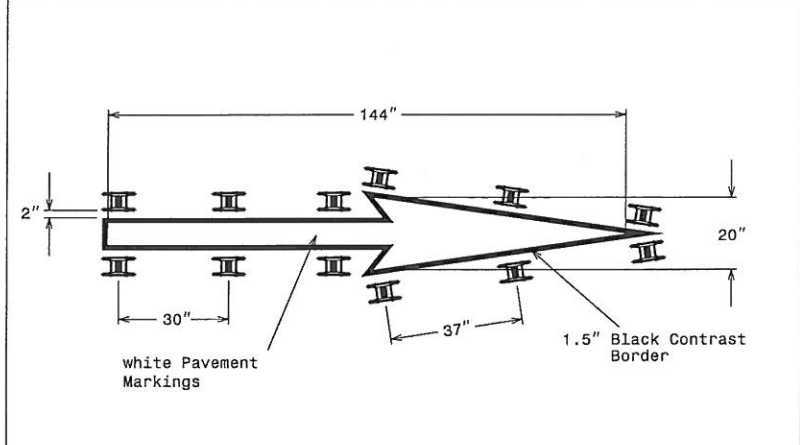
ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
WRONG WAY RAMP ARROW
ONE-LANE EXIT RAMP AT MULTI-LANE APPROACH

SHEET 2 OF 2
1205.XX

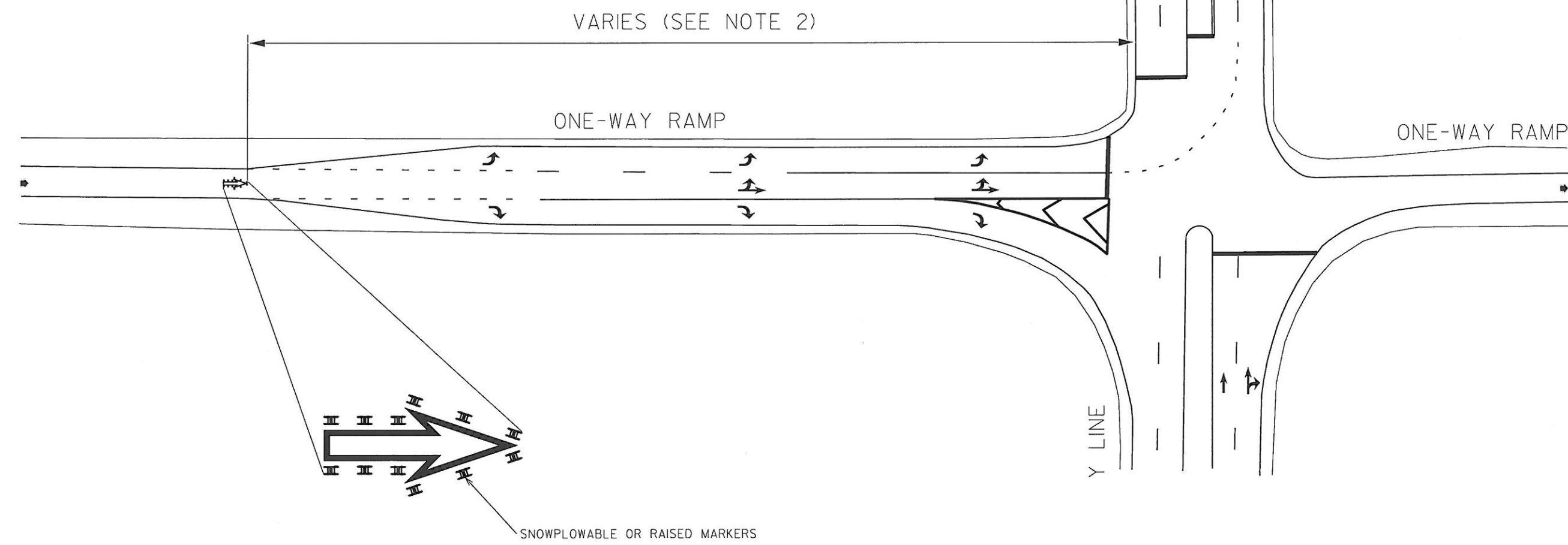
CONCRETE TREATMENT



Heated-In-Placed Thermoplastic



Cold Applied Plastic



NOTES:

- 1) PAVEMENT MARKINGS SHALL BE INSTALLED ON CONCRETE SURFACES ONLY.
- 2) PLACEMENT OF WRONG-WAY RAMP ARROW VARIES AND SHOULD BE LOCATED JUST BEFORE THE MULTI-LANE APPROACH.
- 3) INSTALL MARKERS, SNOWPLOWABLE OR RAISED, IN ACCORDANCE TO THE DETAILS ON THIS SHEET.
- 4) MARKING SHALL BE WHITE HEATED-IN-PLACED THERMOPLASTIC WITH 4 INCH BLACK CONTRAST BORDER OR COLD APPLIED PLASTIC WITH 1.5 INCH WITH BLACK CONTRAST BORDER.

LEGEND	
	DIRECTION OF TRAFFIC FLOW
	PAVEMENT MARKING SYMBOLS

SHEET 2 OF 2
1205.XX

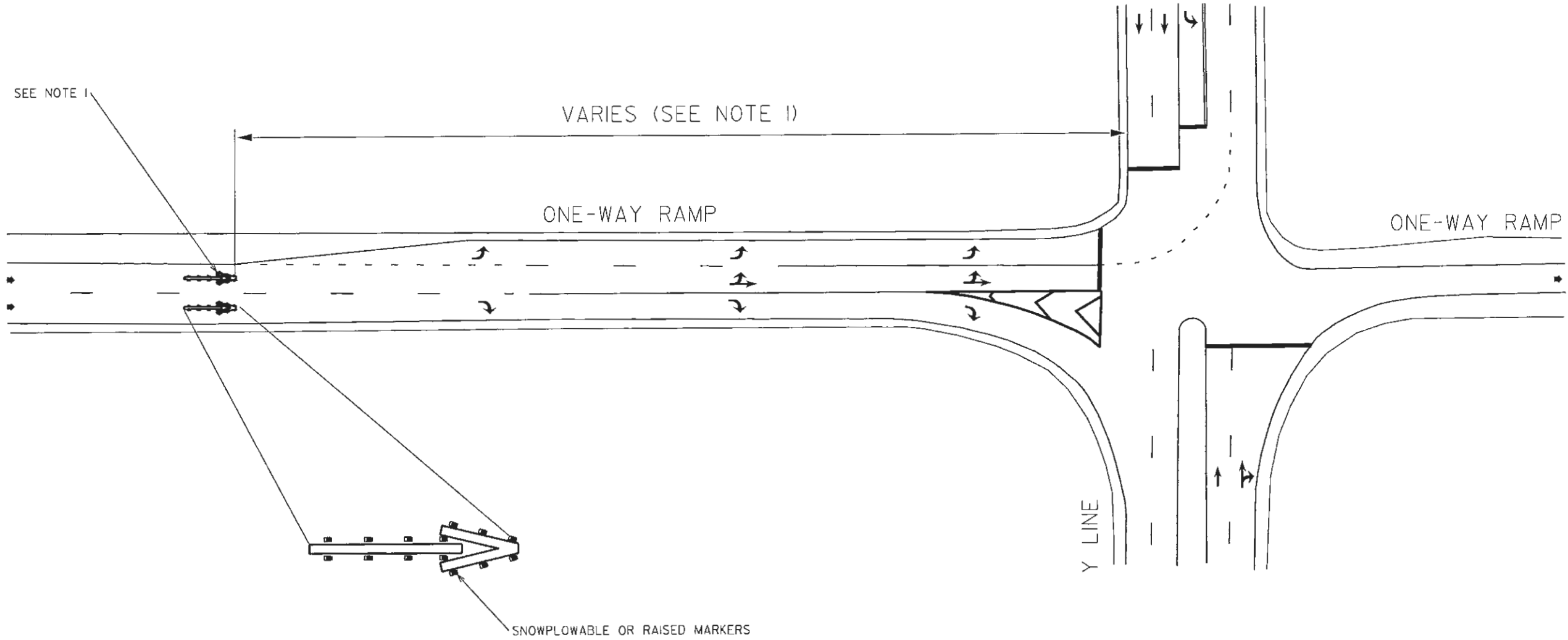
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

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

ENGLISH STANDARD DETAIL FOR
PAVEMENT MARKINGS
WRONG WAY RAMP ARROW
TWO-LANE EXIT RAMP AT MULTI-LANE APPROACH

ENGLISH STANDARD DETAIL FOR
PAVEMENT MARKINGS
WRONG WAY RAMP ARROW
TWO-LANE EXIT RAMP AT MULTI-LANE APPROACH

ASPHALT TREATMENT



NOTES:

- 1) REFER TO THE 2012 ROADWAY STANDARD DRAWING 1205.09, SHEET 1 OF 8 FOR RAMP ARROW DIMENSION REQUIREMENTS.
- 2) PLACEMENT OF WRONG-WAY RAMP ARROW VARIES AND SHOULD BE LOCATED JUST BEFORE THE MULTI-LANE APPROACH.
- 3) INSTALL MARKERS (SNOWPLOWABLE/RAISED) IN ACCORDANCE TO THE ROADWAY STANDARD DETAIL.
- 4) MARKING SHALL BE THERMOPLASTIC MATERIAL.

LEGEND	
	DIRECTION OF TRAFFIC FLOW
	PAVEMENT MARKING SYMBOLS

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

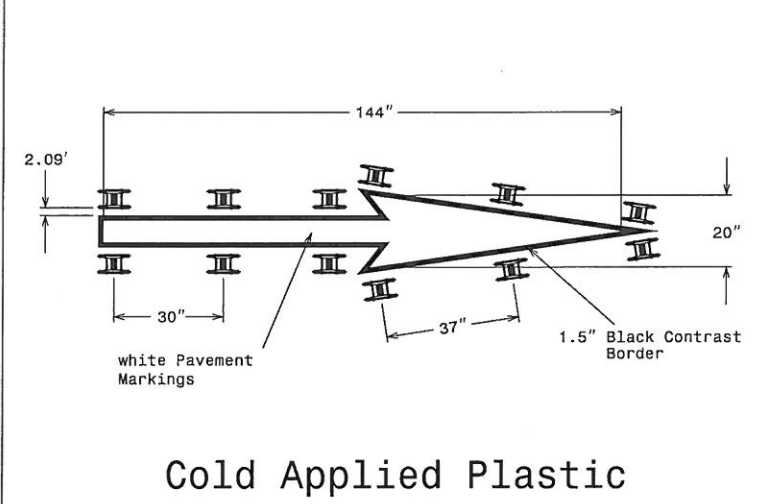
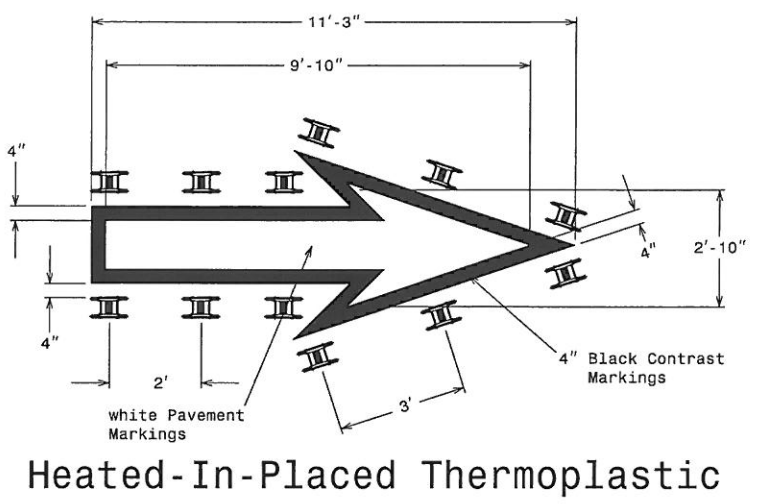
4-16

ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
WRONG WAY RAMP ARROW
TWO-LANE EXIT RAMP AT MULTI-LANE APPROACH

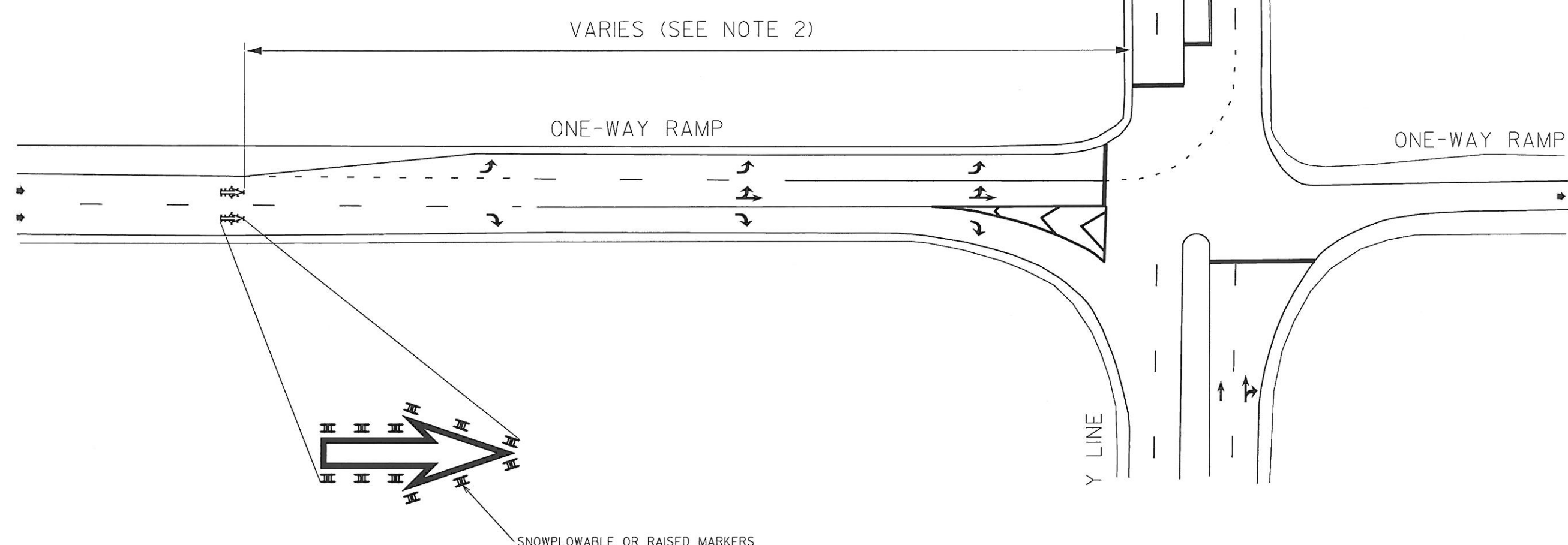
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

4-16

ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
WRONG WAY RAMP ARROW
TWO-LANE EXIT RAMP AT MULTI-LANE APPROACH



CONCRETE TREATMENT



- NOTES:
- 1) PAVEMENT MARKINGS SHALL BE INSTALLED ON CONCRETE SURFACES ONLY.
 - 2) PLACEMENT OF WRONG-WAY RAMP ARROW VARIES AND SHOULD BE LOCATED JUST BEFORE THE MULTI-LANE APPROACH.
 - 3) INSTALL MARKERS, SNOWPLOWABLE OR RAISED, IN ACCORDANCE TO THE DETAILS ON THIS SHEET.
 - 4) MARKING SHALL BE WHITE HEATED-IN-PLACED THERMOPLASTIC WITH 4 INCH BLACK CONTRAST BORDER OR COLD APPLIED PLASTIC WITH 1.5 INCH BLACK CONTRAST BORDER.

LEGEND

- ➔ DIRECTION OF TRAFFIC FLOW
- ↔ PAVEMENT MARKING SYMBOLS

High Speed Detection (≥40 mph)



Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired in series for TS1
Controllers
Wired separately for TS2,
170, and 2070L Controllers

Volume Density Operation

OR



Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft
Wired in series
L2 = 6ft X 6ft
Wired in series

"Stretch" Operation

Low Speed Detection (≤35 mph)



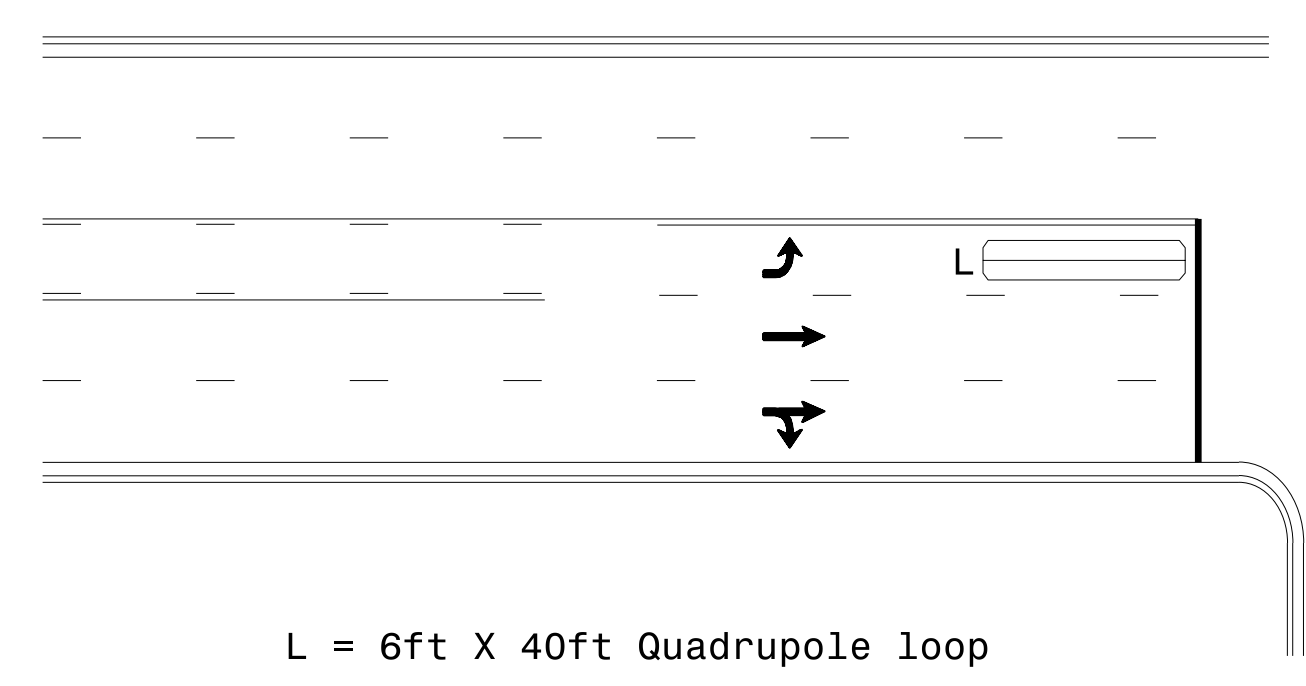
L = 6ft X 6ft
Wired in series

OR



L = 6ft X 40ft
Quadrupole loop, wired separately

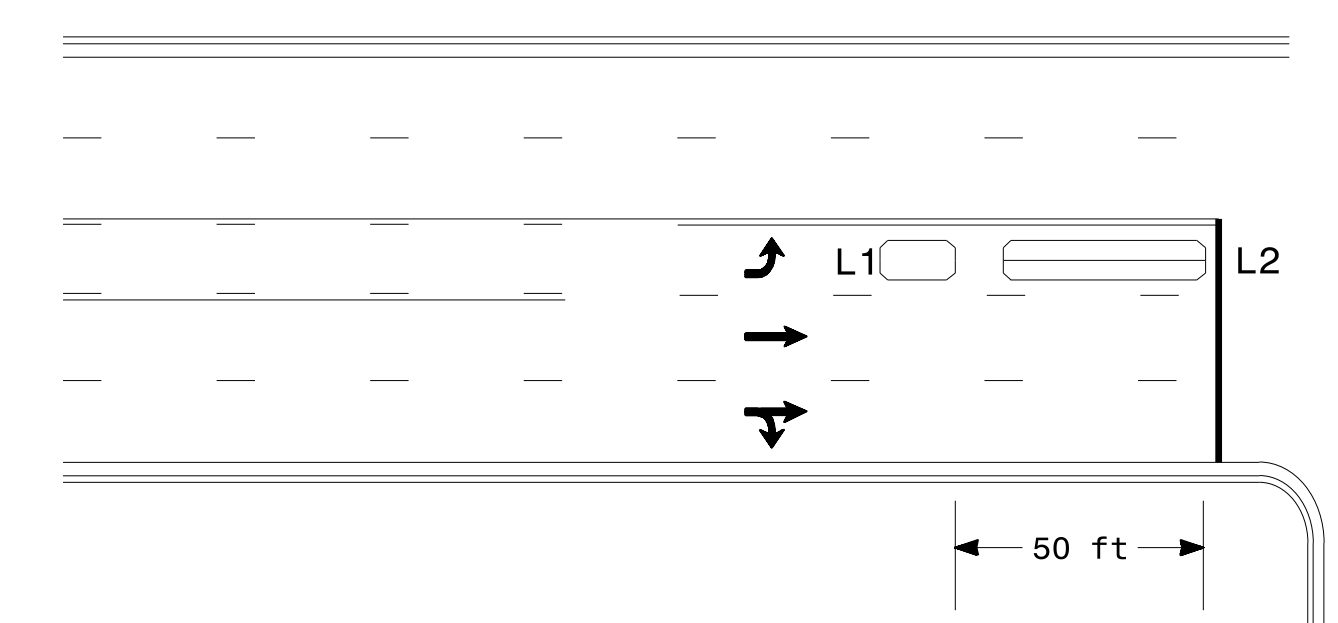
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

OR



L1 = 6ft X 15ft Queue detector
L2 = 6ft X 40ft Quadrupole loop

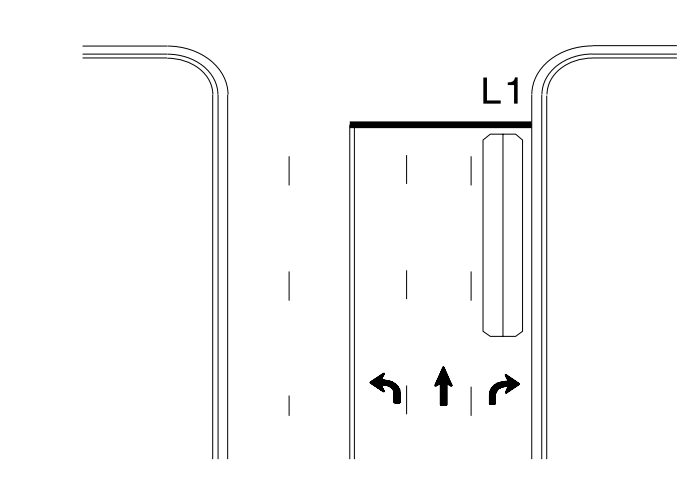
Queue Loop Detection

Right Turn Lane Detection



Shared Lane/
Wide Radius Turn

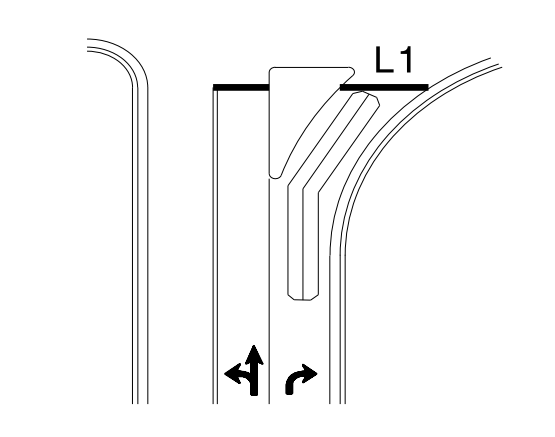
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn



Wide Radius Turn



Channelized Turn

Side Street Detection



L = 6ft X 40ft
Quadrupole loop
Wired to separate
detectors/channels

Presence Loop Placement at Stop Lines



Locate loop slightly
behind leading
edge of stop line

Note:
Loop may be located in advance
of stop line under any of the
following conditions:
1) stop line is greater than 15'
from edge of intersecting
roadway
2) loop detects a permissive or
protected/permissive left turn
3) for an exclusive right turn
lane

Recommended Number of Turns

Single 6' X 6' loop
(when wired separately):

Length of Lead-in ft	Number of Turns
< 250	3
250-375	4
375-525	5
> 525	6

Quadrupole loops: Use 2-4-2 turns
6' X 15' Loops:
Lead-in < 150', use 2 turns
Lead-in > 150', use 3 turns

750 N. Greenfield Pkwy, Garner, NC 27529

Typical Signal Loop Locations

PLAN DATE: January 2015	REVIEWED BY: JPG
PREPARED BY: PLA	REVIEWED BY:
REVISIONS	INIT. DATE

SCALE: N/A

SEAL

1/30/2015

3D:\4146-2015_12\319
 S:\ITS\5812\15_Signal\Loop\Signal Design_Section\Eastern_Regional\loop\ypj\ca\2015.dgn
 paalexander

NOTES

- OVERLAP SAW CUTS AT CORNERS AND INTERSECTION POINTS TO ENSURE UNIFORM SAW SLOT DEPTH.
- MAINTAIN 12" SPACING BETWEEN LOOP WIRE TAIL SECTIONS.
- WIRE LOOPS CONNECTED TO THE SAME DETECTOR IN SERIES.
- LOCATE LOOPS IN CENTER OF LANES UNLESS OTHERWISE SHOWN ON PLANS.
- USE A SERIES OF ONE INCH PIECES OF BACKER ROD SPACED ONE FOOT APART ALONG THE ENTIRE LENGTH OF THE FEEDER SLOT AND LOOP SAW SLOT.
- CONSULT LOOP SEALANT MANUFACTURER TO DETERMINE CURING TIME REQUIRED PRIOR TO MILLING.
- REFER TO STANDARD DRAWING 1725.01 SHEETS 2 AND 3 FOR ADDITIONAL REQUIREMENTS.

SAW SLOT DEPTH CHART
ASSUMING 2" MILLING DEPTH

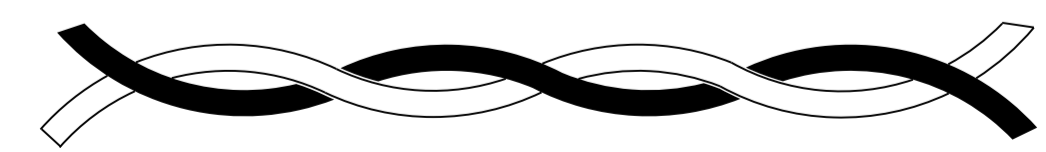
DEPTH (IN)	MAX NO. OF WIRE LAYERS				
	2	3	4	5	6
SAW SLOT DEPTH	4.0	4.5	5.0	5.0	5.0
MINIMUM TOTAL ASPHALT DEPTH REQUIRED	5.0	5.5	6.0	6.0	6.0

LOOP WIRE TWISTING METHOD

INCORRECT WAY TO TWIST WIRE

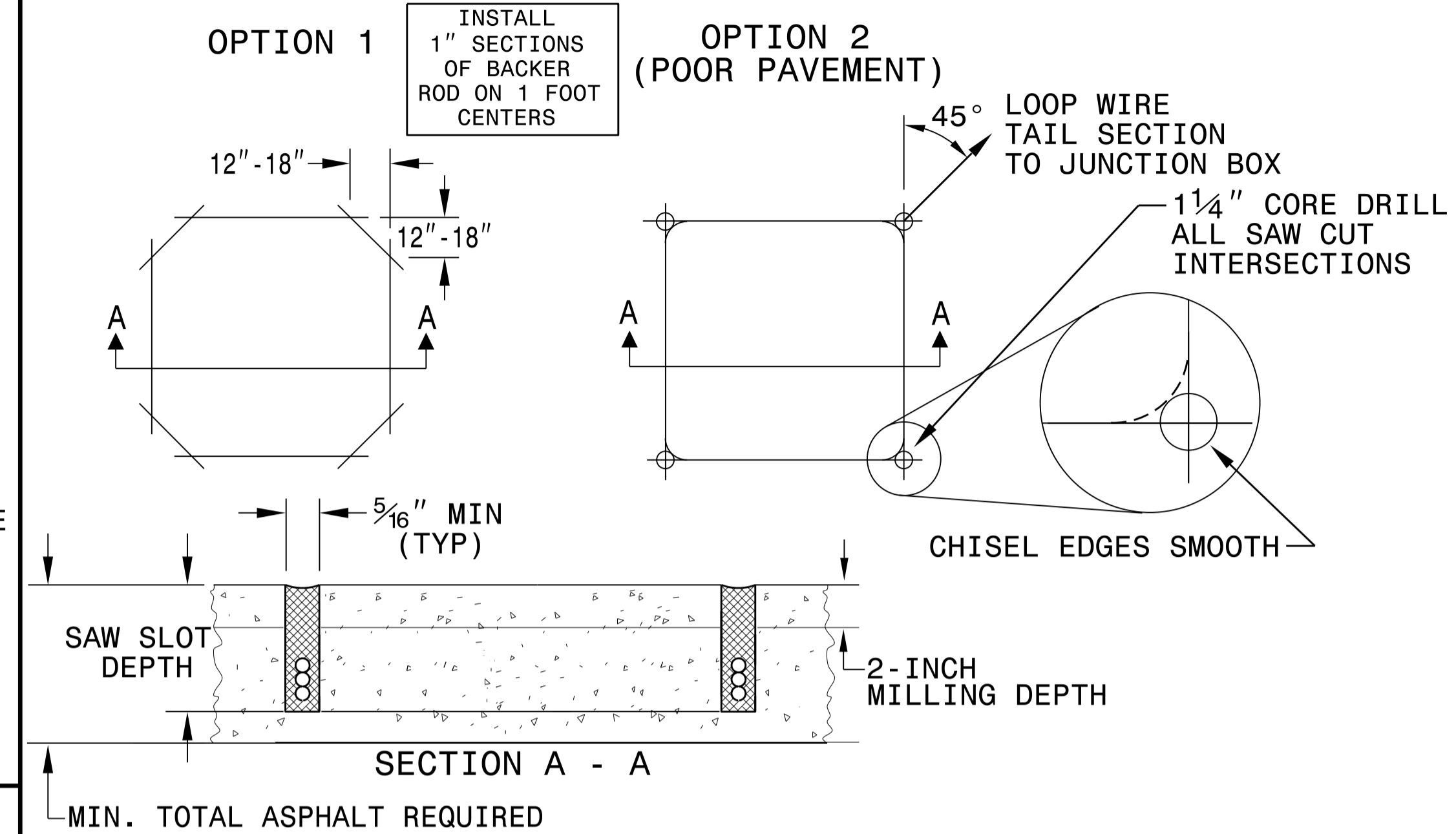


CORRECT WAY TO TWIST WIRE

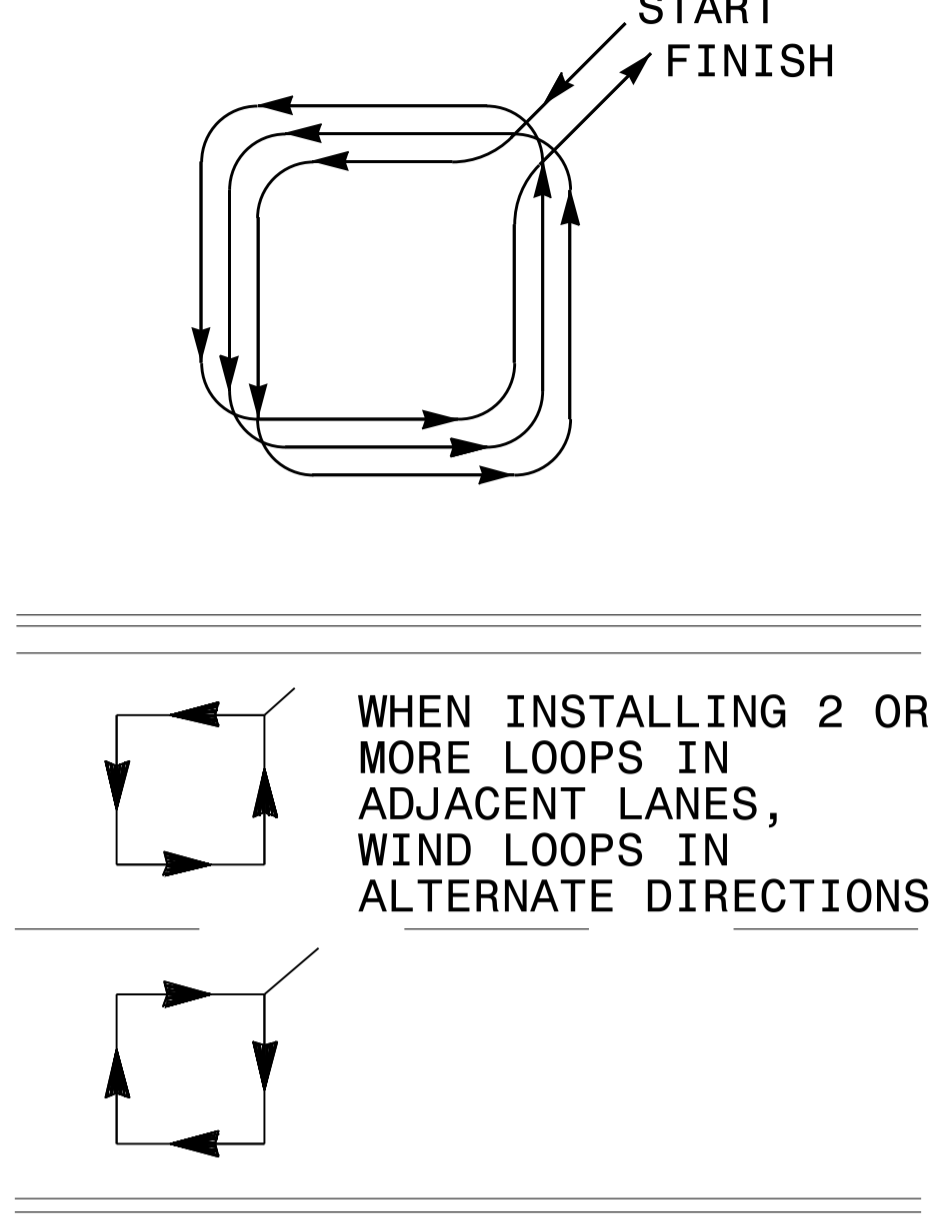


CONVENTIONAL 4-SIDED LOOP

SAW CUT OPTIONS

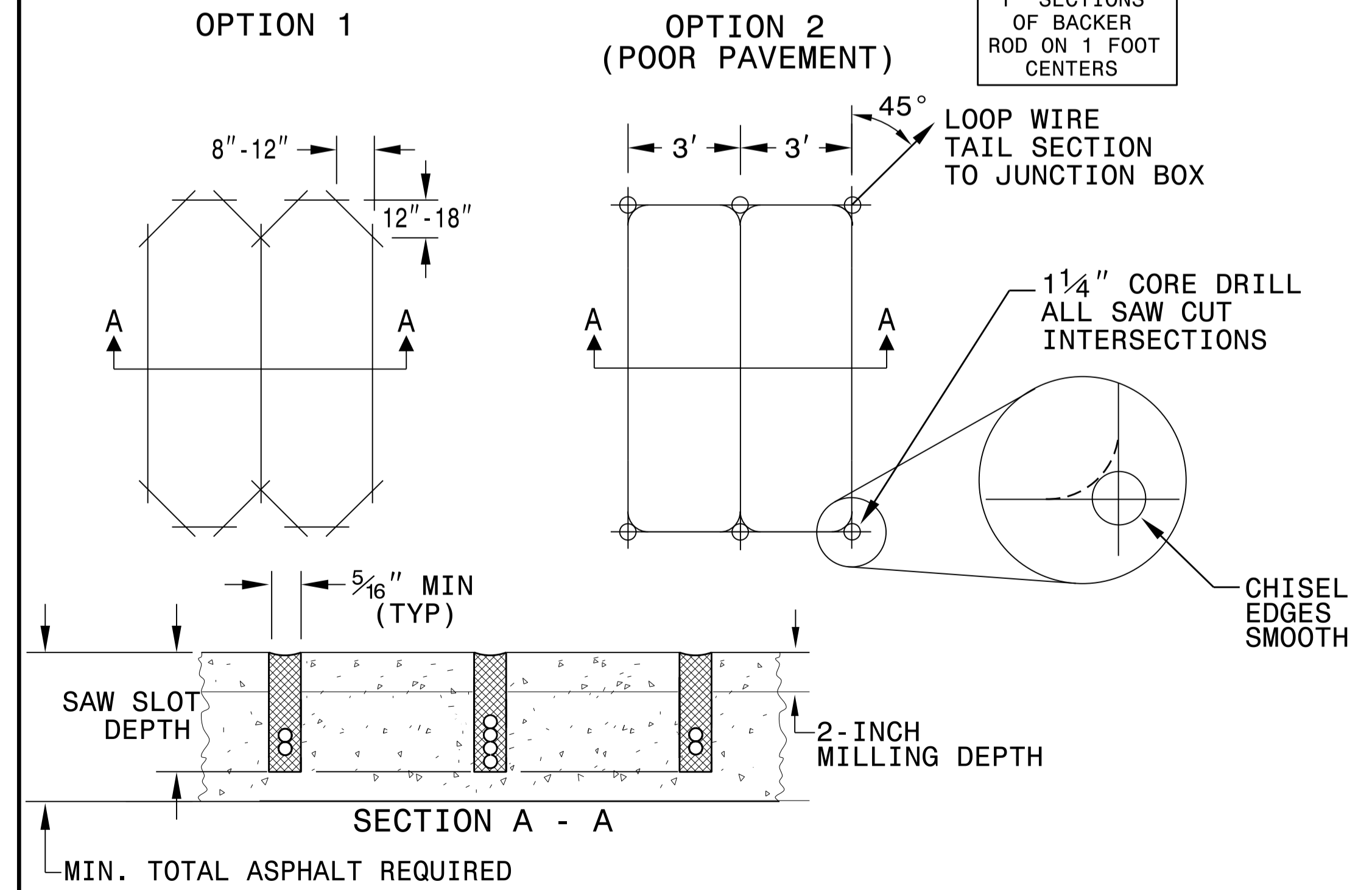


LOOP WINDING METHOD

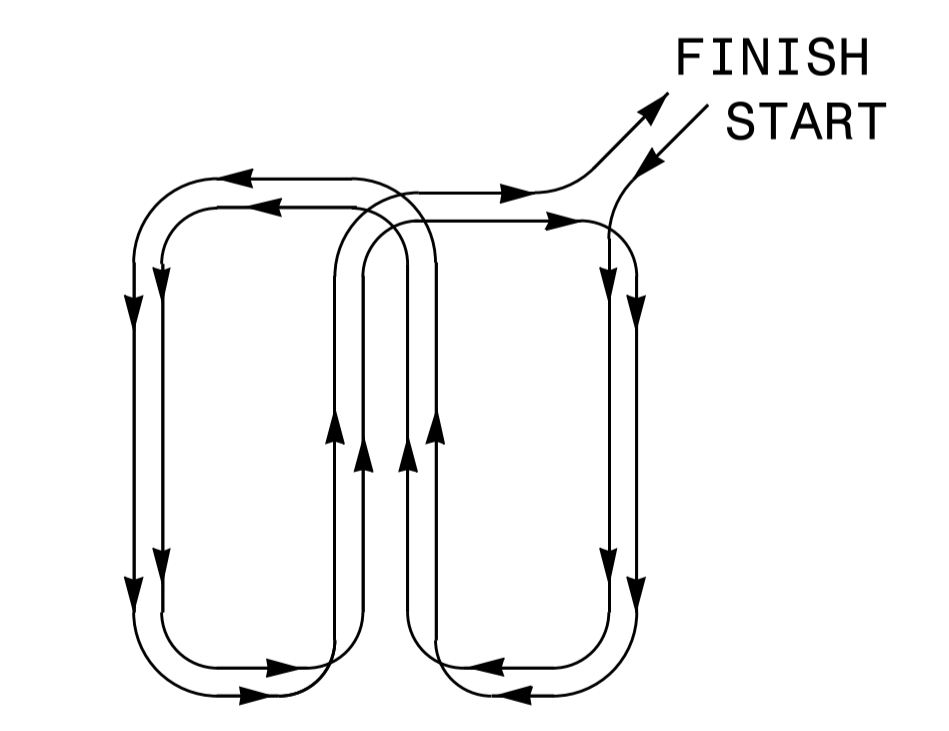


QUADRUPOLE LOOP

SAW CUT OPTIONS

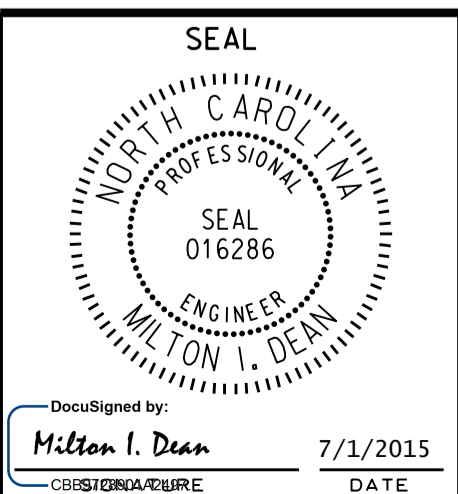
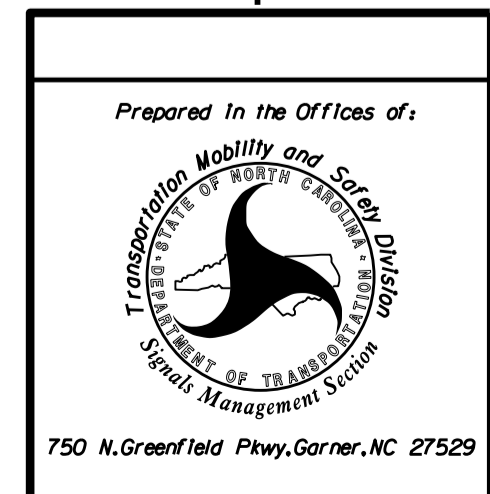


LOOP WINDING METHOD



REVISIONS

1. REMOVED TWISTING NOTES FROM TAIL SECT. TO JUNCTION BOX. 2/26/08 MWH
2. REVISED SECTION A - A DETAILS. 6/29/15 JTP



ENGLISH STANDARD DRAWING FOR
DEEP-CUT INDUCTIVE DETECTION LOOPS
(FOR INSTALLATION PRIOR TO MILLING)