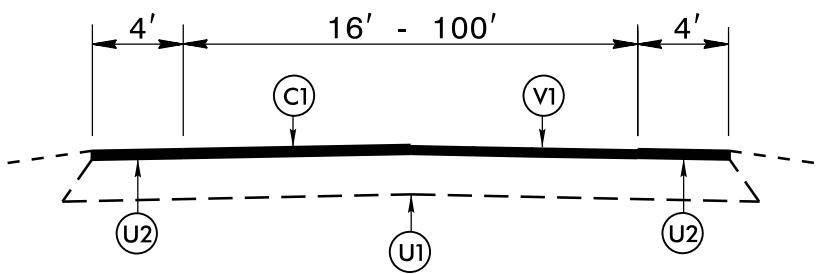
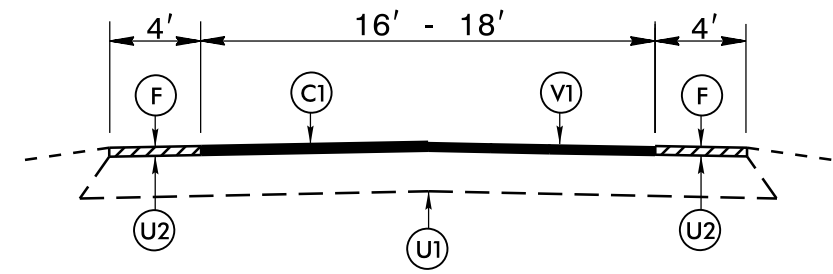


*NOTE: TYPICAL SECTION CONSTRUCTION SEQUENCE:
 1. MILL TRAVEL LANES 1½" AND FILL WITH 1½" SURFACE COURSE, TYPE S9.5D
 2. OVERLAY WITH TRAVEL LANES WITH ¾" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED
 3. OVERLAY SHOULDERS WITH FOG SEAL

TYPICAL SECTION NO. 1
 TO BE USED ON MAPS 1, 6
 MAP 1: STA. 0+00 TO STA. 218+96 EB/NB
 MAP 6: STA. 0+00 TO STA. 215+85 WB/SB



TYPICAL SECTION NO. 2
 TO BE USED ON MAPS 2, 3, 9, 10



TYPICAL SECTION NO. 3
 TO BE USED ON MAPS 4, 5, 7, 8

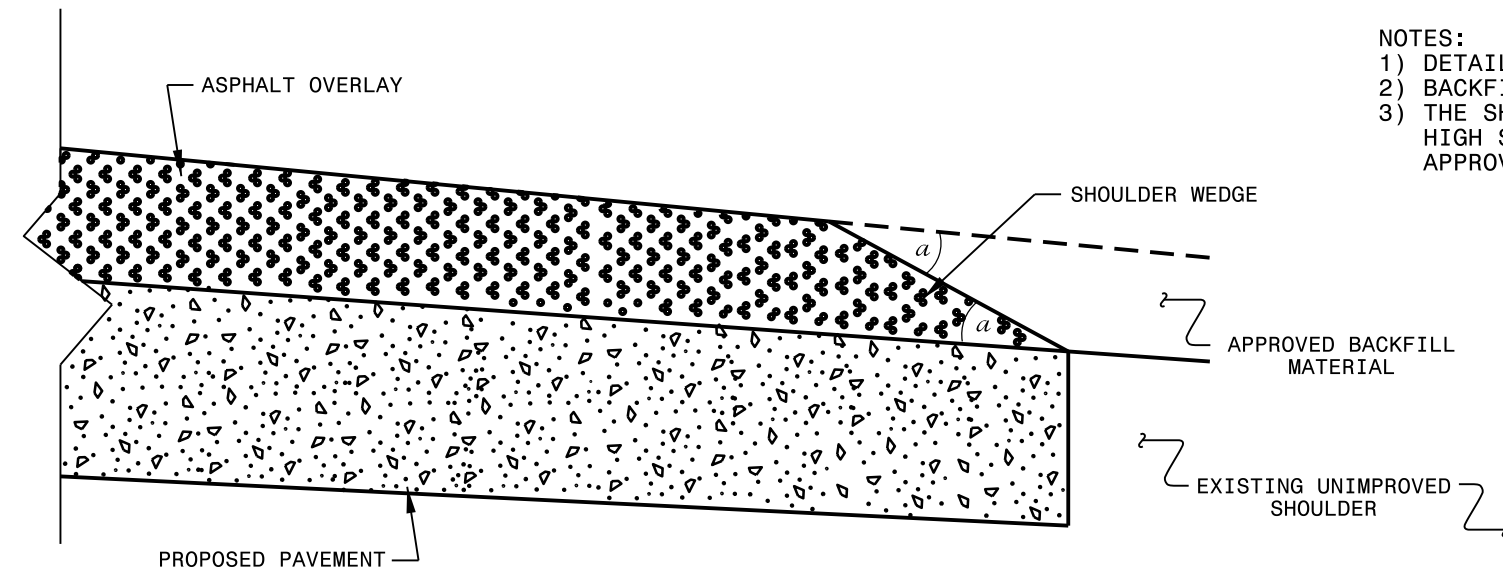
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. ¾" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED, AT AN AVERAGE RATE OF 90 LBS PER SQ. YD.
F	PROPOSED FOG SEAL TO BE APPLIED TO THE EXISTING SHOULDER
U1	EXISTING TRAVELWAY.
U2	EXISTING PAVED SHOULDER.
V1	MILLING ASPHALT PAVEMENT. 1½" DEPTH.

5/14/99

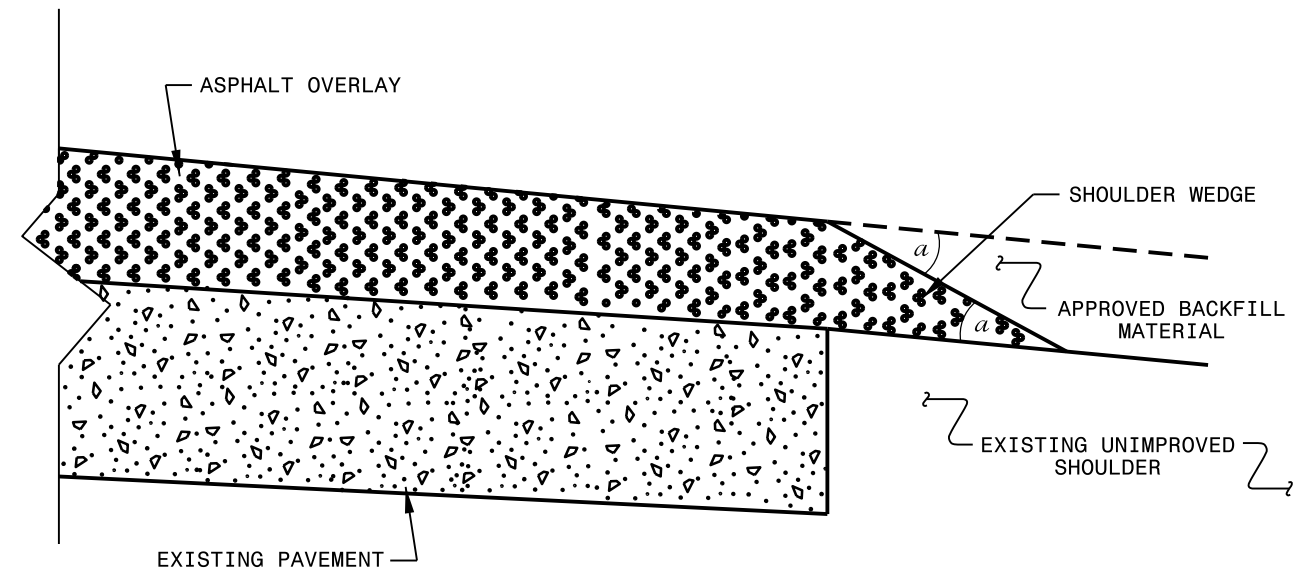
C:\3-5-01\PROJECTS\I-5956\CADD\1-5956_Typical.dgn

NOTES:

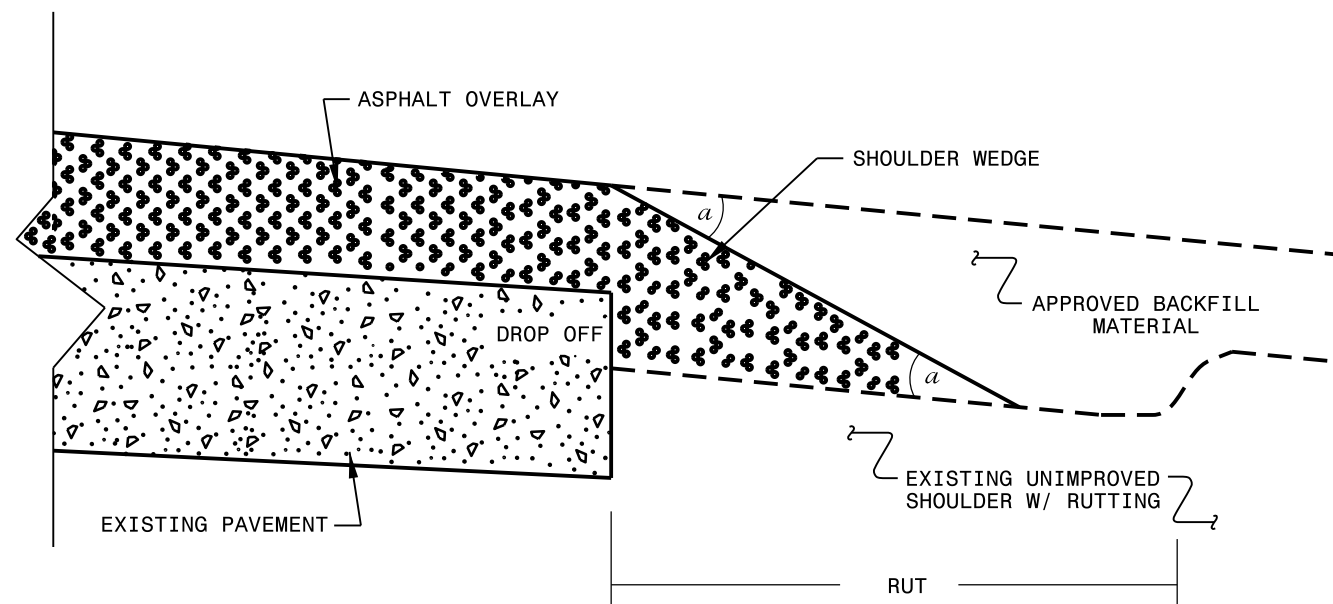
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
- 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
- 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



SHOULDER WEDGE DETAIL
 (Resurfacing Projects w/ Widening or
 with Existing Paved Shoulder having no dropoffs)



SHOULDER WEDGE DETAIL
 (Resurfacing Projects w/ NO Widening)



SHOULDER WEDGE DETAIL
 (Resurfacing Adjacent to
 Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950 FAX 919-250-4119	
SHOULDER WEDGE DETAILS	
ORIGINAL BY: T.SPELL	DATE: 7-19-11
MODIFIED BY:	DATE: 2/2/16
CHECKED BY:	DATE:
FILE SPEC.: szusr/details/stand/shoulderwedgedetail.dgn	

24-MAR-2016 11:45
 S:\Contracts\Resurfacing\Projects\Shoulder Wedge Details\Revised Shoulder Wedge Detail.dgn
 \$\$\$USERNAME\$\$\$

PROJECT NO.	SHEET NO.	TOTAL NO.
I-5956	5	

SUMMARY OF QUANTITIES

PROJECT NO.	COUNTY	MAP NO.	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	FOUND-ATION CONDITION-ING MATERIAL, MINOR STRUCTURES	FOUND-ATION CONDITION-ING GEOTEXTILE	15" SIDE DRAIN PIPE (STD. 310.01)	15" SIDE DRAIN PIPE ELBOWS	INCIDENTAL STONE BASE	MILLING ASPHALT PAVEMENT, 1 1/2" DEPTH	ASPHALT CONC SURFACE COURSE, TYPE S9.5D	POLYMER MODIFIED ASPHALT BINDER FOR PLANT MIX	OPEN- GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED	FOG SEAL	CONCRETE PAD FOR SHOULDER DRAIN PIPE OUTLET (STD. 816.01)	MASONRY DRAINAGE STRUCTURE (STD. 846.04)	FRAME WITH TWO GRATES, STD 840.20, 840.25	REMOVE AND REPLACE CONCRETE APRON (STD. 852.04, 852.05 and/or 852.06)	REMOVE AND REPLACE SHOULDER BERM GUTTER (STD 846.01)	REMOVE & RESET EXISTING GUARDRAIL (STD 862.01, 862.02)	RIP RAP, CLASS B	GEOTEXTILE FOR DRAINAGE	PORTABLE LIGHTING	TEMP SILT FENCE	MATTING FOR EROSION CONTROL	WATTLE	SEEDING & MULCHING							
NO		NO			NO					MI	FT	TON	SY	LF	EA	TONS	SY	TON	TONS	TON	SY	EA	EA	EA	EA	LF	LF	TON	SY	LS	LF	SY	LF	AC							
	Guilford & Alamance	1	I-40 EB	FROM EAST OF SR 3056 (ROCK CREEK DAIRY ROAD) IN GUILFORD COUNTY TO WEST OF SR 1226 (UNIVERSITY DRIVE) IN ALAMANCE COUNTY		4		NO	NO	4.147	48	3	10	30	2		125,162	10,540	945	5,642	46,225	1	1	1	2	16	25	2	7	1	100	70	20	0.10							
TOTAL FOR MAP NO. 1										4.147		3	10	30	2		125,162	10,540	945	5,642	46,225	1	1	1	2	16	25	2	7	1	100	70	20	0.10							
	Guilford	2	I-40 EB OFF RAMP	RAMP TO NC 61	2	1	NO	NO	0.125	26						203	1,907	161	9																						
	"	"	"	"	2	1	NO	NO	0.02	41						481	41	2																							
TOTAL FOR MAP NO. 2										0.145		203	2,388	202	11																										
	Guilford	3	I-40 EB ON RAMP	RAMP FROM NC 61	2	1	NO	NO	0.008	33						103	555	48	3																						
	"	"	"	"	2	2	NO	NO	0.171	26						2,608	220	13																							
TOTAL FOR MAP NO. 3										0.179		103	3,163	268	16																										
	Alamance	4	I-40 EB OFF RAMP	RAMP TO REST AREA	3	1	NO	NO	0.009	18						95	8				58																				
	"	"	"	"	3	1	NO	NO	0.009	18						95	8				58																				
TOTAL FOR MAP NO. 4										0.009		95	8								58																				
	Alamance	5	I-40 EB ON RAMP	RAMP FROM REST AREA	3	1	NO	NO	0.01	18						106	9	1			35																				
	"	"	"	"	3	1	NO	NO	0.01	18						106	9	1			35																				
TOTAL FOR MAP NO. 5										0.01		106	9	1							35																				
	Guilford & Alamance	6	I-40 WB	FROM WEST OF SR 1226 (UNIVERSITY DRIVE) IN ALAMANCE COUNTY TO EAST OF SR 3056 (ROCK CREEK DAIRY ROAD) IN GUILFORD COUNTY		4	MD	NO	NO	4.088	48						123,808	10,430	935	5,578	45,568				1																
TOTAL FOR MAP NO. 6										4.088		123,808	10,430	935	5,578							45,568																			
	Alamance	7	I-40 WB OFF RAMP	RAMP TO REST AREA	3	1	NO	NO	0.01	17						100	8				53																				
TOTAL FOR MAP NO. 7										0.01		100	8							53																					
	Alamance	8	I-40 WB ON RAMP	RAMP FROM REST AREA	3	1	NO	NO	0.011	18						116	10	1			45																				
TOTAL FOR MAP NO. 8										0.011		116	10	1						45																					
	Guilford	9	I-40 WB OFF RAMP	RAMP TO NC 61	2	1	NO	NO	0.136	24						16	1,915	162	9																						
	"	"	"	"	2	1	NO	NO	0.009	25						372	31	2																							
TOTAL FOR MAP NO. 9										0.145		16	2,287	193	11																										
	Guilford	10	I-40 WB ON RAMP	RAMP FROM NC 61	2	1	NO	NO	0.014	29						60	798	70	4																						
	"	"	"	"	2	1	NO	NO	0.121	25						1,775	150	9																							
TOTAL FOR MAP NO. 10										0.135		60	2,573	220	13						1,775	150	9																		
TOTAL FOR PROJ NO. I-5956										8.879		3	10	30	2	382	259,798	21,888	1,933	11,220	91,984	1	1	1	3	16	25	2	7	1	100	70	20	0.10							
GRAND TOTAL										8.879		3	10	30	2	382	259,798	21,888	1,933	11,220	91,984	1	1	1	3	16	25	2	7	1	100	70	20	0.10							

PROJECT NO.	SHEET NO.	TOTAL NO.
I-5956	6	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	LENGTH	WIDTH	4400000000-E	4405000000-E	4410000000-E	4415000000-N	4420000000-N	4422000000-N	4430000000-N	4445000000-E	4480000000-N	4600000000-N	4600000000-N	4600000000-N	4600000000-N	4600000000-N	4600000000-N	4688000000-E	4690000000-E	4695000000-E	4700000000-E	4710000000-E	4725000000-E	4815000000-E	4820000000-E	4825000000-E	4835000000-E	4845000000-N		4890000000-E		4905000000-N	4960000000-N							
										WORK ZONE SIGNS (STATIONARY)	PORTABLE WORK ZONE SIGN	BARRICADE MOUNTED WORK ZONE SIGN	FLASHING ARROW PANELS, TYPE C	CHAGEABLE MESSAGE SIGN	PORTABLE CHANGEABLE MESSAGE SIGN (SHORT TERM)	DRUMS	TYPE III BARRICADE	TMA	WORK ZONE DIGITAL SPEED LIMIT SIGNS	SEQUENTIAL FLASHING WARNING LIGHTS	WORK ZONE PRESENCE LIGHTING	6" X 90 M YELLOW THERMO	6" X 90 M WHITE THERMO	6" X 120 M WHITE THERMO	8" X 90 M WHITE THERMO	12" X 90 M WHITE THERMO	24" X 120 M WHITE THERMO	THERMO MERGE LEFT ARROW 90 M	THERMO RAMP ARROW	6" YELLOW PAINT	6" WHITE PAINT	8" WHITE PAINT	12" WHITE PAINT	24" WHITE PAINT	PAINT MERGE LEFT ARROW	PAINT RAMP ARROW SYMBOL	YELLOW HOT SPRAY THERMO, 6", 50 MILS	WHITE HOT SPRAY THERMO, 6", 50 MILS	WHITE HOT SPRAY THERMO, 12", 50 MILS	SNOWPLOWA BLE PAVEMENT MARKERS CRYSTAL/RED	REPLACE EXISTING BARRIER DELINEATOR						
NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	SF	SF	SF	EA	EA	DAY	EA	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA						
	Guilford & Alamance	1	I-40 EB	FROM EAST OF SR 3056 (ROCK CREEK DAIRY ROAD) IN GUILFORD COUNTY TO WEST OF SR 1226 (UNIVERSITY DRIVE) IN ALAMANCE COUNTY		1	4	MD	4.147	48	350	224	26	4	3	16	292	64	2	5	21	15	21,900	21,950	17,194			2,008			8	43,800	78,288			4,016		16		21,900	39,144	2,008	1,026	300			
TOTAL FOR MAP NO. 1										350	224	26	4	3	16	292	64	2	5	21	15	21,900	21,950	17,194			2,008			8	43,800	78,288			4,016		16		21,900	39,144	2,008	1,026	300				
	Guilford	2	I-40 EB OFF RAMP	RAMP TO NC 61		2	1		0.125	26													767	760			211		56		1	1,534	1,520	422			112					26					
TOTAL FOR MAP NO. 2																																															
	Guilford	3	I-40 EB ON RAMP	RAMP FROM NC 61		2	1		0.008	33													1,025	1,025			211		56		1	1,534	1,520	422			112					26					
TOTAL FOR MAP NO. 3																																															
	Alamance	4	I-40 EB OFF RAMP	RAMP TO REST AREA		3	1		0.009	18													48	48																							
TOTAL FOR MAP NO. 4																																															
	Alamance	5	I-40 EB ON RAMP	RAMP FROM REST AREA		3	1		0.01	18													51	51																							
TOTAL FOR MAP NO. 5																																															
	Guilford & Alamance	6	I-40 WB	FROM WEST OF SR 1226 (UNIVERSITY DRIVE) IN ALAMANCE COUNTY TO EAST OF SR 3056 (ROCK CREEK DAIRY ROAD) IN GUILFORD COUNTY		1	4	MD	4.088	48														21,585	21,605	17,089			2,395		6	43,170	77,388			4,790		12		21,585	39,694	2,395	1,043	300			
TOTAL FOR MAP NO. 6																																															
	Alamance	7	I-40 WB OFF RAMP	RAMP TO REST AREA		3	1		0.01	17													53	53																							
TOTAL FOR MAP NO. 7																																															
	Alamance	8	I-40 WB ON RAMP	RAMP FROM REST AREA		3	1		0.011	18													58	58																							
TOTAL FOR MAP NO. 8																																															
	Guilford	9	I-40 WB OFF RAMP	RAMP TO NC 61		2	1		0.136	24													765	765																							
TOTAL FOR MAP NO. 9																																															
	Guilford	10	I-40 WB ON RAMP	RAMP FROM NC 61		2	1		0.014	29													715	715			237																				
TOTAL FOR MAP NO. 10																																															
TOTAL FOR PROJ NO. I-5956										8,879	350	224	26	4	3	16	292	64	2	5	21	15	46,967	47,030	34,283	448	4,403	56	14	2	93,934	162,626	896	8,806	112	28	4	43,485	78,838	4,403	2,122	600					
GRAND TOTAL										8,879	350	224	26	4	3	16	292	64	2	5	21	15	46,967	47,030	34,283	448	4,403	56	14	2	93,934	162,626	896	8,806	112	28	4	43,485	78,838	4,403	2,122	600					

PROJECT REFERENCE NO.	SHEET NO.
I-5956	8

PROJECT #	MAP #	STATION	Location	Remove & Replace Concrete Apron	Flowable Fill	Pipe Collar	Install Shoulder Drain Outlet Pad
			LT or RT	EA	CY	CY	EA
I-5956	1	100+00	RT	1			
I-5956	1	179+60	RT	1			
I-5956	1	187+50	RT				1
MAP 1 TOTALS				2			1
I-5954	6	12+80	RT	1			
MAP 6 TOTALS				1			
PROJECT GRAND TOTALS				3			1

DIVIDED MEDIANS WITH WIDTHS 46' OR GREATER

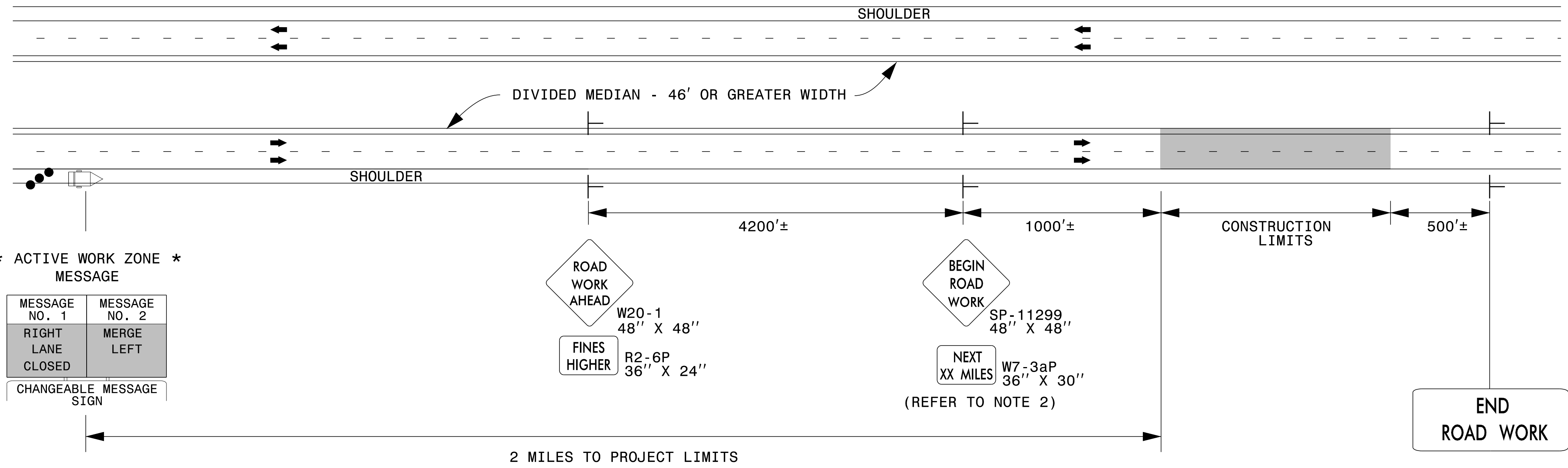
* NOTE: ADVANCE THIS CMS CONTINUOUSLY AS WORK OPERATIONS PROGRESS.

* INACTIVE WORK ZONE *
MESSAGE

MESSAGE NO. 1	MESSAGE NO. 2
ROAD WORK	2 MILES AHEAD
CHANGEABLE MESSAGE SIGN	

* ACTIVE WORK ZONE *
MESSAGE

MESSAGE NO. 1	MESSAGE NO. 2
RIGHT LANE CLOSED	MERGE LEFT
CHANGEABLE MESSAGE SIGN	



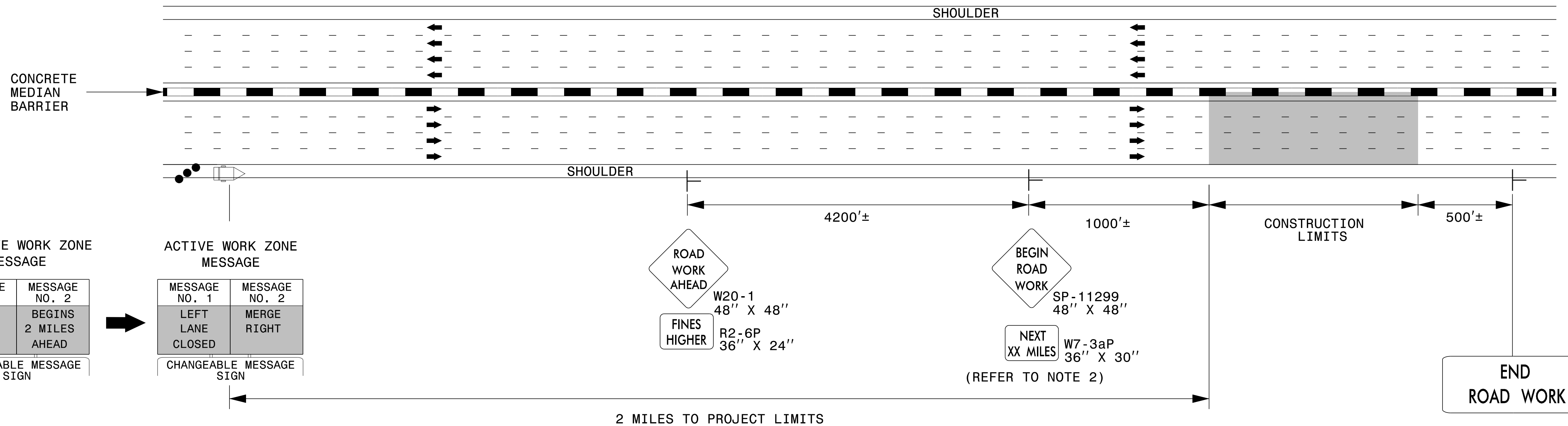
DIVIDED MEDIANS WITH WIDTHS LESS THAN 46' OR WITH PERMANENT MEDIAN BARRIER

INACTIVE WORK ZONE
MESSAGE

MESSAGE NO. 1	MESSAGE NO. 2
ROAD WORK	BEGINS 2 MILES AHEAD
CHANGEABLE MESSAGE SIGN	

ACTIVE WORK ZONE
MESSAGE

MESSAGE NO. 1	MESSAGE NO. 2
LEFT LANE CLOSED	MERGE RIGHT
CHANGEABLE MESSAGE SIGN	



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...

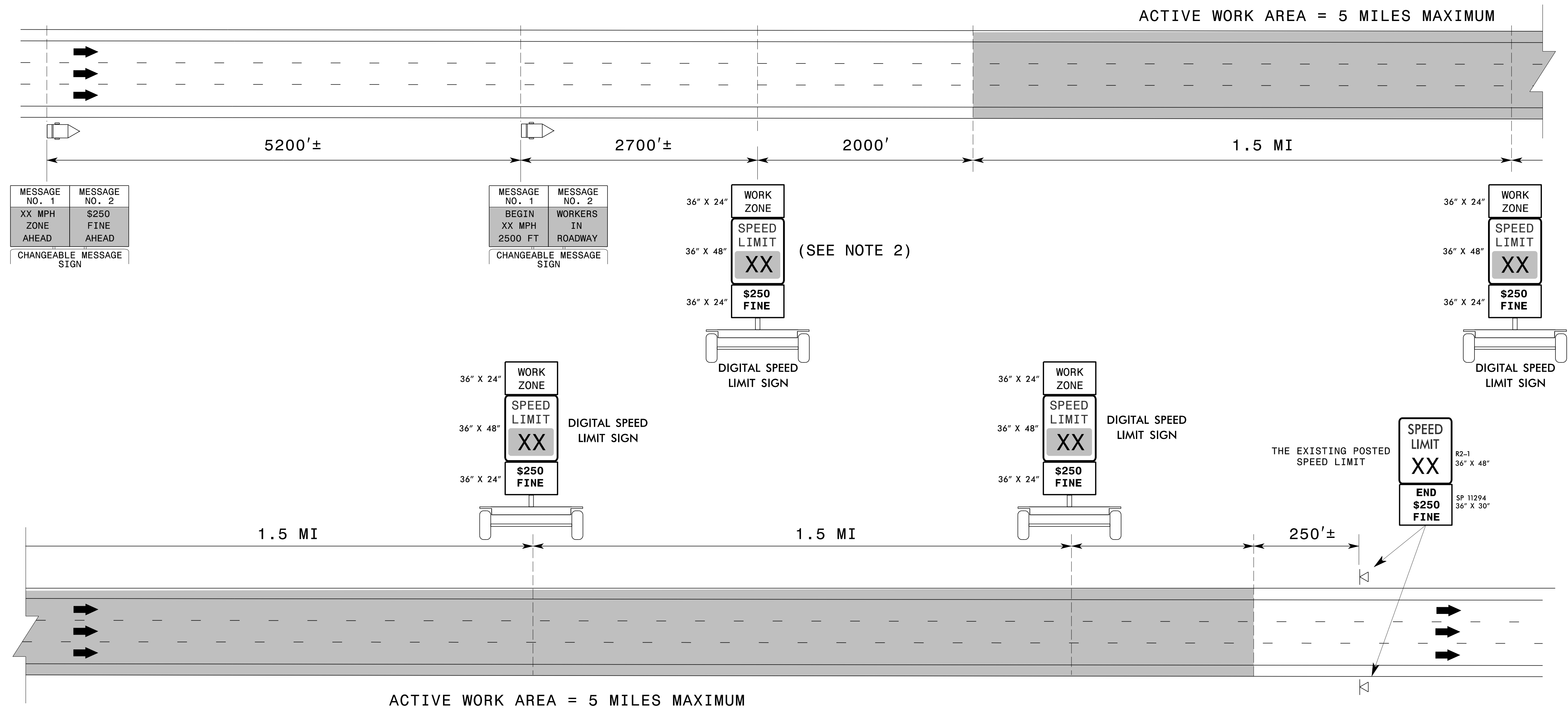
SEAL
022104
JOHN S. KITE, II
ENGINEER

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

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

STATIONARY ADVANCE
WARNING SIGNS FOR
INTERSTATE/FREEWAY
RESURFACING PROJECTS

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"

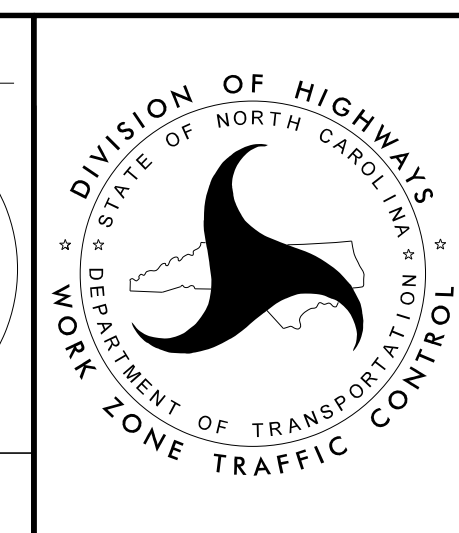
DROP-OFFS BETWEEN OPEN TRAVEL LANES SHOULD NOT EXCEED 2.0"

- ### 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

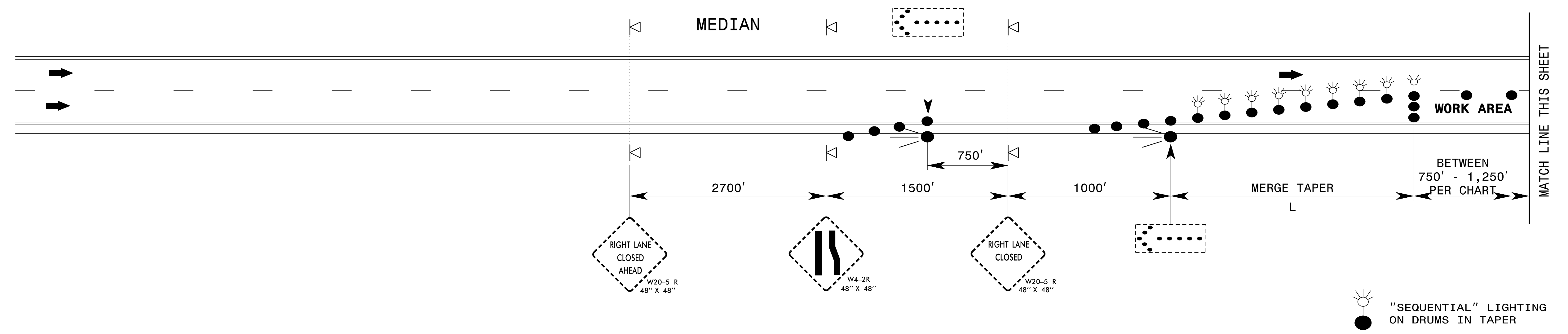
NORTH CAROLINA
PROFESSIONAL
SEAL
022104
ENGINEER
JOHN S. KITE, II

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

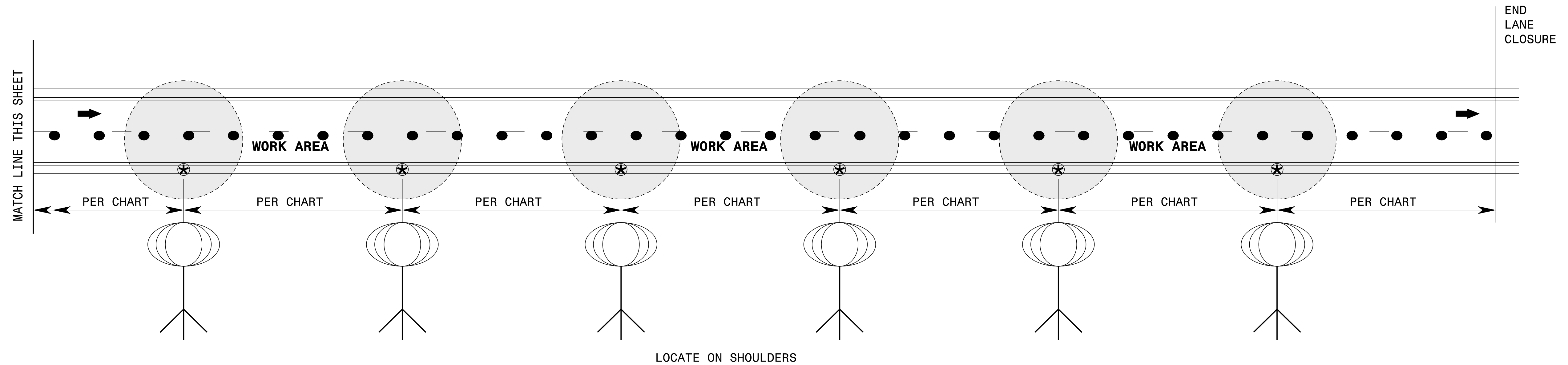


WORK ZONE "VARIABLE"
SPEED LIMIT USING
DIGITAL SPEED LIMIT
SIGNS FOR INTERSTATE/
FREEWAY RESURFACING
PROJECTS

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

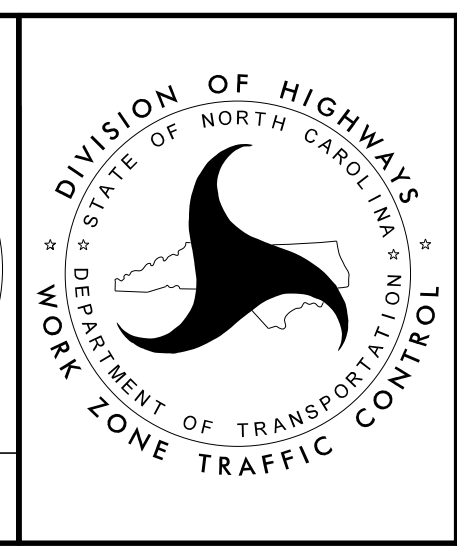
- 1) SPACE LIGHT UNITS ACCORDING TO THE CHART.
- 2) EACH LIGHT UNIT SHALL BE CAPABLE OF ELEVATING TO A MINIMUM HEIGHT OF 14' ABOVE THE PAVEMENT.
- 3) PLACE ON PAVED SHOULDER IF POSSIBLE.

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

DocuSigned by:
E27CE30E1DFC442...

SEAL
022104
ENGINEER
JOHN S. KITE, II

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

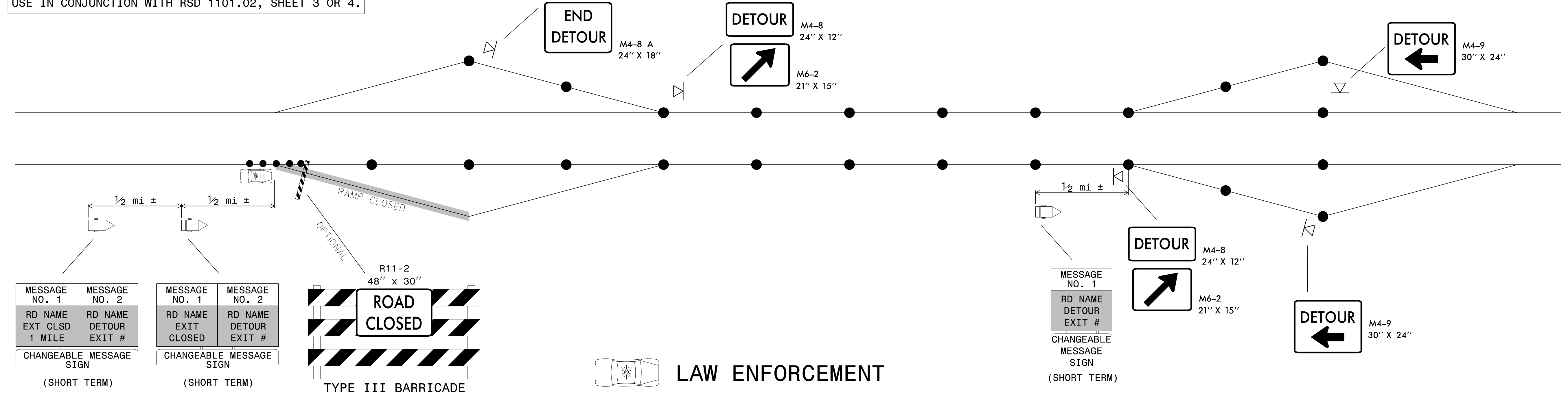


**SEQUENTIAL FLASHING
WARNING LIGHTS
AND
WORK ZONE
PRESENCE LIGHTING**

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

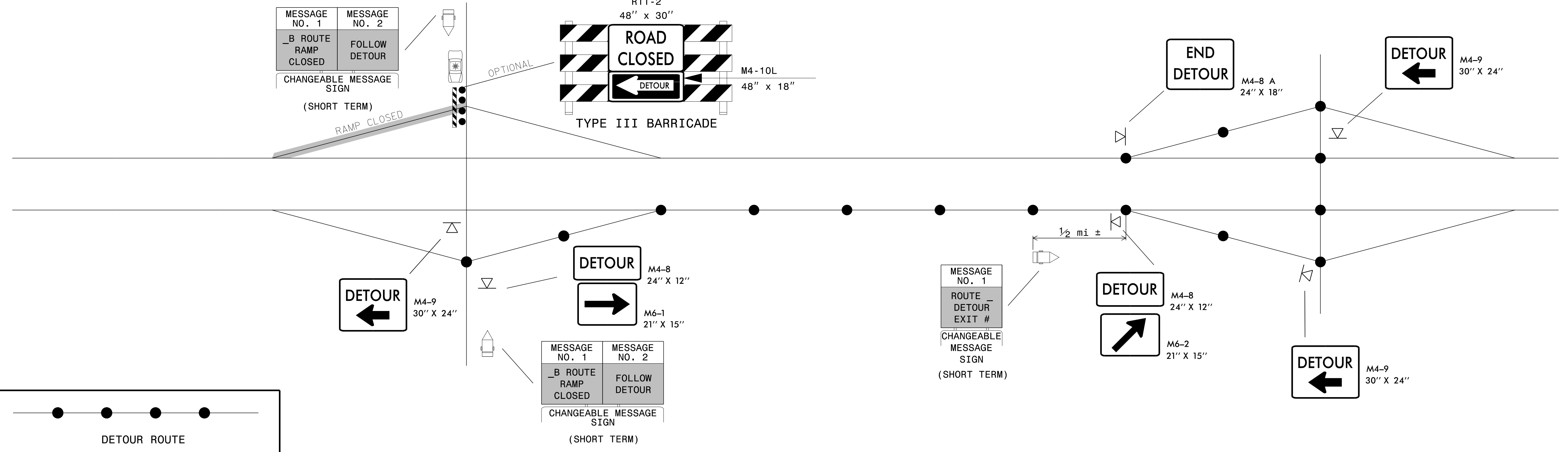
SHORT TERM CLOSURE AND DETOUR OF OFF-RAMP TO ADJACENT INTERCHANGE

USE IN CONJUNCTION WITH RSD 1101.02, SHEET 3 OR 4.



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

USE IN CONJUNCTION WITH RSD 1101.02, SHEET 3 OR 4.



GENERAL NOTES:

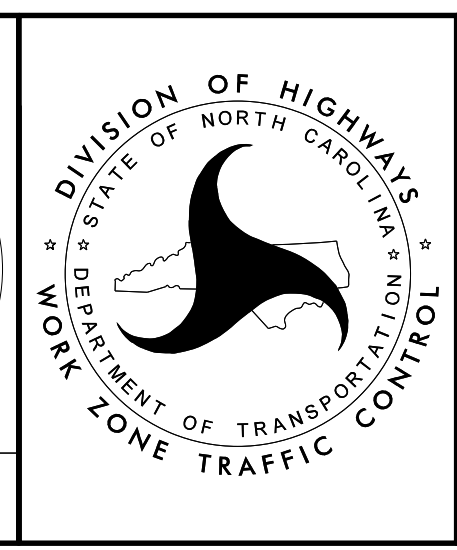
1. THIS DRAWING IS INTENDED FOR USE DURING SHORT TERM CLOSURES OF INTERSTATE AND FREEWAY RAMPS.
2. RAMP CLOSURES SHALL BE APPROVED BY THE ENGINEER.
3. IF RAMP CLOSURE RESTRICTIONS APPLY, SEE SPECIAL PROVISION, "INTERMEDIATE CONTRACT TIMES AND LIQUIDATED DAMAGES".
4. ADDITIONAL CHANGEABLE MESSAGE SIGNS 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**

2/23/2017 S:\TMU\WZTC\DesignGroup3\Squad3B\0Data\Interstate Resurfacing Provisions and Details\TypicalOff-Ramp Detour.dgn User:keddis

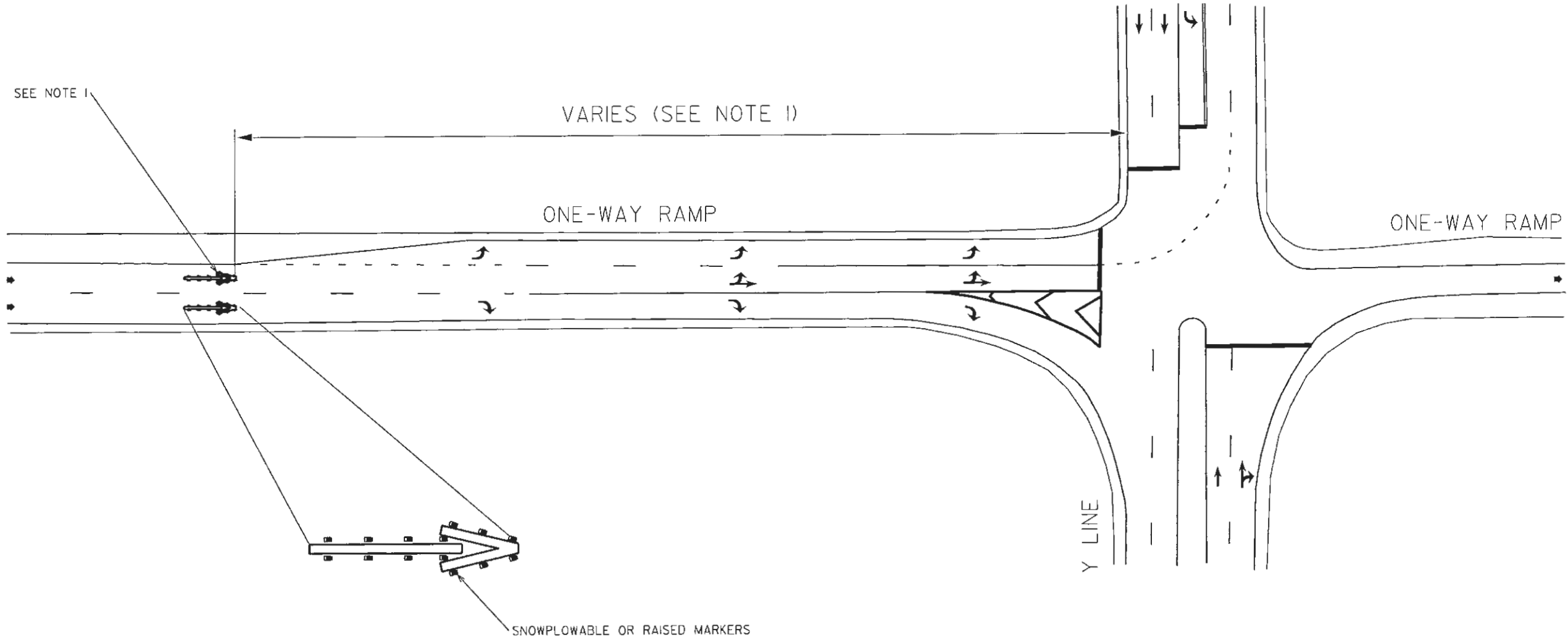
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

8-15

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

SHEET 1 OF 2
1205.XX

ASPHALT TREATMENT



SEE NOTE 1

VARIES (SEE NOTE 1)

ONE-WAY RAMP

ONE-WAY RAMP

Y LINE

SNOWPLOWABLE OR RAISED MARKERS

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.

8-15

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

SHEET 1 OF 2
1205.XX

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

4-16

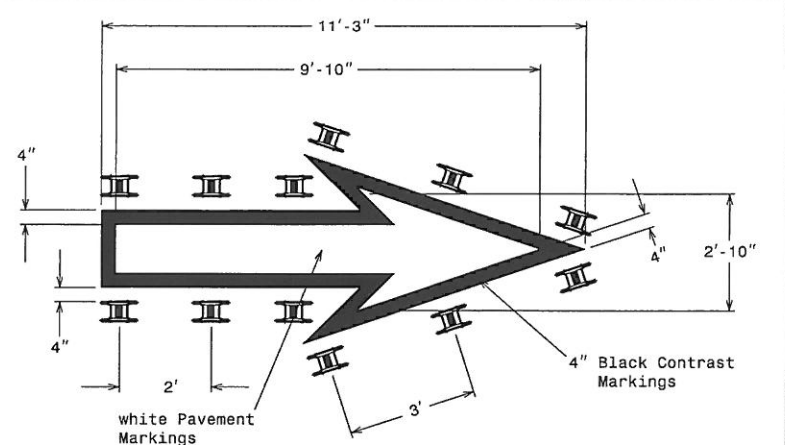
ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
WRONG WAY RAMP ARROW
TWO-LANE EXIT RAMP AT MULTI-LANE APPROACH

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

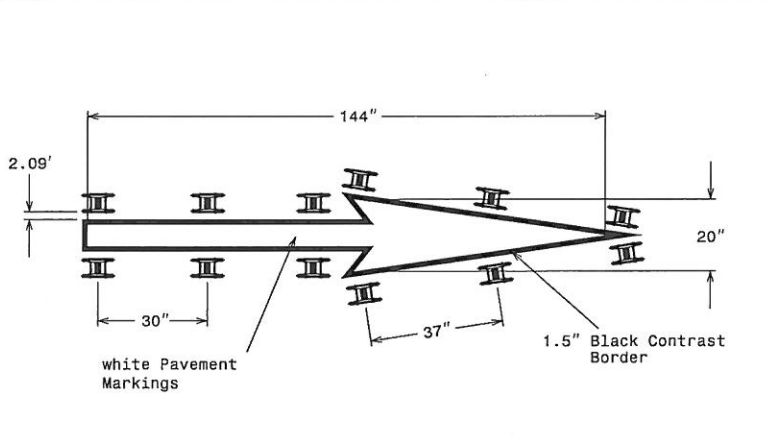
4-16

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

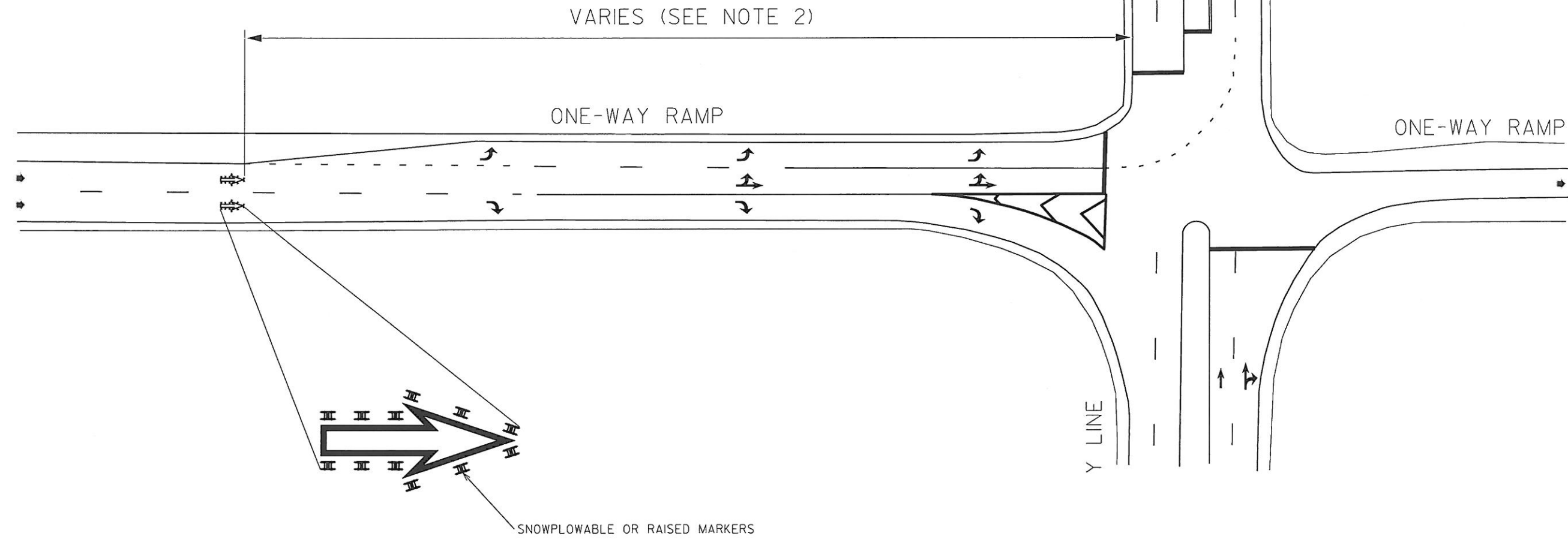
CONCRETE TREATMENT



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 BLACK CONTRAST BORDER.

LEGEND

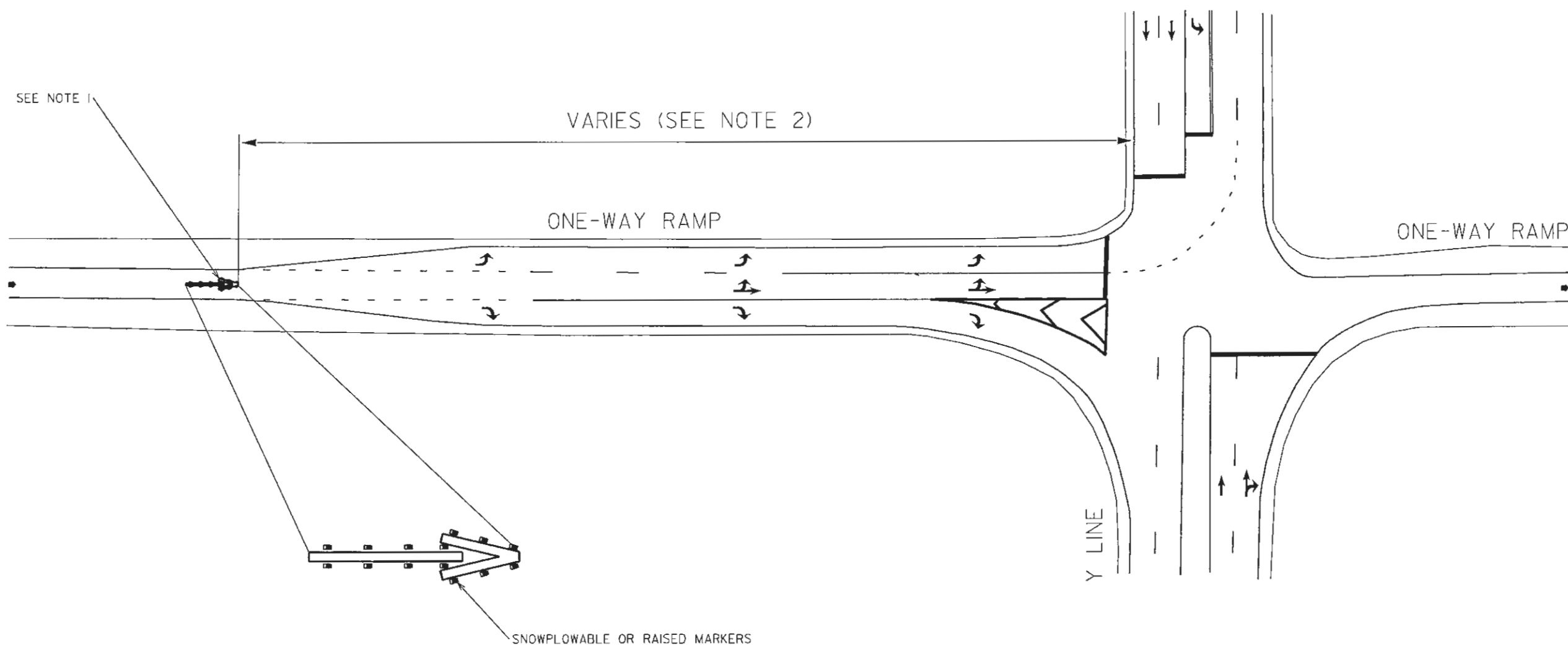
- ➡ DIRECTION OF TRAFFIC FLOW
- ↔ PAVEMENT MARKING SYMBOLS

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

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
	ONE-WAY RAMP
	WRONG WAY RAMP ARROW

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

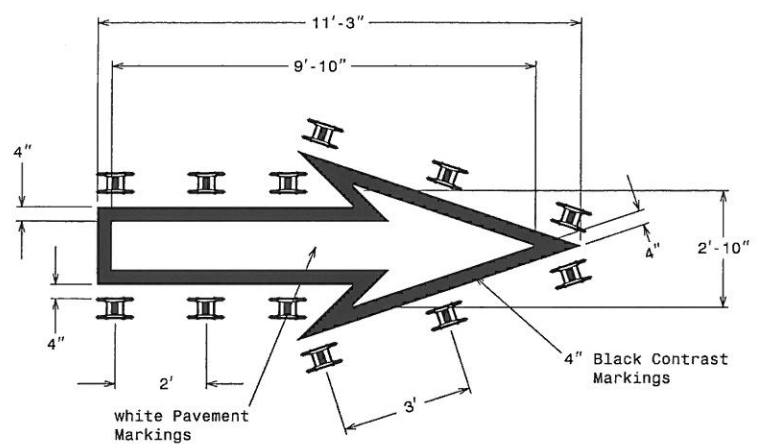
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

4-16

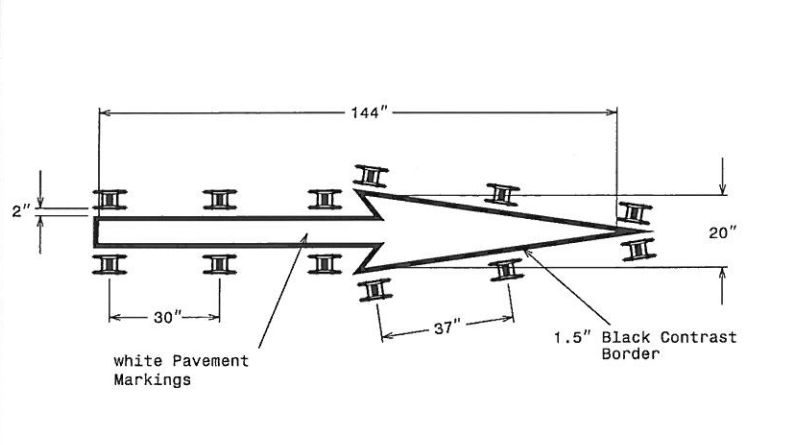
ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
WRONG WAY RAMP ARROW
ONE-LANE EXIT RAMP AT MULTI-LANE APPROACH

SHEET 2 OF 2
1205.XX

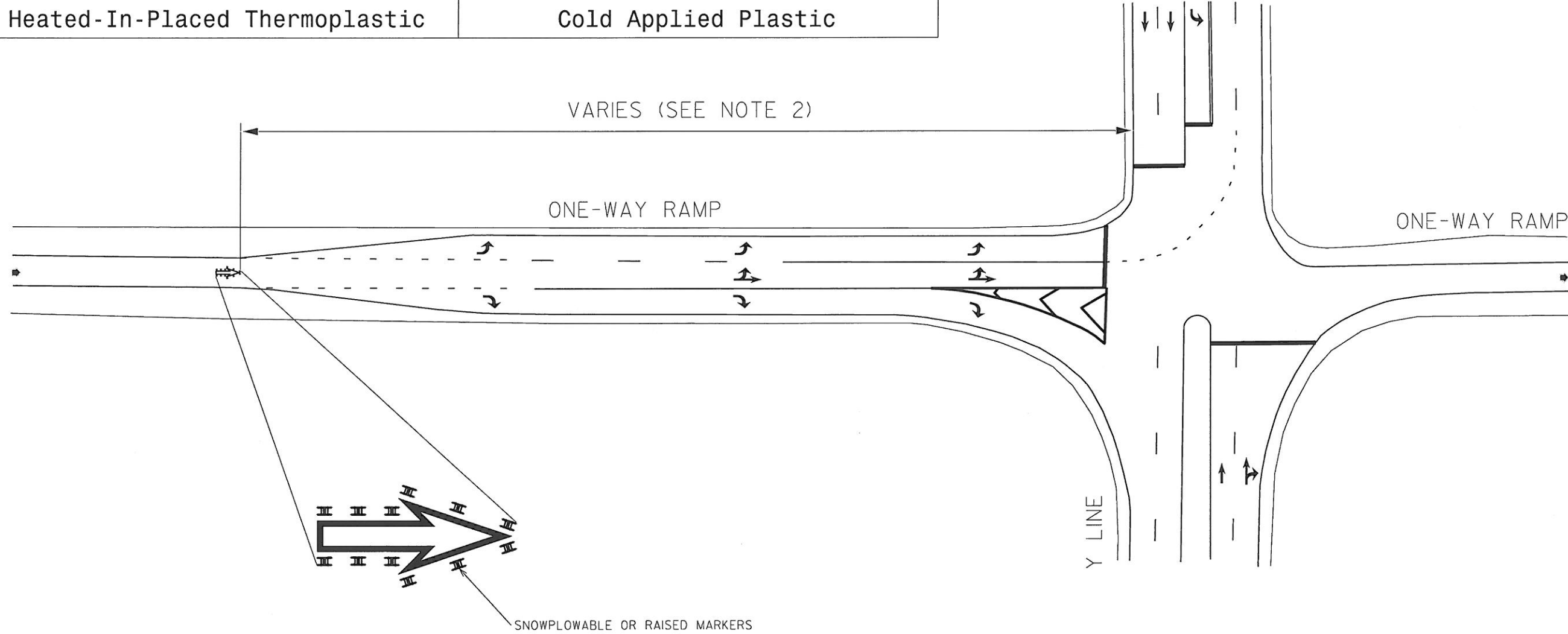
CONCRETE TREATMENT



Heated-In-Placed Thermoplastic



Cold Applied Plastic



NOTES:

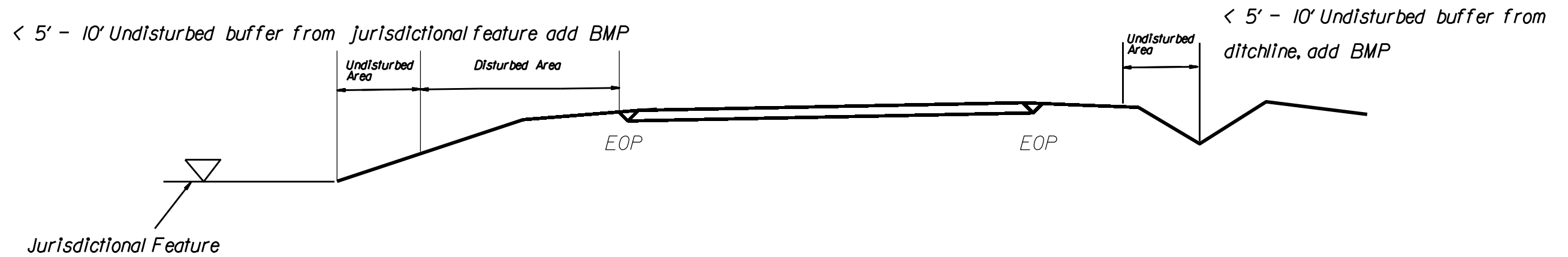
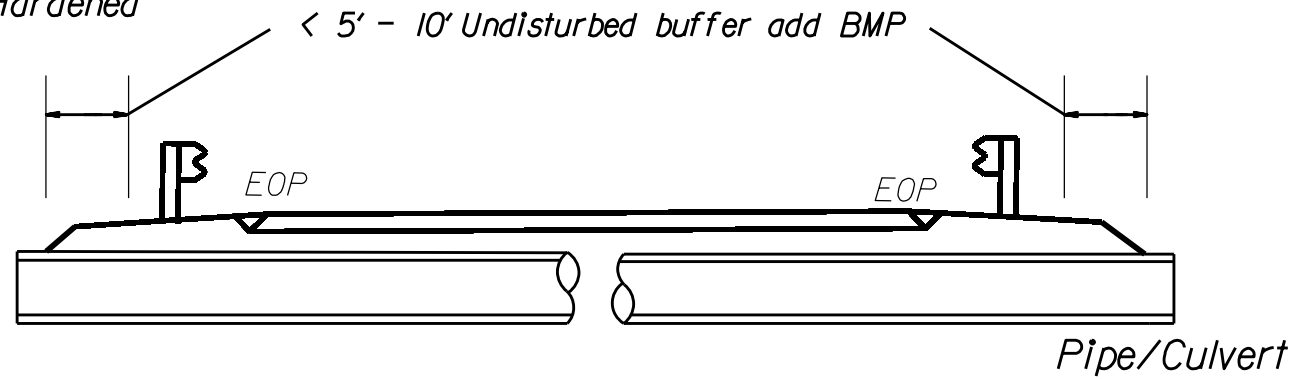
- 1) PAVEMENT MARKINGS SHALL BE INSTALLED ON CONCRETE SURFACES ONLY.
- 2) PLACEMENT OF WRONG-WAY RAMP ARROW VARIES AND SHOULD BE LOCATED JUST BEFORE THE MULTI-LANE APPROACH.
- 3) INSTALL MARKERS, SNOWPLOWABLE OR RAISED, IN ACCORDANCE TO THE DETAILS ON THIS SHEET.
- 4) MARKING SHALL BE WHITE HEATED-IN-PLACED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

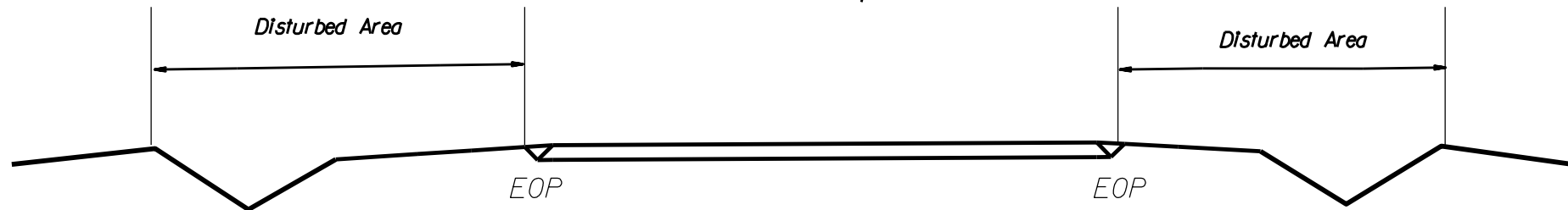
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle, Silt Fence or Hardened Aggregate.

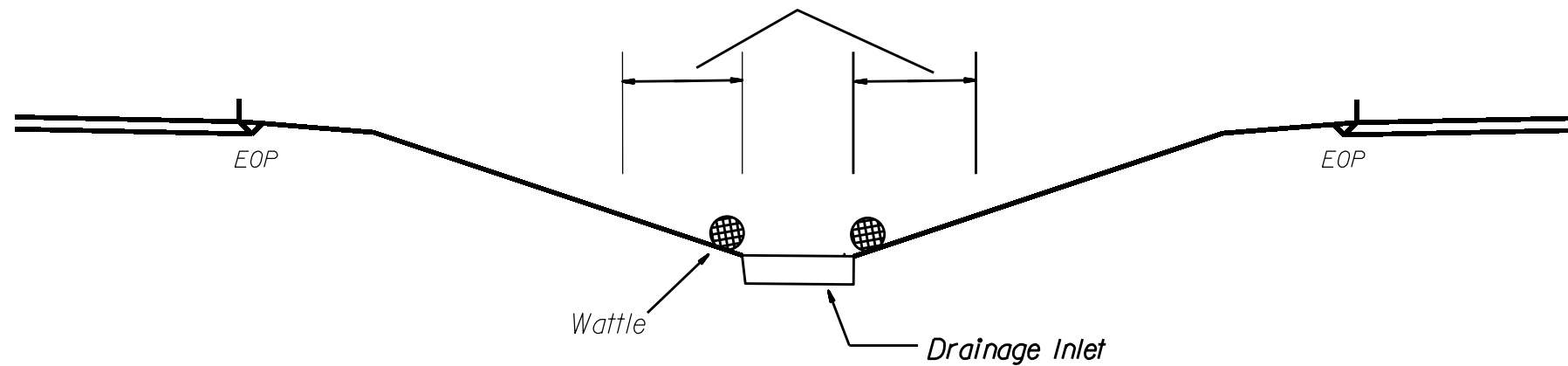
EROSION CONTROL DETAIL



Use BMP's if shoulders and/or frontslopes and/or ditchline and/or backslopes are disturbed

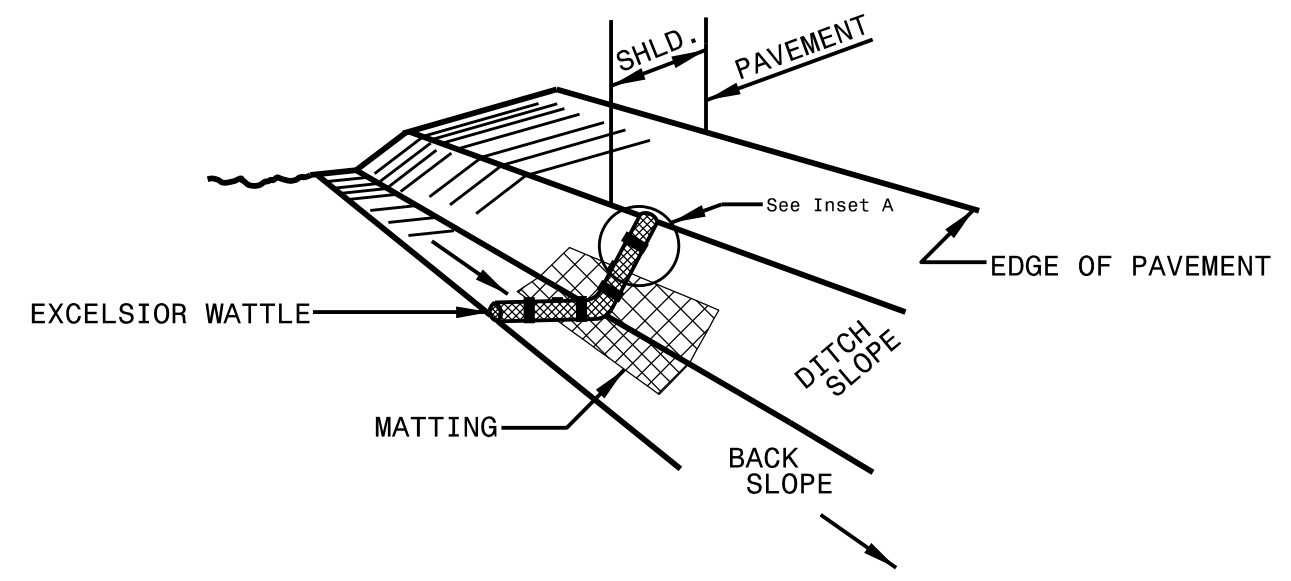


< 5' - 10' Undisturbed buffer from inlet, add wattle

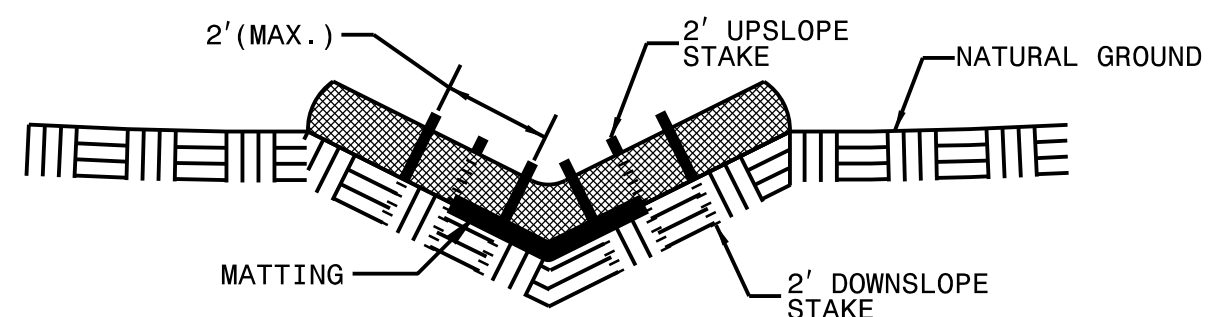


NOT TO SCALE

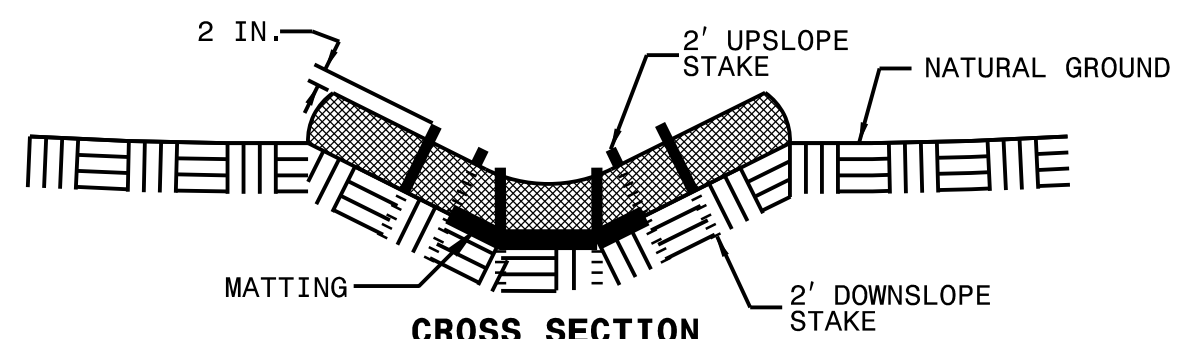
WATTLE DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



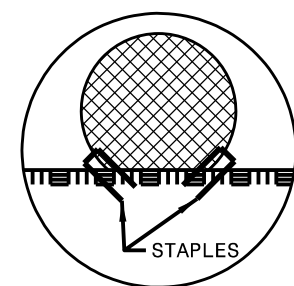
CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

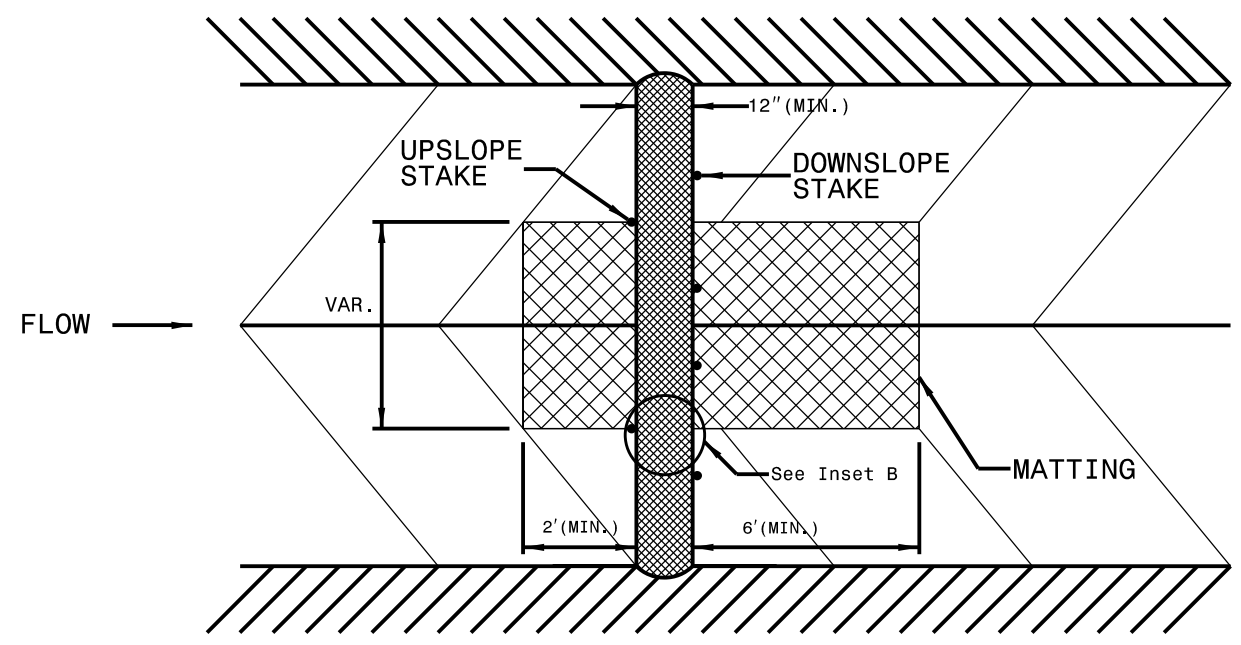
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



INSET A



INSET B



TOP VIEW