

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	2022CPT.01.11.10081.1, ETC	1
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
2022CPT.01.11.10081.1		PE, CONST
2022CPT.01.11.20082.1		PE, CONST

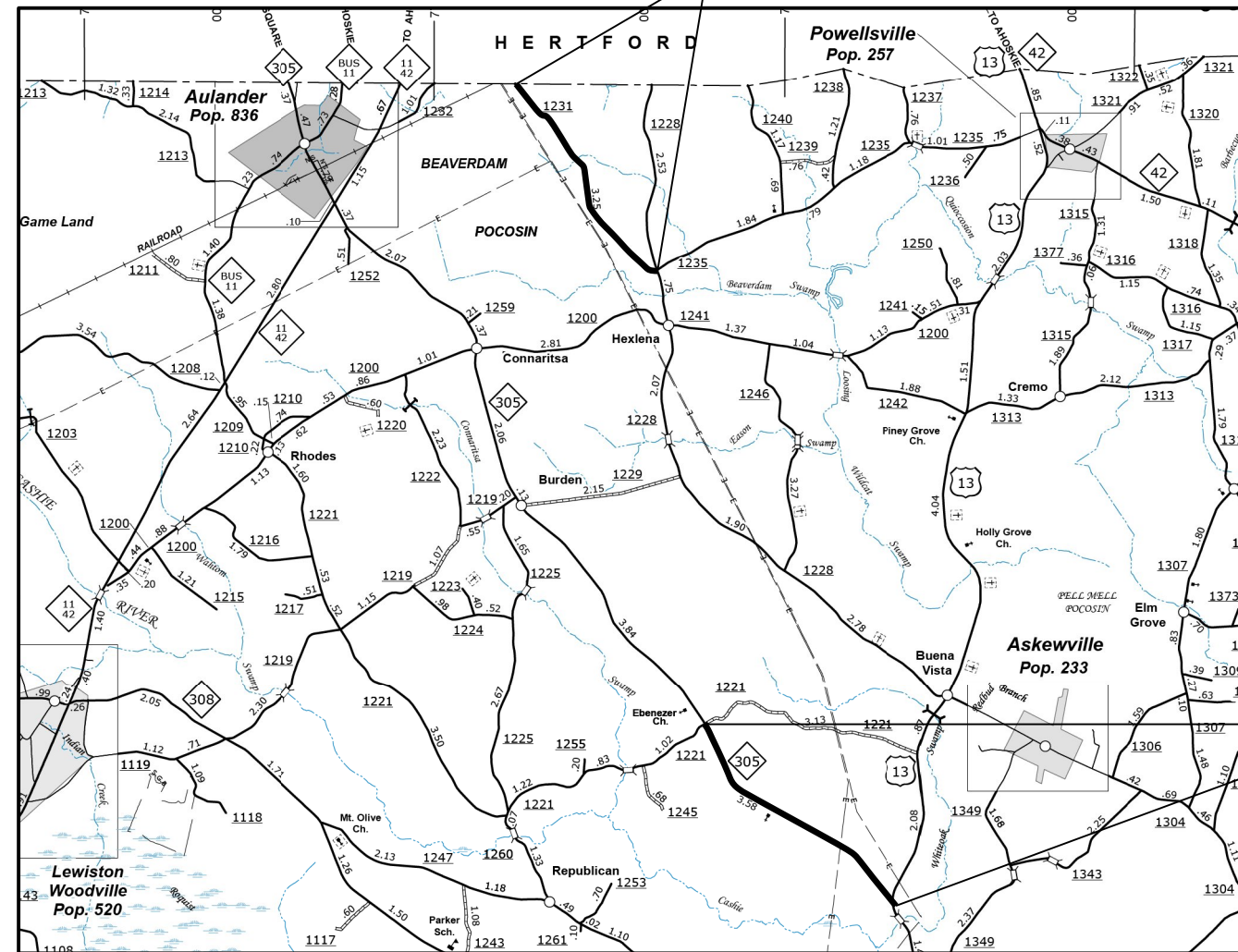
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BERTIE COUNTY

LOCATION: MAP 1 - NC 305 FROM SR 1221 TO US 13
MAP 3 - SR 1231 FROM HERTFORD COUNTY LINE TO SR 1228

TYPE OF WORK:
MILLING, RESURFACING, FULL DEPTH RECLAMATION AND
SHOULDER RECONSTRUCTION

MAP 3



MAP 1

CONTRACT: DA00515 WBS NO.: 2022CPT.01.11.10081.1, ETC.

GRAPHIC SCALES

NTS

PROJECT LENGTH

MAP 1 = 3.57 MILES
MAP 3 = 3.10 MILES

LENGTH PROJECT 2020CPT.01.11.20081.1, ETC. = 12.86 MI.

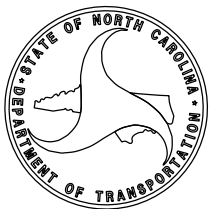
Prepared in the Office of:
DIVISION OF HIGHWAYS
113 AIRPORT DR., EDENTON NC, 27932

2018 STANDARD SPECIFICATIONS

W. B. HOBBS, PE
DIVISION PROJECT TEAM LEAD

CHRIS SLACHTA
DIVISION CONTRACT ENGINEER

S. P. FENWICK, PLS
DIVISION DESIGN ENGINEER



I8-0CT-202109:53 S:\Contracts\5161\Proposed Resurfacing\DA00515 Bertie (North)\Hertford Primary & FDR\Design Files\DA00515_tshl-tsh2.dgn \$\$\$USERNAME\$\$\$

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HERTFORD COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	2022CPT.01.11.10081.1, ETC	2
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
2022CPT.01.11.10461.1		PE, CONST
2022CPT.01.11.20462.1		PE, CONST

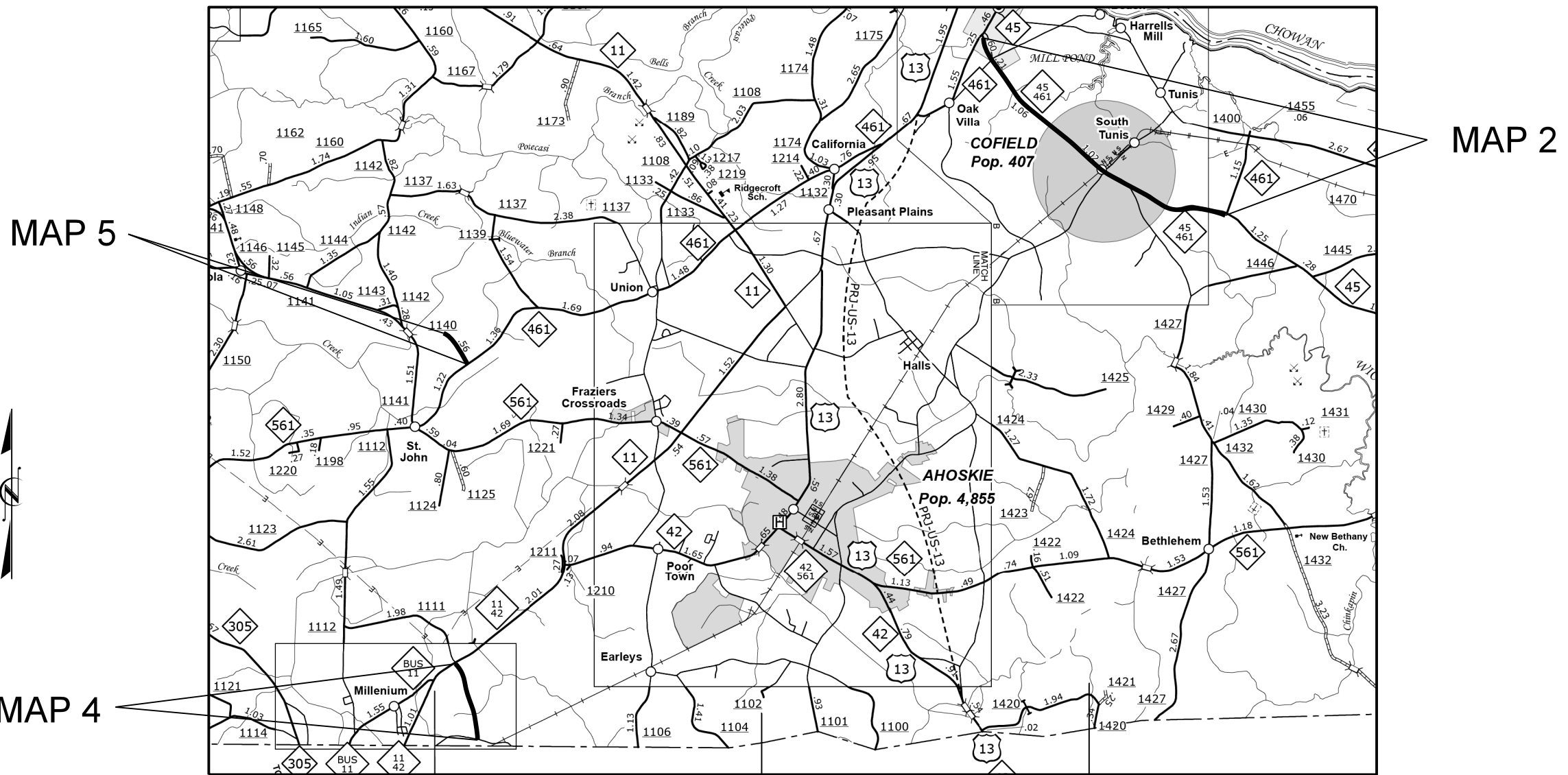
LOCATION: MAP 2 - NC 45 (HERTFORD CO.) FROM NC 461 TO INT. OF NC 45 AND NC 461

MAP 4 - SR 1109 FROM SR 1110 TO NC 11

MAP 5 - SR 1140 FROM DEAD END TO NC 461

TYPE OF WORK:

MILLING, RESURFACING, FULL DEPTH RECLAMATION AND SHOULDER RECONSTRUCTION



CONTRACT: DA00515 **WBS NO.: 2022CPT.01.11.10081.1, ETC.**

26-OCT-2021 09:59 S:\Contracts\6) Proposed Resurfacing\DA00515 Bertie (North)-Hertford Primary & FDR\Design Files\DA00515_tsn2.dgn \$\$\$USERNAME\$\$\$

GRAPHIC SCALES

NTS

PROJECT LENGTH

MAP 2 = 4.55 MILES
MAP 4 = 1.10 MILES
MAP 5 = 0.54 MILES

LENGTH PROJECT 2020CPT.01.11.20081.1, ETC. = 12.86 MI.

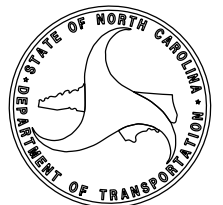
Prepared in the Office of:
DIVISION OF HIGHWAYS
113 Airport Dr., Edenton NC, 27932

2018 STANDARD SPECIFICATIONS

W. B. HOBBS, PE
DIVISION PROJECT TEAM LEAD

CHRIS SLACHTA
DIVISION CONTRACT ENGINEER

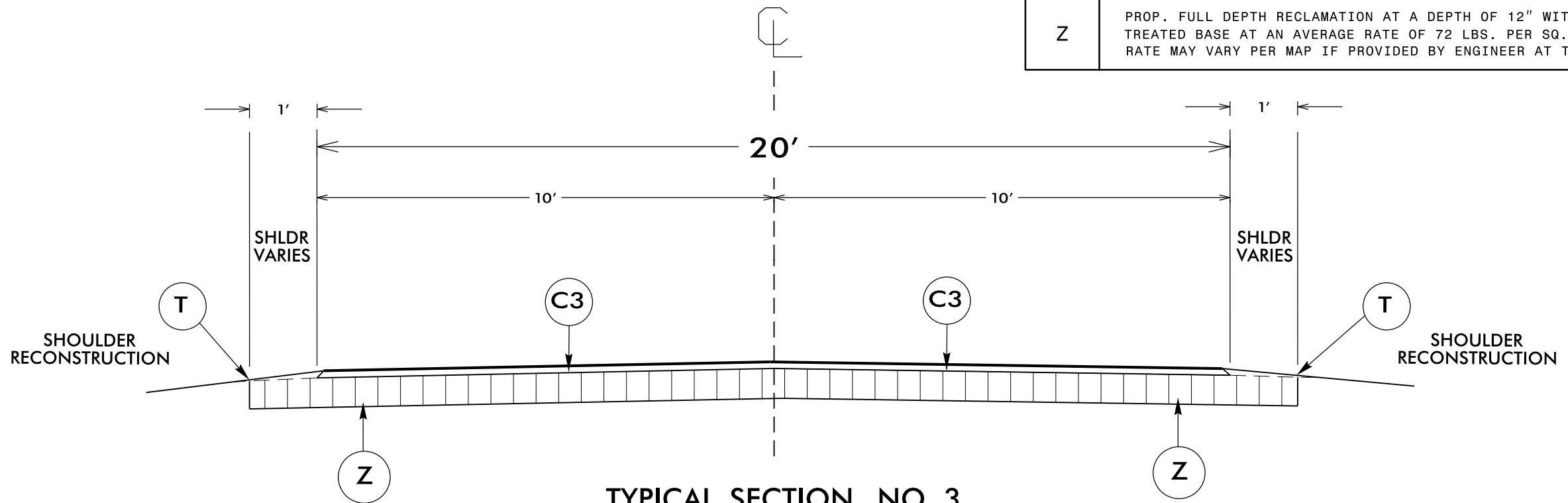
S. P. FENWICK, PLS
DIVISION DESIGN ENGINEER



1. VEGETATION MUST BE REMOVED FROM SHOULDER PRIOR TO PERFORMING FULL DEPTH RECLAMATION (FDR) OUT TO 20'
2. CONTRACTOR IS REQUIRED TO HAVE AN OPERATIONAL & EFFECTIVE DUST SUPPRESSION SYSTEM, THROUGHOUT THE CEMENT APPLICATION PROCESS.
3. CEMENT LADEN WATER MUST NOT BE ALLOWED TO LEAVE ROADWAY.
4. IF ASPHALT CURING SEAL IS APPLIED, BLOTTING MATERIAL MUST BE THOROUGHLY REMOVED PRIOR TO PLACING ASPHALT CONCRETE SURFACE COURSE.
5. CONTRACTOR SHALL WET CURE FDR FOR 24 HOURS PRIOR TO PAVING. DO NOT LET THE SURFACE OF FDR DRY OUT. A TACK COAT BETWEEN FDR AND NEXT LAYER OF ASPHALT PAVEMENT IS REQUIRED.
6. "NO" TRAFFIC WILL BE ALLOWED ON CEMENT TREATED BASE PRIOR TO PLACEMENT OF THE ASPHALT CONCRETE SURFACE COURSE.
7. PAVEMENT MARKINGS TO BE APPLIED BY THE CONTRACTOR.
8. SHOULDER RECONSTRUCTION TO BE COMPLETED BY THE CONTRACTOR.

P A V E M E N T S C H E D U L E

C1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C3	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 336 LBS. PER SQ. YD.
T	EARTH MATERIAL
U	EXISTING PAVEMENT.
V1	MILLING ASPHALT PAVEMENT. 1.5" IN DEPTH.
Z	PROP. FULL DEPTH RECLAMATION AT A DEPTH OF 12" WITH PORTLAND CEMENT TREATED BASE AT AN AVERAGE RATE OF 72 LBS. PER SQ. YD. (APPLICATION RATE MAY VARY PER MAP IF PROVIDED BY ENGINEER AT TIME OF CONSTRUCTION)



TYPICAL SECTION NO. 3
USE WITH: MAPS 3, 4, & 5

NOTES:

* ALL INTERSECTING ROADS ARE TO BE RESURFACED TO THE ENDS OF THEIR RADII, THE MAIN LINE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER. THIS SHALL INCLUDE ANY TAPERS AND TURN LANES LOCATED BOTH ON THE MAIN LINE OR INTERSECTING PAVED ROADWAY.

* A TACK COAT BETWEEN THE FDR LAYER AND THE SURFACE COURSE LAYER IS REQUIRED

NTS

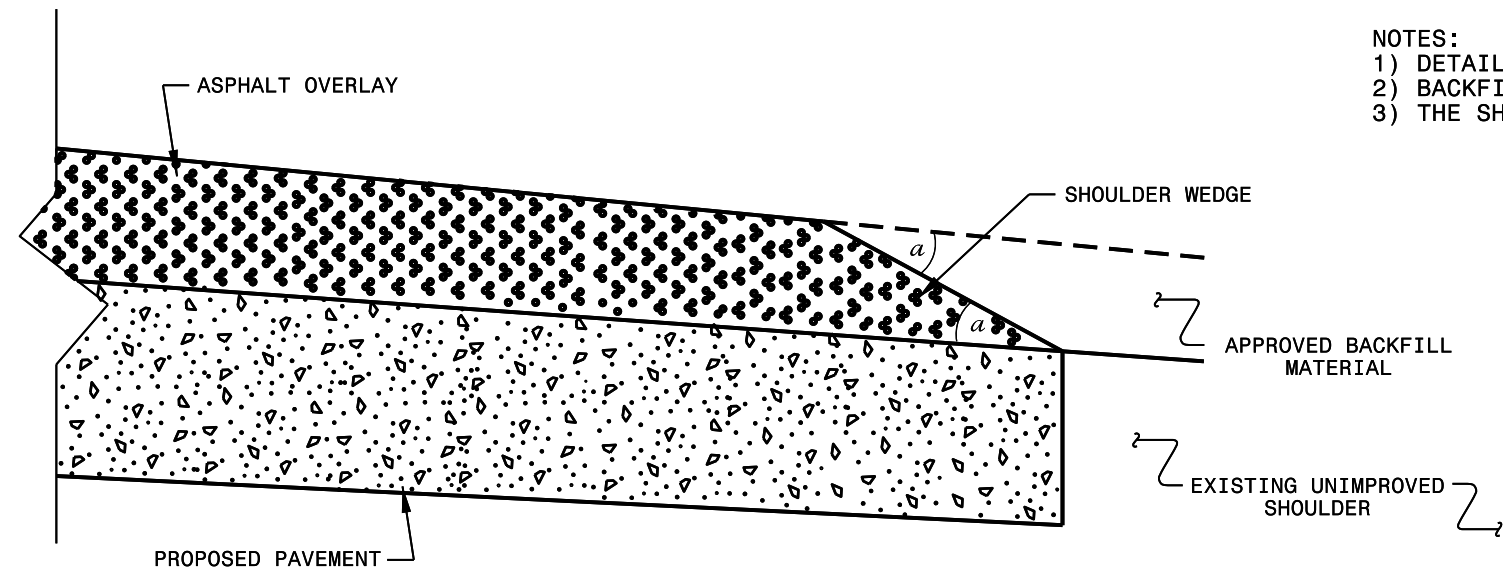
SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	MATERIAL TRANSFER VEHICLE	LENGTH	WIDTH	MOBILIZATION	BORROW EXCAVATION	SOIL CEMENT BASE	PORTLAND CEMENT FOR SOIL CEMENT BASE	INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTION	MILLING ASPHALT PAVEMENT (1%)	INCIDENTAL MILLING	ASPHALT CONCRETE INTERMEDIATE COURSE, I19.0C	ASPHALT CONCRETE SURFACE COURSE, S9.5C	ASPHALT BINDER FOR PLANT MIX	GENERIC PAVING ITEM FULL DEPTH PATCHING, 0-5"	ADJUSTMENT OF MANHOLES	TEMPORARY SILT FENCE	COIR FIBER WATTLE	SEEDING & MULCHING	RESPONSE FOR EROSION CONTROL
											MI	FT	EA	CY	SY	TON	TONS	SMI	SY	SY	TONS	TONS	TONS	TON	EA	LF	LF	ACR	EA
2022CPT.01.11.10081.1	Bertie	1	NC 305	SR 1221 CHARLES TAYLOR RD TO US 13	1	2	2WU	NO	NO	YES	3.57	24	1	714			71	7.14	50,266	500	7,657	4,668	648	66		100	100	3.6	4
TOTAL FOR PROJ NO. 2022CPT.01.11.10081.1											3.57	24	1	714			71	7.14	50,266	500	7,657	4,668	648	66		100	100	3.6	4
2022CPT.01.11.10461.1	Hertford	2	NC 45 HERTFORD CO	NC 461 TO NC 45/NC 461 INTERSECTION	2	2	2WU	NO	NO	YES	4.55	26	*	910			91	9.10	69,403	6,466		7,010	421	947	1	100	100	4.6	5
TOTAL FOR PROJ NO. 2022CPT.01.11.10461.1											4.55	26	*	910			91	9.10	69,403	6,466		7,010	421	947	1	100	100	4.6	5
2022CPT.01.11.20082.1	Bertie	3	SR 1231 BRICK MILL RD	HERTFORD CL TO SR 1228 EARLY STATION RD	3	2	2WU	NO	NO	NO	3.1	20	*	620	40,009	1,209	62	6.20				6,721	450			100	100	3.1	3
TOTAL FOR PROJ NO. 2022CPT.01.11.20082.1											3.1	20	*	620	40,009	1,209	62	6.20				6,721	450			100	100	3.1	3
2022CPT.01.11.20462.1	Hertford	4	SR 1109 JOE HOLLOMAN RD	SR 1110 BRICKMILL RD TO NC 11	3	2	2WU	NO	NO	NO	1.1	20	*	220	14,197	429	22	2.20				2,384	160			100	100	1.1	2
2022CPT.01.11.20462.1	Hertford	5	SR 1140 MCCASKEY RD	DEAD END TO NC 461	3	2	2WU	NO	NO	NO	0.54	20	*	108	6,969	211	11	1.08				1,170	78			54	100	0.5	2
TOTAL FOR PROJ NO. 2022CPT.01.11.20462.1											1.64	20	*	328	21,166	640	33	3.28				3,554	238			154	200	1.6	4
GRAND TOTAL											12.86		1	2,572	61,175	1,849	257	25.72	119,669	6,966	7,657	21,953	1,757	1,013	1	454	500	12.9	16

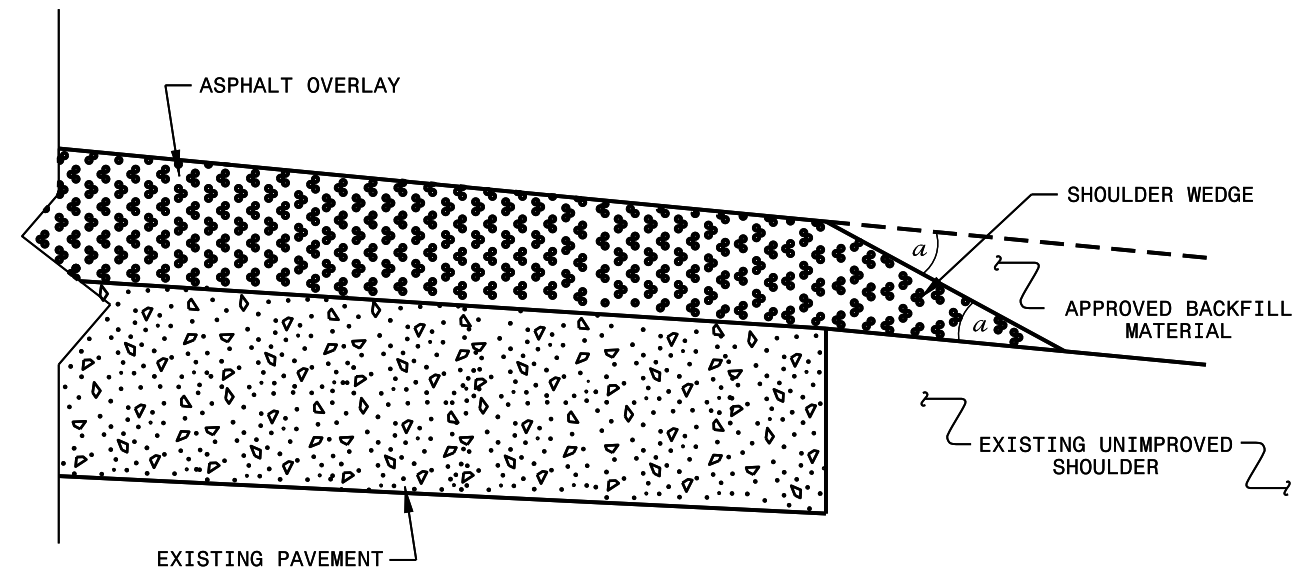
THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	WORK ZONE SIGNS (BARRICADE MOUNTED)	WORK ZONE ADV/GEN WARNING SIGNING	DRUMS	BARRICADES (TYPE III)	TEMPORARY TRAFFIC CONTROL (SP)	THERMO PAVEMENT MARKING LINES (6", 90 MILS) WHITE	THERMO PAVEMENT MARKING LINES (6", 90 MILS) YELLOW	THERMO PAVEMENT MARKING CHARACTER (90 MILS), RXR	THERMO PAVEMENT MARKING SYMBOL (90 MILS), LT ARROW	THERMO PAVEMENT MARKING SYMBOL (90 MILS), RT ARROW	PAINT PAVEMENT MARKING LINES (4") WHITE	PAINT PAVEMENT MARKING LINES (4") YELLOW	PAINT PAVEMENT MARKING LINES (16")	PAINT PAVEMENT MARKING LINES (24")	PAINT PAVEMENT MARKING CHARACTER (MSG RXR)	PAINT PAVEMENT MARKING SYMBOL (LT ARROW)	PAINT PAVEMENT MARKING SYMBOL (RT ARROW)	GENERIC PAVEMENT MARKING ITEM, THERMO LINE 16" 90 MILS (SP)	GENERIC PAVEMENT MARKING ITEM, THERMO LINE 24" 90 MILS (SP)	GENERIC PAVEMENT MARKING ITEM, THERMO HOT SPRAY LINES (4" 55 MILS) WHITE	GENERIC PAVEMENT MARKING ITEM, THERMO HOT SPRAY LINES (4" 55 MILS) YELLOW	GENERIC PAVEMENT MARKING ITEM, NON-CAST IRON SNOWPLOWABLE PAVEMENT MARKER					
								MI	FT	SF	SF	EA	LF	LS	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
2022CPT.01.11.10081.1	Bertie	1	NC 305	SR 1221 CHARLES TAYLOR RD TO US 13	1	2	2WU	3.57	24		408			1	38,413	23,562				76,826	47,124		72					36			236					
TOTAL FOR PROJ NO. 2022CPT.01.11.10081.1											3.57	24		408			1	38,413	23,562				76,826	47,124		72							36			236
2022CPT.01.11.10461.1	Hertford	2	NC 45 HERTFORD CO	NC 461 TO NC 45/NC 461 INTERSECTION	2	2	2WU	4.55	26		552			*	48,958	30,030	4	4	1	48,958	30,030	200	360	4	4	1	200	360		300						
TOTAL FOR PROJ NO. 2022CPT.01.11.10461.1											4.55	26		552			*	48,958	30,030	4	4	1	48,958	30,030	200	360	4	4	1	200	360		300			
2022CPT.01.11.20082.1	Bertie	3	SR 1231 BRICK MILL RD	HERTFORD CL TO SR 1228 EARLY STATION RD	3	2	2WU	3.1	20	109	376	77	77.50	*						33,356	20,460							33,356	20,460							
TOTAL FOR PROJ NO. 2022CPT.01.11.20082.1											3.1	20	109	376	77	77.50	*								33,356	20,460							33,356	20,460		
2022CPT.01.11.20462.1	Hertford	4	SR 1109 JOE HOLLOMAN RD	SR 1110 BRICKMILL RD TO NC 11	3	2	2WU	1.1	20	35	216		25.00	*						11,836	7,260						11,836	7,260								
2022CPT.01.11.20462.1	Hertford	5	SR 1140 MCCASKEY RD	DEAD END TO NC 461	3	2	2WU	0.54	20	35	168		25.00	*						5,810	3,564						5,810	3,564								
TOTAL FOR PROJ NO. 2022CPT.01.11.20462.1											1.64	20	70	384		50									17,646	10,824							17,646	10,824		
GRAND TOTAL											12.86		179	1,720	77	127.5	1	87,371	53,592	4	4	1	176,786	108,438	200	432	4	4	1	200	396		51,002	31,284	536	

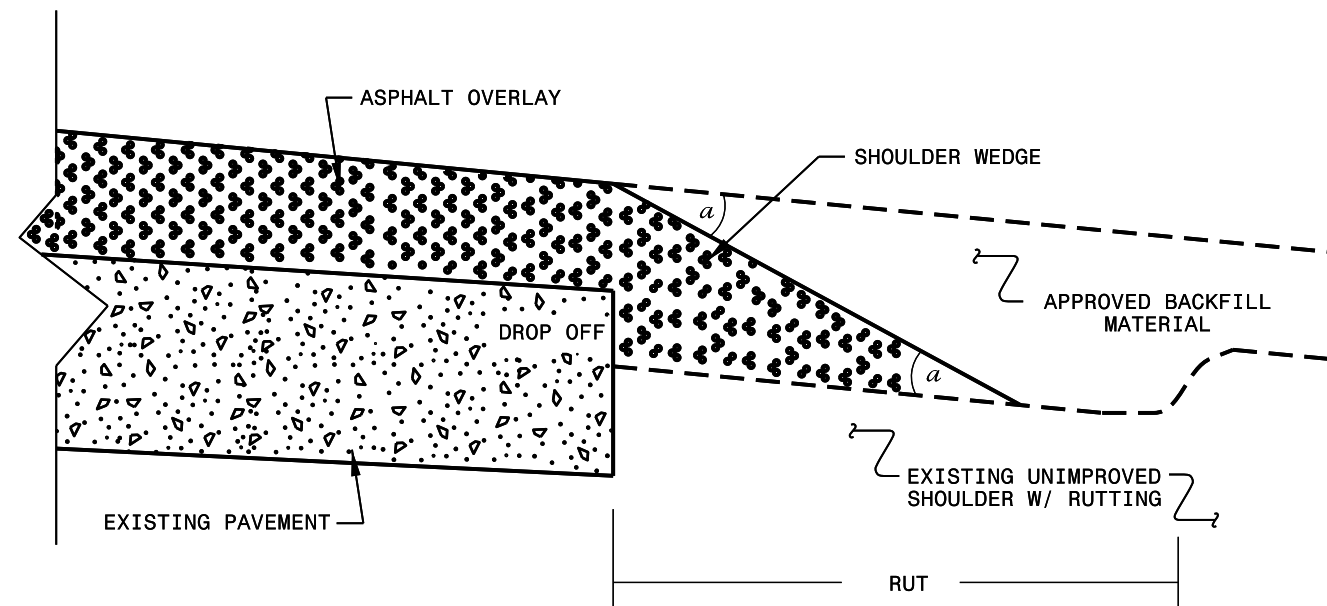
- NOTES:
 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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



SHOULDER WEDGE DETAIL
 (Resurfacing Projects w/ NO Widening)





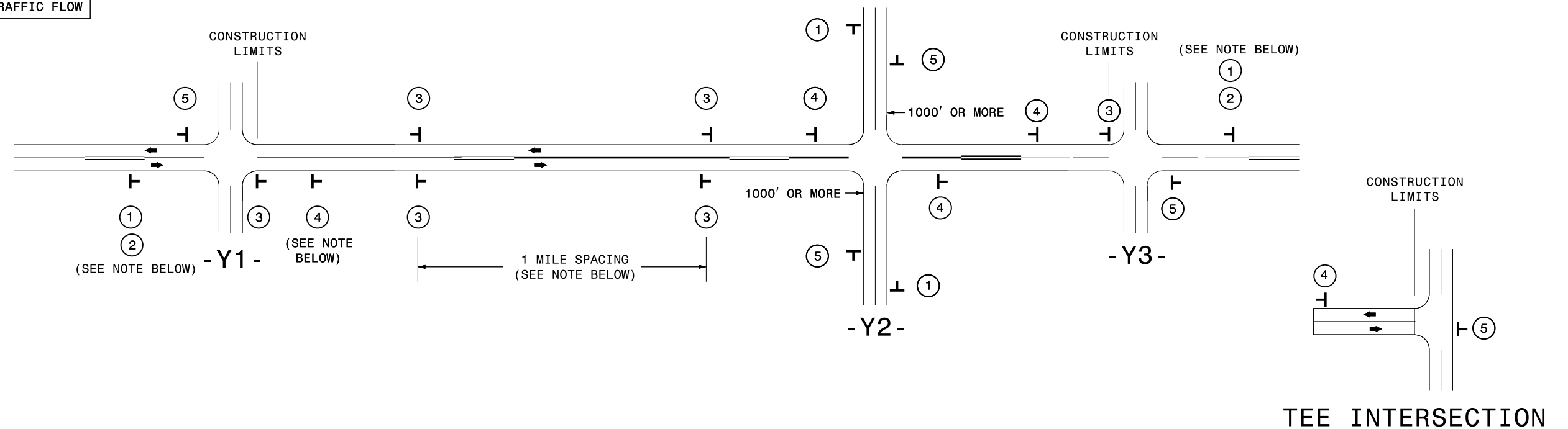
SHOULDER WEDGE DETAIL
 (Resurfacing Adjacent to
 Rutted Shoulder)

- 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:	10/16/12
CHECKED BY:		DATE:	
FILE SPEC.:	s:\usr\details\stand\shoulderwedgedetail.dgn		






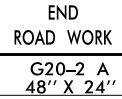
SIGNING FOR RESURFACING PROJECTS

LEGEND
 STATIONARY SIGN
 DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING


-Y- LINE SIGNING


SIGNING NOTES AND PLACEMENT PER DIRECTION	①		PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.
	②		#2 SIGN ONLY USED WHEN CONSTRUCTION LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)
	③	 	- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 1/2 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.
	④		- THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. - DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. - INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. - FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500' OF EACH APPROACH. - A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN. - FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE.
	⑤		PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.
THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE START OF CONTRACT WORK.			
FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.			

NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:


- 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE
- 2) SUBDIVISION ROADS
- 3) DEAD END ROADS

WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.


W20-1
48" X 48"


W20-7 A
48" X 48"

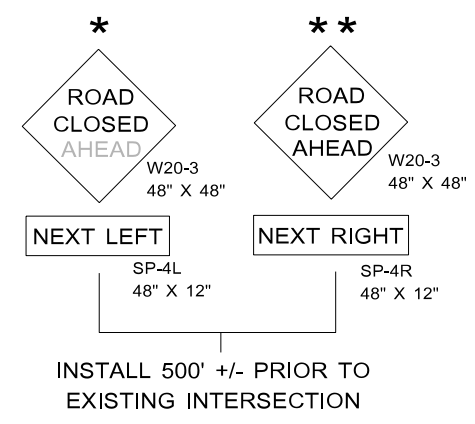
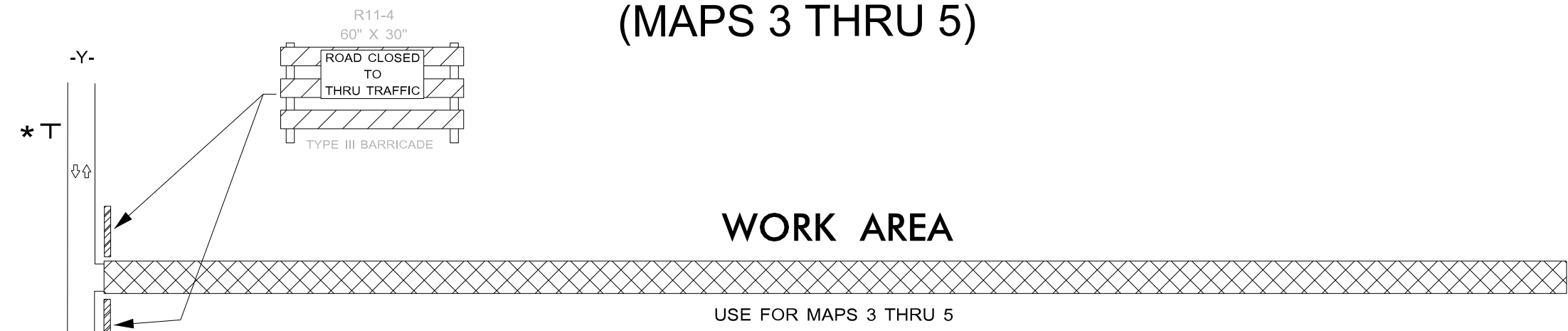
PLACED 500' IN ADVANCE OF FLAGGER.



ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2-LANE ROADWAY RESURFACING

18-OCT-2021 10:04 Proposed Resurfacing DA000515 Bertie (North)-Hertford Primary & FDR\Design Files\DA000515_DL.sh3-4_6-ll.dgn

ROAD CLOSURE (MAPS 3 THRU 5)



ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "2018 NCDOT STANDARD ROADWAY DRAWINGS" ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1135.01	CONES
1145.01	BARRICADES
904.10	ORIENTATION OF GROUND MOUNTED SIGNS

GENERAL NOTES

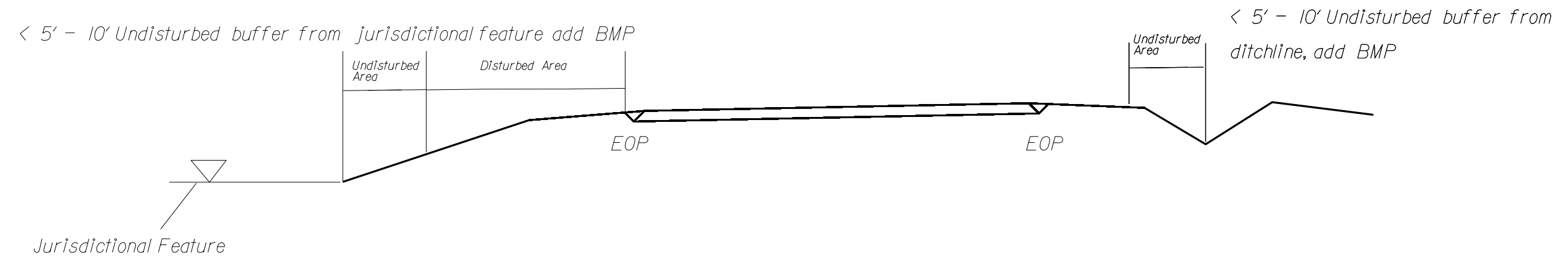
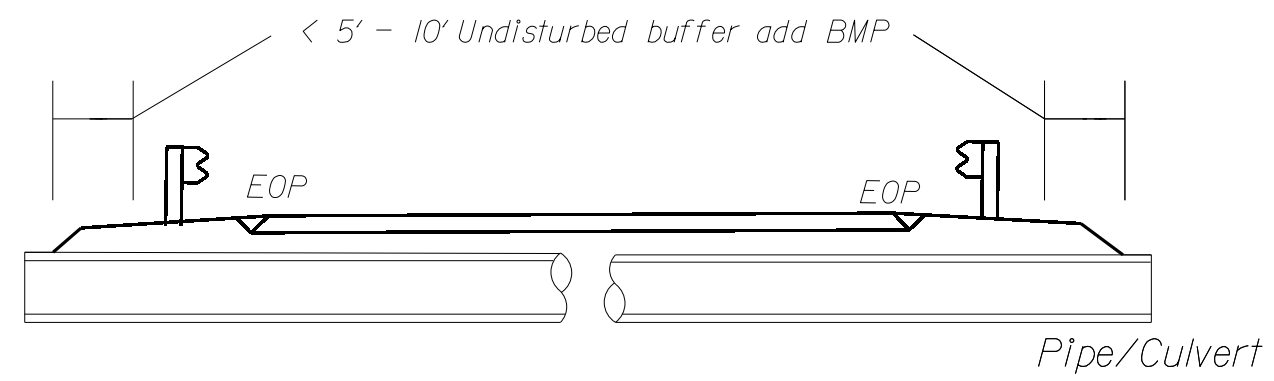
1. PROVIDE A MINIMUM 21 CALENDAR DAY NOTICE TO STATE FORCES BEFORE A ROADWAY IS CLOSED TO TRAFFIC SUCH THAT THE NECESSARY PROVISIONS CAN BE MADE TO INFORM LOCAL EMERGENCY AND LAW ENFORCEMENT PERSONNEL, SCHOOLS OR ANY OTHER PARTIES AFFECTED BY THE ROAD CLOSURE.
2. INSTALL SIGNS BEFORE THE BARRICADES WHEN CLOSING THE ROADWAY TO TRAFFIC. REMOVE BARRICADES BEFORE SIGNS WHEN OPENING THE ROADWAY TO TRAFFIC. INSTALL/REMOVE SIGNS AND BARRICADES WITHIN THE SAME CALENDAR DAY.
3. SEE STANDARD SPECIFICATION 1089-1 FOR WORK ZONE SIGNS.
4. SEE STANDARD SPECIFICATION 1089-2 FOR WORK ZONE SIGN SUPPORTS.

LEGEND	
	DIRECTION OF TRAFFIC FLOW
	BARRICADE (TYPE III)
	STATIONARY MOUNTED SIGN

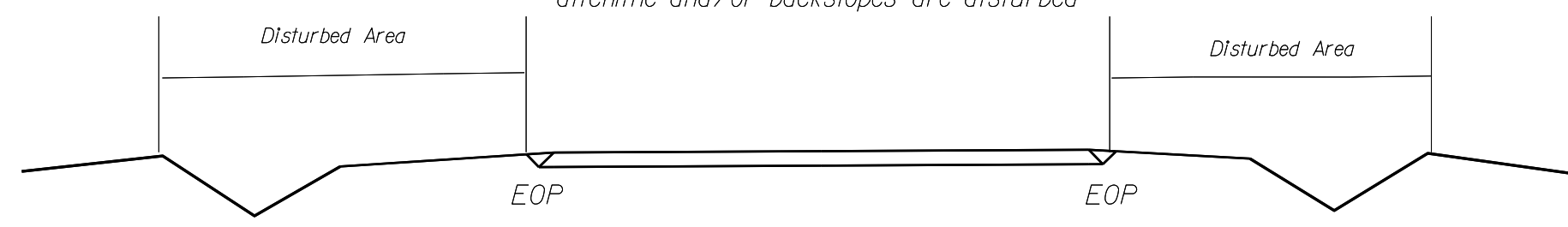
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle or Silt Fence

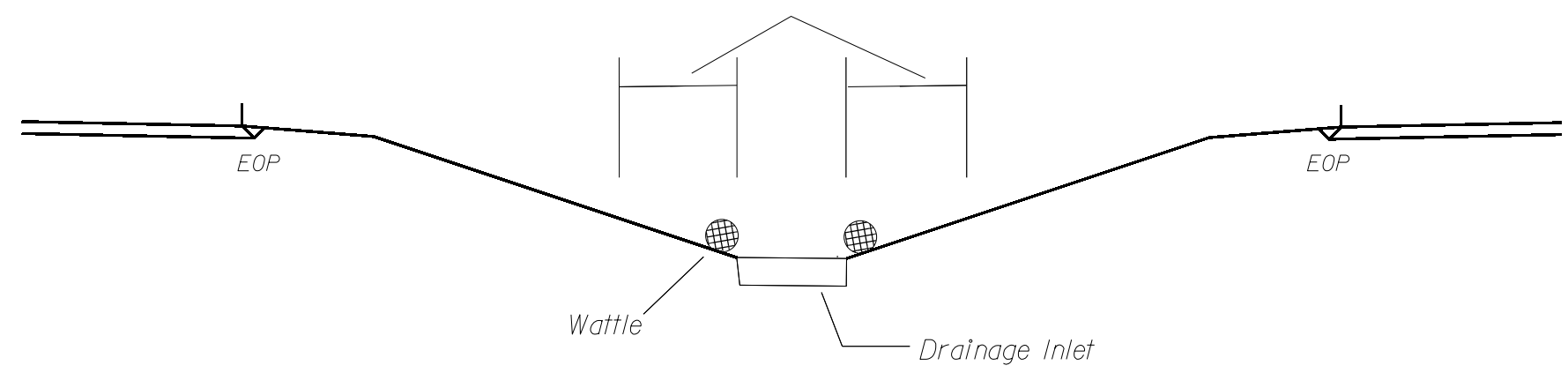
EROSION CONTROL DETAIL



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

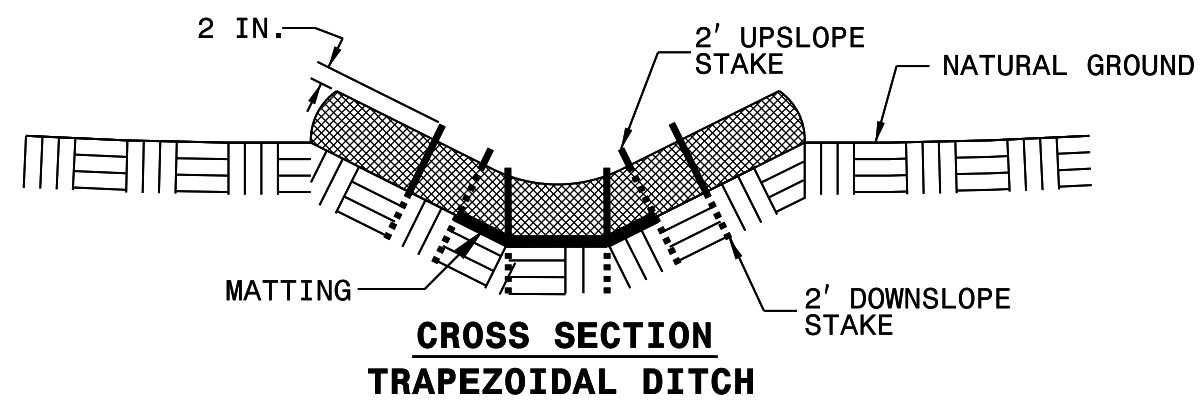
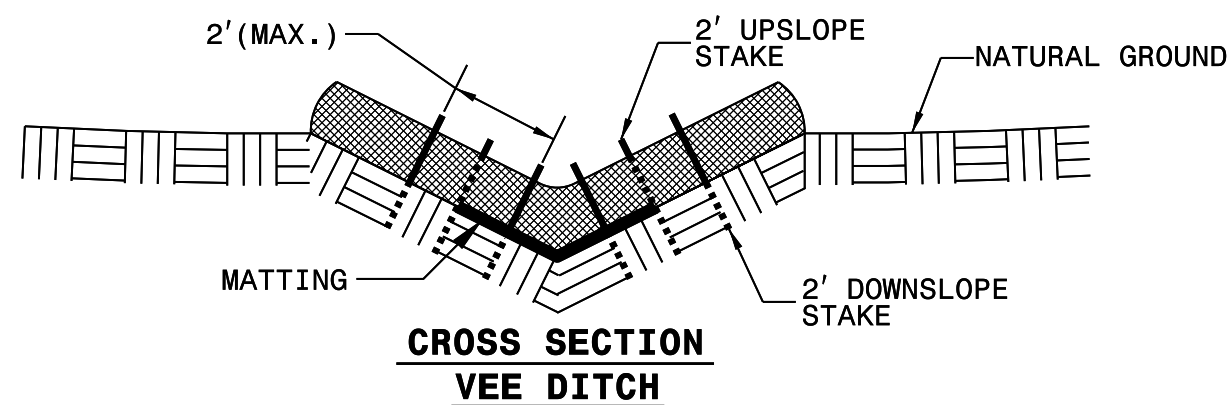
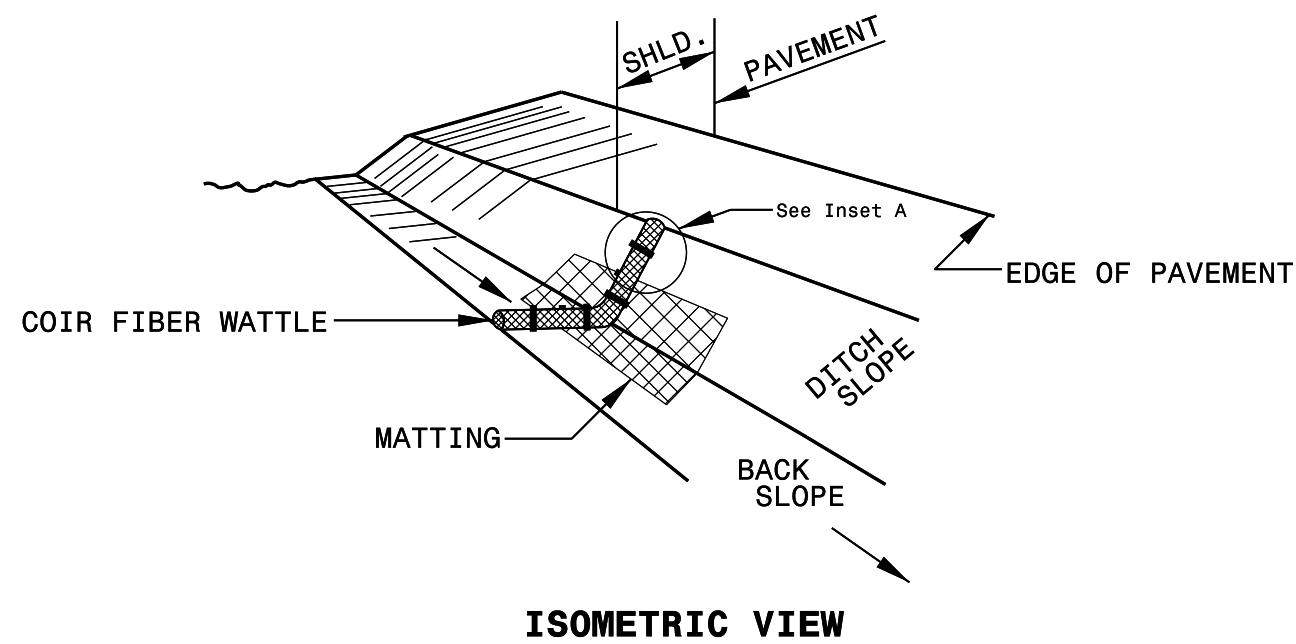


< 5' - 10' Undisturbed buffer from inlet, add wattle



NOT TO SCALE

COIR FIBER WATTLE DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

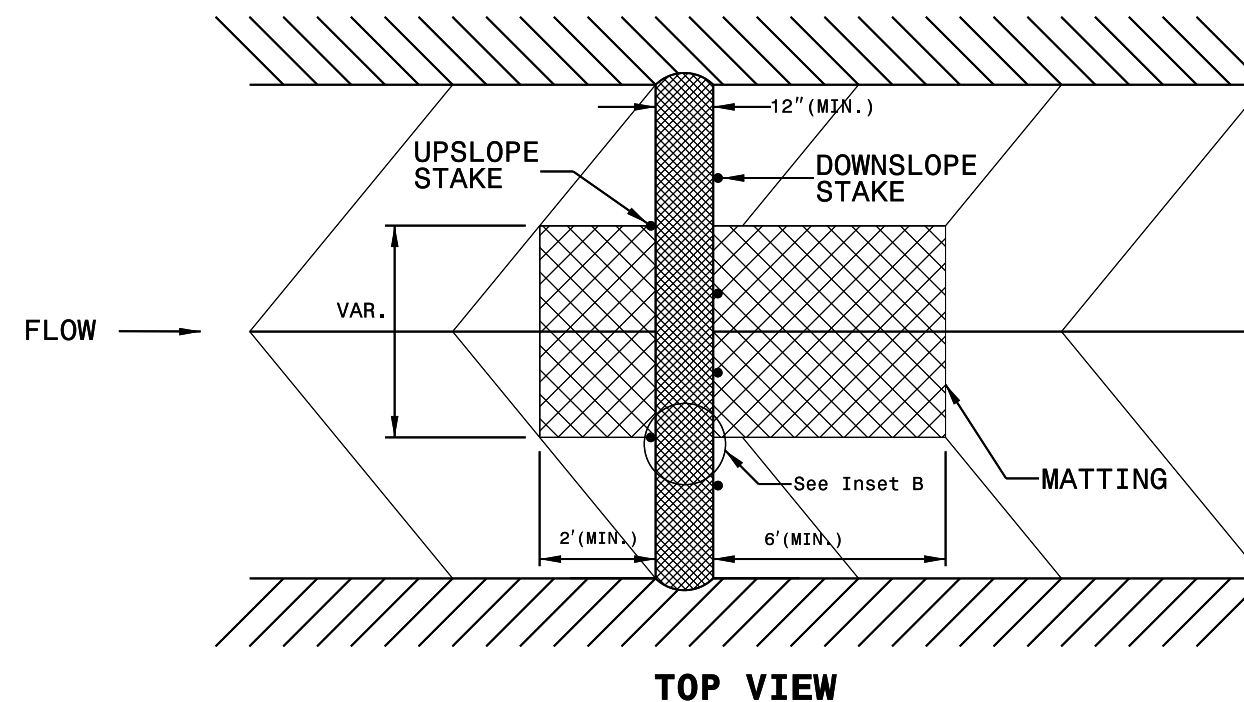
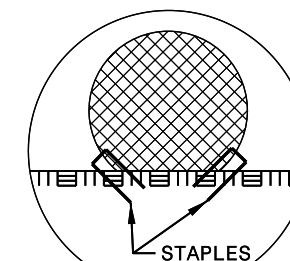
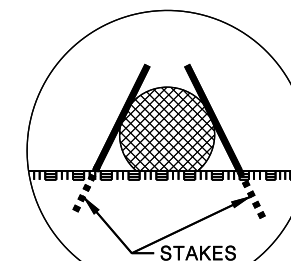
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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.



DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

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 (HOW) 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 HOW ZONES.