

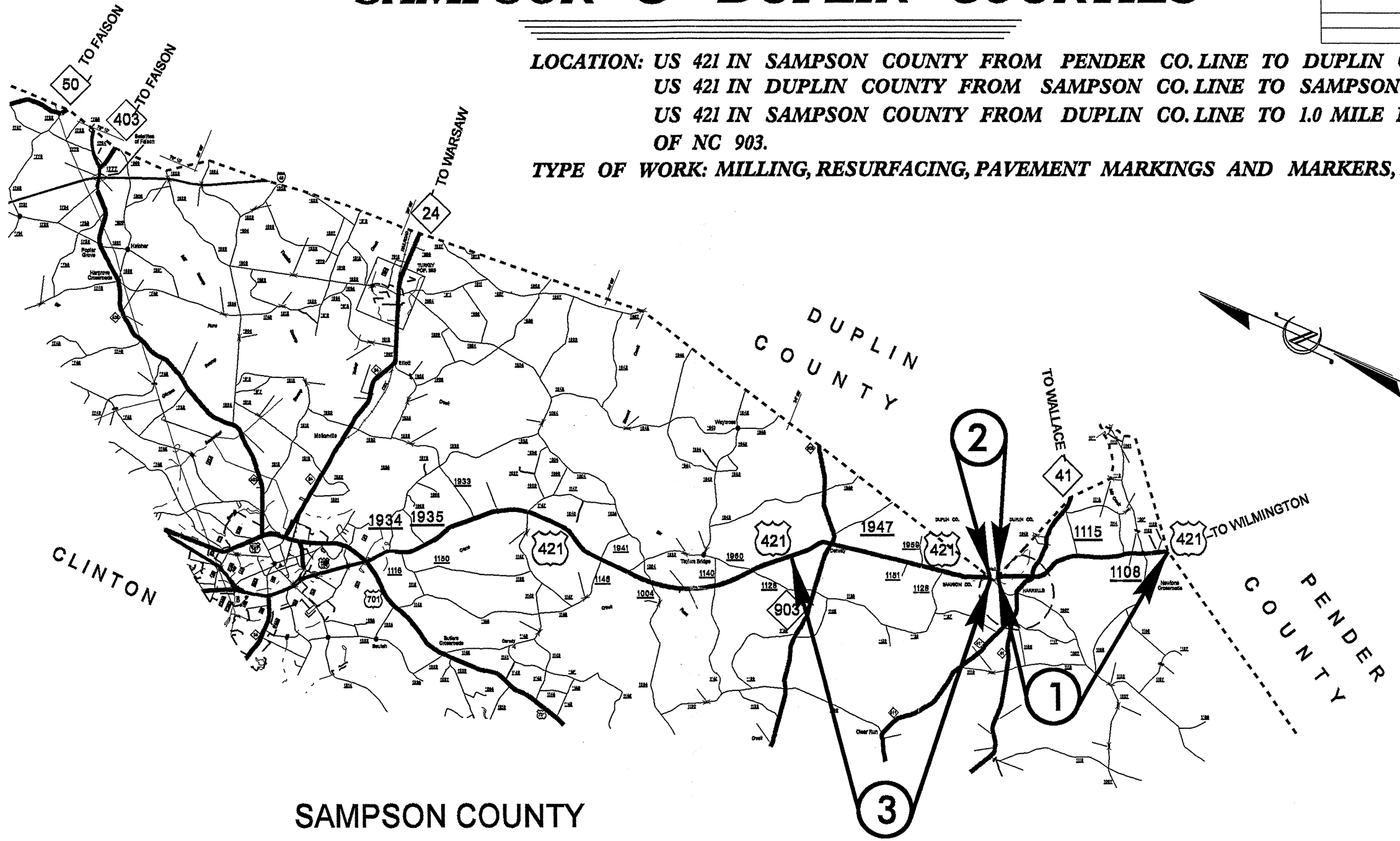
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SAMPSON & DUPLIN COUNTIES

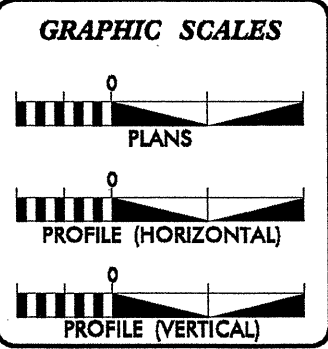
LOCATION: US 421 IN SAMPSON COUNTY FROM PENDER CO. LINE TO DUPLIN CO. LINE,
US 421 IN DUPLIN COUNTY FROM SAMPSON CO. LINE TO SAMPSON CO. LINE,
US 421 IN SAMPSON COUNTY FROM DUPLIN CO. LINE TO 1.0 MILE NORTH
OF NC 903.

TYPE OF WORK: MILLING, RESURFACING, PAVEMENT MARKINGS AND MARKERS, ETC.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	3CR.10311.111, ETC.	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
3CR.10311.111		DUPLIN	
3CR.10821.111		SAMPSON	



CONTRACT: W.B.S. NO.(S): 3CR.10311.111 & 3CR.10821.111



DESIGN DATA

ADT	=	
ADT	=	
DHV	=	%
D	=	%
T	=	% *
V	=	MPH
* TTST		DUAL

PROJECT LENGTH

MAP NO. 1	=	4.82 MI.
MAP NO. 2	=	0.18 MI.
MAP NO. 3	=	5.42 MI.
TOTAL	=	10.42 MI.

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: _____

LETTING DATE: _____

PROJECT ENGINEER: _____

DNL
PROJECT DESIGN TECHNICIAN

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

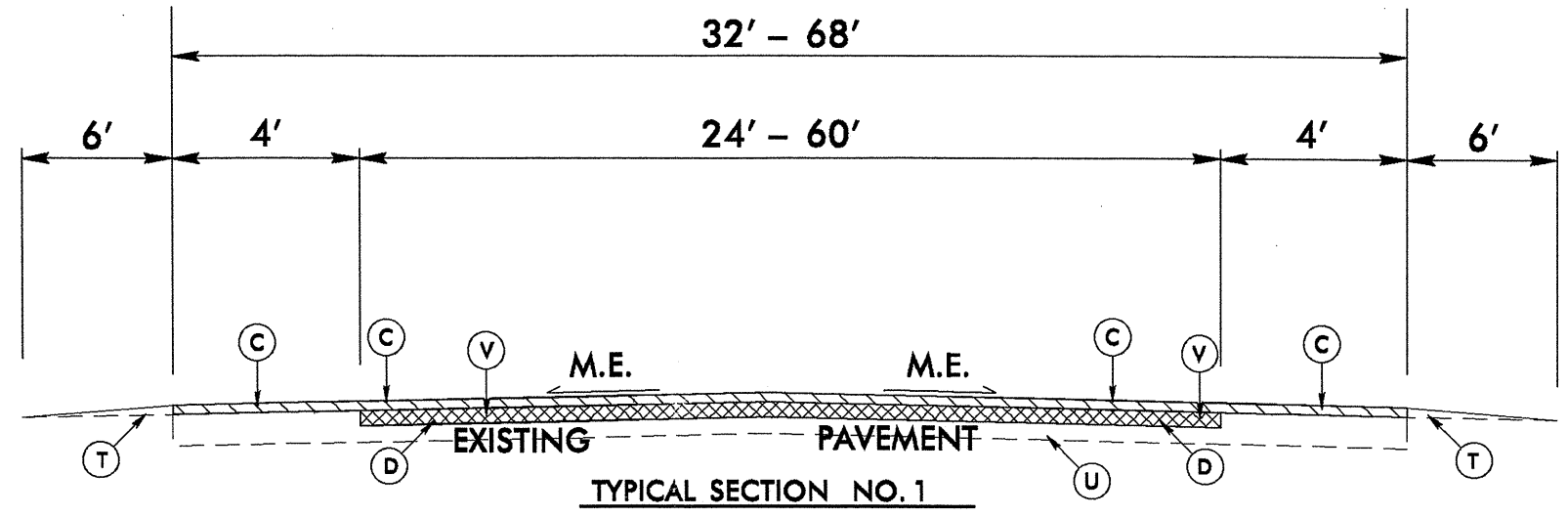
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digitave

8/17/99

15-MAR-2011 07:44
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REVISIONS

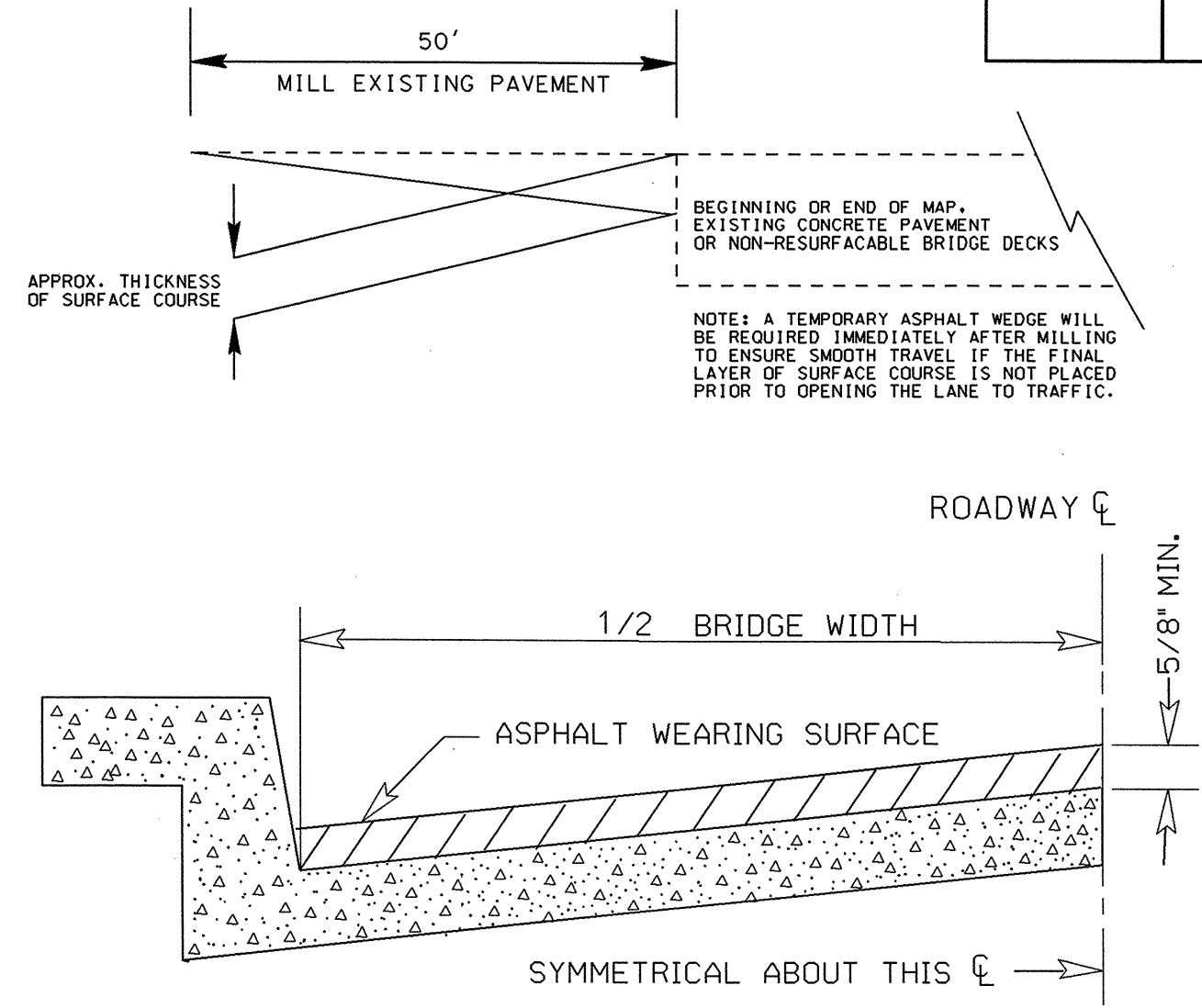
PROJECT REFERENCE NO. 3CR.10311.111, ETC.	SHEET NO. 2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



PAVEMENT SCHEDULE	
C	PROP. APPROX. 1½" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE 89.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	PROP. APPROX. 4" DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
T	EARTH MATERIAL (SHOULDER RECONSTRUCTION)
U	EXISTING PAVEMENT.
V	MILLING BITUMINOUS PAVEMENT. 4 " DEPTH.

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
 SEE STD. DRAWING 1205.01, SHEET 2 OF 2, TABLE 1 FOR EDGE LINE OFFSETS.
 M.E. = MATCH EXISTING

PROJECT REFERENCE NO. 3CR.10311.111, ETC.	SHEET NO. 3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



BRIDGE HALF TYPICAL SECTION

FOR BRIDGES WITH FLOOR DRAINS, CARE SHALL BE EXERCISED IN PLACING THE WEARING SURFACE AROUND FLOOR DRAINS SO AS NOT TO HINDER EFFECTIVE DRAINAGE. ALL DRAINS SHALL BE LEFT OPEN.

THE PROPOSED WEARING SURFACE SHALL VARY IN THICKNESS AS NECESSARY TO PROVIDE A SMOOTH RIDING SURFACE. A THICKNESS OF NOT LESS THAN 5/8" SHALL BE PROVIDED. THE MAXIMUM THICKNESS SHALL PREFERABLY BE 1-1/2" UNLESS IT IS IMPRACTICAL TO PROVIDE A SMOOTH RIDING SURFACE OTHERWISE.

REVISIONS

21-MAR-2010 08:39
 S:\Projects\2010\3CR10311\111\Resurfacing\Projects\Division 3\3c.10311.111\sempsonduplin\Revised Files\us421.2007-rdy-tyr.dgn
 8.6Z\PPF

PROJECT NO.	SHEET NO.	TOTAL NO.
CR.10821.111, 3CR.10311.11	4	5

SUMMARY OF QUANTITIES

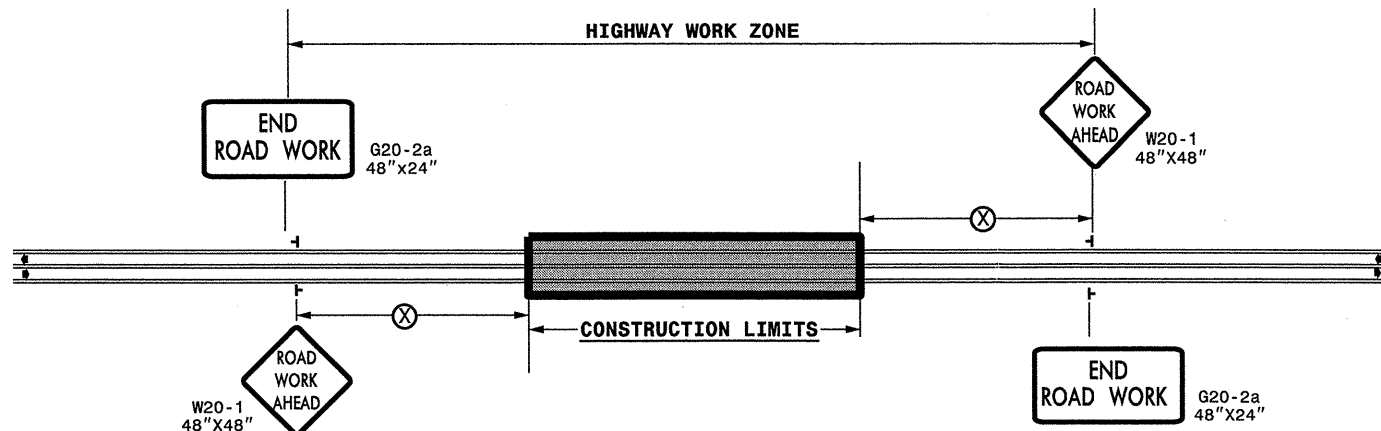
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	BORROW EXC. CY	INC. STONE BASE TONS	SHOULDER RECONST. SMI	4" MILLING SY	INC. MILLING SY	INT. COURSE, I19.0C TONS	SURFACE COURSE, S9.5C TONS	PG 64-22 PLANT MIX TONS	PG 70-22 PLANT MIX TONS	TEMP. SILT FENCE LF	STONE FOR EROSION CONTROL, CLASS B TON	SEDIMENT CONTROL STONE TON	TEMP. MULCHING ACR	SEED FOR TEMP. SEEDING LBS	FERTILIZER FOR TEMP. SEEDING TON	MATTING (EROSION CONTROL) SY	1/4" HARDWARE CLOTH LF	WATTLE LF	SEED & MULCHING AC		
3CR.10821.111	Sampson	1	US 421	PENDER COUNTY LINE TO DUPIN COUNTY LINE (MP 0.00-4.82), THEN DUPLIN COUNTY LINE TO 1.0 MILE NORTH OF NC 903 (MP 5.00-10.42)	1	NO	0	32		300			550					1,042	260	260	10	521	3	70	521	160	20.00		
		"	"	FULL WIDTH (MP 0.00-0.53, 0.83-1.16, 1.22-2.42, 2.49-3.73, 4.02-4.82)	1	NO	4.1	32	2,608		8.20	57,728		14,679	7,464	705	440												
		"	"	TAPER 32'-44' (MP 0.53-0.60, 0.77-0.83, 1.16-1.20, 2.42-2.47, 3.73-3.78, 3.95-4.02)	1	NO	0.34	38	216		0.68	5,984		1,517	735	73	43												
		"	"	FULL WIDTH (MP 0.60-0.64, 0.71-0.77, 1.20-1.22, 2.47-2.49, 3.78-3.95)	1	NO	0.31	44	197		0.62	6,547		1,657	775	80	46												
		"	"	TAPER 44'-56' (MP 0.64-0.67, 0.69-0.71)	1	NO	0.05	50	32		0.10	1,232		311	142	15	8												
		"	"	FULL WIDTH (MP 0.67-0.69)	1	NO	0.02	68	13		0.04	704		178	77	9	5												
TOTAL FOR MAP NO. 1							4.82		3,066	300	9.64	72,195	550	18,342	9,193	882	542	1,042	260	260	10	521	3	70	521	160	20.00		
3CR.10821.111	Sampson	3	US 421	FULL WIDTH (MP 5.00-5.04, 5.10-5.18, 9.57-10.42)	1	NO	0.97	32	617		1.94	13,658		3,473	1,766	167	104												
		"	"	TAPER 68'-32' (MP 5.04-5.10)	1	NO	0.06	50	38		0.12	1,478		374	170	18	10												
		"	"	NO WORK (MP 5.18-9.26)	NA	NO	4.08	1																					
		"	"	TAPER 32'-44' (MP 9.26-9.32, 9.50-9.57)	1	NO	0.13	38	83		0.26	2,288		580	281	28	17												
		"	"	FULL WIDTH (MP 9.32-9.37, 9.47-9.50)	1	NO	0.08	44	51		0.16	1,690		428	200	21	12												
		"	"	TAPER 44'-56' (MP 9.37-9.40, 9.42-9.47)	1	NO	0.08	50	51		0.16	1,971		498	227	24	13												
		"	"	FULL WIDTH (MP 9.40-9.42)	1	NO	0.02	68	13		0.04	704		178	77	9	5												
TOTAL FOR MAP NO. 3							5.42		853		2.68	21,789		5,531	2,721	267	161												
TOTAL FOR PROJ NO. 3CR.10821.111							10.24		3,919	300	12.32	93,984	550	23,873	11,914	1,149	703	1,042	260	260	10	521	3	70	521	160	20.00		
3CR.10311.111	Duplin	2	US 421	SAMPSON COUNTY LINE TO SAMPSON COUNTY LINE (MP 4.82-5.00)	1	NO	0	32																					
		"	"	FULL WIDTH (MP 4.82-5.00)	1	NO	0.18	32	114		0.36	2,534		644	328	31	19												
TOTAL FOR MAP NO. 2							0.18		114		0.36	2,534		644	328	31	19												
TOTAL FOR PROJ NO. 3CR.10311.111							0.18		114		0.36	2,534		644	328	31	19												
GRAND TOTAL							10.42		4,033	300	12.68	96,518	550	24,517	12,242	1,180	722	1,042	260	260	10	521	3	70	521	160	20.00		

PROJECT NO.	SHEET NO.	TOTAL NO.
3CR.10311.111	5	5
3CR.10821.111		

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	LENGTH	WIDTH	4685000000-E		4686000000-E		4695000000-E		4710000000-E		4721000000-E		4725000000-E					4810000000-E		4820000000-E		4835000000-E		4840000000-N		4845000000-N				4905000000-N	
							4" X 90 M WHITE THERMO	4" X 120 M YELLOW THERMO	4" X 120 M WHITE THERMO	8" X 90 M WHITE THERMO	8" X 90 M YELLOW THERMO	24" X 120 M WHITE THERMO	THERMO MSG SCHOOL 120 M	THERMO LT ARROW 90 M	THERMO STR ARROW 90 M	THERMO RT ARROW 90 M	THERMO STR & RT ARROW 90 M	4" WHITE PAINT	4" YELLOW PAINT	8" WHITE PAINT	8" YELLOW PAINT	24" WHITE PAINT	PAINT MSG SCHOOL	PAINT LT ARROW	PAINT STR ARROW	PAINT RT ARROW	PAINT STR & RT ARROW	SNOW PLOWABLE MARKERS (Y/Y) EA	SNOW PLOWABLE MARKERS (C/R) EA						
3CR.10821.111	Sampson	1	US 421	PENDER COUNTY LINE TO DUPIN COUNTY LINE (MP 0.00-4.82), THEN DUPIN COUNTY LINE TO 1.0 MILE NORTH OF NC 903 (MP 5.00-10.42)		32					1,350	600	100	12	17	10	3	15					1,350	600	100	12	17	10	3	15					
				FULL WIDTH (MP 0.00-0.53, 0.83-1.16, 1.22-2.42, 2.49-3.73, 4.02-4.82)	4.1	32	43,296	43,296																									271		
				TAPER 32'-44" (MP 0.53-0.60, 0.77-0.83, 1.16-1.20, 2.42-2.47, 3.73-3.78, 3.95-4.02)	0.34	38	3,590	7,181																									45		
				FULL WIDTH (MP 0.60-0.64, 0.71-0.77, 1.20-1.22, 2.47-2.49, 3.78-3.95)	0.31	44	3,274	3,274	1,637																								20	82	
				TAPER 44'-56" (MP 0.64-0.67, 0.69-0.71)	0.05	50	528	528	264																								3	13	
				FULL WIDTH (MP 0.67-0.69)	0.02	68	211	211	211																								1	11	
TOTAL FOR MAP NO. 1					4.82		50,899	54,490	2,112		1,350	600	100	12	17	10	3	15					53,011	54,490	1,350	600	100	12	17	10	3	15	340	106	
3CR.10821.111	Sampson	3	US 421	FULL WIDTH (MP 5.00-5.04, 5.10-5.18, 9.57-10.42)	0.97	32	10,243	10,243																									64		
				TAPER 68'-32" (MP 5.04-5.10)	0.06	50	634	634	634																								4	32	
				NO WORK (MP 5.18-9.26)	4.08	1																													
				TAPER 32'-44" (MP 9.26-9.32, 9.50-9.57)	0.13	38	1,373	2,746																										17	
				FULL WIDTH (MP 9.32-9.37, 9.47-9.50)	0.08	44	845	1,690	422																								5	21	
				TAPER 44'-56" (MP 9.37-9.40, 9.42-9.47)	0.08	50	845	422	422																								5	21	
				FULL WIDTH (MP 9.40-9.42)	0.02	68	211	211	211																								1	11	
TOTAL FOR MAP NO. 3					5.42		14,151	15,946	1,689																								96	85	
TOTAL FOR PROJ NO. 3CR.10821.111					10.24		65,050	70,436	3,801		1,350	600	100	12	17	10	3	15					68,851	70,436	1,350	600	100	12	17	10	3	15	436	191	
							74,237			1,950						45						139,287	1,950					45				627			
3CR.10311.111	Duplin	2	US 421	SAMPSON COUNTY LINE TO SAMPSON COUNTY LINE (MP 4.82-5.00)		32																													
				FULL WIDTH (MP 4.82-5.00)	0.18	32	1,901	950																										12	
TOTAL FOR MAP NO. 2					0.18		1,901	950																										12	
TOTAL FOR PROJ NO. 3CR.10311.111					0.18		1,901	950																										12	
							950																2,851										12		
GRAND TOTAL					10.42		66,951	71,386	3,801		1,350	600	100	12	17	10	3	15					70,752	71,386	1,350	600	100	12	17	10	3	15	448	191	
							75,187			1,950						45						142,138	1,950				45					639			

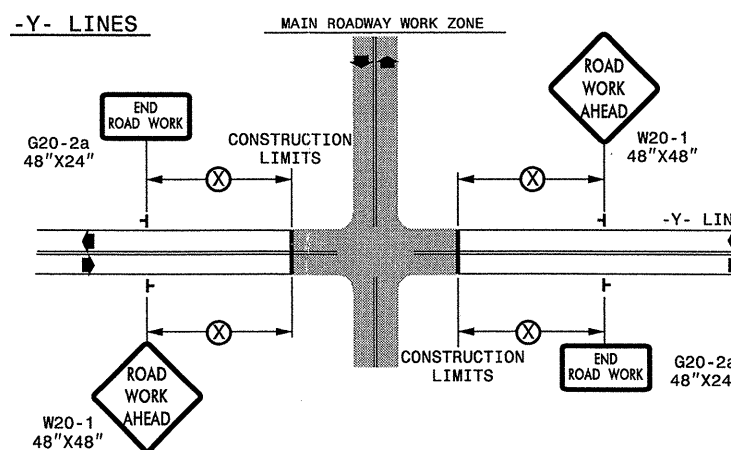
TWO-WAY UNDIVIDED ** (L-LINES)



POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING
≤ 50	500'
≥ 55	1000'

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

ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)



GENERAL NOTES

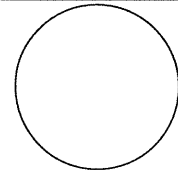
- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.
- ** TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

LEGEND

- ┆ STATIONARY SIGN
- ◀ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1

DETAIL DRAWING FOR
TWO-WAY UNDIVIDED
WORK ZONE WARNING SIGNS

APPROVED: _____ DATE: _____	DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS	
SEAL 	SCALE: NONE	REVISIONS
	DATE: _____	7-98 10/01
	DWG. BY: _____	10-98 03/04
	DESIGN BY: _____	01/01 11/04
	REVIEWED BY: _____	CARD FILE

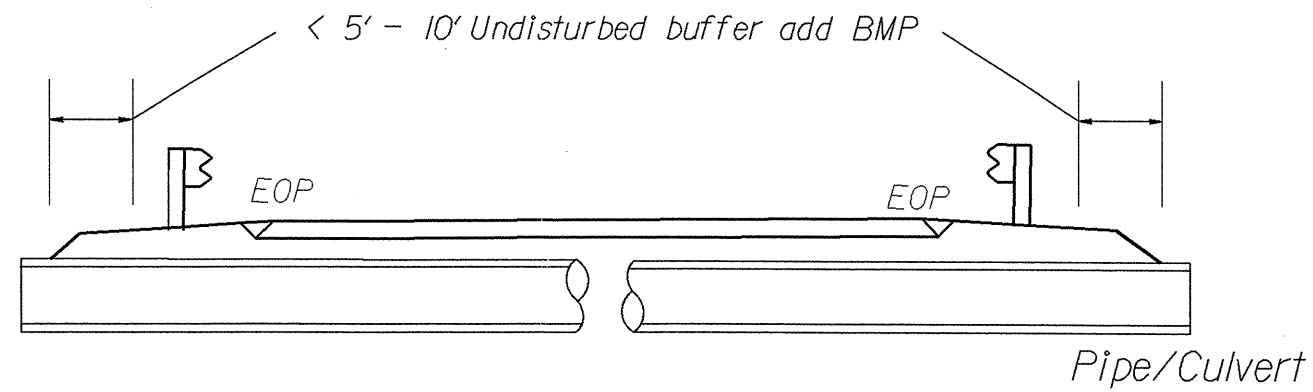
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PROJECT REFERENCE NO. 3CR10311JII, ETC.	SHEET NO. EC-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

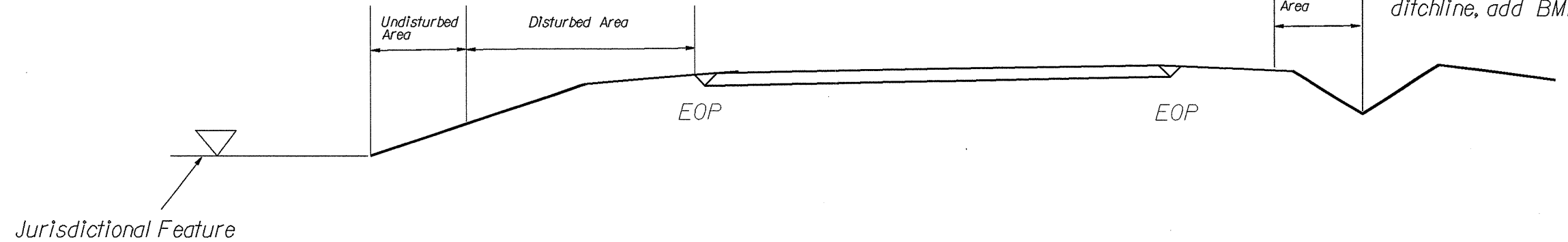
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle or Silt Fence

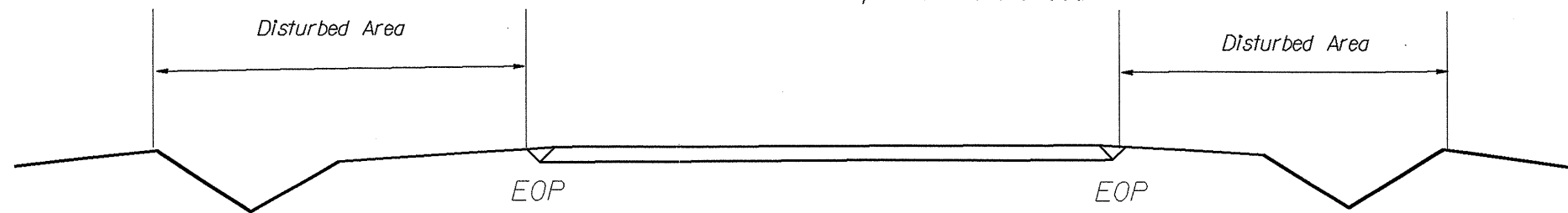
EROSION CONTROL DETAIL



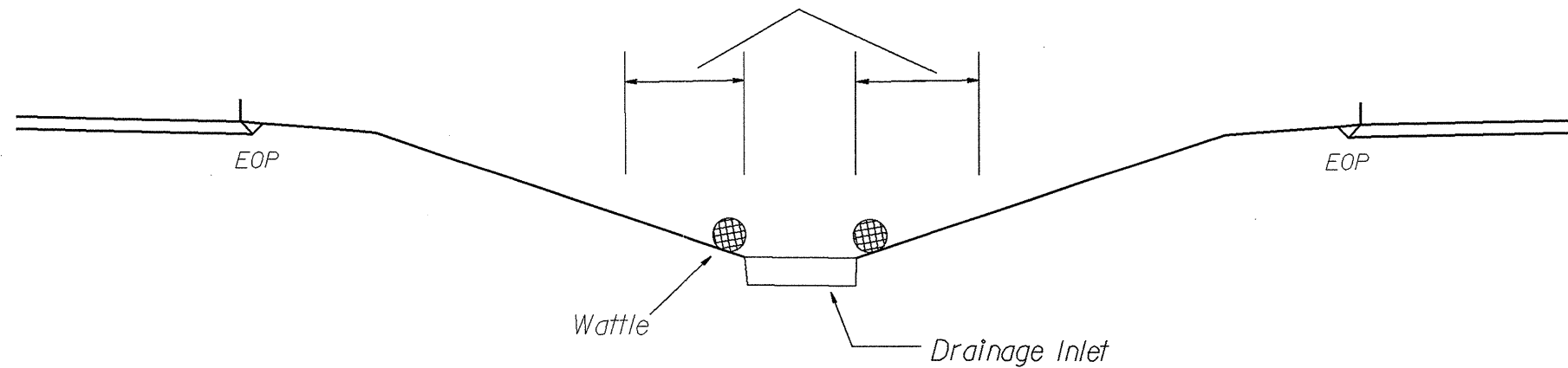
< 5' - 10' Undisturbed buffer from jurisdictional feature add BMP



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



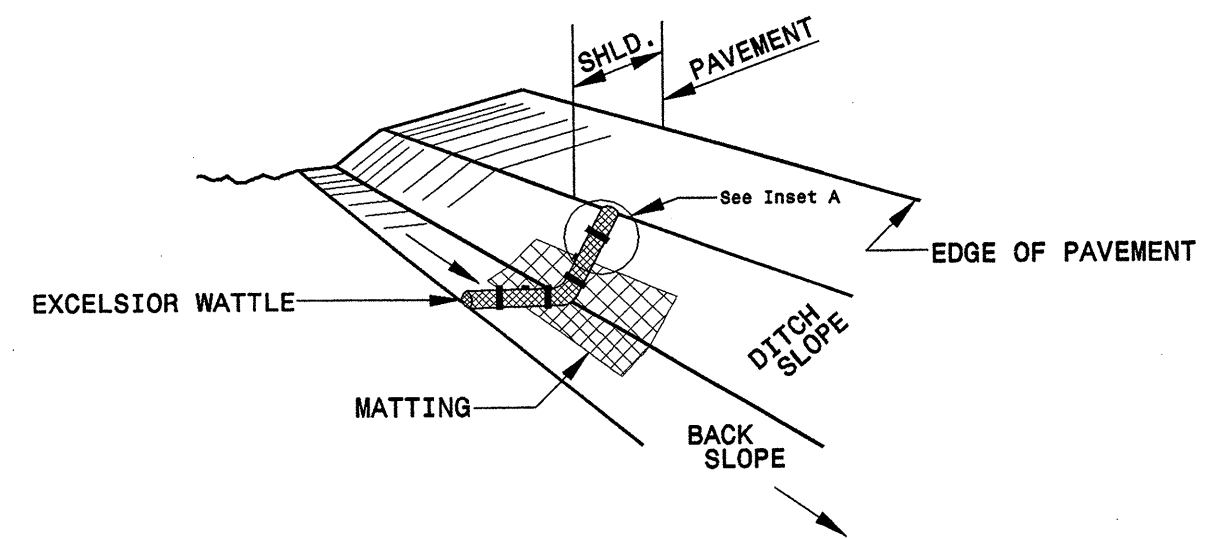
< 5' - 10' Undisturbed buffer from inlet, add wattle



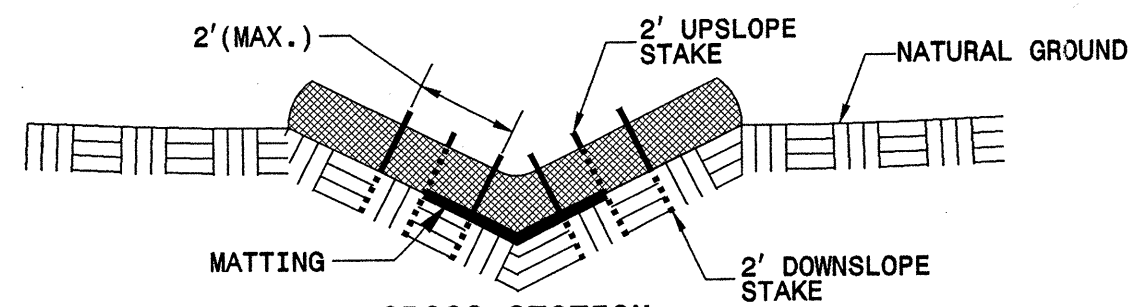
NOT TO SCALE

PROJECT REFERENCE NO. 3CR.10311.111, ETC	SHEET NO. EC-2
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

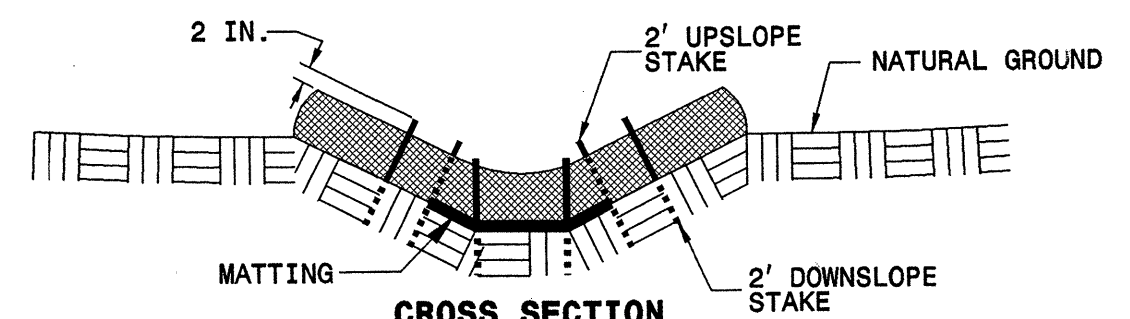
WATTLE DETAIL



ISOMETRIC VIEW

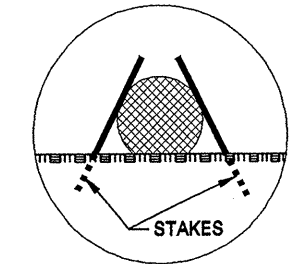


CROSS SECTION VEE DITCH

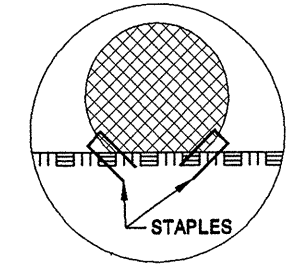


CROSS SECTION TRAPEZOIDAL DITCH

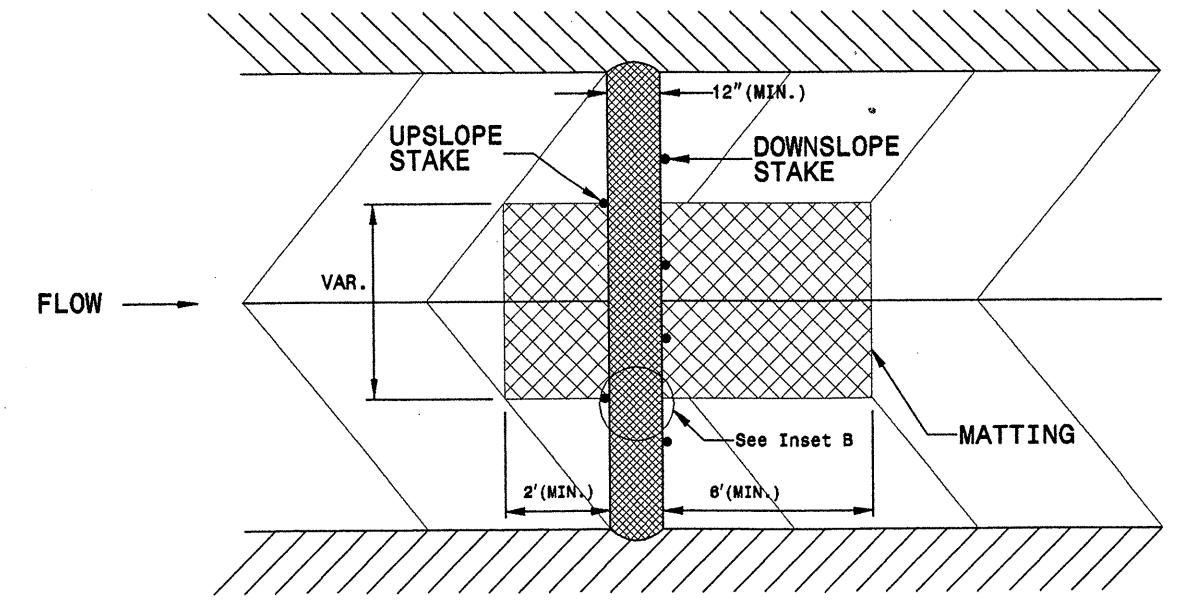
- NOTES:**
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
 - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
 - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
 - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 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