STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	37460	1	6

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
37460		PE, CONST

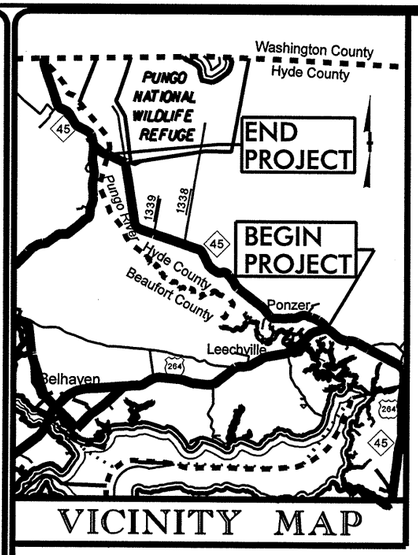
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HYDE COUNTY

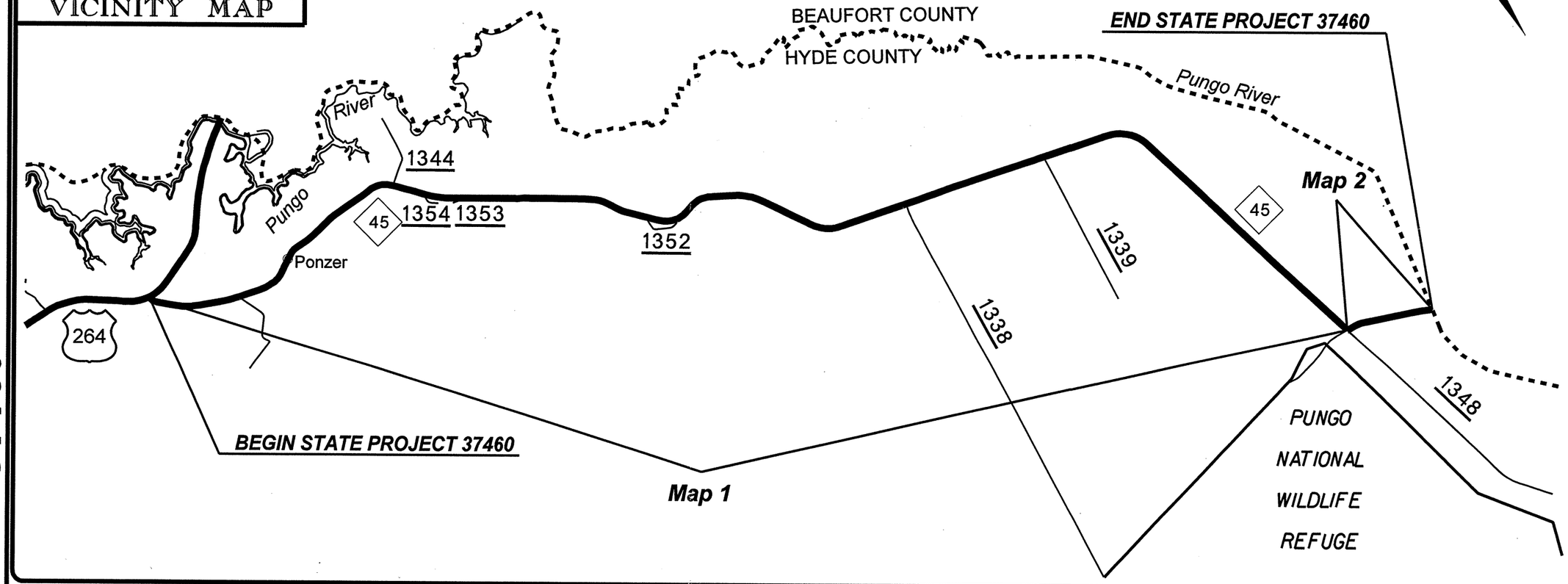
LOCATION: NC 45 FROM US 264 TO BEAUFORT CO. LINE

TYPE OF WORK: ***MILLING, FULL DEPTH RECLAMATION, WIDENING, RESURFACING, AND GUARDRAIL INSTALLATION***

NCMA PROJECT: MA01019R



VICINITY MAP



PROJECT: 37460

GRAPHIC SCALES	PROJECT LENGTH	Prepared in the Office of: DIVISION OF HIGHWAYS, 113 Airport Dr., Edenton NC, 27932	DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA
NTS	*LENGTH ROADWAY STATE PROJECT 37460 = 9.5 MILES* *TOTAL LENGTH STATE PROJECT 37460 = 9.5 MILES*	*2006 STANDARD SPECIFICATIONS* *LETTING DATE:* AUGUST 15, 2006 J.D. JENNINGS, PE — *OPERATIONS ENGINEER* S.P. FENWICK, PLS — *DIVISION DESIGN CONST. ENGINEER*	

ADIS G&M
e:$DATE$
name:$FILE$
Time: $TIME$

v8 copy of ma01019r_rdy_tsh_081803 06/28/2006 10:11:11 AM

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
37460	2 OF 6

PROPOSED SILT FENCE LOCATIONS

0.14 MILE BEGIN SILT FENCE LT
0.20 MILE END SILT FENCE LT

1.10 MILES (50 LF LT & RT) = 100 LF TOTAL @ PIPE

1.20 MILES (50 LF LT & RT) = 100 LF TOTAL @ PIPE

1.43 MILES (50 LF LT) & (100 LF RT) = 150 LF TOTAL @ PIPE

1.48 MILES BEGIN SILT FENCE RT
1.50 MILES END SILT FENCE RT

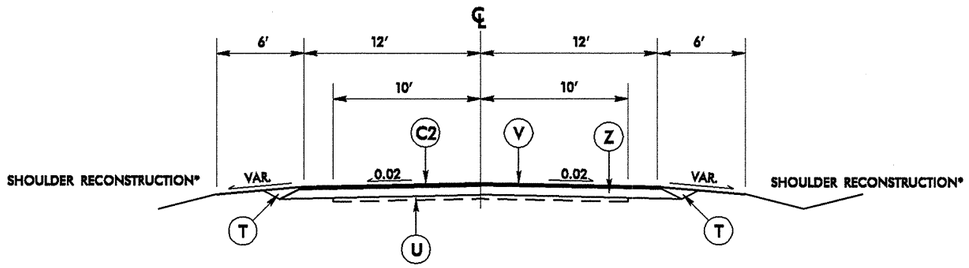
3.48 MILES BEGIN SILT FENCE LT & RT
3.60 MILES END SILT FENCE LT & RT @ BRIDGE

3.80 MILES BEGIN SILT FENCE LT &RT
3.85 MILES END SILT FENCE LT & RT

4.83 MILES BEGIN SILT FENCE RT

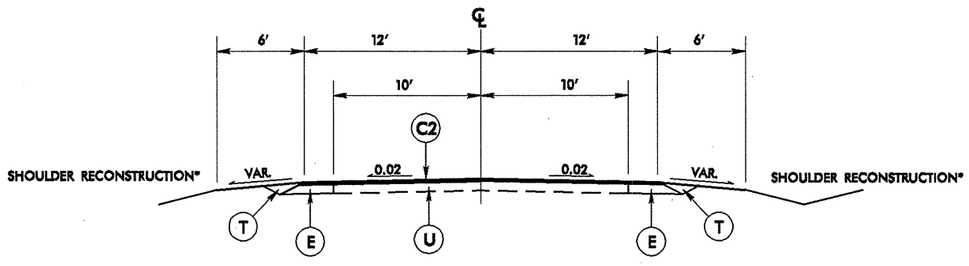
5.60 MILES 50' LF ON EACH CORNER OF BRIDGE
(4 CORNERS @ 50 LF EACH = 200 LF TOTAL)

7.00 MILES BEGIN SILT FENCE LT
7.30 MILES END SILT FENCE LT & RT



TYPICAL SECTION NO. 1

USE WITH MAP NO. 1



TYPICAL SECTION NO. 2

USE WITH MAP NO. 2

* SHOULDER RECONSTRUCTION TO BE PERFORMED AS DIRECTED BY THE ENGINEER TO MATCH EXISTING SHOULDERS AS CLOSELY AS POSSIBLE.

	PAVEMENT SCHEDULE
C2	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQUARE YARD, IN EACH OF 2 LAYERS.
E	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQUARE YARD.
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING BITUMINOUS PAVEMENT 2.5" DEPTH
Z	8" ROADWAY RECLAMATION (OVER 24' WIDTH) USING PORTLAND CEMENT AT AN AVERAGE RATE OF 43 LBS. PER SQUARE YARD

NOTE: PAVEMENT EDGE SLOPE ARE 1:1 UNLESS SHOWN OTHERWISE

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" PROJECT SERVICES UNIT – N. C. DEPARTMENT OF TRANSPORTATION – RALEIGH, N. C., DATED JULY 18, 2006 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
862.03	STRUCTURE ANCHOR UNITS
1101.02	TEMPORARY LANE CLOSURES
1205.01	PAVEMENT MARKINGS
1205.02	PAVEMENT MARKINGS
1205.08	PAVEMENT MARKINGS
1250.01	PAVEMENT MARKER SPACING

NOTE:
1. VEGETATION MUST BE REMOVED FROM SHOULDERS PRIOR TO PERFORMING FULL DEPTH RECLAMATION (FDR) AND/OR WIDENING.
2. CONTRACTOR IS REQUIRED TO HAVE AN OPERATING, EFFECTIVE DUST SUPPRESSION SYSTEM, THROUGHOUT THE CEMENT APPLICATION PROCESS.
3. DURING FDR PROCESS, WATER MUST BE INJECTED DIRECTLY INTO MIXING CHAMBER. 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 SURFACE COURSE.
5. SURFACE COURSE SHALL NOT BE PLACED ON RECLAIMED BASE PRIOR TO 48 HOURS AFTER ACHIEVING SATISFACTORY COMPACTION. RECLAIMED BASE MUST BE KEPT MOIST UNTIL SURFACE COURSE IS PLACED.
6. MILLING, RECLAMATION AND PAVING OPERATIONS MUST BE CONTAINED WITHIN 3 MILE STATIONARY WORK ZONE.
7. NO TRAFFIC WILL BE ALLOWED ON MILLED AREAS OR RECLAIMED BASE PRIOR TO PLACEMENT OF THE FIRST LAYER OF SURFACE COURSE.
8. MILL BRIDGES 2.5" AND REPLACE 3" S9.5B.

PROJECT NO.	SHEET NO.	TOTAL NO.
37460	3	6

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LENGTH MI	WIDTH FT	BORROW CY	6" CONCRETE DRIVEWAY SY	TRAFFIC CONTROL LS	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	2.5" MILLING SY	BASE COURSE, B25.0B TONS	SURFACE COURSE, S9.5B TONS	PG 64-22 PLANT MIX TONS	SEDIMENT CONTROL STONE TONS
37460	Hyde	1	NC 45	FROM US 264 TO WATER PLANT	1	8.92	24	20			892	17.84	104,662		23,451	1,407	40
		2	NC 45	WATER PLANT TO BEAUFORT CO. LINE	2	0.58	24		24		58	1.16		582	1,540	117	
TOTAL FOR PROJ NO. MA01019R						**9.5**		**20**	**24**	**1**	**950**	**19**	**104,662**	**582**	**24,991**	**1,524**	**40**
GRAND TOTAL						**9.5**		**20**	**24**	**1**	**950**	**19**	**104,662**	**582**	**24,991**	**1,524**	**40**

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LENGTH MI	WIDTH FT	EROSION CONTROL STONE CLASS B AC	ROADWAY RECLAMATION (8") SY	GUARDRAIL ANCHOR TYPE 350 EA	GUARDRAIL ANCHOR TYPE 350, LEVEL II EA	WTR TRANSITION SECTION EA	TEMPORARY SILT FENCE LF	SEED & MULCHING AC
37460	Hyde	1	NC 45	FROM US 264 TO WATER PLANT	1	8.92	24	50	125,595	8	4	4	18,000	9
		2	NC 45	WATER PLANT TO BEAUFORT CO. LINE	2	0.58	24							1
TOTAL FOR PROJ NO. MA01019R						**9.5**		**50**	**125,595**	**8**	**4**	**4**	**18,000**	**10**
GRAND TOTAL						**9.5**		**50**	**125,595**	**8**	**4**	**4**	**18,000**	**10**

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LENGTH MI	4685000000-E 4" X 90 M WHITE THERMO LF	4686000000-E 4" X 120 M YELLOW THERMO LF	4810000000-E 4" WHITE PAINT LF	4810000000-E 4" YELLOW PAINT LF	4900000000-N YELLOW & YELLOW MARKERS EA
37460	Hyde	1	NC 45	FROM US 264 TO WATER PLANT	1	8.92	94,195	58,875	94,195	58,875	590
		2	NC 45	WATER PLANT TO BEAUFORT CO. LINE	2	0.58	6,125	3,828	6,125	3,828	40
TOTAL FOR PROJ NO. MA01019R						**9.5**	**100,320**	**62,703**	**100,320**	**62,703**	**630**
									163,023		
GRAND TOTAL						**9.5**	**100,320**	**62,703**	**100,320**	**62,703**	**630**
									163,023		

COMPUTED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
GUARDRAIL SUMMARY

PROJECT REFERENCE NO.	SHEET NO.
37460	4 of 6

NC1069

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL
W = TOTAL WIDTH OF FLARE FROM BEGIN

G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

SURVEY LINE	BEG. STA. (MILE)	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL WIDTH	FLARE LENGTH		W		ANCHORS							IMPACT ATTENUATOR TYPE 350		SINGLE FACED CONCRETE BARRIER	REMOVE EXISTING GUARDRAIL	REMOVE & STOCKPILE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	XI MOD	XI	GRAU 350	M-350	III	BP-25 MOD	GRAU 350 TL-2	WTR	BP-25	G	NG				
L	0.4		Bridge No. 1														4											REPLACE BRIDGE END TREATMENTS
L	3.8		Bridge No. 19														4											REPLACE BRIDGE END TREATMENTS
L	5.6		Bridge No. 23						4												1	1						RIGHT SIDE BRIDGE APPROACH
L	5.6		Bridge No. 23						4												1	1						LEFT SIDE TRAILING END
L	5.6		Bridge No. 23						4												1	1						LEFT SIDE BRIDGE APPROACH
L	5.6		Bridge No. 23						4												1	1						RIGHT SIDE TRAILING END
	TOTAL																8				4	4						

LESS ANCHOR DEDUCTIONS		
GRAU-350	50	
M-350	37.5	0
CAT-1	6.25	0
AT-1	6.25	0
TOTAL DEDUCTIONS		0
ADDITIONAL GUARDRAIL POSTS		8
TOTAL LENGTH STRAIGHT		0

WBS ELEMENT	SHEET NO.
37460	5 OF 6

GENERAL NOTES

(1) THE FOLLOWING OPTIONS MAY BE USED FOR ADVANCE WARNING SIGNS:
- A. TRUCK MOUNTED SIGNS
- B. TRUCK MOUNTED CHANGEABLE MESSAGE SIGN (CMS)
- C. GROUND MOUNTED ADVANCE WARNING SIGNS (MUST CIRCLE TO PICK UP SIGNS)
- D. GROUND MOUNTED CHANGEABLE MESSAGE SIGN (CMS) (MUST USE CIRCLE TO PICK UP SIGNS)

(2) ALL ADVANCE WARNING SIGNS MUST BE 48" X 48" WITH FLUORESCENT ORANGE TYPE VII, VIII OR IX SHEETING. IF SPACE LIMITATIONS ON SHOULDER PROHIBIT A 48" X 48" SIGN, A SMALLER SIGN CAN BE USED WITH APPROVAL FROM ENGINEER.

(3) SIGNS ON VEHICLES SHOULD BE MOUNTED A MINIMUM OF ONE (1) FOOT FROM THE GROUND AND SHOULD NOT BLOCK THE MOTORIST'S SIGHT OF THE FLASHING ARROW PANEL AND/OR LIGHTBAR.

(4) GROUND MOUNTED ADVANCED WARNING SIGNS SHOULD BE MOUNTED A MINIMUM OF ONE (1) FOOT FROM THE GROUND TO BOTTOM OF SIGN.

(5) SIGN SPACING SHOULD BE ADJUSTED FOR HORIZONTAL AND VERTICAL CURVES, ETC. TO IMPROVE SIGHT DISTANCES.

(6) ADDITIONAL VEHICLES SHOULD BE USED IN WORK CARAVAN TO FACILITATE DRYING OF PAVEMENT MARKING MATERIAL (TMIA'S ARE OPTIONAL ON THESE ADDITIONAL VEHICLES). HOWEVER, THE FIRST VEHICLE MOTORISTS SEE IN THE TRAVEL LANE SHALL HAVE A TMIA.

(7) ADJUST DISTANCE AS NEEDED TO PREVENT MOTORISTS FROM ENTERING SPACE BETWEEN THE APPLICATION AND PROTECTION VEHICLE. DISTANCE CAN BE LENGTHENED TO ACCOMODATE SIGHT DISTANCE NEEDS.

(8) ROUND UP MILEAGE TO NEXT WHOLE MILE. WORK ZONE SHOULD NOT EXCEED FIVE (5) MILES IN LENGTH.

(9) RADIO COMMUNICATION BETWEEN VEHICLES IS REQUIRED.

(10) USE OF A LIGHT BAR ON ALL VEHICLES IS PREFERRED, BUT A ROTATING BEACON MAY BE USED INSTEAD.

(11) IF WORK IS PERFORMED AT NIGHT, THE WORK AREA MUST BE ILLUMINATED WITH MACHINE AND/OR TOWER LIGHTS AS APPROVED BY THE ENGINEER.

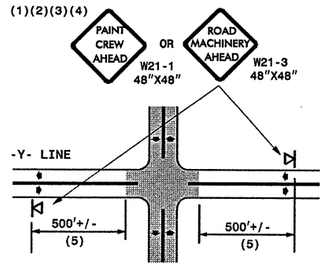
(12) ALL TRAFFIC CONTROL DEVICES WILL BE CONSIDERED INCIDENTAL TO THE PAY ITEMS FOR PAVEMENT MARKING AND MARKERS.

(13) INFORMATIONAL SIGNS SHOULD BE ACTIVITY SPECIFIC, i.e. "PAINT CREW IN ROAD". SIGNS MAY BE RECTANGULAR OR DIAMOND SHAPE. SIGN SIZE SHOULD BE BASED ON THE MOTORIST ABILITY TO RECOGNIZE SIGN WHEN TRAVELING FIVE (5) MILES ABOVE POSTED SPEED LIMIT.

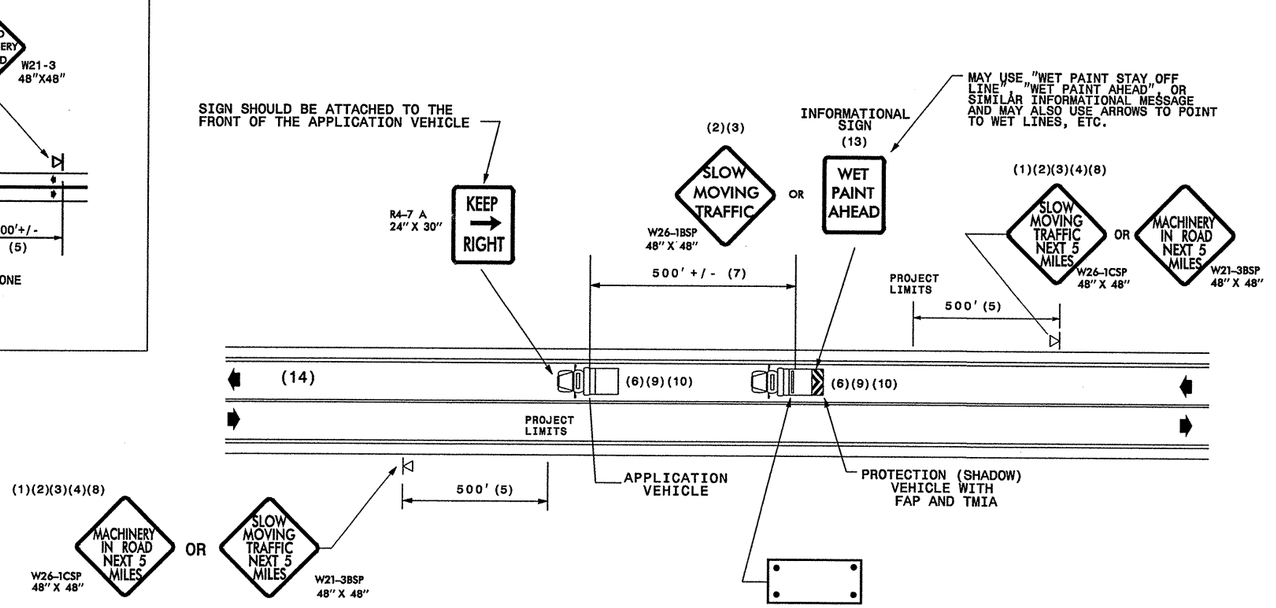
(14) IF A LEAD VEHICLE IS ADDED TO OPERATION, IT SHOULD HAVE THE SAME ADVANCE WARNING SIGNS AS THE APPLICATION VEHICLE SHOWN BELOW.

LEGEND

- PORTABLE SIGN. SIGNS MUST BE NCHRP-350 AND NCDOT APPROVED.
- DIRECTION OF TRAFFIC FLOW
- APPLICATION VEHICLE WITH LIGHT BAR
- PROTECTION VEHICLE WITH TRUCK MOUNTED IMPACT ATTENUATOR (TMIA) AND LIGHT BAR (SEE ROADWAY STANDARD NO. 1165.01). TMIA MUST BE NCHRP-350 TEST LEVEL 3 (60+MPH) APPROVED.
- FLASHING ARROW PANEL, TYPE "B" (60"X30" MIN.), "CAUTION MODE"



-Y- LINES



MOVING OPERATION CARAVAN

(OPERATIONS TRAVELING 3 MPH OR FASTER)
PLACING PAVEMENT MARKING OR MARKERS
ON TWO-LANE TWO-WAY ROADWAYS

DRAWING NUMBER 6
IMPLEMENTATION DATE: 07/01/97
REVISED: 11/03/04

TWO LANE, TWO WAY WORK ZONE (L-LINES)

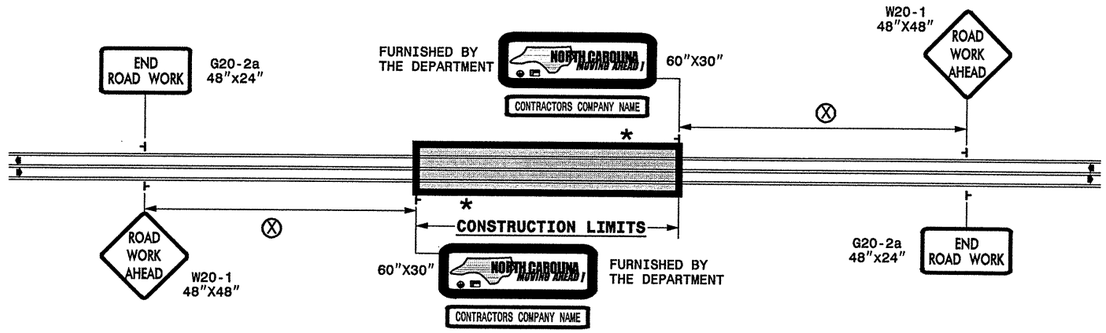
FURNISHED BY THE DEPARTMENT

NORTH CAROLINA MOVING AHEAD!

60"X30"

CONTRACTORS COMPANY NAME

60" Max. X 12"



POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING (X)
P.S.L. ≤ 50	350'
P.S.L. ≥ 55	500'

* ROAD WORK NEXT XX MILES G20-1A 60"X24"

THIS SIGN TO BE USED ON PROJECTS LONGER THAN 2 MILES

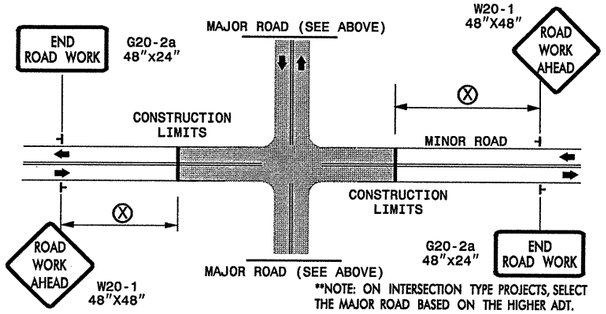
THE NUMBER DISPLAYED ON THE SIGN IS TO BE A WHOLE NUMBER ROUNDED UP TO THE NEXT MILE

IT'S TO BE LOCATED 1,500 FEET INSIDE OF THE CONSTRUCTION LIMITS

PROJ. REFERENCE NO.	SHEET NO.
37460	NCMA-1
	6 OF 6

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

INTERSECTIONS (-Y- LINES)

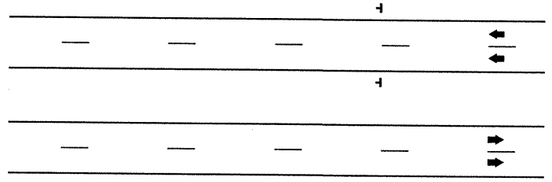


**NOTE: ON INTERSECTION TYPE PROJECTS, SELECT THE MAJOR ROAD BASED ON THE HIGHER ADT.

FREEWAYS/INTERSTATES

DUAL MOUNT "ROAD WORK AHEAD" SIGNS 1,000' IN ADVANCE OF PROJECT LIMITS

DUAL MOUNT "MOVING AHEAD" SIGNS 500' IN ADVANCE OF PROJECT LIMITS



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. USE PORTABLE WORK ZONE SIGNS ONLY WITH PORTABLE WORK ZONE SIGN STANDS SPECIFICALLY DESIGNED FOR ONE ANOTHER. PORTABLE WORK ZONE SIGNS MAY BE ROLL UP OR APPROVED COMPOSITE.
- 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.

LEGEND

⊢ STATIONARY SIGN

DIRECTION OF TRAFFIC FLOW

DETAIL DRAWING FOR ADVANCE WARNING WORK ZONE SIGNS

SHEET 1 OF 1

APPROVED: _____ DATE: _____

SEAL

ADVANCE WARNING WORK ZONE SIGNS FOR "MOVING AHEAD"

SCALE:	NONE
DATE:	07/03
DWG. BY:	JSK
DESIGN BY:	JSK
REVIEWED BY:	SK

REVISIONS	
11/04	
12/04	
CADD FILE	