

PROJECT NO.	SHEET NO.	TOTAL NO.
I-5017	2	
42398.3.1	. [	

### SUMMARY OF QUANTITIES

PROJECT	COUNTY	MAP	ROUTE	DESCRIPTION	TYP	LENGTH	WIDTH	DIAMOND	REPAIR OF	CLASS IV	UNDERCUT	FABRIC FOR	UNDERDRAIN
	1							GRINDING PCC	JOINTED CONC.	SUBGRADE	EXCAVATION	SOIL	REPAIR
								PAVEMENT	PAVEMENT	STALIBLIZATION		STABILIZATION	
									SLABS				
NO	i .	NO			NO	MI	FT	SY	SY	TON	CY	SY	EA
I-5017	Nash	1	I-95 SB	FROM MM 143 TO 128		15	24	250,500	100	75	50	100	5
		2	I-95 NB	FROM MM 128 TO 143		15	24	250,500	100	75	50	100	5
TOTAL	FOR PROJ.	1-5017	7			30		501,000	200	150	100	100	10
GR	RAND TOTA	L			ПП	30		501,000	200	150	100	200	10

## POLYUREA AND PAINT QUANTITIES

[		Т	T		$\neg \neg$	4405000000-E	4415000000-N	4420000000-N	4430000000-N	4480000000-N	4845000000-N	481500	0000-E	4825000000-E	4847100000-E	4847120000-E	4847220000-N	4905000000-N
PROJECT	COUNT	Y MA	P ROUTE	DESCRIPTION		PORTABLE	FLASHING	CHANGEABLE	DRUMS	TRUCK	PAINT SYMBOL	6" WHITE PAINT	6" YELLOW	12" WHITE PAINT	6" POLYUREA	12" POLYUREA	POLYUREA	SNOW
						WORK ZONE	ARROW PANELS,	MESSAGE SIGNS		MOUNTED			PAINT				SYMBOL	PLOWABLE
		1	1 1			SIGN	TYPE C			IMPACT								MARKERS
			1							ATTENUATOR								
		1								(60MPH)								
NO	ı	N	0	1		SF	EA .	EA	EA	EA	EA	LF	LF	LF	LF	LF	EA	EA
I-5017	Nash	1	I-95 SB	FROM MM 143 TO 128		300	1	2	300	1	19	118,000	94,000	8,177	212,000	8,177	19	2,350
		2	! I-95 NB	FROM MM 128 TO 143		300	1	2	300	1	19	118,000	94,000	8,177	212,000	8,177	19	2,350
TOTAL	FOD DDO		347			600	2	4	600	2	38	236,000	188,000	16,354	424,000	16,354	38	4,700
IOIAL	TOTAL FOR PROJ. I-5017										424,000							
	GRAND TOTAL					600	2	4	600	2	38	236,000	188,000	16,354	424,000	16,354	38	4700
G			Γ									424,	000					

JOINT SEALER SEE DETAIL 'A' DOWEL 12" ON CENTERS 1/2 L/2 | L/2 SEE TABLE 1

TRANSVERSE CONTRACTION JOINT

L/2 L/2

PLANNED TRANSVERSE CONSTRUCTION JOINT

**T/2** 

JOINT SEALER

SEE DETAIL 'D'

SEE TABLE 1

DOWEL 12" ON CENTERS

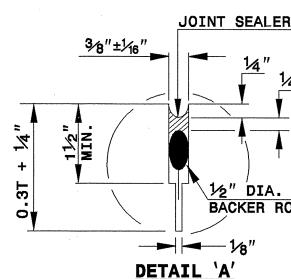
- GENERAL NOTES:
  -FORM TRANSVERSE CONTRACTION JOINTS BY SAWING WITH APPROVED EQUIPMENT.
  -SPACE TRANSVERSE CONTRACTION JOINTS AT INTERVALS OF 15'.
  -USE A DOWEL ASSEMBLY OR OTHER APPROVED DOWEL INSERTION TECHNIQUE IN ALL TRANSVERSE CONTRACTION JOINTS DOWEL ASSEMBLIES ARE COVERED IN STD. DWG. 700.03.

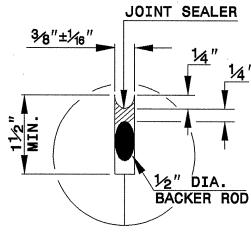
  -14" PER 1' IS THE ALIGNMENT TOLERANCE FOR PLACEMENT OF DOWELS.

  -14" IS THE LOCATION TOLERANCE FOR DOWELS OR TIE BARS.

  -18" IS THE TOLERANCE IN DEPTH OF SAWING PAVEMENT JOINTS.

  -PROVIDE SMOOTH DOWEL BARS. PROVIDE DEFORMED TIE BARS.





I-5017

sht. no. 3

DETAIL 'D'

TABLE I - DOWEL BARS								
SLAB THICKNESS	DOWEL BAR	DOWEL LENGTH "L"						
8" OR LESS	1"	14"						
8½" TO 9½"	11/8"	16"						
10" TO 10½"	11/4"	18"						
. 11"	13⁄8″	18"						
12" AND ABOVE	11/2"	18"						

CONTRACTION JOINTS

AND

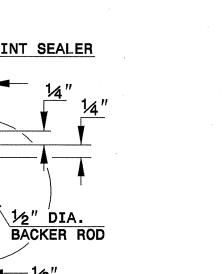
CONSTRUCTION

JOINTS

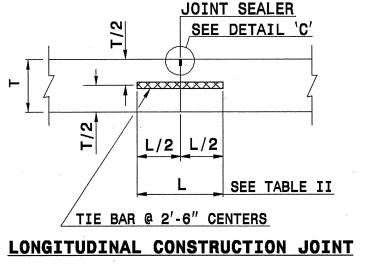
**PAVEMENT** 

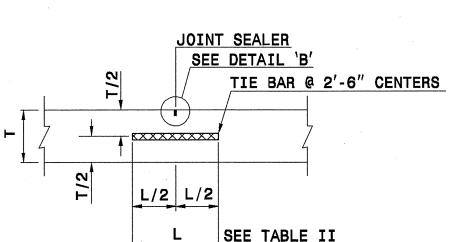
CONCRETE

700.01









JOINT SEALER

SEE DETAIL 'C'

SEE TABLE II

#### JOINT SEALER JOINT SEALER 1/4"±1/16" 1/4"±1/16" + 14" 0.3T ZIV DIA. 3/8" DIA. BACKER ROD BACKER ROD DETAIL 'C' DETAIL 'B'

TABLE	II - TIE 6	BARS
SLAB THICKNESS	TIE BAR DIA. "D"	TIE BAR LENGTH "L"
81/2" OR LESS	1⁄2"	30"
9" OR ABOVE	5/2"	30"

#### **GENERAL NOTES:**

-CONSTRUCT TRANSVERSE CONSTRUCTION JOINTS AT THE END OF EACH DAY'S OPERATION (PLANNED JOINT) OR WHEN THE PLACING OF CONCRETE IS SUSPENDED FOR MORE THAN 30 MINUTES (EMÉRGENCY JOINT)

-USE AN APPROVED HEADER AT EMERGENCY JOINTS DESIGNED TO PERMIT THE PLACEMENT OF AND CORRECTLY HOLD IN PLACE TIE BARS (STD. DWG. 700.04).
-LOCATE PLANNED TRANSVERSE CONSTRUCTION JOINTS AT THE SPACING REQUIRED FOR

- CONTRACTION JOINTS. USE AN APPROVED METHOD OF INSTALLING DOWELS IN ALL PLANNED
- TRANSVERSE CONSTRUCTION JOINTS.

  -DO NOT LOCATE EMERGENCY TRANSVERSE CONSTRUCTION JOINTS LESS THAN 3' FROM ANY CONTRACTION JOINT OR PLANNED CONSTRUCTION JOINT.

  -DO NOT TIE BARS IN LONGITUDINAL JOINTS WITHIN 1'-4" OF A TRANSVERSE JOINT.

EMERGENCY TRANSVERSE CONSTRUCTION JOINT

L/2 L/2

TIE BAR @ 12" CENTERS

T/2

LONGITUDINAL JOINT

2 0 2 700.01

**2** 0F 700.0

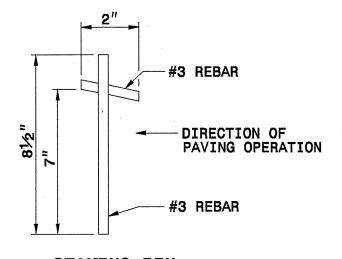
-05 JOINTS

I-5017

Sht. no.4

JOINTS CONTRACTION **PAVEMENT** AND CONCRETE CONSTRUCTION

## ## ## ##



STAKING PIN (MIN. 8 PER BASKET)

	I-5017 Sht. no.5
	SLAB (12'-0")
	L <sub>T</sub> (11'-6")
3"_	3" D <sub>S</sub> (11'-0" C. TO C.)
	MIN. 3 EA. #6 GAGE SPREADER WIRES
T	
	12 DOWELS ON 12" CTS.

TYPICAL UNIT DIMENSIONS

"V" LEG ONLY								
SLAB	WIRE GAGE							
THICKNESS	T <sub>R</sub>	T <sub>R</sub> B <sub>R</sub>						
8" OR LESS	2	2	2					
81⁄2" - 10"	0	2	2					
10½" & ABOVE	2/0's	2/0's	2/0's					

**GENERAL NOTES:** 

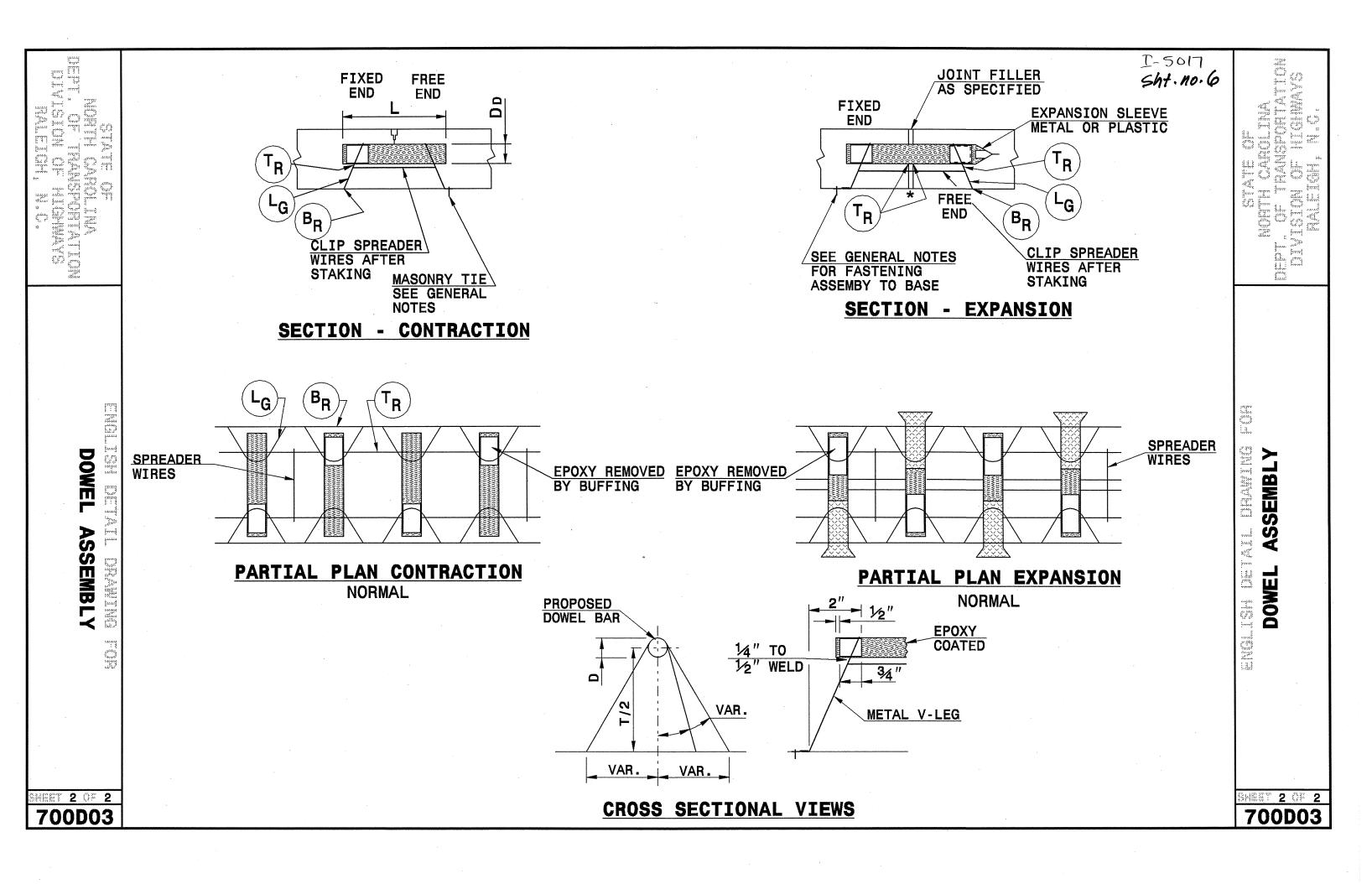
- -USE RIGID CONSTRUCTED DOWEL ASSEMBLY CAPABLE OF HOLDING THE DOWEL BAR IN PROPER POSITION DURING PLACMENT OF CONCRETE AND DESIGNED AS TO PERMIT UNRESTRICTED MOVEMENT OF THE SLAB. USE DOWEL ASSEMBLY APPROVED BY THE ENGINEER PRIOR TO USE.
- -USE DOWEL ASSEMBLIES MANUFACTURED WITH DOWELS ALTERNATELY WELDED TO FRAME MEMBERS. -USE STAKING PIN OR APPROVED ALTERNATE.
- -SAW CUT EPOXY COATED DOWELS WITH ONE END BUFFED 34" x CIRCUMFERENCE TO FACILITATE WELDING OF THE DOWEL TO THE ASSEMBLY FRAME. TOUCH UP OF THE BUFFED AREA WILL NOT BE REQUIRED.
- -RESISTANCE WELD FRAME MEMBERS; DOWELS AND SPREADER WIRES MAY BE ARC WELDED. WELD IN ACCORDANCE WITH AWS WELDING CODE.
- -FULLY DIP THE DOWEL ASSEMBLIES TO ASSURE A COMPLETE COATING OF WAX.
- -SEE DETAIL 700D01 FOR DOWEL BAR SIZES.

00D03

**ASSEMBLY** 

DOWEL

700D03

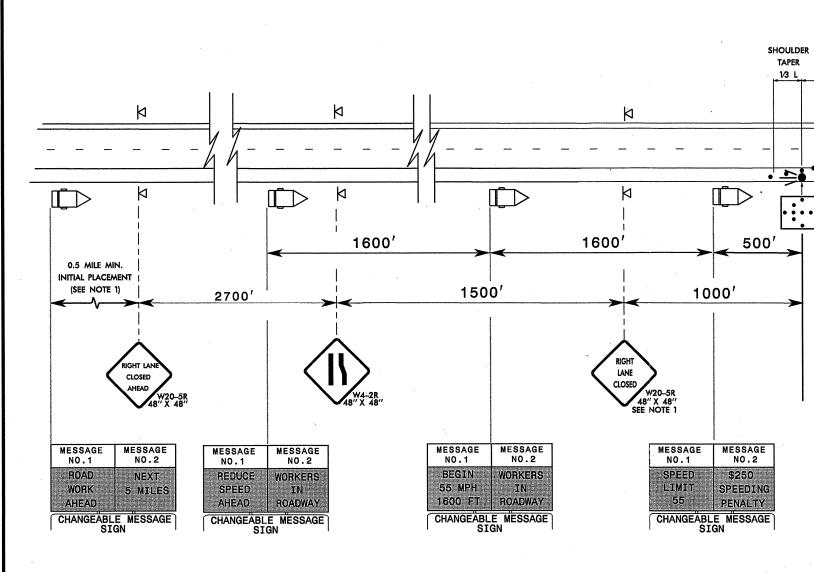


PROJ. REFERENCE NO. SHEET NO. 42398.3.1 TCP-1 (I-5017)

ROAD WORK G20-2a

48"X24'

**END** 



# DETAIL B EXIT RAMPS MAIN ROADWAY WORK ZONE OR AS ATTAINABLY CONSTRUCTION LIMITS SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ROAD WORK | G20-2a

48"X24'

ALONG -Y- LINE THAT RAMP INTERSECTS.

IF CONSTRUCTION LIMITS ARE AT END

OF RAMP, PLACE SIGN AT END OF RAMP.

#### **GENERAL NOTES**

DOWN

50' STREAM

MIN. TAPER

SPACE

LENGTH

**VARIES** 

ACTIVE WORK AREA

BUFFER

SPACE

MERGE

TAPER

AREA

LENGTH

VARIES

EXISTING POSTED

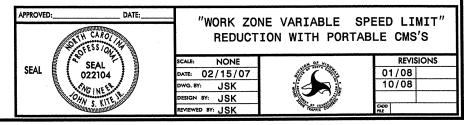
SPEED LIMIT

250'+/-

SPEED LIMIT 70

250'+/-

- 1. THIS DRAWING IS INTENDED TO SHOW THE CMS LOCATIONS AND MESSAGING REQUIRED FOR A "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION AND SPEEDING PENALTY ON A FREEWAY WHICH IS TO BE REDUCED FROM 70 MPH TO 55 MPH. REFER TO THE ROADWAY STANDARD DRAWING (RSD) 1101.02 SHEET 3 OF 9 FOR ADDITIONAL LANE CLOSURE REQUIREMENTS AND GENERAL NOTES.
- 2. EACH DIRECTION OF THE PROJECT IS TO BE EVALUATED FOR THE "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION AND SPEEDING PENALTY. THIS DRAWING INTENTIONALLY HAS 1 DIRECTION SIGNED AS A REMINDER TO CAREFULLY CONSIDER WHETHER BOTH DIRECTIONS OF THE PROJECT NEED TO HAVE THE SPEED
- 3. IN ADDITION, FOR ACTIVE WORK AREAS THAT EXCEED 1 MILE IN LENGTH, AN EVALUATION IS TO BE MADE TO DETERMINE IF ADDITIONAL CMS'S ARE NEEDED TO SUPPLEMENT THE INITIAL ONES. PORTABLE MOUNTED W3-5 SIGNS WITH SPEED PENALTY SIGNS ARE TO BE PLACED ALONG ENTRANCE RAMPS LOCATED WITHIN THE ACTIVE WORK AREA
- 4. THE \$250 SPEEDING PENALTY APPLIES FOR ALL PROJECTS THAT QUALIFY FOR A "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION. MESSAGE ON CMS IS TO BE USED TO DISPLAY THE \$250 SPEEDING PENALTY.
- 5. THE "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION AND SPEEDING PENALTY ARE ONLY IN EFFECT WHILE A LANE CLOSURE IS IN PLACE. THE "WORK ZONE VARIABLE SPEED LIMIT" AND SPEED PENALTY MESSAGES ARE TO BE REMOVED AND THE SIGNS ARE TO BE TURNED OFF WHEN LANE CLOSURE IS REMOVED. OTHER PERTINENT MESSAGING MAY BE DISPLAYED AT THE DIRECTION OF THE ENGINEER IN COORDINATION WITH THE WORK ZONE TRAFFIC CONTROL UNIT (919-250-4159). AT THE COMPLETION OF THE PROJECT, THE RESIDENT ENGINEER SHALL NOTIFY THE REGIONAL TRAFFIC ENGINEER TO RESCIND THE ORDINANCE.
- 6. WHEN "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION AND SPEEDING PENALTY ARE IN EFFECT, THE CONTRACTOR IS TO COVER ANY EXISTING SPEED LIMIT SIGNS LOCATED WITHIN THE ACTIVE WORK AREA THAT CONFLICT WITH THE "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION.
- 7. USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCE WORK ZONE SIGNS.
- 8. DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- 9. ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- 10.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.
- 11.PROVIDE PORTABLE WORK ZONE SIGN STANDS, PORTABLE SIGNS AND SIGN SHEETING WHICH ARE LISTED ON THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S APPROVED PRODUCT LIST OR ACCEPTED AS TRAFFIC QUALIFIED BY THE TRAFFIC CONTROL UNIT.
- 12.THE "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION MUST BE ORDINANCED AND SIGNED BY THE STATE TRAFFIC ENGINEER BEFORE ANY SPEED LIMIT SIGNS ARE USED FOR REDUCING THE SPEED LIMIT.
- 13.TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.



**ENTRANCE RAMPS** 

CONSTRUCTION LIMITS

MAINLINE ACTIVE WORK AREA