

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO.	SHEET NO.
B-5019	TCP-1

**PLAN FOR PROPOSED  
TRAFFIC CONTROL, MARKING & DELINEATION  
PERQUIMANS COUNTY**

**ROADWAY STANDARD DRAWINGS**

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

STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW PANELS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - THRU LANE DROPS
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS (TEMPORARY & PERMANENT)
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

**INDEX OF SHEETS**

SHEET NO.	TITLE
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND AND INDEX OF SHEETS
TCP-2	PROJECT NOTES
TCP-3 THRU TCP-8	TRAFFIC CONTROL PLAN SHEETS
TCP-9	SIGN DESIGNS

**LEGEND**

- GENERAL**
- DIRECTION OF TRAFFIC FLOW
  - NORTH ARROW
  - PROPOSED PVMT. EXIST. PVMT.
  - WORK AREA
  - REMOVAL OF EXISTING PAVEMENT

**TRAFFIC CONTROL DEVICES**

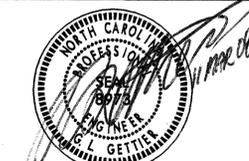
- TYPE I BARRICADE
- TYPE II BARRICADE
- TYPE III BARRICADE
- CONE
- DRUM SKINNY DRUM
- FLASHING ARROW PANEL (TYPE C)
- STATIONARY SIGN
- PORTABLE SIGN
- STATIONARY OR PORTABLE SIGN
- CRASH CUSHION
- CHANGEABLE MESSAGE SIGN
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- POLICE
- FLAGGER

**PAVEMENT MARKINGS**

- CRYSTAL/CRYSTAL PAVEMENT MARKER
- YELLOW/YELLOW PAVEMENT MARKER
- CRYSTAL/RED PAVEMENT MARKER
- PAVEMENT MARKING SYMBOLS

**TEMP PAV'T MARKING SCHEDULE**

DESCRIPTION	PAY ITEM / QUANTITY BREAKDOWN	TOTAL BREAKDOWN
	<u>PAVEMENT MARKING LINES</u>	
	TAPE	
DOUBLE YELLOW CENTERLINE (4 IN)	13,310 LF	13,310 LF
WHITE EDGELINE (4 IN)	18,350 LF	18,350 LF
STOP BAR (24 IN)	12 LF	12 LF
	<u>PAVEMENT MARKING SYMBOLS</u>	
	TAPE	
LEFT TURN ARROW	2 EA	6 EA
STRAIGHT ARROW	2 EA	
RIGHT TURN ARROW	2 EA	
	<u>PAVEMENT MARKERS</u>	
CRYSTAL/RED TEMP. RAISED PAVEMENT MARKERS	460 EA	460 EA
WHITE OR GRAY SURFACE MOUNT TUBULAR MARKERS	20 EA	20 EA
ORANGE SURFACE MOUNT TUBULAR MARKERS	293 EA	293 EA

APPROVED: _____ DATE: _____	PLAN PREPARED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL UNIT
SEAL 	_____ TRAFFIC CONTROL ENGINEER
	_____ TRAFFIC CONTROL PROJECT ENGINEER
	_____ TRAFFIC CONTROL PROJECT DESIGN ENGINEER
	_____ TRAFFIC CONTROL DESIGN ENGINEER / TECHNICIAN

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**TIP PROJECT: B-5019 WBS ELEMENT: 41827.3.1**

# PROJECT NOTES

PROJ. REFERENCE NO.	SHEET NO.
41827.3.1	TCP-2

## GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS, OR RESULT IN DUPLICATE, OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES, AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

### LANE AND SHOULDER CLOSURE REQUIREMENTS

- A) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED, OR AS DIRECTED BY THE ENGINEER.
- B) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

- C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

### PAVEMENT EDGE DROP OFF REQUIREMENTS

- D) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

- E) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (WB-11) 500' IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

### TRAFFIC PATTERN ALTERATIONS

- F) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

### SIGNING

- G) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- H) PROVIDE PERMANENT SIGNING.
- I) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

### TRAFFIC CONTROL DEVICES

- J) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.
- K) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- L) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 1000 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

### PAVEMENT MARKINGS AND MARKERS

- M) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

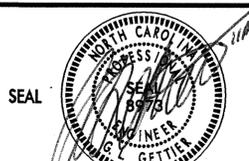
ROAD NAME	MARKING	MARKER
US 17 (ROADWAY)	POLYUREA	PERMANENT RAISED
US 17 (BRIDGE)	POLYUREA	PERMANENT RAISED

- N) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

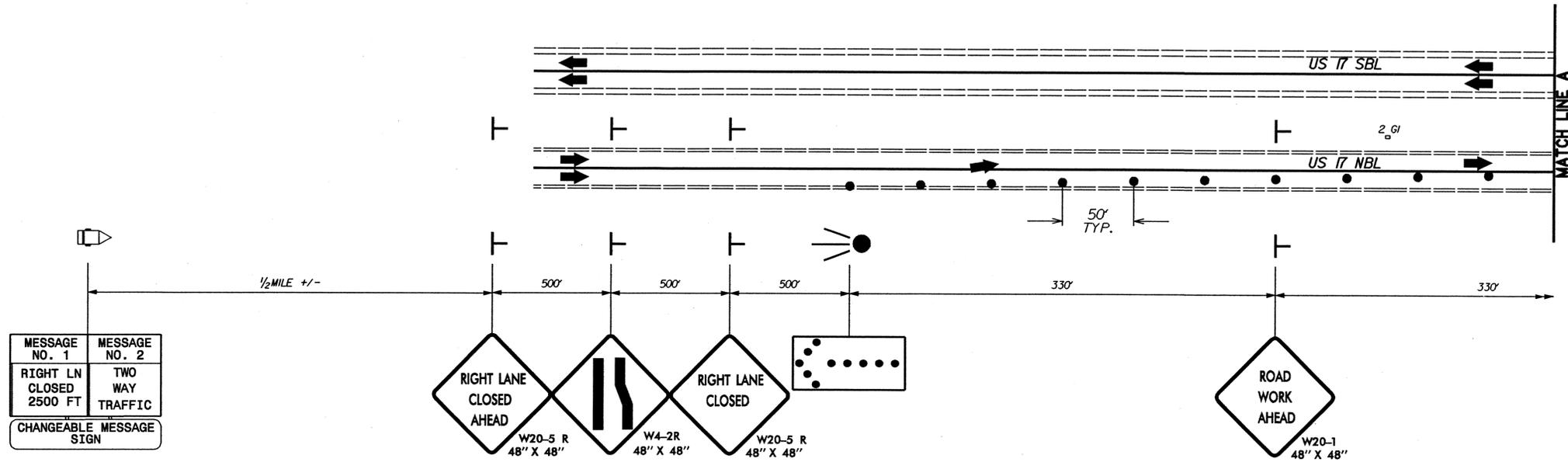
ROAD NAME	MARKING	MARKER
US 17 (ROADWAY & BRIDGE)	COLD APPLIED TYPE 4 (TAPE)	TEMPORARY RAISED AND SURFACE MOUNTED TUBULAR

- O) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- P) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

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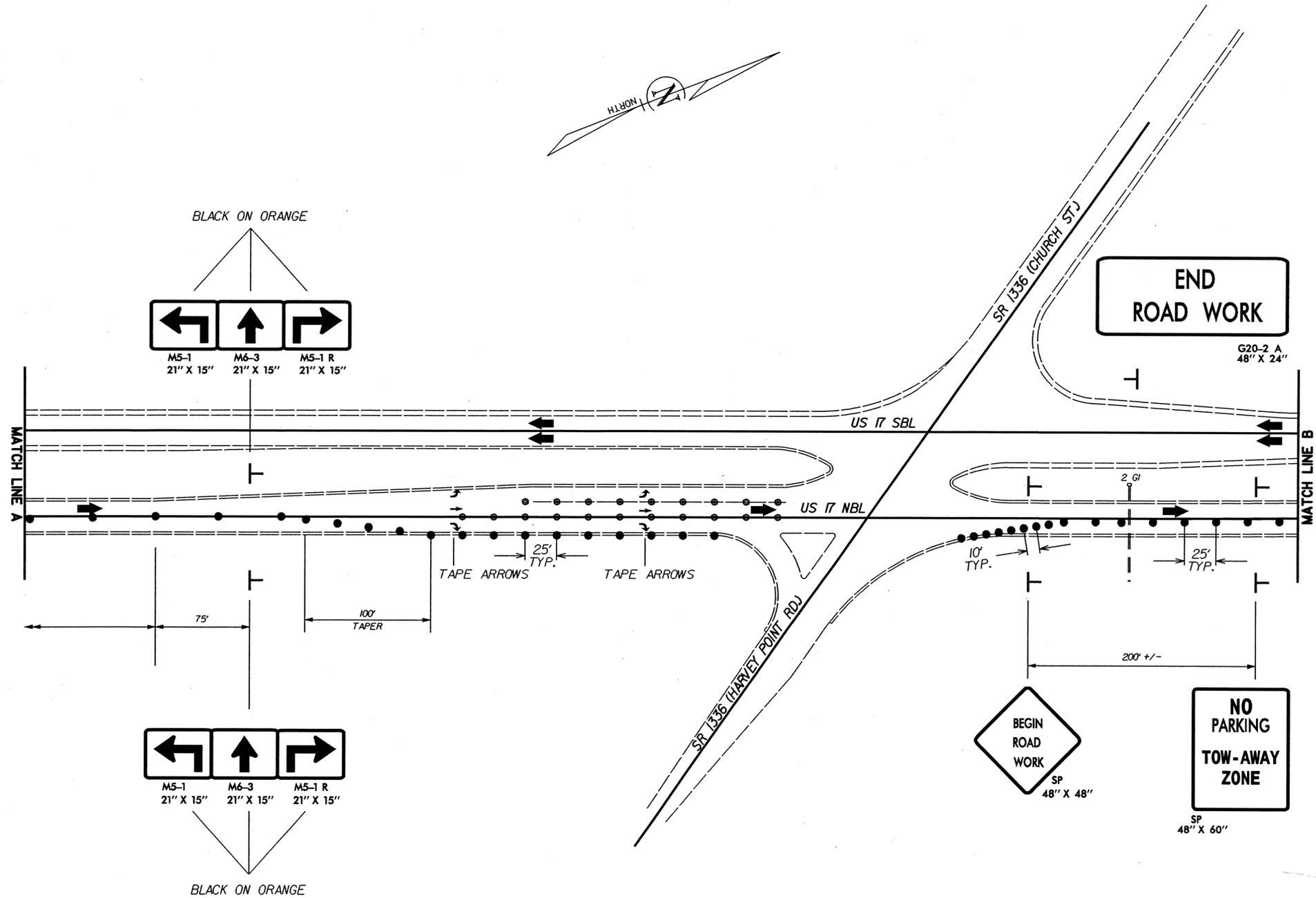
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	DESIGN BY: _____		
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© WHITE OR GRAY SURFACE MOUNT TUBULAR MARKERS  
WITH WHITE/CRYSTAL RETROREFLECTIVE SHEETING

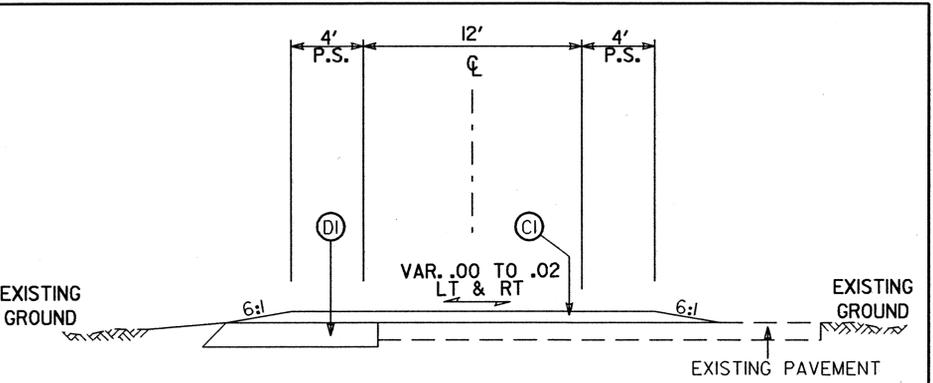
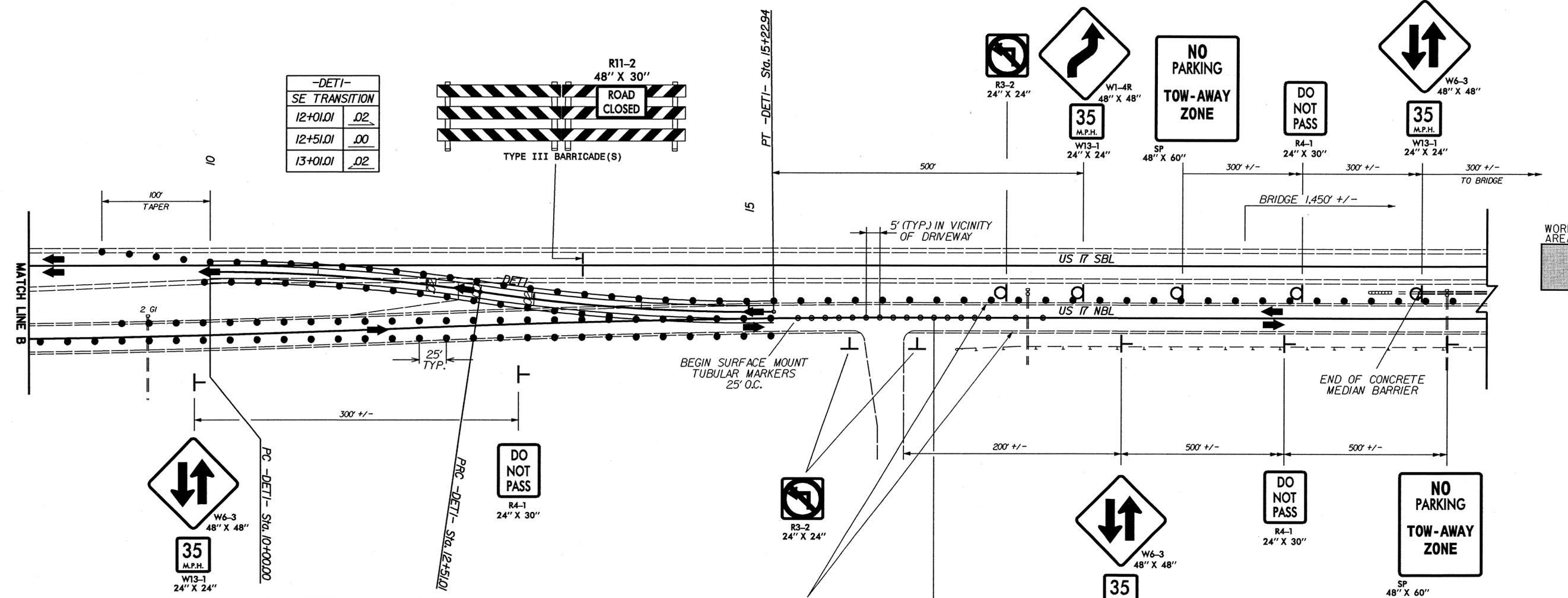
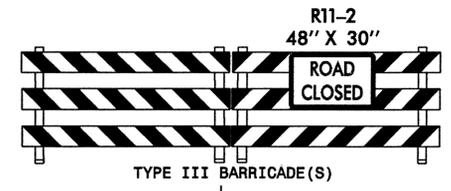
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**-DETI-**  
 PI Sta 11+25.73  
 $\Delta = 8' 27" 35.9" (RT)$   
 $D = 3' 22" 13.2"$   
 $L = 251.01'$   
 $T = 125.73'$   
 $R = 1,700.00'$

**-DETI-**  
 PI Sta 13+87.27  
 $\Delta = 9' 09" 53.4" (LT)$   
 $D = 3' 22" 13.2"$   
 $L = 271.93'$   
 $T = 136.25'$   
 $R = 1,700.00'$

-DETI-	
SE TRANSITION	
12+01.01	.02
12+51.01	.00
13+01.01	.02



**TYPICAL SECTION - DETOUR 1**

C1	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.

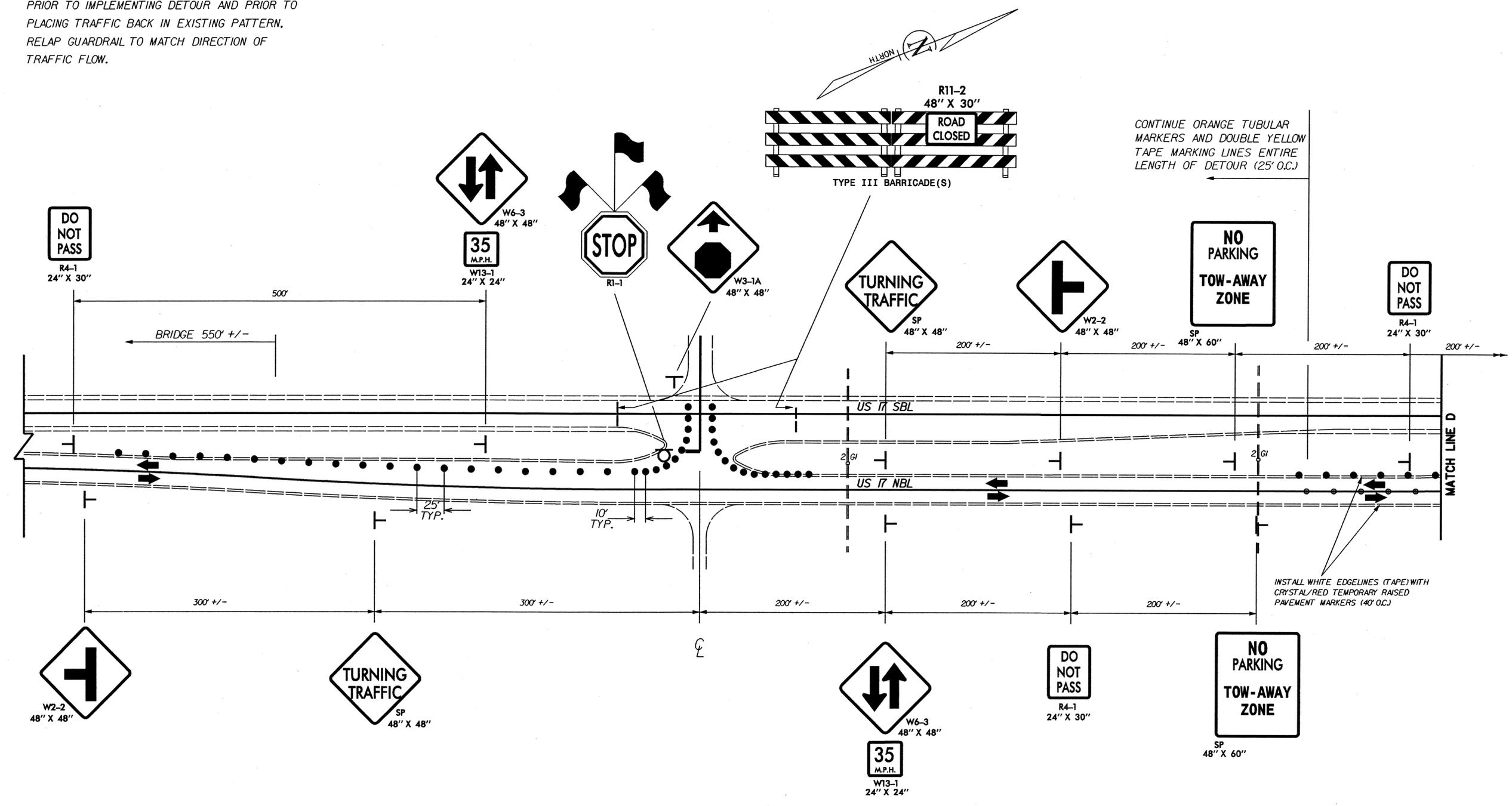
© ORANGE SURFACE MOUNT TUBULAR MARKERS WITH WHITE & CRYSTAL REFLECTIVE SHEETING

NOTE:  
 PRIOR TO IMPLEMENTING DETOUR AND PRIOR TO PLACING TRAFFIC BACK IN EXISTING PATTERN, RELAP GUARDRAIL TO MATCH DIRECTION OF TRAFFIC FLOW.

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NOTE:  
 PRIOR TO IMPLEMENTING DETOUR AND PRIOR TO  
 PLACING TRAFFIC BACK IN EXISTING PATTERN,  
 RELAP GUARDRAIL TO MATCH DIRECTION OF  
 TRAFFIC FLOW.

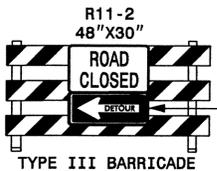
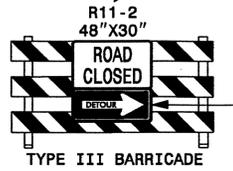
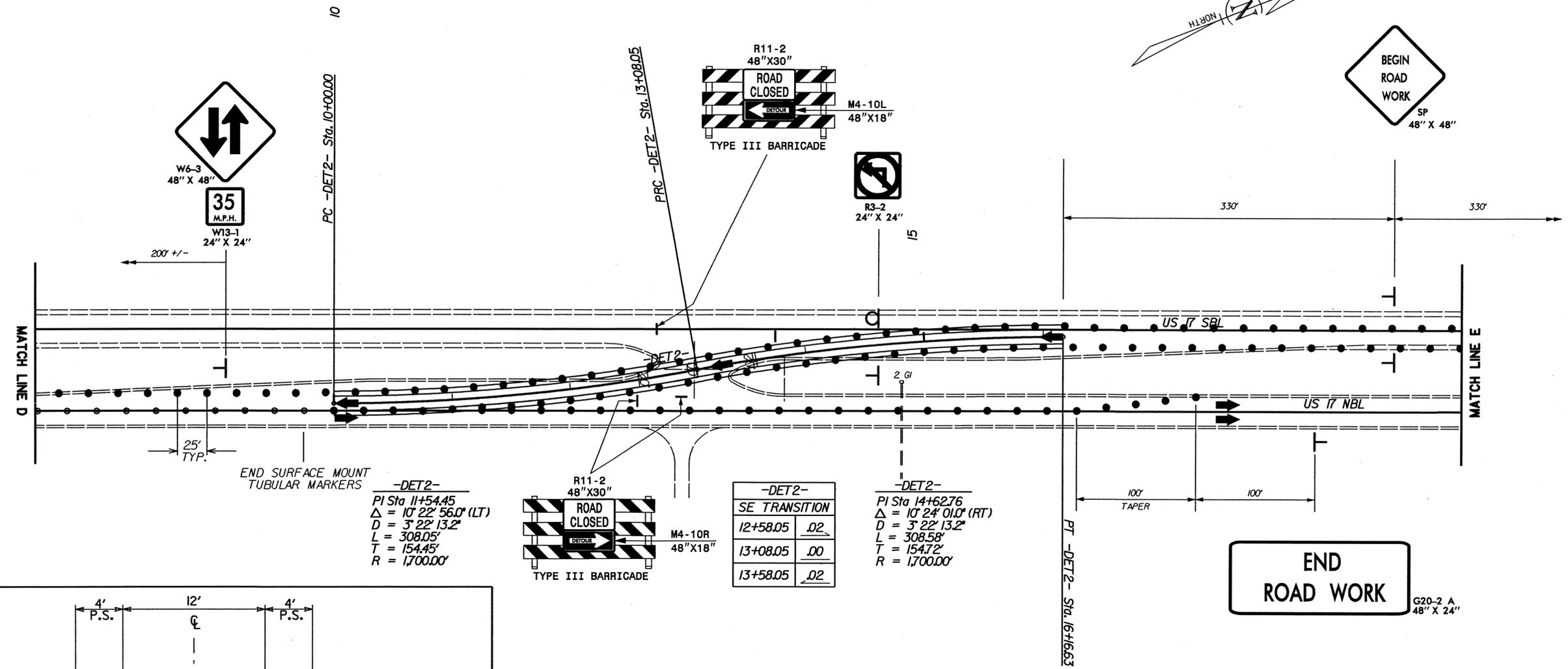


CONTINUE ORANGE TUBULAR  
 MARKERS AND DOUBLE YELLOW  
 TAPE MARKING LINES ENTIRE  
 LENGTH OF DETOUR (25' O.C.)

INSTALL WHITE EDGE LINES (TAPE) WITH  
 CRYSTAL/RED TEMPORARY RAISED  
 PAVEMENT MARKERS (40' O.C.)

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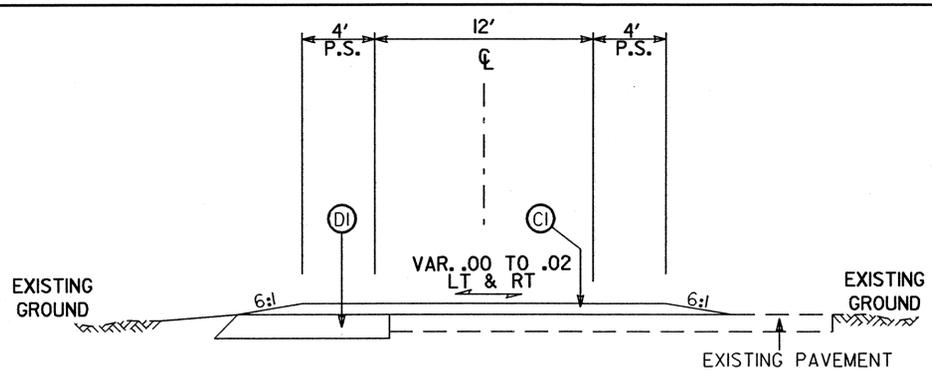


**-DET2-**  
SE TRANSITION

12+58.05	.02
13+08.05	.00
13+58.05	.02

**-DET2-**  
PI Sta 11+54.45  
 $\Delta = 10^\circ 22' 56.0''$  (LT)  
D = 3' 22' 13.2"  
L = 308.05'  
T = 154.45'  
R = 1,700.00'

**-DET2-**  
PI Sta 14+62.76  
 $\Delta = 10^\circ 24' 01.0''$  (RT)  
D = 3' 22' 13.2"  
L = 308.58'  
T = 154.72'  
R = 1,700.00'



**TYPICAL SECTION - DETOUR 2**

C1	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0, AT AN AVERAGE RATE OF 827 LBS. PER SQ. YD.

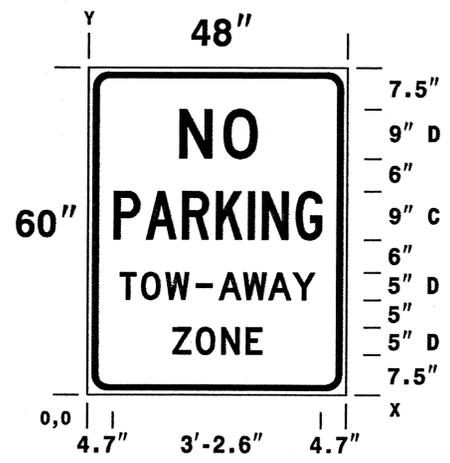
© ORANGE SURFACE MOUNT TUBULAR MARKERS WITH WHITE & CRYSTAL REFLECTIVE SHEETING

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**SIGN DETAIL**




**N. C. DEPARTMENT OF TRANSPORTATION**  
 DIVISION OF HIGHWAYS  
 TRAFFIC ENGINEERING BRANCH

SIGN NUMBER: SPO2001    DESIGN BY: D IVES    DATE: 01-09-02  
 TYPE: E    CHECKED BY:    STD. #: R7-XX  
 QUANTITY: 52    PROJECT ID:    DIV: T/C  
 WIDTHxHEIGHT: 48" x 60"    BACKGROUND COLOR: WHITE  
 SIGN AREA: 20.00 SQ.FT.    COPY COLOR: RED  
 BORDER TYPE: RECESSED    MAJ COPY SERIES: D  
 RECESS: 0.75"    NO. Z BARS: 2    LENGTH: 40  
 BORDER WIDTH: 1.25"    MAT'L: 0.125" ALUMINUM  
 RADII: 3.0"

**NOTES:**  
 -Legend and border shall be direct applied Non-reflective sheeting.  
 -Background shall be Type VII, VIII or IX reflective sheeting.

DIMENSIONS IN INCHES

SPACINGS ARE TO START OF NEXT LETTER

Y FONT	LETTER SPACINGS										HT LEN	
43.5 D	N	O										9.0
	16.7	8.2	6.3	16.7								14.5
28.5 C	P	A	R	K	I	N	G					9.0
	4.7	6.0	6.7	6.3	6.0	2.6	6.3	4.9	4.7			38.6
17.5 D	T	O	W	-	A	W	A	Y				5.0
	5.9	4.0	4.6	4.7	5.0	4.5	4.7	4.5	4.2	5.9		36.2
7.5 D	Z	O	N	E								5.0
	15.7	4.3	4.7	4.6	3.1	15.7						16.6

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