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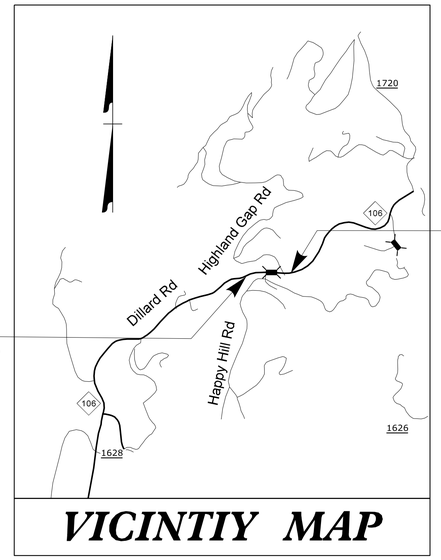
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

MACON COUNTY



VICINTIY MAP

LOCATION: BRIDGE NO. 26 NC–106 (DILLARD RD) OVER MIDDLE CREEK

INDEX OF SHEETS

SHEET NO.
TMP–1

BR–0029

TIP PROJECT:

WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

PLANS PREPARED BY:

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DIVISION OF HIGHWAYS ★ STATE OF NORTH CAROLINA ★ DEPARTMENT OF TRANSPORTATION ★ WORK ZONE TRAFFIC CONTROL

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DATE: 3/14/2022

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NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.06	WARNING SIGNS FOR BLASTING ZONES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.12	PAVEMENT MARKINGS - BRIDGES
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)
- WORK AREA
- REMOVAL
- Temporary Pavement
- Temporary Tie
- WEDGING

SIGNALS

EXISTING PROPOSED TEMPORARY (TEMP)

PAVEMENT MARKINGS

——— EXISTING LINES
——— TEMPORARY LINES

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

C1	WHITE EDGELINE	COLD APPLIED PLASTIC (4")	LF
C13	DOUBLE YELLOW	COLD APPLIED PLASTIC (4")	LF
P61	WHITE STOPBAR	PAINT (24")	LF
P1	WHITE EDGELINE	PAINT (4")	LF
P13	DOUBLE YELLOW	PAINT (4")	LF

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DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

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ROADWAY STANDARD DRAWINGS & LEGEND

PROJ. REFERENCE NO.	SHEET NO.
BR-0029	TMP-1B

MANAGEMENT STRATEGIES

MANAGEMENT STRATEGIES

THE FOLLOWING LISTED WORK ZONE STRATEGIES ARE RECOMMENDED FOR INCLUSION WITHIN THIS TRANSPORTATION MANAGEMENT PLAN (TMP).

RECOMMENDED STRATEGIES:

TRAFFIC MANAGEMENT STRATEGIES:
- LANE SHIFTS OR CLOSURES
- SHOULDER CLOSURES
- ONE-LANE, TWO WAY OPERATION (FLAGGING)
- DETOUR ROUTES

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.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
NC 106	MONDAY-FRIDAY 7-9 AM, 4-6 PM

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME
NC 106

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 P.M. DECEMBER 31st TO 9:00 A.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 9:00 A.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00 P.M. THURSDAY AND 9:00 A.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 P.M. FRIDAY TO 9:00 A.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 P.M. THE DAY BEFORE INDEPENDENCE DAY AND 9:00 A.M. THE DAY AFTER INDEPENDENCE DAY.

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 P.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 A.M. THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 P.M. FRIDAY AND 9:00 A.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 P.M. TUESDAY TO 9:00 A.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 P.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 A.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTICTIONS	DURATION AND OPERATION
-Y1- HAPPY HILL ROAD	MONDAY-FRIDAY 7AM-9AM & 4PM-6PM	30 MINUTE WEDGE UP TO FINAL GRADE
-L- NC 106		20 MINUTE ROCK BLASTING

LANE AND SHOULDER CLOSURE REQUIREMENTS

D) 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.

E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

F) 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..

G) 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.

H) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

I) 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.

J) 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 (W8-11) 350' IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

K) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

L) 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.

M) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFFSITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

N) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

O) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

P) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

Q) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS OR AS DIRECTED BY THE ENGINEER. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE / RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

R) PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION. PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS: (SEE ALSO 1101.05)

POSTED SPEED LIMIT	MINIMUM OFFSET
40 OR LESS	15 FT
45 - 50	20 FT
55	25 FT
60 MPH or HIGHER	30 FT

TRAFFIC CONTROL DEVICES

S) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

T) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

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SEAL

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DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

TRANSPORTATION OPERATIONS PLAN

PROJ. REFERENCE NO.	SHEET NO.
BR-0029	TMP-1C

GENERAL NOTES CONT.

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
ALL	PAINT	NONE
BRIDGE DECK	COLD APPLIED PLASTIC	NONE

V) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

W) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

X) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

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DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

TRANSPORTATION OPERATIONS PLAN

12/20/2021
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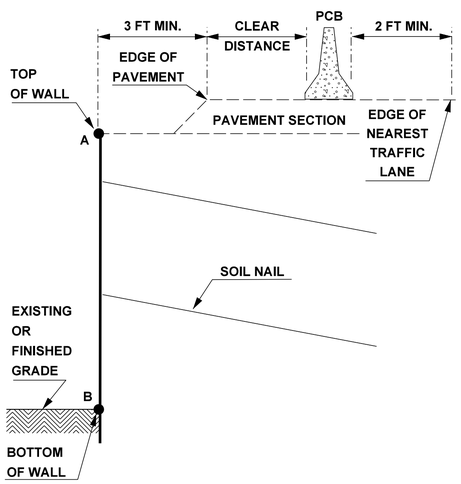
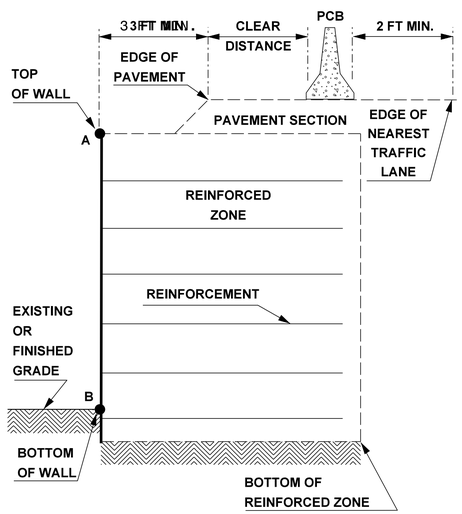
PROJ. REFERENCE NO.	SHEET NO.
BR-0029	TMP-2

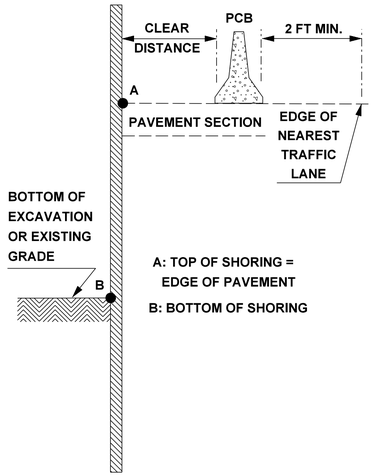
TEMPORARY SOIL NAIL WALL



TEMPORARY MSE WALL



TEMPORARY SHORING



NOTE: WALL OR SHORING HEIGHT = A-B

FIGURE A

NOTES

1- REFER TO THE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS AND NOTES.

2- REFER TO THE "TEMPORARY SHORING" STANDARD PROVISION FOR INFORMATION ABOUT TEMPORARY SHORING AND PORTABLE CONCRETE BARRIER (PCB).

3- PCB IS REQUIRED IF TEMPORARY SHORING/WALL IS LOCATED WITHIN THE CLEAR ZONE IN ACCORDANCE WITH THE AASHTO ROADSIDE DESIGN GUIDE. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT FOR APPLICABLE PAVEMENT DESIGN).

4- BASED ON THE CLEAR DISTANCE, OFFSET, DESIGN SPEED AND PAVEMENT TYPE, CHOOSE AN UNANCHORED OR ANCHORED PCB FROM THE TABLE SHOWN IN FIGURE B. CLEAR DISTANCE IS DEFINED AS SHOWN IN FIGURE A AND OFFSET IS DEFINED AS SHOWN IN FIGURE B.

5- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET PCB NEXT TO AND UP AGAINST THE TRAFFIC SIDE OF THE TEMPORARY SHORING/WALLS EXCEPT FOR BARRIER ABOVE TEMPORARY WALLS. PCB WITH THE MINIMUM REQUIRED CLEAR DISTANCE IS REQUIRED ABOVE TEMPORARY WALLS.

6- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.

7- SET PCB WITH A MINIMUM HORIZONTAL DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A UNLESS OTHERWISE SHOWN IN THE PLANS OR APPROVED BY THE ENGINEER.

8- FOR PCB ABOVE AND BEHIND TEMPORARY WALLS, PROVIDE A MINIMUM DISTANCE OF 3 FT BETWEEN THE EDGE OF PAVEMENT AND THE WALL FACE AS SHOWN IN FIGURE A. IF THIS MINIMUM REQUIRED DISTANCE IS NOT AVAILABLE, CONTACT THE ENGINEER.

9- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS.

MINIMUM REQUIRED CLEAR DISTANCE, inches

Barrier Type	Pavement Type	Offset * ft	Design Speed, mph <30	31-40	41-50	51-60	61-70	71-80
Unanchored PCB	Asphalt	<8	24	26	29	32	36	40
		8-14	26	28	31	35	38	42
		14-20	27	29	34	36	39	43
		20-26	28	31	35	38	40	44
		26-32	29	32	36	39	42	45
		32-38	30	34	38	41	43	46
		38-44	31	34	41	43	45	48
		44-50	31	35	41	43	46	49
		50-56	32	36	42	44	47	50
		>56	32	36	42	45	47	51
	Concrete	<8	17	18	21	22	25	26
		8-14	19	20	23	25	26	29
		14-20	22	22	24	26	28	31
		20-26	23	24	26	27	30	34
		26-32	24	25	27	28	32	35
		32-38	24	26	27	30	33	36
		38-44	25	26	28	30	34	37
		44-50	26	26	28	32	35	37
		50-56	26	26	28	32	35	38
		>56	26	27	29	32	36	38
Anchored PCB	Asphalt	All Offsets	24 for All Design Speeds					
Anchored PCB	Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds					

* See Figure Below

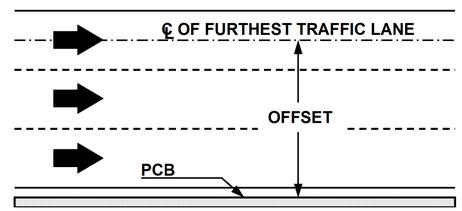


FIGURE B

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PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

PROJ. REFERENCE NO.	SHEET NO.
BR-0029	TMP-2A

TEMPORARY SHORING DATA

SHORING LOCATION NO. 1

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE END BENT CONSTRUCTION FROM STATION 14+70 ±-L-, 9.75’ RT, TO STATION 15+25 ±-L-, 9.75’ RT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION 14+70 ±-L-, 9.75’ RT, TO STATION 15+25 ±-L-, 9.75’ RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (Φ) = 30 DEGREES
COHESION (c) = 0 LB/SF
GROUNDWATER ELEVATION = 3392 FT

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 14+70 ±-L-, 9.75’ RT, TO STATION 15+25 ±-L-, 9.75’ RT. MAY NOT PENETRATE BELOW ELEVATION 3400 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 14+70 ±-L-, 9.75’ RT, TO STATION 15+25 ±-L-, 9.75’ RT.

AT THE CONTRACTOR’S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 14+70 ±-L-, 9.75’ RT, TO STATION 15+25 ±-L-, 9.75’ RT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION 14+70 ± -L-, 9.75’ RT, TO STATION 15+25 ±-L-, 9.75’ RT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

SHORING LOCATION NO. 2

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE END BENT INSTALLATION FROM STATION 15+78 ±-L-, 9.24’ RT, TO STATION 16+41 ±-L-, 9.24’ RT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION 15+78 ±-L-, 9.24’ RT, TO STATION 16+41 ±-L-, 9.24’ RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (Φ) = 30 DEGREES
COHESION (c) = 0 LB/SF
GROUNDWATER ELEVATION = 3395

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 15+78 ±-L-, 9.24’ RT, TO STATION 16+41 ± -L-, 9.24’ RT MAY NOT PENETRATE BELOW ELEVATION 3390 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 15+78 ±-L-, 9.24’ RT, TO STATION 16+41 ±-L-, 9.24’ RT.

AT THE CONTRACTOR’S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 15+78 ±-L-, 9.24’ RT, TO STATION 16+41 ±-L-, 9.24’ RT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION 15+78 ±-L-, 9.24’ RT, TO STATION 16+41 ±-L-, 9.24’ RT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

SHORING LOCATION NO. 3

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE END BENT CONSTRUCTION FROM STATION 14+62 ±-L-, 5.75’ RT, TO STATION 15+02 ±-L-, 5.75’ RT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION 14+62 ±-L-, 5.75’ RT, TO STATION 15+02 ±-L-, 5.75’ RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (Φ) = 30 DEGREES
COHESION (c) = 0 LB/SF
GROUNDWATER ELEVATION = 3392 FT

AT THE CONTRACTOR’S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 14+62 ±-L-, 5.75’ RT, TO STATION 15+02 ±-L-, 5.75’ RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

WHEN BACKFILL FOR BRIDGE APPROACH FILLS OVERLAPS WITH THE REINFORCED ZONE OF TEMPORARY WALLS, USE SHORING BACKFILL OR BACKFILL MATERIAL REQUIRED FOR BRIDGE APPROACH FILLS, WHICHEVER IS BETTER, IN THE REINFORCED ZONE OF TEMPORARY WALLS.

SHORING LOCATION NO. 4

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.
TEMPORARY SHORING IS REQUIRED FOR THE END BENT CONSTRUCTION FROM STATION 16+06 ±-L-, 5.75’ RT, TO STATION 16+46 ±-L-, 5.75’ RT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION 16+06 ±-L-, 5.75’ RT, TO STATION 16+46 ±-L-, 5.75’ RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (Φ) = 30 DEGREES
COHESION (c) = 0 LB/SF
GROUNDWATER ELEVATION = 3395 FT

AT THE CONTRACTOR’S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 16+06 ±-L-, 5.75’ RT, TO STATION 16+46 ±-L-, 5.75’ RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

WHEN BACKFILL FOR BRIDGE APPROACH FILLS OVERLAPS WITH THE REINFORCED ZONE OF TEMPORARY WALLS, USE SHORING BACKFILL OR BACKFILL MATERIAL REQUIRED FOR BRIDGE APPROACH FILLS, WHICHEVER IS BETTER, IN THE REINFORCED ZONE OF TEMPORARY WALLS.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH SEALED DOCUMENTS FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENTS WERE SUBMITTED TO THE WZTC SECTION ON DECEMBER 8, 2021 AND SEALED BY PROFESSIONAL ENGINEER, SHIPING YANG, P.E., LICENSE # 031361.

PLANS PREPARED BY:

DRMP
ENGINEERS · PLANNERS · SCIENTISTS

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8000 Regency Parkway, Suite 110
Cary, NC 27518
NC License No. C-2213 ✆(919) 650-1038

APPROVED: DocuSigned by: Lisa M. Moon 58CE588D830D421...

DATE: 3/14/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

TEMPORARY SHORING DATA

PROJ. REFERENCE NO.	SHEET NO.
BR-0029	TMP-2B

SIGN NUMBER: SP-1
TYPE: D
QUANTITY: 2

SIGN WIDTH: 4′-0″
HEIGHT: 2′-0″
TOTAL AREA: 8.0 Sq.Ft.

BORDER TYPE: RECESSED
RECESS: 0.47″
WIDTH: 0.63″
RADII: 1.5″

NO. Z BARS:
LENGTH:

BACKG COLOR: Orange
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT′L: 0.080″ (2.0 mm) ALUMINUM

USE NOTES: 1,2

1. Legend and border(except those that are colored black) shall be direct applied Grade B sheeting.
2. Background shall be Grade B reflective sheeting.

DESIGN BY: DJW
PROJECT ID: BR0029

CHECKED BY:
LOCATION:

Oct 20, 2021
DIV: NCDOT

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																									Series/Size Text Length
		H	I	G	H	L	A	N	D																C 2000
	8	4.7	2	4.6	4.7	3.4	4.7	4.7	3.4	7.9															32.1
		G	A	P		R	D																		C 2000
	11.1	4.1	4.7	3.4	6	4.4	3.4	11.1																	25.9

FILENAME: BR0029_TC_TCP_DETOUR

NORTH CAROLINA D.O.T. SIGN DETAIL

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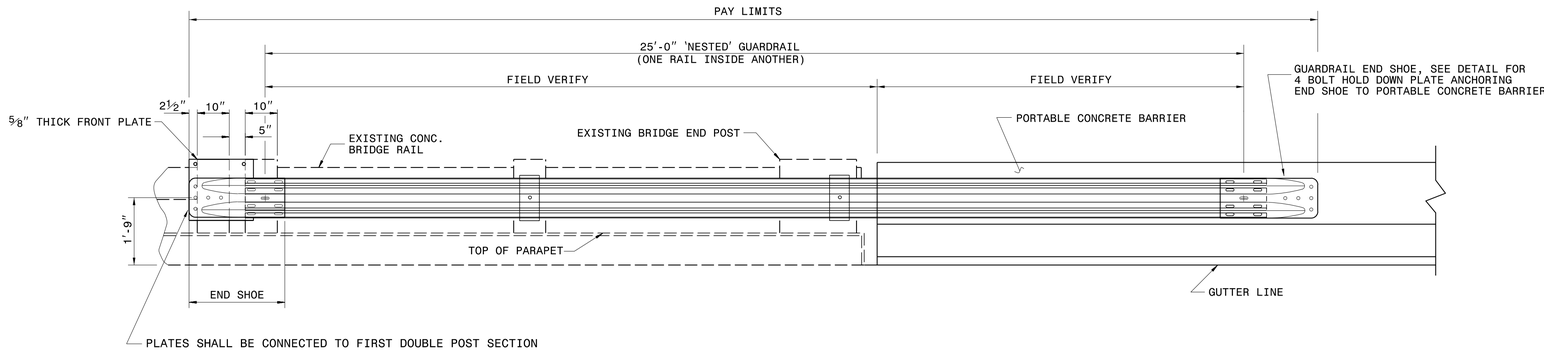
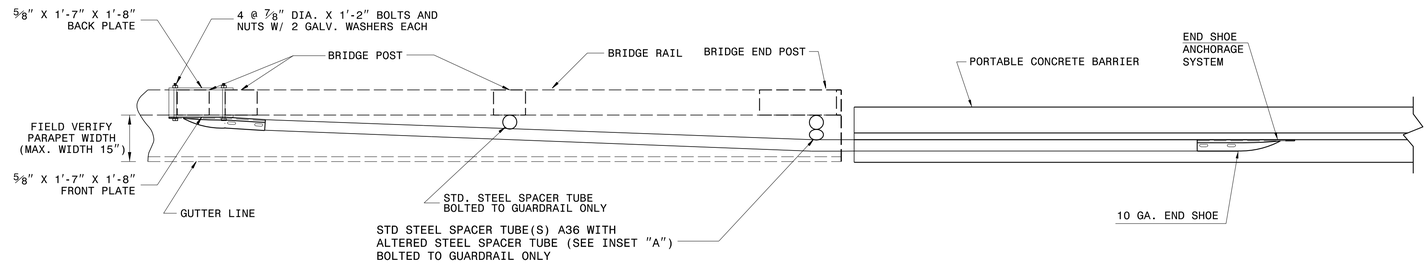
SPECIAL SIGN DESIGNS

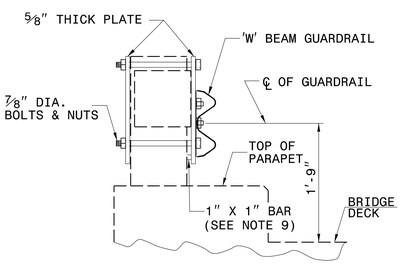
PROJ. REFERENCE NO.	SHEET NO.
BR-0029	TMP-2C



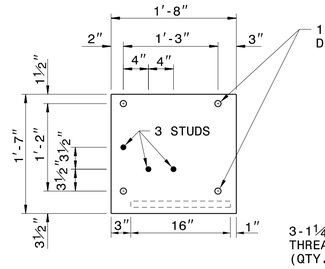
ELEVATION VIEW



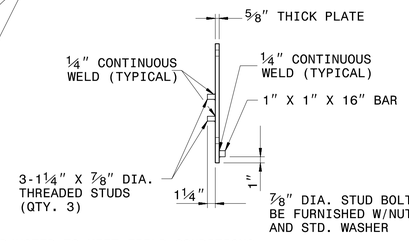
PLAN VIEW



SECTION VIEW

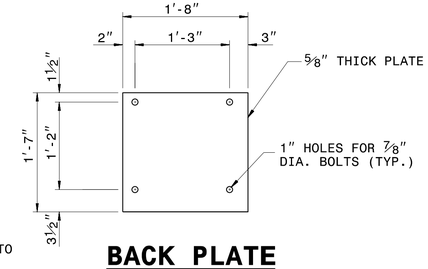


FRONT VIEW



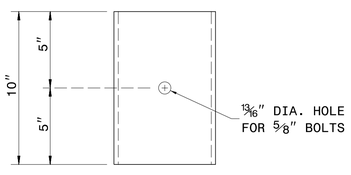
SIDE VIEW

STUDS MAY BE ADJUSTED TO MEET FIELD CONDITIONS

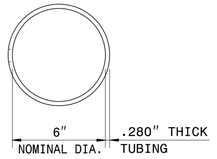


BACK PLATE

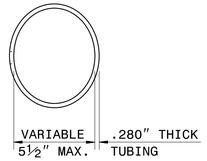
FRONT PLATE



FRONT VIEW



PLAN VIEW



PLAN VIEW
INSET "A"

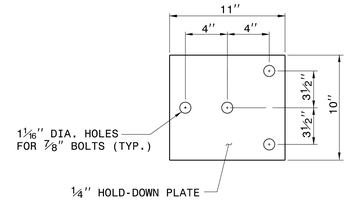
STEEL SPACER TUBE

NOTES FOR 4 BOLT HOLD DOWN PLATE

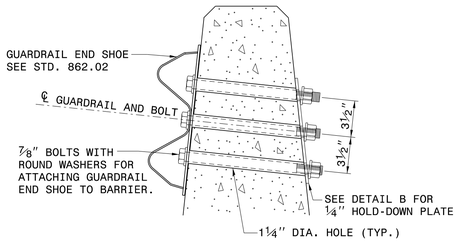
THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A ¼" HOLD DOWN PLATE AND 4 - 7/8" DIA. BOLTS WITH NUTS AND WASHERS.

THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL. THE 1¼" DIA. HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.



4 BOLT HOLD DOWN PLATE



PART SECTION OF BARRIER OR RAIL

THRU END SHOE SECTION AND
4 BOLT HOLD DOWN PLATE

GENERAL NOTES:

1. USE NUTS, BOLTS, AND WASHERS CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-307 AND GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.
2. TAP NUTS FOR THE 7/8" DIA. STUDS AND BOLTS AFTER GALVANIZING SEE A.S.T.M. A-563.
3. USE PLATES AND TUBES CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-36 AND GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.
4. ADDITIONAL FIELD HOLES MAY BE DRILLED IN STEEL RAIL AS DIRECTED BY THE ENGINEER.
5. INSTALL FACE OF GUARDRAIL AS NEAR AS POSSIBLE TO PLUMB WITH THE PARAPET FACE AT BRIDGE END POST SPACER TUBE LOCATION BY USING STANDARD OR ALTERED SPACER TUBES OR A COMBINATION THEREOF OR AS DIRECTED BY THE ENGINEER. FOR VERY SMALL PARAPET WIDTHS, GUARDRAIL MAY BE INSTALLED AGAINST BRIDGE RAIL WITHOUT SPACER TUBES.
6. DO NOT DRILL BRIDGE RAIL IN ORDER TO INSTALL GUARDRAIL ANCHOR UNIT.
7. KEEP TOE OF PORTABLE CONCRETE BARRIER FLUSH WITH FACE OF PARAPET.
8. ATTACH 1" X 1" BAR AND THREADED STUDS TO PLATE WITH ¼" WELDS ALL AROUND.
9. 1" X 1" BAR MAY NOT BE NEEDED ON BRIDGE RAILS WHERE FACE OF RAIL DOES NOT PROJECT BEYOND FACE OF POST.

PLANS PREPARED BY:

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APPROVED: DocuSigned by: Lisa M. Moon 58CE588D83D0421...

DATE: 3/14/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

PCB ATTACHING TO EXISTING BRIDGE RAIL

PROJ. REFERENCE NO.	SHEET NO.
BR-0029	TMP-3A

PHASING

ACCESS TO ALL RESIDENCES AND BUSINESSES WITHIN THE PROJECT LIMITS MUST BE MAINTAINED AT ALL TIMES.

MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION.

USE CMS DURING ALL FLAGGING AND PORTABLE SIGNAL OPERATIONS ON NC 106, EASTBOUND CMS ~5,000 feet (0.9 MILES) WEST OF -Y1- AND WESTBOUND CMS ~4,850 FEET (0.9 MILES) EAST OF -Y2- SEE INSET 3 CMS ON TMP-5.

FLAGGERS MAY BE USED IN LIEU OF THE PORTABLE SIGNAL OPERATION, WHEN APPROPRIATE AND WITH APPROVAL OF THE ENGINEER. USE FLAGGERS IN ACCORDANCE RSD 1101.02 SHEET 1 OF 14.

AS NECESSARY, USE RSD 1101.06 (SHEET 1 OF 1) FOR PLACEMENT OF ADVANCED WARNING SIGNS FOR BLASTING ZONE.

PHASE I

STEP 1:
INSTALL CHANGEABLE MESSAGE SIGNS ON NC 106 AS SHOWN ON TMP-5 OF THE PLANS. OPERATE FOR TWO WEEKS MINIMUM PRIOR TO BEGINNING CONSTRUCTION. SEE INSET 1 ON TMP-5.

STEP 2:
INSTALL WORK ZONE ADVANCE WARNING SIGNS. SEE RSD 1101.01, SHEET 3 OF 3.

INSTALL PORTABLE TRAFFIC SIGNAL WITH DRIVEWAY ASSISTANCE AS SHOWN ON TMP-4. SIGNAL SHALL BE PROGRAMMED TO OPERATE IN YELLOW FLASH DURING NORMAL TWO-WAY, TWO-LANE OPERATION AND RYG WHEN A LANE CLOSURE IS NEEDED, FOLLOWING PROJECT TIME RESTRICTIONS. PROGRAM THE CMS AS SHOWN ON TMP-5, INSET 3 WHEN THE PORTABLE SIGNAL IS IN RYG OPERATION OR IF FLAGGING IS NECESSARY WITHIN THE WORK ZONE.

STEP 3:
AWAY FROM TRAFFIC AND USING RSD 1101.02, SHEET 14 (FOR PORTABLE SIGNALS) OF 14 AS NECESSARY, CONSTRUCT:
- -L- STA 15+90 +/- TO STA 17+10 +/-, INSTALL MINIMUM OF 2' TEMPORARY PAVEMENT FOR BARRIER. SEE INSET 2 ON TMP-5.
- -Y1- STA 10+94+/- TO STA 13+42 +/-, COMPLETE CONSTRUCTION UP TO BUT NOT INCLUDING THE FINAL SURFACE IN THE FOLLOWING MANNER (SEE TMP-6):

1. -Y1- STA 10+94 +/- TO STA 12+85 +/-, CONSTRUCT ON NEW ALIGNMENT, SEE -Y1- SUB-STEP 1.
2. -Y1- STA 12+85+/- TO STA 13+42 +/-, CONSTRUCT TIE-IN TO EXISTING -Y1- AND CONSTRUCT 12' TEMPORARY TIE TO EXISTING -Y1- ADJACENT TO -Y1- STA 11+14 +/-. SEE -Y1- SUB-STEP 2.
3. SHIFT TRAFFIC TO THE NEW ALIGNMENT VIA TEMPORARY TIE AS SHOWN ON THE PLANS. INSTALL ALL APPROPRIATE TRAFFIC CONTROL DEVICES. SEE TMP-6, -Y1- SUB-STEP 3.

AWAY FROM TRAFFIC BEGIN CONSTRUCTION UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE OF THE FOLLOWING:
- -L- STA 10+00 +/- TO STA 22+00 +/-, LEFT SIDE (TMP-5)
- -Y1- STA 10+66 +/- TO STA 10+94 +/-, SEE TMP-6, -Y1- SUB-STEP 3.

STEP 4:
AWAY FROM TRAFFIC AND USING RSD 1101.02, SHEET 14 (FOR PORTABLE SIGNALS) OF 14 AS NECESSARY, PERFORM THE FOLLOWING WORK:
- -L- STA 10+50 +/- TO STA 14+70 +/-, RIGHT SIDE, CLEAR AND GRADE HILLSIDE TO FINAL GRADE WEST OF EXISTING -Y1-.

AWAY FROM TRAFFIC CONTINUE CONSTRUCTION UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE OF THE FOLLOWING:
- -L- STA 10+00 +/- TO STA 22+00 +/-, LEFT SIDE (SEE TMP-5)
- -Y1- STA 10+66 +/- TO STA 10+94 +/-, SEE TMP-6, -Y1- SUB-STEP 3.

STEP 5:
USING RSD 1101.02, SHEET 14 (FOR PORTABLE SIGNALS) OF 14 AS NECESSARY, PERFORM THE FOLLOWING WORK:
- INSTALL ANCHORED PORTABLE CONCRETE BARRIER (PCB) FROM -L- STA 13+90 +/- TO STA 15+05 +/- AND ATTACH PCB TO EXISTING BRIDGE RAIL. SEE SPECIAL DETAIL ON TMP-2C AND SECTION A-A ON TMP-5.
- INSTALL ANCHORED PCB FROM -L- STA 15+90 +-/- TO STA 16+90 +/- AND ATTACH PCB TO EXISTING BRIDGE RAIL, SEE SPECIAL DETAIL ON TMP-2C AND SECTIONS B-B AND C-C ON TMP-5.

AWAY FROM TRAFFIC CONTINUE CONSTRUCTION UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE OF THE FOLLOWING:
- -L- STA 10+00 +/- TO STA 22+00 +/-, LEFT SIDE (SEE TMP-5)
- -Y1- STA 10+66 +/- TO STA 10+94 +/-, SEE TMP-5, -Y1- SUB-STEP 3.

PHASE I CONT.

STEP 6:
USING RSD 1101.02, SHEET 14 (FOR PORTABLE SIGNALS) OF 14 AS NECESSARY, CONSTRUCT THE FOLLOWING:

- TEMPORARY SHORING
  - LOCATION 1 FROM -L- STA 14+70 +/-, 9.75' RT TO STA 15+25 +/-, 9.75' RT.
  - LOCATION 2 FROM -L- STA 15+78 +/-, 9.24' RT TO STA 16+41 +/-, 9.24' RT (SEE SECTION B-B ON TMP-5)

AWAY FROM TRAFFIC CONTINUE CONSTRUCTION UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE OF THE FOLLOWING:

- -L- STA 10+00 +/- TO STA 22+00 +/-, LEFT SIDE (SEE TMP-5)
- -Y1- STA 10+66 +/- TO STA 10+90 +/-, SEE TMP-6, -Y1- SUB-STEP 3.

STEP 7:
AWAY FROM TRAFFIC AND USING RSD 1101.02, SHEETS 11 AND 14 (FOR PORTABLE SIGNALS) OF 14 AS NECESSARY, BEGIN/CONTINUE CONSTRUCTION UP TO BUT NOT INCLUDING FINAL SURFACE COURSE (UNLESS OTHERWISE NOTED) OF THE FOLLOWING:
- -L- STA 10+00 +/- TO STA 13+40 +/-, CONSTRUCT LEFT SIDE WIDENING TO EXISTING EDGE OF PAVEMENT. ENSURE THAT THE ELEVATION AT THE EXISTING EDGE OF PAVEMENT IS WITHIN 2"OF THE EXISTING ROADWAY ELEVATION.
- -L- STA 13+40 +/- TO STA 14+74.61 +/-, CONSTRUCT LEFT SIDE WIDENING OF -L- TO THE MINIMUM DIMENSION FROM THE PROPOSED LEFT SIDE EDGE OF PAVEMENT (EOP) AS LISTED BELOW AND AS SHOWN ON PLANS.
  - -L- STA 13+40 +/- CONSTRUCT TO EXISTING EOP
  - -L- STA 13+40 +/- TO STA 13+50 +/-, TAPER TO MINIMUM WIDTH OF 20.9'
  - -L- STA 13+50 +/- TO STA 14+00 +/- TAPER TO MINIMUM WIDTH OF 25.45'.
  - -L- STA 14+00 +/- TO STA 14+41 +/- TAPER TO MINIMUM WIDTH OF 26.5'.
  - -L- STA 14+41 +/- TO STA 14+70 +/- MAINTAIN MINIMUM WIDTH OF 26.5'. SEE SECTION A-A ON TMP-5.
  - -L- STA 14+70 +/- TO STA 14+74.61 +/- MAINTAIN MINIMUM WIDTH OF 24.6'.
- -L- STA 14+74.61 +/- TO STA 16+29.53 +/-, CONSTRUCT MINIMUM WIDTH OF 26.4' FOR BRIDGE WITH APPROACH SLABS. SEE SECTION B-B ON TMP-5.
- -L- STA 16+29.53 +/- TO STA 17+03 +/-, CONSTRUCT LEFT SIDE WIDENING OF -L- TO THE MINIMUM DIMENSION FROM THE PROPOSED LEFT SIDE EOP AS LISTED BELOW AND AS SHOWN ON PLANS.
  - -L- STA 16+29.53 +/- CONSTRUCT MINIMUM WIDTH OF 24.8'
  - -L- STA 16+29.53 +/- TO STA 16+41 +/-, TAPER TO MINIMUM WIDTH OF 27.5'
  - -L- STA 16+41 +/- TO STA 17+03 +/-, MAINTAIN MINIMUM WIDTH OF 27.5'. SEE SECTION C-C ON TMP-5.
- -L- STA 17+78 +/- TO STA 20+00 +/-, CONSTRUCT LEFT SIDE WIDENING OF -L- TO THE MINIMUM DIMENSION FROM THE PROPOSED LEFT SIDE EOP AS LISTED BELOW AND AS SHOWN ON PLANS. ALSO CONSTRUCT TEMPORARY PAVEMENT TO LEFT SIDE OF PROPOSED EOP AT CROSS SLOPE OF PROPOSED FINAL CONSTRUCTION.
  - -L- STA 17+78 +/- TO STA 18+50 +/- CONSTRUCT MINIMUM WIDTH OF 21.5' AND CONSTRUCT A MINIMUM OF 8' TEMPORARY PAVEMENT.
  - -L- STA 18+50 +/- TO STA 19+00 +/- -TAPER TO MINIMUM WIDTH OF 17' AND CONSTRUCT A MINIMUM OF 8' TEMPORARY PAVEMENT. SEE SECTION D-D ON TMP-5.
  - -L- STA 19+00 +/- TO STA 19+50 +/- TAPER TO MINIMUM WIDTH OF 14' AND CONSTRUCT A MINIMUM OF 8' TEMPORARY PAVEMENT.
  - -L- STA 19+50 +/- TO STA 20+00 +/- TAPER TO MEET EXISTING EOP AND CONSTRUCT A MINIMUM OF 8' TEMPORARY PAVEMENT.

PHASE 1 CONT.

STEP 7 CONT:

- -L- STA 20+00 +/- TO STA 22+00 +/-, CONSTRUCT LEFT SIDE WIDENING TO EXISTING EDGE OF PAVEMENT. ENSURE THAT THE ELEVATION AT THE EXISTING EDGE OF PAVEMENT IS WITHIN 2"OF THE EXISTING ROADWAY ELEVATION. ALSO CONSTRUCT TEMPORARY PAVEMENT TO LEFT SIDE OF PROPOSED EOP AT CROSS SLOPE OF PROPOSED FINAL CONSTRUCTION AS LISTED BELOW AND AS SHOWN ON PLANS.
  - -L- STA 20+00 +/- TO STA 20+47 +/-, CONSTRUCT A MINIMUM OF 8'.
  - -L- STA 20+47 +/- TO STA 20+85 +/-, TAPER TO MINIMUM WIDTH OF 6.93'
  - -L- STA 20+85 +/- TO STA 21+20 +/-, WEDGE ACROSS ENOUGH OF EXISTING LANE TO MAINTAIN POSITIVE DRAINAGE, TAPER TO MINIMUM WIDTH OF 4'
  - -L- STA 21+20 +/- TO STA 21+68 +/-, WEDGE ACROSS ENOUGH OF EXISTING LANE TO MAINTAIN POSITIVE DRAINAGE, MAINTAIN MINIMUM WIDTH OF 4'
  - -L- STA 21+68 +/- TO STA 22+00 +/-, WEDGE ACROSS ENOUGH OF EXISTING LANE TO MAINTAIN POSITIVE DRAINAGE
- -Y1- CONSTRUCTION:
  - -Y1- FROM EXISTING -L- TO -Y1- STA 10+66 +/-, CONSTRUCT -Y1- IN FINAL ALIGNMENT BUT AT TEMPORARY GRADE. SEE SECTION A-A ON TMP-5 AND -Y1- STEP 7 ON TMP-6. ANY WORK ON -Y1- WITHIN THESE LIMITS WILL REQUIRE A FLAGGING OPERATION DUE TO SIGHT DISTANCE LIMITATIONS DUE TO CONSTRUCTION EQUIPMENT. ENSURE THAT TRAFFIC ON EXISTING -Y1- CAN SAFELY EXIT -Y1- ONTO NC 106.
  - -Y1- STA 10+66 +/- TO STA 10+94 +/-, SEE -Y1- SUB-STEP 3 ON TMP-6.
  - BEGIN REMOVAL OF EXISTING ROADWAY ALONG RT SIDE OF -Y1-, SEE -Y1- STEP 7 ON TMP-6.

WORK UNDER STEP 8 TO BE DONE DURING ONE WEEK ICT

STEP 8:
AWAY FROM TRAFFIC AND USING RSD 1101.02, SHEET 14 (FOR PORTABLE SIGNALS) OF 14 AS NECESSARY, CONSTRUCT -Y2- AS SHOWN ON TMP-6 IN THE FOLLOWING MANNER:
1. USING RSD 1101.03, SHEET 2 OF 9, DETOUR -Y2- AS SHOWN ON TMP-9 AND TMP-10.
2. CONSTRUCT UP TO BUT NOT INCLUDING FINAL LAYER OF THE FOLLOWING:
   - -L- STA 17+03 +/- TO -Y2-, CONSTRUCT LEFT SIDE WIDENING OF -L- 27.5' FROM THE PROPOSED LEFT SIDE EOP
   - -L- FROM -Y2- TO STA 17+78 +/-, CONSTRUCT LEFT SIDE WIDENING OF -L- 21.5' FROM THE PROPOSED LEFT SIDE EOP AND CONSTRUCT 8' TEMPORARY PAVEMENT TO LEFT SIDE OF PROPOSED EOP AT CROSS SLOPE OF PROPOSED FINAL CONSTRUCTION.
   - -Y2- FROM RIGHT SIDE OF -L- AT 7.5' OFFSET, TO -Y2- STA 10+76 +/-
   - CONSTRUCT TEMPORARY TIE TO EXISTING ROADWAY AS SHOWN ON THE PLANS.
3. END DETOUR AND OPEN -Y2- BACK TO TRAFFIC.

PLANS PREPARED BY:

DRMP
ENGINEERS · PLANNERS · SCIENTISTS

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Cary, NC 27518
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APPROVED: DocuSigned by: Lisa M Moon 58CE58BD83D0421...

DATE: 3/14/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PHASING OPERATIONS PLAN

2/23/2022
R:\BR0029\Traffic\TrafficControl\TCP\BR0029_TC_TCP_TSHL.dgn
User:DWhite

PROJ. REFERENCE NO.	SHEET NO.
BR-0029	TMP-3B

PHASING

ACCESS TO ALL RESIDENCES AND BUSINESSES WITHIN THE PROJECT LIMITS MUST BE MAINTAINED AT ALL TIMES.

MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION.

USE CMS DURING ALL FLAGGING AND PORTABLE SIGNAL OPERATIONS ON NC 106, EASTBOUND CMS ~5,000 feet (0.9 MILES) WEST OF -Y1- AND WESTBOUND CMS ~4,850 FEET (0.9 MILES) EAST OF -Y2- SEE INSET 3 CMS ON TMP-5.

FLAGGERS MAY BE USED IN LIEU OF THE PORTABLE SIGNAL OPERATION, WHEN APPROPRIATE AND WITH APPROVAL OF THE ENGINEER. USE FLAGGERS IN ACCORDANCE RSD 1101.02 SHEET 1 OF 14.

AS NECESSARY, USE RSD 1101.06 (SHEET 1 OF 1) FOR PLACEMENT OF ADVANCED WARNING SIGNS FOR BLASTING ZONE.

PHASE I CONT.

STEP 9:
AWAY FROM TRAFFIC AND USING RSD 1101.02, SHEETS 11 AND 14 (FOR PORTABLE SIGNALS) OF 14 AS NECESSARY, COMPLETE CONSTRUCTION UP TO BUT NOT INCLUDING FINAL SURFACE COURSE (UNLESS OTHERWISE NOTED) OF THE FOLLOWING:

- -L- STA 10+00 +/- TO STA 13+40 +/-, CONSTRUCT LEFT SIDE WIDENING TO EXISTING EDGE OF PAVEMENT. ENSURE THAT THE ELEVATION AT THE EXISTING EDGE OF PAVEMENT IS WITHIN 2”OF THE EXISTING ROADWAY ELEVATION.
- -L- STA 13+40 +/- TO STA 14+74.61 +/-, CONSTRUCT LEFT SIDE WIDENING OF -L- TO THE MINIMUM DIMENSION FROM THE PROPOSED LEFT SIDE EDGE OF PAVEMENT (EOP) AS LISTED BELOW AND AS SHOWN ON PLANS.
  - -L- STA 13+40 +/- CONSTRUCT TO EXISTING EOP
  - -L- STA 13+40 +/- TO STA 13+50 +/-, TAPER TO MINIMUM WIDTH OF 20.9’
  - -L- STA 13+50 +/- TO STA 14+00 +/-, TAPER TO MINIMUM WIDTH OF 25.45’.
  - -L- STA 14+00 +/- TO STA 14+41 +/-, TAPER TO MINIMUM WIDTH OF 26.5’.
  - -L- STA 14+41 +/- TO STA 14+70 +/-, MAINTAIN MINIMUM WIDTH OF 26.5’. SEE SECTION A-A ON TMP-5.
  - -L- STA 14+70 +/- TO STA 14+74.61 +/- MAINTAIN MINIMUM WIDTH OF 24.6’.
- -L- STA 14+74.61 +/- TO STA 16+29.53 +/-, CONSTRUCT MINIMUM WIDTH OF 26.4’ FOR BRIDGE WITH APPROACH SLABS. SEE SECTION B-B ON TMP-5.
- -L- STA 16+29.53 +/- TO STA 17+03 +/-, CONSTRUCT LEFT SIDE WIDENING OF -L- TO THE MINIMUM DIMENSION FROM THE PROPOSED LEFT SIDE EOP AS LISTED BELOW AND AS SHOWN ON PLANS.
  - -L- STA 16+29.53 +/-, CONSTRUCT MINIMUM WIDTH OF 24.8’
  - -L- STA 16+29.53 +/- TO STA 16+41 +/-, TAPER TO MINIMUM WIDTH OF 27.5’
  - -L- STA 16+41 +/- TO STA 17+03 +/-, MAINTAIN MINIMUM WIDTH OF 27.5’. SEE SECTION C-C ON TMP-5.
- -L- STA 17+78 +/- TO STA 20+00 +/-, CONSTRUCT LEFT SIDE WIDENING OF -L- TO THE MINIMUM DIMENSION FROM THE PROPOSED LEFT SIDE EOP AS LISTED BELOW AND AS SHOWN ON PLANS. ALSO CONSTRUCT TEMPORARY PAVEMENT TO LEFT SIDE OF PROPOSED EOP AT CROSS SLOPE OF PROPOSED FINAL CONSTRUCTION.
  - -L- STA 17+78 +/- TO STA 18+50 +/- CONSTRUCT MINIMUM WIDTH OF 21.5’ AND CONSTRUCT A MINIMUM OF 8’ TEMPORARY PAVEMENT.
  - -L- STA 18+50 +/- TO STA 19+00 +/- -TAPER TO MINIMUM WIDTH OF 17’ AND CONSTRUCT A MINIMUM OF 8’ TEMPORARY PAVEMENT. SEE SECTION D-D ON TMP-5.
  - -L- STA 19+00 +/- TO STA 19+50 +/- TAPER TO MINIMUM WIDTH OF 14’ AND CONSTRUCT A MINIMUM OF 8’ TEMPORARY PAVEMENT.
  - -L- STA 19+50 +/- TO STA 20+00 +/- TAPER TO MEET EXISTING EOP AND CONSTRUCT A MINIMUM OF 8’ TEMPORARY PAVEMENT.
- -L- STA 20+00 +/- TO STA 22+00 +/-, CONSTRUCT LEFT SIDE WIDENING TO EXISTING EDGE OF PAVEMENT. ENSURE THAT THE ELEVATION AT THE EXISTING EDGE OF PAVEMENT IS WITHIN 2” OF THE EXISTING ROADWAY ELEVATION. ALSO CONSTRUCT TEMPORARY PAVEMENT TO LEFT SIDE OF PROPOSED EOP AT CROSS SLOPE OF PROPOSED FINAL CONSTRUCTION AS LISTED BELOW AND AS SHOWN ON PLANS.
  - -L- STA 20+00 +/- TO STA 20+47 +/-, CONSTRUCT A MINIMUM OF 8’.
  - -L- STA 20+47 +/- TO STA 20+85 +/-, TAPER TO MINIMUM WIDTH OF 6.93’
  - -L- STA 20+85 +/- TO STA 21+20 +/-, WEDGE ACROSS ENOUGH OF EXISTING LANE TO MAINTAIN POSITIVE DRAINAGE, TAPER TO MINIMUM WIDTH OF 4’
  - -L- STA 21+20 +/- TO STA 21+68 +/-, WEDGE ACROSS ENOUGH OF EXISTING LANE TO MAINTAIN POSITIVE DRAINAGE, MAINTAIN MINIMUM WIDTH OF 4’
  - -L- STA 21+68 +/- TO STA 22+00 +/-, WEDGE ACROSS ENOUGH OF EXISTING LANE TO MAINTAIN POSITIVE DRAINAGE
- -Y1- CONSTRUCTION:
  - -Y1- FROM EXISTING -L- TO -Y1- STA 10+66 +/-, CONSTRUCT -Y1- IN FINAL ALIGNMENT BUT AT TEMPORARY GRADE. SEE SECTION A-A ON TMP-5 AND -Y1- STEP 7 ON TMP-6. ANY WORK ON -Y1- WITHIN THESE LIMITS WILL REQUIRE A FLAGGING OPERATION DUE TO SIGHT DISTANCE LIMITATIONS DUE TO CONSTRUCTION EQUIPMENT. ENSURE THAT TRAFFIC ON EXISTING -Y1- CAN SAFELY EXIT -Y1- ONTO NC 106.
  - -Y1-STA 10+66 +/- TO STA 10+94 +/-, SEE INSET 3 ON TMP-6.
  - CONTINUE REMOVAL OF EXISTING ROADWAY ALONG RT SIDE OF -Y1-, SEE -Y1- ON TMP-6.

PHASE I CONT.

STEP 10:
AWAY FROM TRAFFIC, IN PREPARATION OF THE TRAFFIC SHIFT, INSTALL THE FOLLOWING AS SHOWN ON TCP-7:

- TEMPORARY SHORING
  - LOCATION 3 FROM -L- STA 14+62 +/-, 5.75' RT TO STA 15+02 +/-, 5.75’ RT.
  - LOCATION 4 FROM -L- STA 16+06 +/-, 5.75' RT TO STA 16+46 +/-, 5.75' RT.
- -L- STA 14+75+/- TO STA 16+30+/-, INSTALL ATTENUATOR AND ANCHORED BARRIER ON BRIDGE AND APPROACHES,
- -L- STA 16+30+/- TO STA 17+69+/-, INSTALL BARRIER WITH ATTENUATOR AND
- TEMPORARY PAVEMENT MARKINGS AND TRAFFIC CONTROL DEVICES THAT ARE NOT IN CONFLICT WITH EXISTING TRAFFIC.

USING RSD 1101.02, SHEETS 11 AND 14 (FOR PORTABLE SIGNALS) OF 14 AND PORTABLE SIGNALS AS NECESSARY, MILL AND WEDGE OR RESURFACE UP TO BUT NOT INCLUDING FINAL SURFACE COURSE OF EXISTING -L- STA 10+00 +/- TO STA 13+40 +/- TO SMOOTH OUT -L- FOR THE PHASE II TRAFFIC PATTERN.

PHASE II

WORK UNDER STEP 1 TO BE DONE IN A CONTINUOUS MANNER WITHIN A SINGLE WEEK PERIOD BETWEEN 6:00 PM MONDAY TO 7:00 AM FRIDAY. SEE ICT AND LIQUIDATED DAMAGES.

STEP 1:
USING RSD 1101.02, SHEETS 11 AND 14 OF 14 AND PORTABLE SIGNALS AS NECESSARY CONSTRUCT IN THE FOLLOWING MANNER:
1. CONSTRUCT THE FOLLOWING:
   - -L- STA 10+00 +/- TO -L- STA 22+25 +/-, INSTALL REMAINING TEMPORARY PAVEMENT MARKINGS AND ALL APPROPRIATE TRAFFIC CONTROL DEVICES, AS SHOWN ON TMP-7 AND SHIFT TRAFFIC TO NEW PATTERN.
   - -L- STA 14+38 +/-, INSTALL A TEMPORARY TIE BETWEEN PHASE 1 CONSTRUCTION AND EXISTING ROADWAY FOR -Y1- DURING TRAFFIC SHIFT.
   - -L- STA 19+20 +/-, INSTALL A TEMPORARY TIE TO DRIVEWAY DURING TRAFFIC SHIFT.
2. -L- STA 19+50 +/- TO STA 20+85+/-, CONSTRUCT ANY REMAINING PAVEMENT NEEDED FOR TWO 10’ LANES. BACKFILL WITH SUITABLY COMPACTED MATERIAL AT A 6:1 SLOPE ADJACENT TO CONSTRUCTION AT THE END OF EACH WORK PERIOD.
3. INSTALL TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-8 AND OPEN FULL TWO-LANE, TWO-WAY PATTERN ON -L-.

STEP 2:
USING RSD 1101.02, SHEETS 11 AND 14 (FOR PORTABLE SIGNALS) OF 14 AS NECESSARY, CONSTRUCT UP TO BUT NOT INCLUDING FINAL SURFACE COURSE OF THE FOLLOWING:

- -L- STA 10+00 TO STA 14+74.61 +/-, CONSTRUCT REMAINING -L-, SEE SECTION A-A ON TMP-8. COORDINATE WITH -Y1- CONSTRUCTION.
- -L- STA 14+74.61+/- TO STA 16+29.53 +/-, REMOVE EXISTING ROADWAY AND BRIDGE. CONSTRUCT REMAINING BRIDGE, SEE SECTION B-B ON TMP-8.
- -L- STA 16+29.53 +/- TO -L- STA 20+85 +/-, CONSTRUCT REMAINING -L-.
- -L- STA 20+85 +/- TO -L- STA 22+00 +/-, MILL AND OVERLAY AS NECESSARY TO CONSTRUCT REMAINING -L-.
- -Y1- FROM -L- TO -Y1- STA 10+66, CONSTRUCT PROPOSED -Y1- TO FINAL GRADE, BY CLOSING THE ROADWAY UP TO 30 MINUTES AT A TIME.

AWAY FROM TRAFFIC AND USING RSD 1101.02, SHEET 1 OF 14 AS NECESSARY, COMPLETE CONSTRUCTION OF THE FOLLOWING:

- -Y1- COMPLETE REMOVAL OF EXISTING ROADWAY ALONG RT SIDE OF NEW ALIGNMENT.

STEP 3:
USING RSD 1101.02, SHEETS 11 AND 14 (FOR PORTABLE SIGNALS) OF 14 AS NECESSARY:

- INSTALL TEMPORARY PAVEMENT MARKINGS IN FINAL PATTERN, AS SHOWN ON PAVEMENT MARKING PLANS, INSTALL FINAL SIGNS, AND SHIFT TRAFFIC TO FINAL PATTERN

STEP 4:
USING RSD 1101.02 SHEETS 11 AND 14 (FOR PORTABLE SIGNALS) OF 14 AS NECESSARY, COMPLETE THE FOLLOWING WORK:

- PLACE FINAL LAYER OF SURFACE COURSE ON ENTIRE PROJECT
- PLACE FINAL PAVEMENT MARKINGS AND MARKERS ON THE PROJECT PER THE PAVEMENT MARKING PLANS.

PLANS PREPARED BY:

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DATE: 3/14/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M MOON

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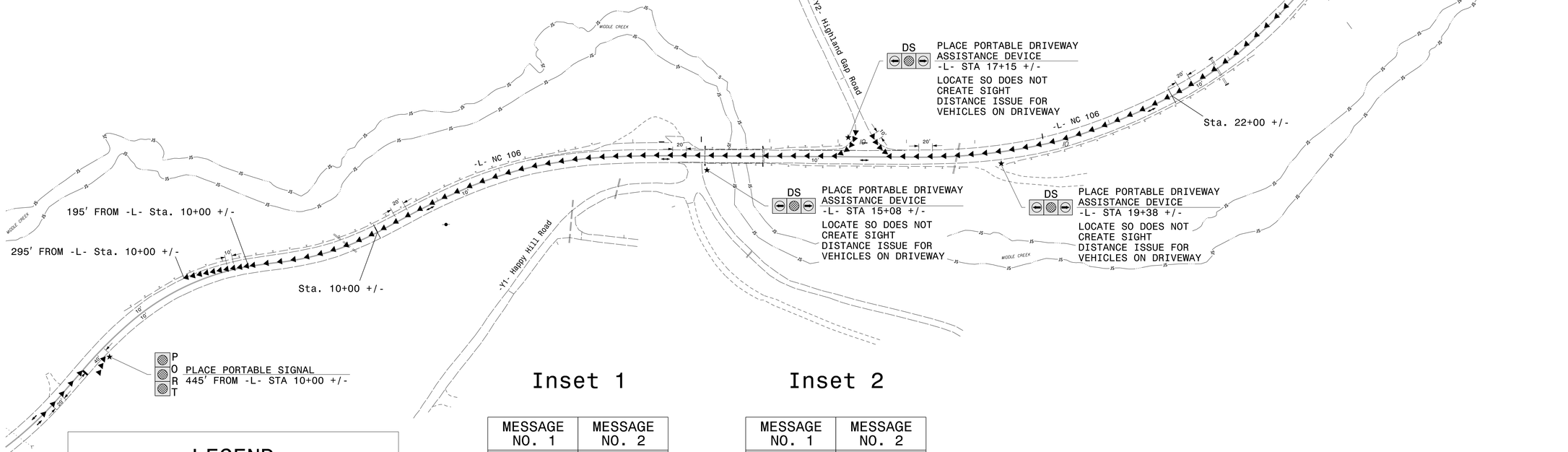
DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

PHASING OPERATIONS PLAN

PROJ. REFERENCE NO.	SHEET NO.
BR-0029	TMP-4

NOTES:

1. CLEAR, GRADE AND INSTALL TEMPORARY DRAINAGE AS NECESSARY AT THE PROPOSED PORTABLE SIGNAL LOCATIONS OR ANOTHER LOCATION AS AGREED UPON WITH THE ENGINEER.
2. PORTABLE SIGNAL SHALL ONLY OPERATE DURING PERMITTED HOURS FOR LANE CLOSURES AND FOR STOPPING TRAFFIC, WHEN NO LANE CLOSURE IS PRESENT AND TRAFFIC IS NOT STOPPED, PORTABLE SIGNALS SHALL FLASH YELLOW AND DRIVEWAY SIGNALS SHALL FLASH RED, BE COVERED OR ADJUSTED TO INDICATE THAT THEY ARE NOT IN USE. ENSURE THE PUBLIC NOTICE INDICATES HOW THE DRIVEWAY SIGNALS WILL BE HANDLED DURING NORMAL TWO LANE ROAD OPERATIONS.
3. DURING FLASHING OPERATION, COVER OR REMOVE SIGNS AND UPDATE CMS TO MATCH WORDING ON INSET 1 ON THE THIS SHEET.
4. AS NECESSARY, SET SIGNAL TO ALL RED FOR ROCK BLASTING. DURING ROCK BLASTING, UPDATE CMS TO MATCH WORDING ON INSET 2 OF THIS SHEET.
5. SHIFT DRIVEWAY ASSISTANCE SIGNALS IN CONJUCTION WITH ALIGNMENT CHANGES DURING CONSTRUCTION AS APPROPRIATE.
6. ADJUST CONES FOR OPPOSITE LANE CLOSURE WHEN SHIFTING CONSTRUCTION TO OTHER SIDE OF ROADWAY AS NEEDED.



LEGEND

- PORTABLE SIGN
- DIRECTION OF TRAFFIC FLOW
- PORTABLE SIGNAL
- TRAFFIC CONE

Inset 1

MESSAGE NO. 1	MESSAGE NO. 2
ROAD WORK 1 MILE	USE CAUTION

CHANGEABLE MESSAGE SIGN

Inset 2

MESSAGE NO. 1	MESSAGE NO. 2
ROCK BLASTING 1 MILE	PREPARE TO STOP

CHANGEABLE MESSAGE SIGN

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DATE: 3/14/2022

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TEMPORARY TRAFFIC CONTROL TEMPORARY LANE CLOSURES

12/20/2021
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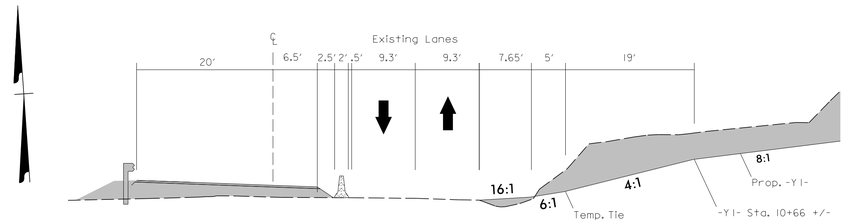
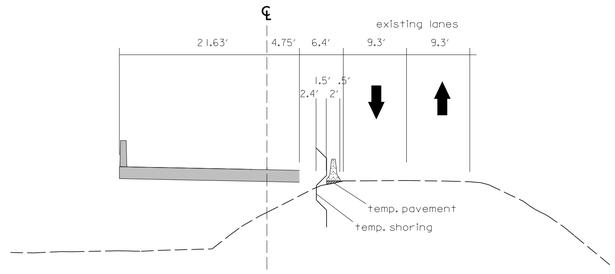
User:DWhite

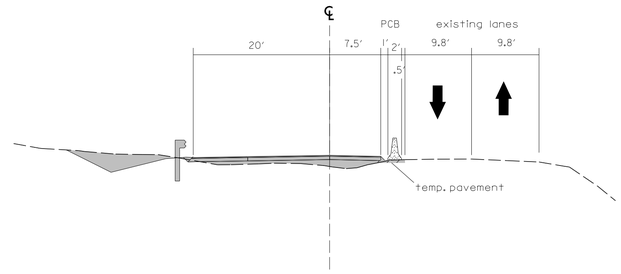
PROJ. REFERENCE NO.	SHEET NO.
BR-0029	TMP-5



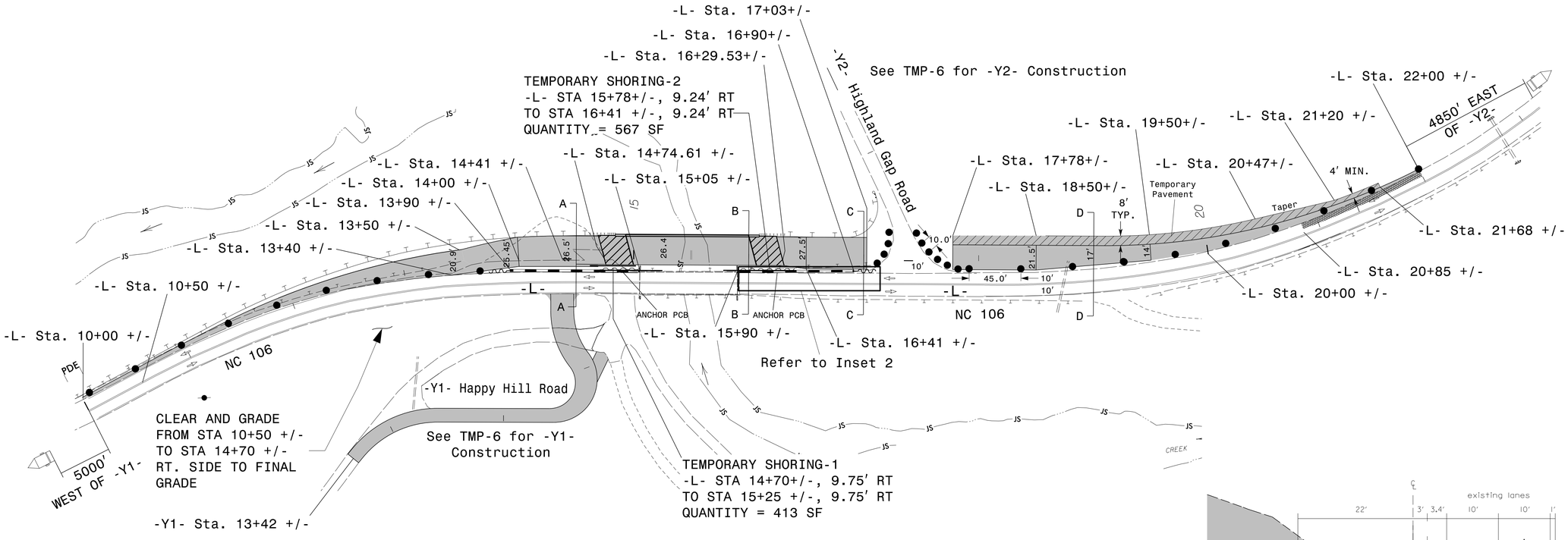
Section A-A
Sta 14+50 -L-



Section B-B
Sta 16+00 -L-



Section C-C
Sta 17+00 -L-

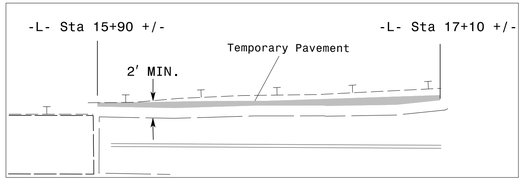


Inset 1

MESSAGE NO. 1	MESSAGE NO. 2
BRIDGE WORK 1 MILE	STARTING XX-XX-XX

CHANGEABLE MESSAGE SIGN

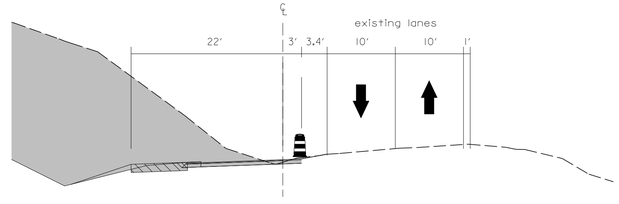
Inset 2



Inset 3

MESSAGE NO. 1	MESSAGE NO. 2
ROAD WORK 1 MILE	PREPARE TO STOP

CHANGEABLE MESSAGE SIGN



Section D-D
Sta 19+00 -L-

NOTES:
1) SEE TMP-4 FOR INFORMATION ABOUT PORTABLE SIGNAL.
2) SEE RSD 1101.06, SHEET 1 OF 1 FOR PLACEMENT OF ADVANCED WARNING SIGNS FOR BLASTING ZONE. USE PORTABLE SIGNAL IN ALL RED TO STOP TRAFFIC FOR A MAXIMUM OF 20 MINUTES AT A TIME DURING PERMITTED HOURS FOR STOPPING TRAFFIC.

PLANS PREPARED BY:

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SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

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DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

TEMPORARY TRAFFIC CONTROL PHASE I

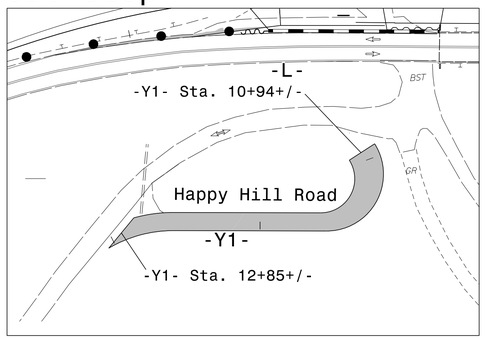
2/23/2022
R:\BR0029\Traffic\TrafficControl\TCP\BR0029_TC_TCPI_Phl.dgn
User:DWhite

PROJ. REFERENCE NO.	SHEET NO.
BR-0029	TMP-6

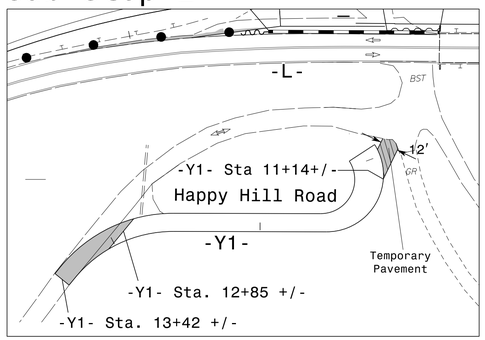
-Y1- HAPPY HILL ROAD

Step 3

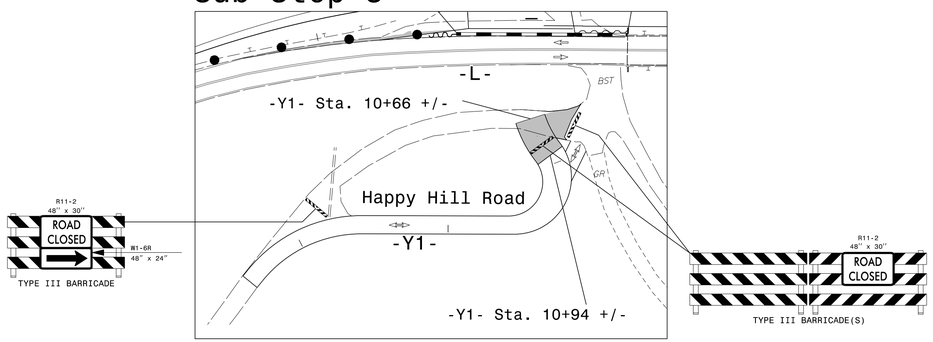
Sub-Step 1



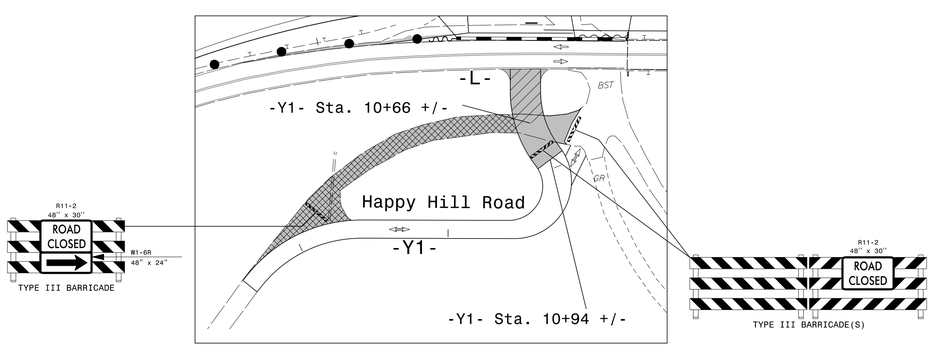
Sub-Step 2



Sub-Step 3

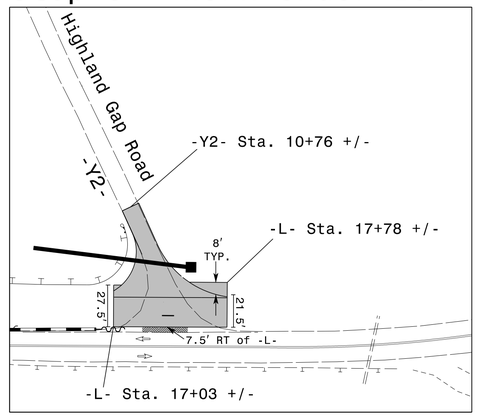


Step 7&9



-Y2- HIGHLAND GAP ROAD

Step 8 - Work Under ICT



NOTES:
1) SEE TMP-4 FOR INFORMATION ABOUT PORTABLE SIGNAL.
2) SEE RSD 1101.06, SHEET 1 OF 1 FOR PLACEMENT OF ADVANCED WARNING SIGNS FOR BLASTING ZONE. USE PORTABLE SIGNAL IN ALL RED TO STOP TRAFFIC FOR A MAXIMUM OF 20 MINUTES AT A ATIME DURING PERMITTED HOURS FOR STOPPING TRAFFIC.

PLANS PREPARED BY:

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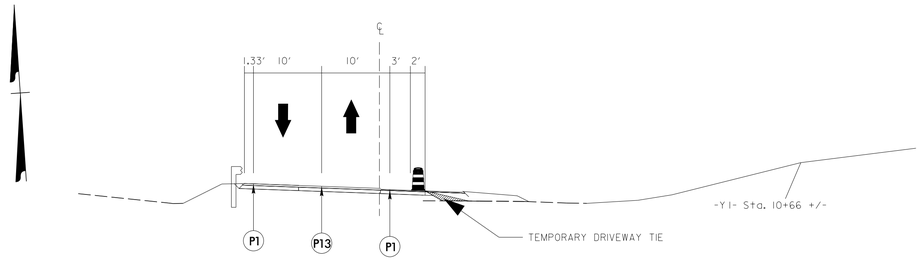
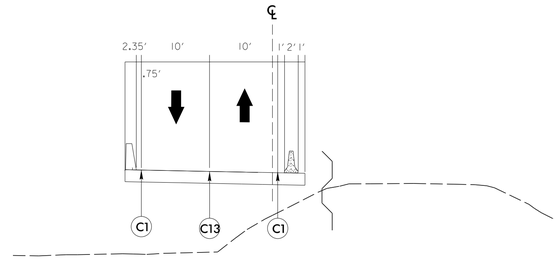
TEMPORARY TRAFFIC CONTROL PHASE I -Y1- & -Y2-

12/20/2021
R:\BR0029\TrafficControl\TCP\BR0029_TC_TCP1 - Y Lines.dgn
User:dWhite

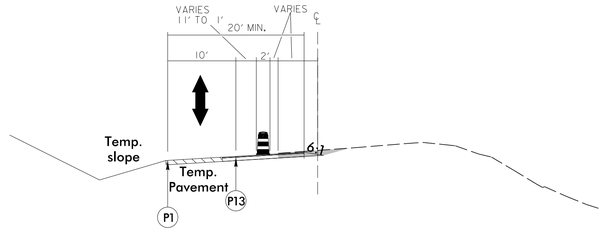
PROJ. REFERENCE NO.	SHEET NO.
BR-0029	TMP-7



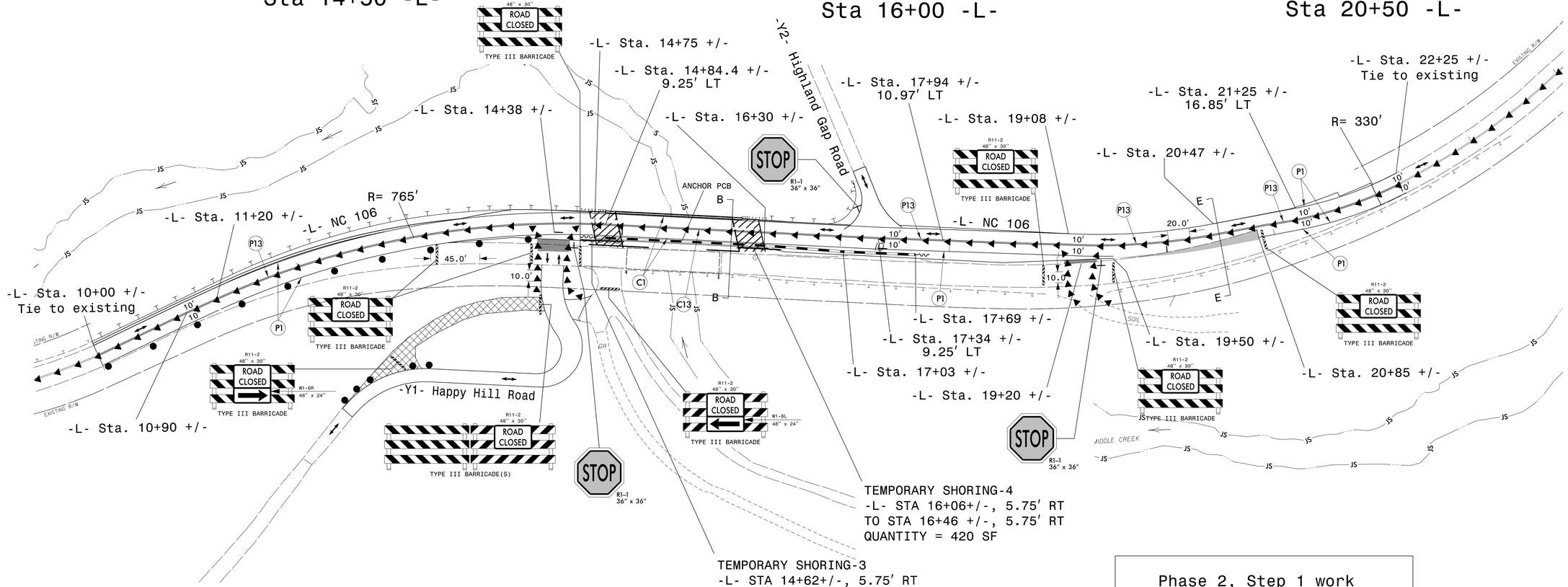
Section A-A
Sta 14+50 -L-



Section B-B
Sta 16+00 -L-



Section E-E
Sta 20+50 -L-



TEMPORARY SHORING-4
-L- STA 16+06+/-, 5.75' RT
TO STA 16+46 +/-, 5.75' RT
QUANTITY = 420 SF

TEMPORARY SHORING-3
-L- STA 14+62+/-, 5.75' RT
TO STA 15+02 +/-, 5.75' RT
QUANTITY = 360 SF

Phase 2, Step 1 work
to be done under ICT

NOTES:
1) SEE TMP-4 FOR INFORMATION ABOUT PORTABLE SIGNAL.
2) SEE RSD 1101.06, SHEET 1 OF 1 FOR PLACEMENT OF ADVANCED WARNING SIGNS FOR BLASTING ZONE. USE PORTABLE SIGNAL IN ALL RED TO STOP TRAFFIC FOR A MAXIMUM OF 20 MINUTES AT A TIME DURING PERMITTED HOURS FOR STOPPING TRAFFIC.

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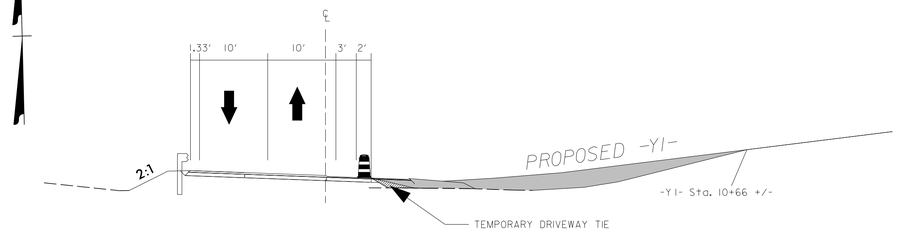
DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

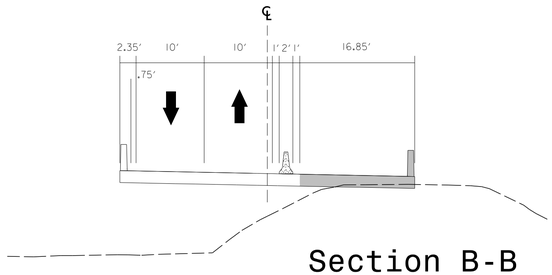
TEMPORARY TRAFFIC CONTROL
PHASE 2
(STEP 1)

2/23/2022
R:\BR0029\Traffic\TrafficControl\TCP\BR0029_TC_TCP2_Ph2- Step1-2.dgn
User:DWhite

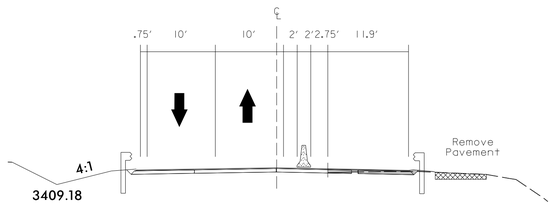
PROJ. REFERENCE NO.	SHEET NO.
BR-0029	TMP-8



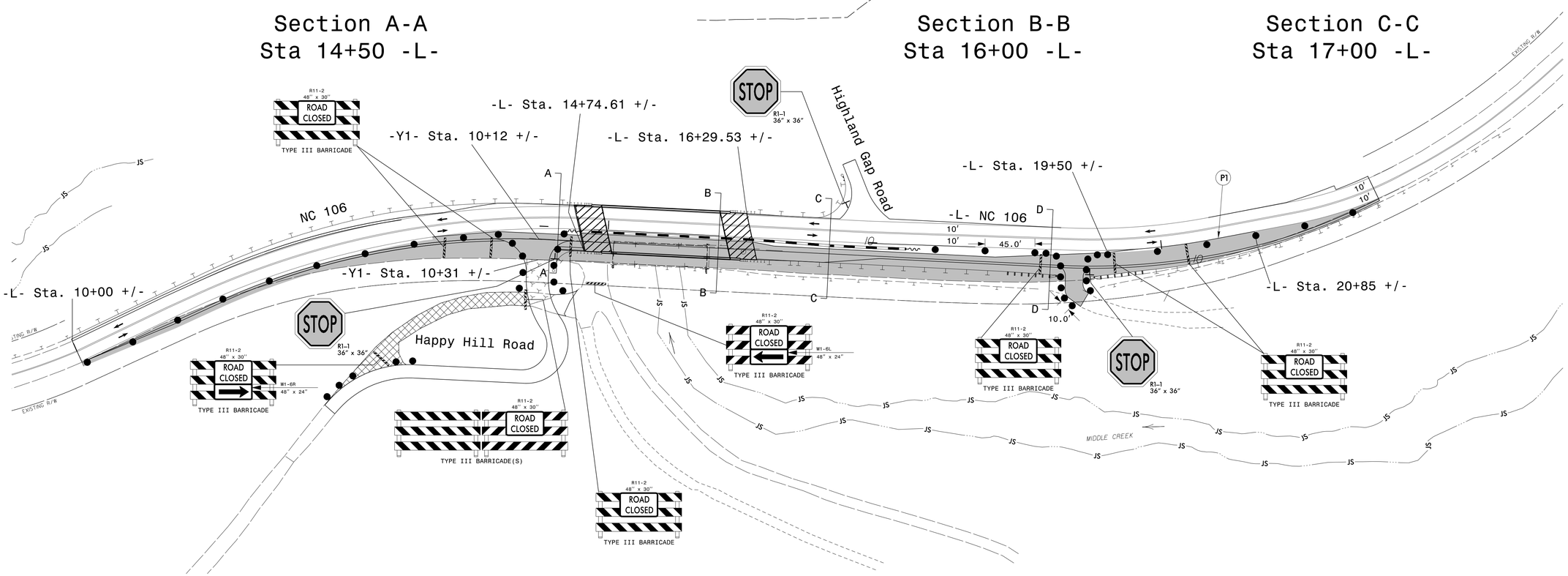
Section A-A
Sta 14+50 -L-

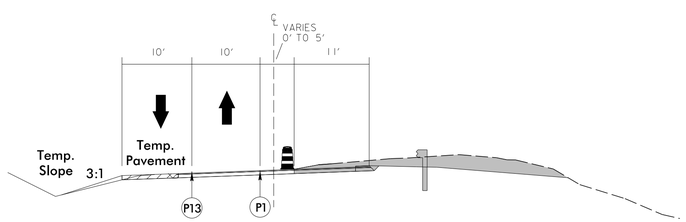


Section B-B
Sta 16+00 -L-



Section C-C
Sta 17+00 -L-





Section D-D
Sta 19+00 -L-

NOTES:
1) SEE TMP-4 FOR INFORMATION ABOUT PORTABLE SIGNAL.
2) SEE RSD 1101.06, SHEET 1 OF 1 FOR PLACEMENT OF ADVANCED WARNING SIGNS FOR BLASTING ZONE. USE PORTABLE SIGNAL IN ALL RED TO STOP TRAFFIC FOR A MAXIMUM OF 20 MINUTES AT A TIME DURING PERMITTED HOURS FOR STOPPING TRAFFIC.

PLANS PREPARED BY:

DRMP
ENGINEERS • PLANNERS • SCIENTISTS

DRMP, Inc.
8000 Regency Parkway, Suite 110
Cary, NC 27518
NC License No. C-2213 • (919) 650-1038

APPROVED: DocuSigned by: Lisa M Moon 55CE58BD83D0421...

DATE: 3/14/2022

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NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

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DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TEMPORARY TRAFFIC CONTROL PHASE 2

PROJ. REFERENCE NO.	SHEET NO.
BR-0029	TMP-9

Natural Bridge Rd

Highland Gap Rd

Silly Ridge Rd

Chestnut Mountain Rd

Shoal Creek Rd

McConnell Rd

Buck Knob Rd

Buck Knob Rd

Highland Gap Rd

Highland Gap Rd

Dillard Rd

106

Dillard Rd

106

Dillard Rd

SEE RSD 1101.03 SHEET 2 OF 9 FOR APPROPRIATE SIGN SPACING AND ADDITIONAL REQUIREMENTS

DETOUR ROUTE

Plans Prepared By:

DRMP

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NC License No. C-2213 (919) 650-1038

APPROVED: DocuSigned by: Lisa M Moon 58CE58BD8300421...

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DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

OFF SITE DETOUR

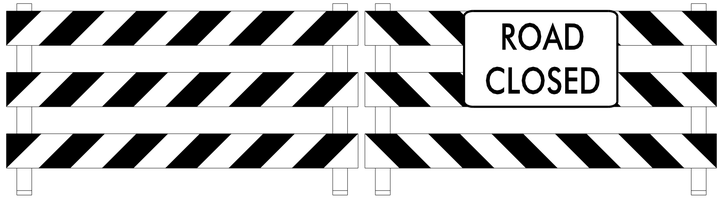
FOR -Y2-

12/20/2021
R:\BR0029\Traffic\TrafficControl\TCP\BR0029_TC_TCP_DETOUR.dgn
User:DWhite

PROJ. REFERENCE NO.	SHEET NO.
BR-0029	TMP-10

A

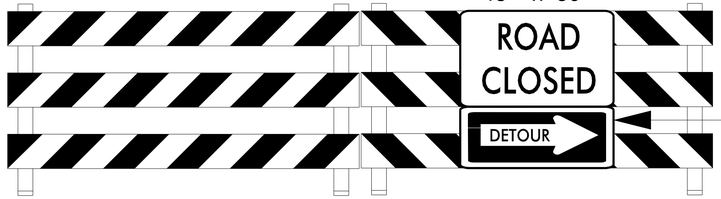
R11-2
48″ x 30″



TYPE III BARRICADE(S)

B

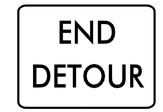
R11-2
48″ x 30″



M4-10R
48″ x 18″

TYPE III BARRICADE(S)

C



M4–8 A
24″ X 18″

D

W20–3
48″ X 48″

SP–4R
42″ X 12″

E

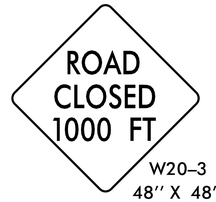
W20–3
48″ X 48″

SP–4L
42″ X 12″

F

W20–3
48″ X 48″

G

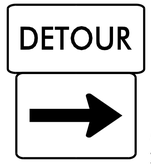


W20–3
48″ X 48″

H

W20–3
48″ X 48″

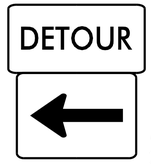
I



M4–8
24″ X 12″

M6–1
21″ X 15″

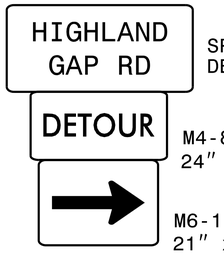
J



M4–8
24″ X 12″

M6–1 L
21″ X 15″

K

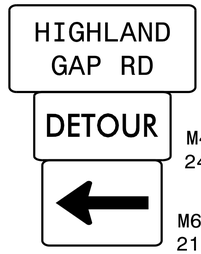


M4-8
24″ x 12″

M6-1
21″ x 15″

SPECIAL SIGN
DESIGN SP-1 ON TMP-2

L



M4-8
24″ x 12″

M6-1
21″ x 15″

SPECIAL SIGN
DESIGN SP-1 ON TMP-2

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OFF SITE DETOUR

FOR -Y2-