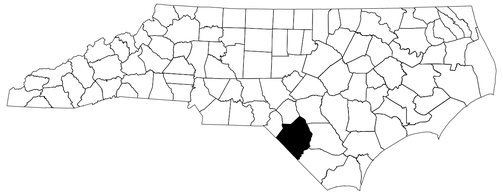
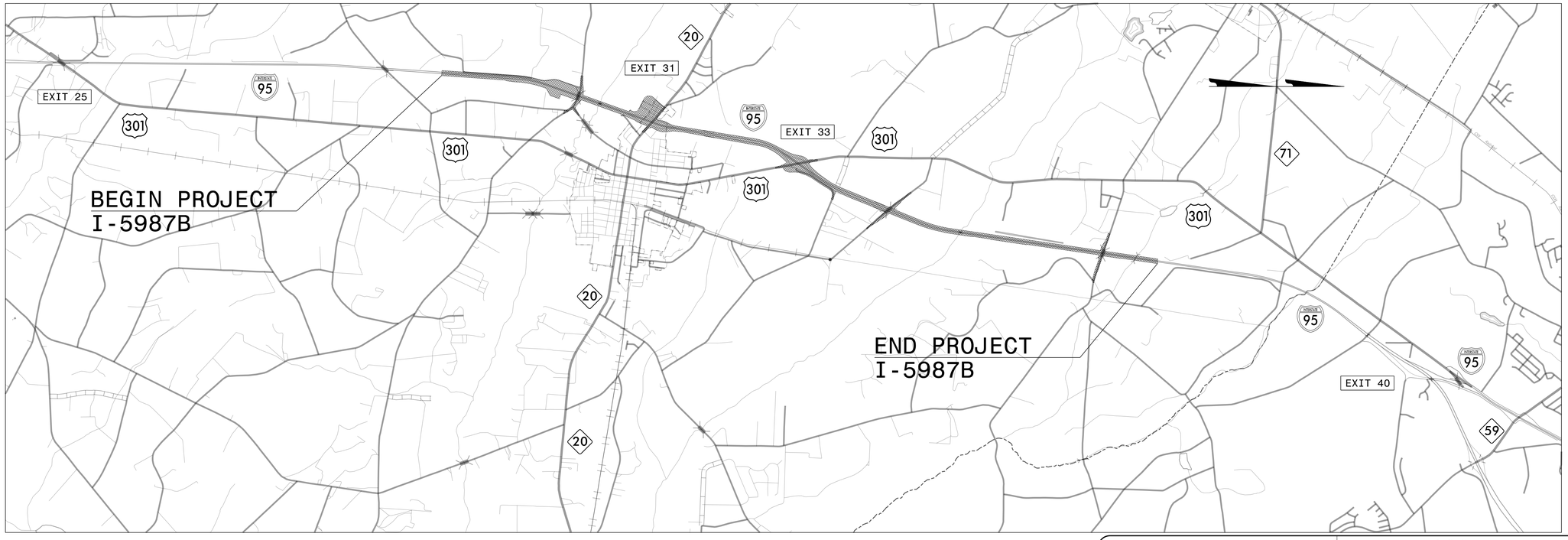
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

ROBESON COUNTY





VICINITY MAP

SHEET NO.
TMP-1

I-5987B

TIP PROJECT:

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

PLANS PREPARED BY:

L. STOUCHKO, PE (MOTT MACDONALD)

J. WOODARD, PE (STANTEC)

NCDOT CONTACTS:

CRAIG A. FREEMAN, JR, PE
PROJECT ENGINEER

WILLIAM R. MARSH, PE
PROJECT DESIGN ENGINEER

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

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DATE: 4/29/2022
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 19862 J. W. WOODARD JR.

APPROVED: DocuSigned by: Lori D. Stouchko 6C933CB5742F461...
DATE: 4/29/2022
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 034437 LORI D. STOUCHKO

3/15/2022
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INDEX OF SHEETS

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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 ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
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
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGERS
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 MULTI-LANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMPS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1205.14	PAVEMENT MARKINGS - ROUNDABOUTS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1251.03	RAISED PAVEMENT MARKERS - SNOWPLOWABLE
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)
- WORK AREA
- ONGOING WORK AREA
- REMOVAL
- TEMPORARY PAVEMENT
- WEDGING

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

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

PAINT PAVEMENT MARKING LINES (4")

SYMBOL	DESCRIPTION
P1	WHITE EDGELINE
P2	WHITE SOLID LANE LINE
P4	3 FT. - 9 FT./SP WHITE MINISKIP
P5	2 FT. - 6 FT./SP WHITE MINISKIP
P10	YELLOW EDGELINE
P11	YELLOW SINGLE CENTER
P12	10 FT. YELLOW SKIP
P13	YELLOW DOUBLE CENTER

PAINT PAVEMENT MARKING LINES (8")

SYMBOL	DESCRIPTION
P40	WHITE GORELINE
P41	WHITE DIAGONAL
P44	3 FT. - 9 FT./SP WHITE MINISKIP
P45	3 FT. - 3 FT./SP WHITE MINISKIP

PAINT PAVEMENT MARKING LINES (12")

SYMBOL	DESCRIPTION
P102	12" YIELD LINE TRIANGLE

PAINT PAVEMENT MARKING LINES (24")

SYMBOL	DESCRIPTION
P61	WHITE STOPBAR
P103	24" YEILD LINE TRIANGLE

COLD APPLIED PLASTIC (6")

SYMBOL	DESCRIPTION
C20	WHITE EDGELINE
C22	10 FT. WHITE SKIP
C30	YELLOW EDGELINE

PERFORMANCE PAVEMENT MARKING LINES (6")

SYMBOL	DESCRIPTION
Z21	WHITE SOLID LINE
Z22	10 FT. WHITE SKIP
Z23	3 FT. - 9 FT./SP WHITE MINISKIP
Z31	YELLOW SOLID LINE

PERFORMANCE PAVEMENT MARKING LINES (12")

SYMBOL	DESCRIPTION
Z50	WHITE GORELINE

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ROADWAY STANDARD DRAWINGS & LEGEND

4/19/2022
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PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-1C

MANAGEMENT STRATEGIES

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

RECOMMENDED STRATEGIES:

TRAFFIC MANAGEMENT STRATEGIES:

- FULL ROADWAY CLOSURES
- ROLLING ROADBLOCK
- LANE SHIFTS OR CLOSURES
- SHOULDER CLOSURES
- ONE-LANE, TWO WAY OPERATION (FLAGGING)
- TWO-WAY TRAFFIC ON ONE SIDE OF DIVIDED FACILITY (CROSSOVER)
- RAMP CLOSURES / RELOCATION
- NIGHT WORK
- WEEKEND WORK
- WORK HOUR RESTRICTIONS FOR PEAK TRAVEL
- OFF-SITE DETOURS / USE OF ALTERNATIVE ROUTES
- ON-SITE DETOURS

WORK ZONE SAFETY & MOBILITY STRATEGIES:

- SPEED LIMIT REDUCTION
- TEMPORARY TRAFFIC SIGNALS
- DIGITAL SPEED LIMIT SIGNS / VARIABLE SPEED LIMITS
- SEQUENTIAL LIGHTING
- PRESENCE LIGHTING
- WORK ZONE PERFORMANCE PAVEMENT MARKINGS
- HIGH VISIBILITY DEVICES
- CONNECTED LANE CLOSURE DEVICES
- TYPICAL MEDIAN ACCESS AREAS

TRAFFIC / INCIDENT MANAGEMENT & SPEED ENFORCEMENT STRATEGIES:

- ITS FOR TRAFFIC MONITORING / MANAGEMENT (SMART WORKZONE)
- COORDINATION WITH STATE TRAFFIC OPERATIONS CENTER (STOC)
- COORDINATION WITH MEDIA
- LOCAL DETOUR ROUTES
- DEDICATED (PAID) LAW ENFORCEMENT
- COOPERATIVE LAW ENFORCEMENT (HAWKS)
- INCREASED PENALTIES FOR WORK ZONE VIOLATIONS

CONTRACTING & INNOVATIVE CONTRUCTION STRATEGIES:

- INTERMEDIATE CONTRACT TIMES / LIQUIDATED DAMAGES

MAINTENACE OF DRAINAGE STRATEGIES:

- PERFORM WORK IN A MANNER THAT MAINTAINS POSITIVE DRAINAGE DURING CONSTRUCTION. IMPLEMENT A COMBINATION OF PHASED CONSTRUCTION OF PROPOSED PIPE NETWORKS, MAINTAINING EXISTING DRAINAGE NETWORS, AND TEMPORARY PIPES, STEEL PLATES, AND DRAINAGE STRUCTURES AS REQUIRED, AS DIRECTED BY THE ENGINEER, AND AS DETAILED IN THE TEMP.
- PROVIDE WEDGING AS REQUIRED TO PROMOTE POSITVE DRAINAGE AND SMOOTH TRANSITIONS. IN CONDITIONS WHERE WEDGING IS REQUIRED ACROSS PCB IN ORDER TO UNIFORMLY BUILD PAVEMENT UP, UTILIZE TEMPORARY LANE CLOSURES AS REQUIRED TO TEMPORARILY RESET PCB.
- PRELIMINARY HYDRAULIC ANALYSIS OF THE TEMPORARY CONDITIONS INDICATE HYDROPLANING MAY OCCCUR ON TRAVEL LANES WHERE SHEET FLOW DRAINAGE WIDTHS EXCEED 60'. THE 60' WIDTH IS IDENTIFIED FROM THE TEMPORARY CROWN POINT TO THE FARTHEST EDGE OF TRAVEL OF THE TEMPORARY TRAFFIC PATTERN. THE CONTRACTOR SHALL PROVIDE TEMPORARY DRAINAGE MEASURES WITHIN THE WORK AREA AND BEHING BARRIER AS REQUIRED AS TO NOT CONTRIBUTE TO SHEET FLOW DRAINAGE ACROSS THE TEMPORARY TRAVEL LANES.

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.

CONSTRUCTION OPERATIONS REQUIRING A LANE CLOSURE ON A RAMP/LOOP SECTION WITH A SINGLE LANE SHALL BE DEFINED AS A ROAD CLOSURE AND SHALL BE SUBJECT TO THE INTERMEDIATE CONTRACT TIMES FOR ROAD CLOSURES FOUND IN GENERAL NOTE C.

TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
I-95	6:00 A.M. TO 7:00 P.M. MONDAY THRU THURSDAY 6:00 A.M. TO 9:00 P.M. FRIDAY THRU SUNDAY
NC 20 (EXIT 31)	7:00 A.M. TO 9:00 A.M. MONDAY THRU FRIDAY 4:00 P.M. TO 6:00 P.M. MONDAY THRU FRIDAY
US 301 (EXIT 33)	7:00 A.M. TO 9:00 A.M. MONDAY THRU FRIDAY 4:00 P.M. TO 6:00 P.M. MONDAY THRU FRIDAY

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

ROAD NAME

I-95, NC 20 (EXIT 31), US 301 (EXIT 33)

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 A.M. DECEMBER 31st TO 9:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 9:00 P.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 9:00 P.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 P.M. FRIDAY TO 9:00 P.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

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

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-95 (INCLUDING ALL RAMPS)	6:00 A.M. TO 11:00 P.M. MONDAY THRU SUNDAY

D) DO NOT CONDUCT MULTI-VEHICLE HAULING AS FOLLOWS; INGRESS AND EGRESS FROM RAMPS WILL NOT BE ALLOWED:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-95 (INCLUDING ALL RAMPS)	6:00 A.M. TO 6:00 P.M. MONDAY THRU THURSDAY 6:00 A.M. TO 7:00 P.M. FRIDAY THRU SUNDAY

E) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

F) 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.

G) 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.

H) 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.

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TRANSPORTATION OPERATIONS PLAN

4/8/2022
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GENERAL NOTES
(continuted)

J) 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.

K) 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.

L) DO NOT INSTALL MORE THAN TWO MILES OF LANE CLOSURE ON I-95 MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.

M) PROVIDE A MINIMUM OF TWO MILES BETWEEN LANE CLOSURES ON I-95 MEASURED FROM THE END OF ONE CLOSURE TO THE FIRST SIGN OF THE NEXT CLOSURE.

N) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON ALL Y-LINES

PAVEMENT EDGE DROP OFF REQUIREMENTS

O) 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.

P) 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) 500 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

R) 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.

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

T) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500 IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

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

V) PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC MANAGEMENT PLANS.

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

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

TRAFFIC BARRIER

Y) 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.

Z) 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

AA) 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.

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

CC) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES (DRUMS) PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT. CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
I-95 & ALL RAMPS/LOOPS	WZ PERFORMANCE	TEMPORARY RAISED
ALL -Y- LINES	PAINT	TEMPORARY RAISED
CONCRETE BRIDGE DECKS	COLD APPLIED	

EE) 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.

FF) TRACE EXISTING AND PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO REMOVAL AND INSTALLATION.

PLACE DRUMS TO DELINEATE ANY EXISTING AND PROPOSED MONOLITHIC ISLANDS AFTER REMOVAL AND BEFORE INSTALLATION.

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

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

MISCELLANEOUS

II) LAW ENFORCEMENT SHALL BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

JJ) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 1000 AND 500 RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS. THIS NOTE DOES NOT APPLY TO I-95 OR I-95 RAMPS/LOOPS.

KK) ALL CURB RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE SIGNING AND DELINEATION UNIT.

PLANS PREPARED FOR THE NCDOT BY:
MOTT MACDONALD
MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669

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Raleigh, NC 27606
Tel. 919.851.6866
Fax. 919.851.7024
www.stantec.com
License No. F-0672

DocuSigned by: Lori D. Stouchko 6C933CB5742F461... 4/29/2022
SEAL 034437 NORTH CAROLINA PROFESSIONAL ENGINEER LORI D. STOUCHKO
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

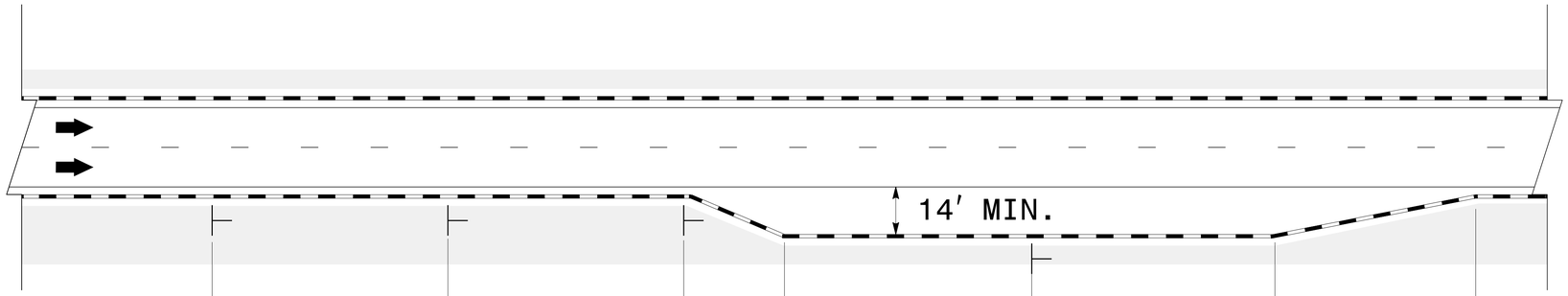
DocuSigned by: J.W. Woolard, Jr. BBC02F49E95C4EC... 4/29/2022
SEAL 19862 NORTH CAROLINA PROFESSIONAL ENGINEER J.W. WOOLARD JR.
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

TRANSPORTATION OPERATIONS PLAN

3/15/2022
U:\Traffic\Transportation Management Plan\TCP\PLAN SHEETS\SERIES I AND 2\I-5987B_TC_TMP-01D_General_Notes.dgn
User:rangood

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2A-1



FENDER BENDER
MOVE VEHICLES FROM TRAVEL LANES
R16-4
84″ X 42″

*USE ONLY AT FIRST PULL-OFF AREA AND EVERY OTHER PULL-OFF AREA FOLLOWING

PULL – OFF AREA
1/4 MILE
SPECIAL
54″ X 36″
(SEE NOTE 6)

PULL – OFF AREA
EMERGENCY ONLY
SPECIAL
84″ X 60″
(SEE NOTE 6)

EMERGENCY STOPPING ONLY
R8-7
30″ X 24″

GENERAL NOTES FOR MOTORIST PULL-OFF AREAS

1. PULL-OFF AREAS SHALL BE PROVIDED IN WORK ZONES ALONG HIGHWAYS WITH SPEED LIMITS GREATER THAN OR EQUAL TO 55 MPH WHERE INSUFFICIENT SHOULDERS EXIST FOR TWO MILES OR GREATER. INSUFFICIENT SHOULDERS EXIST WHEN 10′ OF PAVED RIGHT SHOULDER IS NOT CONSISTENTLY AVAILABLE FOR MOTORIST USE.

2. THE SPACING OF PULL-OFF AREAS SHALL BE AS FOLLOWS:
   - FOR AREAS WITH INSUFFICIENT SHOULDERS UP TO 3.0 MILES IN LENGTH, ONE PULL-OFF AREA APPROXIMATELY CENTERED IN THE WORK ZONE.
   - FOR AREAS WITH INSUFFICIENT SHOULDERS GREATER THAN 3.0 MILES IN LENGTH, ONE PULL-OFF AREA EVERY MILE.

3. PULL-OFF AREAS SHALL BE A MINIMUM OF 1000′ LONG. THE WIDTH OF PULL-OFF AREAS SHALL BE 14′ AND SHALL CONSIST OF A PAVED SURFACE.

4. PULL-OFF AREAS MAY BE ON EITHER THE LEFT OR RIGHT SIDE OF THE TRAVEL LANES.

5. PORTABLE CONCRETE BARRIER SHALL ONLY BE USED IF WARRANTED BY FIELD CONDITIONS.

6. REFER TO TMP-XX FOR SPECIAL SIGN DESIGNS.

APPROVED: DocuSigned by: Lori D. Stouchko 9C930CB5742F461...
DATE: 4/29/2022
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

MOTORIST PULL-OFF AREA DETAIL

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2A-2

SIGN NUMBER: SP18267
TYPE: D
QUANTITY: 1
SIGN WIDTH: 4'-6"
HEIGHT: 3'-0"
TOTAL AREA: 13.5 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 1.25"
RADII: 3"
NO. Z BARS: N/A
LENGTH: N/A

BACKG COLOR: Orange
COPY COLOR: Black

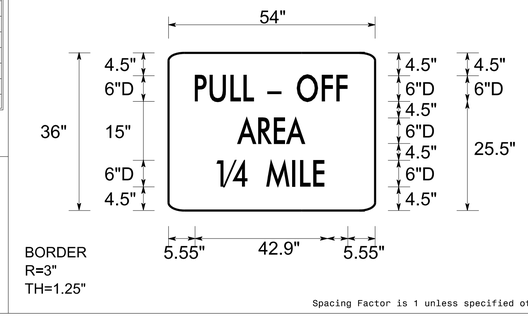
SYMBOL	X	Y	WID	HT

MAT'L: 0.125" (3.2 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: W. Johnson
CHECKED BY: AIA
DATE: Oct 30, 2018
PROJECT ID:
DIV: 5



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																											Series/Size Text Length
		P	U	L	L		-		O	F	F																D 2000
	5.6	5	5.5	4.6	3.7	4	2.1	4	5.6	4.6	3.7	5.6															42.9
		A	R	E	A																						D 2000
	16.8	6	5.1	4.2	5.1	16.8																					20.4
		1/4		M	I	L	E																				D 2000
	11.6	7.9	6	6.1	2.4	4.6	3.7	11.6																			30.8

FILENAME: Full_Off

NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SP18266
TYPE: A
QUANTITY: 1
SIGN WIDTH: 7'-0"
HEIGHT: 5'-0"
TOTAL AREA: 35.0 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 1.25"
RADII: 3"
NO. Z BARS: 2
LENGTH: 76.0

BACKG COLOR: Orange-Top/White-Bottom
COPY COLOR: Black

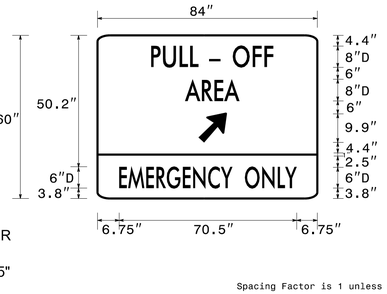
SYMBOL	X	Y	WID	HT
AR_Type A	37	17.7	8	12.6

MAT'L: 0.125" (3.2 mm) ALUMINUM

USE NOTES: 1,2,3

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.
3. Shields: A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum and demountable.

DESIGN BY: W. Johnson
CHECKED BY: AIA
DATE: Oct 30, 2018
PROJECT ID:
DIV: 5



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																											Series/Size Text Length
		P	U	L	L		-		O	F	F																D 2000
	10.8	6.6	7.4	6.2	5	8	2.8	8	7.4	6.2	5	10.8															62.5
		A	R	E	A																						D 2000
	28.4	8	6.8	5.6	6.8	28.4																					27.2
		E	M	E	R	G	E	N	C	Y		O	N	L	Y												D 2000
	6.8	4.7	6.1	4.7	5	5.4	4.7	5.4	4.9	5.2	4	5.6	5.5	4.1	5.2	6.8											70.5

FILENAME: Full_Off

NORTH CAROLINA D.O.T. SIGN DETAIL

APPROVED: DocuSigned by: Lori D. Stouchko 8C933CB5742F461...
DATE: 4/29/2022
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

PULL-OFF AREA SPECIAL SIGN DESIGNS

3/15/2022
U:\Traffic\Transportation Management Plan\TCP\PLAN SHEETS\SERIES I AND 2\I-5987B_TC_TMP-02A-2_Pull-Off Areas_Special Sign_Designs.dgn
User:angood

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2A-3

PLANS PREPARED FOR THE NCDOT BY:

MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669

SIGN NUMBER: SP-001
TYPE: STATIONARY
QUANTITY: SEE PLANS

SIGN WIDTH: 4'-0"
HEIGHT: 2'-0"
TOTAL AREA: 8.0 Sq.Ft.

BORDER TYPE: INSET
RECESS: 0.38"
WIDTH: 0.63"
RADII: 1.5"

NO. Z BARS:
LENGTH:

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

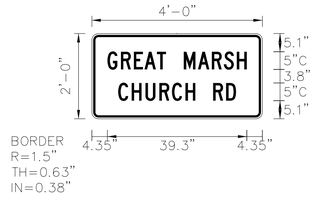
SYMBOL	X	Y	WID	HT

MAT'L: 0.080" (2.0 mm) ALUMINUM

DESIGN BY: S COLEMAN
CHECKED BY:
Aug 03, 2021
PROJECT ID: I-5987B
LOCATION: SAINT PAULS, NC
DIV: 6

USE NOTES: 1,2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be NC GRADE B fluorescent orange retroreflective sheeting.



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																														Series/Size Text Length
		G	R	E	A	T		M	A	R	S	H																		C 2000
	4.4	3.8	3.6	3	3.5	2.5	5	4	3.9	3.4	3.6	2.8	4.4																	39.3
		C	H	U	R	C	H		R	D																					C 2000
	7.4	3.8	3.9	3.9	3.5	3.8	2.8	5	3.6	2.8	7.4																			33.2

FILENAME: WZTC Sign Designs

NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SP-002
TYPE: STATIONARY
QUANTITY: SEE PLANS

SIGN WIDTH: 4'-0"
HEIGHT: 2'-6"
TOTAL AREA: 10.0 Sq.Ft.

BORDER TYPE: INSET
RECESS: 0.38"
WIDTH: 0.63"
RADII: 1.5"

NO. Z BARS:
LENGTH:

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

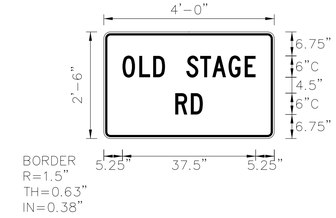
SYMBOL	X	Y	WID	HT

MAT'L: 0.080" (2.0 mm) ALUMINUM

DESIGN BY: S COLEMAN
CHECKED BY:
Aug 03, 2021
PROJECT ID: I-5987B
LOCATION: SAINT PAULS, NC
DIV: 6

USE NOTES: 1,2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be NC GRADE B fluorescent orange retroreflective sheeting.



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																														Series/Size Text Length
		Q	L	D		S	T	A	G	E																				C 2000
	5.2	4.7	3.9	3.4	6	3.9	3.4	4.6	4.6	3.1	5.3																			37.5
		R	D																											C 2000
	20.1	4.4	3.4	20.1																										7.7

FILENAME: WZTC Sign Designs

NORTH CAROLINA D.O.T. SIGN DETAIL

APPROVED: DocuSigned by: Lori D. Stouchko 8C933CB5742F461...
DATE: 4/29/2022
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SECTION 1
SPECIAL SIGN DESIGNS

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2A4

SIGN NUMBER: SD-1
TYPE: STATIONARY
QUANTITY: SEE PLANS

SIGN WIDTH: 4′-0″
HEIGHT: 1′-0″
TOTAL AREA: 4.0 Sq.Ft.

BORDER TYPE: RECESSED
RADII: 1.5″
WIDTH: 0.44″
RECESS: 0.38″

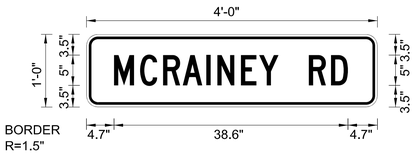
NO. Z BARS:
LENGTH:

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT'L: 0.125″ (3.2MM) ALUMINUM

DESIGN BY: D. RICHARDSON CHECKED BY: J. WOOLARD, PE
PROJECT ID: I-5987 DIV: 6
DATE: May 26, 2021



BORDER
R=1.5"
TH=0.44"
IN=0.38"

USE NOTES

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be NC GRADE B Fluorescent Orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

	M	C	R	A	I	N	E	Y		R	D										Series/Size Text Length
4.7	4.3	3.8	3.3	3.9	1.8	3.9	3	3.2	5	3.6	2.8	4.7									C 2000
																					38.6

SIGN NUMBER: SD-2
TYPE: STATIONARY
QUANTITY: SEE PLANS

SIGN WIDTH: 4′-0″
HEIGHT: 1′-6″
TOTAL AREA: 6.0 Sq.Ft.

BORDER TYPE: RECESSED
RADII: 1.5″
WIDTH: 0.63″
RECESS: 0.38″

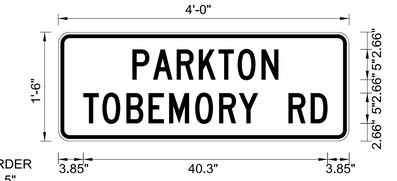
NO. Z BARS:
LENGTH:

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT'L: 0.125″ (3.2MM) ALUMINUM

DESIGN BY: D. RICHARDSON CHECKED BY: J. WOOLARD, PE
PROJECT ID: I-5987B DIV: 6
DATE: Jul 27, 2021



BORDER
R=1.5"
TH=0.63"
IN=0.38"

USE NOTES

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be NC GRADE B Fluorescent Orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

	P	A	R	K	T	O	N														Series/Size Text Length
11.95	3.4	3.9	3.6	3.3	3.1	3.9	2.8	11.95													C 2000
																					24.1
	T	O	B	E	M	O	R	Y		R	D										C 2000
3.85	3.2	3.9	3.6	3.4	4.3	4	3.3	3.2	5	3.7	2.8	3.85									40.3

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www.stantec.com
License No. F-0672

DocuSigned by: J.W. Woolard, Jr. BBC02F49E9E1EC...
NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR.
4/29/2022

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

SECTION 2

SPECIAL SIGN DESIGNS

3/15/2022
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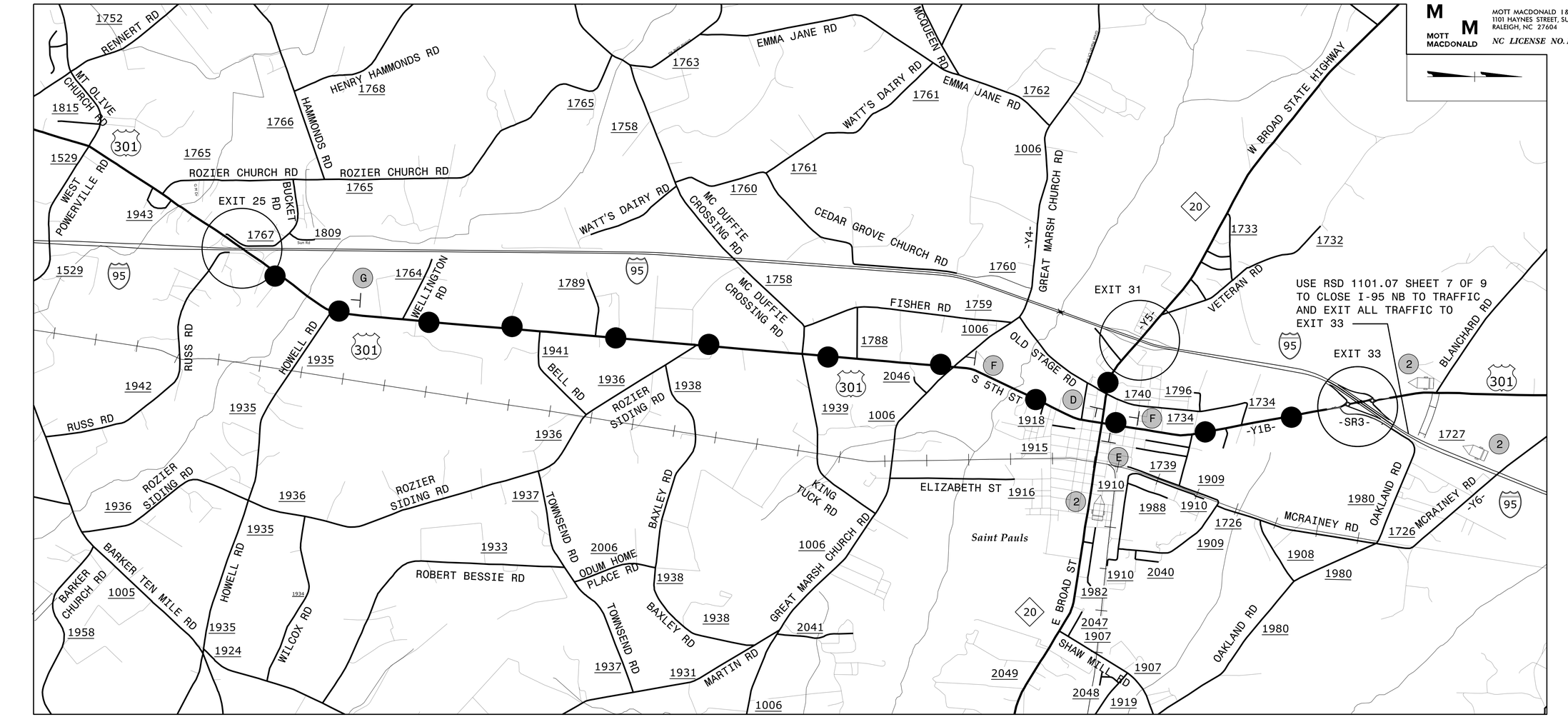
angood

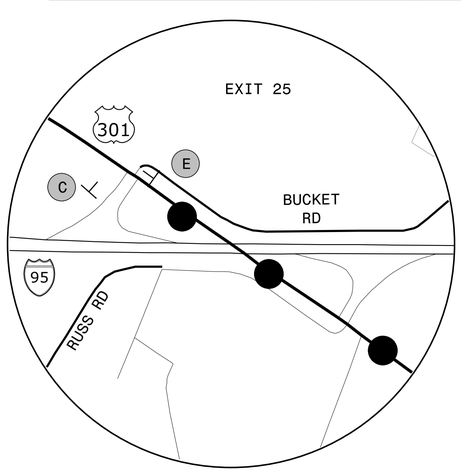
COORDINATE I-95 DETOURS WITH I-5987A
CONSTRUCTION OF INTERCHANGE AT EXIT 25

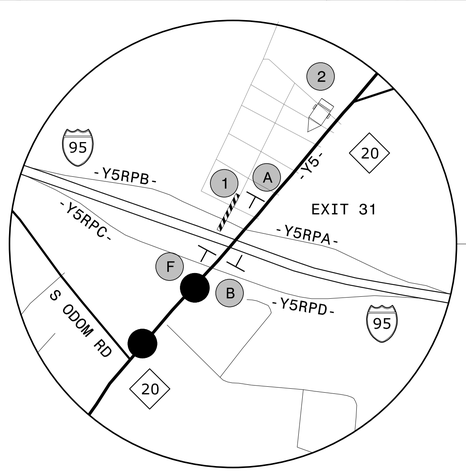
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D1

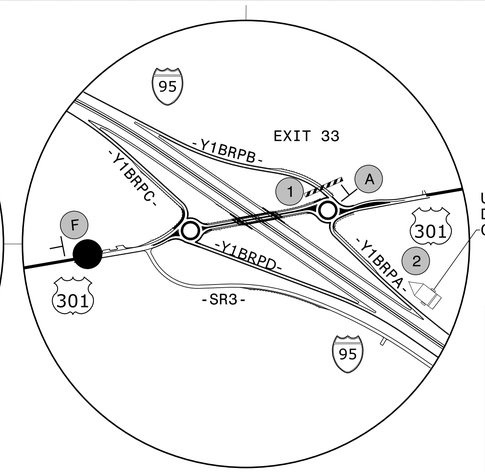
PLANS PREPARED FOR THE NCDOT BY:

MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669









USE ONLY DURING CLOSURE

DETOUR ROUTE

SEE SHEET TMP-2D1A FOR DETOUR SIGNS

APPROVED: Docusigned by: Lori D. Stouchko 6C933CB5742F461...
DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D STOUCHKO

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SECTION 1

DETOUR
I-95 SB
NIGHTLY CLOSURE

3/15/2022
G:\5010019_NV5_I-5987B\I-5987B\TrafficControl\Tcp\I-5987B_TC_TMP-02D01_I-95 SB Detour.dgn
User:ST108227

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D1A

PLANS PREPARED FOR THE NCDOT BY:

MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669

A

W20-3
48″ X 48″

NEXT RIGHT SP-4R
42″ X 12″

B

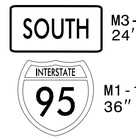
W20-3
48″ X 48″

NEXT LEFT SP-4L
42″ X 12″

C

M4-8 A
24″ X 18″

D



M4-8
24″ X 12″

M3-3
24″ X 12″

M1-1
36″ X 36″

M6-1
21″ X 15″

E

M4-8
24″ X 12″

M3-3
24″ X 12″

M1-1
36″ X 36″

M6-1
21″ X 15″

F

M4-8
24″ X 12″

M3-3
24″ X 12″

M1-1
36″ X 36″

M6-3
21″ X 15″

G

M4-8
24″ X 12″

M3-3
24″ X 12″

M1-1
36″ X 36″

M6-2
21″ X 15″

1

R11-2
48″ x 30″

M4-10L
48″ x 18″

TYPE III BARRICADE

2

BEGINNING 10 DAYS PRIOR TO ROAD CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
I-95 SB NIGHTLY CLOSURES	MNTH/DAY THRU MNTH/DAY

CHANGEABLE MESSAGE SIGN

DURING ROAD CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
I-95 SB CLOSED	USE US 301 SOUTH

CHANGEABLE MESSAGE SIGN

SEE SHEET TMP-2D1
FOR DETOUR

APPROVED: Docusigned by: Lori D. Stouchko 6C933CB5742F461...

DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SECTION 1

DETOUR
I-95 SB
TEMPORARY TRAFFIC
CONTROL DEVICES

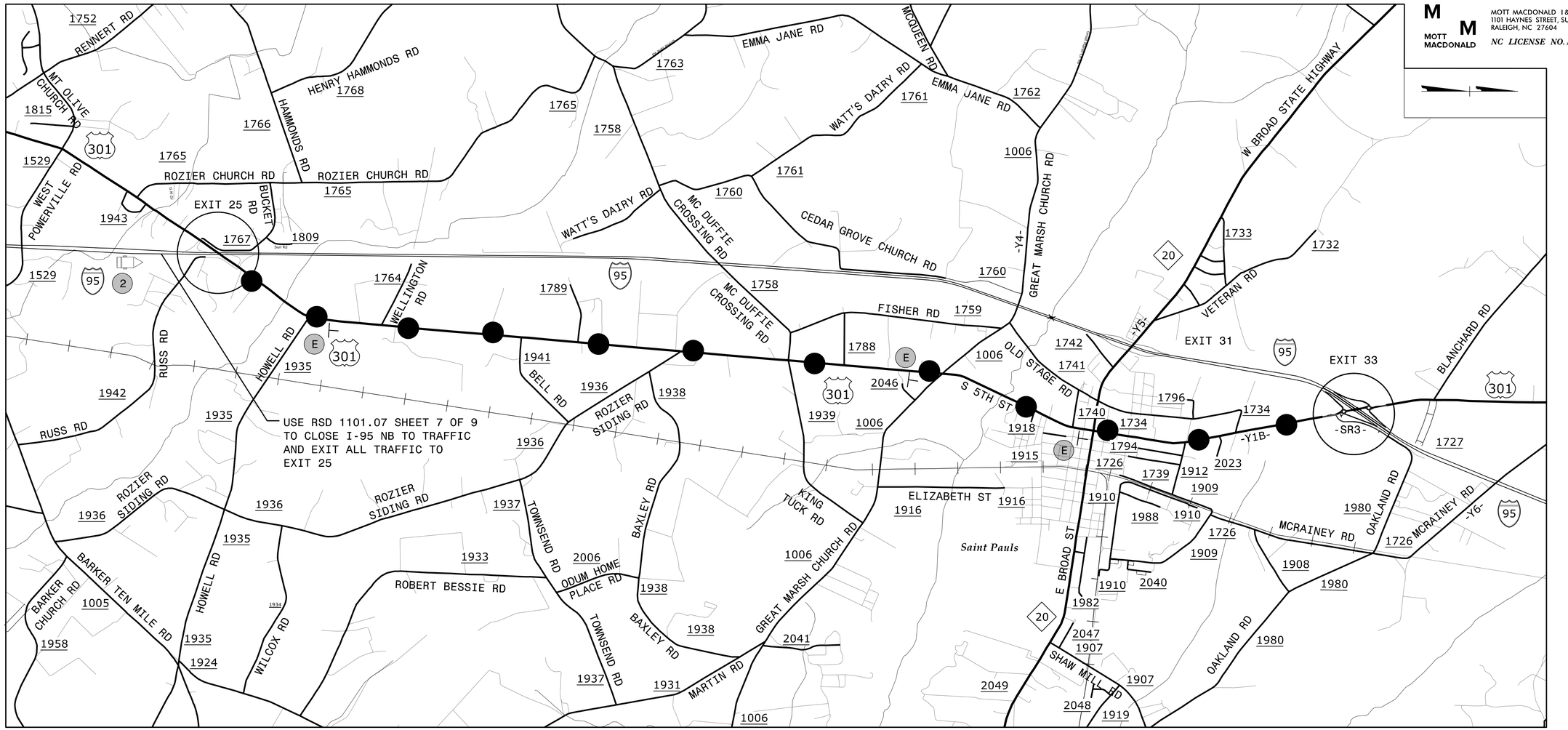
3/15/2022
G:\5001009_NV5_I-5987B\I-5987B\TrafficControl\Tcp\I-5987B_TC_TMP-02D0IA_I95 SB Detour Signs.dgn
User:ST086227

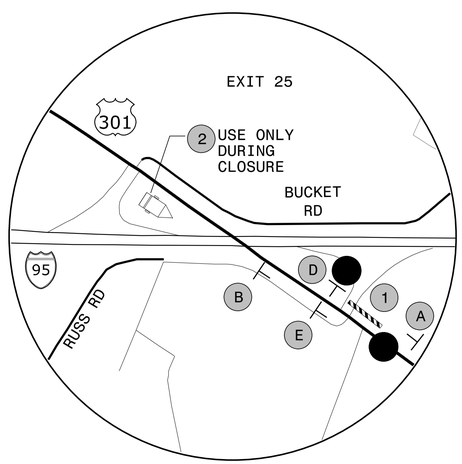
COORDINATE I-95 DETOURS WITH I-5987A
CONSTRUCTION OF INTERCHANGE AT EXIT 25

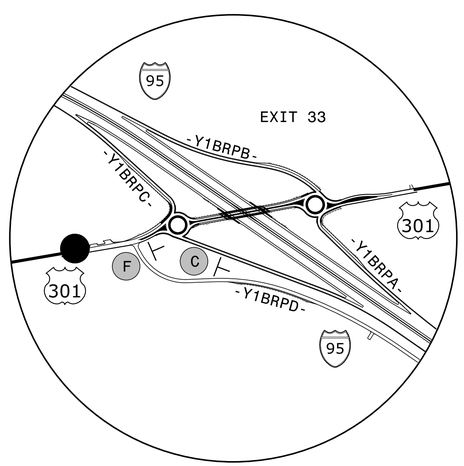
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D2

PLANS PREPARED FOR THE NCDOT BY:

MOTT MACDONALD
MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669







DETOUR ROUTE

SEE SHEET TMP-2D2A
FOR DETOUR SIGNS

APPROVED: Docusigned by: Lori D. Stouchko 6C933CB5742F461...
DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D STOUCHKO

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SECTION 1

DETOUR
I-95 NB
NIGHTLY CLOSURES

3/15/2022
G:\5010019_NV5_I-5987B\I-5987B\TrafficControl\Tcp\I-5987B_TC_TMP-02D02_I-95 NB Detour.dgn
User:ST108227

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D2A

PLANS PREPARED FOR THE NCDOT BY:

MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669

(A)

W20-3
48″ X 48″

NEXT RIGHT — SP-4R
42″ X 12″

(B)

W20-3
48″ X 48″

NEXT LEFT — SP-4L
42″ X 12″

(C)

END
DETOUR — M4-8 A
24″ X 18″

(D)

DETOUR — M4-8
24″ X 12″

NORTH — M3-1
24″ X 12″

M1-1
36″ X 36″

M6-1
21″ X 15″

(E)

DETOUR — M4-8
24″ X 12″

NORTH — M3-1
24″ X 12″

M1-1
36″ X 36″

M6-3
21″ X 15″

(F)

DETOUR — M4-8
24″ X 12″

NORTH — M3-1
24″ X 12″

M1-1
36″ X 36″

M6-1
21″ X 15″

(1)

R11-2
48″ x 30″

M4-10R
48″ x 18″

TYPE III BARRICADE

(2)

BEGINNING 10 DAYS PRIOR TO ROAD CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
I-95 NB NIGHTLY CLOSURES	MNTH/DAY THRU MNTH/DAY

CHANGEABLE MESSAGE SIGN

DURING ROAD CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
I-95 NB CLOSED	USE US 301 NORTH

CHANGEABLE MESSAGE SIGN

SEE SHEET TMP-2D2
FOR DETOUR

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DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SECTION 1

DETOUR
I-95 NB
TEMPORARY TRAFFIC
CONTROL DEVICES

3/15/2022
G:\5011\0019_NV5_I-5987B\I-5987B\TrafficControl\Tcp\I-5987B_TC_TMP-02D02A_I95 NB Detour Signs.dgn
User:ST086227

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D3

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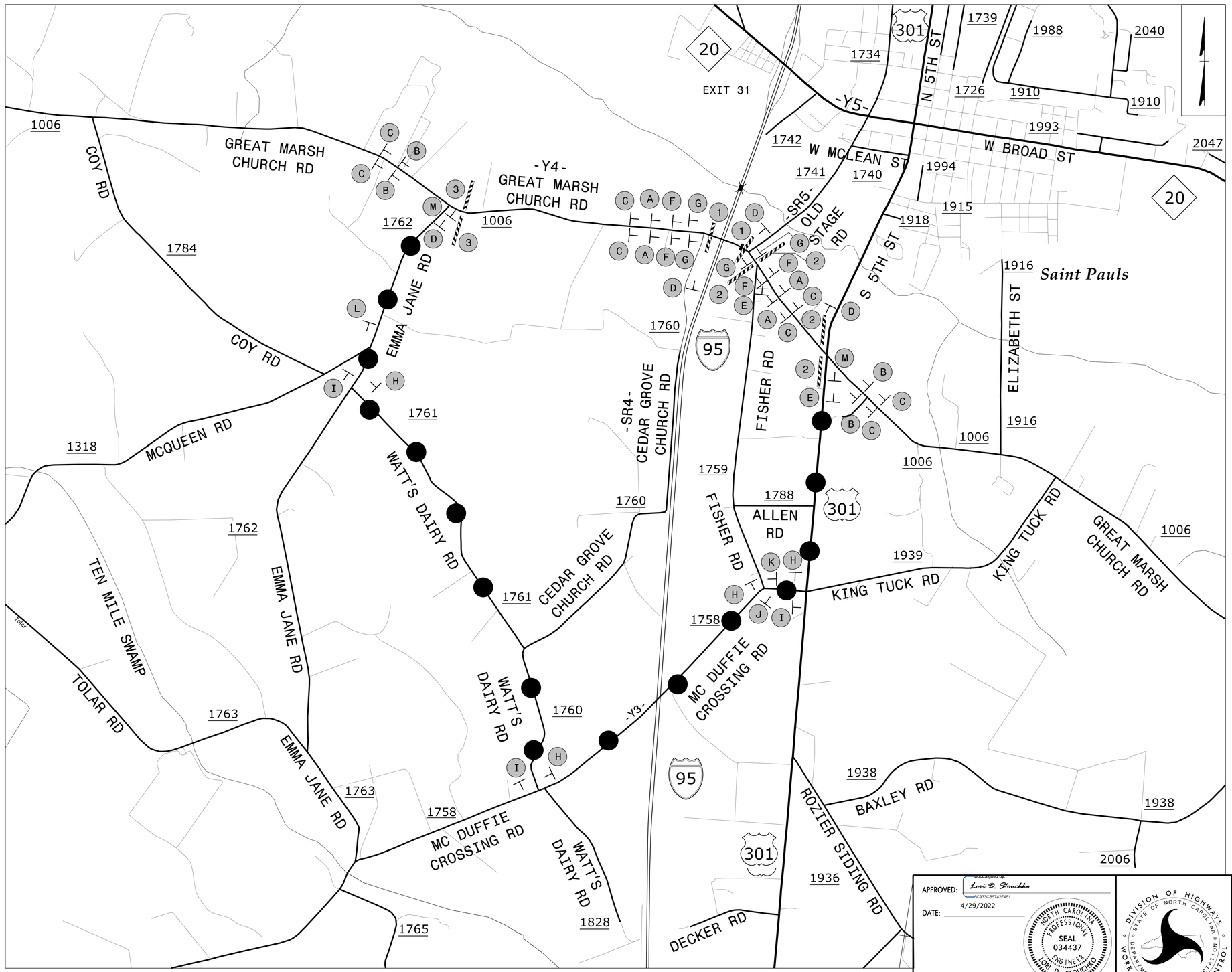

NOTE: SEE RSD 1101.03 SHEETS 1 AND 2 OF 9 FOR GENERAL NOTES AND SIGN SPACING

APPROVED: DocuSigned by: Lori D. Stouchko 6C933CB5742F461...
DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

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

SECTION 1

DETOUR
-Y4-
72" RCP INSTALLATION
ROAD CLOSURE

3/15/2022
G:\5010091\NV5_I-5987B\I-5987B\TrafficControl\Tcp\I-5987B_TC_TMP-02D03_Y4 Detour.dgn
User:ST086227

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D3A

PLANS PREPARED FOR THE NCDOT BY:

MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669

A

W20-3
48″ X 48″

B

W20-2
48″ X 48″

C

W20-3
48″ X 48″

D

W20-3
48″ X 48″

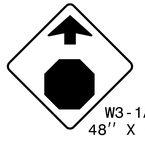
SP-4R
42″ X 12″

E

W20-3
48″ X 48″

SP-4L
42″ X 12″

F

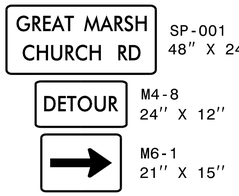


W3-1A
48″ X 48″

G

R1-1
36″ X 36″

H

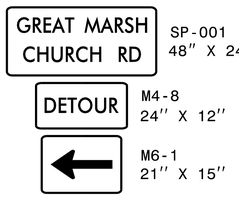


SP-001
48″ X 24″

M4-8
24″ X 12″

M6-1
21″ X 15″

I

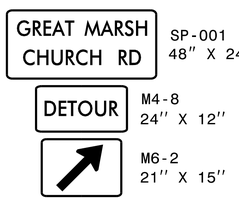


SP-001
48″ X 24″

M4-8
24″ X 12″

M6-1
21″ X 15″

J

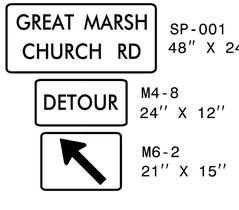


SP-001
48″ X 24″

M4-8
24″ X 12″

M6-2
21″ X 15″

K

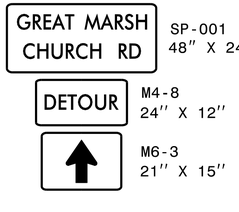


SP-001
48″ X 24″

M4-8
24″ X 12″

M6-2
21″ X 15″

L

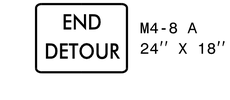


SP-001
48″ X 24″

M4-8
24″ X 12″

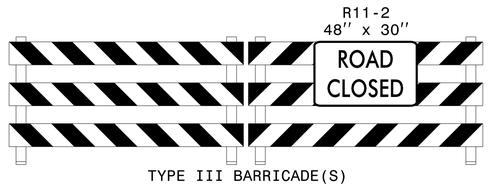
M6-3
21″ X 15″

M



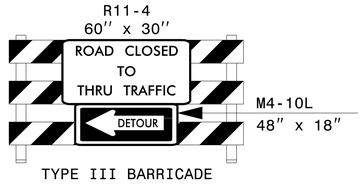
M4-8 A
24″ X 18″

1



TYPE III BARRICADE(S)

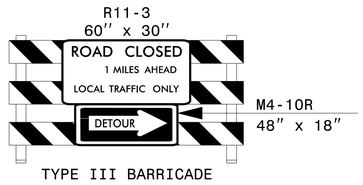
2



M4-10L
48″ x 18″

TYPE III BARRICADE

3



M4-10R
48″ x 18″

TYPE III BARRICADE

SEE SHEET TMP-2D3
FOR DETOUR

APPROVED: DocuSigned by: Lori D. Stouchko 6C933CB5742F461...

DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SECTION 1

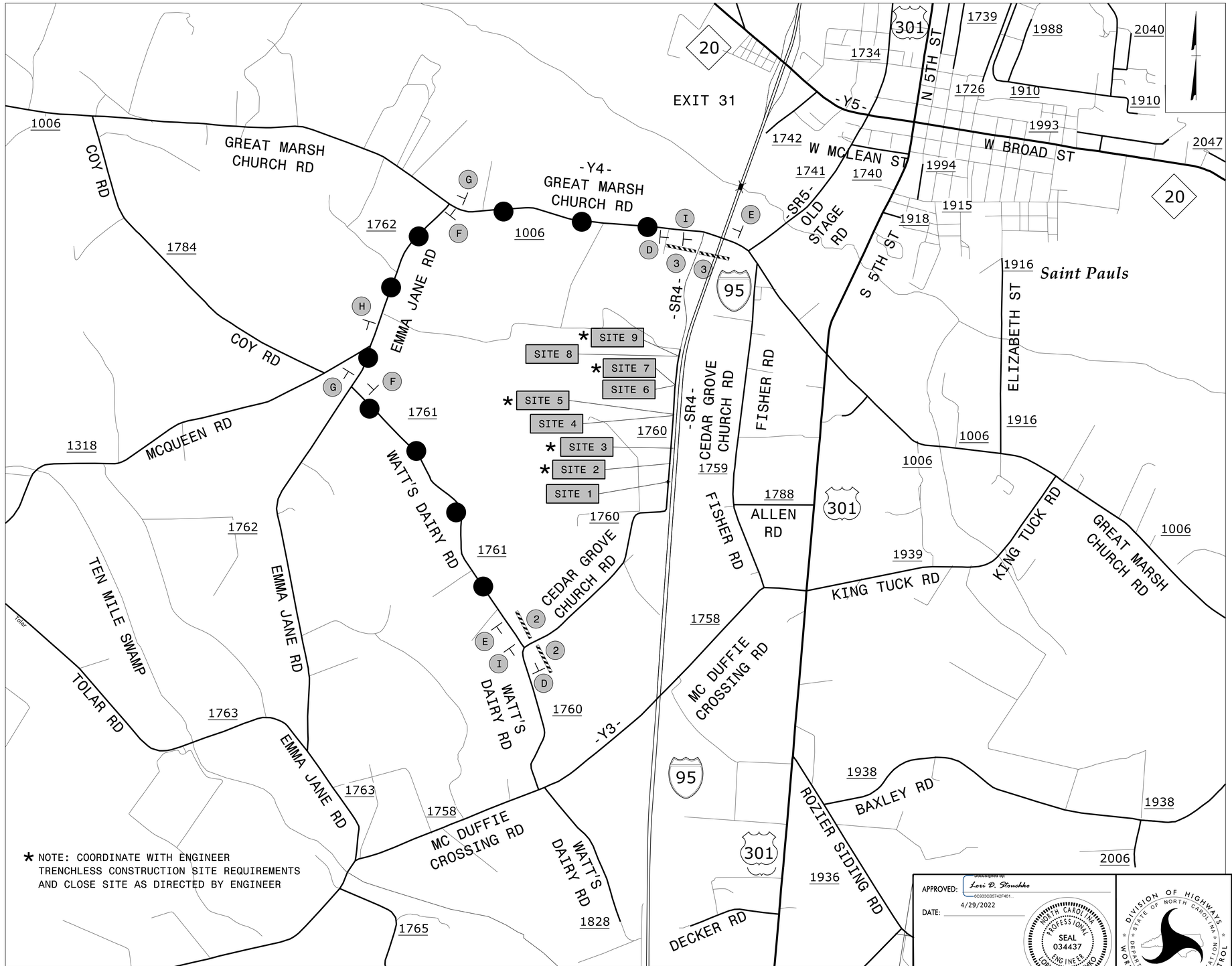
DETOUR
-Y4-
ROAD CLOSURE
TEMPORARY TRAFFIC
CONTROL DEVICES

3/15/2022
G:\5011009_NV5_I-5987B\I-5987B\TrafficControl\Tcp\I-5987B_TC_TMP-02D03A_Y4 Detour Signs.dgn
User:STO86227

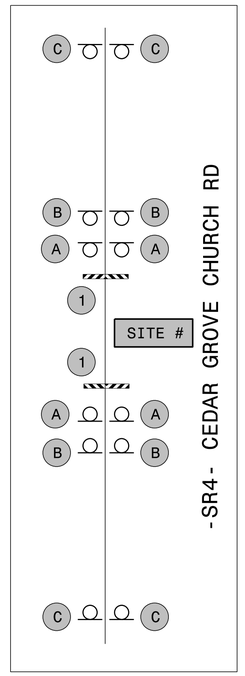
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D4

PLANS PREPARED FOR THE NCDOT BY:

MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669



* NOTE: COORDINATE WITH ENGINEER TRENCHLESS CONSTRUCTION SITE REQUIREMENTS AND CLOSE SITE AS DIRECTED BY ENGINEER



LOCATE ROAD CLOSURE TYPE III BARRICADES (1) IN SUCH A MANNER TO MAINTAIN ACCESS TO ALL DRIVEWAY

DETOUR ROUTE

SEE SHEET TMP-2D4A FOR DETOUR SIGNS

NOTE: SEE RSD 1101.03 SHEETS 1 AND 2 OF 9 FOR GENERAL NOTES AND SIGN SPACING

APPROVED: Docusigned by: Lori D. Stouchko 6C933CB5742F461...
DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D STOUCHKO

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

SECTION 1

DETOUR
-SR4-
DRAINAGE INSTALLATION
ROAD CLOSURE

3/15/2022
G:\5001001_NV5_I-5987B\I-5987B\TrafficControl\Tcp\I-5987B_TC_TMP-02D04_SR4 Detour.dgn
User:ST086227

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D4A

PLANS PREPARED FOR THE NCDOT BY:

MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669

A

W20-3
48″ X 48″

B

W20-3
48″ X 48″

C

W20-3
48″ X 48″

D

W20-3
48″ X 48″

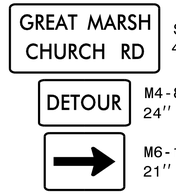
SP-4R
42″ X 12″

E

W20-3
48″ X 48″

SP-4L
42″ X 12″

F

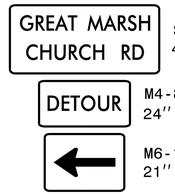


SP-001
48″ X 24″

M4-8
24″ X 12″

M6-1
21″ X 15″

G

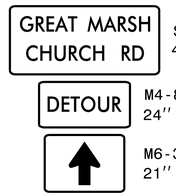


SP-001
48″ X 24″

M4-8
24″ X 12″

M6-1
21″ X 15″

H



SP-001
48″ X 24″

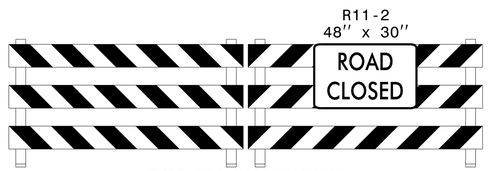
M4-8
24″ X 12″

M6-3
21″ X 15″

I

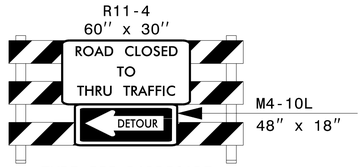
M4-8 A
24″ X 18″

1



TYPE III BARRICADE(S)

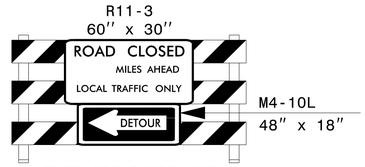
2



M4-10L
48″ x 18″

TYPE III BARRICADE

OR

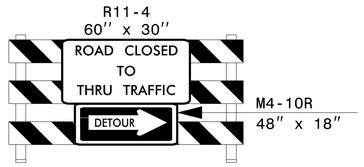


M4-10L
48″ x 18″

TYPE III BARRICADE

NOTE: USE "ROAD CLOSED TO THRU TRAFFIC" WHERE DISTANCE TO CLOSURE IS 1 MILE OR LESS

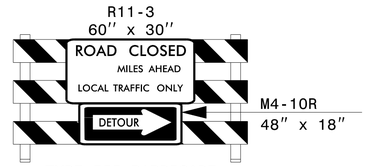
3



M4-10R
48″ x 18″

TYPE III BARRICADE

OR



M4-10R
48″ x 18″

TYPE III BARRICADE

NOTE: USE "ROAD CLOSED TO THRU TRAFFIC" WHERE DISTANCE TO CLOSURE IS 1 MILE OR LESS

SUMMARY OF DRAINAGE SITES ON -SR4-

SITE 1
-EY18- STA 25+00+/-
42″ RCP UNDER EXISTING -SR4- AT -L- STA 513+90
42″ RCP UNDER EXISTING -SR4- AT -L- STA 514+00

* SITE 2
-EY18- STA 29+40+/-
18″ WELDED STEEL AT -L- STA 518+33
TRENCHLESS CONSTRUCTION UNDER I-95

* SITE 3
-EY18- STA 33+10+/-
24″ WELDED STEEL AT -L- STA 522+00
TRENCHLESS CONSTRUCTION UNDER I-95

SITE 4
-EY18- STA 40+75+/-
48″ RCP UNDER EXISTING -SR4- AT -L- STA 529+40
48″ RCP UNDER EXISTING -SR4- AT -L- STA 529+49

* SITE 5
-EY18- STA 40+85+/-
54″ WELDED STEEL AT -L- STA 529+93
TRENCHLESS CONSTRUCTION
54″ WELDED STEEL AT -L- STA 530+00
TRENCHLESS CONSTRUCTION UNDER I-95

SITE 6
-EY18- STA 47+80+/-
30″ RCP UNDER EXISTING -SR4- AT -L- STA 536+75

* SITE 7
-EY18- STA 47+80+/-
24″ WELDED STEEL AT -L- STA 536+75
TRENCHLESS CONSTRUCTION UNDER I-95

SITE 8
-EY18- STA 54+75+/-
30″ RCP UNDER EXISTING -SR4- AT -L- STA 543+55

* SITE 9
-EY18- STA 54+75+/-
36″ WELDED STEEL AT -L- STA 543+55
TRENCHLESS CONSTRUCTION UNDER I-95

* NOTE: COORDINATE WITH ENGINEER TRENCHLESS CONSTRUCTION SITE REQUIREMENTS AND CLOSE SITE AS DIRECTED BY ENGINEER

SEE SHEET TMP-2D4
FOR DETOUR

APPROVED: DocuSigned by: Lori D. Stouchko 6C933CB5742F461...
DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

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

SECTION 1

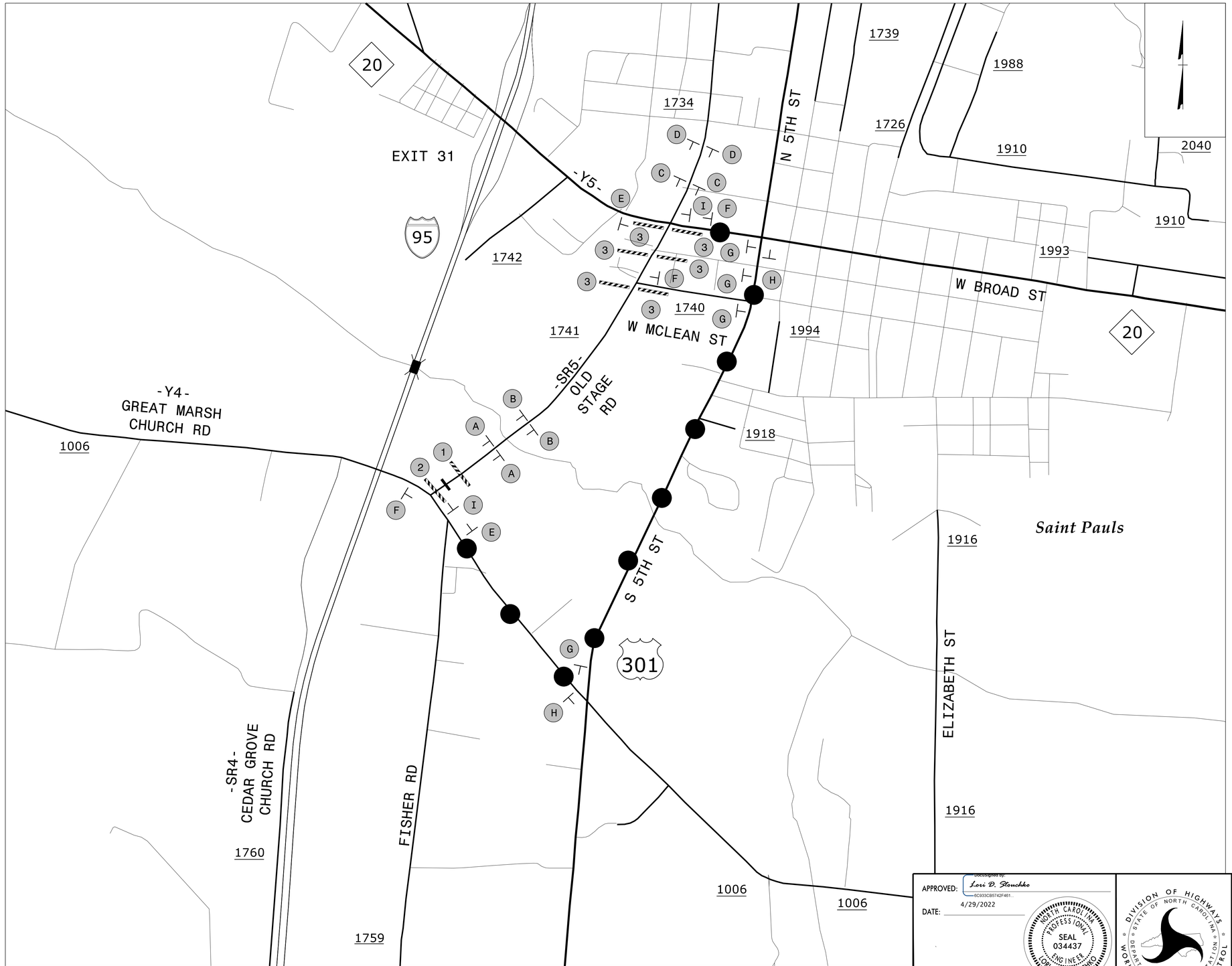
DETOUR
-SR4-
DRAINAGE INSTALLATION
TEMPORARY TRAFFIC
CONTROL DEVICES

3/15/2022
G:\5011009_NV5_I-5987B\I-5987B\TrafficControl\Tcp\I-5987B_TC_TMP-02D04A_SR4 Detour Signs.dgn
User:ST086227

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D5

PLANS PREPARED FOR THE NCDOT BY:

MOTT MACDONALD
MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669



DETOUR ROUTE

SEE SHEET TMP-2D5A
FOR DETOUR SIGNS

NOTE: SEE RSD 1101.03 SHEETS 1 AND 2
OF 9 FOR GENERAL NOTES AND SIGN SPACING

APPROVED: Docusigned by: Lori D. Stouchko 6C933CB5742F461...

DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SECTION 1

DETOUR
-SR5-
24" RCP INSTALLATION
ROAD CLOSURE

3/15/2022
G:\5011\0019_NV5_I-5987B\I-5987B\TrafficControl\Tcp\I-5987B_TC_TMP-02D05_SR5 Detour.dgn
User:STO86227

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D5A

PLANS PREPARED FOR THE NCDOT BY:
MOTT MACDONALD
MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669

A

W20-3
48″ X 48″

B

W20-3
48″ X 48″

C

W20-2
48″ X 48″

D

W20-3
48″ X 48″

E

W20-3
48″ X 48″

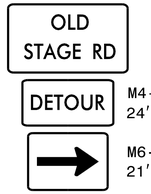
SP-4R
42″ X 12″

F

W20-3
48″ X 48″

SP-4L
42″ X 12″

G

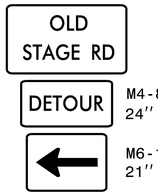


SP-002
48″ X 30″

M4-8
24″ X 12″

M6-1
21″ X 15″

H



SP-002
48″ X 30″

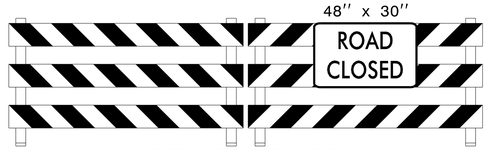
M4-8
24″ X 12″

M6-1
21″ X 15″

I

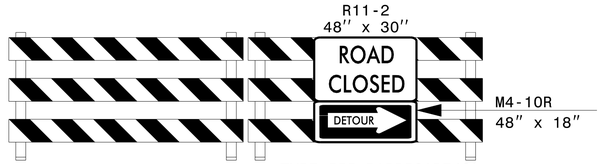
M4-8A
24″ X 18″

1



TYPE III BARRICADE(S)

2



TYPE III BARRICADE(S)

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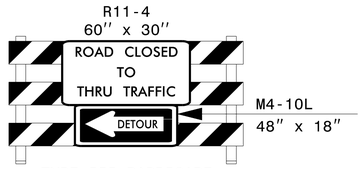

TYPE III BARRICADE

SEE SHEET TMP-2D5
FOR DETOUR

APPROVED: Docusigned by: Lori D. Stouchko 6C933CB5742F461...
DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

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

SECTION 1

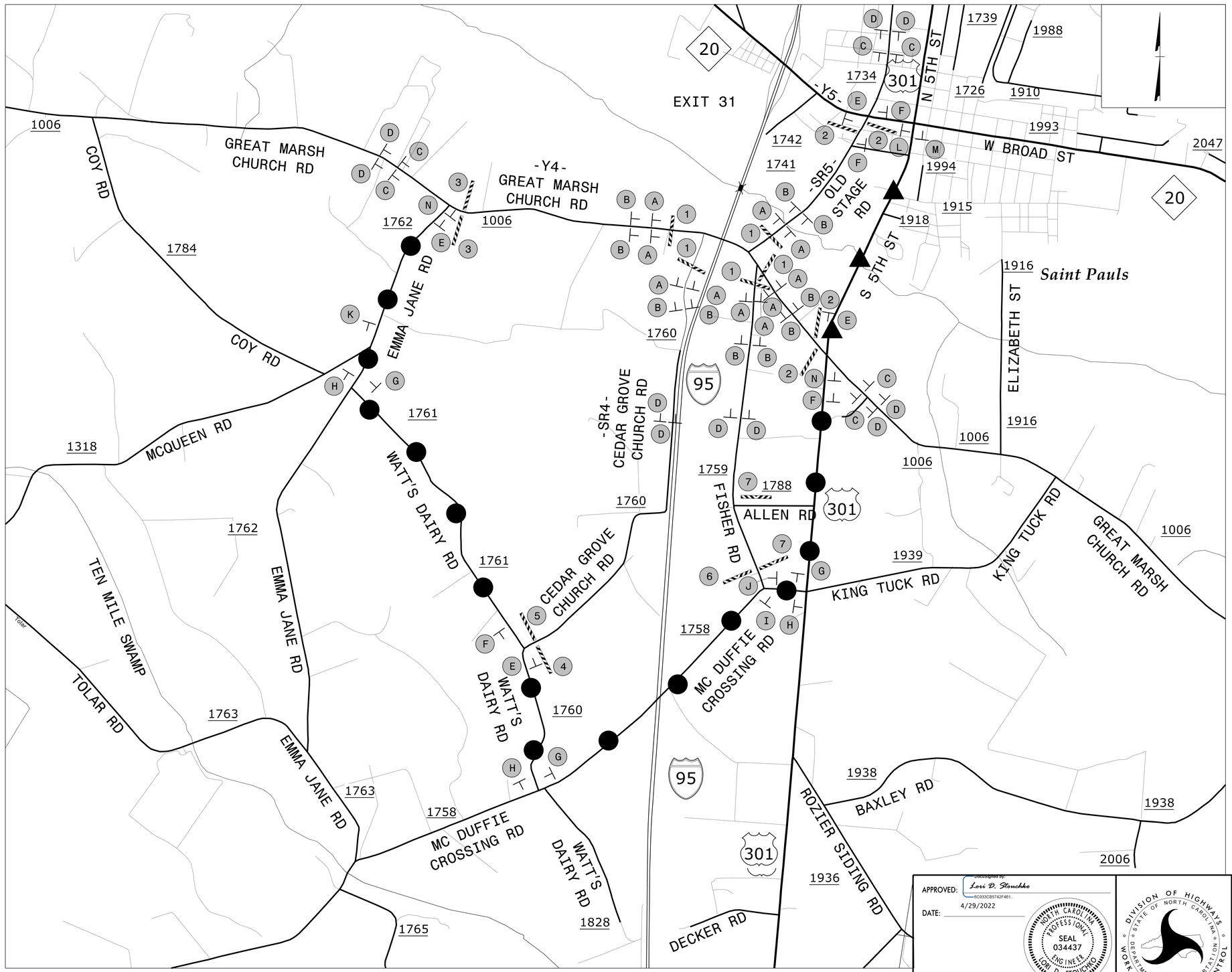
DETOUR
-SR5-
24″ RCP INSTALLATION
TEMPORARY TRAFFIC
CONTROL DEVICES

3/15/2022
G:\5010091_NV5_I-5987B\I-5987B\TrafficControl\Tcp\I-5987B_TC_TMP-02D05A_SR5 Detour Signs.dgn
User:ST086227

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D6

PLANS PREPARED FOR THE NCDOT BY:

MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669



DETOUR ROUTE GREAT MARSH CHURCH RD (-Y5- CLOSURE)

DETOUR ROUTE TO GREAT MARSH CHURCH RD (-SR5- CLOSURE)

SEE SHEET TMP-2D6A FOR DETOUR SIGNS

NOTE: SEE RSD 1101.03 SHEETS 1 AND 2 OF 9 FOR GENERAL NOTES AND SIGN SPACING

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DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D STOUCHKO

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

SECTION 1

DETOUR
-Y4-/-SR4-/-SR5-
ROAD CLOSURES

3/15/2022
G:\5010091NV5_I-5987B\I-5987B\TraffiControl\Tcp\I-5987B_TC_TMP-02006_Y4 SR4 SR5 Detour.dgn
User:ST086227

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D6A

PLANS PREPARED FOR THE NCDOT BY:

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1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669

A

W20-3
48" X 48"

B

W20-3
48" X 48"

C

W20-2
48" X 48"

D

W20-3
48" X 48"

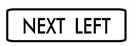
E

W20-3
48" X 48"

SP-4R
42" X 12"

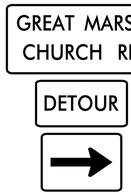
F

W20-3
48" X 48"



SP-4L
42" X 12"

G

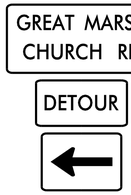


SP-001
48" X 24"

M4-8
24" X 12"

M6-1
21" X 15"

H

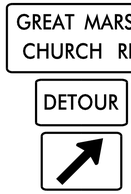


SP-001
48" X 24"

M4-8
24" X 12"

M6-1
21" X 15"

I

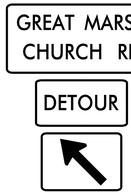


SP-001
48" X 24"

M4-8
24" X 12"

M6-2
21" X 15"

J

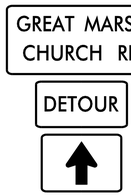


SP-001
48" X 24"

M4-8
24" X 12"

M6-2
21" X 15"

K



SP-001
48" X 24"

M4-8
24" X 12"

M6-3
21" X 15"

L

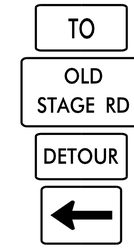
M4-5
24" X 12"

SP-001
48" X 24"

M4-8
24" X 12"

M6-1
21" X 15"

M



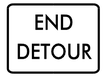
M4-5
24" X 12"

SP-002
48" X 30"

M4-8
24" X 12"

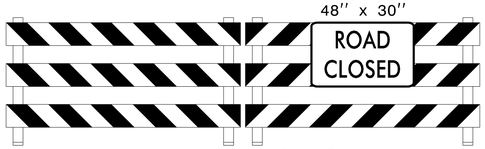
M6-1
21" X 15"

N



M4-8A
24" X 18"

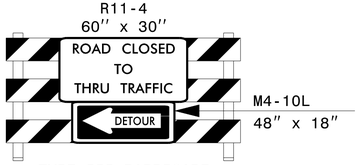
1



R11-2
48" x 30"

TYPE III BARRICADE(S)

2

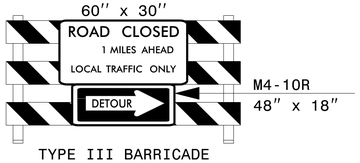


R11-4
60" x 30"

M4-10L
48" x 18"

TYPE III BARRICADE

3



R11-3
60" x 30"

M4-10R
48" x 18"

TYPE III BARRICADE

4

R11-3
60" x 30"

TYPE III BARRICADE

5

R11-3
60" x 30"

TYPE III BARRICADE

6

R11-3
60" x 30"

TYPE III BARRICADE

7

R11-3
60" x 30"

TYPE III BARRICADE

SEE SHEET TMP-2D6
FOR DETOUR

APPROVED: Docusigned by: Lori D. Stouchko 6C933CB5742F461...

DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D STOUCHKO

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

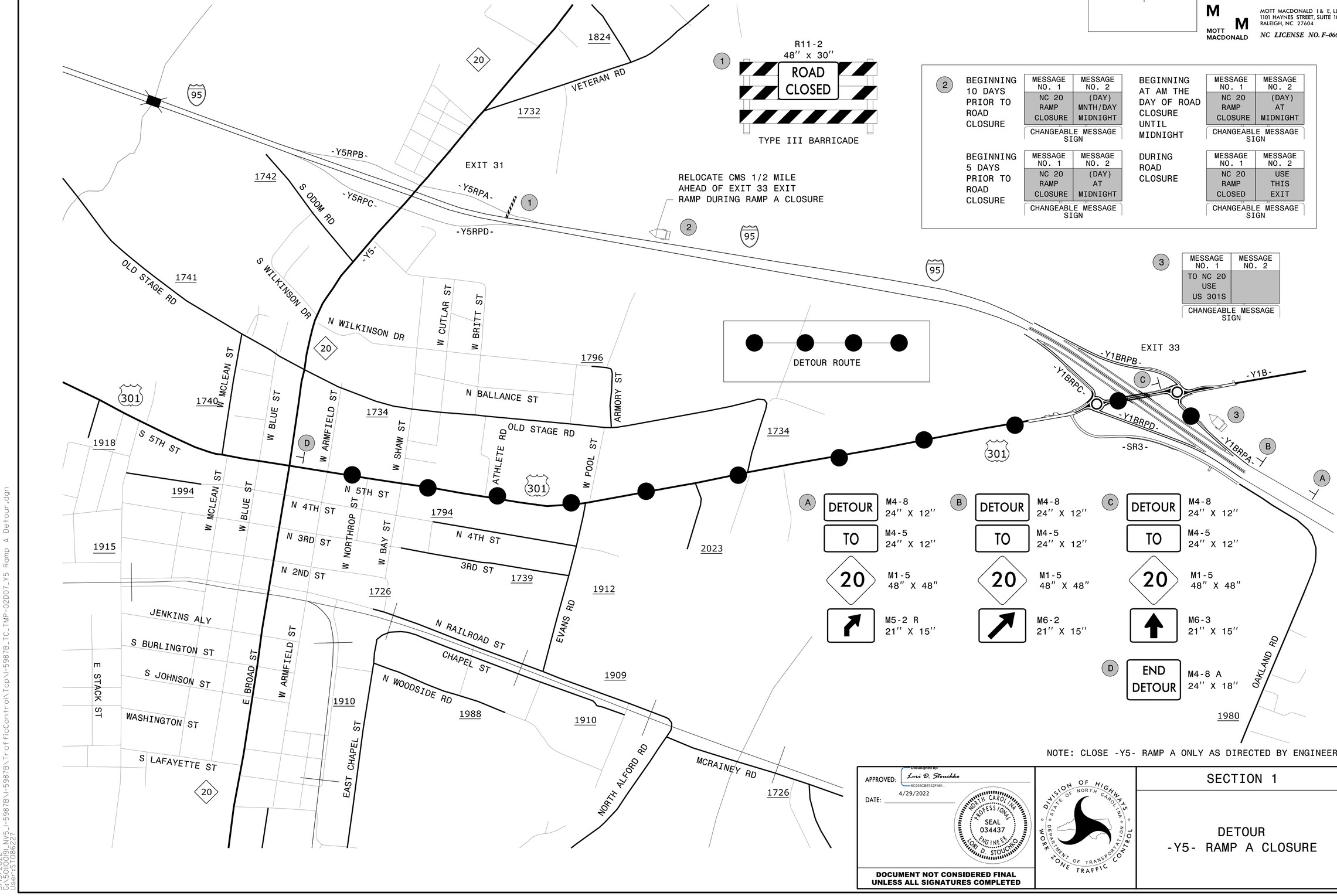
SECTION 1

DETOUR
-Y4-/-SR4-/-SR5-
ROAD CLOSURES
TEMPORARY TRAFFIC
CONTROL DEVICES

3/15/2022
G:\50\0091_NV5_I-5987B\I-5987B\TrafficControl\Tcp\I-5987B_TC_TMP-02D06A_Y4 SR4 SR5 Detour Signs.dgn
User:ST086227

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D7

PLANS PREPARED FOR THE NCDOT BY:
MOTT MACDONALD
MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669



NOTE: CLOSE -Y5- RAMP A ONLY AS DIRECTED BY ENGINEER

APPROVED: DocuSigned by: Lori D. Stouchko 6C933CB5742F461...
DATE: 4/29/2022
NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO
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DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

SECTION 1

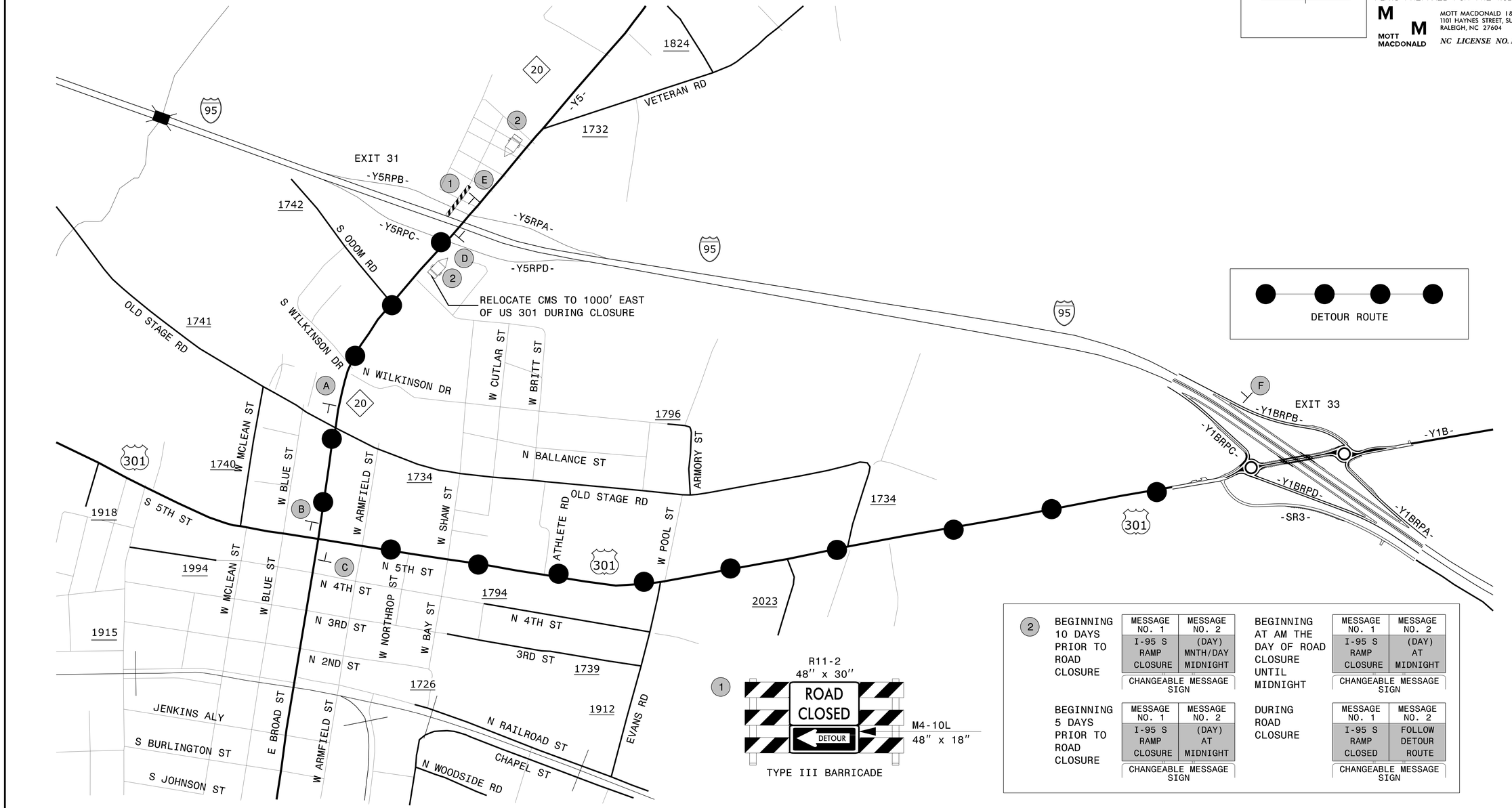
DETOUR
-Y5- RAMP A CLOSURE

3/15/2022
G:\5011\0019_NV5_I-5987B\I-5987B\TrafficControl\Tcp\I-5987B_TC_TMP-02D07_Y5 Ramp A Detour.dgn
User:ST0862227

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D8

PLANS PREPARED FOR THE NCDOT BY:

MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669



1 — R11-2, 48″ x 30″

M4-10L, 48″ x 18″

TYPE III BARRICADE

2

BEGINNING 10 DAYS PRIOR TO ROAD CLOSURE	MESSAGE NO. 1	MESSAGE NO. 2
	I-95 S RAMP CLOSURE	(DAY) MNTH/DAY MIDNIGHT
	CHANGEABLE MESSAGE SIGN	

BEGINNING AT AM THE DAY OF ROAD CLOSURE UNTIL MIDNIGHT	MESSAGE NO. 1	MESSAGE NO. 2
	I-95 S RAMP CLOSURE	(DAY) AT MIDNIGHT
	CHANGEABLE MESSAGE SIGN	

BEGINNING 5 DAYS PRIOR TO ROAD CLOSURE	MESSAGE NO. 1	MESSAGE NO. 2
	I-95 S RAMP CLOSURE	(DAY) AT MIDNIGHT
	CHANGEABLE MESSAGE SIGN	

DURING ROAD CLOSURE	MESSAGE NO. 1	MESSAGE NO. 2
	I-95 S RAMP CLOSED	FOLLOW DETOUR ROUTE
	CHANGEABLE MESSAGE SIGN	

A — DETOUR M4-8, 24″ X 12″ / TO M4-5, 24″ X 12″ / SOUTH M3-3, 24″ X 12″ / INTERSTATE 95 M1-1, 36″ X 36″ / M6-3, 21″ X 15″

B — DETOUR M4-8, 24″ X 12″ / TO M4-5, 24″ X 12″ / SOUTH M3-3, 24″ X 12″ / INTERSTATE 95 M1-1, 36″ X 36″ / M6-1, 21″ X 15″

C — DETOUR M4-8, 24″ X 12″ / TO M4-5, 24″ X 12″ / SOUTH M3-3, 24″ X 12″ / INTERSTATE 95 M1-1, 36″ X 36″ / M6-1, 21″ X 15″

D — ROAD CLOSED AHEAD W20-3, 48″ X 48″ / NEXT LEFT SP-4L, 42″ X 12″

E — ROAD CLOSED AHEAD W20-3, 48″ X 48″ / NEXT RIGHT SP-4R, 42″ X 12″

F — END DETOUR M4-8 A, 24″ X 18″

NOTE: CLOSE -Y5- RAMP B ONLY AS DIRECTED BY ENGINEER

APPROVED: Docusigned by: Lori D. Stouchko 6C933CB5742F461... DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

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

SECTION 1

DETOUR
-Y5- RAMP B CLOSURE

3/15/2022
G:\SOI\00191_NV5_I-5987B\I-5987B\TrafficControl\Tcp\I-5987B_TC_TMP-02D08_Y5 Ramp B Detour.dgn
User:ST086227

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D9

PLANS PREPARED FOR THE NCDOT BY:

MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669

1 — R11-2, 48″ x 30″ — ROAD CLOSED — TYPE III BARRICADE

2

BEGINNING 10 DAYS PRIOR TO ROAD CLOSURE	MESSAGE NO. 1	MESSAGE NO. 2
CHANGEABLE MESSAGE SIGN	NC 20 RAMP CLOSURE	(DAY) MNTH/DAY MIDNIGHT
BEGINNING 5 DAYS PRIOR TO ROAD CLOSURE	MESSAGE NO. 1	MESSAGE NO. 2
CHANGEABLE MESSAGE SIGN	NC 20 RAMP CLOSURE	(DAY) AT MIDNIGHT

BEGINNING AT AM THE DAY OF ROAD CLOSURE UNTIL MIDNIGHT	MESSAGE NO. 1	MESSAGE NO. 2
CHANGEABLE MESSAGE SIGN	NC 20 RAMP CLOSURE	(DAY) AT MIDNIGHT
DURING ROAD CLOSURE	MESSAGE NO. 1	MESSAGE NO. 2
CHANGEABLE MESSAGE SIGN	NC 20 RAMP CLOSED	USE EXIT 33

DETOUR ROUTE

A	DETOUR	M4-8	24″ X 12″
	TO	M4-5	24″ X 12″
	20	M1-5	48″ X 48″
	↱	M5-2 R	21″ X 15″
B	DETOUR	M4-8	24″ X 12″
	TO	M4-5	24″ X 12″
	20	M1-5	48″ X 48″
	↗	M6-2	21″ X 15″
C	DETOUR	M4-8	24″ X 12″
	TO	M4-5	24″ X 12″
	20	M1-5	48″ X 48″
	→	M6-1	21″ X 15″
D	END DETOUR	M4-8 A	24″ X 18″

NOTE: CLOSE -Y5- RAMP C ONLY AS DIRECTED BY ENGINEER

APPROVED: Docusigned by: Lori D. Stouchko 6C933CB5742F461...
DATE: 4/29/2022
NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

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

SECTION 1

DETOUR
-Y5- RAMP C CLOSURE

3/15/2022
G:\5011\0019_NV5_I-5987B\I-5987B\TrafficControl\Tcp\I-5987B_TC_TMP-02D09_Y5 Ramp C Detour.dgn
User:STO86227

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D10

PLANS PREPARED FOR THE NCDOT BY:

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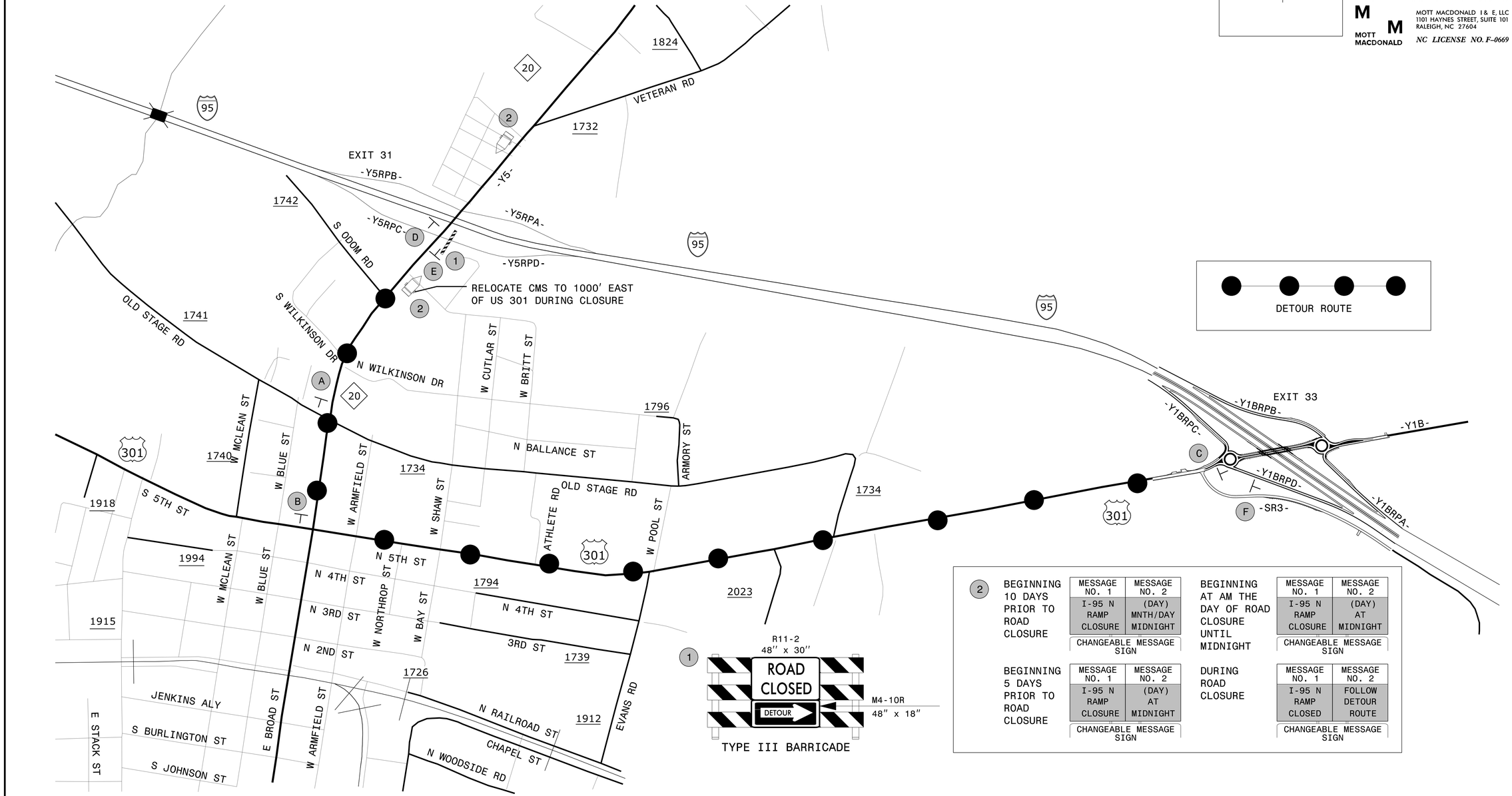
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669



1 — R11-2, 48″ x 30″: ROAD CLOSED / DETOUR; M4-10R, 48″ x 18″

TYPE III BARRICADE

2

	MESSAGE NO. 1	MESSAGE NO. 2
BEGINNING 10 DAYS PRIOR TO ROAD CLOSURE	I-95 N RAMP CLOSURE	(DAY) MNTH/DAY MIDNIGHT
	CHANGEABLE MESSAGE SIGN	
BEGINNING 5 DAYS PRIOR TO ROAD CLOSURE	I-95 N RAMP CLOSURE	(DAY) AT MIDNIGHT
	CHANGEABLE MESSAGE SIGN	
BEGINNING AT AM THE DAY OF ROAD CLOSURE UNTIL MIDNIGHT	I-95 N RAMP CLOSURE	(DAY) AT MIDNIGHT
	CHANGEABLE MESSAGE SIGN	
DURING ROAD CLOSURE	I-95 N RAMP CLOSED	FOLLOW DETOUR ROUTE
	CHANGEABLE MESSAGE SIGN	

A

DETOUR	M4-8, 24″ X 12″
TO	M4-5, 24″ X 12″
NORTH	M3-1, 24″ X 12″
INTERSTATE 95	M1-1, 36″ X 36″
↑	M6-3, 21″ X 15″

B

DETOUR	M4-8, 24″ X 12″
TO	M4-5, 24″ X 12″
NORTH	M3-1, 24″ X 12″
INTERSTATE 95	M1-1, 36″ X 36″
←	M6-1, 21″ X 15″

C

DETOUR	M4-8, 24″ X 12″
TO	M4-5, 24″ X 12″
NORTH	M3-1, 24″ X 12″
INTERSTATE 95	M1-1, 36″ X 36″
→	M6-1, 21″ X 15″

D

ROAD CLOSED AHEAD	W20-3, 48″ X 48″
NEXT LEFT	SP-4L, 42″ X 12″

E

ROAD CLOSED AHEAD	W20-3, 48″ X 48″
NEXT RIGHT	SP-4R, 42″ X 12″

F — END DETOUR, M4-8 A, 24″ X 18″

NOTE: CLOSE -Y5- RAMP D ONLY AS DIRECTED BY ENGINEER

APPROVED: DocuSigned by: Lori D. Stouchko 6C933CB5742F461...

DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

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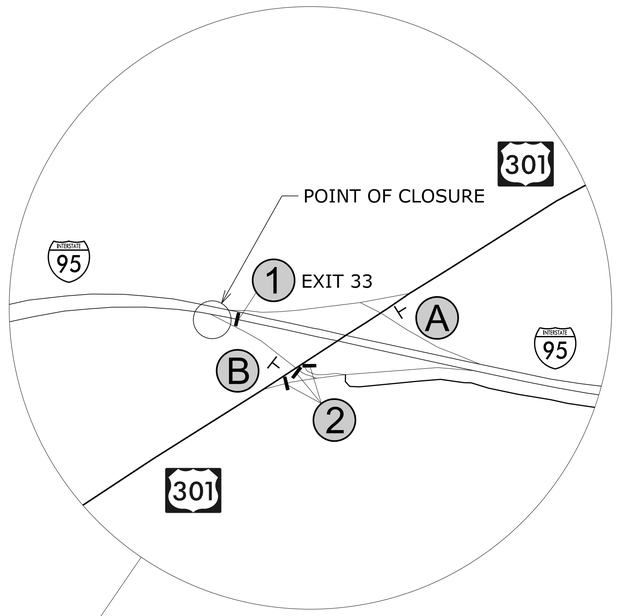
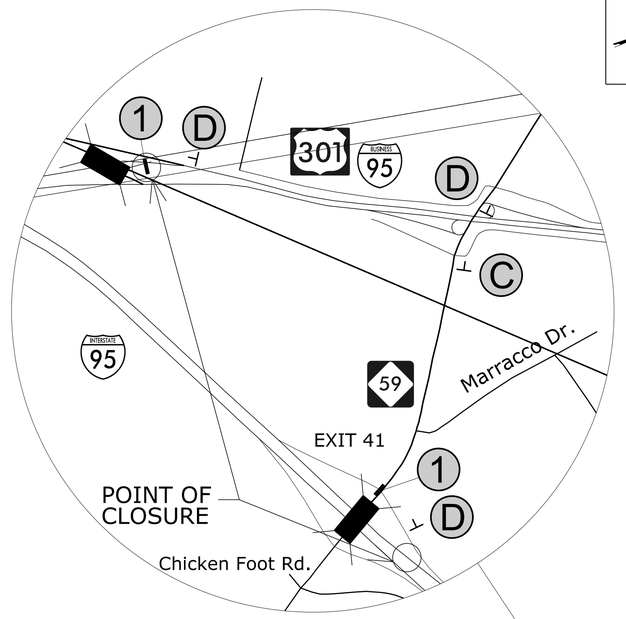
SECTION 1

DETOUR
-Y5- RAMP D CLOSURE

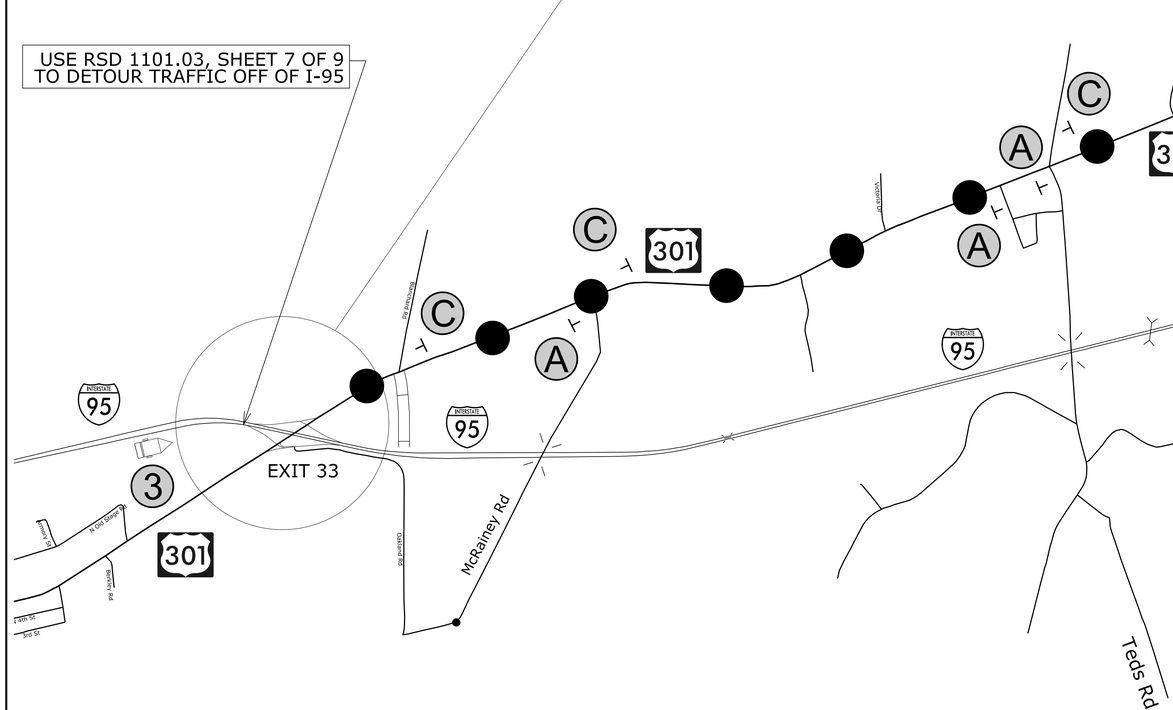
3/15/2022
G:\5011009_NV5_I-5987B\I-5987B\TrafficControl\Tcp\I-5987B_TC_TMP-02D10_Y5 Ramp D Detour.dgn
User:ST086227

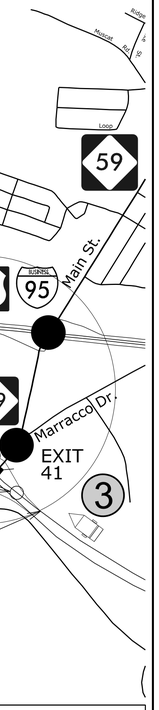
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D11





USE RSD 1101.03, SHEET 7 OF 9
TO DETOUR TRAFFIC OFF OF I-95





USE RSD 1101.03, SHEET 7 OF 9
TO DETOUR TRAFFIC OFF OF I-95

Stantec
Stantec Consulting Services Inc.
801 Jones Franklin Road
Suite 300
Raleigh, NC 27606
Tel. 919.851.6866
Fax. 919.851.7024
www.stantec.com
License No. F-0672

DocuSigned by: J.W. Woolard, Jr. BBC02F40E95...
NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR.
4/29/2022

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SECTION 2

DETOUR I-95 NIGHTLY CLOSURE

3/15/2022
U:\Traffic\Transportation Management Plan\TCP\PLAN SHEETS\I-5987B_TMP_2Dii_DETOUR I-95.dgn
angood

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D11A

A

M4-8
24"X12"
M3-1
24"X12"
M1-1
24"X24"
M6-3
21"x15"

B

M4-8
24"X12"
M3-1
24"X12"
M1-1
24"X24"
M6-1L
21"x15"

C

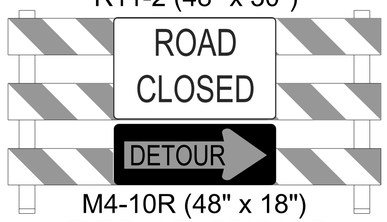
M4-8
24"X12"
M3-3
24"X12"
M1-1
24"X24"
M6-3
21"x15"

D

M4-8
24"X12"
M3-3
24"X12"
M1-1
24"X24"
M6-1
21"x15"

1

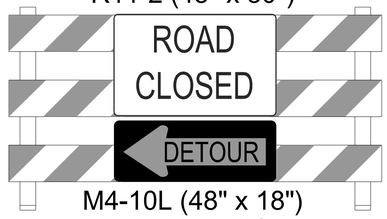
R11-2 (48" x 30")



M4-10R (48" x 18")
TYPE III BARRICADE

2

R11-2 (48" x 30")



M4-10L (48" x 18")
TYPE III BARRICADE

3

MESSAGE NO. 1	MESSAGE NO. 2
I-95 NB CLOSED	USE US 301 NORTH

CHANGEABLE MESSAGE SIGN

MESSAGE NO. 1	MESSAGE NO. 2
I-95 SB CLOSED	USE US 301 SOUTH

CHANGEABLE MESSAGE SIGN

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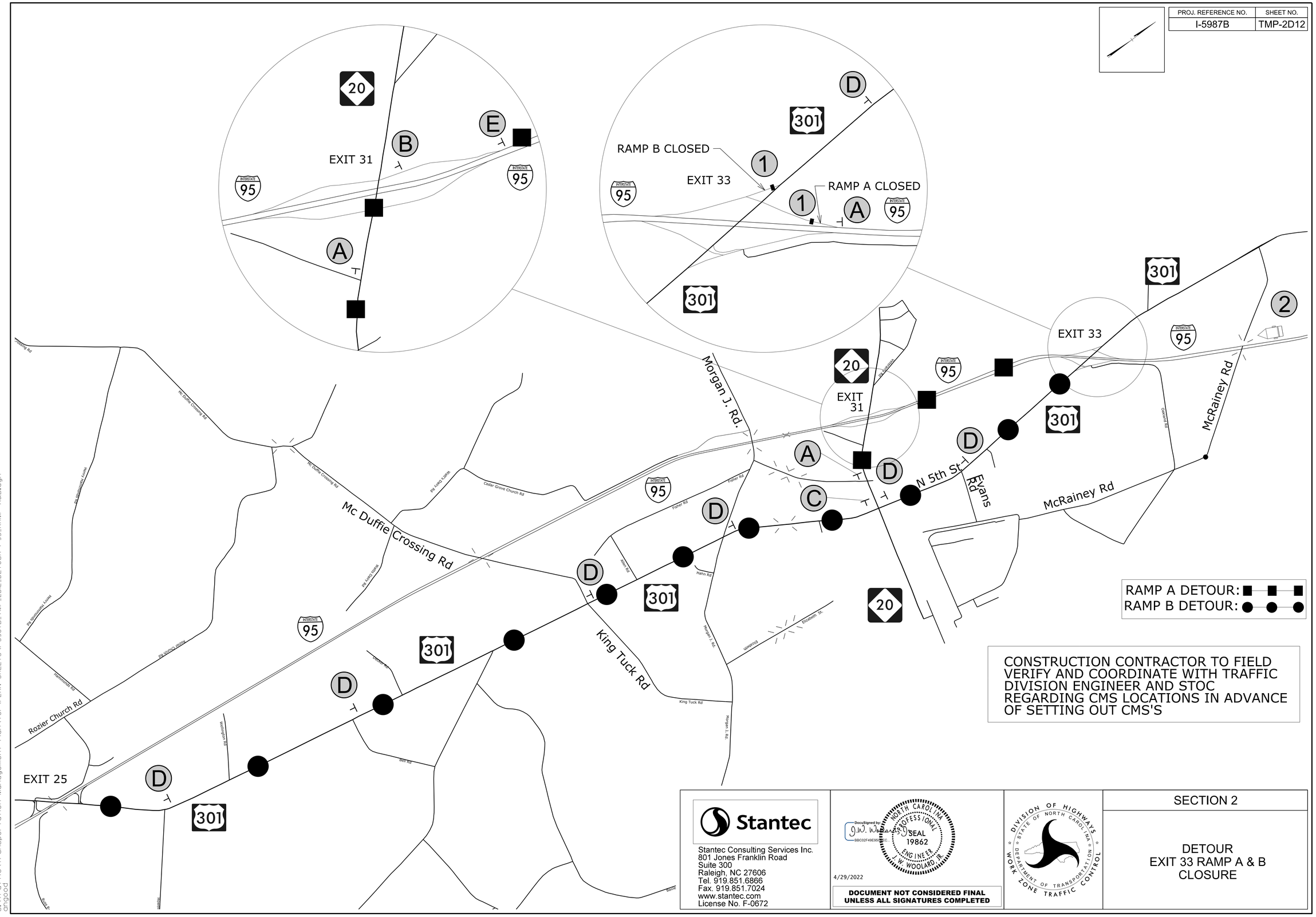
SECTION 2

DETOUR
I-95 NIGHTLY
CLOSURE SIGNS

3/15/2022
U:\Traffic\Transportation Management Plan\TCP\PLAN SHEETS\I-5987B_TMP_2D11A_DETOUR I-95.dgn
angood

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D12



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SECTION 2

DETOUR
EXIT 33 RAMP A & B CLOSURE

3/15/2022
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angood

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D12A

A

M4-5
24"X12"

M1-4
24"X30"

M6-3
21"x15"

B

M4-5
24"X12"

M1-4
24"X30"

M6-1L
21"x15"

C

M4-8b
24"X12"
M4-8
24"X12"

D

M4-5
24"X12"
M3-3
24"X12"

M1-1
24"X24"

M6-3
21"x15"

E

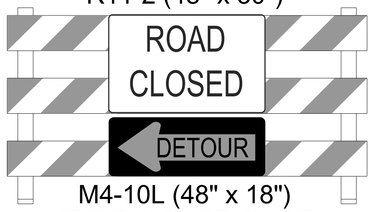
M4-5
24"X12"

M1-4
24"X30"

M6-2
21"x15"

1

R11-2 (48" x 30")



M4-10L (48" x 18")
TYPE III BARRICADE

2

BEGINNING 10 DAYS PRIOR TO RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 33 CLOSED	MNTH/DAY THRU MNTH/DAY

CHANGEABLE MESSAGE SIGN

DURING RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 33 CLOSED AHEAD	USE NEXT EXIT EXIT 31

CHANGEABLE MESSAGE SIGN

3/15/2022
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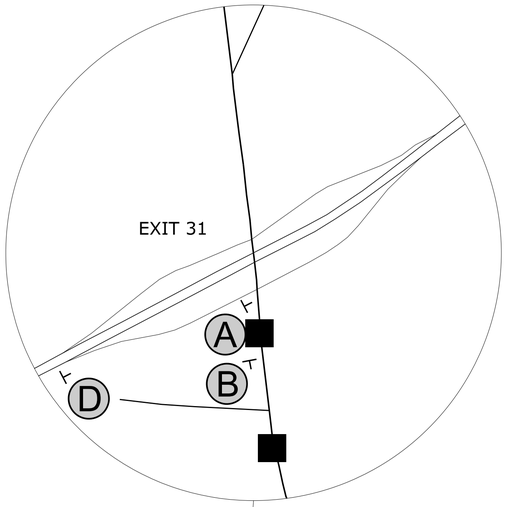
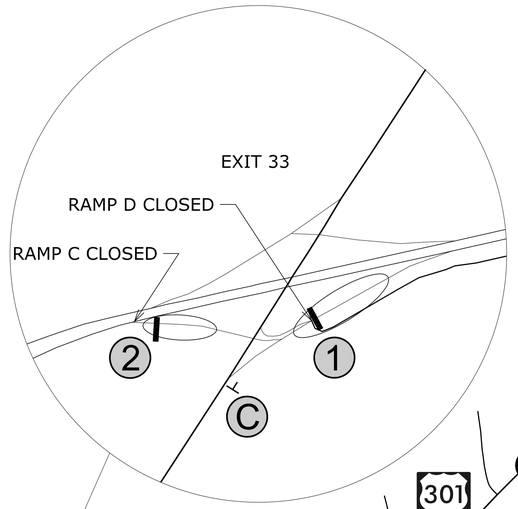
SECTION 2

DETOUR
EXIT 33 RAMP A & B
CLOSURE SIGNS

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D13





RAMP C DETOUR:
RAMP D DETOUR:

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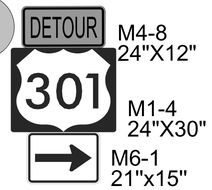
SECTION 2

DETOUR
EXIT 33 RAMP C & D CLOSURE

3/15/2022
U:\Traffic\Transportation Management Plan\TCP\PLAN SHEETS\I-5987B_TMP_2D13_DETOUR I-95_RAMP C&D.dgn
angood

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D13A

A



M4-8
24"X12"

M1-4
24"X30"

M6-1
21"x15"

B

M4-8
24"X12"

M1-4
24"X30"

M6-3
21"x15"

C

M4-5
24"X12"
M3-1
24"X12"

M1-1
24"X24"

M6-3
21"x15"

D

M4-8
24"X12"

M1-4
24"X30"

M6-2
21"x15"

E

M4-5
24"X12"
M3-1
24"X12"

M1-1
24"X24"

M6-1
21"x15"

F

M4-8
24"X12"
M3-1
24"X12"

M1-1
24"X24"

M6-2
21"x15"

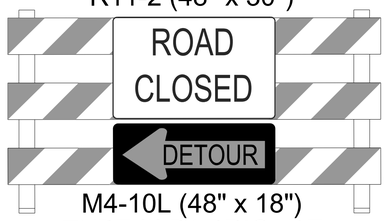
1

R11-2 (48" x 30")

TYPE III BARRICADE

2

R11-2 (48" x 30")



M4-10L (48" x 18")
TYPE III BARRICADE

3

BEGINNING 10 DAYS PRIOR TO RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 33 CLOSED	MNTH/DAY THRU MNTH/DAY

CHANGEABLE MESSAGE SIGN

DURING RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 33 CLOSED AHEAD	USE NEXT EXIT EXIT 31

CHANGEABLE MESSAGE SIGN

3/15/2022
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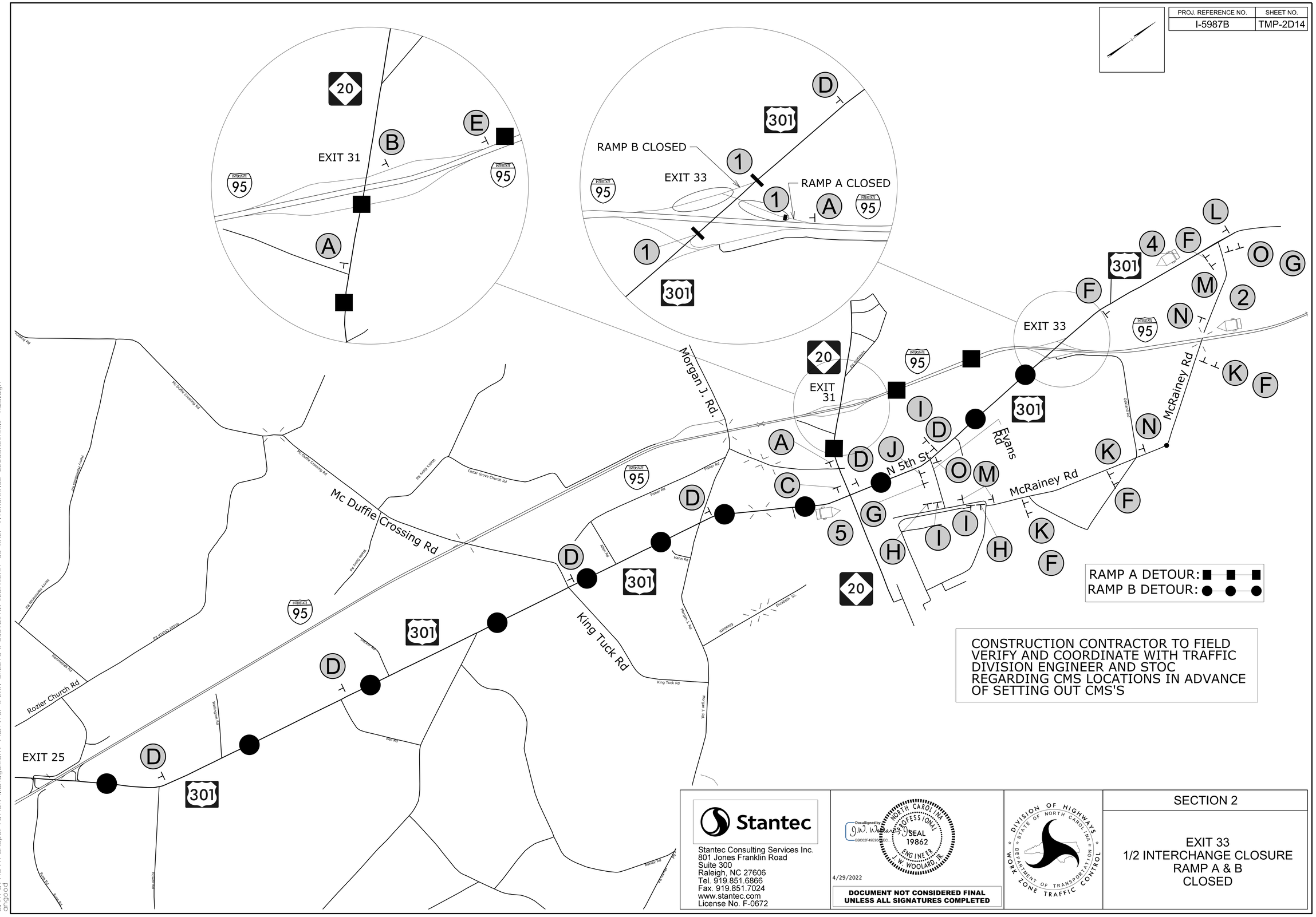
SECTION 2

DETOUR
EXIT 33 RAMP C & D
SIGNS

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D14



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SECTION 2

EXIT 33
1/2 INTERCHANGE CLOSURE
RAMP A & B
CLOSED

3/15/2022
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angood

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D14A

A

M4-5 24"X12"
M1-4 24"X30"
M6-3 21"x15"

B

M4-5 24"X12"
M1-4 24"X30"
M6-1L 21"x15"

C

M4-8b 24"X12"
M4-8 24"X12"

D

M4-5 24"X12"
M3-3 24"X12"
M1-1 24"X24"
M6-3 21"x15"

E

M4-5 24"X12"
M1-4 24"X30"
M6-2 21"x15"

F

M4-5 24"X12"
M3-1 24"X12"
M1-1 24"X24"
M6-3 21"x15"

G

M4-5 24"X12"
M3-1 24"X12"
M1-1 24"X24"
M6-1 21"x15"

H

M4-5 24"X12"
M3-1 24"X12"
M1-1 24"X24"
M6-1L 21"x15"

I

M4-8 24"X12"
M3-1 24"X12"
M1-4 24"X30"
M6-1L 21"x15"

J

M4-8 24"X12"
M3-1 24"X12"
M1-4 24"X30"
M6-1 21"x15"

K

M4-8 24"X12"
M3-1 24"X12"
M1-4 24"X30"
M6-3 21"x15"

L

M4-8 24"X12"
M3-3 24"X12"
M1-4 24"X30"
M6-1L 21"x15"

M

M4-8 24"X12"
M3-3 24"X12"
M1-4 24"X30"
M6-1 21"x15"

N

M4-8 24"X12"
M3-3 24"X12"
M1-4 24"X30"
M6-3 21"x15"

O

M4-8b 24"X12"
M4-8 24"X12"

2

BEGINNING 10 DAYS PRIOR TO RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 33 CLOSED	MNTH/DAY THRU MNTH/DAY

CHANGEABLE MESSAGE SIGN

DURING RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 33 CLOSED AHEAD	USE NEXT EXIT EXIT 31

CHANGEABLE MESSAGE SIGN

4

DURING RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
US 301 CLOSED AHEAD	FOLLOW DETOUR

CHANGEABLE MESSAGE SIGN

5

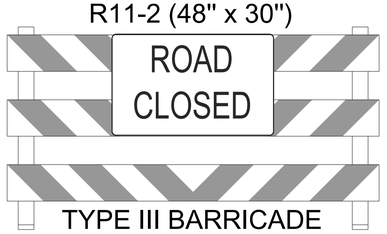
DURING RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
US 301 CLOSED AHEAD	FOLLOW DETOUR

CHANGEABLE MESSAGE SIGN

1

R11-2 (48" x 30")



TYPE III BARRICADE

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SECTION 2

EXIT 33
1/2 INTERCHANGE CLOSURE
RAMP A & B
SIGNS

3/15/2022
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angood

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D15

EXIT 31

EXIT 33

RAMP D CLOSED

RAMP C CLOSED

EXIT 33

EXIT 31

1 MILE

RAMP C DETOUR:

RAMP D DETOUR:

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SECTION 2

EXIT 33
1/2 INTERCHANGE CLOSURE
RAMP C & D
CLOSED

3/15/2022
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angood

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D15A

A

M4-8 24"X12"
M1-4 24"X30"
M6-1 21"x15"

B

M4-8 24"X12"
M1-4 24"X30"
M6-3 21"x15"

C

M4-5 24"X12"
M3-1 24"X12"
M1-1 24"X24"
M6-3 21"x15"

D

M4-8 24"X12"
M1-4 24"X30"
M6-2 21"x15"

E

M4-5 24"X12"
M3-1 24"X12"
M1-1 24"X24"
M6-1 21"x15"

F

M4-5 24"X12"
M3-1 24"X12"
M1-1 24"X24"
M6-1L 21"x15"

G

M4-8 24"X12"
M3-1 24"X12"
M1-4 24"X30"
M6-1L 21"x15"

H

M4-8 24"X12"
M3-1 24"X12"
M1-4 24"X30"
M6-1 21"x15"

I

M4-8 24"X12"
M3-1 24"X12"
M1-4 24"X30"
M6-3 21"x15"

J

M4-8 24"X12"
M3-3 24"X12"
M1-4 24"X30"
M6-1L 21"x15"

K

M4-8 24"X12"
M3-3 24"X12"
M1-4 24"X30"
M6-1 21"x15"

L

M4-8 24"X12"
M3-3 24"X12"
M1-4 24"X30"
M6-3 21"x15"

M

M4-8b 24"X12"
M4-8 24"X12"

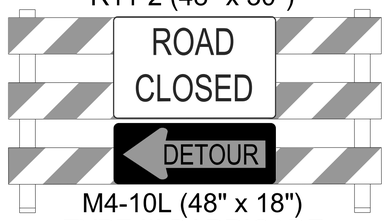
1

R11-2 (48" x 30")

TYPE III BARRICADE

2

R11-2 (48" x 30")



M4-10L (48" x 18")
TYPE III BARRICADE

3

BEGINNING 10 DAYS PRIOR TO RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 33 CLOSED	MNTH/DAY THRU MNTH/DAY

CHANGEABLE MESSAGE SIGN

4

DURING RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
US 301 CLOSED AHEAD	FOLLOW DETOUR

CHANGEABLE MESSAGE SIGN

5

DURING RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
US 301 CLOSED AHEAD	FOLLOW DETOUR

CHANGEABLE MESSAGE SIGN

DURING RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 33 CLOSED AHEAD	TO US301 USE NEXT EXIT

CHANGEABLE MESSAGE SIGN

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SECTION 2

EXIT 33
1/2 INTERCHANGE CLOSURE
RAMP C & D
SIGNS

3/15/2022
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angood

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D16

A TO 301 — M4-5 24"X12" — M1-4 24"X30" — M6-1 21"x15"

B TO 301 — M4-5 24"X12" — M1-4 24"X30" — M6-3 21"x15"

C TO 301 — M4-5 24"X12" — M1-4 24"X30" — M6-1L 21"x15"

D DETOUR OAKLAND ROAD — M4-8 24"X12" — M6-3 21"x15"

E DETOUR OAKLAND ROAD — M4-8 24"X12" — M6-1L 21"x15"

F DETOUR OAKLAND ROAD — M4-8 24"X12" — M6-1 21"x15"

1 R11-2 (48" x 30")

ROAD CLOSED

TYPE III BARRICADE

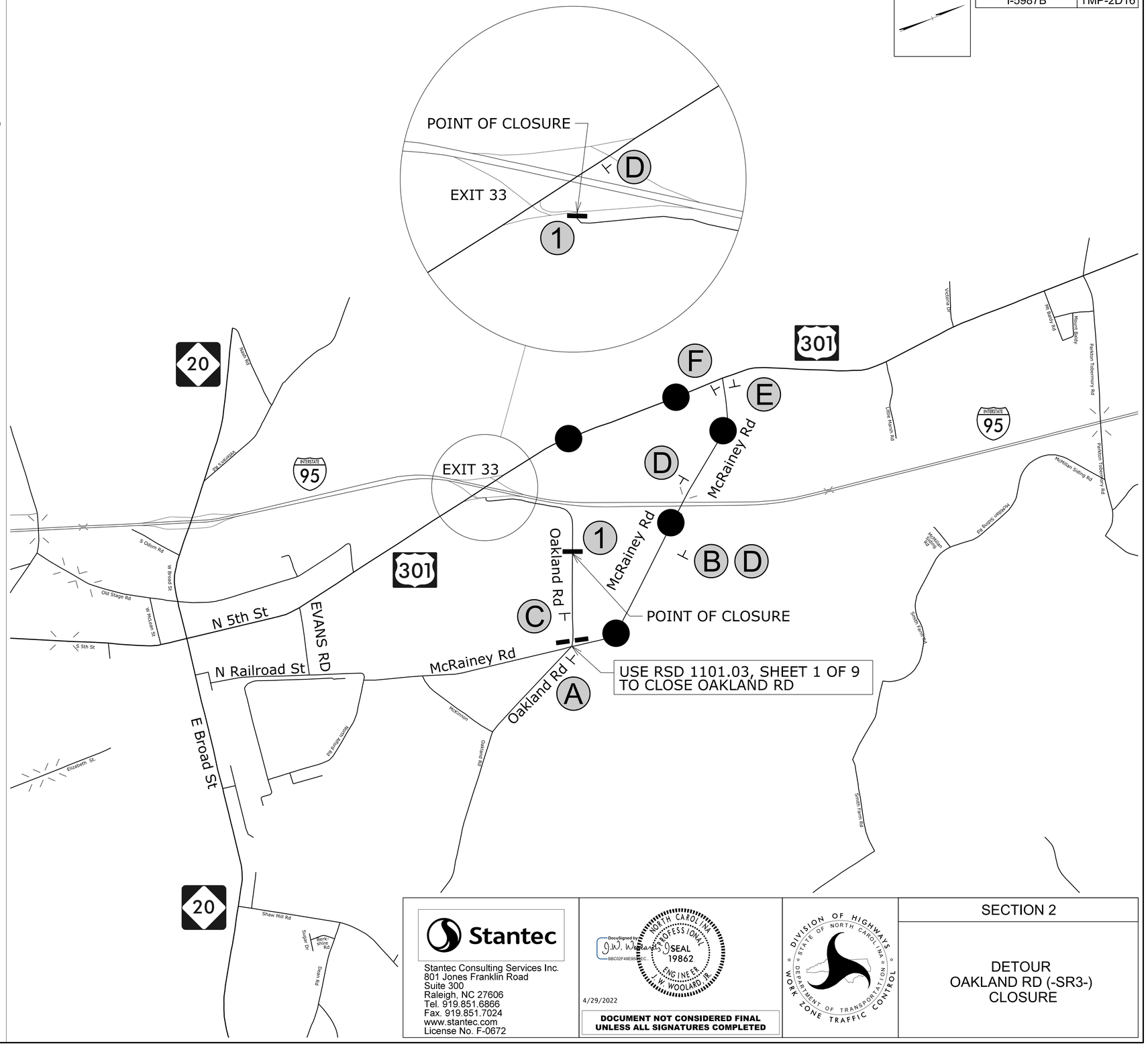
2 R11-2 (48" x 30")

ROAD CLOSED

DETOUR

M4-10R (48" x 18")

TYPE III BARRICADE



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SECTION 2

DETOUR
OAKLAND RD (-SR3-)
CLOSURE

3/15/2022
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angood

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D17

A — DETOUR / McRAINEY ROAD — M4-8 24"X12"
M6-1L 21"x15"

B — DETOUR / McRAINEY ROAD — M4-8 24"X12"
M6-1 21"x15"

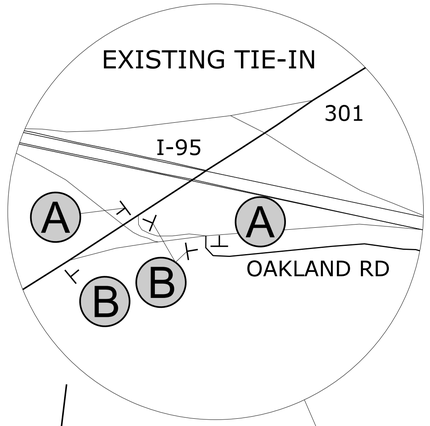
C — DETOUR / McRAINEY ROAD — M4-8 24"X12"
M6-3 21"x15"

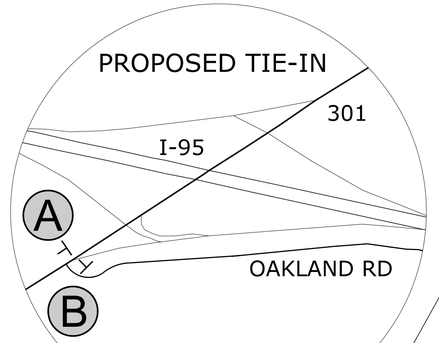
E — END / DETOUR — M4-8b 24"X12" / M4-8 24"X12"

1 — R11-2 (48" x 30")
ROAD CLOSED
TYPE III BARRICADE

2 — R11-2 (48" x 30")
ROAD CLOSED
DETOUR
M4-10L (48" x 18")
TYPE III BARRICADE

3 — R11-2 (48" x 30")
ROAD CLOSED
DETOUR
M4-10R (48" x 18")
TYPE III BARRICADE



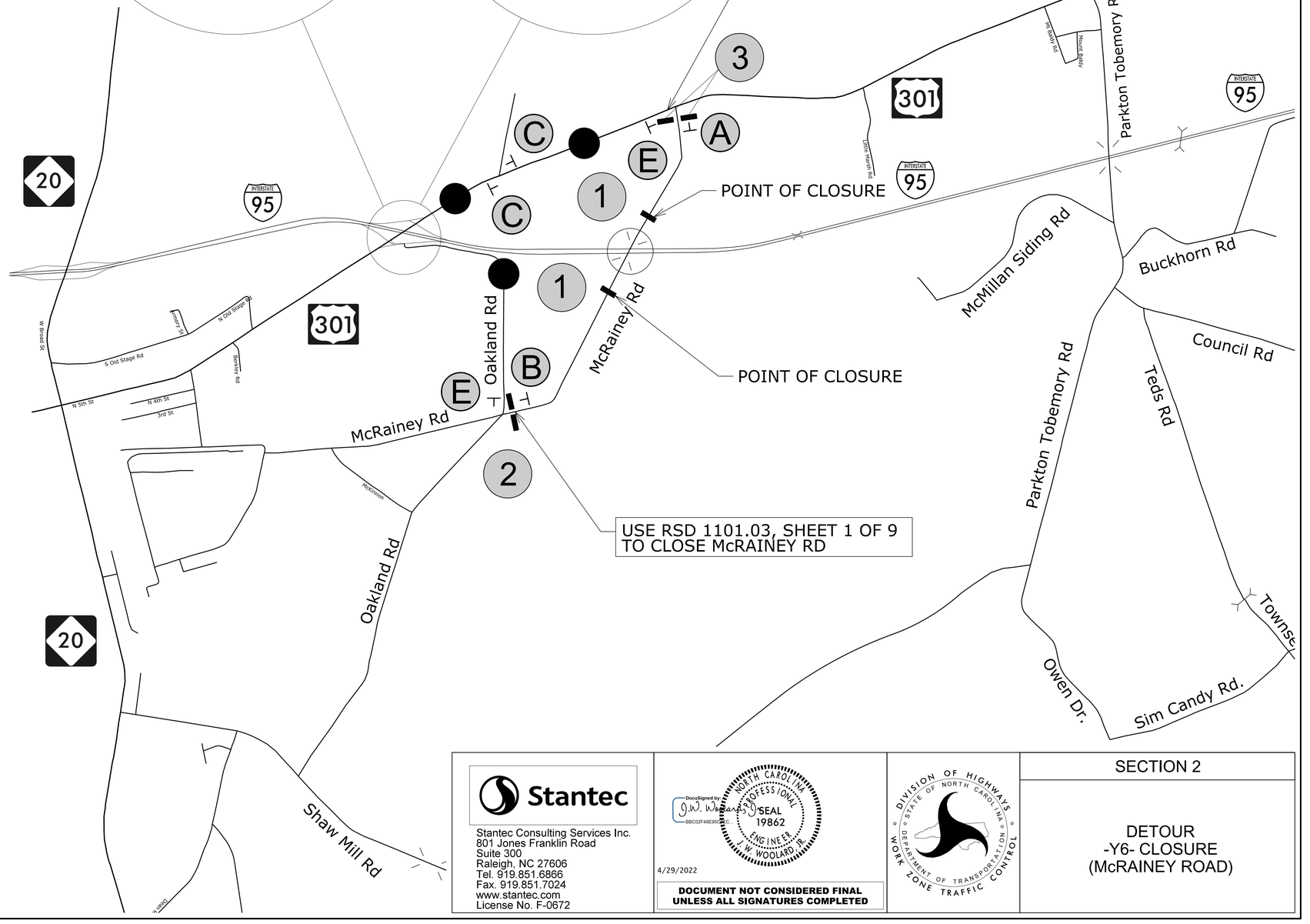


USE RSD 1101.03, SHEET 1 OF 9
TO CLOSE McRAINEY RD

POINT OF CLOSURE

POINT OF CLOSURE

USE RSD 1101.03, SHEET 1 OF 9
TO CLOSE McRAINEY RD



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License No. F-0672

DocuSigned by: J.W. Woolard Jr. BBC02F49E95C4...
NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD JR.
4/29/2022
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DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

SECTION 2

DETOUR
-Y6- CLOSURE
(McRAINEY ROAD)

3/15/2022
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angood

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2D18

A DETOUR / PARKTON TOBEMORY RD — M4-8 24"X12" — M6-1L 21"x15"

B DETOUR / PARKTON TOBEMORY RD — M4-8 24"X12" — M6-1 21"x15"

C DETOUR / PARKTON TOBEMORY RD — M4-8 24"X12" — M6-3 21"x15"

D END DETOUR — M4-8b 24"X12" — M4-8 24"X12"

1 R11-2 (48" x 30") — ROAD CLOSED — TYPE III BARRICADE

2 R11-2 (48" x 30") — ROAD CLOSED / DETOUR — M4-10L (48" x 18") TYPE III BARRICADE

3 R11-2 (48" x 30") — ROAD CLOSED / DETOUR — M4-10R (48" x 18") TYPE III BARRICADE

USE RSD 1101.03, SHEET 1 OF 9
TO CLOSE PARKTON TOBEMORY RD

SEE SHEET TMP-2D18
FOR DETOUR SIGNS

USE RSD 1101.03, SHEET 1 OF 9
TO CLOSE PARKTON TOBERMORY RD

POINT OF CLOSURE

POINT OF CLOSURE

Parkton Tobemory Rd

Buckhorn Rd

Council Rd

Green Springs Rd

McRainey Rd

Oakland Rd

McMillan Siding Rd

Parkton Tobemory Rd

Teds Rd

Owen Rd

Parkton Rd

McDonald Rd

Woodlington Rd

McClean Rd.

Branton Rd.

Stanley Hill Rd

Fairmont

INTERSTATE 95

301

40

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DocuSigned by: J.W. Woolard Jr. BBC02F40E95...
NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR.

4/29/2022

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

SECTION 2

DETOUR
-Y7- CLOSURE
(PARKTON TOBEMORY RD)

3/15/2022
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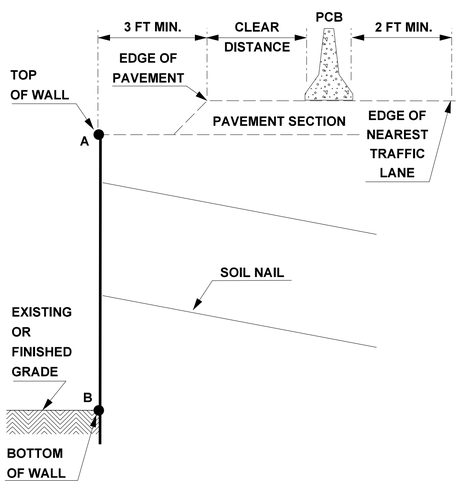
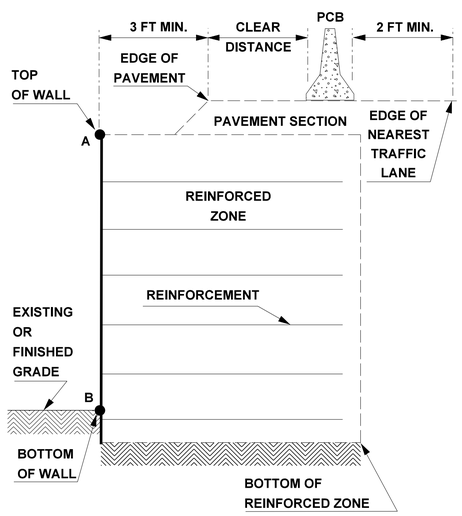
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2TS1

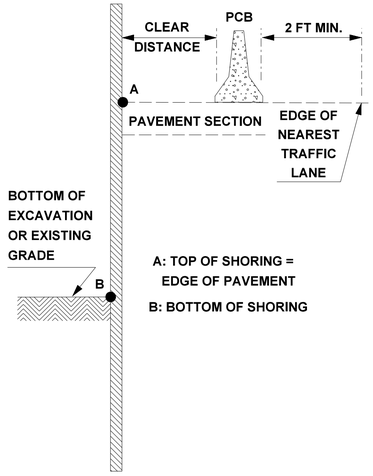
TEMPORARY SOIL NAIL WALL



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

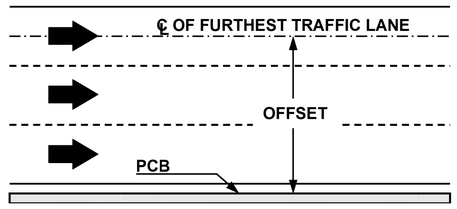


FIGURE B

DETAIL PROVIDED BY NCDOT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

3/15/2022
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User:rangood

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2TS2

PLANS PREPARED FOR THE NCDOT BY:
MOTT MACDONALD
MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669

NOTES FOR TEMPORARY SHORING NO. B1-01

SEE TMP-10

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

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 -L- 572+64±, 96.4 FT LT, TO STATION -L- 573+38±, 85 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 148 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 572+64±, 96.4 FT LT, TO STATION -L- 573+38±, 85 FT LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 572+64±, 96.4 FT LT, TO STATION -L- 573+38±, 85 FT LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

NOTES FOR TEMPORARY SHORING NO. B1-02

SEE TMP-10

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

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 -Y4- 23+31.50±, 25.75 FT RT, TO STATION -Y4- 24+00±, 25.75 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 148 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -Y4- 23+31.50±, 25.75 FT RT, TO STATION -Y4- 24+00±, 25.75 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y4- 23+31.50±, 25.75 FT RT, TO STATION -Y4- 24+00±, 25.75 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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

NOTES FOR TEMPORARY SHORING NO. B1-03

SEE TMP-10

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

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 -Y4- 23+31.50±, 29.75 FT RT, TO STATION -Y4- 24+18±, 29.75 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 148 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y4- 23+31.50±, 29.75 FT RT, TO STATION -Y4- 24+18±, 29.75 FT RT.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -Y4- 23+31.50±, 29.75 FT RT, TO STATION -Y4- 24+18±, 29.75 FT RT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

NOTES FOR TEMPORARY SHORING NO. B1-04

SEE TMP-10

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

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 -Y4- 25+24.50±, 29.75 FT RT, TO STATION -Y4- 26+09±, 29.75 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 148 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y4- 25+24.50±, 29.75 FT RT, TO STATION -Y4- 26+09±, 29.75 FT RT.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -Y4- 25+24.50±, 29.75 FT RT, TO STATION -Y4- 26+09±, 29.75 FT RT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

NOTES FOR TEMPORARY SHORING NO. B1-05

SEE TMP-10

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

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 -Y4- 25+54±, 25.75 FT RT, TO STATION -Y4- 26+09±, 25.75 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 148 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -Y4- 25+54±, 25.75 FT RT, TO STATION -Y4- 26+09±, 25.75 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y4- 25+54±, 25.75 FT RT, TO STATION -Y4- 26+09±, 25.75 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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

NOTES FOR TEMPORARY SHORING NO. B1-06

SEE TMP-11

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

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 -L- 585+04.50±, 30 FT RT, TO STATION -L- 585+61±, 30 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 142 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 585+04.50±, 30 FT RT, TO STATION -L- 585+61±, 30 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 585+04.50±, 30 FT RT, TO STATION -L- 585+61±, 30 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE NCDOT DIVISION ENGINEER ON FEBRUAY 10, 2022 AND SEALED BY A PROFESSIONAL ENGINEER, JINYOUNG PARK, LICENSE # 032171.

APPROVED: DocuSigned by: Lori D. Stouchko 6C933CB5742F461...
DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SECTION 1

TEMPORARY SHORING NOTES
SECTION 1
LOCATIONS B1-1
THRU B1-6

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2TS3

PLANS PREPARED FOR THE NCDOT BY:
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RALEIGH, NC 27604
NC LICENSE NO. F-0669

NOTES FOR TEMPORARY SHORING NO. B1-07

SEE TMP-11

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

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 -L- 578+50±, 34.9 FT RT, TO STATION -L- 585+17.50±, 33 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 142 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 578+50±, 34.9 FT RT, TO STATION -L- 585+17.50±, 33 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 578+50±, 34.9 FT RT, TO STATION -L- 585+17.50±, 33 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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

NOTES FOR TEMPORARY SHORING NO. B1-08

SEE TMP-11

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

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 -L- 586+74±, 30 FT RT, TO STATION -L- 587+15±, 30 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 142 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 586+74±, 30 FT RT, TO STATION -L- 587+15±, 30 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 586+74±, 30 FT RT, TO STATION -L- 587+15±, 30 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

NOTES FOR TEMPORARY SHORING NO. B1-09

SEE TMP-11
AND TMP-12

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

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 -L- 586+98±, 33 FT RT, TO STATION -L- 594+50±, 33 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 142 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 586+98±, 33 FT RT, TO STATION -L- 594+50±, 33 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 586+98±, 33 FT RT, TO STATION -L- 594+50±, 33 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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

NOTES FOR TEMPORARY SHORING NO. B1-10

SEE TMP-13
AND TMP-14B

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

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 -L- 610+32±, 33.5 FT RT, TO STATION -L- 616+08±, 34.25 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 157 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 610+32±, 33.5 FT RT, TO STATION -L- 616+08±, 34.25 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 610+32±, 33.5 FT RT, TO STATION -L- 616+08±, 34.25 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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

NOTES FOR TEMPORARY SHORING NO. B1-11

SEE TMP-14B

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

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 -L- 615+33±, 31.25 FT RT, TO STATION -L- 616+52±, 31.25 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 155 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 615+33±, 31.25 FT RT, TO STATION -L- 616+52±, 31.25 FT RT.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -L- 615+33±, 31.25 FT RT, TO STATION -L- 616+52±, 31.25 FT RT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

NOTES FOR TEMPORARY SHORING NO. B1-12

SEE TMP-14B

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

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 -L- 617+35.50±, 31.25 FT RT, TO STATION -L- 618+79±, 31.1 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 160 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 617+35.50±, 31.25 FT RT, TO STATION -L- 618+79±, 31.1 FT RT.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -L- 617+35.50±, 31.25 FT RT, TO STATION -L- 618+79±, 31.1 FT RT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE NCDOT DIVISION ENGINEER ON FEBRUAY 10, 2022 AND SEALED BY A PROFESSIONAL ENGINEER, JINYOUNG PARK, LICENSE # 032171.

APPROVED: DocuSigned by: Lori D. Stouchko 6C933CB5742F461...
DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SECTION 1

TEMPORARY SHORING NOTES
SECTION 1
LOCATIONS B1-7
THRU B1-12

3/15/2022
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User:ST086227

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2TS4

PLANS PREPARED FOR THE NCDOT BY:

MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669

NOTES FOR TEMPORARY SHORING NO. B1-13

SEE TMP-14B AND TMP-15

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

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 -L- 618+10±, 34.25 FT RT, TO STATION -L- 619+44±, 34 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 160 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 618+10±, 34.25 FT RT, TO STATION -L- 619+44±, 34 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 618+10±, 34.25 FT RT, TO STATION -L- 619+44±, 34 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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

NOTES FOR TEMPORARY SHORING NO. B1-14

SEE TMP-32B

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

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 -Y5- 41+22.50±, 5.3 FT RT, TO STATION -Y5- 41+80.20±, 5.3 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 155 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y5- 41+22.50±, 5.3 FT RT, TO STATION -Y5- 41+80.20±, 5.3 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -Y5- 41+22.50±, 5.3 FT RT, TO STATION -Y5- 41+80.20±, 5.3 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

NOTES FOR TEMPORARY SHORING NO. B1-15

SEE TMP-32B

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

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 -Y5- 41+22.50±, 5.3 FT LT, TO STATION -Y5- 41+80.20±, 5.3 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 155 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y5- 41+22.50±, 5.3 FT LT, TO STATION -Y5- 41+80.20±, 5.3 FT LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -Y5- 41+22.50±, 5.3 FT LT, TO STATION -Y5- 41+80.20±, 5.3 FT LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

NOTES FOR TEMPORARY SHORING NO. B1-16

SEE TMP-32B

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

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 -Y5RPB- 22+84±, 4 FT RT, TO STATION -Y5RPB- 26+18±, 13.8 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 155 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y5RPB- 22+84±, 4 FT RT, TO STATION -Y5RPB- 26+18±, 13.8 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -Y5RPB- 22+84±, 4 FT RT, TO STATION -Y5RPB- 26+18±, 13.8 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

NOTES FOR TEMPORARY SHORING NO. B1-17

SEE TMP-40 AND TMP-41

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

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 -L- 552+00±, 36 FT LT, TO STATION -L- 559+00±, 36 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 160 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 552+00±, 36 FT LT, TO STATION -L- 559+00±, 36 FT LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 552+00±, 36 FT LT, TO STATION -L- 559+00±, 36 FT LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

NOTES FOR TEMPORARY SHORING NO. B1-18

SEE TMP-44

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

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 -L- 600+00±, 31 FT RT, TO STATION -L- 601+00±, 33 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 151 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 600+00±, 31 FT RT, TO STATION -L- 601+00±, 33 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 600+00±, 31 FT RT, TO STATION -L- 601+00±, 33 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE NCDOT DIVISION ENGINEER ON FEBRUAY 10, 2022 AND SEALED BY A PROFESSIONAL ENGINEER, JINYOUNG PARK, LICENSE # 032171.

APPROVED: DocuSigned by: Lori D. Stouchko 6C933CB5742F461...
DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SECTION 1

TEMPORARY SHORING NOTES
SECTION 1
LOCATIONS B1-13
THRU B1-18

3/15/2022
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User:ST086227

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2TS5

PLANS PREPARED FOR THE NCDOT BY:
MOTT MACDONALD
MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669

NOTES FOR TEMPORARY SHORING NO. B1-19

SEE TMP-45 AND TMP-46

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

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 -Y5RPB- 10+99±, 1.25 FT RT, TO STATION -Y5RPB- 21+09±, 11 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 155 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -Y5RPB- 10+99±, 1.25 FT RT, TO STATION -Y5RPB- 21+09±, 11 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y5RPB- 10+99±, 1.25 FT RT, TO STATION -Y5RPB- 21+09±, 11 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

NOTES FOR TEMPORARY SHORING NO. B1-20

SEE TMP-45 AND TMP-46

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

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 -Y5RPC- 16+19±, 11 FT LT, TO STATION -Y5RPC- 23+23±, 0 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 160 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -Y5RPC- 16+19±, 11 FT LT, TO STATION -Y5RPC- 23+23±, 0 FT LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y5RPC- 16+19±, 11 FT LT, TO STATION -Y5RPC- 23+23±, 0 FT LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

NOTES FOR TEMPORARY SHORING NO. B1-21

SEE TMP-46 AND TMP-47

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

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 -Y5RPD- 10+00±, 15 FT RT, TO STATION -Y5RPD- 24+35±, 11 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 158 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -Y5RPD- 10+00±, 15 FT RT, TO STATION -Y5RPD- 24+35±, 11 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y5RPD- 10+00±, 15 FT RT, TO STATION -Y5RPD- 24+35±, 11 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

NOTES FOR TEMPORARY SHORING NO. B1-22

SEE TMP-47

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

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 -L- 632+01±, 46 FT RT, TO STATION -L- 633+00±, 46 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 158 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 632+01±, 46 FT RT, TO STATION -L- 633+00±, 46 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 632+01±, 46 FT RT, TO STATION -L- 633+00±, 46 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

NOTES FOR TEMPORARY SHORING NO. B1-23

SEE TMP-58

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

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 -L- 601+00±, 33 FT RT, TO STATION -L- 610+32±, 33.5 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 160 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 601+00±, 33 FT RT, TO STATION -L- 610+32±, 33.5 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 601+00±, 33 FT RT, TO STATION -L- 610+32±, 33.5 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

NOTES FOR TEMPORARY SHORING NO. B1-24

SEE TMP-56 AND TMP-57

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

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 -L- 619+44±, 34 FT RT, TO STATION -L- 632+80±, 28 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 158 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 619+44±, 34 FT RT, TO STATION L- 632+80±, 28 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 619+44±, 34 FT RT, TO STATION L- 632+80±, 28 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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APPROVED: DocuSigned by: Lori D. Stouchko 6C933CB5742F461...
DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SECTION 1

TEMPORARY SHORING NOTES
SECTION 1
LOCATIONS B1-19
THRU B1-24

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2TS6

PLANS PREPARED FOR THE NCDOT BY:

MOTT MACDONALD
MOTT MACDONALD I & E, LLC
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RALEIGH, NC 27604
NC LICENSE NO. F-0669

NOTES FOR TEMPORARY SHORING NO. B1-25

SEE TMP-65

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

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 -L- 507+50±, 40 FT LT, TO STATION -L- 515+00±, 40 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 165 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 507+50±, 40 FT LT, TO STATION -L- 515+00±, 40 FT LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 507+50±, 40 FT LT, TO STATION -L- 515+00±, 40 FT LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

NOTES FOR TEMPORARY SHORING NO. B1-26

SEE TMP-65

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

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 -L- 507+50±, 40 FT RT, TO STATION -L- 515+50±, 40 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 165 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 507+50±, 40 FT RT, TO STATION -L- 515+50±, 40 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 507+50±, 40 FT RT, TO STATION -L- 515+50±, 40 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

NOTES FOR TEMPORARY SHORING NO. B1-27

SEE TMP-69

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

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 -L- 553+00±, 46 FT RT, TO STATION -L- 558+50±, 40.25 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 160 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 553+00±, 46 FT RT, TO STATION -L- 558+50±, 40.25 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 553+00±, 46 FT RT, TO STATION -L- 558+50±, 40.25 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

NOTES FOR TEMPORARY SHORING NO. B1-28

SEE TMP-73 AND TMP-74

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

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 -L- 602+00±, 16 FT LT, TO STATION -L- 616+29±, 16 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 160 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 602+00±, 16 FT LT, TO STATION L- 616+29±, 16 FT LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 602+00±, 16 FT LT, TO STATION L- 616+29±, 16 FT LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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

NOTES FOR TEMPORARY SHORING NO. B1-29

SEE TMP-74

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

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 -L- 615+75±, 21 FT LT, TO STATION -L- 617+73±, 21 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 155 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 615+75±, 21 FT LT, TO STATION -L- 617+73±, 21 FT LT.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -L- 615+75±, 21 FT LT, TO STATION -L- 617+73±, 21 FT LT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

NOTES FOR TEMPORARY SHORING NO. B1-30

SEE TMP-74

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

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 -L- 617+74.50±, 21 FT LT, TO STATION -L- 618+87±, 21 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 160 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 617+74.50±, 21 FT LT, TO STATION -L- 618+87±, 21 FT LT.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -L- 617+74.50±, 21 FT LT, TO STATION -L- 618+87±, 21 FT LT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE NCDOT DIVISION ENGINEER ON FEBRUAY 10, 2022 AND SEALED BY A PROFESSIONAL ENGINEER, JINYOUNG PARK, LICENSE # 032171.

APPROVED: DocuSigned by: Lori D. Stouchko -6C933CB5742F461...
DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SECTION 1

TEMPORARY SHORING NOTES
SECTION 1
LOCATIONS B1-25
THRU B1-30

3/15/2022
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User:ST08627

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2TS7

PLANS PREPARED FOR THE NCDOT BY:

MOTT MACDONALD
MOTT MACDONALD I & E, LLC
1101 HAYNES STREET, SUITE 101
RALEIGH, NC 27604
NC LICENSE NO. F-0669

NOTES FOR TEMPORARY SHORING NO. B1-31

SEE TMP-74 AND TMP-75

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

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 -L- 618+30±, 16 FT LT, TO STATION -L- 630+50±, 16 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 160 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 618+30±, 16 FT LT, TO STATION -L- 630+50±, 16 FT LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 618+30±, 16 FT LT, TO STATION -L- 630+50±, 16 FT LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

NOTES FOR TEMPORARY SHORING NO. B1-32

SEE TMP-74A

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

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 -Y5- 40+90.20±, 5.3 FT RT, TO STATION -Y5- 41+22.50±, 5.3 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 160 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y5- 40+90.20±, 5.3 FT RT, TO STATION -Y5- 41+22.50±, 5.3 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -Y5- 40+90.20±, 5.3 FT RT, TO STATION -Y5- 41+22.50±, 5.3 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

NOTES FOR TEMPORARY SHORING NO. B1-33

SEE TMP-74A

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

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 -Y5- 40+90.20±, 5.3 FT LT, TO STATION -Y5- 41+22.50±, 5.3 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 160 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y5- 40+90.20±, 5.3 FT LT, TO STATION -Y5- 41+22.50±, 5.3 FT LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -Y5- 40+90.20±, 5.3 FT LT, TO STATION -Y5- 41+22.50±, 5.3 FT LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

NOTES FOR TEMPORARY SHORING NO. B1-34

SEE TMP-91A

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

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 -Y5- 40+01.90±, 5.3 FT RT, TO STATION -Y5- 41+ 90.20±, 5.3 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 160 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y5- 40+01.9±, 5.3 FT RT, TO STATION -Y5- 41+ 90.2±, 5.3 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -Y5- 40+01.9±, 5.3 FT RT, TO STATION -Y5- 41+90.20±, 5.3 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

NOTES FOR TEMPORARY SHORING NO. B1-35

SEE TMP-91A

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

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 -Y5- 40+01.90±, 5.3 FT LT, TO STATION -Y5- 41+ 90.20±, 5.3 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 160 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y5- 40+01.90±, 5.3 FT LT, TO STATION -Y5- 41+ 90.20±, 5.3 FT LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -Y5- 40+01.90±, 5.3 FT LT, TO STATION -Y5- 41+ 90.20±, 5.3 FT LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

NOTES FOR TEMPORARY SHORING NO. B1-36

SEE TMP-91 AND TMP-91A

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

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 -Y5RPA- 22+06±, 22 FT RT, TO STATION -Y5RPA- 23+68±, 11.8 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 159 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y5RPA- 22+06±, 22 FT RT, TO STATION -Y5RPA- 23+68±, 11.8 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -Y5RPA- 22+06±, 22 FT RT, TO STATION -Y5RPA- 23+68±, 11.8 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

NOTES FOR TEMPORARY SHORING NO. B1-37

SEE TMP-92

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

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 -Y5RPA- 10+00±, 13 FT LT, TO STATION -Y5RPA- 17+50±, 38.7 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (C) = 0 PSF
GROUNDWATER ELEVATION = 159 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -Y5RPA- 10+00±, 13 FT LT, TO STATION -Y5RPA- 17+50±, 38.7 FT RT.

AT THE CONTRACTOR'S OPTION AND WHEN APPLICABLE, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y5RPA- 10+00 ±, 13 FT LT, TO STATION -Y5RPA- 17+50±, 38.7 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE NCDOT DIVISION ENGINEER ON FEBRUAY 10, 2022 AND SEALED BY A PROFESSIONAL ENGINEER, JINYOUNG PARK, LICENSE # 032171.

APPROVED: DocuSigned by: Lori D. Stouchko 6C933CB5742F461...
DATE: 4/29/2022

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SECTION 1

TEMPORARY SHORING NOTES
SECTION 1
LOCATIONS B1-31
THRU B1-37

3/15/2022
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PROJ. REFERENCE NO.	SHEET NO.
I-5987B	TMP-2TS8

TEMPORARY SHORING LOCATION NO. B2-01

SEE SHEETS TMP-146, 147

ESTIMATED QUANTITY = 3510 SF

-L- STA. 797+00±, 33.0′ RT TO -L- STA. 802+40±, 33.0′ RT
LENGTH = 540′ AVERAGE HEIGHT = 6.5 FT MAXIMUM HEIGHT = 7.8 FT

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

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 -L- 797+00±, 33 FT RT, TO STATION -L- 802+40±, 33 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT (γ) = 120 PCF
- FRICTION ANGLE (ϕ) = 30 DEGREES
- COHESION (C) = 0 PSF
- GROUNDWATER ELEVATION = 144 FT±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 797+00±, 33 FT RT, TO STATION -L- 802+40±, 33 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 797+00±, 33 FT RT, TO STATION -L- 802+40±, 33 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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

TEMPORARY SHORING LOCATION NO. B2-02

SEE SHEET TMP-147

ESTIMATED QUANTITY = 3791 SF

-L- STA. 803+92±, 33.0′ RT TO -L- STA. 808+60±, 33.0′ RT
LENGTH = 468′ AVERAGE HEIGHT = 8.1 FT MAXIMUM HEIGHT = 8.5 FT

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

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 -L- 803+92±, 33 FT RT, TO STATION -L- 808+60±, 33 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT (γ) = 120 PCF
- FRICTION ANGLE (ϕ) = 30 DEGREES
- COHESION (C) = 0 PSF
- GROUNDWATER ELEVATION = 144 FT±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 803+92±, 33 FT RT, TO STATION -L- 808+60±, 33 FT RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 803+92±, 33 FT RT, TO STATION -L- 808+60±, 33 FT RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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

TEMPORARY SHORING LOCATION NO. B2-03

SEE SHEET TMP-157

ESTIMATED QUANTITY = 732 SF

-Y1B- STA. 27+50±, 32.0′ LT TO -Y1B- STA. 28+09±, 32.0′ LT
LENGTH = 59′ AVERAGE HEIGHT = 12.4 FT MAXIMUM HEIGHT = 17.0 FT

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

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 -Y1B- 27+50±, 32 FT LT, TO STATION -Y1B- 28+09±, 32 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT (γ) = 120 PCF
- FRICTION ANGLE (ϕ) = 30 DEGREES
- COHESION (C) = 0 PSF
- GROUNDWATER ELEVATION = 161 FT±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y1B- 27+50±, 32 FT LT, TO STATION -Y1B- 28+09±, 32 FT LT.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -Y1B- 27+50±, 32 FT LT, TO STATION -Y1B- 28+09±, 32 FT LT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

TEMPORARY SHORING LOCATION NO. B2-04

SEE SHEET TMP-157

ESTIMATED QUANTITY = 1701 SF

-Y1B- STA. 26+20±, 27.0′ LT TO -Y1B- STA. 28+09±, 27.0′ LT
LENGTH = 189′ AVERAGE HEIGHT = 9.0 FT MAXIMUM HEIGHT = 22.0 FT

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

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 -Y1B- 26+20±, 27 FT LT, TO STATION -Y1B- 28+09±, 27 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT (γ) = 120 PCF
- FRICTION ANGLE (ϕ) = 30 DEGREES
- COHESION (C) = 0 PSF
- GROUNDWATER ELEVATION = 161 FT±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -Y1B- 26+20±, 27 FT LT, TO STATION -Y1B- 28+09±, 27 FT LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y1B- 26+20±, 27 FT LT, TO STATION -Y1B- 28+09±, 27 FT LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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

TEMPORARY SHORING LOCATION NO. B2-05

SEE SHEET TMP-158

ESTIMATED QUANTITY = 656 SF

-Y1B- STA. 30+28±, 32.0′ LT TO -Y1B- STA. 30+85±, 32.0′ LT
LENGTH = 57′ AVERAGE HEIGHT = 11.5 FT MAXIMUM HEIGHT = 16.0 FT

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

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 -Y1B- 30+28±, 32 FT LT, TO STATION -Y1B- 30+85±, 32 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT (γ) = 120 PCF
- FRICTION ANGLE (ϕ) = 30 DEGREES
- COHESION (C) = 0 PSF
- GROUNDWATER ELEVATION = 162 FT±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y1B- 30+28±, 32 FT LT, TO STATION -Y1B- 30+85±, 32 FT LT.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -Y1B- 30+28±, 32 FT LT, TO STATION -Y1B- 30+85±, 32 FT LT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

TEMPORARY SHORING LOCATION NO. B2-06

SEE SHEET TMP-158

ESTIMATED QUANTITY = 4273 SF

-Y1B- STA. 30+28±, 27.0′ LT TO -Y1B- STA. 32+75±, 27.0′ LT
LENGTH = 247′ AVERAGE HEIGHT = 17.3 FT MAXIMUM HEIGHT = 23.0 FT

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

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 -Y1B- 30+28±, 27 FT LT, TO STATION -Y1B- 32+75±, 27 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT (γ) = 120 PCF
- FRICTION ANGLE (ϕ) = 30 DEGREES
- COHESION (C) = 0 PSF
- GROUNDWATER ELEVATION = 162 FT±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -Y1B- 30+28±, 27 FT LT, TO STATION -Y1B- 32+75±, 27 FT LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y1B- 30+28±, 27 FT LT, TO STATION -Y1B- 32+75±, 27 FT LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEER. THE DOCUMENT WAS SUBMITTED TO STANTEC CONSULTING ON (FEB 10, 2022) AND SEALED BY A PROFESSIONAL ENGINEER, (JINYOUNG PARK, Ph.D., P.E.), LICENSE #032171.

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NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD JR.

DocuSigned by: J.W. Woolard Jr. BBC02F49E95E4C...

4/29/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SECTION 2

TEMPORARY SHORING NOTES
SECTION 2
LOCATIONS B2-01
THRU B2-06

3/15/2022
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