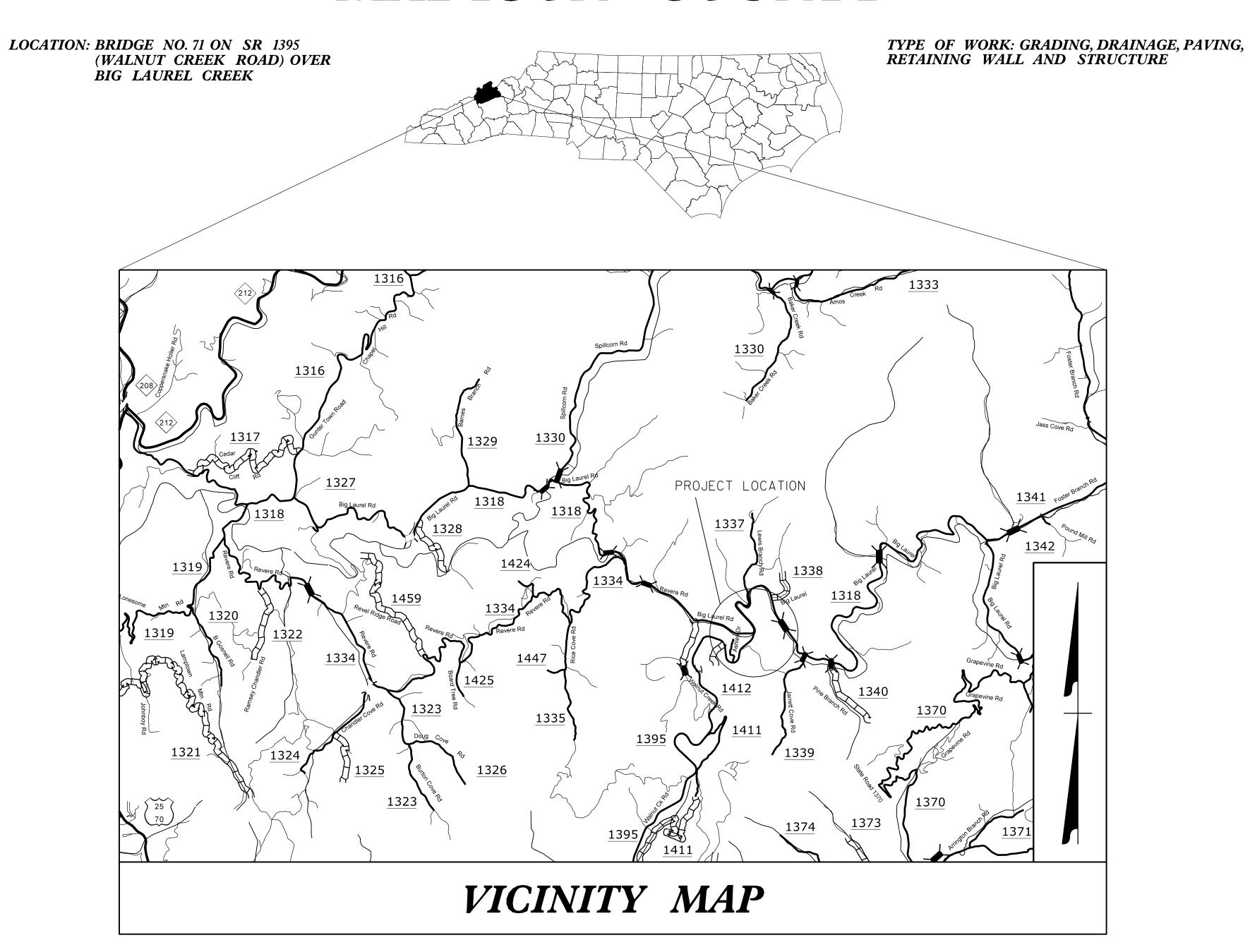
TRANSPORTATION MANAGEMENT PLAN

MADISON COUNTY



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

PLANS PREPARED BY:

JAMES A. SPEER, PE

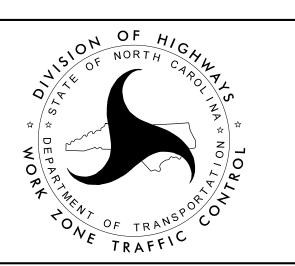
SPENCER MERRITT, PE

ZACHARY CLARK, PE

PROJECT ENGINEER

NCDOT CONTACTS:

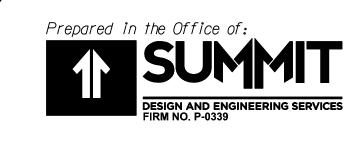
KARMEN DAIS, PE
PROJECT DESIGN ENGINEER



INDEX OF SHEETS

SHEET NO. TITLE TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS TMP - 1 LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND TMP-1A TRANSPORTATION OPERATIONS PLAN: GENERAL NOTES TMP-1B TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT TMP-2 STRATEGIES, NOTES, AND PHASING) TEMPORARY TRAFFIC CONTROL PHASE I DETAIL TMP-3 TMP-4 TEMPORARY TRAFFIC CONTROL PHASE II DETAIL TMP-5 TEMPORARY TRAFFIC CONTROL PHASE III DETAIL

DOCUMENT NOT CONSIDERED FINAL



NC FIRM LICENSE No: P-0339 320 Executive Ct. Hillsborough, NC 27278 (919) 732-3883 (919) 732-6676 (FAX) APPROVED: James A. Spur

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DATE: 10/31/2022

SEAL

SEAL

UNLESS ALL SIGNATURES COMPLETED

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TMP-1

B-5989

PROJECT

NC FIRM LICENSE No: P-0339 320 Executive Ct. Hillsborough, NC 27278 (919) 732-3883 (919) 732-6676 (FAX) PROJ. REFERENCE NO. B-5989 TMP-1A

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:

TITLE

STD. NO.

1101.01	WORK ZONE 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	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY - DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.12	
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)
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

LEGEND

GENERAL

DIRECTION OF TRAFFIC FLOW

DIRECTION OF PEDESTRIAN TRAFFIC FLOW

----- EXIST. PVMT.

NORTH ARROW

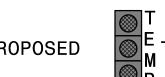
PROPOSED PVMT.

TEMP. SHORING (LOCATION PURPOSES ONLY)

WORK AREA

SIGNALS





PAVEMENT MARKINGS

——EXISTING LINES ——TEMPORARY LINES

TRAFFIC CONTROL DEVICES

BARRICADE (TYPE III)

DRUM SKINNY DRUM O 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

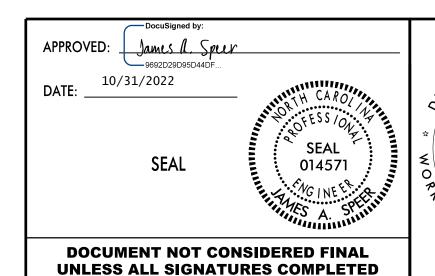
◆ YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

SYMBOL	DESCRIPTION QUANTITY	
	PAINT (4")	
P1 P5 P13	WHITE EDGELINE 2 FT - 6 FT WHITE MINI-SKIP YELLOW DOUBLE CENTER LINE	4,455 LF 60 LF 3,700 LF
	PAINT (24")	
P61	WHITE STOPBAR	32 LF



ROADWAY STANDARD DRAWINGS & LEGEND

repared in the Office of:	SUMMIT DESIGN AND ENGINEERING SERVICES	NC FIRM LICENSE No: P-0339 320 Executive Ct. Hillsborough, NC 27278 (919) 732-3883 (919) 732-6676 (FAX)	PROJ. REFERENCE NO.	SHEET NO.
			B-5989	TMP-1B

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.

A) 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

- B) 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.
- C) 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.
- D) 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.

- E) 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.
- F) 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.
- G) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON SR 1395.

PAVEMENT EDGE DROP OFF REQUIREMENTS

H) 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.

I) 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) IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- K) 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.
- L) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- M) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

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

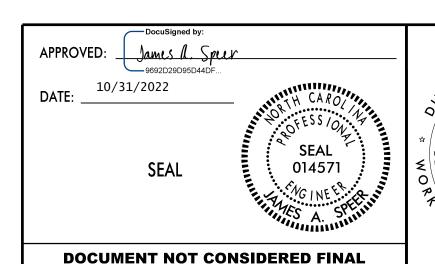
PAVEMENT MARKINGS AND MARKERS

 ROAD NAME
 MARKING
 MARKERS

 -L- WALNUT CREEK ROAD (SR 1395)
 PAINT
 NONE

 -Y- BIG LAUREL ROAD (SR 1318)
 PAINT
 NONE

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



UNLESS ALL SIGNATURES COMPLETED

TRANSPORTATION
OPERATIONS
PLAN

Prepared in the Office of: SUMMIT DESIGN AND ENGINEERING SERVICES NC FIRM LICENSE No: P-0339 320 Executive Ct. Hillsborough, NC 27278 (99) 732-3883 (99) 732-3883 (99) 732-6676 (FAX) PROJ. REFERENCE NO. SHEET NO. B - 5989 TMP - 2

B-5989 MANAGEMENT STRATIGIES

MAINTENANCE OF TRAFFIC FOR THIS PROJECT HAS BEEN DIVIDED INTO THREE PHASES. CONSTRUCT ON —SITE DETOUR AS MUCH AS POSSIBLE AWAY FROM TRAFFIC, ACTIVATE PORTABLE TAFFIC SIGNAL SYSTEM AND SHIFT TRAFFIC TO ON—SITE DETOUR IN ORDER TO CONSTRUCT THE PROPOSED, AND THEN SHIFT TRAFFIC TO FINAL PATTERN TO COMPLETE CONSTRUCTION AND REMOVAL OF THE ON—SITE DETOUR.

DURING PHASE I, WHILE MAINTAINING TRAFFIC ON SR 1395 AND SR 1318, CONSTRUCT TEMPORARY ON—SITE DETOUR.

DURING PHASE II, SET-UP, AND TEST TEMPORARY PORTABLE TRAFFIC SIGNAL SYSTEM. UPON SUCCESSFUL TESTS, INSTALL ADDITIONAL TRAFFIC CONTROL DEVICES ON SR 1395 AND SR 1318 AND ACTIVATE THE TEMPORARY PORTABLE TRAFFIC SIGNAL SYSTEM. SHIFT TRAFFIC ONTO TEMPORARY DETOUR. REMOVE EXISTING BRIDGE AND BEGIN CONSTRUCTION OF NEW BRIDGE, RETAINING WALL AND AS MUCH OF THE FINAL ROADWAY APPROACHES AS POSSBILE.

DURING PHASE III, USING FLAGGERS COMPLETE ALL REMAINING ROADWAY CONSTRUCTION AND THEN SHIFT TRAFFIC TO THE FINAL PATTERN INCLUDING THE REMOVAL OF THE TEMPORARY ON-SITE DETOUR AND PORTABLE TRAFFIC SIGNAL SYSTEM.

NOTES

COMPLETE ANY PROPOSED PAVEMENT CONSTRUCTION IN SUCH A MANNER THAT PONDING OF WATER WILL NOT OCCUR IN THE TRAVEL LANE .

THE TERM RSD DENOTES *ROADWAY STANDARD DRAWING*.

THE TERM PTSS DENOTES *PORTABLE TRAFFIC SIGNAL SYSTEM*.

PHASING

PHASE I (SEE TMP-3)

STEP 1:

USING ROADWAY STANDARD DRAWING NO. 1101.01 (SHEET 3 OF 3), INSTALL ALL ADVANCED WORK ZONE WARNING SIGNS ON SR 1395 AND SR 1318.

STEP 2:

AWAY FROM TRAFFIC AND USING RSD 1101.02 (SHEET 1 OF 14) WHERE NEEDED, CONSTRUCT TEMPORARY ON-SITE DETOUR (-DET-), TEMPORARY BRIDGE AND APPROACHES FROM -DET- STA. 12 + 12 +/- TO STA. 14 + 90 +/-, INCLUDING DS 0506 AND UP TO AND INCLUDING THE FINAL LAYER OF SURFACE COURSE. SEE SHEET TMP-3.

STEP 3:

USING RSD 1101.02 (SHEET 1 OF 14), CONSTRUCT THE DETOUR TIE-INS FROM -DET-STA. 11+69+/- TO -DET-STA. 12+12+/- INCLUDING THE FINAL LAYER OF SURFACE COURSE TO MATCH THE EXISTING EDGE AND ELEVATION OF EXISTING PAVEMENT AND PROPOSED DRAINAGE SYSTEM 0501 TO 0505 AND -DET-PAVEMENT TIE-IN TO -Y-. SEE RDWY SHEETS 4, AND 5 AND TMP-3.

STEP 4:

USING RSD 1101.02 (SHEET 1 OF 14), PLACE TEMPORARY PAVEMENT MARKINGS, TEMPORARY RAISED MARKERS AND ADDITIONAL WORK ZONE SIGNS ON DETOUR (-DET-).

PHASE II (SEE TMP-4)

STEP 1:

USING RSD 1101.02 (SHEET 1 OF 14) AND RSD 1101.02 (SHEET 14 OF 14) SET-UP AND TEST THE PTSS OPERATION OF THE DETOUR.

UPON ACCEPTANCE OF THE PTSS OPERATION, USE RSD 1101.03 (SHEET 3 OF 9) TO PLACE ADDITIONAL BARRICADES AND TRAFFIC CONTROL DEVICES WITHIN THE WORK AREA.

ACTIVATE PTSS AND SHIFT TRAFFIC ONTO DETOUR. SEE TMP-4.

STEP 2:

AWAY FROM TRAFFIC, REMOVE EXISTING BRIDGE, CONSTRUCT NEW BRIDGE AND RETAINING WALL AND CONSTRUCT AS MUCH OF THE FINAL MAINLINE ROADWAY APPROACHES AS POSSIBLE INCLUDING WEDGING FROM -L- STA. 14+25+/- TO -L- STA. 17+50+/- AND FROM -Y- STA. 11+25+/- TO -Y- STA. 13+20+/- UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE LAYER. PROVIDE SMOOTH TRANSITION OF THE FIRST LAYER OF SURFACE COURSE PLACED ON -L- IN ORDER TO TIE IN AND MATCH THE EXISTING PAVEMENT ON -L-. SEE TMP-4.

STEP 3:

WHILE THE PTSS IS IN OPERATION, PLACE TEMPORARY PAVEMENT MARKING ON PROPOSED -L- STA. 14+25 TO -L- STA. 17+50 AND FROM -Y- STA. 11+25 TO -Y- STA. 13+20+/-. SEE TMP-4.

PHASE III (SEE TMP-5)

STEP 1:

SHIFT TRAFFIC FROM ALL DETOUR PATTERNS TO -L AND -Y AND DEACTIVATE THE PTSS.

STEP 2:

USING RSD 1101.02 (SHEET 1 OF 14) CONSTRUCT THE REMAINING ROADWAY TIE–INS FROM -L- STA. 11+50+/- TO 14+25+/- AND APPROX. -L- STA. 17+50+/- TO -L- STA. 19+50+/- UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE LAYER. SEE TMP–5.

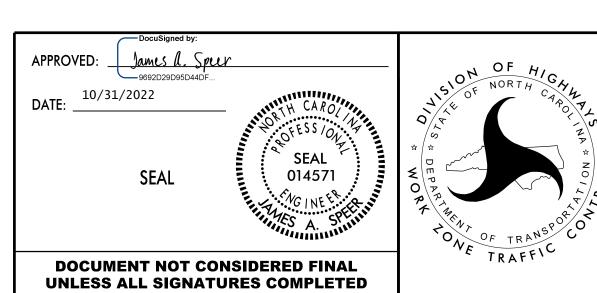
SIMULTANEOUSLY IN STEP II, REMOVE THE PTSS, DETOUR BRIDGE AND DETOUR ROADWAY APPROACHES. SEE TMP-5.

STEP 3:

USING RSD 1101.02 (SHEET 1 OF 14), PLACE THE FINAL LAYER OF SURFACE COURSE AND TEMPORARY PAVEMENT MARKINGS ON PROPOSED -L- STA. 11+50+/- TO -L- STA. 19+50+/- AND FROM -Y- STA. 11+25+/- TO -Y- STA. 13+22+/-. INSTALL ALL PERMANENT SIGNING IN THIS STEP.

STEP 4:

AT THE APPROPRIATE TIME AFTER ASPHALT HAS CURED OUT, PER NCDOT STD. SPEC. 1205-5, and as directed by the engineer, using RSD 1101.02 (sheet 1 of 14) PLACE FINAL PAVEMENT MARKING AND MARKERS ON -L- STA. 11+50 TO -L- STA. 19+50 AND ON -Y- STA. 11+25 TO -Y- STA. 13+22+/-. TIE PROPOSED PAVEMENT MARKING INTO EXISTING PAVEMENT MARKING.



TRANSPORTATION OPERATIONS PLAN

