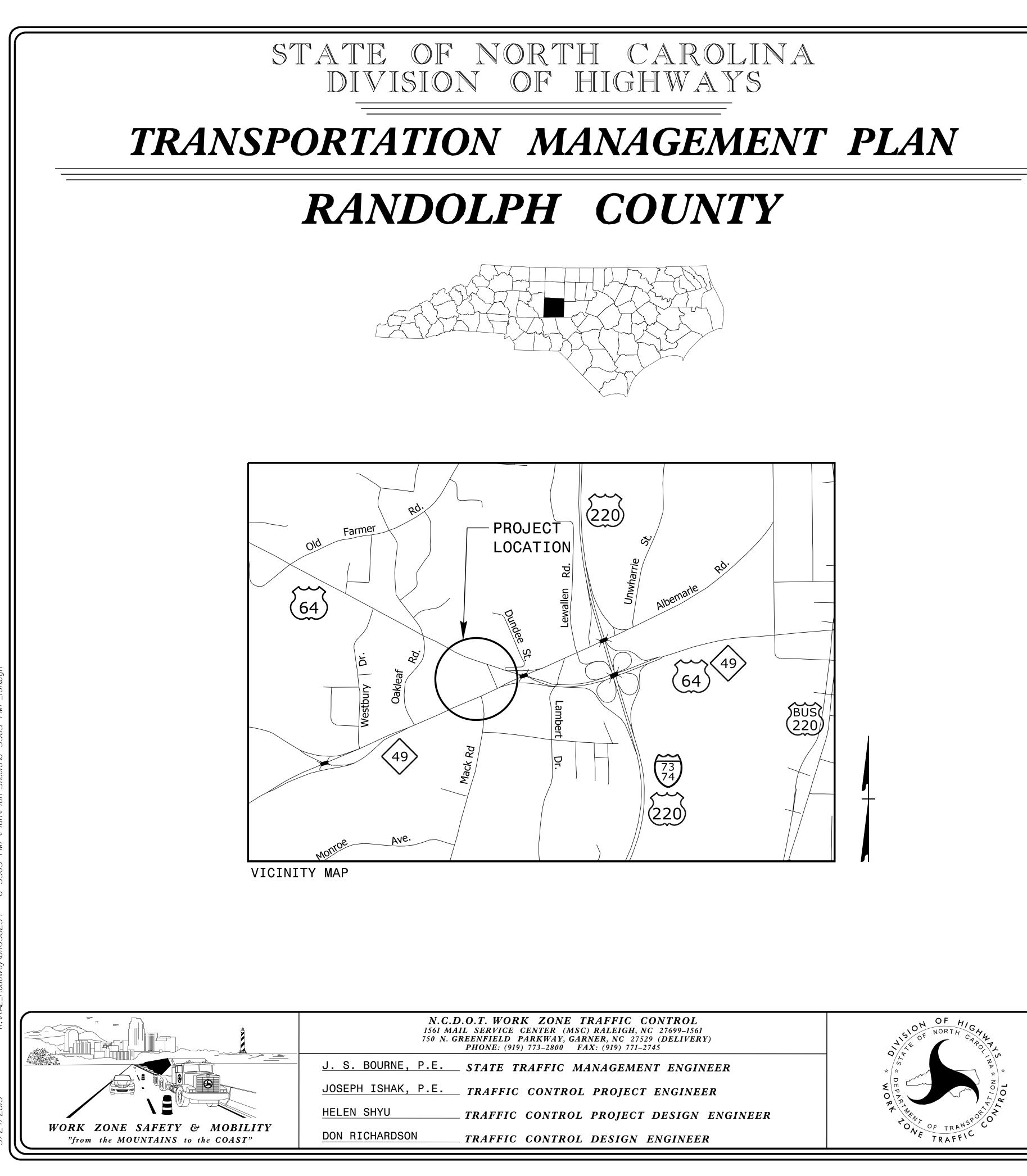
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MATT WEST, P.E. TRAFFIC CONTROL PROJECT ENGINEER DAVID SHINBARA, E.I. TRAFFIC CONTROL PROJECT DESIGN ENGINEER

Kimley-Horn and Associates, Inc. DocuSigned by: Matt West

		SHEET NO.
IND	EX OF SHEETS	TMP-1
SHEET NO.	TITLE	
TMP - 1	TITLE SHEET, VICINITY MAP AND INDEX OF SHEETS	
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND	
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES AND LOCAL NOTES)	
TMP-2	N/A	
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING	
TMP-4 THRU TMP-6	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL	Ó
TMP-7 THRU TMP-9	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL	$\overline{\mathbf{\omega}}$
TMP-10 THRU TMP-11	TEMPORARY TRAFFIC CONTROL PHASE III DETAIL	S I

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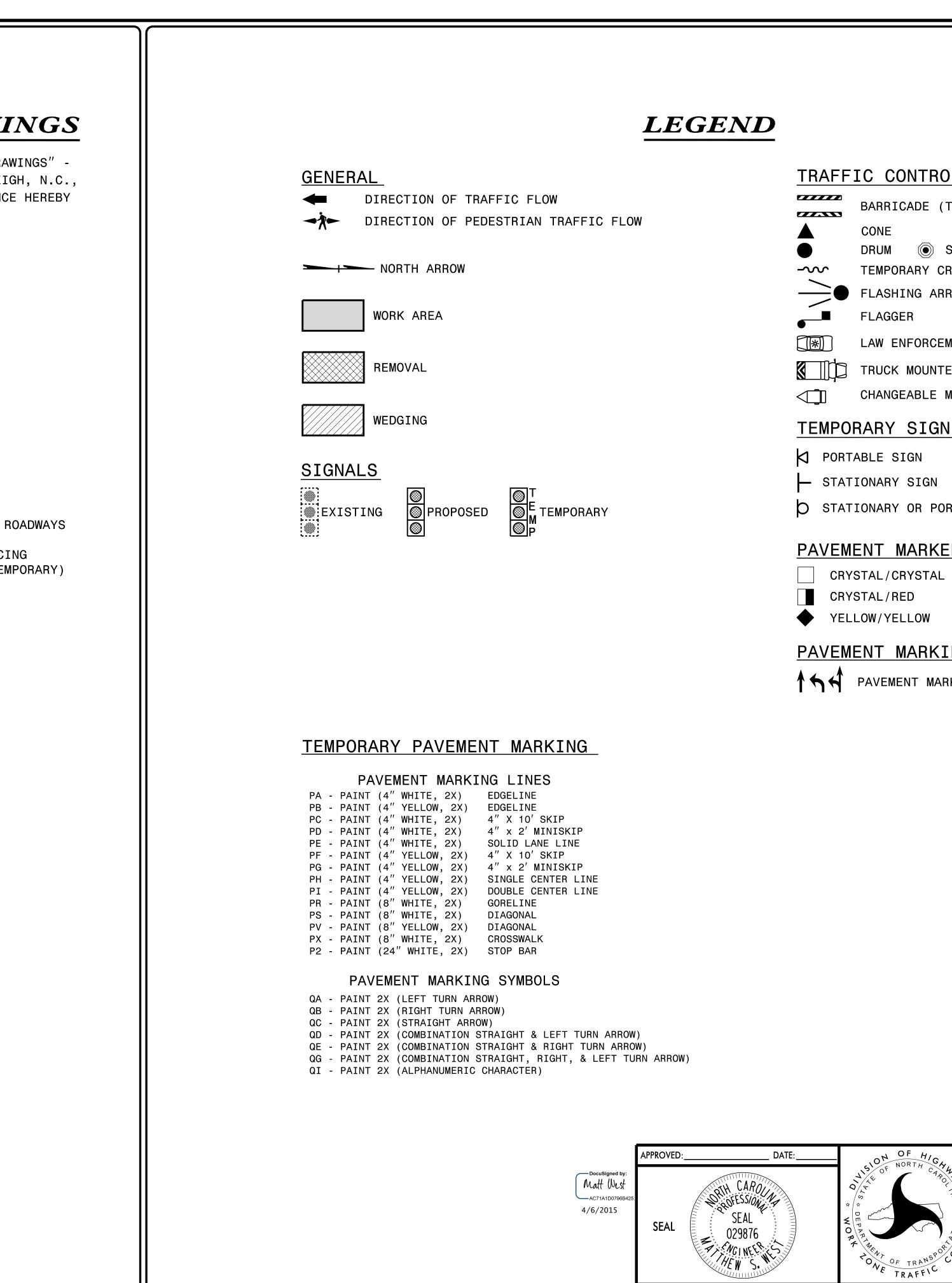
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ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" -PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1180.01	SKINNY - DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)



RENCE NO. SHEET NO.	PROJ. REFERENCE NO.
05 TMP-1A	U-5305

TRAFFIC CONTROL DEVICES

	BARRICADE (TYPE III)
	CONE
	DRUM 🔘 SKINNY DRUM 🎯 TUBULAR MARKER
~~~	TEMPORARY CRASH CUSHION
$\rightarrow$	FLASHING ARROW BOARD
•	FLAGGER
	LAW ENFORCEMENT
	TRUCK MOUNTED ATTENUATOR (TMA)
	CHANGEABLE MESSAGE SIGN

#### TEMPORARY SIGNING

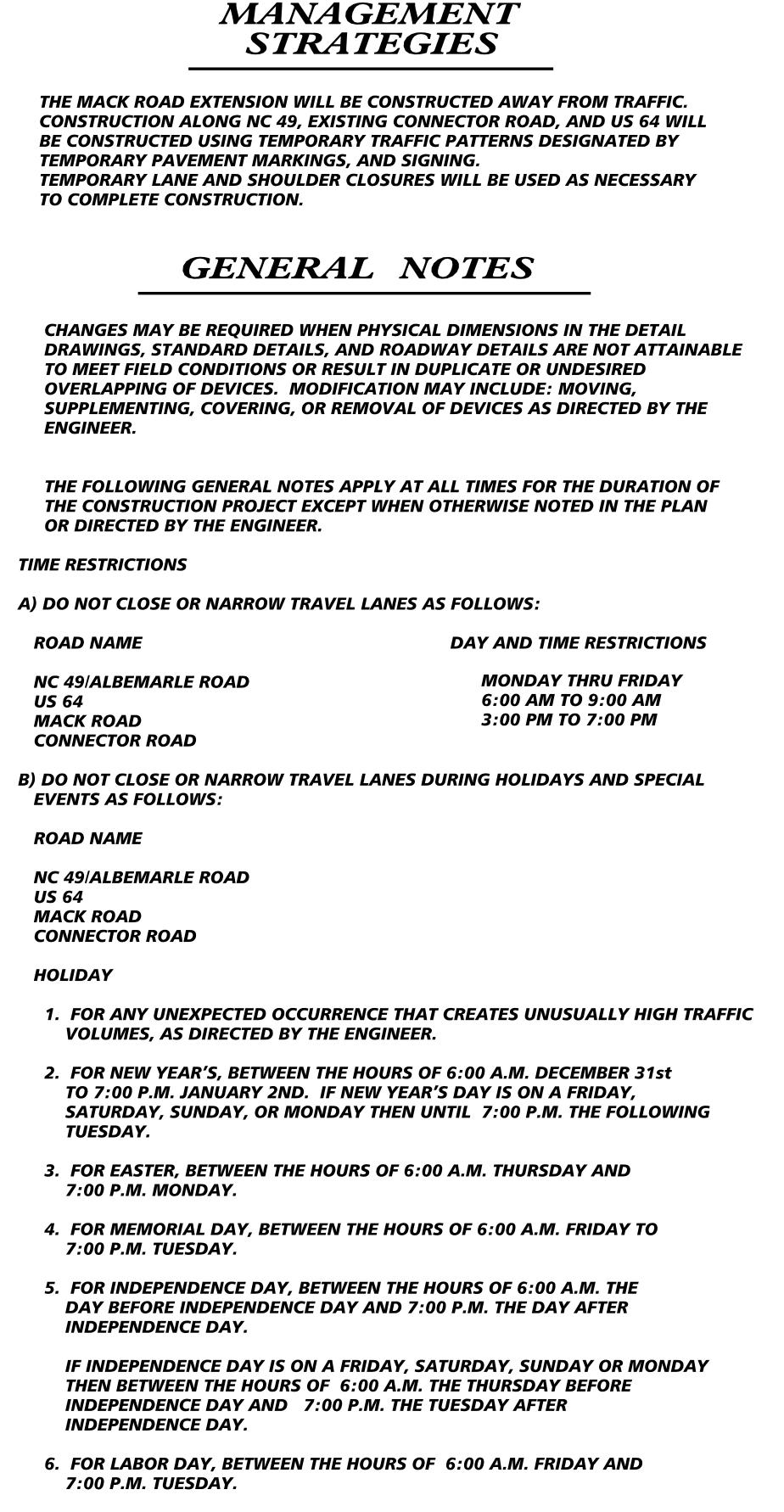
- STATIONARY SIGN
- b stationary or portable sign

#### PAVEMENT MARKERS

#### PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

#### ROADWAY STANDARD DRAWINGS & LEGEND



- 7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 7:00 P.M. MONDAY.
- 8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) 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

- D) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN **OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY** STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

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.

- G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- H) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

**PAVEMENT EDGE DROP OFF REQUIREMENTS** 

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

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

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

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

J) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

L) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

- SIGNING (COI
- M) ENSURE TRAFFIC P
- N) INSTALL B (W8-1) 500 ENGINEER.

TRAFFIC CON

- O) WHEN LAI **AREAS NO** 10 FT ON-0 **REFER TO** 1130 (DRU REQUIREM
- P) PLACE TYP ATTACHED
- Q) PLACE AD PERPENDI UNOPENEL

PAVEMENT M

R) INSTALL T ON INTERI

> ROAD NAI ALL

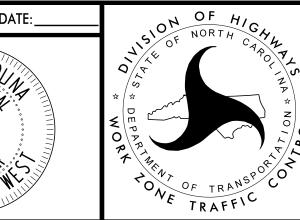
- S) PLACE ON SECOND A APPLICATI
- T) TIE PROPO LINES.
- U) REMOVE/R MARKERS
- V) TRACE THI **PROPER CO** PLACE DR AFTER REN

MISCELLANEC

- W) LAW ENFO AREA AND
- X) IN THE EV TIE-IN ARE THE ENGIN AND BLAC 500 FT RES TO DELINE

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D GREATER IN F CENTER IN RAD STANDARD SPE	ARE NOT IN EFFECT EET THAN TWICE T II, AND 3 FT OFF T ECIFICATIONS FOR NES) AND 1180 (S	HE POSTED SI HE EDGE OF A ROADS AND :	PEED LIMIT (MPH) NN OPEN TRAVELV STRUCTURES SECT	EXCEPT, VAY. TIONS
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ICULAR TO THE	5 OF THREE CHANN EDGE OF TRAVELV LOSED TO TRAFFIC	VAY ON 500 F		
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	VEMENT MARKING PAVEMENT AS FOL		ORARY PAVEMENT	MARKERS
ME	MARKING PAINT	MARK TEI	(ER MPORARY RAISED	
APPLICATION OI	I OF PAINT FOR TE F PAINT SIX (6) MC ( SIX MONTHS AS	ONTHS AFTER	THE INITIAL	PLACE A
OSED PAVEMEN	T MARKING LINES	TO EXISTING	PAVEMENT MARK	(ING
	CONFLICTING/DAM F EACH DAY'S OPE	_	ENT MARKINGS A	ND
COLOR PAVEMEN RUMS TO DELIN	MONOLITHIC ISLAI NT MARKINGS PRI EATE ANY PROPOS FORE INSTALLATIO	OR TO REMOV SED MONOLIT	AL AND INSTALLA	
ous				
	ALL BE USED TO M TIONS AS DIRECTE			E WORK
EA TO AN APPRO NEER. PLACE BI CK ON ORANGE SPECTIVELY IN A	AY TIE-IN CANNOT OPRIATE ROADWA LACK ON ORANGE "PAVEMENT END: ADVANCE OF THE OF ROADWAY AL	Y ELEVATION "LOOSE GRAU S'' SIGNS (W8- UNEVEN AREA	AS DETERMINED /EL" SIGNS (W8-7) -3) 500 FT AND AS. USE DRUMS	BY
<b>-</b>				



TRANSPORTATION **OPERATIONS** PLAN

#### PHASE I

#### STEP 1:

PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL INSTALL WORK ZONE ADVANCE WARNING SIGNS AS SHOWN IN THE NCDOT ROADWAY STANDARD DRAWING NO. 1101.01.

WHILE MAINTAINING EXISTING TRAFFIC ON NC 49/SHANA LANE/ALBEMARLE ROAD, US 64, CONNECTOR ROAD, MACK ROAD, FISHER CIRCLE AND ALL INTERSECTING ROADWAYS AND DRIVEWAYS, USING NCDOT ROADWAY STANDARD DRAWING NO. 1101.02 FOR TEMPORARY LANE CLOSURES AND PROVIDING WEDGING AS NECESSARY TO ENSURE POSITIVE DRAINAGE AND SMOOTH TRANSITIONS FROM NEW TO EXISTING PAVEMENT, THE CONTRACTOR SHALL:

**INSTALL ALL TRAFFIC CONTROL DEVICES AS SHOWN ON SHEETS TMP-4 THRU TMP-6** 

PLACE TEMPORARY PAVEMENT MARKINGS ALONG NC 49 AS SHOWN ON SHEET TMP-4 AND PLACE TRAFFIC ONTO NEW PATTERN.

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF THE MACK ROAD EXTENSION.

STEP 2:

CONSTRUCT PROPOSED IMPROVEMENTS UP TO BUT NOT INCLUDING THE FINAL LAYER OF ASPHALT ALONG THE SOUTH SIDE OF NC 49 FROM -Y1- STA. 10+40 TO STA. 27+35 AND ALONG THE EAST SIDE OF MACK ROAD FROM -L- STA. 9+00 TO STA. 14+12 AS SHOWN ON SHEETS TMP-4 THRU TMP-5. DO NOT WIDEN SIMULTANEOUSLY ON BOTH SIDES OF MACK ROAD AT THE INTERSECTION OF NC 49.

CONSTRUCT PROPOSED IMPROVEMENTS UP TO BUT NOT INCLUDING THE FINAL LAYER OF ASPHALT ALONG THE NORTH SIDE OF US 64 FROM -Y2- STA. 17+63 TO STA. 25+80 AS SHOWN ON SHEETS TMP-4 AND TMP-6. STA. 23+50 TO STA. 27+09 AS SHOWN ON SHEETS TMP-7 AND TMP-9.

COMPLETE THE NEW DRIVEWAY AT CONNECTOR ROAD AND ASSOCIATED DRAINAGE STRUCTURES ALONG CONNECTOR ROAD IN ORDER TO MAINTAIN ACCESS TO THE TANK & TUMMY GAS STATION DURING PHASE 2 CONSTRUCTION AS SHOWN ON SHEET TMP-4.

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## **CONSTRUCTION PHASING**

### PHASE II

WHILE MAINTAINING EXISTING TRAFFIC ON NC 49/SHANA LANE/ALBEMARLE ROAD, US 64, CONNECTOR ROAD, MACK ROAD, FISHER CIRCLE, AND ALL INTERSECTING ROADWAYS AND DRIVEWAYS, USING NCDOT ROADWAY STANDARD DRAWING NO. 1101.02 FOR TEMPORARY LANE CLOSURES AND PROVIDING WEDGING AS NECESSARY TO ENSURE POSITIVE DRAINAGE AND SMOOTH TRANSITIONS FROM NEW TO EXISTING PAVEMENT, THE CONTRACTOR SHALL:

STEP 1:

REMOVE ALL CONFLICTING PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ALONG MACK ROAD AND NC 49 AS SHOWN ON SHEETS TMP-7 THRU TMP-8.

SHIFT TRAFFIC SIGNAL HEADS AT THE OAKLEAF RD AND NC 49 INTERSECTION AS SHOWN ON THE TEMPORARY SIGNAL PLANS.

INSTALL ALL TRAFFIC CONTROL DEVICES AS SHOWN ON SHEETS TMP-7 THRU TMP-9.

USING TEMPORARY LANE CLOSURES, FLAGGERS, AND LAW ENFORCEMENT TO DIRECT TRAFFIC AT INTERSECTIONS AS NEEDED, SHIFT TRAFFIC ONTO NEW PATTERN.

**STEP 2**:

AWAY FROM TRAFFIC, COMPLETE CONSTRUCTION OF PROPOSED MACK ROAD EXTENSION AS SHOWN ON SHEET TMP-7. PLACE FINAL PAVEMENT MARKINGS AND MARKERS. REFER TO PAVEMENT MARKING PLANS FOR LOCATIONS.

CONSTRUCT PROPOSED IMPROVEMENTS UP TO BUT NOT INCLUDING THE FINAL LAYER OF ASPHALT ALONG THE NORTH SIDE OF NC 49 FROM -Y1- STA. 10+57 TO STA. 25+82 AND ALONG THE WEST SIDE OF MACK ROAD FROM -L- STA. 9+00 TO STA. 13+30 AS SHOWN ON SHEETS TMP-7 THRU TMP-8. WHILE MAINTAINING EXIST US 64, CONNECTOR ROAD, ROADWAYS AND DRIVEWA NO. 1101.02 FOR TEMPORA

STEP 1:

INSTALL PROPOSED TRAFFI ROAD EXTENSION AND US

REMOVE ALL CONFLICTING AND MARKERS IN THE FINA ON SHEETS TMP-10 AND TW STOPBAR LOCATIONS ARE STOPBAR LOCATIONS.

USING TEMPORARY LANE C TRAFFIC AT INTERSECTIONS

ACTIVATE TRAFFIC SIGNALS INTERSECTION.

INSTALL TRAFFIC CONTROL

STEP 2:

CLOSE EXISTING CONNECTO DRIVEWAY OFF AT US 64.

CONSTRUCT PROPOSED CUP AT THE DEMOLISHED DRIVE AT THE INTERSECTION OF C

CONSTRUCT PROPOSED CUP GAS STATION AS SHOWN O

STEP 3:

REMOVE TRAFFIC CONTROL CONTROL DEVICES ASSOCIA THRU TMP-11.

STEP 4:

CONSTRUCT PROPOSED ME AND FROM -Y1- STA. 19+96

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STEP 5:

PLACE FINAL LAYER OF ASF NC 49, US 64, AND MACK R

STEP 6:

REMOVE ALL TRAFFIC CONTROL DEVICES, AND OPEN ALL LANES TO TRAFFIC.

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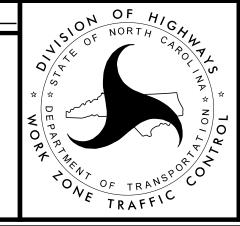
Matt West

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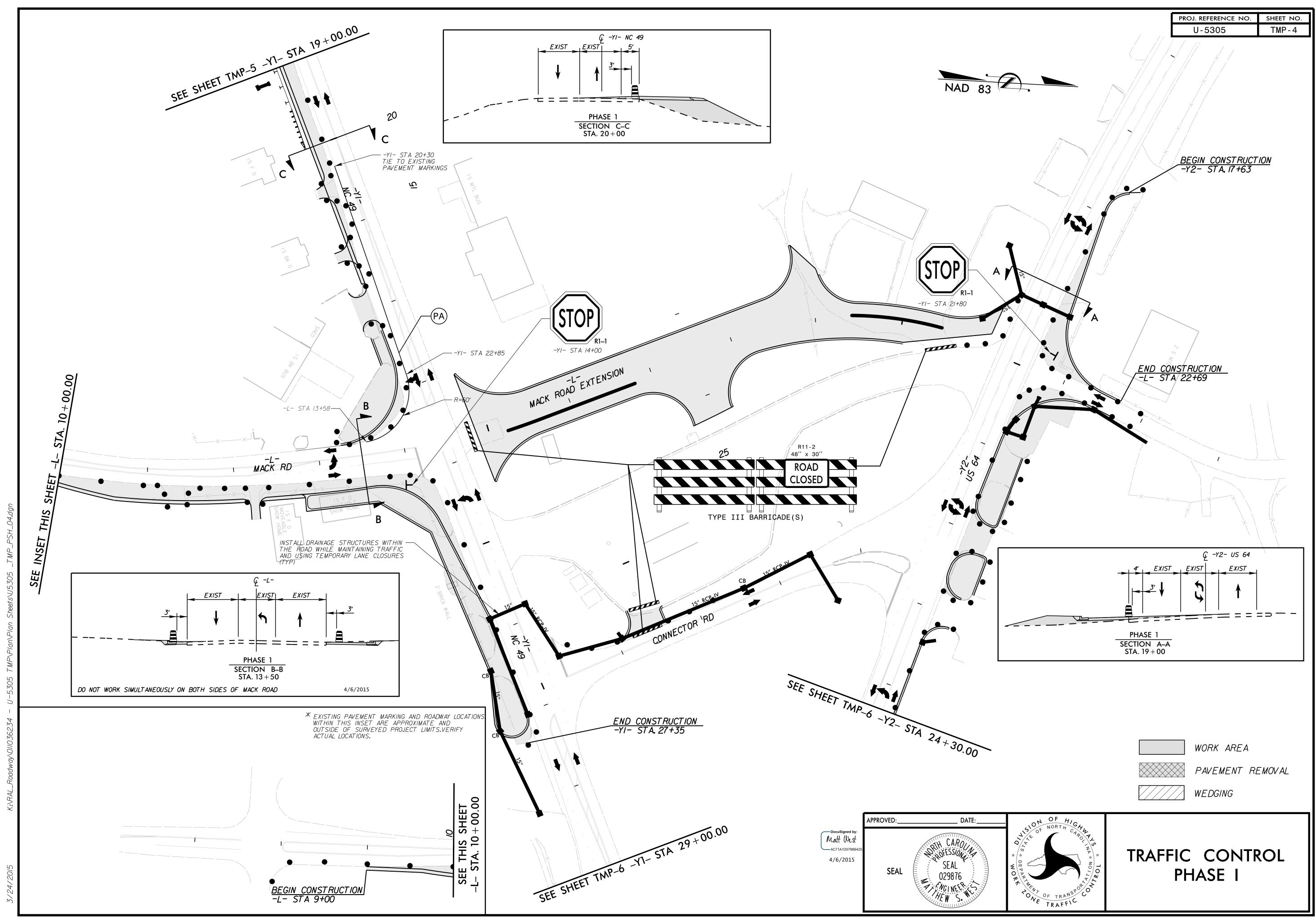
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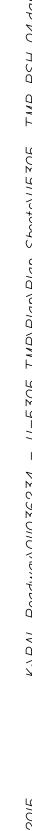
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	U-5305	TMP-3
PHASE III		
TING TRAFFIC ON NC 49/SHANA LAN	E/ALBEMARLE ROAD	
MACK ROAD, FISHER CIRCLE, AND A	ALL INTERSECTING	
AYS, USING NCDOT ROADWAY STAN ARY LANE CLOSURES, THE CONTRAC		
IC SIGNALS AT THE MACK ROAD ANI	D NC 49 AND THE MA	4 <i>CK</i>
64 INTERSECTIONS.		
G MARKINGS AND PLACE TEMPORAR	Y PAVEMENT MARKI	NGS
AL PATTERN ALONG MACK ROAD, NO	-	
MP-11. REFER TO PAVEMENT MARKIN APPROXIMATE, REFER TO THE FINAL		
CLOSURES, FLAGGERS, AND LAW EN	FORCEMENT TO DIRE	<b>CT</b>
S AS NEEDED, SHIFT TRAFFIC ONTO I		
.S, AND RESTORE EXISTING SIGNAL A	AT OAKLEAF DR / NC	49
L DEVICES ASSOCIATED WITH STEP 2	AS SHOWN ON SHE	ET TMP-10.
OR ROAD TO THROUGH TRAFFIC AND REMOVE EXISTING PAVEMENT AS SH		
REMOVE EXISTING PAVEMENT AS SP	IOWN ON SHEET IW	10
IRB AND GUTTER AND BUILD UP PAV WEWAY LOCATIONS FROM -L- STA. 20-		
CONNECTOR ROAD AND NC 49 AS SH		
		<b></b>
IRB AND GUTTER AND DRIVEWAY AT ON SHEET TMP-10.	INE IANK AND IUN	ΙΙΝΙΥ
L DEVICES ASSOCIATED WITH STEP 2		
IATED WITH MEDIAN WORK AS SHOW	VN ON SHEETS TIMP-	10
EDIAN ALONG NC 49 FROM -Y1- STA.	10+79 TO STA. 12+	79
6 TO STA. 27+35.		
EDIAN ALONG MACK ROAD FROM -L-	STA. 12+34 TO STA.	, <b>13+53</b>
EDIAN ALONG US 64 FROM -Y2- STA	. 18+60 TO STA. 26+	09.
LAND IN GORE AREA OF ALBEMARLE	BD AND CUANA I AI	NE
LAIND IIN GUNE ANEA UF ALDEINIAKLE	NU ANU JUANA LAI	₩£.
SPHALT AND FINAL PAVEMENT MARK	INGS AND MARKERS	5 ON
ROAD. REFER TO THE PAVEMENT MA	RKING PLANS FOR LO	CATIONS.

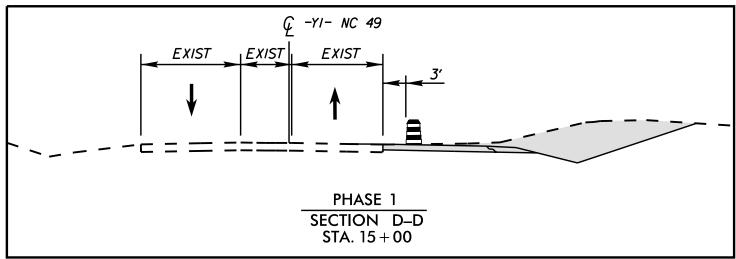
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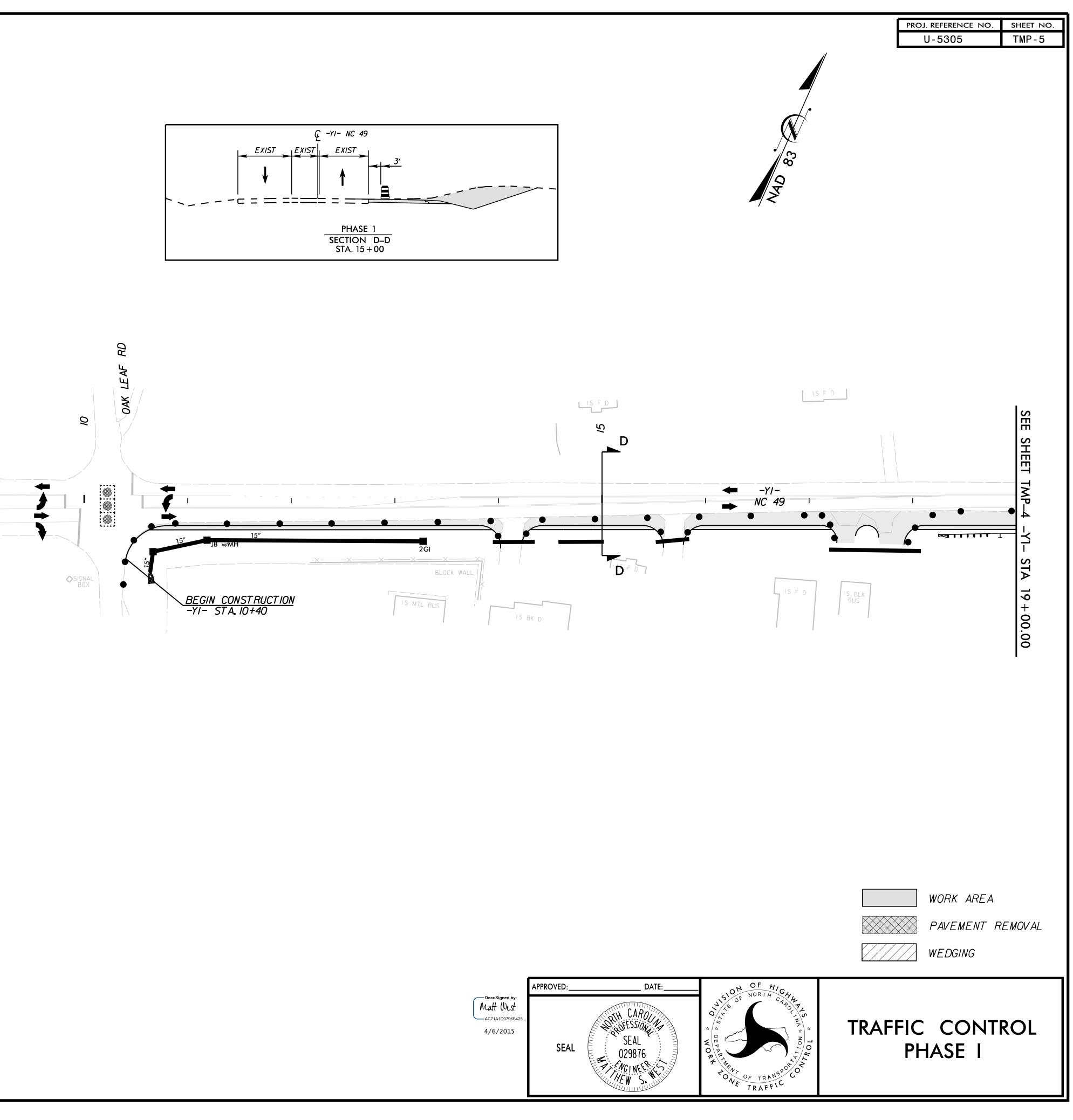


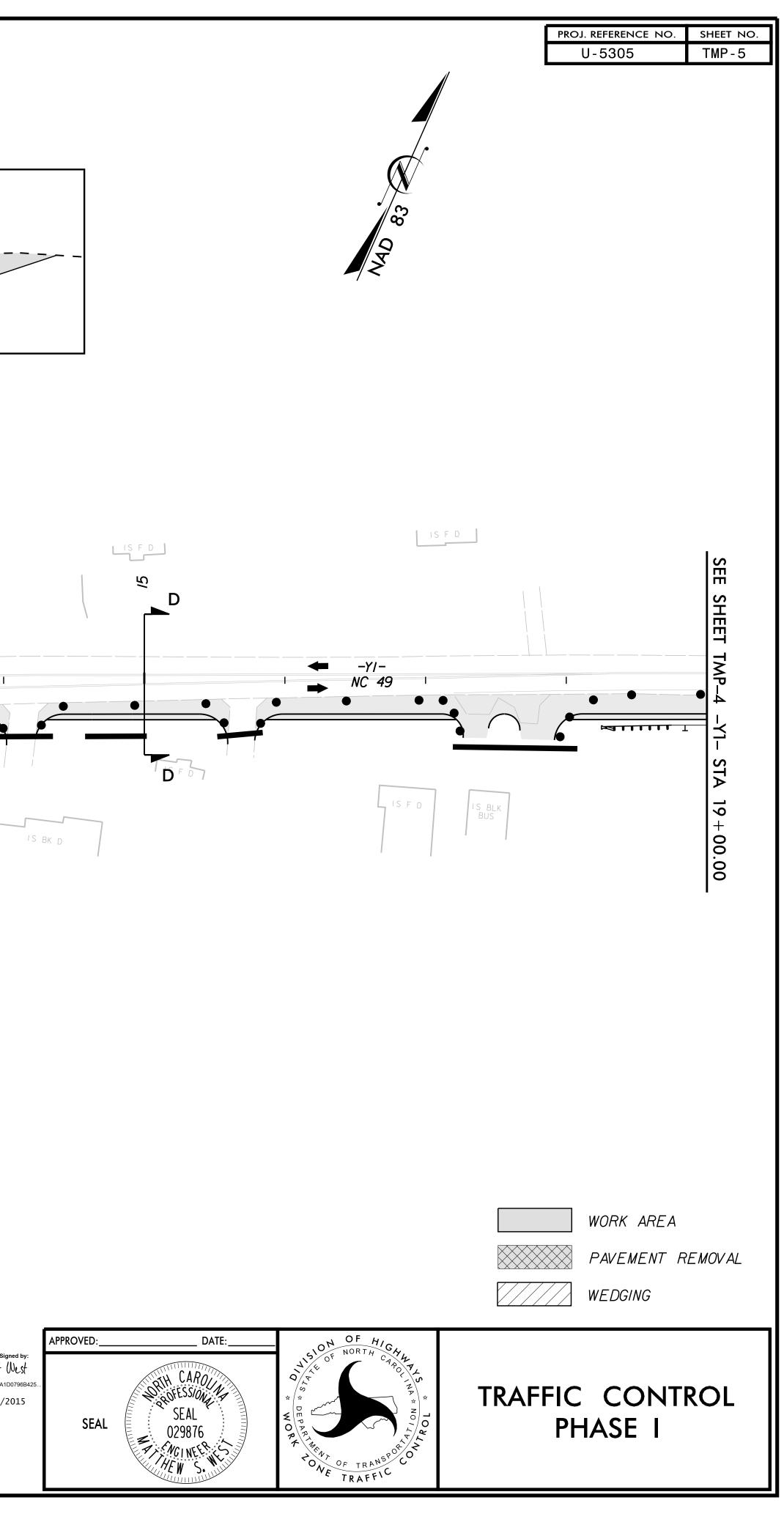
TRANSPORTATION OPERATIONS PLAN

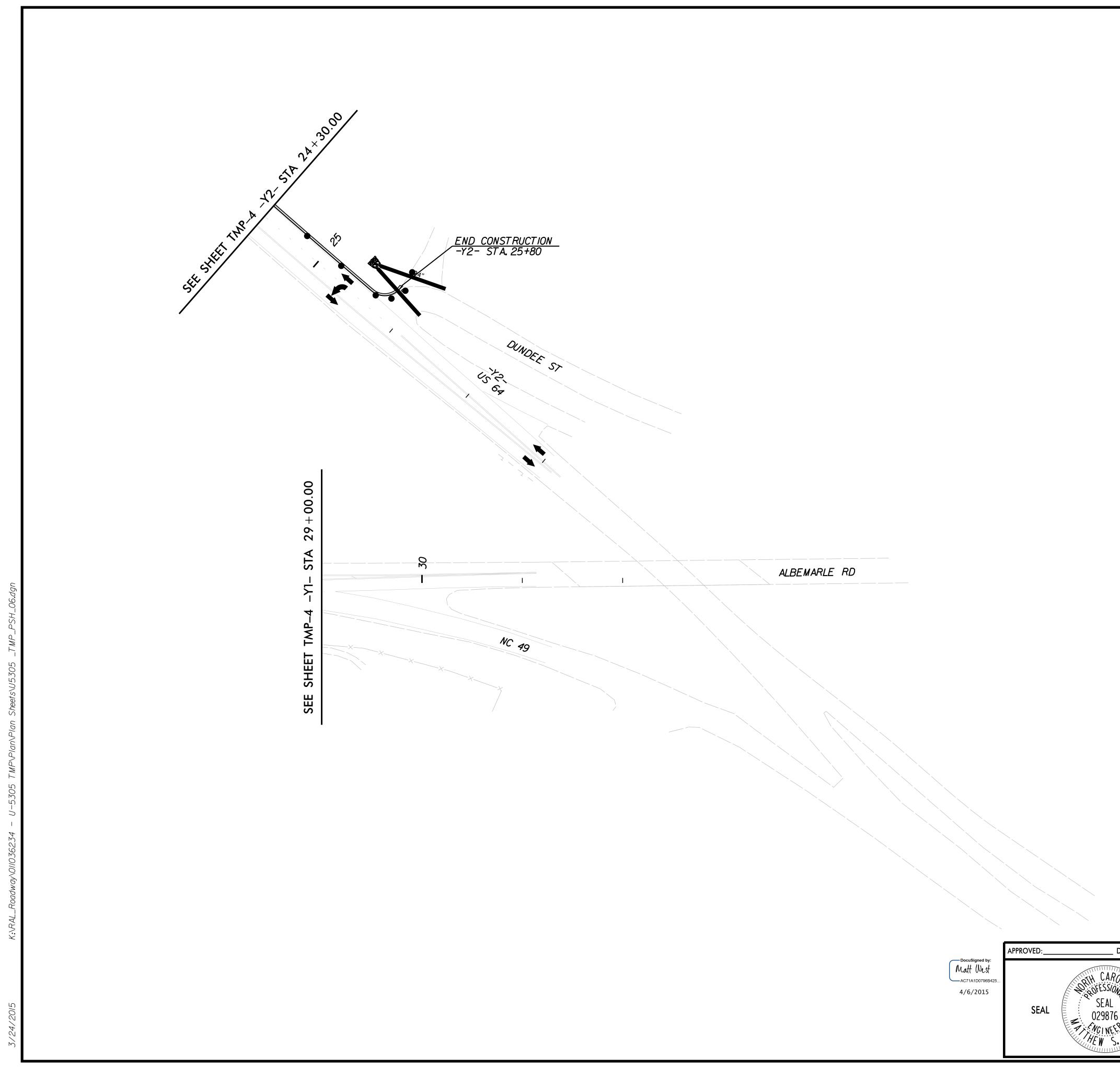












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	WORK AREA	
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	TRAFFIC CONT	rol I
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CONTRACTOR		

