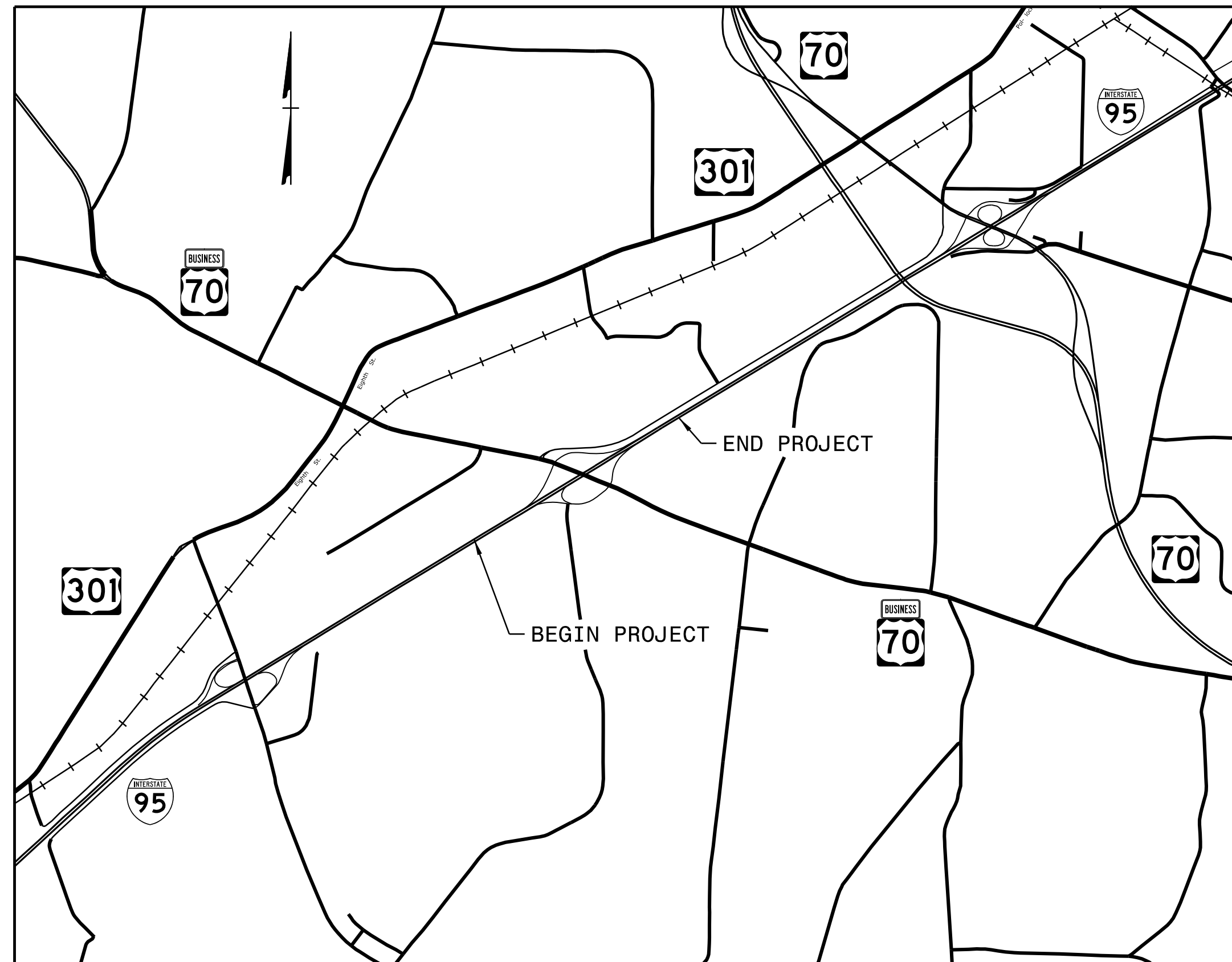
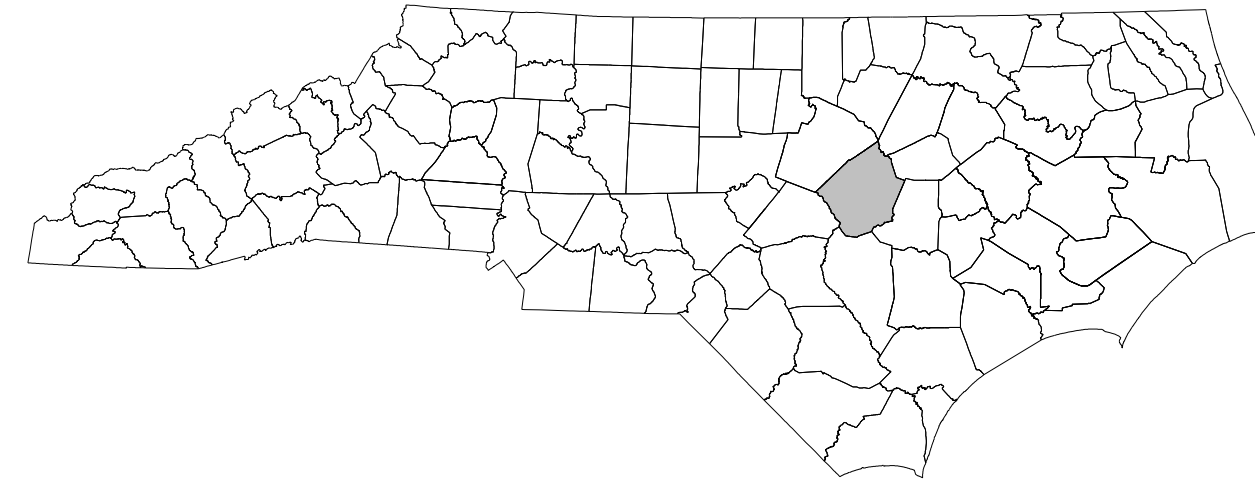


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DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

JOHNSTON COUNTY



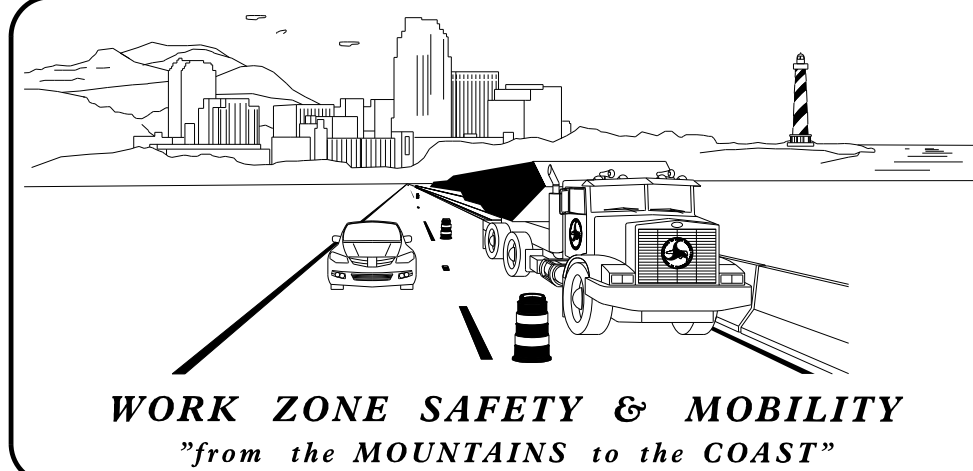
<u>SHEET NO.</u>	<u>TITLE</u>
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B THRU 1D	TRANSPORTATION OPERATIONS PLAN: (GENERAL NOTES)
TMP-2	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
TMP-2A AND 2AA	TEMPORARY SHORING DATA
TMP-2B	-RPB- OFFSITE DETOUR
TMP-2C	-RPC- OFFSITE DETOUR
TMP-2D	-RPD- OFFSITE DETOUR
TMP-2E	SPECIAL SIGN DESIGN
TMP-3 AND 3A	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4 THRU 20	TEMPORARY TRAFFIC CONTROL PHASE I DETAILS
TMP-21 THRU 31	TEMPORARY TRAFFIC CONTROL PHASE II DETAILS
TMP-32 THRU 39C	TEMPORARY TRAFFIC CONTROL PHASE III DETAILS
TMP-40 THRU 49	TEMPORARY TRAFFIC CONTROL PHASE IV DETAILS

SHEET NO.
TMP-1

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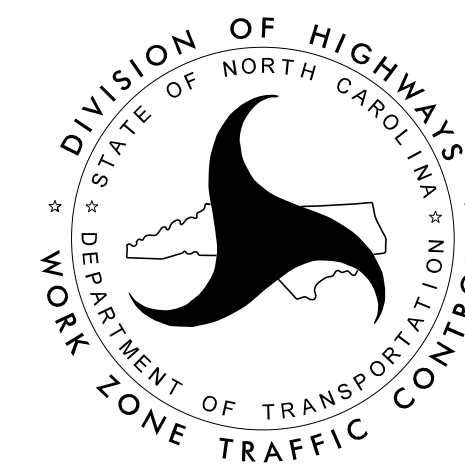
PLANS PREPARED BY:

C. B. HOLDEN, PE
PROJECT MANAGER

K. W. BISBY, PE
SENIOR PROJECT ENGINEER

NCDOT CONTACTS:

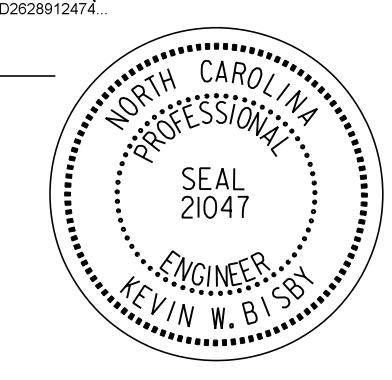
RUSSELL BROADWELL, PE
PROJECT ENGINEER



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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
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1170.01	POSITIVE PROTECTION
1180.01	SKINNY-DRUM
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
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
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
1264.02	OBJECT MARKERS - INSTALLATION
1266.01	TUBULAR MARKERS

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)

- WORK AREA
- REMOVAL
- ONGOING CONSTRUCTION
- TEMPORARY PAVEMENT

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 MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING SCHEDULE

PAINT				WORK ZONE PERFORMANCE MARKINGS		COLD APPLIED PLASTIC	
Symbol	Description	Symbol	Description	Symbol	Description	Symbol	Description
P1	WHITE EDGELINE (4")	P43	WHITE SOLID LANE LINE (8")	Z6	3 FT. - 9 FT./SP WHITE MINISKIP (6")	C1	WHITE EDGELINE (4")
P2	WHITE SOLID LANE LINE (4")	P44	3 FT. - 9 FT./SP WHITE MINISKIP (8")	Z7	10 FT. WHITE SKIP (6")	C13	YELLOW DOUBLE CENTER (4")
P3	10 FT. WHITE SKIP (4")	P61	WHITE STOP BAR (24")	Z8	WHITE SOLID LINE (6")	TEMPORARY RAISED PAVEMENT MARKERS	
P4	3 FT. - 9 FT./SP WHITE MINISKIP (4")	P70	LEFT TURN ARROW	Z9	YELLOW SOLID LINE (6")	Symbol	Description
P5	2 FT. - 6 FT./SP WHITE MINISKIP (4")	P71	RIGHT TURN ARROW	Z11	WHITE SOLID LINE (12")	MH	YELLOW/YELLOW
P10	YELLOW EDGELINE (4")	P72	STRAIGHT ARROW			MI	CRYSTAL RED
P11	YELLOW SINGLE CENTER (4")	P73	COMBO. LEFT/STRAIGHT ARROW				
P12	10 FT. YELLOW SKIP (4")	P74	COMBO. RIGHT/STRAIGHT ARROW				
P13	YELLOW DOUBLE CENTER (4")	P79	MERGE ARROW				
P40	WHITE GORELINE (8")	P100	ALPHANUMERIC CHARACTER				
P41	WHITE DIAGONAL (8")	P103	24" YIELD LINE TRIANGLE				
P42	YELLOW DIAGONAL (8")						

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ROADWAY STANDARD DRAWINGS & LEGEND

GENERAL NOTES

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

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

TIME RESTRICTIONS

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

ROAD NAME	DAY	TIME RESTRICTIONS
I-95, ALL RAMPS AND LOOPS	MONDAY THROUGH SUNDAY	5:00 A.M. TO 9:00 P.M.

DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY	TIME RESTRICTIONS
ALL OTHER ROADS	MONDAY THROUGH FRIDAY	5:00 A.M. TO 9:00 A.M. AND 3:00 P.M. TO 8:00 P.M.

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

ROAD NAME

I-95, ALL RAMPS AND LOOPS
 US 70 BUS. (MARKET STREET)
 MALLARD ROAD
 OUTLET CENTER DRIVE

HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 5:00 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.
- FOR EASTER, BETWEEN THE HOURS OF 5:00 A.M. THURSDAY AND 9:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 5:00 A.M. FRIDAY TO 9:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 5:00 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 5:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 5:00 A.M. FRIDAY AND 9:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 5:00 A.M. TUESDAY TO 9:00 P.M. MONDAY.

8. FOR CHRISTMAS, BETWEEN THE HOURS OF 5:00 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	OPERATION
I-95 RAMPS	MONDAY THROUGH SUNDAY 5:00 AM TO 12:00 (MIDNIGHT)	TRAFFIC SHIFTS

D) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
I-95 US 70 BUS. (MARKET STREET)	MONDAY THROUGH SUNDAY 5:00 AM TO 12:00 (MIDNIGHT)	30 MINUTE MAXIMUM ROAD CLOSURE DURATION FOR BRIDGE DEMOLITION; GIRDER, OVERHANG AND FALSEWORK INSTALLATION OR REMOVAL; OVERHEAD SIGN ASSEMBLIES

E) EXCLUDING HAULING OPERATIONS THAT ARE CONDUCTED ENTIRELY BEHIND A TEMPORARY TRAFFIC BARRIER OR GUARDRAIL, MULTI-VEHICLE HAULING SHALL NOT BE ALLOWED INGRESS AND EGRESS FROM ANY OPEN TRAVEL LANE DURING THE FOLLOWING TIME RESTRICTIONS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-95, ALL RAMPS AND LOOPS	MONDAY THROUGH FRIDAY 6:00 AM TO 8:00 PM SATURDAY AND SUNDAY 10:00 AM TO 7:00 PM
US 70 BUS. (MARKET STREET)	MONDAY THROUGH FRIDAY 6:00 AM TO 9:00 AM 4:00 PM TO 7:00 PM



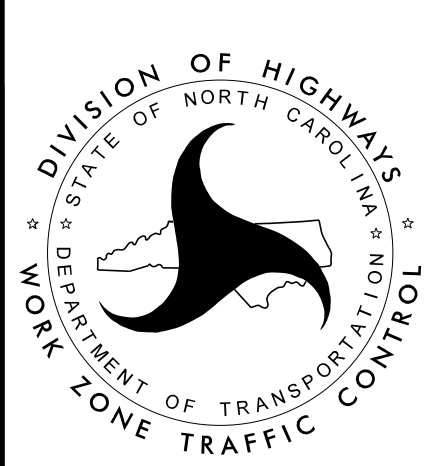
F) DO NOT CONDUCT MULTI-VEHICLE HAULING AS FOLLOWS; INGRESS AND EGRESS FROM RAMPS SHALL NOT BE ALLOWED:

ROAD NAME	DAY	TIME RESTRICTIONS
ALL OTHER ROADS	MONDAY THROUGH SUNDAY	5:00 A.M. TO 9:00 P.M.

G) DO NOT CONDUCT ANY HAULING OPERATION AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVEL WAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL, OR AS DIRECTED BY THE ENGINEER.

H) HAUL VEHICLES SHALL NOT ENTER AND EXIT AND OPEN TRAVEL LANE AT SPEEDS MORE THAN 10 MPH BELOW THE POSTED SPEED LIMIT.

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LANE AND SHOULDER CLOSURE REQUIREMENTS

- I) 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.
- J) WHEN BARRIER IS SET ON THE ROADWAY SHOULDER, INSTALL SHOULDER CLOSURE SIGNS AND DEVICES IN ADVANCE OF THE BARRIER USING RDWY. STD. 1101.04.
- K) WHEN PERSONNEL OR EQUIPMENT ARE WORKING WITHIN 15 FT. OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING RDWY. STD. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL, OR A LANE CLOSURE IS USED.
- L) WHEN PERSONNEL 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 RDWY. STD. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL 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 RDWY. STD. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- M) WHEN PERSONNEL OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED 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 EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- N) DO NOT PERFORM WORK INVOLVING HEAVY EQUIPMENT WITHIN 15 FEET OF THE EDGE OF TRAVEL WAY WHEN WORK IS BEING PERFORMED BEHIND A LANE CLOSURE ON THE OPPOSITE SIDE OF THE TRAVEL WAY.
- O) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON I-95.

PAVEMENT EDGE DROP-OFF REQUIREMENTS

- P) 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.
- Q) 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

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

SIGNING

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

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.
- U) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.
- V) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- W) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) OR "BUMP" SIGNS (W8-1) (500 FT) IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

- X) 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.

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Y) PROTECT THE APPROACH END OF 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 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 (MPH)	MINIMUM OFFSET (FT)
< 40	15
45 - 50	20
55	25
> 60	30

TRAFFIC CONTROL DEVICES

Z) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREA 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 TRAVEL WAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTION 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

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

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

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
I-95, RAMPS, LOOPS	WORK ZONE PERFORMANCE MARKINGS	TEMPORARY RAISED
ALL OTHER ROADS	PAINT	TEMPORARY RAISED
CONCRETE SURFACES	COLD APPLIED PLASTIC (TYPE 4) UNLESS OTHERWISE INDICATED	TEMPORARY RAISED

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

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

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

GG) TRACE THE MONOLITHIC ISLAND LOCATIONS WITH THE PROPER COLOR PAVEMENT MARKINGS PRIOR TO INSTALLATION. PLACE DRUMS TO DELINEATE ANY REMOVED MONOLITHIC ISLANDS.

TEMPORARY SHORING

HH) TEMPORARY SHORING IS REQUIRED TO MAINTAIN TRAFFIC WHEN A 2:1 (H:V) SLOPE FROM THE TOP OF AN EMBANKMENT OR BOTTOM OF AN EXCAVATION WILL INTERSECT THE EXISTING GROUND LINE LESS THAN 5 FT FROM THE EDGE OF PAVEMENT OF AN OPEN TRAVELWAY. THIS PROVISION DOES NOT APPLY TO PIPE, INLET OR UTILITY INSTALLATION UNLESS NOTED OTHERWISE IN THE PLANS. (SEE PROJECT SPECIAL PROVISIONS)

MISCELLANEOUS

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

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




KK) CONTRACTOR SHALL MAINTAIN SIDEWALK ACCESS AT ALL TIMES AS STATED IN THE PHASING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY SIDEWALKS (CONCRETE, ASPHALT, OR OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER) AT ALL LOCATIONS WHERE THE OPEN PEDESTRIAN TRAVEL WAY HAS BEEN REMOVED FOR CONSTRUCTION OPERATIONS (UTILITIES, DRAINAGE, ETC.). (SEE SPECIAL PROVISIONS)

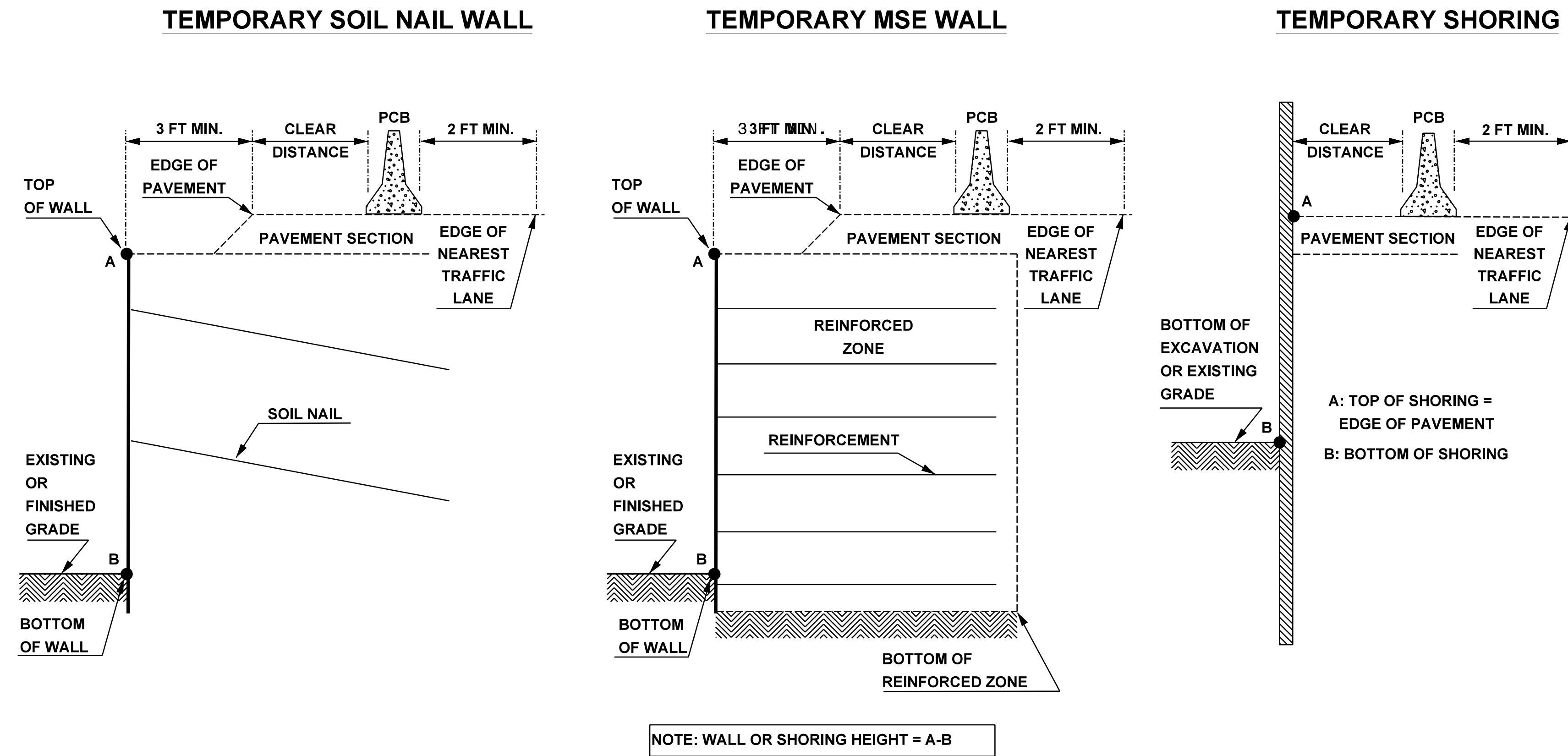
LL) TO ENSURE THAT PROJECT INFORMATION CAN BE DISTRIBUTED TO THE PUBLIC USING STANDARD METHODS, INCLUDING BUT NOT LIMITED TO NOTIFYING MEDIA OUTLETS, THE CONTRACTOR SHALL INFORM THE DEPARTMENT AT LEAST THIRTY (30) CALENDAR DAYS IN ADVANCE OF ANY CONSTRUCTION ACTIVITY THAT WILL SIGNIFICANTLY IMPACT THE PUBLIC. THESE ACTIVITIES SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE START OF CONSTRUCTION, MAJOR TRAFFIC SHIFTS, ROAD CLOSURES, RAMP CLOSURES, DETOURS, NIGHT WORK AND PROJECT COMPLETION.

MM) IN THE EVENT THAT TYPE "D", "E" OR "F" SIGNS CONFLICT WITH CONSTRUCTION OPERATIONS, RELOCATE THE SIGN IN A LOCATION, AND USING METHODS, APPROVED BY THE ENGINEER. LOCATE THE SIGN A MINIMUM OF 20' FROM THE NEAREST TRAVEL LANE ON FREEWAYS; AND A 6' MINIMUM CLEARANCE ON ALL OTHER ROADS UNLESS PROTECTED BY BARRIER OR GUARDRAIL. MINIMUM VERTICAL CLEARANCE IS 7' ABOVE THE EDGE OF THE NEAREST TRAVEL LANE.

NN) IN THE EVENT THAT TYPE "A" OR "B" SIGNS CONFLICT WITH CONSTRUCTION OPERATIONS, RELOCATE THE SIGN IN A LOCATION, AND USING METHODS, APPROVED BY THE ENGINEER. LOCATE THE SIGN A MINIMUM OF 30' FROM THE NEAREST TRAVEL LANE UNLESS PROTECTED BY BARRIER OR GUARDRAIL. MINIMUM VERTICAL CLEARANCE IS 7' ABOVE THE EDGE OF THE NEAREST TRAVEL LANE.

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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
	Concrete	44-50	31	35	41	43	46	49
		50-56	32	36	42	44	47	50
		>56	32	36	42	45	47	51
		<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
Anchored PCB	Asphalt	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
		All Offsets	24 for All Design Speeds					
Anchored PCB	Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds					

* See Figure Below

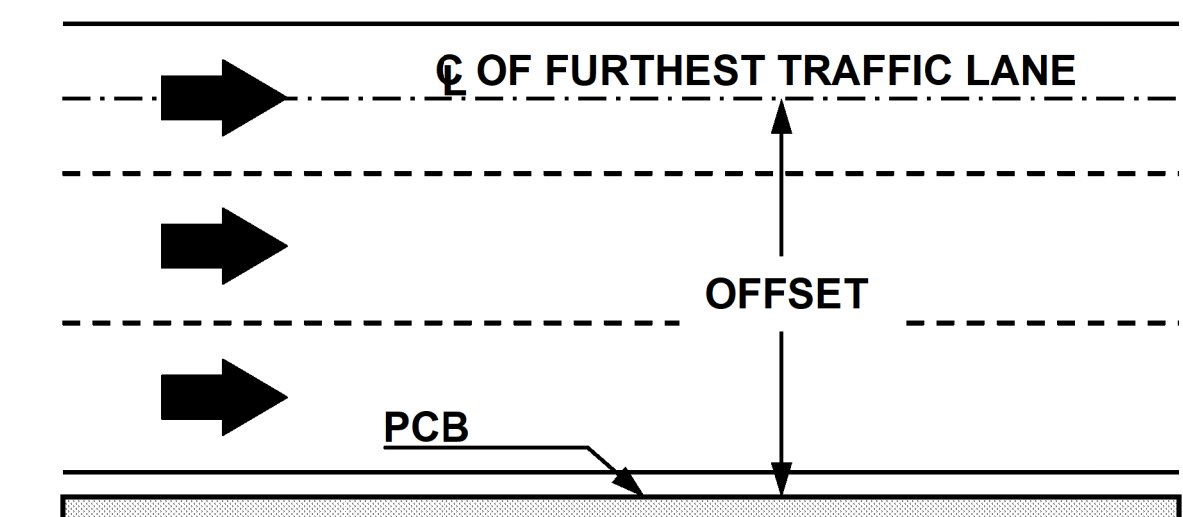


FIGURE B

APPROVED: _____ DATE: _____ SEAL		PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

SHORING LOCATION NO.	BEGIN STATION & OFFSET	END STATION & OFFSET	ESTIMATED AVERAGE HEIGHT (FT)	ESTIMATED MAXIMUM HEIGHT (FT)	SHORING LOCATION, TYPE, TRAFFIC CONTROL PLAN
1	-Y1- STA 35+23± 1.5 FT RT	-Y1- STA 36+25± 1.5 FT RT	11.3	20.0	ROADWAY EMBANKMENT CONSTRUCTION (CUT, TC PHASE I, STEP 2 AND 3, TMP-6)
2	Y1 STA 37+53± 1.5 FT RT	-Y1- STA 38+23± 1.5 FT RT	10.8	20.0	ROADWAY EMBANKMENT CONSTRUCTION (CUT, TC PHASE I, STEP 2 AND 3, TMP-6)
3	-Y1 - STA 35+25± 3.0 FT RT	-Y1- STA 35+90± 2.0 FT RT	15.0	21.0	ROADWAY EMBANKMENT CONSTRUCTION (FILL, TC PHASE I, STEP 2 AND 3, TMP-6)
4	-Y1- STA 37+92± 3.5 FT RT	-Y1- STA 38+23± 3.5 FT RT	12.0	21.0	ROADWAY EMBANKMENT CONSTRUCTION (FILL, TC PHASE I, STEP 2 AND 3, TMP-6)
5	-L- STA 56+02± 13.7 FT LT	-L- STA 56+77± 14.6 FT LT	6.1	6.1	ROADWAY CONSTRUCTION (CUT, TC PHASE I, STEP 2 AND 3, TMP-6)
6	-L- STA 56+02± 9.3 FT RT	-L- STA 56+77± 8.3 FT RT	6.1	6.1	ROADWAY CONSTRUCTION (CUT, TC PHASE I, STEP 2 AND 3, TMP-6)

THE FOLLOWING NOTES ON PLANS ARE RECOMMENDED FOR THE PROPOSED SHORING LOCATIONS:

SHORING LOCATION NO. 1:

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 -Y1- STA 35+23±, 1.5 FT RT TO STATION -Y1- STA 36+25±, 1.5 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: VARIES, ASSUMED ELEVATION ±146.7 FT

AT THE CONTRACTOR'S OPTION AND AS APPLICABLE, USE STANDARD TEMPORARY SHORING FOR THE TEMPORARY SHORING FROM -Y1- STA 35+23±, 1.5 FT RT TO STATION -Y1- STA 36+25±, 1.5 FT RT. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -Y1- STA 35+23±, 1.5 FT RT TO STATION -Y1- STA 36+25±, 1.5 FT RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. THE SUBSURFACE INFORMATION THAT IS AVAILABLE CAN BE FOUND IN THE ROADWAY SUBSURFACE INVENTORY REPORT.

DRIVEN PILING FOR TEMPORARY SHORING FROM -Y1- STA 35+23±, 1.5 FT RT TO STATION -Y1- STA 36+25±, 1.5 FT RT, MAY NOT PENETRATE BELOW ELEVATION 116.5 FT DUE TO VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y1- STA 35+23±, 1.5 FT RT TO STATION -Y1- STA 36+25±, 1.5 FT RT.

SHORING LOCATION NO. 2:

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 -Y1- STA 37+53±, 1.5 FT RT TO STATION -Y1- STA 38+23±, 1.5 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: VARIES, ASSUMED ELEVATION ±145.0 FT

AT THE CONTRACTOR'S OPTION AND AS APPLICABLE, USE STANDARD TEMPORARY SHORING FOR THE TEMPORARY SHORING FROM STATION -Y1- STA 37+53±, 1.5 FT RT TO STATION -Y1- STA 38+23±, 1.5 FT RT. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -Y1- STA 37+53±, 1.5 FT RT TO STATION -Y1- STA 38+23±, 1.5 FT RT. THE INFORMATION PROVIDED FOR TEMPORARY

SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. THE SUBSURFACE INFORMATION THAT IS AVAILABLE CAN BE FOUND IN THE ROADWAY SUBSURFACE INVENTORY REPORT.

DRIVEN PILING FOR TEMPORARY SHORING FROM -Y1- STA 37+53±, 1.5 FT RT TO STATION -Y1- STA 38+23±, 1.5 FT RT, MAY NOT PENETRATE BELOW ELEVATION 114.8 FT DUE TO VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y1- STA 37+53±, 1.5 FT RT TO STATION -Y1- STA 38+23±, 1.5 FT RT.

SHORING LOCATION NO. 3:

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 -Y1- STA 35+25±, 3 FT RT TO STATION -Y1- STA 35+90±, 2 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:


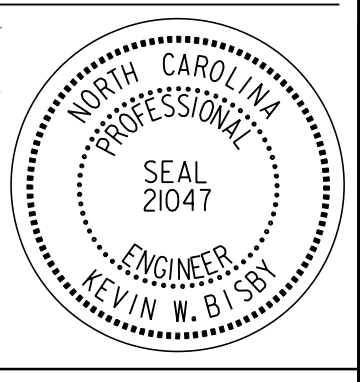
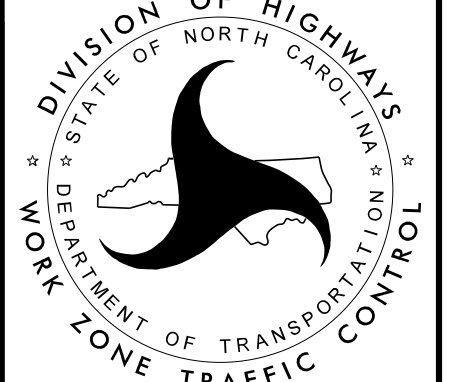
UNIT WEIGHT (γ): 120 PCF FRICTION ANGLE (φ): 30 DEGREES
COHESION (C): 0 PSF
GROUNDWATER ELEVATION: VARIES, ASSUMED ELEVATION ±146.7 FT

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR THE TEMPORARY SHORING FROM STATION -Y1- STA 35+25±, 3 FT RT TO STATION -Y1- STA 35+90±, 2 FT RT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -Y1- STA 35+25±, 3 FT RT TO STATION -Y1- STA 35+90±, 2 FT RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. THE SUBSURFACE INFORMATION THAT IS AVAILABLE CAN BE FOUND IN THE ROADWAY SUBSURFACE INVENTORY REPORT.

DO NOT USE CANTILEVER, BRACED OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -Y1- STA 35+25±, 3 FT RT TO STATION -Y1- STA 35+90±, 2 FT RT.

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APPROVED:  <small>DocuSigned by: Kevin Bishop 800802028912474</small> DATE: 9/19/2023 SEAL			TEMPORARY SHORING DATA
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SHORING LOCATION NO. 4:

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 -Y1- STA 37+92±, 3.5 FT RT TO STATION -Y1- STA 38+23±, 3.5 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: VARIES, ASSUMED ELEVATION ±145.0 FT.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR THE TEMPORARY SHORING FROM STATION -Y1- STA 37+92±, 3.5 FT RT TO STATION -Y1- STA 38+23±, 3.5 FT RT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -Y1- STA 37+92±, 3.5 FT RT TO STATION -Y1- STA 38+23±, 3.5 FT RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. THE SUBSURFACE INFORMATION THAT IS AVAILABLE CAN BE FOUND IN THE ROADWAY SUBSURFACE INVENTORY REPORT.

DO NOT USE CANTILEVER, BRACED OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -Y1- STA 37+92±, 3.5 FT RT TO STATION -Y1- STA 38+23±, 3.5 FT RT.

SHORING LOCATION NO. 5:

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- STA 56+02±, 13.7 FT LT TO STATION -L- STA 56+77±, 14.6 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: VARIES, ASSUMED ELEVATION RANGE BETWEEN ±145.0 - ±146.7 FT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR THE TEMPORARY SHORING FROM STATION -L- STA 56+02±, 13.7 FT LT TO STATION -L- STA 56+77±, 14.6 FT LT. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- STA 56+02±, 13.7 FT LT TO STATION -L- STA 56+77±, 14.6 FT LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. THE SUBSURFACE INFORMATION THAT IS AVAILABLE CAN BE FOUND IN THE ROADWAY SUBSURFACE INVENTORY REPORT.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- STA 56+02±, 13.7 FT LT TO STATION -L- STA 56+77±, 14.6 FT LT.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -L- STA 56+02±, 13.7 FT LT TO STATION -L- STA 56+77±, 14.6 FT LT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

SHORING LOCATION NO. 6:

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- STA 56+02±, 9.3 FT RT TO STATION -L- STA 56+77±, 8.3 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

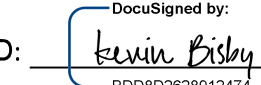
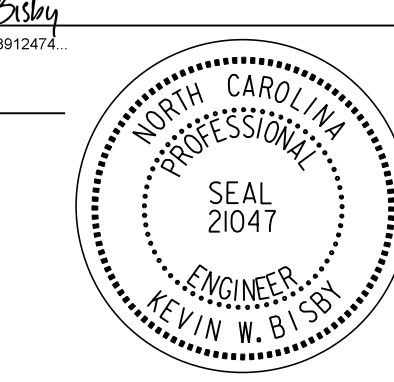
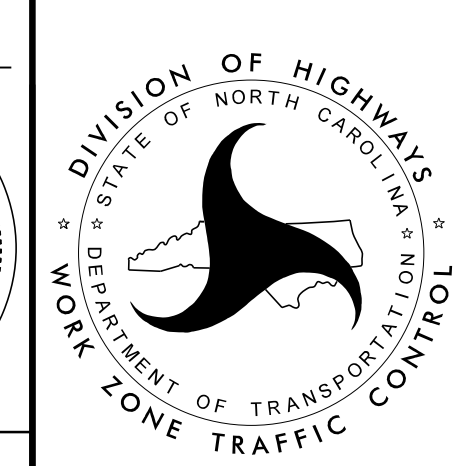
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COHESION (C): 0 PSF
GROUNDWATER ELEVATION: VARIES, ASSUMED ELEVATION RANGE BETWEEN ±145.0 - ±146.7 FT.

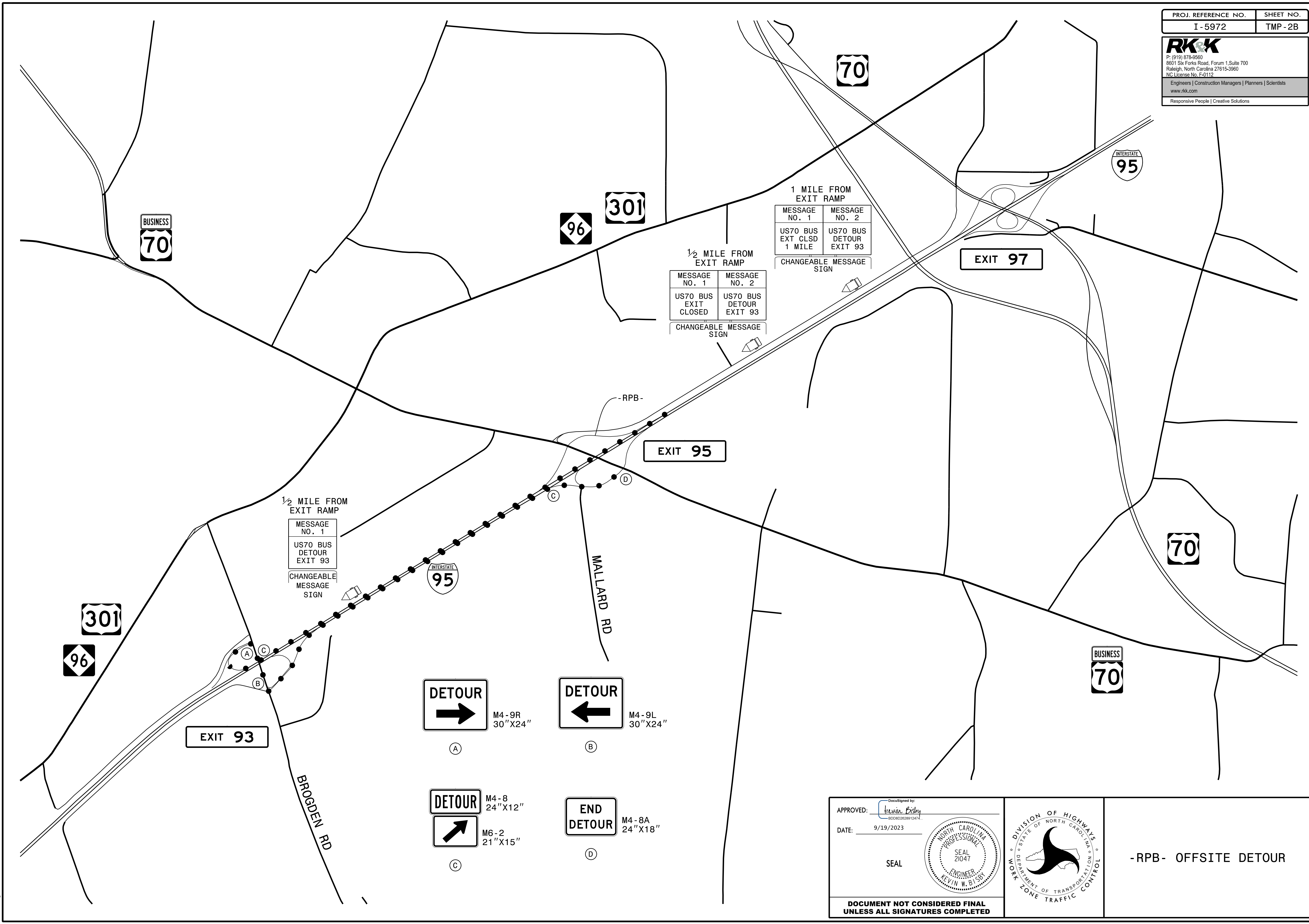
AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR THE TEMPORARY SHORING FROM STATION -L- STA 56+02±, 9.3 FT RT TO STATION -L- STA 56+77±, 8.3 FT RT. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- STA 56+02±, 9.3 FT RT TO STATION -L- STA 56+77±, 8.3 FT RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. THE SUBSURFACE INFORMATION THAT IS AVAILABLE CAN BE FOUND IN THE ROADWAY SUBSURFACE INVENTORY REPORT.

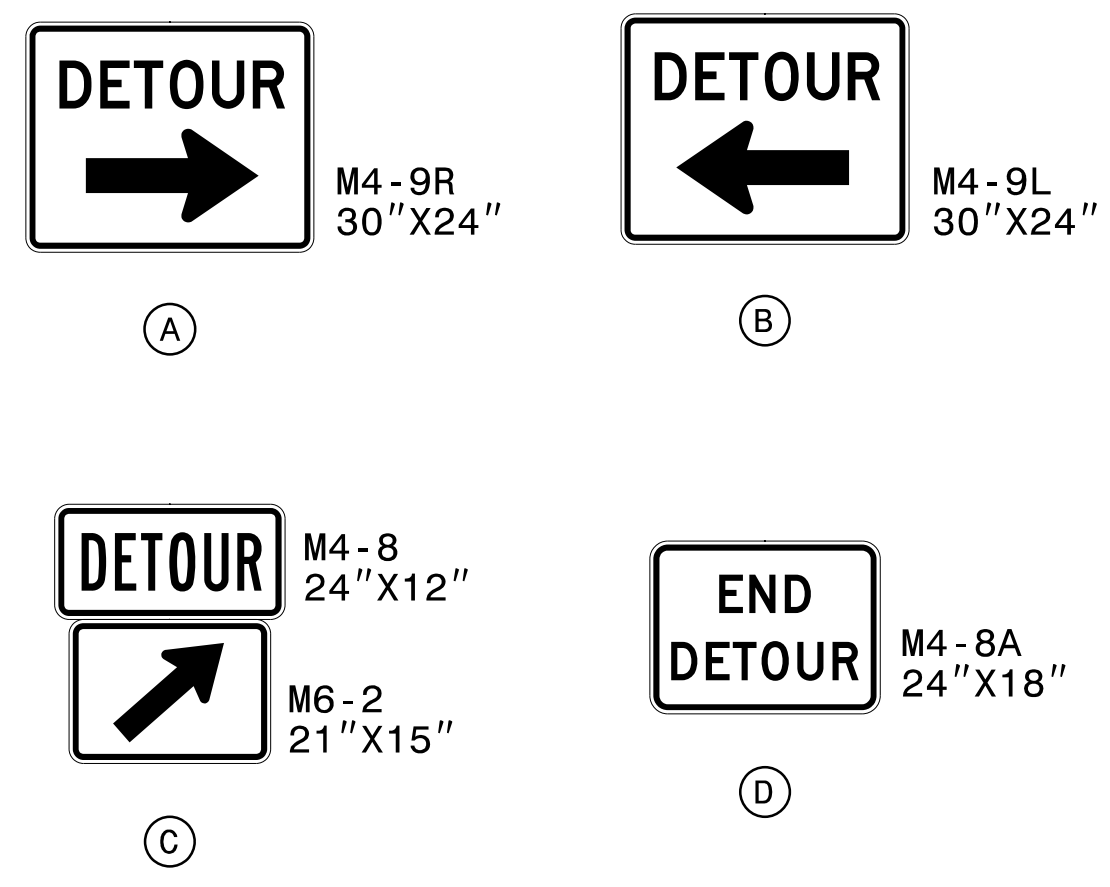
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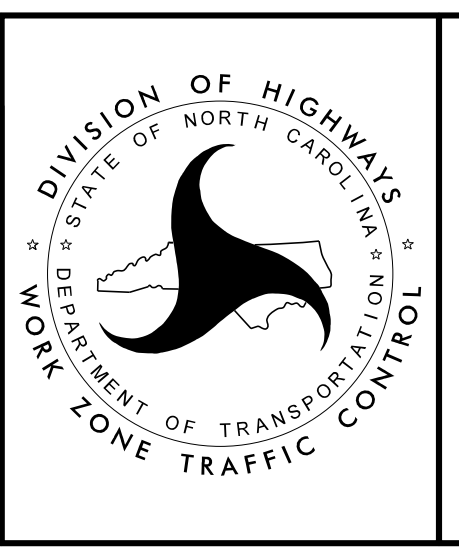
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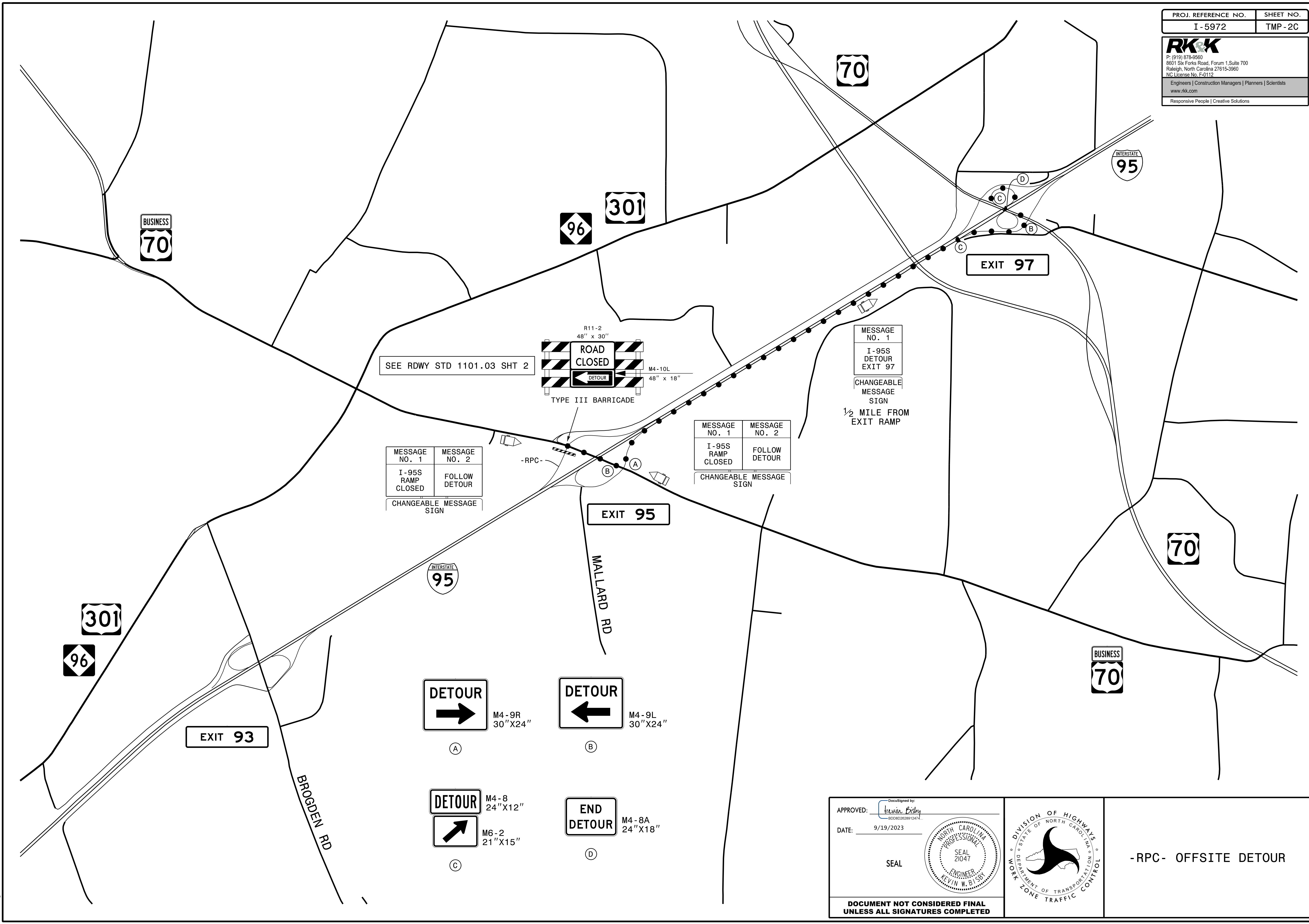
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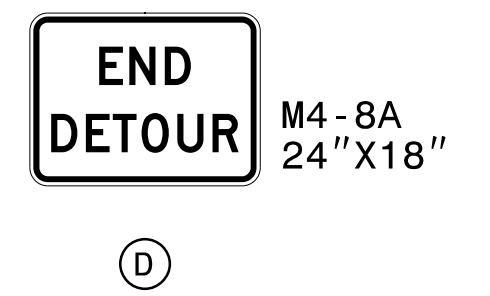
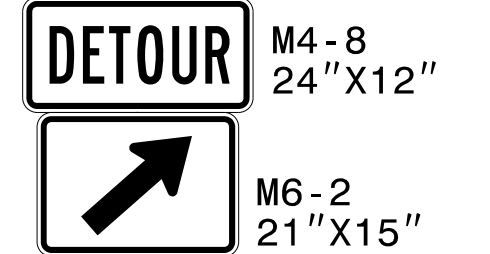
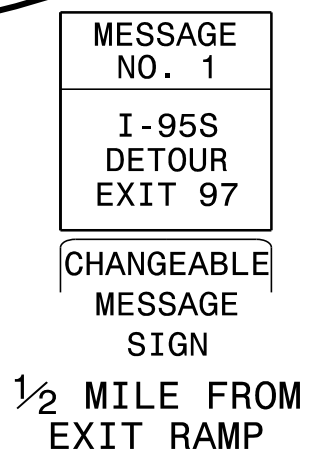
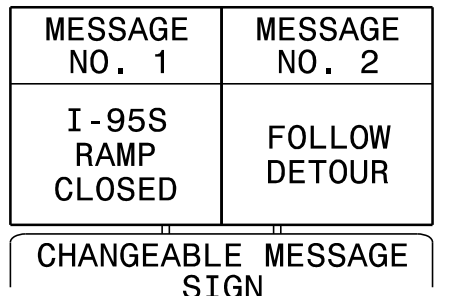
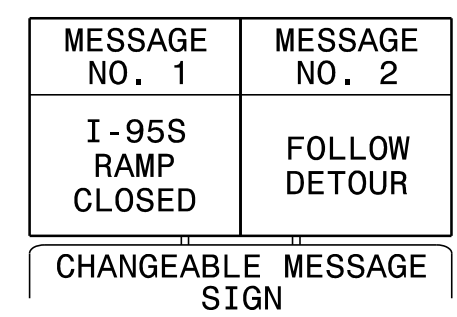
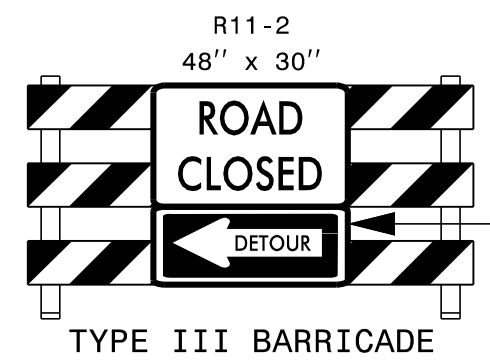


-RPB- OFFSITE DETOUR

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 UNLESS ALL SIGNATURES COMPLETED



SEE RDWY STD 1101.03 SHT 2

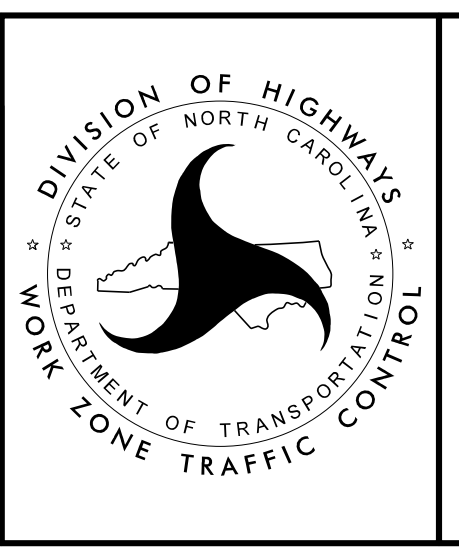


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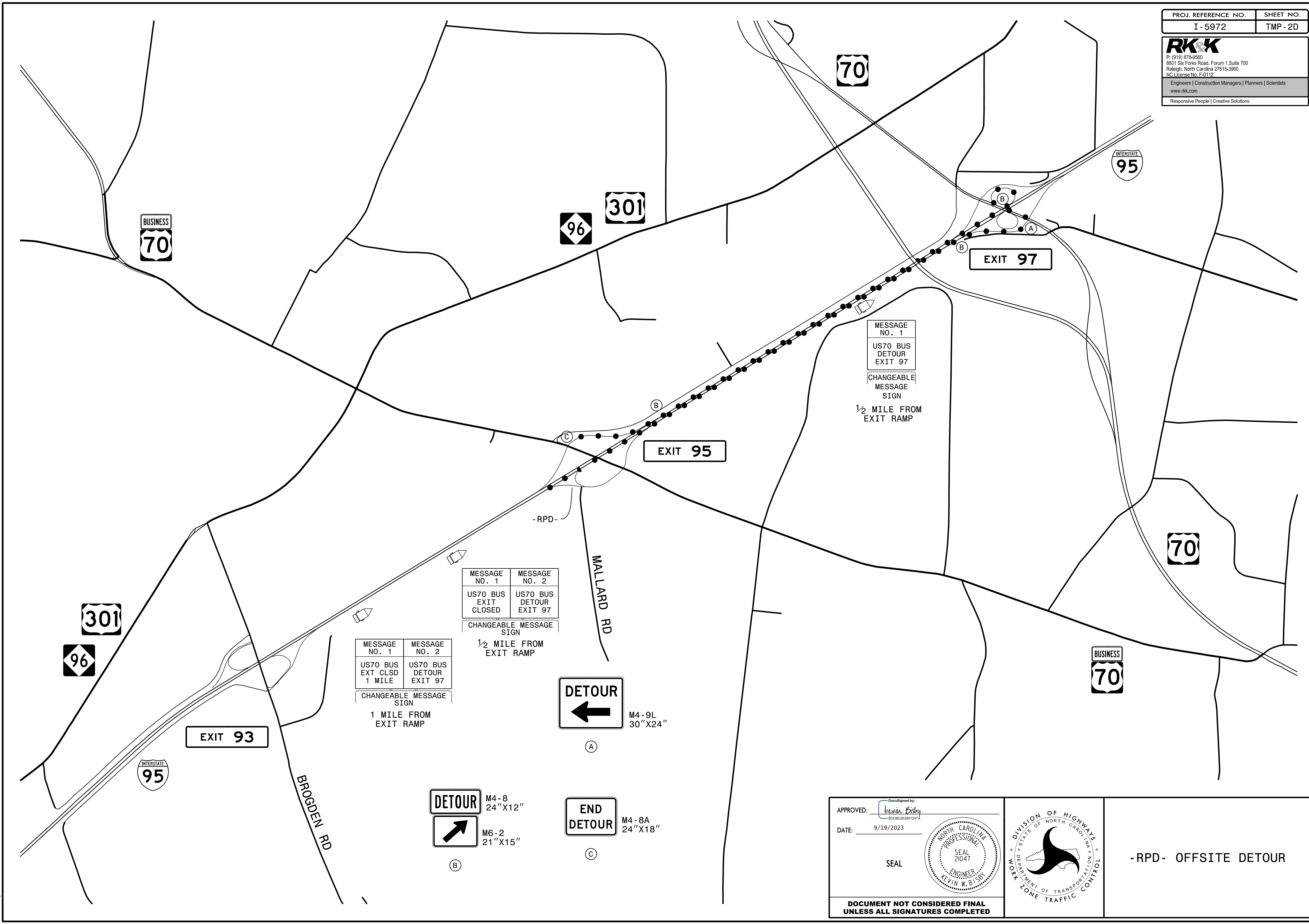
DATE: 9/19/2023

SEAL

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



-RPC- OFFSITE DETOUR




MESSAGE NO. 1
 US70 BUS
 DETOUR
 EXIT 97
 CHANGEABLE
 MESSAGE
 SIGN
 1/2 MILE FROM
 EXIT RAMP


MESSAGE NO. 1	MESSAGE NO. 2
US70 BUS EXIT CLOSED	US70 BUS DETOUR EXIT 97

CHANGEABLE MESSAGE
SIGN
 1/2 MILE FROM
EXIT RAMP


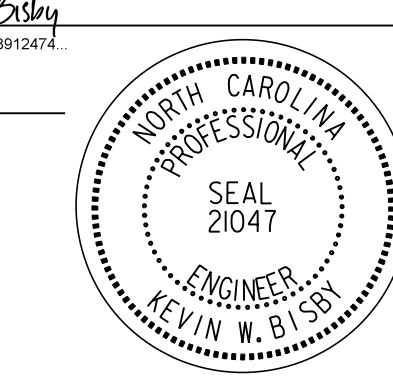
MESSAGE NO. 1	MESSAGE NO. 2
US70 BUS EXT CLSD 1 MILE	US70 BUS DETOUR EXIT 97


CHANGEABLE MESSAGE
SIGN
 1 MILE FROM
EXIT RAMP

DETOUR

 M4-9L
 30"X24"
 (A)

DETOUR

 M4-8
 24"X12"
 M6-2
 21"X15"
 (B)

**END
DETOUR**
 M4-8A
 24"X18"
 (C)

APPROVED: 
 DATE: 9/19/2023
 SEAL

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 UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS
 NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION

 WORK ZONE TRAFFIC CONTROL

-RPD- OFFSITE DETOUR

SIGN NUMBER: SD-1 TYPE: OVERLAY QUANTITY: 1 SIGN WIDTH: 4'-0" HEIGHT: 0'-8" TOTAL AREA: 2.7 Sq.Ft. BORDER TYPE: NONE RECESS: WIDTH: RADII: NO. Z BARS: LENGTH:	BACKG COLOR: Green COPY COLOR: White	DESIGN BY: K. Bisby PROJECT ID: I-5972	CHECKED BY: B. Holden LOCATION: SEE PLAN	DATE: Jun 02, 2021 DIV: 4																																																																																						
	<table border="1"> <thead> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> </thead> <tbody> <tr> <td>AR_Type D</td> <td>2.8</td> <td>1</td> <td>6</td> <td>9</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	SYMBOL	X	Y	WID	HT	AR_Type D	2.8	1	6	9																																																																															
SYMBOL	X	Y	WID	HT																																																																																						
AR_Type D	2.8	1	6	9																																																																																						
USE NOTES: 1, 2 1. Legend (except those that are colored black) shall be direct applied Grade C sheeting. 2. Background shall be Grade C reflective sheeting.		Spacing Factor is 1 unless specified otherwise																																																																																								
LETTER POSITIONS <p style="text-align: center;">Letter spacings are to start of next letter</p> <table border="1"> <thead> <tr> <th></th> <th>W</th> <th>I</th> <th>L</th> <th>S</th> <th>O</th> <th>N</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>Series/Size</th> </tr> <tr> <th></th> <th colspan="19">Text Length</th> </tr> </thead> <tbody> <tr> <td></td> <td>17.8</td> <td>6.2</td> <td>2.4</td> <td>4.2</td> <td>5</td> <td>5.6</td> <td>4.1</td> <td>2.8</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>D 2000</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>27.5</td> </tr> </tbody> </table>						W	I	L	S	O	N															Series/Size		Text Length																				17.8	6.2	2.4	4.2	5	5.6	4.1	2.8													D 2000																						27.5
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PHASE I

STEP 1:
ERECT WORK ZONE ADVANCE WARNING SIGNS ON ALL ROADWAY APPROACHES TO THE PROJECT LIMITS IN ACCORDANCE WITH RDWY STD 1101.01.

STEP 2:
USING RDWY STD 1101.02, PERFORM MILLING/PAVING OPERATIONS ON I-95 NORTH AND SOUTH EXCLUDING THE FINAL LAYER OF SURFACE COURSE. APPLY WORK ZONE PERFORMANCE PAVEMENT MARKINGS (SEE SPECIAL PROVISIONS).

USING RDWY STD 1101.02, **BEGIN** 4' TEMPORARY PAVEMENT CONSTRUCTION TO THE EDGE AND ELEVATION OF THE EXISTING PAVEMENT: (SEE TMP-4 THROUGH 8)

- -L- STA 24+41± TO STA 50+00± RT MED
- -L- STA 62+00± TO STA 86+31± RT MED
- -L- STA 24+05± TO STA 50+00± LT MED
- -L- STA 60+63± TO STA 85+86± LT MED

USING RDWY STD 1101.02, CONSTRUCT TEMPORARY PAVEMENT FOR PORTABLE CONCRETE BARRIER SUPPORT: (SEE TMP-6 THROUGH 6D)

- -L- STA 52+50± TO STA 54+50± RT
- -RPB- STA 13+68± TO STA 22+99± LT
- -RPC- STA 15+53± TO STA 22+32± RT
- -RPD- STA 14+27± TO STA 20+50± LT

USING RDWY STD 1101.02, **BEGIN** CONSTRUCTION TO THE EDGE AND ELEVATION OF THE EXISTING PAVEMENT: (SEE TMP-6, 9 AND 10)

- -Y1- STA 21+70± TO EXISTING RAMP C (RT)
- -Y1- FROM EXISTING RAMP D TO STA 56+50± (RT)

USING RDWY STD 1101.02, **BEGIN** CONSTRUCTION OF -Y2- FROM MALLARD RD TO -Y1- US 70 BUSINESS EXCLUDING THE FINAL LAYER OF SURFACE COURSE. (SEE TMP-10, 11 AND 12)

STEP 3:
USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS, SHIFT I-95 (NORTH AND SOUTH) ONTO THE OUTSIDE SHOULDERS, AND SET PORTABLE CONCRETE BARRIER TO FACILITATE CONSTRUCTION OF THE MEDIAN BENT. (SEE TMP-5, 6, 6A, 6E, 6F AND 7)

AT THE CONTRACTOR'S OPTION, **COMPLETE** 4' TEMPORARY PAVEMENT CONSTRUCTION IN THE I-95 MEDIAN AND SHIFT I-95 TRAFFIC TOWARD THE MEDIAN AS DESCRIBED IN STEP 4.

USING RDWY STD 1101.02 AND 1101.03 SHT 9, SET PORTABLE CONCRETE BARRIER ON RAMPS AND -Y1- US 70 BUSINESS, AND **BEGIN** CONSTRUCTION EXCLUDING THE FINAL LAYER OF SURFACE COURSE: (SEE TMP-6 THROUGH 6D)

- TEMPORARY PAVEMENT AND -TEMPPRB- TO -Y1- US 70 BUSINESS
- -TEMPPRC- STA 15+00± TO -Y1- US 70 BUSINESS INCLUDING -RPC- FROM STA 19+36±
- TEMPORARY PAVEMENT ADJACENT TO EXISTING RAMP D FROM THE BACK OF GORE TO STA 19+00±
- -Y1- FROM EXISTING RAMP C TO EXISTING RAMP D (RT)

STEP 4:
COMPLETE 4' TEMPORARY PAVEMENT CONSTRUCTION IN THE I-95 MEDIAN AS BEGUN IN STEP 2 AND USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS, SHIFT I-95 TRAFFIC TOWARD THE MEDIAN AND SET PORTABLE CONCRETE BARRIER. (SEE TMP-13 THROUGH 17)

STEP 5:
BEHIND BARRIER, **BEGIN** CONSTRUCTION OF I-95 WIDENING EXCLUDING THE FINAL LAYER OF SURFACE COURSE: (SEE TMP-13, 14, 15, 16 AND 17)

- -L- STA 33+39± TO STA 40+79± RT
- -L- STA 27+95± TO STA 38+50± LT
- -L- STA 69+79± TO STA 77+11± LT

USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS AND OPEN -Y2- TO TRAFFIC. CLOSE ACCESS TO MALLARD RD AT THE RAMP D INTERSECTION. (SEE TMP-15, 18, 19 AND 20)

THE CONTRACTOR **MAY BEGIN** CONSTRUCTION OF MALLARD RD FROM -Y3- STA 13+50± TO STA 23+92± EXCLUDING THE FINAL LAYER OF SURFACE COURSE WHEN -Y2- IS OPEN TO TRAFFIC AND MALLARD RD IS CLOSED AT RAMP D. CONSTRUCT SHALL BE COMPLETED BEFORE BEGINNING PHASE IV STEP 5. (SEE TMP-15 AND 20)

STEP 6:
REVISE ADVANCE GUIDE SIGNS ON US 70 BUSINESS WEST AND CLOSE RAMP A TO TRAFFIC. **RAMP A TRAFFIC WILL USE THE EXISTING LOOP D TO ACCESS I-95N.** SET PORTABLE CONCRETE BARRIER ON I-95N AND CONSTRUCT -RPA- AND I-95N WIDENING FROM -L- STA 67+53± TO STA 82+41± EXCLUDING THE FINAL LAYER OF SURFACE COURSE. (SEE TMP-15, 16, 17 AND 18)

PHASE II

STEP 1:
USING RDWY STD 1101.02, CONSTRUCT TEMPORARY SIGNAL AT THE US 70 BUSINESS/-RPA-/-RPD- INTERSECTION. APPLY PAVEMENT MARKINGS, REMOVE PORTABLE CONCRETE BARRIER ALONG I-95N, REVISE ADVANCE GUIDE SIGNS ON US 70 BUSINESS AND OPEN RAMP A TO TRAFFIC. SIMULTANEOUSLY CLOSE THE RIGHT TURN FROM US 70 BUSINESS ONTO THE EXISTING LOOP D. (SEE TMP-21, 21A, 21B, 22 AND 24)

STEP 2:
USING RDWY STD 1101.02, REMOVE MONOLITHIC ISLANDS ON RAMPS B, C AND D. REPAIR PAVEMENT FLUSH WITH THE EXISTING PAVEMENT. (SEE TMP-21 AND 23)

EXTEND PORTABLE CONCRETE BARRIER ALONG RAMP D AND TIE IN THE TEMPORARY PAVEMENT TO THE EXISTING LOOP D PAVEMENT. (SEE TMP-21)

COMPLETE CONSTRUCTION OF US 70 BUSINESS AS BEGUN IN PHASE I STEPS 2 AND 3.

STEP 3:
IN A CONTINUOUS OPERATION USING RDWY STD 1101.02 AND RAMP CLOSURE, APPLY PAVEMENT MARKINGS, DIRECT RAMP D TRAFFIC ONTO THE TEMPORARY PAVEMENT, REVISE THE TEMPORARY SIGNAL AND SET PORTABLE CONCRETE BARRIER ALONG THE RIGHT SIDE OF RAMP D. BEHIND BARRIER, **BEGIN** CONSTRUCTION OF RAMP D EXCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -RPD- STA 14+35± TO STA 28+50± AFTER THE TRAFFIC SHIFT IS COMPLETE. (SEE TMP-2D, 25, 25A AND 25B)

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USING RDWY STD 1101.02, PAVE US 70 BUSINESS EXCLUDING THE FINAL LAYER OF SURFACE COURSE: (SEE TMP-25, 25B, 26 AND 27)

- -Y1- STA 21+70± TO STA 30+75±
- -Y1- STA 44+50± TO STA 56+50±

STEP 4:

IN A CONTINUOUS OPERATION USING RDWY STD 1101.02 AND RAMP CLOSURES, PAVE -Y1 STA 30+75± TO STA 32+36± AND STA 40+00± TO STA 44+50±, APPLY PAVEMENT MARKINGS, SET PORTABLE CONCRETE BARRIER AND SHIFT US 70 BUSINESS, RAMP B AND RAMP C INTO THE PATTERN SHOWN. (SEE TMP-2B, 2C AND 28 THROUGH 31)

STEP 5:

USING RDWY STD 1101.02 AND BEHIND BARRIER, CONSTRUCT US 70 BUSINESS EXCLUDING THE FINAL LAYER OF SURFACE COURSE TO ACCOMMODATE TURN LANES FROM -Y1- STA 32+36± TO STA 42+42±. (SEE TMP-29 AND 29A)

BEHIND BARRIER, **BEGIN** CONSTRUCTION EXCLUDING THE FINAL LAYER OF SURFACE COURSE: (SEE TMP-29 AND 29A)

- -RPB- STA 15+00± TO STA 21+54±
- -RPC- STA 14+29± TO STA 19+36±

PHASE III

STEP 1:

USING RDWY STD 1101.02, RESET PORTABLE CONCRETE BARRIER, REVISE PAVEMENT MARKINGS AND TEMPORARY SIGNAL AND OPEN TURN LANES AT THE US 70 BUSINESS RAMP INTERSECTIONS. (SEE TMP-32 THROUGH 33)

THE CONTRACTOR MAY PROCEED WITH STEP 2A PRIOR TO THE COMPLETION OF -RPB- CONSTRUCTION AND REMOVAL OF THE EXISTING RAMPS. -RPB- CONSTRUCTION AND REMOVAL OF THE EXISTING RAMPS SHALL BE COMPLETE BEFORE STEP 3.

STEP 2:

USING RDWY STD 1101.02 AND BEHIND BARRIER, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE: (SEE TMP-32 AND 32A)

- -Y1- STA 32+36± TO STA 42+42±
 - ONCE THE MEDIAN BENT FOR STAGE 2 OF THE BRIDGE IS COMPLETE: (SEE TMP-32 AND 32A)
 1. PERFORM MEDIAN PAVING FROM -L- STA 50+00± TO STA 62+00± RT AND STA 50+00± TO STA 60+63± TO THE EDGE AND ELEVATION OF THE EXISTING PAVEMENT.
 2. USING RDWY STD 1101.02, REMOVE/RESET PORTABLE CONCRETE BARRIER, APPLY PAVEMENT MARKINGS, AND SHIFT I-95 TRAFFIC TOWARD THE MEDIAN. **BEGIN** I-95 OUTSIDE WIDENING EXCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -L- STA 44+90± TO STA 65+07± LT AND -L- STA 45+70± TO STA 67+53± RT ONCE THE TRAFFIC SHIFT IS COMPLETE.
- -RPB- STA 21+54± TO US 70 BUSINESS AND EXISTING RAMP REMOVAL
- EXISTING RAMP C RAMP REMOVAL

COMPLETE I-95 OUTSIDE WIDENING AS BEGUN IN PHASE I STEP 5.

COMPLETE THE STEPS 3 AND 4 WITHIN 5 CALENDAR DAYS FOR EACH RAMP USING THE FOLLOWING SEQUENCE. **SEE SPECIAL PROVISIONS FOR INTERMEDIATE CONTRACT TIME.** THE CONTRACTOR MAY CONSTRUCT RAMPS IN ANY ORDER, AND SHALL NOT CLOSE RAMPS CONCURRENTLY.

STEP 3:

USING RDWY STD 1101.02, RAMP CLOSURES AND BEHIND BARRIER, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE: (SEE TMP-2B, 2C, 2D AND 34 THROUGH 37)

1. -L- STA 38+50± TO STA 44+90±; -RPC- STA 10+00± TO STA 14+29±; -RPC- STA 19+36± TO US 70 BUSINESS
2. -L- STA 40+79± TO STA 45+70±; -RPD- STA 10+00± TO STA 14+35±; -RPD- STA 21+00± TO US 70 BUSINESS
3. -L- STA 65+07± TO STA 69+79±; -RPB- STA 10+00± TO STA 15+00±; -RPB- STA 21+54± TO US 70 BUSINESS

STEP 4:

USING RDWY STD 1101.02 AND BEHIND PORTABLE CONCRETE BARRIER: (SEE TMP-38 THROUGH 39C)

1. APPLY PAVEMENT MARKINGS, SET/RESET PORTABLE CONCRETE BARRIER, AND OPEN RAMP C TO TRAFFIC.
2. APPLY PAVEMENT MARKINGS, SET/RESET PORTABLE CONCRETE BARRIER, REVISE THE TEMPORARY SIGNAL, AND OPEN RAMP D TO TRAFFIC.
3. APPLY PAVEMENT MARKINGS, SET/RESET PORTABLE CONCRETE BARRIER, AND OPEN RAMP B TO TRAFFIC.

PHASE IV

STEP 1:

COMPLETE OUTSIDE WIDENING ON I-95 AS BEGUN IN PHASE III STEP 2.

COMPLETE CONSTRUCTION OF US 70 BUSINESS AS BEGUN IN PHASE III STEP 2.

COMPLETE CONSTRUCTION OF MALLARD RD AS BEGUN IN PHASE I STEP 6.

BEHIND BARRIER, REMOVE TEMPORARY RAMP PAVEMENT. (SEE TMP-40)

BEHIND BARRIER CONSTRUCT LEFT SIDE OF RAMP B EXCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -RPB- STA 15+00± TO STA 21+54±. (SEE TMP-40)

STEP 2:

USING RDWY STD 1101.02, REMOVE PORTABLE CONCRETE BARRIER, APPLY PAVEMENT MARKINGS, CONSTRUCT FINAL SIGNALS, AND DIRECT US 70 BUSINESS TRAFFIC INTO THE FINAL PATTERN. ONCE TRAFFIC HAS BEEN SHIFTED TO THE FINAL PATTERN, USING RDWY STD 1101.02, CONSTRUCT MONOLITHIC ISLANDS ON US 70 BUSINESS. (SEE TMP-40 THROUGH 42)

STEP 3:

USING RDWY STD 1101.02, REMOVE PORTABLE CONCRETE BARRIER, APPLY PAVEMENT MARKINGS AND DIRECT I-95 AND RAMPS INTO THE FINAL PATTERN. (SEE TMP-43 THROUGH 49)

STEP 4:

USING RDWY STD 1101.02, REMOVE I-95 TEMPORARY MEDIAN PAVEMENT. (SEE TMP-43 THROUGH 48)

STEP 5:

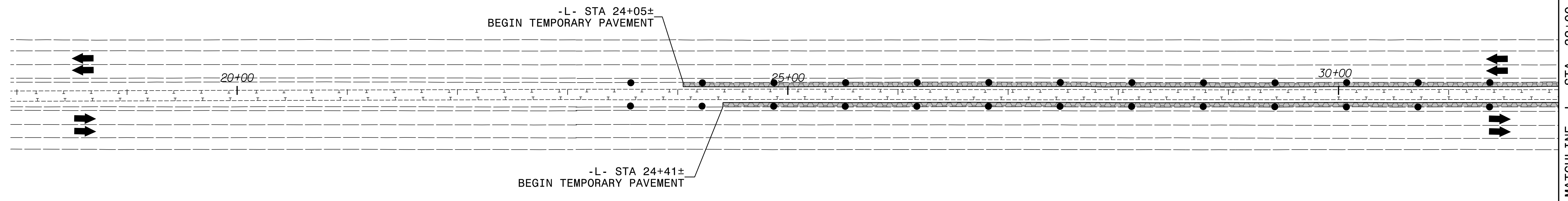
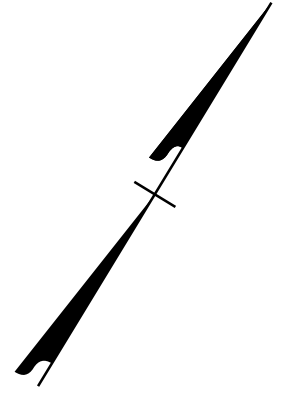
USING RDWY STD 1101.02, PAVE THE FINAL LAYER OF SURFACE COURSE ON I-95, US 70 BUSINESS, -Y2- AND MALLARD RD. APPLY FINAL PAVEMENT MARKINGS IN ACCORDANCE WITH THE FINAL PAVEMENT MARKING PLAN.

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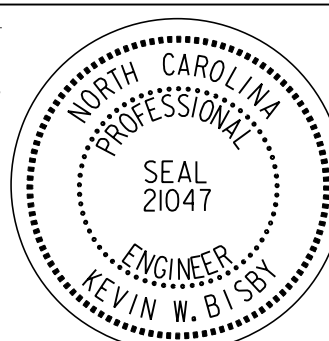
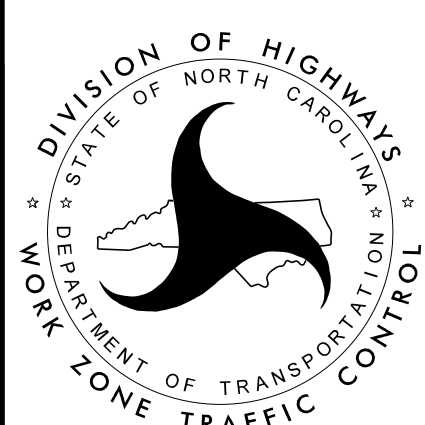
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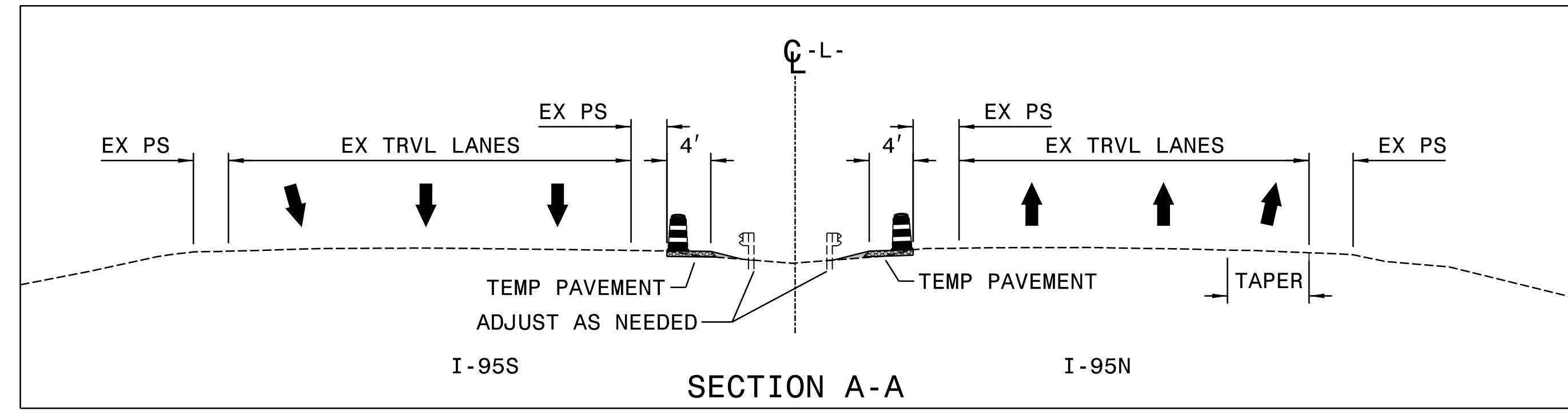
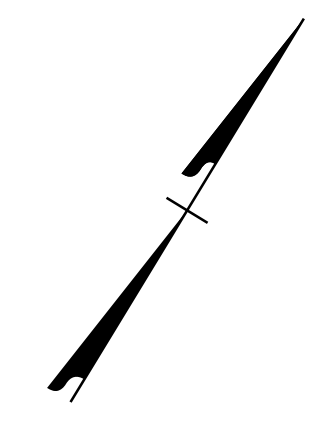
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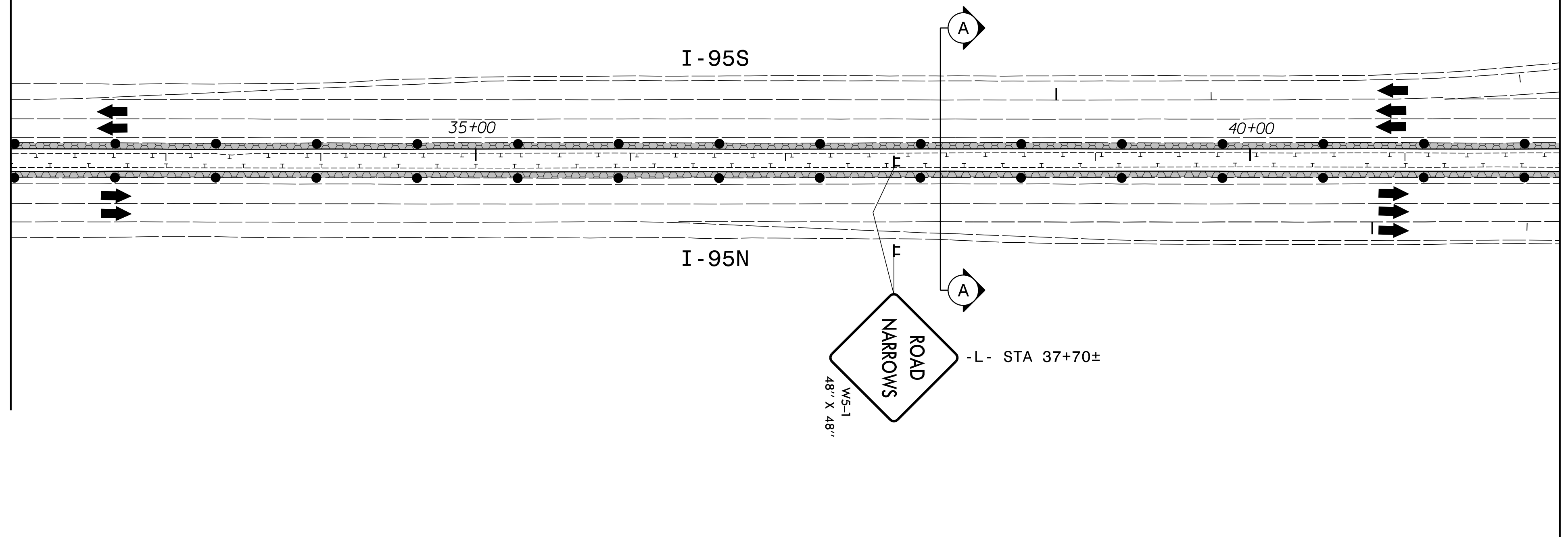


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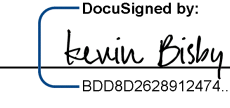


MATCHLINE - L- STA. 32+00 SEE TMP-4

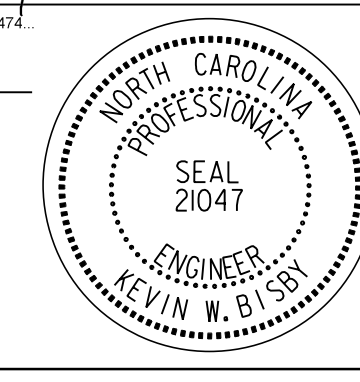
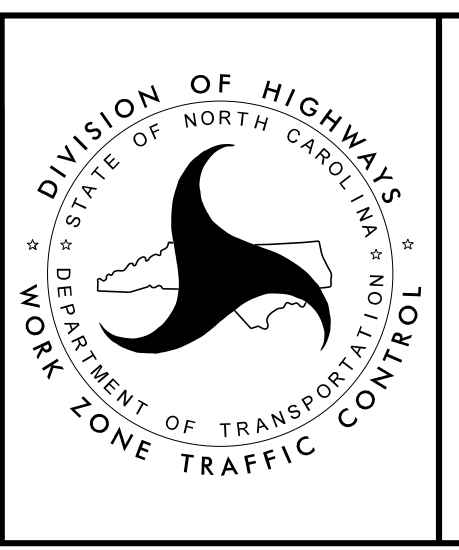


MATCHLINE - L- STA. 42+00 SEE TMP-6

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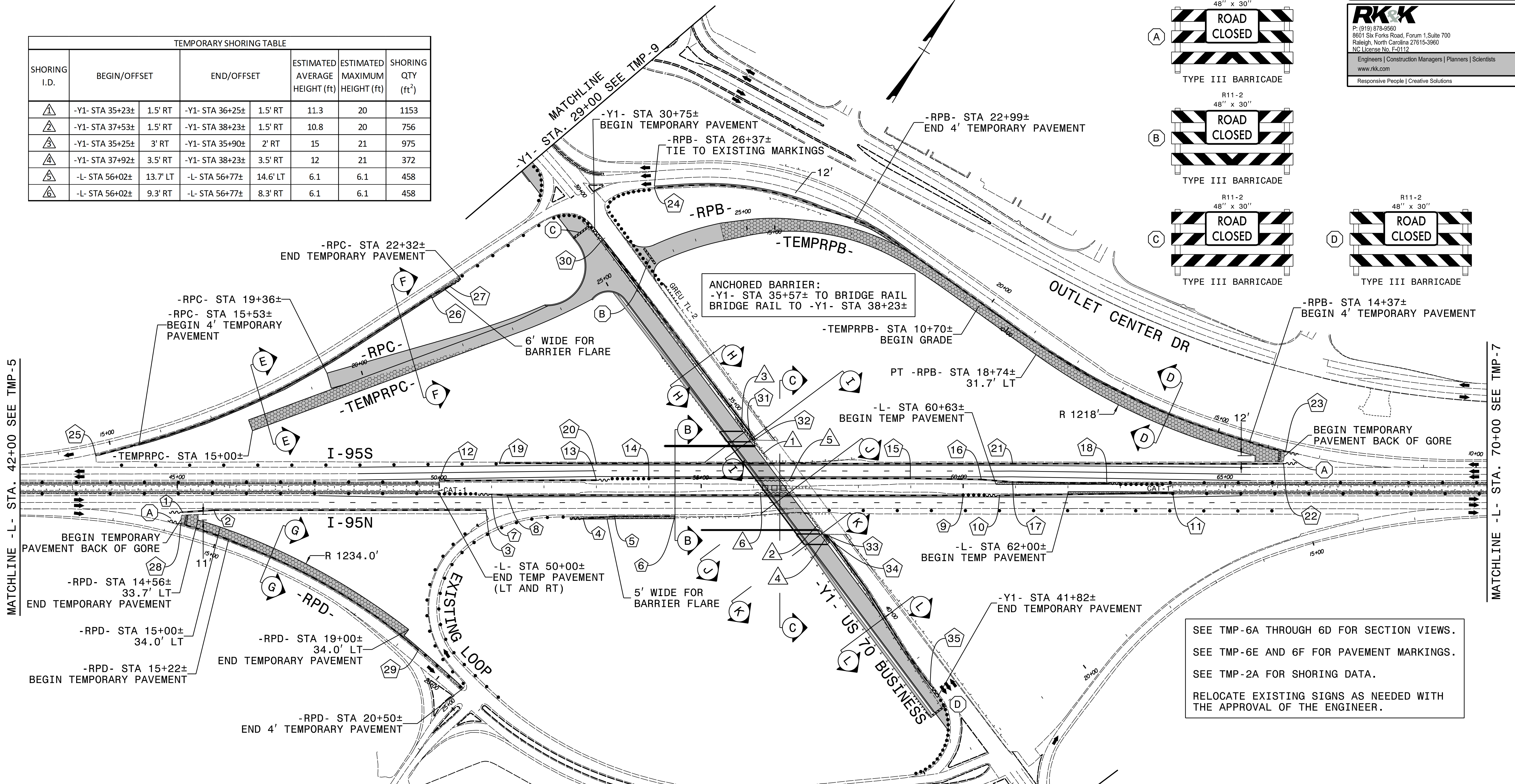
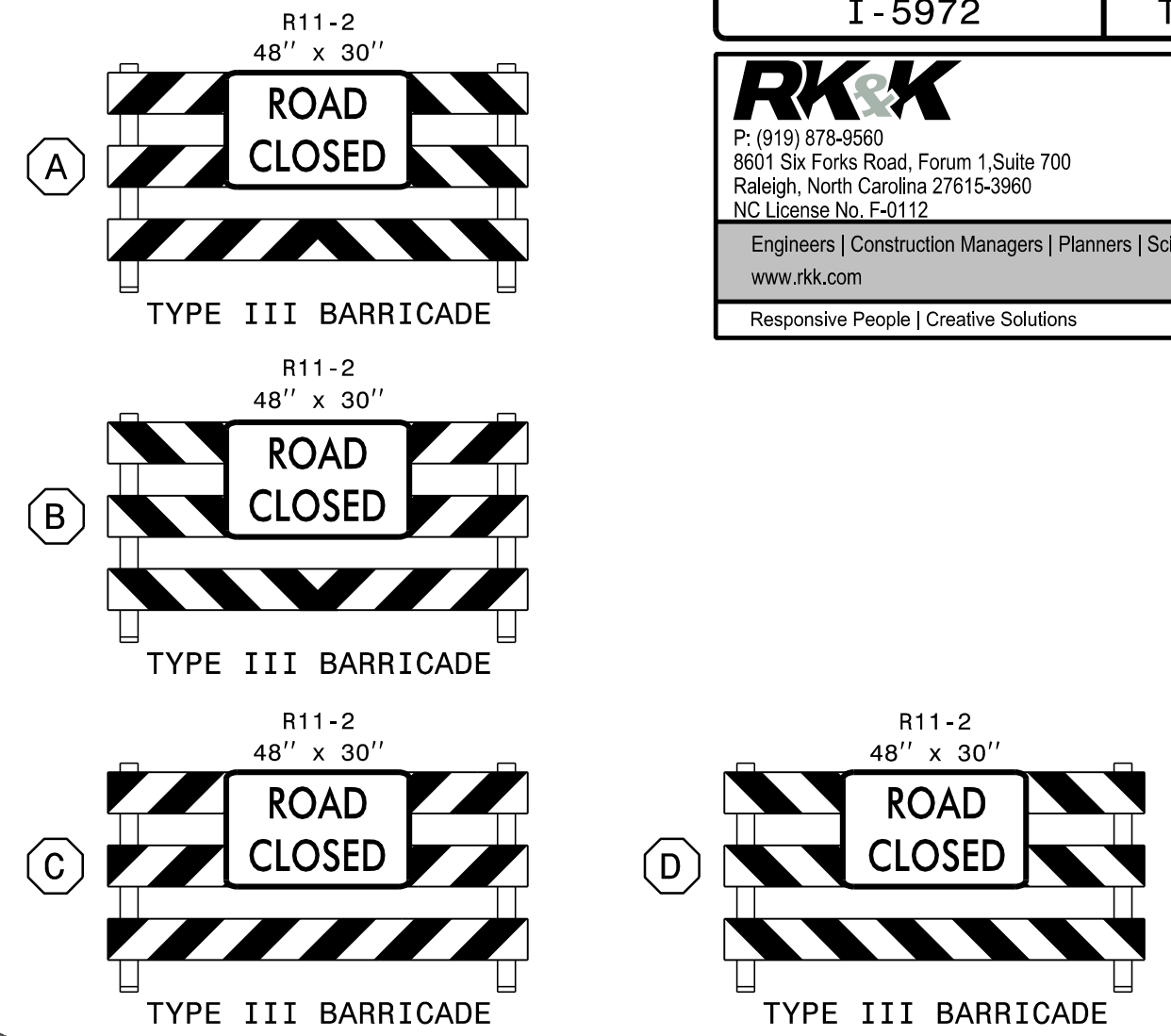



PHASE I - STEPS 2 AND 3

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TEMPORARY SHORING TABLE						
SHORING I.D.	BEGIN/OFFSET	END/OFFSET	ESTIMATED AVERAGE HEIGHT (ft)	ESTIMATED MAXIMUM HEIGHT (ft)	SHORING QTY (ft ²)	
△	-Y1- STA 35+23± 1.5' RT	-Y1- STA 36+25± 1.5' RT	11.3	20	1153	
△	-Y1- STA 37+53± 1.5' RT	-Y1- STA 38+23± 1.5' RT	10.8	20	756	
△	-Y1- STA 35+25± 3' RT	-Y1- STA 35+90± 2' RT	15	21	975	
△	-Y1- STA 37+92± 3.5' RT	-Y1- STA 38+23± 3.5' RT	12	21	372	
△	-L- STA 56+02± 13.7' LT	-L- STA 56+77± 14.6' LT	6.1	6.1	458	
△	-L- STA 56+02± 9.3' RT	-L- STA 56+77± 8.3' RT	6.1	6.1	458	



SEE TMP-6A THROUGH 6D FOR SECTION VIEWS.
 SEE TMP-6E AND 6F FOR PAVEMENT MARKINGS.
 SEE TMP-2A FOR SHORING DATA.
 RELOCATE EXISTING SIGNS AS NEEDED WITH THE APPROVAL OF THE ENGINEER.

POSITIVE PROTECTION LOCATIONS		
1 -L- STA 45+10± 6' OFFSET FROM TRAVEL LANE	13 -L- STA 53+00± 6' OFFSET FROM TRAVEL LANE	25 -RPC- STA 14+69± 2' OFFSET FROM TRAVEL LANE
2 -L- STA 45+70± 2' OFFSET FROM TRAVEL LANE	14 -L- STA 54+00± 2' OFFSET FROM TRAVEL LANE	26 -RPC- STA 21+67± 2' OFFSET FROM TRAVEL LANE
3 -L- STA 50+90± 2' OFFSET FROM TRAVEL LANE	15 -L- STA 59+00± 2' OFFSET FROM TRAVEL LANE	27 -RPC- STA 22+08± 6' OFFSET FROM TRAVEL LANE
4 -L- STA 52+75± 6' OFFSET FROM TRAVEL LANE	16 -L- STA 60+35± 4' OFFSET FROM TRAVEL LANE	28 -RPD- STA 14+30± 2' OFFSET FROM TRAVEL LANE
5 -L- STA 53+35± 2' OFFSET FROM TRAVEL LANE	17 -L- STA 60+94± 9' OFFSET FROM TRAVEL LANE	29 -RPD- STA 19+38± 2' OFFSET FROM TRAVEL LANE
6 -L- STA 54+50± 2' OFFSET FROM TRAVEL LANE	18 -L- STA 62+74± 9' OFFSET FROM TRAVEL LANE	30 -Y1- STA 31+00± 2' OFFSET FROM TRAVEL LANE
7 -L- STA 51+00± 4' OFFSET FROM TRAVEL LANE	19 -L- STA 51+15± 4' OFFSET FROM TRAVEL LANE	31 -Y1- STA 35+60± 2' OFFSET FROM TRAVEL LANE
8 -L- STA 51+30± 2' OFFSET FROM TRAVEL LANE	20 -L- STA 53+00± 2' OFFSET FROM TRAVEL LANE	32 -Y1- STA 35+80± CONNECT TO BRIDGE RAIL
9 -L- STA 60+00± 2' OFFSET FROM TRAVEL LANE	21 -L- STA 60+94± 2' OFFSET FROM TRAVEL LANE	33 -Y1- STA 38+05± CONNECT TO BRIDGE RAIL
10 -L- STA 60+70± 2' OFFSET FROM TRAVEL LANE	22 -L- STA 66+11± 6' OFFSET FROM TRAVEL LANE	34 -Y1- STA 38+25± 2' OFFSET FROM TRAVEL LANE
11 -L- STA 64+00± 7' OFFSET FROM TRAVEL LANE	23 -RPB- STA 13+66± 2' OFFSET FROM TRAVEL LANE	35 -Y1- STA 41+55± 2' OFFSET FROM TRAVEL LANE
12 -L- STA 50+00± 2.5' OFFSET FROM TRAVEL LANE	24 -RPB- STA 26+38± 2' OFFSET FROM TRAVEL LANE	

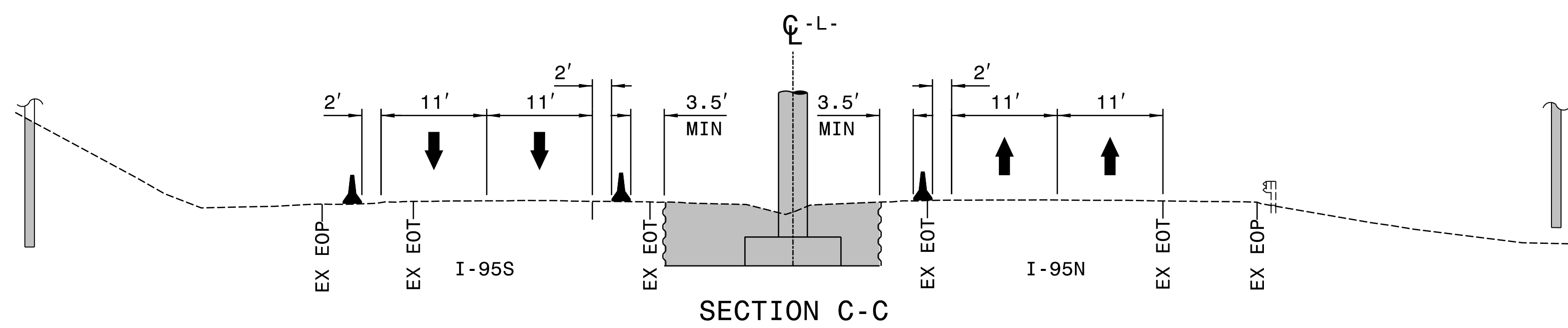
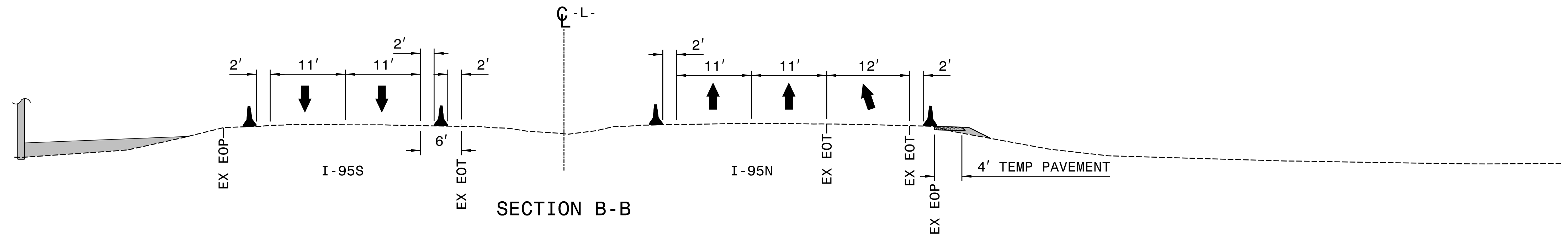
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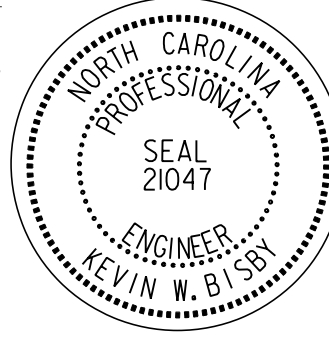
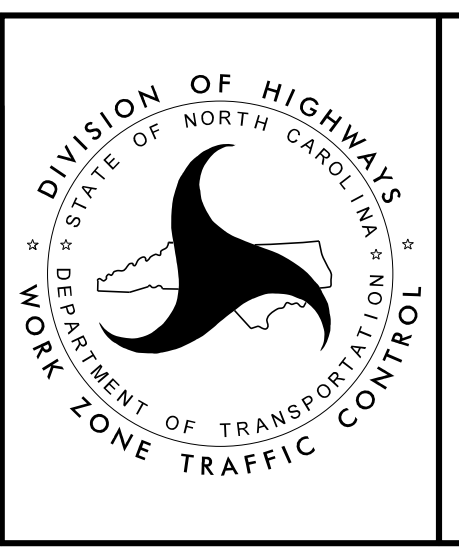


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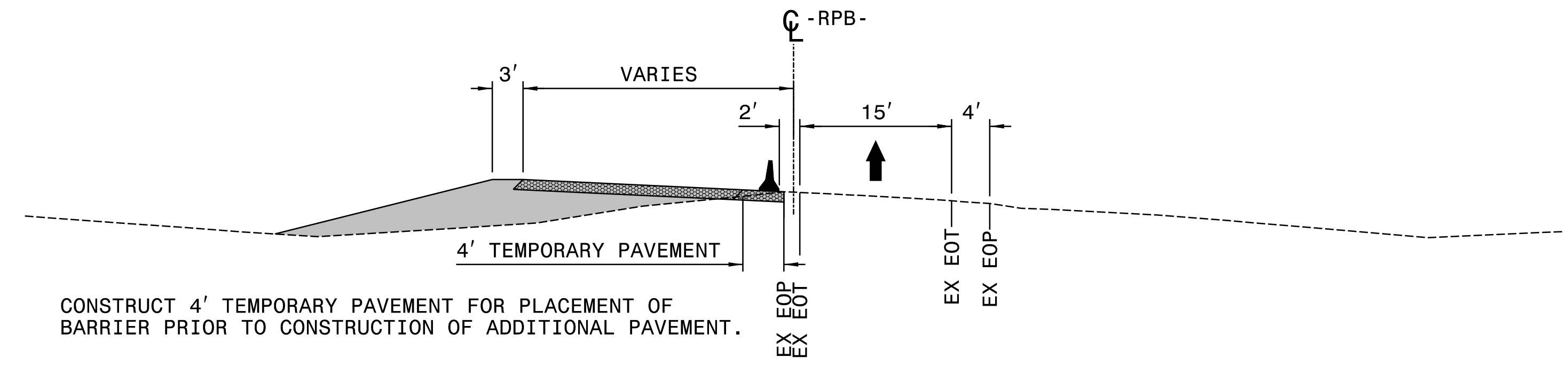
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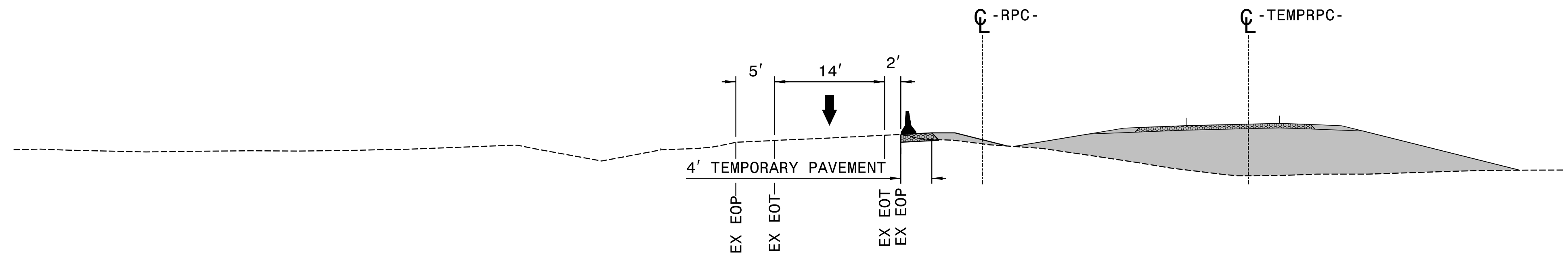



PHASE I - STEPS 2 AND 3

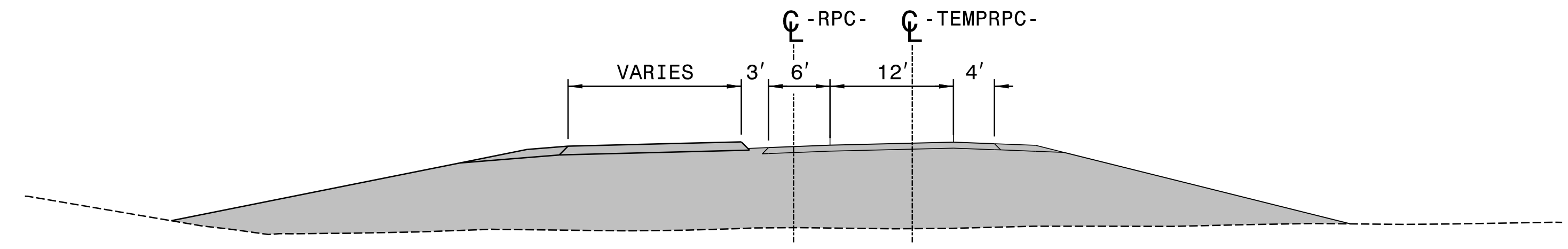
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SECTION D-D



SECTION E-E



SECTION F-F

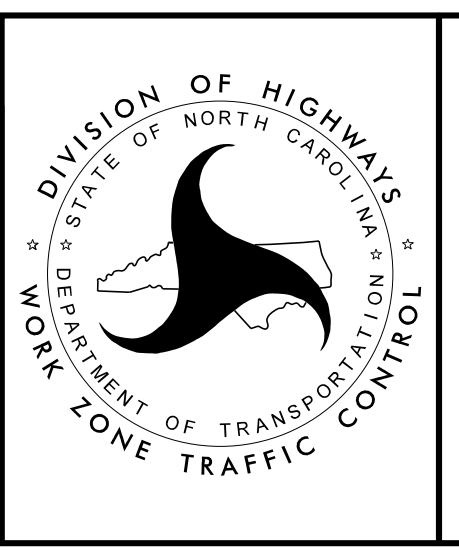
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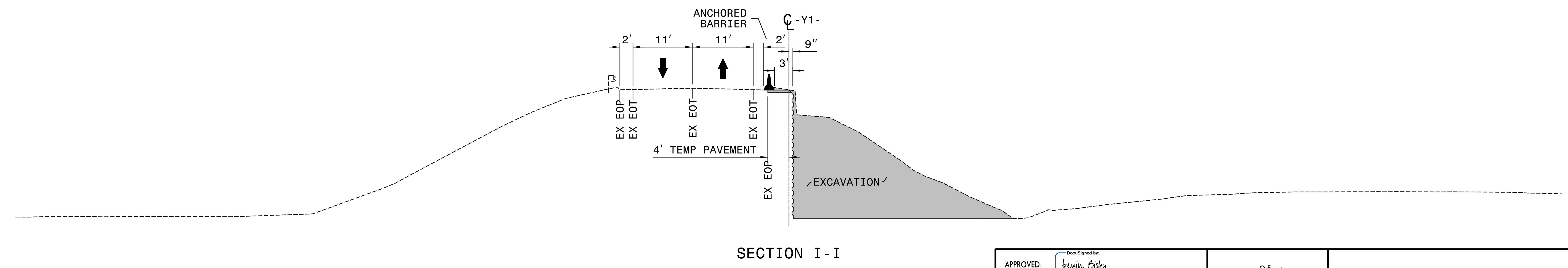
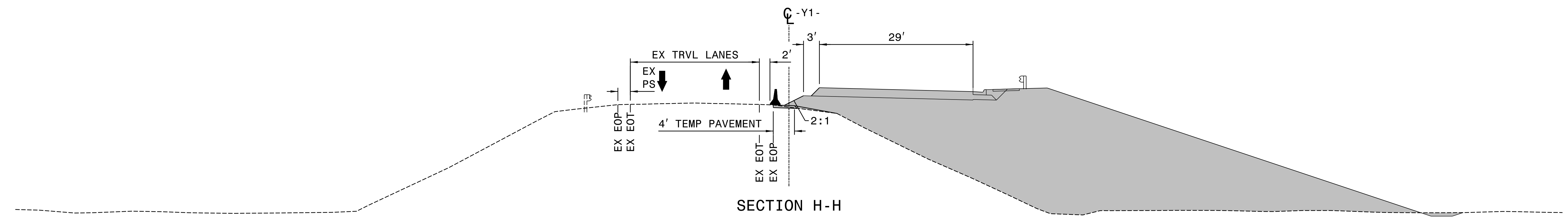
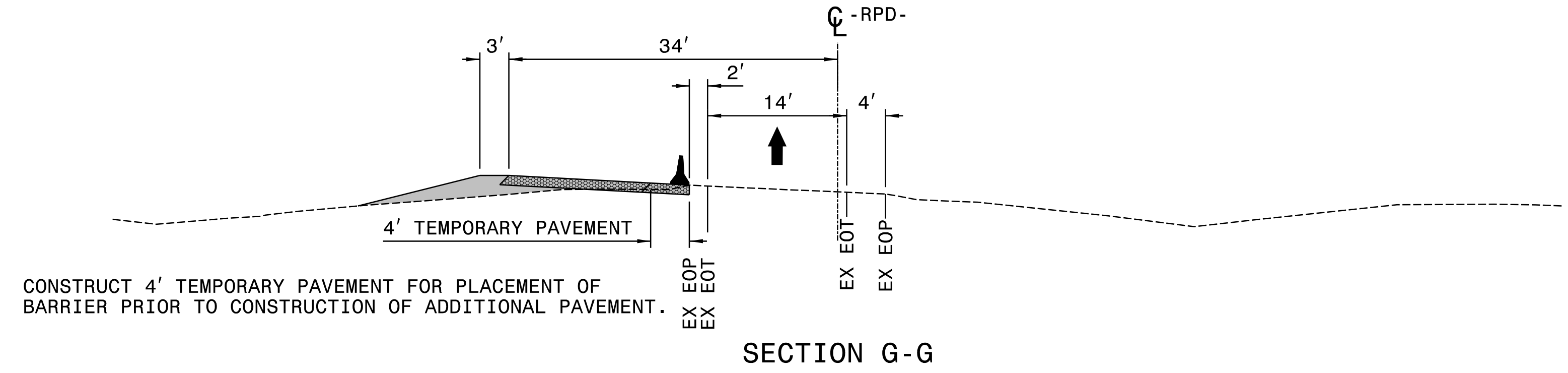
DATE: 9/19/2023

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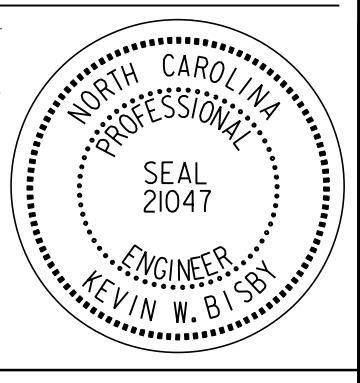
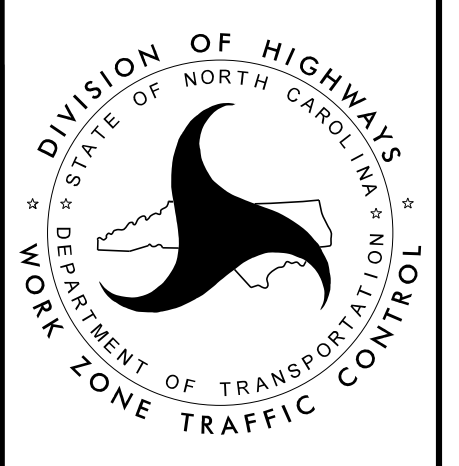
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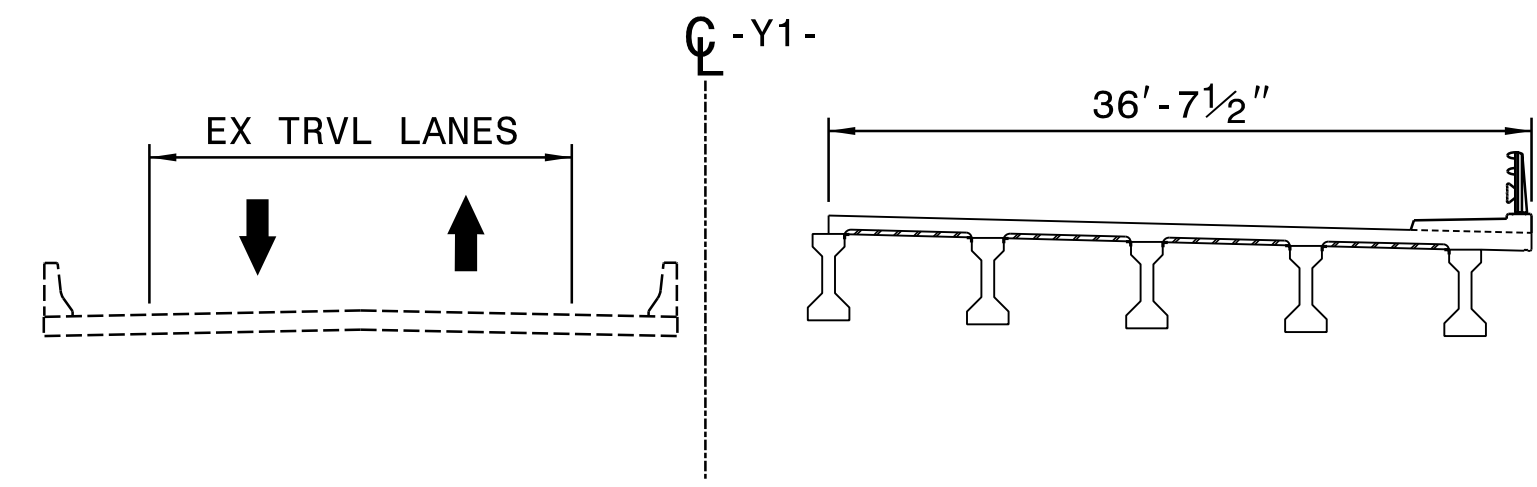


PHASE I - STEPS 2 AND 3

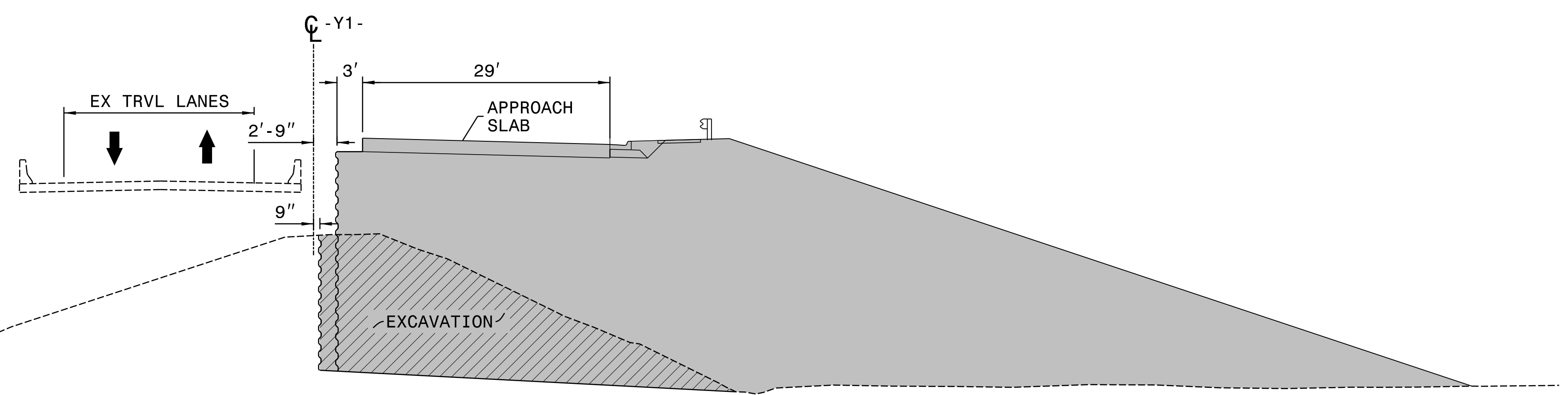


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 R015by

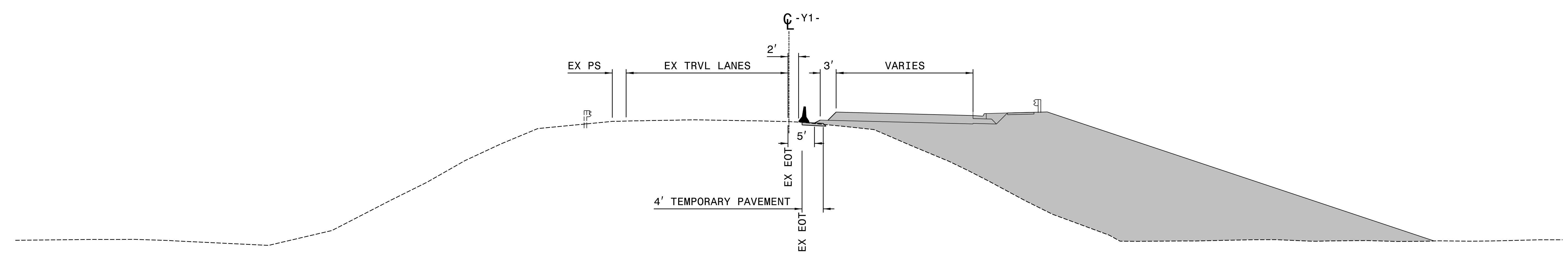
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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



SECTION J-J




SECTION K-K

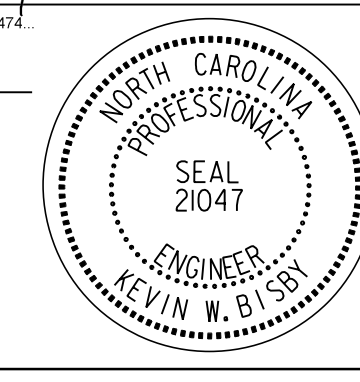
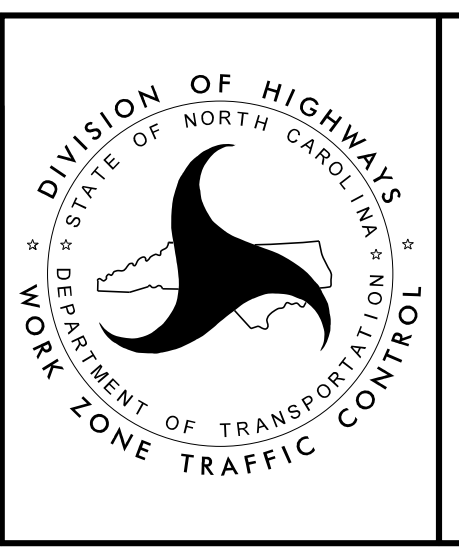


SECTION L-L

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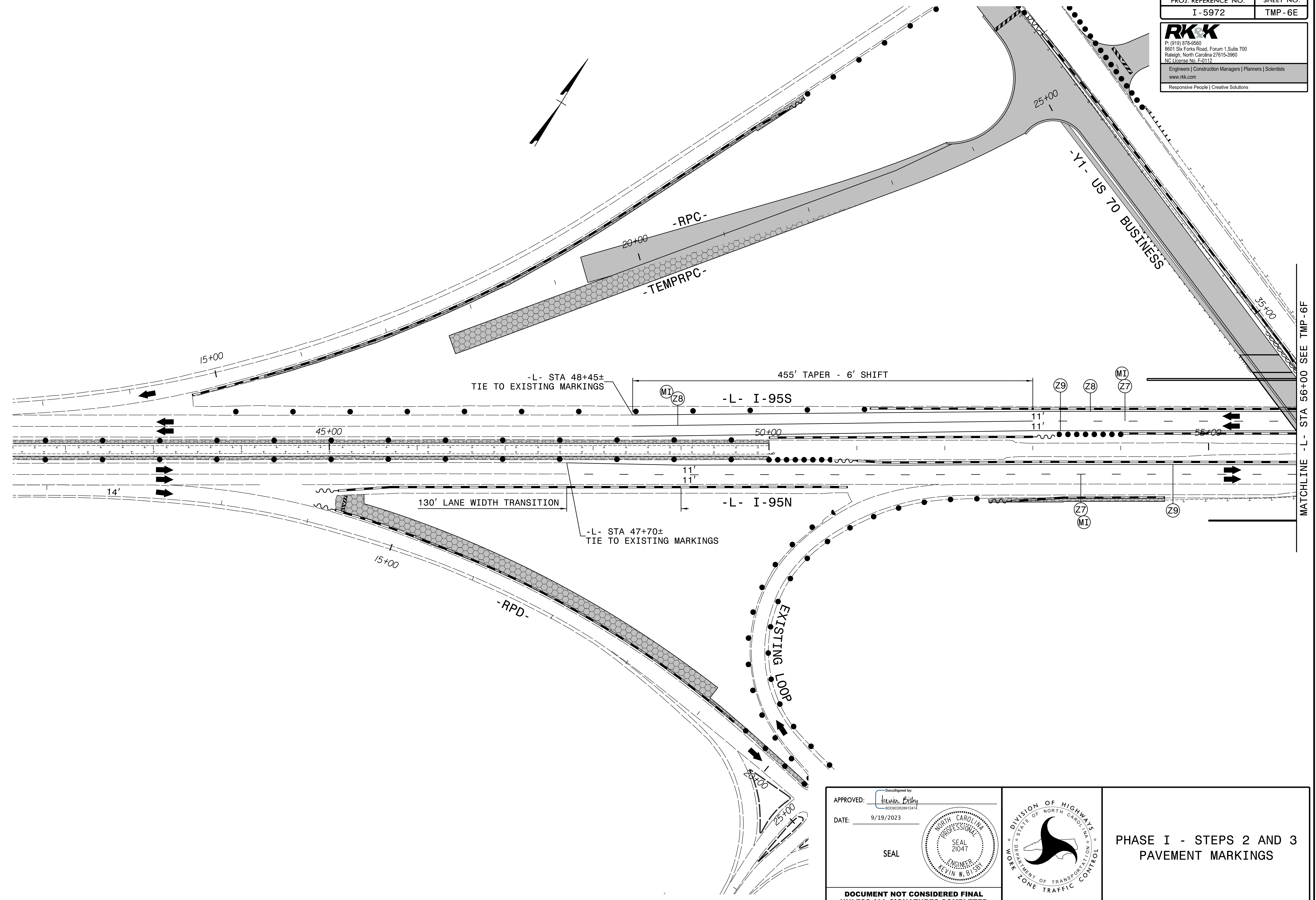
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 DATE: 9/19/2023

SEAL

PHASE I - STEPS 2 AND 3

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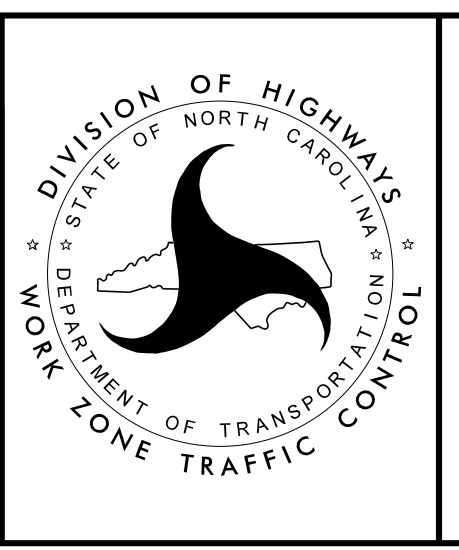
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 R01587

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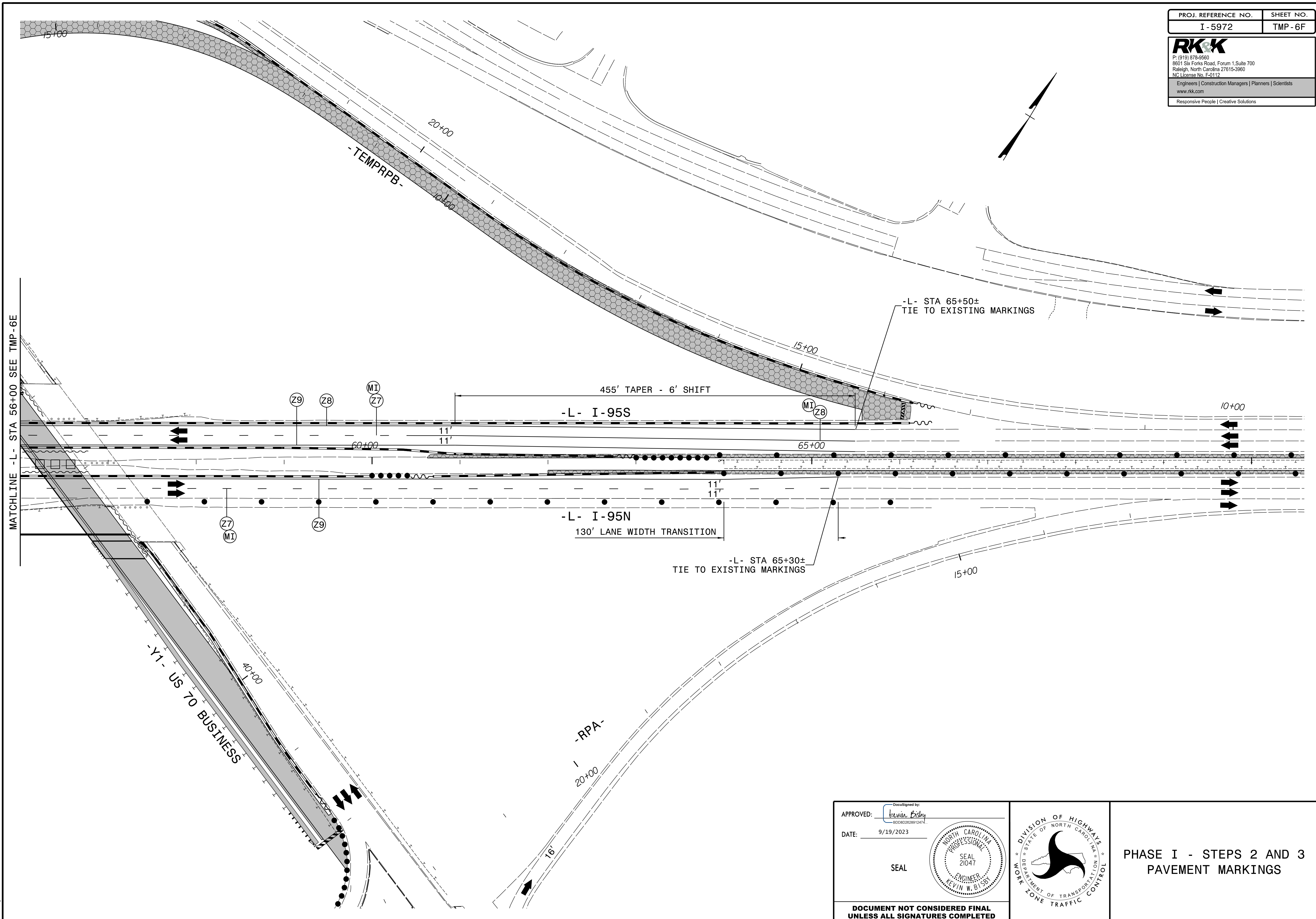
DATE: 9/19/2023

SEAL



**PHASE I - STEPS 2 AND 3
 PAVEMENT MARKINGS**

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MATCHLINE - L - STA 56+00 SEE TMP - 6E

-Y1- US 70 BUSINESS


-RPA-

-TEMPRPB-

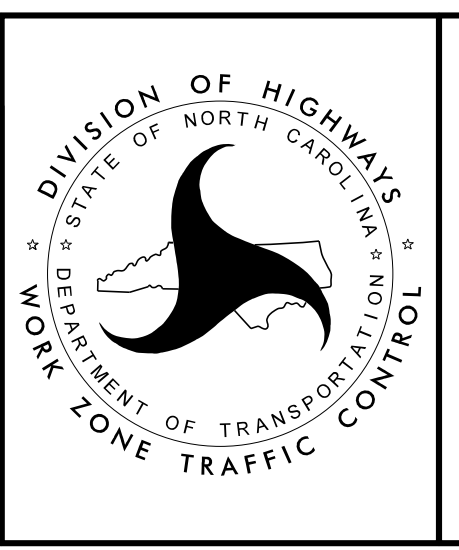
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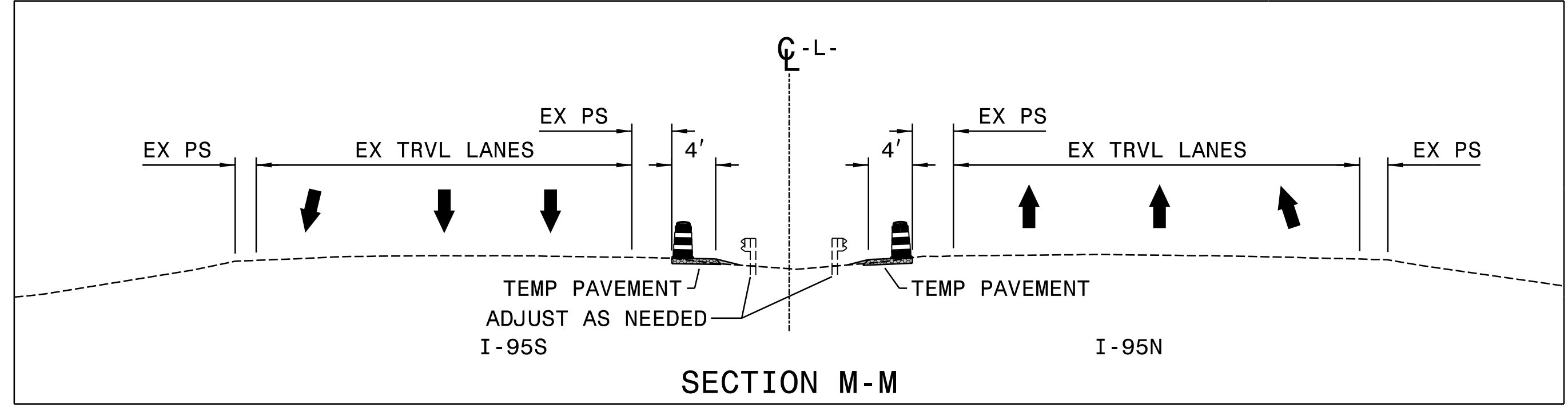
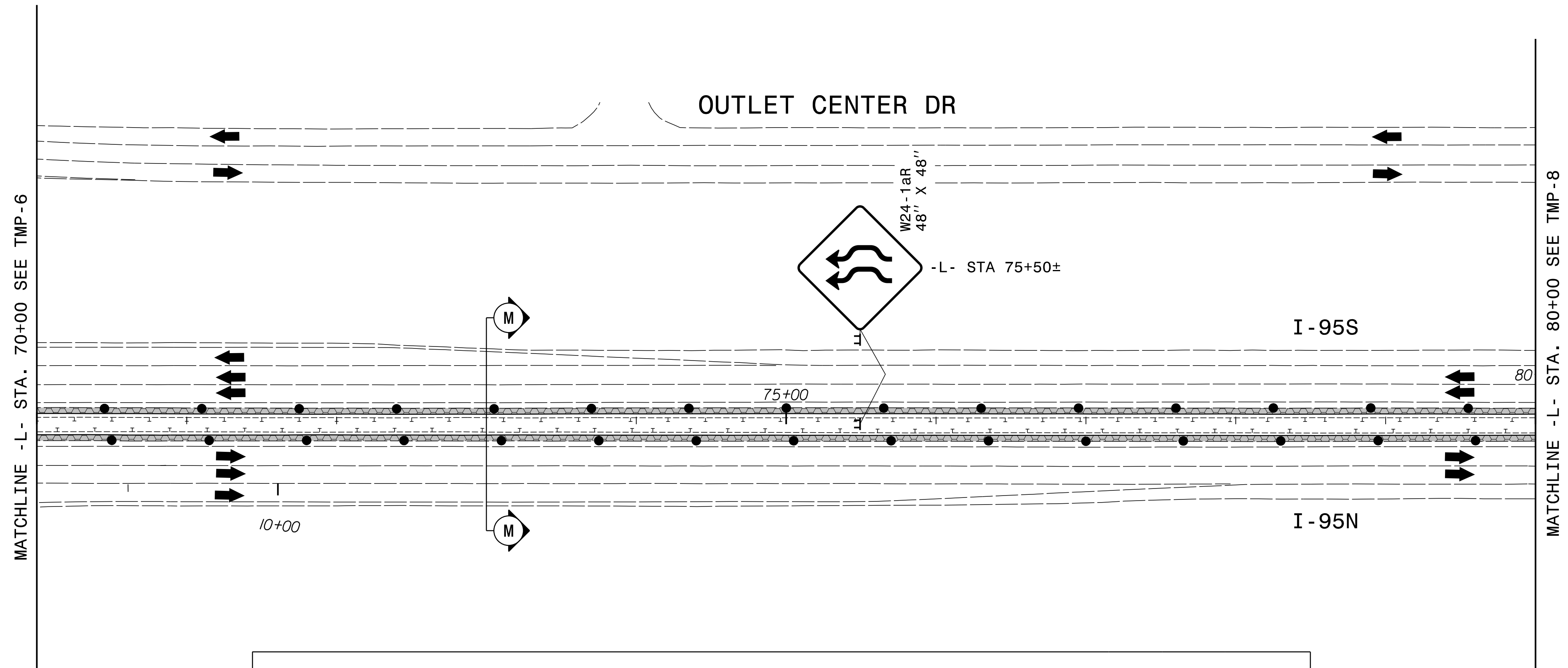
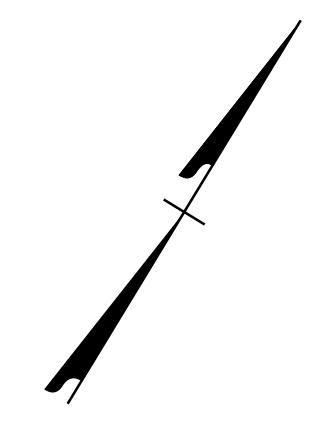
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**PHASE I - STEPS 2 AND 3
PAVEMENT MARKINGS**

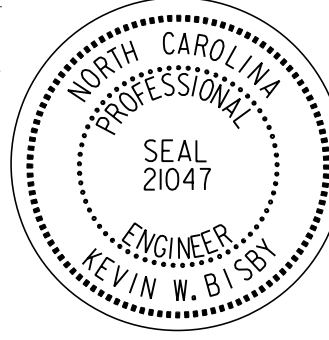
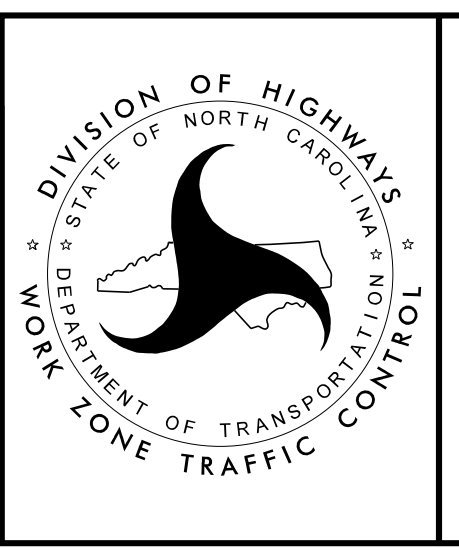


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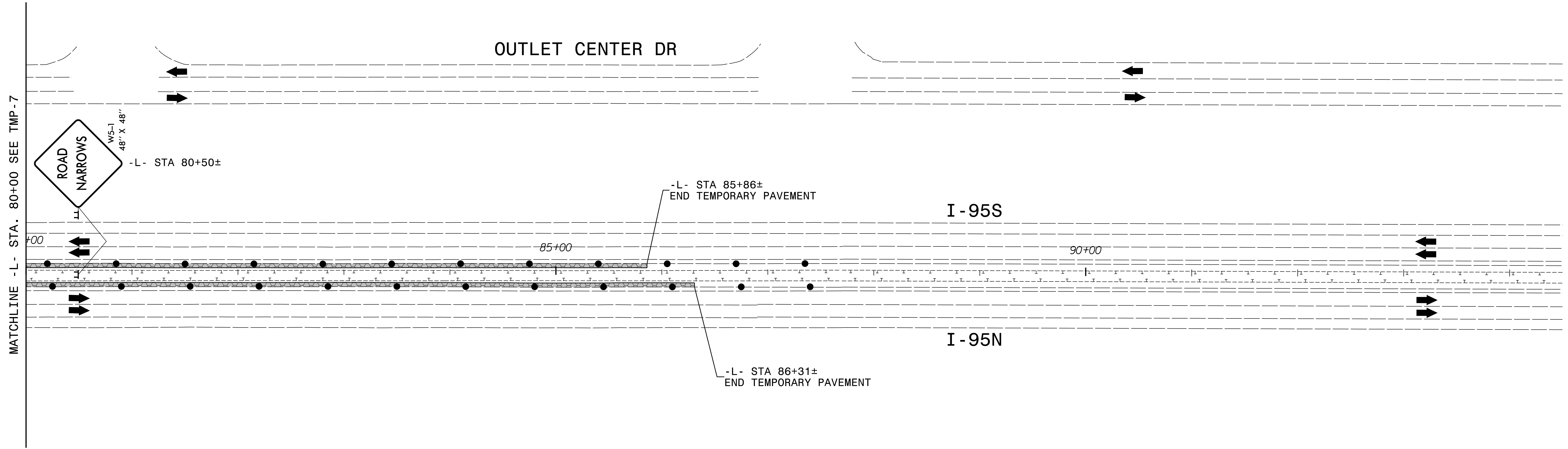
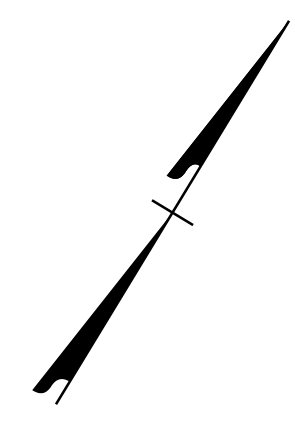
DATE: 9/19/2023

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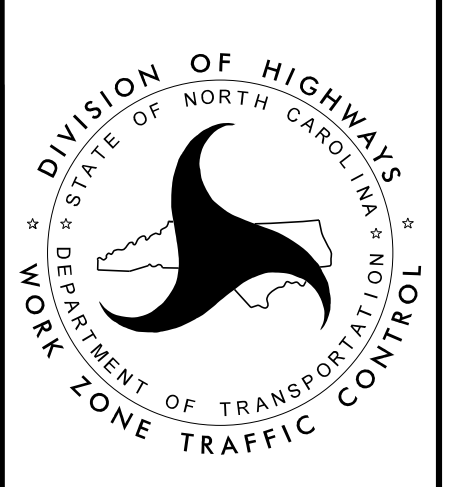
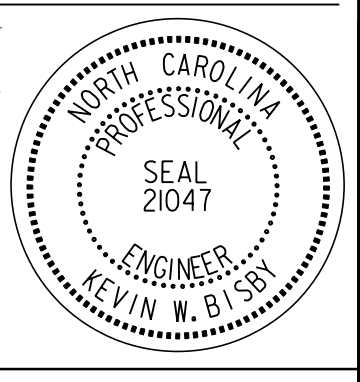
PHASE I - STEPS 2 AND 3

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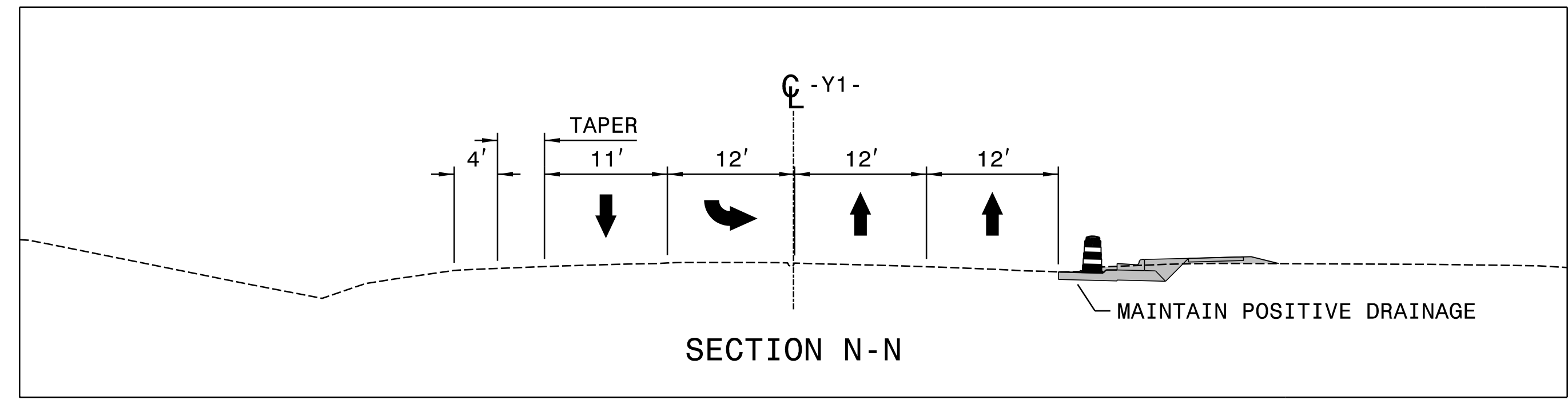
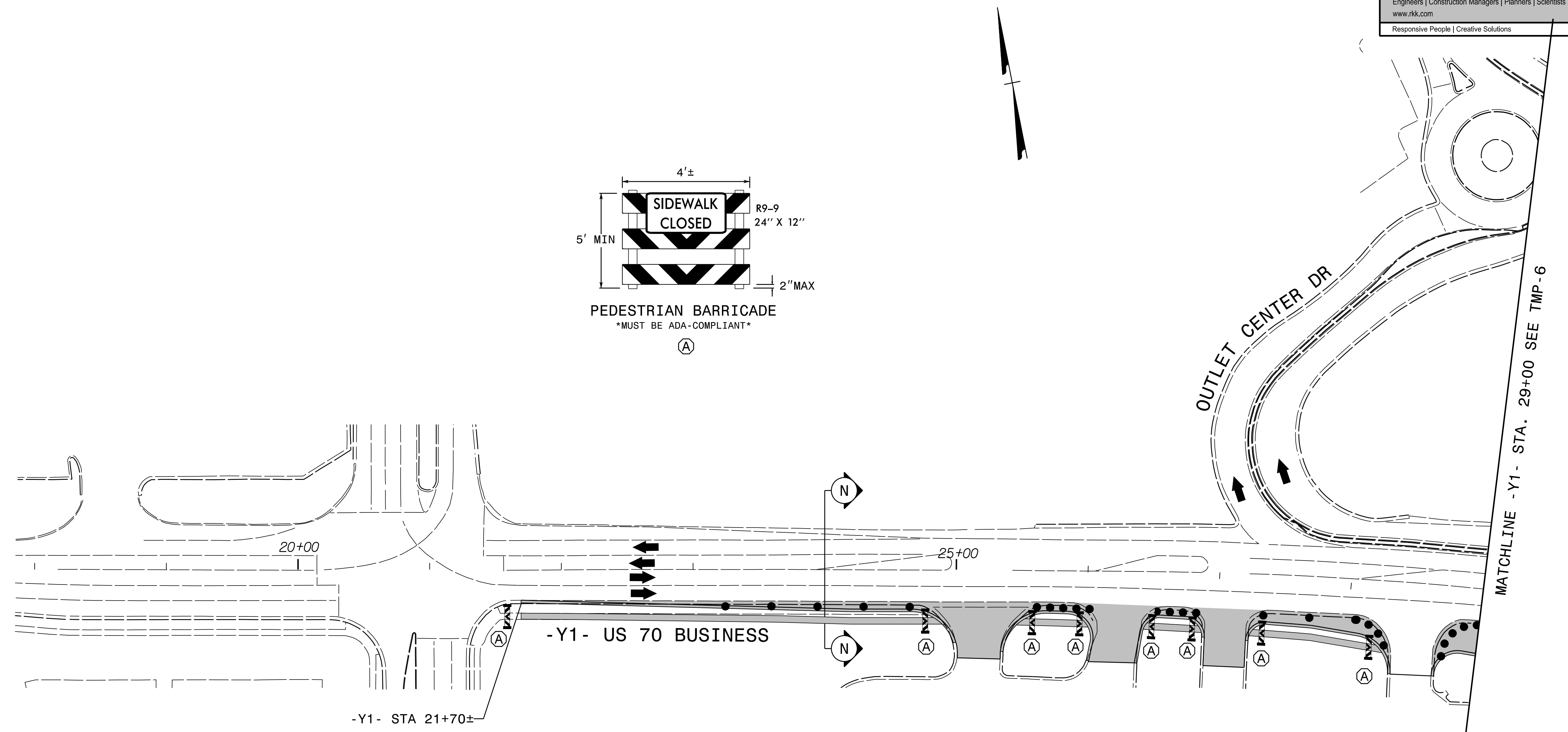
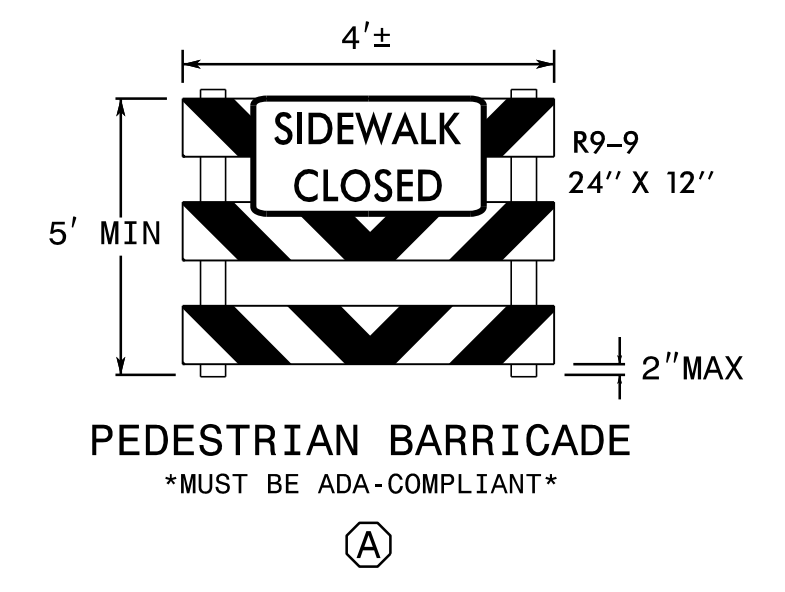
MATCHLINE - L - STA. 80+00 SEE TMP-7

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800802028912474
 DATE: 9/19/2023
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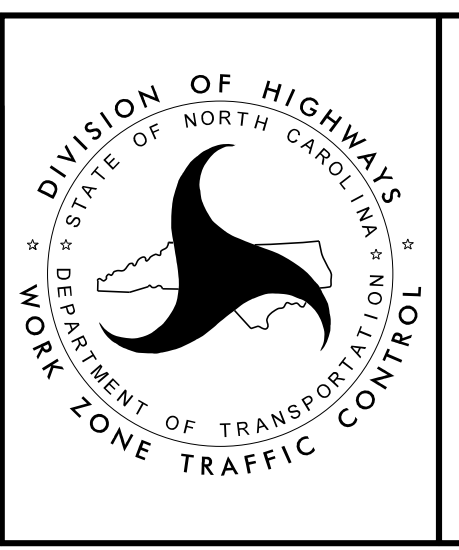
PHASE I - STEPS 2 AND 3

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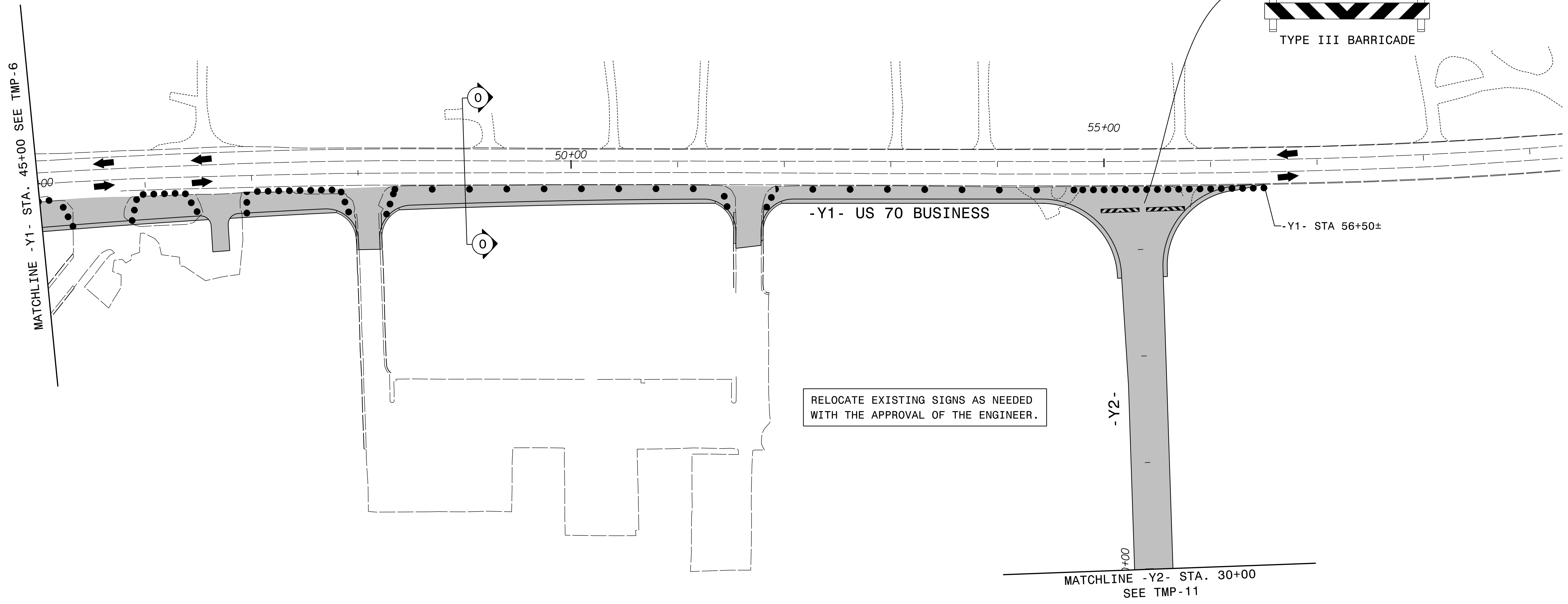
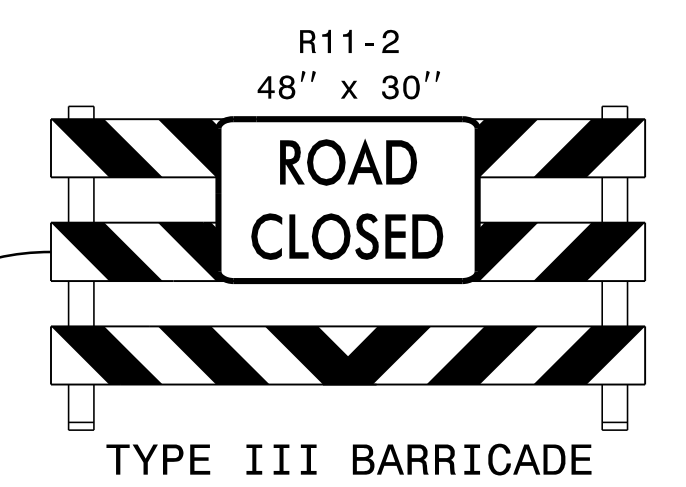
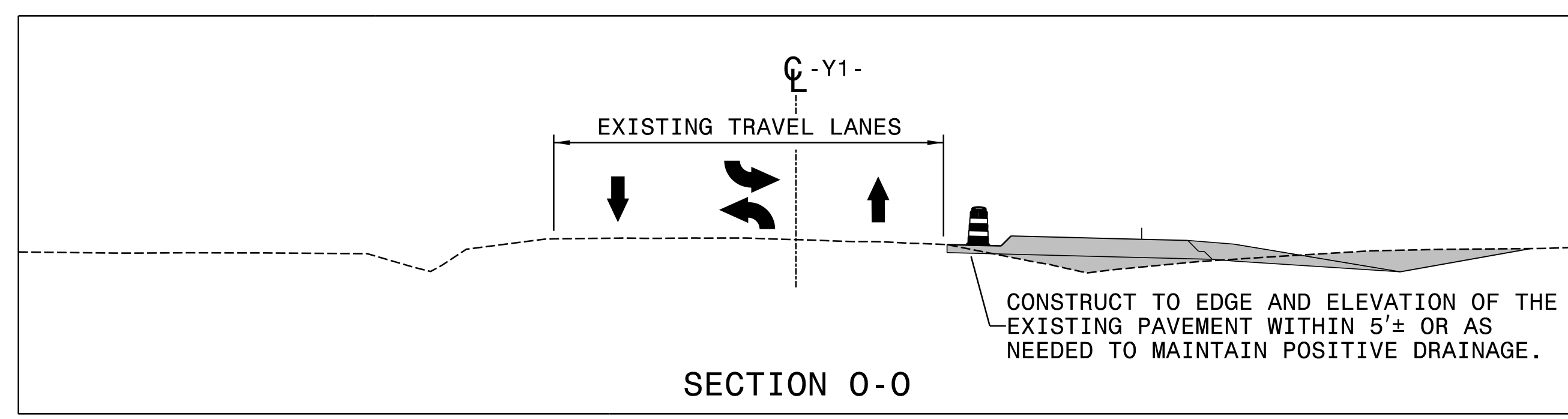
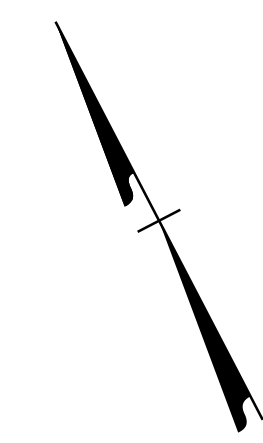


RELOCATE EXISTING SIGNS AS NEEDED WITH THE APPROVAL OF THE ENGINEER.


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 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 21047
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PHASE I - STEPS 2 AND 3

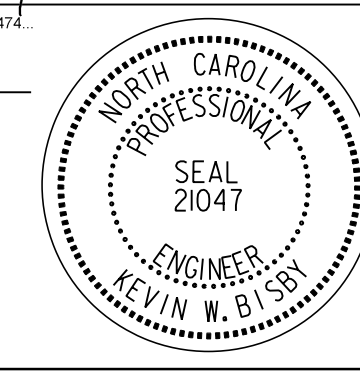
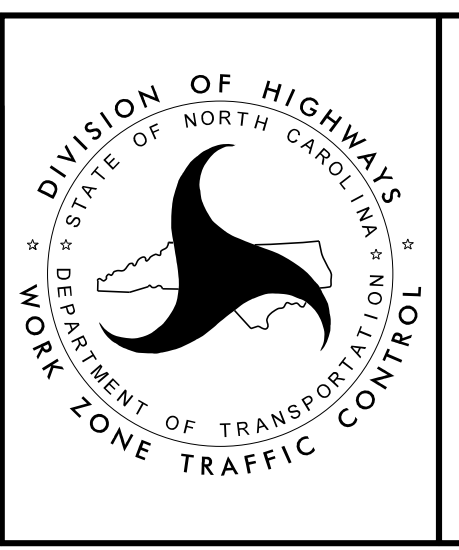


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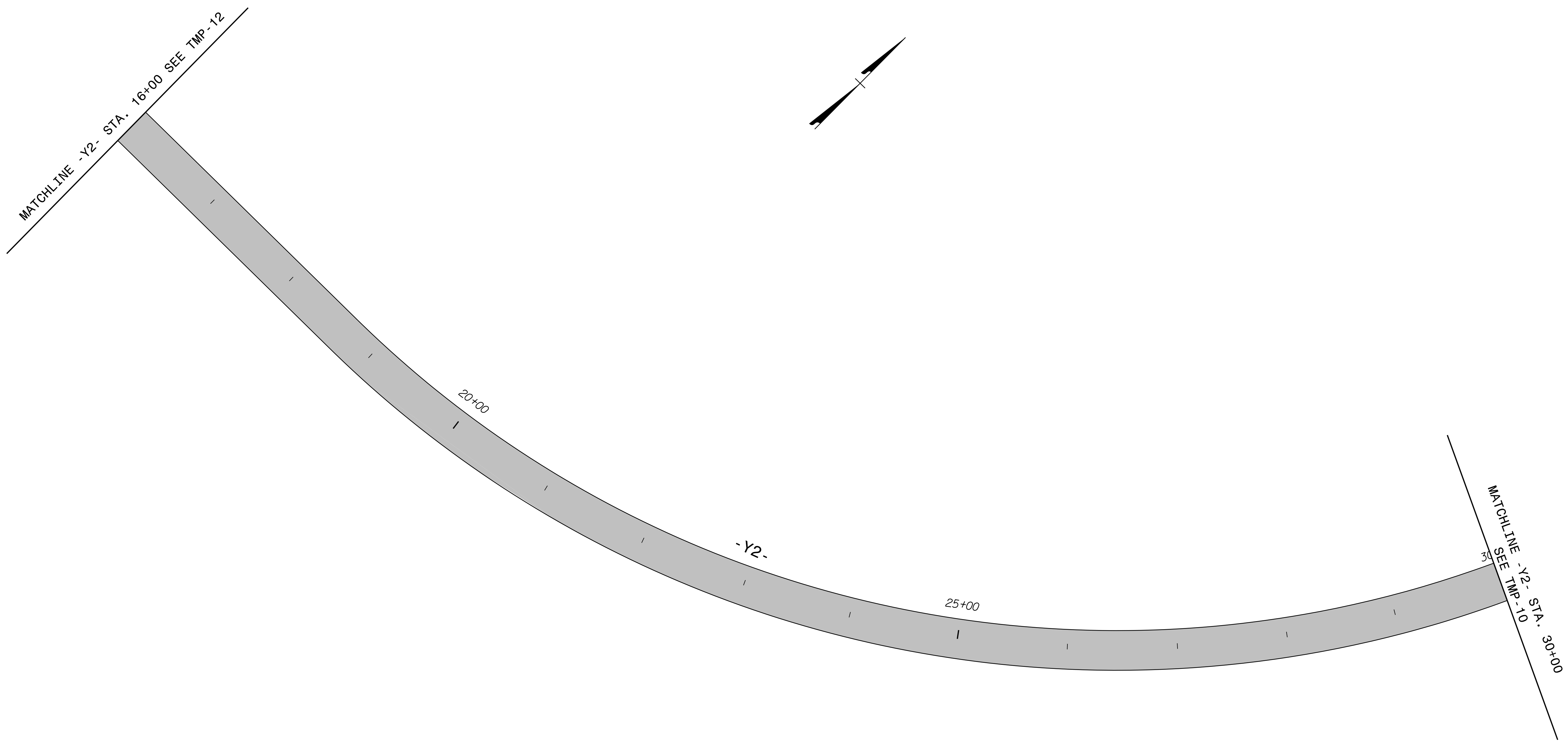



PHASE I - STEP 2


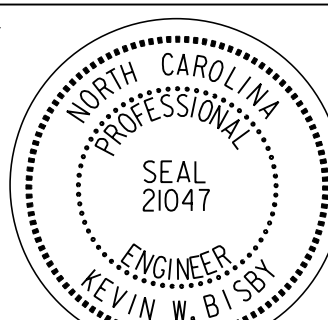
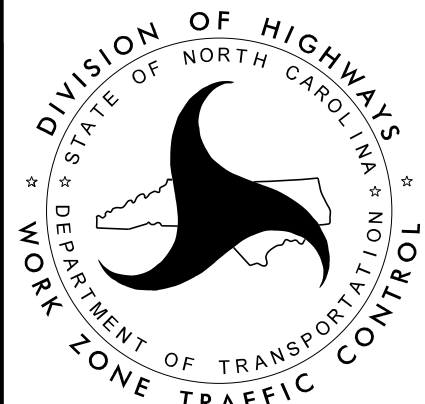
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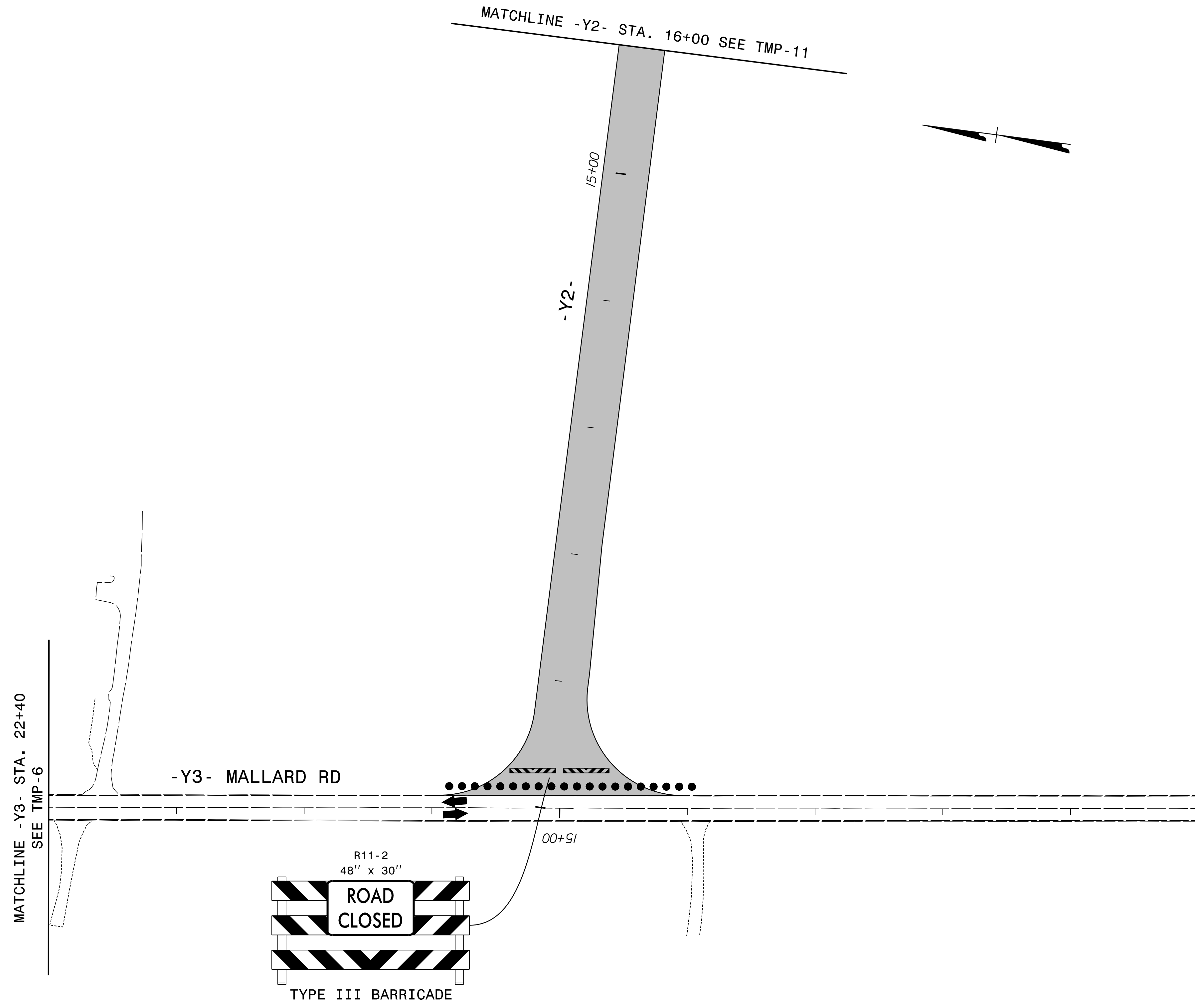


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APPROVED:  <small>DocuSigned by: Kevin Bishop 800802028912472</small> DATE: 9/19/2023 SEAL			PHASE I - STEP 2
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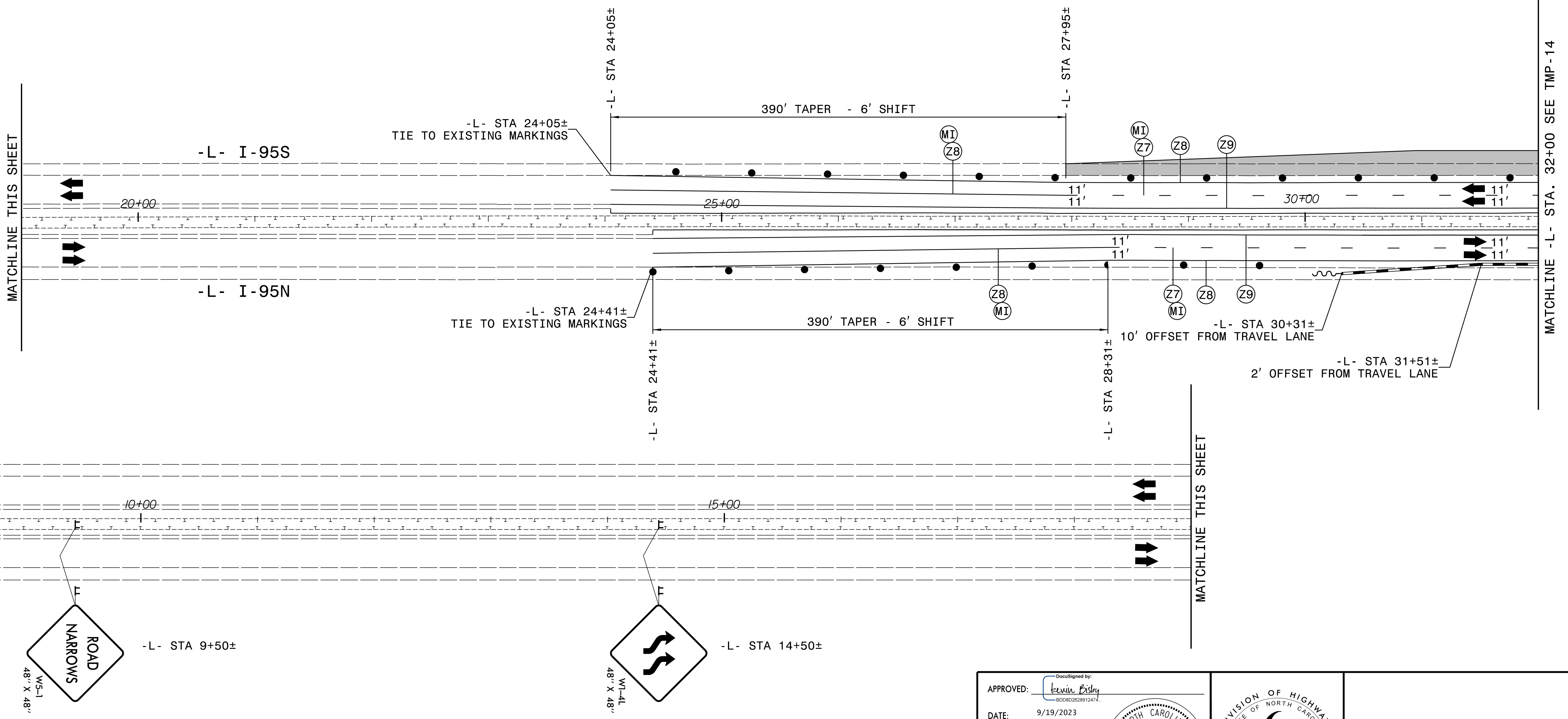
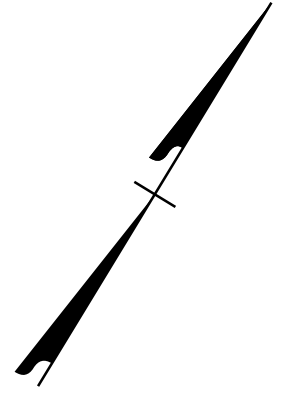
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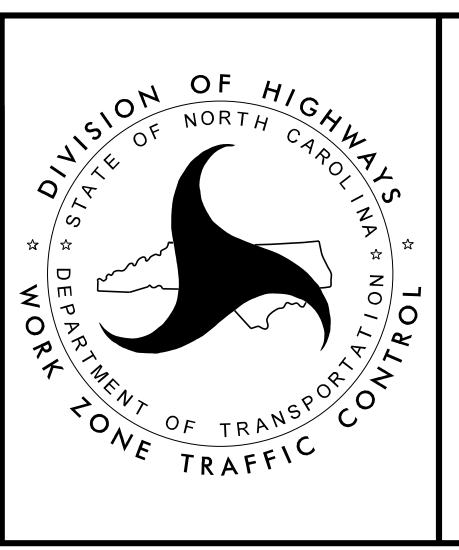
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MATCHLINE THIS SHEET

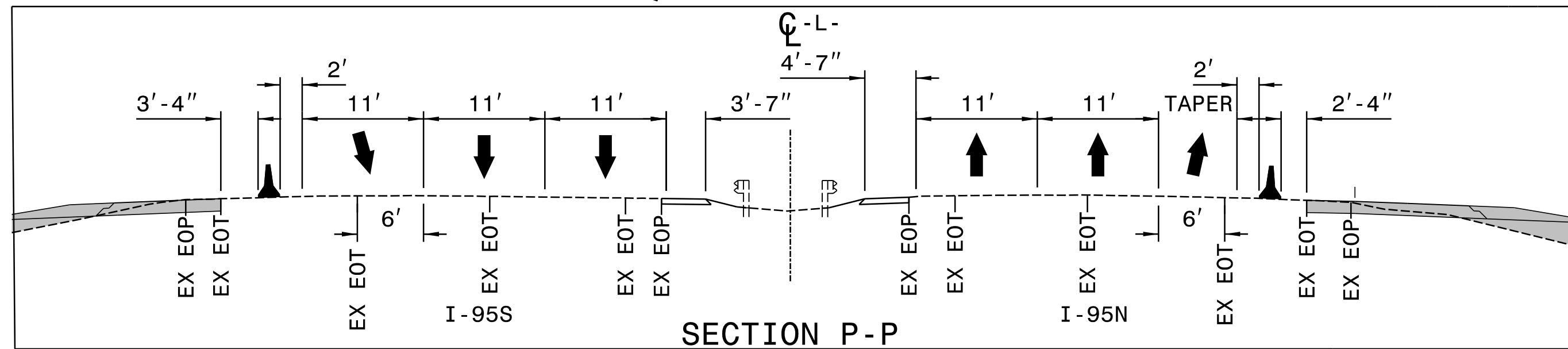
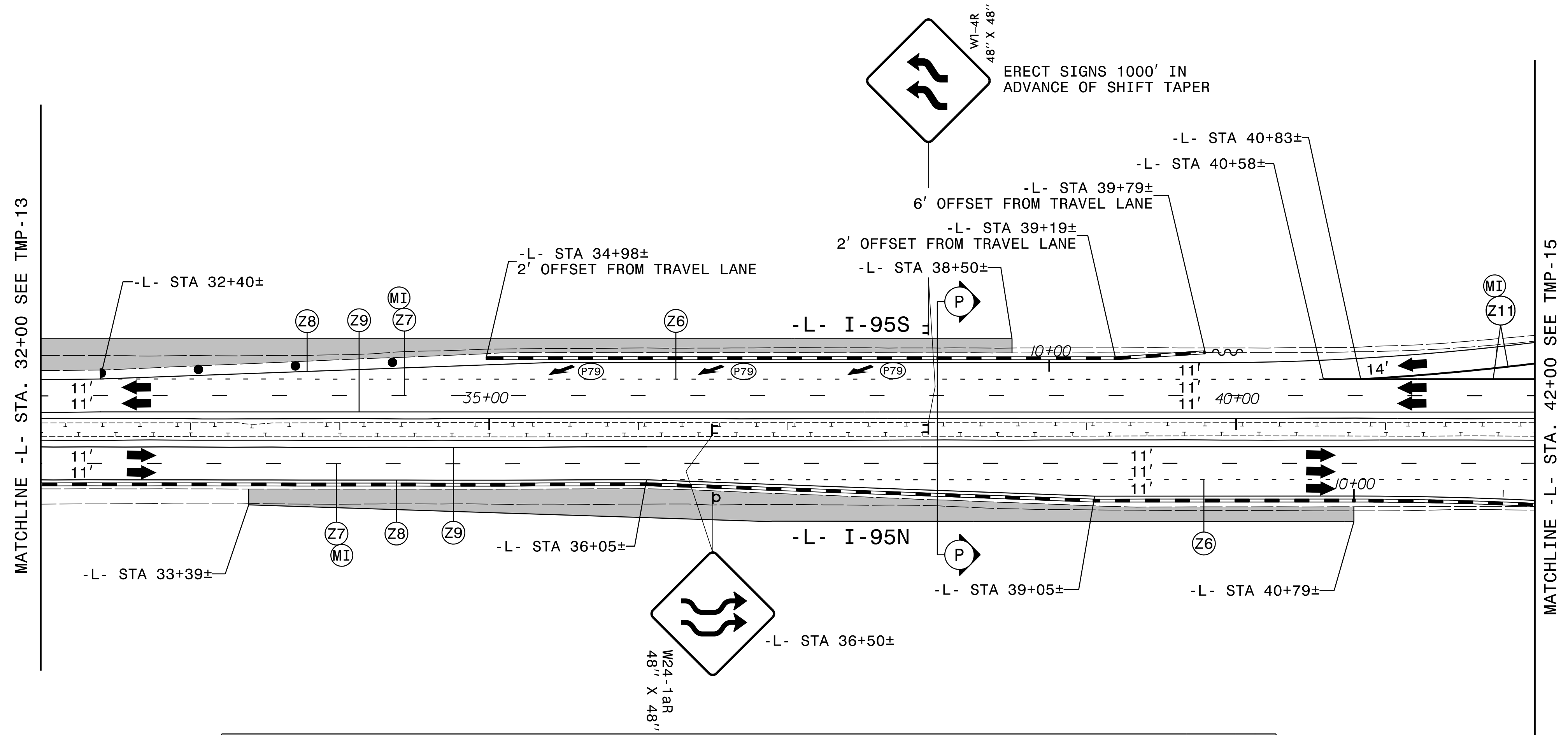
RELOCATE EXISTING SIGNS AS NEEDED WITH THE APPROVAL OF THE ENGINEER.

APPROVED: *Kevin Bishop*
 DATE: 9/19/2023

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PHASE I - STEPS 4 AND 5

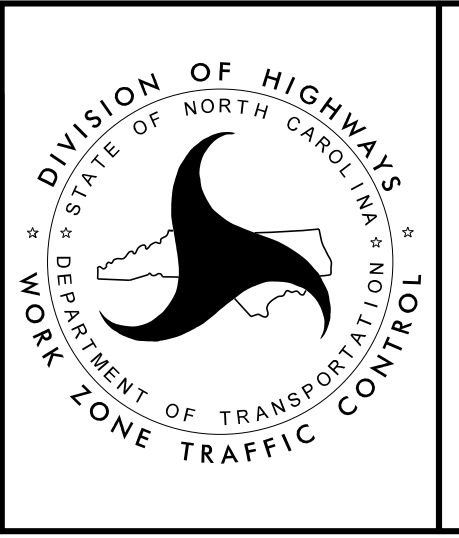


RELOCATE EXISTING SIGNS AS NEEDED WITH THE APPROVAL OF THE ENGINEER.

APPROVED: *Kevin Bishop*
 DATE: 9/19/2023

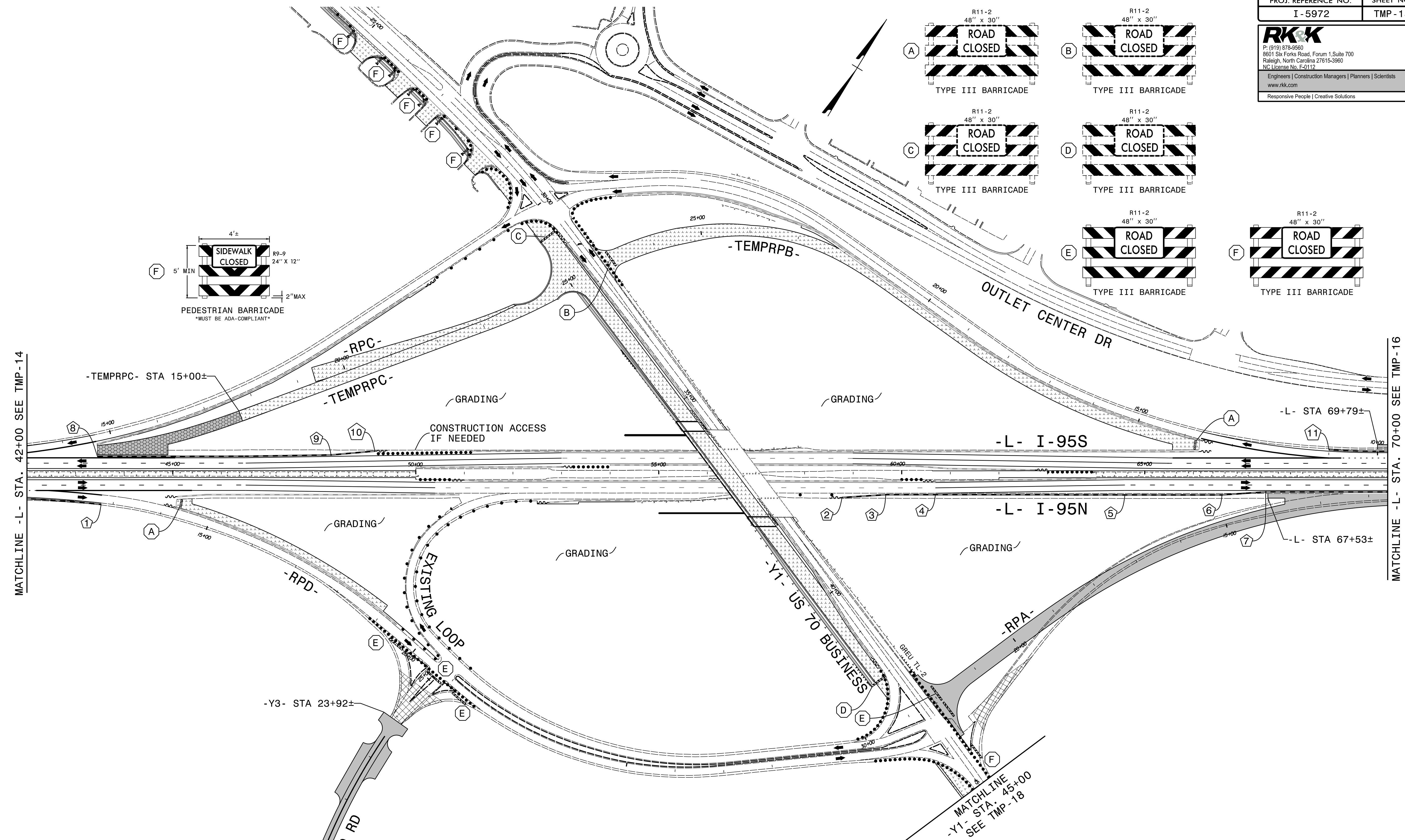
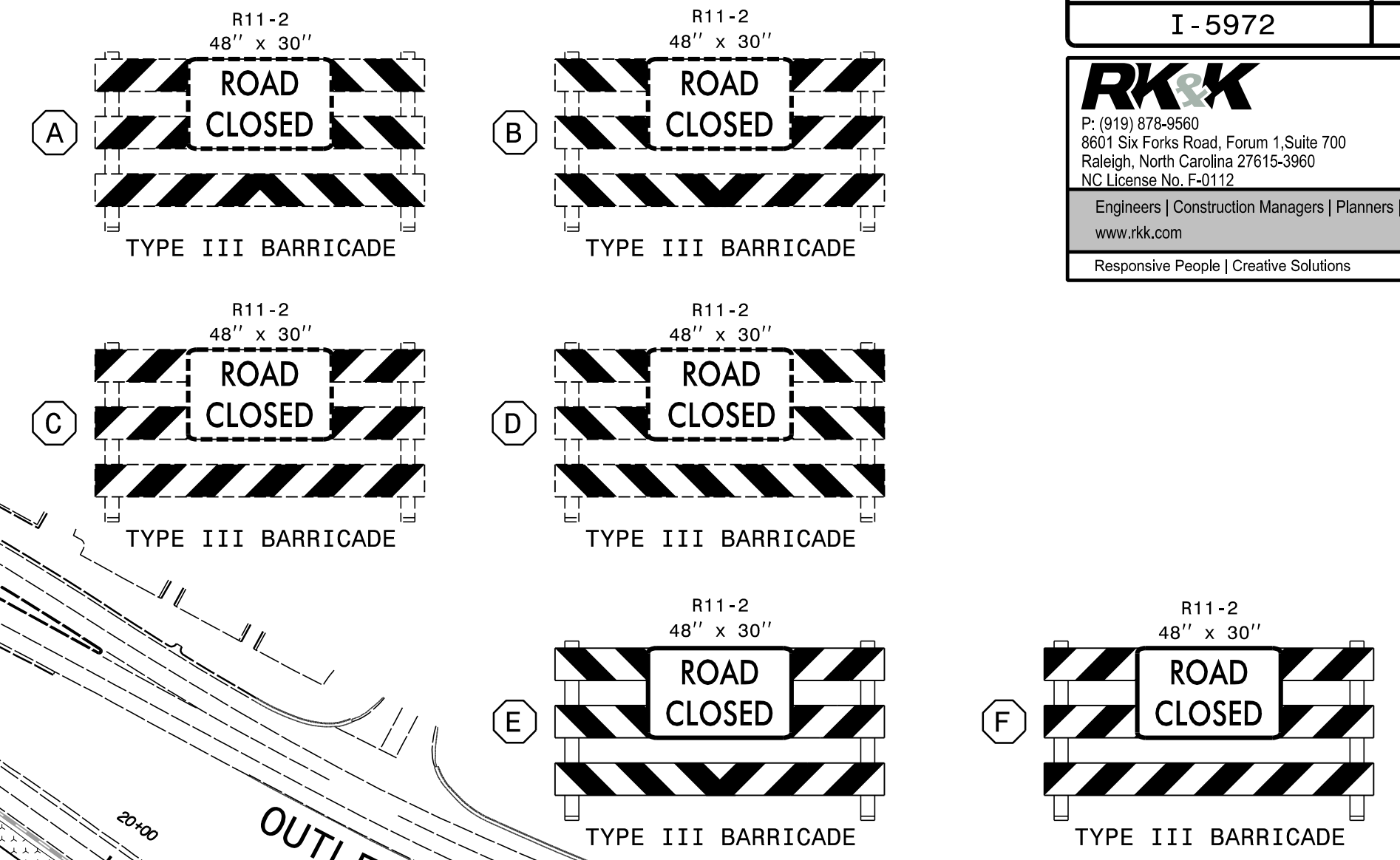
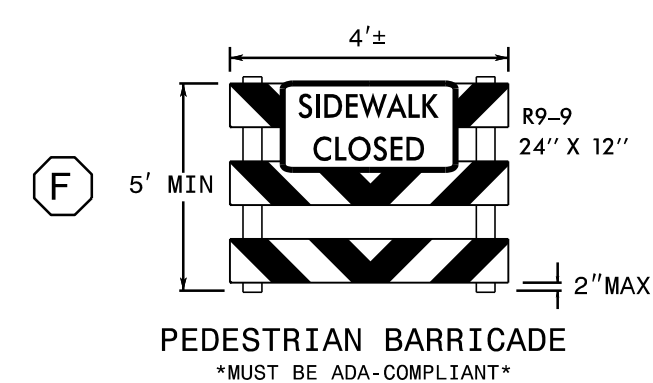
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SEAL 21047
 ENGINEER
 KEVIN W. BISHOP



PHASE I - STEPS 4 AND 5

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MATCHLINE -L- STA. 42+00 SEE TMP-14

MATCHLINE -L- STA. 70+00 SEE TMP-16

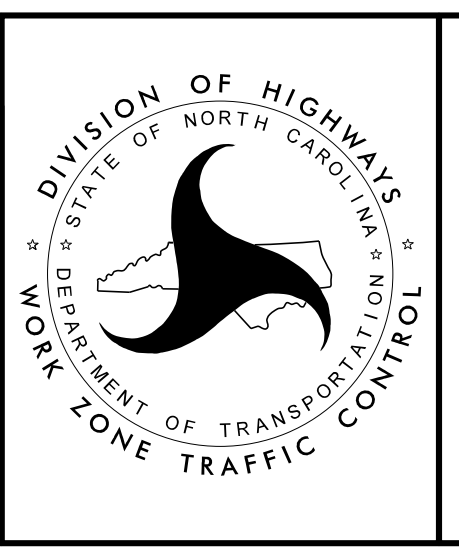
POSITIVE PROTECTION LOCATIONS	
1 -L- STA 43+53± 2' OFFSET FROM TRAVEL LANE	7 -L- STA 67+49± 2' OFFSET FROM TRAVEL LANE
2 -L- STA 58+77± 8' OFFSET FROM TRAVEL LANE	8 -L- STA 43+45± 2' OFFSET FROM TRAVEL LANE
3 -L- STA 59+67± 2' OFFSET FROM TRAVEL LANE	9 -L- STA 48+26± 2' OFFSET FROM TRAVEL LANE
4 -L- STA 60+69± 2' OFFSET FROM TRAVEL LANE	10 -L- STA 49+16± 8.5' OFFSET FROM TRAVEL LANE
5 -L- STA 64+59± 8' OFFSET FROM TRAVEL LANE	11 -L- STA 68+79± 2' OFFSET FROM TRAVEL LANE
6 -L- STA 66+59± 8' OFFSET FROM TRAVEL LANE	

SEE TMP-15A AND 15B FOR PAVEMENT MARKINGS.
RELOCATE EXISTING SIGNS AS NEEDED WITH THE APPROVAL OF THE ENGINEER.

APPROVED: DATE: 9/19/2023

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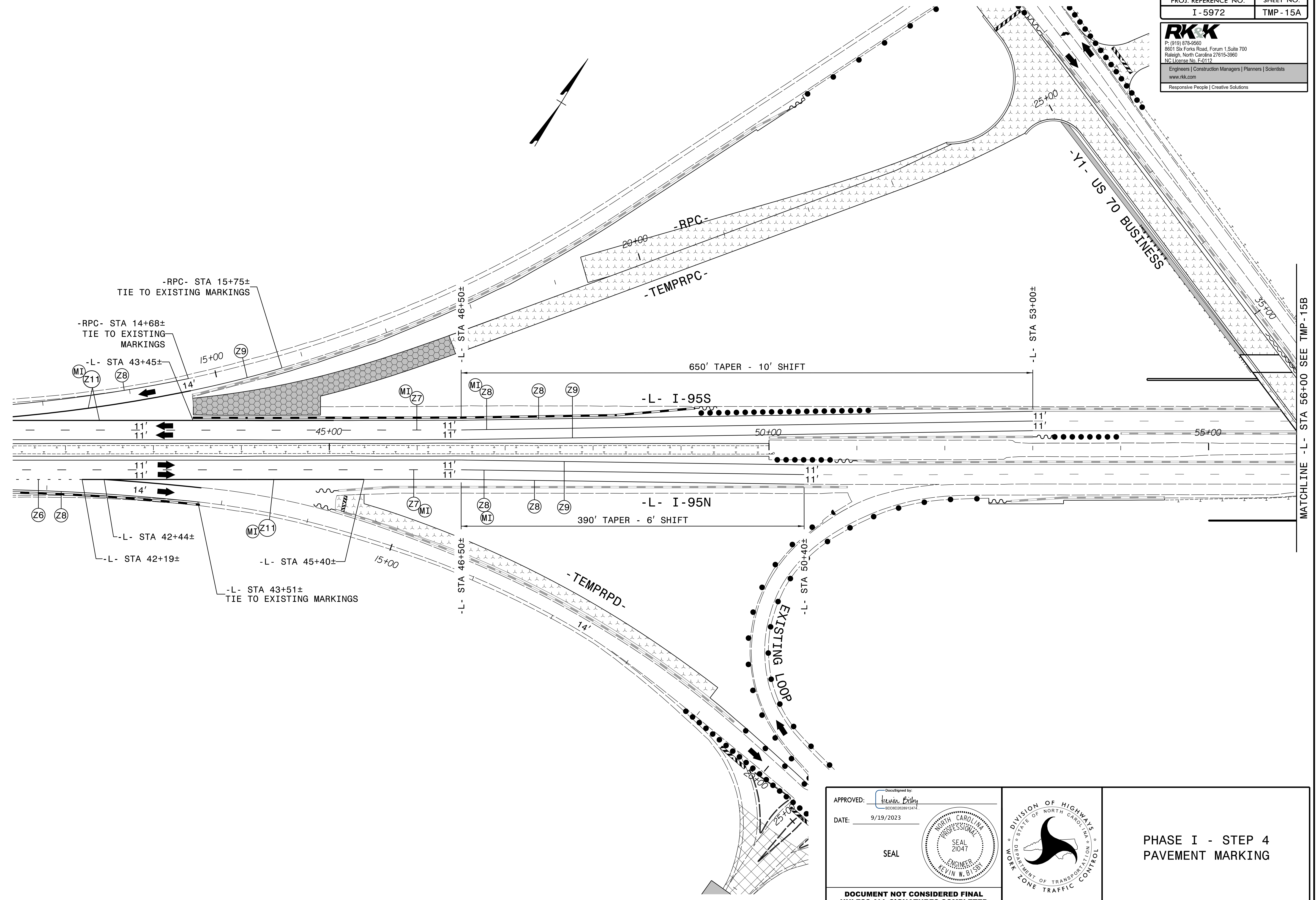


DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

PHASE I
STEPS 4 THROUGH 6

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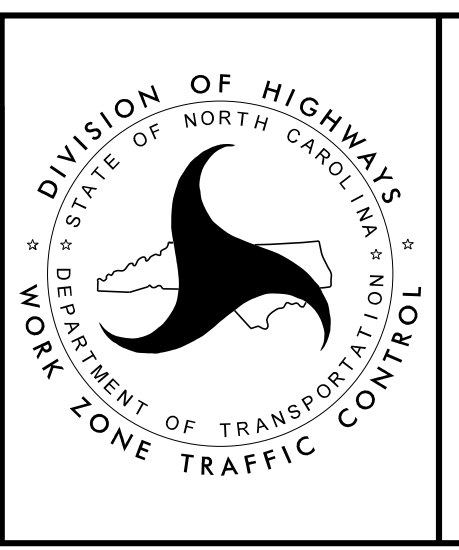


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 DATE: 9/19/2023

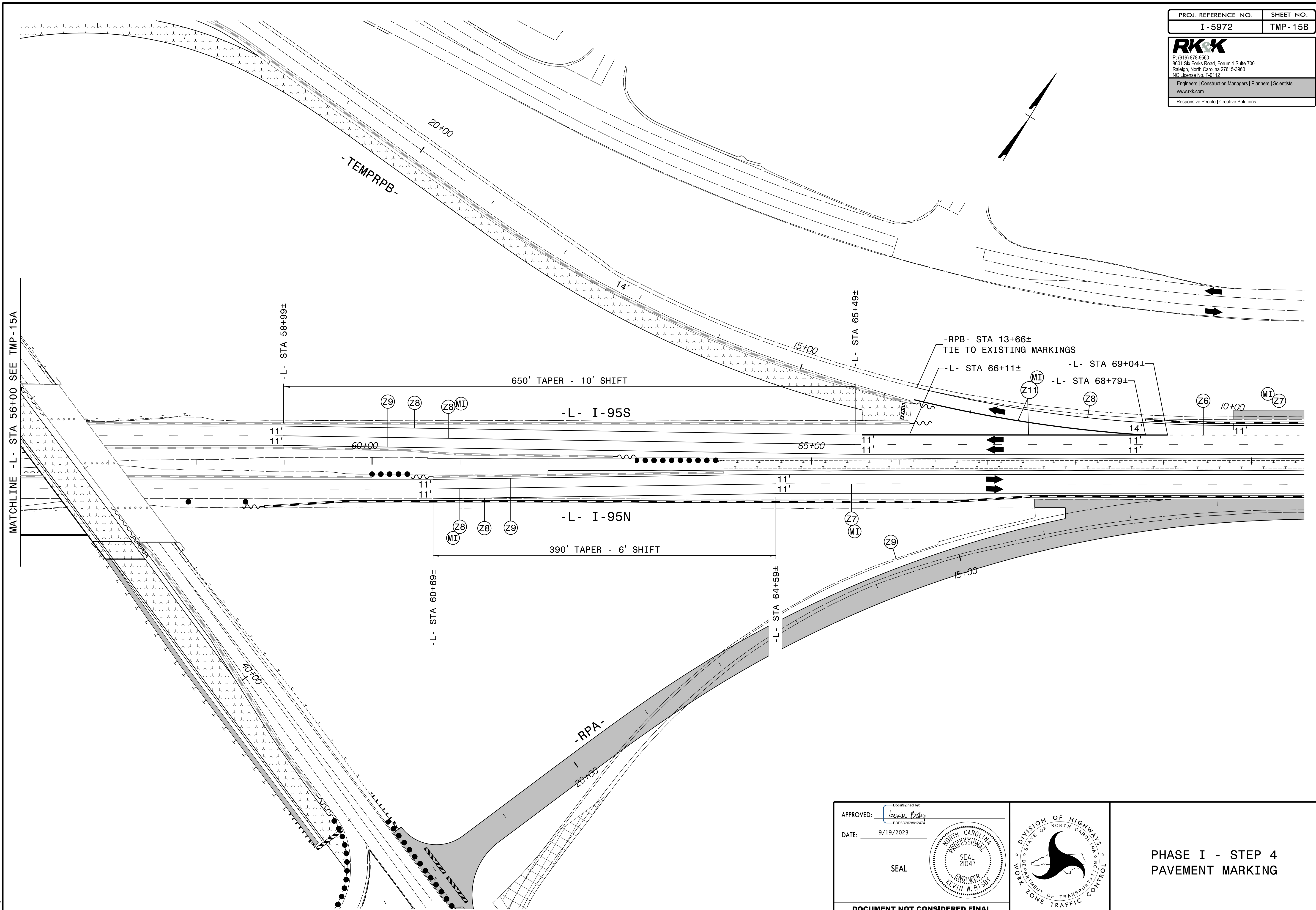
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DIVISION OF HIGHWAYS
 NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WORK ZONE TRAFFIC CONTROL

PHASE I - STEP 4
 PAVEMENT MARKING



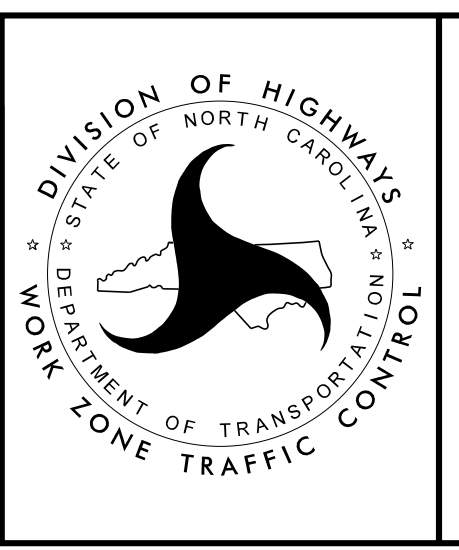
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APPROVED: *Kevin Bishop*
DocuSigned by: Kevin Bishop
 800802028912474

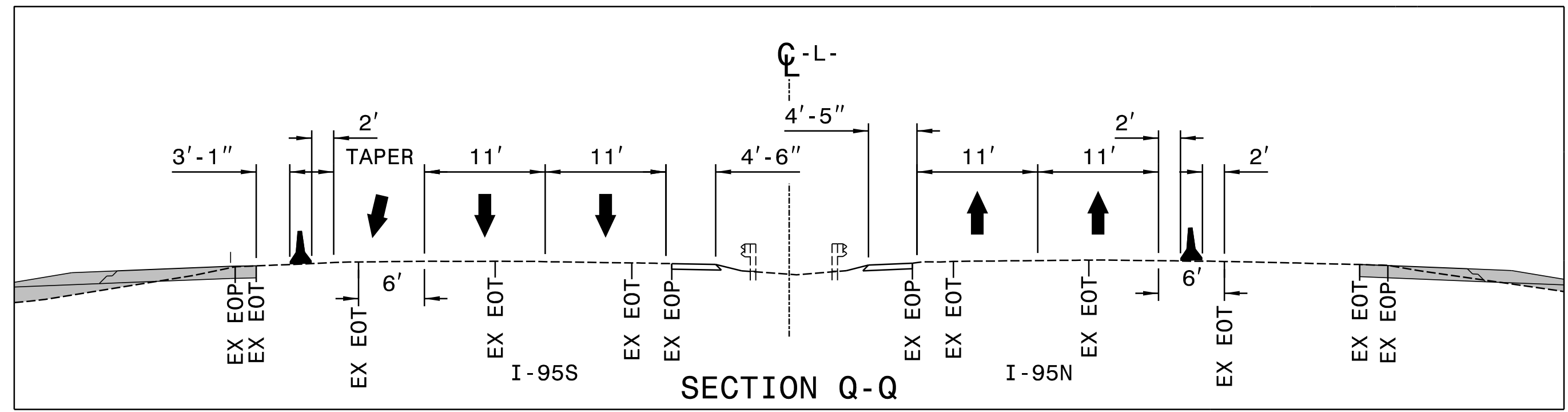
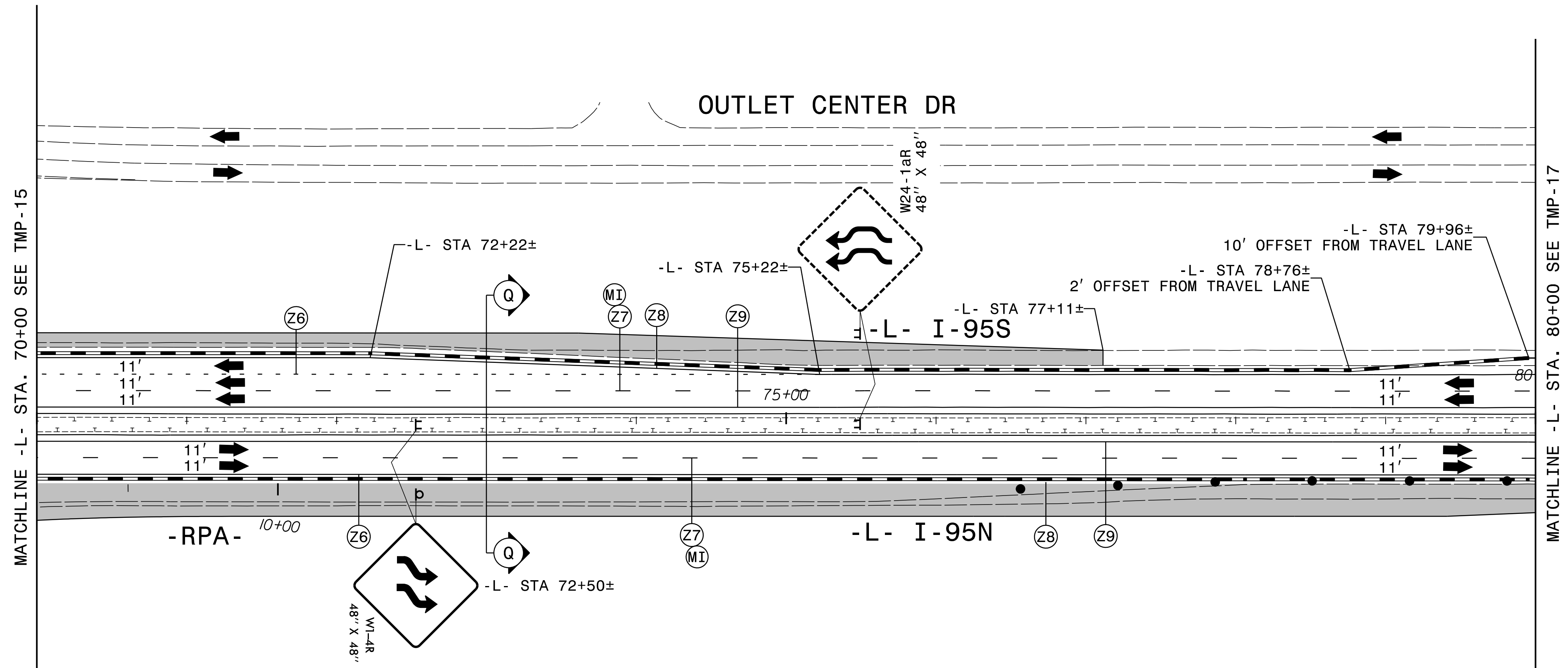
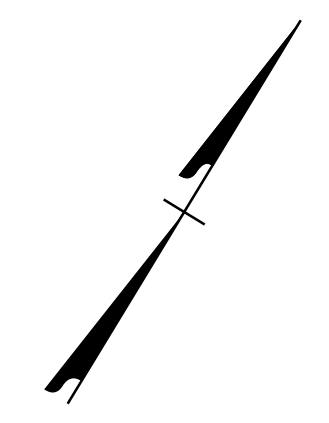
DATE: 9/19/2023

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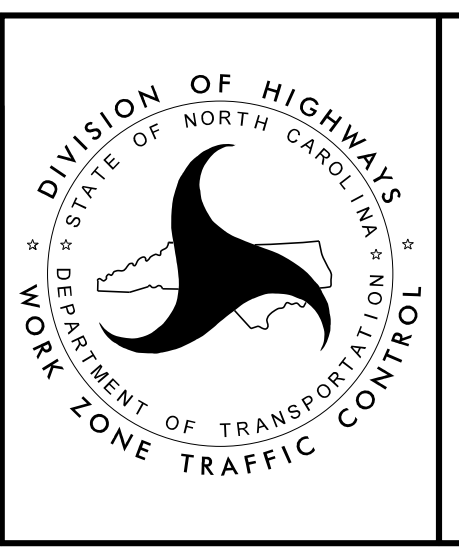


**PHASE I - STEP 4
 PAVEMENT MARKING**

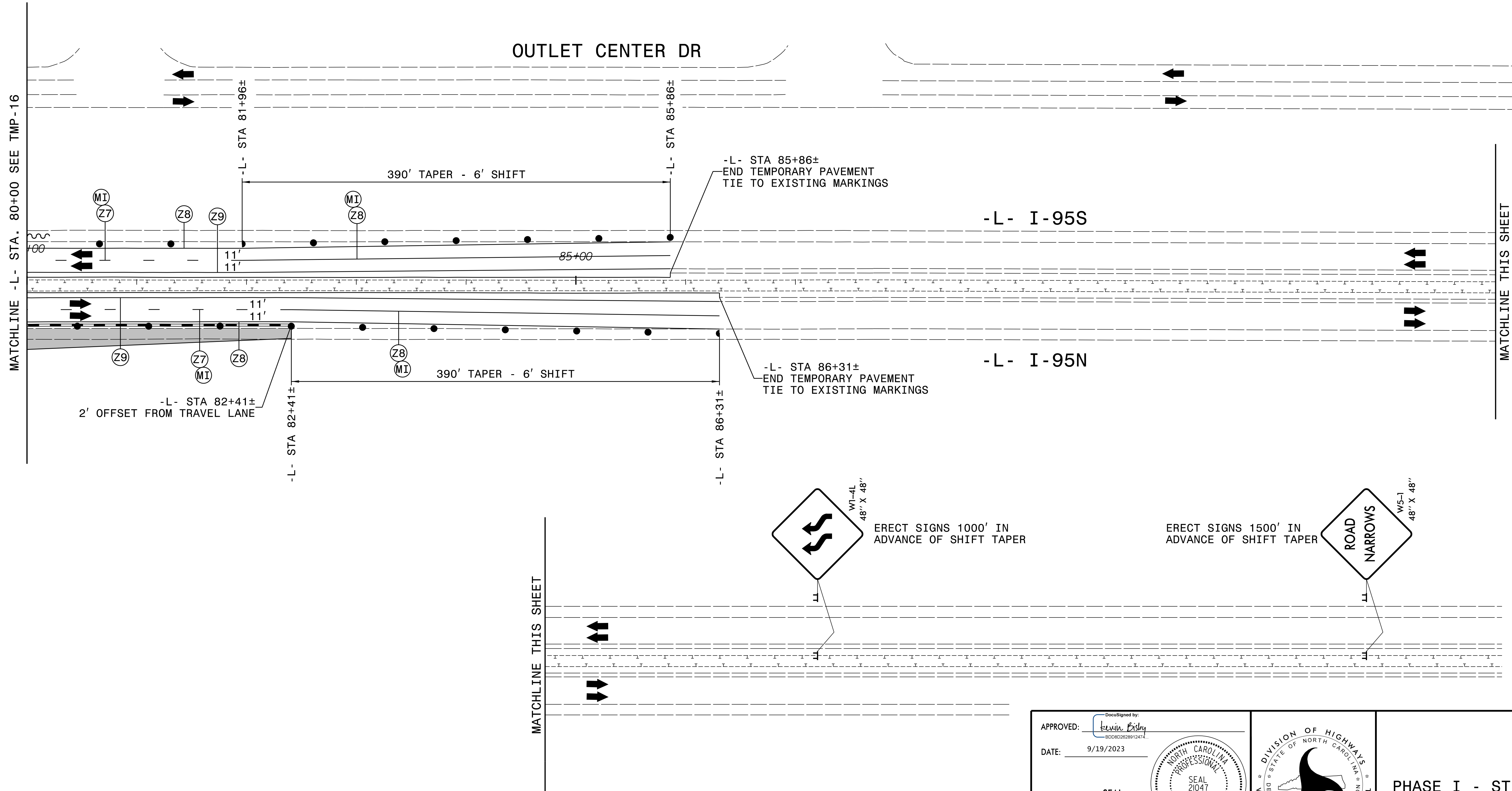
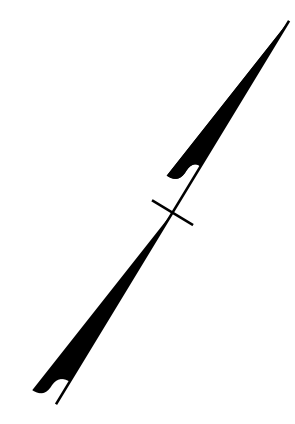


RELOCATE EXISTING SIGNS AS NEEDED WITH THE APPROVAL OF THE ENGINEER.

APPROVED: *Kevin Bishop*
 DATE: 9/19/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 KEVIN W. BISHOP
 SEAL 21047

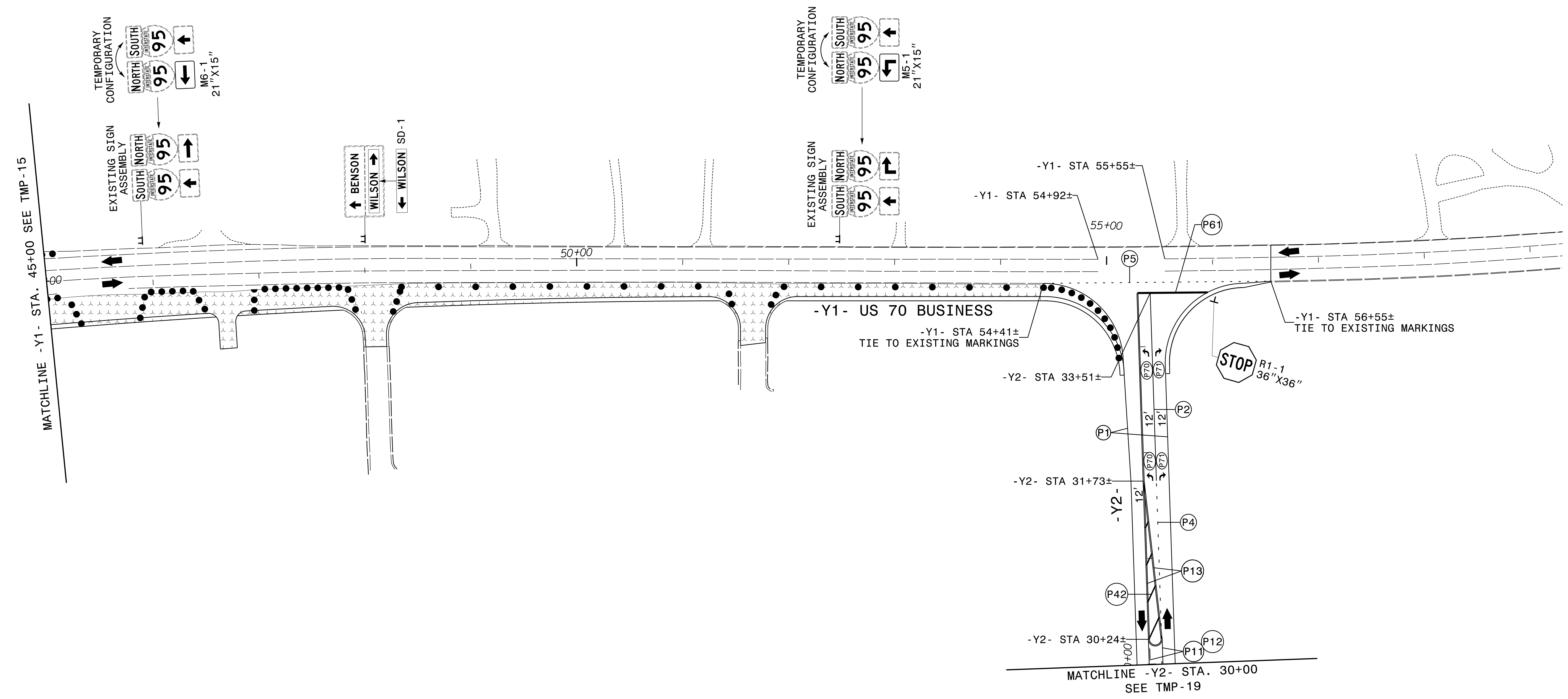
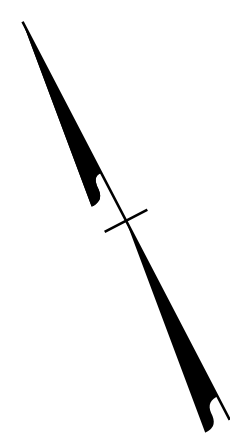


PHASE I - STEPS 4 AND 5



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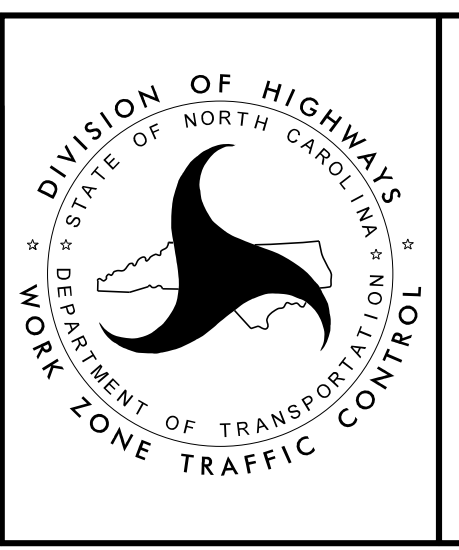


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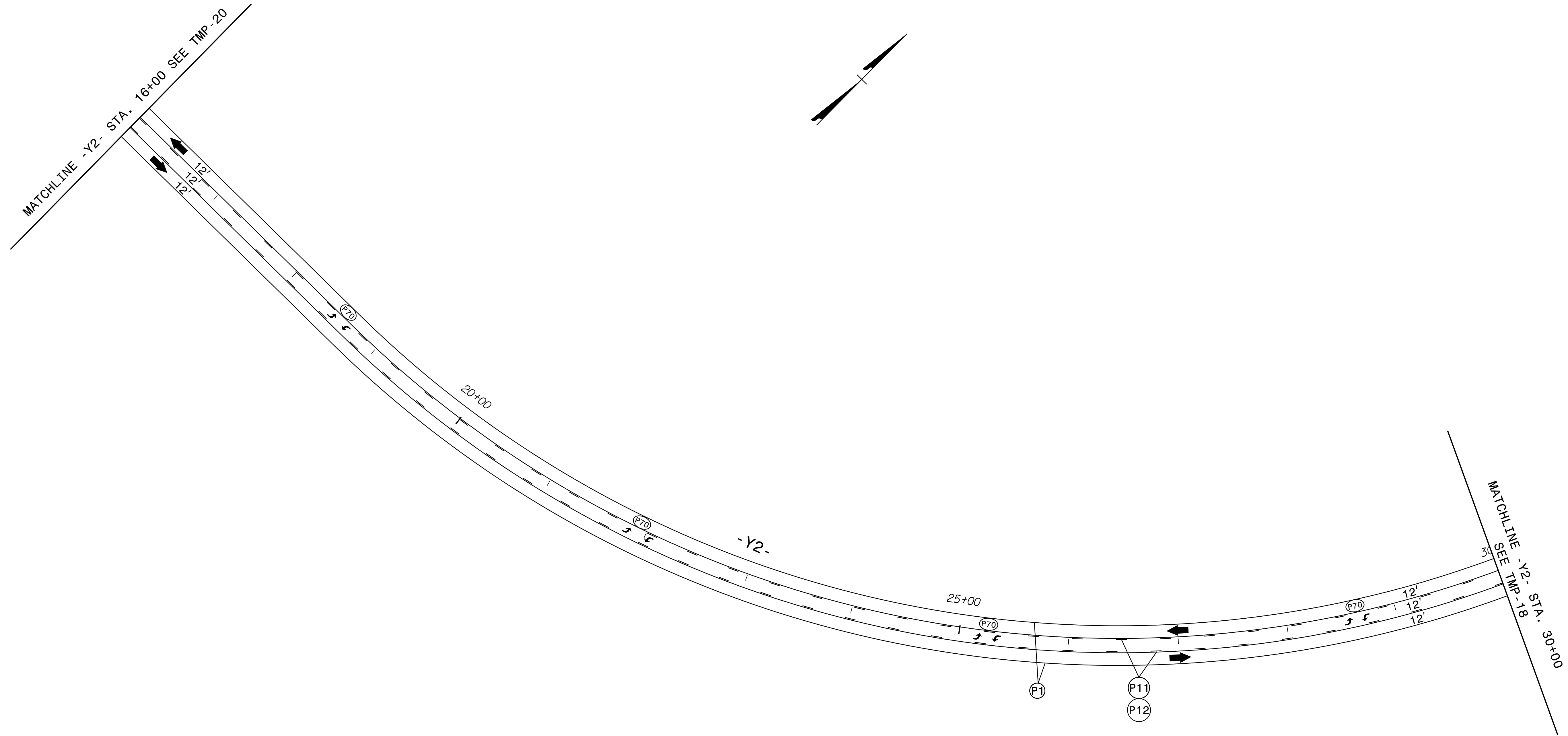


PHASE I - STEPS 5 AND 6


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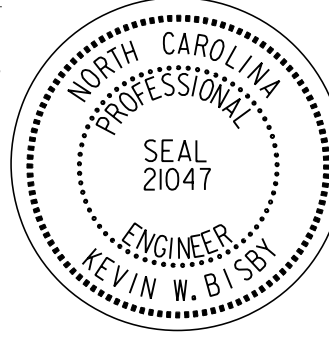
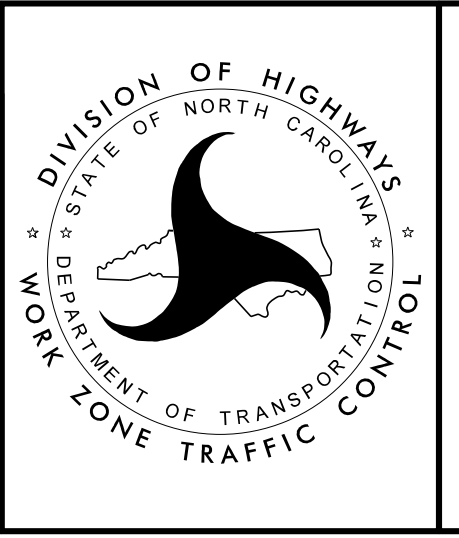


9/19/2023
 15912-TMP-FSH19.dgn
 R015bby

APPROVED: 
DocuSigned by: Kevin Bishop
800802028912472

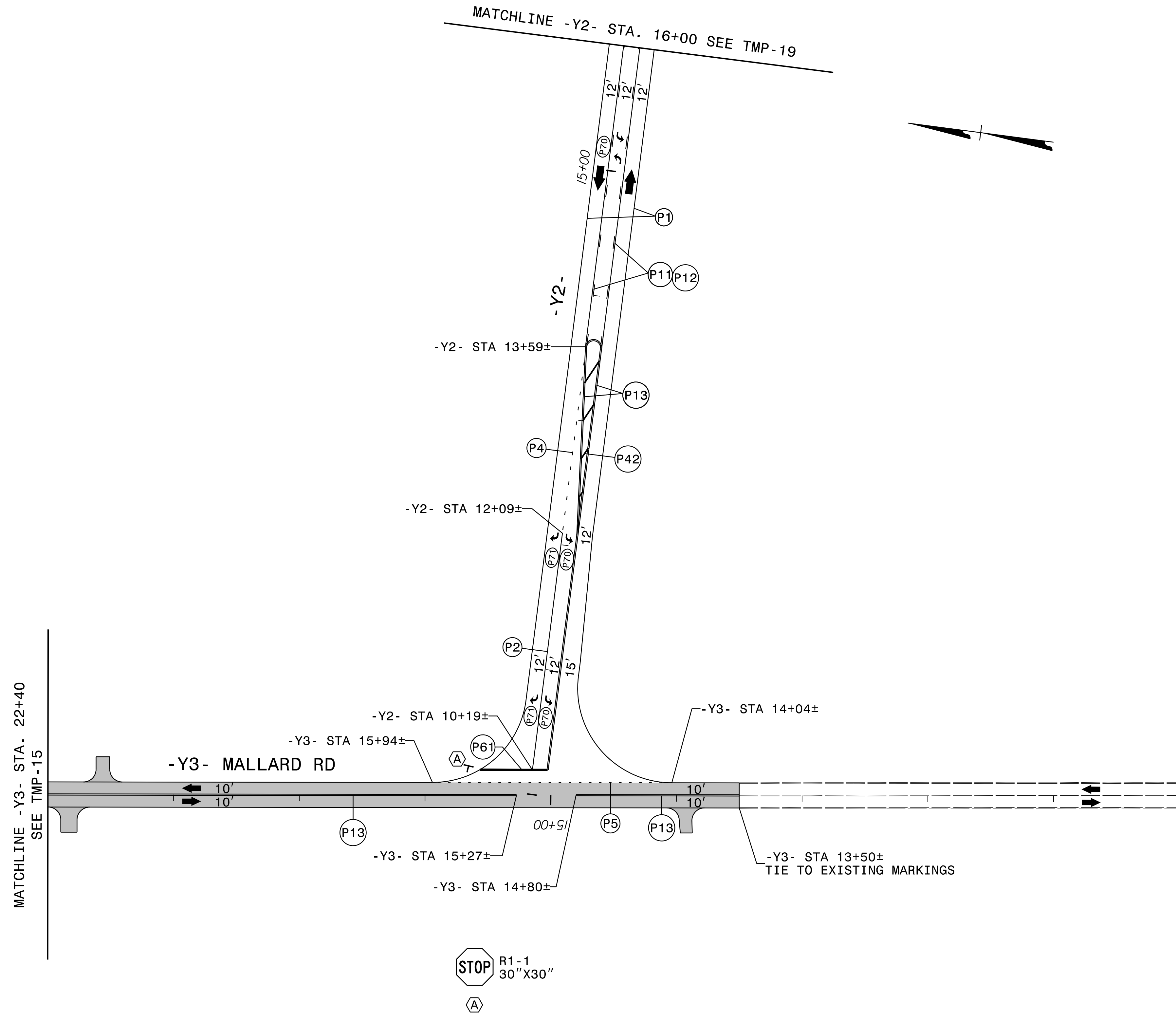
DATE: 9/19/2023

SEAL

PHASE I - STEP 6

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

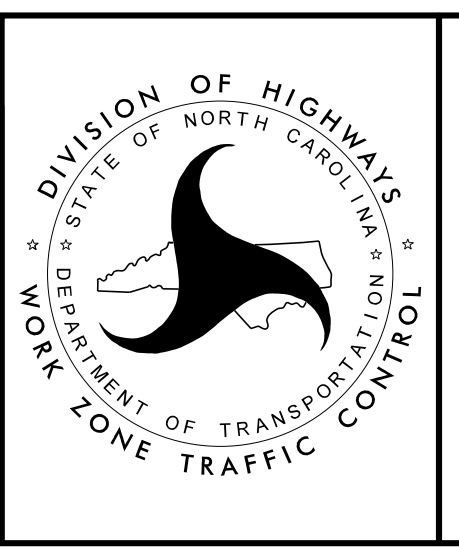


9/19/2023
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 R015by

APPROVED: Kevin Bishop
DocuSigned by: Kevin Bishop
800802028912472

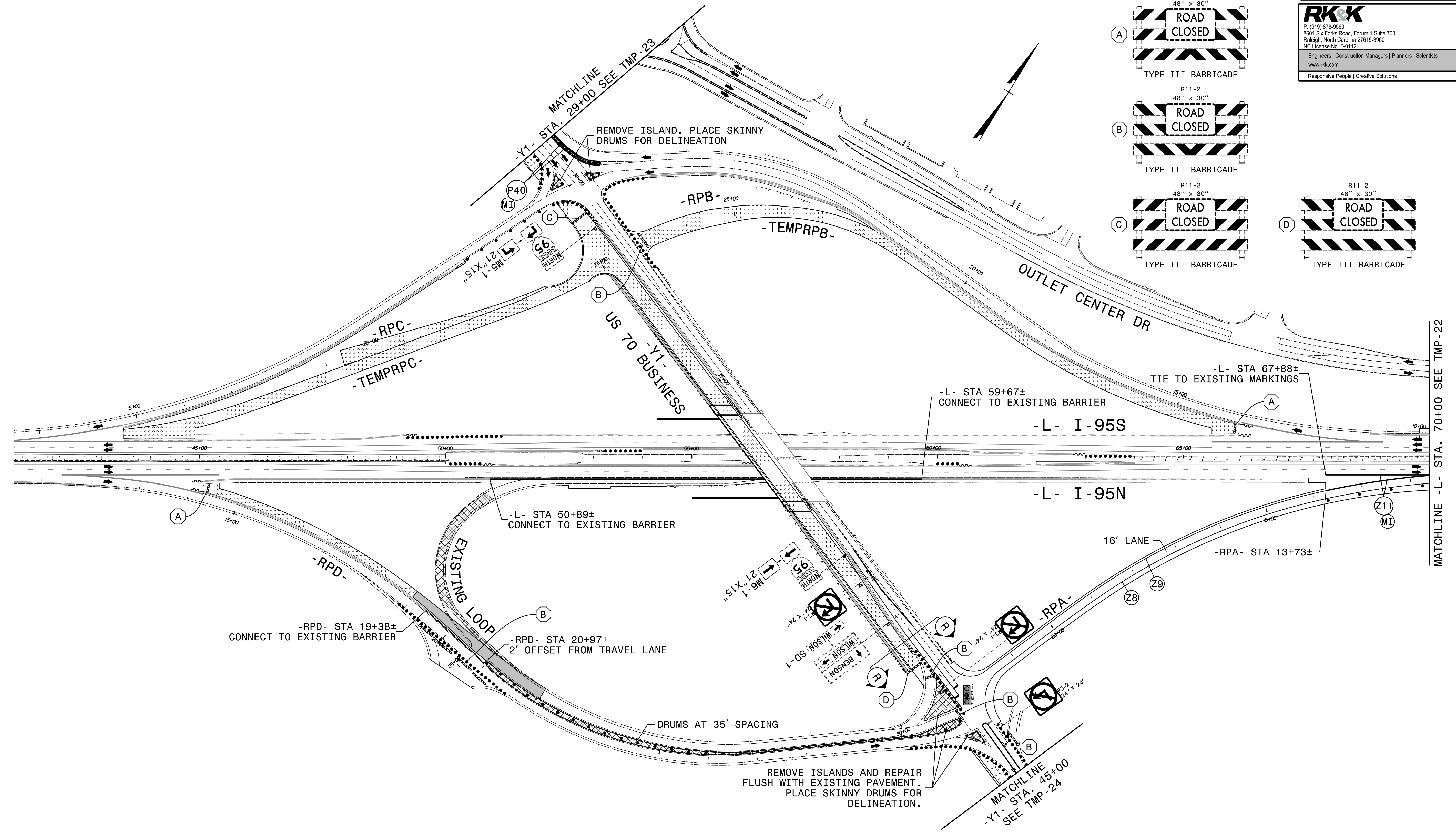
DATE: 9/19/2023

SEAL



PHASE I - STEP 6

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-RPD- STA 19+38±
CONNECT TO EXISTING BARRIER

-L- STA 50+89±
CONNECT TO EXISTING BARRIER

-L- STA 59+67±
CONNECT TO EXISTING BARRIER

-L- STA 67+88±
TIE TO EXISTING MARKINGS

-RPD- STA 20+97±
2' OFFSET FROM TRAVEL LANE

-RPA- STA 13+73±

DRUMS AT 35' SPACING

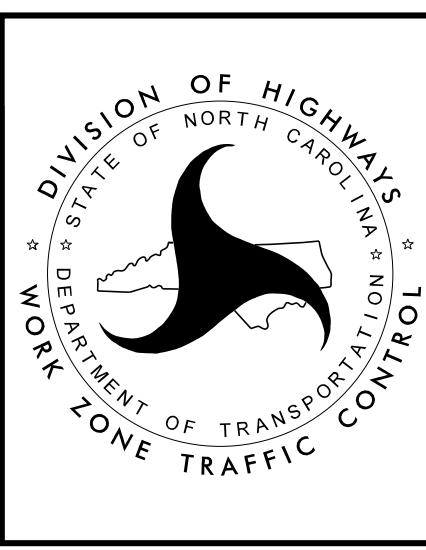
REMOVE ISLANDS AND REPAIR
FLUSH WITH EXISTING PAVEMENT.
PLACE SKINNY DRUMS FOR
DELINEATION.

SEE TMP-21A FOR SECTION VIEW.
SEE TMP-21B FOR ADDITIONAL PAVEMENT MARKINGS.

APPROVED: *Kevin Bishop*
 DATE: 9/19/2023

SEAL

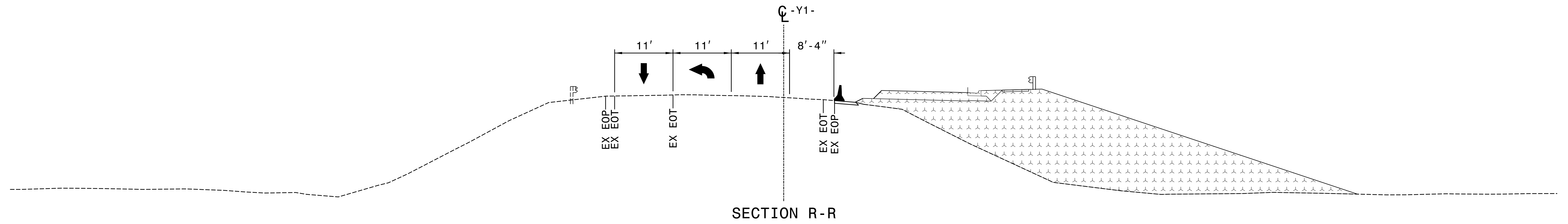
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UNLESS ALL SIGNATURES COMPLETED



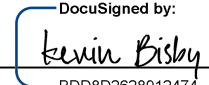
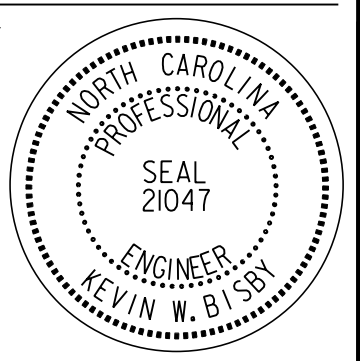

DIVISION OF HIGHWAYS
 NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WORK ZONE TRAFFIC CONTROL

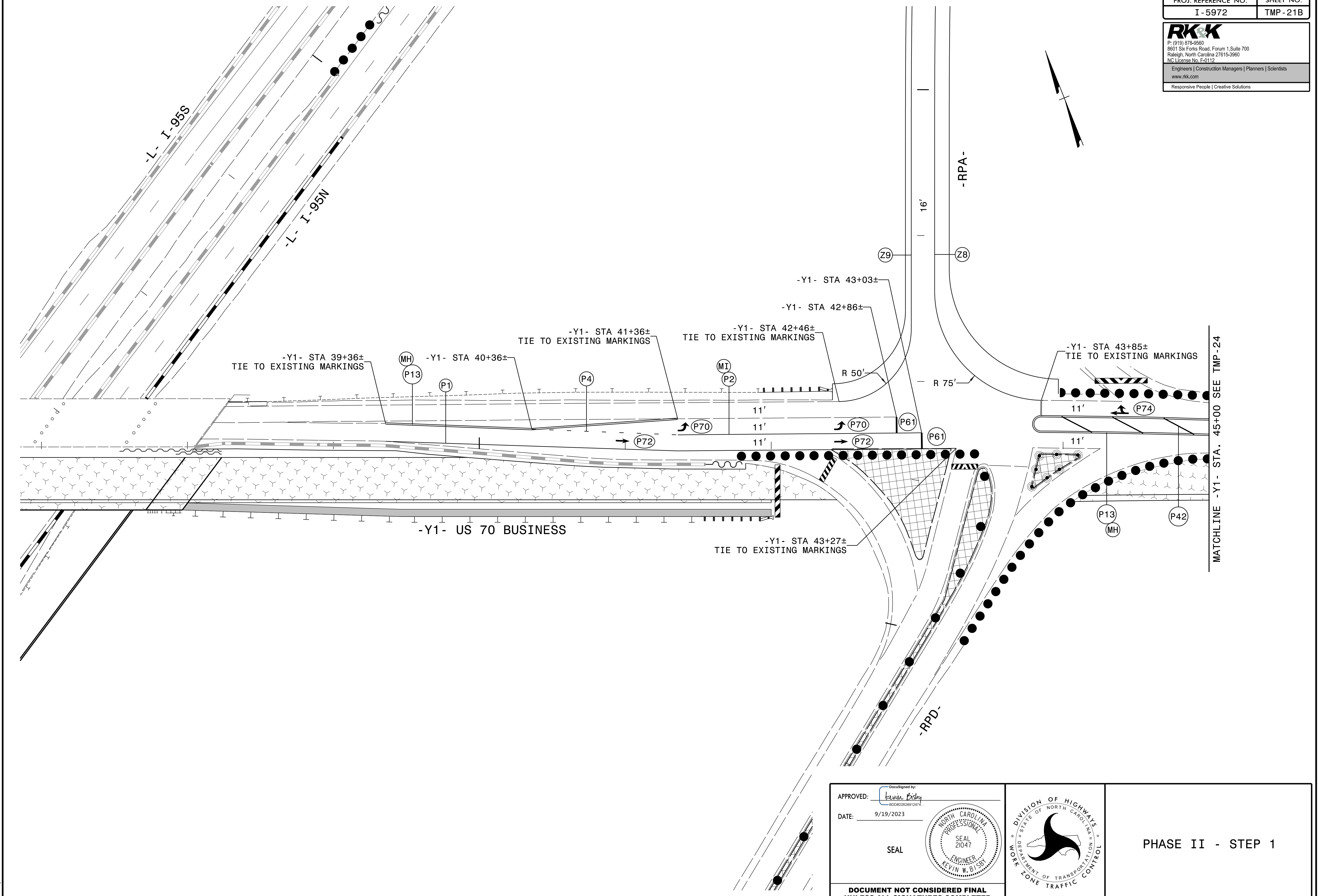
PHASE II - STEPS 1 AND 2

9/19/2023
 I-5972-TMP-FSH21.dgn
 R015bby



9/19/2023
 15972-TMP-FSH21A.dgn
 R015Bdy

APPROVED:  DATE: 9/19/2023 SEAL	 	PHASE II - STEP 1
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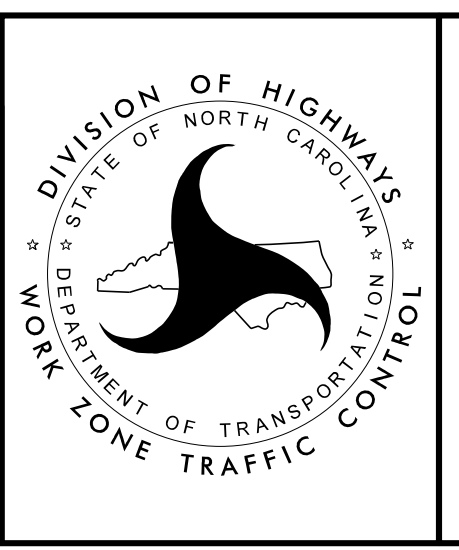
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 R015by

APPROVED: *Kevin Bishop*
DocuSigned by: Kevin Bishop
800802028912472

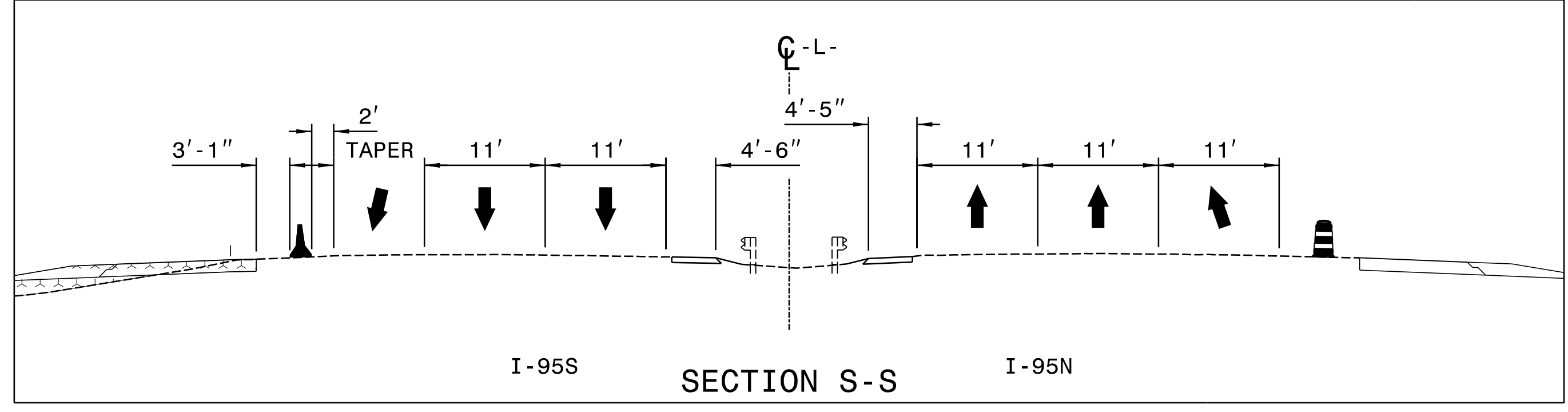
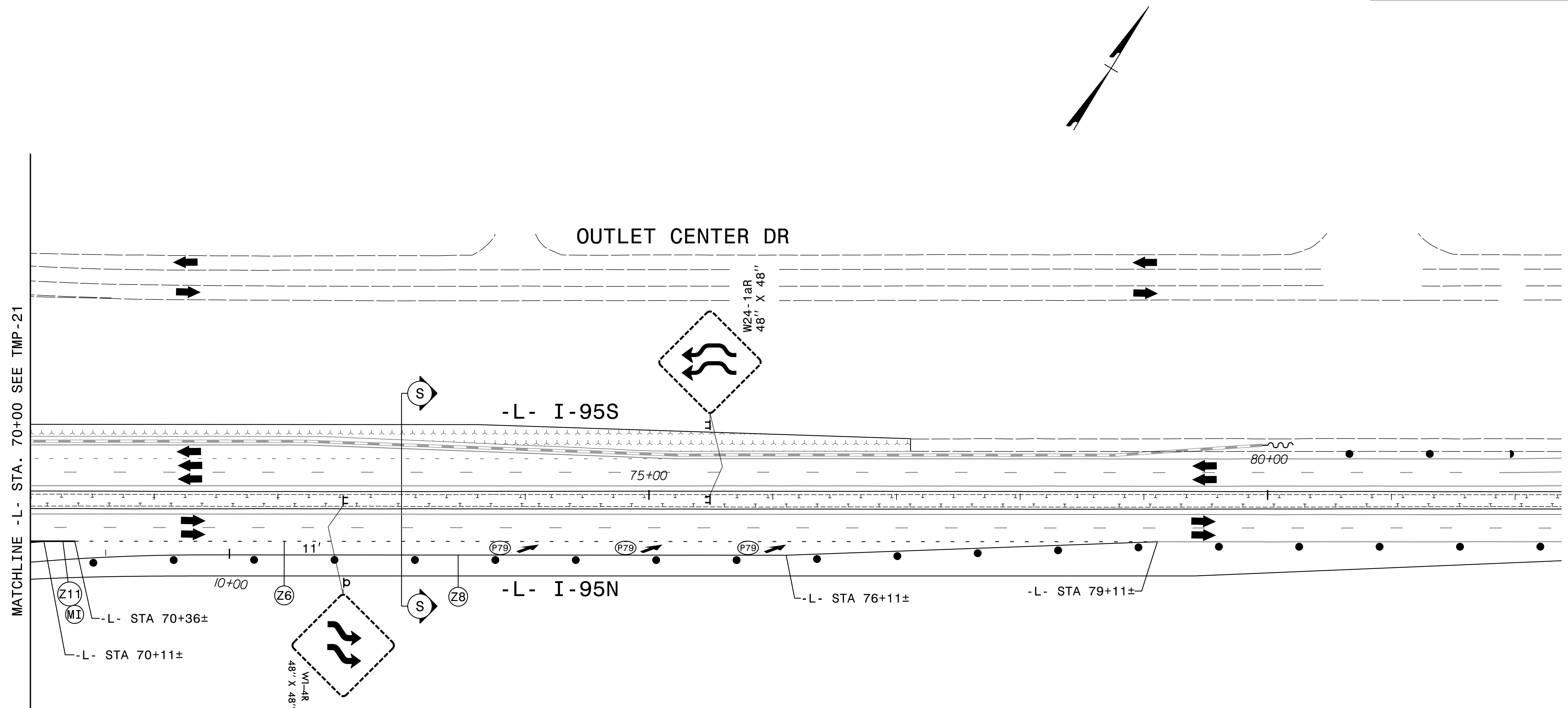
DATE: 9/19/2023

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PHASE II - STEP 1

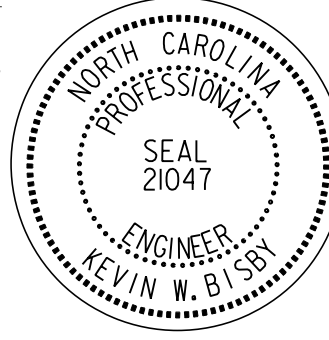


MATCHLINE - L- STA. 70+00 SEE TMP-21

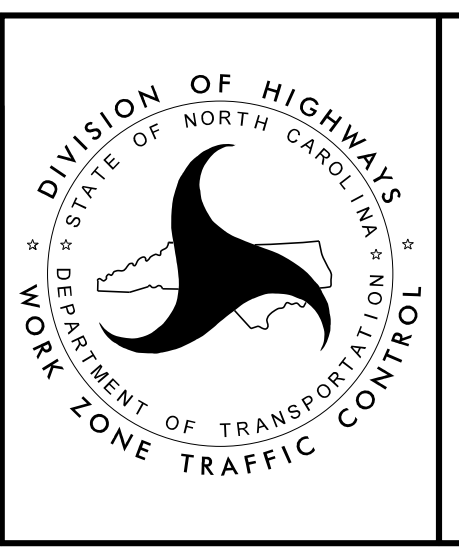
9/19/2023
 15972-TMP-FSH22.dgn
 KRobby

APPROVED: 
 DATE: 9/19/2023

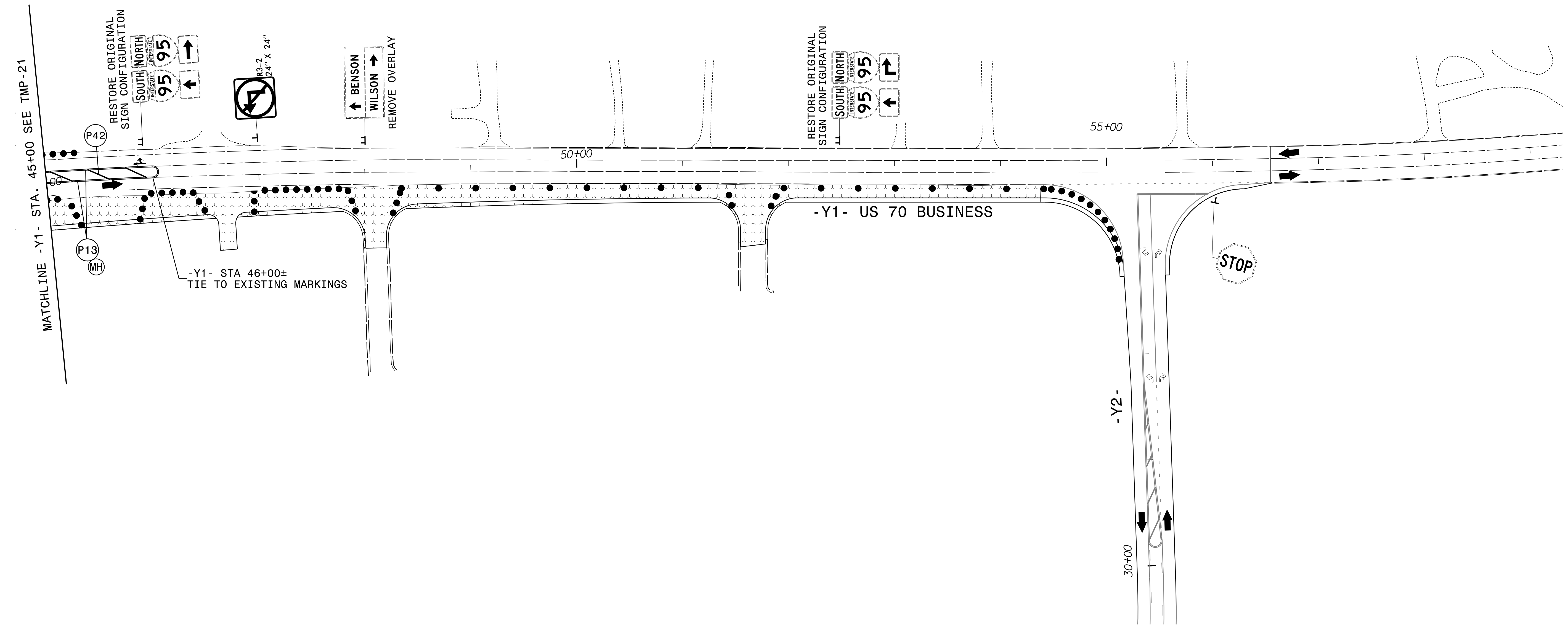
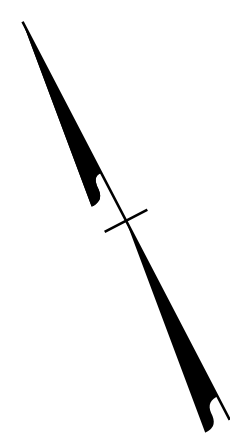
SEAL




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PHASE II - STEP 1

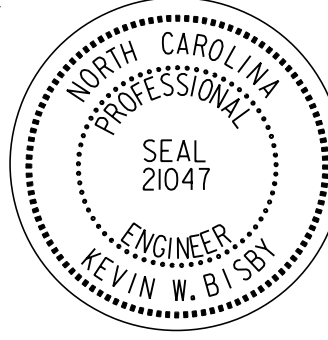


9/19/2023
 15972_TMP_FSH24.dgn
 R01sby

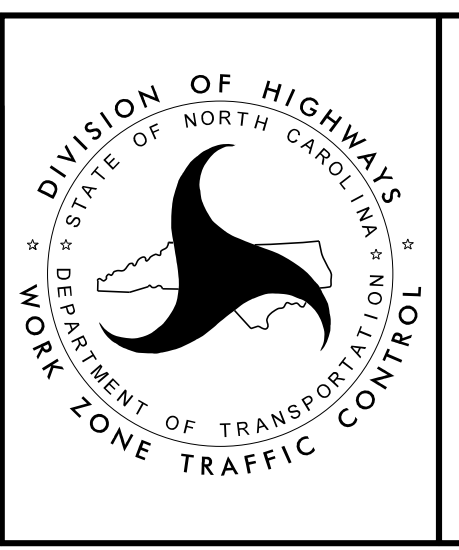
APPROVED: 
DocuSigned by: Kevin Bishop
800802028912472

DATE: 9/19/2023

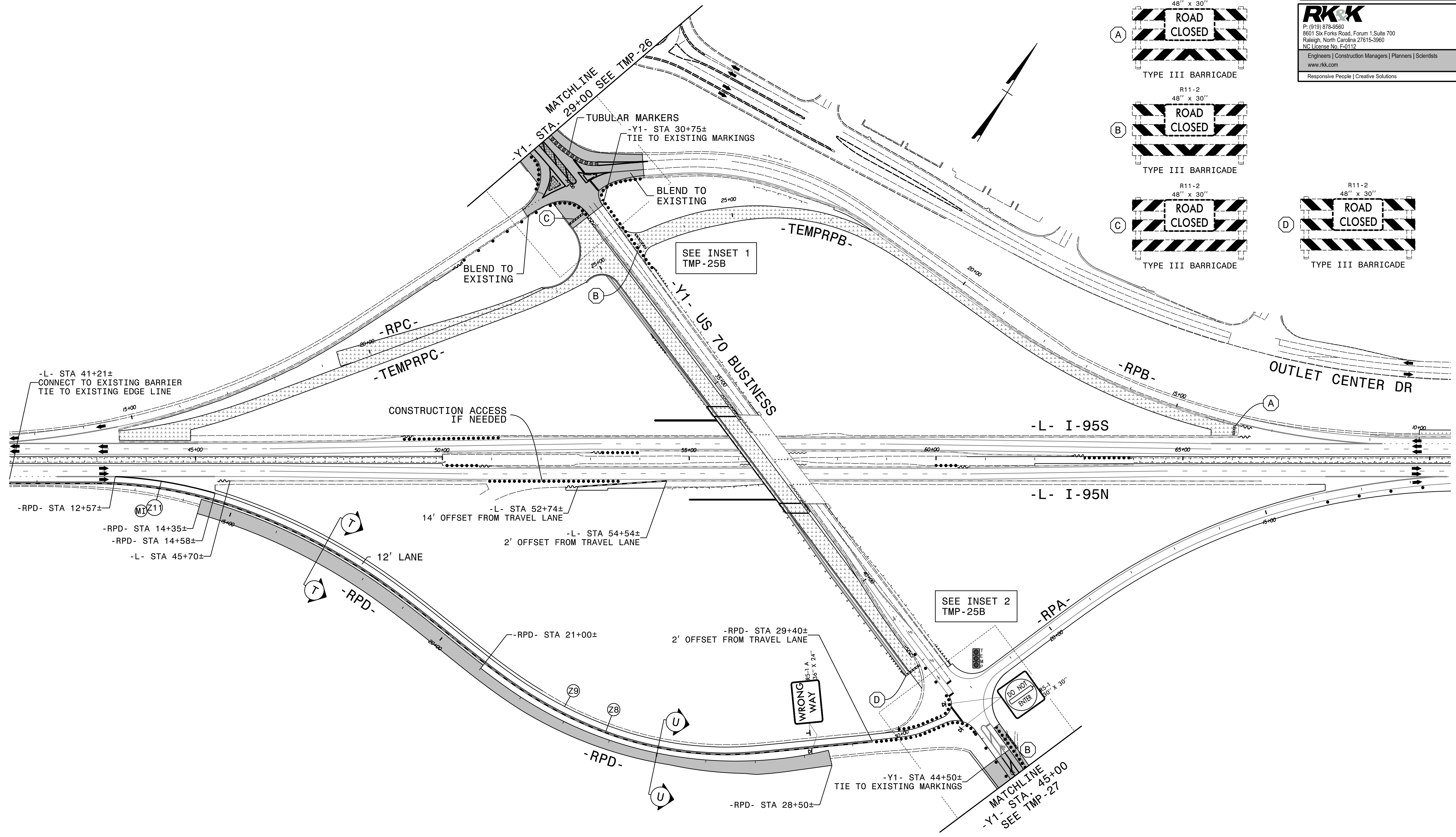
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PHASE II - STEP 1

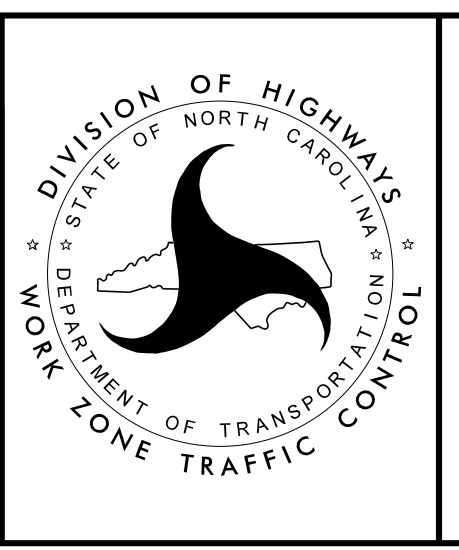


SEE TMP-25A FOR SECTION VIEWS.
 SEE TMP-25B FOR ADDITIONAL PAVEMENT MARKINGS.

APPROVED: *Kevin Bishop*
 DATE: 9/19/2023

SEAL

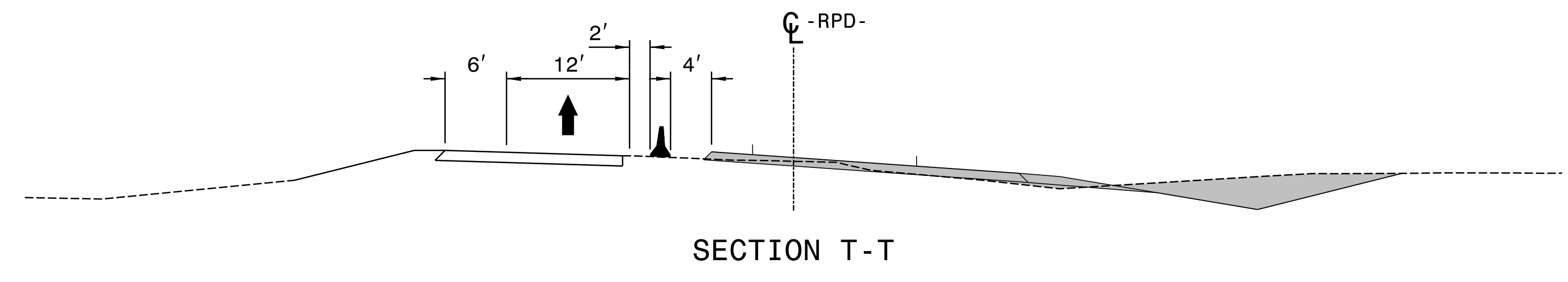
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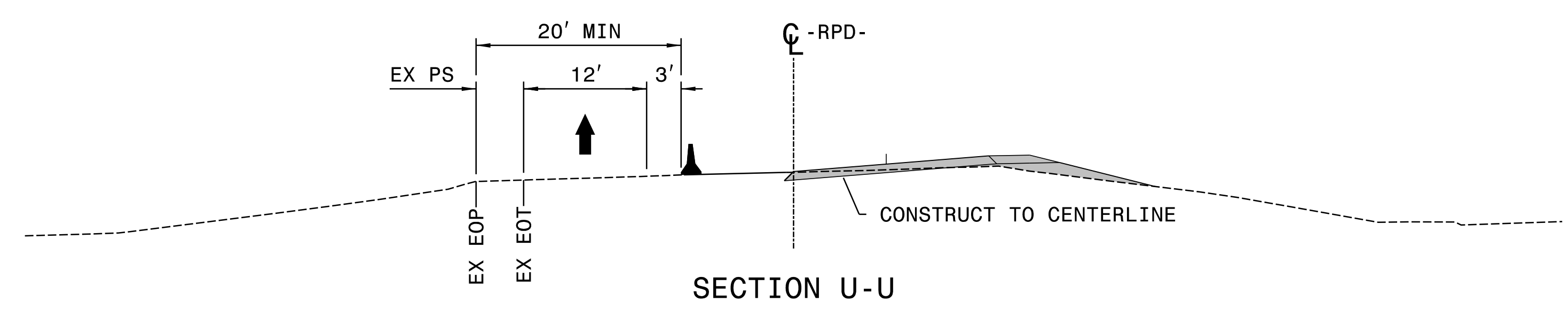
DIVISION OF HIGHWAYS
 NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WORK ZONE TRAFFIC CONTROL

PHASE II - STEP 3

9/19/2023
 I-5972-TMP-FSH25.dgn
 R015bby




SECTION T-T



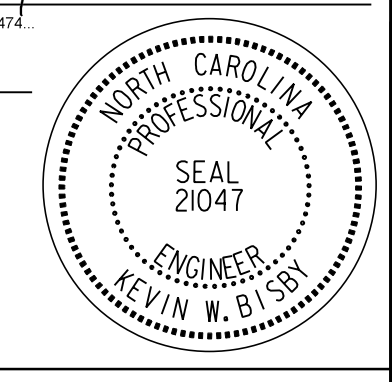
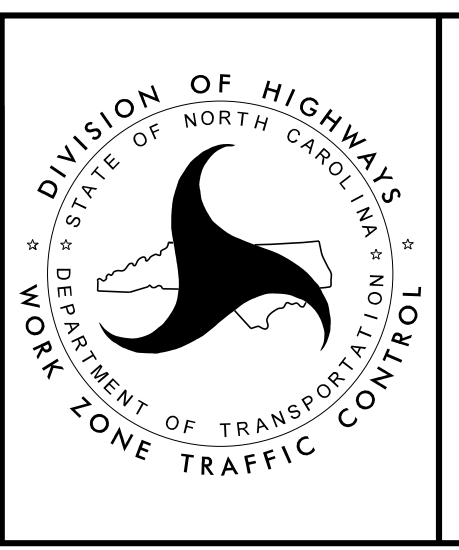
SECTION U-U

9/19/2023
 I5972_TMP_FSH25A.dgn
 R015by

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DocuSigned by: Kevin Bishop
800802028912472

DATE: 9/19/2023

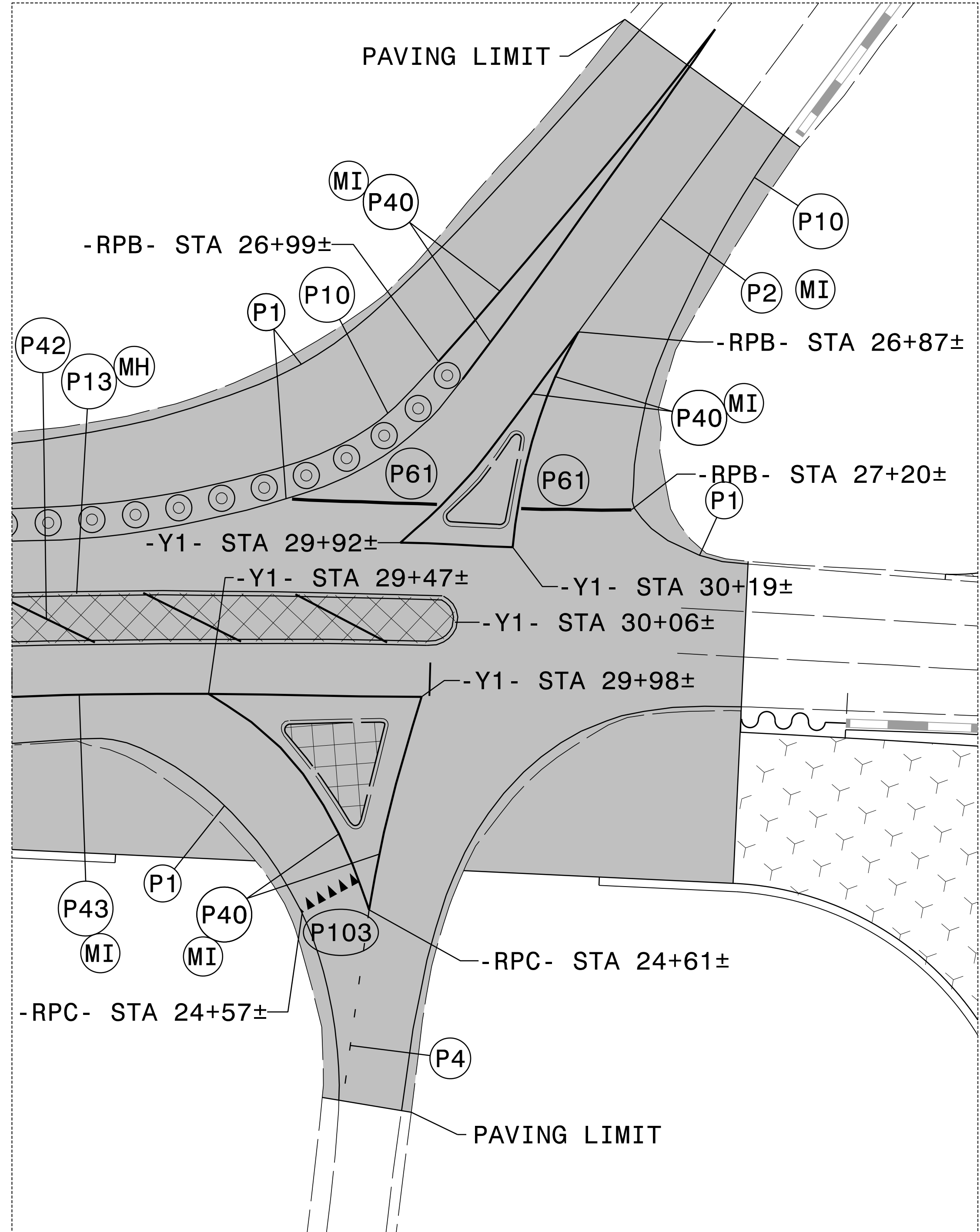
SEAL

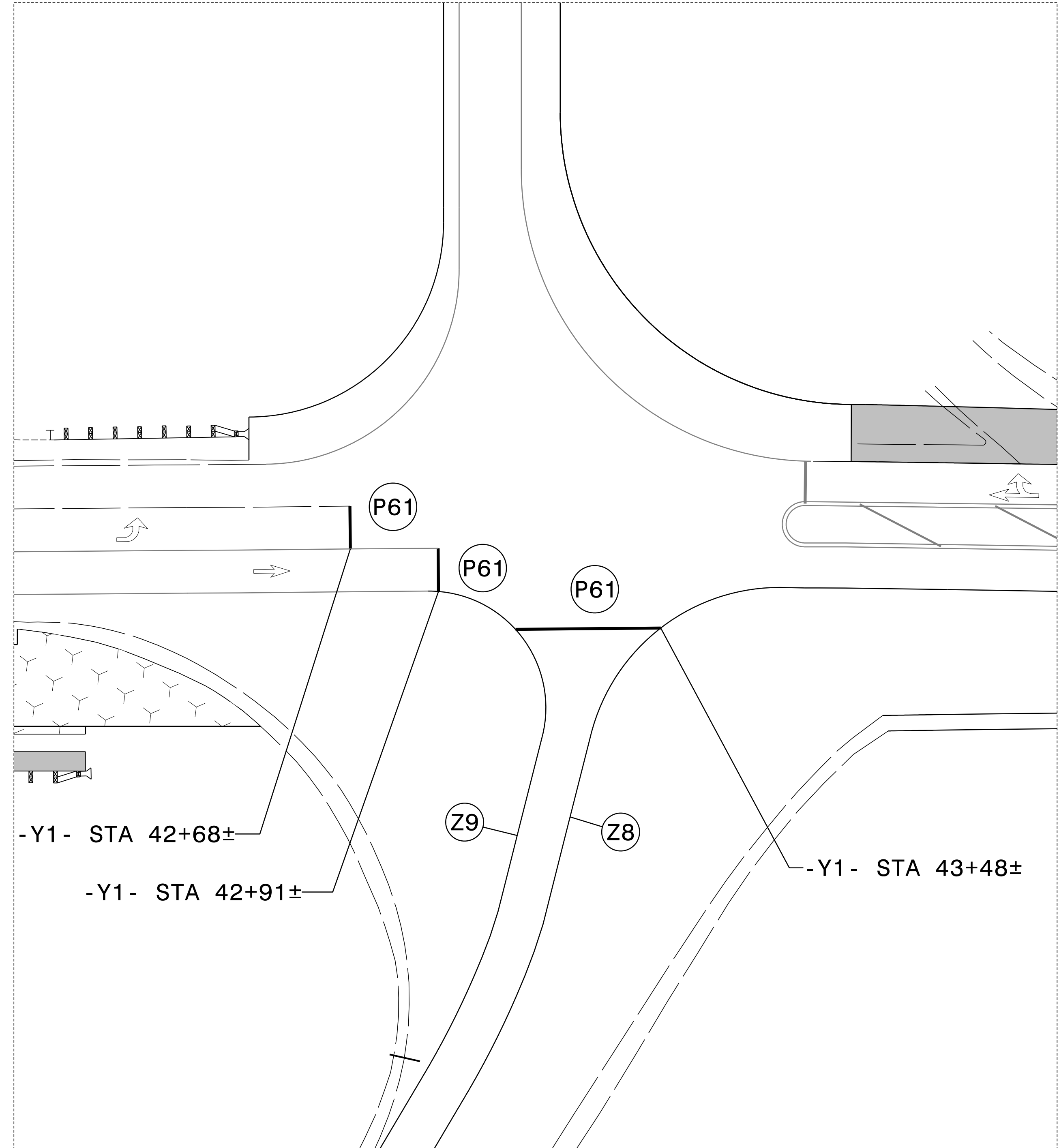
PHASE II - STEP 3

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INSET 1



INSET 2



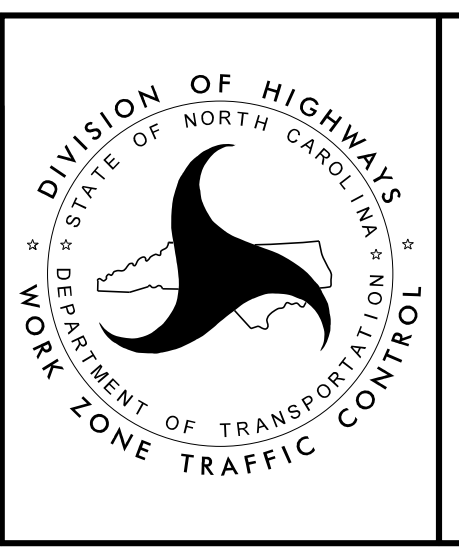
EXISTING LANE WIDTHS

APPROVED: *Kevin Bishop*
800802028912474

DATE: 9/19/2023

SEAL

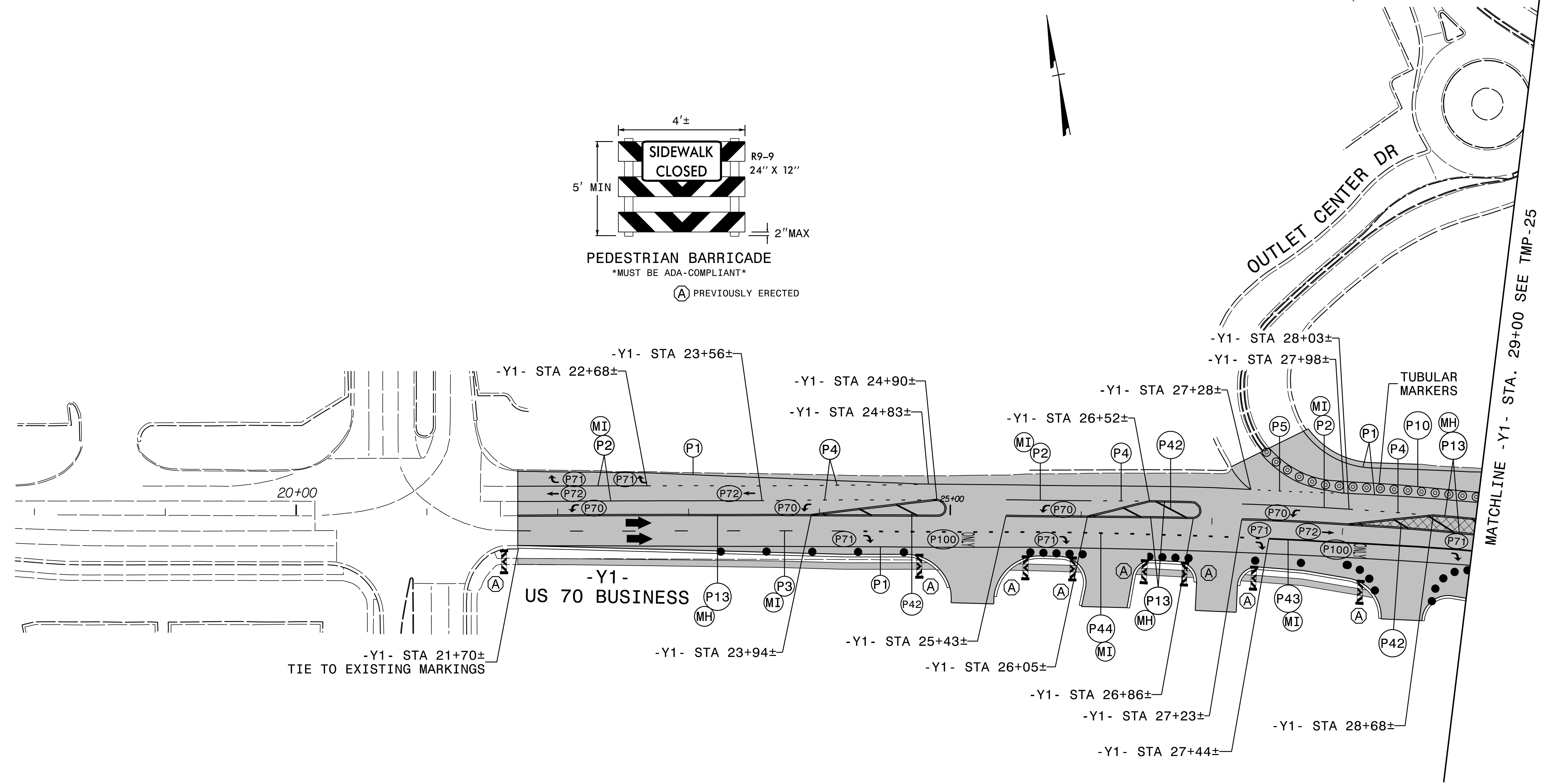
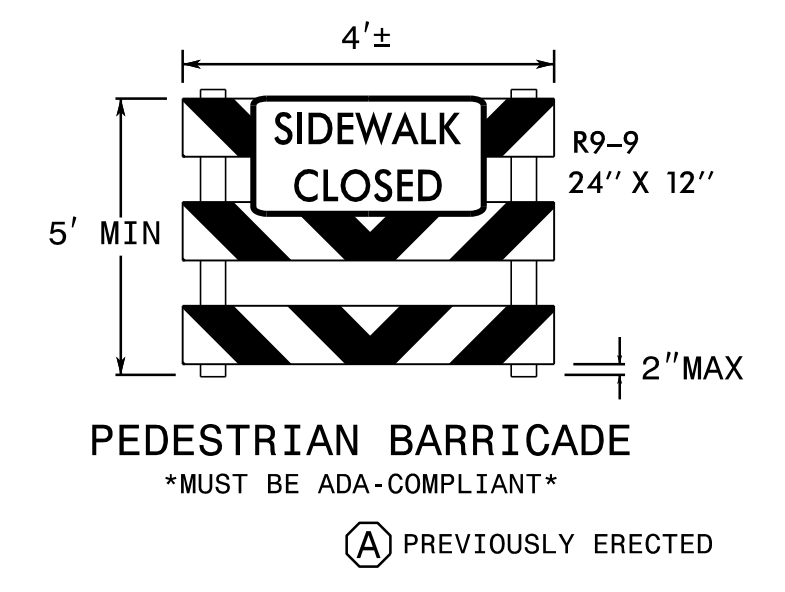
NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 21047
 KEVIN W. BISHOP



PHASE II - STEP 3
 PAVEMENT MARKINGS

9/19/2023
 I5972-TMP-FSH25B.dgn
 R015Bdy

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 UNLESS ALL SIGNATURES COMPLETED



9/19/2023
 15912-TMP-FSH26.dgn
 R015by

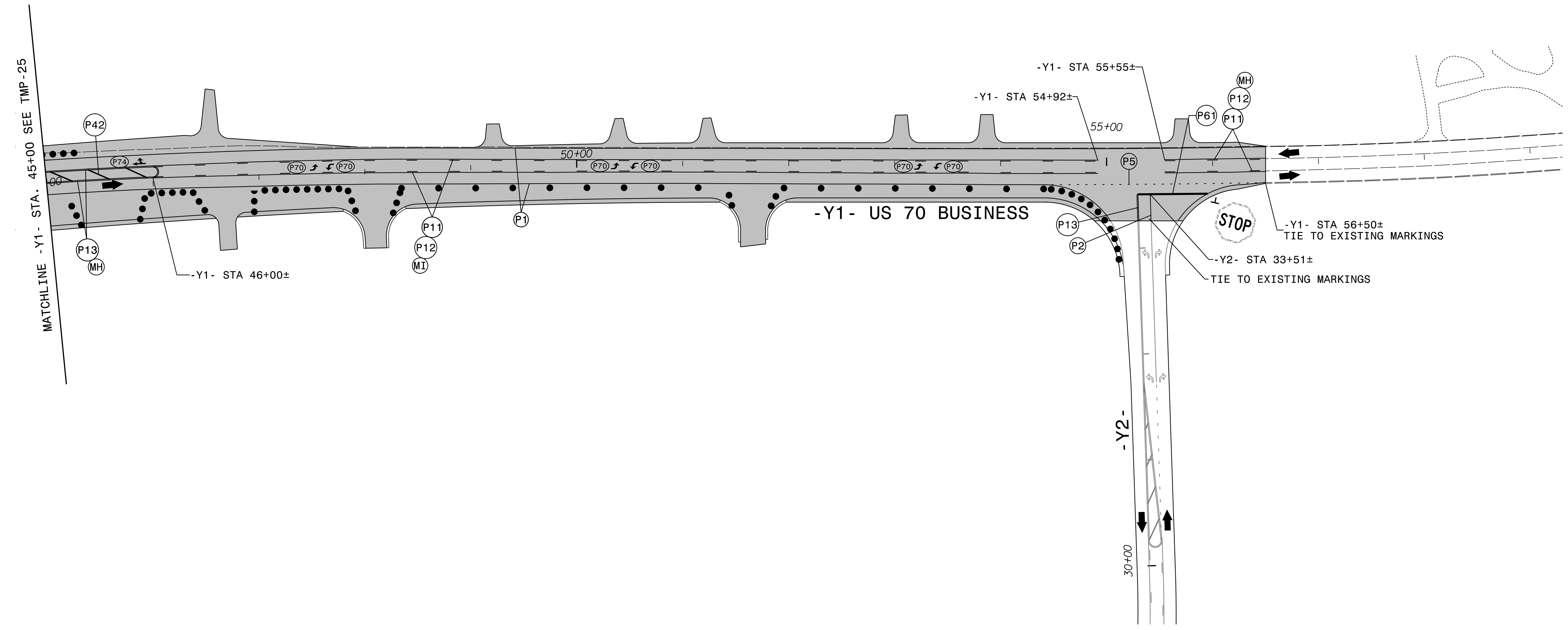
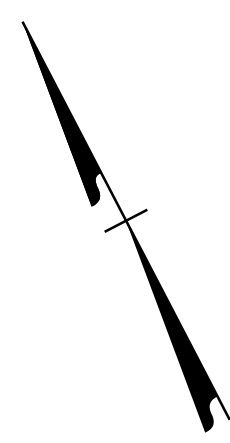
EXISTING LANE WIDTHS

APPROVED: *Kevin Bishop*
 DATE: 9/19/2023

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PHASE II - STEP 3

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9/19/2023
 15912-TMP-FSH27.dgn
 R015by

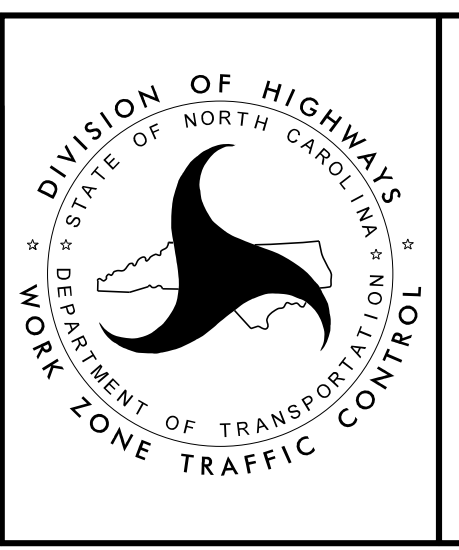
EXISTING LANE WIDTHS

APPROVED: 
 DATE: 9/19/2023

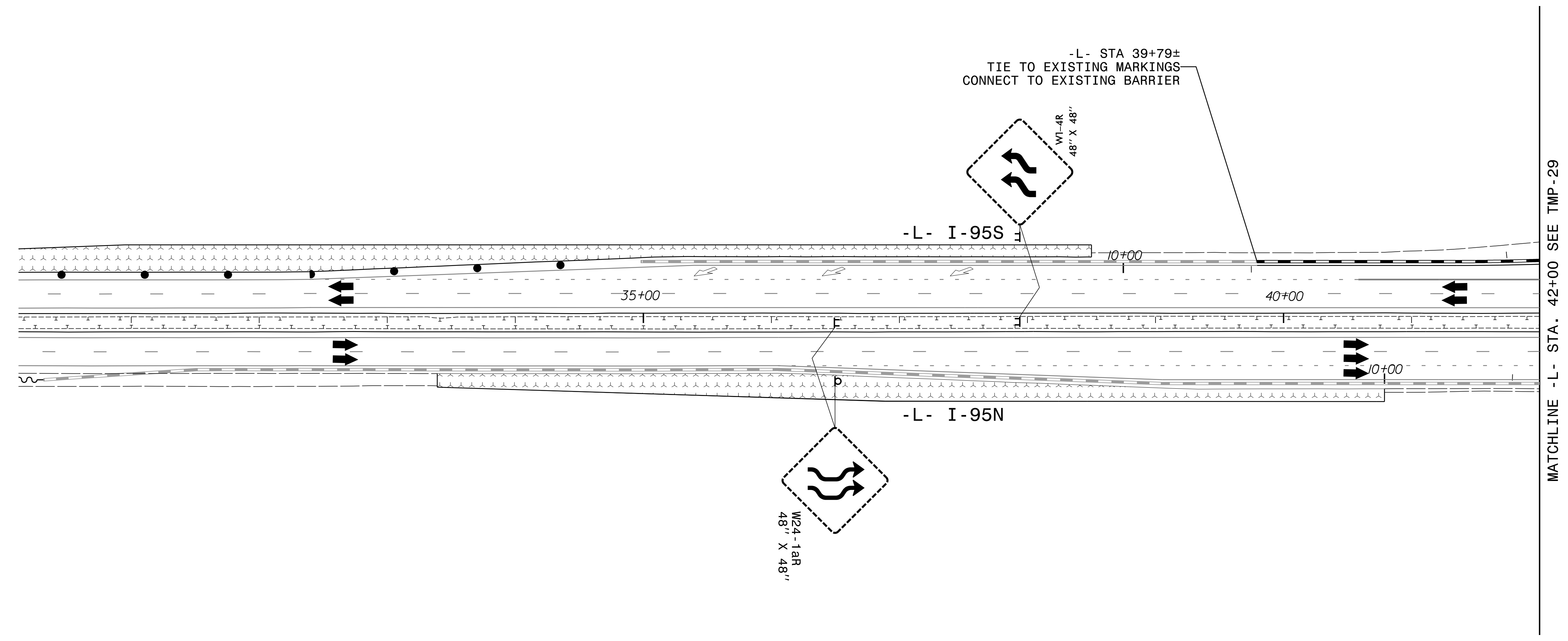
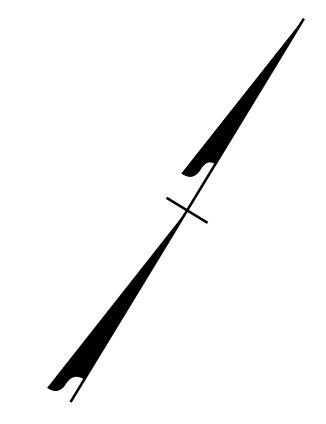
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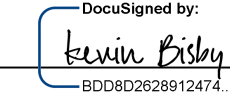


PHASE II - STEP 3



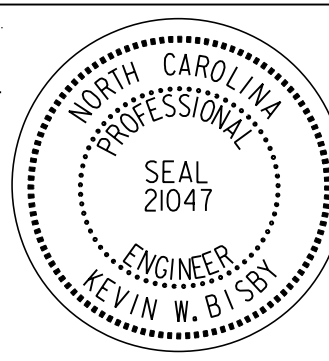
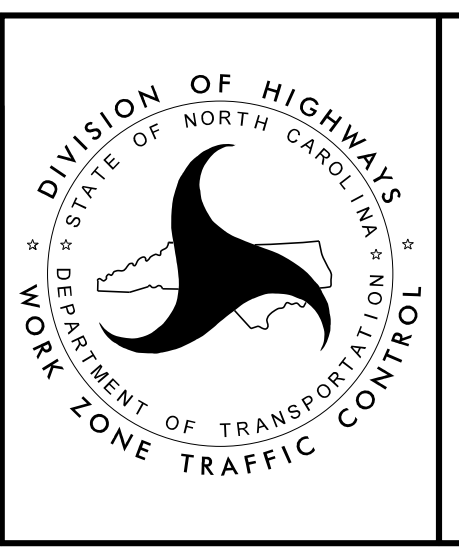
MATCHLINE -L- STA. 42+00 SEE TMP-29

9/19/2023
 15972-TMP-FSH28.dgn
 R015by

APPROVED: 
DocuSigned by: Kevin Bisby
 B00802028912472

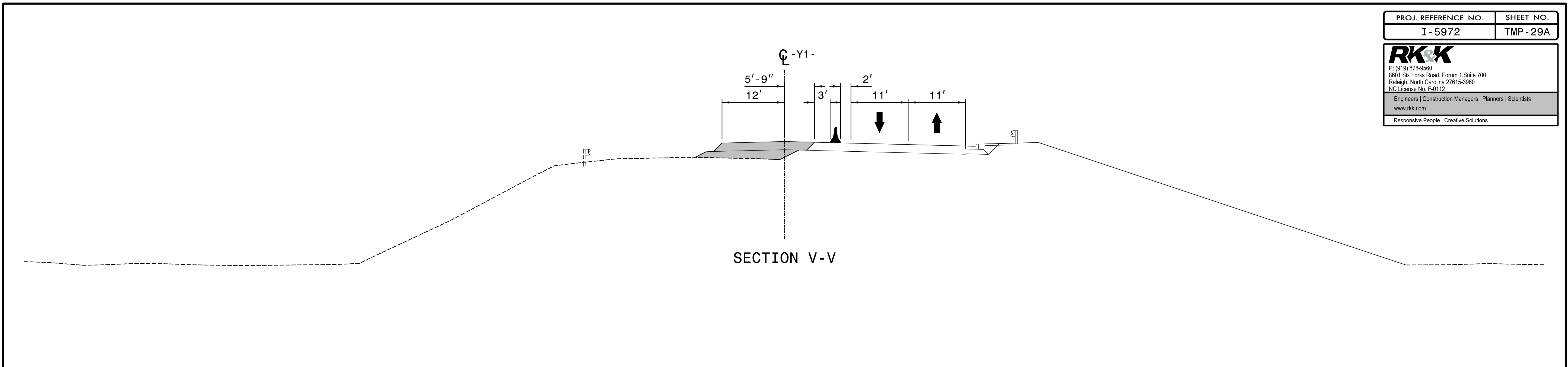
DATE: 9/19/2023

SEAL

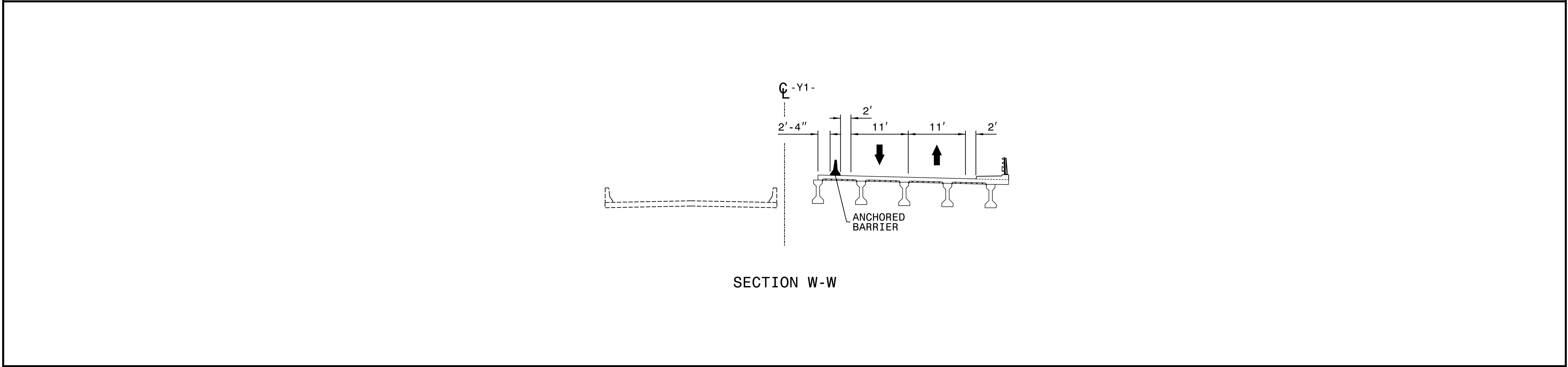



PHASE II - STEP 4

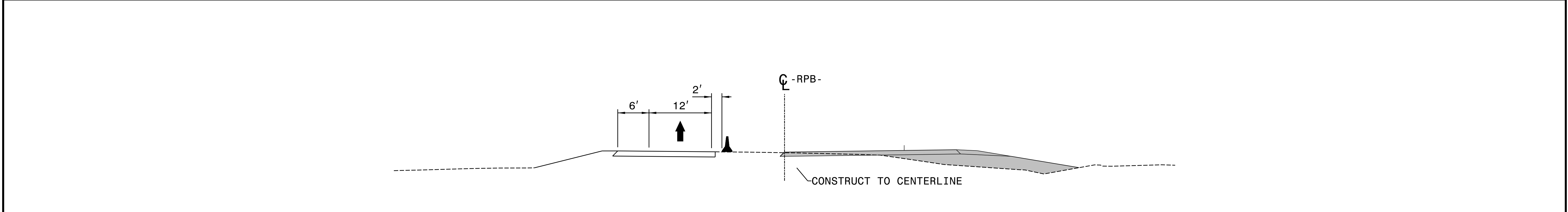
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SECTION V-V



SECTION W-W

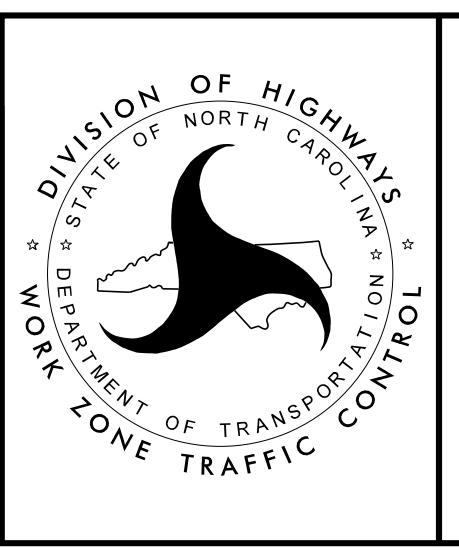


SECTION X-X

APPROVED: *Kevin Bishop*
DocuSigned by: Kevin Bishop
 800802028912472

DATE: 9/19/2023

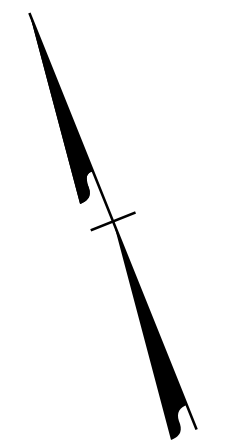
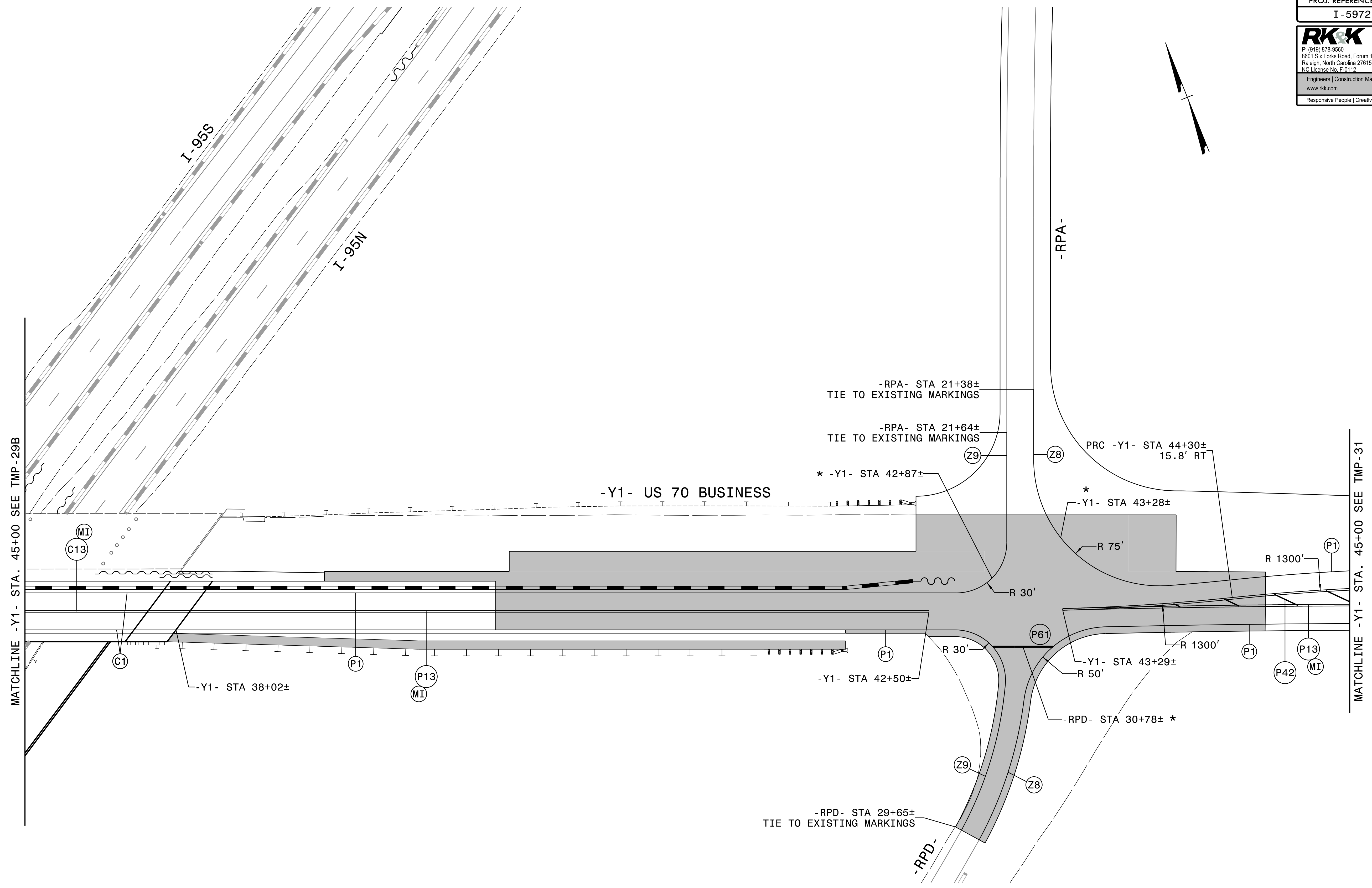
SEAL



PHASE II
 STEPS 4 AND 5

9/19/2023
 15912-TMP-FSH29A.dgn
 R01Sdy

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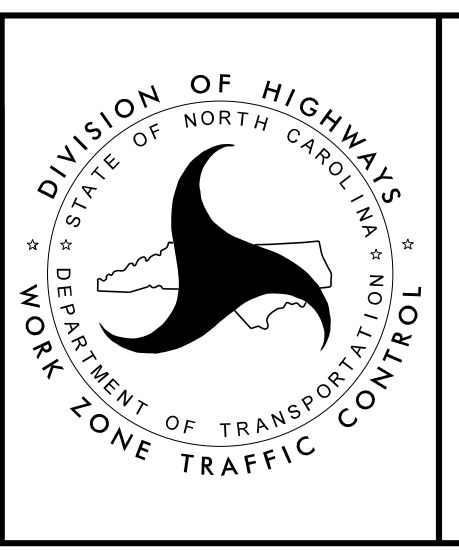
12' LANES ON RAMPS.
 11' LANES ON US 70 BUSINESS.
 *CHANGE BETWEEN PAINT AND PERFORMANCE MARKING TYPES

APPROVED: *Kevin Bishop*
800802028912474

DATE: 9/19/2023

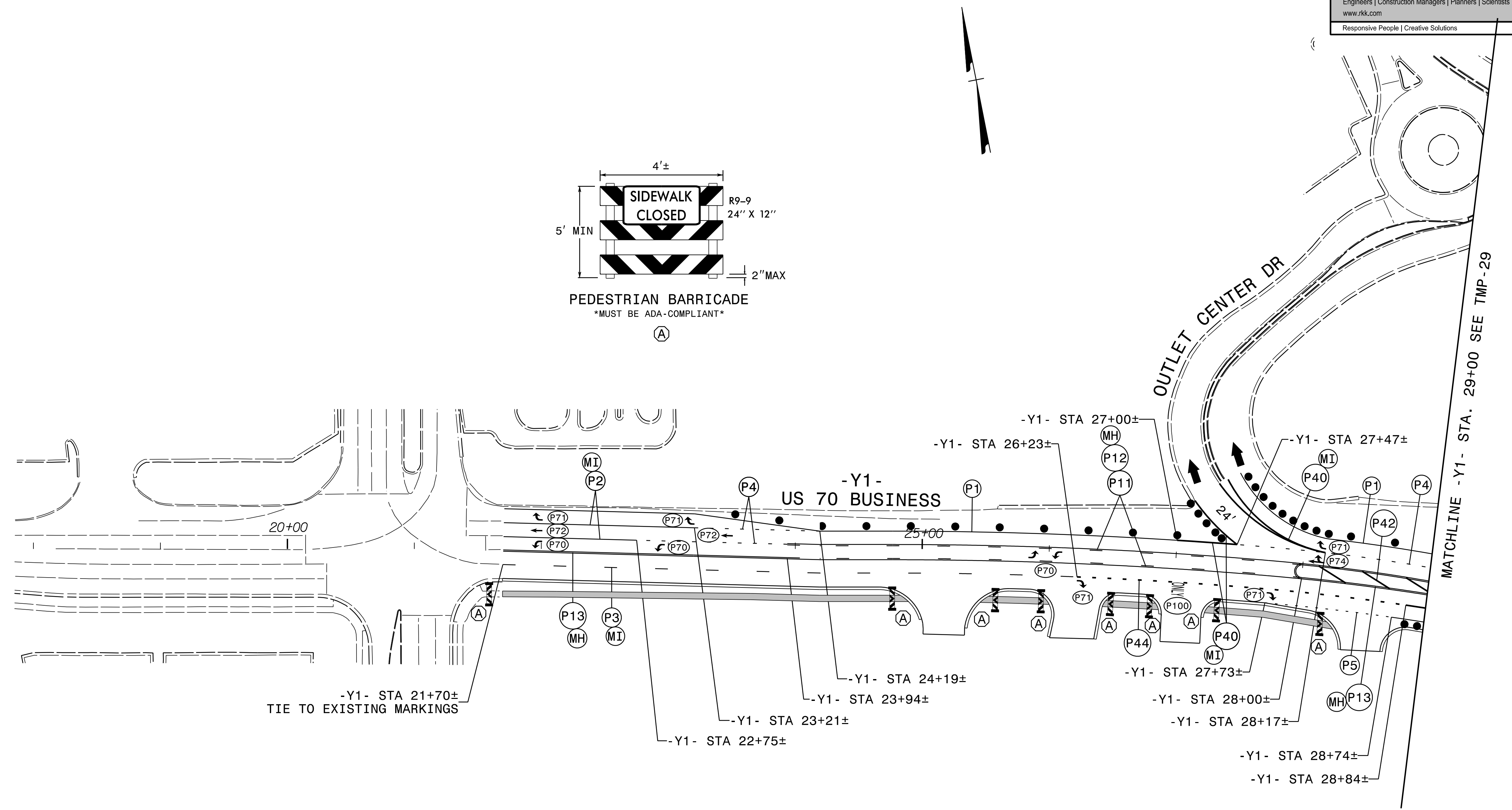
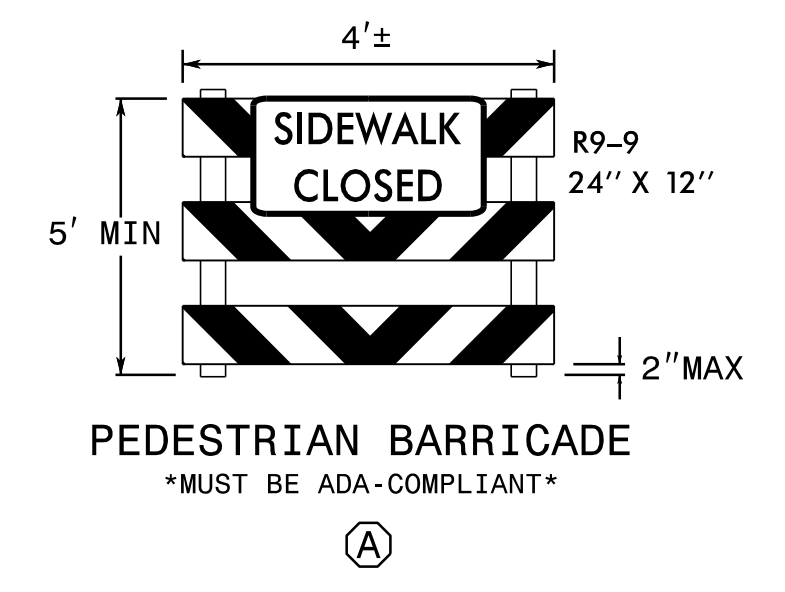
SEAL

PROFESSIONAL ENGINEER
 KEVIN W. BISHOP
 21047




**PHASE II - STEP 4
 PAVEMENT MARKINGS**

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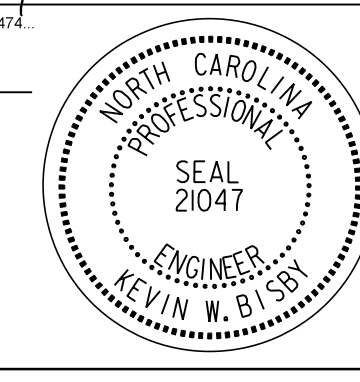


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 15912-TMP-FSH30.dgn
 R015by

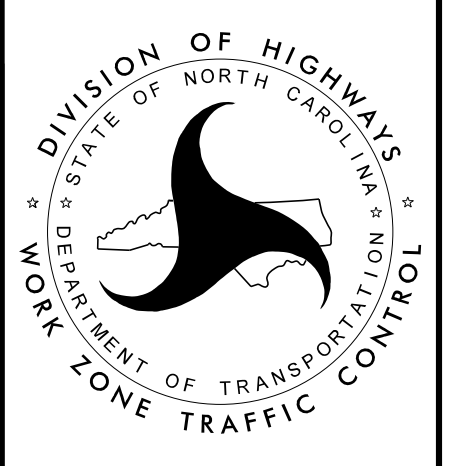
11' LANES

APPROVED: 
 DATE: 9/19/2023

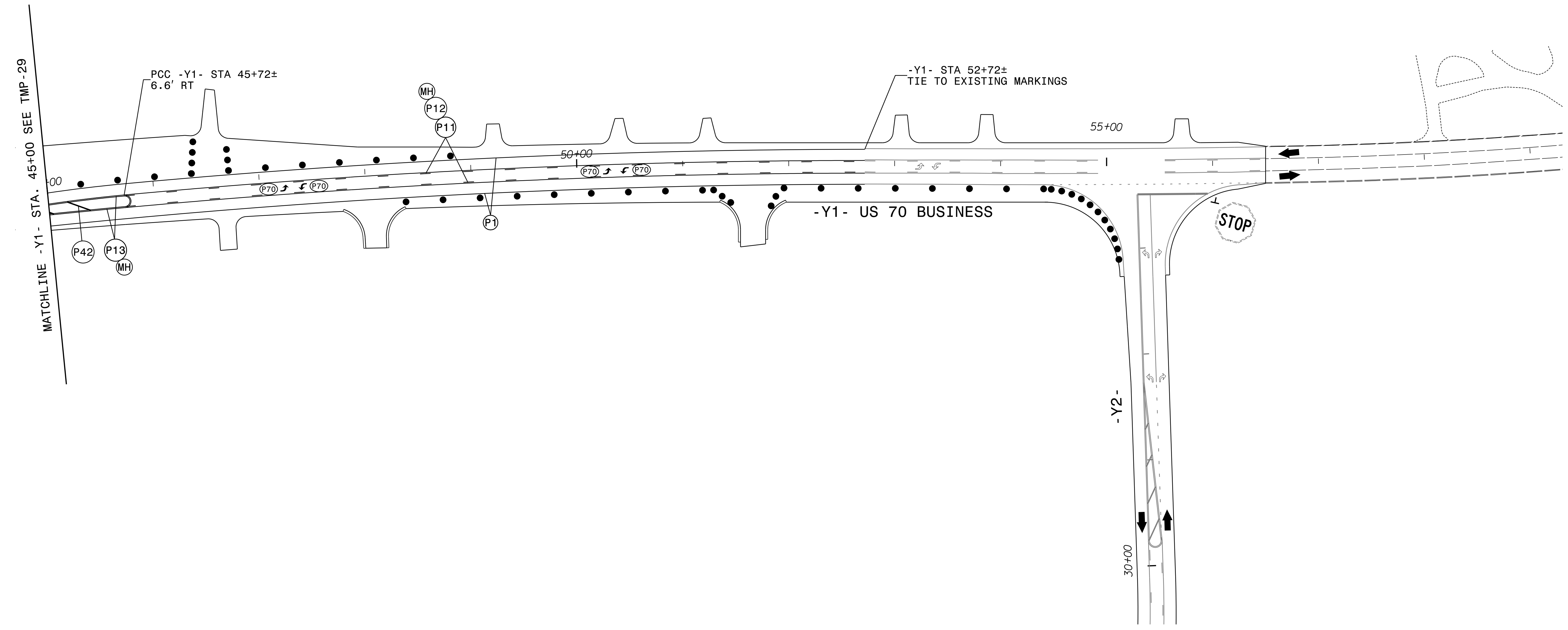
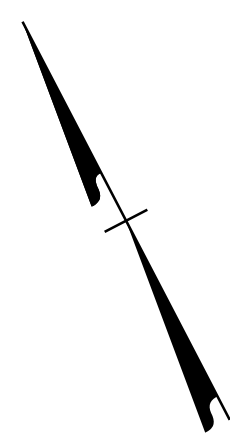
SEAL



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PHASE II - STEP 4



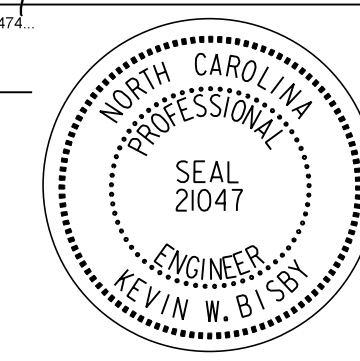
9/19/2023
 I5972-TMP-FSH31.dgn
 R015by

11' LANES

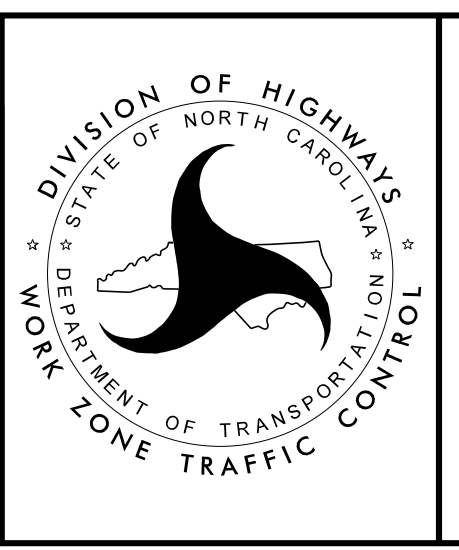
APPROVED: 
DocuSigned by: Kevin Bishop
800802028912472

DATE: 9/19/2023

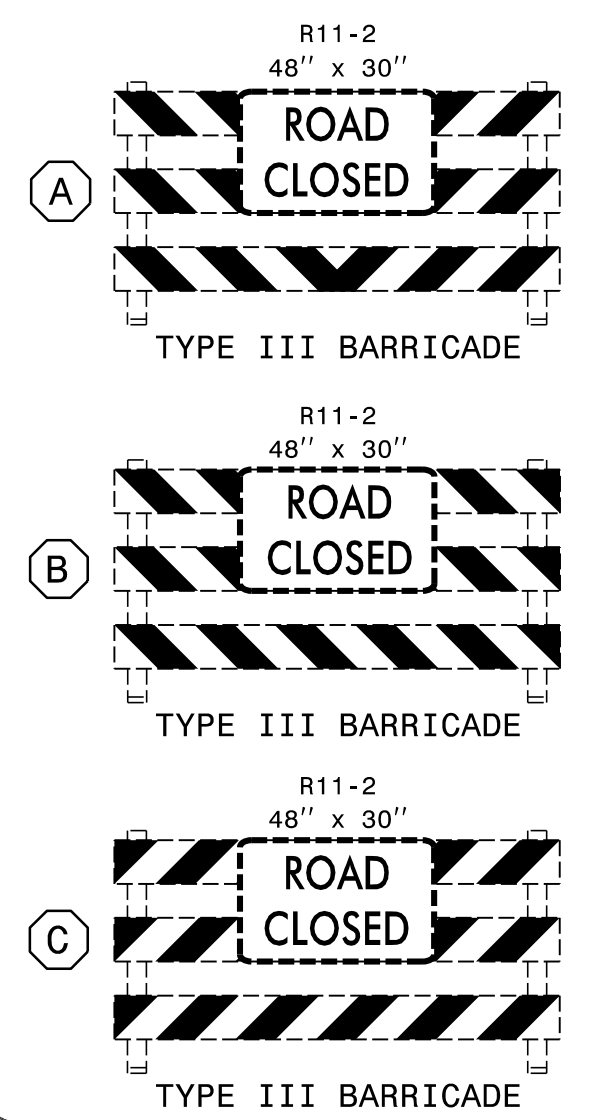
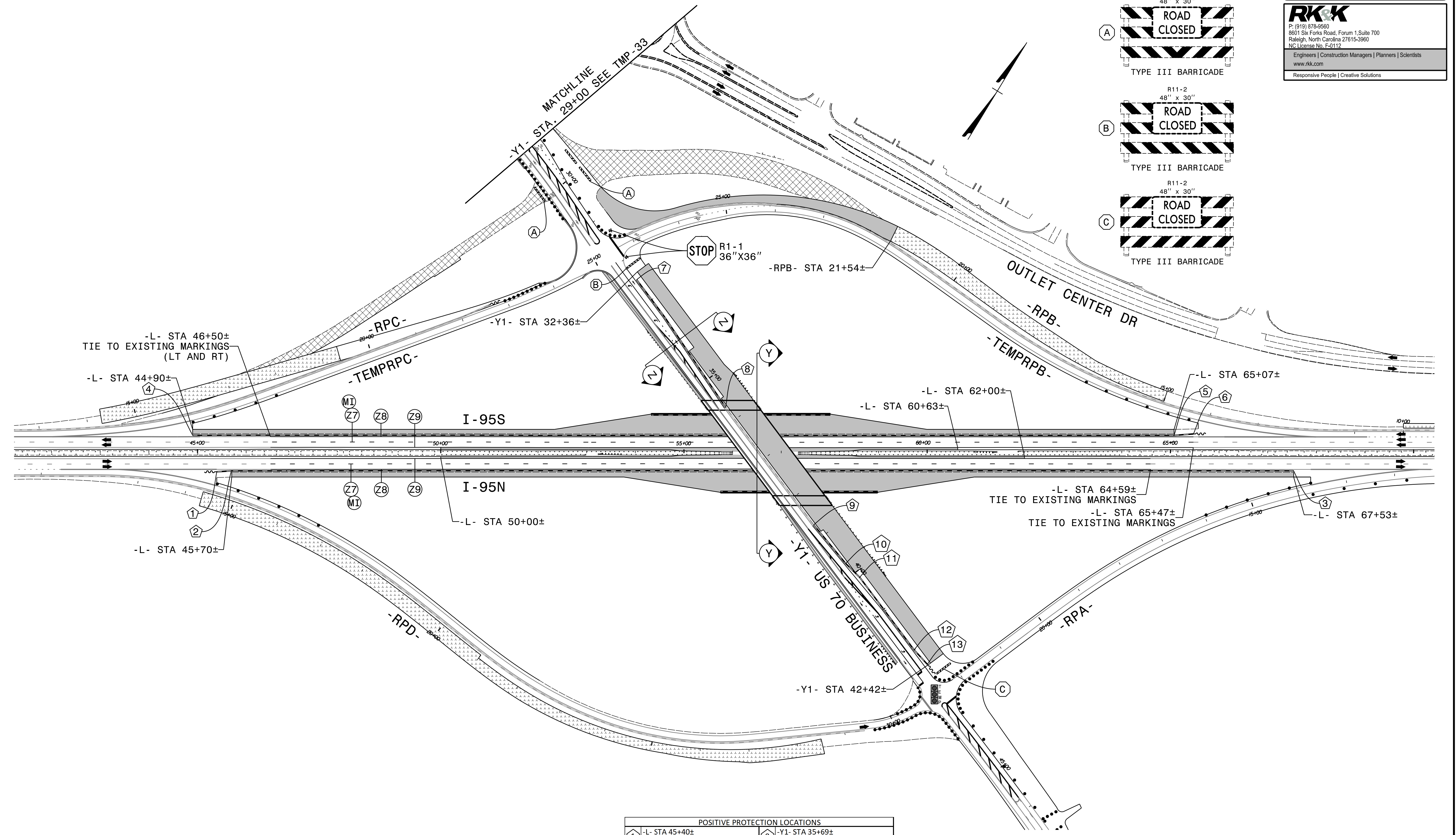
SEAL



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PHASE II - STEP 4



STOP R1-1
36" X 36"

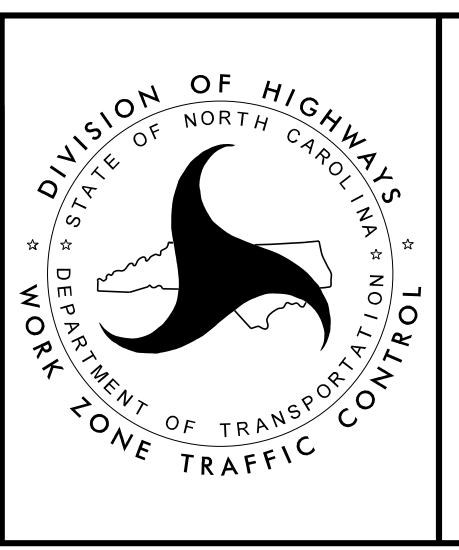
11' LANES
 SEE TMP-32A FOR SECTION VIEWS.
 SEE TMP-32B AND 32C FOR ADDITIONAL PAVEMENT MARKINGS
 RELOCATE EXISTING SIGNS WITH THE APPROVAL OF THE ENGINEER.

POSITIVE PROTECTION LOCATIONS	
1 -L- STA 45+40± 4' OFFSET FROM TRAVEL LANE	8 -Y1- STA 35+69± CONNECT TO EXISTING BARRIER
2 -L- STA 45+70± 2' OFFSET FROM TRAVEL LANE	9 -Y1- STA 38+70± CONNECT TO EXISTING BARRIER
3 -L- STA 67+53± 2' OFFSET FROM TRAVEL LANE	10 -Y1- STA 39+73± 2' OFFSET FROM TRAVEL LANE
4 -L- STA 44+90± 2' OFFSET FROM TRAVEL LANE	11 -Y1- STA 40+13± 6' OFFSET FROM TRAVEL LANE
5 -L- STA 65+07± 2' OFFSET FROM TRAVEL LANE	12 -Y1- STA 42+00± 2' OFFSET FROM TRAVEL LANE
6 -L- STA 65+47± 5' OFFSET FROM TRAVEL LANE	13 -Y1- STA 42+40± 6' OFFSET FROM TRAVEL LANE
7 -Y1- STA 32+49± 2' OFFSET FROM TRAVEL LANE	

APPROVED: *Kevin Bisby*
 DATE: 9/19/2023

SEAL

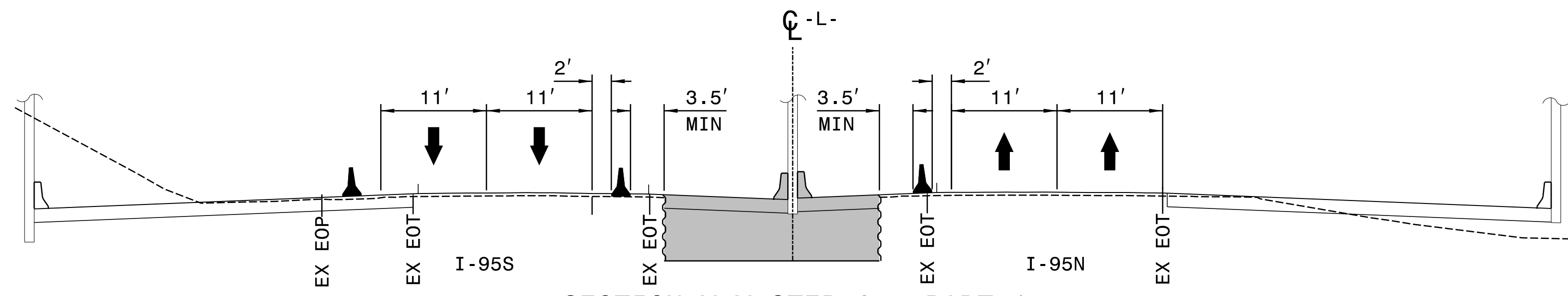
DOCUMENT NOT CONSIDERED FINAL
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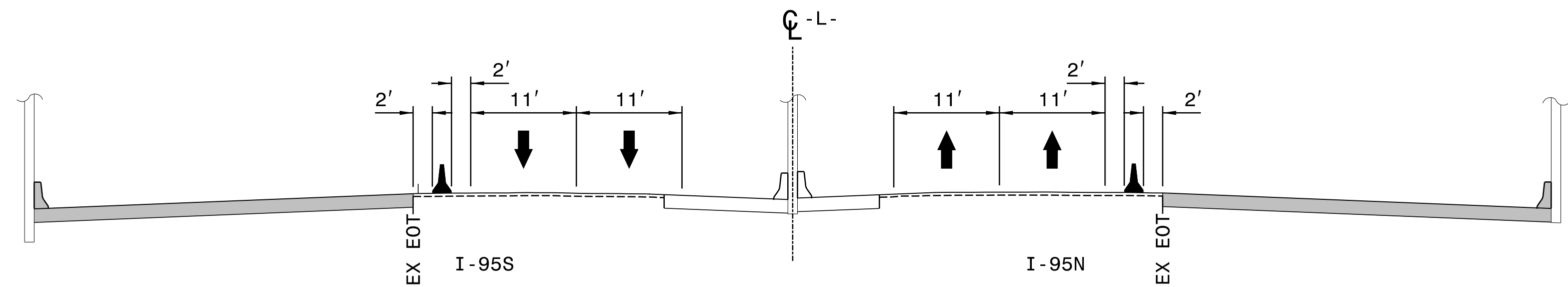
DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WORK ZONE TRAFFIC CONTROL

PHASE III
 STEPS 1 AND 2

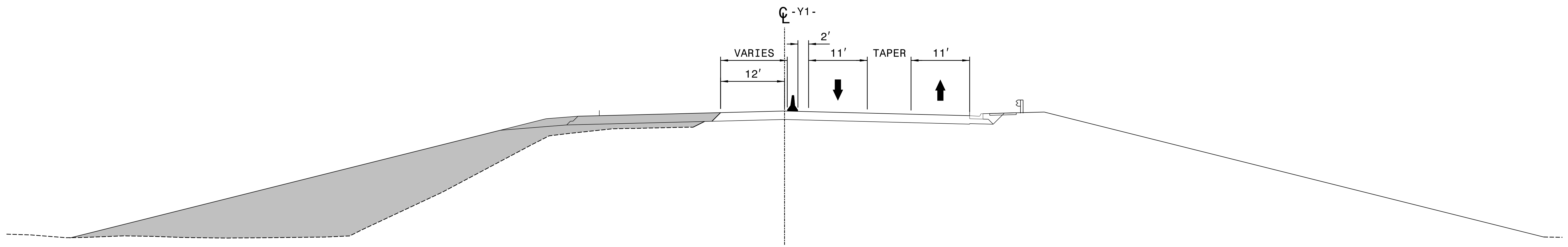
9/19/2023
 15912_TMP_PSH32.dgn
 Robby



SECTION Y-Y STEP 2 - PART 1
 BACKFILL EXCAVATION AND PAVE TO THE EDGE
 AND ELEVATION OF THE EXISTING PAVEMENT.



SECTION Y-Y STEP 2 - PART 2
 SHIFT TRAFFIC TO THE MEDIAN

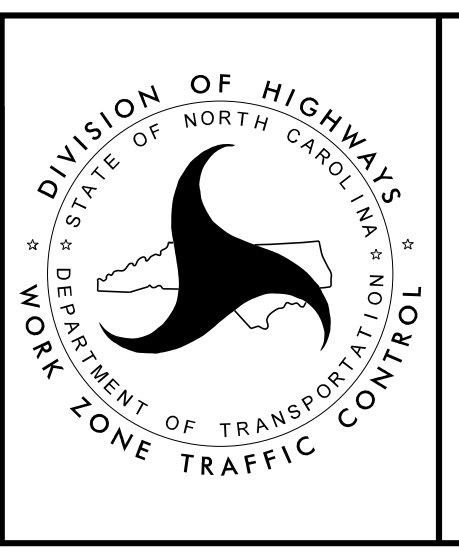


SECTION Z-Z

APPROVED: *Kevin Bishop*
 DATE: 9/19/2023

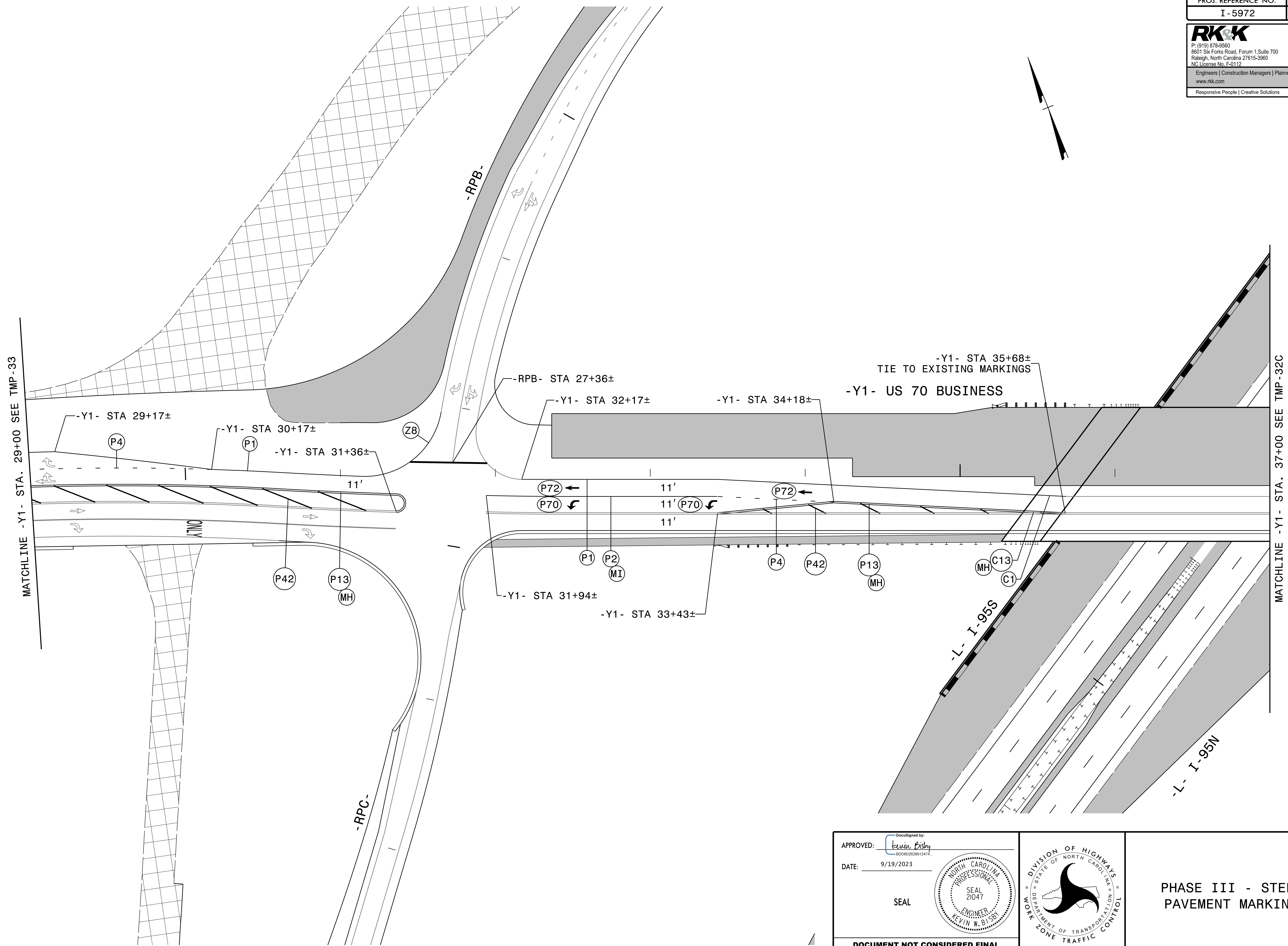
SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 21047
 KEVIN W. BISHOP




PHASE III
STEPS 2 AND 2A

9/19/2023
 15912-TMP-FSH32A.dgn
 R01Sby




9/19/2023
 15972-TMP-FSH32B.dgn
 R015by

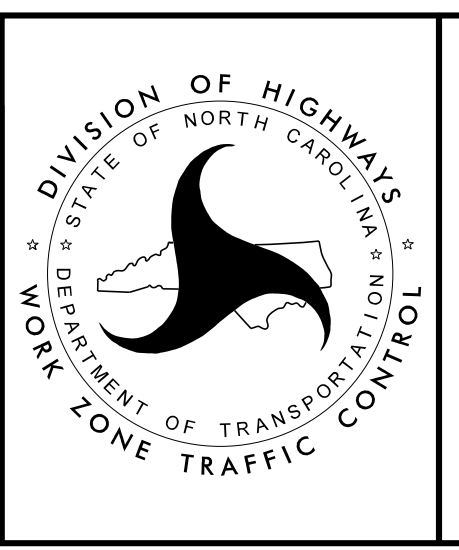
APPROVED: 
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DATE: 9/19/2023

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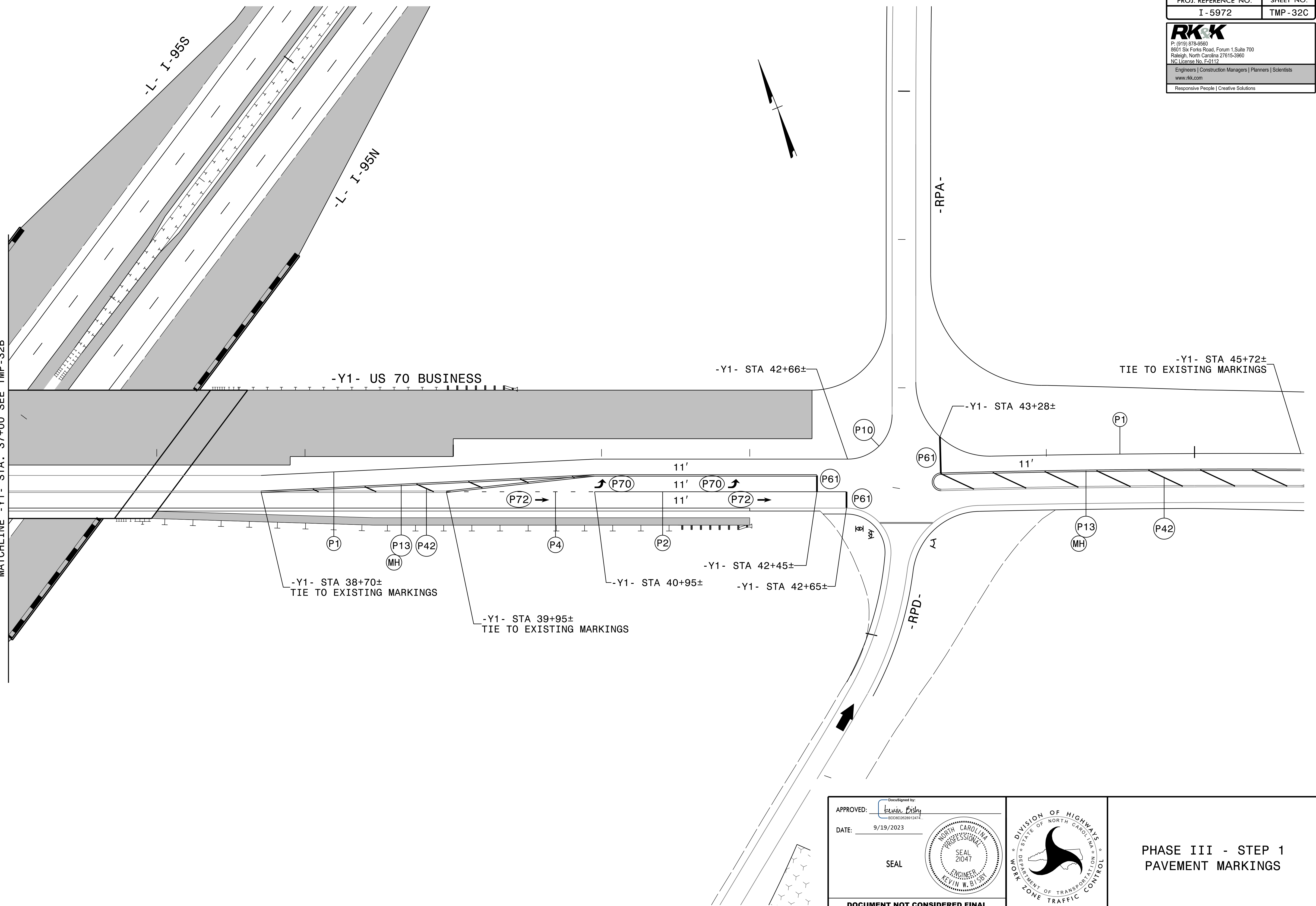


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**PHASE III - STEP 1
PAVEMENT MARKINGS**

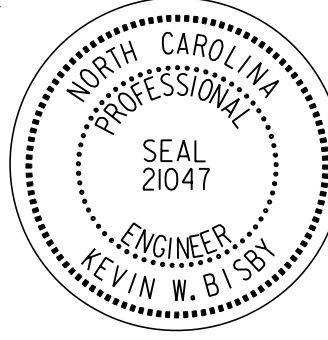
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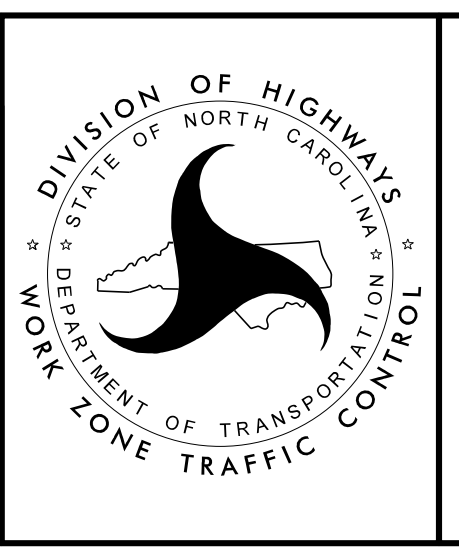
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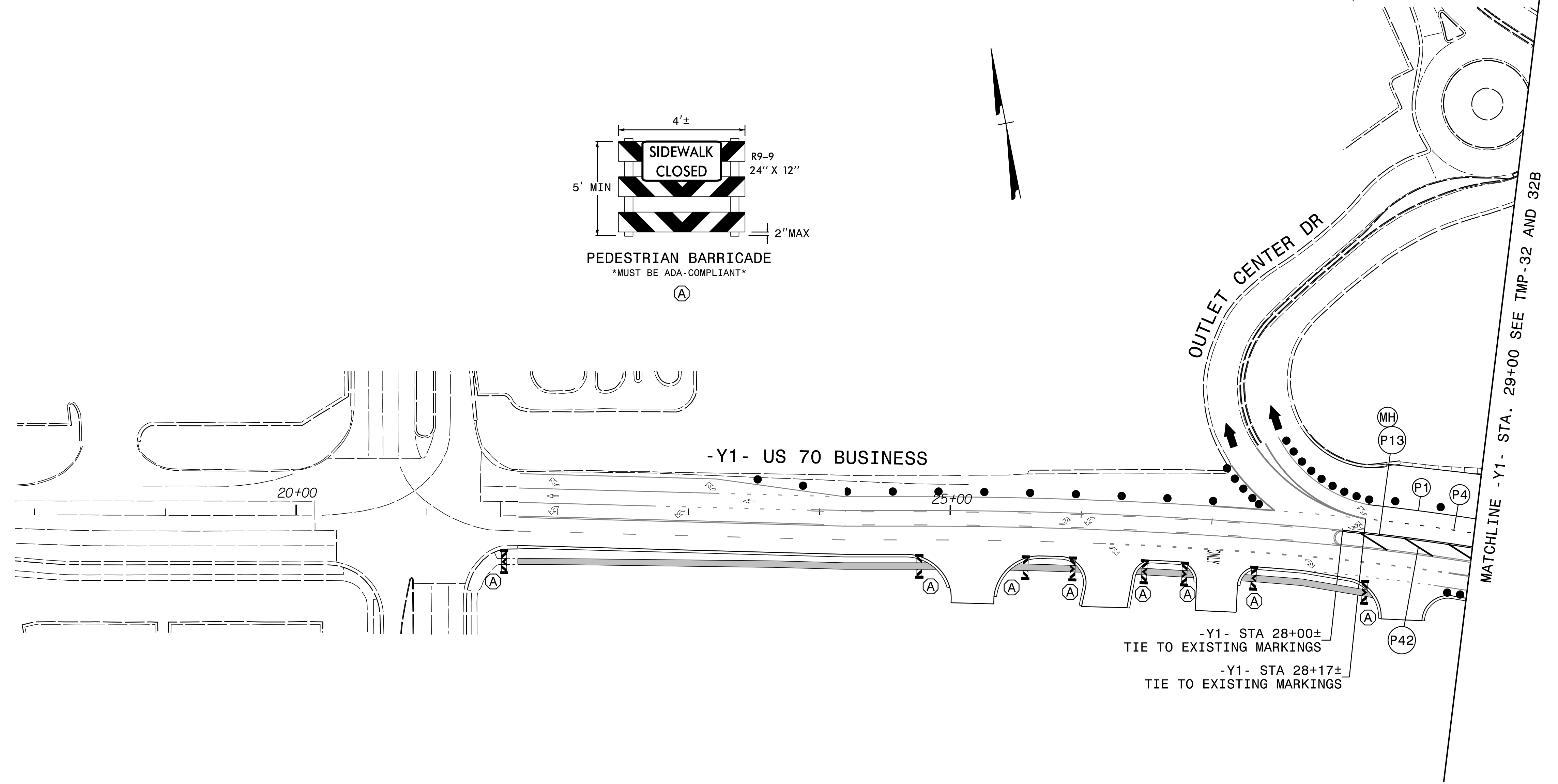
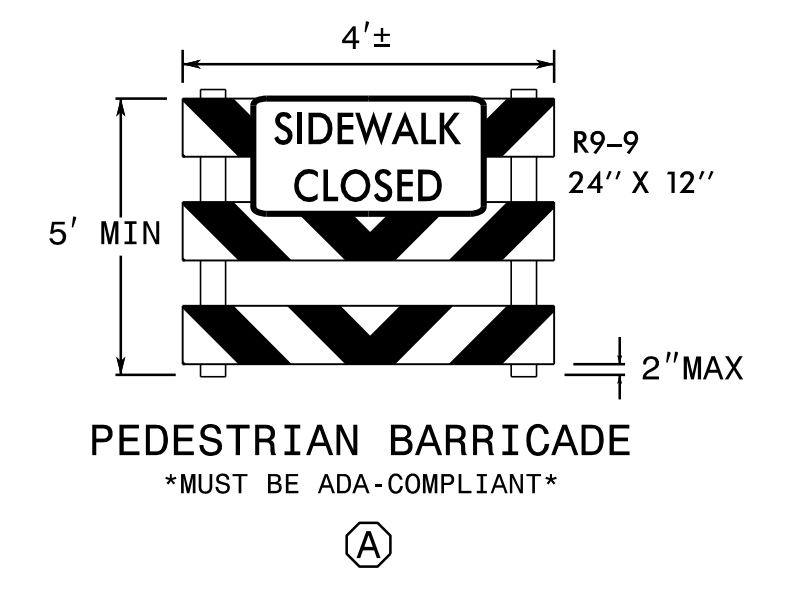
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**PHASE III - STEP 1
 PAVEMENT MARKINGS**




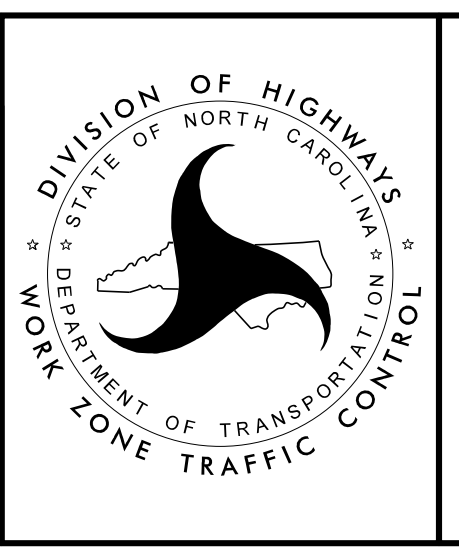
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11' LANES

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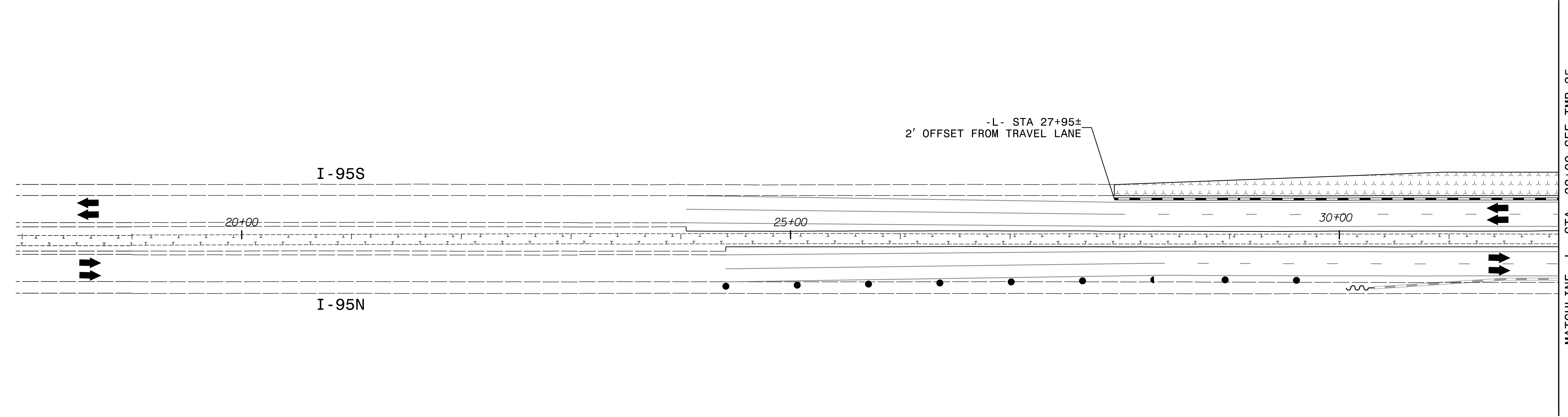
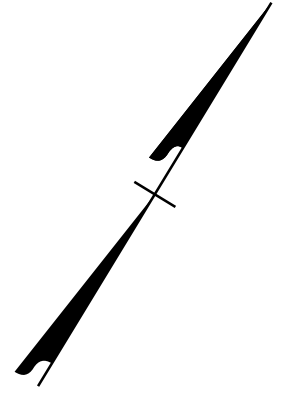



PHASE III - STEP 1


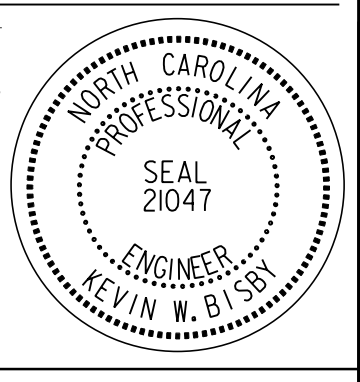
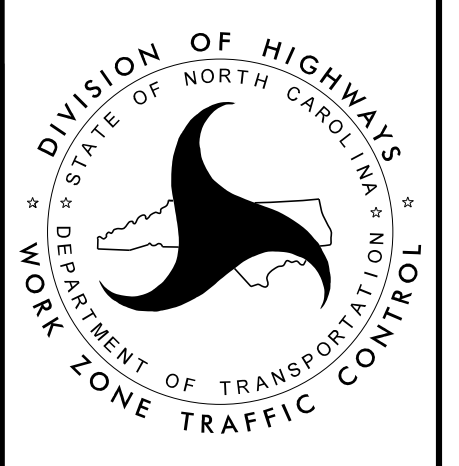
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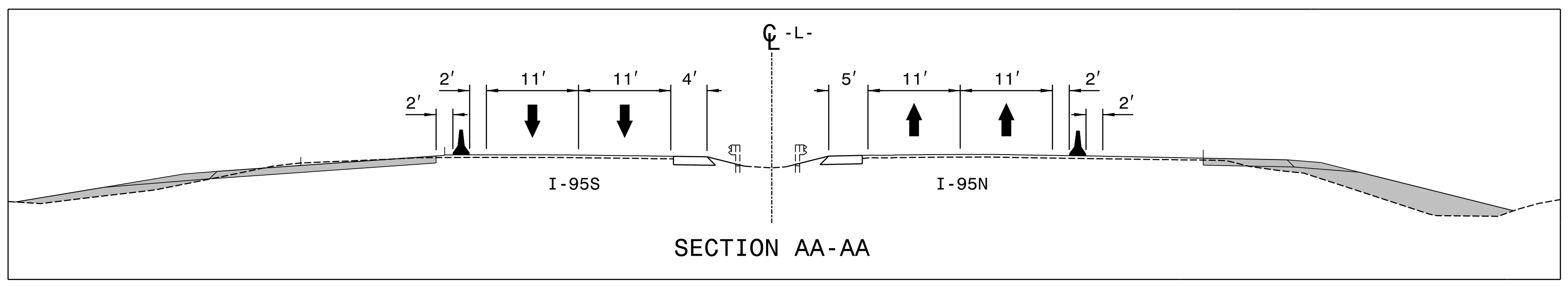
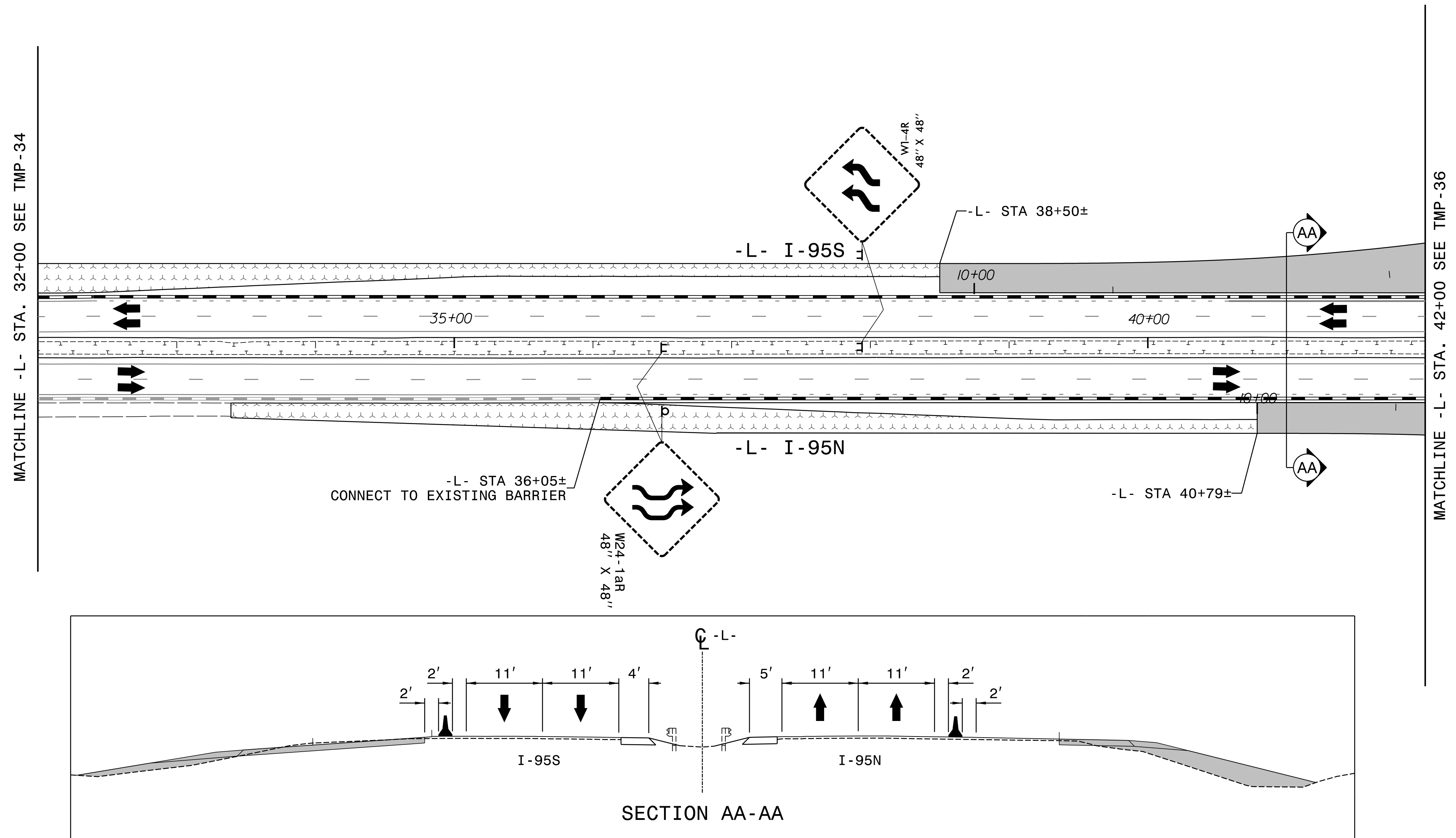
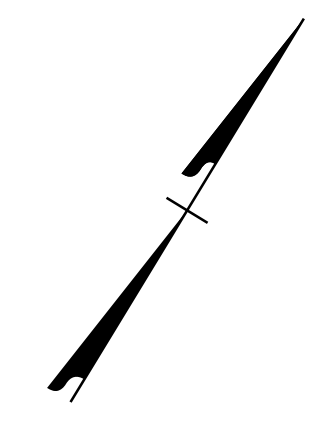
PROJ. REFERENCE NO.	SHEET NO.
I - 5972	TMP - 34

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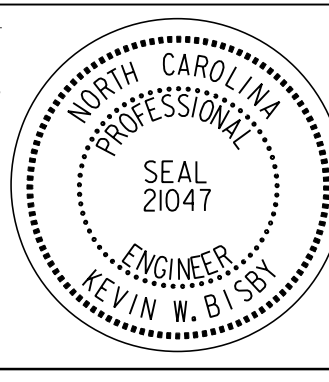
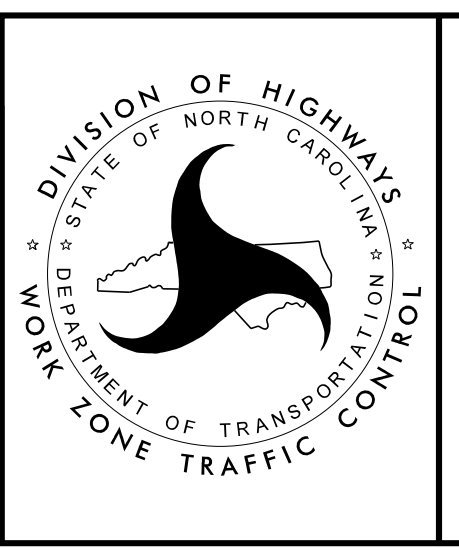


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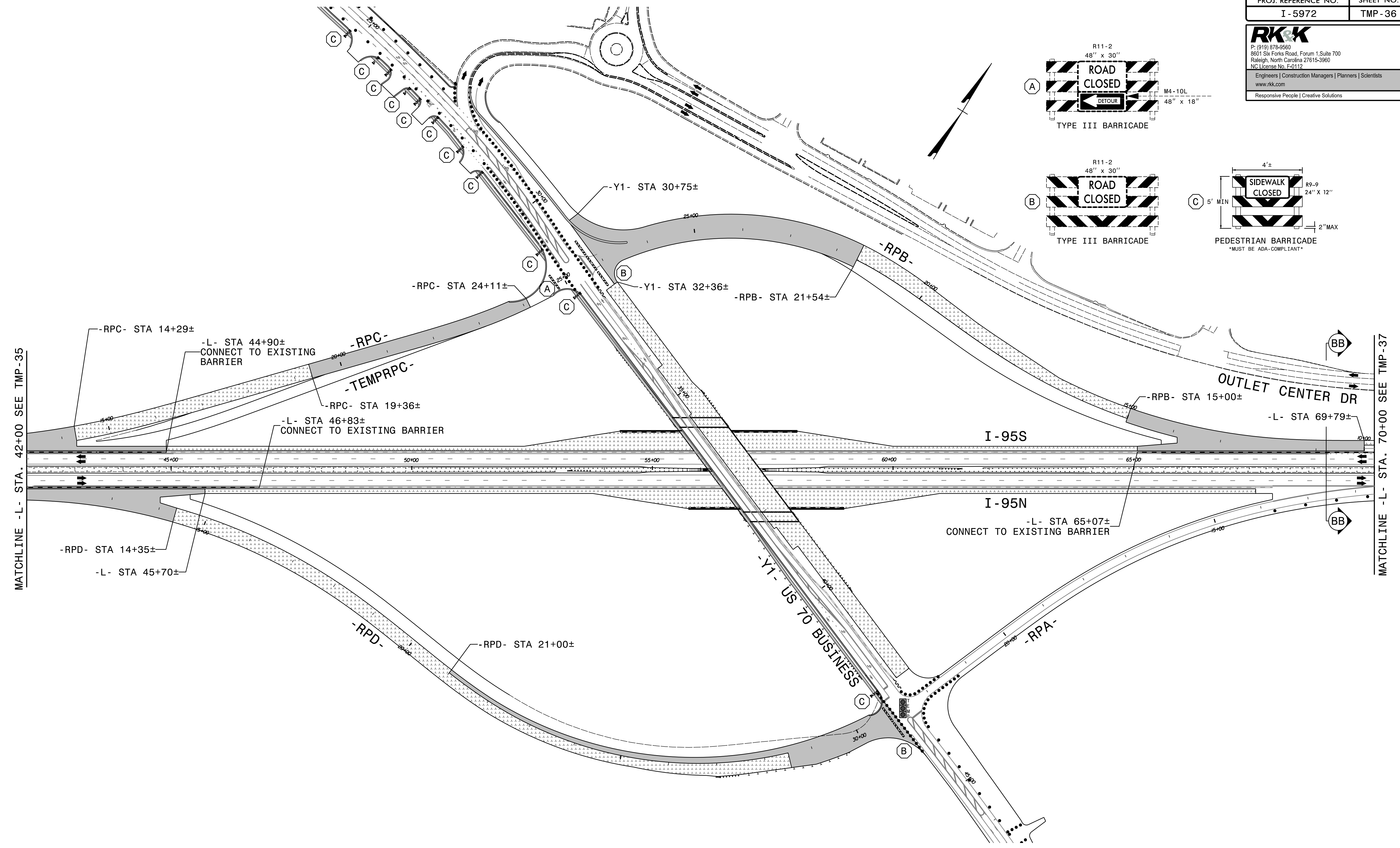
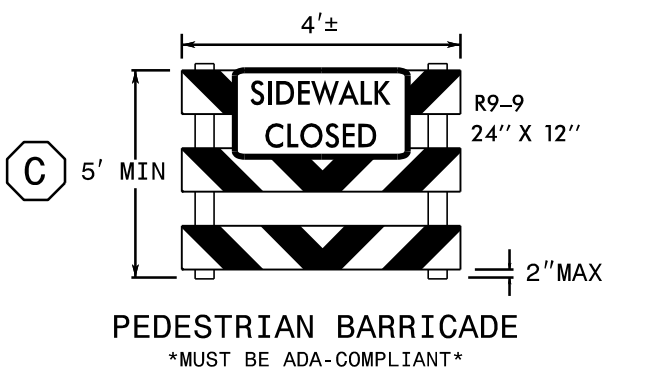
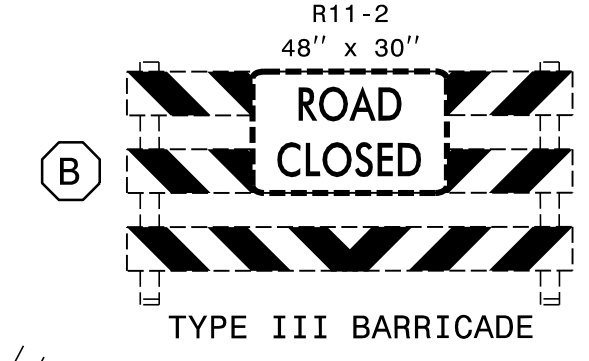
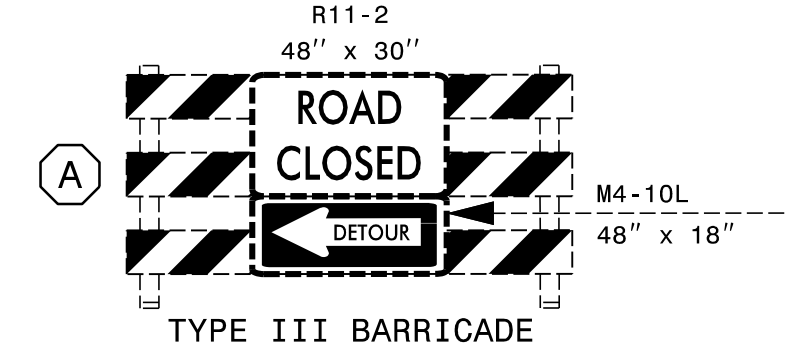
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MATCHLINE -L- STA. 42+00 SEE TMP-35

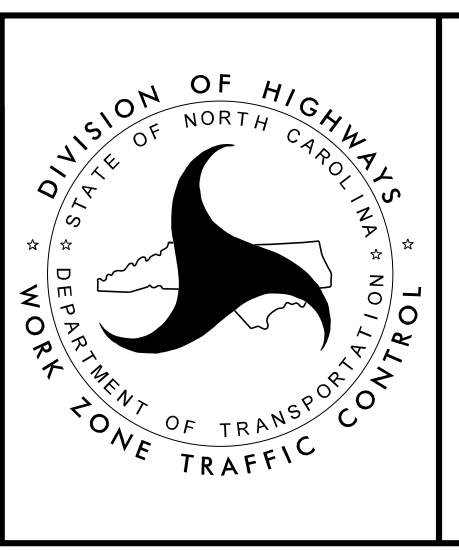
MATCHLINE -L- STA. 70+00 SEE TMP-37

SEE TMP-36A FOR SECTION VIEW.
 DO NOT CLOSE RAMPS CONCURRENTLY.

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 DATE: 9/19/2023

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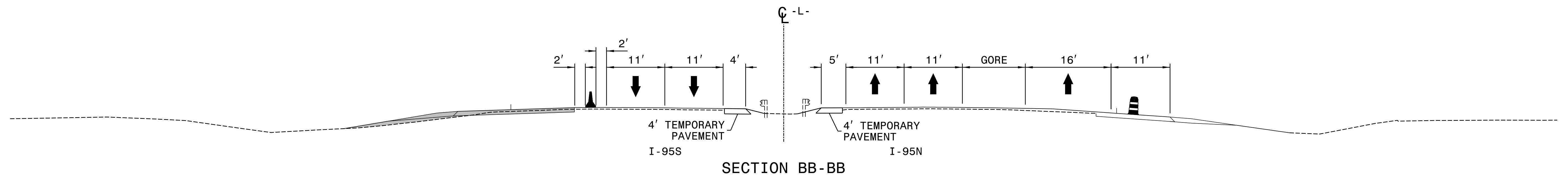
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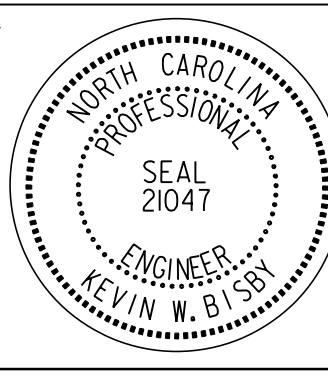
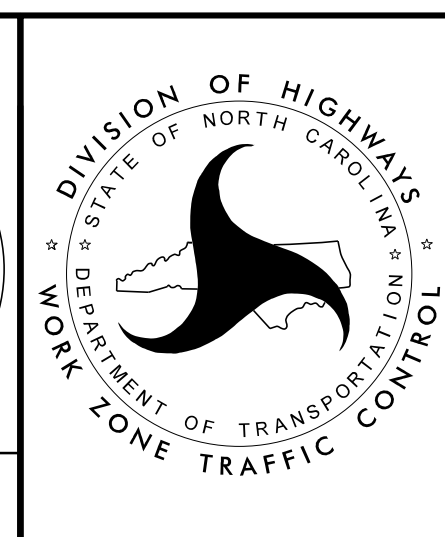


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