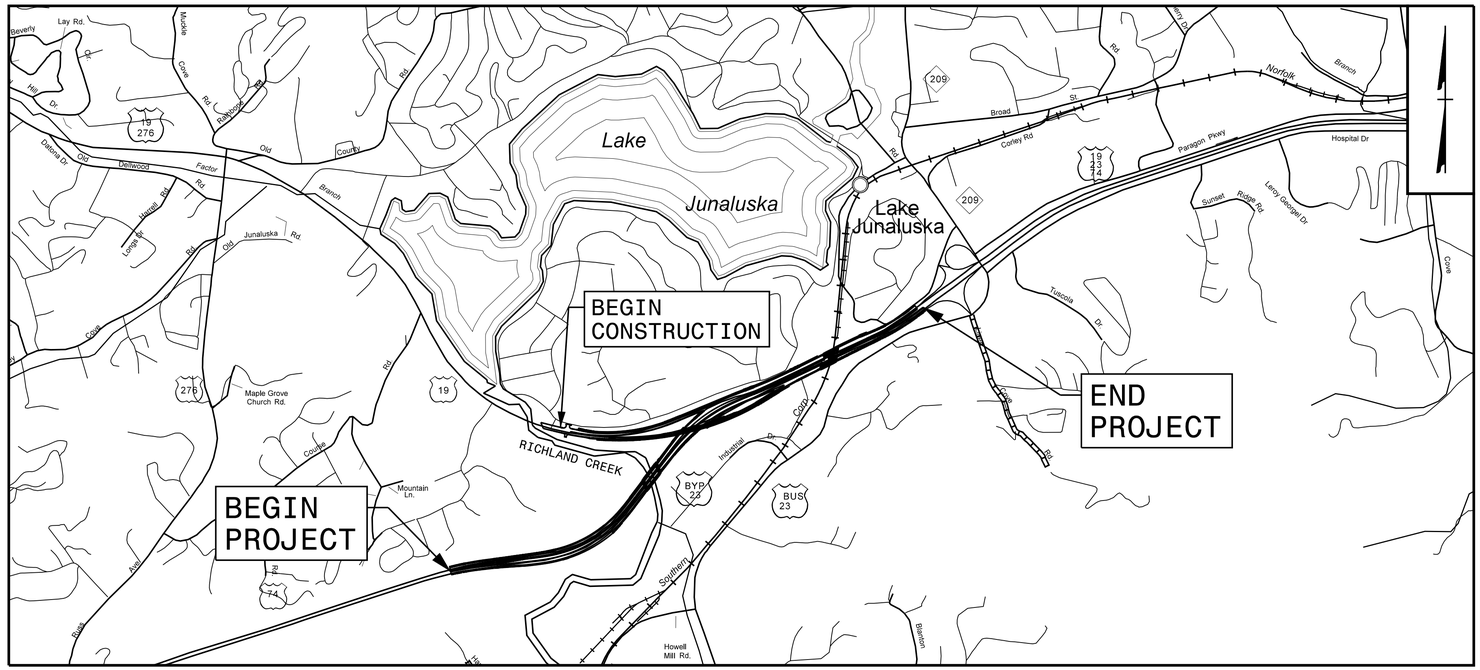
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

HAYWOOD COUNTY

LOCATION: US 23/US 74/US 19 (GREAT SMOKY MOUNTAIN HWY)
FROM WEST OF NC 209 (CRABTREE RD) TO EAST OF RUSS AVE



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SHEET NO.
TMP-1

B-3186 / B-5898

TIP PROJECT:

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

PLANS PREPARED BY:

MIKE RZEPKA, P.E.
TRAFFIC CONTROL PROJECT ENGINEER

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

PLAN PREPARED BY:

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

APPROVED: Michael T. Rzepka

DATE: 5/10/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

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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	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGERS
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY-DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMPS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
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

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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-1A

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LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)
- WORK AREA
- CONTINUING CONSTRUCTION
- REMOVAL
- WEDGING
- 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 MARKERS

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

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

P20	PAINT 6" WHITE EDGELINE	P53	PAINT 12" WHITE SOLID LANE LINE
P21	PAINT 6" WHITE SOLID LANE LINE	P61	PAINT 24" WHITE STOPBAR
P22	PAINT 6" 10'-30'/SP. WHITE SKIP	P71	PAINT RIGHT TURN ARROW
P23	PAINT 6" 3'-9'/SP. WHITE MINI-SKIP	P79	PAINT MERGE ARROW
P30	PAINT 6" YELLOW EDGELINE	P100	PAINT ALPHANUMERIC CHARACTER
P50	PAINT 12" WHITE GORELINE		

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

ROADWAY STANDARD DRAWINGS & LEGEND

PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-1B

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MANAGEMENT STRATEGIES

PHASE 1: MAINLINE (-L-) WILL BE MAINTAINED IN EXISTING FOUR-LANE/TWO-WAY PATTERN DURING CONSTRUCTION OF -DETO1_PH1_RUN-. EB TRAFFIC WILL SHIFT TO -DETO1_PH1_RUN- WHILE TEMPORARY PAVEMENT FROM -L- STA. 28+00 +/- TO STA. 39+39 +/-, -DETO1_Y1RT-, AND A PORTION -DETO1_WB- IS BUILT. NB US 19 TRAFFIC WILL SHIFT TO -DETO1_Y1RT- AND EB US 23/74 TRAFFIC WILL SHIFT TO THE TEMPORARY PAVEMENT AND THE NEW PORTION OF -DETO1_WB- WHILE -DETO1_EB-, DETOUR BRIDGE OVER RICHLAND CREEK, -Y1RT- END BENT #1, A PORTION OF -Y1RT-, WIDENING OF EXISTING EB BRIDGE OVER RR, AND -DETO1_EB_EXT- ARE CONSTRUCTED. ADJACENT CONSTRUCTION WILL UTILIZE DAILY LANE CLOUSRES, SHIFTED/NARROWED LANES AND PORTABLE CONCRETE BARRIER FOR SEPARATION.

PHASE 2: EB US 23/74 WILL SHIFT TO -DETO1_EB-. CONSTRUCT -Y1RT- BRIDGE OVER EXISTING EB LANES, -Y1LTXRP-, AND THE -DETO1_WB- CROSSOVERS BEFORE SHIFTING WB US 23/74 TO -DETO1_WB- AND CROSSOVERS. THEN SHIFT WB US 23/74 TRAFFIC TO EXISTING EB LANE UTILIZING THE -DETO1_WB- ALIGNMENT. THE WB SHIFT WILL CLOSE SB US 19 RAMP ACCESS TO EB US 23/74. USE ICT TO CONSTRUCT REMAINING -Y1RT-, -Y1RT- BRIDGE, AND ROADWAY APPROACH. USE ICT TO CONSTRUCT -Y1LT-. CLOSE MUP.

PHASE 2 CONSTRUCTION AWAY FROM TRAFFIC INCLUDES PROPOSED -L_LT- (WB LANES), WB PORTION OF BRIDGE OVER RICHLAND CREEK, WIDENING AND REHAB OF WB BRIDGE OVER RR. COORDINATE WB LANES AND -Y1LT- CONSTRUCTION WITH CLOSURE AND REOPENING OF SB US 19 RAMP ACCESS VIA TEMPORARY RAMP TIE UTILIZING -Y1LTXRP-.

PHASE 3: SHIFT WB US 23/74 TRAFFIC TO NEWLY BUILT WB LANES AND CONSTRUCT -DETO2_EB- CROSSOVERS AND -Y1RTXRP-. SHIFT EB US 23/74 TRAFFIC TO NEWLY BUILT WB LANES USING MEDIAN CROSSOVERS AND SHIFT US 19 NB TRAFFIC TO -Y1RTXRP-. CONSTRUCTION AWAY FROM TRAFFIC INCLUDES REMAINING BRIDGE OVER RICHLAND CREEK, REHAB OF EB BRIDGE OVER RR, -L_RT- (EB LANES), AND -DETO1_EB- REMOVAL. CONSTRUCT EB LANES WHILE MAINTAIN TEMPORARY RAMP TIE (-Y1RTXRP-). REOPEN MUP.

PHASE 4: EB & WB US 23/74 TRAFFIC WILL BE SHIFTED TO PROPOSED LANES ON -L_LT- & -L_RT- AND US 19 NB TRAFFIC WILL SHIFT TO -Y1RT-. CONSTRUCTION IN THIS PHASE INCLUDES LANE CLOSURES AND WORK BEHIND TEMPORARY BARRIER TO CONSTRUCT EXPRESSWAY GUTTER AND FINAL SLOPES LEFT OF -L_LT-, REMOVAL OF -Y1RTXRP-, AND REMOVAL OF MEDIAN CROSSOVERS.

GENERAL NOTES

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

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

TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
US 19/23/74	SUNDAY TO SATURDAY, 6:00 AM TO 8:00 PM

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

ROAD NAME

US 23/74 (GREAT SMOKY MOUNTAIN HWY)

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR CHRISTMAS AND NEW YEAR'S, BETWEEN THE HOURS OF 12:00 AM DECEMBER 18th TO 12:00 AM JANUARY 5th.
3. FOR EASTER, BETWEEN THE HOURS OF 12:00 AM THE THURSDAY BEFORE AND 12:00 AM THE FOLLOWING TUESDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 12:00 AM THE THURSDAY BEFORE TO 12:00 AM THE FOLLOWING WEDNESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 12:00 AM JUNE 28th AND 12:00 AM JULY 9th.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 12:00 AM THE THURSDAY BEFORE AND 12:00 AM THE FOLLOWING WEDNESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 12:00 AM THE TUESDAY BEFORE TO 12:00 AM THE FOLLOWING TUESDAY.
8. FOR LEAF SEASON, BETWEEN OCTOBER 6th AND NOVEMBER 7th, BETWEEN THE HOURS OF 6:00 AM TO 7:00 PM MONDAY THRU THURSDAY, 6:00 AM TO 9:00 PM ON FRIDAY, 9:00 AM TO 9:00 PM ON SATURDAY, AND 12:00 PM TO 8:00 PM ON SUNDAY.

ROAD NAME

US 19

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S DAY, BETWEEN THE HOURS OF 3:00 PM DECEMBER 31ST AND 7:00 AM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY, THEN UNTIL 7:00 AM THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 3:00 PM THURSDAY AND 7:00 AM MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 3:00 PM FRIDAY AND 7:00 AM TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 3:00 PM THE DAY BEFORE INDEPENDENCE DAY AND 7:00 AM THE DAY AFTER INDEPENDENCE DAY.

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY, THEN BETWEEN THE HOURS OF 3:00 PM THE THURSDAY BEFORE INDEPENDENCE DAY AND 7:00 AM THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 3:00 PM FRIDAY AND 7:00 AM TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 3:00 PM TUESDAY AND 7:00 AM MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 3:00 PM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 AM THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS DAY.

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
US 19/23/74	SUNDAY TO SATURDAY, 5:00 AM TO 11:00 PM	30 MINUTES; OVERHEAD STRUCTURE WORK

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

ROAD NAME	DAY AND TIME RESTRICTIONS
US 19/23/74	MONDAY TO FRIDAY, 6:00 AM TO 9:00 AM 4:00 PM TO 7:00 PM

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

ROAD NAME	DAY AND TIME RESTRICTIONS
US 19/23/74	MONDAY TO FRIDAY, 6:00 AM TO 9:00 AM 4:00 PM TO 7:00 PM

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

LANE AND SHOULDER CLOSURE REQUIREMENTS

G) 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.

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

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

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

TRANSPORTATION OPERATIONS PLAN (SHEET 1 OF 2)

REVISIONS

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GENERAL NOTES (CONT.)

I) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

J) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

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

L) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON US 23/74.

M) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

LANE AND SHOULDER CLOSURE REQUIREMENTS

N) 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.

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

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

Q) 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.

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

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

S) 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.

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

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

TRAFFIC BARRIER

V) 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.

W) PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS: (SEE ALSO 1101.05)

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

TRAFFIC CONTROL DEVICES

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

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

Z) 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

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

ROAD NAME	MARKING	MARKER
US 19/23/74	PAINT	TEMPORARY RAISED

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

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

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

MISCELLANEOUS

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

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

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TRANSPORTATION OPERATIONS PLAN (SHEET 2 OF 2)

REVISIONS

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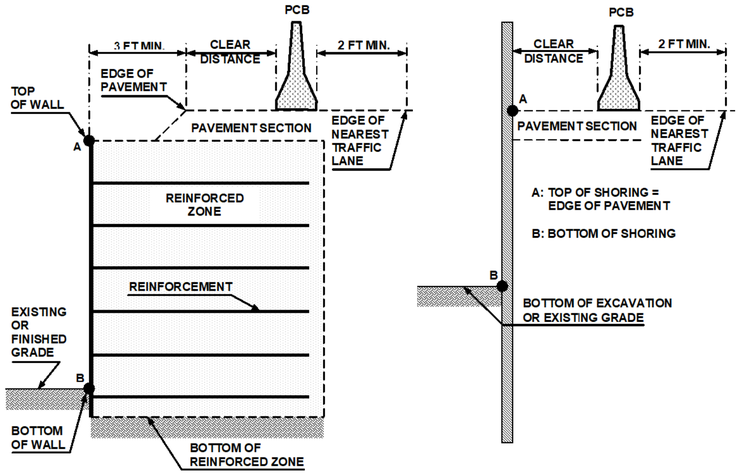

NOTE: WALL OR SHORING HEIGHT = A - B

FIGURE A

NOTES

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

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

3- PCB IS REQUIRED IF TEMPORARY SHORING 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 UNIT 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 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- PCB REQUIREMENTS FOR TEMPORARY WALLS APPLY TO TEMPORARY MECHANICALLY STABILIZED EARTH (MSE) WALLS AND TEMPORARY SOIL NAIL WALLS.

8- 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 AND OR AS APPROVED BY THE ENGINEER.

9- 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 THESE MINIMUM REQUIRED DISTANCES ARE NOT AVAILABLE, CONTACT THE ENGINEER.

10- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS. BARRIER DEFLECTIONS AND RESULTING MINIMUM REQUIRED CLEAR DISTANCES MIGHT VARY SIGNIFICANTLY FOR LARGER HEAVIER VEHICLES, RUNS OF BARRIER LESS THAN 200 FT IN LENGTH AND WET OR DRY PAVEMENT.

PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-2

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MINIMUM REQUIRED CLEAR DISTANCE, inches

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

* See Figure Below

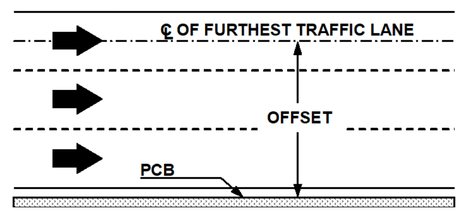

FIGURE B

APPROVED: Michael T. Rzepka
DATE: 3/17/2022
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

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

PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

REVISIONS

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TEMPORARY SHORING DATA

PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-2A

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

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 -DET01_Y1RT- STATION 27+65, 23′ LT TO -DET01_Y1RT- STATION 29+16, 23′ LT FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 28 DEGREES
COHESION (c) = 0 PSF
GROUNDWATER ELEVATION = 2575 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM -DET01_Y1RT- STATION 27+65, 23′ LT TO -DET01_Y1RT- STATION 29+16, 23′ LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM -DET01_Y1RT- STATION 27+65, 23′ LT TO -DET01_Y1RT- STATION 29+16, 23′ LT MAY NOT PENETRATE BELOW ELEVATION 2565 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM -DET01_Y1RT- STATION 27+65, 23′ LT TO -DET01_Y1RT- STATION 29+16, 23′ LT.

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 -DET01_EB- STATION 35+00, 23′ LT, TO -DET01_EB- STATION 41+05, 23′ 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 = 2560 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM -DET01_EB- STATION 35+00, 23′ LT, TO -DET01_EB- STATION 41+05, 23′ LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM -DET01_EB- STATION 35+00, 23′ LT, TO -DET01_EB- STATION 41+05, 23′ LT MAY NOT PENETRATE BELOW ELEVATION 2550 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

AT THE CONTRACTOR'S OPTION, USE STANDARD SHORING FOR TEMPORARY SHORING FROM -DET01_EB- STATION 35+00, 23′ LT, TO -DET01_EB- STATION 41+05, 23′ LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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 -DET01_EB- STATION 37+50, 23′ RT, TO -DET01_EB- STATION 41+05, 23′ 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 = 2560 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM -DET01_EB- STATION 37+50, 23′ RT, TO -DET01_EB- STATION 41+05, 23′ RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM -DET01_EB- STATION 37+50, 23′ RT, TO -DET01_EB- STATION 41+05, 23′ RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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 -DET01_EB- STATION 43+90, 23′ LT TO -DET01_EB- STATION 51+81, 21′ 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 = 2580 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM -DET01_EB- STATION 43+90, 23′ LT TO -DET01_EB- STATION 51+81, 21′ LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM -DET01_EB- STATION 43+90, 23′ LT TO -DET01_EB- STATION 51+81, 21′ LT, MAY NOT PENETRATE BELOW ELEVATION 2550 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM -DET01_EB- STATION 43+90, 23′ LT TO -DET01_EB- STATION 51+81, 21′ LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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

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 -DET01_EB- STATION 44+05, 23′ RT, TO -DET01_EB- STATION 56+08, 21′ 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 = 2580 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM -DET01_EB- STATION 44+05, 23′ RT, TO -DET01_EB- STATION 56+08, 21′ RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM -DET01_EB- STATION 44+05, 23′ RT, TO -DET01_EB- STATION 56+08, 21′ RT, MAY NOT PENETRATE BELOW ELEVATION 2550 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

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

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 -Y1RTXRP- STATION 10+16.51, 106′ LT, TO -Y1RTXRP- STATION 11+07.93, 10′ 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 = 2580 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM -Y1RTXRP- STATION 10+16.51, 106′ LT, TO -Y1RTXRP- STATION 11+07.93, 10′ LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM -Y1RTXRP- STATION 10+16.51, 106′ LT, TO -Y1RTXRP- STATION 11+07.93, 10′ LT, MAY NOT PENETRATE BELOW ELEVATION 2555 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

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

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

TEMPORARY SHORING DATA

REVISIONS

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REVISIONS

TEMPORARY SHORING DATA

PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-2B

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SHORING LOCATION NO. 7

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 -DET01EBEXT- STATION 44+83, 7.2′ LT, TO -DET01EBEXT- STATION 45+08, 7.2′ LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 28 DEGREES
COHESION (c) = 0 PSF
GROUNDWATER ELEVATION = 2620 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM -DET01EBEXT- STATION 44+83, 7.2′ LT, TO -DET01EBEXT- STATION 45+08, 7.2′ LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM -DET01EBEXT- STATION 44+83, 7.2′ LT, TO -DET01EBEXT- STATION 45+08, 7.2′ LT MAY NOT PENETRATE BELOW ELEVATION 2605 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

SHORING LOCATION NO. 8

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 -DET01EBEXT- STATION 46+81, 7.2′ LT, TO -DET01EBEXT- STA. 47+06, 7.2′ 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 = 2620 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM -DET01EBEXT- STATION 46+81, 7.2′ LT, TO -DET01EBEXT- STA. 47+06, 7.2′ LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM -DET01EBEXT- STATION 46+81, 7.2′ LT, TO -DET01EBEXT- STA. 47+06, 7.2′ LT MAY NOT PENETRATE BELOW ELEVATION 2605 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM -DET01EBEXT- STATION 46+81, 7.2′ LT, TO -DET01EBEXT- STA. 47+06, 7.2′ LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

SHORING LOCATION NO. 9

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 -L- STATION 34+50, 5′ RT, TO -L- STATION 41+54, 5′ 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 = 2580 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM -L- STATION 34+50, 5′ RT, TO -L- STATION 41+54, 5′ RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM -L- STATION 34+50, 5′ RT, TO -L- STATION 41+54, 5′ RT, MAY NOT PENETRATE BELOW ELEVATION 2580 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- STATION 34+50, 5′ RT, TO -L- STATION 41+54, 5′ RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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

SHORING LOCATION NO. 10

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

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

DESIGN TEMPORARY SHORING FROM -L- STATION 43+84, 5′ RT, TO -L_RT- STATION 51+61, 6′ LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 28 DEGREES
COHESION (c) = 0 PSF
GROUNDWATER ELEVATION = 2575 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM -L- STATION 43+84, 5′ RT, TO -L_RT- STATION 51+61, 6′ LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM -L- STATION 43+84, 5′ RT, TO -L_RT- STATION 51+61, 6′ LT, MAY NOT PENETRATE BELOW ELEVATION 2550 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

SHORING LOCATION NO. 11

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

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

DESIGN TEMPORARY SHORING FROM -L_LT- STATION 68+00, 33.9′ LT, TO -L_LT- STATION 68+27, 33.9′ LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (ϕ) = 28 DEGREES
COHESION (c) = 0 PSF
GROUNDWATER ELEVATION = 2610 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM -L_LT- STATION 68+00, 33.9′ LT, TO -L_LT- STATION 68+27, 33.9′ LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM -L_LT- STATION 68+00, 33.9′ LT, TO -L_LT- STATION 68+27, 33.9′ LT MAY NOT PENETRATE BELOW ELEVATION 2590 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM -L_LT- STATION 68+00, 33.9′ LT, TO -L_LT- STATION 68+27, 33.9′ LT.

SHORING LOCATION NO. 12

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

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

DESIGN TEMPORARY SHORING FROM -L_LT- STATION 69+83, 33.4′ LT, TO -L_LT- STATION 70+12, 33.4′ 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 = 2610 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM -L_LT- STATION 69+83, 33.4′ LT, TO -L_LT- STATION 70+12, 33.4′ LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM -L_LT- STATION 69+83, 33.4′ LT, TO -L_LT- STATION 70+12, 33.4′ LT MAY NOT PENETRATE BELOW ELEVATION 2590 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM -L_LT- STATION 69+83, 33.4′ LT, TO -L_LT- STATION 70+12, 33.4′ LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM -L_LT- STATION 69+83, 33.4′ LT, TO -L_LT- STATION 70+12, 33.4′ LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

TEMPORARY SHORING DATA

PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-2C

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

A

MESSAGE NO. 1	MESSAGE NO. 2
US 19 N TO CLOSE AT	LAKESHRE DRIVE (DAY)

CHANGEABLE MESSAGE SIGN

BEGINNING 6 DAYS PRIOR TO ROAD CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
US 19 N CLOSED AHEAD	DETOUR FOLLOW US 276 S

CHANGEABLE MESSAGE SIGN

DURING ROAD CLOSURE

PLACE CMS 1 MILE IN ADVANCE OF US 276 INTERSECTION

R11-4
60" x 30"
ROAD CLOSED TO THRU TRAFFIC
DETOUR
M4-10R
48" x 18"
TYPE III BARRICADE

DETOUR M4-8 24" X 12"
NORTH M3-1 24" X 12"
19
M1-4
M6-1 L 21" X 15"

COVER EXISTING US 19 NORTH GUIDE SIGN AND PLACE DETOUR SIGNS NEXT TO US 276 SOUTH EXISTING GUIDE SIGNS

DETOUR M4-8 24" X 12"
NORTH M3-1 24" X 12"
19
M1-4
M6-1 21" X 15"

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

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

CLOSE US 19 NB AT LAKESHORE DRIVE
(SEE TMP-9 & TMP-28 FOR ADDTIONAL BARRICADE AND SIGN PLACEMENT)

WORK AREA
(US 19 NB RAMP CLOSED)

PLACE SIGNS NEXT TO EX. US 74/23 GUIDE SIGNS

DETOUR M4-8 24" X 12"
NORTH M3-1 24" X 12"
19
M1-4
M6-3 21" X 15"

PLACE SIGNS NEXT TO EX. US 74/23 GUIDE SIGNS

DETOUR M4-8 24" X 12"
NORTH M3-1 24" X 12"
19
M1-4
M6-1 L 21" X 15"

END DETOUR M4-8 A 24" X 18"
NORTH M3-1 24" X 12"
19
M1-4

Lake Junaluska

Crestview Dr., Beverly Dr., Lay Rd., Cir., Spring Dr., Ivey Hill Dr., Datona Dr., Old Dellwood Rd., Harrell Rd., Longs Dr., Fellowship Church Rd., Mauney Cove Rd., Hughes Rd., Maple Grove Church Rd., Course Rd., Golf Course Rd., Carl Arrington Rd., Mountain Ln., Top Hall Rd., Phillips Rd., Howell Mill Rd., Happy Hill Rd., Calhoun Rd., Radio Tower Rd., Howell Mill Rd., Norfolk Southern, Woodland Dr., Blanton Dr., Lakeshore Dr., Hickory Hill Rd., Industrial Dr., Corp. Rd., Broad St., Corley Rd., Tuscola Dr., Lemon Cove Rd.

19, 276, 209, 19 23 74, 74, BYP 23, BUS 23

= DETOUR ROUTE

SEE RSD 1101.03, SHEET 1 OF 9 FOR ADDITIONAL SIGN AND BARRICADE PLACEMENT

APPROVED: Michael T. Rzepka
DATE: 3/17/2022
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

OFF-SITE DETOUR ROUTE FOR US 19 NB RAMP CLOSURE

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-2D

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

REVISIONS

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Crestview Dr.
Beverly
Lay Rd.
Spring Dr.
Ivey Hill Dr.
Cir.
Muckle Cove Rd.
Rathbone Rd.
Old County Rd.
Datona Dr
Old Dellwood Rd.
Harrell Rd.
Longs Dr
Rd.
Fellowship Church Rd.
Mauney Cove
Hughes Rd.
Maple Grove Church Rd.
Golf
Carl Arrington Rd.
Mountain Ln.
Top Rd.
Phillips Rd.
Howell
Calhoun Rd.
Radio Tower Rd.
Mill
Happy Hill Rd.
Rd.
Norfolk
Woodland
Southern
Howell Mill Rd.
Hickory Hill Rd.
Industrial Dr.
Corp.
Tuscola Dr.
Lemon Cove Rd.
Broad St.
Corley Rd
1300'+/-
Rd.
Lake Junaluska
Lake Junaluska

19
276
74
BYP 23
BUS 23
209
EXIT 104
EXIT 103
EXIT 102

END DETOUR
M4-8 A
24" X 18"
SOUTH
M3-3
24" X 12"
19
M1-4

PLACE SIGNS NEXT TO
EX. US 19 GUIDE SIGNS

PLACE SIGNS NEXT TO
EX. US 276 GUIDE SIGNS

DETOUR
M4-8
24" X 12"
SOUTH
M3-3
24" X 12"
19
M1-4
M6-1 L
21" X 15"

DETOUR
M4-8
24" X 12"
SOUTH
M3-3
24" X 12"
19
M1-4
M6-3
21" X 15"

DETOUR
M4-8
24" X 12"
SOUTH
M3-3
24" X 12"
19
M1-4
M6-2
21" X 15"

WORK AREA
(US 19 SB RAMP CLOSED)
SEE TMP-26 FOR ADDITIONAL
SIGN PLACEMENT

A

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 103 TO CLOSE	(DAY) AT (TIME)

CHANGEABLE MESSAGE SIGN

BEGINNING 6 DAYS PRIOR TO CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 103 US 19 S CLOSED	DETOUR USE EXIT 102

CHANGEABLE MESSAGE SIGN

DURING CLOSURE

PLACE CMS 1 MILE IN ADVANCE OF EXIT 103

● ● ● = DETOUR ROUTE

APPROVED: Michael T. Rzepka
DATE: 3/17/2022
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

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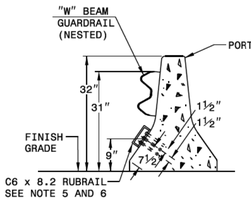
DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

OFF-SITE DETOUR ROUTE FOR US 19 SB RAMP CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-2E



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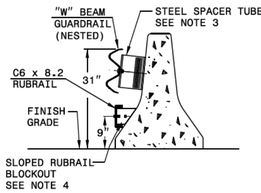

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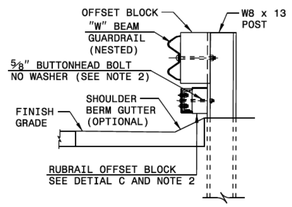

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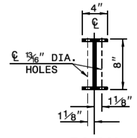
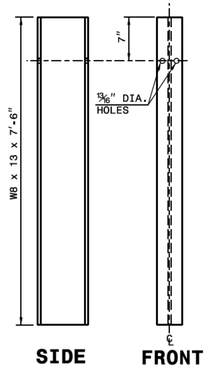
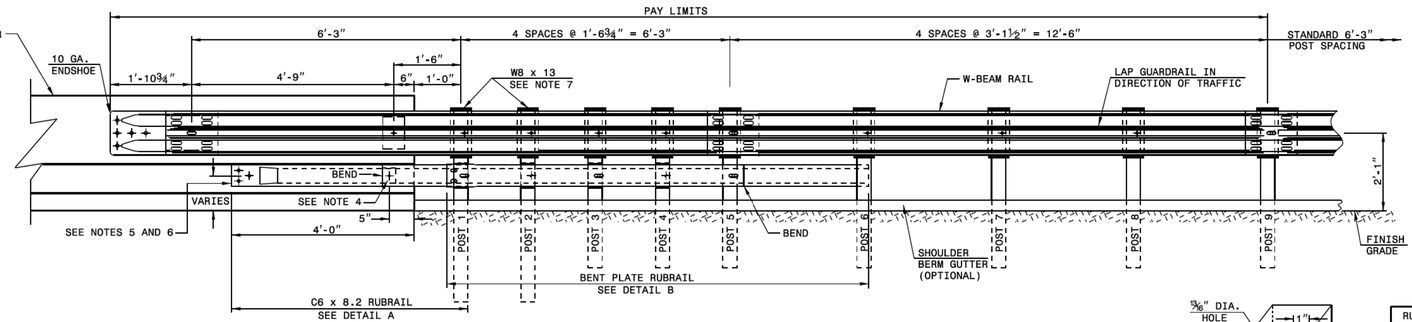


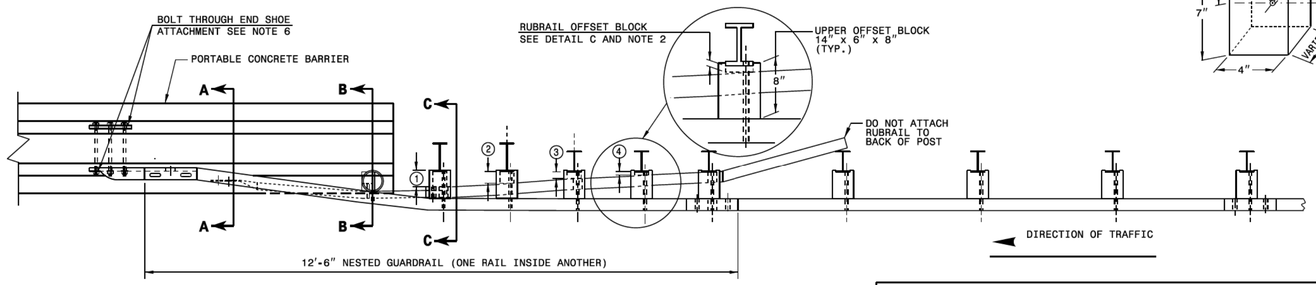
PLAN



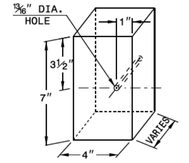
DETAIL F
"W8 X 13 X 7'-6". STEEL POST



ELEVATION



PLAN



RUBRAIL BLOCKS 7" HIGH x 4" WIDE		
POST	THICKNESS	BOLT LENGTH
①	4¼"	9"
②	3¼"	5" *
③	2"	6"
④	1"	3" *

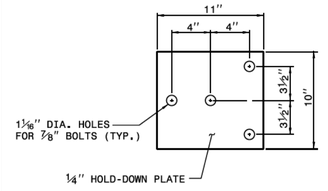
* BOLTS FOR POSTS 2 AND 4 ARE USED TO ATTACH BLOCK TO POST. RUBRAIL NOT ATTACHED TO BLOCK.

DETAIL C
RUBRAIL BLOCKOUT

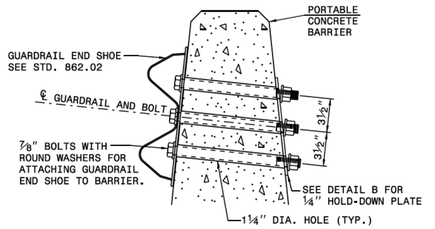
GENERAL NOTES:
1) POSTS 1 THROUGH 5 REQUIRE AN ADDITIONAL HOLE TO ATTACH LOWER BLOCKOUTS AND/OR RUBRAIL.
2) RUBRAIL BLOCKOUTS LOCATED ON POSTS 1 THROUGH 4 ARE OFFSET DRILLED AND SECURED WITH ⅝" BUTTONHEAD BOLTS (SEE CHART FOR BOLT LENGTHS). SECURE BLOCKS ONLY TO POSTS 2 AND 4. SECURE RUBRAIL AND BLOCKOUTS TO POSTS 1 AND 3. RUBRAIL IS SECURED TO POST 5 WITH A ⅝" x 4½" BUTTONHEAD BOLT. RUBRAIL IS FLARED TO BACK OF POST 6 AND NOT SECURED.
3) STEEL SPACER TUBE IS A SCHEDULE 40 GALVANIZED PIPE 6" INSIDE DIAMETER x 9" LONG. ATTACH TUBE TO GUARDRAIL ONLY WITH ⅝" x 1¼" LONG BUTTONHEAD BOLT AND RECTANGULAR PLATE WASHER.
4) SEE DETAIL D FOR SLOPED RUBRAIL BLOCKOUT. BLOCKOUT IS ATTACHED TO RAIL ELEMENT ONLY. USE ⅜" x 3" LAG BOLT WITH FLAT WASHER.
5) SHOP FABRICATE THE C6 x 8.2 RUBRAIL END TO BE CONSISTENT WITH THE SLOPE OF THE JERSEY SHAPE AND ATTACH FLUSH WITH THE SLOPED TOE OF THE BARRIER OR BRIDGE RAIL.
6) ANCHORAGE:
   (a) AT PORTABLE CONCRETE BARRIER, ANCHOR RUBRAIL USING THREE ⅝" x 6" CHEMICALLY ANCHORED BOLTS WITH WASHERS.
   (b) AT PORTABLE CONCRETE BARRIER, ANCHOR THE W-BEAM END SHOE USING A 4 BOLT HOLD-DOWN PLATE AS SHOWN. INSTALL THE W-BEAM END SHOE BEHIND THE NESTED W-BEAM ELEMENTS.
7) POSTS 1 AND 2 ARE W8 x 13, 7'-6" LONG. ALL OTHER POSTS IN THE ANCHOR UNIT ARE W6 x 8.5.

NOTES FOR 4 BOLT HOLD DOWN PLATE

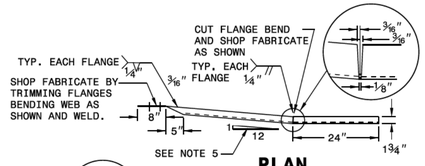
1) THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A ¼" HOLD DOWN PLATE AND 4 - ⅞" DIA. BOLTS WITH NUTS AND WASHERS.
2) THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.
3) AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL. THE 1¼" DIA. HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.



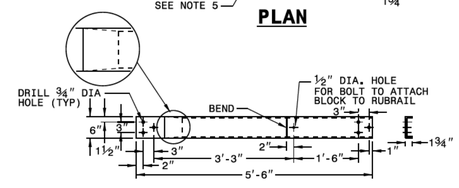
4 BOLT HOLD DOWN PLATE



PART SECTION OF BARRIER OR RAIL
THRU END SHOE SECTION AND
4 BOLT HOLD DOWN PLATE

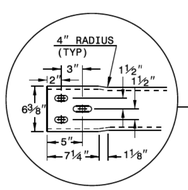


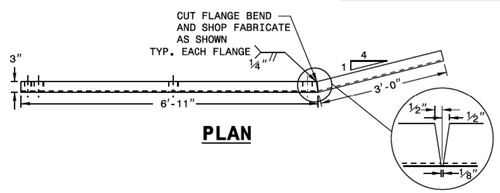
PLAN



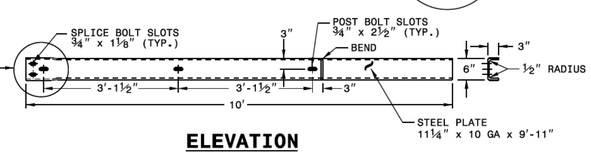
ELEVATION

DETAIL A
C6 x 8.2 RUBRAIL



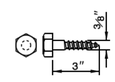


PLAN

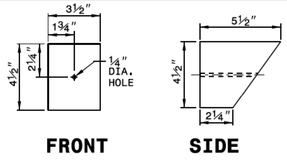


ELEVATION

DETAIL B
BENT PLATE RUBRAIL



DETAIL E
LAG BOLT



DETAIL D
SLOPED RUBRAIL BLOCKOUT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

TEMPORARY GUARDRAIL ANCHOR UNIT TYPE B-77

ORIGINAL BY: E.E. WARD DATE: 04-07-04
MODIFIED BY: J.S. Howerton DATE: 10-02-18
CHECKED BY: DATE:
FILE SPEC.:

REVISIONS

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PHASING

PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-3

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

NOTES:
BEFORE BEGINNING ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS AND TRAFFIC CONTROL DEVICES. FIELD VERIFY LOCATIONS WITH THE RESIDENT ENGINEER PRIOR TO INSTALLATION.

MAINTAIN VEHICULAR ACCESS TO ALL RESIDENCES AND BUSINESSES DURING THE LIFE OF THE CONTRACT, UNLESS OTHERWISE NOTED IN THE PHASING PLANS OR DIRECTED BY THE RESIDENT ENGINEER.

COMPLETE ANY PROPOSED OR TEMPORARY WIDENING IN SUCH A MANNER THAT NO PONDING OF WATER WILL OCCUR WITHIN THE TRAVEL LANE.

WHEN USING LANE CLOSURES (RSD 1101.02), RETURN TRAFFIC TO EXISTING AND/OR TEMPORARY TRAFFIC PATTERN UPON ACTIVITIES COMPLETION, UNLESS OTHERWISE NOTED IN THE PHASING PLANS.

WHEN PHASING STATES TO USE LANE CLOSURES, REFER TO THE FOLLOWING FOR ALL EXISTING AND PROPOSED ROADS:

-ALL TWO-LANE/TWO-WAY FACILITIES SEE RSD 1101.02 SHEET 1 OF 14

-ALL 3-LANE OR 5-LANE ROADWAYS SEE RSD 1101.02 SHEET 2 OF 14

-ALL MULTI-LANE FACILITIES POSTED < 60 MPH SEE RSD 1101.02 SHEET 3 OF 14

-ALL MULTI-LANE FACILITIES POSTED ≥ 60 MPH SEE RSD 1101.02 SHEET 4 OF 14

-ALL ENTRANCE AND EXIT RAMPS SEE RSD 1101.02 SHEETS 9 AND 10 OF 14

COMPLETE PAVING UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE UNTIL STATED TO PLACE FINAL LAYER IN THE PHASING PLANS.

WHEN WEDGING OVER EXISTING PAVEMENT, WEDGE TO PROPOSED ELEVATION (LESS THE FINAL LAYER OF SURFACE COURSE), OR WEDGE AS NEEDED TO MAINTAIN TRAFFIC. MAINTAIN POSITIVE DRAINAGE AND MAINTAIN A MAXIMUM 0.04 ROLLOVER IN BOTH EXISTING AND/OR TEMPORARY TRAVEL LANES.

REPLACE MARKINGS AND RETURN TRAFFIC TO THE CURRENT TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

FOR ALL SHOULDER CLOSURES, SEE RSD 1101.04. WHEN PORTABLE CONCRETE BARRIER (PCB) IS PRESENT ON SHOULDERS, PLACE SHOULDER CLOSURE SIGNS & DEVICES IN ADVANCE OF PCB.

WHEN MEDIAN WORK REQUIRES REMOVAL OF CROSSOVER PROTECTION FOR THAT SIDE OF TRAFFIC, REPLACE WITH PORTABLE CONCRETE BARRIER OR OTHER APPROVED POSITIVE PROTECTION A MINIMUM OF TWO FEET OFF TRAVEL LANE.

UTILIZE SLOTTED PORTABLE CONCRETE BARRIER (PCB) TO FACILITATE TEMPORARY DRAINAGE.

PHASE 1
(SEE TMP-4 THRU TMP-15)

STEP 1:

BEHIND EXISTING GUARDRAIL AND USING LANE CLOSURES, CONSTRUCT TEMPORARY WIDENING (-DET01_PH1_RUN-) ALONG THE OUTSIDE OF EXISTING EB US 23/74.

NOTE: STEP 2 AND STEP 2A MAY BE PERFORMED SIMULTANEOUSLY.

STEP 2:

USING LANE CLOSURES, CONSTRUCT TEMPORARY WIDENING ALONG THE MEDIAN OF EXISTING EB US 23/74 BETWEEN -L- STA 28+00± TO STA 39+39±.

USING LANE CLOSURES, PLACE TEMPORARY MARKINGS AND MARKERS AND SHIFT EB US 23/74 TRAFFIC TO -DET01_ PH1_RUN-.

WORK IN A CONTINUOUS MANNER TO COMPLETE WORK IN PHASE 1, STEP 2A IN 21 CONSECUTIVE DAYS.
(SEE INTERMEDIATE CONTRACT TIMES AND LIQUIDATED DAMAGES)

STEP 2A:

AWAY FROM TRAFFIC COMPLETE THE FOLLOWING:

A) CLOSE EXISTING NB US 19 ACCESS TO EB US 23/74. DETOUR RAMP TRAFFIC OFFSITE.

B) CONSTRUCT -DET01_WB- AND -DET01_Y1RT- TEMPORARY PAVEMENTS.

C) PLACE TEMPORARY MARKINGS AND MARKERS AND SHIFT EB US 23/74 TRAFFIC TO -DET01_WB- AND REOPEN NB US 19 (-DET_Y1RT-) ACCESS TO EB US 23/74 (SEE PHASE 1, STEP 3 DETAILS).

PHASE 1
(CONTINUED)

STEP 3:

USING LANE CLOSURES, PLACE TEMPORARY MARKINGS AND MARKERS AND SHIFT EB US 23/74 TRAFFIC TO TEMPORARY MEDIAN WIDENING OF EXISTING EB US 23/74 BETWEEN -L- STA 28+02± TO STA 39+56±.

USING LANE CLOSURES, INSTALL PORTABLE CONCRETE BARRIER (PCB). BEHIND BARRIER AND TEMPORARY GUARDRAIL, CONSTRUCT THE FOLLOWING:

- -Y1RT- BRIDGE END BENT #2 WITH PROPOSED WALLS

- -Y1RT- FROM -Y1RT- BRIDGE TO BRIDGE WIDENING OVER RAILROAD (INCLUDING TEMPORARY WIDENING AND WALL ALONG INSIDE OF -Y1RT-)

- EXISTING EB BRIDGE WIDENING OVER RAILROAD

- -DET01_EB- FROM -L_RT- STA 18+60± TO -Y1RT- (TEMPORARY SHORING REQUIRED)

PHASE 2
(SEE TMP-16 THRU TMP-28C)

WORK IN A CONTINUOUS MANNER TO COMPLETE WORK IN PHASE 2, STEPS 1 & 1A IN 7 CONSECUTIVE DAYS.
(SEE INTERMEDIATE CONTRACT TIMES AND LIQUIDATED DAMAGES)

STEP 1:

USING LANE CLOSURES AND BEHIND BARRIER, COMPLETE THE FOLLOWING:

A) CLOSE NB US 19 RAMP ACCESS

B) PLACE TEMPORARY MARKINGS AND MARKERS AND SHIFT EB US 23/74 TRAFFIC TO -DET01_EB-, -Y1RT- AND -DET01_EB_EXT- ALIGNMENTS.

C) CONSTRUCT/WEDGE NB US 19 RAMP TIE TO SHIFTED EB US 23/74 TRAFFIC (APPROX. -L- STA 58+50± TO STA 67+64±).

STEP 1A:

PLACE TEMPORARY MARKINGS AND MARKERS AND OPEN NB US 19 RAMP TIE TO SHIFTED EB US 23/74 TRAFFIC

STEP 1B:

AWAY FROM TRAFFIC, CONSTRUCT MEDIAN BENT OF -Y1RT- BRIDGE. HANG GIRDERS BETWEEN MEDIAN BENT AND END BENT #2 (NO TRAFFIC BENEATH).

USING LANE CLOSURES, CONSTRUCT -DET01_WB- CROSSOVERS AT -L- STA 19+00± AND STA 74+00±, AND -Y1LTXRP- FOR STEP 2 PATTERNS.

WORK IN A CONTINUOUS MANNER TO COMPLETE WORK IN PHASE 2, STEPS 2, 2A, & 2B IN 240 CONSECUTIVE DAYS.
(SEE INTERMEDIATE CONTRACT TIMES AND LIQUIDATED DAMAGES)

STEP 2:

USING LANE CLOSURES, COMPLETE THE FOLLOWING:

A) CLOSE NB US 19 RAMP ACCESS TO EB US 23/74 TRAFFIC. INSTALL PCB FOR WB TRAFFIC PATTERN.

B) PLACE TEMPORARY MARKINGS AND MARKERS AND SHIFT WB US 23/74 TRAFFIC TO EXISTING EB US 23/74 LANES VIA CROSSOVERS AT -L- STA 19+00± AND STA 74+00± (-DET01_WB-).
OPEN SB US 19 RAMP ACCESS VIA -Y1LTXRP-.

C) CLOSE EXISTING PEDESTRIAN MULTI-USE PATH (MUP).

STEP 2A:

BEHIND BARRIER AND AWAY FROM TRAFFIC, CONSTRUCT THE FOLLOWING PROPOSED:

- -Y1RT- STA 13+08± TO STA 17+00± WEDGING AND WIDENING OF EXISTING, INCLUDING PROPOSED WALL ALONG MUP.

- -Y1RT- STA 17+00± TO -Y1RT- BRIDGE.

- -Y1RT- BRIDGE END BENT #1, CENTER BENT AND GIRDER FIELD SECTIONS 1 & 2 (SEE STRUCTURE PLANS).

COMPLETE DECK WORK OF -Y1RT- BRIDGE BETWEEN MEDIAN BENT AND END BENT #2 WESTBOUND LANES WITH MEDIAN BARRIER.

PHASE 2
(CONTINUED)

STEP 2B:

USING LANE CLOSURES AND AWAY FROM TRAFFIC, PLACE TEMPORARY MARKINGS AND MARKERS AND REMOVE CONFLICTING PCB.

OPEN NB US 19 RAMP ACCESS (-Y1RT-) TO PHASE 2 EB US 23/74 TRAFFIC PATTERN (AS SHOWN IN PHASE 3, STEP 1).

EXISTING MUP REMAINS TEMPORARILY CLOSED.

NOTE: PHASE 2, STEP 3 WORK MAY BE PERFORMED CONCURRENTLY WITH PHASE 2, STEPS 2A & 2B.

STEP 3:

NOTE: CONSTRUCT AFFECTED SEGMENT OF WB LANES AND -Y1LT- BELOW IN COORDINATION WITH US 19 SB RAMP CLOSURE (STEP 3A) FROM -DET01_WB- TRAFFIC PATTERN. STEP 3A CLOSURE CAN OCCUR AT ANY POINT DURING WB CONSTRUCTION. THE TEMPORARY EXIT (-Y1LTXRP-) CAN BE REOPENED TO NEW WB LANES AND -Y1LT- UNTIL ALL OF THE WB LANES ARE COMPLETED IN STEP 3.

AWAY FROM TRAFFIC, CONSTRUCT THE FOLLOWING PROPOSED:

- LEFT SIDE OF BRIDGE (WB DIRECTION & MEDIAN BARRIER) OVER RICHLAND CREEK.

- WB BRIDGE WIDENING OVER NS RR, INCLUDING EXISTING BRIDGE REHAB.

- -L_LT- STA 15+00± TO STA 33+80± WEDGING AND WIDENING OF EXISTING, INCLUDING TEMPORARY PAVEMENT WIDENING ALONG OUTSIDE (OMIT EXPRESSWAY GUTTER).

- -L_LT- STA 33+80± TO WB PORTION OF BRIDGE, INCLUDING TEMPORARY PAVEMENT WIDENING ALONG OUTSIDE (OMIT EXPRESSWAY GUTTER) (SHORING REQUIRED WEST OF RICHLAND CREEK BRIDGE).

- -L_LT- FROM WB PORTION OF BRIDGE OVER RICHLAND CREEK TO -L_LT- STA 52+00±.

- -L_LT- STA 65+00± TO STA 80+64± WEDGING AND WIDENING OF EXISTING AND WALL.

AWAY FROM TRAFFIC, MAY BEGIN CONSRTUCTION OF RETAINING WALL -RW4- AND ADJACENT PAVEMENT FROM -Y1LT- STA 14+10± TO -L_LT- STA 65+00±.

AWAY FROM TRAFFIC, AND BEHIND BARRIER, INSTALL AS MUCH PHASE 3 MEDIAN PCB AS POSSIBLE (PROTECT APPROACH END(S) WITH CRASH CUSHION(S) AS NEEDED). PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS FOR PHASE 3 TRAFFIC PATTERN. PROPOSED WB MEDIAN GUARDRAIL INSTALLED REQUIRES TEMPORARY LAPPING FOR EB TRAFFIC IN PHASE 3.

APPROVED: Michael T. Rzepka

DATE: 5/10/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

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

TEMPORARY TRAFFIC CONTROL PHASING

REVISIONS

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PHASING

PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-3A

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PHASE 2
(CONTINUED)

WORK IN A CONTINUOUS MANNER TO COMPLETE WORK IN PHASE 2, STEP 3A IN 90 CONSECUTIVE DAYS.
(SEE INTERMEDIATE CONTRACT TIMES AND LIQUIDATED DAMAGES)

STEP 3A:

USING LANE CLOSURES AND AWAY FROM TRAFFIC, COMPLETE THE FOLLOWING:

A) CLOSE SB US 19 RAMP ACCESS (-Y1LTXRP-) AND RESET PCB ACROSS RAMP OPENING.

B) CONSTRUCT ENOUGH PAVEMENT WIDTH TO REOPEN SB US 19 RAMP IN SUB STEP "C" AT THE FOLLOWING LOCATIONS:

- -L_LT- STA 52+00± TO STA 58+50±
- -L_LT- STA 58+50± TO STA 65+00± WEDGING AND WIDENING OF EXISTING
- -Y1LT- STA 13+20± TO STA 16+95± WEDGING AND WIDENING OF EXISTING
- -Y1LT- STA 16+95± TO -L_LT-

C) REMOVE PCB ACROSS RAMP OPENING AND RESET/INSTALL PCB ALONG RAMP. PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS AND REOPEN SB US 19 RAMP ACCESS (-Y1LTXRP-) (SEE TMP-28A THRU TMP-28C).

STEP 3B:

COMPLETE CONSTRUCTION OF RETAINING WALL -RW4- AND ADJACENT PAVMENT FROM -Y1LT- STA 14+10± TO -L_LT- STA 65+00±.

PHASE 3
(SEE TMP-29 THRU TMP-41)

STEP 1:

USING LANE CLOSURES ON US 23/74, PLACE TEMPORARY PAVEMENT MARKINGS AND SHIFT WB TRAFFIC TO -DET02_EB- ALIGNMENT. RESET PCB AS SHOWN.

USING LANE CLOSURES AND BEHIND BARRIER, CONSTRUCT THE FOLLOWING:

- -DET02_EB_X1- AND -DET02_EB_X2- CROSSOVERS AT -L- STA 19+00± AND STA 76+00±, RESPECTIVELY.
- -Y1RTXRP-

COMPLETE INSTALLATION OF MEDIAN PCB FOR PHASE 3, STEP 2 TRAFFIC PATTERN.

STEP 2:

USING LANE CLOSURES, RESTRIPE EXISTING EB LANES AND CROSSOVERS FOR -DET02_EB- ALIGNMENT AND SHIFT EB TRAFFIC TO -DET02_EB-, AND NB US 19 RAMP TRAFFIC TO -Y1RTXRP-.

USING LANE CLOSURES AND AWAY FROM TRAFFIC, INSTALL PCB AND CONSTRUCT THE FOLLOWING:

- REMAINING PORTION OF BRIDGE (EB DIRECTION) OVER RICHLAND CREEK.
- REHAB OF EB BRIDGE DECK OVER NS RR.
- -L_RT- STA 15+00± TO STA 31+50± WEDGING AND WIDENING OF EXISTING .
- -L_RT- STA 31+50± TO STA 58+00±.
- -L_RT- STA 62+50± TO STA 81+45± MILLING, WEDGING AND WIDENING OF EXISTING AND WALL.
- REMOVAL OF TEMPORARY PAVEMENT AND BRIDGE ASSOCIATED WITH -DET01_EB-.

REOPEN MUP UPON COMPLETION OF STEP 2 BRIDGE WORK AND TEMPORARY BRIDGE REMOVAL.

PHASE 3
(CONTINUED)

WORK IN A CONTINUOUS MANNER TO COMPLETE WORK IN STEP 2A IN 18 CONSECUTIVE DAYS.
(SEE INTERMEDIATE CONTRACT TIMES AND LIQUIDATED DAMAGES)

STEP 2A:

AWAY FROM TRAFFIC COMPLETE THE FOLLOWING:

A) CLOSE NB US 19 ACCESS (-Y1RTXRP-) TO EB US 23/74 TRAFFIC PATTERN.

B) CONSTRUCT -L_RT- STA 58+00±TO STA 62+50±.

C) USING LANE CLOSURES. PLACE TEMPORARY MARKINGS AND MARKERS AND REMOVE CONFLICTING PCB (SEE PHASE 4 DETAILS).

D) SHIFT EB US 23/74 TRAFFIC TO -L_RT- PHASE 4 PATTERN. OPEN -Y1RT- TO FINAL PATTERN.

PHASE 4
(SEE TMP-42 THRU TMP-47)

STEP 1:

USING LANE CLOSURES, COMPLETE THE FOLLOWING:

A) RELAP PROPOSED GUARDRAIL THAT WAS USED FOR -DET02_EB- TRAFFIC DIRECTION IN WB LANES.

B) REMOVE PCB (USED AS MEDIAN BARRIER IN PHASE 3).

C) REMOVE PHASE 3 MARKINGS AND PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS AND SHIFT WB TRAFFIC INTO FINAL TRAVEL LANES OF -L_LT-.

STEP 2:

USING LANE CLOSURES AND/OR BEHIND BARRIER, COMPLETE THE FOLLOWING:

- REMOVE TEMPORARY WIDENING, CONSTRUCT PROPOSED EXPRESSWAY GUTTER AND GRADE FINAL SLOPES ALONG OUTSIDE SHOULDER OF -L_LT- FROM BEGIN PROJECT LIMIT TO BRIDGE OVER RICHLAND CREEK.
- MILL/WEDGE TO FINAL GRADE LESS FINAL SURFACE LAYER OF EB US 23/74 LANES FROM -L- STA 74+50± TO STA 81+45±. (PLACE TEMPORARY MARKINGS UNTIL STEP 3)
- REMOVE MEDIAN CROSSOVERS, GRADE FINAL MEDIAN AND INSTALL FINAL GUARDRAIL.

STEP 3:

USING LANE CLOSURES, PLACE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS AND MARKERS.

REMOVE REMAINING TRAFFIC CONTROL DEVICES.

APPROVED: Michael T. Rzepka

DATE: 5/10/2022

SEAL

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TEMPORARY TRAFFIC CONTROL PHASING

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
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HICKORY HILL RD

US 19 SB

US 19 NB

US 23/74

B-5898
B-3186

-DET01_PH1_RUN-

50+00

45+00

55+00

EX
EX

TRAFFIC DRUM
120' SPACING

-DET01_PH1_RUN- STA. 43+73 +/-
BEGIN CONSTRUCTION
BEGIN SHOULDER RECONSTRUCTION

-DET01_PH1_RUN- STA. 48+29 +/-
END SHOULDER RECONSTRUCTION

-DET01_PH1_RUN- STA. 52+18 +/-
BEGIN SHOULDER RECONSTRUCTION

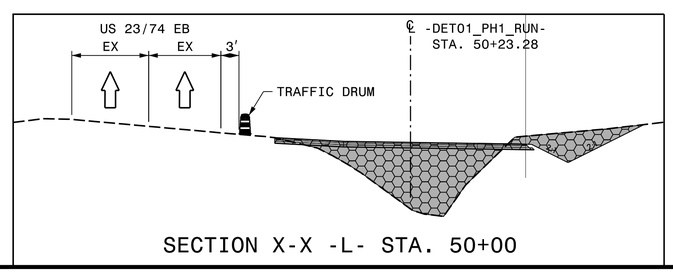
-DET01_PH1_RUN- STA. 56+75 +/-
END CONSTRUCTION
END SHOULDER RECONSTRUCTION

R11-2
48" x 30"

ROAD
CLOSED

W1-6L
48" x 24"

TYPE III BARRICADE



SECTION X-X -L- STA. 50+00

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

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PHASE 1, STEP 1

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-5

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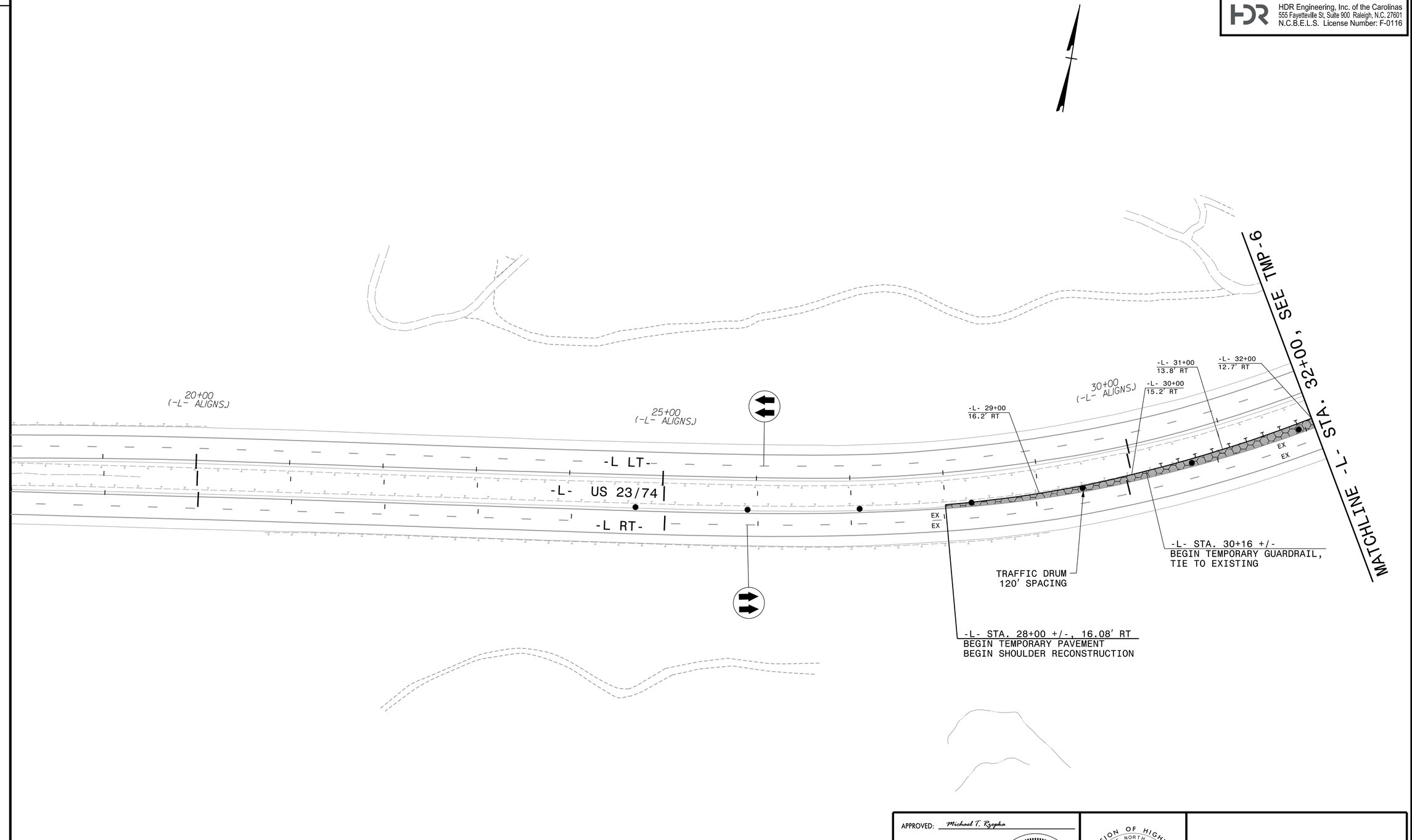

APPROVED: *Michael T. Rzepka*

DATE: 3/17/2022

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PHASE 1, STEP 2

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
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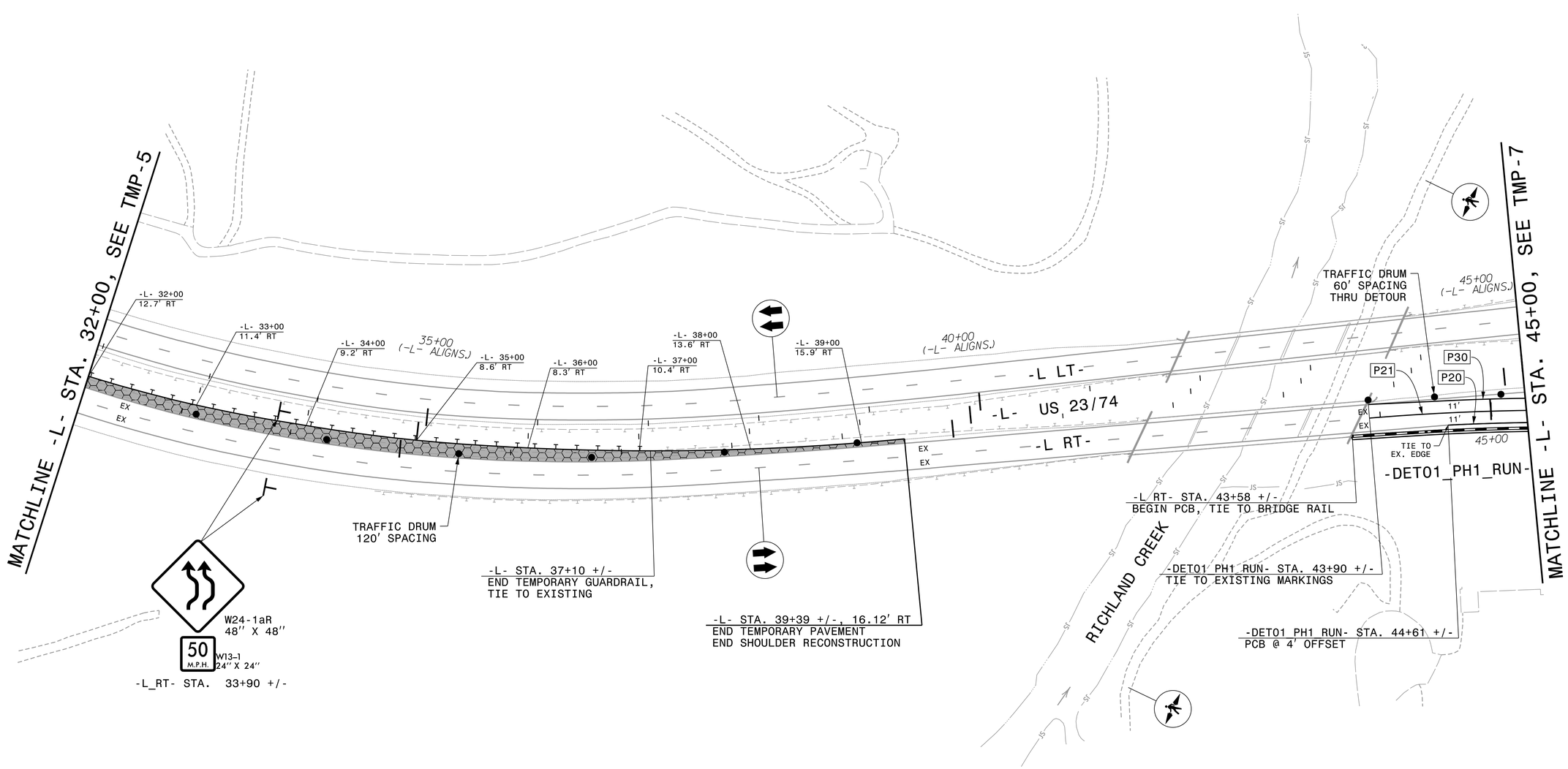

APPROVED: *Michael T. Rzepka*

DATE: 3/17/2022

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PHASE 1
STEPS 2 & 2A

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-7

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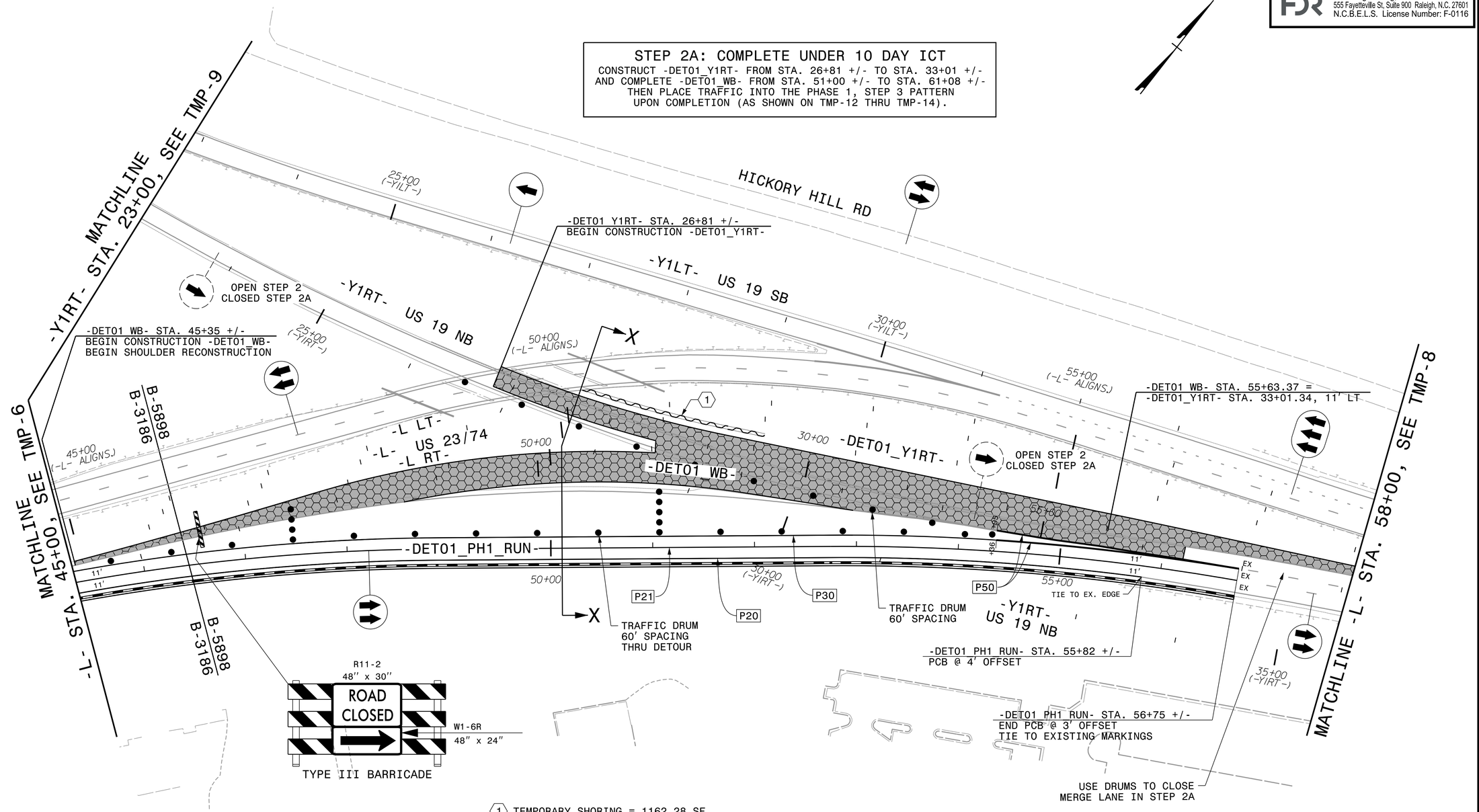
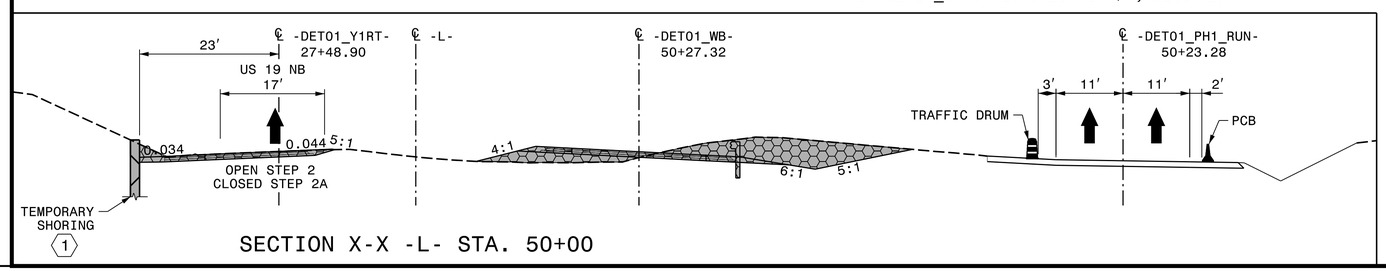
STEP 2A: COMPLETE UNDER 10 DAY ICT

CONSTRUCT -DET01_Y1RT- FROM STA. 26+81 +/- TO STA. 33+01 +/-
AND COMPLETE -DET01_WB- FROM STA. 51+00 +/- TO STA. 61+08 +/-
THEN PLACE TRAFFIC INTO THE PHASE 1, STEP 3 PATTERN
UPON COMPLETION (AS SHOWN ON TMP-12 THRU TMP-14).



(1) TEMPORARY SHORING = 1162.28 SF
FROM -DET01_Y1RT- STA. 27+65 +/-, 23.0' LT
TO -DET01_Y1RT- STA. 29+16 +/-, 23.0' LT



SECTION X-X -L- STA. 50+00

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

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PHASE 1
STEPS 2 & 2A

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
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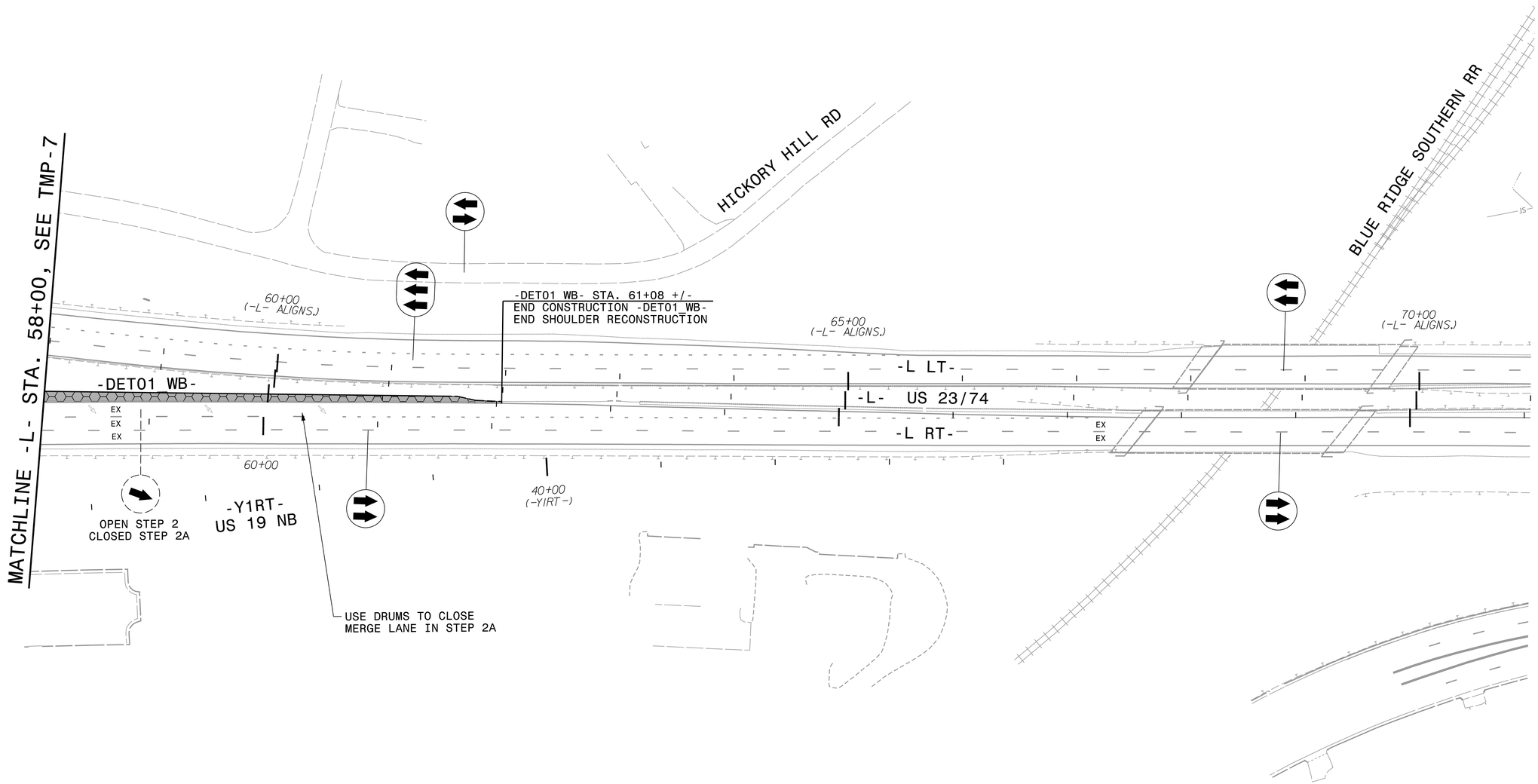

APPROVED: *Michael T. Rzepka*

DATE: 3/17/2022

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PHASE 1
STEPS 2 & 2A

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-9

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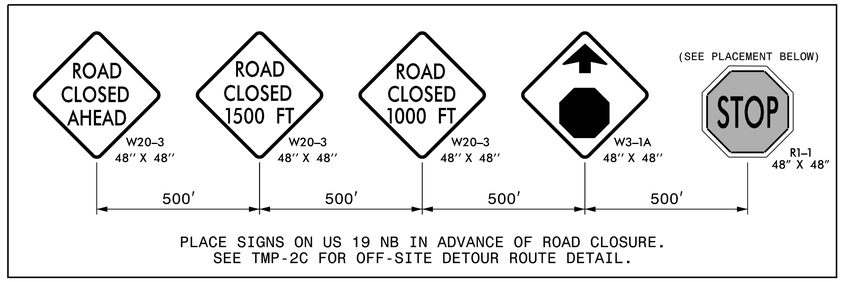
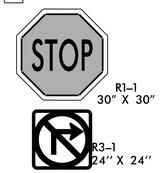


PLACE SIGNS ON US 19 NB IN ADVANCE OF ROAD CLOSURE.
SEE TMP-2C FOR OFF-SITE DETOUR ROUTE DETAIL.

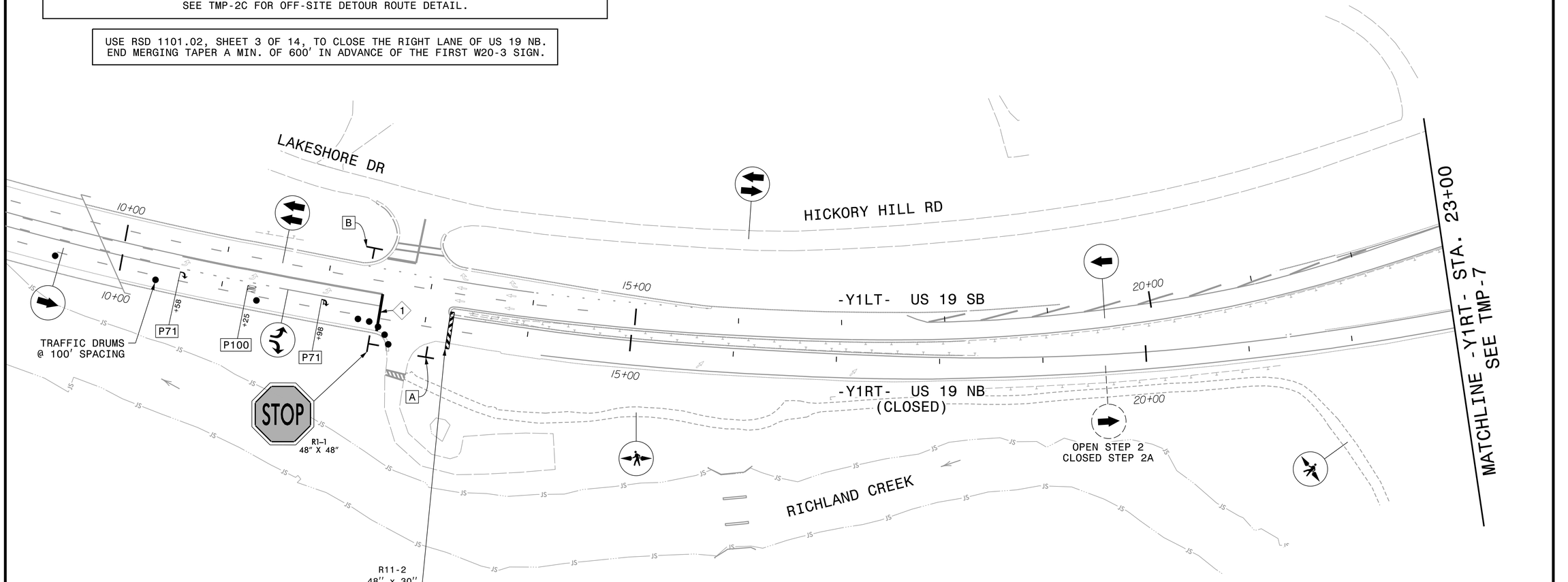
USE RSD 1101.02, SHEET 3 OF 14, TO CLOSE THE RIGHT LANE OF US 19 NB.
END MERGING TAPER A MIN. OF 600' IN ADVANCE OF THE FIRST W20-3 SIGN.

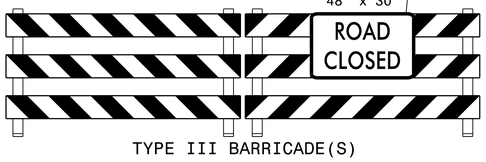
A



B

PLACE BELOW
EX. STOP SIGN





TYPE III BARRICADE(S)

US 19 NB CLOSURE
IN STEP 2A

P61 STOPBAR LOCATIONS	
1	-Y1RT- STA. 12+55.17, 15.25' LT to -Y1RT- STA. 12+55.17, 21.10' RT

APPROVED: *Michael T. Rzepka*

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

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PHASE 1
STEPS 2 & 2A

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-10

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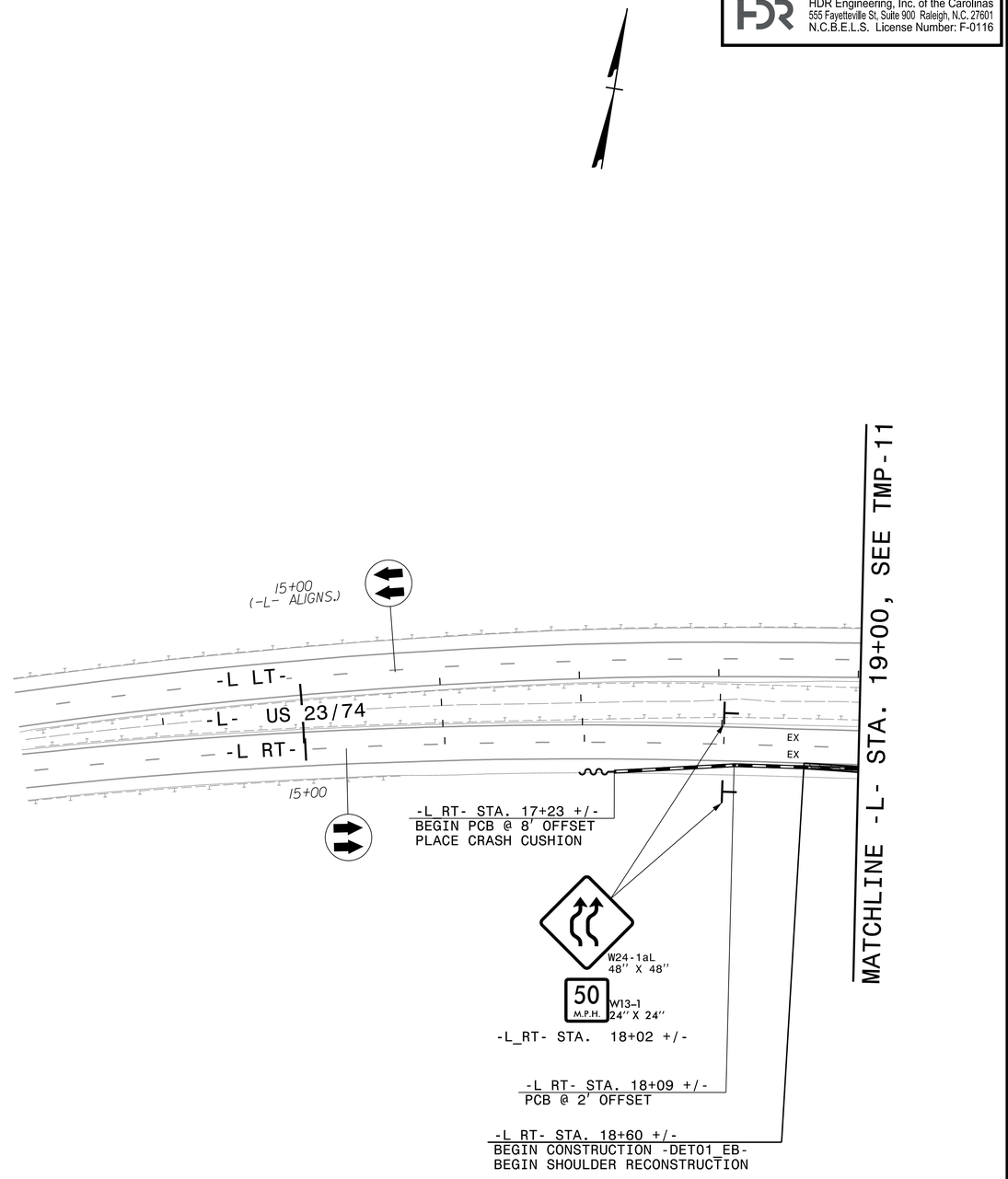

10+00

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

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PHASE 1, STEP 3

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-11

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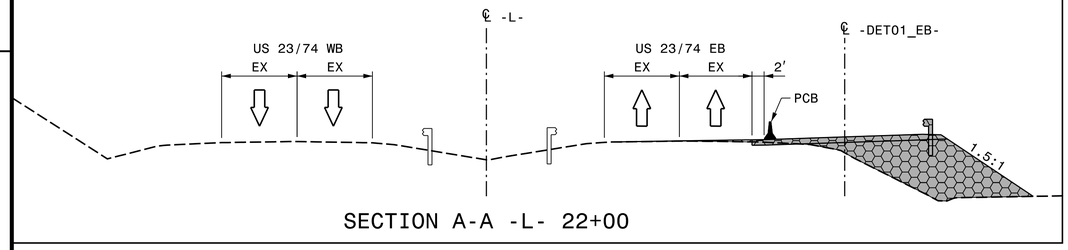
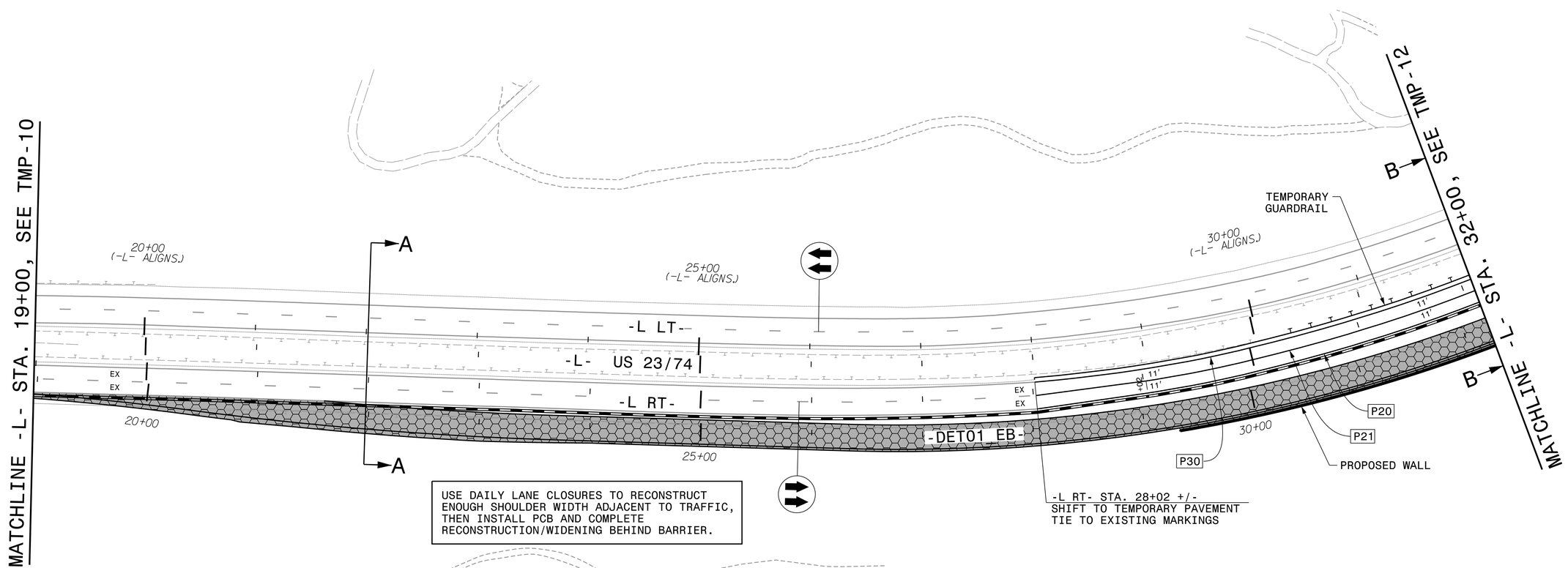
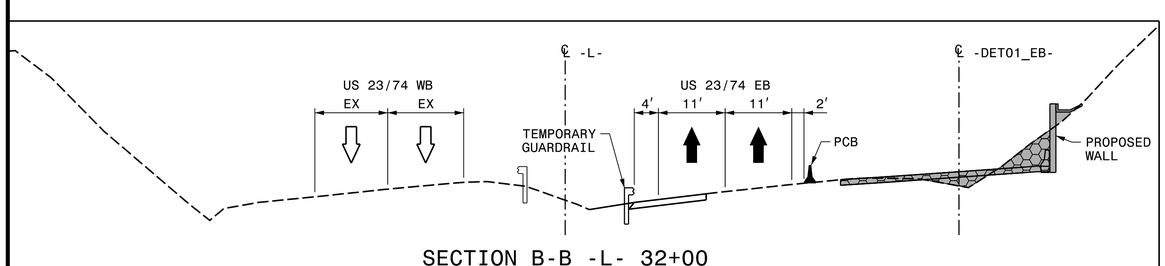


SECTION A-A -L- 22+00





SECTION B-B -L- 32+00

REVISIONS

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

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

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PHASE 1, STEP 3

PLOT DRIVER: NCDOT.pdf_color_eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 1/21/2022 TIME: 4:00:54 PM
FILE: pw:\\pwhdruseas01:HDR_US_East_01\Documents\3322\10030389\6.0_CAD_BIM\6.2_Work_In_Progress\B-3186-B-5898\Traffic\Traffic\Traffic\TrafficControl\TCP\B3186-B5898_TMP_TMP11.dgn

PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-12

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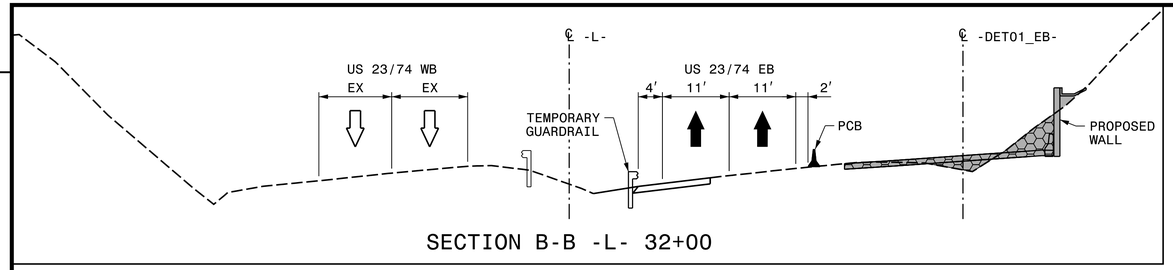
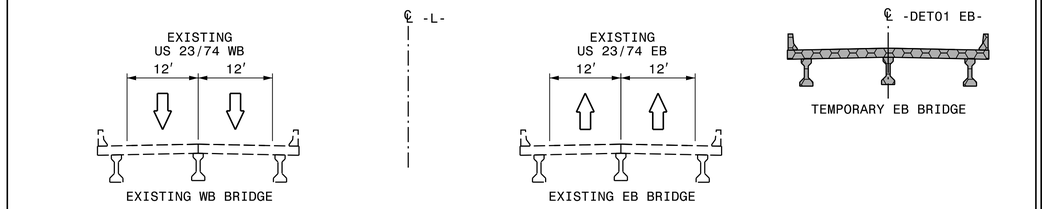
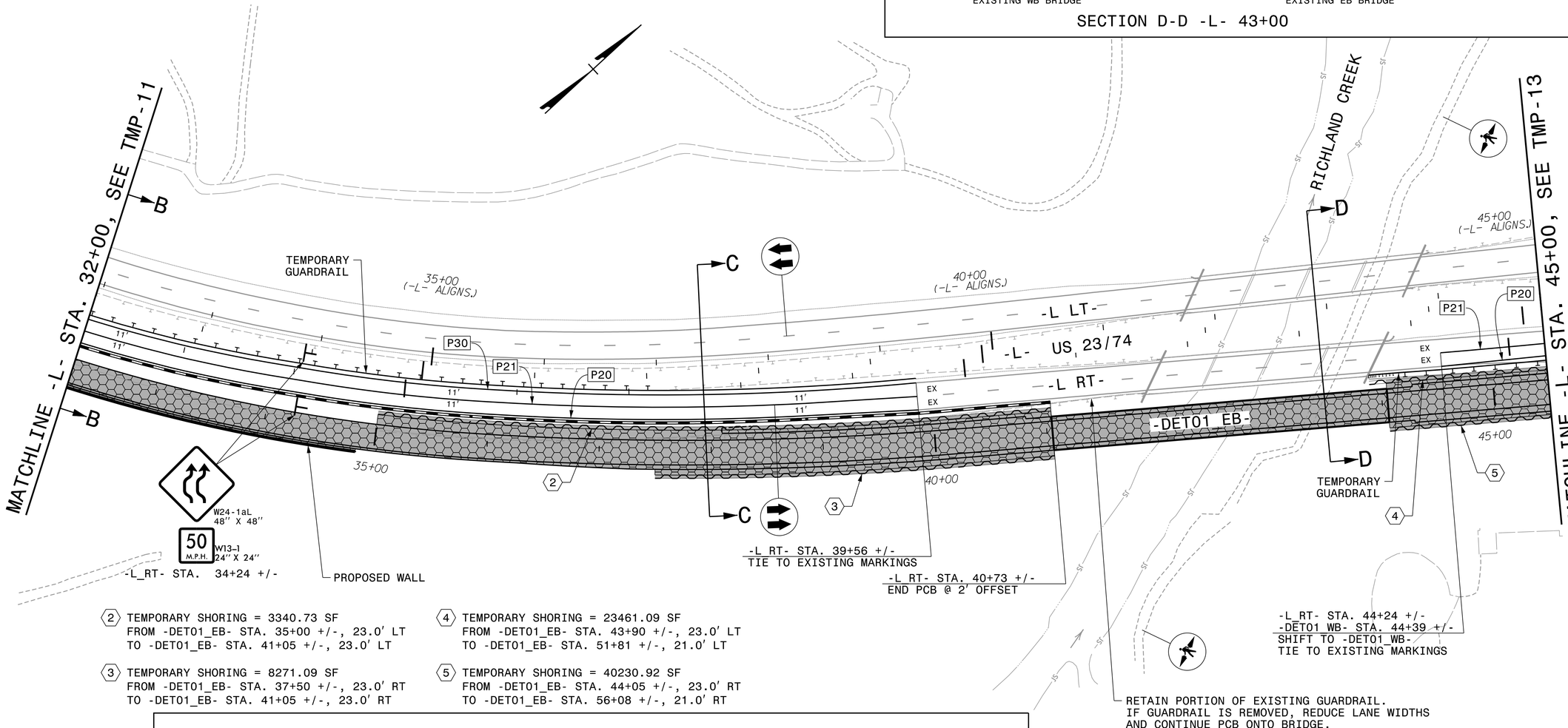


SECTION B-B -L- 32+00



SECTION D-D -L- 43+00

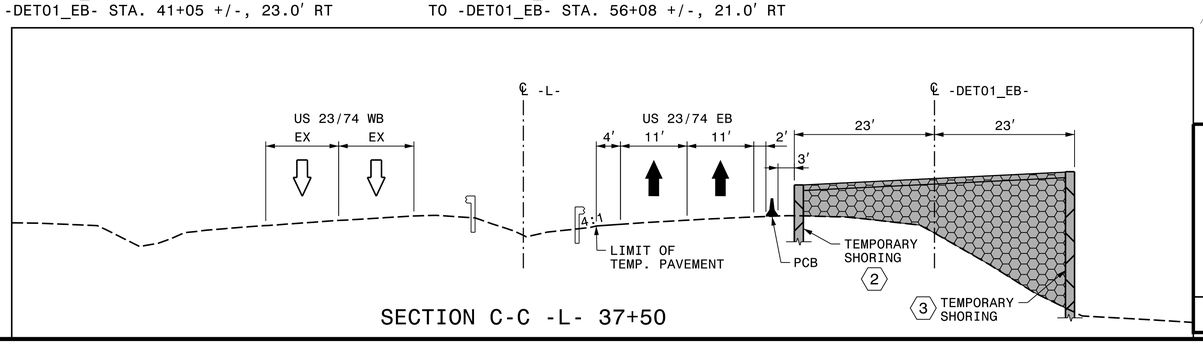


(2) TEMPORARY SHORING = 3340.73 SF
FROM -DET01_EB- STA. 35+00 +/-, 23.0′ LT
TO -DET01_EB- STA. 41+05 +/-, 23.0′ LT

(3) TEMPORARY SHORING = 8271.09 SF
FROM -DET01_EB- STA. 37+50 +/-, 23.0′ RT
TO -DET01_EB- STA. 41+05 +/-, 23.0′ RT

(4) TEMPORARY SHORING = 23461.09 SF
FROM -DET01_EB- STA. 43+90 +/-, 23.0′ LT
TO -DET01_EB- STA. 51+81 +/-, 21.0′ LT

(5) TEMPORARY SHORING = 40230.92 SF
FROM -DET01_EB- STA. 44+05 +/-, 23.0′ RT
TO -DET01_EB- STA. 56+08 +/-, 21.0′ RT



SECTION C-C -L- 37+50

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

SEAL

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PHASE 1, STEP 3

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-13

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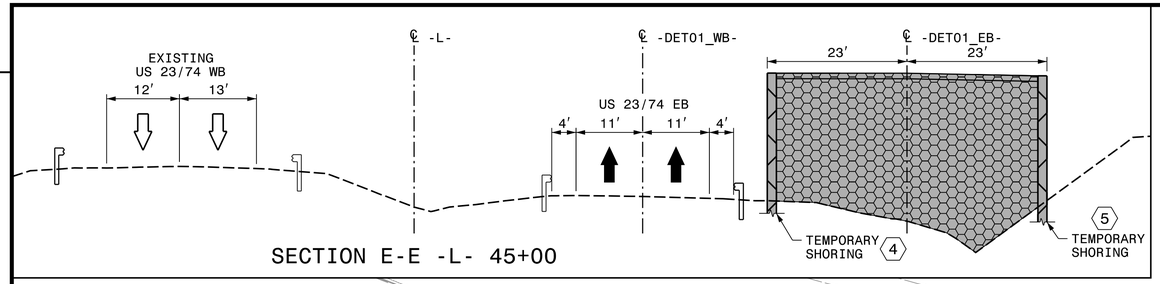
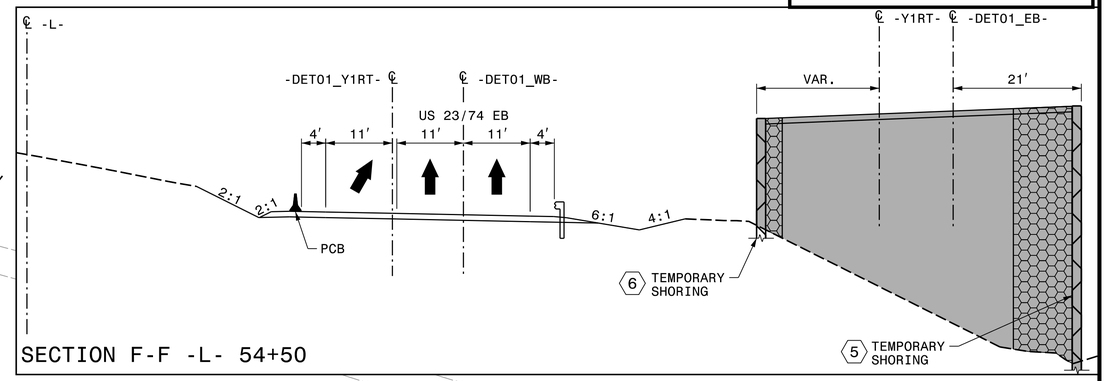


SECTION E-E -L- 45+00

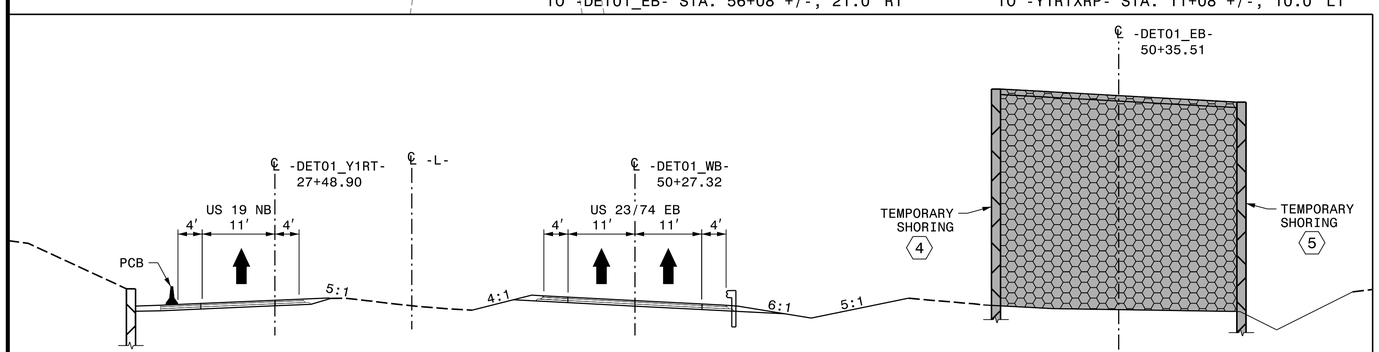


SECTION F-F -L- 54+50

4 TEMPORARY SHORING = 23461.09 SF
FROM -DET01_EB- STA. 43+90 +/-, 23.0′ LT
TO -DET01_EB- STA. 51+81 +/-, 21.0′ LT

5 TEMPORARY SHORING = 40230.92 SF
FROM -DET01_EB- STA. 44+05 +/-, 23.0′ RT
TO -DET01_EB- STA. 56+08 +/-, 21.0′ RT

6 TEMPORARY SHORING = 1697.29 SF
FROM -Y1RTXRP- STA. 10+17 +/-, 10.0′ LT
TO -Y1RTXRP- STA. 11+08 +/-, 10.0′ LT



SECTION X-X -L- STA. 50+00

APPROVED: *Michael T. Rzepka*

DATE: 3/17/2022

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PHASE 1, STEP 3

REVISIONS

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 1/21/2022 TIME: 4:01:37 PM
FILE: pw:\\pwhdrusea01:HDR_US_East_01\Documents\3322\10030389\6.0_CAD_BIM\6.2_Work_In_Progress\B-3186-B-5898\Traffic\Traffic\TraffficControl\TCP\B3186-B5898_TMP_TMP13.dgn

PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-14

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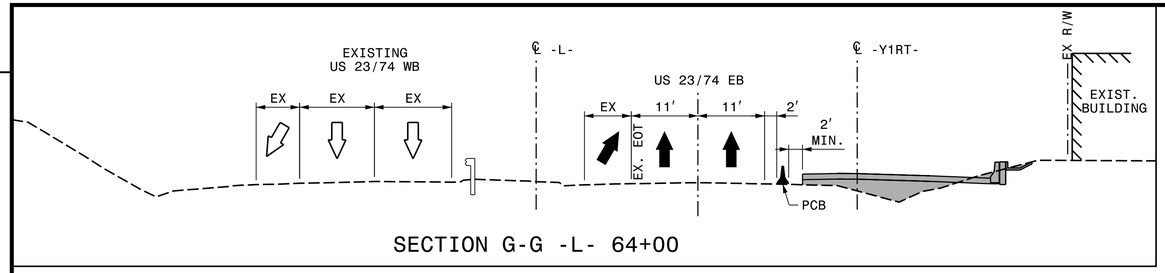
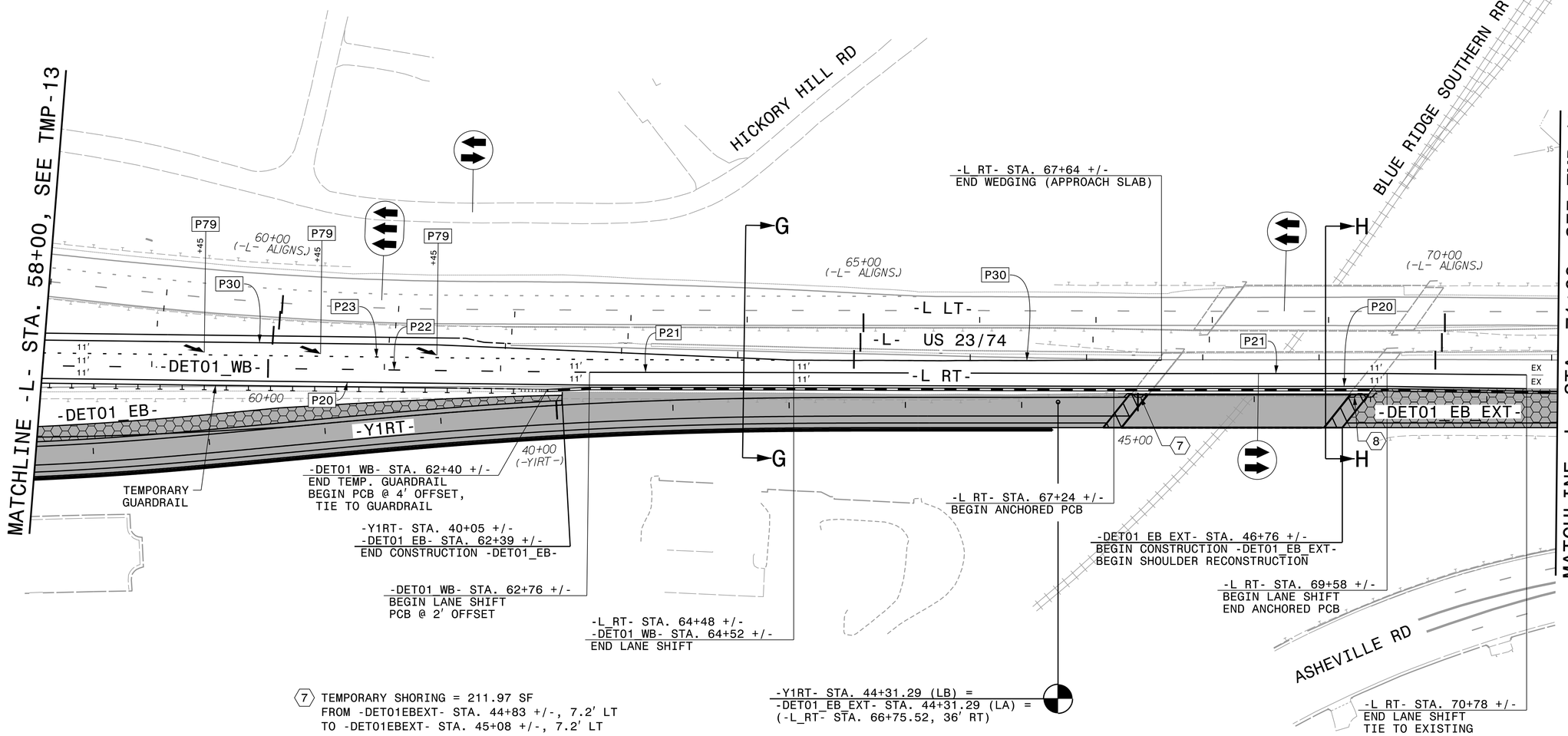


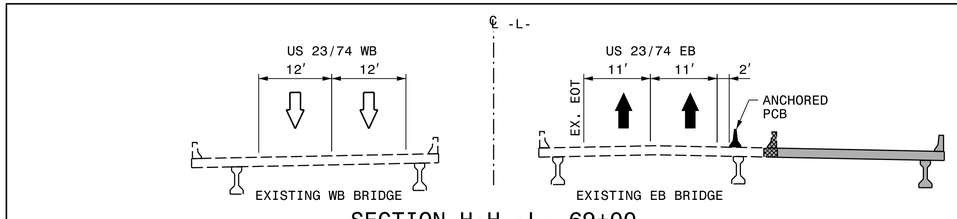
SECTION G-G -L- 64+00



7 TEMPORARY SHORING = 211.97 SF
FROM -DET01EBEXT- STA. 44+83 +/-, 7.2′ LT
TO -DET01EBEXT- STA. 45+08 +/-, 7.2′ LT

8 TEMPORARY SHORING = 201.00 SF
FROM -DET01EBEXT- STA. 46+81 +/-, 7.2′ LT
TO -DET01EBEXT- STA. 47+06 +/-, 7.2′ LT

USE DAILY LANE CLOSURES TO RECONSTRUCT ENOUGH SHOULDER WIDTH ADJACENT TO TRAFFIC, THEN INSTALL PCB AND COMPLETE RECONSTRUCTION/WIDENING BEHIND BARRIER.



SECTION H-H -L- 69+00

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

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PHASE 1, STEP 3

REVISIONS

PLOT DRIVER: NCDOT_pdf_color-eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 1/21/2022 TIME: 4:01:58 PM
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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-15

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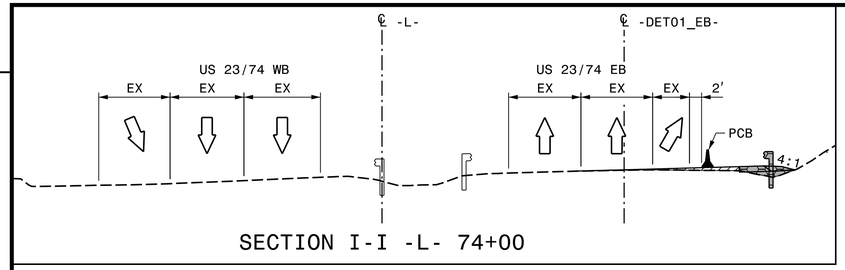
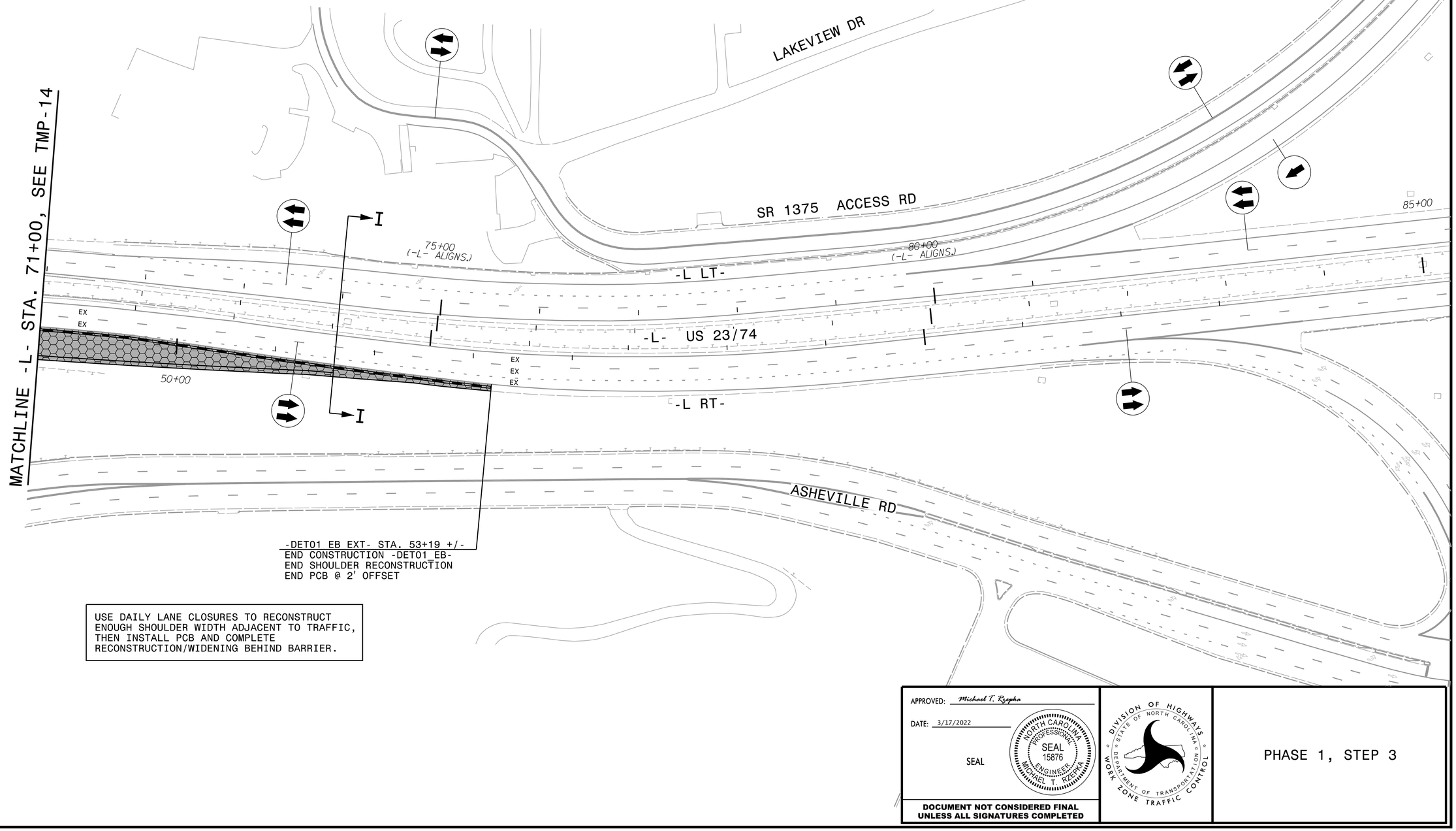


SECTION I-I -L- 74+00



-DET01 EB EXT- STA. 53+19 +/-
END CONSTRUCTION -DET01_EB-
END SHOULDER RECONSTRUCTION
END PCB @ 2' OFFSET

USE DAILY LANE CLOSURES TO RECONSTRUCT ENOUGH SHOULDER WIDTH ADJACENT TO TRAFFIC, THEN INSTALL PCB AND COMPLETE RECONSTRUCTION/WIDENING BEHIND BARRIER.

APPROVED: *Michael T. Rzepka*

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

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PHASE 1, STEP 3

REVISIONS

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 1/21/2022 TIME: 4:02:17 PM
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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-16

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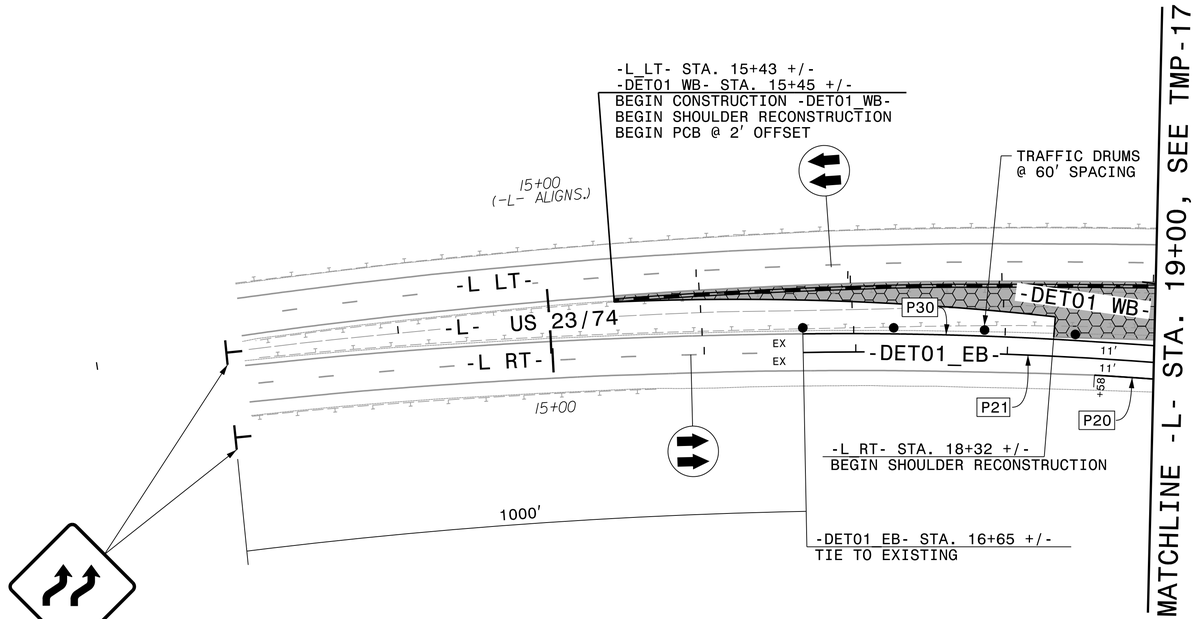
USE DAILY LANE CLOSURES TO RECONSTRUCT ENOUGH SHOULDER WIDTH ADJACENT TO TRAFFIC, THEN INSTALL PCB AND COMPLETE RECONSTRUCTION/WIDENING BEHIND BARRIER.



10+00

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

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PHASE 2, STEP 1

REVISIONS

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_tcp.tbl
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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-17

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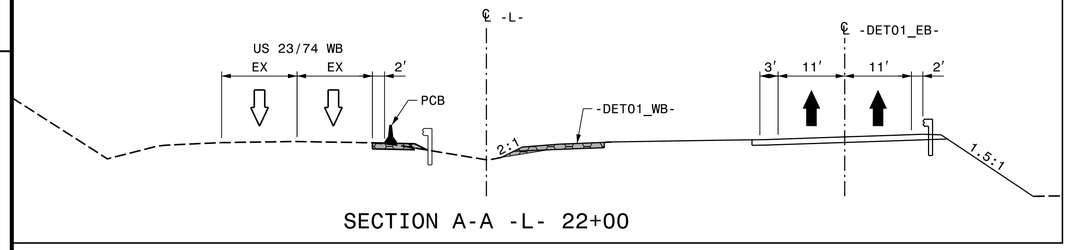
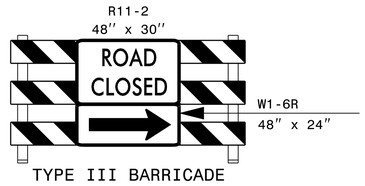
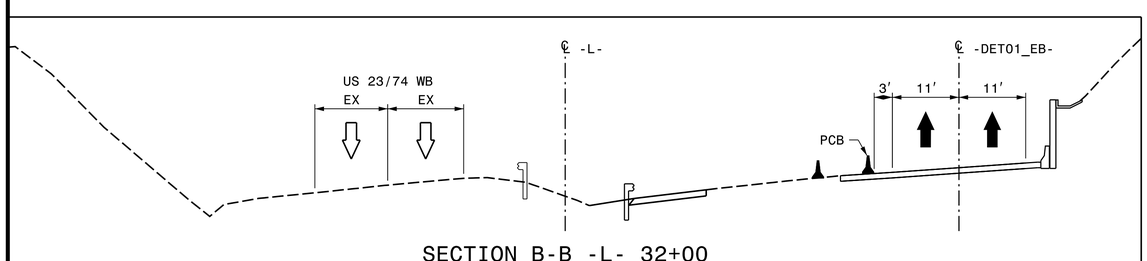


SECTION A-A -L- 22+00



TYPE III BARRICADE

USE DAILY LANE CLOSURES TO RECONSTRUCT ENOUGH SHOULDER WIDTH ADJACENT TO TRAFFIC, THEN INSTALL PCB AND COMPLETE RECONSTRUCTION/WIDENING BEHIND BARRIER.



SECTION B-B -L- 32+00

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

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

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PHASE 2, STEP 1

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-18

HDR Engineering, Inc. of the Carolinas
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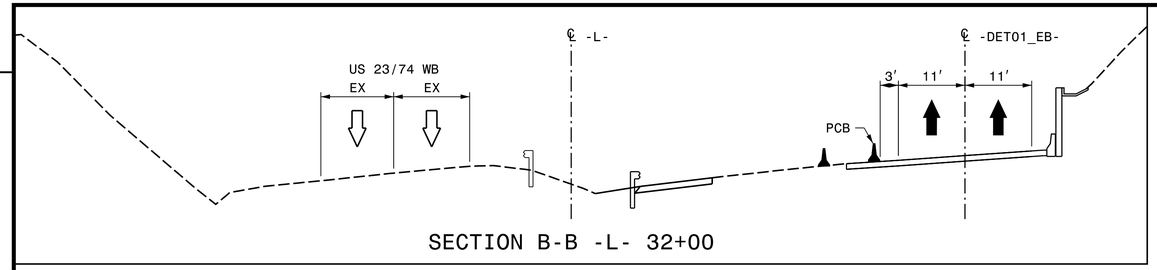
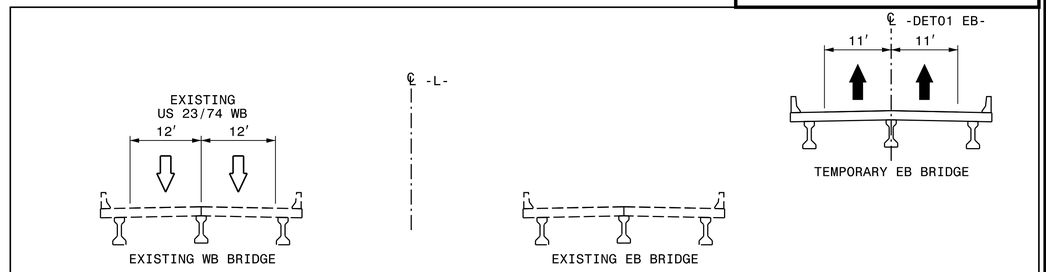
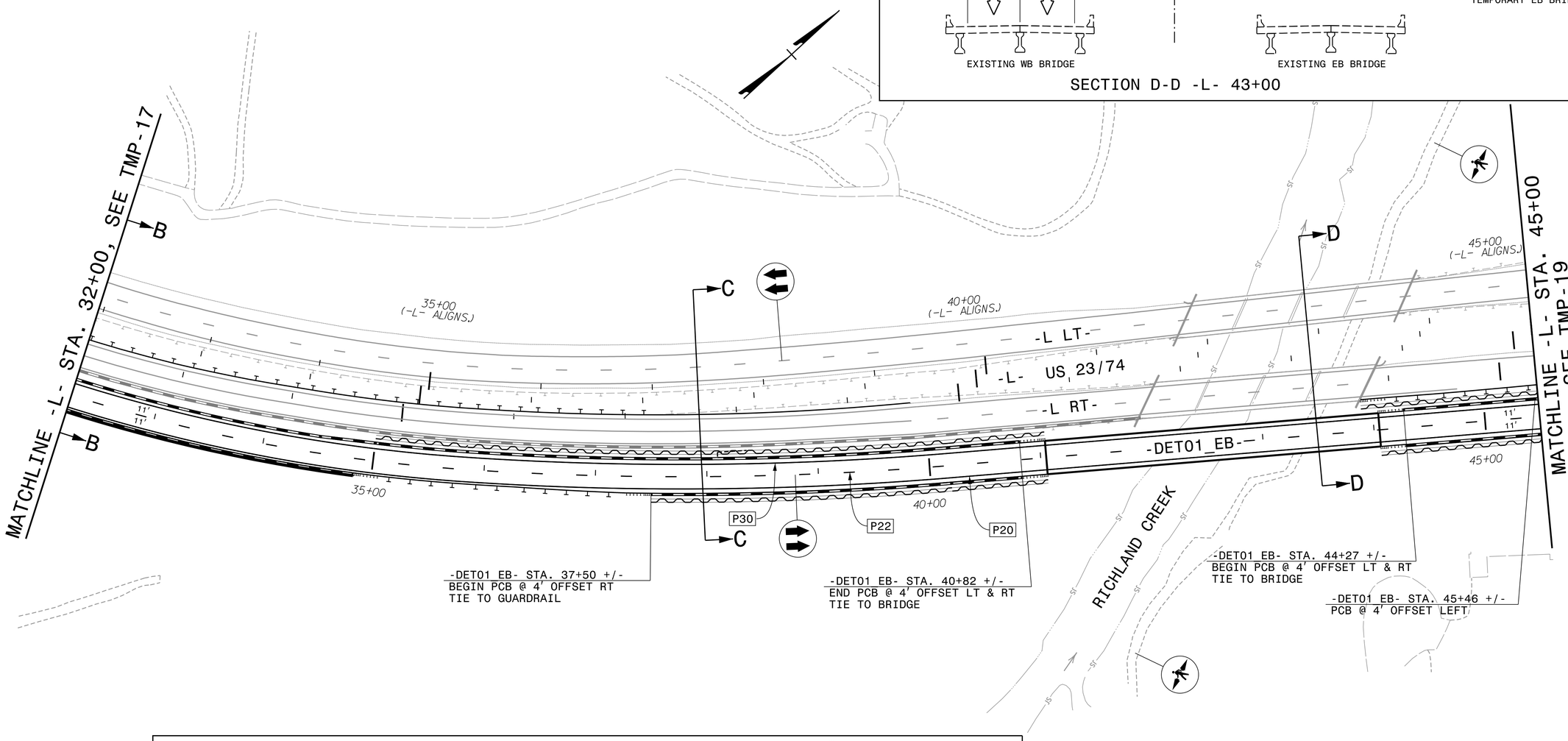
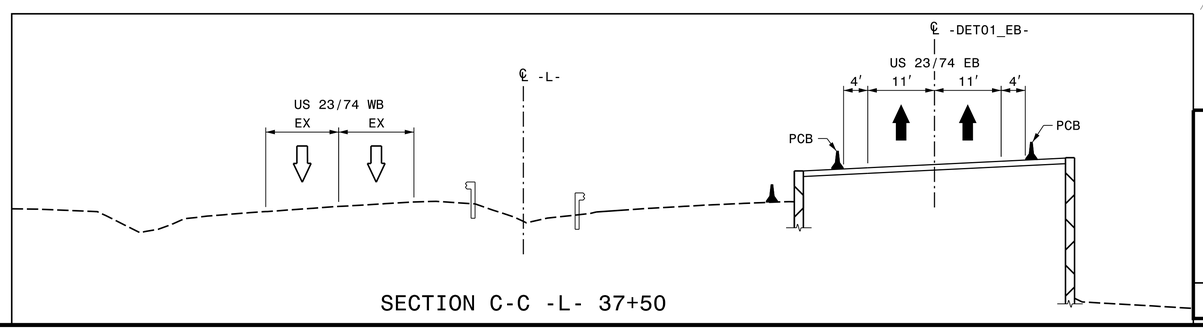


SECTION B-B -L- 32+00



SECTION D-D -L- 43+00





SECTION C-C -L- 37+50

APPROVED: *Michael T. Rzepka*

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

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PHASE 2, STEP 1

REVISIONS

PLOT DRIVER: NCDOT_pdf_color-eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 1/21/2022 TIME: 4:03:38 PM
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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-19

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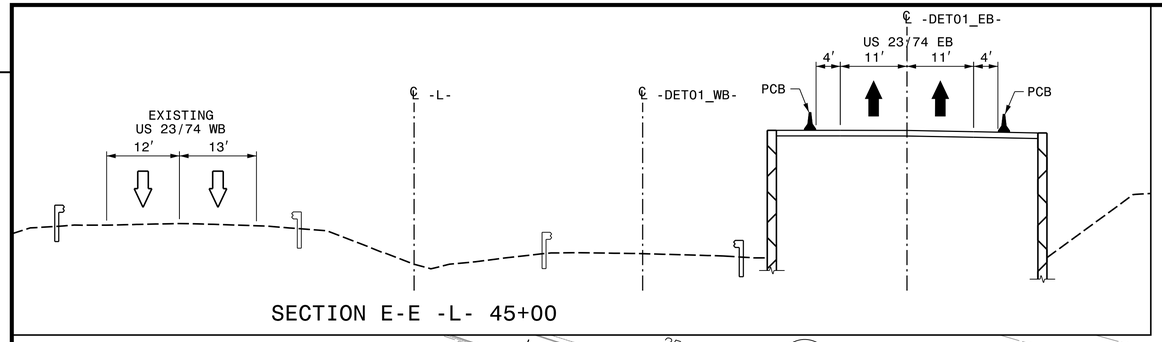
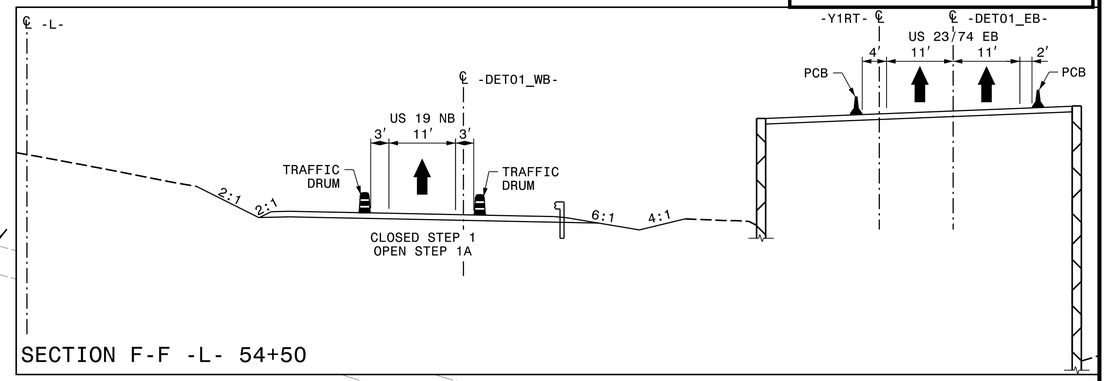
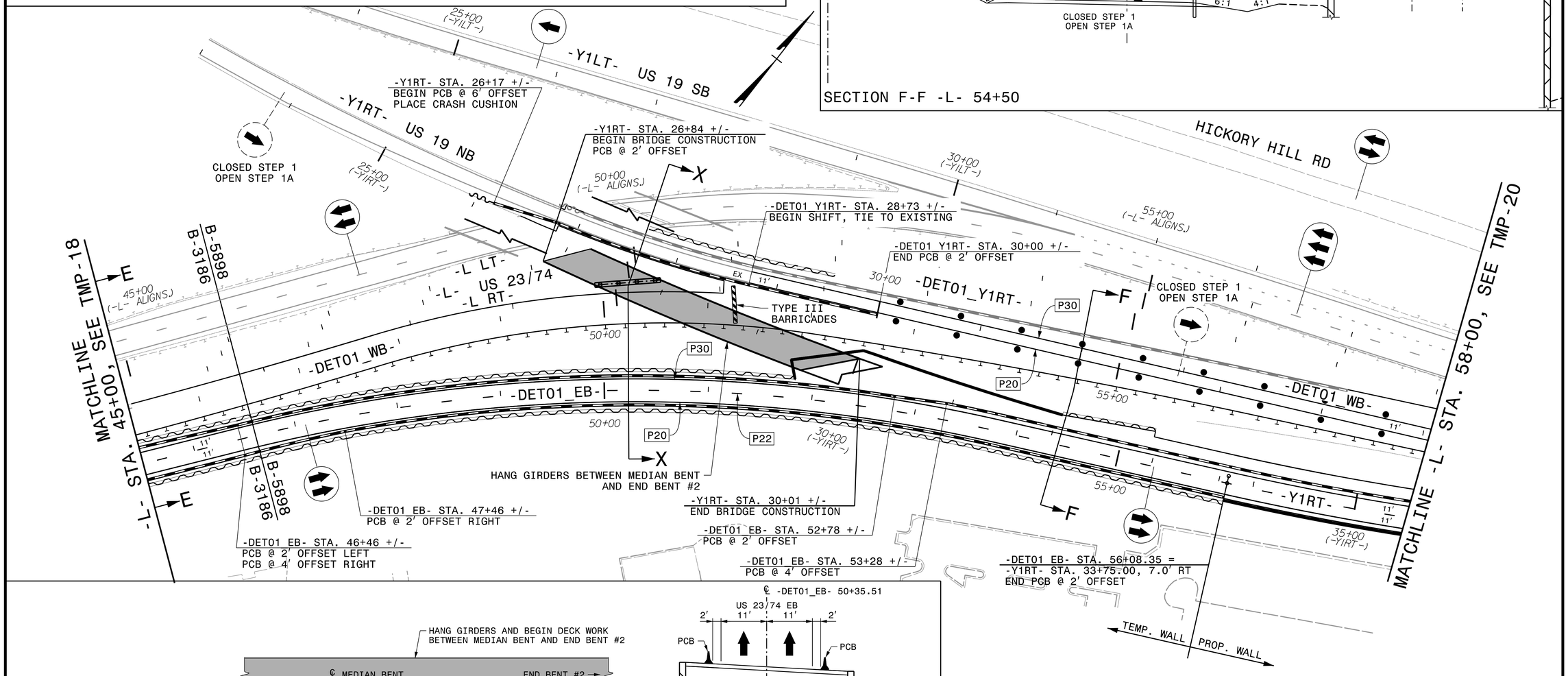
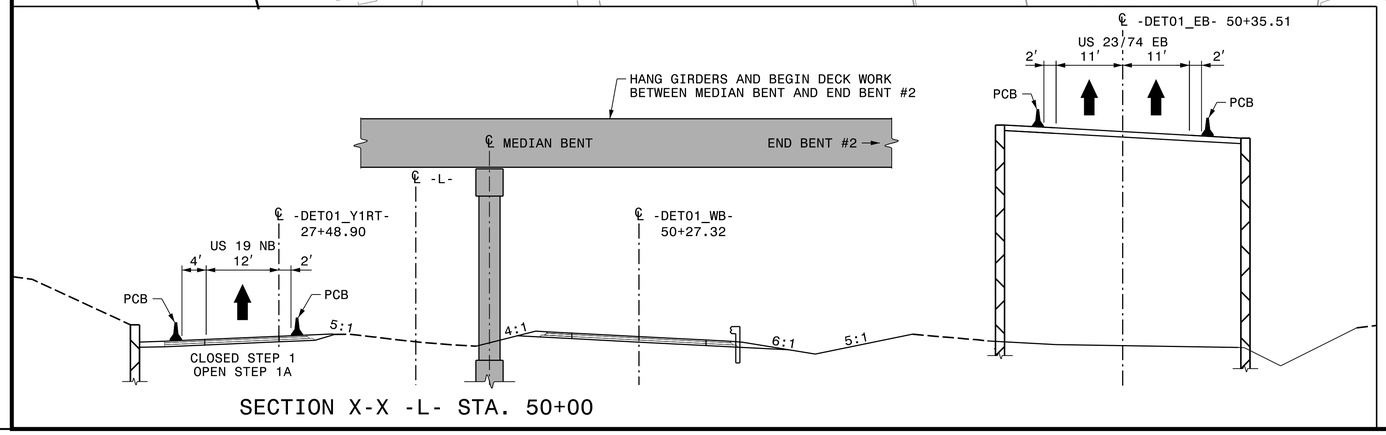


SECTION E-E -L- 45+00



SECTION F-F -L- 54+50





SECTION X-X -L- STA. 50+00

APPROVED: *Michael T. Rzepka*

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

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PHASE 2
STEPS 1, 1A & 1B

REVISIONS

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 1/21/2022 TIME: 4:03:59 PM
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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-20

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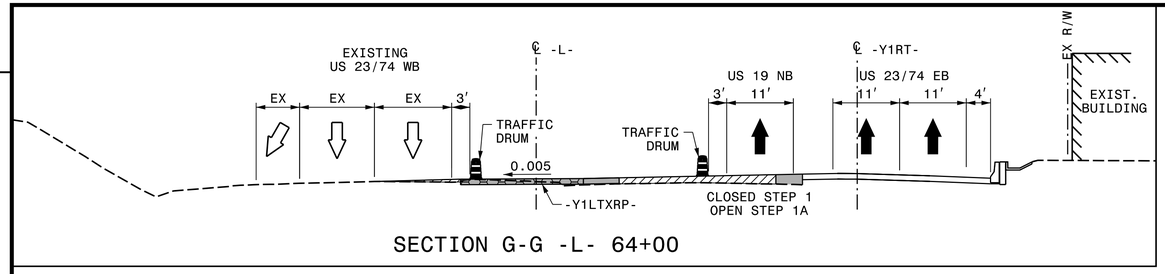
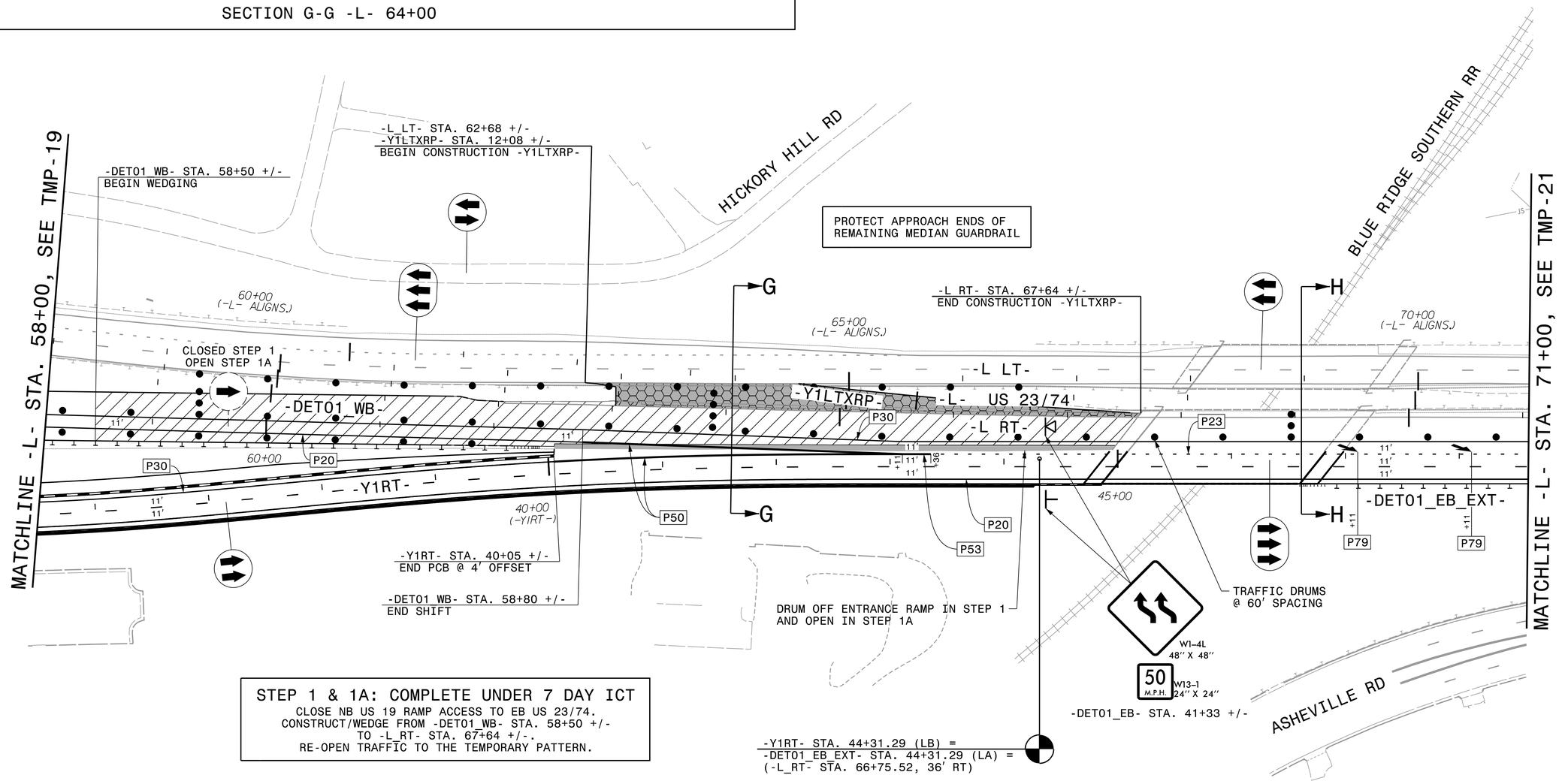
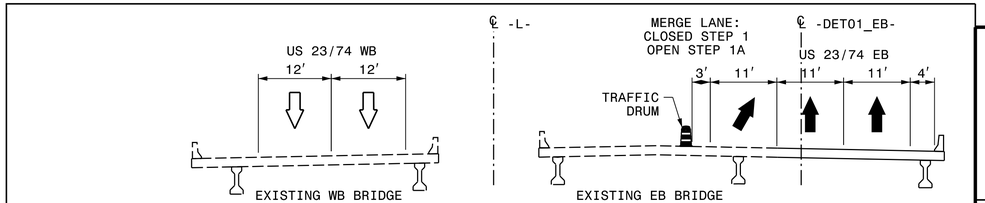


SECTION G-G -L- 64+00



STEP 1 & 1A: COMPLETE UNDER 7 DAY ICT

CLOSE NB US 19 RAMP ACCESS TO EB US 23/74.
CONSTRUCT/WEDGE FROM -DET01_WB- STA. 58+50 +/-
TO -L_RT- STA. 67+64 +/-.
RE-OPEN TRAFFIC TO THE TEMPORARY PATTERN.



SECTION H-H -L- 69+00

APPROVED: *Michael T. Rzepka*

DATE: 4/11/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

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

PHASE 2
STEPS 1, 1A & 1B

REVISIONS

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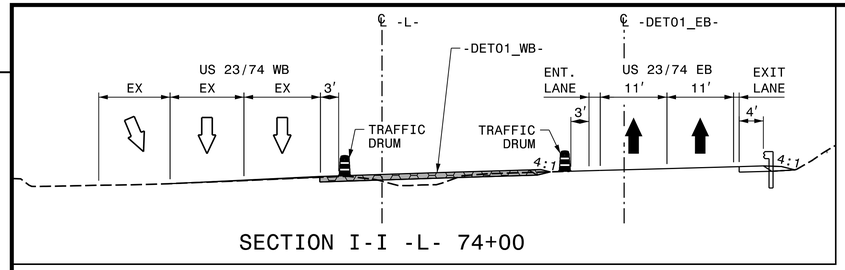
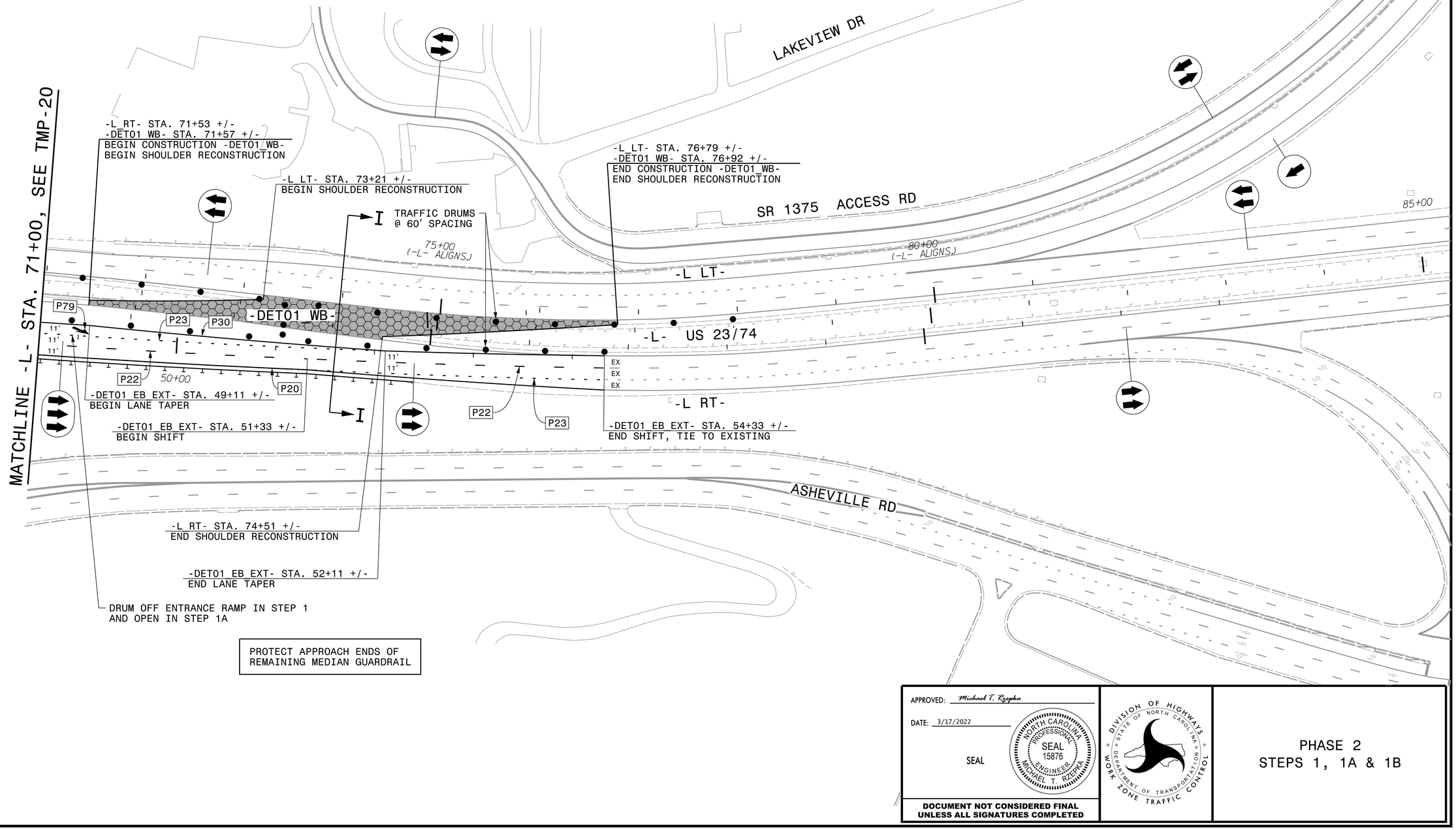
PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-21

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116



SECTION I-I -L- 74+00



PROTECT APPROACH ENDS OF REMAINING MEDIAN GUARDRAIL

APPROVED: *Michael T. Rzepka*

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

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PHASE 2
STEPS 1, 1A & 1B

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-22

HDR Engineering, Inc. of the Carolinas
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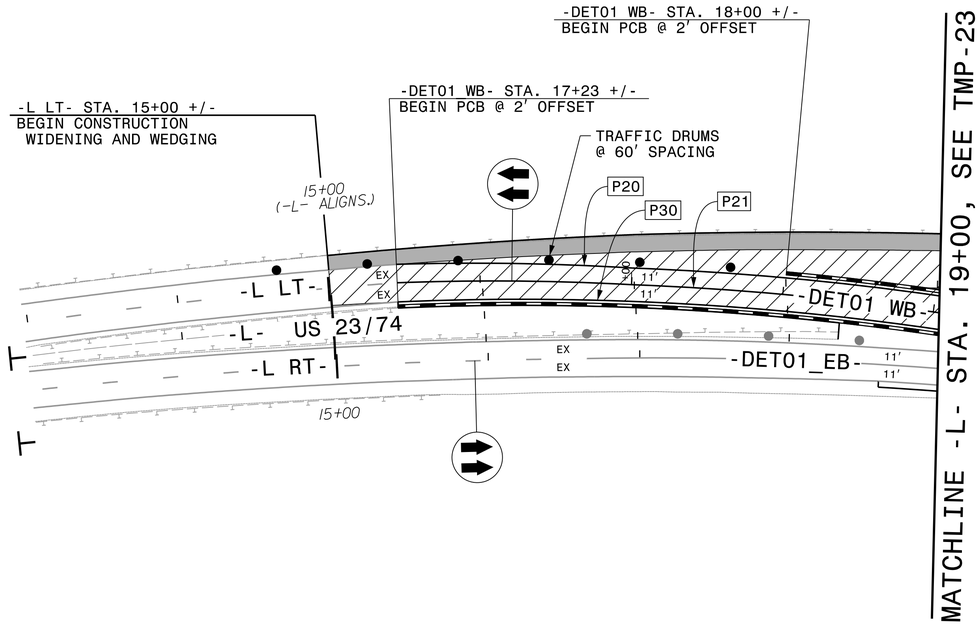
N.C.B.E.L.S. License Number: F-0116



10+00

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

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PHASE 2, STEPS 2 & 3

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-23

HDR Engineering, Inc. of the Carolinas
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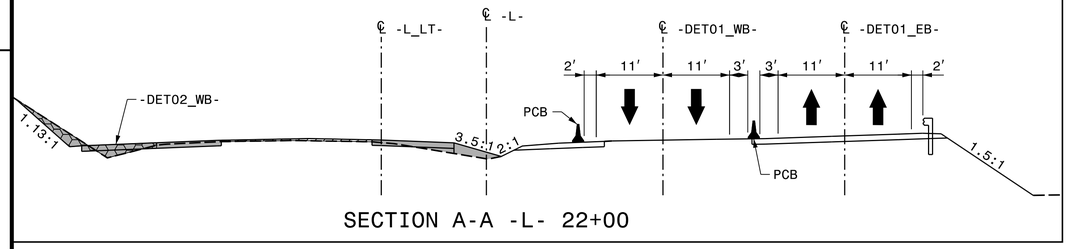
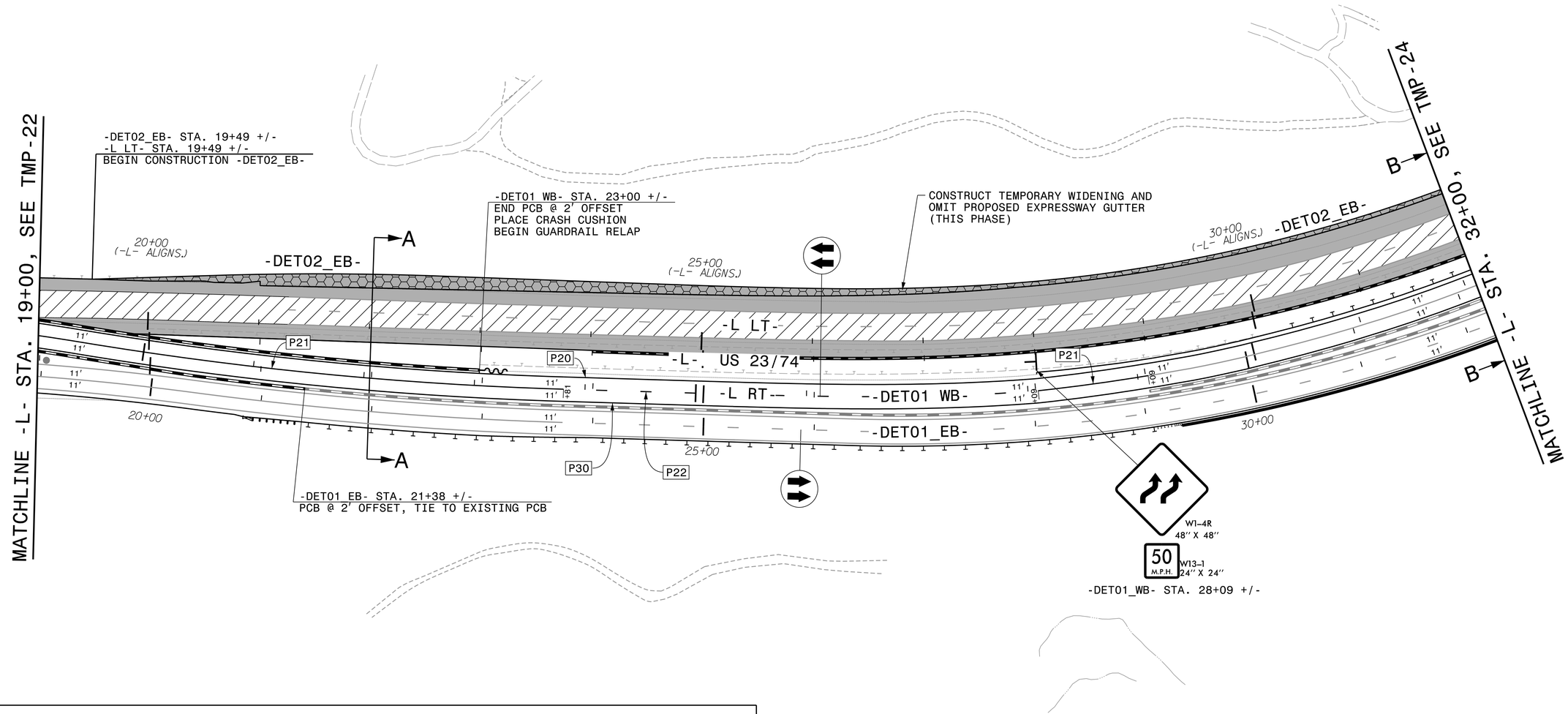
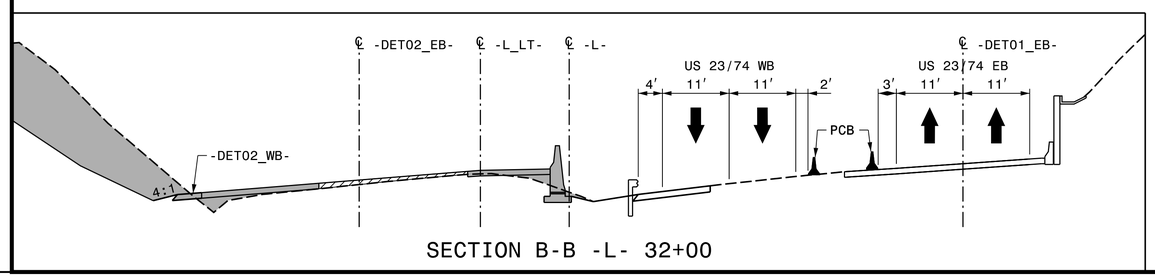
N.C.B.E.L.S. License Number: F-0116



SECTION A-A -L- 22+00





SECTION B-B -L- 32+00

APPROVED: *Michael T. Rzepka*

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

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PHASE 2, STEPS 2 & 3

REVISIONS

PLOT DRIVER: NCDOT.pdf_color_eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 1/21/2022 TIME: 4:05:36 PM
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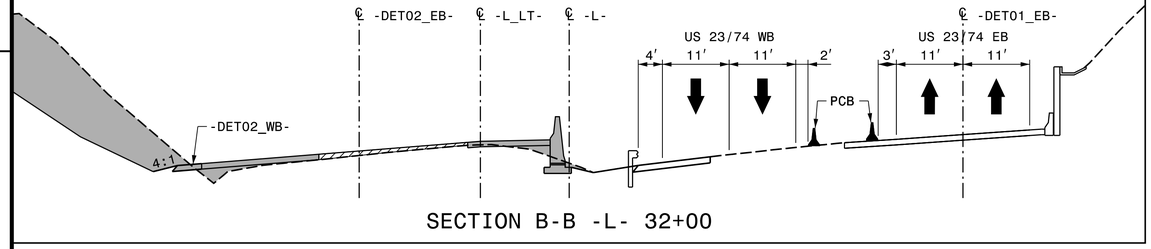
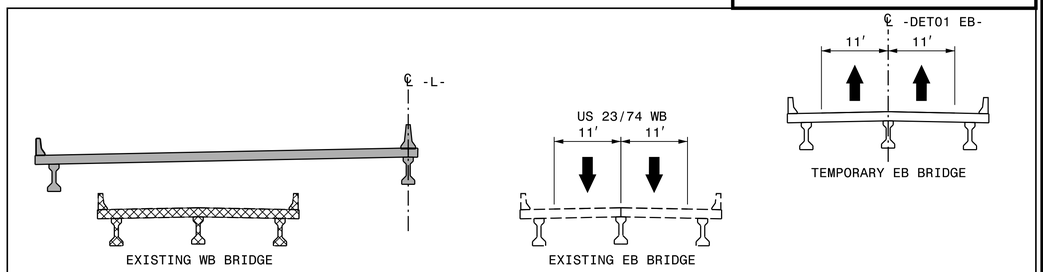
PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-24

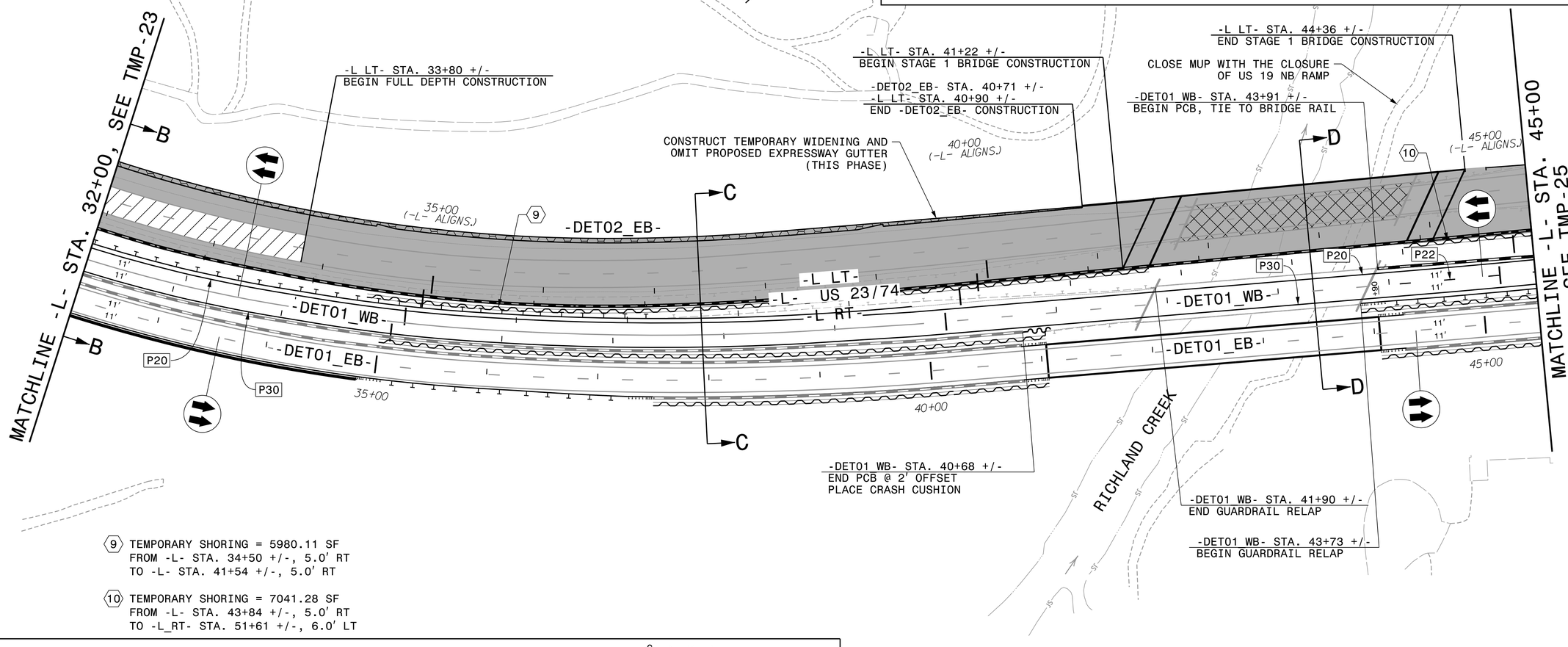
HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116



SECTION B-B -L- 32+00

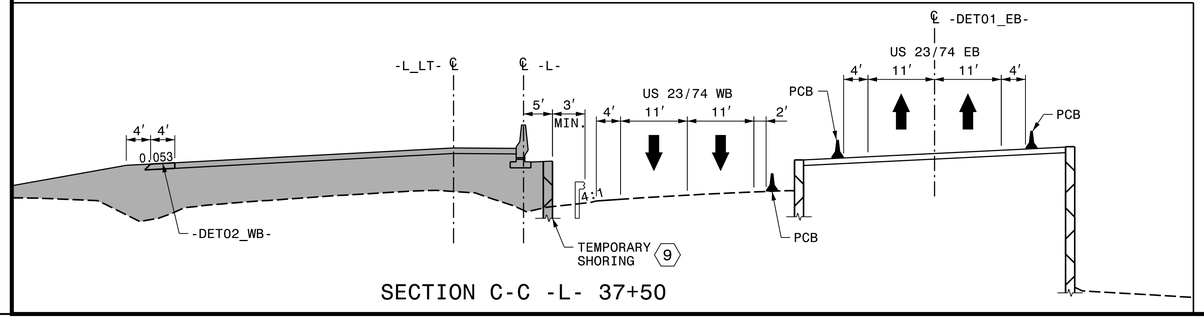


SECTION D-D -L- 43+00



9 TEMPORARY SHORING = 5980.11 SF
FROM -L- STA. 34+50 +/-, 5.0′ RT
TO -L- STA. 41+54 +/-, 5.0′ RT

10 TEMPORARY SHORING = 7041.28 SF
FROM -L- STA. 43+84 +/-, 5.0′ RT
TO -L_RT- STA. 51+61 +/-, 6.0′ LT



SECTION C-C -L- 37+50

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

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PHASE 2, STEPS 2 & 3

REVISIONS

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 1/21/2022 TIME: 4:05:59 PM
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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-25

HDR Engineering, Inc. of the Carolinas
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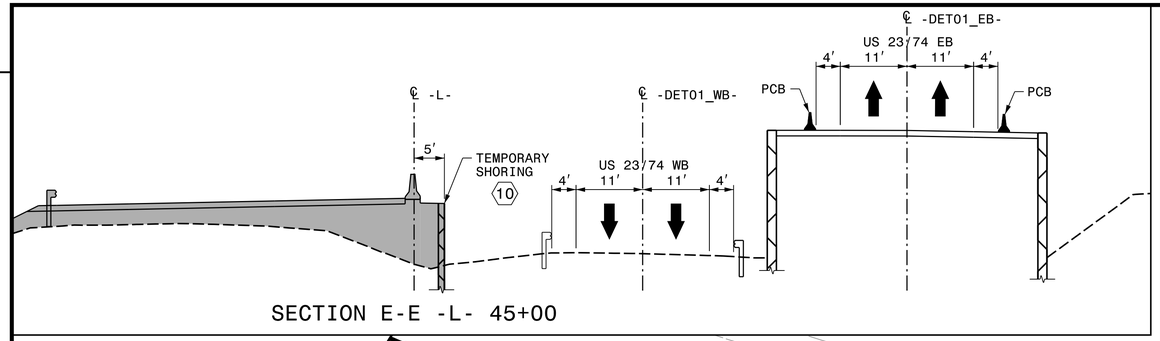
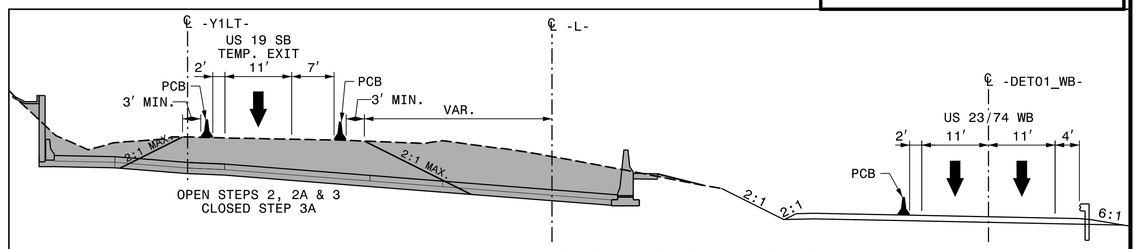
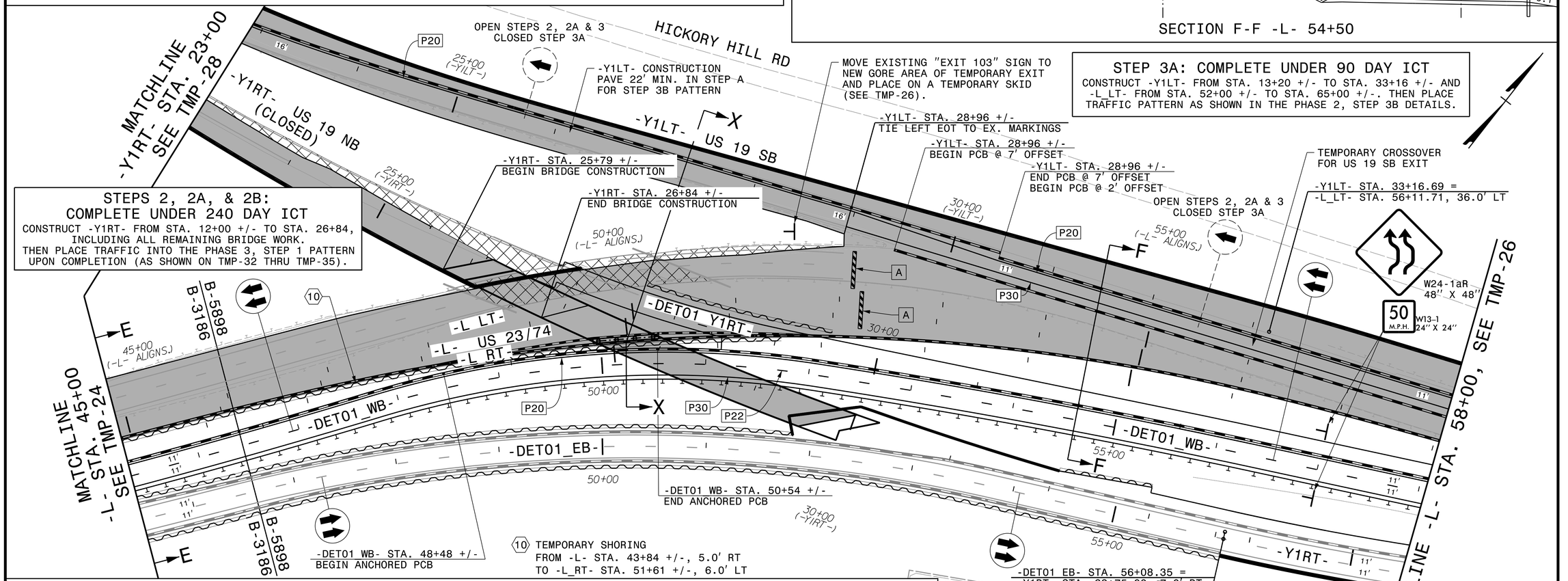
N.C.B.E.L.S. License Number: F-0116

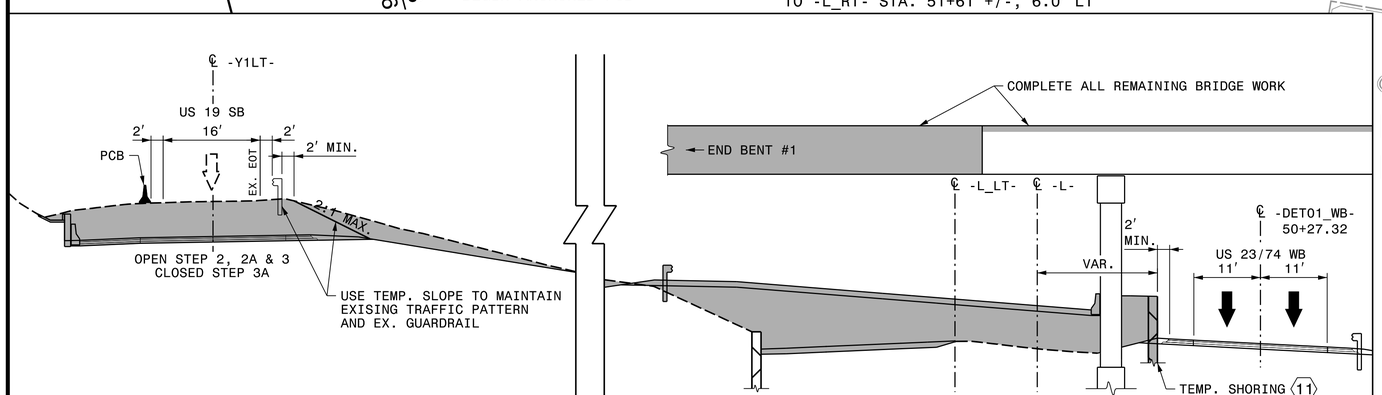


SECTION E-E -L- 45+00



SECTION F-F -L- 54+50





SECTION X-X -L- STA. 50+00

APPROVED: *Michael T. Rzepka*

DATE: 5/10/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PHASE 2
STEPS 2, 2A, 3 & 3A

REVISIONS

PLOT DRIVER: NCDOT.pdf.color_eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 4/28/2022 TIME: 10:05:09 AM
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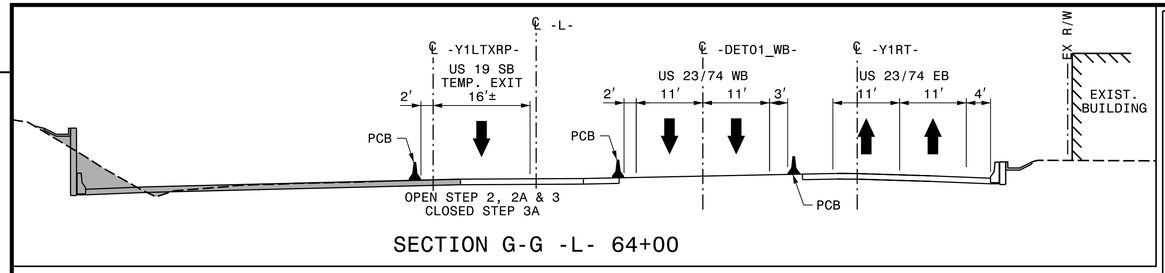
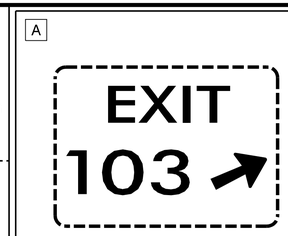


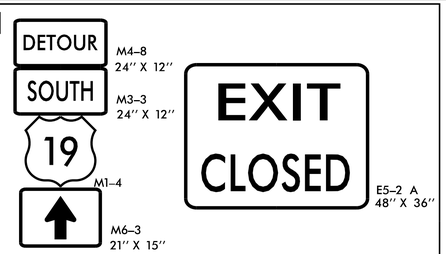
SECTION G-G -L- 64+00

A



WHEN US 19 SB RAMP IS OPEN
(USE EXISTING SIGN
ON TEMPORARY SKID)

A



WHEN US 19 SB RAMP IS CLOSED
(SEE TMP-2D FOR OFF-SITE DETOUR ROUTE DETAIL)

PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-26

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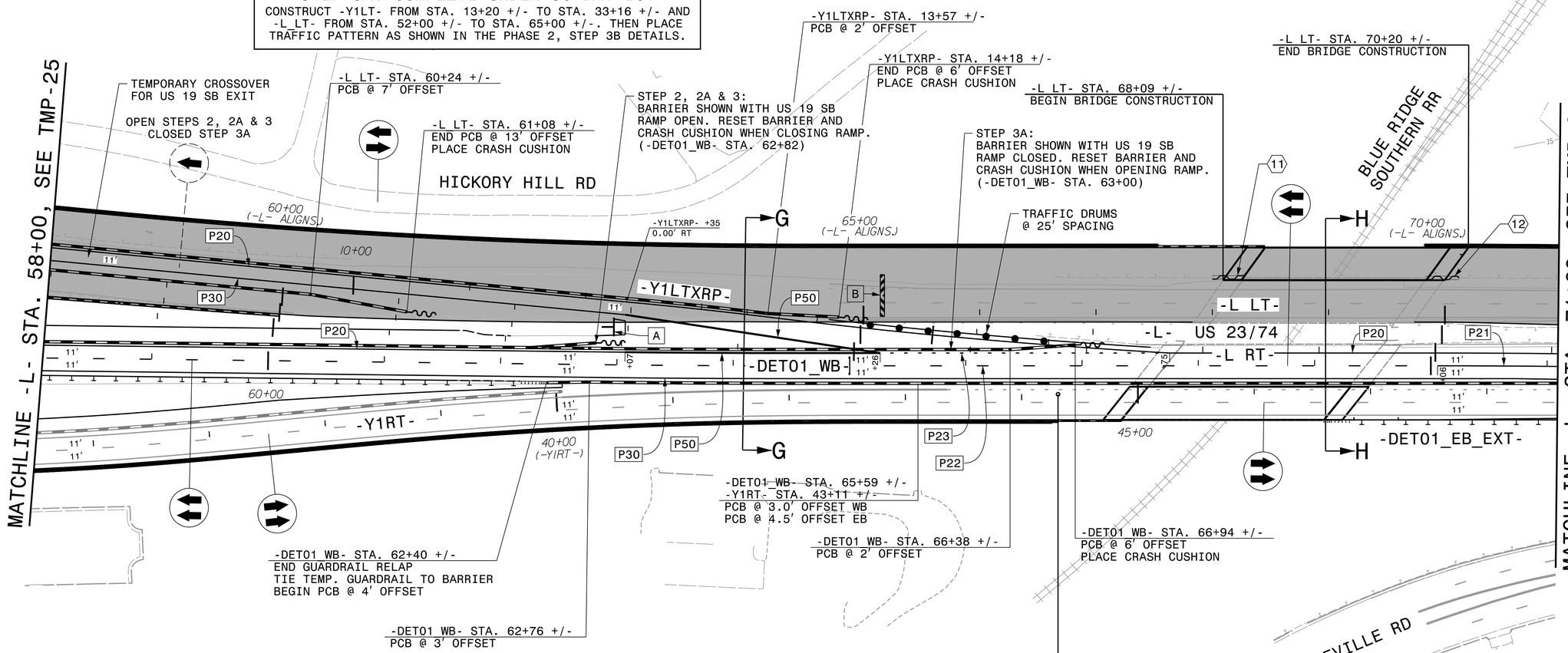
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

STEP 3A: COMPLETE UNDER 90 DAY ICT

CONSTRUCT -Y1LT- FROM STA. 13+20 +/- TO STA. 33+16 +/- AND -L_LT- FROM STA. 52+00 +/- TO STA. 65+00 +/-. THEN PLACE TRAFFIC PATTERN AS SHOWN IN THE PHASE 2, STEP 3B DETAILS.

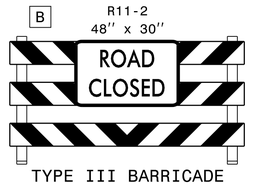


(11) TEMPORARY SHORING = 255.09 SF
FROM -L_LT- STA. 68+00 +/-, 33.9' LT
TO -L_LT- STA. 68+27 +/-, 33.9' LT

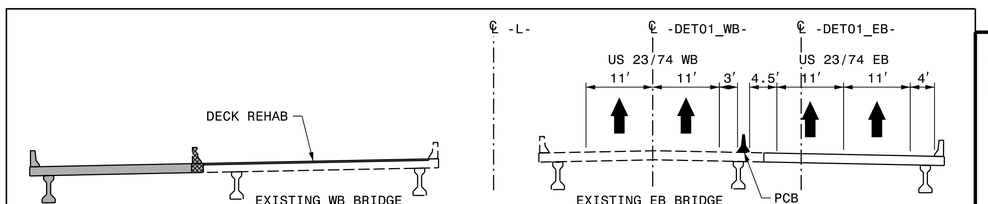
(12) TEMPORARY SHORING = 278.39 SF
FROM -L_LT- STA. 69+83 +/-, 33.4' LT
TO -L_LT- STA. 70+12 +/-, 33.4' LT

-Y1RT- STA. 44+31.29 (LB) =
-DET01_EB_EXT- STA. 44+31.29 (LA) =
(-L_RT- STA. 66+75.52, 36' RT)

B



TYPE III BARRICADE



SECTION H-H -L- 69+00

APPROVED: *Michael T. Rzepka*

DATE: 5/10/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

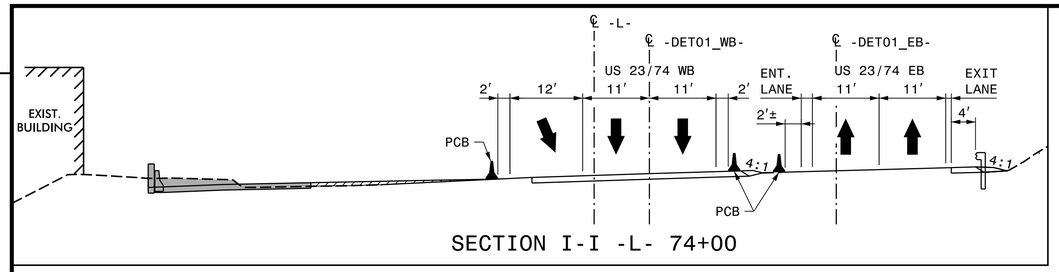
PHASE 2
STEPS 2, 2A, 3 & 3A

REVISIONS

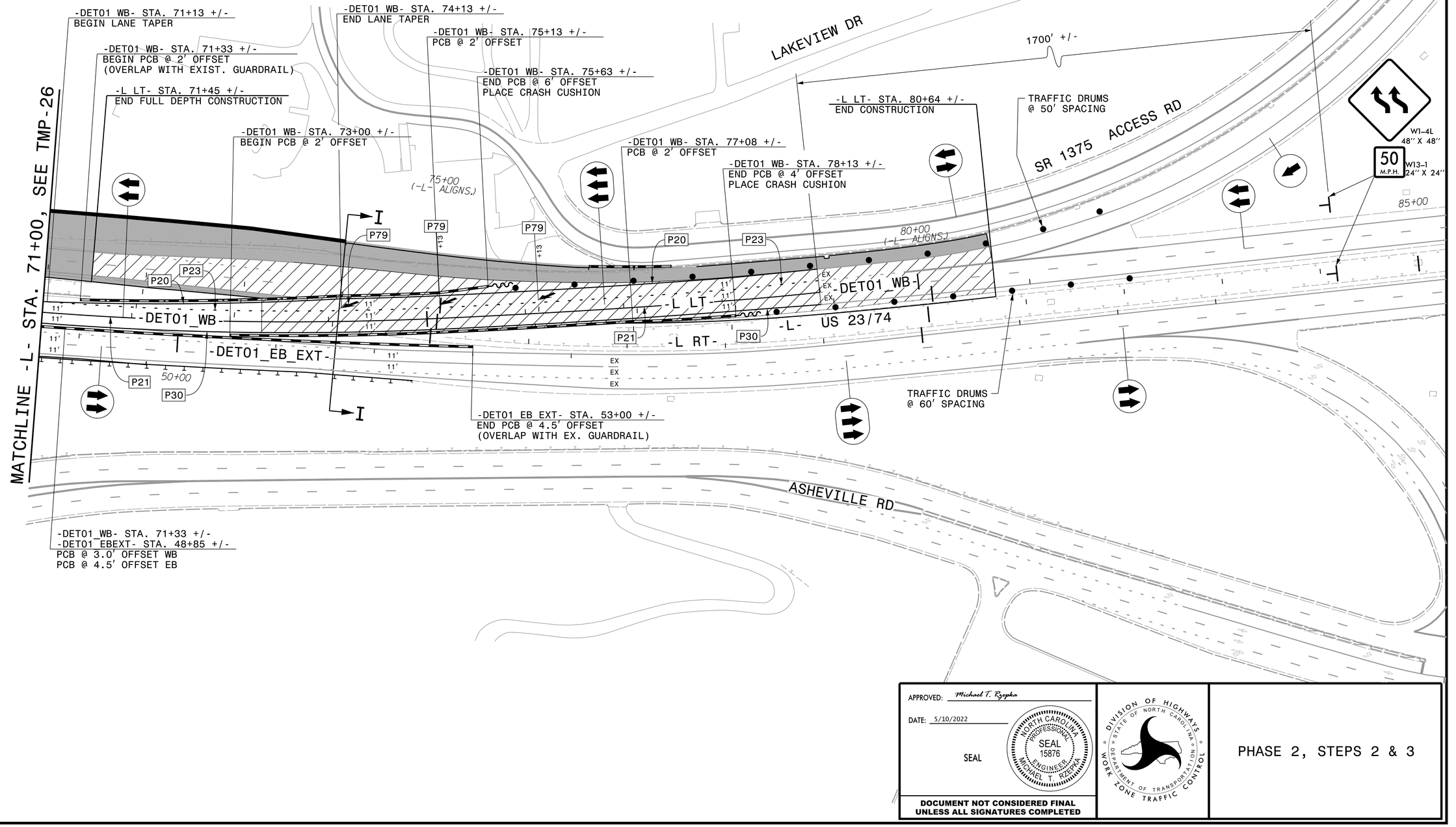
PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 4/28/2022 TIME: 9:58:21 AM
FILE: pw:\pwhdrusegs01:HDR_US_East_01\Documents\3322\10030389\6.0_CAD_BIM\6.2_Work_In_Progress\B-3186-B-5898\Traffic\Traffic\TrafficControl\TCP\B3186-B5898_TMP_TMP26.dgn

PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-27

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116



SECTION I-I -L- 74+00



APPROVED: *Michael T. Rzepka*

DATE: 5/10/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

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PHASE 2, STEPS 2 & 3

REVISIONS

PLOT DRIVER: NCDOT_pdf_color_eng.50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 4/28/2022 TIME: 9:47:08 AM
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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-28

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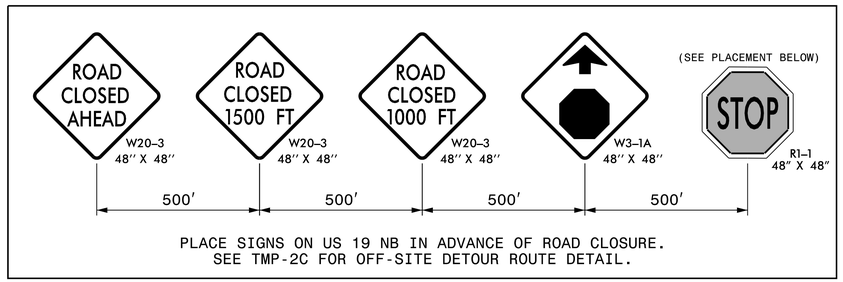
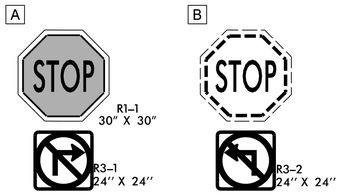
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116



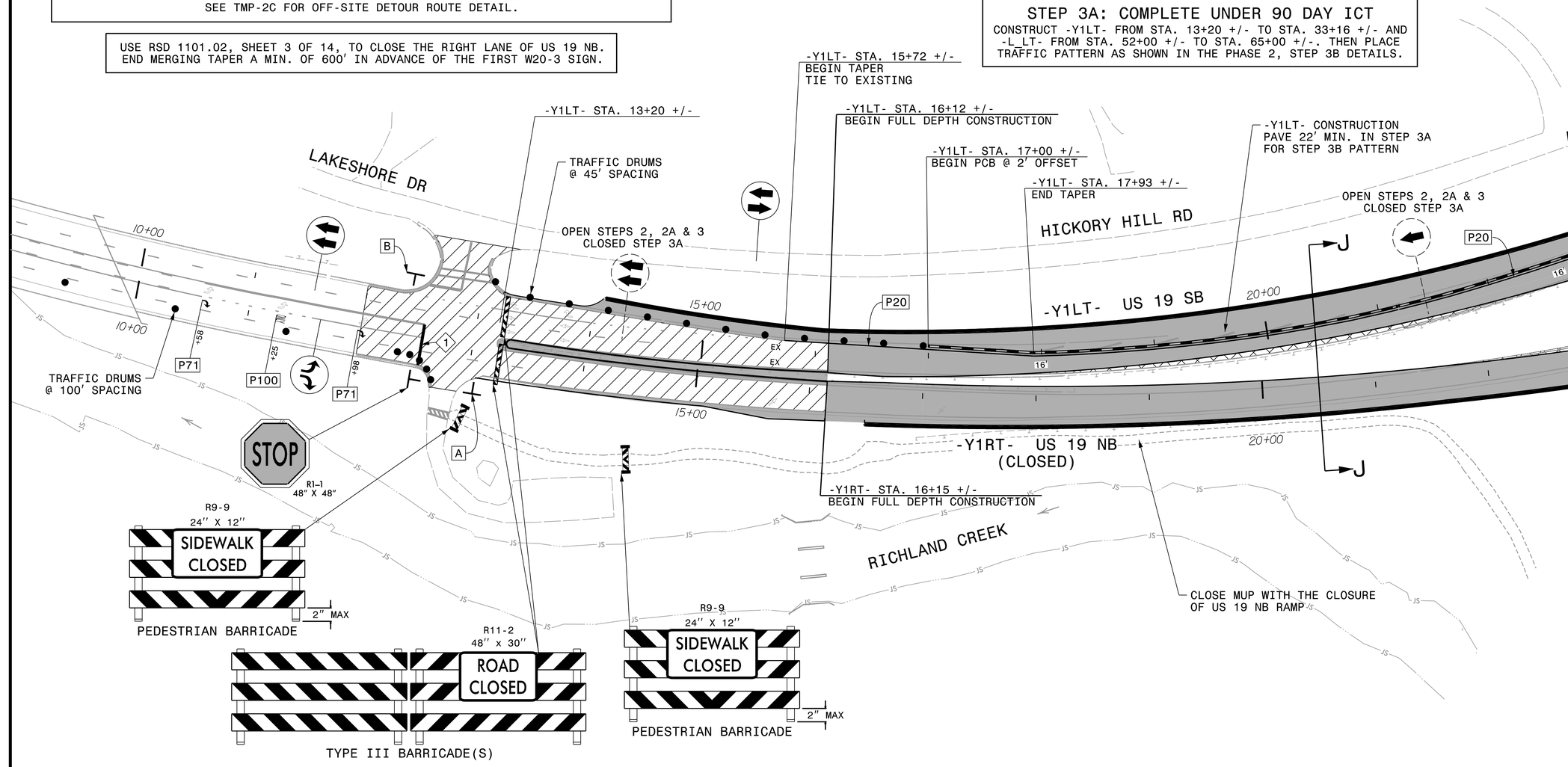
PLACE SIGNS ON US 19 NB IN ADVANCE OF ROAD CLOSURE.
SEE TMP-2C FOR OFF-SITE DETOUR ROUTE DETAIL.

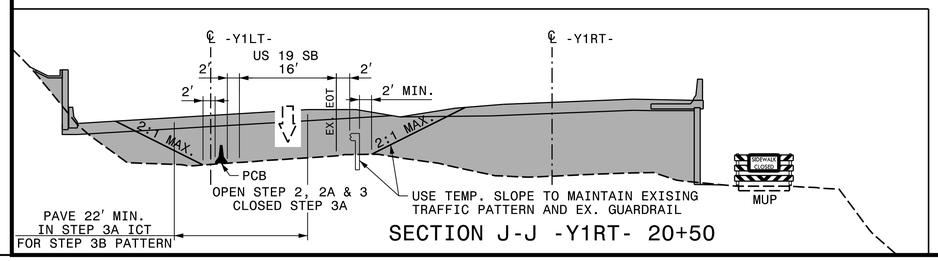
USE RSD 1101.02, SHEET 3 OF 14, TO CLOSE THE RIGHT LANE OF US 19 NB.
END MERGING TAPER A MIN. OF 600' IN ADVANCE OF THE FIRST W20-3 SIGN.



STEP 3A: COMPLETE UNDER 90 DAY ICT

CONSTRUCT -Y1LT- FROM STA. 13+20 +/- TO STA. 33+16 +/- AND -L_LT- FROM STA. 52+00 +/- TO STA. 65+00 +/-. THEN PLACE TRAFFIC PATTERN AS SHOWN IN THE PHASE 2, STEP 3B DETAILS.





SECTION J-J -Y1RT- 20+50

P61	STOPBAR LOCATIONS
1	-Y1RT- STA. 12+55.17, 15.25' LT to -Y1RT- STA. 12+55.17, 21.10' RT

APPROVED: *Michael T. Rzepka*

DATE: 5/10/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

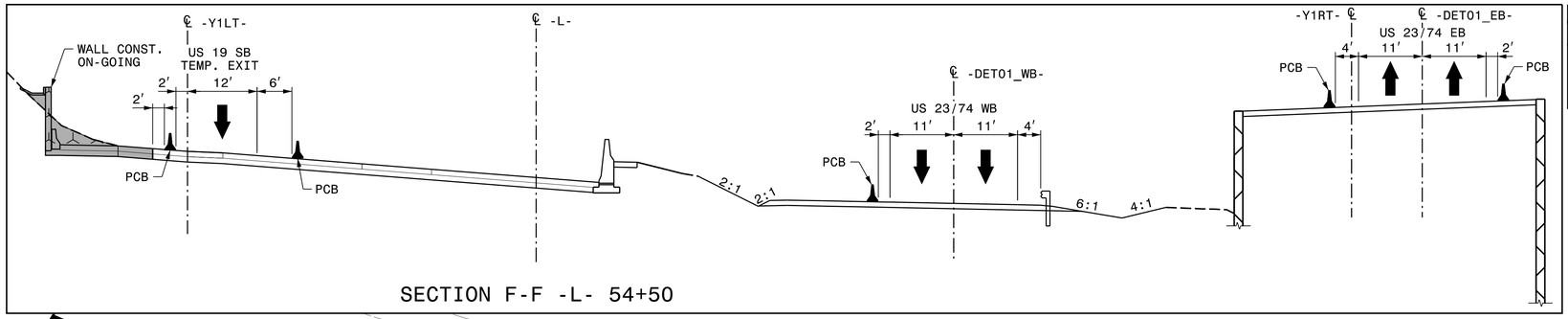
PHASE 2
STEPS 2, 2A, 3 & 3A

REVISIONS

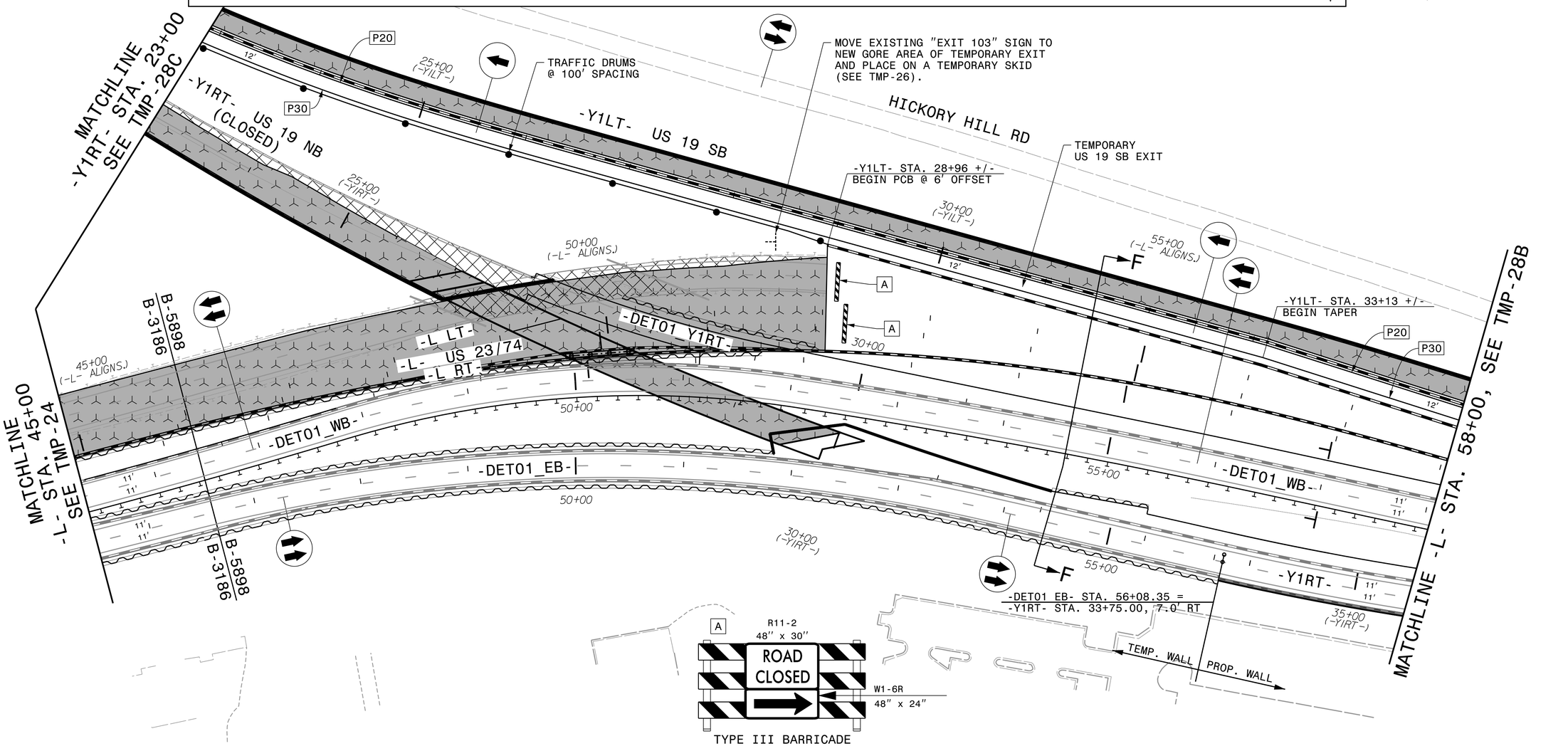
PLOT DRIVER: NCDOT_pdf_color_eng.50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 4/28/2022 TIME: 9:47:16 AM
FILE: pw:\\pwhdrusea01:HDR_US_East_01\Documents\3322\10030389\6.0_CAD.BIM\6.2_Work_In_Progress\B-3186-B-5898\Traffic\TrafficControl\TCP\B3186-B5898_TMP_TMP28.dgn

PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-28A

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116



SECTION F-F -L- 54+50



TYPE III BARRICADE

APPROVED: *Michael T. Rzepka*

DATE: 5/10/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

PHASE 2
STEP 3B

REVISIONS

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 4/28/2022 TIME: 9:47:25 AM
FILE: pw:\\pwhdrusea01.HDR_US_East_01\Documents\3322\10030389\6.0_CAD_BIM\6.2_Work_In_Progress\B-3186-B-5898\Traffic\Traffic\Traffic Control\TCP\B3186-B5898_TMP_TMP28A.dgn

PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-28B

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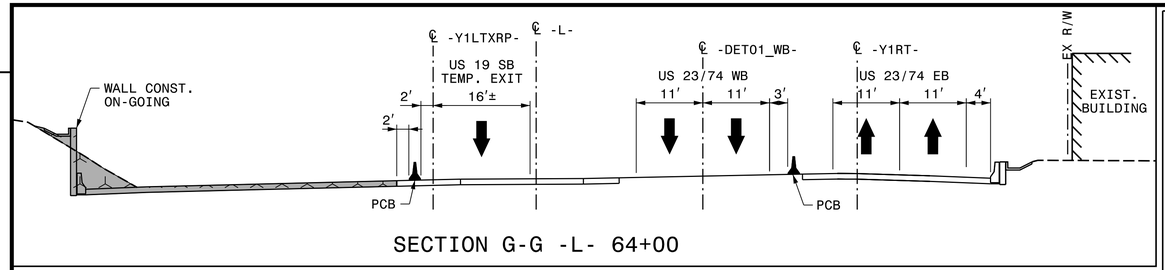
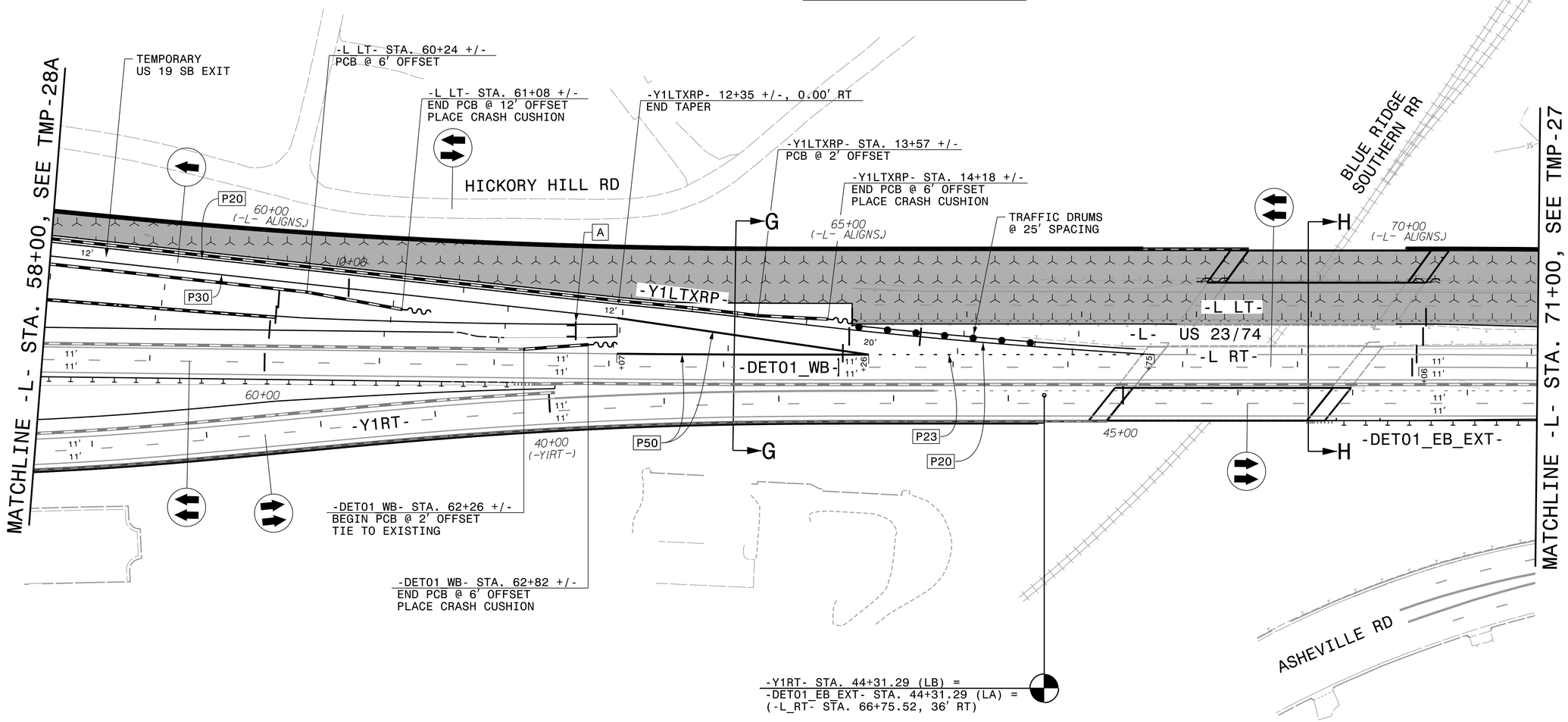
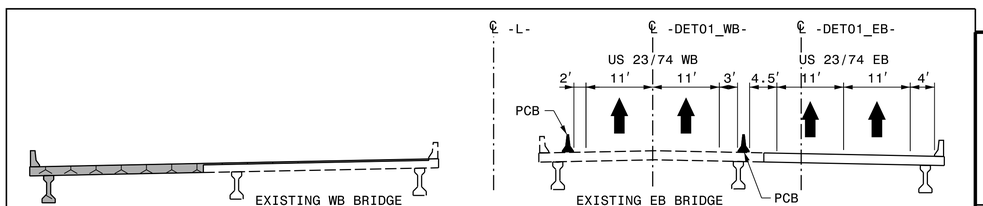


SECTION G-G -L- 64+00

A

USE EXISTING SIGN ON TEMPORARY SKID





SECTION H-H -L- 69+00

APPROVED: *Michael T. Rzepka*

DATE: 5/10/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

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

PHASE 2
STEP 3B

REVISIONS

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 4/28/2022 TIME: 9:51:04 AM
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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-28C

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A — RIGHT LANE MUST TURN RIGHT R3-7 R 30" X 30"

B — ONLY R3-5a 24" X 30"; LEFT LANE R3-5bP 24" X 30"

C — R3-2 24" X 24"

TRAFFIC DRUMS @ 10' SPACING
8' OFFSET FROM EOT

-Y1LT- STA. 14+07 +/-
BEGIN PCB @ 13' OFFSET FROM WALL

-Y1LT- STA. 15+07 +/-
BEGIN LANE TAPER

-Y1LT- STA. 16+32 +/-
END PCB @ 13' OFFSET FROM WALL
BEGIN PCB @ 2' OFFSET FROM EOT

TRAFFIC DRUMS
@ 100' SPACING

LAKESHORE DR

HICKORY HILL RD

-Y1LT- US 19 SB

-Y1RT- US 19 NB
(CLOSED)

RICHLAND CREEK

MATCHLINE -Y1RT- STA. 23+00
SEE TMP-28A

10+00 · 15+00 · 20+00

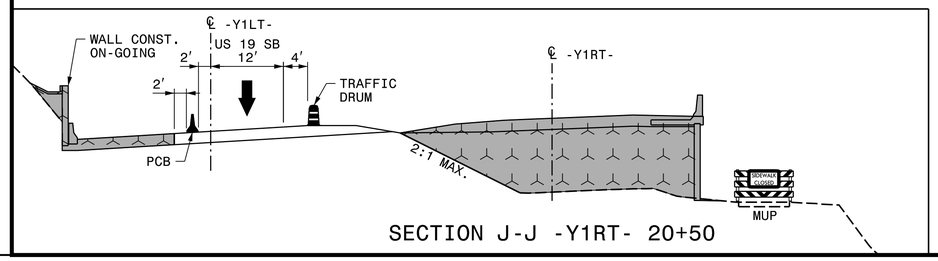
P71 · P72 · P21 · P20 · P30 · P23

+92 · +28

12' · 12' · 6' · 12'

JS · VAN

SECTION J-J -Y1RT- 20+50



APPROVED: Michael T. Rzepka

DATE: 5/10/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

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PHASE 2
STEP 3B

REVISIONS

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_tcp.tbl
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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-29

HDR Engineering, Inc. of the Carolinas
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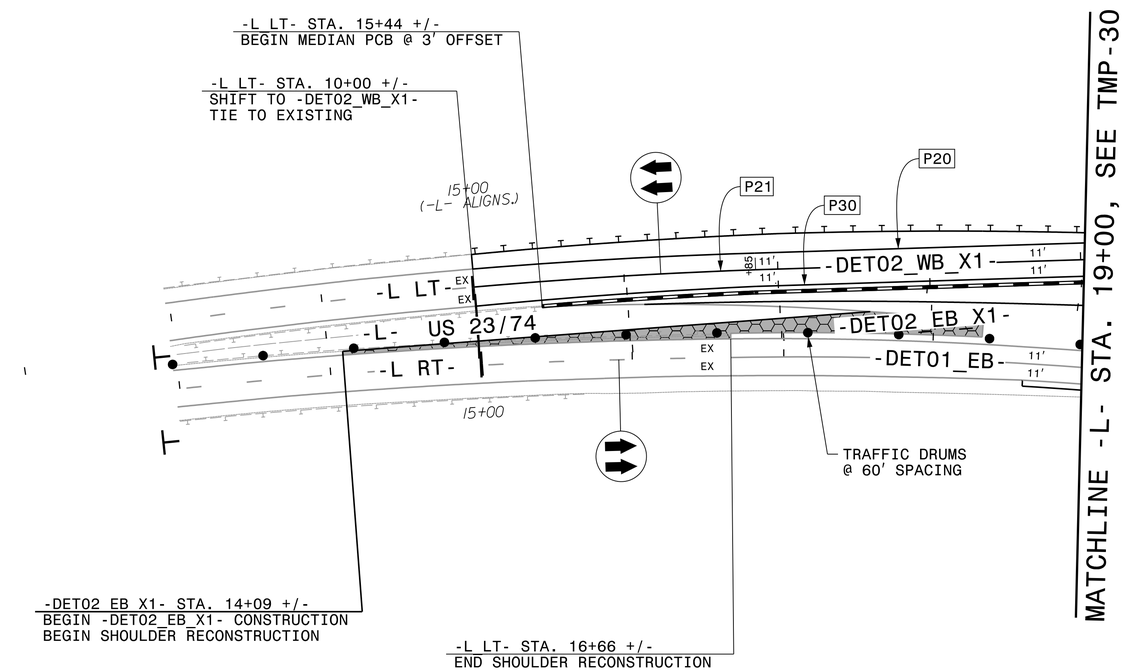

10+00

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

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PHASE 3, STEP 1

REVISIONS

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_tcp.tbl
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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-30

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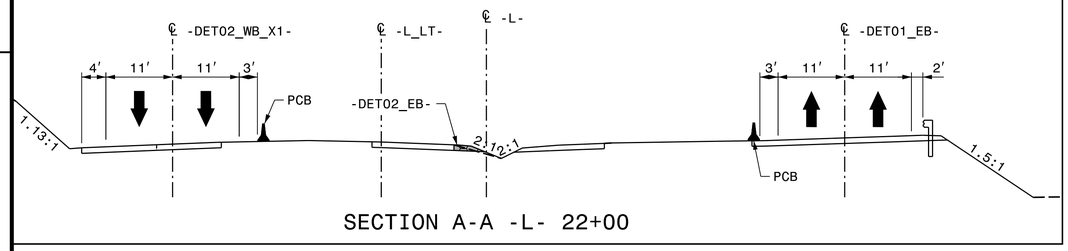
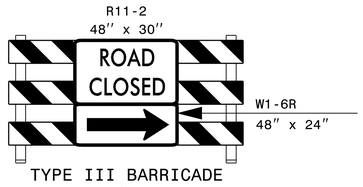
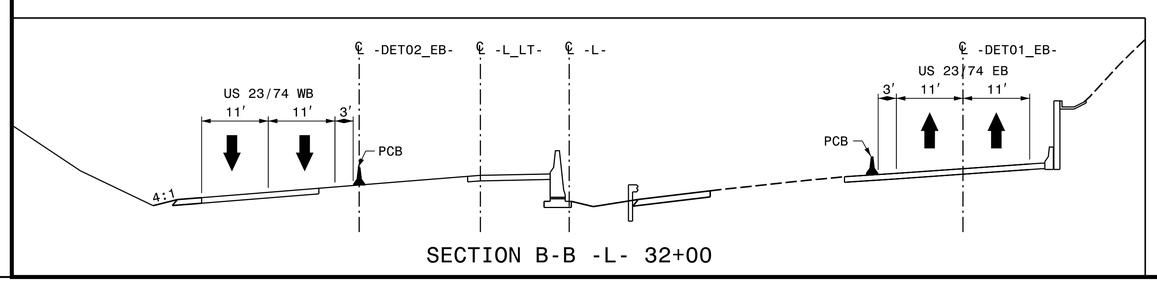


SECTION A-A -L- 22+00



TYPE III BARRICADE



SECTION B-B -L- 32+00

REVISIONS

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

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PHASE 3, STEP 1

PLOT DRIVER: NCDOT_pdf_color-eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 1/21/2022 TIME: 4:08:03 PM
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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-31

HDR Engineering, Inc. of the Carolinas
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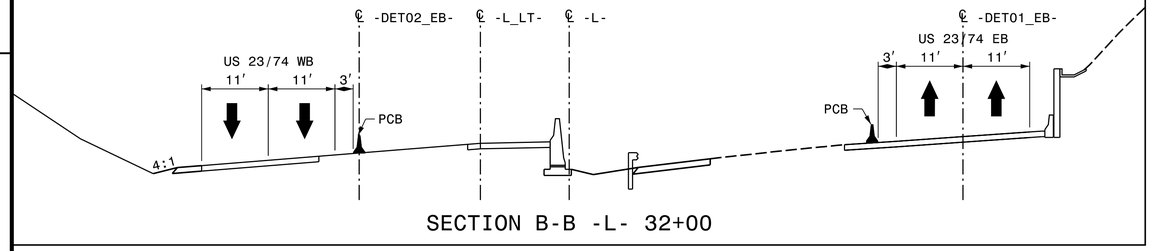
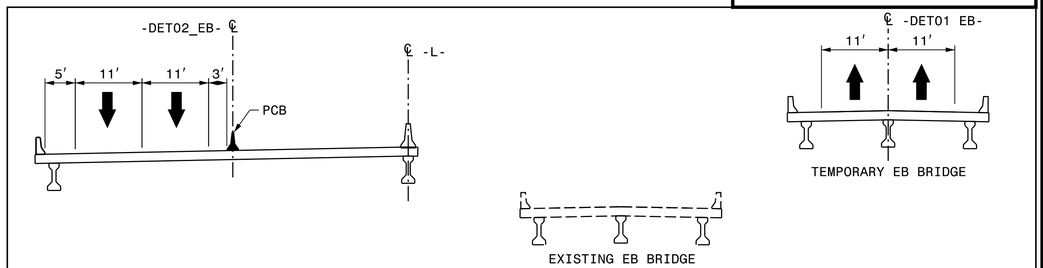
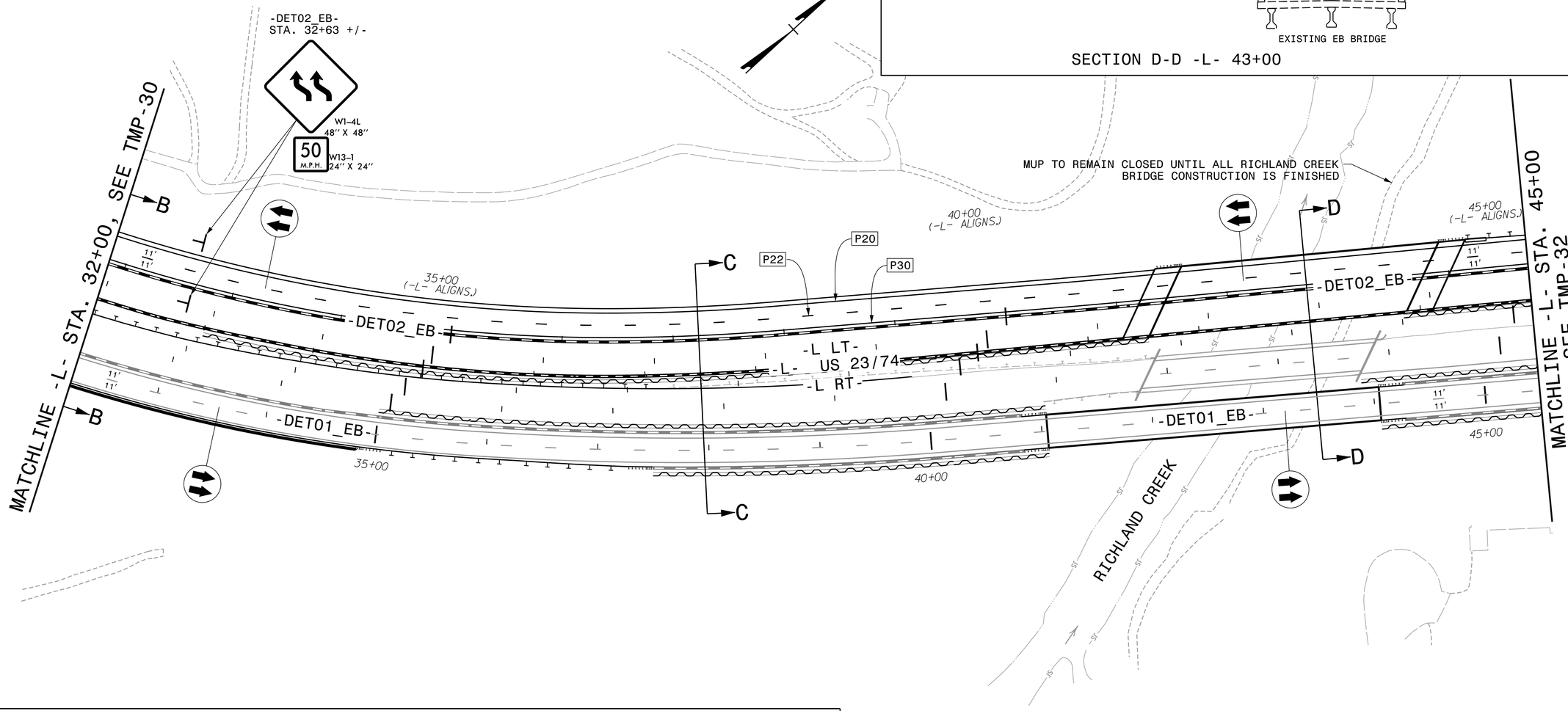
N.C.B.E.L.S. License Number: F-0116

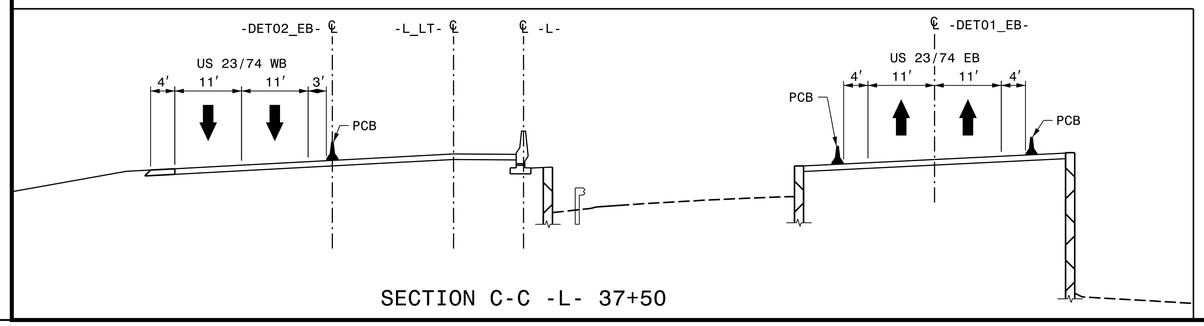


SECTION B-B -L- 32+00



SECTION D-D -L- 43+00





SECTION C-C -L- 37+50

APPROVED: *Michael T. Rzepka*

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

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PHASE 3, STEP 1

REVISIONS

PLOT DRIVER: NCDOT_pdf_color-eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 1/21/2022 TIME: 4:08:21 PM
FILE: pw:\\pwhdruseas01.HDR_US_East_01\Documents\3322\10030389\6.0_CAD_BIM\6.2_Work_In_Progress\B-3186-B-5898\Traffic\TrafficControl\TCP\B3186-B5898_TMP_TMP31.dgn

PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-32

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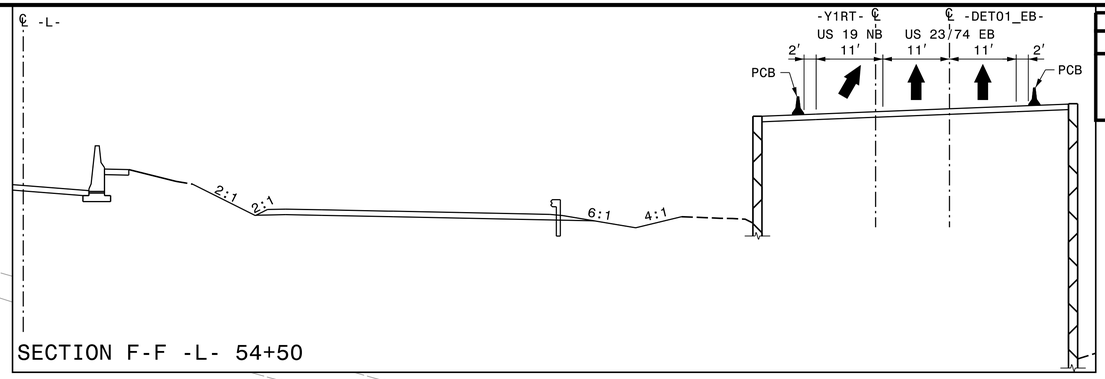
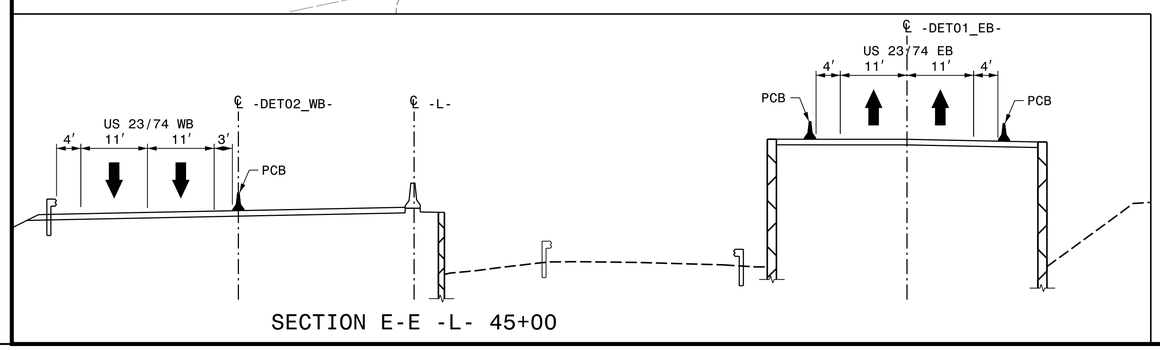


SECTION F-F -L- 54+50

PLACE TEMPORARY MARKINGS IN THE FINAL PATTERN ON
-Y1LT- FROM STA. 12+00 TO STA. 27+00
AND -Y1RT- FROM STA. 12+00 TO STA. 30+00
(SEE FINAL MARKING PLANS)



SECTION E-E -L- 45+00

APPROVED: *Michael T. Rzepka*

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

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PHASE 3, STEP 1

REVISIONS

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 1/21/2022 TIME: 4:08:41 PM
FILE: pw:\\pwhdrusea01:HDR_US_East_01\Documents\3322\10030389\6.0_CAD_BIM\6.2_Work_In_Progress\B-3186-B-5898\Traffic\TrafficControl\TCP\B3186-B5898_TMP_TMP32.dgn

PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-33

HDR Engineering, Inc. of the Carolinas
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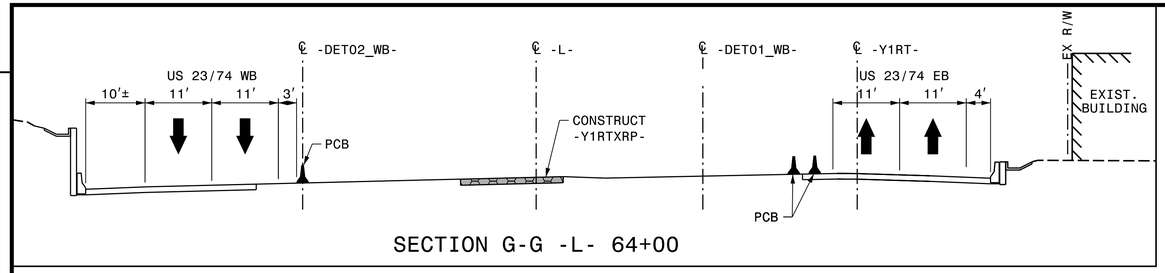
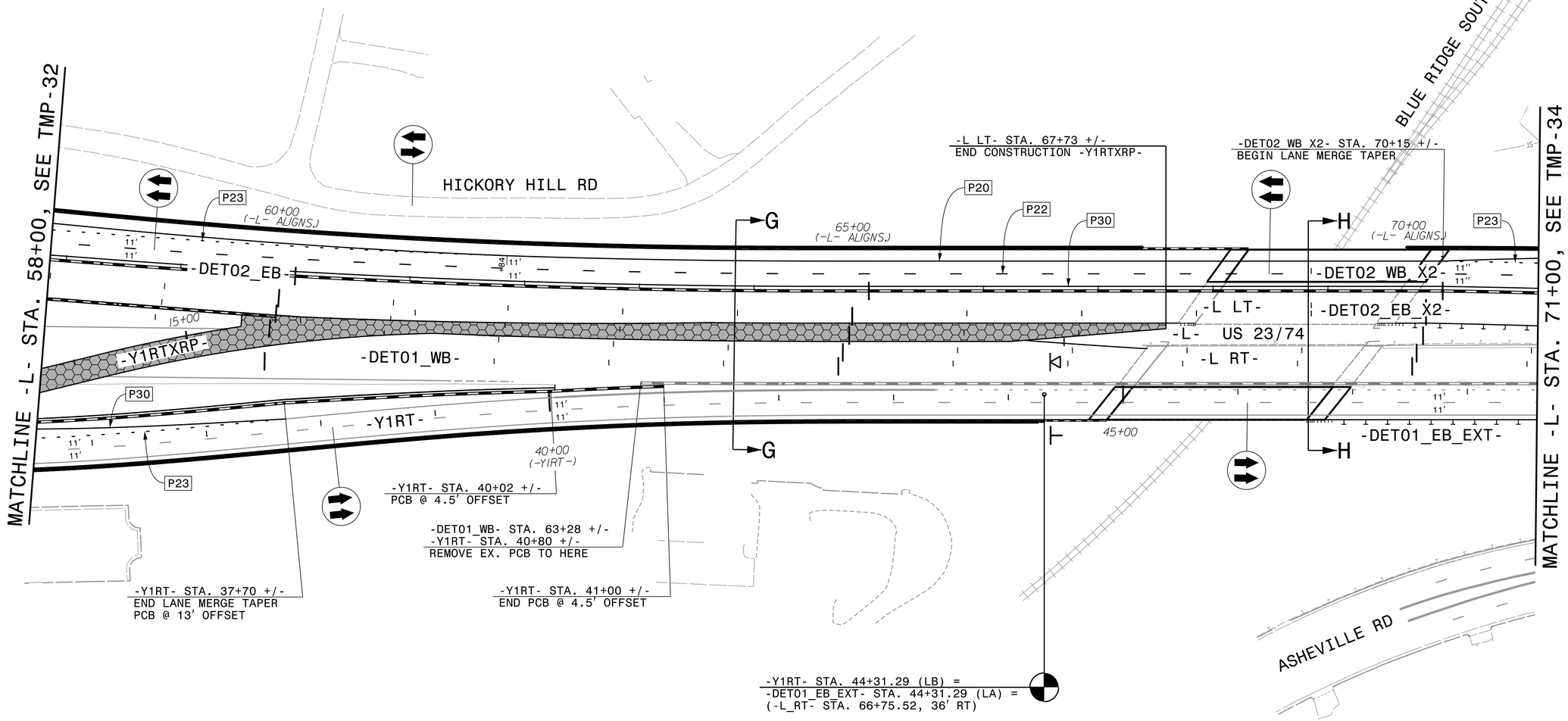
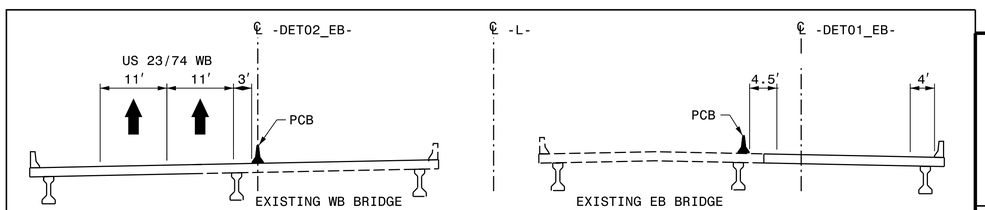
N.C.B.E.L.S. License Number: F-0116



SECTION G-G -L- 64+00





SECTION H-H -L- 69+00

APPROVED: *Michael T. Rzepka*

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

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PHASE 3, STEP 1

REVISIONS

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 1/21/2022 TIME: 4:09:01 PM
FILE: pw:\\pwhdrusegs01:HDR_US_East_01\Documents\3322\10030389\6.0_CAD_BIM\6.2_Work_In_Progress\B-3186-B-5898\Traffic\TrafficControl\TCP\B3186-B5898_TMP_TMP33.dgn

PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-34

HDR Engineering, Inc. of the Carolinas
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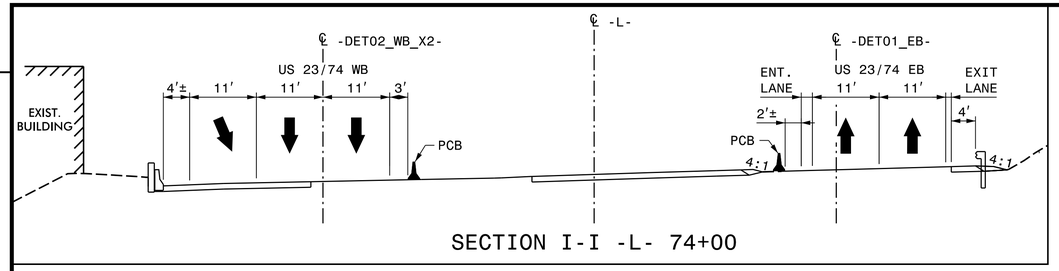
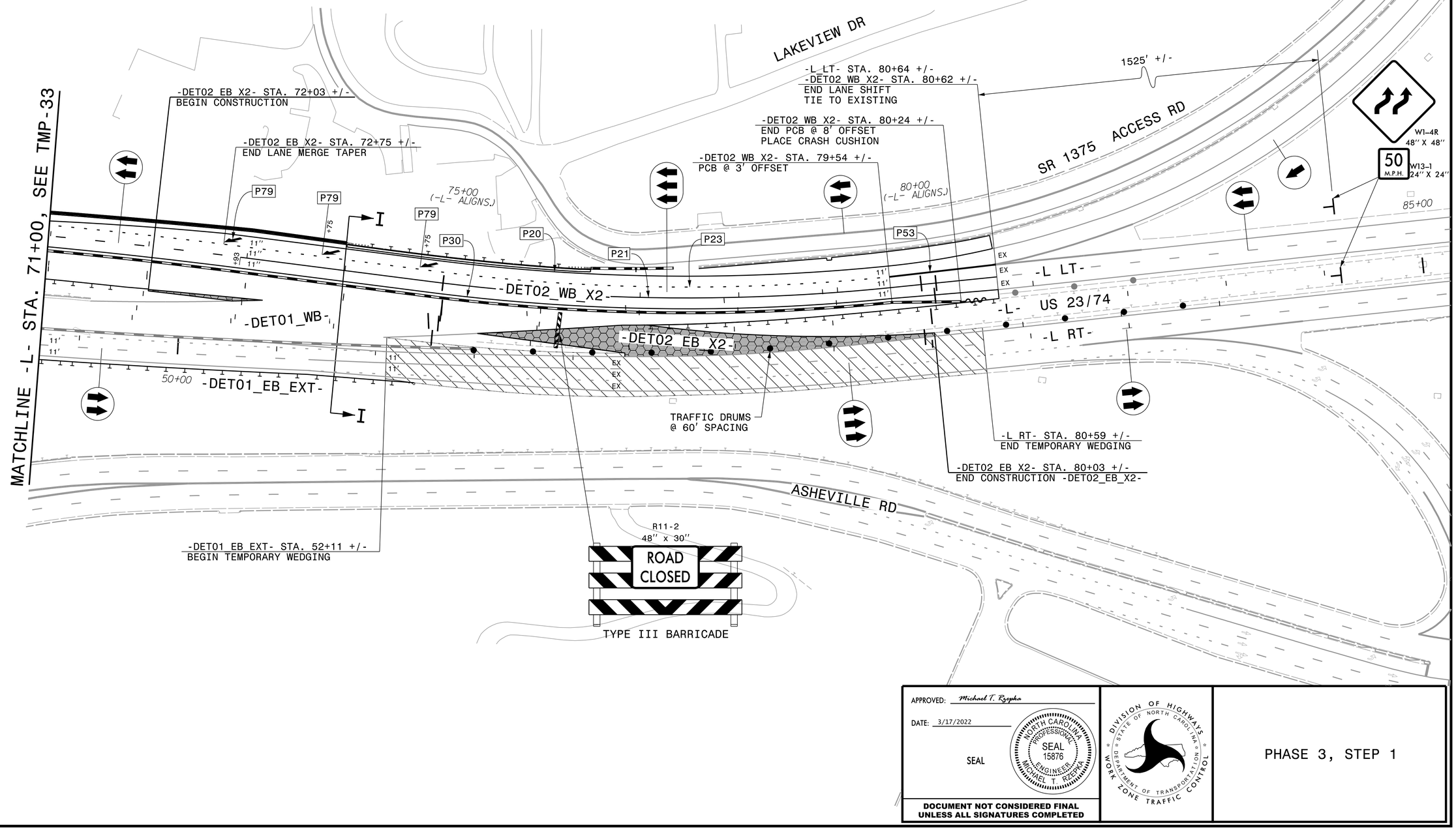
N.C.B.E.L.S. License Number: F-0116



SECTION I-I -L- 74+00



APPROVED: *Michael T. Rzepka*

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

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PHASE 3, STEP 1

REVISIONS

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 1/21/2022 TIME: 4:09:21 PM
FILE: pw:\\pwhdrusea501:HDR_US_East_01\Documents\3322\10030389\6.0_CAD_BIM\6.2_Work_In_Progress\B-3186-B-5898\Traffic\TrafficControl\TCP\B3186-B5898_TMP_TMP34.dgn

PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-35

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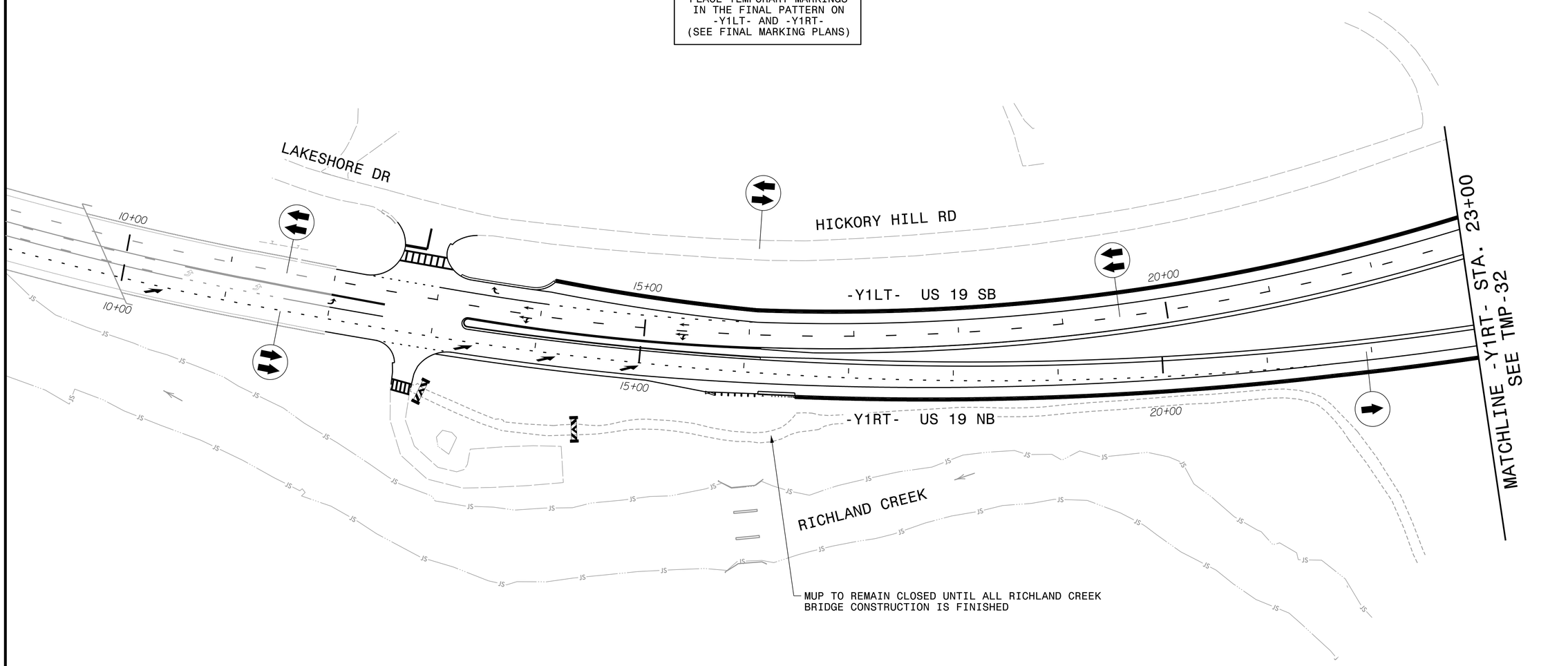
PLACE TEMPORARY MARKINGS
IN THE FINAL PATTERN ON
-Y1LT- AND -Y1RT-
(SEE FINAL MARKING PLANS)



MUP TO REMAIN CLOSED UNTIL ALL RICHLAND CREEK BRIDGE CONSTRUCTION IS FINISHED

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

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PHASE 3, STEP 1

REVISIONS

PLOT DRIVER: NCDOT_pdf_mono_eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: MRZEPKA DATE: 1/24/2022 TIME: 11:30:24 AM
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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-36

HDR Engineering, Inc. of the Carolinas
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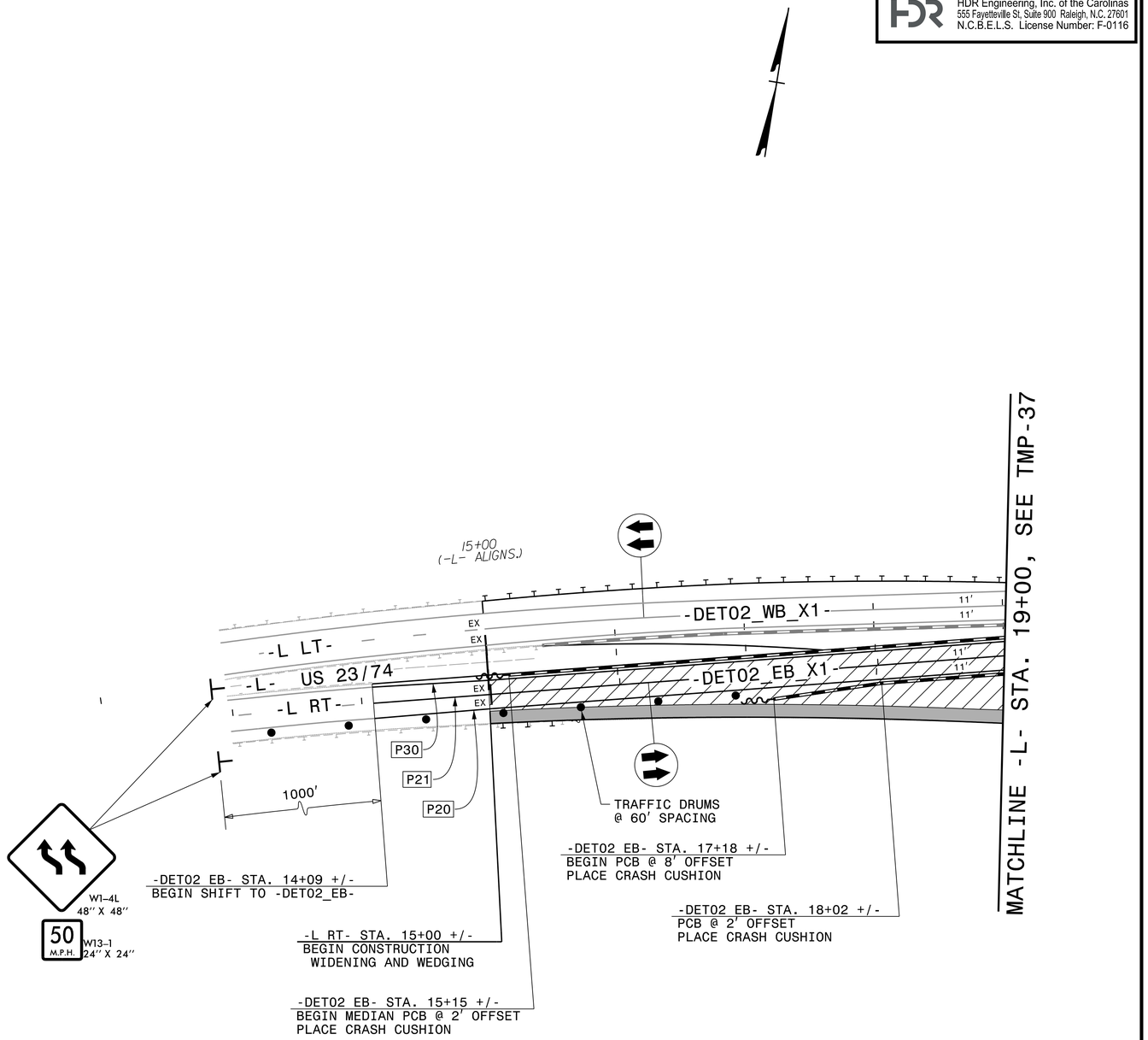
N.C.B.E.L.S. License Number: F-0116



APPROVED: Michael T. Rzepka

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

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PHASE 3, STEP 2

REVISIONS

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 1/21/2022 TIME: 4:10:03 PM
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PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-37

HDR Engineering, Inc. of the Carolinas
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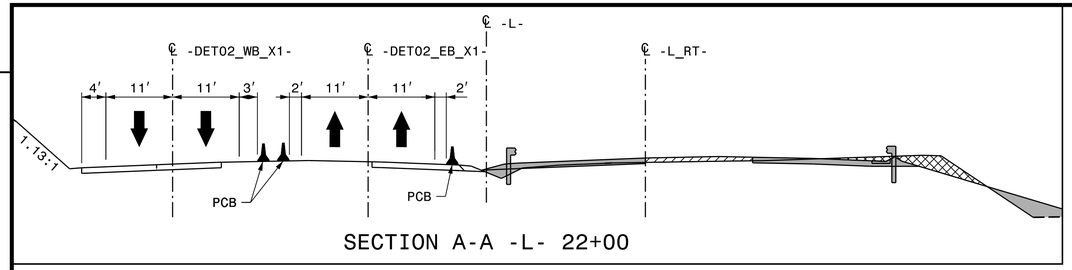
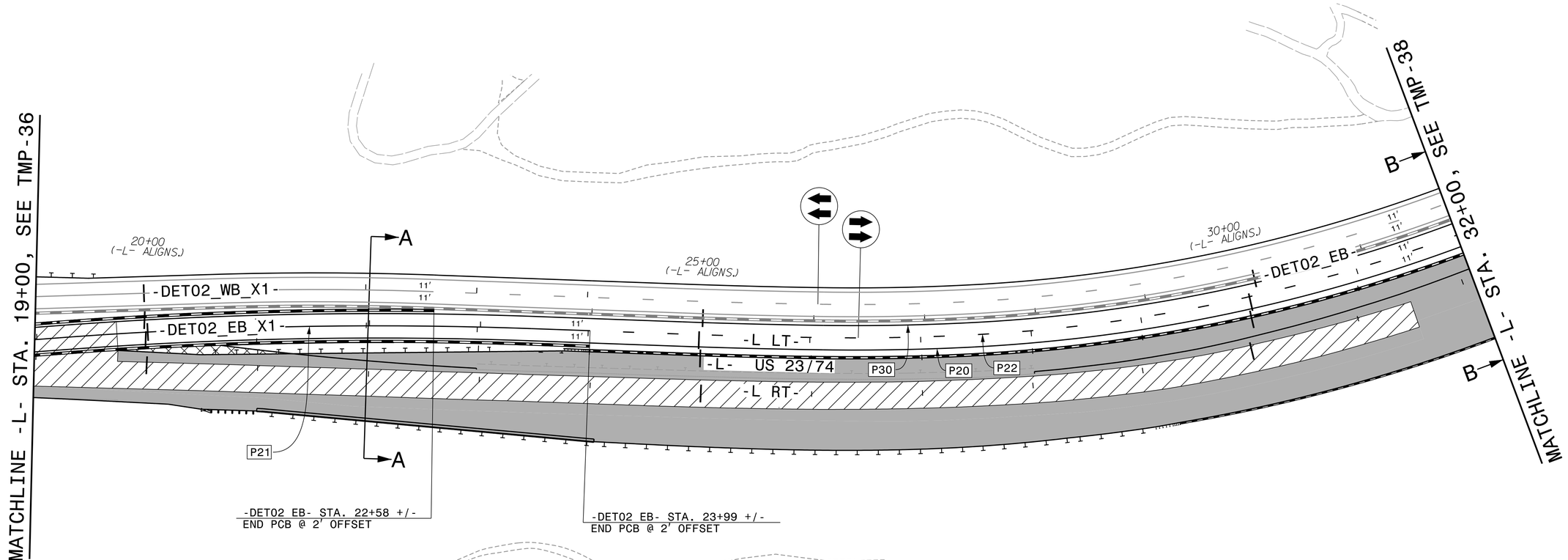
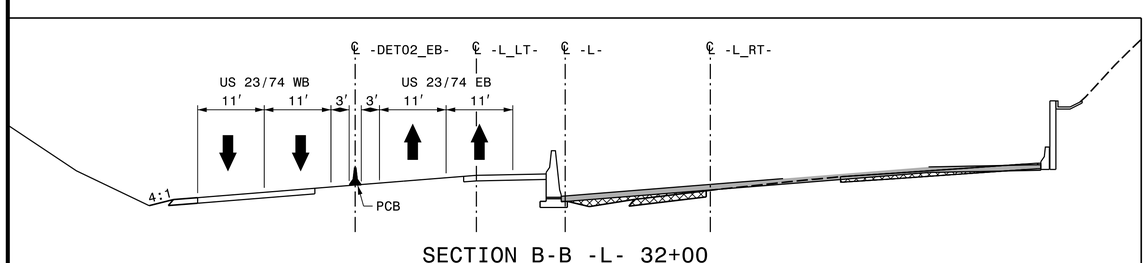
N.C.B.E.L.S. License Number: F-0116



SECTION A-A -L- 22+00





SECTION B-B -L- 32+00

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

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PHASE 3, STEP 2

REVISIONS

PLOT DRIVER: NCDOT_pdf_color-eng_50.plt PENTABLE: NCDOT_tcp.tbl
USER: CHARNDEN DATE: 1/21/2022 TIME: 4:10:25 PM
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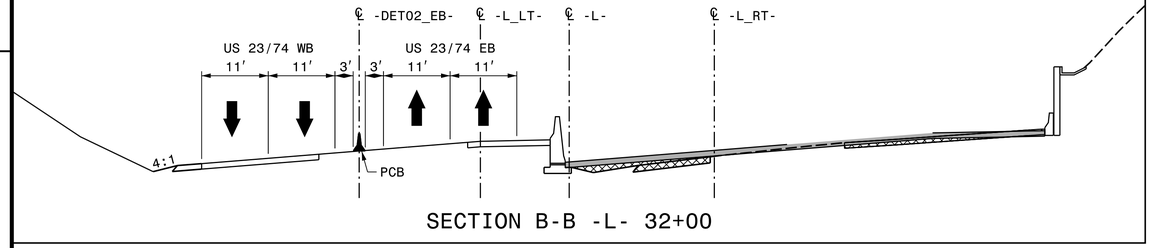
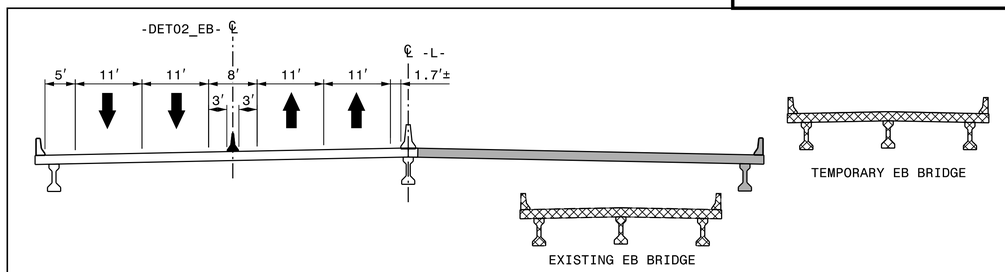
PROJ. REFERENCE NO.	SHEET NO.
B-3186 / B-5898	TMP-38

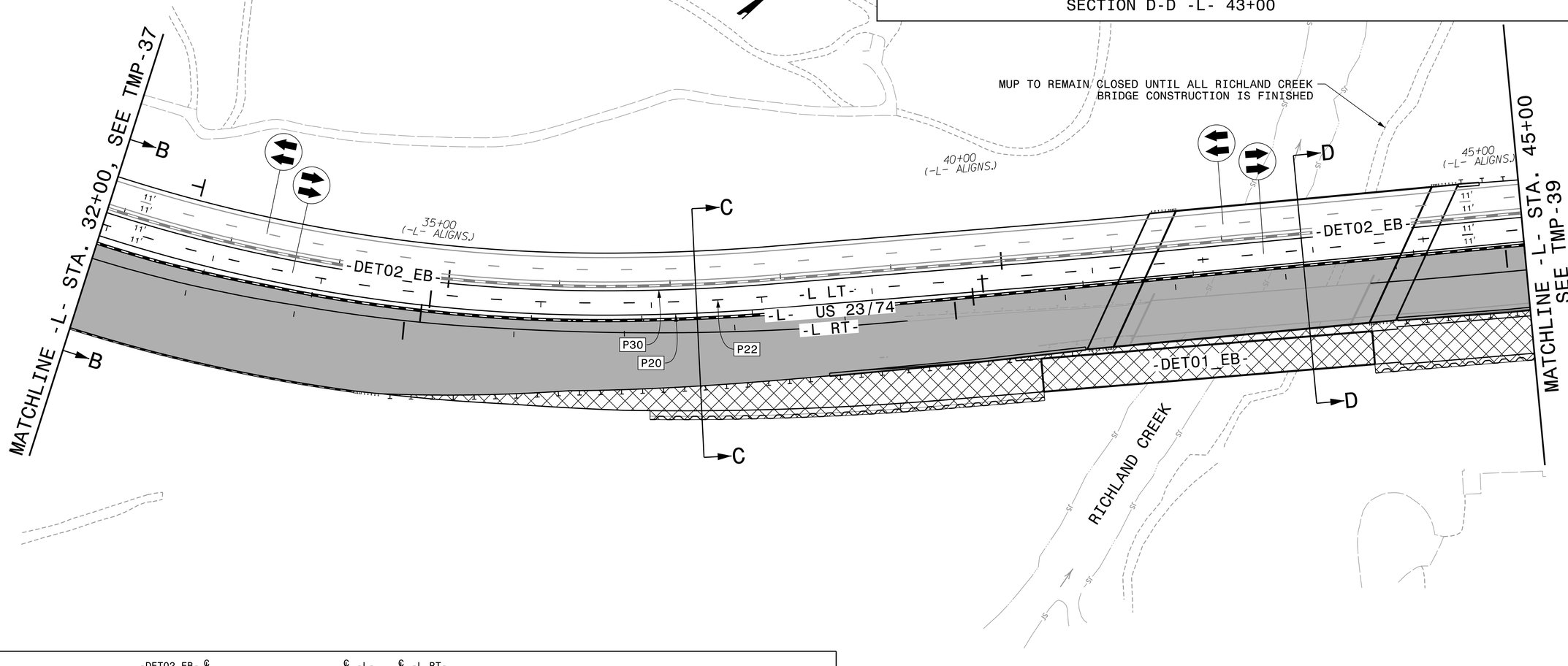
HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

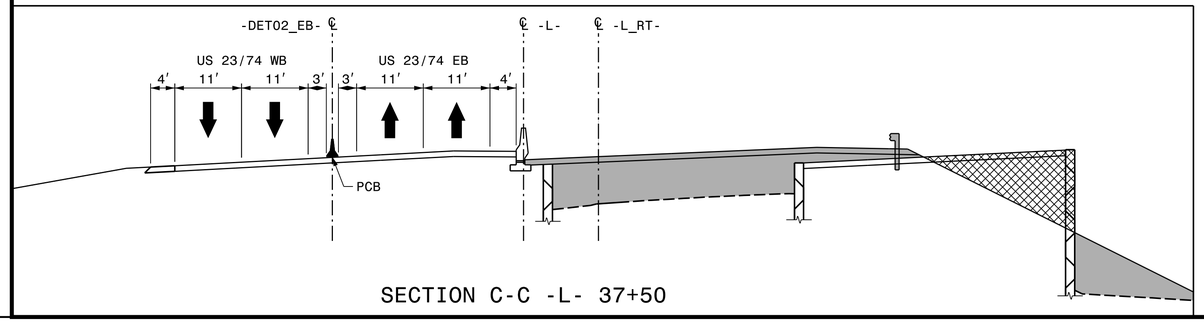


SECTION B-B -L- 32+00



SECTION D-D -L- 43+00





SECTION C-C -L- 37+50

APPROVED: Michael T. Rzepka

DATE: 3/17/2022

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

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

PHASE 3, STEP 2

REVISIONS

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_tcp.tbl
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