

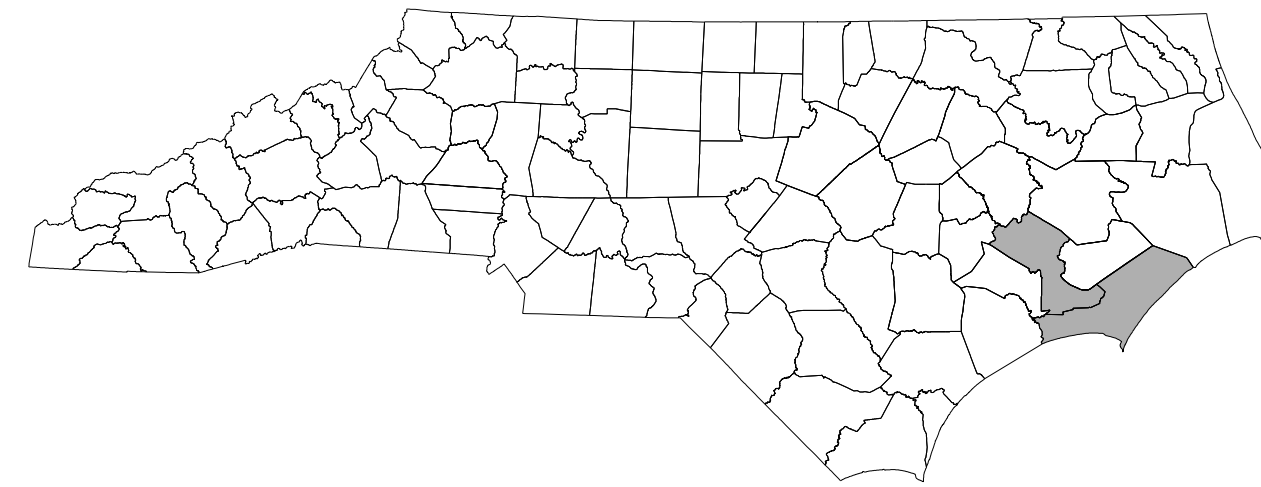
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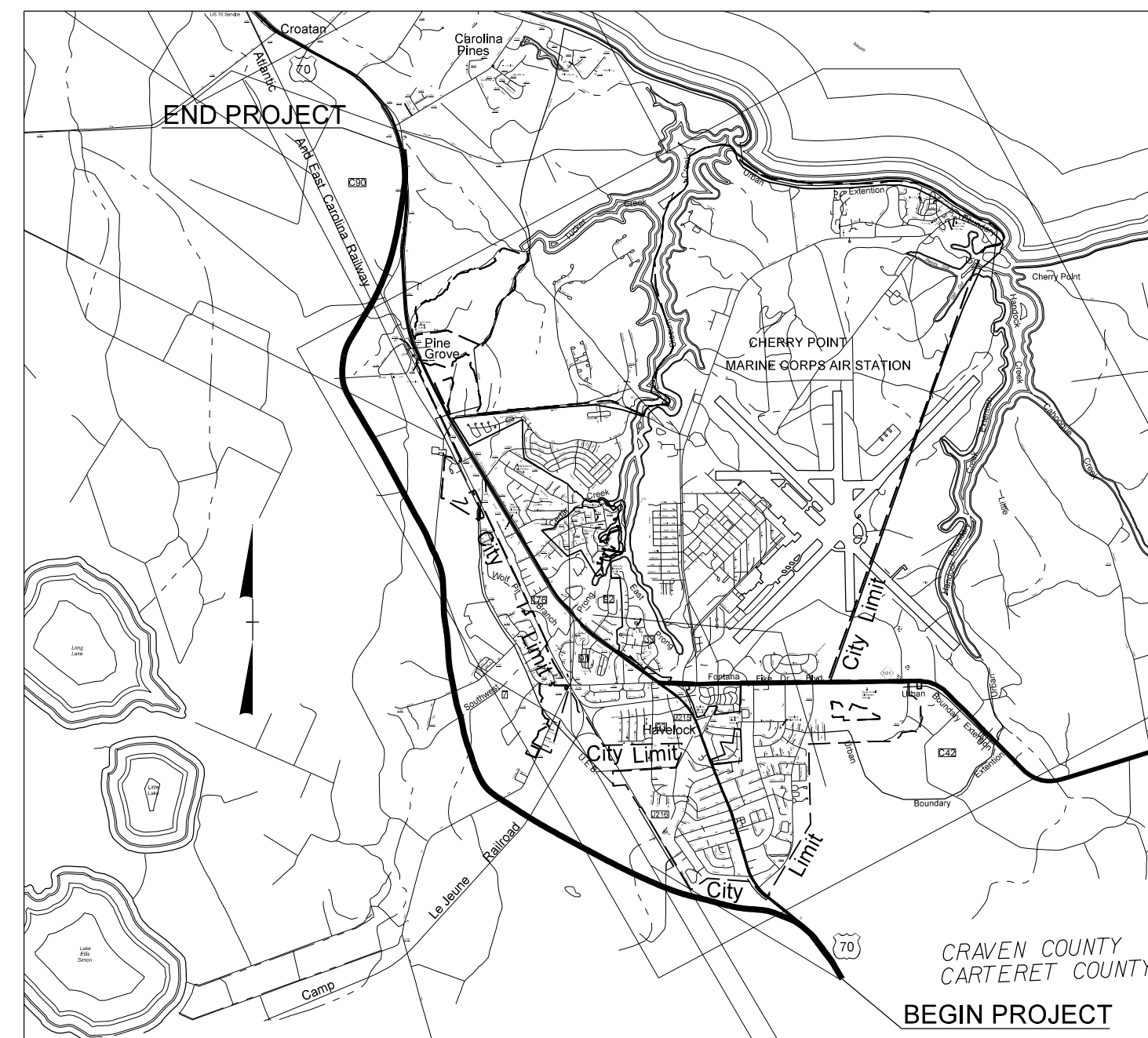
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN
CRAVEN AND CARTERET COUNTIES



LOCATION: US 70 (HAVELOCK BYPASS) FROM SOUTH OF CARTERET/CRAVEN COUNTY LINE TO SOUTH OF SR 1176 (CAROLINA PINES BLVD.)

TYPE OF WORK: GRADING, DRAINAGE, PAVING, WIDENING, CULVERTS AND STRUCTURES



VICINITY MAP

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-2-2A	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, AND LOCAL NOTES)
TMP-2B	DMS INSTALLATION TYPICAL
TMP-2C	SHORING NOTES
TMP-3-3A	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4-5	PROJECT LAYOUT
TMP-6-17	AREA 2
TMP-18-23	AREA 3
TMP-24-26	AREA 4
TMP-27-42	AREA 5

PLAN PREPARED BY:

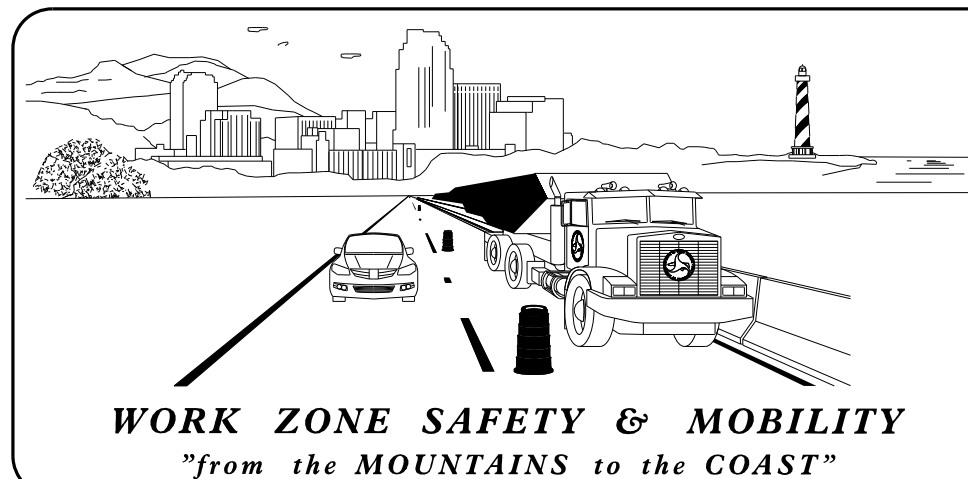
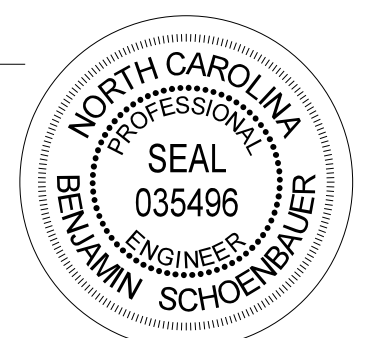
HR HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

MICHELLE WARD, P.E. TRAFFIC CONTROL PROJECT ENGINEER
BEN SCHOENBAUER, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER
JOHN WILES, P.E. TRAFFIC CONTROL DESIGN ENGINEER

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UNLESS ALL SIGNATURES COMPLETED

APPROVED: *Ben Schoenbauer*
DATE: 12/17/2018

SEAL



N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. HUMMER, P.E. STATE TRAFFIC MANAGEMENT ENGINEER
J. S. KITE, P.E. TRAFFIC CONTROL PROJECT ENGINEER
S. B. JENNINGS TRAFFIC CONTROL PROJECT DESIGN ENGINEER
TRAFFIC CONTROL DESIGN ENGINEER



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SHEET NO.
TMP-1

R-1015

TIP PROJECT:

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1170.01	POSITIVE PROTECTION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMPS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	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
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

LEGEND

GENERAL

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

- WORK AREA
- CONTINUING CONSTRUCTION
- REMOVAL
- WEDGING
- TEMPORARY PAVEMENT

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TEMPORARY PAVEMENT MARKING

- | | |
|------------------------------------|--------------------------------|
| PAINT (4") | PAINT (24") |
| PA WHITE EDGELINE | P2 WHITE STOPBAR |
| PI YELLOW DOUBLE CENTER | |
| PAINT (6") | SYMBOLS |
| P6 WHITE EDGELINE | QA LEFT TURN ARROW |
| P7 YELLOW EDGELINE | QC STRAIGHT ARROW |
| P11 2 FT.-6 FT./SP. WHITE MINISKIP | QE COMBO. RIGHT/STRAIGHT ARROW |
| PJ 10 FT. WHITE SKIP | |
| PK 3 FT.-9 FT./SP. WHITE MINISKIP | |
| PL WHITE SOLID LANE LINE | |

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

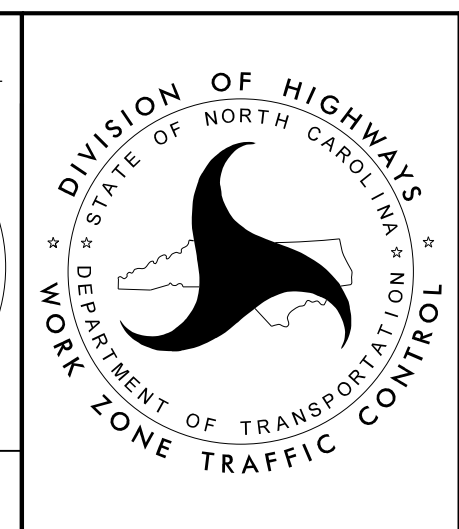
- PAVEMENT MARKING SYMBOLS

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APPROVED: *Ben Schenbauer*

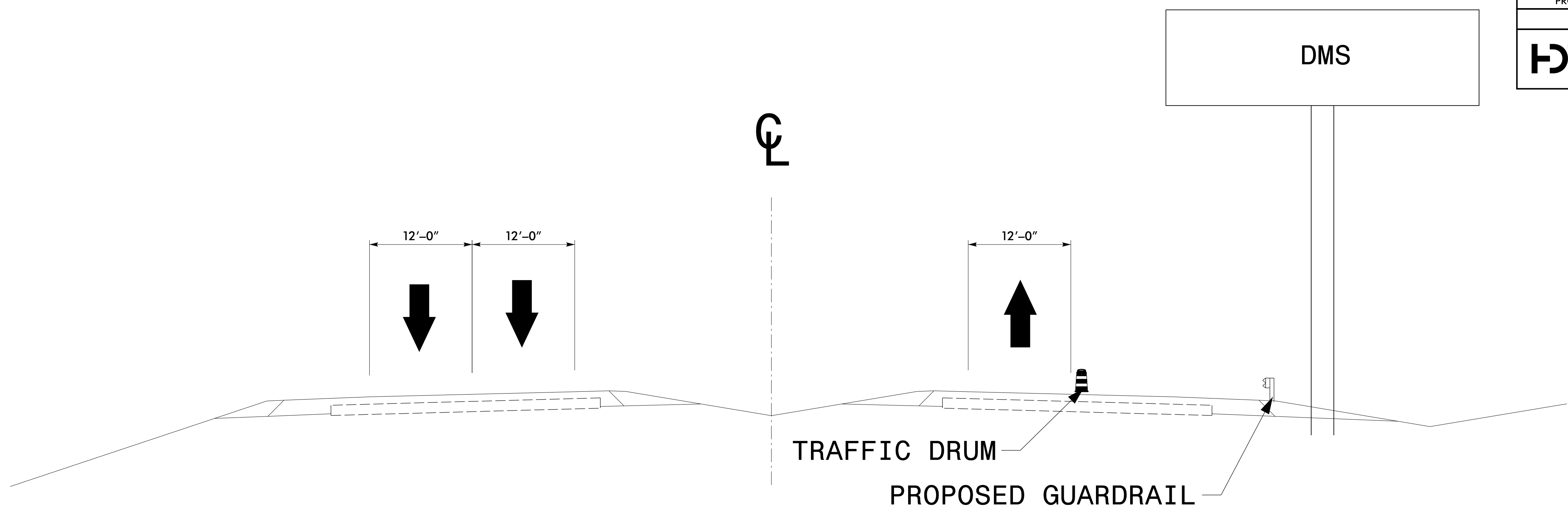
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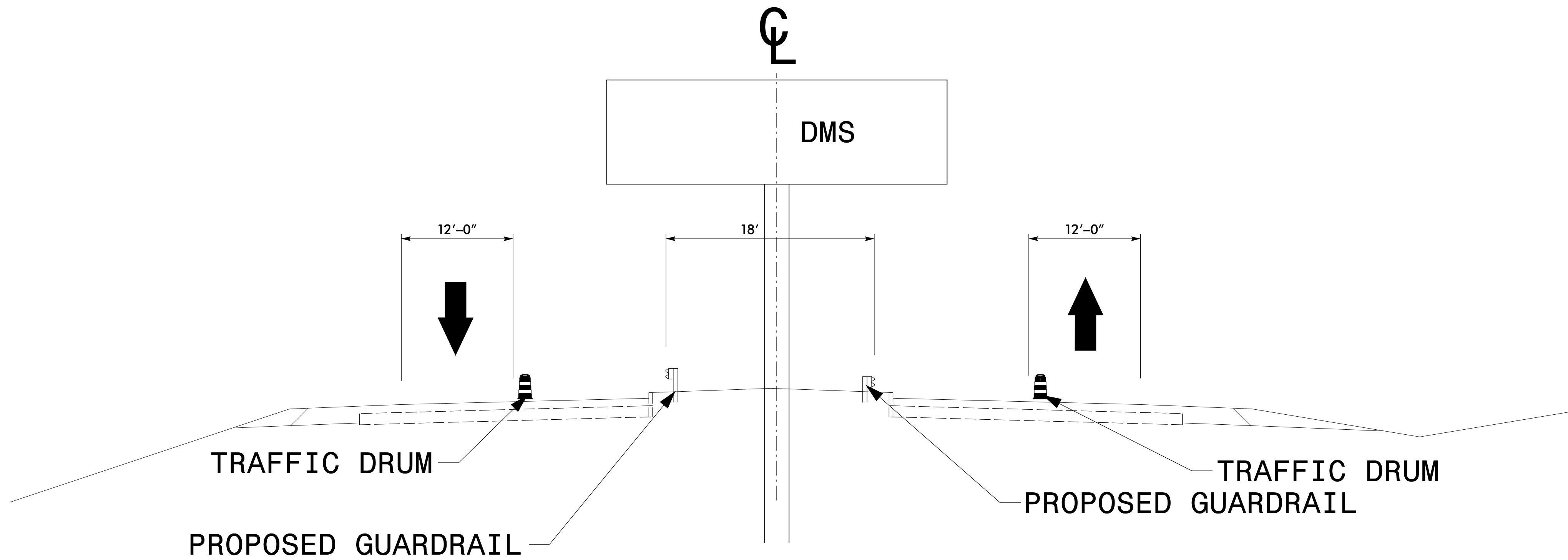


ROADWAY STANDARD
DRAWINGS & LEGEND

PROJ. REFERENCE NO. R-1015	SHEET NO. 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-01116	



NOTE:
 USE RSD 1101.02 SHEET 3 OF 14, AND 1101.04 SHEET 1 OF 1 AS NECESSARY TO
 CLOSE THE RIGHT LANE AND SHOULDER FOR DMS AND GUARDRAIL CONSTRUCTION
 (SEE GENERAL NOTES FOR LANE CLOSURE RESTRICTIONS).

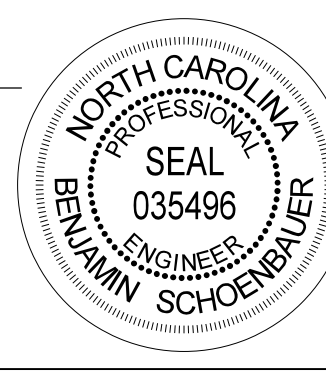


NOTE:
 USE RSD 1101.02 SHEET 3 OF 14, AND 1101.04 SHEET 1 OF 1 AS NECESSARY TO
 CLOSE THE RIGHT LANE AND SHOULDER FOR DMS AND GUARDRAIL CONSTRUCTION
 (SEE GENERAL NOTES FOR LANE CLOSURE RESTRICTIONS).

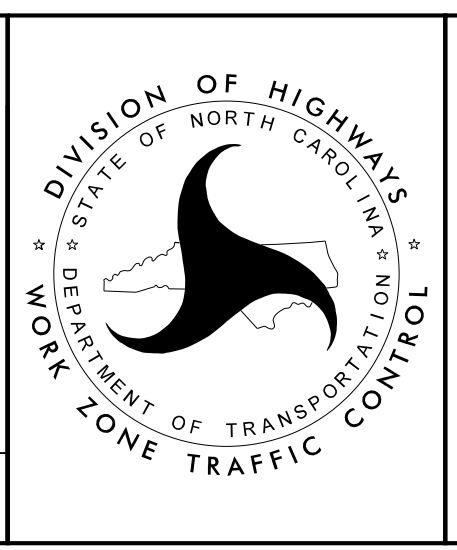
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REVISIONS


APPROVED: *Ben Schoenbauer*
 DATE: 12/4/2018



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DMS
 INSTALLATION
 TYPICAL

PROJ. REFERENCE NO.	SHEET NO.
R-1015	TMP-2C
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Shoring Location No. 1

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

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

DESIGN TEMPORARY SHORING FROM STATION 52+18± -Y4DET-, 20 FT, LEFT, TO STATION 52+80± -Y4DET-, 20 FT, LEFT, 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 = 8 FT

DO NOT USE CANTILEVER, BRACED OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 52+18± -Y4DET-, 20 FT, LEFT, TO STATION 52+80± -Y4DET-, 20 FT, LEFT.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 52+18± -Y4DET-, 20 FT, LEFT, TO STATION 52+80± -Y4DET-, 20 FT, LEFT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

Shoring Location No. 2

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

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

DESIGN TEMPORARY SHORING FROM STATION 51+87± -Y4-, 68 FT, RIGHT, TO STATION 52+74± -Y4-, 68 FT, RIGHT, 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 = 8 FT

DO NOT USE CANTILEVER, BRACED OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 51+87± -Y4-, 68 FT, RIGHT, TO STATION 52+74± -Y4-, 68 FT, RIGHT.

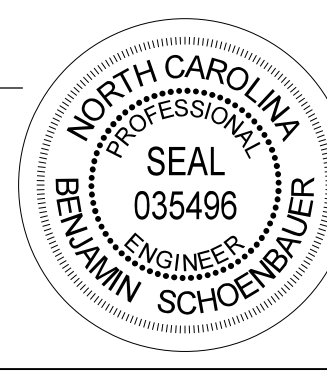
AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 51+87± -Y4-, 68 FT, RIGHT, TO STATION 52+74± -Y4-, 68 FT, RIGHT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

REVISIONS

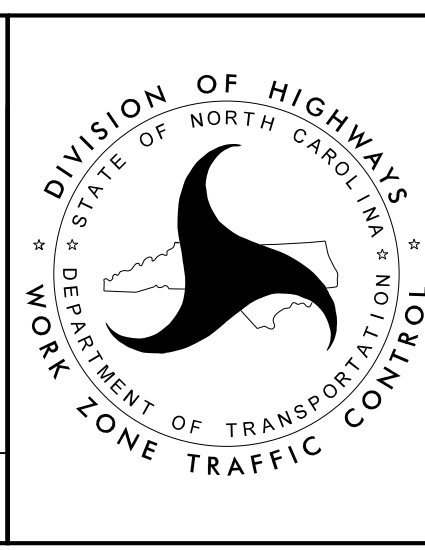
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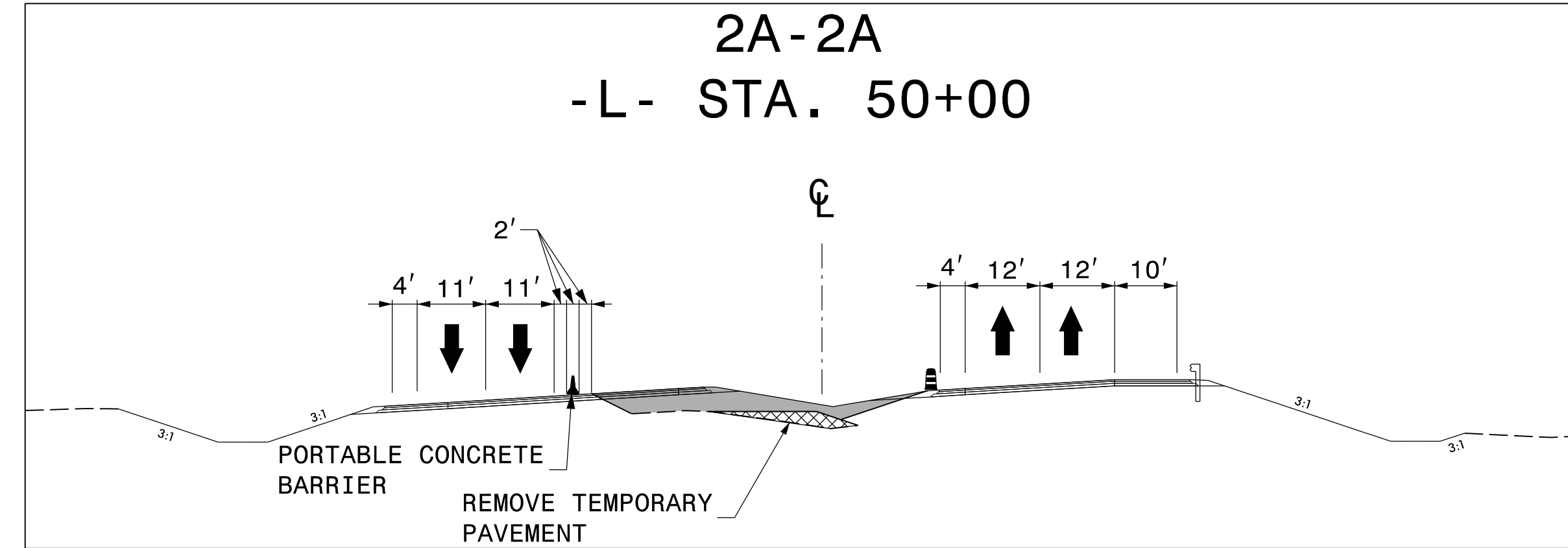
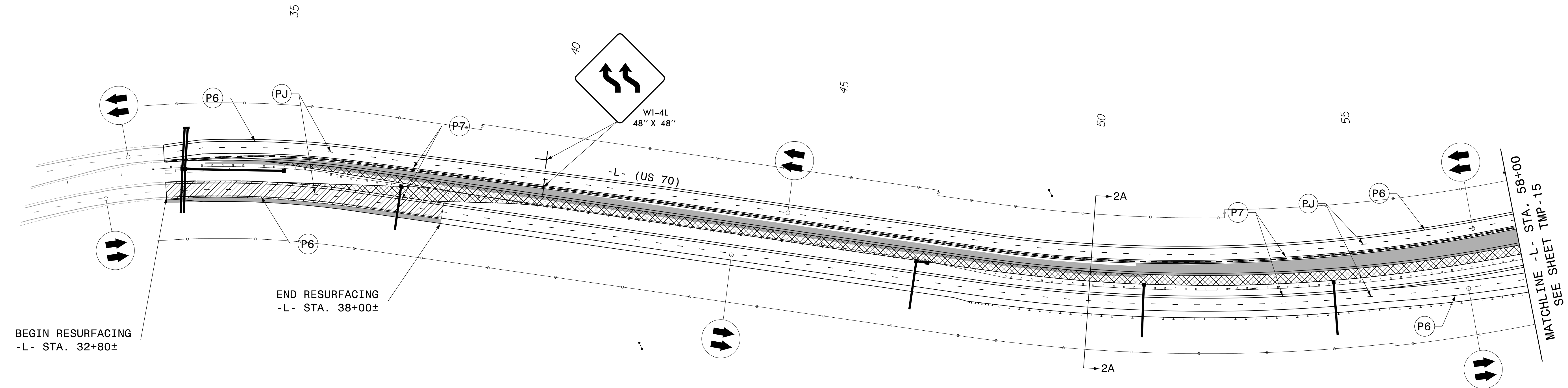
APPROVED: *Ben Schoenwiler*
 DATE: 12/17/2018



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TEMPORARY SHORING NOTES

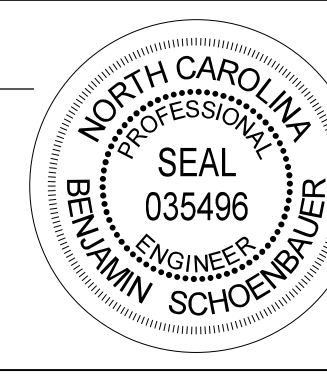


REVISIONS

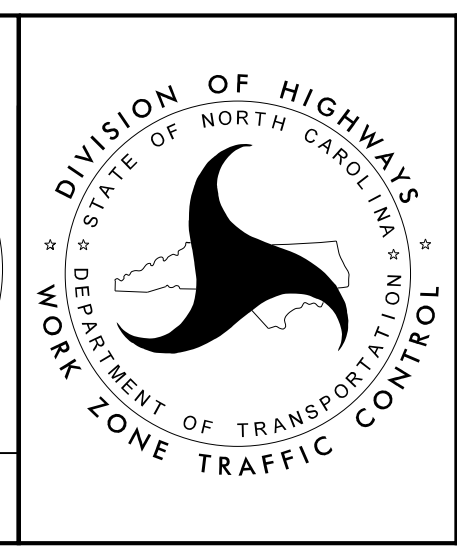
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APPROVED: *Ben Schoenberger*
 DATE: 12/4/2018


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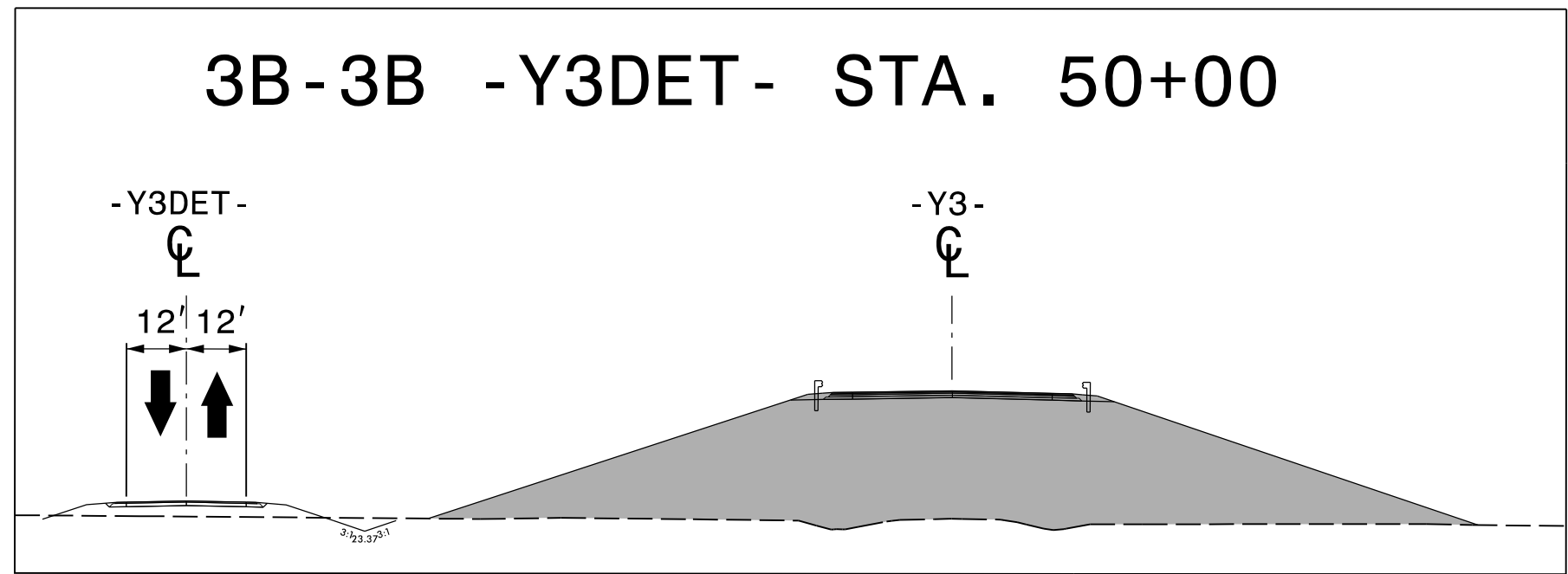
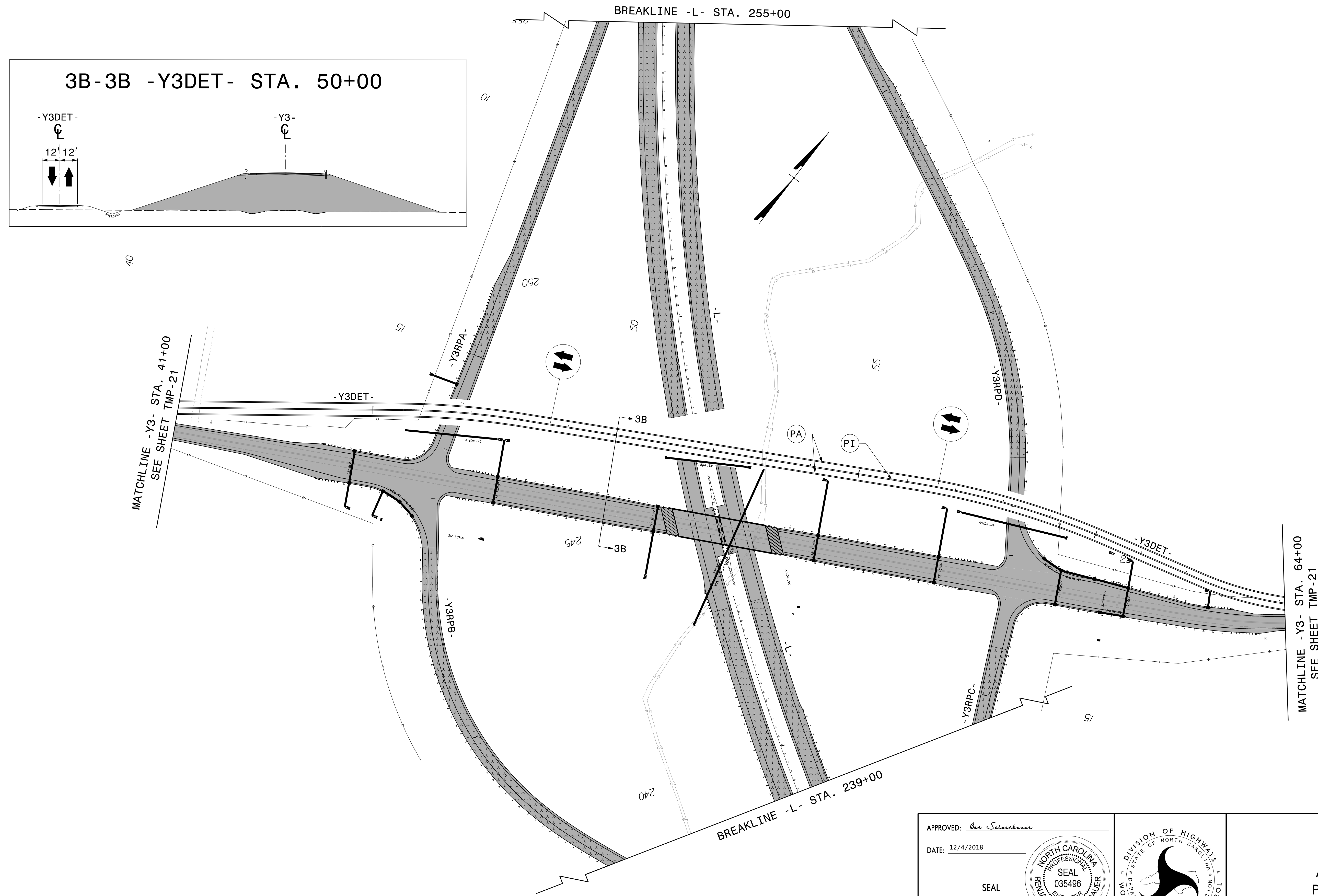


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AREA 2
 PHASE 3

PROJ. REFERENCE NO.	SHEET NO.
R - 1015	TMP - 20
 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	




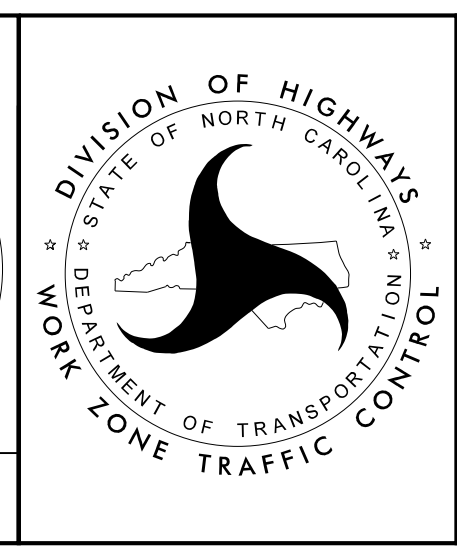
MATCHLINE -Y3- STA. 41+00
SEE SHEET TMP-21

MATCHLINE -Y3- STA. 64+00
SEE SHEET TMP-21

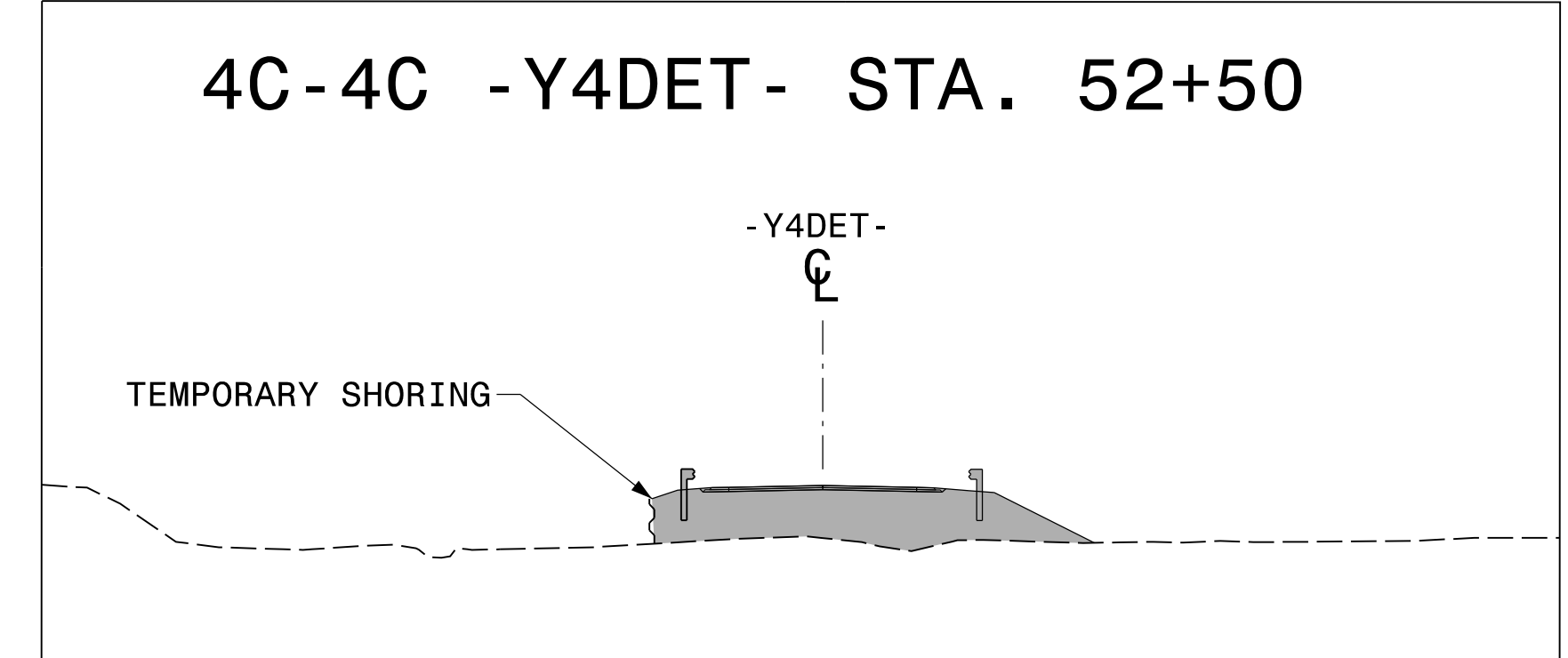
REVISIONS

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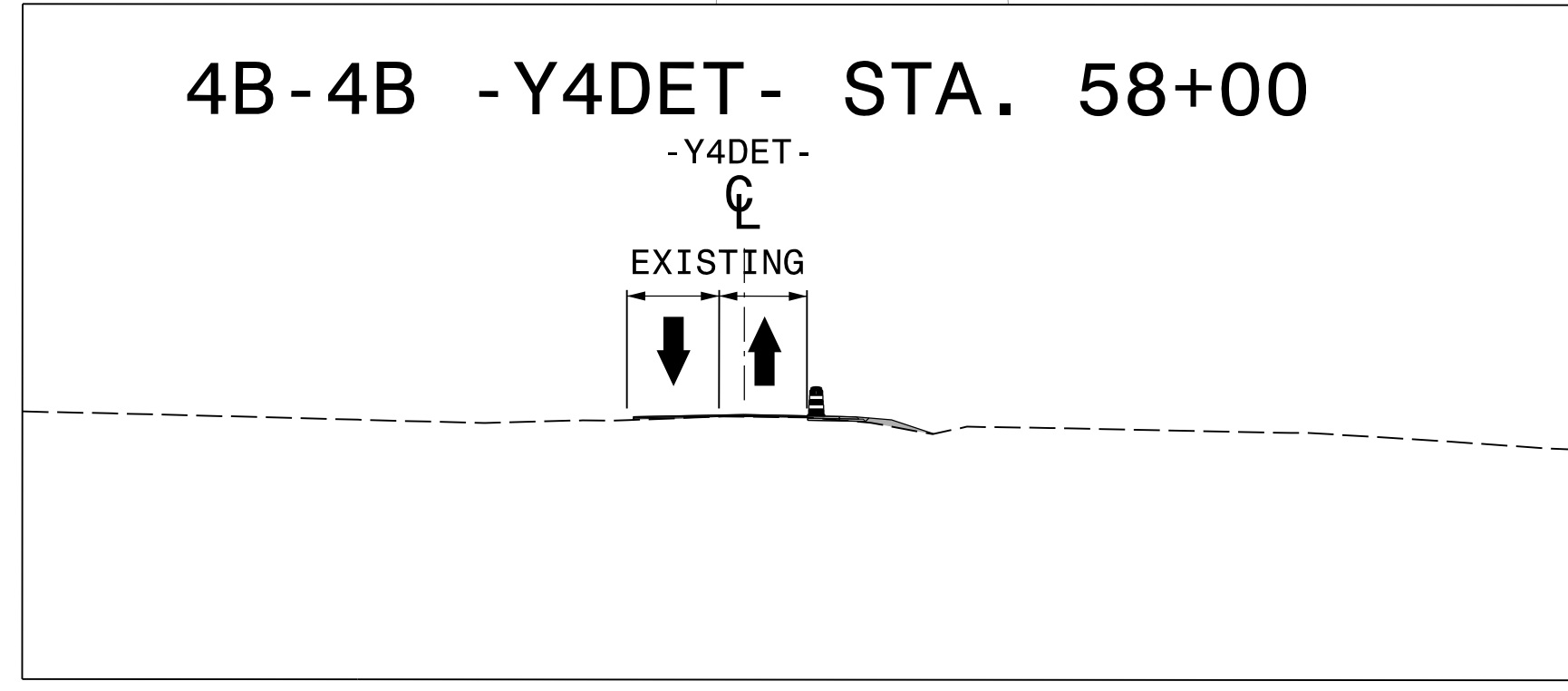
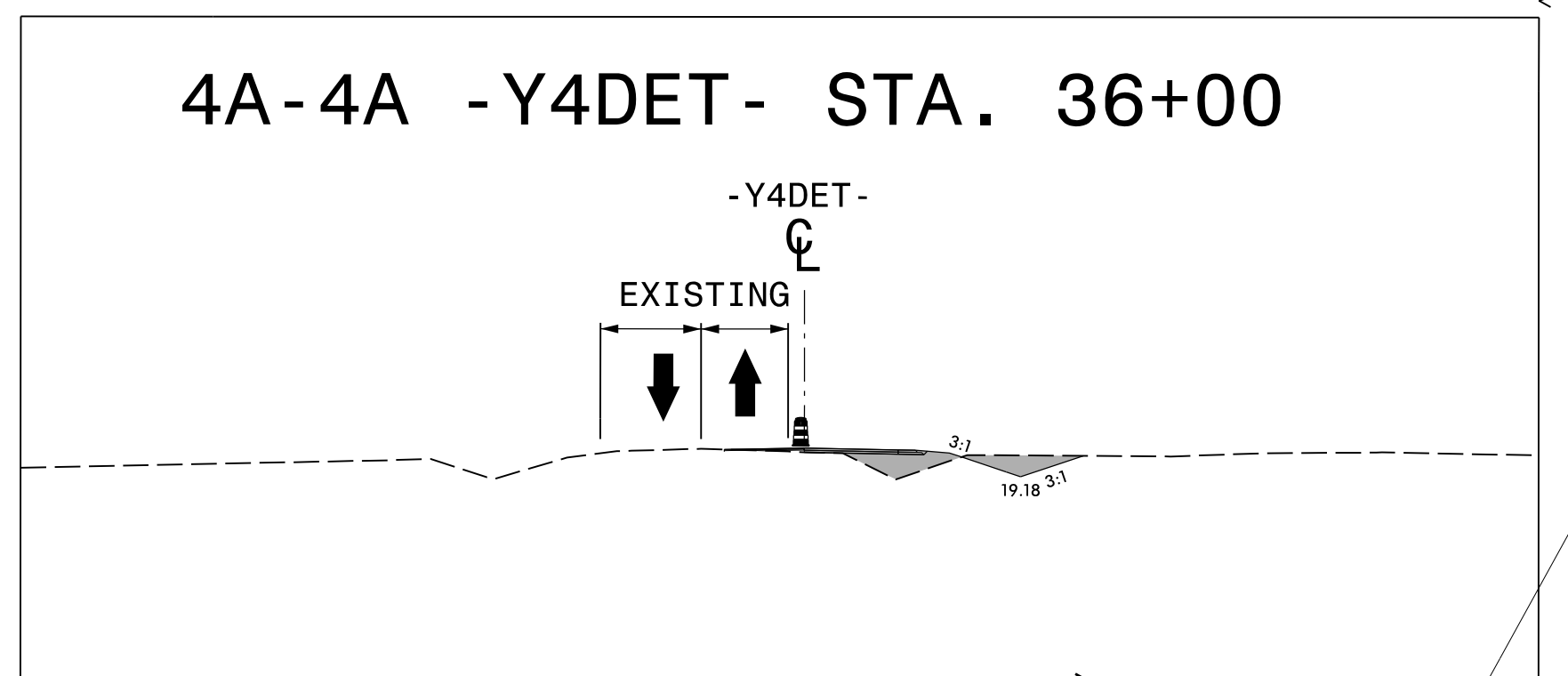
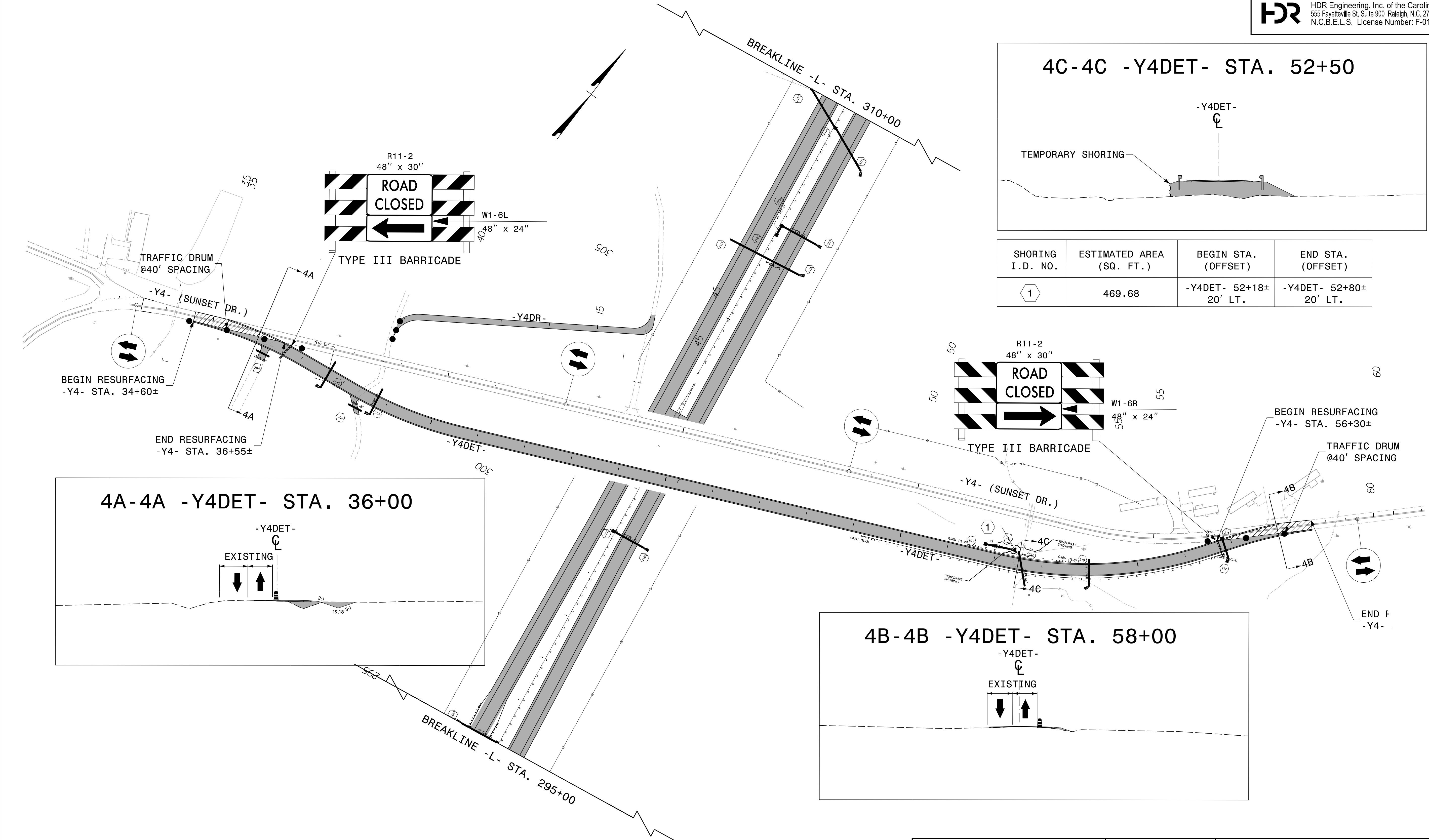
APPROVED: *Ben Schoenberger*
 DATE: 12/4/2018
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AREA 3
PHASE 2



SHORING I.D. NO.	ESTIMATED AREA (SQ. FT.)	BEGIN STA. (OFFSET)	END STA. (OFFSET)
1	469.68	-Y4DET- 52+18± 20' LT.	-Y4DET- 52+80± 20' LT.



REVISIONS

12/17/2018: ADDED TEMPORARY GUARDRAIL -Y4DET-, 4C-4C -Y4DET- 52+50

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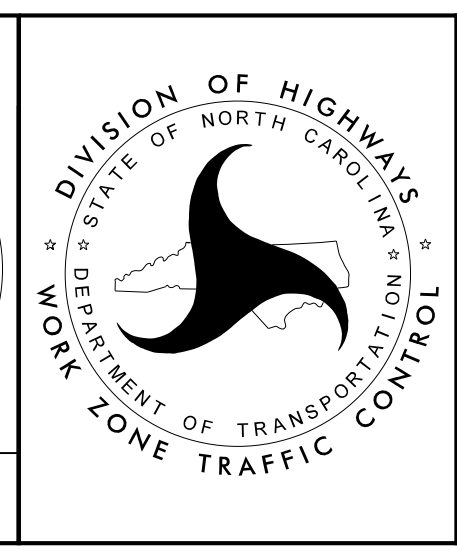
APPROVED: *Ben Schoenberger*

DATE: 12/17/2018

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035496 BENJAMIN SCHOENBERGER

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**AREA 4
 PHASE 1**

