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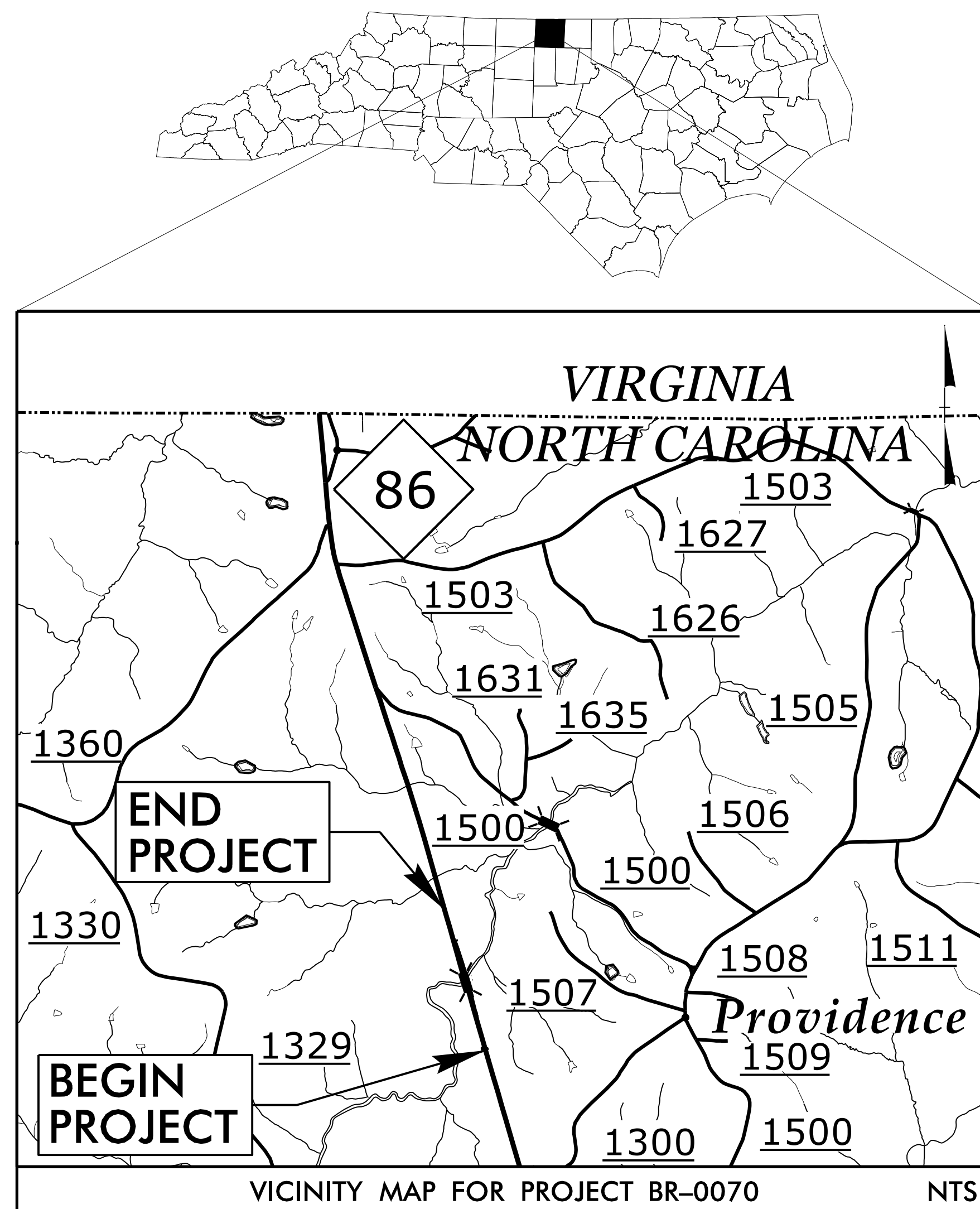
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

CASWELL COUNTY

**LOCATION: REPLACE BRIDGE No. 61 ON NC 86
OVER HOGAN'S CREEK**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING,
AND STRUCTURE**



SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (GENERAL NOTES, MANAGEMENT STRATEGIES, AND LOCAL NOTES)
TMP-2	TRANSPORTATION OPERATIONS PLAN: (PHASING)
TMP-3	TEMPORARY ANCHOR UNIT TYPE W-BEAM DETAIL
TMP-4 TO TMP-6	TEMPORARY TRAFFIC CONTROL PHASE I DETAILS
TMP-7 TO TMP-11	TEMPORARY TRAFFIC CONTROL PHASE II DETAILS
TMP-12 TO TMP-14	TEMPORARY TRAFFIC CONTROL PHASE III DETAILS

SHEET NO.
TMP-1

BR-0070

TIP PROJECT:

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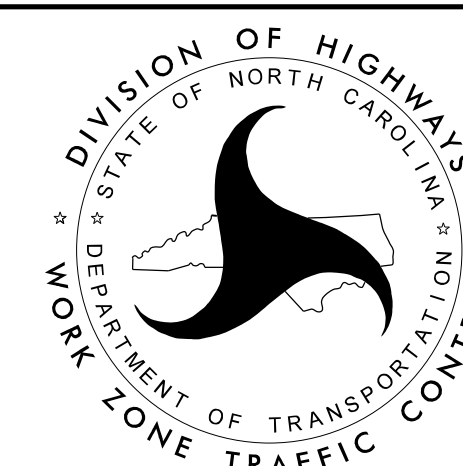
PLANS PREPARED BY:

JOSHUA ROEMER

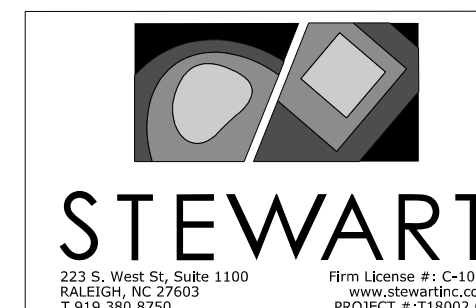
MICHAEL BURNS, PE

NCDOT CONTACTS:

BRIAN KETNER, PE
PROJECT ENGINEER



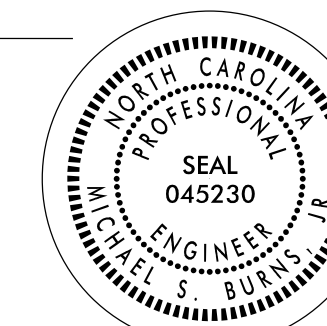
PREPARED IN THE OFFICE OF



APPROVED: *Michael S. Burns, Jr.*

DATE: 10/20/2022

SEAL



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
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES - TYPE III
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION - REFLECTIVE END TREATMENT
1170.01	POSITIVE PROTECTION - PORTABLE CONCRETE BARRIER
1180.01	SKINNY DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - DIVIDED AND UNDIVIDED ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

LEGEND

GENERAL

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

WORK AREA

REMOVAL

WEDGING

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 WHITE EDGELINE (6")
- P33 PAINT YELLOW DOUBLE CENTER (6")

TEMPORARY PAVEMENT MARKERS

- MH TEMPORARY RAISED YELLOW & YELLOW

PERMANENT PAVEMENT MARKING

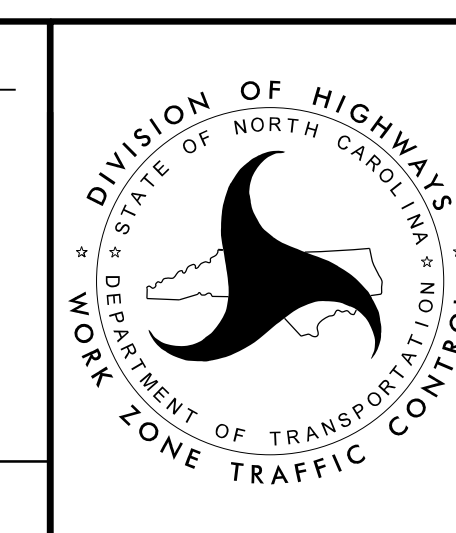
- C20 COLD APPLIED PLASTIC (TYPE 2) WHITE EDGELINE (6")
- C33 COLD APPLIED PLASTIC (TYPE 2) YELLOW DOUBLE CENTER (6")

PERMANENT PAVEMENT MARKERS

- MA PERMANENT RAISED YELLOW & YELLOW

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DocuSigned by: Michael S. Burns, Jr. 045230C00DF437...
 DATE: 10/20/2022

SEAL



ROADWAY STANDARD DRAWINGS & LEGEND

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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 UNDESIRE 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
NC 86	MONDAY THRU FRIDAY 6-9AM AND 4-7PM

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

ROAD NAME
NC 86

HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 7:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 P.M. THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 7:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 7:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

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

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

LANE AND SHOULDER CLOSURE REQUIREMENTS

- D) 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.
- E) 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.

F) 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.

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

PAVEMENT EDGE DROP OFF REQUIREMENTS

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

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

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

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

I) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 100 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

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

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

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

TRAFFIC BARRIER

N) 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.

O) 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

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
NC 86	PAINT	RAISED

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

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

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

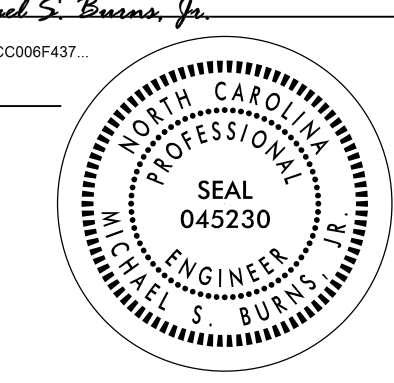
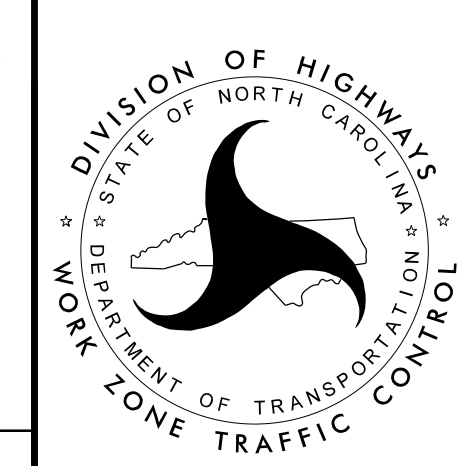
MANAGEMENT STRATEGIES

DURING CONSTRUCTION OF PROPOSED STRUCTURE BRIDGE No. 61 OVER HOGAN'S CREEK, NC 86 WILL BE OPEN TO THROUGH TRAFFIC. THROUGH TRAFFIC ON NC 86 WILL BE MAINTAINED USING AN ON-SITE DETOUR.

ACCESS TO ALL RESIDENCES WITHIN THE PROJECT LIMITS MUST BE MAINTAINED AT ALL TIMES.

LOCAL NOTES

- NOTIFY THE CASWELL COUNTY SCHOOLS TRANSPORTATION DIRECTOR OF THE BRIDGE REMOVAL 30 DAYS PRIOR TO ROAD CLOSURE.
- NOTIFY THE CASWELL COUNTY EMERGENCY MANAGEMENT SERVICES DIRECTOR OF BRIDGE REMOVAL 30 DAYS PRIOR TO ROAD CLOSURE.

APPROVED: <i>Michael S. Burns, Jr.</i> <small>DocuSigned by: Michael S. Burns, Jr. 042523CC0006437</small> DATE: 10/20/2022 SEAL			TRANSPORTATION OPERATIONS PLAN
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PHASING

PHASE 1

STEP 1

USING ROADWAY STANDARD DRAWING (RSD) 1101.01 SHEET 3 OF 3, INSTALL WORK ZONE ADVANCE WARNING SIGNS ALONG NC 86.

STEP 2

USING RSD 1101.02 SHEET 1 OF 14 AND SHEETS TMP-04 THRU TMP-06, INSTALL TEMPORARY PORTABLE CONCRETE BARRIER AT THE FOLLOWING LOCATIONS:

- -L- STA. 14+28 +/- TO -L- STA. 28+97 +/-
- -L- STA. 31+77 +/- TO -L- STA. 39+54 +/-
- -L- STA. 39+99 +/- TO -L- STA. 45+58 +/-

STEP 3

BEHIND TEMPORARY PORTABLE CONCRETE BARRIER, CONSTRUCT THE FOLLOWING UP TO BUT NOT INCLUDING THE FINAL LAYER OF ASPHALT PAVEMENT:

- -L- STA. 17+96 +/- TO -L- STA. 29+15 +/- (PROPOSED ROADWAY APPROACH)
- -L- STA. 29+15 +/- TO -L- STA. 31+99 +/- (PROPOSED BRIDGE NO. 61)
- -L- STA. 31+99 +/- TO -L- STA. 43+31 +/- (PROPOSED ROADWAY APPROACH)

BEHIND TEMPORARY PORTABLE CONCRETE BARRIER, CONSTRUCT THE FOLLOWING UP TO SUBGRADE:

- -L- STA. 13+00 +/- TO -L- STA. 17+96 +/- RT
- -L- STA. 14+31 +/- TO -L- STA. 48+00 +/- RT

PHASE 2

STEP 1

USING RSD 1101.02 SHEET 1 OF 14, RSD 1150.01 SHEET 1 OF 1, AND SHEETS TMP-07 THRU TMP-08, TEMPORARILY BLOCK THE DRIVEWAY USING FLAGGERS AND CONSTRUCT THE FOLLOWING UP TO BUT NOT INCLUDING THE FINAL LAYER OF ASPHALT, WEDGING ABOVE THE EXISTING PAVEMENT AS NEEDED:

- DRIVEWAY CONNECTION

STEP 2

USING RSD 1101.02 SHEET 1 OF 14, REMOVE TEMPORARY PORTABLE CONCRETE BARRIER AND REPLACE WITH DRUMS.

IN A SINGLE AND CONTINUOUS OPERATION COMPLETE THE FOLLOWING STEPS:

STEP 3

USING RSD 1101.02 SHEET 1 OF 14 AND SHEETS TMP-07 THRU TMP-08, CONSTRUCT THE FOLLOWING UP TO BUT NOT INCLUDING THE FINAL LAYER OF ASPHALT, WEDGING ABOVE THE EXISTING PAVEMENT AS NEEDED:

- L- STA. 13+00 +/- TO -L- STA. 23+16 +/-
- L- STA. 38+09 +/- TO -L- STA. 48+00 +/-

STEP 4

USING RSD 1205.01 AND TMP-09 THRU TMP-11, INSTALL THE TEMPORARY PAVEMENT MARKINGS.

- -L- STA. 13+00 +/- TO -L- 48+00 +/-

STEP 5

SHIFT TRAFFIC INTO A TWO-LANE TWO-WAY PATTERN ALONG THE NEWLY CONSTRUCTED -L- (NC 86) AND CLOSE THE EXISTING ROADWAY.

PHASE 3

STEP 1

USING RSD 1101.02 SHEET 1 OF 14 AND SHEETS TMP-12 THRU TMP-14, REMOVE EXISTING ASPHALT PAVEMENT AS WELL AS THE EXISTING BRIDGE NO. 61 STRUCTURE FROM THE FOLLOWING LOCATIONS:

- -L- STA. 18+83 +/- TO -L- STA. 28+96 +/-
- -L- STA. 28+96 +/- TO -L- STA. 31+59 +/- (EXISTING BRIDGE NO. 61)
- -L- STA. 31+59 +/- TO -L- STA. 43+08 +/-

STEP 2

USING RSD 1101.02 SHEET 1 OF 14, CONSTRUCT THE FINAL LAYER OF ASPHALT FROM:

- -L- STA. 13+00 +/- TO -L- STA. 48+00 +/-

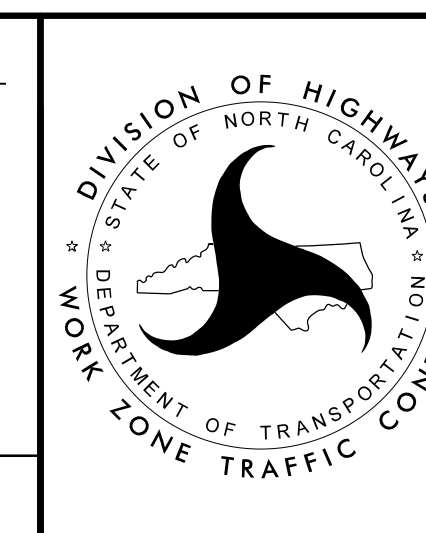
STEP 3

CONSTRUCT THE FINAL PAVEMENT MARKINGS IN ACCORDANCE WITH THE FINAL PAVEMENT MARKING PLAN.

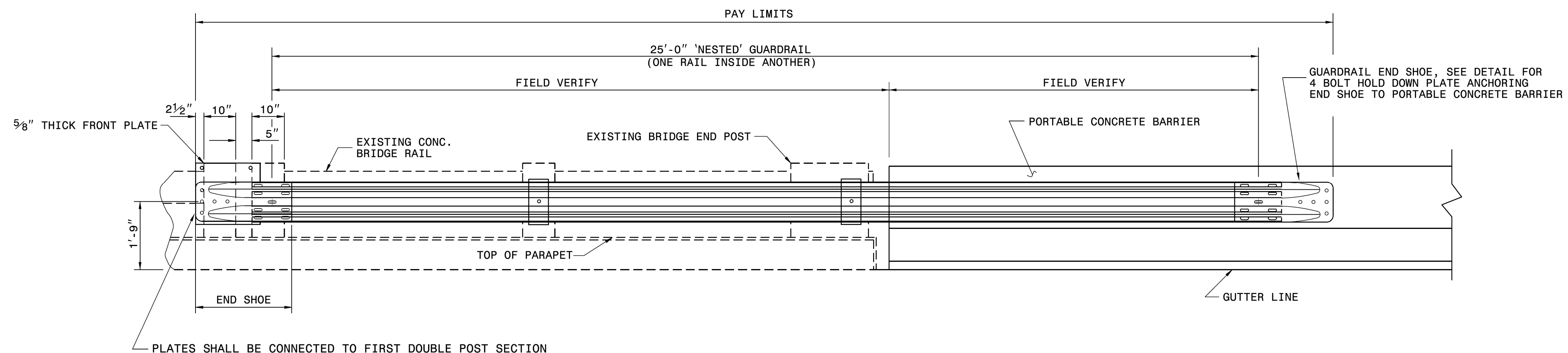
STEP 4

REMOVE ALL WORK ZONE TRAFFIC CONTROL DEVICES.

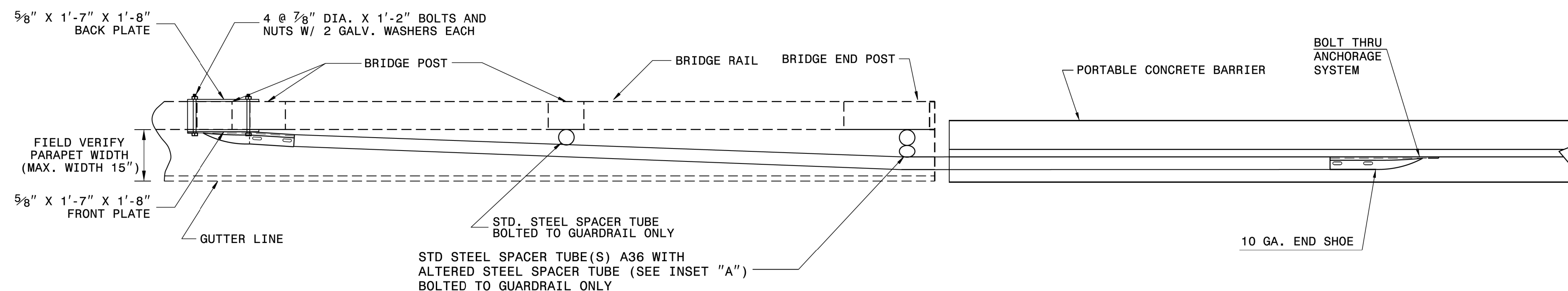
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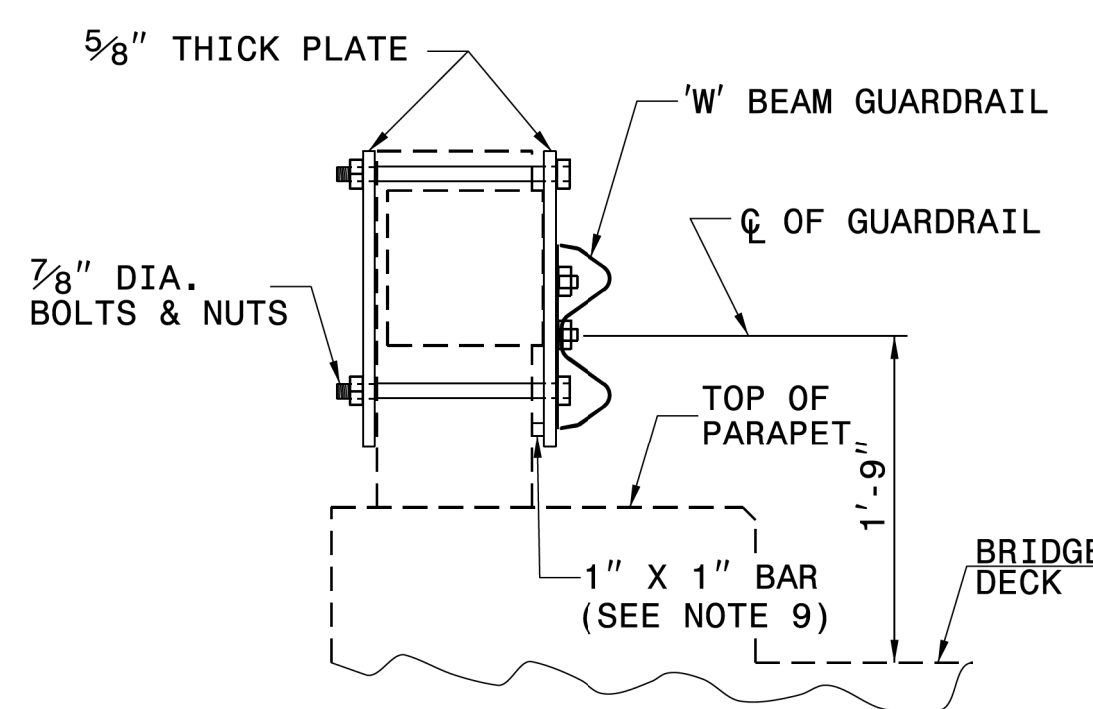
**TRANSPORTATION
OPERATIONS
PLAN**



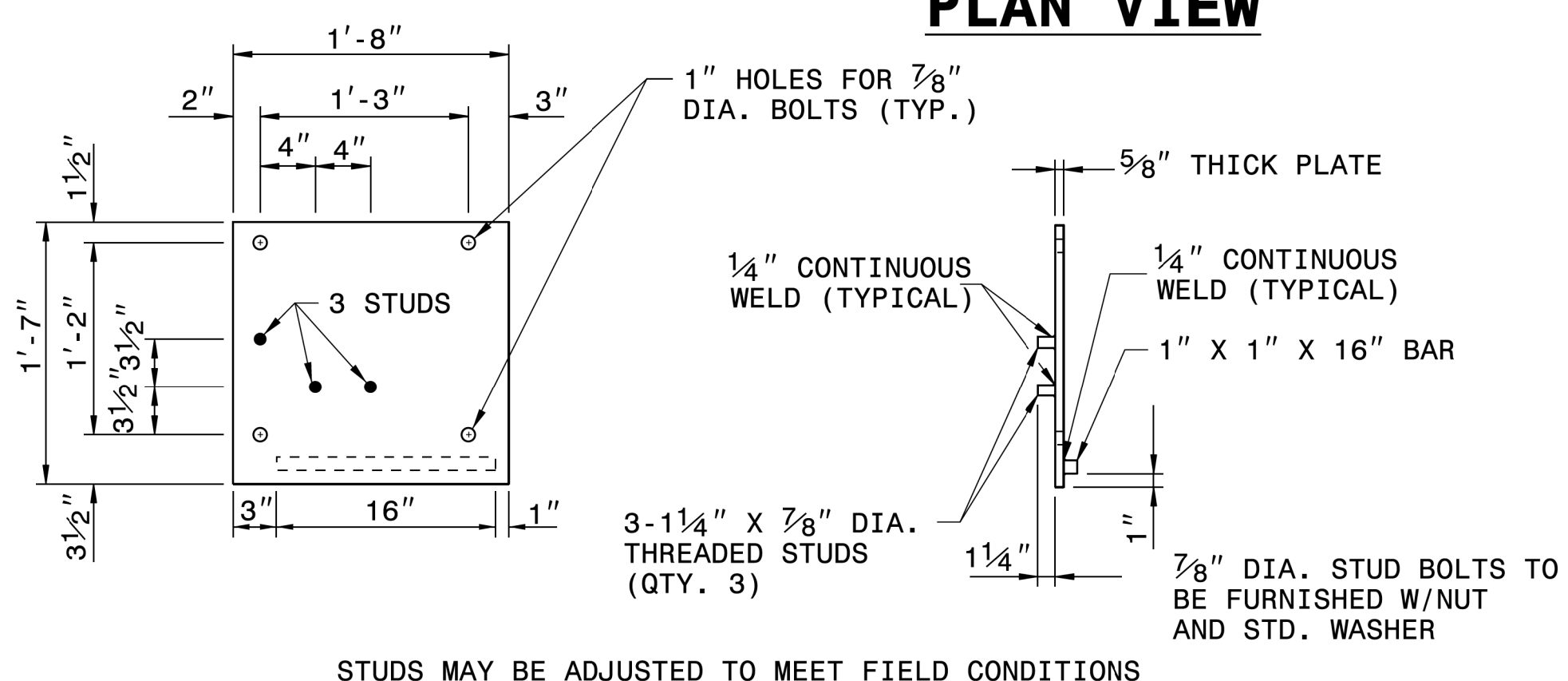
ELEVATION VIEW



PLAN VIEW

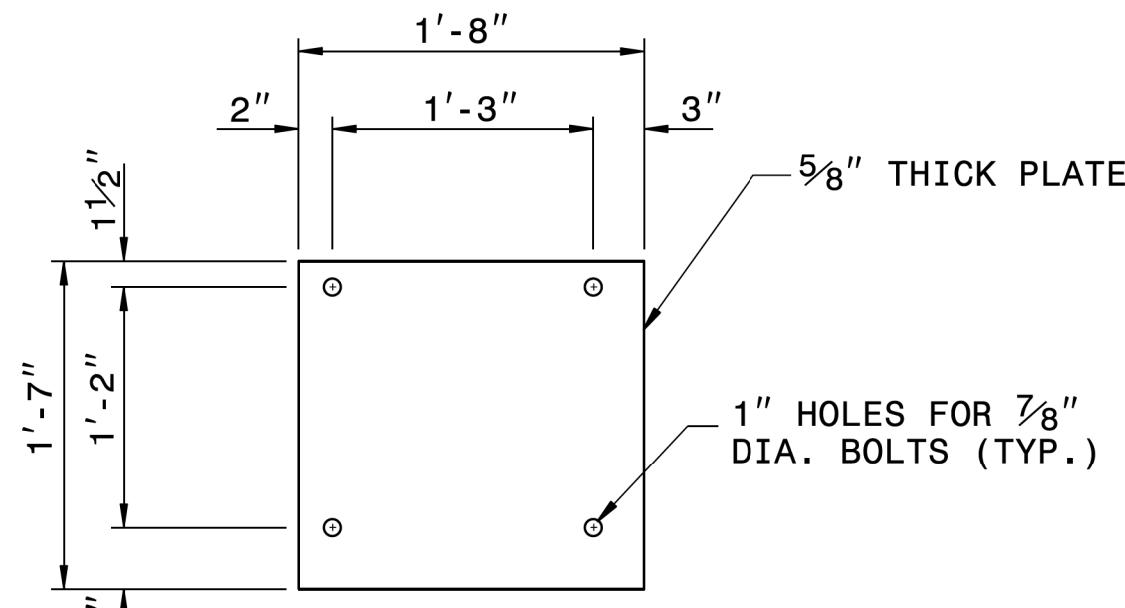


SECTION VIEW

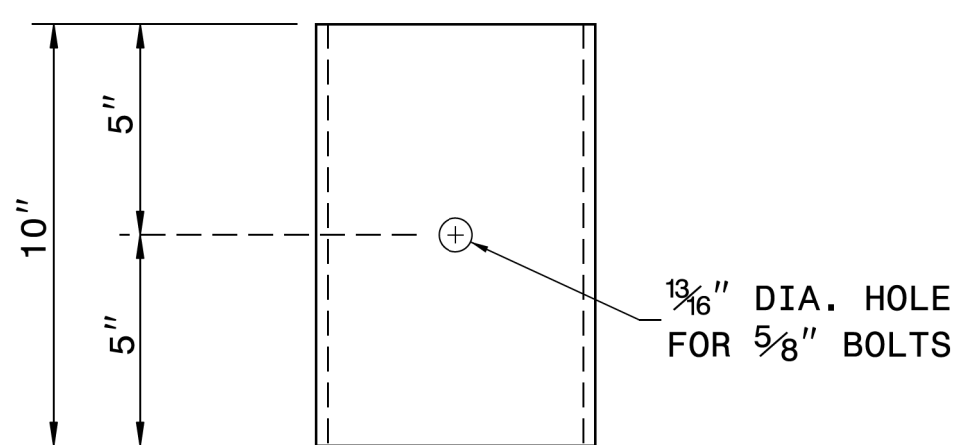


FRONT VIEW

SIDE VIEW

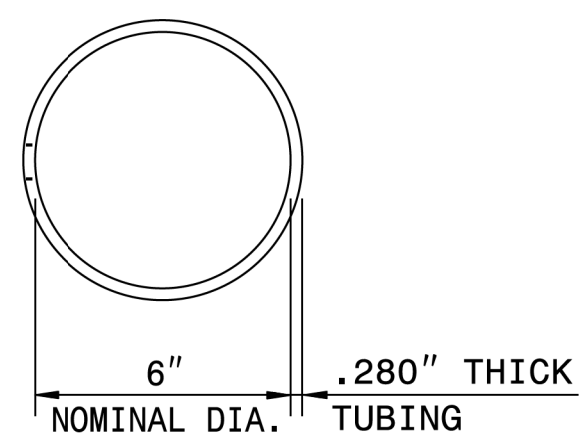


BACK PLATE

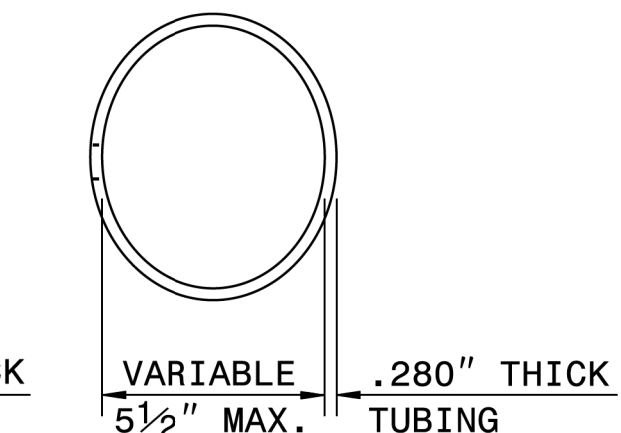


FRONT VIEW

STEEL SPACER TUBE



PLAN VIEW



PLAN VIEW INSET "A"

GENERAL NOTES:

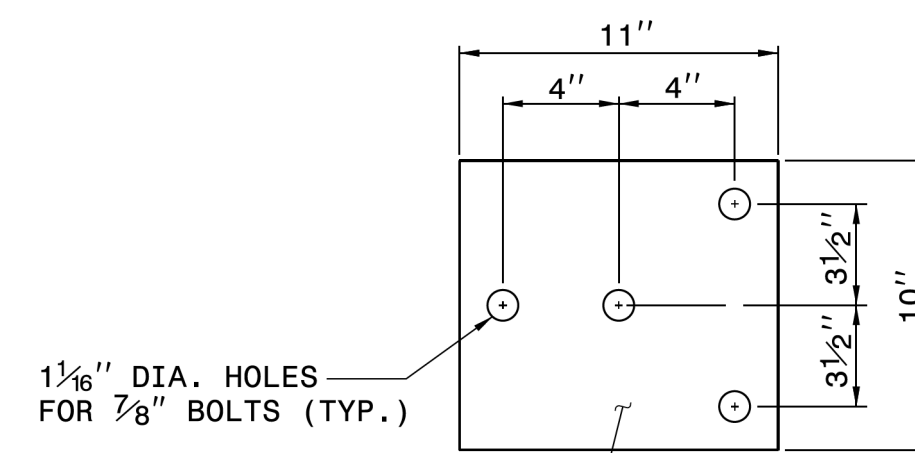
- 1. USE NUTS, BOLTS, AND WASHERS CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-307 AND GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.
2. TAP NUTS FOR THE 7/8" DIA. STUDS AND BOLTS AFTER GALVANIZING SEE A.S.T.M. A-563.
3. USE PLATES AND TUBES CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-36 AND GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.
4. ADDITIONAL FIELD HOLES MAY BE DRILLED IN STEEL RAIL AS DIRECTED BY THE ENGINEER.
5. INSTALL FACE OF GUARDRAIL AS NEAR AS POSSIBLE TO PLUMB WITH THE PARAPET FACE AT BRIDGE END POST SPACER TUBE LOCATION BY USING STANDARD OR ALTERED SPACER TUBES OR A COMBINATION THEREOF OR AS DIRECTED BY THE ENGINEER. FOR VERY SMALL PARAPET WIDTHS, GUARDRAIL MAY BE INSTALLED AGAINST BRIDGE RAIL WITHOUT SPACER TUBES.
6. DO NOT DRILL BRIDGE RAIL IN ORDER TO INSTALL GUARDRAIL ANCHOR UNIT.
7. KEEP TOE OF PORTABLE CONCRETE BARRIER FLUSH WITH FACE OF PARAPET.
8. ATTACH 1" X 1" BAR AND THREADED STUDS TO PLATE WITH 1/4" WELDS ALL AROUND.
9. 1" X 1" BAR MAY NOT BE NEEDED ON BRIDGE RAILS WHERE FACE OF RAIL DOES NOT PROJECT BEYOND FACE OF POST.

NOTES FOR 4 BOLT HOLD DOWN PLATE

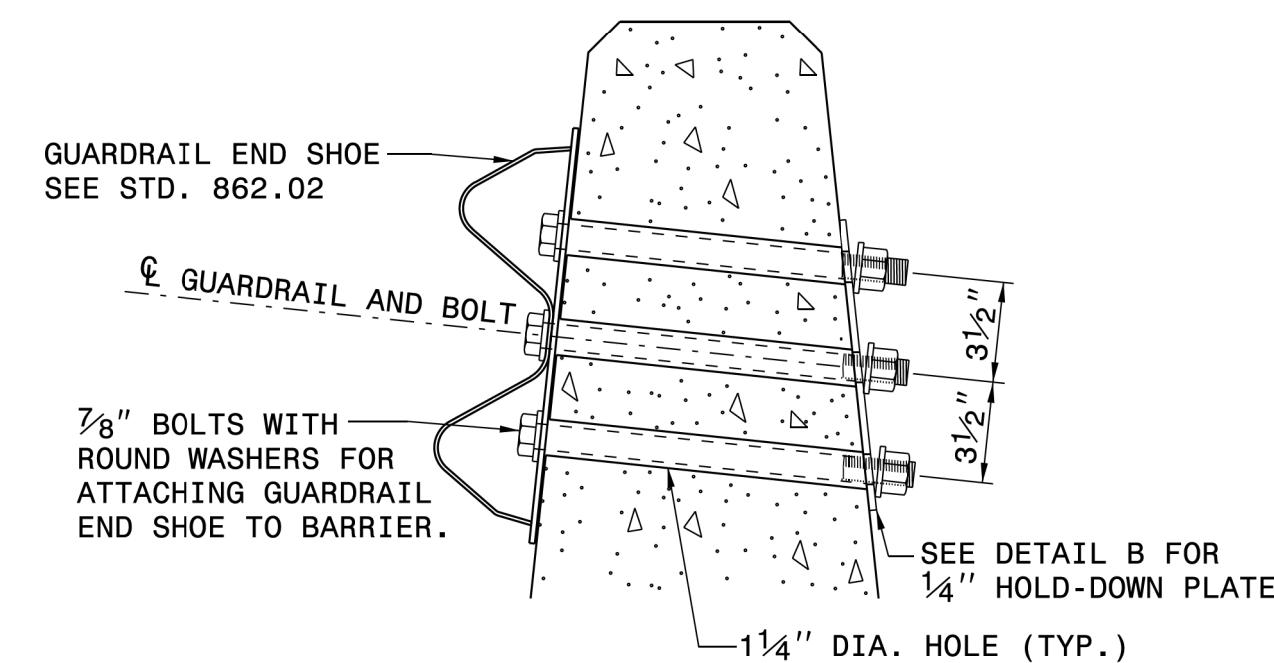
THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4" HOLD DOWN PLATE AND 4 - 7/8" DIA. BOLTS WITH NUTS AND WASHERS.

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.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURIED WITH A SHARP POINTED TOOL. THE 1/4" 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

10/21/2022



DocuSigned by: Nicola M. Hacker 588432034164CS.

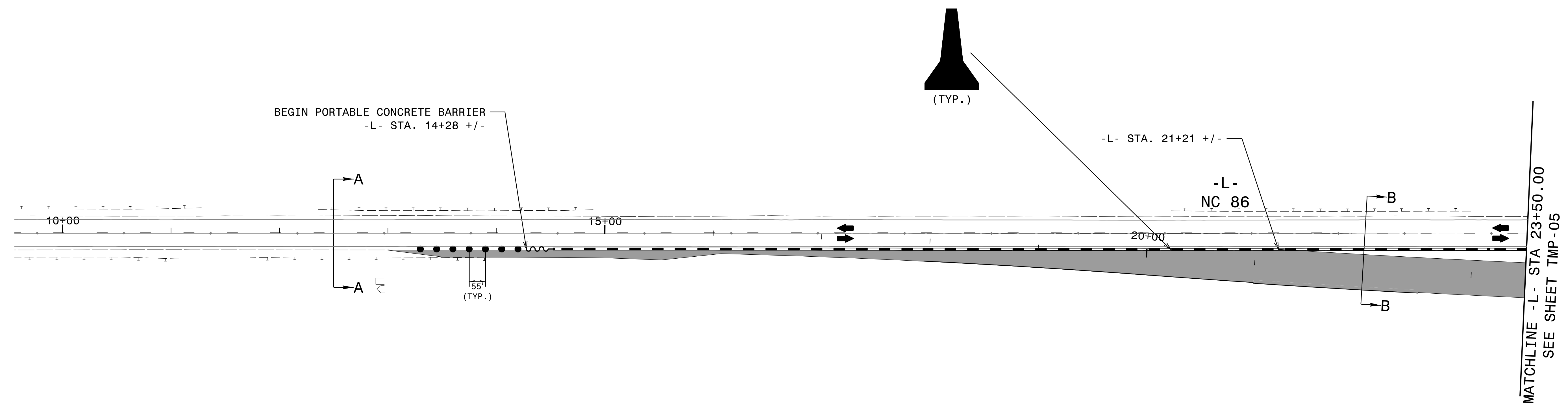
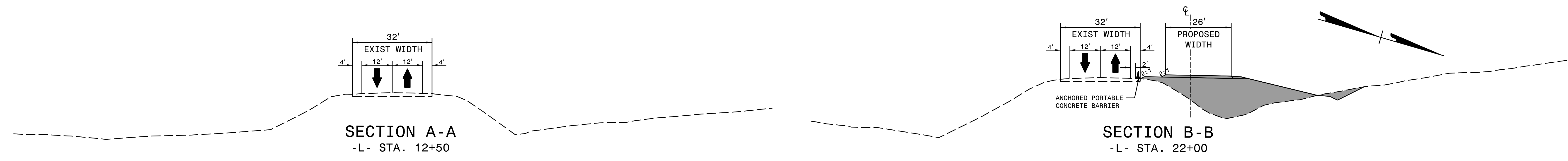
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TEMPORARY ANCHOR UNIT TYPE W-BEAM

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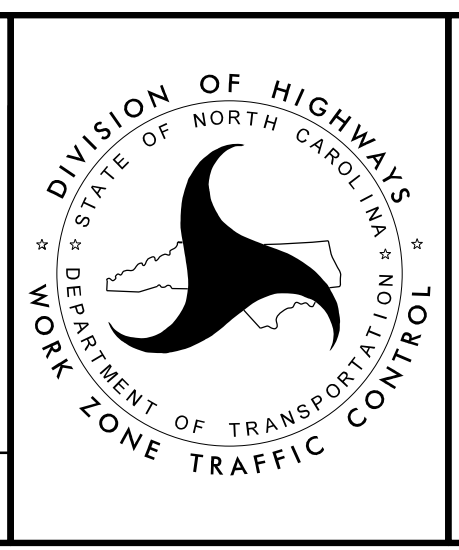
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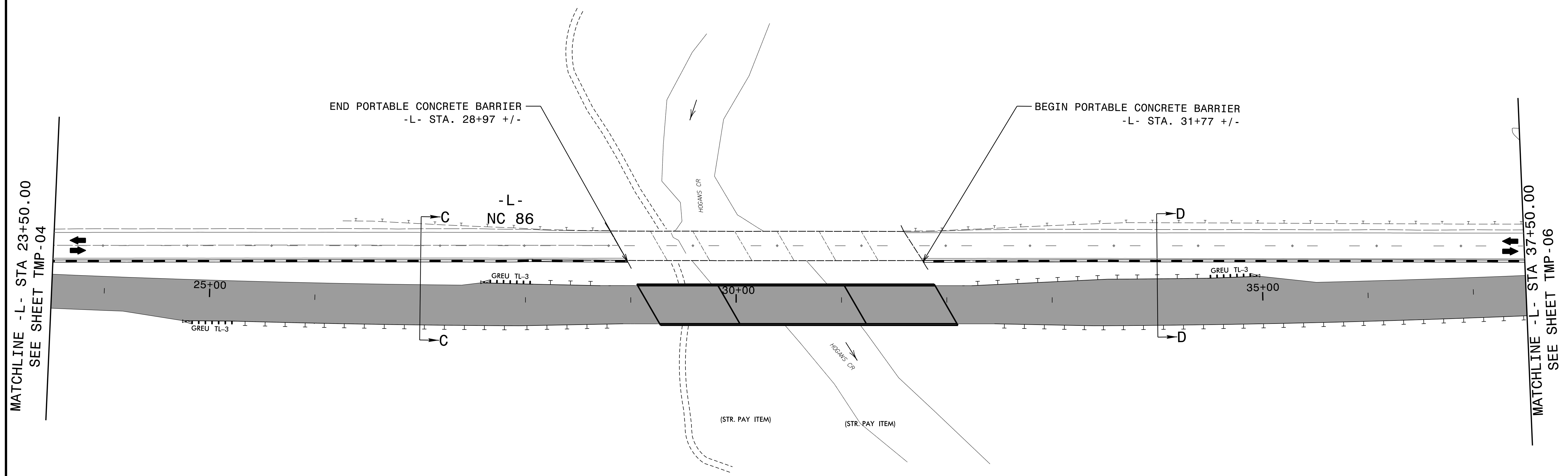
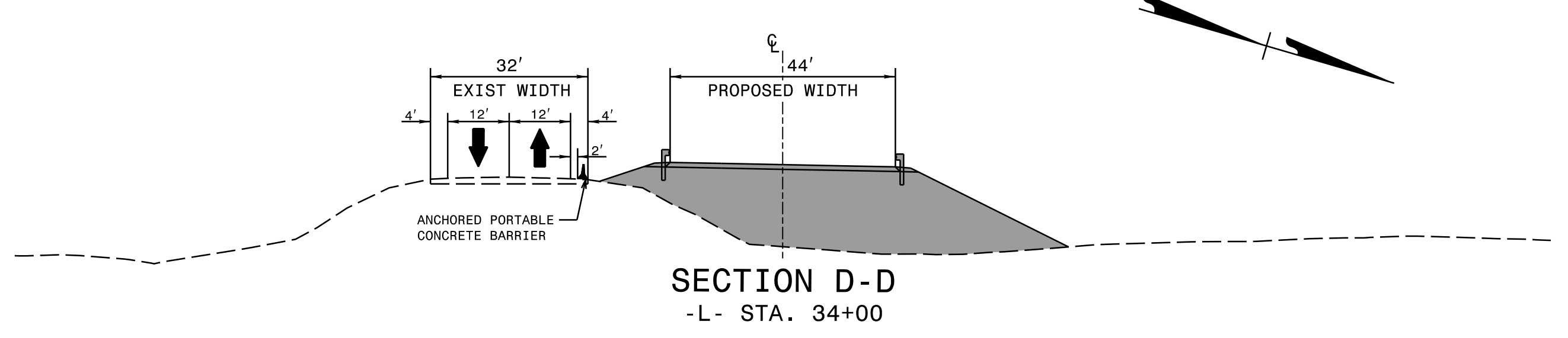
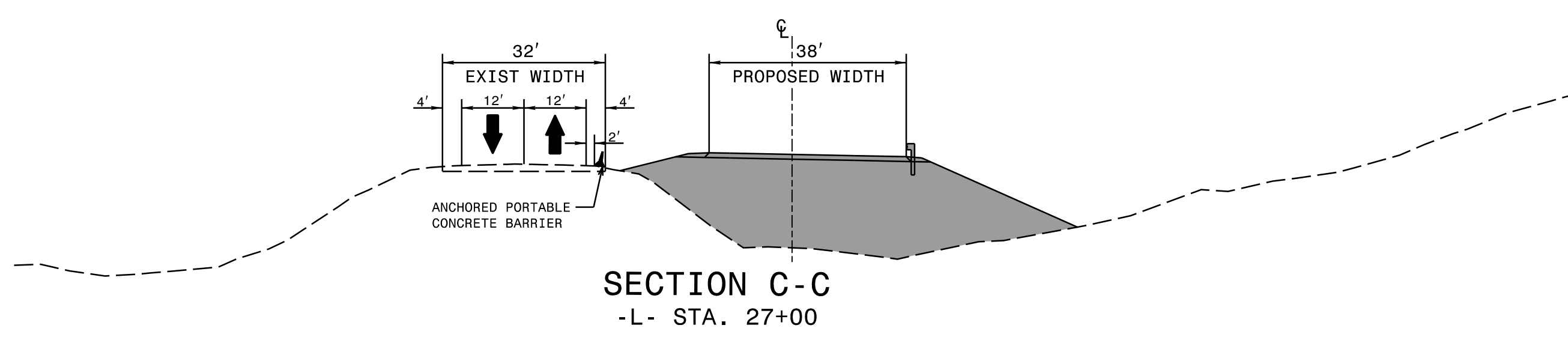
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SEAL 045230
 MICHAEL S. BURNS
 PROFESSIONAL ENGINEER
 NORTH CAROLINA

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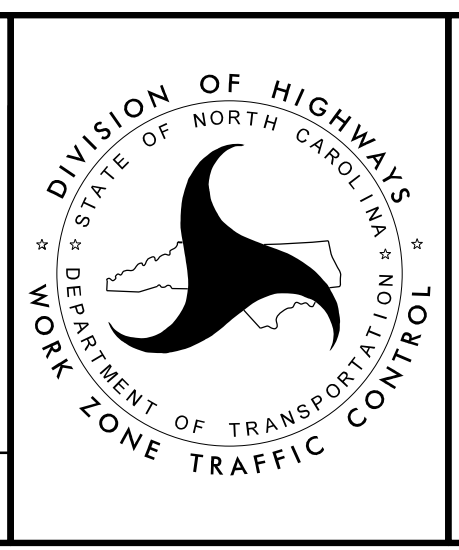
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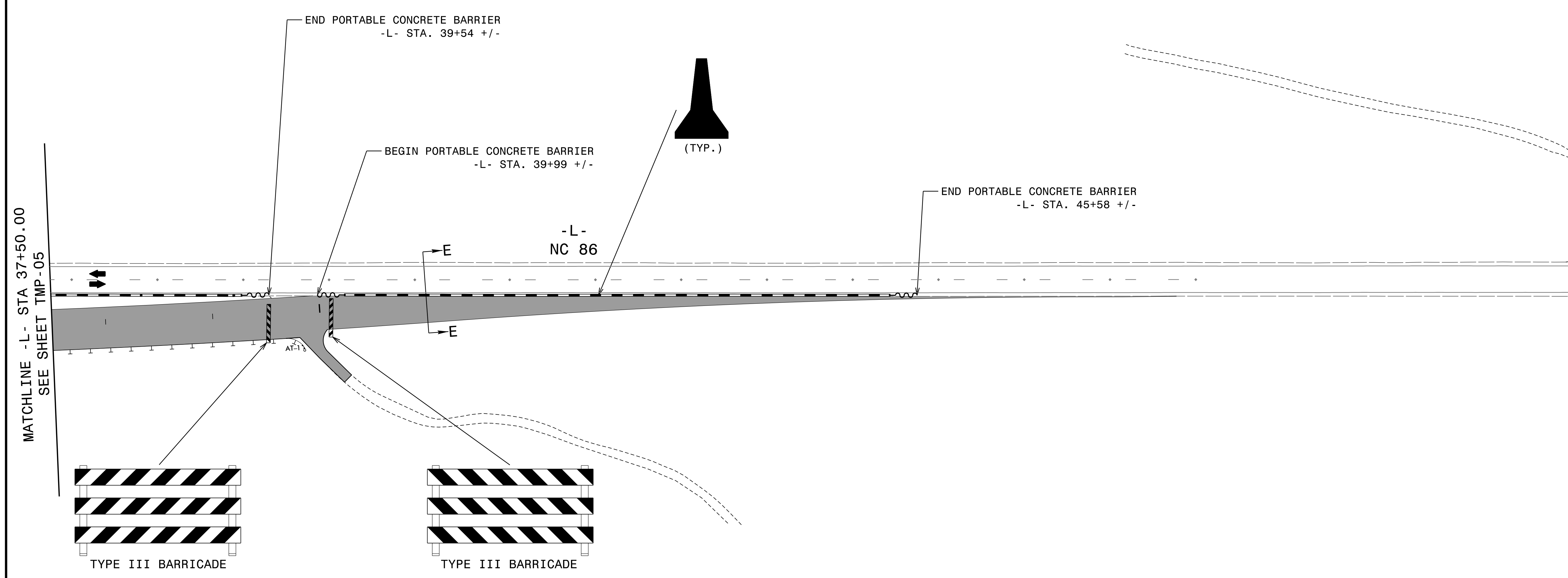
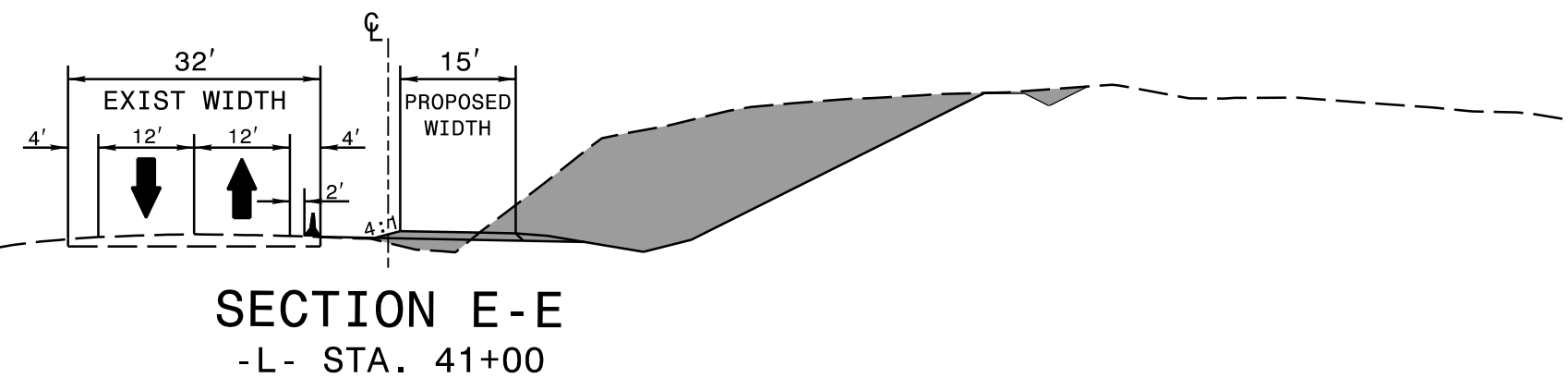
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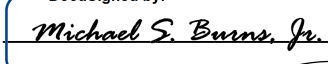
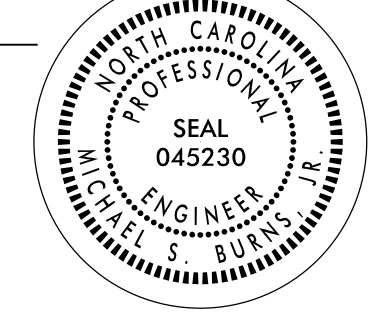


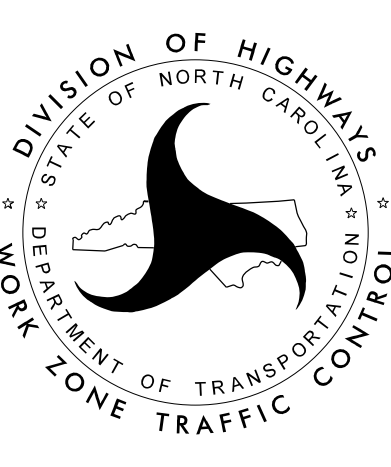
TEMPORARY TRAFFIC
 CONTROL PHASE 1
 DETAIL



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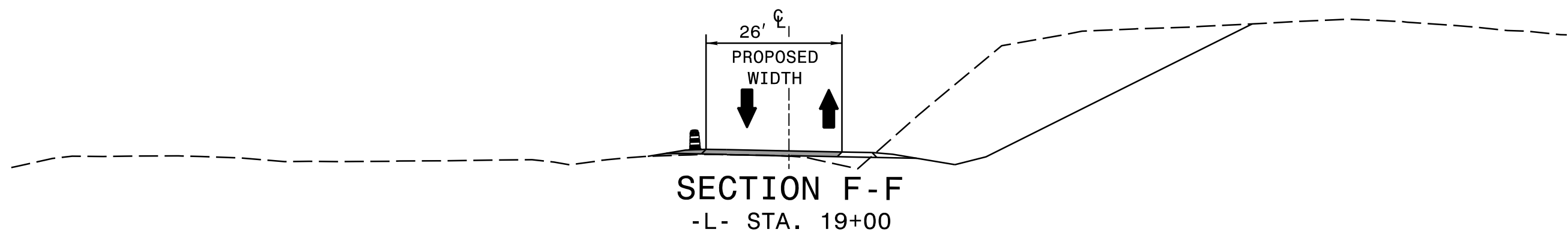

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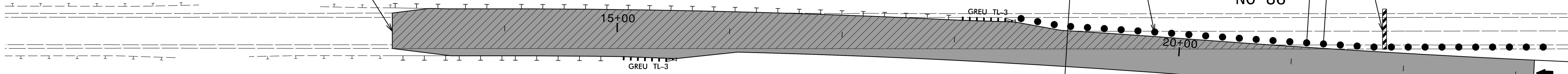


TEMPORARY TRAFFIC CONTROL PHASE 1 DETAIL

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BEGIN CONSTRUCTION
-L- STA. 13+00 +/-



END CONSTRUCTION
-L- STA. 23+16 +/-

BREAKLINE -L- STA 23+50.00
SEE SHEET TMP-08

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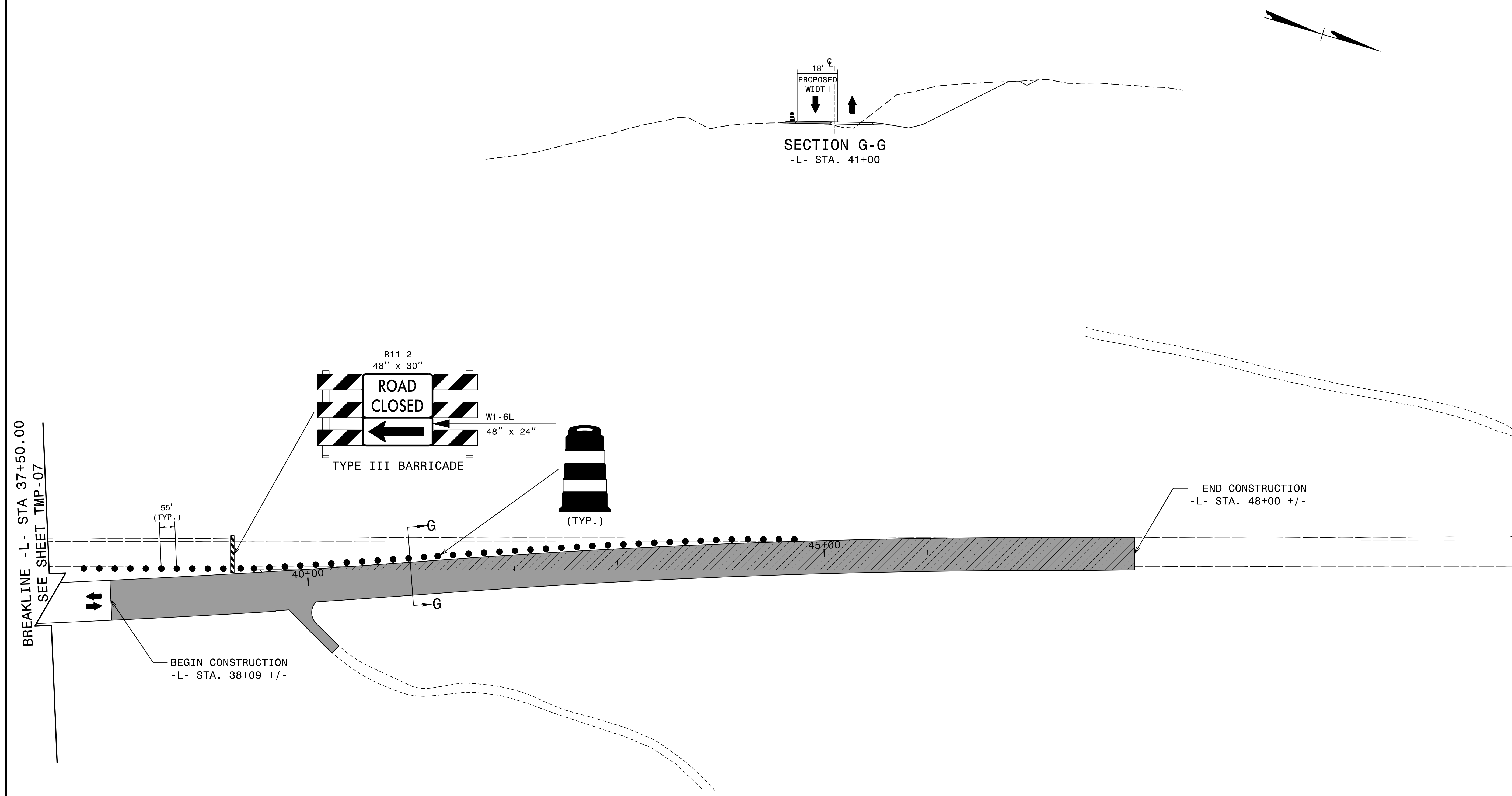
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TEMPORARY TRAFFIC
CONTROL PHASE 2
DETAIL



BREAKLINE - L- STA 37+50.00
SEE SHEET TMP-07

55'
(TYP.)

R11-2
48" x 30"
**ROAD
CLOSED**
TYPE III BARRICADE

W1-6L
48" x 24"

(TYP.)

BEGIN CONSTRUCTION
-L- STA. 38+09 +/-

40+00

G

G

45+00

END CONSTRUCTION
-L- STA. 48+00 +/-

SECTION G-G
-L- STA. 41+00

18'
PROPOSED
WIDTH

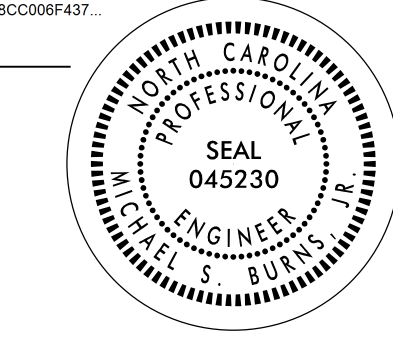
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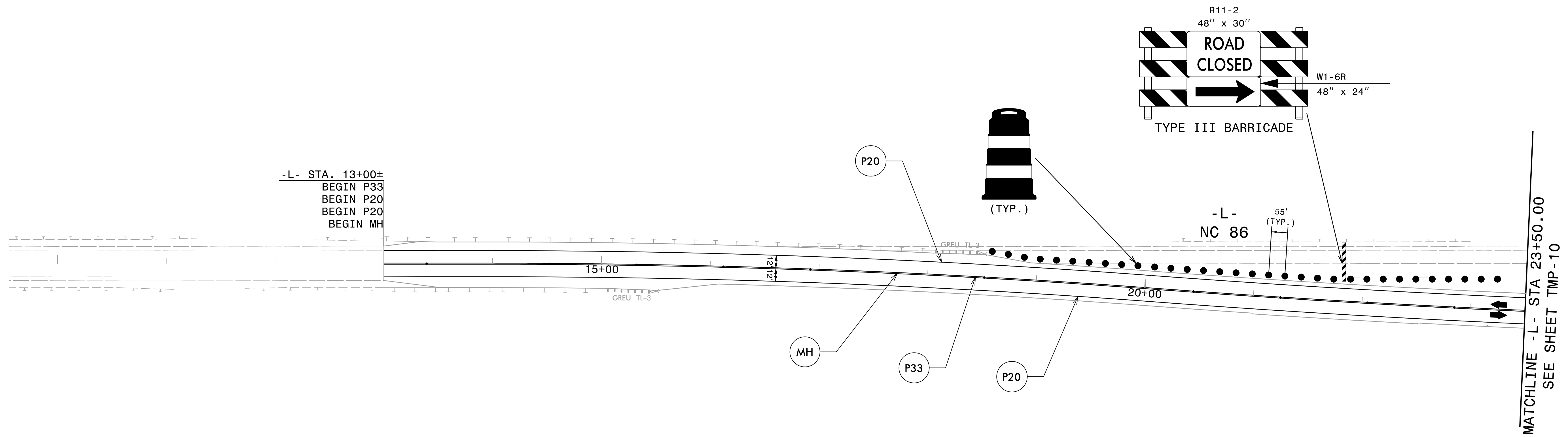
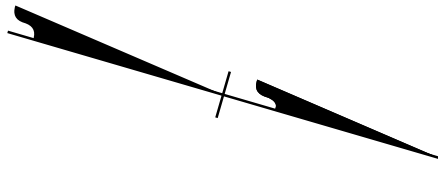


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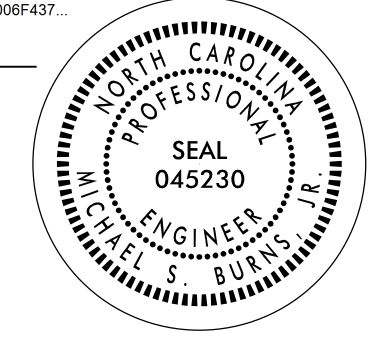
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TEMPORARY TRAFFIC
CONTROL PHASE 2
DETAIL




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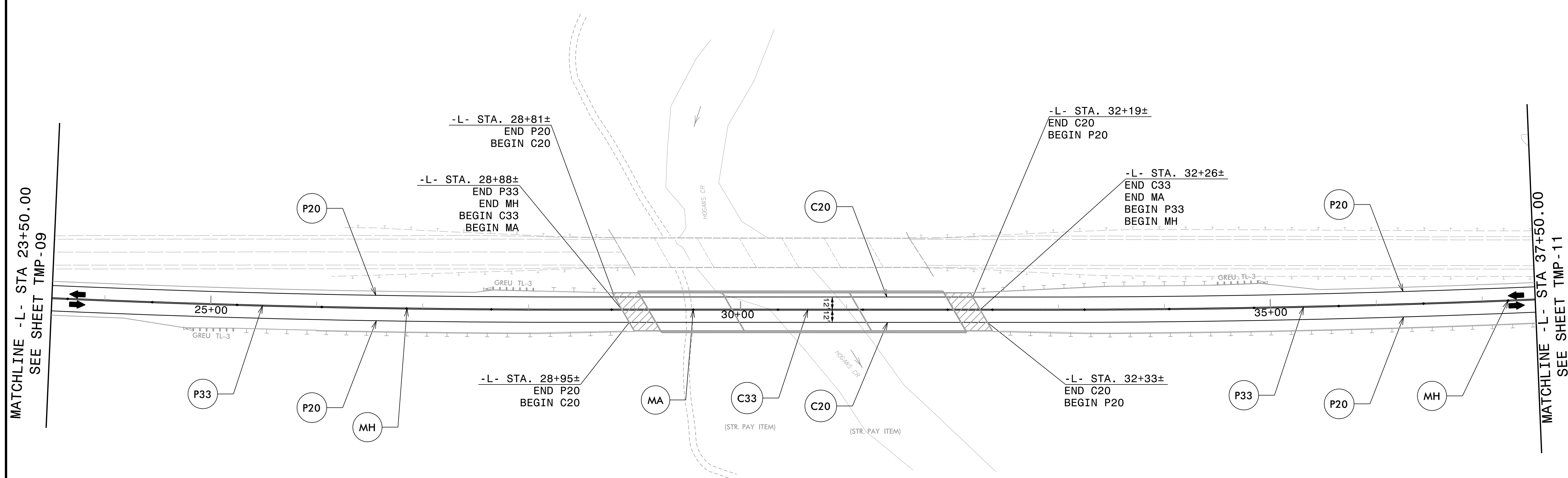
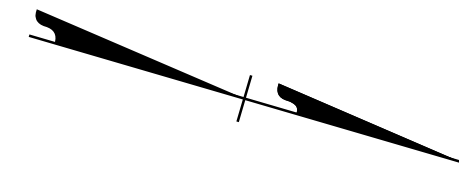

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TEMPORARY TRAFFIC
 CONTROL PHASE 2
 DETAIL



MATCHLINE -L- STA 23+50.00
SEE SHEET TMP-09

MATCHLINE -L- STA 37+50.00
SEE SHEET TMP-11

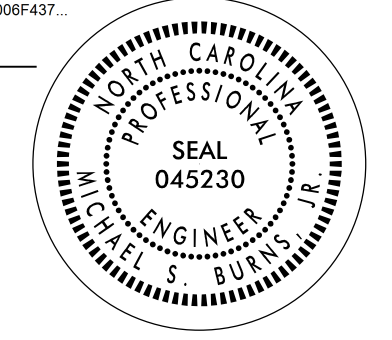
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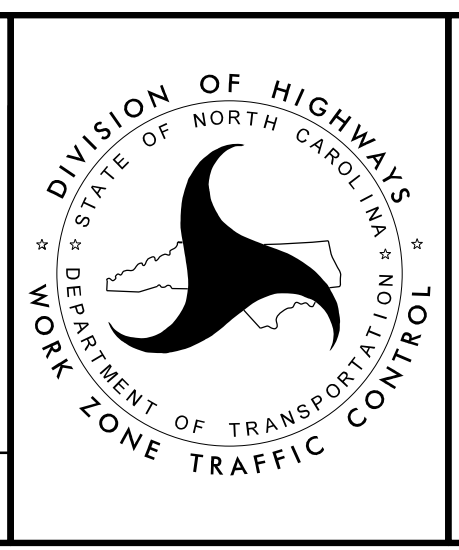
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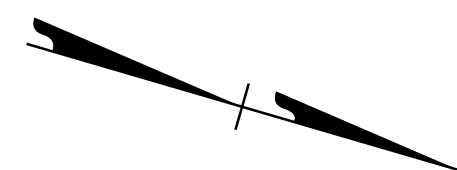
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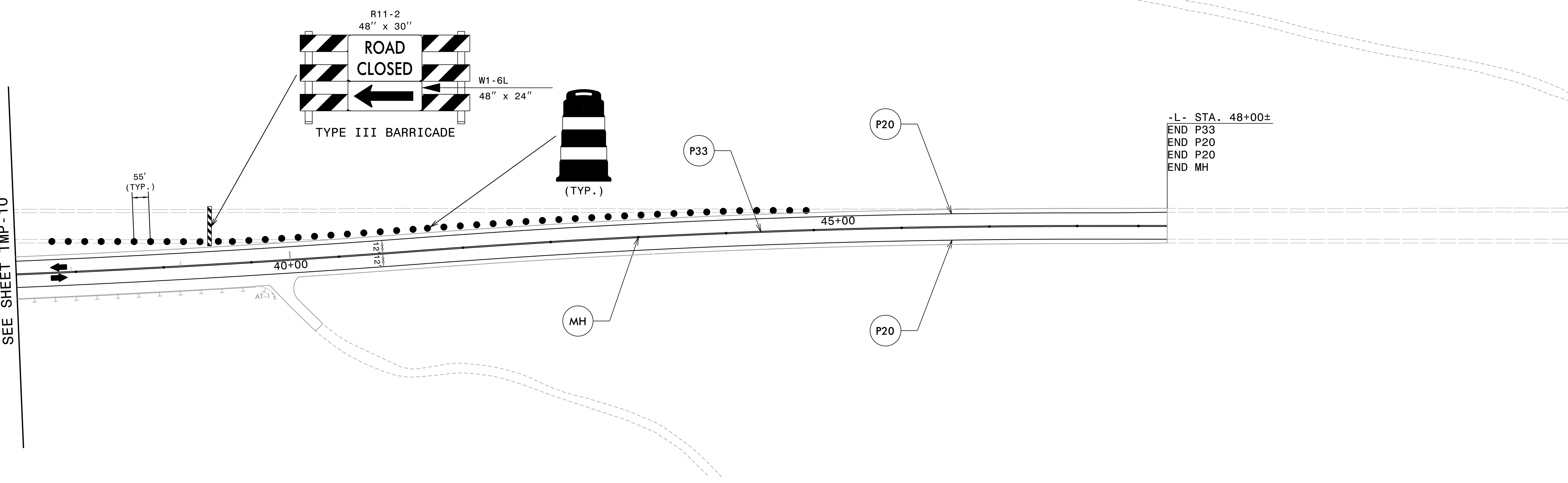
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**TEMPORARY TRAFFIC
CONTROL PHASE 2
DETAIL**



MATCHLINE -L- STA 37+50.00
SEE SHEET TMP-10



-L- STA. 48+00±
END P33
END P20
END P20
END MH

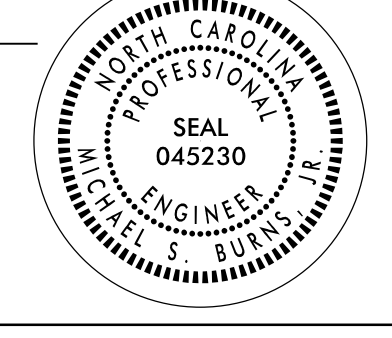
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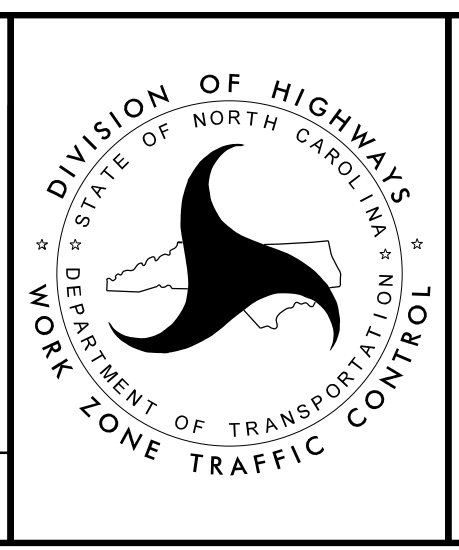
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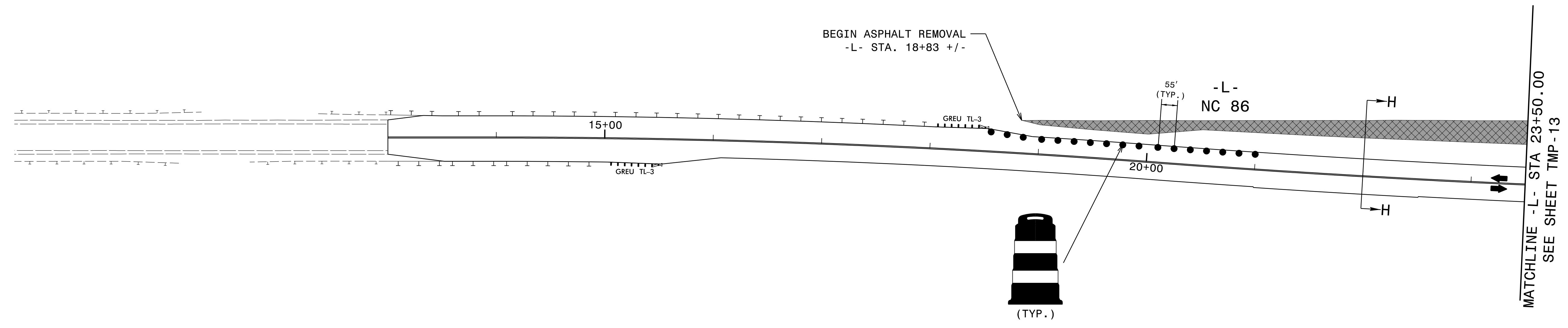
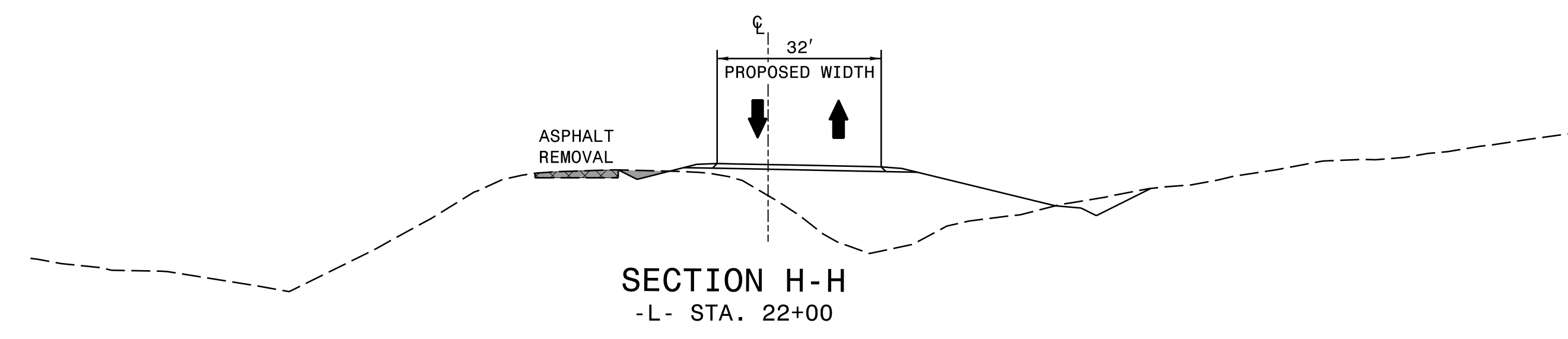
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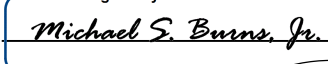
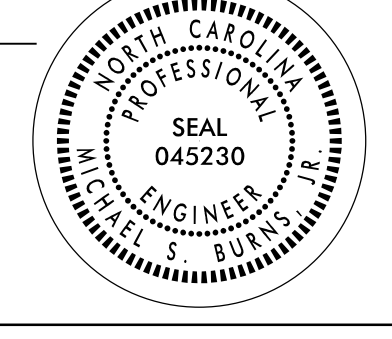


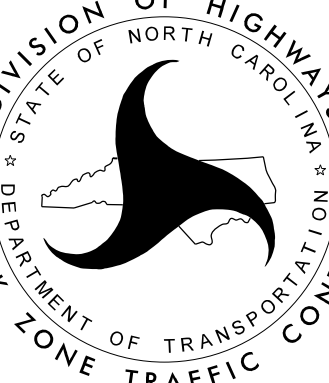
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CONTROL PHASE 2
DETAIL**



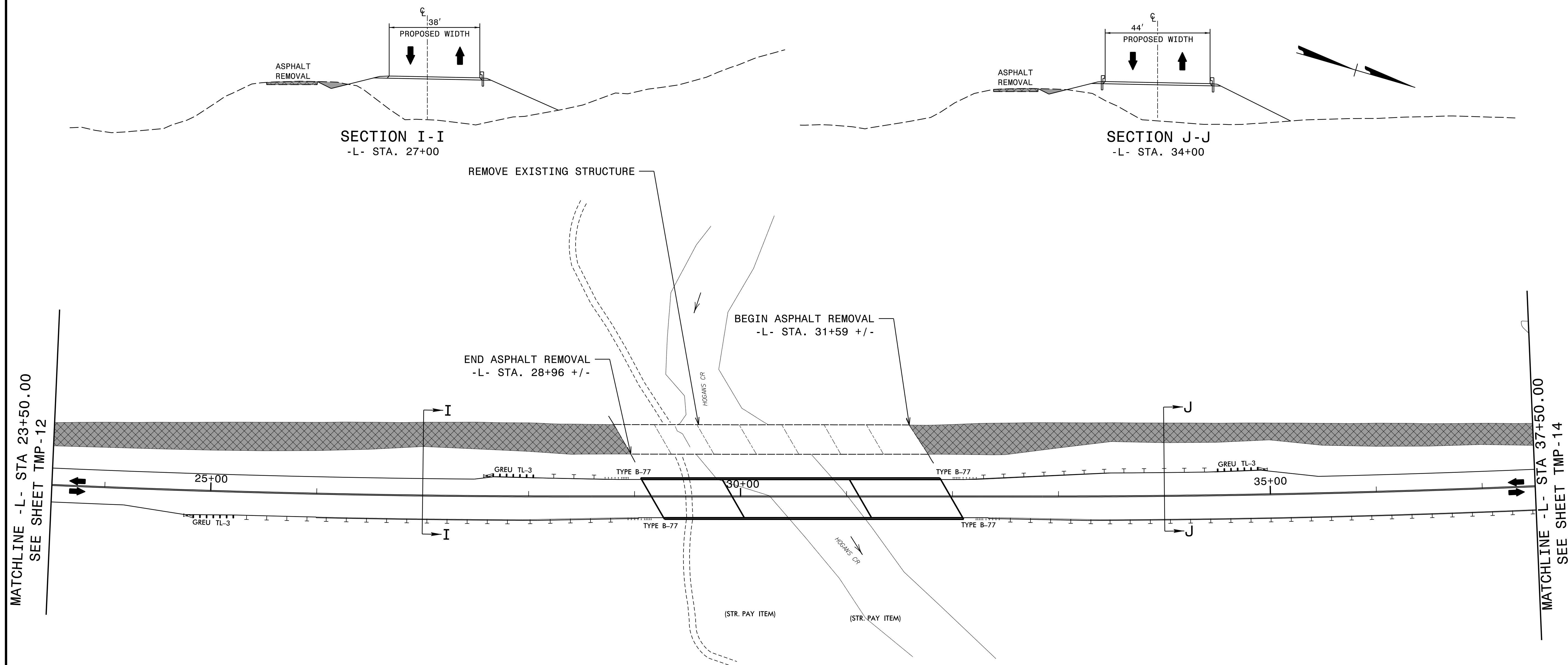
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CONTROL PHASE 3
DETAIL**



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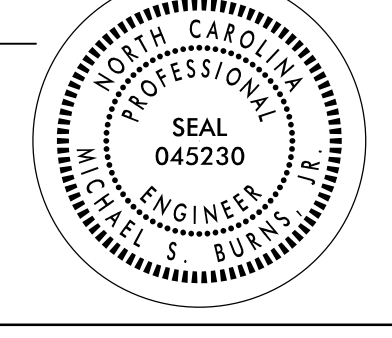
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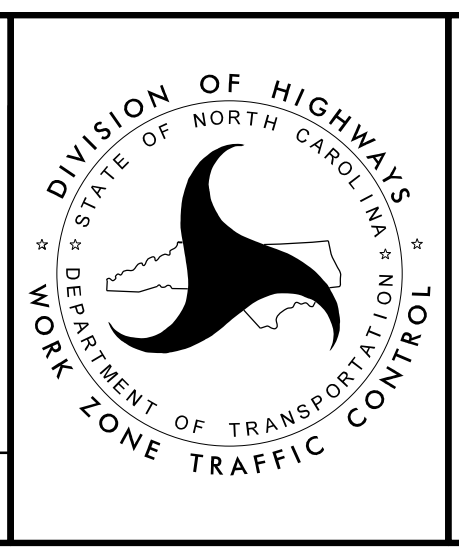
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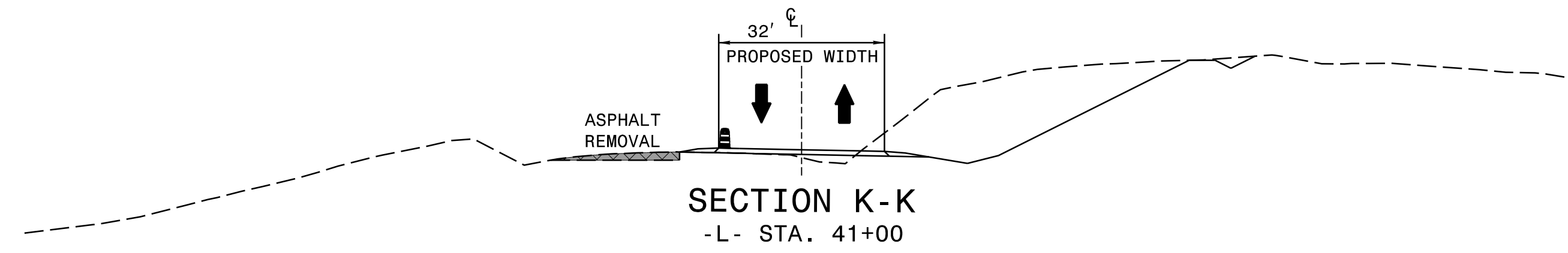
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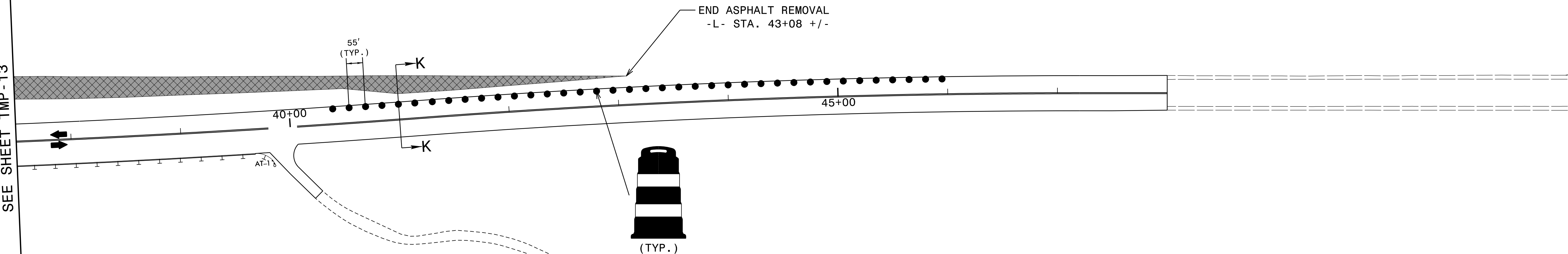
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 CONTROL PHASE 3
 DETAIL**



MATCHLINE -L- STA 37+50.00
 SEE SHEET TMP-13



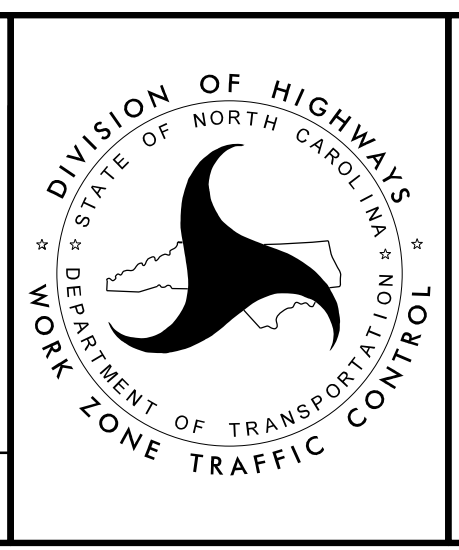
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