2

## STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO. SHEET NO. TCP-1

# PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION

# SWAIN COUNTY

## ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS"-PROJECT SERVICES UNIT-N.C. DEPARTMENT OF TRANSPORTATION-RALEIGH, N.C., DATED JULY 2006 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	<u>TITLE</u>
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD 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 PANELS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGERS
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - THRU LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
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1253.01	SNOWPLOWABLE RAISED PAVEMENT MARKERS
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1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

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TCP-2	PROJECT NOTES
TCP-3	PHASING
TCP-3A	TEMPORARY PAVEMENT MARKING SCHEDULE
TCP-4	DETAIL I
TCP-5	DETAIL II
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TCP-5B	DETOUR MAP AND SIGNINGS
TCP-6	DETAIL III
TCP-7	DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS

#### FINAL PAVEMENT MARKING PLANS

ADVANCED WORK ZONE WARNING SIGNS

PM-1	FINAL	PAVEMENT	MARKING	SCHEDULE
PM-2	FINAL	PAVEMENT	MARKING	PLAN

## [LEGEND]

#### **GENERAL**

NORTH ARROW
PROPOSED PVMT. ----- EXIST. PVMT.

DIRECTION OF TRAFFIC FLOW

WORK AREA

REMOVAL OF EXISTING PAVEMENT

#### TRAFFIC CONTROL DEVICES

T TYPE I BARRICADE

TYPE III BARRICADE

CONE

DRUM
SKINNY DRUM

FLASHING ARROW PANEL (TYPE C)

— STATIONARY SIGN

PORTABLE SIGN

STATIONARY OR PORTABLE SIGN

---- CRASH CUSHION

CHANGEABLE MESSAGE SIGN

TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)

POLICE

- FLAGGER

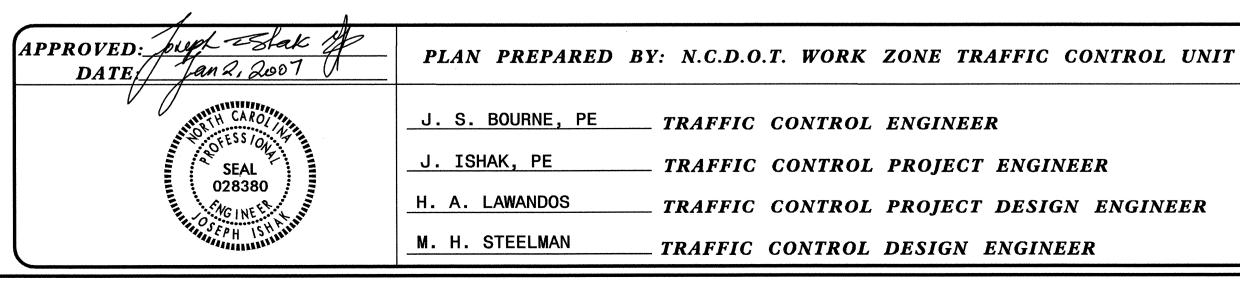
#### PAVEMENT MARKINGS

CRYSTAL/CRYSTAL PAVEMENT MARKER

◆ YELLOW/YELLOW PAVEMENT MARKER

CRYSTAL/RED PAVEMENT MARKER

PAVEMENT MARKING SYMBOLS



TIP PROJECT:

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

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

B) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS: THE TIME RESTRICTIONS DO NOT APPLY TO THE 4-LANE SECTION EAST OF SR 1368 (ACQUONI RD.).

ROAD NAME

DAY AND TIME RESTRICTIONS

1. US 19/US 441 BUS. & US 441 NORTH

MONDAY THRU THURSDAY FROM 11:00 AM TO 8:00 PM AND

FROM 10:00 AM FRIDAY TO 10:00 PM SUNDAY

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

#### ROAD NAME

1. US 19/US 441 BUS. & US 441 NORTH: THE TIME RESTRICTIONS DO NOT APPLY TO THE 4-LANE SECTION EAST OF SR 1368 (ACQUONI RD.).

#### HOLIDAY

- 1. FOR UNEXPECTED OCCURENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- 2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 10:00 AM. DECEMBER 31ST TO 10:00 PM JANUÁRY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY, THEN UNTIL 8:00 PM THE FOLLOWING TUESDAY.
- 3. FOR EASTER, BETWEEN THE HOURS OF 11:00 AM THURSDAY AND 8:00 PM MONDAY.
- 4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 10:00 AM FRIDAY TO 8:00 PM TUESDAY.
- 5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 10:00 AM THE DAY BEFORE INDEPENDENCE DAY AND 10:00 PM THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY, THEN BETWEEN THE HOURS OF 11:00 AM THE THURSDAY BEFORE INDEPENDENCE DAY AND 8:00 PM THE TUESDAY AFTER INDEPENDENCE DAY.

- FOR LABOR DAY, BETWEEN THE HOURS OF 10:00 AM FRIDAY AND 8:00 PM TÚESDAY.
- 7. FOR THANKSGIVING, BETWEEN THE HOURS OF 11:00 AM TUESDAY AND 8:00 PM MONDÂY.
- 8. FOR CHRISTMAS, BETWEEN THE HOURS OF 10:00 AM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00 PM THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS DAY.
- 9. FOR JULY POW WOW. BETWEEN THE HOURS OF 6:00 AM THE FRIDAY OF THE WEEK OF THE JULY POW WOW AND 8:00 PM THE FOLLOWING MONDAY AFTER THE WEEK OF THE JULY POW WOW AT THE CHIEF'S DESCRETION.
- 10. FOR THE CHILDREN'S TROUT DERBY ON THE FIRST WEEKEND IN AUGUST BETWEEN THE HOURS OF 6:00 AM THE FRIDAY OF THE WEEK OF THE CHILDREN'S TROUT DERBY AND 10:00 PM THE FOLLOWING SUNDAY AFTER THE WEEK OF THE CHILDREN'S TROUT DERBY.
- 11. FOR THE CHEROKEE INDIAN FAIR ON THE FIRST WEEKEND IN OCTOBER BETWEEN THE HOURS OF 6:00 AM THE FRIDAY OF THE WEEK OF THE CHEROKEE INDIAN FAIR AND 8:00 PM THE FOLLOWING MONDAY AFTER THE WEEK OF THE CHEROKEE INDIAN FAIR.
- D) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME

DAY AND TIME RESTRICTIONS

TO 11:00 PM SUNDAY

**DURATION AND** OPERATION

1. US 19/US 441 BUS. MONDAY THRU THURSDAY AND US 441 NORTH FROM 7:00 AM TO 11:00 PM AND FROM 7:00 AM FRIDAY

15 MINUTES ANY OPERARTION THAT REQUIRES THE CONTRACTOR TO STOP TRAFFIC

DO NOT CONDUCT SINGLE VEHICLE & MULTI-VEHICLE HAULING AS FOLLOWS:

ROAD NAME

DAY AND TIME RESTRICTIONS

1. US 19/US 441 BUS. & US 441 NORTH

**EVERY WEEKEND FROM** 10:00 AM FRIDAY TO 10:00 PM SUNDAY

MONDAY THRU THURSDAY FROM 11:00 AM TO 8:00 PM

DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR OTHERWISE DIRECTED BY THE ENGINEER

#### LANE AND SHOULDER CLOSURE REQUIREMENTS

- 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 40 FT (12m) 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.
- I) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT (1.5m) 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 (3m) 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, ON BOTH SIDES OF AN OPEN TRAVELWAY, WITHIN THE SAME LOCATION, ON A TWO-LANE, TWO-WAY ROAD.
- L) DO NOT PERFORM WORK INVOLVING HEAVY EQUIPMENT WITHIN 15 FT (5m) OF THE EDGE OF TRAVELWAY WHEN WORK IS BEING PERFORMED BEHIND A LANE CLOSURE ON THE OPPOSITE SIDE OF THE TRAVELWAY.
- M) DO NOT INSTALL MORE THAN 0.5 MILE OF LANE CLOSURE ON US 441, US 19 AND US 441 BUS., MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- N) DO NOT INSTALL MORE THAN ONE LANE CLOSURE, IN ANY ONE DIRECTION, ON US 441, US 19 AND US 441 BUS.
- O) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

#### PAVEMENT EDGE DROP OFF REQUIREMENTS

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 A DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 inches (50mm) ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 inches (75mm) ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

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

Q) DO NOT EXCEED A DIFFERENCE OF 2 inches (40mm) IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT (150m) IN ADVANCE AND A MINIMUM OF ONCE EVERY MILE THROUGHOUT THE UNEVEN AREA.

#### TRAFFIC PATTERN ALTERATIONS

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

#### SIGNING

S) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 100 FT (31m) FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRÍOR TO THE BEGINNING OF CONSTRUCTION.

WHEN NO WORK IS BEING CONDUCTED FOR A PERIOD LONGER THAN ONE WEEK, REMOVE OR COVER ALL ADVANCE WORK ZONE WARNING SIGNS. AS DIRECTED BY THE ENGINEER, AT NO COST TO THE DEPARTMENT.

- T) PROVIDE PERMANENT SIGNING WITHIN THE PROJECT LIMITS.
- U) PROVIDE DETOUR SIGNING WITHIN AND OFF THE PROJECT LIMITS.
- V) COVER OR REMOVE ALL DETOUR SIGNING WITHIN AND OFF THE PROJECT LIMITS WHEN A DETOUR IS NOT IN OPERATION.
- ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

#### TRAFFIC BARRIER

INSTALL PORTABLE CONCRETE BARRIER/WATER-FILLED BARRIER ACCORDING TO THE TRAFFIC CONTROL PLAN A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE PORTABLE CONCRETE BARRIER/WATER-FILLED BARRIER IS INSTALLED AT ANY LOCATION, PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLAN OR AS DIRECTED BY THE ENGINEER.

ONCE PORTABLE CONCRETE BARRIER/WATER-FILLED BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE PORTABLE CONCRETE BARRIER/ WATER-FILLED BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE/ RESET PORTABLE CONCRETE BARRIER/WATER-FILLED BARRIÈR AT NO CÓST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLAN, BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL PORTABLE CONCRETE BARRIER/WATER-FILLED BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE PORTABLE CONCRETE BARRIER/WATER-FILLED BARRIER AGAINST THE TRAFFIC FLOW, BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (35 MPH) TO CLOSE OR KEEP CLOSED THE SECTION OF THE ROADWAY UNTIL THE BARRIER CAN BE PLACED OR AFTER BARRIER IS REMOVED.

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

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

POSTED SPEED LIMIT

MINIMUM OFFSET

40 OR LESS

15 FT 20 FT

#### TRAFFIC CONTROL DEVICES

- SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT (3m) ON-CENTER IN RADII, AND 3 FT (1m) OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT.
- AA) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY. STAGGER OR OVERLAP BARRICADES TO ALLOW FOR INGRESS OR EGRESS.
- BB) PLACE SETS OF THREE DRUMS PERPENDICULAR TO THE EDGE OF THE TRAVELWAY ON 500 FT (150m) CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC. THESE DRUMS SHALL BE IN ADDITION TO CHANNELIZING DEVICES.

#### PAVEMENT MARKINGS AND MARKERS

CC) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME

MARKING

**POLYUREA** 

MARKER

SNOWPLOWABLE RAISED

MARKER

1. ALL ROADS 2. BRIDGE DECK

POLYUREA PERMANENT RAISED

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

ROAD NAME

2. BRIDGE DECK

1. ALL ROADS

MARKING

(REMOVABLE TAPE)

TEMPORARY RAISED COLD APPLIED PLASTIC TEMPORARY RAISED

EE) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING

- FF) REPLACE ANY PAVEMENT MARKINGS THAT HAVE BEEN DAMAGED BY THE END OF EACH DAY'S OPERATION.
- GG) PLACE AT LEAST TWO APPLICATIONS OF PAINT ON NEW ASPHALT WITH TEMPORARY TRAFFIC PATTERNS WHICH WILL REMAIN IN PLACE OVER THREE (3) MONTHS. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON SUFFICIENT DRÝING TIME. AS DETERMINED BY THE ENGINEER.

#### TEMPORARY/FINAL SIGNALS

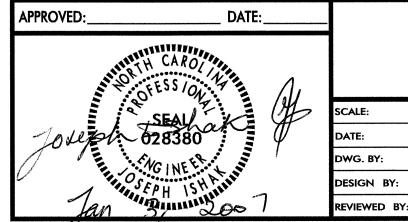
HH) SHIFT AND REVISE ALL SIGNAL HEADS AS SHOWN ON THE SIGNAL PLANS.

#### **MISCELLANEOUS**

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

### LOCAL NOTES

- 1) LANE CLOSURES AND ROAD CLOSURES ON SR 1368 (ACQUONI RD.) AND SR 1360 (OLD RIVER RD.) WILL BE PERMITTED AS SHOWN IN THE PLAN OR AS DIRECTED BY THE ENGINEER.
- 2) COORDINATE CONSTRUCTION ACTIVITIES WITH CONTRACTOR ON PROJECT R-4758 TO AVOID CONFLICTS.



## PROJECT NOTES

NONE **DEC.06** MHS MHS DESIGN BY:



**REVISIONS** 

- STEP 1) USING SHEET TCP-7, INSTALL ADVANCE WORK ZONE WARNING SIGNS ON ALL ROADS.
- STEP 2) USING RSD 1101.02, SHEETS 1 OF 9 AND 4 OF 9, PERFORM THE FOLLOWING:
  AT THE END OF EACH WORK DAY, RETURN TRAFFIC TO THE EXISTING PATTERN ON ALL ROADS.
  - -BEGIN DRAINAGE WORK WITHIN THE PROJECT LIMITS.
  - -BEGIN INSTALLATION OF TEMPORARY SIGNAL (14-0400T1) AT THE US 441 NORTH/US 441 BUS. INTERSECTION FOR THE TEMPORARY TRAFFIC PATTERN TO BE USED FOR THE UPCOMING -Y-TRAFFIC SHIFT. COVER SIGNAL HEADS UNTIL READY TO ACTIVATE. (SEE SIGNAL PLANS).
  - -INSTALL AND ACTIVATE TEMPORARY SIGNAL (14-0796T1) AT THE US 441 NORTH/ACQUONI RD. INTERSECTION AND ADJUST STOP BAR LOCATIONS AS SHOWN ON SHEET TCP-4. (SEE SIGNAL PLANS).
  - -INSTALL WATER-FILLED BARRIER ALONG -Y1- (ACQUONI RD.) AS SHOWN ON TCP-4.
  - -CONSTRUCT TEMPORARY WORK BRIDGE FOR PROPOSED STAGE I STRUCTURE WORK.
- STEP 3) BEGIN CONSTRUCTION OF STAGE I STRUCTURE AND ROADWAY FROM -L- STA. 12+78+/- TO -L- STA. 16+40+/- UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE. (SEE SHEET TCP-4).
  - -COMPLETE INSTALLATION OF TEMPORARY SIGNAL (14-0400T1) BEGUN IN STEP 2.
- STEP 4) USING RSD 1101.02, SHEETS 1 OF 9 AND 4 OF 9, PERFORM THE FOLLOWING WORK AS SHOWN ON SHEET TCP-5:
  - -REMOVE EXISTING CONCRETE ISLAND AT THE US 441 NORTH/US 441 BUS. INTERSECTION.
  - -REMOVE THE EXISTING CONFLICTING MARKINGS AND INSTALL TEMPORARY PAVEMENT MARKING AND TEMPORARY MARKERS ON -Y- (US 441 NORTH) FROM -Y- STA. 10+00+/- TO -Y- STA. 13+70+/- AND SHIFT -Y- TRAFFIC TO A TEMPORARY TRAFFIC PATTERN AS SHOWN ON SHEET TCP-5. UNCOVER AND ACTIVATE TEMPORARY TRAFFIC SIGNAL (14-0400T1) AT THE US 441 NORTH/US 441 BUS. INTERSECTION. (SEE SIGNAL PLANS).
- STEP 5) USING RSD 1101.02, SHEETS 1 OF 9 AND 4 OF 9, PERFORM THE FOLLOWING WORK AS SHOWN ON TCP-5:
  - -CONSTRUCT WIDENING WORK UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE IN THE FOLLOWING LOCATIONS:
  - (A) LEFT SIDE OF -Y- (US 441 NORTH) FROM -Y- STA. 10+00+/- TO -Y- STA. 13+70+/-
  - -BEGIN CONSTRUCTION OF WIDENING WORK IN THE FOLLOWING LOCATIONS UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT:
  - (A) LEFT SIDE OF -L- (US 19) FROM -L- STA. 10+42+/- TO -Y- STA. 13+14+/-
  - (B) LEFT SIDE OF -L- (US 19) FROM -L- STA. 12+20+/- TO -L- STA. 12+78+/-
  - -USING RSD 1101.03, SHEETS 8 OF 9, 9 OF 9, AND FLAGGERS, BEGIN INSTALLATION OF TEMPORARY SIGNALS (14-0400T2) AND (14-0796T2) AT THE US 441 NORTH/US 441 BUS. INTERSECTION AND THE US 441 BUS./SR 1368 (ACQUONI RD.) INTERSECTION RESPECTIVELY FOR THE TRAFFIC PATTERN SHOWN ON SHEET TCP-6. COVER SIGNAL HEADS UNTIL READY TO ACTIVATE. (SEE SIGNAL PLANS). (SEE CONTRACT TIMES AND LIQUIDATED DAMAGES).

WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK REQUIRED IN STEP 6 THROUGH STEP 9 WITHIN THE TIME PERIOD BETWEEN NOVEMBER 1st AT 12:00 A.M. AND 12:00 A.M. THE FRIDAY BEFORE THE FOLLOWING MEMORIAL DAY. SEE CONTRACT TIME AND LIQUIDATED DAMAGES.

- STEP 6) USING RSD 1101.02, SHEET 4 OF 9, AS NECESSARY, PERFORM THE FOLLOWING WORK:
  - -CLOSE THE RIGHT LANE OF US 19 AS SHOWN ON SHEET TCP-5A. RELOCATE THE "ROAD WORK AHEAD" AND "END ROAD WORK" SIGNS ON THE EASTERN END OF PROJECT AS SHOWN ON SHEET TCP-5A.
  - -INSTALL OFFISTE DETOUR SIGNS AS SHOWN ON TCP-5B. USING RSD 1101. 03, SHEET 1 OF 9, ON THE NORTH END OF -Y1- (ACQUONI RD.) IN CONJUNCTION WITH SHEETS TCP-5A AND TCP-5B, CLOSE -Y1- (ACQUONI RD.) AND DETOUR TRAFFIC AS SHOWN ON SHEETS TCP-5A AND TCP-5B.
  - -COVER THE SIGNAL HEADS AT THE US 441 BUS./SR 1368 (ACQUONI RD.) INTERSECTION.
  - -REMOVE CONFLICTING PAVEMENT MARKING AT THE US 441 BUS./SR 1368 (ACQUOINI RD.) INTERSECTION AND PLACE TEMPORARY PAVEMENT MARKING AND TEMPORARY MARKERS AS SHOWN ON SHEET TCP-5A.
- STEP 7) COMPLETE THE PROPOSED STAGE I STRUCTURE AND ROADWAY WORK FROM -L- STA. 12+78+/TO -L- STA. 16+40+/- UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.
  REMOVE WATER-FILLED BARRIER PREVIOUSLY INSTALLED ALONG -Y1- (ACQUONI RD.).
  (SEE SHEET TCP-5A).
  - -COMPLETE CONSTRUCTION OF WIDENING UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN THE FOLLOWING LOCATIONS AS SHOWN ON SHEET TCP-5A:
  - (A) LEFT SIDE OF -L- (US 19) FROM -L- STA. 10+42+/- TO -Y- STA. 13+14+/-
  - (B) LEFT SIDE OF -L- (US 19) FROM -L- STA. 12+20+/- TO -L- STA. 12+78+/-
  - -AWAY FROM TRAFFIC, CONSTRUCT -Y1- FROM -Y1- STA. 13+20+/- TO THE INTERSECTION WITH US 441 BUS. AND THE LEFT SIDE OF -L- FROM THE INTERSECTION WITH -Y1- TO -L- STA. 20+00+/- UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE. (REFER TO RSD 1101.02, SHEET 1 OF 9 AND 4 OF 9, AS NECESSARY).

-USING RSD 1101.03, SHEET 8 OF 9, 9 OF 9, AND FLAGGERS, COMPLETE INSTALLATION OF TEMPORARY SIGNALS (14-0400T2) AND (14-0796T2) BEGUN IN STEP 5. COVER SIGNAL HEADS UNTIL READY TO ACTIVATE. (SEE SIGNAL PLANS). (SEE CONTRACT TIMES AND LIQUIDATED DAMAGES).

WORK IN CONTINUOUS MANNER TO COMPLETE THE WORK REQUIRED IN STEP 8 AND STEP 9.

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- STEP 8) USING RSD 1101.02, SHEETS 1 OF 9 AND 4 OF 9, PERFORM THE FOLLOWING WORK:
- -BEGIN INSTALLATION OF PCB ON -L- (US 441 BUS.) FROM -L- STA. 12+83+/- TO
  - -L- STA. 16+95+/- AS SHOWN ON SHEET TCP-6. PROTECT THE EXPOSED END OF PCB WITH A TMIA UNTIL A SUITABLE END TREATMENT IS ATTACHED AS DIRECTED BY THE ENGINEER.
  - -REMOVE EXISTING MARKINGS ON -L- (US 441 BUS.) THAT CONFLICT WITH THE TEMPORARY TRAFFIC PATTERN SHOWN ON TCP-6.
  - -COVER ANY EXISTING SIGNS THAT CONFLICT WITH THE TEMPORARY TRAFFIC PATTERN SHOWN ON TCP-6.
  - -CONSTRUCT TIE-INS AND PLACE TEMPORARY PAVEMENT MARKINGS AND TEMPORARY MARKERS ON ALL ROADS AS SHOWN ON SHEET TCP-6.
- STEP 9) USING RSD 1101.02, SHEETS 1 OF 9 AND 4 OF 9, SIMULTANEOUSLY PERFORM THE FOLLOWING
  - A) REMOVE THE OFFSITE DETOUR SIGNS AND ROAD CLOSURE SIGNS AND DEVICES AND OPEN -Y1- (ACQUONI RD.) TO TRAFFIC AS SHOWN ON SHEET TCP-6.
  - B) ACTIVATE THE TEMPORARY SIGNALS (14-0400T2) AND (14-0796T2) AT THE US 441 NORTH/US 441 BUS. INTERSECTION AND THE US 441 BUS./SR 1368 (ACQUONI RD.) INTERSECTION RESPECTIVELY AND SHIFT -L- (US 441 BUS.) AND -Y- (US 441 NORTH) TRAFFIC TO THE TEMPORARY TRAFFIC PATTERNS SHOWN ON SHEET TCP-6.
  - C) COMPLETE PCB INSTALLATION FROM -L- STA. 12+83+/- TO -L- STA. 16+95+/- BEGUN IN STEP 8.
  - D) RELOCATE THE "ROAD WORK AHEAD" AND THE "END ROAD WORK" SIGNS ON THE EASTERN END OF THE PROJECT BACK TO THE ORIGINAL LOCATION.
- STEP 10) USING RSD 1101.02, SHEETS 1 OF 9 AND 4 OF 9, AS NECESSARY, PERFORM THE FOLLOWING WORK:
  - -REMOVE EXISTING BRIDGE AND CONSTRUCT TEMPORARY WORK BRIDGE FOR PROPOSED STAGE II STRUCTURE.

-CONSTRUCT STAGE II STRUCTURE AND APPROACHES UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE IN THE FOLLOWING LOCATIONS:

- A) RIGHT SIDE OF -Y- (US 441 NORTH) FROM -Y- STA. 10+00+/- TO -Y- STA. 13+14+/-
- B) RIGHT SIDE OF -L- (US 441 BUS.) FROM -L- STA. 12+50+/- TO -L- STA. 20+00+/C) LEFT SIDE OF -Y- SR 1360 (OLD RIVER RD.) FROM -Y- STA. 14+25+/- TO
  -Y- STA. 15+00+/-
- -USING RSD 1101.02, SHEETS 1 OF 9 AND 4 OF 9, AS NEEDED, BEGIN INSTALLATION OF PROPOSED FINAL SIGNALS (14-0400 FINAL) AND (14-0796 FINAL) AT THE US 441 NORTH/US 441 BUS. INTERSECTION AND AT THE US 441 BUS./SR 1368 (ACQUONI RD.) INTERSECTION RESPECTIVELY. (SEE SIGNAL PLANS).
- STEP 11) USING RSD 1101.02, SHEETS 1 OF 9 AND 4 OF 9, PERFORM THE FOLLOWING WORK:
  - -COMPLETE DRAINAGE WORK WITHIN THE PROJECT LIMITS.
  - -REMOVE PCB INSTALLED IN STEP 8 ON -L- (US 441 BUS.)
  - -CONSTRUCT REMAINING TIE-INS AND PLACE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS AND FINAL MARKERS ON ALL ROADS. SEE FINAL PAVEMENT MARKING SCHEDULE (PM-1) AND PLAN (PM-2).
  - -COMPLETE PROPOSED FINAL SIGNAL INSTALLATION AND ACTIVATE THE PROPOSED SIGNALS (14-0400 FINAL) AND (14-0796 FINAL) AT THE US 441 NORTH/US 441 BUS. INTERSECTION AND AT THE US 441 BUS./SR 1368 (ACQUONI RD.) INTERSECTION RESPECTIVELY. (SEE SIGNAL PLANS).
- STEP 12) REMOVE ALL WORK ZONE TRAFFIC CONTROL DEVICES INCLUDING CONFLICTING SIGNS AND OPEN ALL ROADS TO THE FINAL TRAFFIC PATTERN.

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PROJ. REFERENCE NO. SHEET NO.

B-4696
TCP-3A

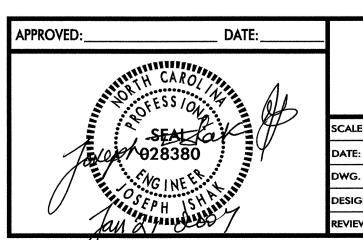
# TEMPORARY PAV'T MARKING SCHEDULE

PAY ITEM QUANTITY

SYMBOL DESCRIPTION **BREAKDOWN** TOTAL QUANTITY **TEMPORARY** PAVEMENT MARKINGS PAINT(24") TEMPORARY PAVEMENT MARKING 536 LF Ρ4 WHITE STOPBAR (2X) 536 LF **TOTAL** COLD APPLIED PLASTIC (24") Type 4 - Removable Tape **C5** WHITE STOPBAR 22 TOTAL 22 LF COLD APPLIED PLASTIC (4") Type 4 - Removable Tape WHITE EDGELINE 400 LF LF 2 FT. WHITE MINISKIP 25 CE LF WHITE SOLID LANE LINE 92 CIYELLOW DOUBLE CENTER TOTAL 917 LF PAINT(4") 9132 LF WHITE EDGELINE (2X) 767 LF 10 FT. WHITE SKIP (2X) 340 2 FT. WHITE MINISKIP (2X) 3054 LF WHITE SOLID LANE LINE (2X) 2 FT. YELLOW MINISKIP (2X) 45 PΙ YELLOW DOUBLE CENTER (2X) 14800 **TOTAL** 28138 LF PAINT(8") YELLOW DIAGONAL (2X) 292 WHITE CROSSWALK LINE (2X) 1180 LF PX TOTAL 1472 LF PAINT MARKING CHARACTERS QΙ ALPHANUMERIC CHAR. (2X) 32 EA **TOTAL** 32 EA PAINT MARKING SYMBOLS LEFT TURN ARROW (2X) EA 22 EA RIGHT TURN ARROW (2X) EA STRAIGHT ARROW (2X) 20 EA COMBO.STRAIGHT/LEFT (2X) 16 EA COMBO.STRAIGHT/RIGHT (2X) TOTAL 82 EA COLD APPLIED PLASTIC PAVEMENT MARKING SYMBOL Type 4 - Removable Tape LEFT TURN ARROW 1 EA 1 EA STRAIGHT ARROW **TOTAL** 2 EA **MARKERS** TEMPORARY RAISED PAVEMENT MARKERS YELLOW & YELLOW 83 EA EA ΜI CRYSTAL & RED 120 TOTAL 203 EA

#### NOTES:

- 1) AS DIRECTED BY THE ENGINEER, TEMPORARY PAVEMENT MARKING (PAINT) MAY BE USED TO STRIPE THE FINAL TRAFFIC PATTERN ON -L- AND ALL -Y- LINES. THE TEMPORARY PAVEMENT MARKING SCHEDULE INCLUDES QUANTITIES FOR PLACING TWO APPLICATIONS OF PAINT ON THE FINAL SURFACE OF NEW ASPHALT WITH PERMANENT TRAFFIC PATTERNS WHICH WILL REMAIN IN PLACE UNTIL THE PROPOSED FINAL PAVEMENT MARKING (POLYUREA ON -L- LINE AND -Y- LINES) ARE APPLIED.
- 2) FOR EACH PAINT PAVEMENT MARKING ITEM, 1X IMPLIES A SINGLE APPLICATION, 2X IMPLIES TWO APPLICATIONS, AND 3X IMPLIES THREE APPLICATIONS.



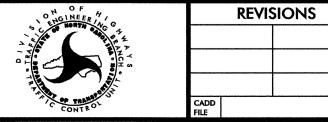
# TEMPORARY PAVEMENT MARKING SCHEDULE

DATE: DEC.2006

DWG. BY: MHS

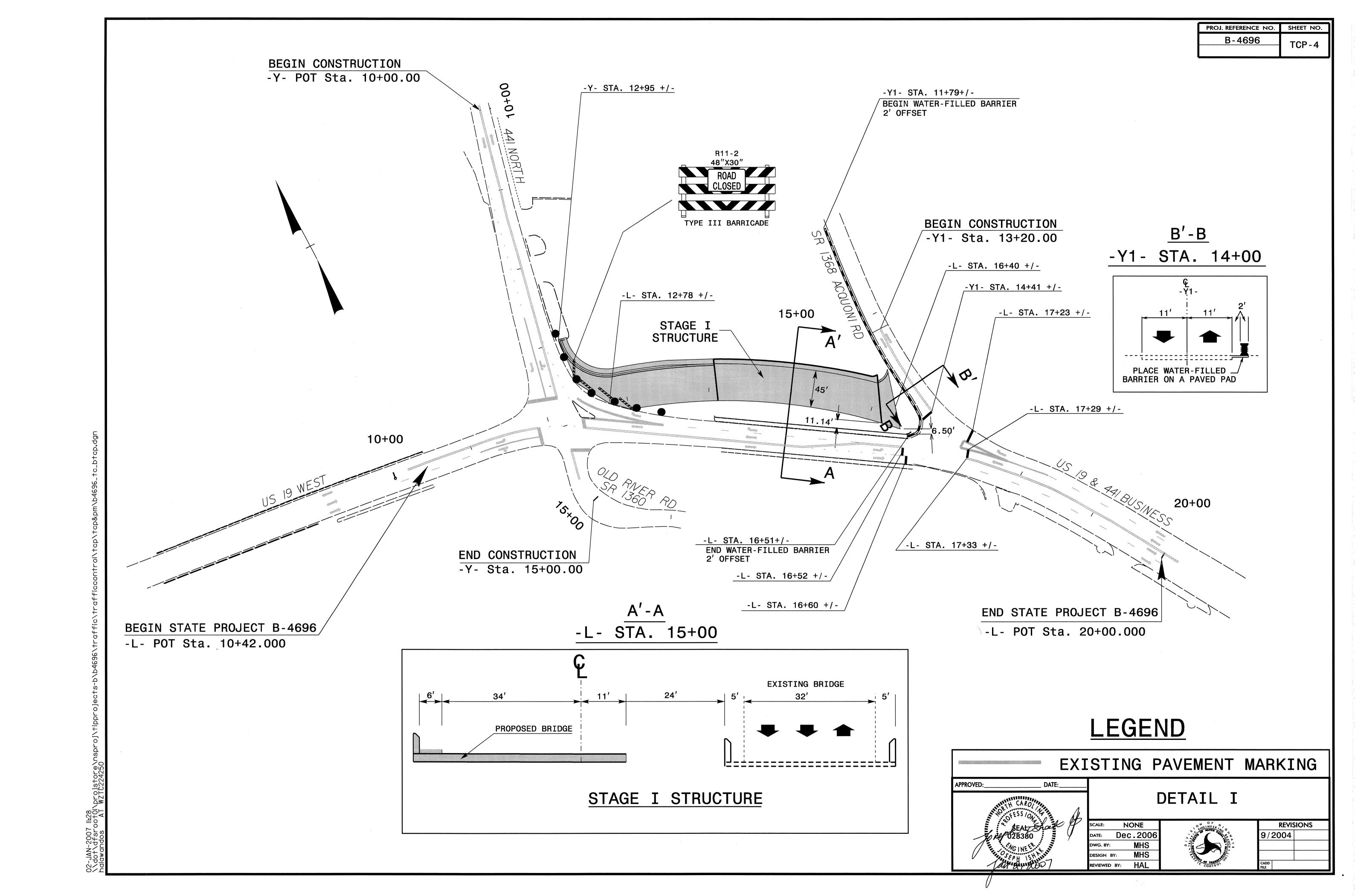
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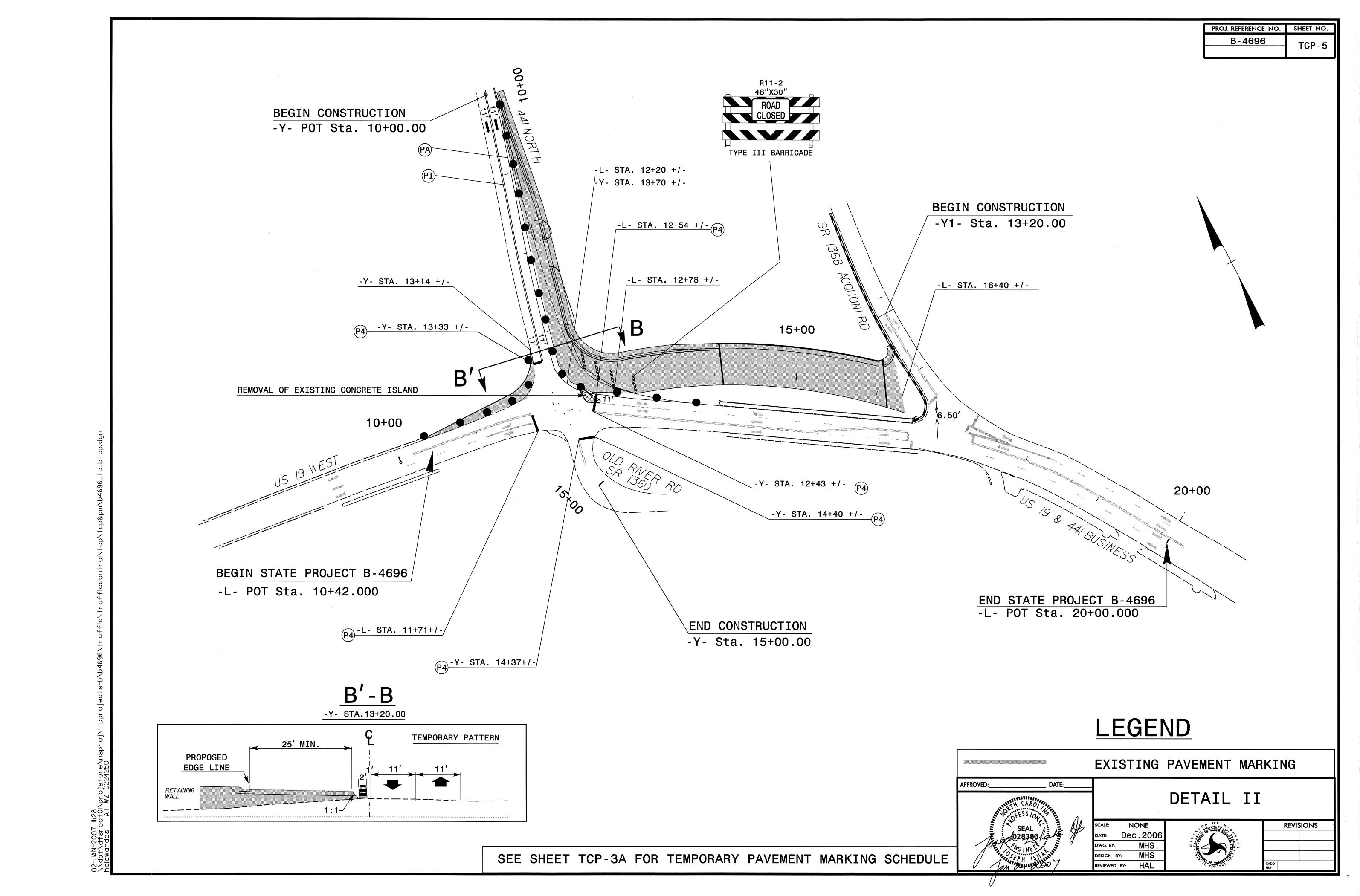
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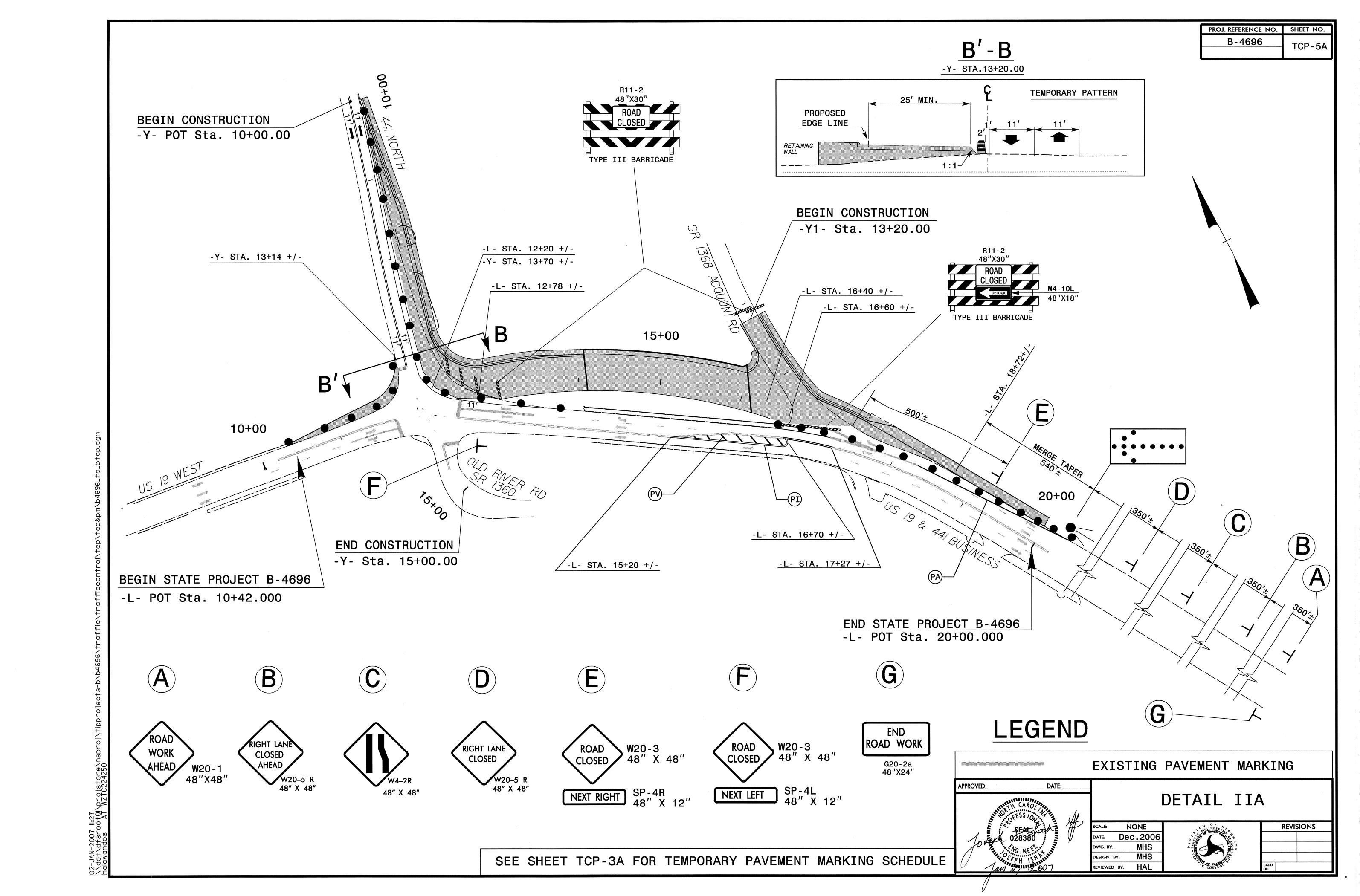


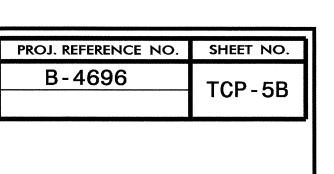
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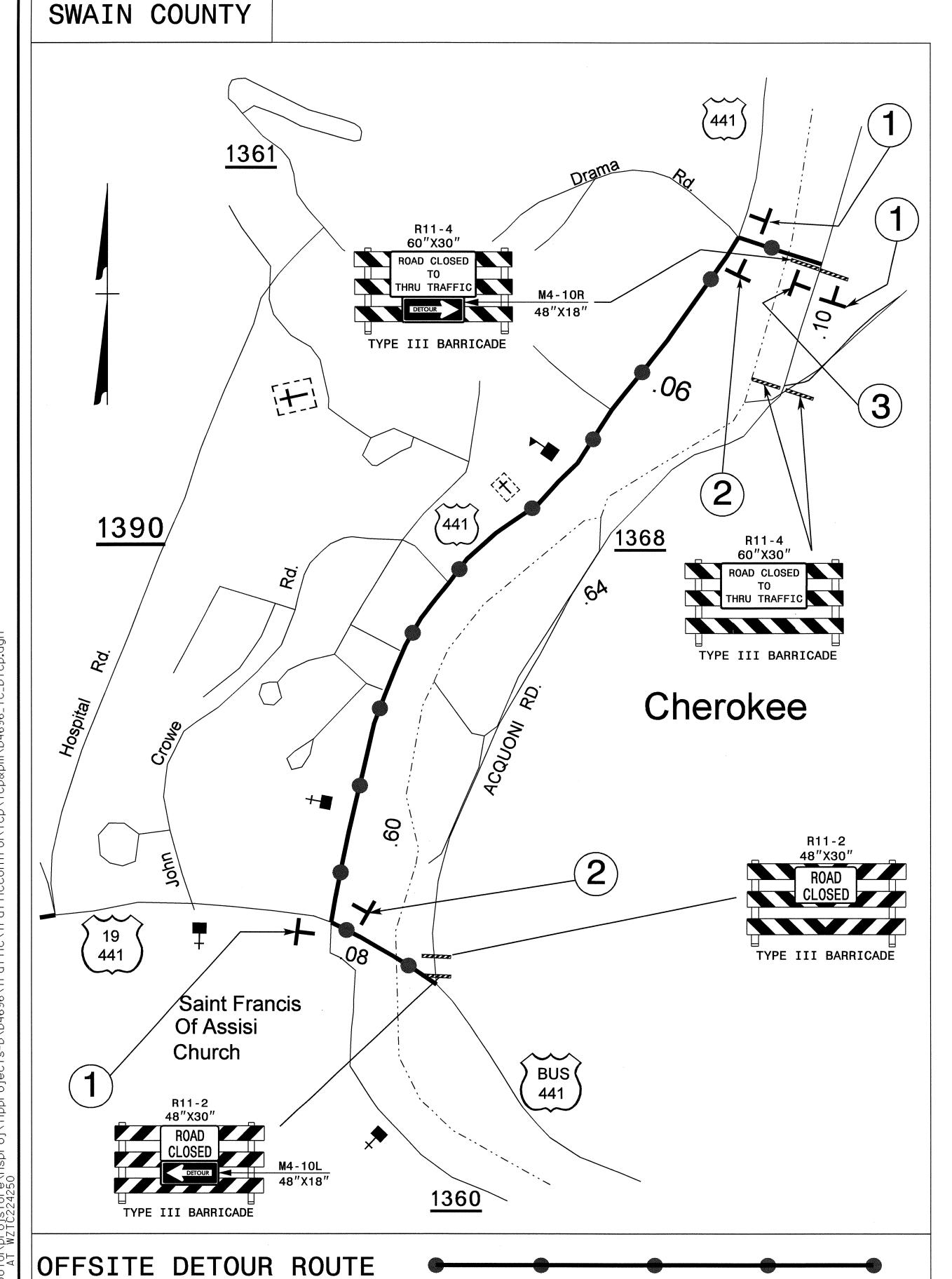
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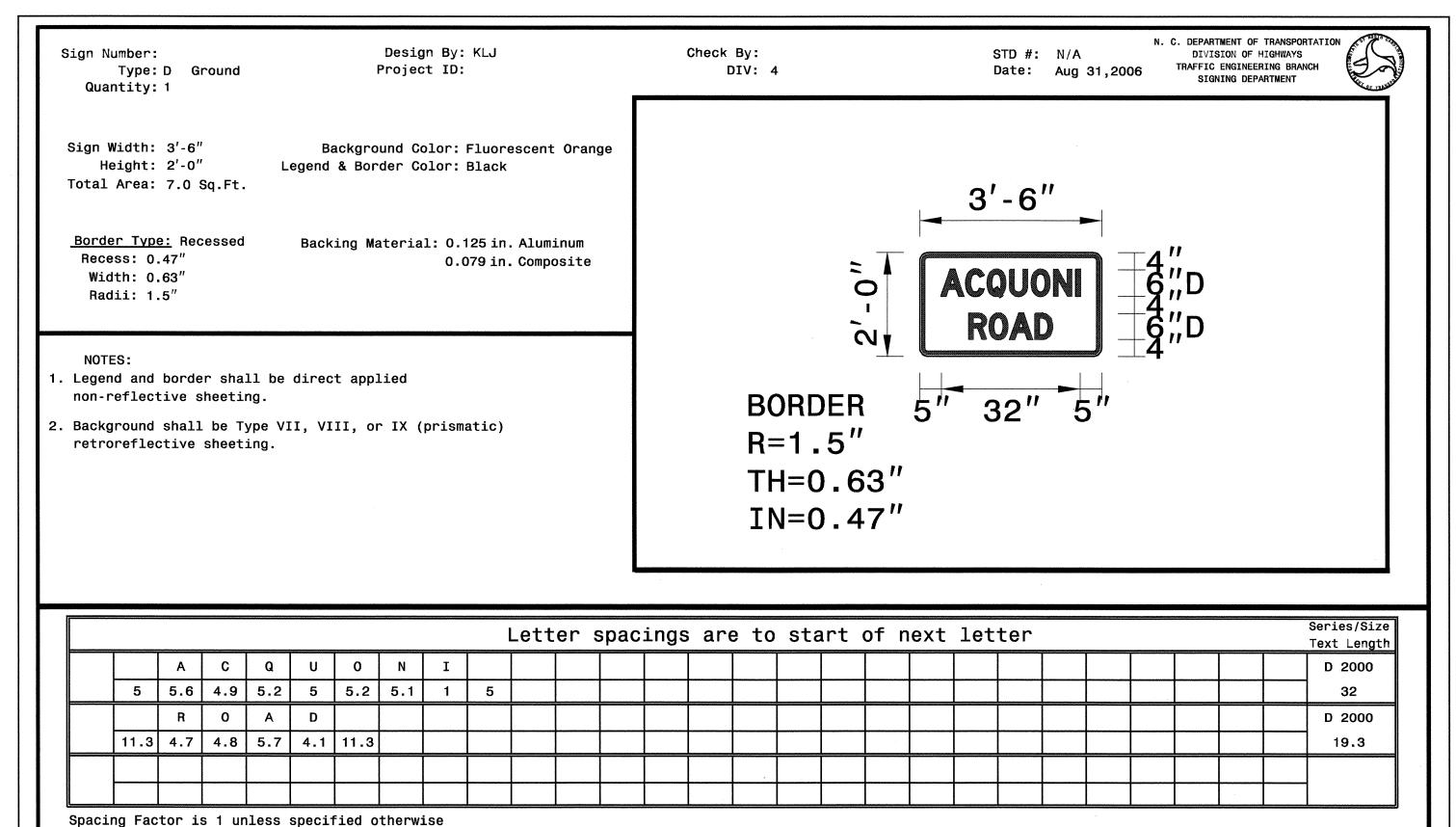


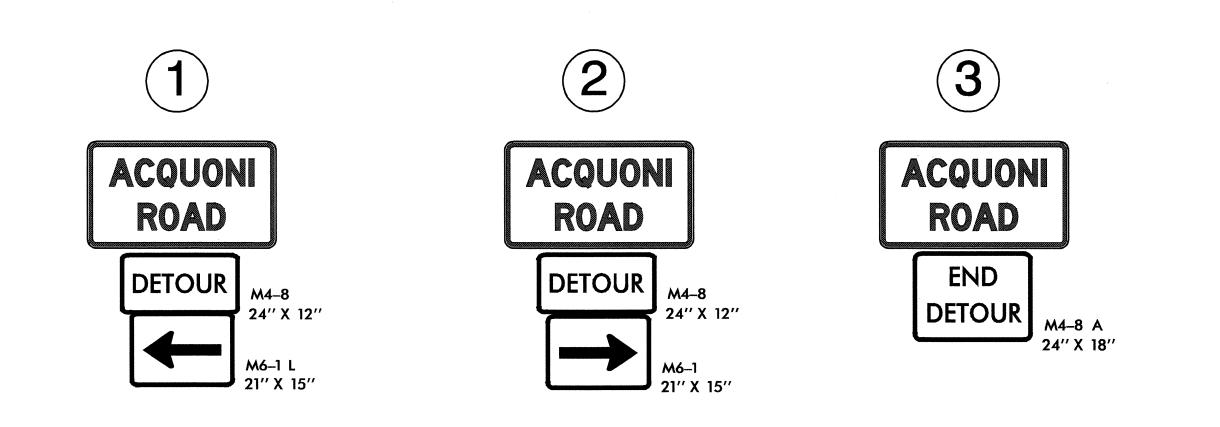


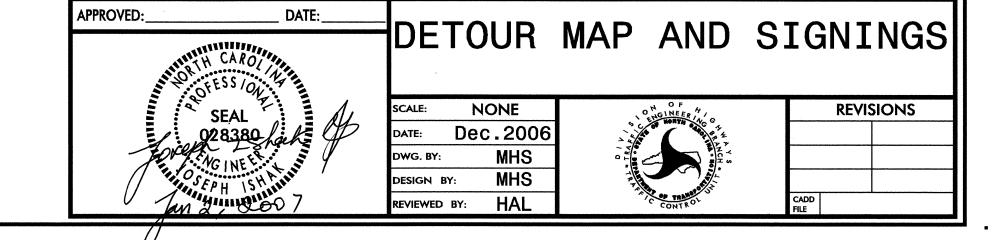


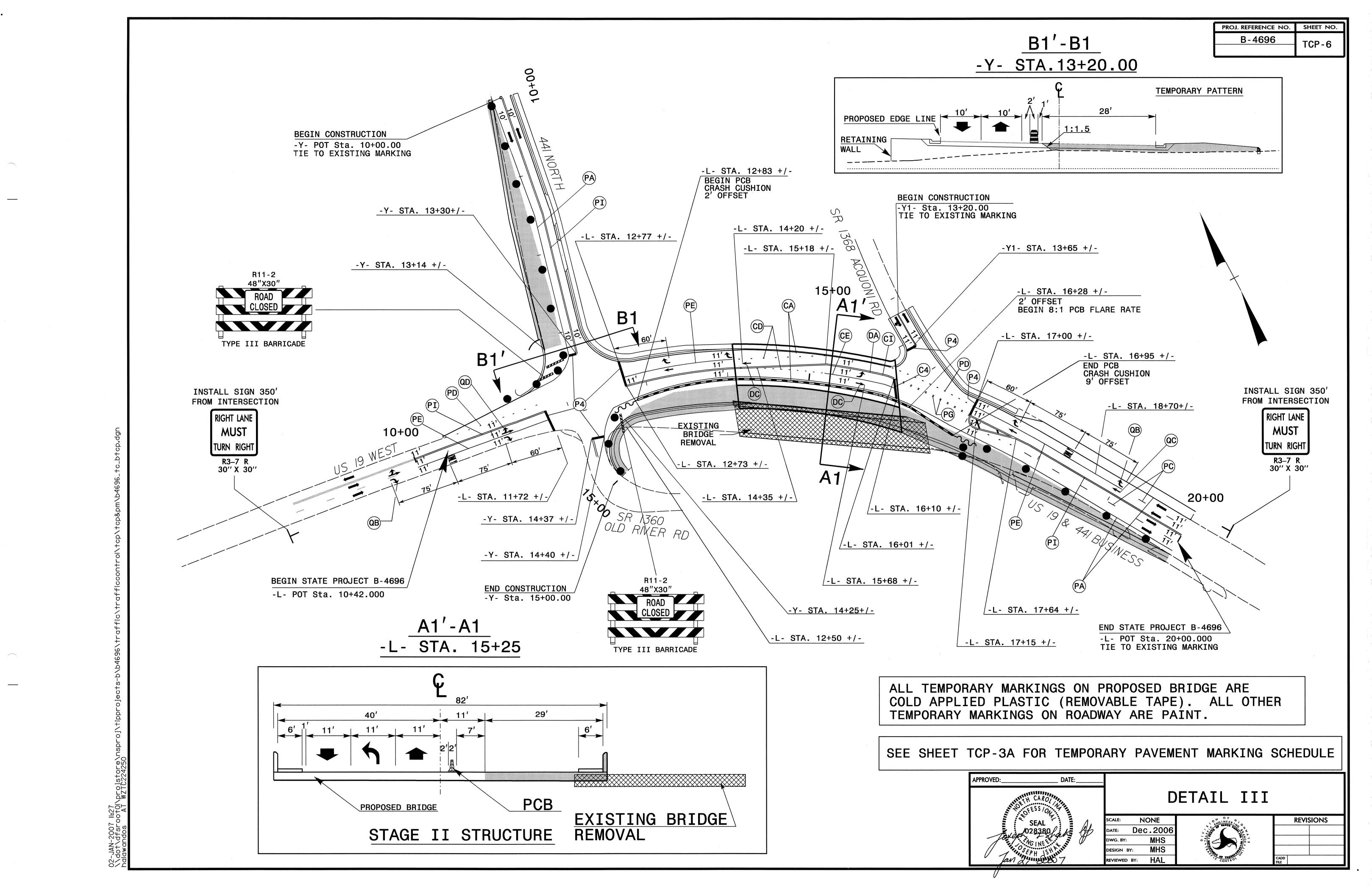












PROJ. REFERENCE NO. SHEET NO. B-4696 TCP-7

**HIGHWAYS** 

OF

DIVISION

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RALEIGH,

TRANSPORTATION CAROLINA NORTH **OF** STATE

RECOMMENDED MINIMUM

SIGN SPACING

 $\otimes$ 

500'

1000'

POSTED SPEED LIMIT

(M.P.H.)

≤ 50

≥ 55

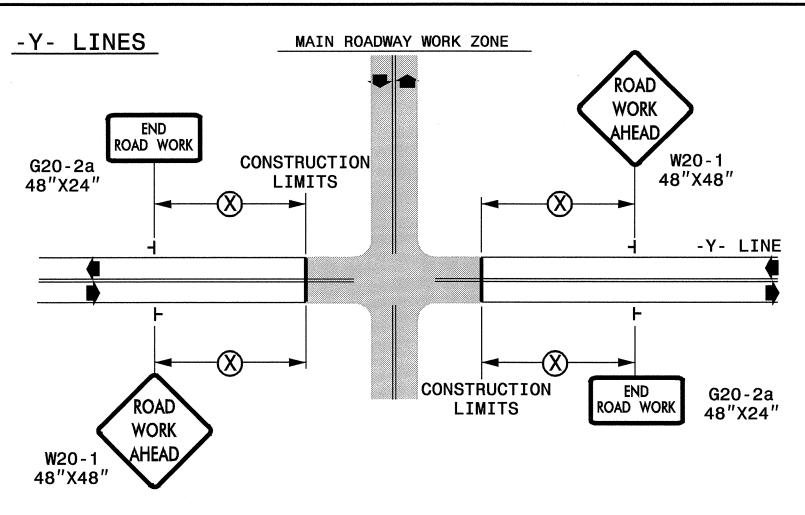
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ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)

**END** 

ROAD WORK G20-2a 48"X24"

TWO-WAY UNDIVIDED \*\* (L-LINES)



#### **GENERAL NOTES**

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.

END ROAD WORK G20-2a 48"x24"

- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.

HIGHWAY WORK ZONE

-<u>construction limits</u>-

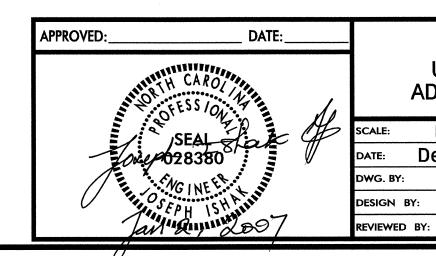
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.
- \*\* TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

## **LEGEND**

├ STATIONARY SIGN

■ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1



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