R-3833B

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO.	SHEET NO.
R-3833B	TCP-1

PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION

IREDELL COUNTY

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS"-ROADWAY DESIGN 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.	TITLE
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 PANELS
1135.01	CONES
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
1205.03	PAVEMENT MARKINGS - INTERCHANGES
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
1251.01	RAISED PAVEMENT MARKERS (TEMPORARY & PERMANENT)
1253.01	SNOWPLOWABLE RAISED PAVEMENT MARKERS
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

INDEX OF SHEETS

SHEET NO.	TITLE
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND AND INDEX OF SHEETS
TCP-2 & 2A	GENERAL NOTES
TCP-3-3C	PHASING
TCP-4	TEMPORARY PAVEMENT MARKING SCHEDULE
TCP-5	TEMPORARY SHORING
TCP-6-10A	AREA I PHASE I DETAILS
TCP-11-16	AREA II PHASE I DETAILS
TCP-17-20	AREA I PHASE II DETAILS
TCP-21 & 22	AREA II PHASE II DETAILS
TCP-23	AREA II PHASE II OFFSITE DETOUR
TCP-24-26	ADVANCE WORK ZONE WARNING SIGNS
TCP-27	LANE CLOSURE SWITCHES

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- NORTH ARROW
- PROPOSED PVMT. -------- EXIST. PVMT.
- WORK AREA
- REMOVAL OF EXISTING PAVEMENT

TRAFFIC CONTROL DEVICES

- TYPE I BARRICADE
- TYPE II BARRICADE
- TYPE III BARRICADE
- CONE
- DRUM
- FLASHING ARROW PANEL (TYPE C)
- TYPE 'B' WARNING LIGHT
- STATIONARY SIGN
- PORTABLE SIGN
- STATIONARY OR PORTABLE SIGN
- WARNING FLAGS
- 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

NOTE: TRAFFIC CONTROL PHASING AND DETAILS FOR THIS PROJECT ARE DIVIDED INTO TWO AREAS. CONSTRUCTION MAY PROCEED CONCURRENTLY IN BOTH AREAS UNLESS OTHERWISE STATED IN THE PROJECT PHASING.

AREA 1 CONSISTS OF BRAWLEY SCHOOL RD (-L-) AND ALL -Y- LINES EXCEPT I-77 (Y6-)

AREA 2 CONSISTS OF I-77 (-Y6-)

APPROVED: John S. Kite
DATE: December 4, 2008

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE JR.

PLAN PREPARED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL UNIT

J. S. BOURNE, PE — TRAFFIC CONTROL ENGINEER
J. S. KITE, PE — TRAFFIC CONTROL PROJECT ENGINEER
D. A. PARKER — TRAFFIC CONTROL PROJECT DESIGN ENGINEER
D. V. JOYNER — TRAFFIC CONTROL DESIGN ENGINEER

PROJECT NOTES

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-2

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
-L- BRAWLEY SCHOOL RD	MONDAY THRU SATURDAY 7:00 AM TO 7:00 PM
-Y6- I-77 (NB & SB)	MONDAY THRU THURSDAY 6:00 AM TO 9:00 PM AND 6:00 AM FRIDAY TO 9:00 PM SUNDAY

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

ROAD NAME
-Y6- I-77 (NB & SB)

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.

2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 AM DECEMBER 31st TO 9:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 9:00 PM THE FOLLOWING TUESDAY.

3. FOR EASTER, BETWEEN THE HOURS OF 6:00 AM THURSDAY AND 9:00 PM MONDAY.

4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 AM FRIDAY TO 9:00 PM TUESDAY.

5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 AM THE DAY BEFORE INDEPENDENCE DAY AND 9:00 PM THE DAY AFTER INDEPENDENCE DAY.

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 AM THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 PM THE TUESDAY AFTER INDEPENDENCE DAY.

6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 AM FRIDAY AND 9:00 PM TUESDAY.

7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 AM TUESDAY TO 9:00 PM MONDAY.

8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 AM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 PM THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT USE MEDIAN CROSSOVERS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-77 (NB & SB)	MONDAY THRU THURSDAY 6:00 AM TO 10:00 PM AND 6:00 AM FRIDAY TO 10:00 PM SUNDAY

D) 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

E) 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.

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN 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.

G) 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.

H) 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.

I) 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.

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

APPROVED: John S. Kite, Jr. DATE: 8/28/09

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022104 JOHN S. KITE, JR.

PROJECT NOTES

SCALE: NONE	REVISIONS
DATE:	
DWG. BY:	
DESIGN BY:	
REVIEWED BY:	CADD FILE

DIVISION OF HIGHWAYS NORTH CAROLINA DEPARTMENT OF TRANSPORTATION TRAFFIC SURVEY GROUP

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PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-2A

PAVEMENT EDGE DROP OFF REQUIREMENTS

K) 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.

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

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

N) 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.

O) PROVIDE PERMANENT SIGNING.

P) PROVIDE DETOUR SIGNING WITHIN AND OFF THE PROJECT LIMITS.

Q) COVER OR REMOVE ALL DETOUR SIGNS WITHIN AND OFF THE PROJECT LIMITS WHEN A DETOUR IS NOT IN OPERATION.

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

S) 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

T) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRAFFIC CONTROL 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 TRAFFIC CONTROL 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 TRAFFIC CONTROL 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.

U) 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 IMPACT 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:

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

V) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED, REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.

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

X) 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

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

ROAD NAME	MARKING	MARKER
I-77 Y6	THERMOPLASTIC	SNOWPLOWABLE
ALL OTHER ROADS	POLYUREA	SNOWPLOWABLE

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

ROAD NAME	MARKING	MARKER
ALL ROADS	PAINT	TEMPORARY RAISED
CONC BRIDGE	REMOVABLE TAPE	TEMPORARY RAISED

AA) 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.

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

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

DD) TRACE THE PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO INSTALLATION. PLACE CONES TO DELINEATE ANY PROPOSED MONOLITHIC ISLANDS BEFORE INSTALLATION

TEMPORARY / FINAL SIGNALS

EE) NOTIFY THE ENGINEER TWO (2) MONTHS BEFORE A TRAFFIC SIGNAL INSTALLATION BY OTHERS IS REQUIRED.

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

MISCELLANEOUS

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

APPROVED: DATE: 11/4/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE JR.

PROJECT NOTES

SCALE:	NONE
DATE:	11/08
DWG. BY:	
DESIGN BY:	
REVIEWED BY:	

DIVISION OF HIGHWAYS NORTH CAROLINA DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL UNIT

REVISIONS	
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PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-3

AREA I

PHASE I

PHASE I SUMMARY: CONSTRUCT THE PROPOSED EB LANES OF BRAWLEY SCHOOL RD. (-L-) INCLUDING STAGE I OF THE BRIDGE OVER I-77 AND STAGE I OF THE RCBC AT -L- STA. 265+00 +/-; CONSTRUCT (-Y4-) RECONNECT ON NEW LOCATION. (SEE TCP-6 THROUGH TCP-10A)

STEP 1 -- INSTALL ADVANCE WARNING SIGNS AS SHOWN ON TCP-24.

-- INSTALL MESSENGER CABLE AS DIRECTED BY THE ENGINEER (SEE SIGNAL PLANS)

NOTE: STEPS 2, 3, 4 AND 5 MAY BE PERFORMED CONCURRENTLY

STEP 2 -- CONSTRUCT STAGE I OF THE BRIDGE OVER I-77 AS FOLLOWS:

A. USING FLAGGERS, INSTALL TEMPORARY SHORING ADJACENT TO BRAWLEY SCHOOL RD. FOR THE CONSTRUCTION OF STAGE I MSE WALL/APPROACH FILLS AND END BENTS (SEE RSD 1101.02, SHEET 1 AND TCP-5 AND TCP-8 AND STRUCTURE PLANS)

B. USING FLAGGERS, INSTALL PCB ADJACENT TO EXISTING GIBBS RD. TO MAXIMIZE THE AMOUNT OF STAGE I MSE WALL CONSTRUCTION AND APPROACH FILL CONSTRUCTION. (SEE ROADWAY DRAWING 1101.02, SHEET 1 AND TCP-8)

C. INSTALL TEMPORARY SHORING IN THE MEDIAN OF I-77 FOR INTERIOR BENT FOUNDATION CONSTRUCTION, (SEE AREA II - PHASE I, STEP 5)

D. BEHIND EXISTING GUARDRAIL ON BRAWLEY SCHOOL RD., PCB ON GIBBS RD. AND BEHIND PCB ON I-77, CONSTRUCT STAGE I MSE WALL, AND STAGE I END BENTS AND INTERIOR BENT FOR BRIDGE OVER I-77 (SEE TCP-8 AND AREA II PHASE I, STEP 2 FOR PCB ON I-77 OUTSIDE SHOULDER)

E. AWAY FROM TRAFFIC, COMPLETE STAGE I BRIDGE SUPERSTRUCTURE INCLUDING CONCRETE ISLANDS.

STEP 3 -- CONSTRUCT STAGE I OF THE TRIPLE BARREL BOX CULVERT AT -L- STA. 265+00 +/- AS FOLLOWS:

A. USING FLAGGERS, INSTALL TEMPORARY SHORING ADJACENT TO BRAWLEY SCHOOL RD. (SEE RSD 1101.02, SHEET 1, AND TCP 7)

B. BEHIND EXISTING GUARDRAIL, CONSTRUCT STAGE I OF THE CULVERT.

STEP 4 -- USING FLAGGERS, BEGIN CONSTRUCTION OF THE PROPOSED EB LANES OF BRAWLEY SCHOOL RD. (-L-), UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -L- STA. 229+50 +/- TO SUNFISH DRIVE. (SEE RSD 1101.02, SHEET 1)

NOTE -- OMIT CONSTRUCTION OF -L- ACROSS THE DRIVE AT -L- STA. 268+00 +/- AND ACROSS GIBBS RD. UNTIL PROPOSED -Y4- IS COMPLETED AND OPENED TO TRAFFIC.

STEP 5 -- CONSTRUCT -Y3-, -Y12-, -Y13-, -Y4- (INCLUDING PROPOSED STRUCTURE) AND -Y5-, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE. (SEE RSD 1101.02, SHEET 1)

STEP 6 -- USING FLAGGERS, WEDGE/RESURFACE EXISTING BRAWLEY SCHOOL RD. AND ROLLING HILLS RD. TO MATCH THE TIE IN GRADE OF GIBBS RD. RECONNECT (-Y4-) PRIOR TO OPENING -Y4- TO TRAFFIC. (SEE RSD 1101.02 SHEET 1 AND TCP-7A FOR INTERMEDIATE TRAFFIC PATTERN).

PHASE I CONT'D

STEP 7 -- OPEN -Y3-, -Y12-, -Y13-, -Y4- AND -Y5-TO REVISED TRAFFIC PATTERN AS DETAILED ON SHEET TCP-7A AND 10A

STEP 8 -- CLOSE THE DRIVE AT -L- STA. 268+00 +/- AND CLOSE GIBB RD. -L- STA. 275+00 +/-

STEP 9 -- REMOVE THE PCB ADJACENT TO EXISTING GIBBS RD. (SEE ROADWAY STANDARD DRAWING 1101.02, SHEET 1)

STEP 10 -- COMPLETE THE CONTRUCTION OF THE EB LANES OF BRAWLEY SCHOOL RD., INCLUDING STAGE I OF THE PROPOSED BRIDGE OVER I-77 AND STAGE I OF THE RCBC AT STA.265+00 +/- AS BEGUN IN STEPS 2, 3, AND 4. (SEE TCP-6 THROUGH TCP-10A)

-- AWAY FROM TRAFFIC, INSTALL PCB WITH CRASH CUSHIONS AND WATERFILLED BARRIER AS SHOWN ON SHEETS TCP-18 AND 19.

-- WITHOUT INTERFERING WITH THE EXISTING TRAFFIC PATTERN, PLACE TEMPORARY PAINT PAVEMENT MARKINGS AND TEMPORARY RAISED PAVEMENT MARKERS FOR THE PHASE II TRAFFIC PATTERN DETAILED ON SHEETS TCP-17 THRU TCP-19.

PHASE II

PHASE II SUMMARY: SHIFT TRAFFIC TO THE PROPOSED EB LANES OF BRAWLEY SCHOOL RD., CONSTRUCT THE PROPOSED WB LANES UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE,CONSTRUCT STAGE II OF THE PROPOSED BRIDGE OVER I-77 AND STAGE II OF THE RCBC AT -L- STA. 265+00 +/-.

AT THE CONCLUSION OF PHASE II, TRAFFIC WILL BE SHIFTED TO THE RESPECTIVE OUTSIDE LANES WITH THE MEDIAN LANES DRUMMED OFF.

NOTE: WHEN SHIFTING TRAFFIC TO THE PHASE II PATTERN, COORDINATE WITH R-3833A CONTRACTOR AS DIRECTED BY THE ENGINEER.

NOTE: WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK OF STEP 1 IN A SINGLE WORK PERIOD.

STEP 1 -- SHIFT TRAFFIC TO THE PHASE II PATTERN AS FOLLOWS:

A. PLACE EXISTING SIGNAL AT THE INTERSECTION OF BRAWLEY SCHOOL RD. AND TALBERT/SUNFISH DR. IN THE FLASH MODE AT ALL APPROACHES AND USE POLICE TO DIRECT TRAFFIC.

B. USING FLAGGERS AND POLICE, WEDGE/RESURFACE BRAWLEY SCHOOL RD. (-L-) FROM -L- STA. 284+50 +/-TO 293+00 +/-, TALBERT RD. (-Y8-) AND SUNFISH (-Y7-). PLACE TEMPORARY PAINT PAVEMENT MARKINGS FOR THE PHASE II TRAFFIC PATTERN DETAILED ON SHEET TCP-20

USING FLAGGERS, REMOVE THE EXISTING STOPBAR ON ROLLING HILLS RD. AND REPLACE AS SHOWN ON SHEET TCP-20

USING FLAGGERS, REMOVE THE EXISTING STOPBAR ON GIBBS RD. RE-CONNECT AND REPLACE AS SHOWN ON SHEET TCP-20.

C. USING THE POLICE/FLAGGERS, SWITCH BRAWLEY SCHOOL RD. TRAFFIC INTO THE PHASE II TRAFFIC PATTERN AND ACTIVATE THE TEMPORARY SIGNAL AT THE INTERSECTION OF BRAWLEY SCHOOL ROAD AND TALBERT/SUNFISH DRIVE. (SEE TCP-17 THRU TCP-20 AND SIGNAL PLANS).

D. USING DRUMS AND BARRICADES, CLOSE OFF EXISTING BRAWLEY SCHOOL RD. FROM -L- STA. 229+50 +/- TO STA 287+00 +/-

NOTE: STEPS 2, 3 AND 4 MAY BE PERFORMED CONCURRENTLY:

STEP 2 -- AWAY FROM TRAFFIC, CONSTRUCT STAGE II OF THE PROPOSED BRIDGE OVER I-77 (SEE TCP-19):

STEP 3 -- USING FLAGGERS AS NECESSARY, CONSTRUCT THE PROPOSED WB LANES OF BRAWLEY SCHOOL RD. FROM -L- STA. 229+50 +/- TO STA. 284+50 +/- (SEE TCP-17 THRU TCP-20 AND RSD 1101.02, SHEET 1)

-- AWAY FROM TRAFFIC AND/OR BEHIND WATERFILLED BARRIER, CONSTRUCT THE PROPOSED MONOLITHIC CONCRETE ISLANDS ON BRAWLEY SCHOOL RD. (-L-) ON BOTH APPROACHED TO THE INTERSECTION WITH ROLLING HILLS RD. (Y1-)/GIBBS RD. RE-CONNECT (-Y4-) (SEE TCP-18)

MAY BEGIN INSTALLATION OF FINAL SIGNAL. COVER HEADS UNTIL ACTIVATION. (SEE SIGNAL PLANS)

STEP 4 -- BEHIND WATERFILLED BARRIER, CONSTRUCT STAGE II OF THE RCBC AT -L- STA. 265+00 +/-. (SEE TCP-18)

STEP 5 -- AWAY FROM TRAFFIC, PLACE TEMPORARY PAINT PAVEMENT MARKINGS IN THE FINAL PATTERN ON THE PROPOSED WB LANES FROM -L- 229+50 +/- TO -L- STA. 284+50 +/- (THIS WILL BE THE NEXT TO FINAL LAYER OF SURFACE COURSE) (SEE PM-2 THRU PM-4)

-- DRUM OFF THE PROPOSED WB MEDIAN LANE AND TURN LANES TO I-77 ON RAMPS.

APPROVED: DATE: 11/4/07

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

PHASING (AREA I)

SCALE:	NONE
DATE:	
DWG. BY:	DR
DESIGN BY:	DP
REVIEWED BY:	

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

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PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-3A

AREA I

PHASE III

NOTE: WORK IN A CONTINUOUS MANNER TO COMPLETE STEP 1 IN A SINGLE WORK PERIOD

STEP 1 -- SHIFT TRAFFIC TO PHASE III PATTERN AS FOLLOWS:

A. PLACE EXIST. SIGNAL IN FLASH MODE ON ALL APPROACHES AT THE INTERSECTION OF BRAWLEY SCHOOL RD. AND TALBERT RD./SUNFISH DR.

USE POLICE TO DIRECT TRAFFIC AT THIS INTERSECTION AND THE INTERSECTION OF BRAWLEY SCHOOL RD AT ROLLING HILLS/GIBB.

B. USING FLAGGERS, REMOVE THE EXISTING STOPBAR ON TALBERT RD. AND REPLACE IT AT -Y8-STA. 15+14 +/-. REMOVE THE WHITE EDGELINE DELINEATING THE RADIUS FROM TALBERT RD. TO WB BRAWLEY SCHOOL RD. (SEE RSD 1101.02, SHEET 1)

C. USING FLAGGERS, REMOVE THE EXISTING STOPBAR ON ROLLING HILLS RD. AND REPLACE IT AT -Y1-STA. 13+50 +/-. REMOVE THE WHITE EDGELINE DELINEATING THE RADIUS FROM ROLLING HILLS RD. TO WB BRAWLEY SCHOOL RD.

D. USING FLAGGERS/POLICE, SHIFT WB TRAFFIC INTO THE PROPOSED OUTSIDE WB LANE. (SEE RSD 1101.02, SHEET 1)

E. USE DRUMS TO CLOSE THE EXISTING WB LANE ON THE PROPOSED EB SIDE.

F. WITH THE PROPOSED MEDIAN LANE OF EB BRAWLEY SCHOOL RD. VACATED AND DRUMED OFF, STRIPE THE LEFT TURN LANE FROM EB BRAWLEY SCHOOL RD. ONTO ROLLING HILLS RD.

USE DRUMS TO DELINEATE ENTRY INTO THIS TURN LANE FROM THE PROPOSED EB LANE OF BRAWLEY SCHOOL RD.

G. ACTIVATE THE PROPOSED SIGNAL AT THE INTERSECTION OF BRAWLEY SCHOOL RD. AND ROLLING HILLS/GIBBS RD. RE-CONNECT.

NOTE: AT THE CONCLUSION OF THE WORK PERIOD:

-- 1 THRU LANE HEADING WB IN THE PROPOSED WB OUTSIDE LANE

-- 1 THRU LANE HEADING EB IN THE PROPOSED EB OUTSIDE LANE.

-- THE MEDIAN THRU LANE OF BOTH DIRECTIONS IS DRUMMED OFF.

-- THE INTERSECTION OF BRAWLEY SCHOOL RD. AND ROLLING HILLS RD./GIBBS RD. RE-CONNECT IS FUNCTIONING SAME AS FINAL PATTERN EXCEPT MEDIAN THRU LANES REMAIN CLOSED.

-- THE SIGNAL AT THE PROPOSED BRIDGE IS NOT ACTIVATED AND RAMPS REMAIN DRUMMED/BARRICADED.

-- THE INTERSECTION OF BRAWLEY SCHOOL RD. IS FUNCTIONING SAME AS DURING PHASE II PATTERN EXCEPT WB THRU LANE PROCEEDS INTO THE PROPOSED OUTSIDE WB LANE.

PHASE III (CONT'D)

STEP 2 -- WITH BOTH MEDIAN LANES VACATED, COMPLETE ALL REMAINING MEDIAN CONSTRUCTION, INCLUDING MONOLITHIC CONCRETE ISLANDS.

STEP 3 -- USING FLAGGERS AND LANE CLOSURES PLACE THE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS IN THE FINAL PATTEN THROUGHOUT THE PROJECT AND OPEN TO THE FINAL PATTERN

STEP 4 -- REMOVE ALL TRAFFIC CONTROL DEVICES.

APPROVED: _____ DATE: 11/4/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

PHASING (AREA I)

SCALE:	NONE
DATE:	
DWG. BY:	DR
DESIGN BY:	DP
REVIEWED BY:	

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

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daparker AT WZTC244746

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-3B

AREA II

PHASE I

PHASE I SUMMARY: CONSTRUCT STAGE I AND STAGE II BRAWLEY SCHOOL RD. BRIDGE OVER I-77, INCLUDING MSE WALLS; CLEAR, GRADE, AND PAVE AS MUCH OF THE PROPOSED RAMPS, AUXILIARY LANES, AND OUTSIDE SHOULDER REPLACEMENT AS POSSIBLE BEHIND PCB ON THE EXISTING OUTSIDE SHOULDER; CONSTRUCT MEDIAN CROSSOVERS FOR OVERHEAD STRUCTURE WORK, AND REPLACE/WIDEN THE INSIDE SHOULDERS FOR USE DURING PHASE II TRAFFIC SHIFT

STEP 1 -- INSTALL ADVANCE WARNING SIGNS AS SHOWN ON SHEET TCP-25

STEP 2 -- USING LANE CLOSURES, INSTALL PCB WITH CRASH CUSHIONS ON THE EXISTING OUTSIDE SHOULDERS OF NORTH AND SOUTHBOUND I-77 IN THE FOLLOWING LOCATIONS (SEE RSD 1101.02, SHEET 3 AND TCP-11 THRU TCP-16):

-Y6- STA. 17+00 +/- TO STA. 83+30 +/- (NB)
-Y6- STA. 19+55 +/- TO STA. 82+40 +/- (SB)

STEP 3 -- PERFORM THE FOLLOWING BEHIND THE PCB ON THE EXISTING OUTSIDE SHOULDERS:

-- BEGIN PROPOSED STAGE I MSE WALLS AND END BENTS FOR THE BRIDGE OVER I-77 (SEE TCP-14)

-- BEGIN CLEARING, GRADING, AND AS MUCH PAVING AS POSSIBLE, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE, OF THE PROPOSED AUXILIARY LANES, PROPOSED OUTSIDE SHOULDER, AND PROPOSED RAMPS. (END CONSTRUCTION OF RAMPS A AND B AT A POINT SO AS NOT TO INTERFERE WITH BRAWLEY SCHOOL RD. TRAFFIC)

NOTE: A SIGNIFICANT PORTION OF THE GRADING AND PAVING OF RAMP C MUST BE DELAYED UNTIL GIBBS RD. IS REALIGNED AND THE GIBBS RD. RE-CONNECT (-Y4-) OPEN TO BRAWLEY SCHOOL RD. (SEE TCP-8)

STEP 4 -- USING LANE CLOSURES, REMOVE EXISTING GUARDRAIL IN THE FOLLOWING LOCATIONS: (SEE RSD 1101.02, SHEET 3 AND TCP-13 THRU TCP-15):

-Y6- STA. 40+80 +/- TO 69+00 +/- NB
-Y6- STA. 40+00 +/- TO STA. 68+20 +/- SB

REPLACE WITH PCB AND CRASH CUSHION IN THE FOLLOWING LOCATIONS

NOTE: USE TMIA'S TO PROTECT EXPOSED ENDS OF GUARDRAIL UNTIL ALL PCB CAN BE INSTALLED.

-Y6- STA. 40+60 +/- TO 59+20 +/- NB
-Y6- STA. 60+40 +/- TO 69+20 +/- NB
-Y6- STA. 39+90 +/- TO 49+00 +/- SB
-Y6- STA. 50+20 +/- TO 68+40 +/- SB

NOTE: THIS WILL CREATE A 100 FT. +/- OPENING FOR MEDIAN ACCESS FROM BOTH TRAVEL DIRECTIONS. (SEE TCP-13 AND 15)

STEP 5 -- USING LANE CLOSURES, INSTALL TEMPORARY SHORING FOR PROPOSED STAGE I INTERIOR BENT FOUNDATION IN THE FOLLOWING LOCATIONS (SEE RSD 1101.03, SHEET 3 AND TCP-14):

-Y6- STA. 56+10 +/- TO 57+20 +/- NB
-Y6- STA. 56+10 +/- TO 57+20 +/- SB

PHASE I CONT'D

STEP 6 -- BEHIND PCB, CONSTRUCT STAGE I INTERIOR BENT

NOTE: INSTALL A LANE CLOSURE AND UTILIZE THE BREAKS IN THE PCB IN ORDER TO MOVE EQUIPMENT INTO AND OUT OF THE MEDIAN (SEE RSD 1101.02, SHEET 3 AND THE "ACCESS THROUGH TEMPORARY BARRIER" DETAIL ON RSD 1101.05)

STEP 7 -- COMPLETE STAGE I MSE WALLS AND END BENTS AS BEGUN IN STEP 3

STEP 8 -- USING LANE CLOSURES, REMOVE PCB TO CONSTRUCT MEDIAN CROSSOVERS IN THE FOLLOWING LOCATION (SEE RSD 1101.02, SHEET 3):

-Y6- STA. 40+60 +/- TO 48+50 +/- NB
-Y6- STA. 60+40 +/- TO 69+20 +/- NB
-Y6- STA. 39+90 +/- TO 49+00 +/- SB
-Y6- STA. 60+80 +/- TO 68+40 +/- SB

ONCE PCB IS REMOVED, DELINEATE OPENING WITH DRUMS SPACED AT 10 FT. CENTERS. PROTECT THE APPROACH ENDS OF EXPOSED GUARDRAIL WITH TMIAS UNTIL PCB IS REPLACED

-- USING LANE CLOSURES, CONSTRUCT BOTH MEDIAN CROSSOVERS AND 6 FT. MEDIAN SHOULDER REPLACEMENT IN THE FOLLOWING LOCATIONS (SEE RSD 1101.02, SHEET 3 AND TCP-13 THRU TCP-15)

-Y6- STA. 41+00 +/- TO STA.48+33 +/-
-Y6- STA. 61+00 +/- TO STA. 68+00 +/-

STEP 9 -- USING LANE CLOSURES, REPLACE THE PCB REMOVED IN STEP 8 (SEE RSD 1101.01, SHEET 3)

STEP 10 -- USING MEDIAN CROSSOVERS, ERECT STAGE I GIRDERS OVER I-77. (SEE RSD 1101.03, SHEET 3 AND 6)

NOTE: THE WORK OF STEP 11 MAY NOT BEGIN UNTIL COMPLETION OF THE BRAWLEY SCHOOL RD. TRAFFIC SHIFT INTO THE PHASE II PATTERN (AREA I, PHASE II, STEP 1)

STEP 11 -- USING MEDIAN CROSSOVERS, REMOVE THE EXISTING STRUCTURE OVER I-77. (SEE RSD 1101.03, SHEET 6)

STEP 12 -- PERFORM THE FOLLOWING BEHIND THE PCB ON THE EXISTING OUTSIDE SHOULDERS WITHOUT INTERFERING WITH THE EXISTING TRAFFIC PATTERN ON EITHER DIRECTION OF I-77

-- BEGIN PROPOSED STAGE II MSE WALLS AND END BENTS FOR THE BRIDGE OVER I-77

-- CONTINUE GRADING AND PAVING OPERATIONS AS BEGUN IN STEP 3. WORK MAY NOW BEGIN IN THE AREA WHERE THE EXISTING BRIDGE WAS REMOVED.

STEP 13 -- BEHIND PCB, CONSTRUCT STAGE II INTERIOR BENT.

-- BEHIND PCB, INSTALL PROPOSED CONCRETE BARRIER FOR PIER PROTECTION AND BRIDGE ANCHOR UNITS AS MUCH AS POSSIBLE.

PHASE I CONT'D

STEP 14 -- COMPLETE STAGE II MSE WALLS AND END BENTS AS BEGUN IN STEP 12

STEP 15 -- USING MEDIAN CROSSOVERS, ERECT STAGE II GIRDERS OVER I-77. (SEE RSD 1101.03, SHEET 6

STEP 16 -- USING LANE CLOSURES, REMOVE EXISTING 4 FT. MEDIAN SHOULDER AND CONSTRUCT PROPOSED 6 FT. MEDIAN SHOULDER IN THE FOLLOWING LOCATIONS: (SEE RSD 1101.02, SHEET 3 AND TCP-11 THROUGH TCP-16

-Y6- STA. 11+50 +/- TO STA. 83+80 +/- NB
-Y6- STA. 11+50 +/- TO STA. 83+80 +/- NB

-- BEHIND PCB AND WITHOUT INTERFERING WITH TRAFFIC IN EITHER DIRECTION OF I-77, COMPLETE AS MUCH OF THE GRADING AND PAVING AS POSSIBLE, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE, THE AUXILIARY LANES, AND OUTSIDE SHOULDERS AS BEGUN IN STEP 3.

-- USING RSD 1101.02, SHEET 3 OF 9, REMOVE MEDIAN CROSSOVERS AND INSTALL PROPOSED GUARDRAIL AS FOLLOWS:

NB: FROM STA 40+80+/- TO 69+00+/-
SB: FROM STA 40+00+/- TO 68+20+/-

APPROVED: DATE: 11/4/08

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KYLE, JR.

PHASING (AREA II)

SCALE:	NONE
DATE:	
DWG. BY:	DR
DESIGN BY:	DP
REVIEWED BY:	

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS

CADD FILE

07-NOV-2008 13:44
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derichardson AT WZ10231460

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-3C

AREA II

PHASE II

PHASE II SUMMARY: UNDER A 120 DAY INTERMEDIATE CONTRACT TIME, SHIFT BOTH DIRECTIONS OF I-77 ON TO THE 6 FT. MEDIAN SHOULDERS. RESET THE BARRIER ON THE OUTSIDE SHOULDER AND COMPLETE THE PAVING OF THE AUXILIARY LANE AND OUTSIDE PAVED SHOULDER.

COMPLETE ALL THE WORK OF PHASE II, STEP 1 THROUGH STEP 10 IN 120 CALENDAR DAYS. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

NOTE: WORK IN A CONTINUOUS MANNER TO COMPLETE THE TRAFFIC SHIFT (STEP 1 AND STEP 2) IN A SINGLE WORK PERIOD. ONLY ONE DIRECTION MUST BE SHIFTED IN A SINGLE WORK PERIOD. STEP 1 DESCRIBES SB TRAFFIC SHIFT; NB IS SIMILAR EXCEPT CLOSURE OF OFF-RAMP IS NOT NECESSARY. CONTRACTOR MAY CHOOSE WHICH DIRECTION TO SHIFT FIRST.

STEP 1 -- SHIFT THE SB DIRECTION OF I-77 ON TO THE 6 FT. MEDIAN SHOULDERS IN THE FOLLOWING SEQUENCE:

A. USING TCP-27, CLOSE THE MEDIAN LANE.

B. REMOVE THE EXISTING YELLOW EDGELINE AND WHITE SKIP LINE AND REPLACE WITH TEMPORARY PAINT EDGE AND SKIP LINES AS DETAILED ON SHEETS TCP-21 AND TCP-22

C. USING TCP-23, CLOSE THE ON RAMP FROM EXIT 36.

USING TCP-27, SHIFT SB I-77 TRAFFIC INTO THE MEDIAN (SEE TCP-21 AND TCP-22)

D. PLACE TEMPORARY WHITE EDGE LINE AS DETAILED ON SHEETS TCP-21 AND TCP-22

INSTALL ADVANCE WARNING "DUAL LANE SHIFT AHEAD" WITH ADVISORY SPEED PANELS AS DETAILED ON SHEETS TCP-21 AND TCP-22

E. REMOVE LANE CLOSURE WITH THE SB DIRECTION OF I-77 SHIFTED INTO THE PHASE II PATTERN AND. RE-OPEN THE ON-RAMP FROM EXIT 36

STEP 2 -- FOLLOWING THE SAME SEQUENCE AS DESCRIBED IN STEP 1, SHIFT NB TRAFFIC INTO THE MEDIAN (SEE TCP-21 AND TCP-22)

STEP 3 -- USING RSD, 1101.02, SHEET 3, RESET THE PCB ON THE EXISTING OUTSIDE PAVED SHOULDERS OF BOTH DIRECTIONS OF I-77 TO THE LOCATIONS SHOWN ON TCP-21 AND TCP-22.

STEP 4 -- BEHIND THE PCB, COMPLETE THE CONSTRUCTION OF THE AUXILIARY LANES AND OUTSIDE PAVED SHOULDER, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE IN THE FOLLOWING LOCATIONS (SEE TCP-21 AND TCP-22:

-Y6- STA. 22+00 +/- TO STA. 81+30 +/-(SB)
-Y6- STA. 13+38 +/- TO STA. 81+50 +/- (NB)

PHASE II CONT'D

COMPLETE THE WORK OF STEP 5 THRU STEP 7 BETWEEN THE HOURS OF 10:00 PM FRIDAY AND 6:00 A.M. THE FOLLOWING MONDAY. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES)

STEP 5 -- USING TCP-23, CLOSE THE ENTRANCE RAMP FROM EXIT 36

STEP 6 -- USING ROADWAY STANDARD DRAWING 1101.02, SHEET 3, COMPLETE THE CONSTRUCTION OF THE SB OUTSIDE PAVED SHOULDER, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -Y6- STA. 12+11 +/- TO STA. 22+00 +/- (SB).

STEP 7 -- RE-OPEN THE ENTRANCE RAMP.

STEP 8 -- USING LANE CLOSURES, REMOVE THE PCB FROM THE OUTSIDE SHOULDERS AND REPLACE WITH DRUMS. PLACE TYPE III BARRICADES AT PROPOSED RAMPS B AND D. (SEE RSD 1101.02, SHEET 3)

NOTE: WORK IN A CONTINUOUS MANNER TO COMPLETE THE TRAFFIC SHIFT (STEP 9 AND STEP 10) IN A SINGLE WORK PERIOD. CONTRACTOR MAY CHOOSE WHICH DIRECTION TO SHIFT FIRST. ONLY ONE DIRECTION MUST BE SHIFTED IN A SINGLE WORK PERIOD.

STEP 9 -- SHIFT THE SB DIRECTION OF I-77 BACK INTO THE EXISTING TRAFFIC PATTERN IN THE FOLLOWING SEQUENCE:

A. USING TCP-27, CLOSE THE OUTSIDE LANE.

USE TCP-23 TO CLOSE THE ENTRANCE RAMP FROM EXIT 36

B. REMOVE THE EXISTING WHITE EDGELINE AND REPLACE WITH TEMPORARY PAINT EDGE LINE IN THE FINAL PATTERN FROM -Y6- STA. 11+50 +/- TO STA. 83+80 +/-.

C. USING TCP-27, PLACE TRAFFIC IN THE OUTSIDE LANE.

D. REMOVE THE EXISTING WHITE SKIP LINE AND YELLOW EDGELINE AND REPLACE WITH TEMPORARY PAINT EDGE AND SKIP LINE IN THE FINAL PATTERN FROM -Y6- STA. 11+50 +/- TO STA. 83+80 +/-.

E. REMOVE LANE CLOSURE WITH THE SB DIRECTION OF I-77 SHIFTED.BACK INTO THEIR EXISTING PATTERN.

RE-OPEN THE ON-RAMP FROM EXIT 36

STEP 10 -- FOLLOWING THE SAME SEQUENCE AS DESCRIBED IN STEP 9, SHIFT NB TRAFFIC INTO THEIR EXISTING PATTERN.

PHASE III

STEP 1 -- USING ROADWAY STANDARD DRAWING 1101.02, SHEET 3, PLACE THE FINAL LAYER OF SURFACE COURSE, FINAL PAVEMENT MARKINGS, AND MARKERS IN THE FINAL TRAFFIC PATTERN ON BOTH DIRECTIONS OF I-77, INCLUDING THE PROPOSED RAMPS. (SEE PM-6 THRU PM-10)

STEP 2 -- COMPLETE THE INSTALLATION OF THE PROPOSED SIGNAL AT I-77 AND BRAWLEY SCHOOL RD.

STEP 3 -- OPEN THE PROJECT TO THE FINAL TRAFFIC PATTERN.

STEP 4 -- REMOVE ALL TRAFFIC CONTROL DEVICES.

APPROVED: [signature] DATE: 11/4/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE

PHASING (AREA II)

SCALE:	NONE
DATE:	
DWG. BY:	DR
DESIGN BY:	DP
REVIEWED BY:	

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
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douglayner AT WZTC244749

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-4

TEMPORARY PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION	PAY ITEM QUANTITY BREAKDOWN	TOTAL QUANTITY
	PAVEMENT MARKING LINES		
	COLD APPLIED PLASTIC (4") TYPE 4 -REMOVABLE TAPE		
CA	WHITE EDGELINE	1000 LF	
CI	YELLOW DOUBLE CENTER LINE	1000 LF	2000 LF
	PAINT (4")		
PA	WHITE EDGELINE	87270 LF	
PB	YELLOW EDGELINE	49380 LF	
PC	10' WHITE SKIP	32145 LF	
PD	2' WHITE MINI SKIP	4575 LF	
PE	WHITE SOLID LANE LINE	40110 LF	
PI	YELLOW DOUBLE CENTER LINE	41640 LF	255120 LF
	PAINT (8")		
PR	WHITE GORELINE	20610 LF	
PX	WHITE CROSSWALK LINE	3630 LF	
PV	YELLOW DIAGONALS	615 LF	24855 LF
	PAINT (24")		
P4	WHITE STOPBAR	1500 LF	1500 LF
	PAINT SYMBOLS		
QA	LEFT TURN ARROW	60 EA	
QB	RIGHT TURN ARROW	60 EA	
QC	STRAIGHT ARROW	60 EA	
QE	COMBO STRAIGHT/RIGHT ARROW	30 EA	210 EA
	PAINT CHARACTERS		
QI	ALPHA NUMERIC CHARACTER	144 EA	144 EA
	TEMPORARY RAISED MARKERS		
MH	YELLOW/YELLOW	300 EA	
MI	CRYSTAL/RED	3000 EA	3300 EA

APPROVED: DATE: 11/4/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

TEMPORARY PAVEMENT MARKING SCHEDULE

SCALE:	NONE
DATE:	11/08
DWG. BY:	AKP
DESIGN BY:	AKP
REVIEWED BY:	DAP

DIVISION OF HIGHWAYS - TRAFFIC ENGINEERING BRANCH - TRAFFIC CONTROL UNIT

REVISIONS

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akpatel AT WZTC244748

TEMPORARY SHORING NOTES

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-5A

TEMPORARY SHORING LOCATION NO. 1 (AS SHOWN ON TCP-07)

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 264+75.00+/- -L-, 6 FT. LEFT OF -L-, TO STATION 264+95.00+/- -L-, 6 FT. LEFT OF -L-, USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 60 PCF
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 PSF

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 264+75.00+/- -L-, 6 FT. LEFT OF -L-, TO STATION 264+95.00+/- -L-, 6 FT. LEFT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

QUANTITY = 60 SF

TEMPORARY SHORING LOCATION NO. 2 (AS SHOWN ON TCP-07)

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 265+35.00+/- -L-, 6 FT. LEFT OF -L-, TO STATION 265+45.00+/- -L-, 6 FT. LEFT OF -L-, USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 60 PCF
FRICTION ANGLE, ϕ = 30 DEG
COHESION, c = 0 PSF

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 265+35.00 +/- -L-, 6 FT. LEFT OF -L-, TO STATION 265+45.00 +/- -L-, 6 FT. LEFT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

QUANTITY = 30 SF

TEMPORARY SHORING LOCATION NO. 3 (AS SHOWN ON TCP-07)

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 264+85.00+/- -L-, 5 FT. RIGHT OF -L-, TO STATION 265+30.00+/- -L-, 5 FT. RIGHT OF -L-, USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 60 PCF
FRICTION ANGLE, ϕ = 30 DEG
COHESION, c = 0 PSF

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 264+85.00+/- -L-, 5 FT. RIGHT OF -L-, TO STATION 265+30.00+/- -L-, 5 FT. RIGHT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

QUANTITY = 315 SF

TEMPORARY SHORING LOCATION No. 4 (AS SHOWN ON TCP-08)

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 276+67.00+/- -L-, 5 FT. LEFT OF -L-, TO STATION 277+21.00+/- -L-, 5 FT. LEFT OF -L-, USE THE FOLLOWING SOIL PARAMETETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 60 PCF
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 PSF

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 276+67.00+/- -L-, 5 FT. LEFT OF -L-, TO STATION 277+21.00+/- -L-, 5 FT. LEFT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

QUANTITY = 432 SF

TEMPORARY SHORING LOCATION NO. 5 (AS SHOWN ON TCP-08)

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 278+58.00+/- -L-, 5 FT. LEFT OF -L-, TO STATION 279+17.00+/- -L-, 5 FT. LEFT OF -L-, USE THE FOLLOWING SOIL PARAMETETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 60 PCF
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 PSF

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 278+58.00+/- -L-, 5 FT. LEFT OF -L-, TO STATION 279+17.00+/- -L-, 5 FT. LEFT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

QUANTITY = 531 SF

APPROVED:_____ DATE:_____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023480 ENGINEER JOHN S. W. FARGHER III

TEMPORARY SHORING NOTES

SCALE:	NONE
DATE:	DEC 08
DWG. BY:	
DESIGN BY:	
REVIEWED BY:	

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION TRAFFIC ENGINEERING BRANCH

REVISIONS

CADD FILE

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TEMPORARY SHORING NOTES

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-5B

TEMPORARY SHORING LOCATION NO. 6 (AS SHOWN ON TCP-08)

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

DO NOT USE STANDARD SHORING FROM STATION 276+53.00+/- -L-, ZERO FEET OF -L-, TO STATION 277+15.00+/- -L-, ZERO FEET OF -L-.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 276+53.00+/- -L-, ZERO FEET OF -L-, TO STATION 277+15.00+/- -L-, ZERO FEET OF -L-, USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 60 PCF
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 PSF

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 276+53.00+/- -L-, ZERO FEET OF -L-, TO STATION 277+15.00+/- -L-, ZERO FEET OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

QUANTITY = 1178 SF

TEMPORARY SHORING LOCATION NO. 7 (AS SHOWN ON TCP-08)

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION

DO NOT USE STANDARD SHORING FROM STATION 278+63.00+/- -L-, ZERO FEET OF -L-, TO STATION 279+29.00+/- -L-, ZERO FEET OF -L-.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 278+63.00+/- -L-, ZERO FEET OF -L-, TO STATION 279+29.00+/- -L-, ZERO FEET OF -L-, USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 60 PCF
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 PSF

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 278+63.00+/- -L-, ZERO FEET OF -L-, TO STATION 279+29.00+/- -L-, ZERO FEET OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

QUANTITY = 1188 SF

TEMPORARY SHORING LOCATION NO. 8 (AS SHOWN ON TCP-12)

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 31+80.00+/- -Y6-, 62 FEET RIGHT OF -Y6-, TO STATION 37+20.00+/- -Y6-, 62 FEET RIGHT OF -Y6-, USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 60 PCF
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 PSF

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 31+80.00+/- -Y6-, 62 FEET RIGHT OF -Y6-, TO STATION 37+20.00+/- -Y6-, 62 FEET RIGHT OF -Y6-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

QUANTITY = 4320 SF

TEMPORARY SHORING LOCATION NO. 9

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 55+00.00+/- -Y6-, 9 FEET LEFT OF -Y6-, TO STATION 56+10.00+/- -Y6-, 9 FEET LEFT OF -Y6-, USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 60 PCF
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 PSF

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 55+00.00+/- -Y6-, 9 FEET LEFT OF -Y6-, TO STATION 56+10.00+/- -Y6-, 9 FEET LEFT OF -Y6-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

QUANTITY = 770 SF

TEMPORARY SHORING LOCATION No. 10

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 55+00.00+/- -Y6-, 9 FEET RIGHT OF -Y6-, TO STATION 56+10.00+/- -Y6-, 9 FEET RIGHT OF -Y6-, USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 60 PCF
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 PSF

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 55+00.00+/- -Y6-, 9 FEET RIGHT OF -Y6-, TO STATION 56+10.00+/- -Y6-, 9 FEET RIGHT OF -Y6-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

QUANTITY = 770 SF

APPROVED:_____ DATE:_____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023480 ENGINEER JOHN S. W. FARGIER

TEMPORARY SHORING NOTES

SCALE:	NONE
DATE:	DEC 08
DWG. BY:	
DESIGN BY:	
REVIEWED BY:	

DIVISION OF HIGHWAYS - TRAFFIC ENGINEERING BRANCH - TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

TEMPORARY SHORING NOTES

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-5C

TEMPORARY SHORING LOCATION NO. 11 (AS SHOWN ON TCP-14)

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 56+10.00+/- -Y6-, 9 FEET LEFT OF -Y6-, TO STATION 57+20.00+/- -Y6-, 9 FEET LEFT OF -Y6-, USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 60 PCF
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 PSF

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 56+10.00+/- -Y6-, 9 FEET LEFT OF -Y6-, TO STATION 57+20.00+/- -Y6-, 9 FEET LEFT OF -Y6-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

QUANTITY = 770 SF

TEMPORARY SHORING LOCATION No. 12 (AS SHOWN ON TCP-14)

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 56+10.00+/- -Y6-, 9 FEET RIGHT OF -Y6-, TO STATION 57+20.00+/- -Y6-, 9 FEET RIGHT OF -Y6-, USE THE FOLLOWING SOIL PARAMETER:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ = 60 PCF
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 PSF

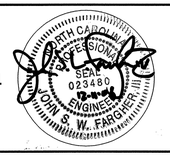
NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 56+10.00+/- -Y6-, 9 FEET RIGHT OF -Y6-, TO STATION 57+20.00+/- -Y6-, 9 FEET RIGHT OF -Y6-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

QUANTITY = 770 SF

APPROVED:_____ DATE:_____

SEAL



TEMPORARY SHORING NOTES

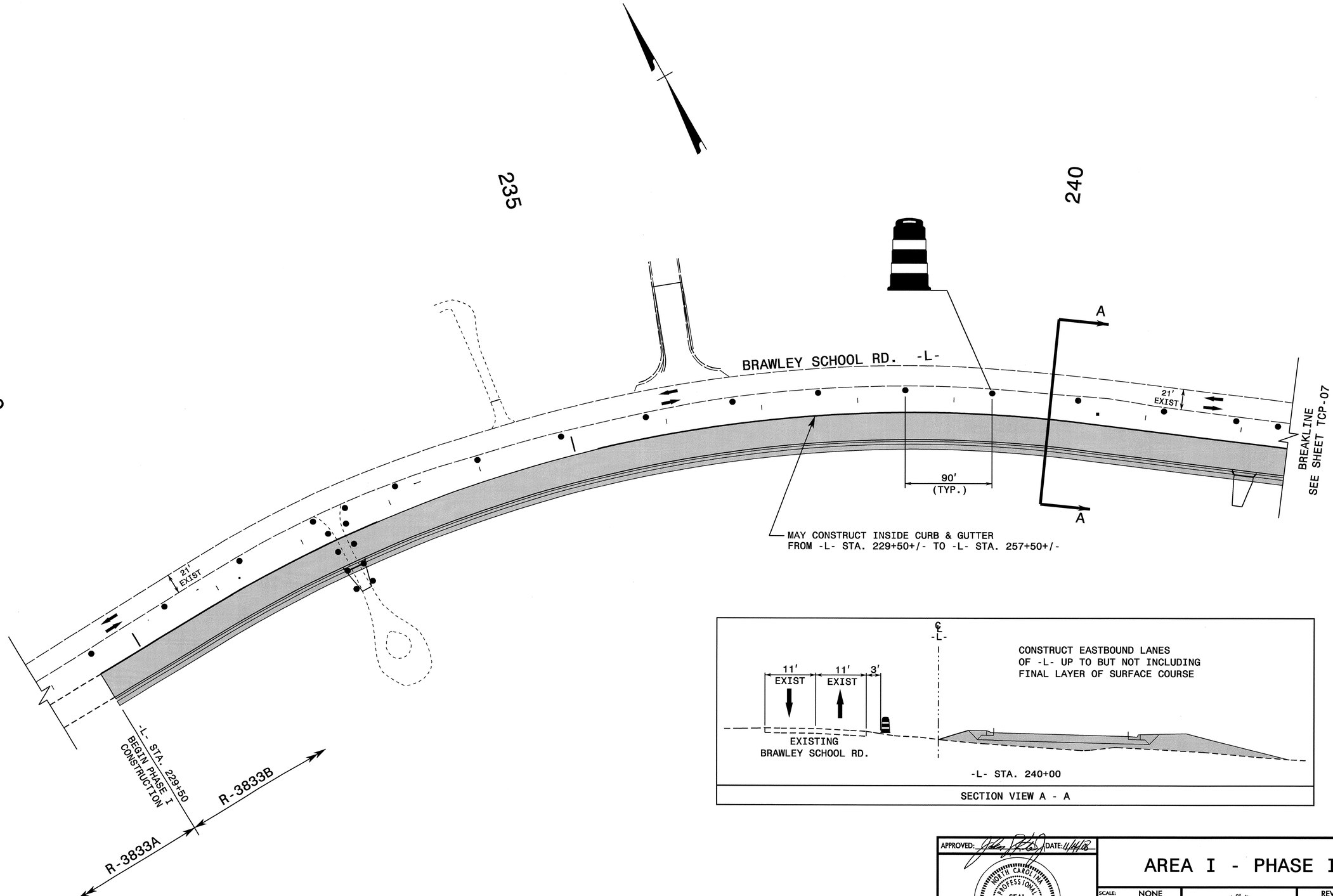
SCALE:	NONE
DATE:	DEC 08
DWG. BY:	
DESIGN BY:	
REVIEWED BY:	

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

REVISIONS	
CADD FILE	

11-DEC-2008 10:20
c:\documents and settings\mbabalola\local settings\temporary internet files\olk2d\r-3833b_tc_tcp_05abc_temp shoring notes.dgn
mbabalola AT GEH240343

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-06



SECTION VIEW A - A

APPROVED: _____ DATE: 11/4/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE JR.

AREA I - PHASE I

SCALE:	NONE
DATE:	10/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

REVISIONS	
CADD FILE	

04-NOV-2008 11:52
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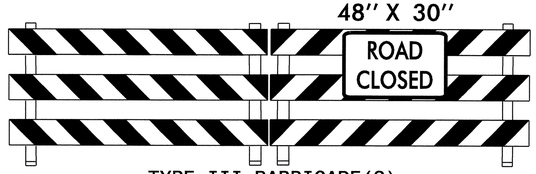
akpatel AT WZTC244748

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-07

R11-2
48" X 30"



TYPE III BARRICADE(S)

WEDGE/RESURFACE -L- AND -Y1- AS DIRECTED BY THE ENGINEER TO MATCH -Y4- PRIOR TO OPENING -Y4- TO TRAFFIC. SEE TCP-7A FOR INTERMEDIATE PM PLAN. SEE SIGNAL PLANS FOR TEMPORARY SIGNAL.

SEE SHEET TCP-06 BREAKLINE

-L- STA. 260+00+/-

-L- STA. 262+10+/-

SEE TEMPORARY SHORING NOTES ON TCP-5

NOTE: DELAY CONSTRUCTION ACROSS DRIVE AT -L- STA. 268+00 UNTILL -Y4-/-Y5- ARE OPEN TO EXISTING BRAWLEY SCHOOL RD

260

265

270

-Y10-

27'

-Y1-

ROLLING HILLS RD.

36'

10'

21' EXIST

90'

27'

20'

B

A

END TS NO.1
-L- STA. 264+95+/-
6' LT

BEGIN TS NO.1
-L- STA. 264+75+/-
6' LT

BEGIN TS NO.2
-L- STA. 265+35+/-
6' LT

END TS NO.2
-L- STA. 265+45+/-
6' LT

BRAWLEY SCHOOL RD. -L-

BB

MTL

20' EXIST

33' EXIST

27'

CB

ESR

MATCH SHEET TCP-08
-L- STA. 270+00+/-

BEGIN TS NO.3
-L- STA. 264+85+/-
5' RT

END TS NO.3
-L- STA. 265+30+/-
5' RT

PLACE INCIDENTAL STONE AS DIRECTED BY THE ENGINEER, TO MAINTAIN ACCESS TO LIFT STATION DURING CONSTRUCTION

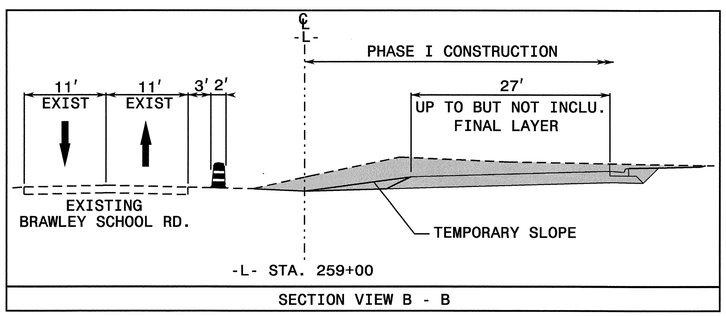
PROPOSED TRIPLE 12' X 8' CULVERT PHASE I CONSTRUCTION

-D-

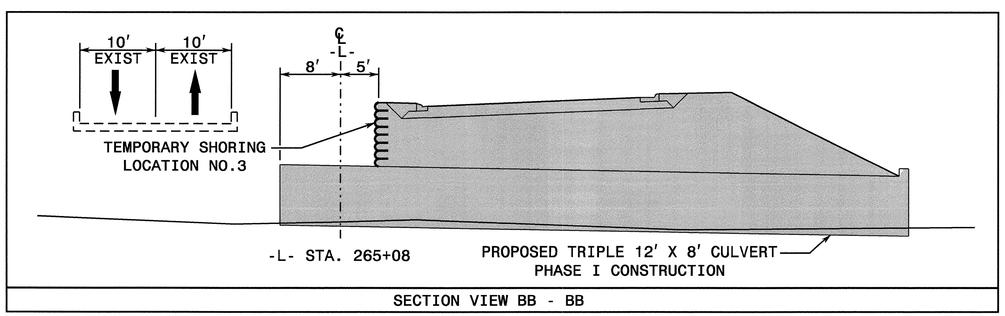
-Y4-
(NEW LOCATION)

CONSTRUCT -Y4- UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE SEE TCP-7A FOR INTERMEDIATE PM PLAN

BREAKLINE
SEE SHEET TCP-10



SECTION VIEW B - B



SECTION VIEW BB - BB

15

APPROVED: [signature] DATE: 11/4/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KIE JR.

AREA I - PHASE I

SCALE:	NONE
DATE:	10/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

04-NOV-2008 11:54
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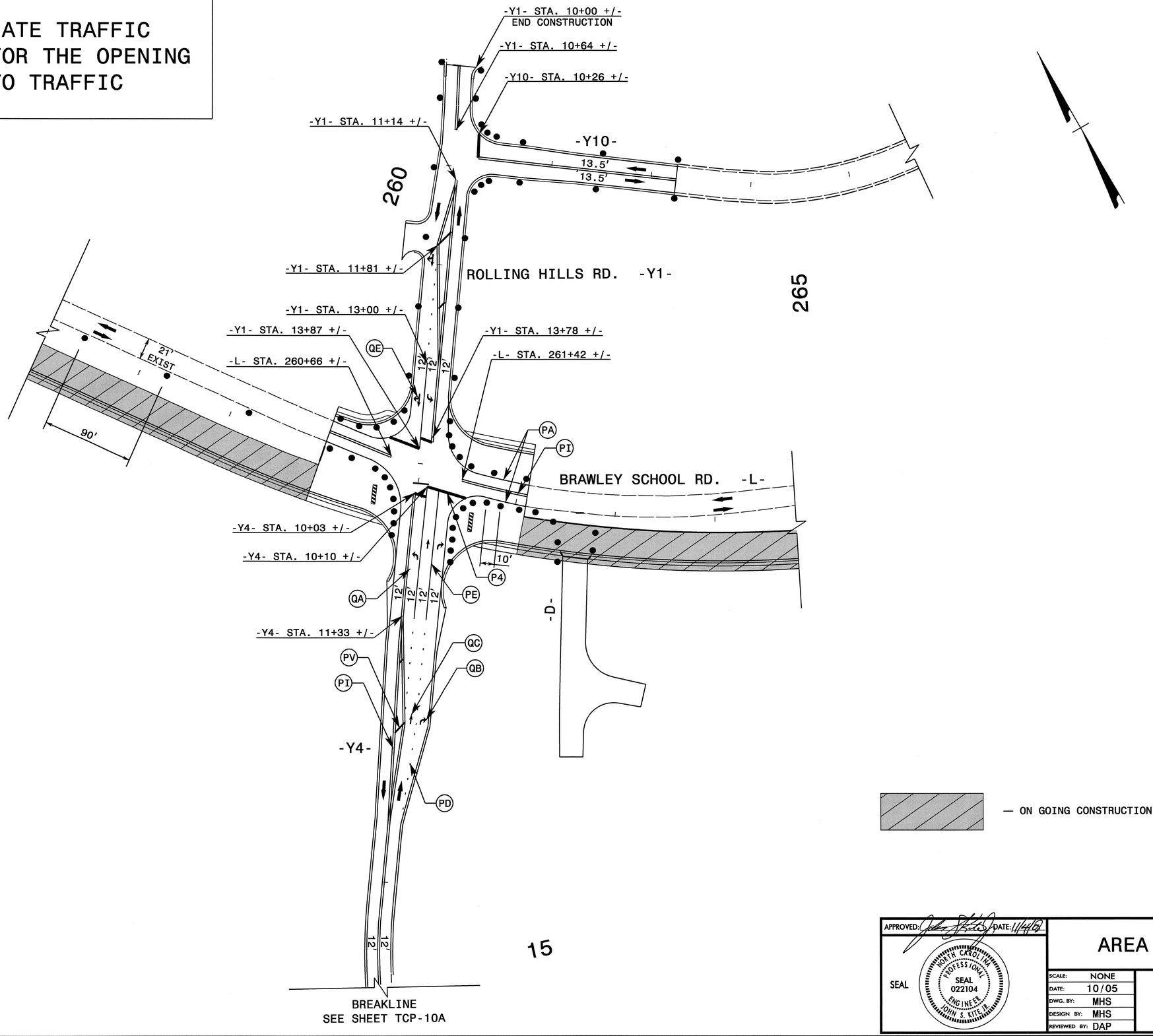
dkpatel AT WZTC244748

INTERMEDIATE TRAFFIC PATTERN FOR THE OPENING OF -Y4- TO TRAFFIC

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-7A



— ON GOING CONSTRUCTION

APPROVED: DATE: 11/4/05

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, III

AREA I - PHASE I

SCALE:	NONE
DATE:	10/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

04-NOV-2008 11:54
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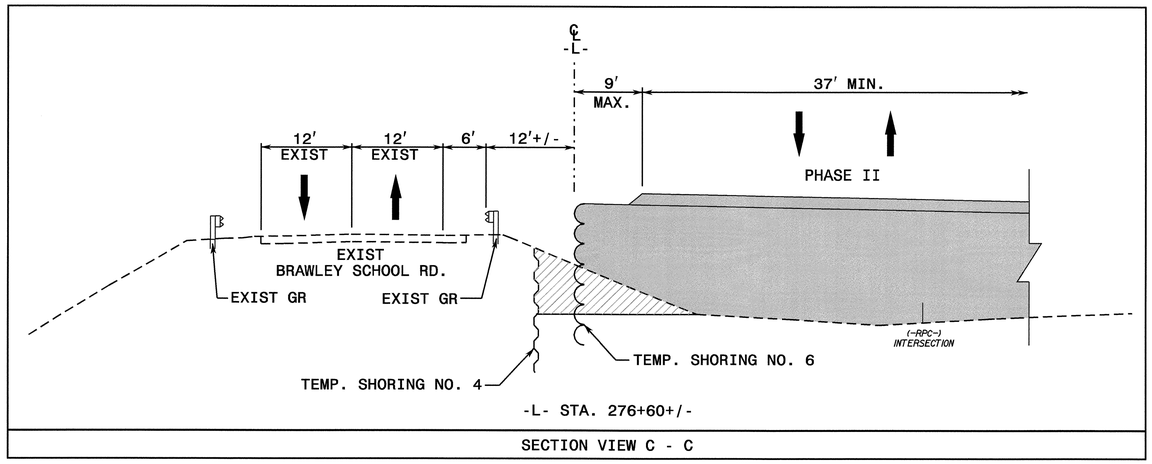
dkpatel AT W2TC244748

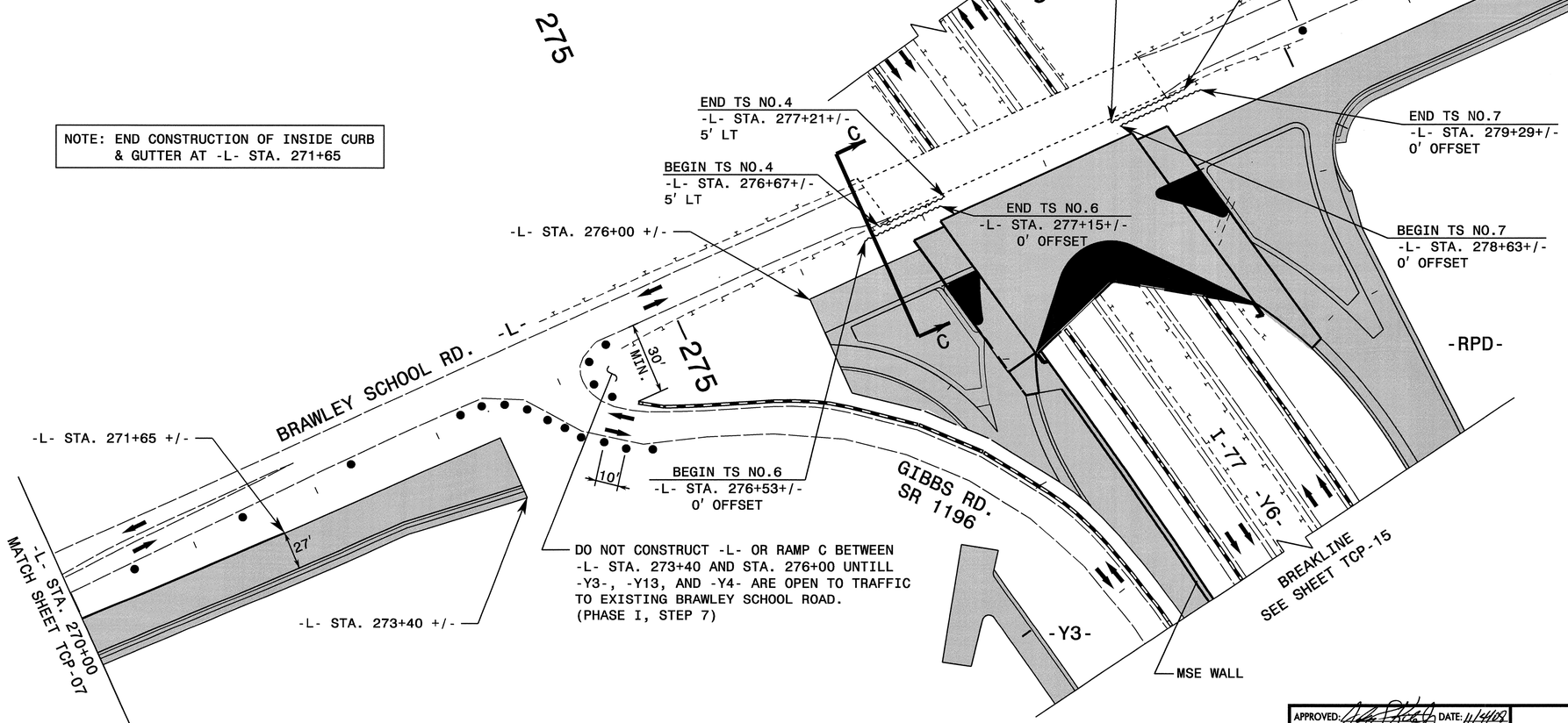
PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-08



SECTION VIEW C - C

SEE TEMPORARY SHORING NOTES ON TCP-5

NOTE: END CONSTRUCTION OF INSIDE CURB & GUTTER AT -L- STA. 271+65



APPROVED: DATE: 11/4/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

AREA I PHASE I

SCALE:	NONE
DATE:	10/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

REVISIONS	
CADD FILE	

04-NOV-2008 11:55
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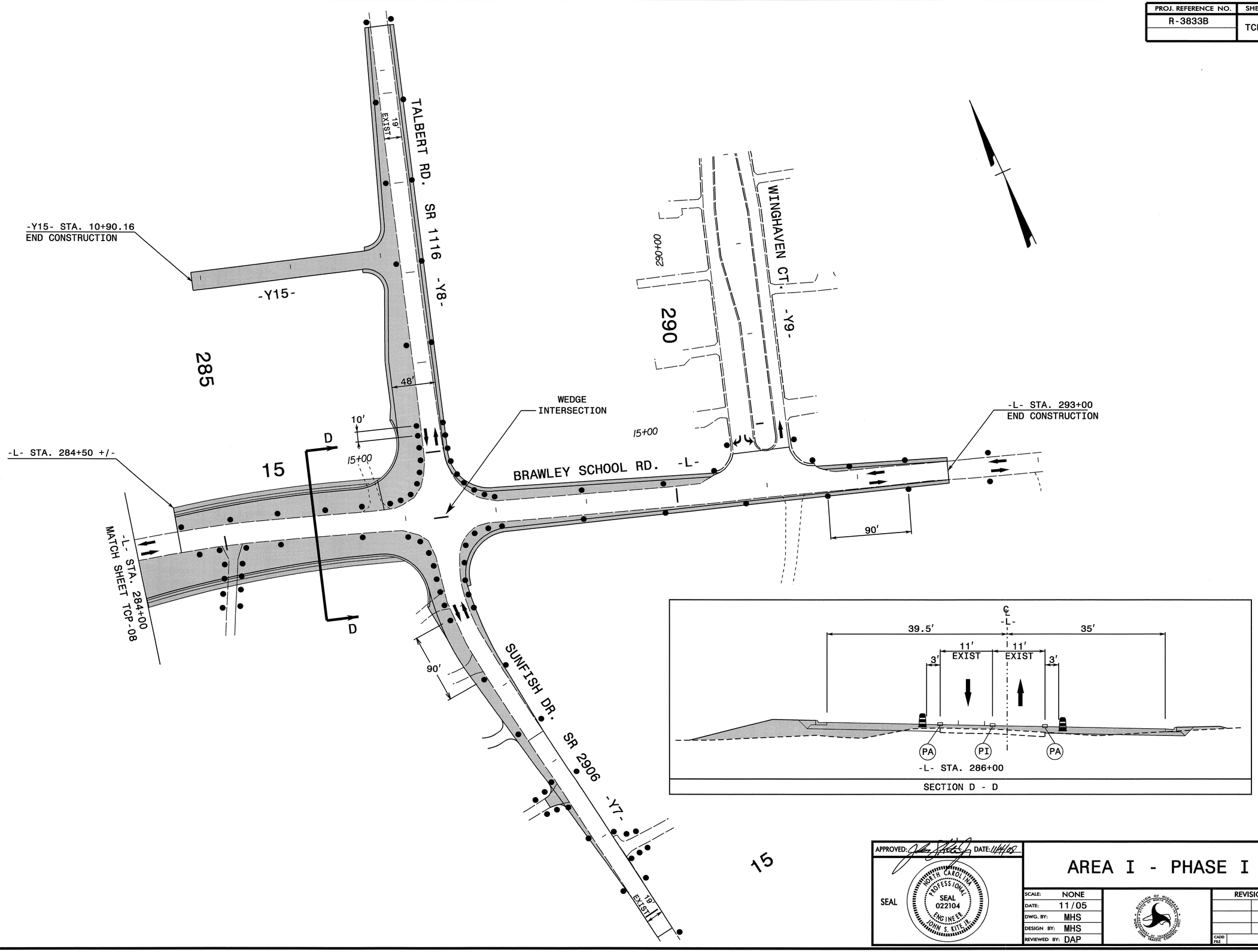
dkpatel AT WZTC244748

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-09



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dkpatel AT WZTC244748

APPROVED: [signature] DATE: 11/4/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, III

AREA I - PHASE I

SCALE:	NONE
DATE:	11/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

DIVISION OF HIGHWAYS — STATE OF NORTH CAROLINA — DEPARTMENT OF TRANSPORTATION — STATE TRAFFIC ENGINEERING BRANCH

REVISIONS

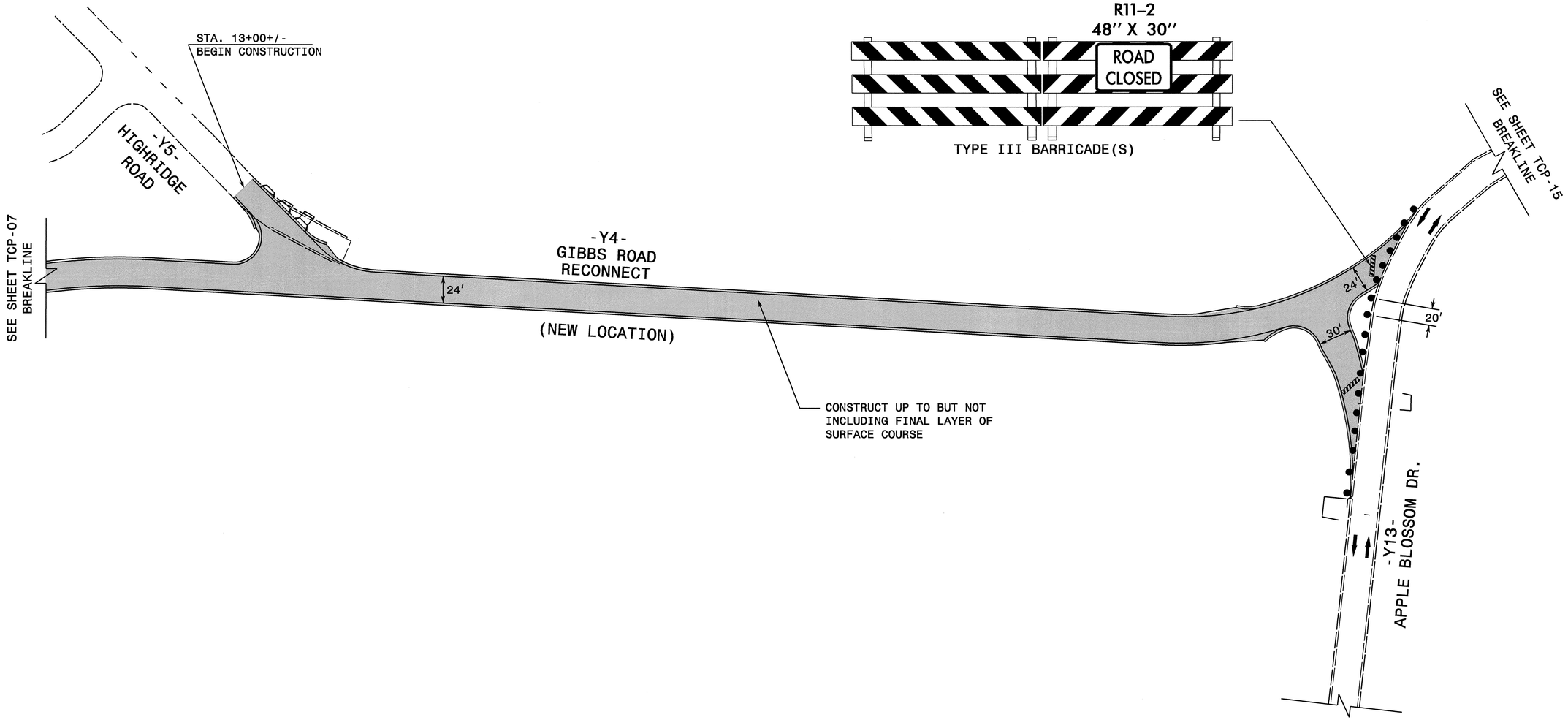
CADD FILE

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-10

30

35

40



APPROVED: DATE: 11/4/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S KITE JR

AREA I - PHASE I

SCALE:	NONE
DATE:	11/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION · DIVISION OF HIGHWAYS · TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

04-NOV-2008 11:57
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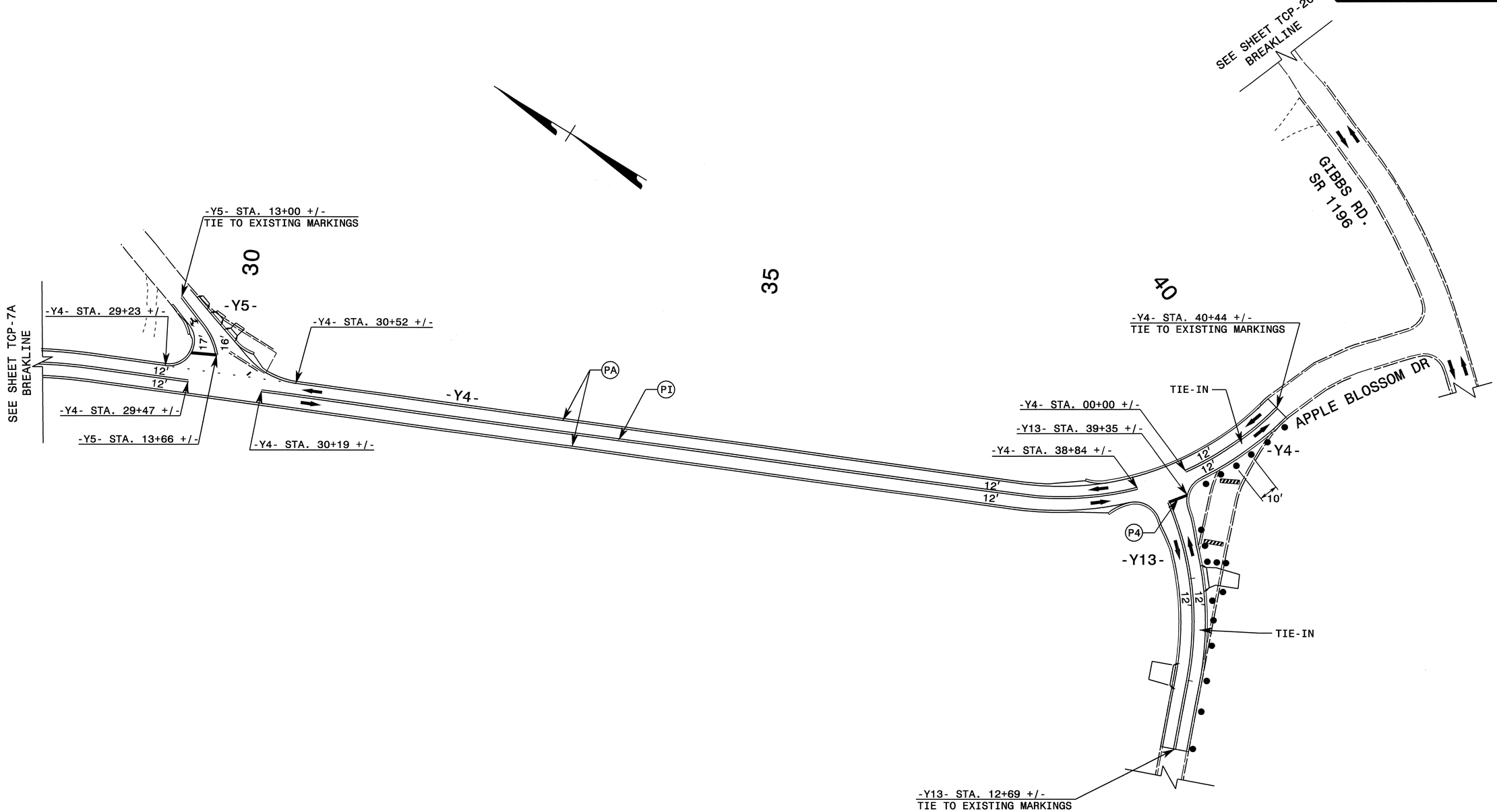
akpatel AT W2TC244748

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-10A



APPROVED: [signature] DATE: 11/4/05

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

AREA I - PHASE I

SCALE:	NONE
DATE:	11/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

REVISIONS	
CADD FILE	

04-NOV-2008 11:57
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akpatel AT W2TC244748

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-11

10

15

20

1000'

EXIT 36

STA. 11+50+/- -Y6-
BEGIN 6' MEDIAN PAVEMENT

-Y6- STA. 17+00+/- (NB)
BEGIN PCB 3' SHY

-Y6- STA. 18+00+/- (NB)
BEGIN PHASE I CLEARING/
GRADING BEHIND PCB

EXISTING PAVEMENT MARKINGS

I-77 -Y6- NB

12'
12'

12'
12'

12'
12'

12'
12'

-Y6- STA. 23+50
MATCH SHEET TCP-12

I-77 -Y6- SB

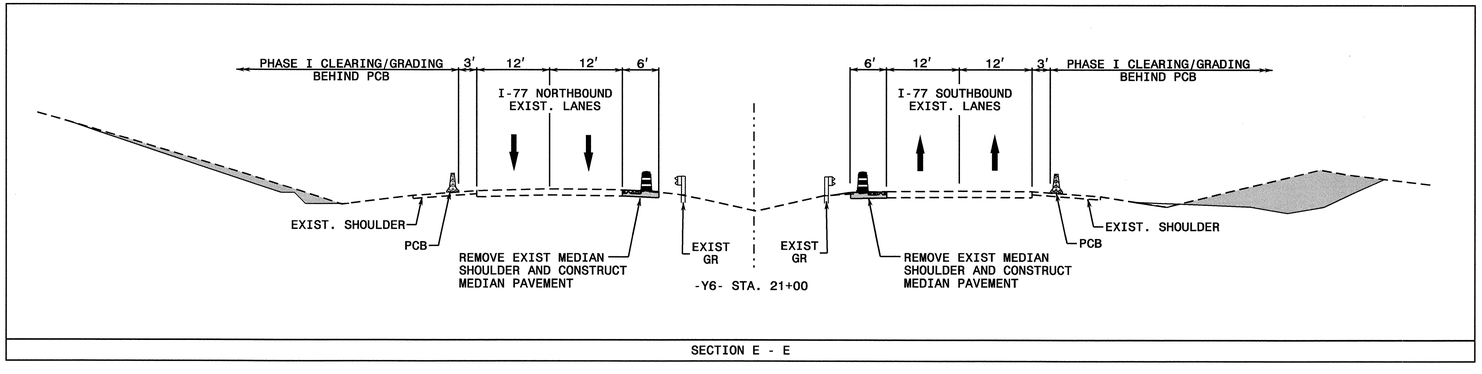
-Y6- STA. 19+55+/- (SB)
BEGIN PCB WITH CRASH
CUSHION 10' SHY +/-

-Y6- STA. 20+55+/- (SB)
END 14:1 TAPER 3' SHY +/-

-Y6- STA. 20+80+/- (SB)
BEGIN PHASE I CLEARING/
GRADING BEHIND PCB

E

E



SECTION E - E

APPROVED: DATE: 11/4/05

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITTLE III

AREA II - PHASE I

SCALE:	NONE
DATE:	11/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

DIVISION OF HIGHWAYS · TRAFFIC ENGINEERING BRANCH · NORTH CAROLINA DEPARTMENT OF TRANSPORTATION · TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

05-NOV-2008 09:52
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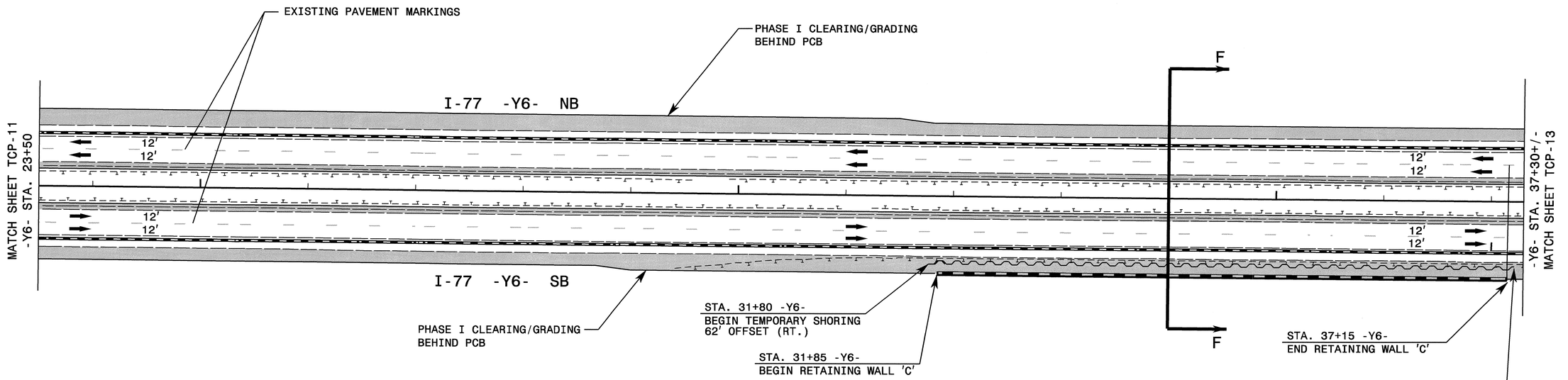
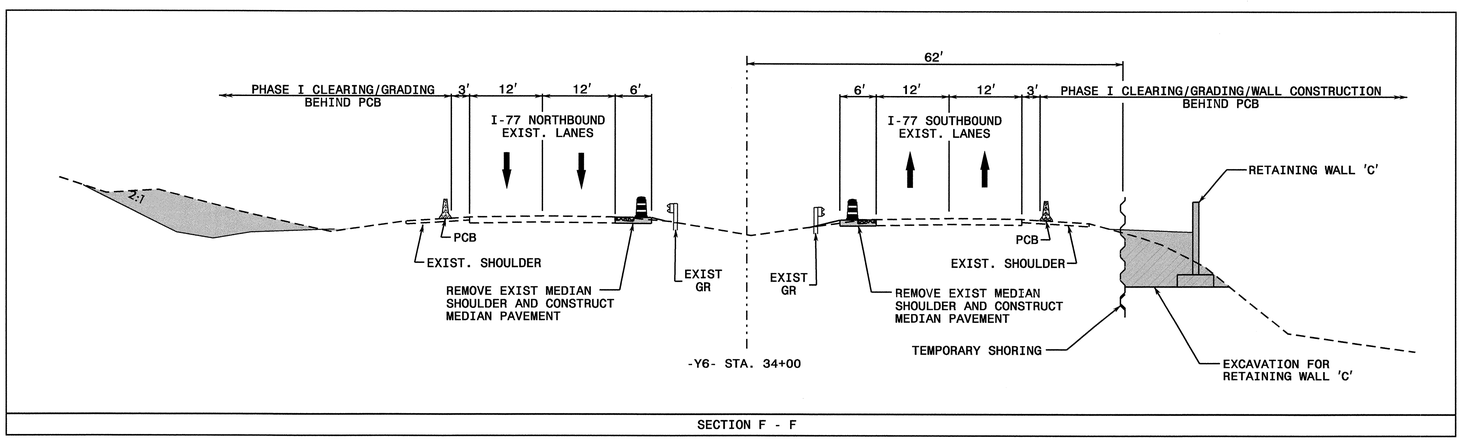
akpatel AT WZTC244748

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-12

25 30 35

SEE SHEET TCP-5 FOR TEMPORARY SHORING NOTES





SECTION F - F

APPROVED: [signature] DATE: 11/4/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

AREA II - PHASE I

SCALE:	NONE
DATE:	11/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

05-NOV-2008 09:56
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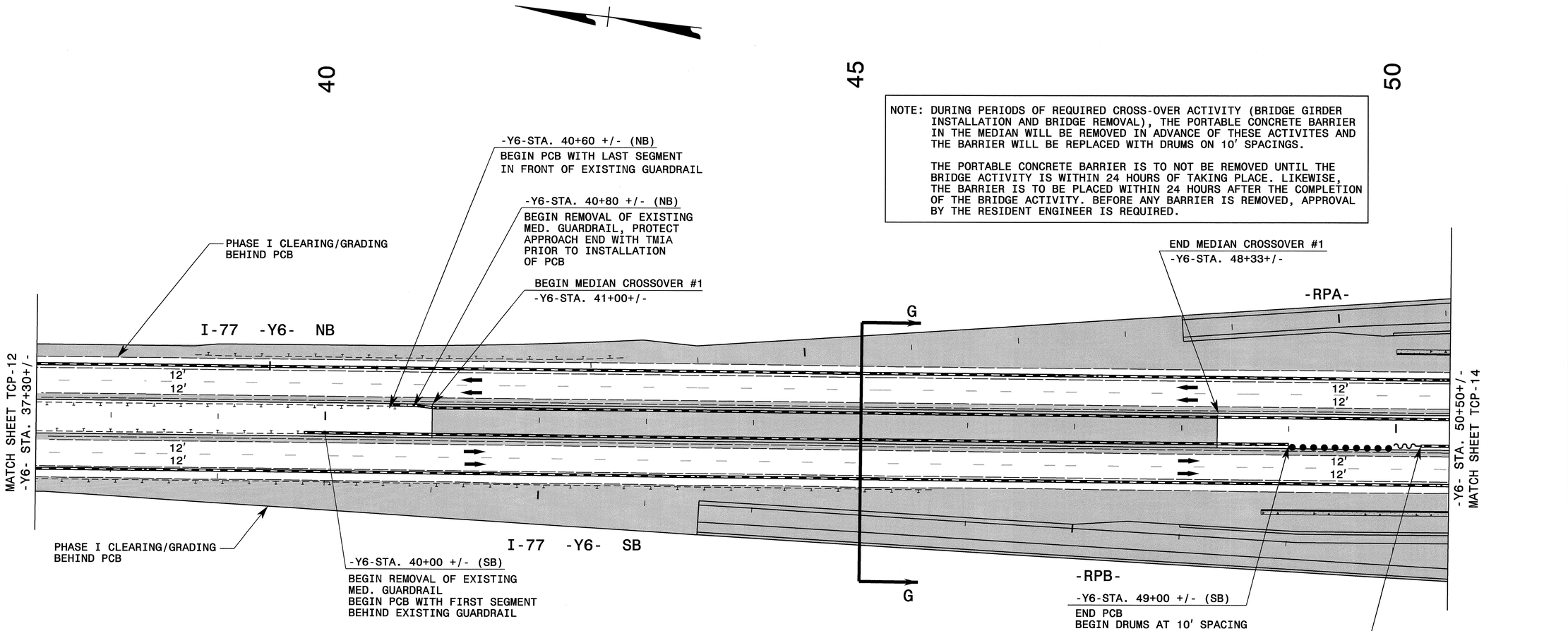
akpatel AT WZTC244748

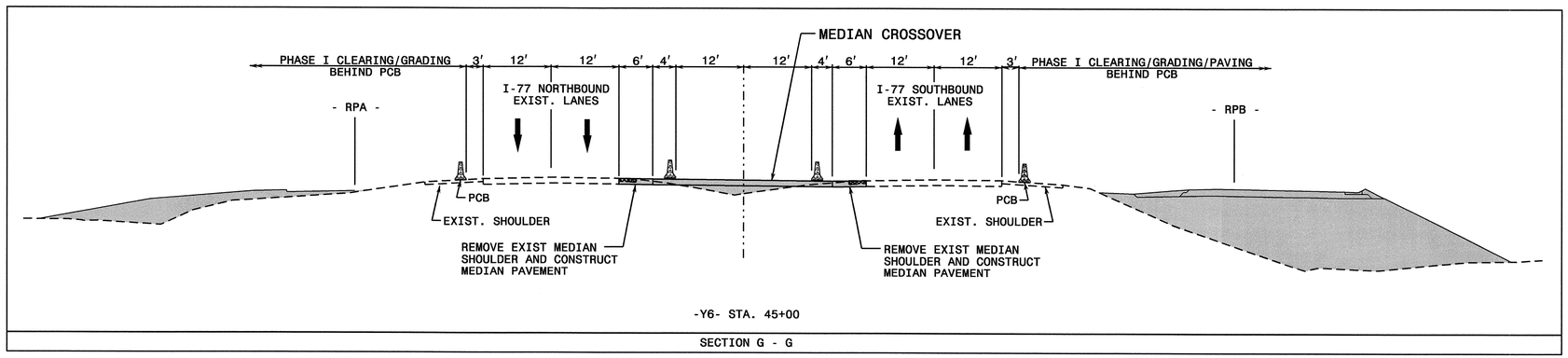
PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-13

40 45 50

NOTE: DURING PERIODS OF REQUIRED CROSS-OVER ACTIVITY (BRIDGE GIRDER INSTALLATION AND BRIDGE REMOVAL), THE PORTABLE CONCRETE BARRIER IN THE MEDIAN WILL BE REMOVED IN ADVANCE OF THESE ACTIVITES AND THE BARRIER WILL BE REPLACED WITH DRUMS ON 10′ SPACINGS.

THE PORTABLE CONCRETE BARRIER IS TO NOT BE REMOVED UNTIL THE BRIDGE ACTIVITY IS WITHIN 24 HOURS OF TAKING PLACE. LIKEWISE, THE BARRIER IS TO BE PLACED WITHIN 24 HOURS AFTER THE COMPLETION OF THE BRIDGE ACTIVITY. BEFORE ANY BARRIER IS REMOVED, APPROVAL BY THE RESIDENT ENGINEER IS REQUIRED.





SECTION G - G

APPROVED: DATE: 11/4/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

AREA II - PHASE I

SCALE:	NONE
DATE:	11/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

06-NOV-2008 10:48
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dpatel AT WZTC244748

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-14

55

60

BEGIN TEMPORARY SHORING
-Y6- STA. 56+10+/-
9' LT.

TEMP. SLOPE

-RPA- STA. 15+00+/-APPROXIMATE LIMITS OF RAMP A PAVING, AND MSE WALL CONSTRUCTION

-RPA-

BRAWLEY SCHOOL RD. -L-

I-77 -Y6- NB

MATCH SHEET TCP-13
-Y6- STA. 50+50+/-

12'
12'
12'
12'

I-77 -Y6- SB

-RPB-

-RPB- STA. 16+65+/-APPROXIMATE LIMITS OF RAMP B PAVING, AND MSE WALL CONSTRUCTION

TEMP. SLOPE

BEGIN TEMPORARY SHORING
-Y6- STA. 56+10+/-
9' RT.

END TEMPORARY SHORING
-Y6- STA. 57+20+/-
9' LT.

-Y6-STA. 59+20 +/- (NB)
END PCB WITH CRASH CUSHION
BEGIN DRUMS AT 10' SPACING

-Y6-STA. 60+40 +/- (NB)
BEGIN PCB
END DRUMS

BEGIN MEDIAN CROSSOVER #2
-Y6-STA. 61+00+/-

-RPD-

H

STAGE I INT. BENT FOUNDATION

12'
12'
12'
12'

END MSE WALL

-Y6- STA. 63+00+/-
MATCH SHEET TCP-15

H

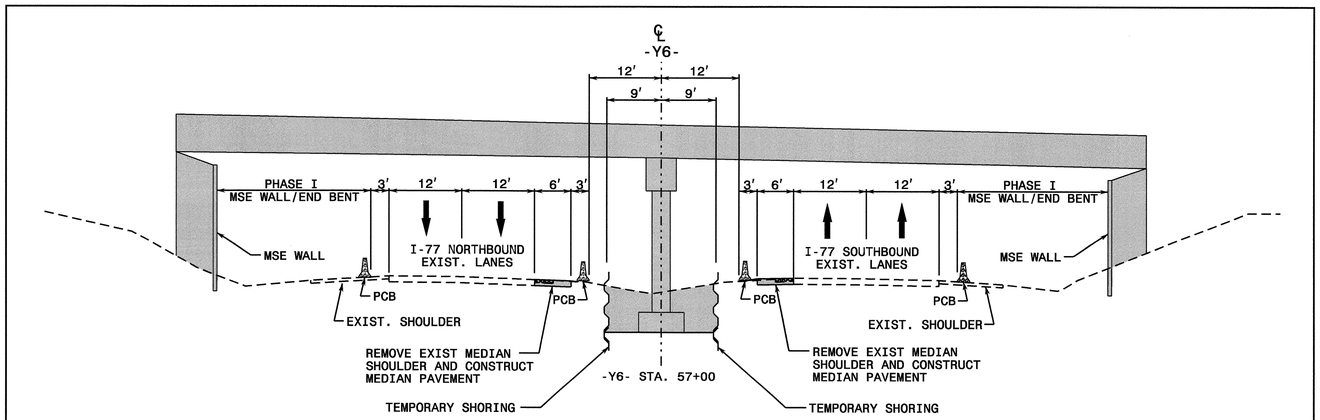
-RPC-

-Y3-

GIBBS RD. SR 1196

END TEMPORARY SHORING
-Y6- STA. 57+20+/-
9' RT.

NOTE: PAVING AND SOME GRADING OF -RPC- MAY NOT COMMENCE UNTIL -Y3- IS OPEN TO TRAFFIC WITH ACCESS TO BRAWLEY SCHOOL ROAD (SEE AREA I, TCP-8)



SECTION VIEW H - H

APPROVED: _____ DATE: 11/4/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

AREA II - PHASE I

SCALE:	NONE
DATE:	11/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

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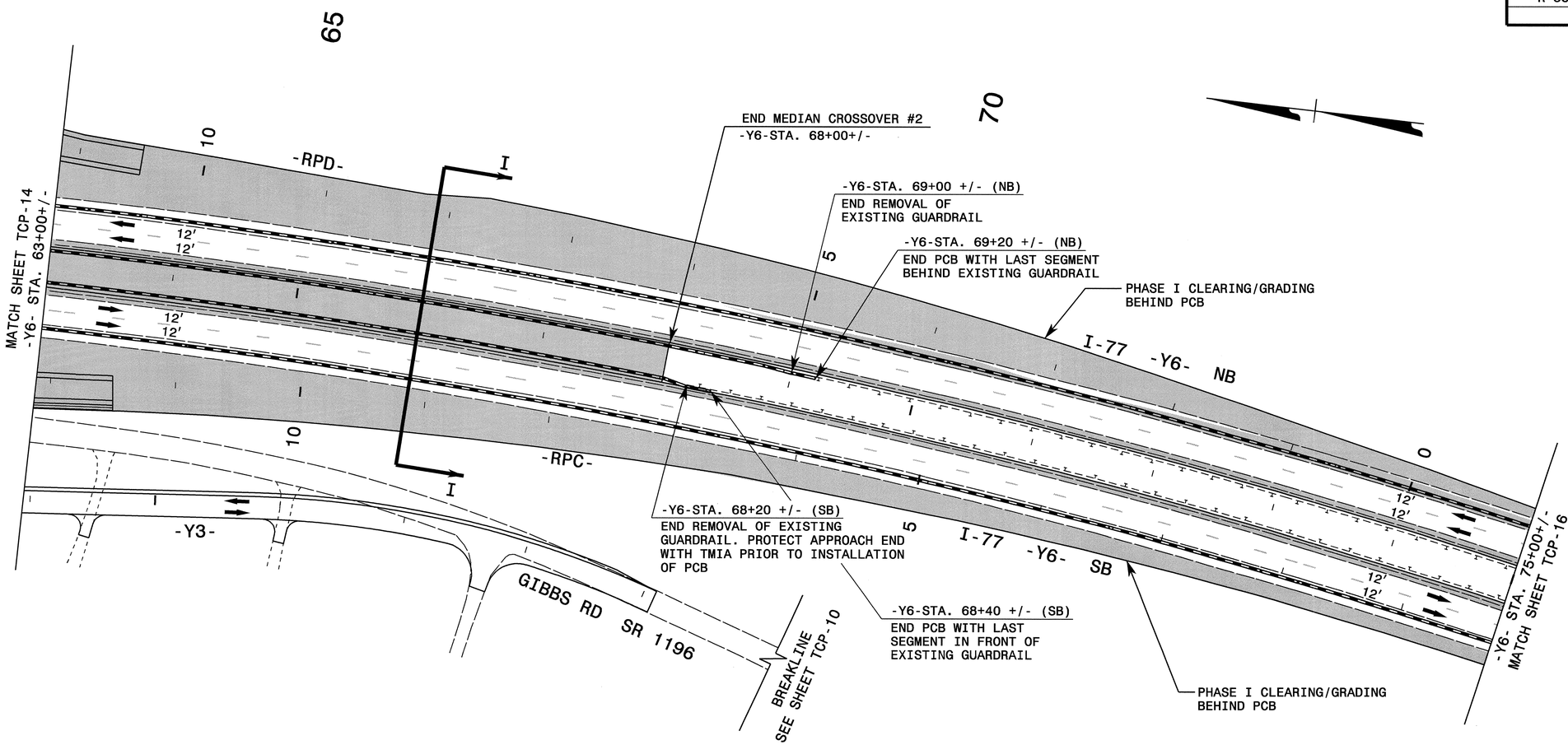
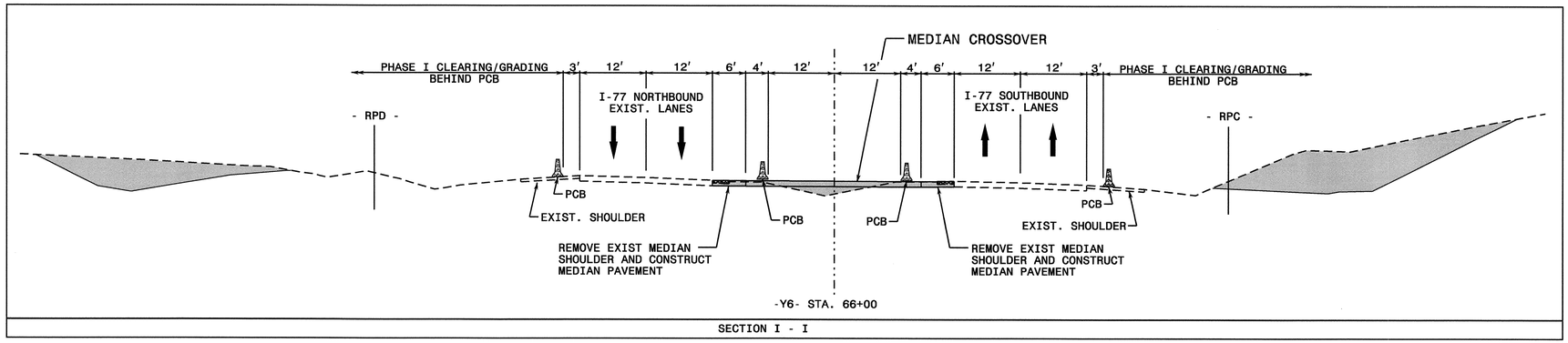
dkpatel AT WZTC244748

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-15





SECTION I - I

NOTE: DURING PERIODS OF REQUIRED CROSS-OVER ACTIVITY (BRIDGE GIRDER INSTALLATION AND BRIDGE REMOVAL), THE PORTABLE CONCRETE BARRIER IN THE MEDIAN WILL BE REMOVED IN ADVANCE OF THESE ACTIVITES AND THE BARRIER WILL BE REPLACED WITH DRUMS ON 10' SPACINGS.

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APPROVED: _____ DATE: 11/4/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KYLE, JR.

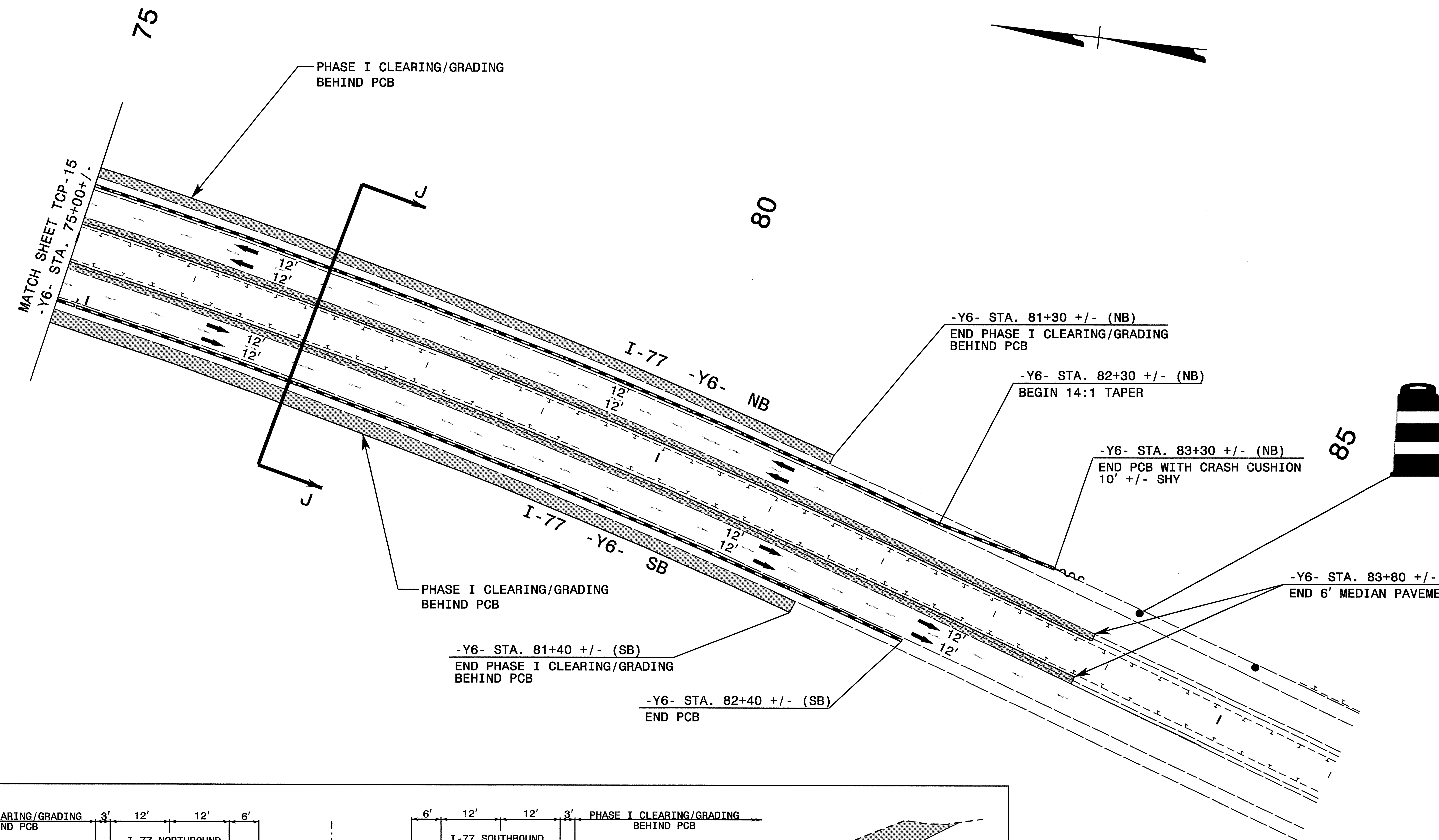
AREA II - PHASE I

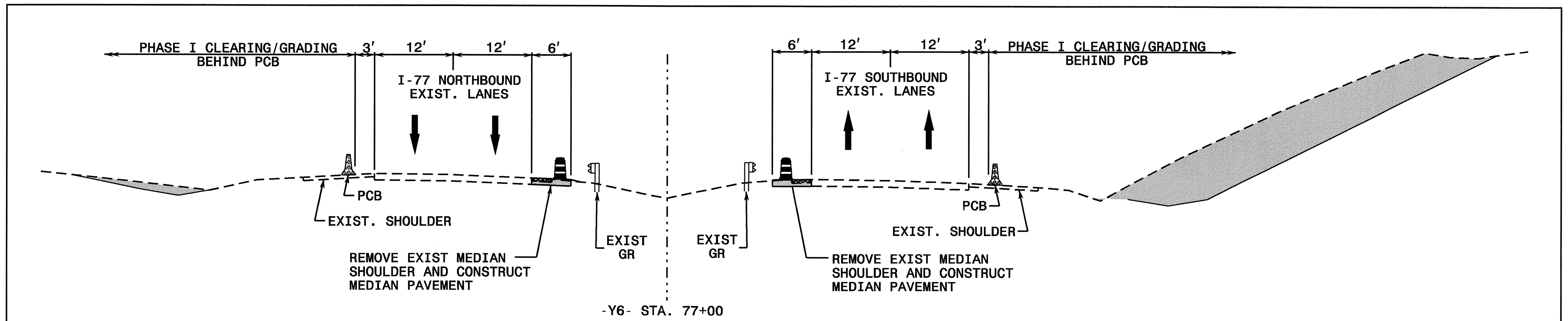
SCALE:	NONE
DATE:	11/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEER

REVISIONS	
CADD FILE	

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-16





SECTION J - J

APPROVED: [signature] DATE: 11/4/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE JR.

AREA II - PHASE I

SCALE:	NONE
DATE:	11/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

DIVISION OF HIGHWAYS — WORK ZONE TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

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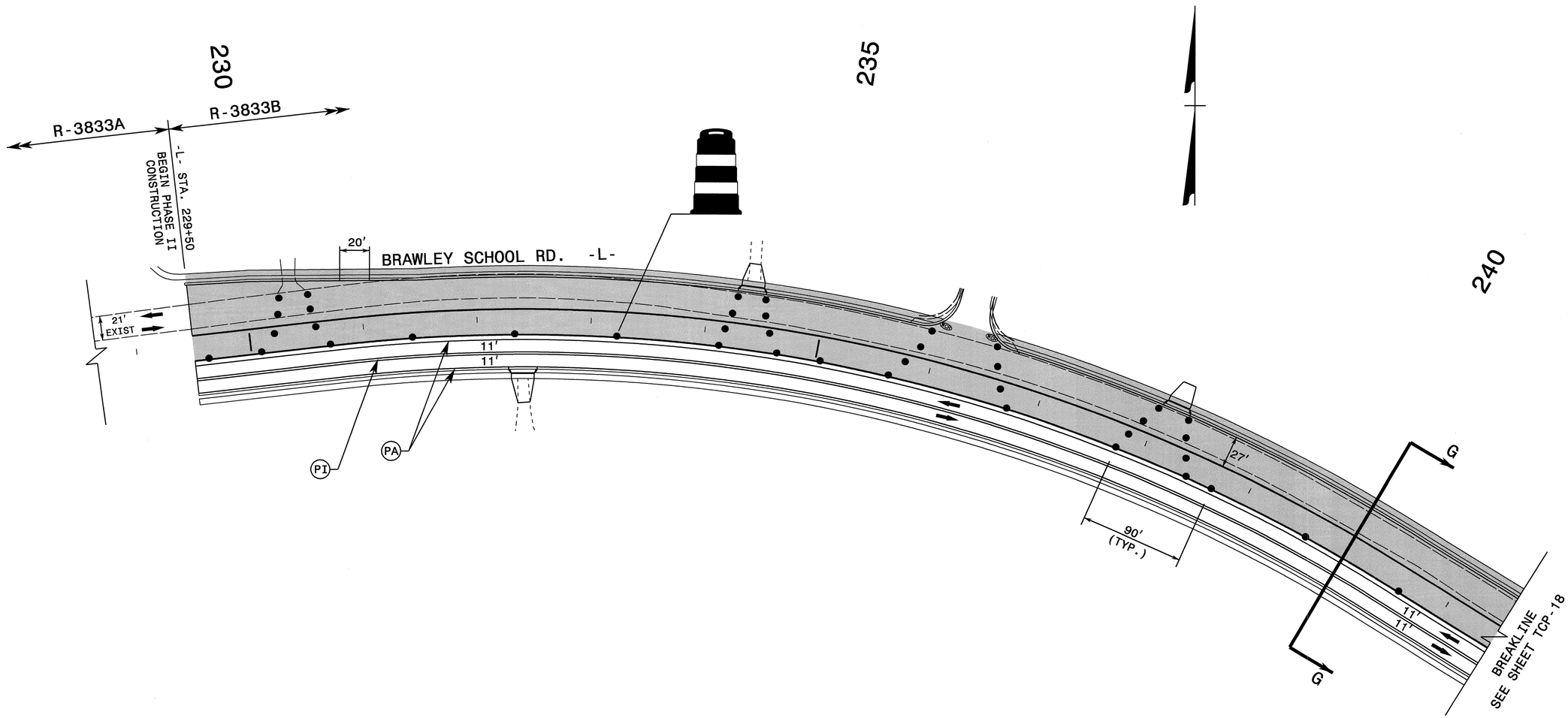
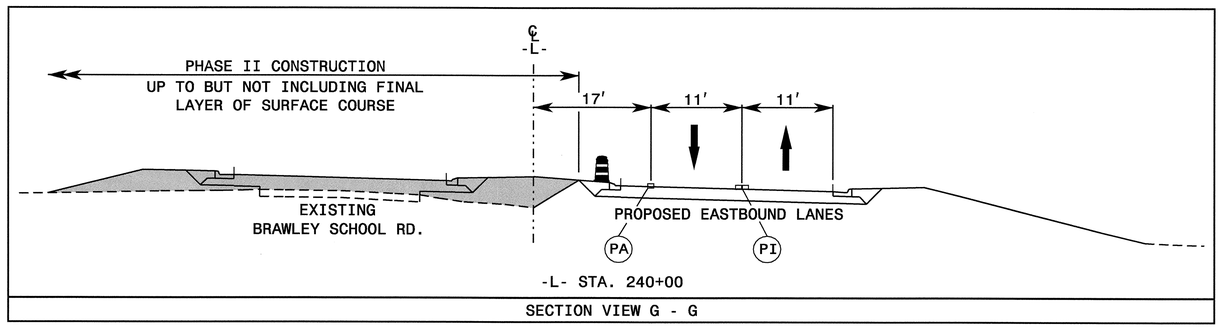
akpatel AT WZTC244748

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-17





SECTION VIEW G - G

APPROVED: _____ DATE: 11/14/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

AREA I - PHASE II

SCALE:	NONE
DATE:	11/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

REVISIONS

CADD FILE

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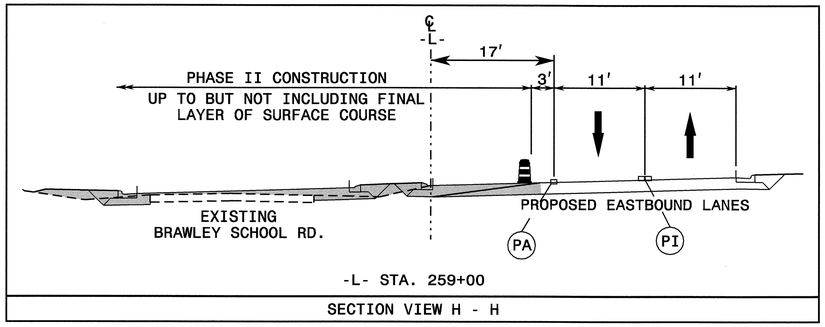
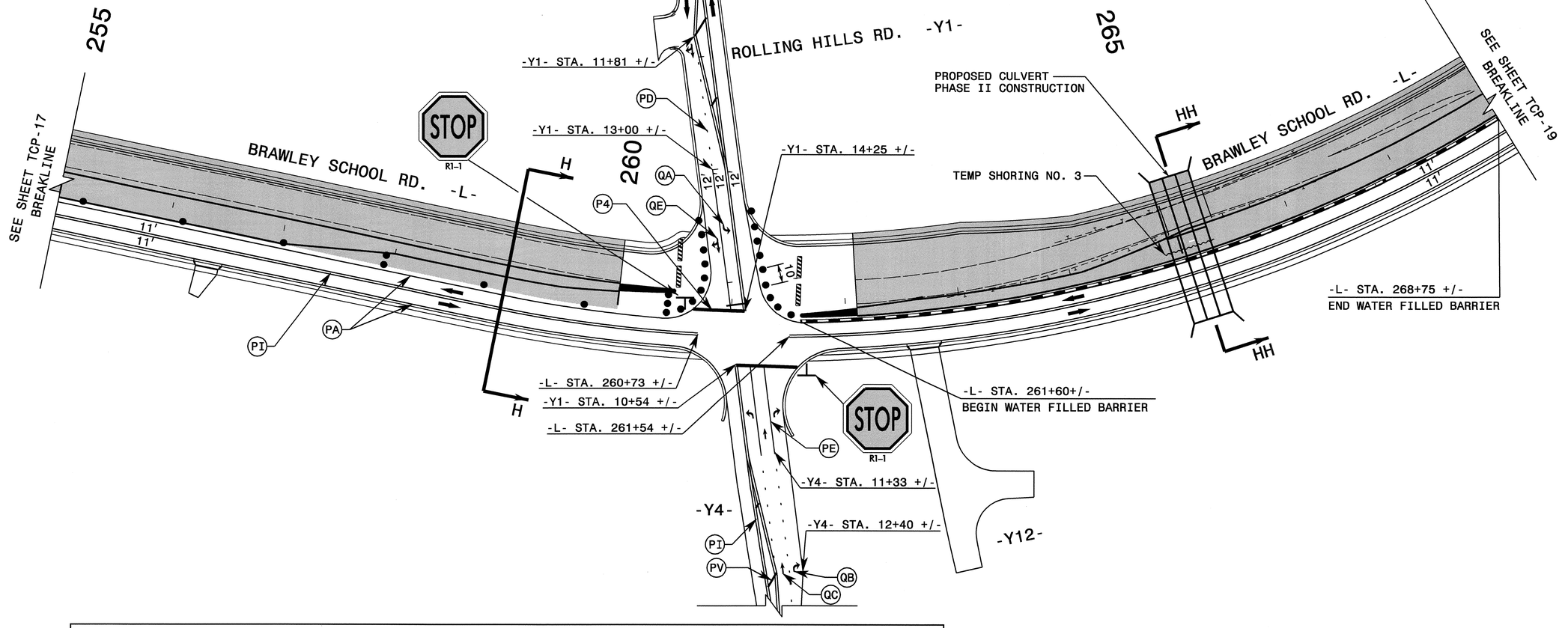
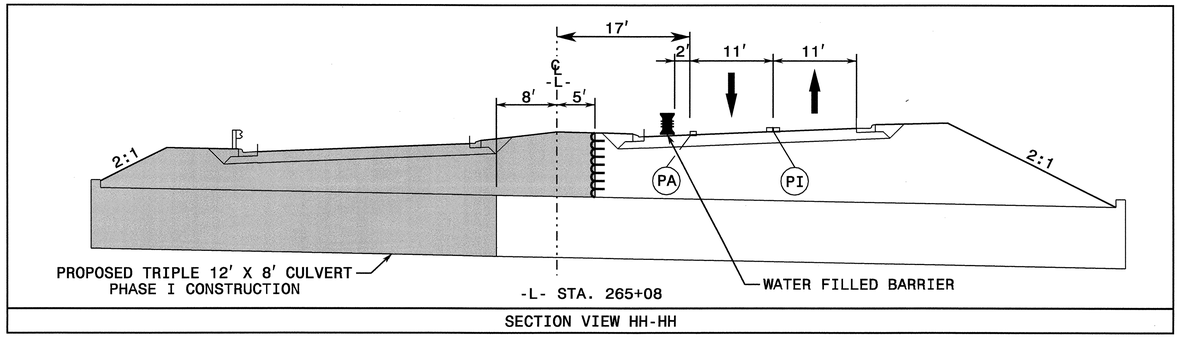
douglovner AT WZTC244749

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-18



SECTION VIEW H - H





SECTION VIEW HH-HH

APPROVED: DATE: 11/4/05

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

AREA I - PHASE II

SCALE:	NONE
DATE:	11/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

REVISIONS

CADD FILE

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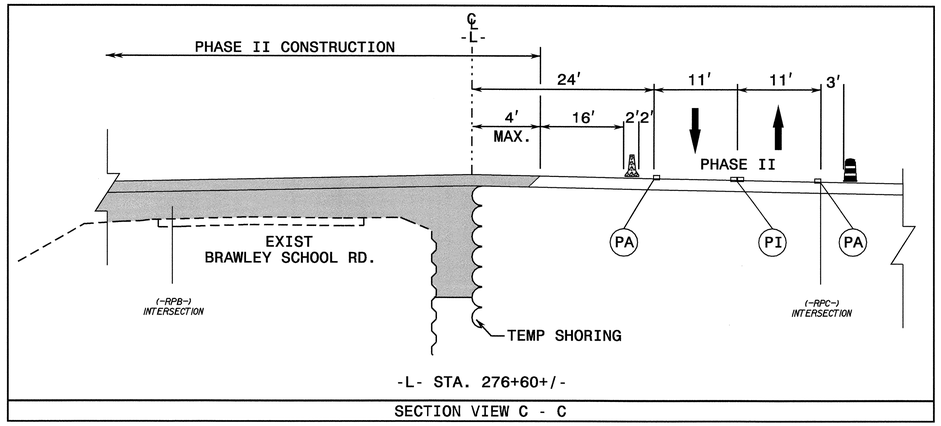
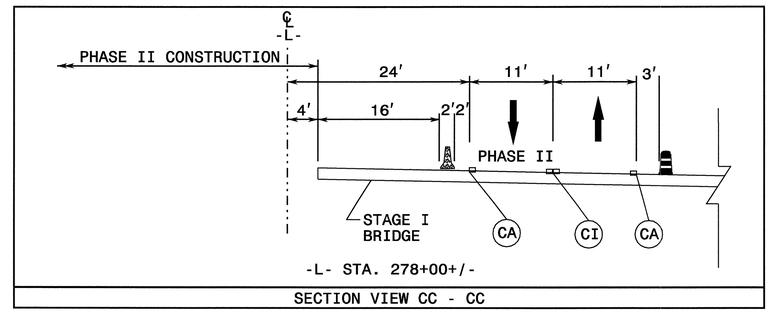
derichardson AT WZTC237460

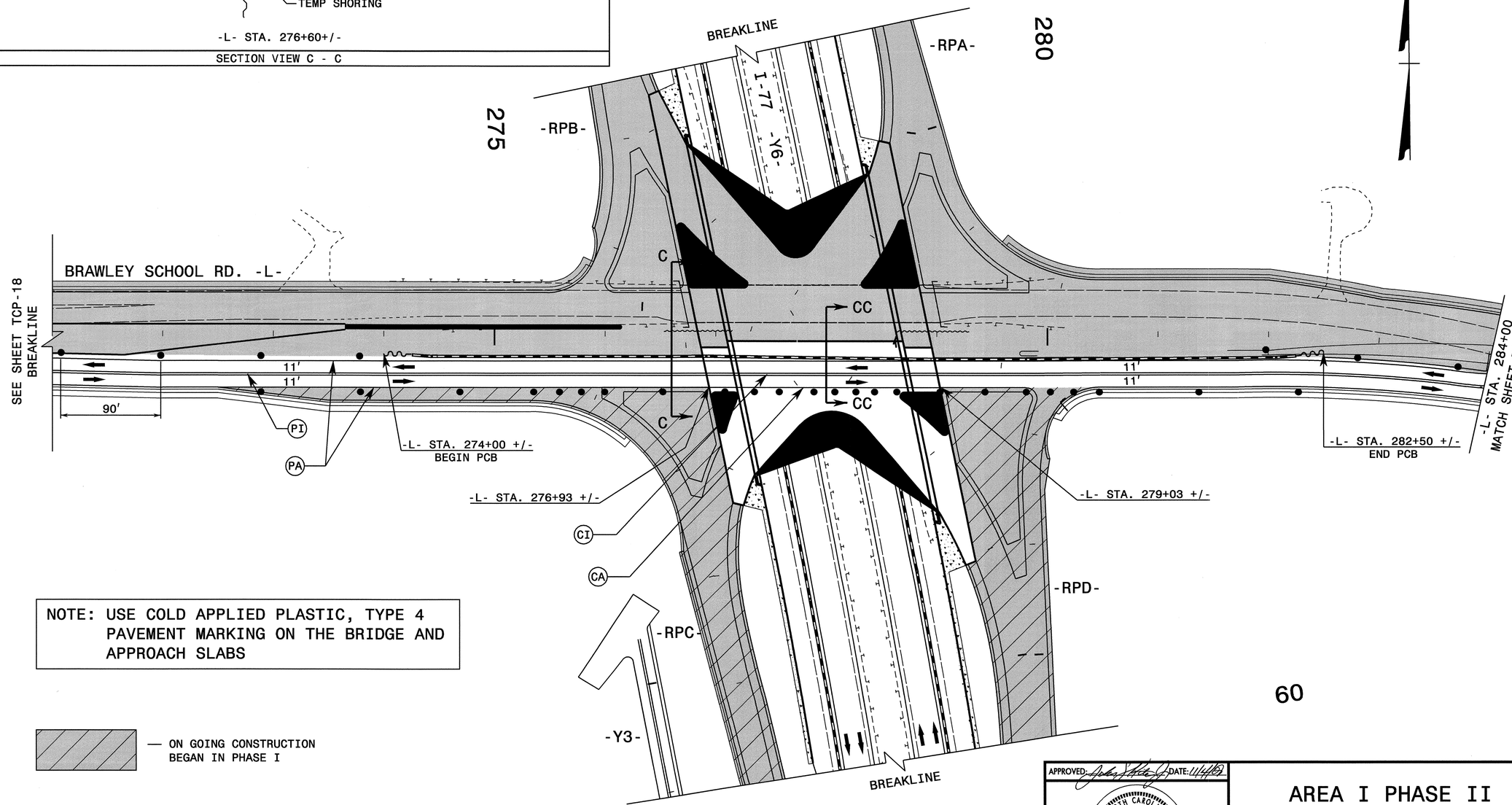
PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-19



SECTION VIEW C - C



SECTION VIEW CC - CC



NOTE: USE COLD APPLIED PLASTIC, TYPE 4 PAVEMENT MARKING ON THE BRIDGE AND APPROACH SLABS

— ON GOING CONSTRUCTION BEGAN IN PHASE I

60

APPROVED: _____ DATE: 11/4/05

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

AREA I PHASE II

SCALE:	NONE
DATE:	11/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

REVISIONS

CADD FILE

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derichardson AT WZTC231460

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-20

285

TALBERT RD. (SR 1116) -Y8-

10' EXIST

10' EXIST

-L- STA. 284+50 +/-

QA

QC

PD

PE

15+00

QG

-Y8- STA. 15+17 +/-

-L- STA. 287+88 +/-

BRAWLEY SCHOOL RD. -L-

12'

12'

12'

12'

12'

12'

-L- STA. 284+00
MATCH SHEET TCP-19

QB

-L- STA. 286+85 +/-

-L- STA. 286+99 +/-

P4

-L- STA. 288+03 +/-

-Y7- STA. 10+43 +/-

PV

PI

SUNFISH DR. (SR 2906) -Y7-

10' EXIST

15+00

290

WINGHAVEN CT. -Y9-

REMOVE EXISTING
LEFT TURN LANE

-Y9- STA. 15+30 +/-

QE

10'

90'

12'

12'

PV

PI

PA

-L- STA. 293+00
END TIP PROJECT R-3833B

W1-4L
48" X 48"

35
M.P.H.

W13-1
24" X 24"

AT -L- STA. 290+50 +/-

— TEMPORARY SIGNAL

15

APPROVED: DATE: 1/4/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

AREA I - PHASE II

SCALE:	NONE
DATE:	11/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP
CADD FILE	

REVISIONS

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akpatel AT WZTC244748

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-21

10 15 20

EXIT 36

-Y6- STA. 11+50+/-
BEGIN 5′ TRAFFIC SHIFT

-Y6- STA. 13+10+/-
BEGIN PORTABLE
CONCRETE BARRIER

-Y6- STA. 13+15+/-
END 5′ TRAFFIC SHIFT

-Y6- STA. 13+38+/-

I-77 -Y6- NB

I-77 -Y6- SB

11′ 11′ 11′ 11′ 11′ 11′ 11′ 11′ 11′ 11′ 11′ 11′

6′

PA PB PC PD PE PR

-Y6- STA. 14+40+/-

-Y6- STA. 13+15+/-
END 5′ TRAFFIC SHIFT

-Y6- STA. 11+50+/-
BEGIN 5′ TRAFFIC SHIFT

-Y6- STA. 20+96+/-
BEGIN PCB

-Y6- STA. 21+80+/-
END 14:1 PCB TAPER

14:1

-Y6- STA. 22+00+/-
BEGIN PAVING OPERATION

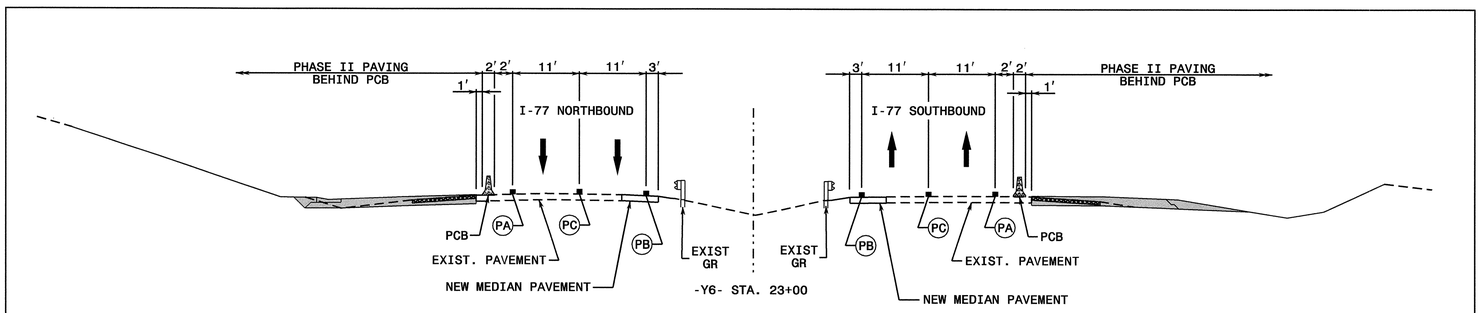
COMPLETE PAVING WITH ON-RAMP CLOSED
SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES

K K

1000′

W1–4L
48″ X 48″

55
M.P.H.
W13–1
24″ X 24″



SECTION K - K

APPROVED: DATE: 11/4/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

AREA II - PHASE II

SCALE:	NONE
DATE:	11/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

06-NOV-2008 16:21
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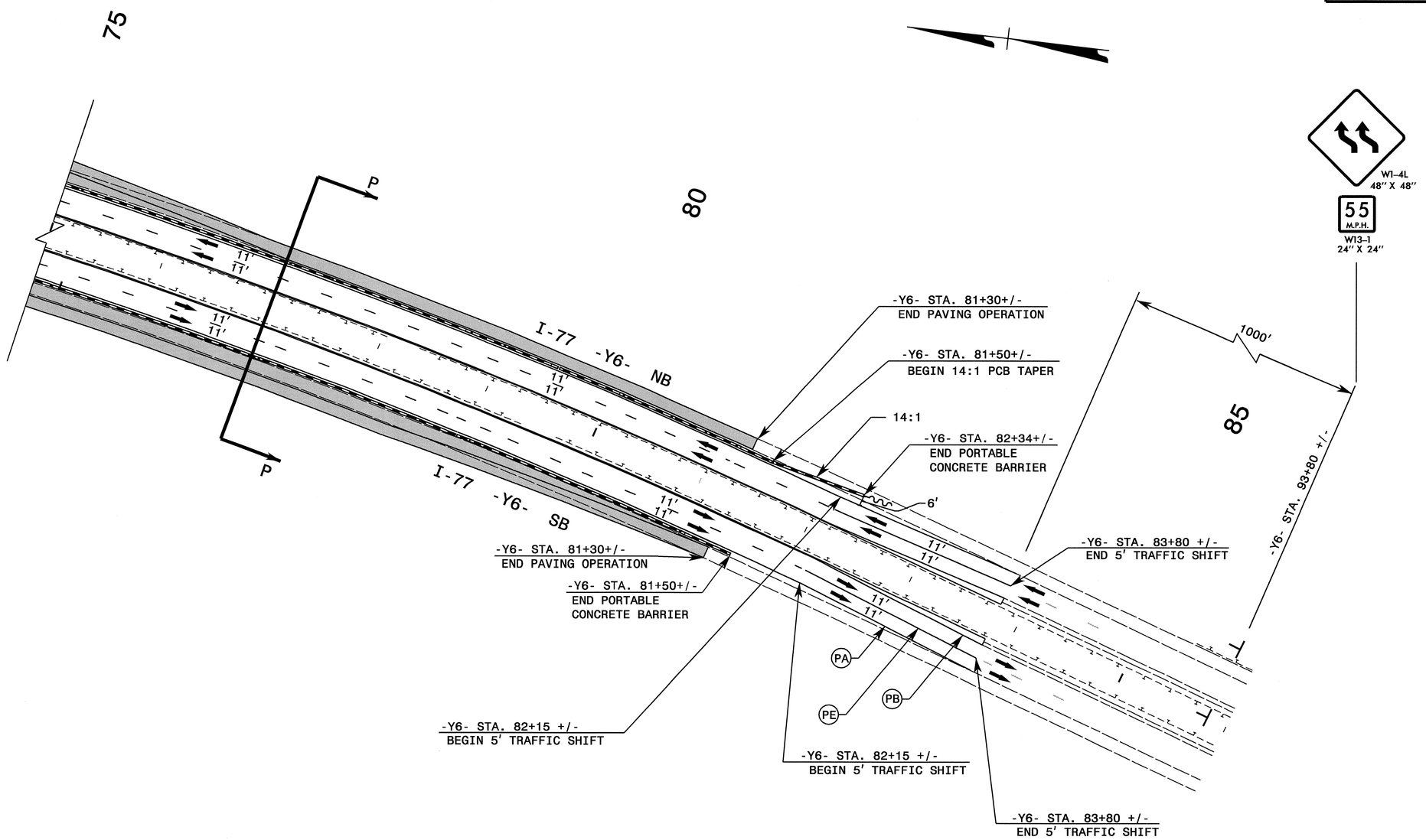
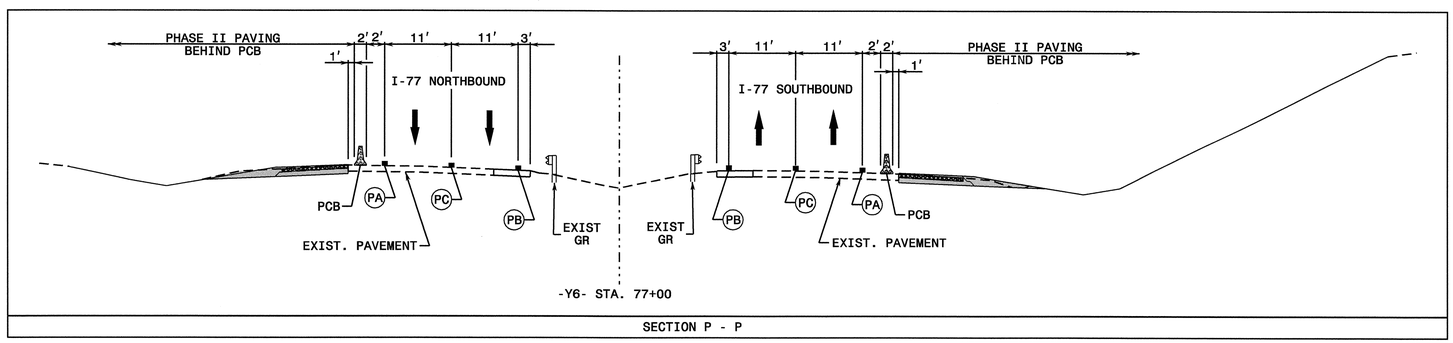
dkpatel AT WZTC244748

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-22





SECTION P - P

APPROVED: DATE: 11/4/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

AREA II - PHASE II

SCALE:	NONE
DATE:	11/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

REVISIONS

CADD FILE

06-NOV-2008 16:23
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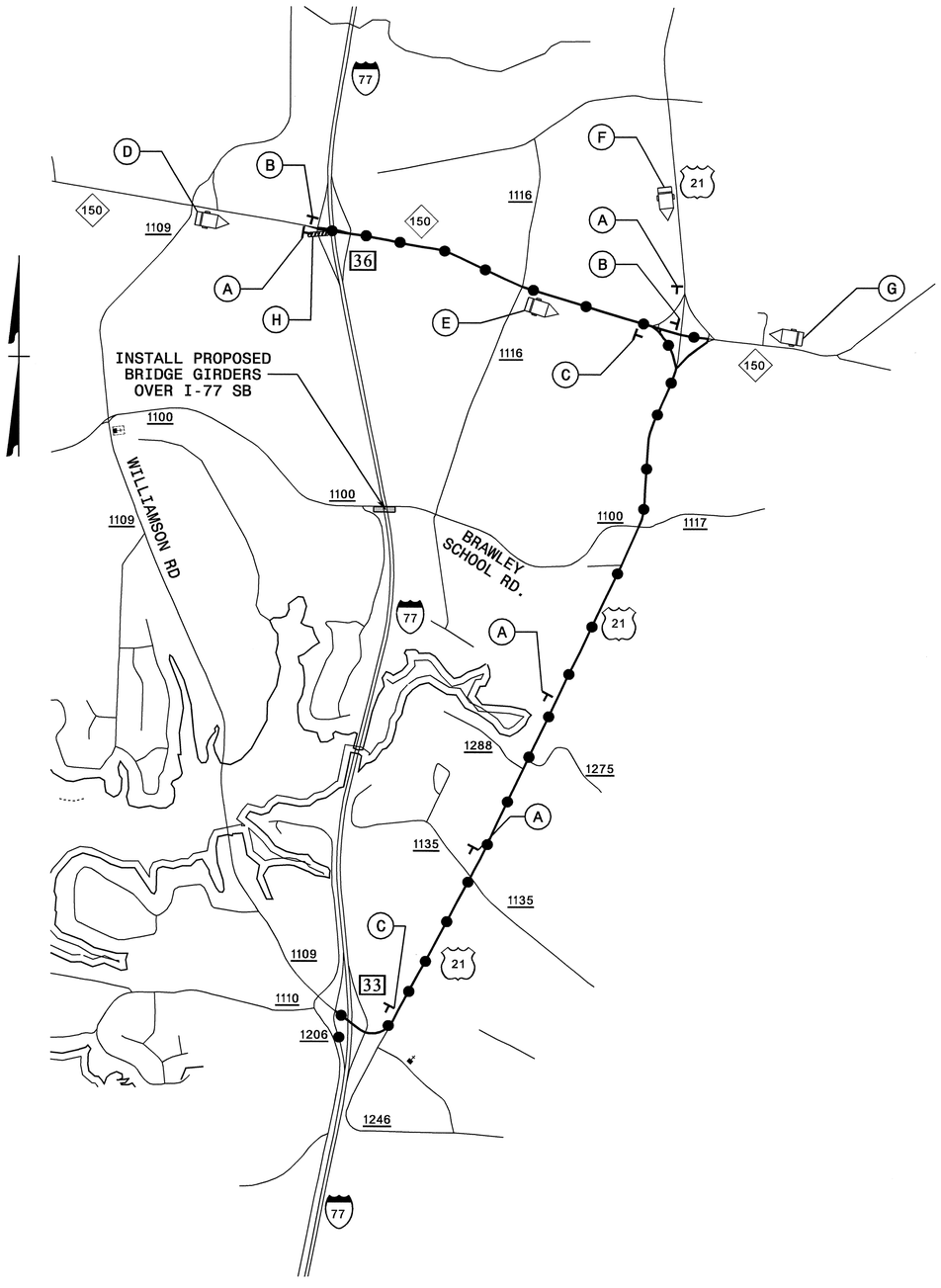
dkpatel AT WZTC244748

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-23



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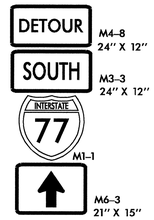

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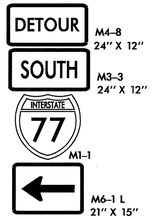

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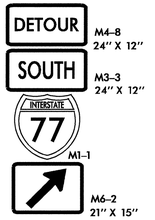


D =

SUGGESTED MESSAGES

MESSAGE NO. 1	MESSAGE NO. 2
I-77 SB RAMP CLOSED	FOLLOW DETOUR

CHANGEABLE MESSAGE SIGN

E =

SUGGESTED MESSAGES

MESSAGE NO. 1	MESSAGE NO. 2
I-77 SB DETOUR TRAFFIC	EXIT AT US 21 SOUTH

CHANGEABLE MESSAGE SIGN

F =

SUGGESTED MESSAGES

MESSAGE NO. 1	MESSAGE NO. 2
I-77 SB CLOSED AT NC150	USE US 21 SB DETOUR

CHANGEABLE MESSAGE SIGN

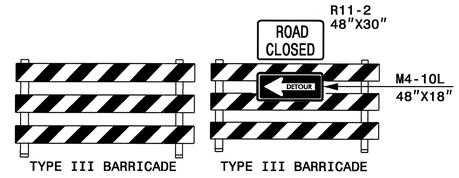
G =

SUGGESTED MESSAGES

MESSAGE NO. 1	MESSAGE NO. 2
I-77 SB CLOSED AHEAD	USE US 21 SB DETOUR

CHANGEABLE MESSAGE SIGN

H =



TYPE III BARRICADE TYPE III BARRICADE

AREA II - PHASE II

APPROVED: DATE: 11/4/08

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE JR.

OFFSITE DETOUR ROUTE FOR I-77 SB ENTRANCE RAMP CLOSURE AT EXIT 36

SCALE:	NONE
DATE:	09/05
DWG. BY:	MHS
DESIGN BY:	MHS
REVIEWED BY:	DAP

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

06-NOV-2008 07:59
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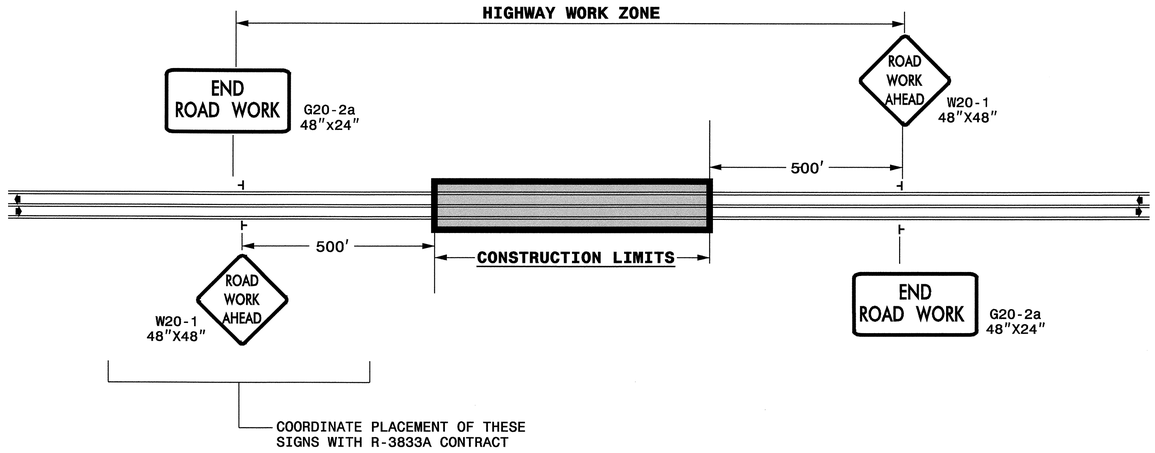
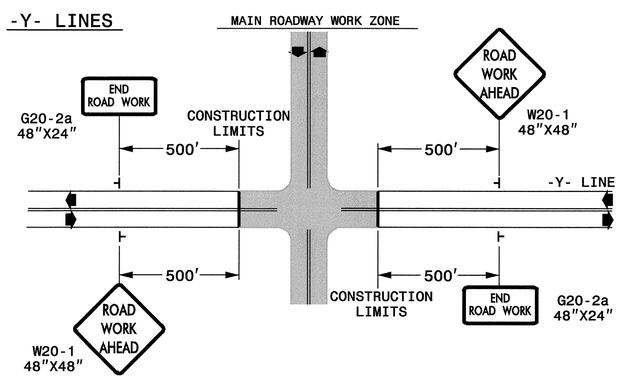
douglayner AT WZTC244749

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-24

TWO-WAY UNDIVIDED ** BRAWLEY SCHOOL ROAD (-L-)



ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE SUNFISH DR. (-Y7-) AND TALBERT RD. (-Y8-)



GENERAL NOTES

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

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

DETAIL DRAWING FOR TWO-WAY UNDIVIDED WORK ZONE WARNING SIGNS

SHEET 1 OF 1

APPROVED: [signature] DATE: 11/3/04

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS

SCALE:	NONE
DATE:	01/07
DWG. BY:	MVS
DESIGN BY:	MVS
REVIEWED BY:	DAP

REVISIONS	
7-98	10/01
10-98	03/04
01/01	11/04
CADD FILE	

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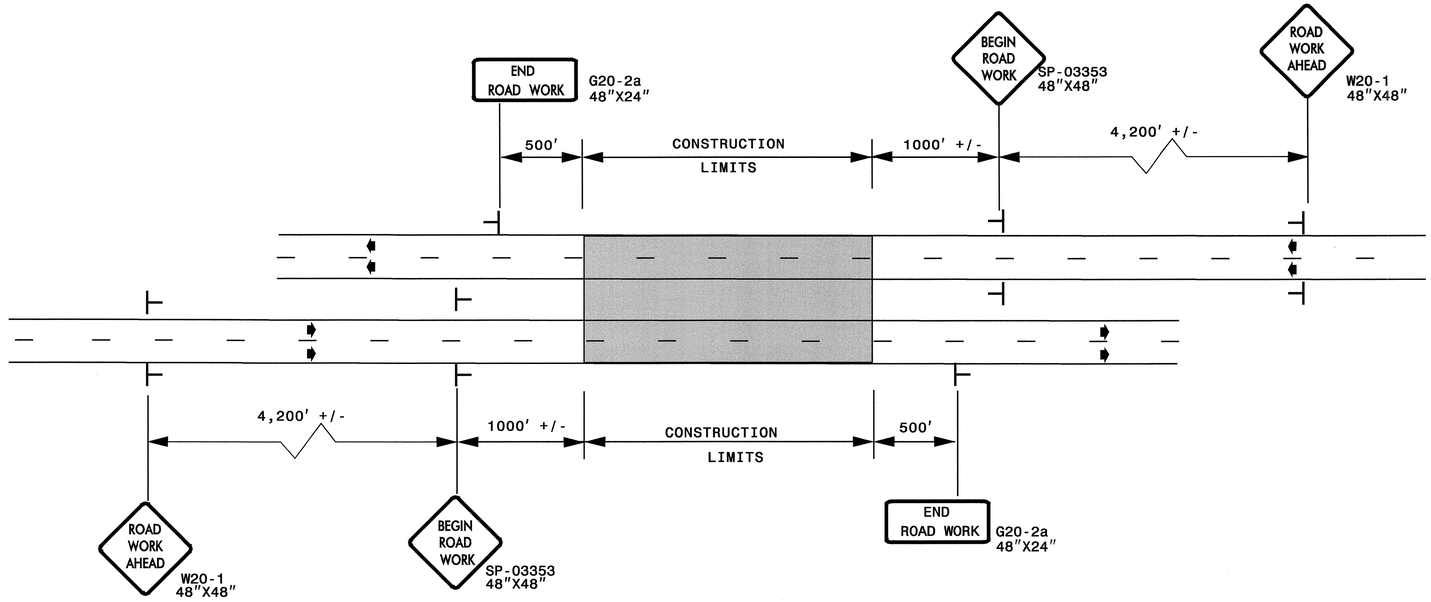
dkpatel AT WZTC244748

ADVANCED WORK ZONE WARNING SIGNING FOR FREEWAYS (4 LANES OR GREATER)

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-25

DETAIL A



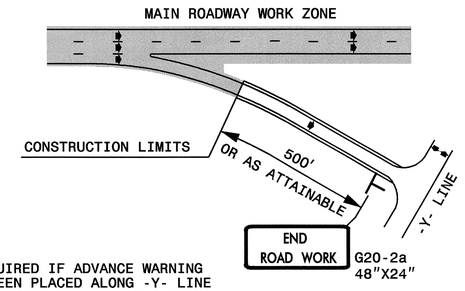
LEGEND

- ⊢ STATIONARY SIGN
- ➧ DIRECTION OF TRAFFIC FLOW

★ USE THE "$250 SPEEDING PENALTY" SIGN, SPEED LIMIT SIGN, AND ORANGE PANEL; ONLY WHEN A "$250 SPEEDING PENALTY" ORDINANCE HAS BEEN ISSUED BY THE REGIONAL TRAFFIC ENGINEER.

DETAIL B

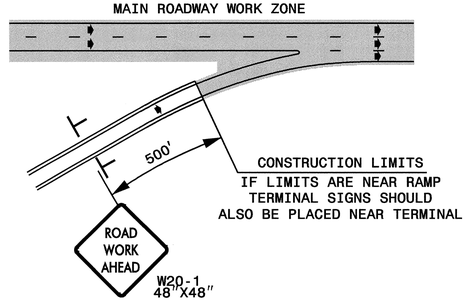
EXIT RAMPS



NOTE: SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

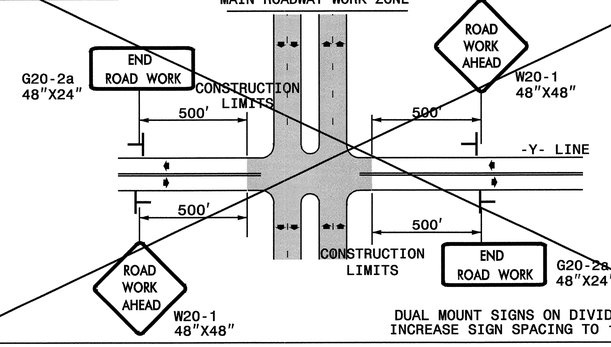
DETAIL C

ENTRANCE RAMPS



DETAIL D

-Y- LINES



DUAL MOUNT SIGNS ON DIVIDED HIGHWAYS AND INCREASE SIGN SPACING TO 1000'+/-.

GENERAL NOTES

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

APPROVED: DATE: 11/4/03

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

ADVANCED WORK ZONE WARNING SIGNS FOR FREEWAYS (4 LANES OR GREATER)

SCALE:	NONE
DATE:	01/07
DWG. BY:	MVS
DESIGN BY:	MVS
REVIEWED BY:	DAP

REVISIONS	
03/04	
CADD FILE	

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akpatel AT WZTC244748

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-26

SP 03353

SIGN NUMBER: SP-03353
TYPE: A
QUANTITY: 1

SIGN WIDTH: 4'-0"
HEIGHT: 4'-0"
TOTAL AREA: 16.0 Sq.Ft.

BORDER TYPE: FLUSH
RECESS: 0.59"
WIDTH: 0.75"
RADII: 1.38"

NO. Z BARS: N/A
LENGTH: N/A

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT'L:

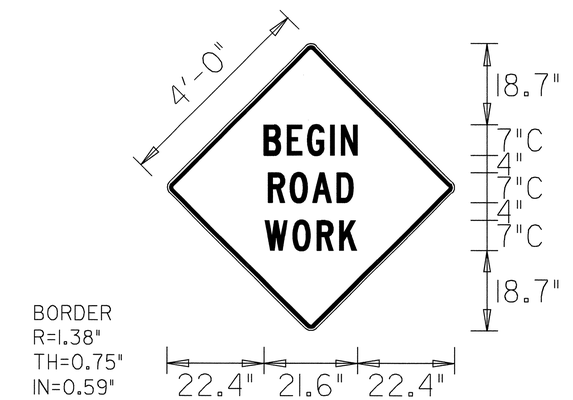
USE NOTES: 2, 4

1. Legend and border shall be direct applied Type VII reflective sheeting.
2. Legend and border shall be direct applied non-reflective sheeting.
3. Shields shall be Type VII reflective sheeting on 0.032" (0.8mm) aluminum and demountable.
4. Background shall be Type VII reflective sheeting.
5. Background shall be Type I reflective sheeting.
6. Center arrow(s) vertically on sign.
7. Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

DESIGNED BY: SIGNCONKEY
PROJECT ID: ALL PROJECTS

CHECKED BY: CHECKED
DIV: DIV

STD #: W20-1
DATE: Aug 20,2003



LETTER POSITIONS

Letter spacings are to start of next letter

																											Series/Size Text Length
		B	E	G	I	N																					C7
	22.4	5.3	4.6	5.4	2.5	3.8	22.4																				21.6
		R	O	A	D																						C7
	23.4	5	5.2	5.6	3.8	23.4																					19.6
		W	O	R	K																						C7
	22.6	6.4	5.6	5.2	4	22.6																					21.2

Spacing Factor is 1 unless specified otherwise

GENERAL NOTES FOR THE "BEGIN ROAD WORK" SIGN

-SIGN SP-03353 "BEGIN ROAD WORK" ONLY APPLIES TO FULL CONTROL AND PARTIAL CONTROL OF ACCESS ROADWAYS

-WHEN USED, INSTALL SIGN SP-03353 "BEGIN ROAD WORK" ACCORDING TO DETAIL A ON SHEET TCP-24

APPROVED: [signature] DATE: 11/4/03

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE JR.

DETAIL DRAWING FOR
ADVANCED WORK ZONE WARNING
SIGN DESIGNS

SCALE:	NONE
DATE:	11/08
DWG. BY:	AKP
DESIGN BY:	AKP
REVIEWED BY:	DAP

REVISIONS

CADD FILE

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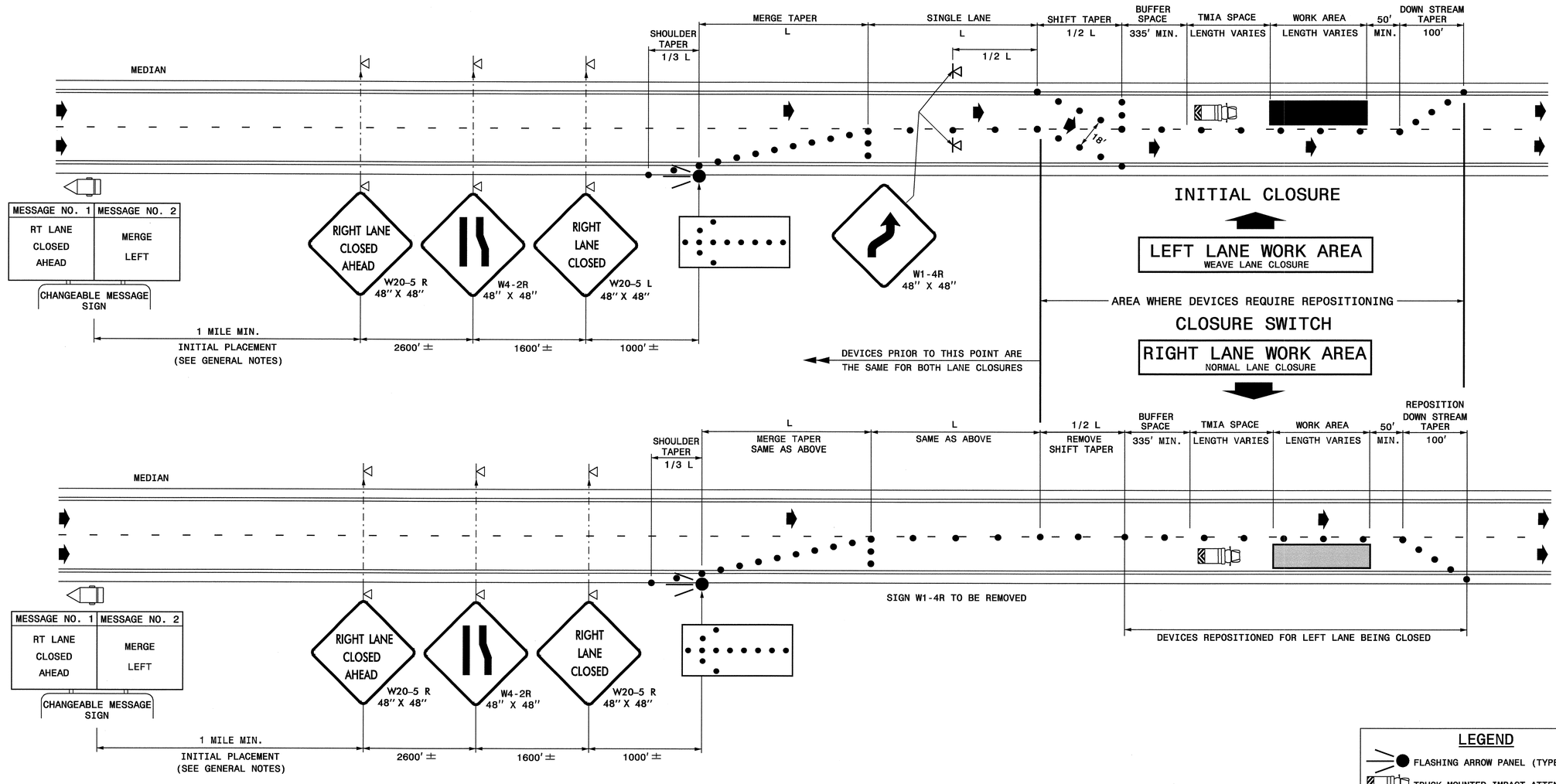
akpatel AT WZTC244748

PROJ. REFERENCE NO.	SHEET NO.
R-3833B	TCP-27



GENERAL NOTES

-WEAVE LANE CLOSURES ARE TO BE USED ONLY ON DIVIDED, CONTROLLED ACCESS ROADWAYS, WITH POSTED SPEED LIMITS OF 55 MPH, OR GREATER.

-FLASHING ARROW PANELS SHALL BE PLACED ON THE SHOULDER (PAVED OR UNPAVED). THE LOCATION OF THE ARROW PANEL SHALL MEET THE REQUIREMENTS FOR STOPPING SIGHT DISTANCE. LANE CLOSURES SHALL BE EXTENDED IF NEEDED, WITHIN THE BUFFER SPACE SUCH THAT STOPPING SIGHT DISTANCE TO THE BEGINNING OF THE LANE CLOSURE OR FLASHING ARROW PANEL IS MET. SEE STD. NO. 1101.11 SHEET 2 FOR STOPPING SIGHT DISTANCE & BUFFER SPACE TABLES.

-THE MAXIMUM SPACING OF DRUMS IN TAPERS SHALL BE EQUAL IN FEET TO THE POSTED SPEED LIMIT. THE MAXIMUM SPACING OF DRUMS ALONG THE BUFFER SPACE, AND WORK AREA, SHALL BE EQUAL IN FEET TO (2) TIMES THE POSTED SPEED LIMIT.

-SEE STD. NO. 1101.11-SHEETS 1 & 4, FOR VALUES OF "L", AND SIGN SPACING DISTANCES.

-SEE STD. NO. 1101.02-SHEETS 6 & 7 FOR TREATMENT OF LANE CLOSURES THRU INTERCHANGES.

-LANE CLOSURES SHALL BE INSTALLED WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC. LANE CLOSURES SHALL BE REMOVED AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.

-LANE CLOSURE SWITCHES TO BE PERFORMED BY A ROLLING ROADBLOCK OPERATION. SEE RSD 1101.07, SHEET 2 OF 2.

-TRUCK MOUNTED IMPACT ATTENUATOR SHALL BE USED TO PROTECT THE WORK AREA. TMIA'S SHALL BE PLACED IN ADVANCE OF THE WORK AREA AT DISTANCES SPECIFIED BY THEIR MANUFACTURER.

-CHANGEABLE MESSAGE SIGN SHALL BE PLACED EITHER IN THE MEDIAN, OR ON THE OUTSIDE OF THE TRAVELWAY, AS DIRECTED BY THE ENGINEER. THE SIGN SHOULD INITIALLY BE LOCATED APPROXIMATELY 2 MILES IN ADVANCE OF THE MERGE TAPER. IF IT IS ANTICIPATED THAT TRAFFIC WILL BACK UP TO WHERE THE SIGN IS LOCATED, THE SIGN SHOULD THEEN INITIALLY BE PLACED APPROXIMATELY 1 MILE PRIOR TO ANTICIPATED BACKUPS. BACKUPS SHOULD BE MONITORED SUCH THAT FOR FUTURE LANE CLOSURES, THE SIGN IS PLACED APPROXIMATELY 1 MILE PRIOR TO WHERE TRAFFIC IS ANTICIPATED TO BACK UP.

-CHANGEABLE MESSAGE SIGN MESSAGES OTHER THAN THE ONES SHOWN MAY BE PORTRAYED AS DEEMED NECESSARY BY THE ENGINEER. NO MORE THAN 2 MESSAGE DISPLAYS SHOULD BE USED WITH ANY CYCLE.

LEGEND

- FLASHING ARROW PANEL (TYPE C)
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- DRUM
- PORTABLE SIGN
- DIRECTION OF TRAFFIC FLOW
- CHANGEBLE MESSAGE SIGN

SHEET 1 OF 1

STANDARD DETAIL DRAWING

APPROVED: DATE: 11/4/08

SEAL 022104 NORTH CAROLINA PROFESSIONAL ENGINEER JOHN S. KITE, JR.

LANE CLOSURE SWITCHES FOR DIVIDED ROADWAYS

LEFT LANE WORK AREA - WEAVE LANE CLOSURE
RIGHT LANE WORK AREA - NORMAL LANE CLOSURE

SCALE:	NONE
DATE:	11/08
DWG. BY:	AKP
DESIGN BY:	AKP
REVIEWED BY:	DAP

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING CONTROL

REVISIONS

CADD FILE

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akpatel AT WZTC244748