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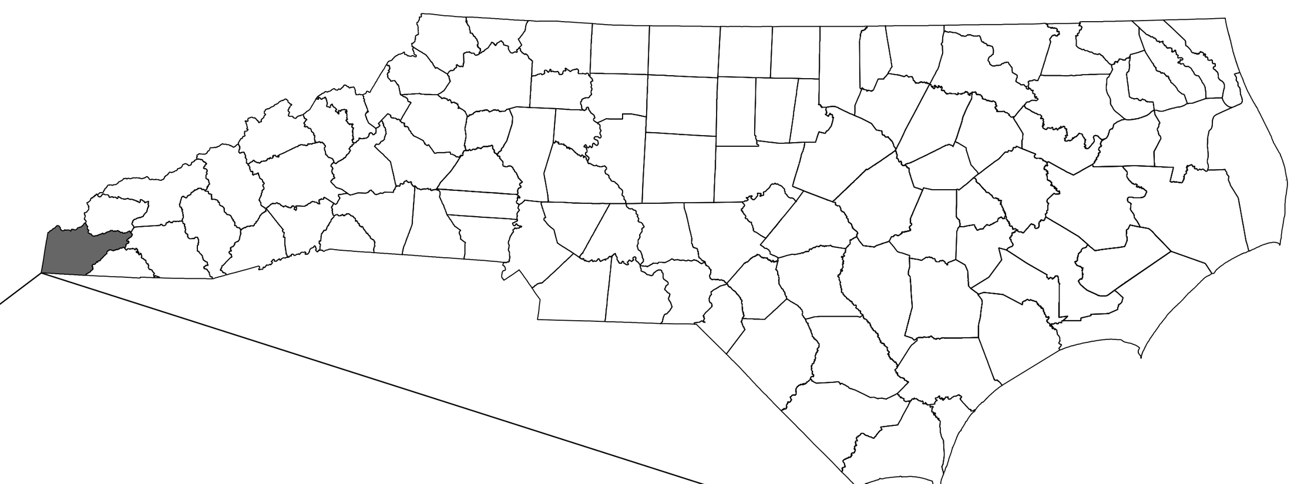
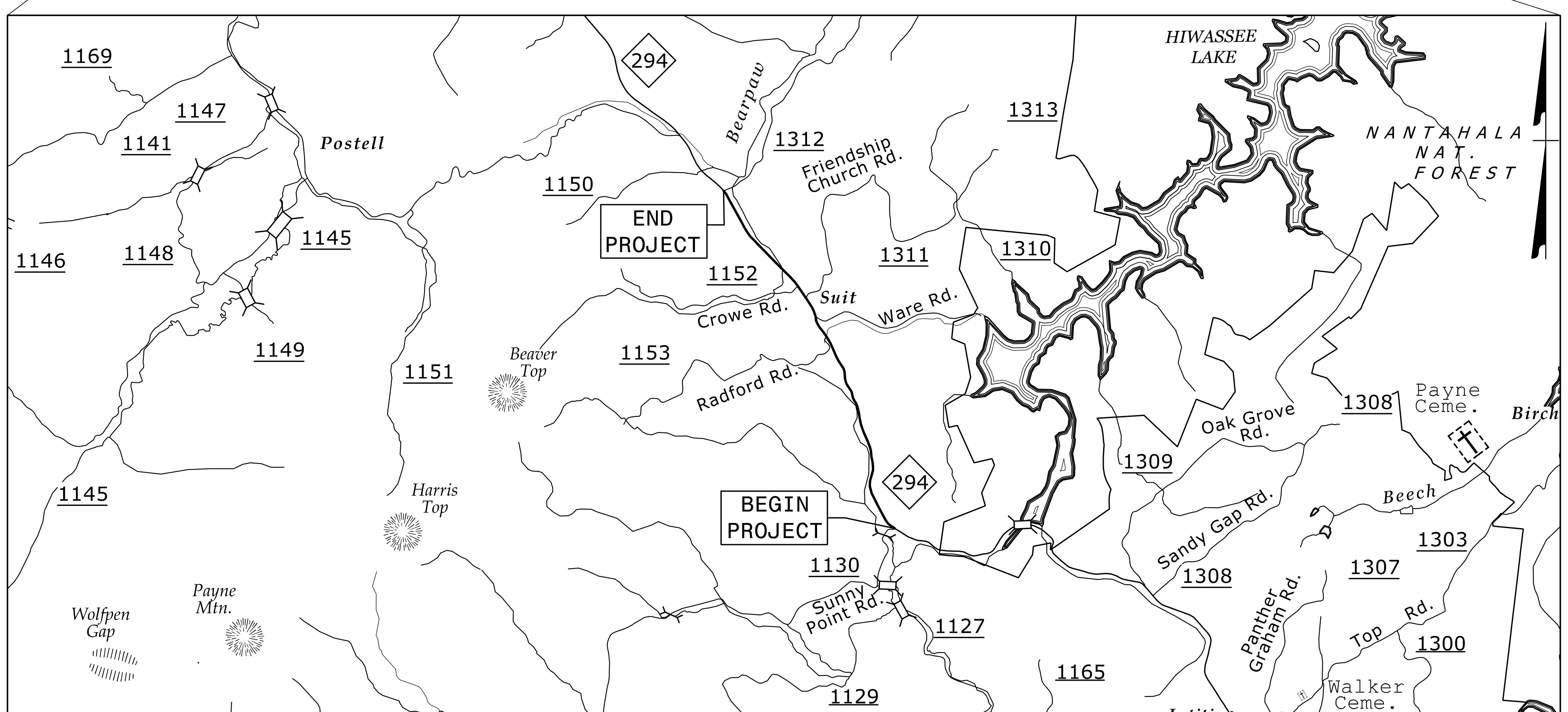
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

CHEROKEE COUNTY

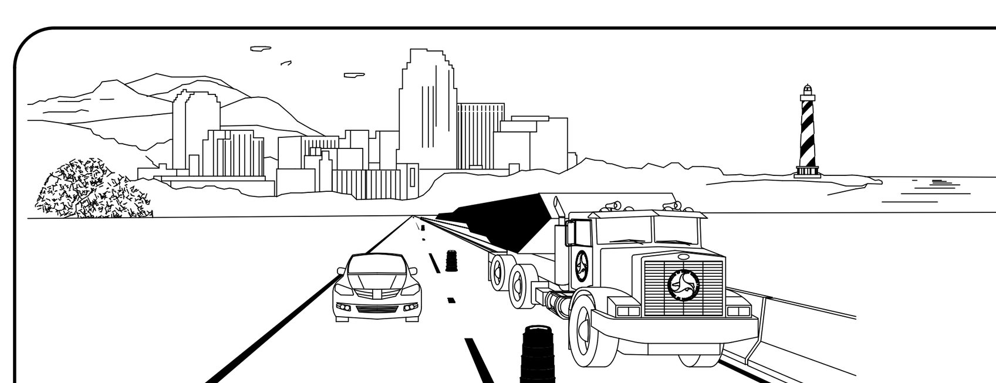




VICINITY MAP

N.T.S.

LOCATION: NC 294 FROM SR 1130 (SUNNY POINT RD.) TO SR 1312 (UPPER BEAR CREEK RD)
TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURES



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

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

J. STUART BOURNE, P.E. *STATE TRAFFIC MANAGEMENT ENGINEER*
J.W. WOOLARD, Jr., P.E. *TRAFFIC CONTROL PROJECT ENGINEER*
TRAFFIC CONTROL PROJECT DESIGN ENGINEER
TRAFFIC CONTROL DESIGN ENGINEER

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

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, AND INDEX OF SHEETS
TMP-1A	ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-1B AND 1C	TRANSPORTATION OPERATIONS PLAN
TMP-2	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
TMP-2A	TEMPORARY SHORING DATA
TMP-3 AND 3A	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4 THRU 9	TEMPORARY TRAFFIC CONTROL PHASE I DETAILS
TMP-10 THRU 16	TEMPORARY TRAFFIC CONTROL PHASE II DETAILS
TMP-17	TEMPORARY TRAFFIC CONTROL PHASE III DETAILS

STV / Ralph Whitehead Associates, Inc.
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Charlotte, NC 28202
NC License Number F-0991

NIKKI T. HONEYCUTT, PE
TRAFFIC ENGINEER

CLARK E. GROVES
TRANSPORTATION DESIGNER

APPROVED: Nikki T. Honeycutt
DATE: 4/10/2015

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKKI T. HONEYCUTT

SHEET NO. TMP-1

PROJECT: R-3622B

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4/10/2015

PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-1A

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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 JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD.NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- WORK AREA
- REMOVAL/BREAKING OF PAVEMENT
- TEMPORARY PAVEMENT

TEMPORARY PAVEMENT MARKING

PAINT 4"

PA	WHITE EDGELINE
PI	YELLOW DOUBLE CENTERLINE

PAINT 24"

P2	WHITE STOPBAR

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW PANEL (TYPE C)
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

SIGNALS

EXISTING PROPOSED TEMPORARY (TEMP)

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

PAVEMENT MARKERS

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

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

APPROVED: DocuSigned by: [signature] DATE: 4/10/2015

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKKI T. HONEYCUTT

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

ROADWAY STANDARD DRAWINGS & LEGEND

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4/9/2015

PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-1B

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MANAGEMENT STRATEGIES

NC 294 CONSTRUCTION SUMMARY
PROPOSED NC 294 WILL BE CONSTRUCTED USING A COMBINATION OF LANE CLOSURES UTILZING FLAGGERS AS NEEDED, TRAFFIC LANE SHIFTS UTILIZING PORTABLE CONCRETE BARRIER, TEMPORARY PAVEMENT, TEMPORARY SHORING AND CULVERT STAGING

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
NC 294 (-L-)	MONDAY 7:00 A.M. THRU FRIDAY 8:30 A.M. MONDAY 2:30 P.M. THRU FRIDAY 4:30 P.M.

THESE RESTRICTIONS ONLY APPLY WHEN CHEROKEE COUNTY SCHOOLS ARE IN SESSION.

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

ROAD NAME

NC 294 (-L-)

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 7:00 A.M. DECEMBER 31st TO 4:30 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 4:30 P.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 7:00 A.M. THURSDAY AND 4:30 P.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY TO 4:30 P.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 4:30 P.M. THE DAY AFTER INDEPENDENCE DAY.

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 7:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 4:30 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY AND 4:30 P.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 7:00 A.M. TUESDAY TO 4:30 P.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 7:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 4:30 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

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

LANE AND SHOULDER CLOSURE REQUIREMENTS

D) 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.

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

F) 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.

G) 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.

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

PAVEMENT EDGE DROP OFF REQUIREMENTS

I) 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.

J) 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) 350 ft IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

L) 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.

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

TRAFFIC BARRIER

N) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRAFFIC MANAGEMENT PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE 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.

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

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

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

APPROVED: DocuSigned by: Nikki T. Honeycutt DATE: 4/10/2015

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKKI T. HONEYCUTT

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

TRANSPORTATION OPERATIONS PLAN

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4/9/2015

PROJ. REFERENCE NO.	SHEET NO.
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GENERAL NOTES (CONT.)

TRAFFIC CONTROL DEVICES

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

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

R) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN OPENED LANES ARE CLOSED TO TRAFFIC.

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

ROAD NAME	MARKING	MARKER
NC 294 (-L-)	PAINT	NONE
(-Y-) LINES	PAINT	NONE

T) 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.

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

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

APPROVED: DocuSigned by: DATE: 4/10/2015

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKKI T. HONEYCUTT

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

TRANSPORTATION OPERATIONS PLAN

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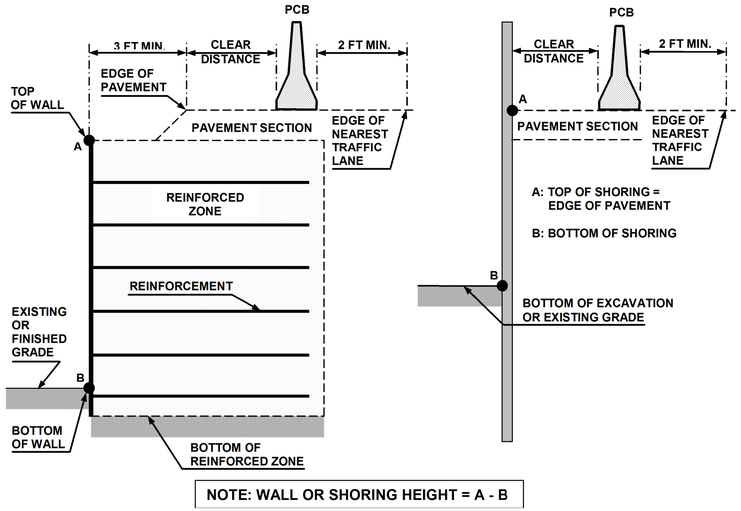
PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-2



NOTE: WALL OR SHORING HEIGHT = A - B

FIGURE A

NOTES

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

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

3- PCB IS REQUIRED IF TEMPORARY SHORING IS LOCATED WITHIN THE CLEAR ZONE IN ACCORDANCE WITH THE AASHTO ROADSIDE DESIGN GUIDE. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).

4- BASED ON THE CLEAR DISTANCE, OFFSET, DESIGN SPEED AND PAVEMENT TYPE, CHOOSE AN UNANCHORED OR ANCHORED PCB FROM THE TABLE SHOWN IN FIGURE B. CLEAR DISTANCE IS DEFINED AS SHOWN IN FIGURE A AND OFFSET IS DEFINED AS SHOWN IN FIGURE B.

5- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET PCB NEXT TO AND UP AGAINST THE TRAFFIC SIDE OF THE TEMPORARY SHORING EXCEPT FOR BARRIER ABOVE TEMPORARY WALLS. PCB WITH THE MINIMUM REQUIRED CLEAR DISTANCE IS REQUIRED ABOVE TEMPORARY WALLS.

6- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.

7- PCB REQUIREMENTS FOR TEMPORARY WALLS APPLY TO TEMPORARY MECHANICALLY STABILIZED EARTH (MSE) WALLS AND TEMPORARY SOIL NAIL WALLS.

8- SET PCB WITH A MINIMUM HORIZONTAL DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A UNLESS OTHERWISE SHOWN IN THE PLANS AND OR AS APPROVED BY THE ENGINEER.

9- FOR PCB ABOVE AND BEHIND TEMPORARY WALLS, PROVIDE A MINIMUM DISTANCE OF 3 FT BETWEEN THE EDGE OF PAVEMENT AND THE WALL FACE AS SHOWN IN FIGURE A. IF THESE MINIMUM REQUIRED DISTANCES ARE NOT AVAILABLE, CONTACT THE ENGINEER.

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

MINIMUM REQUIRED CLEAR DISTANCE, inches

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

*** See Figure Below**

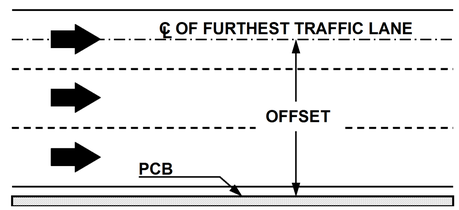


FIGURE B

APPROVED: DocuSigned by: J. W. Woolard, 9 DATE: 5/6/2015

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 019862 ENGINEER J. W. WOOLARD, JR.

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

PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

5/6/2015
C:\Users\jwoolard\Downloads\barrierSTD (1).dgn
User:jwoolard

PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-2A

STV / Ralph Whitehead Associates, Inc.
900 West Trade St., Ste. 715
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NC License Number F-0991

TEMPORARY SHORING DATA

SHORING LOCATION (1) ON -L- AT CULVERT, PHASE I (SEE SHEET TMP-8)

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

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

DESIGN TEMPORARY SHORING FOR THE FOLLOWING ASSUMED SOIL PARAMETERS:
UNIT WEIGHT (γ) = 115 LB/CF
FRICTION ANGLE (ϕ) = 29 DEGREES
COHESION (c) = 0 LB/SF

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

SHORING LOCATIONS (2) AND (5) ON -L- PHASE II (SEE SHEETS TMP-12, TMP-13 AND TMP-16)

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

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

DESIGN TEMPORARY SHORING FOR THE FOLLOWING ASSUMED SOIL PARAMETERS:
UNIT WEIGHT (γ) = 115 LB/CF
FRICTION ANGLE (ϕ) = 29 DEGREES
COHESION (c) = 0 LB/SF

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE CANTILEVER SHORING FOR TEMPORARY SHORING.

SHORING LOCATIONS (3) , (4) AND (6) ON -L- PHASE II (SEE SHEETS TMP-13 AND TMP-16)

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

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

DESIGN TEMPORARY SHORING FOR THE FOLLOWING ASSUMED SOIL PARAMETERS:
UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (c) = 0 LB/SF

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE CANTILEVER SHORING FOR TEMPORARY SHORING.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- STA. 79+00, 17' RT TO -L- STA. 80+88, 17' RT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- STA. 81+80, 15' RT TO -L- STA. 83+50, 15' RT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- STA. 80+88, 17' RT TO -L- STA. 81+80, 17' RT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM FROEHLING & ROBERTSON, INC. THE DOCUMENT WAS SUBMITTED TO STV, INC. ON OCTOBER 31, 2014, AND SEALED BY A PROFESSIONAL ENGINEER, W. PATRICK ALTON, PE, LICENSE #033758.

APPROVED: DocuSigned by: [signature] DATE: 4/10/2015

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKKI T. HONEYCUTT

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

TEMPORARY SHORING DATA

PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-3

STV / Ralph Whitehead Associates, Inc.
900 West Trade St., Ste. 715
Charlotte, NC 28202
NC License Number F-0991

PHASING NOTES

PHASE I

NOTE: CONTRACTOR SHALL MAINTAIN ACCESS TO DRIVEWAYS FOR ALL PHASES WITHIN THE PROJECT LIMITS AND COORDINATE AS NECESSARY WITH PROPERTY OWNERS.

STEP 1

INSTALL WORK ZONE ADVANCE WARNING SIGNS ON ALL ROADWAYS WITHIN THE PROJECT LIMITS IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 1101.01, SHEET 3 OF 3.

STEP 2

MAINTAINING TRAFFIC ON THE EXISTING ROADWAYS AND USING RSD 1101.02 SHEET 1 OF 15 AND FLAGGERS AS NEEDED, PERFORM THE FOLLOWING AS SHOWN ON TMP-4 THROUGH TMP-9:

A) CONSTRUCT PROPOSED WIDENING, GRADING AND CURBS & GUTTER RIGHT OF -L- TO THE EDGE OF EXISTING ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FOR THE FOLLOWING STATION RANGES (Y2 & Y3 TO MAKE TEMPORARY TIE WITH TEMPORARY PAVEMENT):

-L- STA. 11+35 TO STA. 14+99
-L- STA. 24+39 TO STA. 28+25
-L- STA. 50+75 TO STA. 61+04 (INCLUDING DRIVE CONNECTION AT 57+25)
-L- STA. 63+43 TO STA. 65+08
-L- STA. 87+72 TO STA. 90+00
-L- STA. 99+00 TO STA. 127+25 (INCLUDING BUILDUP OF EXISTING PAVEMENT FROM -L- STA. 99+00 TO STA. 112+00)
-Y2- STA. 10+36 TO STA. 12+15
-Y3- STA. 10+35 TO STA. 15+65
-DR6- STA. 10+10 TO 11+47
-Y5- STA. 10+00 TO STA. 11+25

USE WEDGING AS NECESSARY TO MAINTAIN TIE WITH EXISTING ROADWAY AND PROVIDE POSITIVE DRAINAGE. PLACE BARRICADES AS SHOWN ONCE PAVEMENT IS IN PLACE AS SHOWN.

B) CONSTRUCT TEMPORARY PAVEMENT WIDENING RIGHT OF -L- FOR THE FOLLOWING STATION RANGES:

-L- STA. 62+55 TO STA. 78+85
-L- STA. 79+34 TO STA. 85+71
-L- STA. 86+08 TO STA. 87+26
-DR7- STA. 11+51 TO STA. 12+76

C) PLACE TEMPORARY PAVEMENT MARKINGS AND PCB WITH CRASH CUSHIONS AS SHOWN ON TMP-8. INSTALL TEMPORARY SHORING LOCATION NO. 1 AND CONSTRUCT PHASE I OF PROPOSED CULVERT. CONSTRUCT TEMPORARY PAVEMENT FROM -L- STA. 95+00 TO STA. 99+00.

D) CONSTRUCT PROPOSED WIDENING, GRADING AND CURBS & GUTTER LEFT OF -L- TO THE EDGE OF EXISTING ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FOR THE FOLLOWING STATION RANGES:

-L- STA. 15+15 TO STA. 24+35
-L- STA. 28+00 TO STA. 50+75
-L- STA. 61+10 TO STA. 63+95
-L- STA. 87+40 TO STA. 95+00
-L- STA. 99+00 TO STA. 109+50
-DR1- STA. 10+40 TO STA. 11+97
-DR2- STA. 10+10 TO STA. 11+25
-DR3- STA. 10+25 TO STA. 11+69
-Y1- STA. 10+00 TO STA. 13+01
-Y4- STA. 10+75 TO STA. 12+02

USE WEDGING AS NECESSARY TO MAINTAIN TIE WITH EXISTING ROADWAY AND PROVIDE POSITIVE DRAINAGE. PLACE BARRICADES AS SHOWN ONCE PAVEMENT IS IN PLACE AS SHOWN.

E) CONSTRUCT TEMPORARY PAVEMENT WIDENING LEFT OF -L- FOR THE FOLLOWING STATION RANGES:

-Y1TEMP- STA. 12+41 TO STA. 13+84
-DR5TEMP- STA. 10+00 TO STA. 11+12

PHASE II

NOTE: WORK IN A CONTINUOUS MANNER TO COMPLETE STEPS 1 & 2.

STEP 1

COMPLETE THE WORK REQUIRED IN PHASE 2, STEP 1 IN SEVENTY FIVE (75) CONSECUTIVE CALENDAR DAYS (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES).

WITH PHASE 1 CULVERT AND WEST SIDE ROADWAY APPROACH CONSTRUCTED, USING RSD 1101.02 SHEET 1 OF 15 AND FLAGGERS AS NEEDED, PERFORM THE FOLLOWING AS SHOWN ON TMP-14, INSET 1:

A) TIE THE EXISTING ROADWAY TO THE NEWLY CONSTRUCTED WIDENED SECTIONS USING WEDGING AS NECESSARY FROM -L- STA. 95+00 TO STA. 99+00

B) RELOCATE PCB FROM PHASE 1 TO LEFT SIDE OF SHORING LOCATION NO. 1 FROM 95+69 TO 97+95 AND CRASH CUSHIONS.

C) INSTALL AND COVER TEMPORARY TRAFFIC SIGNALS ON EACH SIDE OF THE PROPOSED CULVERT CONSTRUCTION. (-L- STA. 95+13 & 98+64 RESPECTIVELY)

D) PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-14, INSET 1. BRING SIGNAL ONLINE AND SHIFT TRAFFIC TO THE WEST SIDE OF EXISTING NC 294 IN A ONE-LANE, TWO-WAY PATTERN. PLACE BARRICADES AS SHOWN TO CLOSE UPPER ENTRANCE TO PARKING LOT. (STA. 93+50, LT)

E) COMPLETE CONSTRUCTION OF PROPOSED CULVERT AND CONSTRUCT TEMPORARY PAVEMENT FROM -L- STA. 95+00 TO STA. 99+00.

F) ONCE COMPLETE REMOVE TEMPORARY SIGNAL, MODIFY TEMPORARY MARKINGS AS SHOWN ON TMP-14 AND PLACE TRAFFIC INTO A 2-LANE, 2-WAY PATTERN.

STEP 2

MAINTAINING TRAFFIC ON THE EXISTING ROADWAY AND USING RSD 1101.02 SHEET 1 OF 15 AND FLAGGERS AS NEEDED PERFORM THE FOLLOWING:

A) TIE THE EXISTING ROADWAY TO THE NEWLY CONSTRUCTED WIDENED / TEMPORARY PAVEMENT SECTIONS USING WEDGING AS NECESSARY FROM -L- 11+35 TO 90+36 & -Y1- SHIFT TO -Y1TEMP-, TIES @ -Y2- AND -Y3-. PLACE BARRICADES AS SHOWN ON TMP-13 TO CHANNEL CHURCH DRIVEWAY TO -DR6-.

B) CONSTRUCT BUILDUP OF EXISTING PAVEMENT FROM -L- STA. 95+00 TO STA. 99+00.

C) PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-10 THRU TMP-15. PLACE TEMPORARY PAVEMENT MARKERS ACCORDING TO ROADWAY STANDARD DRAWING 1250.01.

D) SHIFT TRAFFIC TO A TWO-WAY, TWO-LANE PATTERN AS SHOWN ON TMP-10 THRU TMP-15, TYING BACK TO THE EXISTING ROADWAY MARKINGS JUST PAST CROWE RD.

APPROVED: DocuSigned by: [signature] DATE: 4/10/2015

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKKI T. HONEYCUTT

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

TEMPORARY TRAFFIC CONTROL PHASING

4/9/2015 R:\Traffic\Traffic Control\TCP\R3622B_TC_TMP_03.dgn

PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-3A

STV / Ralph Whitehead Associates, Inc.
900 West Trade St., Ste. 715
Charlotte, NC 28202
NC License Number F-0991

PHASING NOTES (CONTINUED)

PHASE II (CONT.)

STEP 3

USING RSD 1101.02 SHEET 1 OF 15 AND FLAGGERS AS NEEDED, PERFORM THE FOLLOWING:

A) CONSTRUCT PROPOSED EXPRESSWAY GUTTER RIGHT OF -L- FROM STA. 14+99 TO 20+50 AS SHOWN ON TMP-10.

B) PERFORM PAVEMENT REMOVAL AND OR BREAKING RIGHT OF -L- FROM STA. 28+04 TO STA. 39+77 AS SHOWN ON TMP-10 AND LEFT OF -L- FROM STA. 50+71 TO 61+08 AS SHOWN ON TMP-11.

C) PLACE BARRICADES AS SHOWN ON TMP-12 AND CONSTRUCT ROADWAY FROM -L- STA. 65+08 TO 71+73.

D) INSTALL TEMPORARY PCB AND CRASH CUSHION FOR THE FOLLOWING STATION RANGES AS SHOWN ON TMP-12 & TMP-13:

-L- STA. 73+25 TO STA. 80+80
-L- STA. 81+56 TO STA. 84+00

E) CONSTRUCT PROPOSED EXPRESSWAY GUTTER AND PAVEMENT BUILDUP FROM -L- STA. 90+00 TO STA. 100+00 AS SHOWN ON TMP-14.

F) CONSTRUCT PROPOSED EXPRESSWAY GUTTER FROM -L- STA. 114+50 TO STA. 126+25 AS SHOWN ON TMP-15.

G) CONSTRUCT PROPOSED -DR7- STA. 10+50 TO STA. 12+75

STEP 4

AWAY FROM TRAFFIC PERFORM THE FOLLOWING:

A) INSTALL TEMPORARY SHORING LOCATIONS 2, 3 & 4 AS SHOWN ON TMP-12 & TMP-13.

B) CONSTRUCT PROPOSED ROADWAY FROM -L- STA. 73+23 TO STA. 80+50 AND STA. 82+00 TO STA. 87+49.

C) CONSTRUCT TEMPORARY TIE FROM -Y1- TO TEMPORARY PAVEMENT AT -L- STA. 70+50 AND INSTALL TEMPORARY MARKINGS AS SHOWN ON TMP-12.

STEP 5

USING RSD 1101.02 SHEET 1 OF 15 AND FLAGGERS AS NEEDED PERFORM THE FOLLOWING AS SHOWN ON TMP-12:

A) SHIFT TRAFFIC ON -Y1- ONTO TEMPORARY TIE IN.

B) REMOVE EXISTING PAVEMENT AS SHOWN ON TMP-12 ALONG -Y1- RADFORD RD.

STEP 6

USING RSD 1101.02 SHEET 1 OF 15 AND FLAGGERS AS NEEDED PERFORM THE FOLLOWING AS SHOWN ON TMP-16:

A) SHIFT TRAFFIC ON -Y1-TEMP ONTO TEMPORARY Y1.

B) CONSTRUCT REMAINDER OF -L- FROM STA. 71+73 TO STA. 73+23.

C) REMOVE WATER BARRIER AND CONSTRUCT TEMPORARY DRIVEWAY AT -L- STA. 78+40.

D) SHIFT TRAFFIC ON DR5TEMP ONTO DR5.

C) INSTALL TEMPORARY SHORING, PLACE BARRICADES AND CONSTRUCT REMAINDER OF -L- STA. 80+50 TO 82+00.

PHASE III

NOTE: WORK IN A CONTINUOUS MANNER TO COMPLETE STEPS 1 & 2.

STEP 1

AWAY FROM TRAFFIC PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-17. PLACE TEMPORARY PAVEMENT MARKERS ACCORDING TO ROADWAY STANDARD DRAWING 1250.01.

STEP 2

USING RSD 1101.02 SHEET 1 OF 15 AND FLAGGERS AND WEDGING AS NEEDED PERFORM THE FOLLOWING AS SHOWN ON TMP-17:

A) INSTALL PCB FROM -L- STA. 73+14 TO STA. 77+98 AND FROM STA. 78+79 TO 84+00 ON NEWLY CONSTRUCTED -L- AND CRASH CUSHIONS. PCB TO BE REMOVED AS SOON AS NO OBSTACLE OR FILL WARRANTS ARE PRESENT.

B) REMOVE BARRICADES AND SHIFT TRAFFIC ONTO NEWLY CONSTRUCTED -L- . PLACE BARRICADES AS SHOWN TO REDIRECT TRAFFIC AWAY FROM TEMPORARY ALIGNMENTS AS SHOWN ON TMP-17.

C) CONSTRUCT REMAINDER OF ROADWAY SECTION RIGHT OF -L- FROM STA. 70+25 TO STA. 87+72. TEMPORARY SHORING LOCATIONS 2, 3 & 4 TO BE REMOVED.

D) COMPLETE TIE OF -Y2- TO NEWLY CONSTRUCTED -L- FROM STA. 77+98 TO STA. 78+79.

E) COMPLETE TIE OF -Y3- TO NEWLY CONSTRUCTED -L- FROM STA. 84+00 TO STA. 84+76.

STEP 3

USING RSD 1101.02 SHEET 1 OF 15 AND FLAGGERS AS NEEDED, PLACE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS ON PROPOSED ALIGNMENTS (SEE FINAL PAVEMENT MARKING PLANS).

STEP 4

REMOVE ALL TEMPORARY TRAFFIC CONTROL DEVICES.

APPROVED: DocuSigned by: [signature] DATE: 4/10/2015

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKKI T. HONEYCUTT

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

TEMPORARY TRAFFIC CONTROL PHASING

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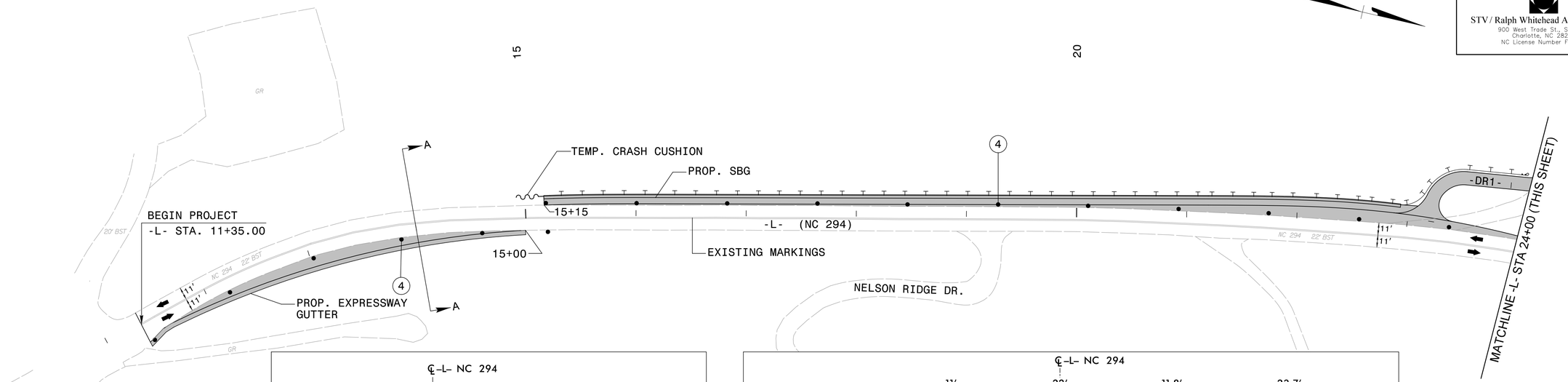
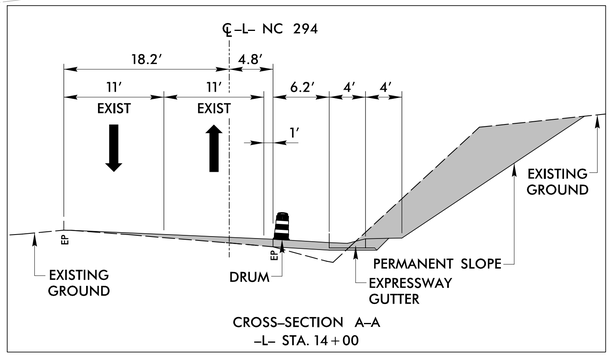
4/9/2015

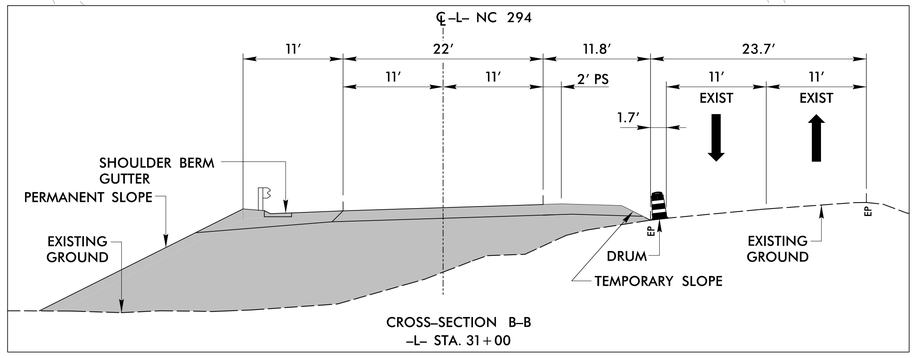
PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-4

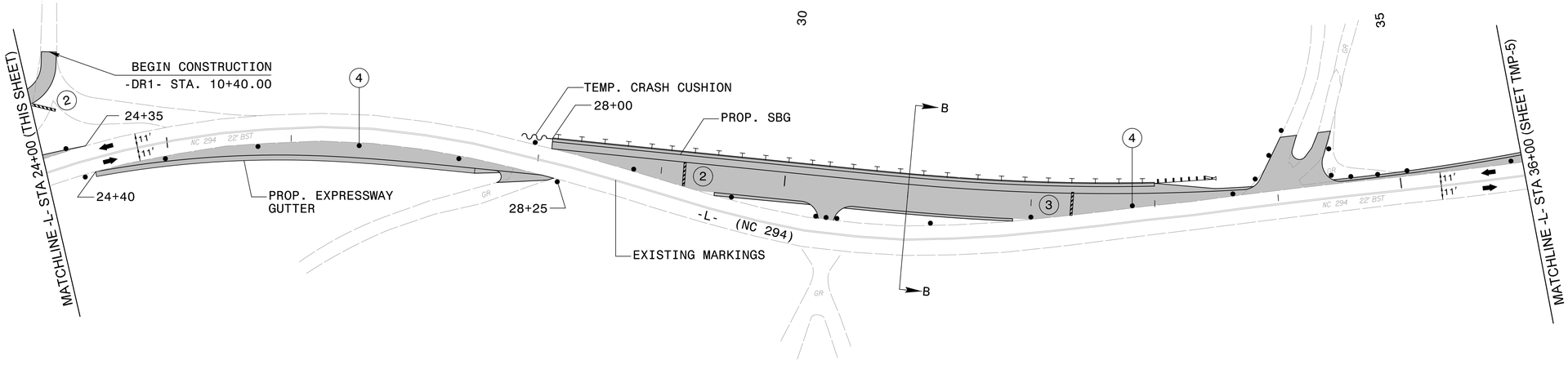
STV/ Ralph Whitehead Associates, Inc.
900 West Trade St., Ste. 715
Charlotte, NC 28202
NC License Number F-0991

15 20









* NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

SCALE 1″ = 50′

2
R11-2
48″X30″
ROAD CLOSED
W1-6R
48″x24″
TYPE III BARRICADE

3
R11-2
48″X30″
ROAD CLOSED
W1-6L
48″x24″
TYPE III BARRICADE

4

APPROVED: DocuSigned by: [signature] DATE: 4/10/2015

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER MIKE T. HONEYCUTT

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

TEMPORARY TRAFFIC CONTROL PHASE I DETAIL

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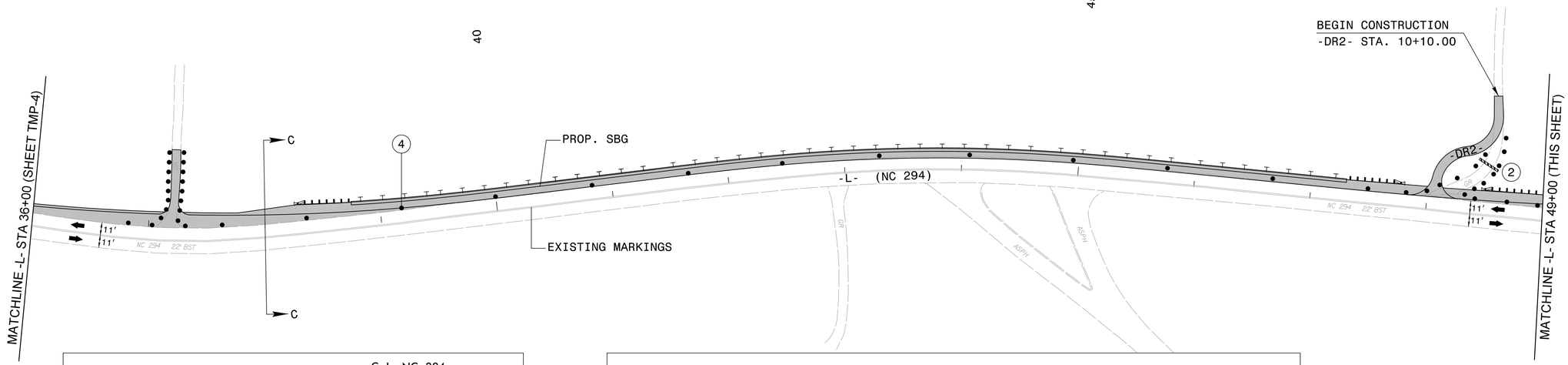
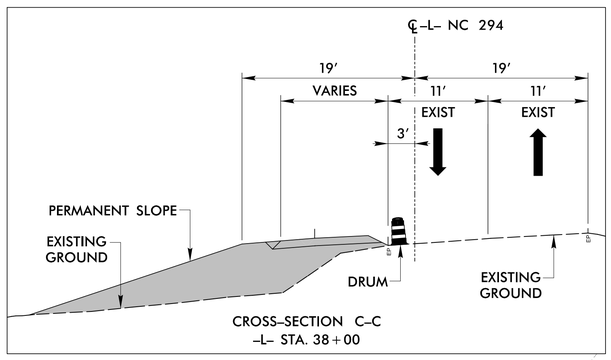
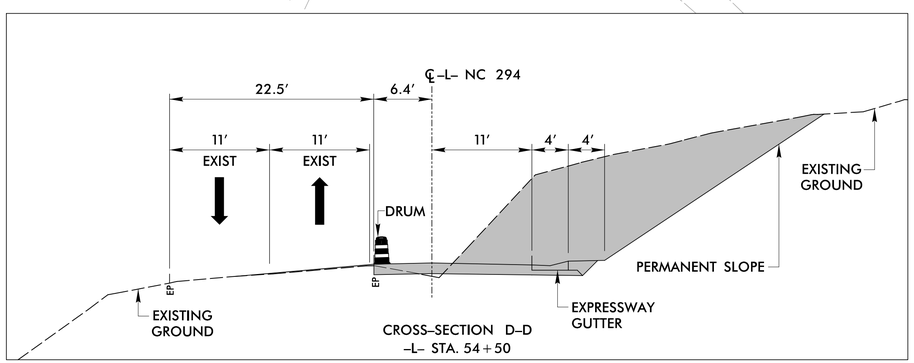
4/9/2015

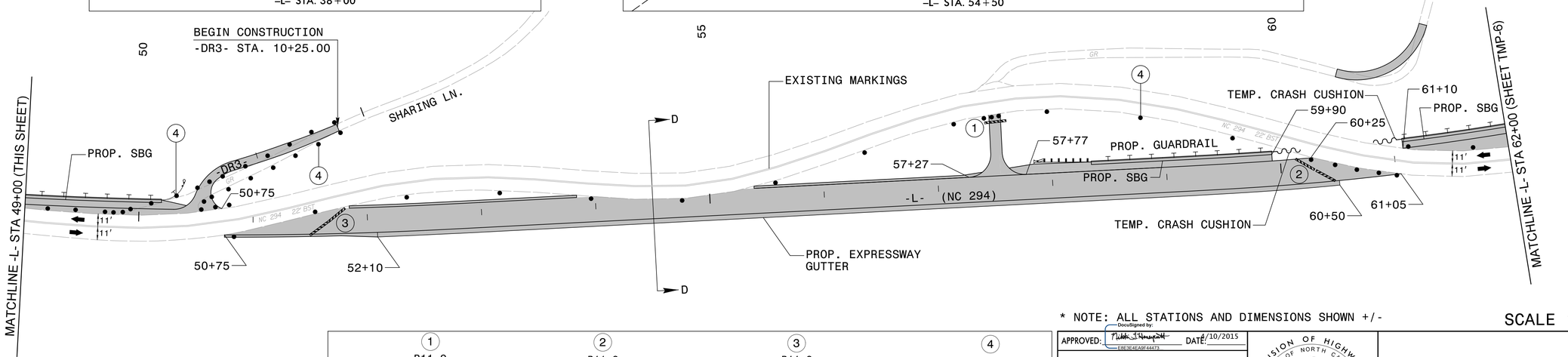
PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-5

STV/ Ralph Whitehead Associates, Inc.
900 West Trade St., Ste. 715
Charlotte, NC 28202
NC License Number F-0991









* NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

SCALE 1″ = 50′

1 — R11-2 48″X30″ — ROAD CLOSED — TYPE III BARRICADE

2 — R11-2 48″X30″ — ROAD CLOSED — W1-6R 48″x24″ — TYPE III BARRICADE

3 — R11-2 48″X30″ — ROAD CLOSED — W1-6L 48″x24″ — TYPE III BARRICADE

4

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NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKKI T. HONEYCUTT

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

TEMPORARY TRAFFIC CONTROL PHASE I DETAIL

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PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-6

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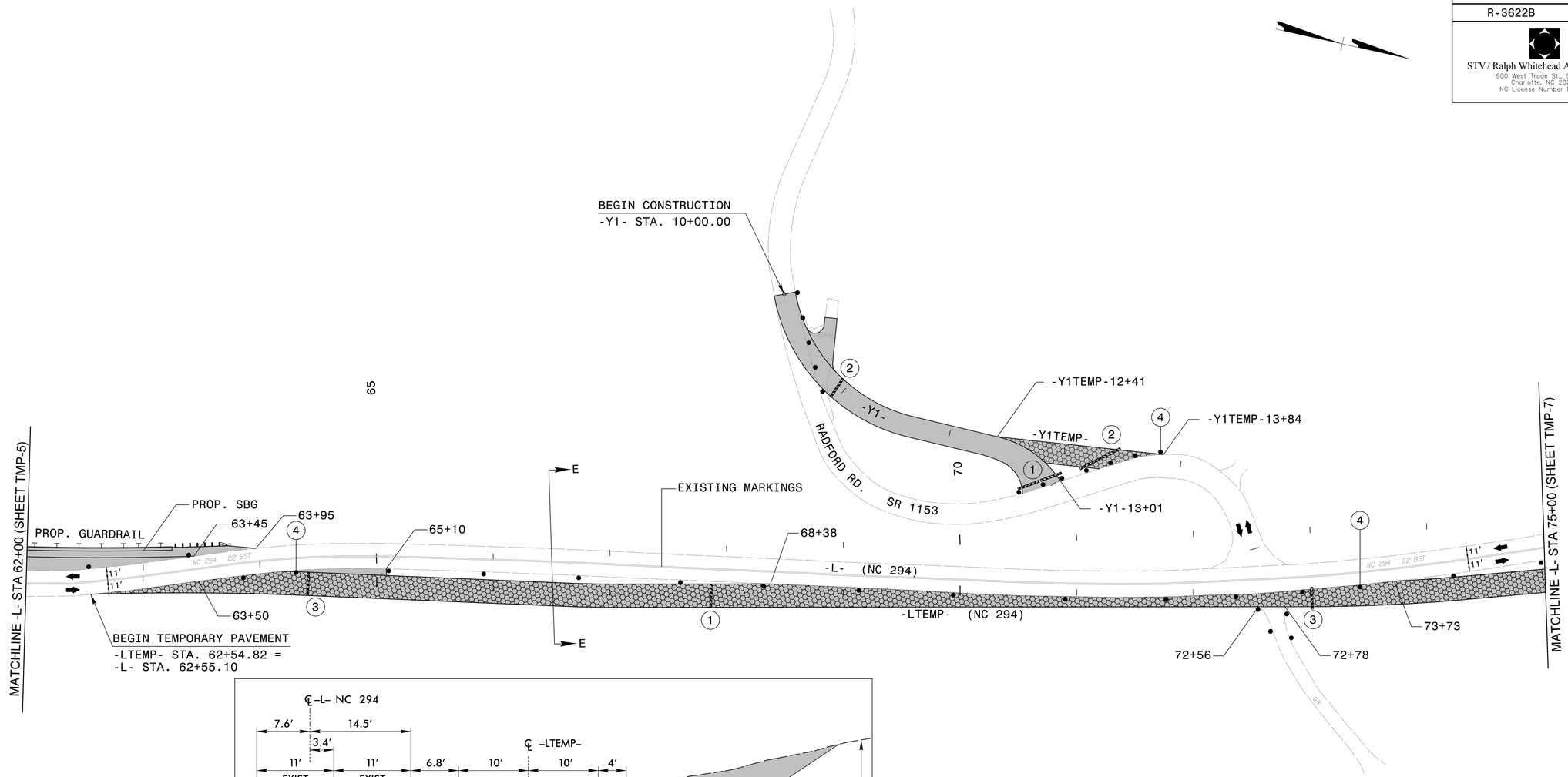
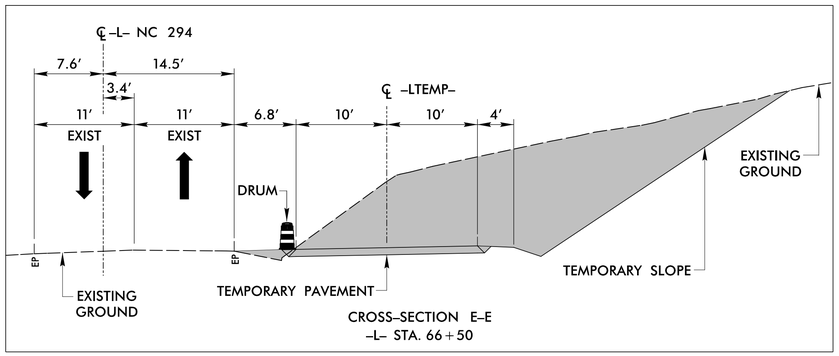
Charlotte, NC 28202
NC License Number F-0991

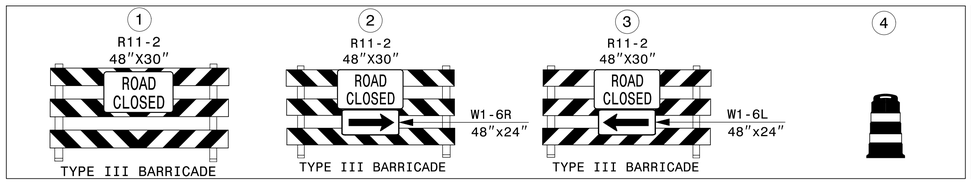




CROSS–SECTION E–E
–L– STA. 66+50

* NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

SCALE 1″ = 50′



APPROVED: DocuSigned by: DATE: 4/10/2015

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKKI T. HONEYCUTT

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

TEMPORARY TRAFFIC CONTROL PHASE I DETAIL

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4/9/2015

PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-7

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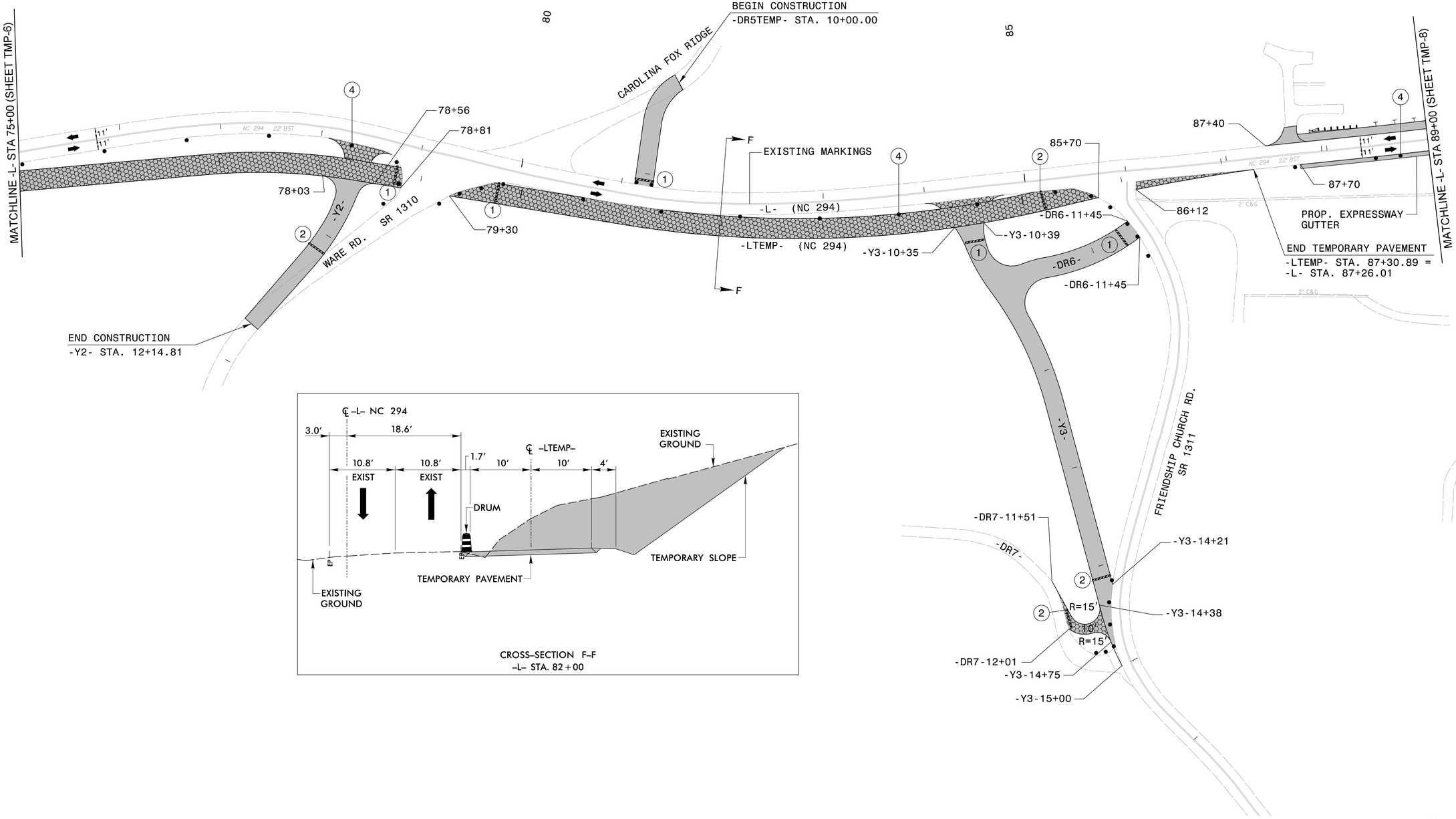
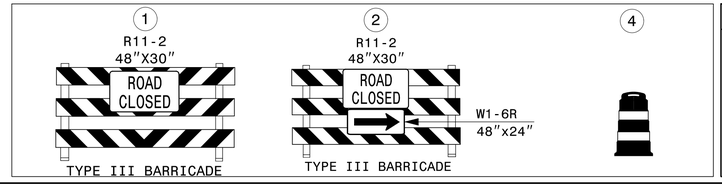
900 West Trade St., Ste. 715
Charlotte, NC 28202
NC License Number F-0991



CROSS-SECTION F–F
–L– STA. 82+00

-LTEMP- CURVE DATA

PI Sta 77+60.59	PI Sta 83+21.81	PI Sta 86+64.04
△ = 14° 25' 09.4" (RT)	△ = 2° 31' 21.2" (LT)	△ = 8° 00' 10.8" (RT)
D = 9° 32' 57.5"	D = 5° 23' 42.3"	D = 3° 05' 49.4"
L = 151.00'	L = 431.68'	L = 258.41'
T = 75.90'	T = 218.86'	T = 129.41'
R = 600.00'	R = 1,062.00'	R = 1,850.00'



* NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

SCALE 1" = 50'

APPROVED: DocuSigned by: Nicholas T. Honeycutt DATE: 4/10/2015

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NICHOLAS T. HONEYCUTT

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

TEMPORARY TRAFFIC CONTROL PHASE I DETAIL

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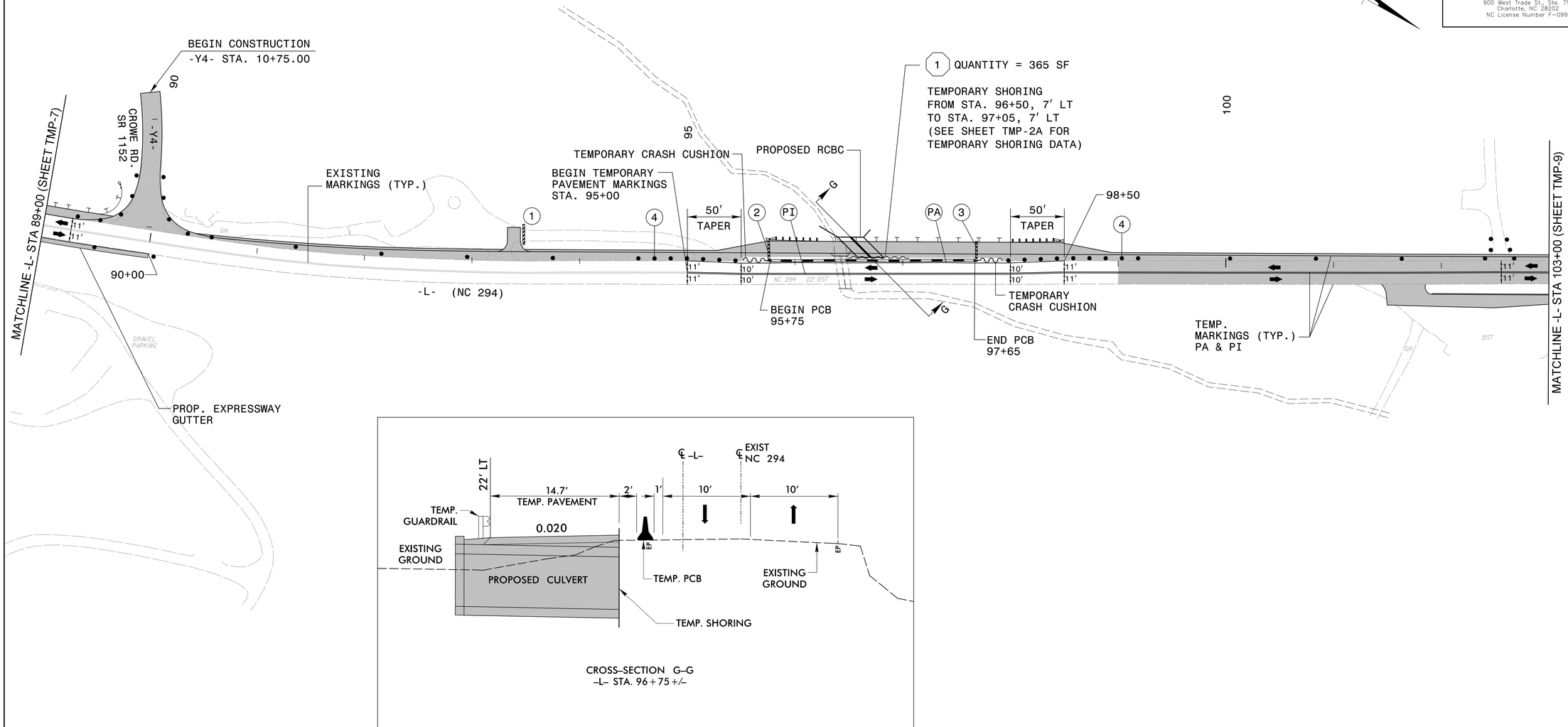
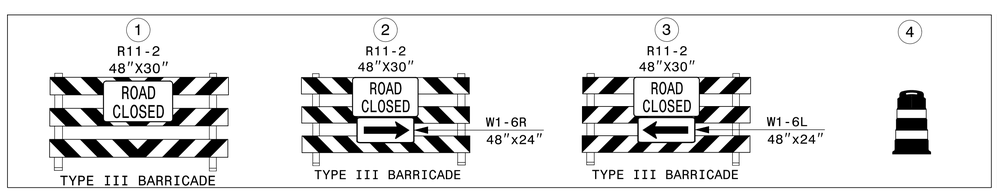
4/9/2015

PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-8

STV/ Ralph Whitehead Associates, Inc.
900 West Trade St., Ste. 715
Charlotte, NC 28202
NC License Number F-0991



CROSS–SECTION G–G
–L– STA. 96+75+/–



* NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

SCALE 1″ = 50′

APPROVED: DocuSigned by: Nikki T. Honeycutt 54E5E545A9F44F3... DATE: 4/10/2015

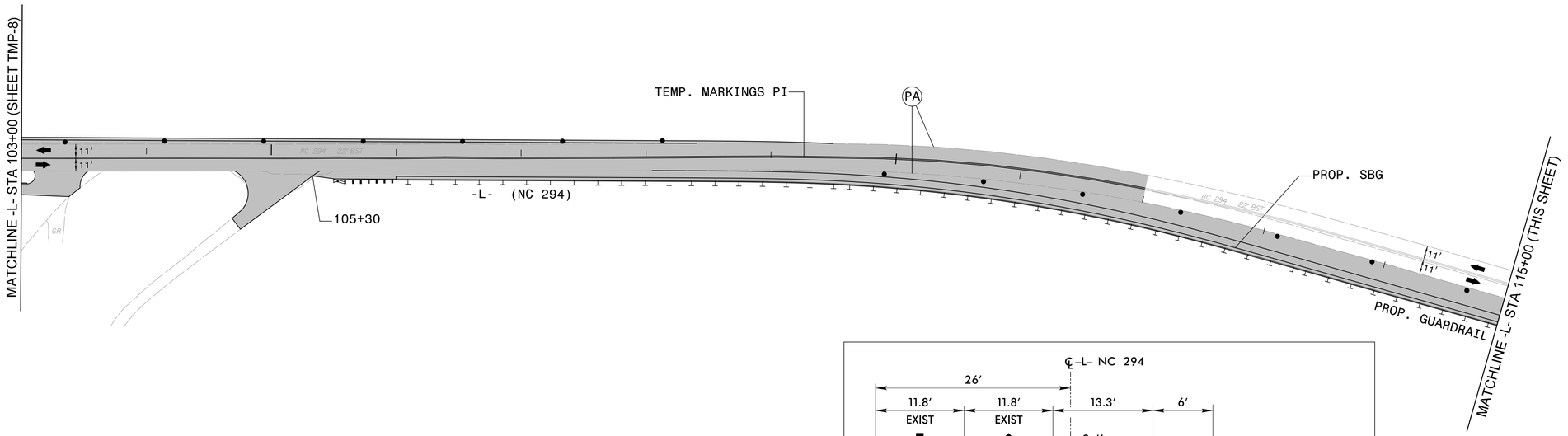
NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKKI T. HONEYCUTT

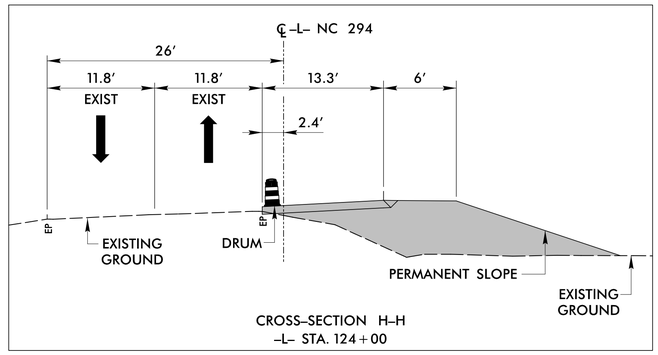
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

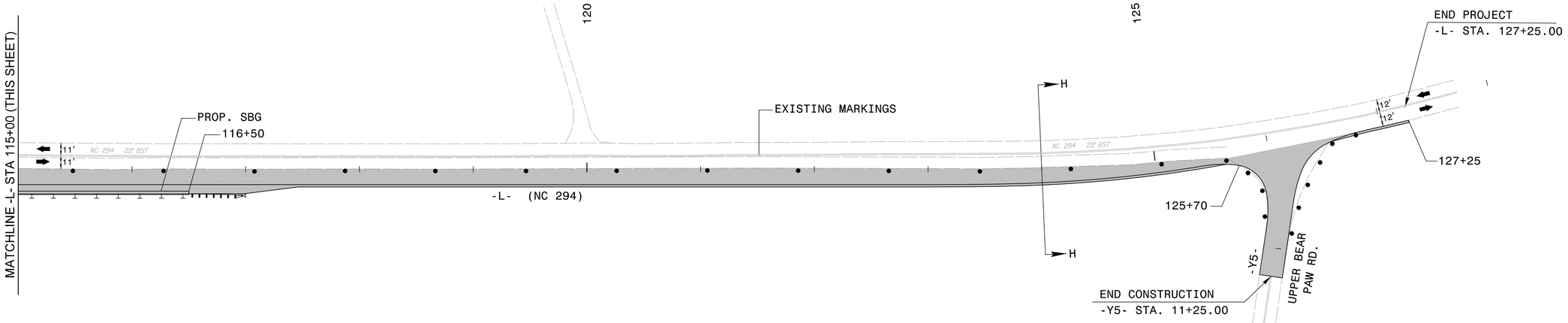
TEMPORARY TRAFFIC CONTROL PHASE I DETAIL

PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-9

STV/ Ralph Whitehead Associates, Inc.
900 West Trade St., Ste. 715
Charlotte, NC 28202
NC License Number F-0991







* NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

SCALE 1" = 50'

4

APPROVED: DocuSigned by: [signature] DATE: 4/10/2015

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER MARK T. HONEYCUTT

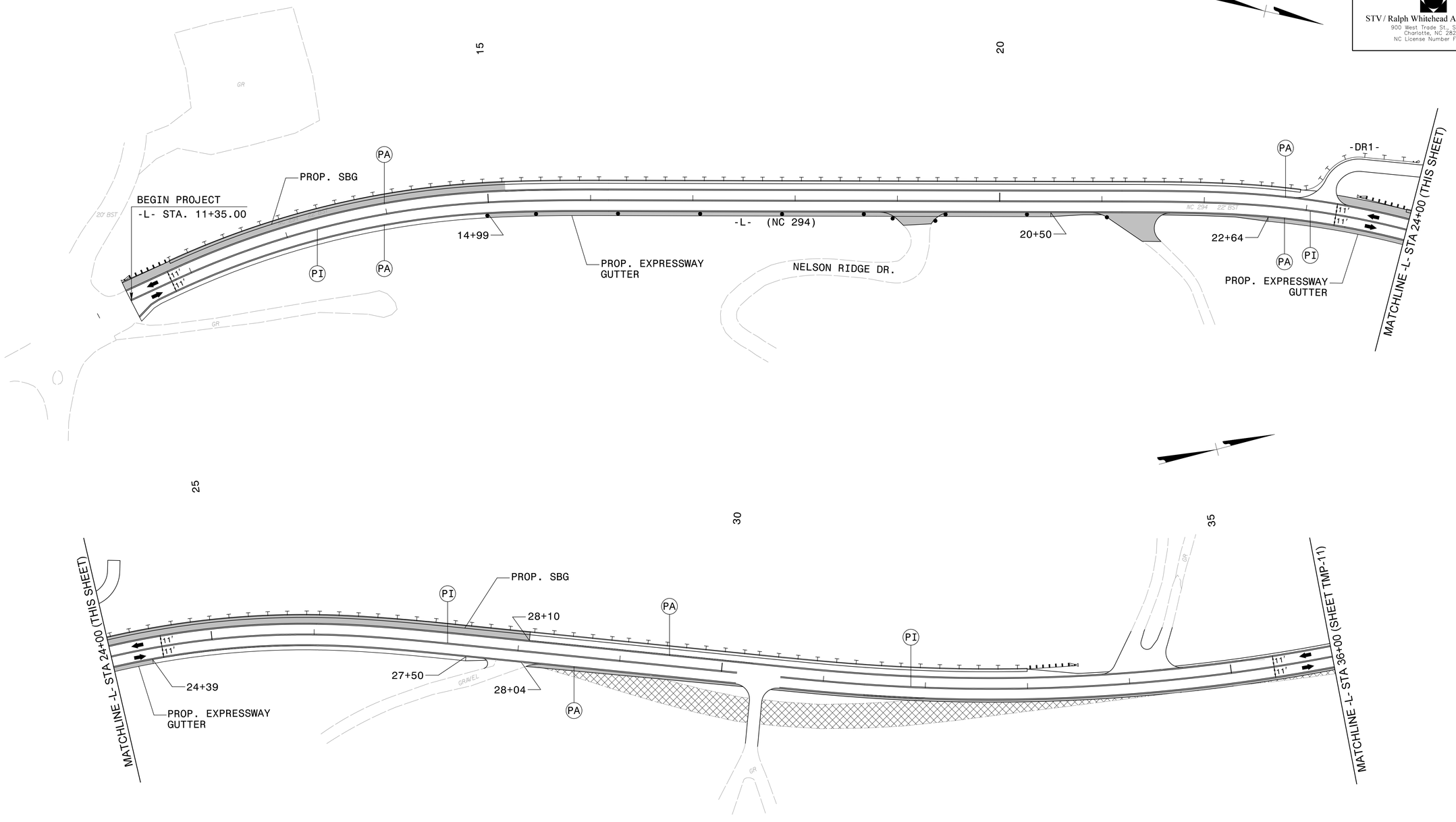
DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

TEMPORARY TRAFFIC CONTROL PHASE I DETAIL

4/9/2015 R:\Traffic\Traffic Control\TCP\R-3622B_TC_TMP_09.dgn

PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-10

STV/ Ralph Whitehead Associates, Inc.
900 West Trade St., Ste. 715
Charlotte, NC 28202
NC License Number F-0991



* NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

SCALE 1″ = 50′

APPROVED: DocuSigned by: Nicholas T. Honeycutt F4E9E4EA9E444A3... DATE: 4/10/2015

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NICHOLAS T. HONEYCUTT

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

TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

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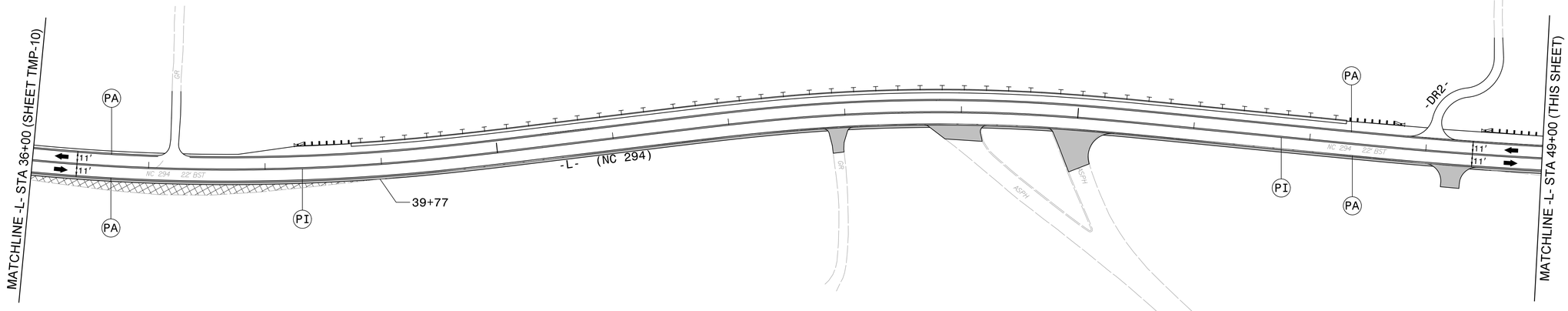
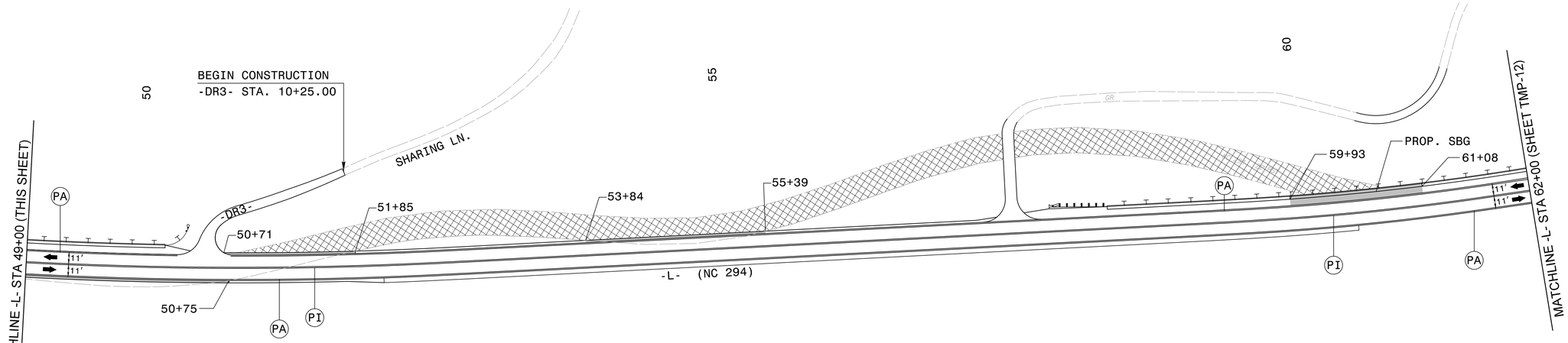
4/9/2015

PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-11

STV/ Ralph Whitehead Associates, Inc.
900 West Trade St., Ste. 715
Charlotte, NC 28202
NC License Number F-0991





* NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

SCALE 1″ = 50′

APPROVED: DocuSigned by: [signature] DATE: 4/10/2015

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKKI T. HONEYCUTT

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

TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

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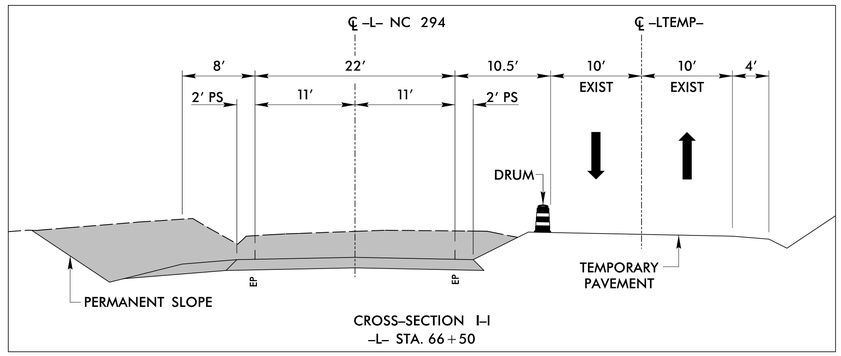
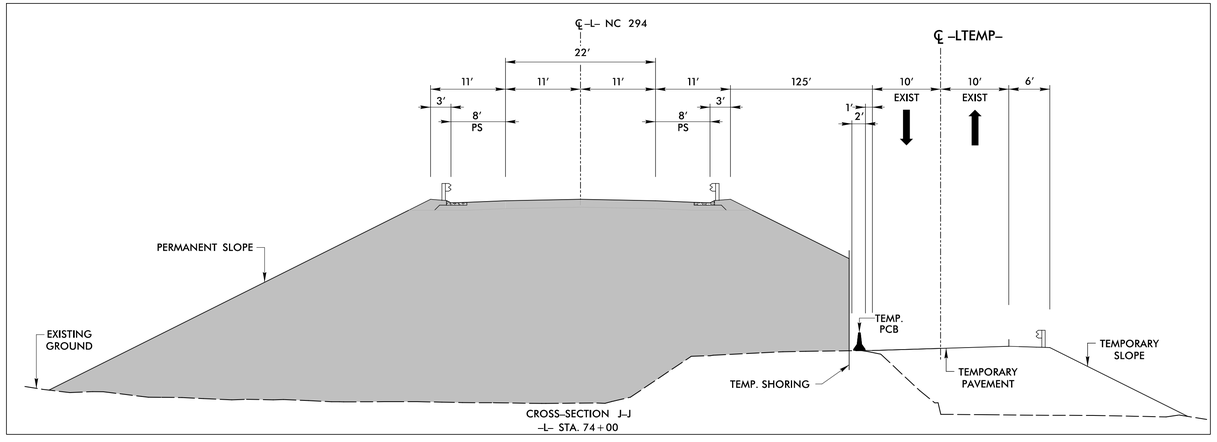
4/9/2015

PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-12

STV/ Ralph Whitehead Associates, Inc.
900 West Trade St., Ste. 715
Charlotte, NC 28202
NC License Number F-0991



CROSS–SECTION I–I
–L– STA. 66+50



CROSS–SECTION J–J
–L– STA. 74+00

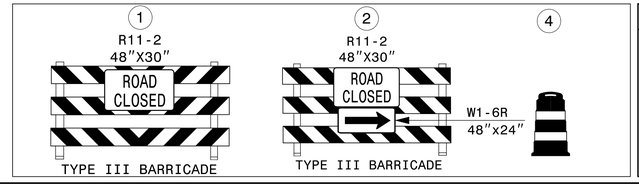
2 QUANTITY = 7,680 SF

TEMPORARY SHORING
FROM STA. 73+25, 41′ RT
TO STA. 77+50, 17′ RT

(SEE SHEET TMP-2A FOR
TEMPORARY SHORING DATA)

* NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

SCALE 1″ = 50′



APPROVED: DocuSigned by: DATE: 4/10/2015

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKKI T. HONEYCUTT

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

TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

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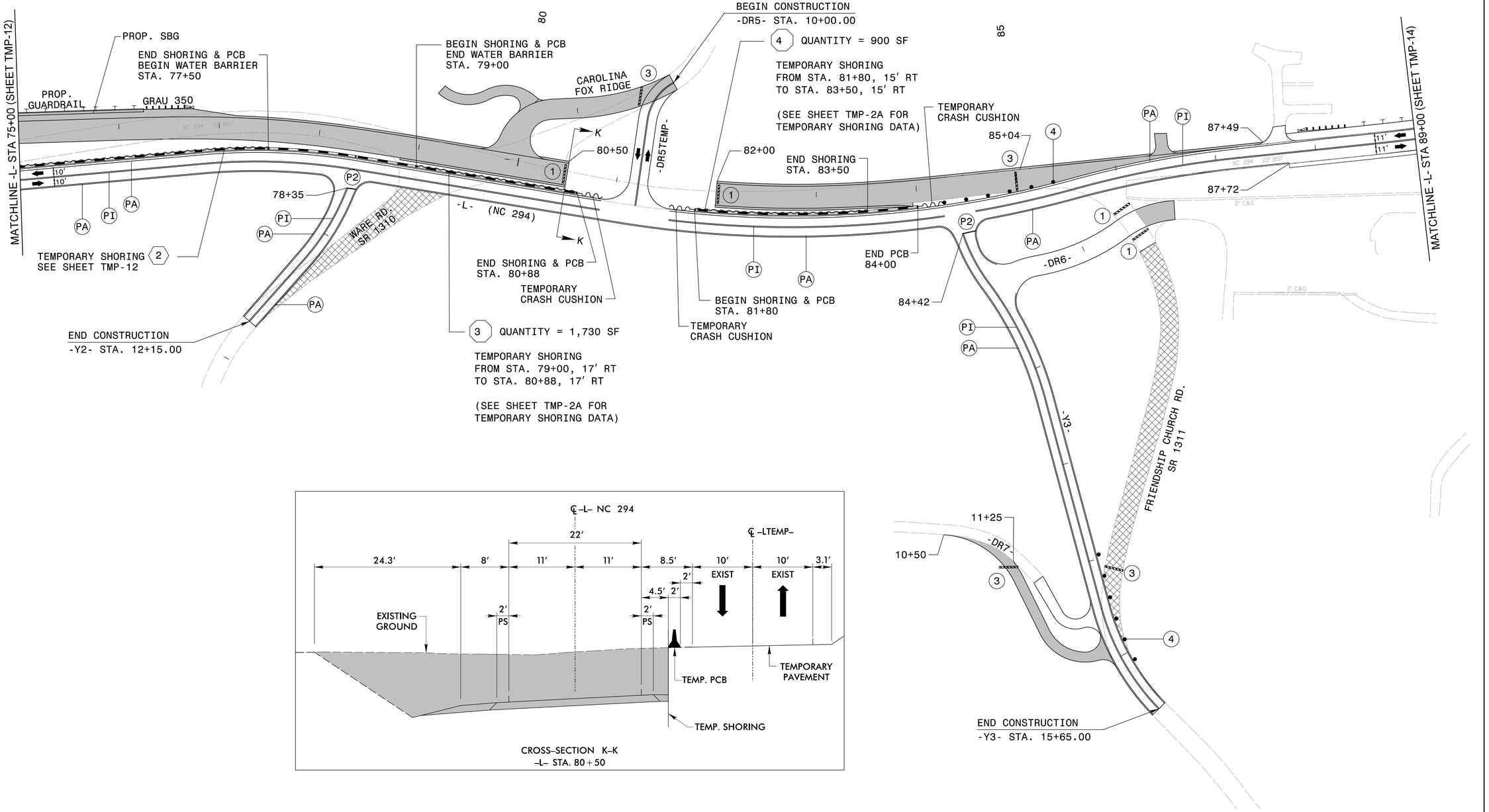
4/9/2015

PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-13

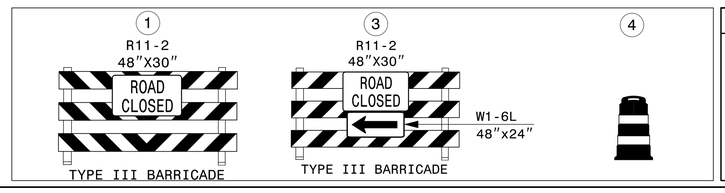
STV/ Ralph Whitehead Associates, Inc.
900 West Trade St., Ste. 715
Charlotte, NC 28202
NC License Number F-0991



CROSS–SECTION K–K
–L– STA. 80+50

* NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

SCALE 1″ = 50′



APPROVED: DocuSigned by: Nicholas J. Honeycutt 4/10/2015 DATE:

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NICHOLAS J HONEYCUTT

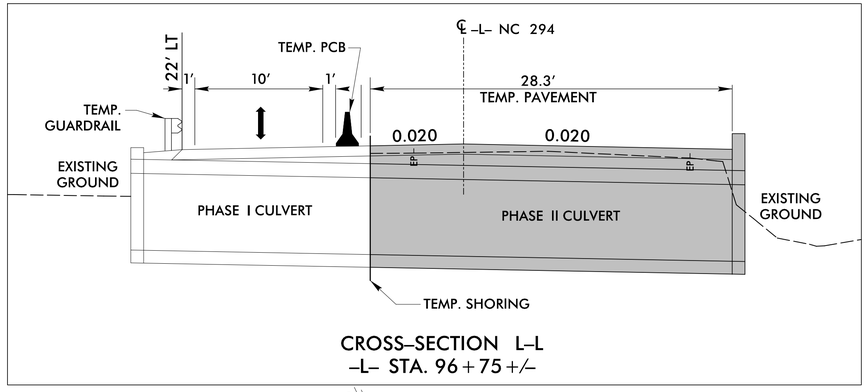
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

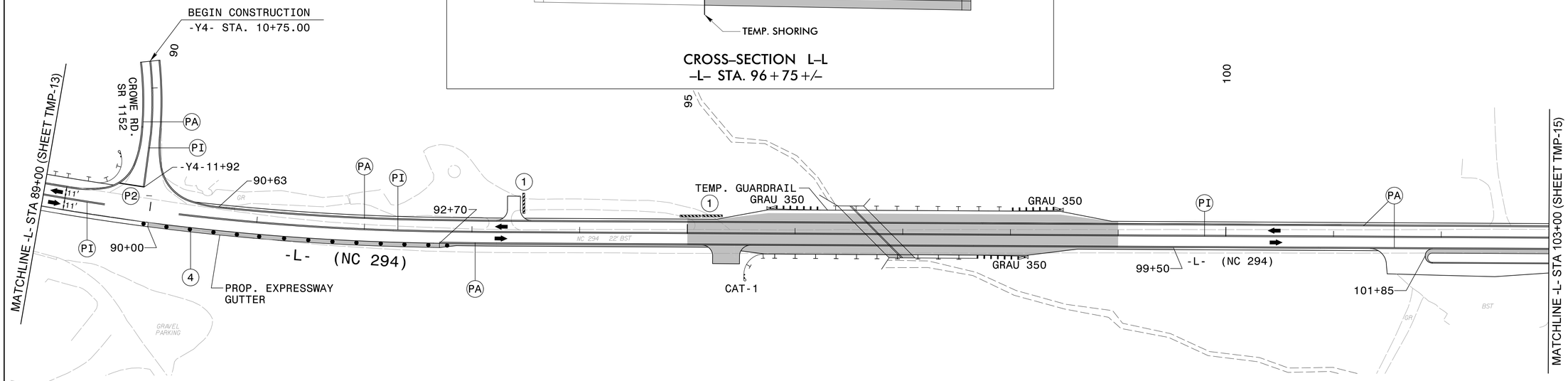
4/9/2015 R:\Traffic\Traffic Control\TCP\R3622B_TC_TMP_13.dgn

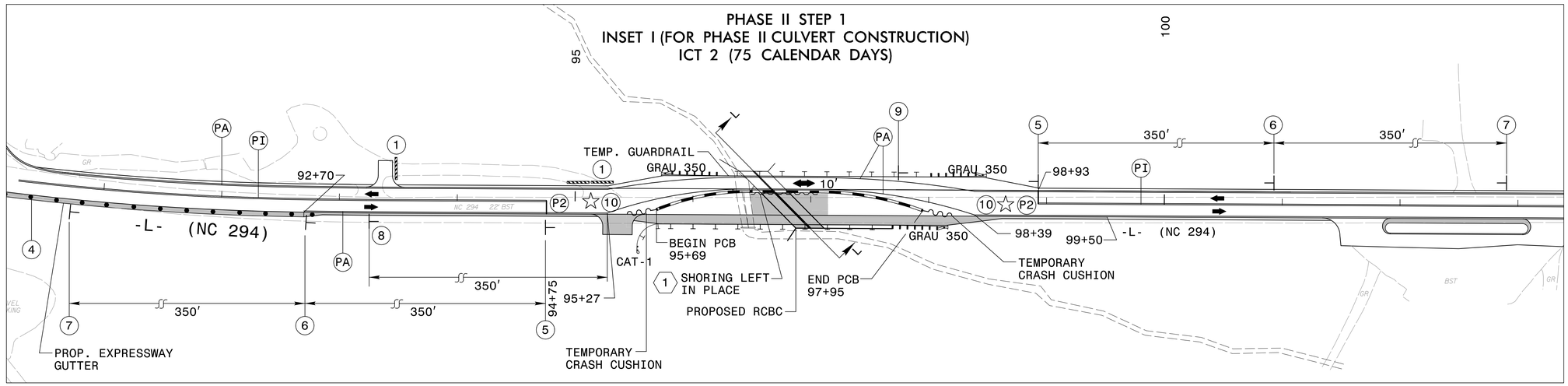
PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-14

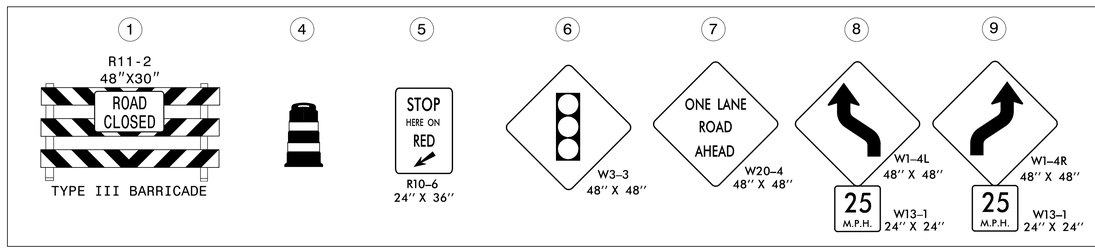
STV/ Ralph Whitehead Associates, Inc.
900 West Trade St., Ste. 715
Charlotte, NC 28202
NC License Number F-0991



CROSS–SECTION L–L
–L– STA. 96+75+/–







* NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

SCALE 1" = 50'

APPROVED: DocuSigned by: Nicholas J. Hennessy DATE: 4/10/2015

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NICKI T. HONEYCUTT

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

TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

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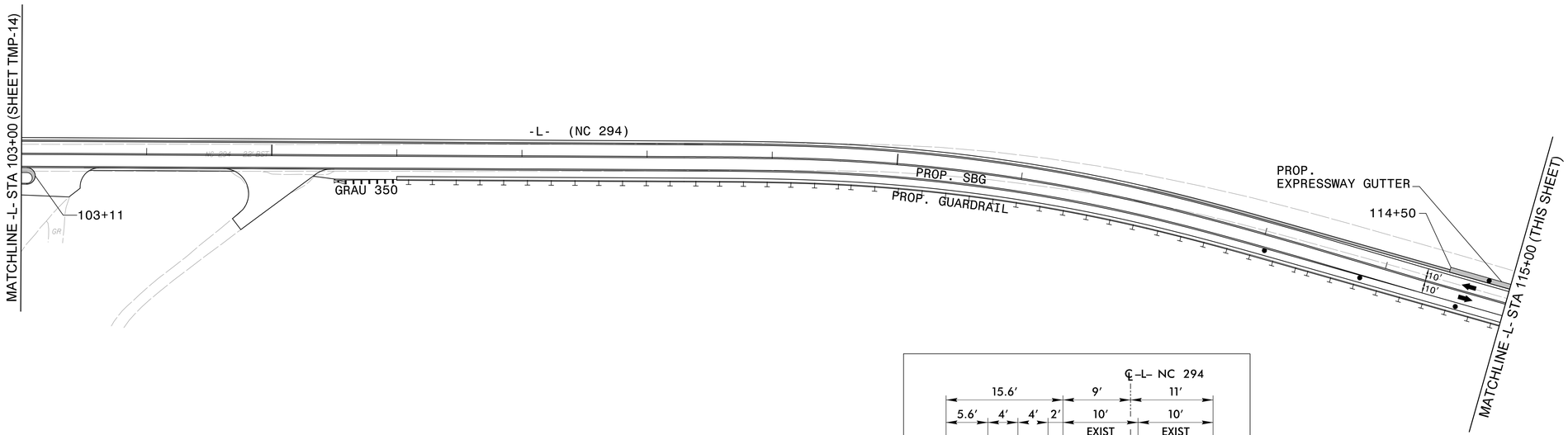
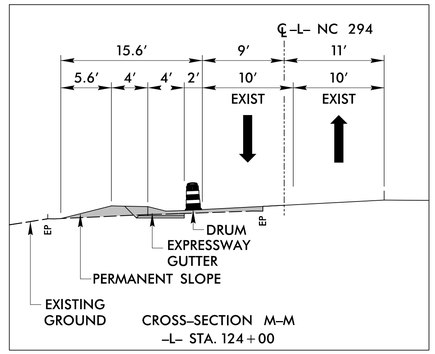
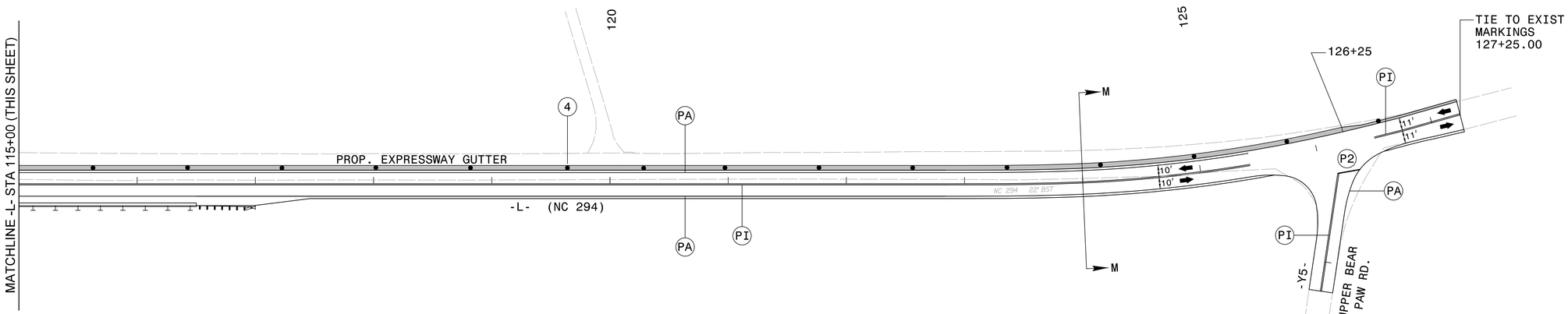
4/9/2015

PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-15

STV/ Ralph Whitehead Associates, Inc.
900 West Trade St., Ste. 715
Charlotte, NC 28202
NC License Number F-0991







* NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

SCALE 1" = 50'

4

APPROVED: DocuSigned by: Nicholas T. Honeycutt F8E9EAFA5E444F3... DATE: 4/10/2015

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NICHOLAS T. HONEYCUTT

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

TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

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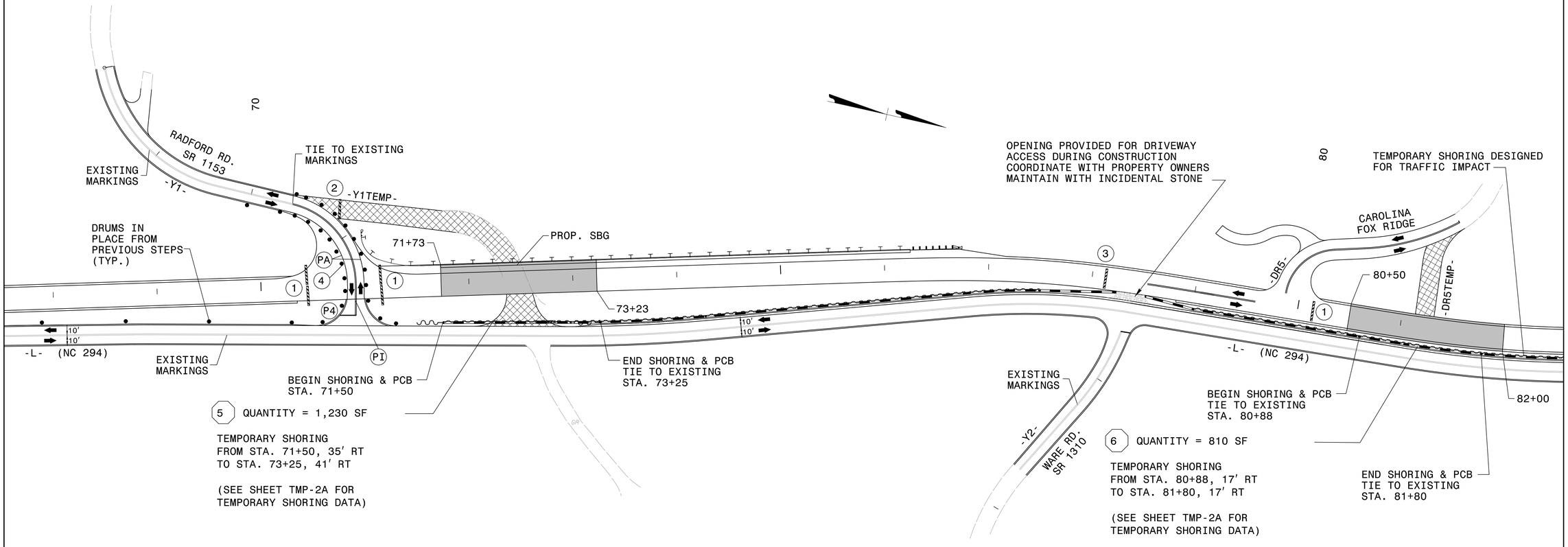
4/9/2015

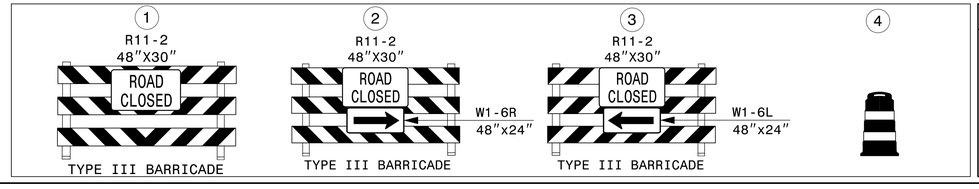
PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-16

STV/ Ralph Whitehead Associates, Inc.
900 West Trade St., Ste. 715
Charlotte, NC 28202
NC License Number F-0991



* NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

SCALE 1" = 50'



APPROVED: DocuSigned by: [signature] DATE: 4/10/2015

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER MIKKO T. HONEYCUTT

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

TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

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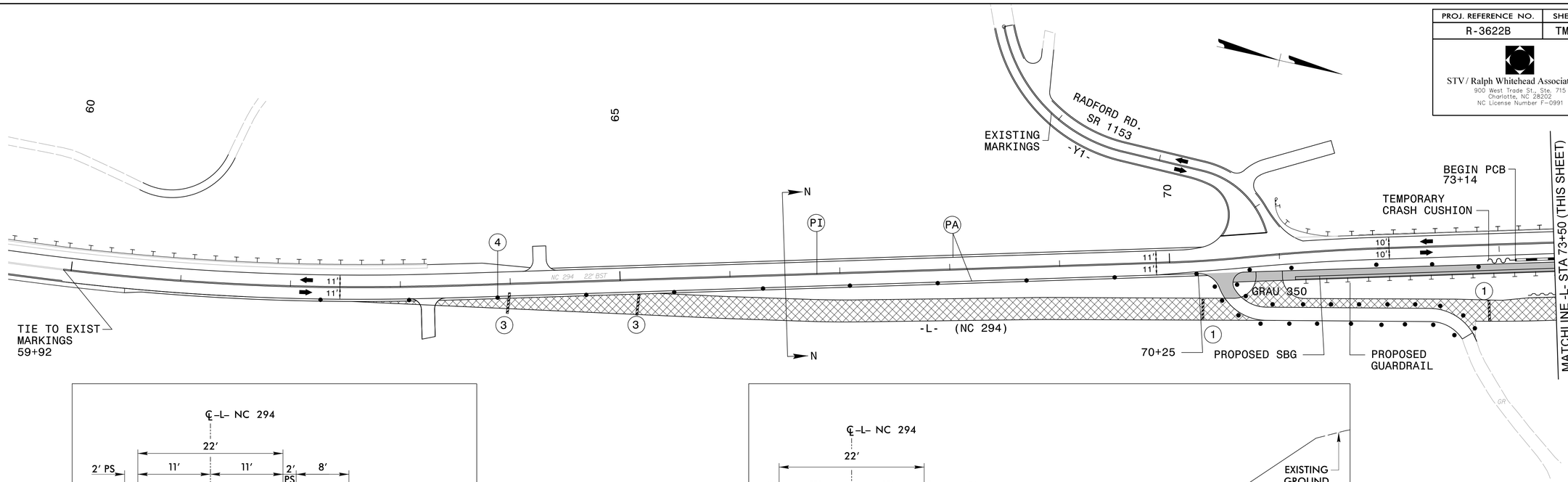
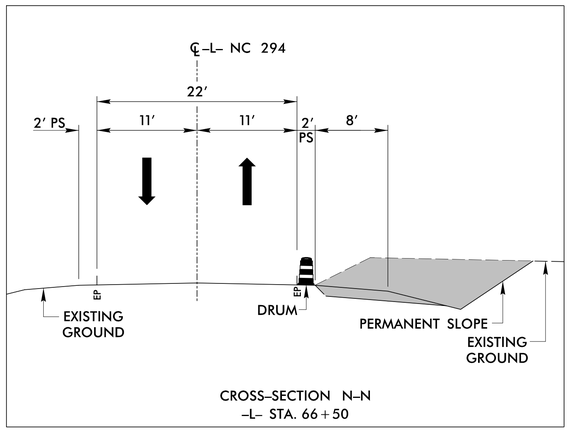
4/10/2015

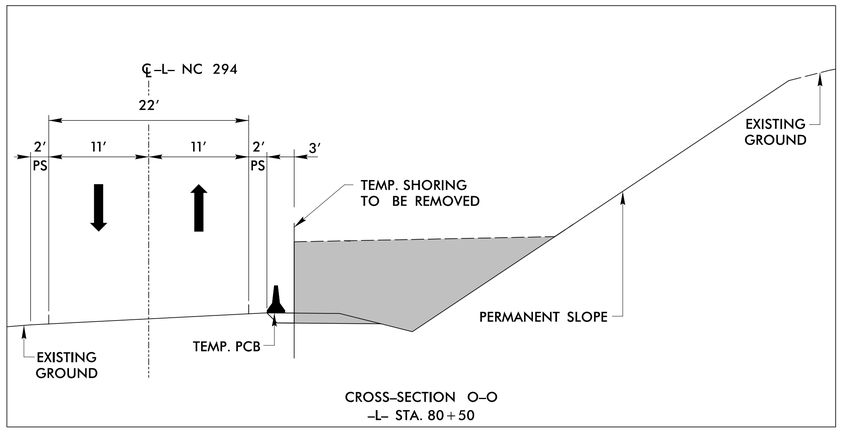
PROJ. REFERENCE NO.	SHEET NO.
R-3622B	TMP-17

STV/ Ralph Whitehead Associates, Inc.
900 West Trade St., Ste. 715
Charlotte, NC 28202
NC License Number F-0991

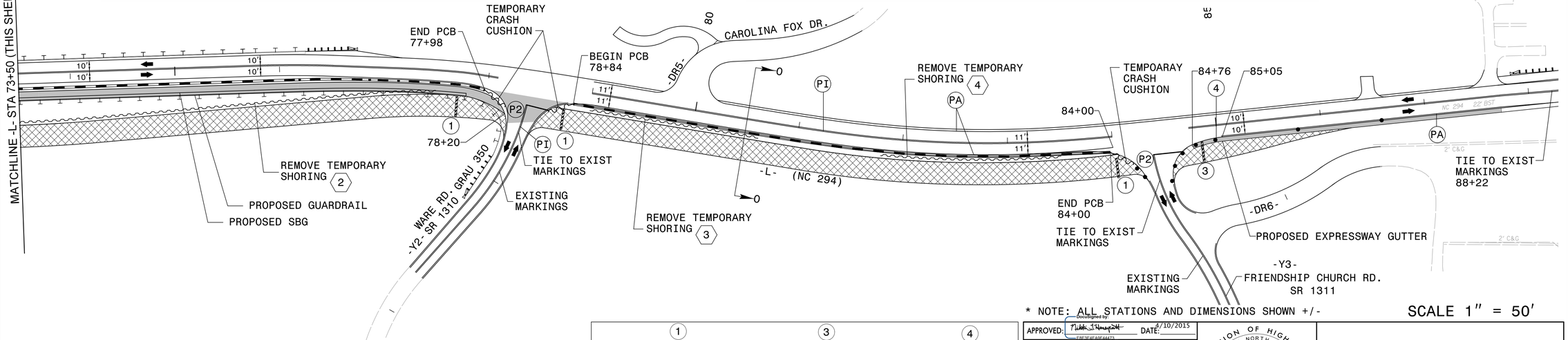




CROSS-SECTION N-N
-L- STA. 66+50

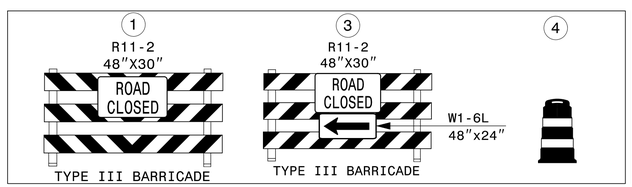


CROSS-SECTION O-O
-L- STA. 80+50



* NOTE: ALL STATIONS AND DIMENSIONS SHOWN +/-

SCALE 1" = 50'



APPROVED: Docusigned by: [signature] DATE: 4/10/2015

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKKI T. HONEYCUTT

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

TEMPORARY TRAFFIC CONTROL PHASE III DETAIL

R:\Traffic\Traffic Control\TCP\R3622B_TC_TWP_I7.dgn

4/9/2015