STATE PROJECT REFERENCE NO.	SHEET NO.
U-2826A	TCP-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION

FORSYTH COUNTY

U-2826A

TIP PROJECT:

ROADWAY STANDARD DRAWINGS

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

STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESS
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW PANELS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES - TYPE III
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSION - REFLECTIVE END TREATMENT
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR - DELINEATION
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - DIVIDED AND UNDIVIDED ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - THRU LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVMENT MARKERS - PERMANENT AND TEMPORARY
1253.01	SNOWPLOWABLE RAISED PAVEMENT MARKERS
1261.01	GUARDRAIL AND BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS
1264.02	PLACEMENT OF OBJECT MARKERS

INDEX OF SHEETS

SHEET NO.	TITLE
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND AND INDEX OF SHEETS
TCP-2 & TCP-3	PROJECT NOTES
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TCP-7 THRU TCP-13	PHASE I DETAILS
TCP-14	PHASE I OVERVIEW 2
TCP-15 THRU TCP-17	PHASE I DETAILS
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TCP-53 THRU TCP-56	PHASE III DETAILS
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TCP-58 THRU TCP-59	PHASE IV DETAILS
TCP-60	PEDESTRIAN BARRICADE AND CROSSWALK/SIDEWALK CLOSURE DETAIL
TCP-61 THRU TCP-61B	WORK ZONE VEHICLE ACCESS TYPICAL DETAIL
TCP-62	US 52 ALTERNATE ROUTE
TCP-63	US 52 ALT ROUTE CMS, DMS & A SIGNS
TCP-64	US 52 ALT ROUTE SIGN DESIGNS
TCP-65	US 52 THROUGH TRAFFIC ALT ROUTE
TCP-66 THRU TCP-68	TEMPORARY GUIDE SIGN DETAILS
TCP-69 & TCP-70	WORK ZONE WARNING SIGNS
PM-1 THRU PM-6	PAVEMENT MARKING

LEGEND

GENERAL

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

TRAFFIC CONTROL DEVICES

- TYPE II BARRICADE
- TYPE III BARRICADE
- CONE
- DRUM
- TUBULAR MARKER
- FLASHING ARROW PANEL (TYPE C)
- TYPE 'B' WARNING LIGHT
- STATIONARY SIGN
- PORTABLE SIGN
- STATIONARY OR PORTABLE SIGN
- WARNING FLAGS
- CRASH CUSHION
- CHANGEABLE MESSAGE SIGN (CMS)
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- POLICE
- FLAGGER
- TREE PROTECTION BARRICADE
- PORTABLE CONCRETE BARRIER
- WATER-FILLED BARRIER

PAVEMENT MARKINGS

- CRYSTAL/CRYSTAL PAVEMENT MARKER
- YELLOW/YELLOW PAVEMENT MARKER
- CRYSTAL/RED PAVEMENT MARKER
- PAVEMENT MARKING SYMBOLS

PLAN REVIEWED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL SECTION

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APPROVED: J. Todd Brooks
DATE: 4-24-09

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PLAN PREPARED FOR N.C.D.O.T. BY: PBSJ
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24-APR-2009 12:55
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13833 AT RALBUXRH

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-2

PROJECT NOTES

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
US 52	MON. - FRI. 6:00 AM TO 8:00 PM SATURDAY 8:00 AM TO 8:00 PM SUNDAY 10:00 AM TO 8:00 PM

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

ROAD NAME

US 52 RAMPS/LOOPS

HOLIDAY

1. FOR ANY SPECIAL OCCURENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 8:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 8:00 P.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 8:00 P.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 8:00 P.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 8:00 P.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 8:00 P.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
9. FOR THE DIXIE CLASSIC FAIR, BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE THE FAIR UNTIL 8:00 P.M. THE MONDAY AFTER THE FAIR.
10. FOR WAKE FOREST UNIVERSITY HOME BASKETBALL AND HOME FOOTBALL GAMES, BETWEEN FOUR (4) HOURS BEFORE THE START AND FOUR (4) HOURS AFTER THE END OF THE UNIVERSITY GAMES.

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

ROAD NAME

LIBERTY ST

SPECIAL EVENT

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

D) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
US 52	AT ANY TIME
OFF RAMP -Y-	MON-SUN. 5:00 AM TO 8:00 PM

E) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
US 52	AT ANY TIME	N/A
26TH/28TH STREET	MON.-SUN. 6 AM TO 8 PM	15 MINUTES TRAFFIC SHIFTS
LIBERTY STREET	MON.-SUN. 5 AM TO 8 PM	30 MINUTES BRIDGE DECK REMOVAL REMOVING & SETTING BRIDGE GIRDERS 15 MINUTES TRAFFIC SHIFTS

F) DO NOT USE ROLLING ROAD BLOCK AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
US 52	MON.-SUN. 5:00 AM - 8:00 PM

G) DO NOT CONDUCT SINGLE VEHICLE HAULING AS FOLLOWS; INGRESS AND EGRESS FROM RAMPS WILL BE ALLOWED:

ROAD NAME	DAY AND TIME RESTRICTIONS
US 52 & RAMPS/LOOPS	MON.- FRI. 6:00 AM TO 8:00 PM SATURDAY 8:00 AM TO 8:00 PM SUNDAY 10:00 AM TO 8:00 PM

H) DO NOT CONDUCT MULTI-VEHICLE HAULING AS FOLLOWS; INGRESS AND EGRESS FROM RAMPS WILL BE ALLOWED:

ROAD NAME	DAY AND TIME RESTRICTIONS
US 52 & RAMPS/LOOPS	MON.- FRI. 6:00 AM TO 8:00 PM SATURDAY 8:00 AM TO 8:00 PM SUNDAY 10:00 AM TO 8:00 PM

I) 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

J) 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.

K) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN AN OPEN TRAVEL LANE ON US 52 -L-, 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.

L) 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 AN UNDIVIDED 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.

M) 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.

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

O) DO NOT INSTALL MORE THAN ONE LANE CLOSURE, IN ANY ONE DIRECTION, ON US 52.

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

PAVEMENT EDGE DROP OFF REQUIREMENTS

Q) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAVE 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.

R) 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) 200' IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

T) 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.

U) PROVIDE PERMANENT SIGNING.

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

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

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

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

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APPROVED: J. Todd Brooks DATE: 12/14/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PROJECT NOTES

SCALE:	
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

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

REVISIONS

CADD FILE

16-DEC-2009 14:13
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12054 AT RAL5GKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-3

GENERAL NOTES (cont.)

TRAFFIC BARRIER

Z) 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.

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

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

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

TRAFFIC CONTROL DEVICES

BB) 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.

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

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

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
US 52 -L-	POLYUREA	SNOWPLOWABLE PAVEMENT MARKERS
PROPOSED BRIDGES	POLYUREA	PERMANENT RAISED PAVEMENT MARKERS
LIBERTY STREET -Y3-	POLYUREA	SNOWPLOWABLE PAVEMENT MARKERS
28TH STREET -Y2-	POLYUREA	SNOWPLOWABLE PAVEMENT MARKERS
26TH STREET -Y1-	POLYUREA	SNOWPLOWABLE PAVEMENT MARKERS
US 52 NB RAMPS -Y-	POLYUREA	SNOWPLOWABLE PAVEMENT MARKERS

NOTE: ALL PAVEMENT MARKINGS SHALL BE POLYUREA WITH HIGHLY REFLECTIVE ELEMENTS.

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

ROAD NAME	MARKING	MARKER
US 52 -L-	PAINT	TEMPORARY RAISED PAVEMENT MARKERS
EXISTING BRIDGES	PAINT	TEMPORARY RAISED PAVEMENT MARKERS
ALL BRIDGES	PAINT	TEMPORARY RAISED PAVEMENT MARKERS
LIBERTY STREET -Y3-	PAINT	TEMPORARY RAISED PAVEMENT MARKERS
28TH STREET -Y2-	PAINT	TEMPORARY RAISED PAVEMENT MARKERS
26TH STREET -Y1-	PAINT	TEMPORARY RAISED PAVEMENT MARKERS
US 52 NB RAMPS -Y-	PAINT	TEMPORARY RAISED PAVEMENT MARKERS

GG) 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.

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

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

JJ) TRACE THE EXISTING AND PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO REMOVAL AND INSTALLATION. PLACE DRUMS TO DELINEATE ANY EXISTING AND PROPOSED MONOLITHIC ISLANDS AFTER REMOVAL AND BEFORE INSTALLATION.

TEMPORARY / FINAL SIGNALS

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

MISCELLANEOUS

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

PEDESTRIANS

MM) MAINTAIN REASONABLE AND SAFE PEDESTRIAN ACCESS TO ALL BUSINESSES, SCHOOLS AND DWELLINGS IN AREAS AFFECTED BY CONSTRUCTION AT ALL TIMES.

NN) WHEN CONSTRUCTION ACTIVITIES WILL BLOCK PEDESTRIAN ACCESS TO PEDESTRIAN SIGNAL PUSHBUTTONS, NOTIFY THE ENGINEER AT LEAST 24 HOURS IN ADVANCE OF SUCH WORK TO HAVE THE TRAFFIC SIGNAL PLACED ON PEDESTRIAN RECALL.

OO) REFER TO MUTCD SECTION 6D.01, "PEDESTRIAN CONSIDERATIONS" AND SECTION 6D.02, "ACCESSIBILITY CONSIDERATIONS" FOR ADDITIONAL REQUIREMENTS AND CONSIDERATIONS FOR MAINTAINING PEDESTRIAN TRAFFIC THROUGH WORK AREA.

PP) CONTRACTOR SHALL MAINTAIN SIDEWALK ACCESS AT ALL TIME AS STATED IN THE PHASING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY SIDEWALKS (CONCRETE, ASPHALT, OR OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER) AT ALL LOCATIONS WHERE THE OPEN PEDESTRIAN TRAVELWAY HAS BEEN REMOVED FOR CONSTRUCTION OPERATIONS (UTILITIES, DRAINAGE, ETC.).

LOCAL NOTES

LN-1 RELAP EXISTING GUARDRAIL OR INSTALL TEMPORARY GUARDRAIL FOR CHANGE IN DIRECTION OF TRAFFIC ADJACENT TO GUARDRAIL. TEMPORARY APPROACH ANCHOR UNITS MAY BE NECESSARY.

LN-2 TEMPORARY PEDESTRIAN RAMPS DESIGNATED IN THESE PLANS ARE TO BE CONSTRUCTED OF STABLE FIRM MATERIAL SUCH AS TEMPORARY ASPHALT OR OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER.

LN-3 COORDINATE WITH EMERGENCY SERVICES FOR TEMPORARY ROAD CLOSURES ON LIBERTY STREET -Y3- FOR REMOVAL OF EXISTING US 52 BRIDGES AND ERECTION OF NEW BRIDGES OR ANY OTHER ACTIVITY WHICH WOULD PREVENT EMS / FIRE SERVICES FROM TRAVELING ON LIBERTY STREET -Y3-.

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APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PROJECT NOTES & PAV'T MARKING SCHEDULE

SCALE:	
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE

24-APR-2009 08:40
G:\TEG\Curr\0006004 U2826A\TCP\u2826a_tc_TCP02_03.dgn
12:054 AT RALSGKTMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-4

PHASING

Phase I

OBJECTIVE: COMPLETE AS MUCH OF -Y-LINE (EXCEPT -Y3-) CONSTRUCTION AS POSSIBLE PRIOR TO CLOSING OFF RAMP FROM US 52 NB TO -Y3- LIBERTY STREET AND WHILE CONSTRUCTING US 52 SB DETOUR ROAD AND TEMPORARY BRIDGE.

SEE PHASE 1 OVERVIEW 1 ON TCP-6 FOR STEPS 1-3
SEE PHASE 1 OVERVIEW 2 ON TCP-14 FOR STEP 4
SEE PHASE 1 OVERVIEW 3 ON TCP-18 FOR STEPS 5-6

STEP 1: SEE PHASE I, OVERVIEW 1 ON TCP-6

-L-

BEGIN CONSTRUCTION OF THE FOLLOWING:

- TEMPORARY DRIVEWAY -DR1TEMP- ALONG WEST SIDE OF US 52 -L- FROM STA 10+68 +/- TO STA 16+13 +/-. [SEE TCP-6 & TCP-9]
- US 52 SB DETOUR ROAD FROM STA 30+00 +/- TO STA 51+50 +/- -SBDET- AND FROM STA 58+00 +/- TO STA 63+66 +/- -SBDET- [SEE TCP-6 THRU TCP-10]. USE RSD NO. 1101.02, SHEET 3 OF 9, TO TEMPORARILY CLOSE RIGHT LANE OF US 52 SB TO INSTALL SHORING AND P.C.B. FROM STA 34+50+/- -L- TO STA 38+00+/- -L- AS SHOWN ON TCP-8 AND IN SECTION D-D AND TO CONSTRUCT SB DETOUR ROAD TIE-INS TO EXISTING US 52 SB AS SHOWN ON TCP-7 & TCP-10.
- TEMPORARY BRIDGE OVER -Y3- FOR US 52 SB DETOUR -SBDET-. ERECT PORTIONS OF TEMPORARY BRIDGE OVER -Y3- DURING OVERNIGHT PERIODS USING RSD NO. 1101.03, SHEETS 8 & 9 OF 9 TO TEMPORARILY STOP TRAFFIC ON LIBERTY ST -Y3- [SEE TCP-6 & TCP-8]
- BORING AND JACKING OF DRAINAGE CROSS PIPES BENEATH US 52 -L-. IF FIELD CONDITIONS ARE ENCOUNTERED WHICH PREVENT BORING AND JACKING AS DETERMINED BY THE ENGINEER, USE RSD NO. 1101.02, SHEET 3 OF 9, TO CONSTRUCT CROSS PIPES SEGMENTALLY BY TRENCHING DURING OFF-PEAK HOURS.
- FULL-DEPTH RECONSTRUCTION OF EXISTING OUTSIDE PAVED SHOULDERS AND TEMPORARY OUTSIDE WIDENING ON US 52 SB USING RSD NO. 1101.02, SHEET 3 OF 9, AS FOLLOWS:

  - STA 29+57 +/- -L- TO STA 33+30 +/- -L- [SEE TCP-7]
  - STA 59+70 +/- -L- TO STA 66+89 +/- -L- [SEE TCP-10]

-Y2-

PLACE DRUMS SPACED 10 FT C-C TO CHANNEL NORTHWESTBOUND TRAFFIC ON 28TH ST -Y2- DEPARTING THE 26TH ST -Y1- INTERSECTION INTO A SINGLE LANE AND INSTALL WATER-FILLED BARRIER (W.F.B.) ALONG NORTH SIDE OF -Y2- FOR TEMPORARY PEDESTRIAN WALKWAY FROM -Y1- TO THE END OF THE EXISTING SIDEWALK AT STA 18+88 +/- AS SHOWN ON TCP-11. CONSTRUCT TEMPORARY ASPHALT PEDESTRIAN RAMP (SEE NOTE LN-2) BETWEEN EXISTING SIDEWALK AND TEMPORARY WALKWAY. [SEE SECTION E-E ON TCP-11]

USING RSD 1101.02, SHEETS 3 & 4 OF 9 AND FLAGGERS, REVISE THE STOP BAR AND INSTALL CROSSWALK MARKINGS ON THE EAST LEG OF 28TH ST -Y2- AT THE -Y2-/-Y3- INTERSECTION AS SHOWN ON TCP-7.

TEMPORARILY CLOSE SIDEWALK ON SOUTH SIDE OF 28TH ST -Y2- AND DETOUR PEDESTRIANS TO NORTH SIDE OF -Y2- BETWEEN 26TH ST -Y1- AND LIBERTY ST -Y3- AS SHOWN ON TCP-7 & TCP-11.

STEP 1: (CONT.)

-Y3-

USING RSD 1101.02, SHEETS 2 & 3 OF 9, PAVE THE AREA BETWEEN THE EXISTING SIDEWALK AND THE BACK OF THE EXISTING CURB ON THE EAST SIDE OF LIBERTY ST -Y3- FROM STA 12+38 +/- -Y3- TO STA 13+75 +/- -Y3- WITH TEMPORARY ASPHALT AS SHOWN ON TCP-7. FINISH PAVEMENT FLUSH WITH THE EXISTING SIDEWALK AND THE TOP OF THE EXISTING CURB TO PROVIDE A TEMPORARY SIDEWALK IN LATER STEP. MAINTAIN PEDESTRIANS ON EXISTING SIDEWALK USING DRUMS OR CONES TO GUIDE PEDESTRIANS AROUND WORK AREA.

USING RSD 1101.02, SHEETS 1 THRU 4 OF 9, REVISE PAVEMENT MARKINGS TO SHIFT LANES ON LIBERTY ST -Y3- FROM STA 15+15 +/- TO STA 24+36 +/- -Y3- AS SHOWN ON TCP-8. INSTALL W.F.B. AND P.C.B. ALONG EAST SIDE OF -Y3- TO CREATE TEMPORARY PEDESTRIAN WALKWAY FROM STA 20+12 +/- TO STA 23+60 +/- -Y3-. CONSTRUCT TEMPORARY ASPHALT RAMPS (SEE NOTE LN-2) BETWEEN EXISTING CURB AND TEMP. WALKWAY AT STA 20+12 +/- AND STA 23+60 +/- -Y3-.
[SEE SECTION C-C ON TCP-8]

ONCE TEMPORARY WALKWAY IS IN PLACE, CLOSE EXISTING SIDEWALK BENEATH THE US 52 OVERPASSES FROM STA 20+12 +/- AND STA 23+60 +/- -Y3- AND REROUTE PEDESTRIANS TO TEMPORARY WALKWAY BETWEEN THE W.F.B. AND P.C.B.

STEP 2: -Y- & -Y2-

NOTE: AS APPROVED BY THE ENGINEER, THE CONTRACTOR MAY TEMPORARILY CLOSE (SEE GENERAL NOTE "D") THE EB LANE OF -Y- FROM STA 10+65 +/- -Y- TO 28TH ST -Y2- AND DETOUR TRAFFIC EXITING TO 26TH ST -Y1- AND 28TH ST -Y2- VIA 25TH ST AND LIBERTY ST -Y3- AS SHOWN ON TCP-13 TO COMPLETE THE CONSTRUCTION ON -Y-.

CONSTRUCT THE FOLLOWING AS MUCH AS POSSIBLE WHILE MAINTAINING 10-FT (MINIMUM) LANES ON -Y- AND USING FLAGGERS [SEE TCP-11]:

- SOUTH SIDE WIDENING ON -Y- FROM STA 10+57+/- -Y- TO 28TH ST -Y2-, INCLUDING SW RADIUS OF -Y-/-Y2- INTERSECTION.
- CURB & GUTTER ALONG NORTH SIDE OF -Y- FROM STA 11+41+/- -Y- TO -Y2- AND ALONG THE SOUTHWEST SIDE OF 28TH ST -Y2- FROM -Y- TO STA 19+31+/- -Y2-, INCLUDING THE NW RADIUS OF THE -Y-/-Y2 INTERSECTION.
- CONSTRUCT CURB & GUTTER IN MEDIAN ON -Y- FROM STA 10+05+/- -Y- TO -Y2-.
- PLACE FIRST LAYER OF SURFACE COURSE ON EB LANES OF -Y- FROM 10+00 +/- -Y- TO 28TH ST -Y2- AND ON WB LANE OF -Y- FROM 28TH ST -Y2- TO STA 11+41 +/- -Y2-. PLACE TEMPORARY MARKINGS ON -Y- ONLY AS SHOWN ON TCP-12.

STEP 3: -Y- AND -Y2-

USING RSD NO. 1101.02, SHEET 3 OF 9, REVISE PAVEMENT MARKINGS FOR RIGHT EB LANE OF 28TH ST -Y2- BETWEEN -Y- AND PIEDMONT CIRCLE TO PATTERN SHOWN ON TCP-12.

CLOSE THE EXISTING "LOOP" FROM 28TH ST -Y2- TO THE US 52 NB ON-RAMP AND REROUTE ON-RAMP TRAFFIC TO THE -Y- INTERSECTION AS SHOWN ON TCP-12. ONCE EXISTING LOOP IS CLOSED, REMOVE EXISTING LOOP PAVEMENT.

STEP 3: (CONT.)

-Y- AND -Y2- (CONT.)

USING RSD NO. 1101.02, SHEET 3 OF 9, CONSTRUCT THE FOLLOWING ON THE SOUTH SIDE OF 28TH ST -Y2- AS SHOWN ON TCP-12:

- CURB & GUTTER ACROSS FORMER LOOP LOCATION
- PROPOSED SIDEWALK FROM STA 16+88 +/- TO STA 17+25 +/- -Y2-
- TEMPORARY SIDEWALK IN SW CORNER OF THE -Y-/-Y2- INTERSECTION
- TEMPORARY SIDEWALK FROM -Y- TO STA 17+25 +/- -Y2-, INCLUDING NW CORNER OF THE -Y-/-Y2- INTERSECTION

WHILE MAINTAINING 10-FT (MINIMUM) LANES ON -Y- AND USING FLAGGERS:

- CONSTRUCT CURB & GUTTER AND WIDENING ALONG NORTH SIDE OF -Y- FROM STA 10+05+/- TO STA 11+41 +/- -Y- AS SHOWN ON TCP-12.
- PLACE FIRST LAYER OF SURFACE COURSE AND TEMPORARY MARKINGS IN PROPOSED FINAL PATTERN FROM STA 10+00 +/- TO STA 11+41 +/- -Y-.

STEP 4: SEE PHASE I OVERVIEW 2 ON TCP-14

-L-

COMPLETE CONSTRUCTION OF TEMPORARY DRIVEWAY -DR1TEMP- ALONG WEST SIDE OF US 52 -L- FROM STA 10+68 +/- TO STA 16+13 +/-, CLOSE EXISTING DRIVEWAY AND REDIRECT TRAFFIC TO NEW DRIVEWAY. [SEE TCP-16]

BEGIN CONSTRUCTION OF US 52 SB DETOUR ROAD FROM STA 51+50 +/- TO STA 58+00 +/- -SBDET-. [SEE TCP-16] CONTINUE CONSTRUCTION US 52 SB DETOUR ROAD FROM STA 30+00 +/- TO STA 51+50 +/- -SBDET- AND FROM STA 58+00 +/- TO STA 63+66 +/- -SBDET- BEGUN IN PHASE I, STEP 1.

-Y2- AND -Y3-

REOPEN SIDEWALK (TEMPORARY AND PERMANENT) ON SOUTH SIDE OF 28TH ST -Y2- TO PEDESTRIANS BETWEEN -Y- AND LIBERTY ST -Y3-.

USING RSD NO. 1101.02, SHEETS 3 & 4 OF 9, PERFORM THE FOLLOWING WORK ON -Y2- AS SHOWN ON TCP-17:

- REMOVE SEGMENT OF EXISTING RAISED MEDIAN ON -Y2- BETWEEN STA 17+10+/- AND STA 17+20+/- AND PAVE AREA WHERE MEDIAN WAS REMOVED FLUSH WITH EXISTING PAVEMENT [SEE ROADWAY PLANS].
- INSTALL PEDESTRIAN CROSSWALK ON EAST LEG OF 28TH ST -Y2- AT PIEDMONT CIRCLE.
- CONSTRUCT NEW WHEELCHAIR RAMP ON NORTH SIDE OF 28TH ST -Y2- AT PIEDMONT CIRCLE. [SEE ROADWAY PLANS]

STEP 4 CONTINUES ON NEXT SHEET, TCP-4A

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APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PROJECT PHASING
PHASE I

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE tc_tcp04_05.dgn

23-APR-2009 14:19
G:\TEC\Curr\00006004 U2826A\TCP\U2826a_tc_TCP04_05.dgn
2054 AT RALSKTMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP- 4A

PHASING

Phase I (cont.)

STEP 4: (CONT.)

-Y2- AND -Y3- (CONT.)

USING RSD NO. 1101.02, SHEETS 1 THRU 4 OF 9 AND FLAGGERS AND/OR POLICE OFFICERS AT THE -Y2-/-Y3- INTERSECTION:

- REVISE STOP BAR AND INSTALL CROSSWALK MARKINGS ON BOTH THE NORTH AND SOUTH LEGS OF LIBERTY ST -Y3- AT THE -Y2-/-Y3- INTERSECTION AS SHOWN ON TCP-15.
- CLOSE AND REMOVE THE EXISTING PEDESTRIAN CROSSWALK ON THE NORTH LEG OF LIBERTY ST -Y3- AT THE -Y2-/-Y3- INTERSECTION AS SHOWN ON TCP-15.

TEMPORARILY CLOSE SIDEWALK ON NORTH SIDE OF 28TH ST -Y2- AND DETOUR PEDESTRIANS TO THE SIDEWALK ON THE SOUTH SIDE BETWEEN -Y-/26TH ST -Y1- AND LIBERTY ST -Y3-. CLOSE THE EXISTING PEDESTRIAN CROSSWALK ON EAST LEG OF 28TH ST -Y2- AT THE -Y2-/-Y3- INTERSECTION. [SEE TCP-15 AND TCP-17]

ONCE PEDESTRIANS HAVE BEEN DETOURED, CLOSE THE RIGHT LANE OF WB 28TH ST -Y2- BETWEEN 26TH ST -Y1- AND LIBERTY ST -Y3- AND PERFORM THE FOLLOWING WORK:

- CONSTRUCT WIDENING ON NORTH SIDE OF -Y2- FROM STA 14+17+/- TO THE -Y2-/-Y3- INTERSECTION, INCLUDING THE NE RADIUS OF THE -Y2-/-Y3- INTERSECTION, UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE AS SHOWN ON TCP-15.
- REMOVE THE W.F.B. PLACED IN PREVIOUS STEP ALONG THE NORTH SIDE OF 28TH ST -Y2- BETWEEN 26TH ST -Y1- AND STA 18+88+/- -Y2-.
- CONSTRUCT CURB & GUTTER AND SIDEWALK ON NORTH SIDE OF 28TH ST -Y2- FROM 26TH ST -Y1- TO STA 18+92 +/- -Y2- AS SHOWN ON TCP-17.

BEGIN REVISING EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF 28TH ST -Y2- AND LIBERTY ST -Y3- IN CONJUNCTION WITH CONSTRUCTION IN NE INTERSECTION RADIUS. [SEE SIGNAL PLANS]

WHILE MAINTAINING PEDESTRIANS ON TEMPORARY ASPHALT SIDEWALK CONSTRUCTED IN PHASE I, STEP 1, CONSTRUCT SIDEWALK ON EAST SIDE OF LIBERTY ST -Y3- FROM STA 12+40+/- TO STA 14+13+/- -Y3- AS SHOWN ON TCP-15. CONSTRUCT CURB & GUTTER EAST OF (BEHIND) THIS NEW SIDEWALK FROM NE CORNER OF -Y2-/-Y3- INTERSECTION TO STA 14+13 +/- -Y3- BUT NOT THE CURB & GUTTER BETWEEN NEW SIDEWALK AT LIBERTY ST -Y3- (IN FRONT) AT THIS TIME.

-Y1-

INSTALL TEMPORARY CONSTRUCTION FENCE ALONG TOE OF PROPOSED FILL SLOPE (FILL LINE) ON NORTH SIDE OF 26TH ST -Y1- TO BLOCK PEDESTRIAN ACCESS TO -Y1- CONSTRUCTION AREA FROM PIEDMONT PARK HOUSING COMPLEX AS SHOWN ON TCP-17.

USING RSD NO. 1101.02, SHEET 1 OF 9, CONSTRUCT 26TH ST -Y1- AS MUCH AS POSSIBLE UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE WITHOUT ENCROACHING ON EXISTING -Y1- TRAVEL WAY. [SEE TCP-17]

BEGIN CONSTRUCTION OF NEW TRAFFIC SIGNAL AT THE INTERSECTION OF -Y-/26TH ST -Y1- AND 28TH ST -Y2-. [SEE SIGNAL PLANS]

STEP 5: SEE PHASE I OVERVIEW 3 ON TCP-18

-Y2-

REOPEN SIDEWALK ON NORTH SIDE OF 28TH ST -Y2- TO PEDESTRIANS BETWEEN 26TH ST -Y1- AND LIBERTY ST -Y3-.

USING RSD NO. 1101.02, SHEETS 3 & 4 OF 9, REVISE PAVEMENT MARKINGS ON NB 28TH ST -Y2- APPROACHING LIBERTY ST -Y3- TO PROPOSED FINAL PATTERN USING TEMPORARY MARKINGS AS SHOWN ON TCP-19.

-Y3-

CLOSE THE EXISTING SIDEWALK SEGMENT AND ROUTE PEDESTRIANS ONTO NEWLY COMPLETED SIDEWALK SEGMENT ON EAST SIDE OF LIBERTY ST -Y3- BETWEEN STA 12+40 +/- AND STA 14+13 +/- -Y3-. [SEE TCP-19]

USING RSD NO. 1101.02, SHEETS 2 THRU 4 OF 9, CONSTRUCT PROPOSED CURB & GUTTER AND PAVEMENT WIDENING UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE ON EAST SIDE OF LIBERTY ST -Y3- FROM 28TH ST -Y2- TO STA 14+13 +/- -Y3- AS SHOWN ON TCP-19.

USING RSD NO. 1101.02, SHEET 3 OF 9, AND DETAILS SHOWN ON TCP-20, TEMPORARILY DETOUR PEDESTRIANS AND RECONSTRUCT MONOLITHIC ISLAND IN THE NW CORNER FOR THE -Y2-/-Y3- INTERSECTION. DISCONTINUE PEDESTRIAN DETOUR AND OPEN NEW ISLAND TO PEDESTRIAN TRAFFIC AS SOON AS POSSIBLE.

-Y1-

USING RSD NO. 1101.02, SHEET 1 OF 9, PERFORM THE FOLLOWING WORK SHOWN ON TCP-21:

- CONSTRUCT TIE-IN OF PROPOSED 26TH ST -Y1- TO EXISTING -Y1- AND COMPLETE -Y1- UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE. PLACE TEMPORARY PAVEMENT MARKINGS IN PROPOSED FINAL PATTERN ON 26TH ST -Y1- AND SHIFT TRAFFIC TO RELOCATED -Y1-.
- COMPLETE CONSTRUCTION OF CURB & GUTTER AND SIDEWALK IN SE CORNER OF THE -Y1-/-Y2- INTERSECTION.
- CONSTRUCT MONOLITIC MEDIAN ON SOUTH LEG OF -Y2- (N. CLEVELAND AVE) AT THE -Y1-/-Y2 INTERSECTION.

TEMPORARILY CLOSE LEFT LANE OF 28TH ST -Y2- DEPARTING THE -Y-/-Y1- INTERSECTION WITH DRUMS SPACED 20 FT C-C AND MAINTAIN 10-FT MINIMUM SB LANE ON 28TH ST -Y2- APPROACHING -Y-/-Y1- INTERSECTION. USING FLAGGERS, REMOVE THE EXISTING NOSE AND CONSTRUCT NEW APPROACH NOSE AT END OF EXISTING RAISED MEDIAN ON THE NORTHWEST LEG OF 28TH ST -Y2- AT THE -Y1-/-Y2 INTERSECTION. [SEE TCP-21]

COMPLETE INSTALLATION OF AND ACTIVATE NEW TRAFFIC SIGNAL AT THE -Y-/-Y1-/-Y2- INTERSECTION. [SEE SIGNAL PLANS]

STEP 6: SEE PHASE I OVERVIEW 3 ON TCP-18

-L-

USING RSD NO. 1101.02, SHEETS 3, 6, & 7 OF 9 TO TEMPORARILY CLOSE RIGHT LANE OF US 52 NB, PERFORM THE FOLLOWING WORK:

- REVISE EXISTING GUIDE SIGNS AND INSTALL TEMPORARY GUIDE SIGNS ON US 52 NB AND OFF-RAMP -Y-. PERMANENTLY CLOSE OFF-RAMP FROM US 52 NB TO LIBERTY ST -Y3-. [SEE TCP-18, TCP-19 & TCP-21]
- INSTALL TEMPORARY EDGE LINE FROM STA 30+00 +/- -L- TO STA 34+00 +/- -L- AND INSTALL MERGE ARROWS ON ACCELERATION LANE FOR ON-RAMP. [SEE TCP-19]
- INSTALL PORTABLE CONCRETE BARRIER (P.C.B.) WITH CRASH CUSHION FROM STA 30+54 +/- TO STA 33+00 +/- -L-. [SEE SECTION F-F ON TCP-19]

ONCE OFF-RAMP TO -Y3- IS CLOSED AND P.C.B. IS INSTALLED, REMOVE EXISTING GUARDRAIL AND CONSTRUCT PROPOSED DRAINAGE BEHIND P.C.B. ALONG EAST SIDE OF US 52 NB AS SHOWN ON TCP-19.

COMPLETE CONSTRUCTION OF THE FOLLOWING BEGUN IN PHASE I, STEP 1:

- US 52 SB DETOUR ROAD -SBDET- AND TEMPORARY BRIDGE.
- BORING AND JACKING OF DRAINAGE CROSS PIPES BENEATH US 52 -L-
- FULL-DEPTH RECONSTRUCTION OF EXISTING OUTSIDE PAVED SHOULDERS AND TEMPORARY OUTSIDE WIDENING ON US 52 SB AS FOLLOWS:
  - STA 29+57 +/- -L- TO STA 33+30 +/- -L- [SEE TCP-7]
  - STA 59+70 +/- -L- TO STA 66+89 +/- -L- [SEE TCP-10]

INSTALL P.C.B., DRUMS, SIGNS, AND TEMPORARY PAVEMENT MARKINGS ON US 52 SB DETOUR ROAD -SBDET- AS MUCH AS POSSIBLE AWAY FROM TRAFFIC TO PREPARE FOR UPCOMING US 52 SB TRAFFIC SHIFT TO DETOUR IN PHASE II. [SEE TCP-22 & TCP-26 THRU TCP-29]

-Y- & -Y2-

REMOVE SIDEWALK CLOSURE BARRICADES AND PEDESTRIAN DETOUR SIGNING INSTALLED IN PHASE I, STEP 4. REROUTE PEDESTRIANS TO THE NORTH SIDE OF N. CLEVELAND AVE -Y2- IN THE FINAL PATTERN BETWEEN 25TH ST AND 26TH ST -Y1-.

CLOSE THE TEMPORARY ASPHALT SIDEWALK ON THE SOUTH SIDE OF -Y2- BY INSTALLING TYPE III BARRICADES WITH "SIDEWALK CLOSED" SIGNS ATTACHED ACROSS SIDEWALK JUST EAST OF MIDBLOCK CROSSWALK AT PIEDMONT CIRCLE AND SOUTH OF -Y-. [SEE TCP-12 FOR LOCATION OF TEMPORARY SIDEWALK TO BE REMOVED ONLY]

USING RSD NO. 1101.02, SHEETS 1 THRU 4 OF 9, REMOVE THE TEMPORARY ASPHALT SIDEWALK ON THE SOUTH SIDE OF -Y2- AND THE CORRESPONDING TEMPORARY CROSSWALKS ACROSS -Y-. REMOVE EXISTING SIDEWALK ON WEST SIDE OF N. CLEVELAND AVE (-Y2-) AS SHOWN IN THE ROADWAY PLANS. USE FLAGGERS AND DRUMS/CONES TO MAINTAIN A MINIMUM 10-FT RIGHT TURN LANE FROM -Y2- TO -Y- WHILE PLACING THE YIELD MARKINGS AT THE END OF THE LANE SHOWN ON TCP-21 ON HALF THE LANE AT A TIME.

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APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PROJECT PHASING
PHASE I (cont.)

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

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

REVISIONS

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12094 AT RALSGKWCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-5

PHASING

Phase II

OBJECTIVE: SHIFT US 52 TRAFFIC TO NB AND SB ON-SITE DETOUR ROADWAYS (-NBDET- AND -SBDET-) AND CONSTRUCT US 52 NB BRIDGE AND US 52 NB CONCRETE PAVEMENT. CONSTRUCT PAVEMENT AS MUCH POSSIBLE WITHOUT REDUCING LANES ON US 52. REDUCE US 52 NB TO SINGLE LANE (WITH 18-FT CLEAR WIDTH FOR WIDE LOADS) WHILE CONSTRUCTING CONCRETE PAVEMENT TIE-INS AT NORTH AND SOUTH PROJECT LIMITS. SHIFT NB TRAFFIC ONTO NEWLY CONSTRUCTED NB CONCRETE PAVEMENT AND NEW NB BRIDGE.

SEE PHASE II OVERVIEW 1 ON TCP-22 FOR STEPS 1 THRU 3
SEE PHASE II OVERVIEW 2 ON TCP-25 FOR STEP 4
SEE PHASE II OVERVIEW 3 ON TCP-30 FOR STEPS 5 & 6.
SEE PHASE II OVERVIEW 4 ON TCP-37 FOR STEPS 7 & 8.

THE CONTRACTOR SHALL COMPLETE PHASE II, STEP 1 WITHIN A SINGLE OVERNIGHT WORK PERIOD.

STEP 1: SEE PHASE II OVERVIEW 1 ON TCP-22

USING RSD NO. 1101.02, SHEETS 3 & 9 OF 9:

- REVISE PAVEMENT MARKINGS ON US 52 SB WHERE THE SB LANES OF THE DETOUR ROAD TIE INTO THE EXISTING SB LANES AS SHOWN ON TCP-26 (SOUTH END) AND TCP-29 (NORTH END).
- COMPLETE INSTALLATION OF P.C.B., SIGNS, AND DRUMS ALONG US 52 SB DETOUR -SBDET-. [SEE TCP-23, TCP-24, TCP-26 THRU TCP-29]
- RELOCATE EXISTING GUIDE SIGNS, AND ROUTE MARKERS FROM EXISTING US 52 SB TO US 52 SB DETOUR AS SHOWN ON TCP-22.
- INSTALL BARRICADES AND DRUMS TO CLOSE EXISTING US 52 SB LANES AND SHIFT US 52 SB TRAFFIC ONTO TO SB DETOUR ROAD -SBDET-. [SEE TCP-23, TCP-24, TCP-26 THRU TCP-29]

STEP 2: USING RSD NO. 1101.02, SHEET 3 OF 9, TO TEMPORARILY CLOSE LEFT LANE ON US 52 NB, PERFORM THE FOLLOWING WORK SHOWN ON TCP-23 & TCP-24:

- REMOVE EXISTING PRECAST CONCRETE MEDIAN BARRIER FROM STA 30+79+/- -L- TO STA 35+63+/- -L- AND FROM STA 57+81+/- -L- TO STA 67+16+/- -L- . INSTALL TRUCK-MOUNTED IMPACT ATTENUATORS (TMIA) IN FRONT OF ENDS OF REMAINING MEDIAN BARRIER THAT ARE EXPOSED TO APPROACHING NB TRAFFIC IMMEDIATELY UPON REMOVAL OF MEDIAN BARRIER AND PRIOR TO REOPENING ADJACENT LANE OF NORTHBOUND TRAFFIC. PLACE DRUMS SPACED 20 FT C-C ALONG LEFT SHOULDER OF US 52 NB WHERE MEDIAN BARRIER HAS BEEN REMOVED.

- RECONSTRUCT MEDIAN PAVEMENT (FULL DEPTH) TO PREPARE MEDIAN CROSSOVERS FOR US 52 NB DETOUR -NBDET- AS FOLLOWS (SEE TCP-23 & TCP-24):

  - FROM STA 30+79 +/- -L- TO STA 31+80 +/- -L- : EAST HALF ONLY
  - FROM STA 31+80 +/- -L- TO STA 34+50 +/- -L- : FULL WIDTH
  - FROM STA 34+50 +/- -L- TO STA 35+63 +/- -L- : WEST HALF ONLY
  - FROM STA 57+81 +/- -L- TO STA 59+60 +/- -L- : WEST HALF ONLY
  - FROM STA 59+60 +/- -L- TO STA 64+25 +/- -L- : FULL WIDTH
  - FROM STA 64+25 +/- -L- TO STA 65+89 +/- -L- : EAST HALF ONLY

INSTALL P.C.B., DRUMS, SIGNS, AND TEMPORARY PAVEMENT MARKINGS ON FORMER US 52 SB PAVEMENT AS MUCH AS POSSIBLE AWAY FROM TRAFFIC TO PREPARE FOR UPCOMING US 52 NB TRAFFIC SHIFT TO NB DETOUR ROAD -NBDET-. [SEE TCP-26 THRU TCP-29].

NOTE: AS REQUIRED AND/OR AS DIRECTED BY THE ENGINEER, RELAP EXISTING MEDIAN GUARDRAIL FOR US 52 NB (-L-) TO ALLOW FOR NB TRAFFIC TO UTILIZE FORMER US 52 SB LANES AS DETOUR ROUTE. [SEE CONSTRUCTION PLANS, TCP-27 AND NOTE LN-1]

THE CONTRACTOR SHALL COMPLETE PHASE II, STEP 3 WITHIN A SINGLE OVERNIGHT WORK PERIOD.

STEP 3: USING RSD NO. 1101.02, SHEETS 3, 6 & 9 OF 9, PERFORM THE FOLLOWING WORK TO SHIFT US 52 NB TRAFFIC ONTO US 52 NB DETOUR -NBDET- IN FORMER US 52 SB LANES AS SHOWN ON TCP-26 THRU TCP-29:

- WEDGE AND OVERLAY TIE-INS BETWEEN EXISTING US 52 NB -L- LANES AND US 52 NB DETOUR -NBDET- LANES. [SEE TCP-26 & TCP-29].
- REVISE PAVEMENT MARKINGS ON US 52 NB WHERE THE NB LANES OF THE DETOUR ROAD TIE INTO THE EXISTING NB LANES AS SHOWN ON TCP-26 (SOUTH END) AND TCP-29 (NORTH END).
- COMPLETE INSTALLATION OF P.C.B., SIGNS, AND DRUMS ALONG US 52 NB DETOUR -NBDET-.
- INSTALL BARRICADES TO CLOSE EXISTING US 52 NB LANES AND SHIFT US 52 NB TRAFFIC ONTO TO NB DETOUR ROAD -NBDET-. [SEE TCP-26 THRU TCP-29]
- RELOCATE AND REVISE EXISTING AND INSTALL TEMPORARY GUIDE SIGNS AS SHOWN ON TCP-25.

STEP 4: SEE PHASE II OVERVIEW 2 TCP-25

USING RSD 1101.02, SHEET 3 OF 9 TO TEMPORARILY CLOSE LEFT LANE OF US 52 NB, INSTALL TEMPORARY SHORING BEHIND P.C.B. ALONG EAST SIDE OF US 52 NB SHOWN ON TCP-27, TCP-27A & TCP-28 AS FOLLOWS:

- STA 35+63 +/- -L- TO STA 39+00 +/- -L- : ROADWAY SHORING
- STA 39+00 +/- -L- TO STA 40+00 +/- -L- : BRIDGE SHORING
- STA 43+25 +/- -L- TO STA 44+25 +/- -L- : BRIDGE SHORING
- STA 44+25 +/- -L- TO STA 57+90 +/- -L- : ROADWAY SHORING

[SEE SECTIONS K-K & L-L ON TCP-27 AND SECTION M-M ON TCP-28]

ONCE CONSTRUCTION OF PROPOSED NB BRIDGE END BENTS HAS BEEN COMPLETED, COMPLETE INSTALLATION OF ROADWAY SHORING FROM STA 39+00 +/- -L- TO STA 39+70 +/- -L- AND FROM STA 43+75 +/- -L- TO STA 44+25 +/- -L- USING RSD NO. 1101.02, SHEET 3 OF 9.

CONSTRUCT PROPOSED US 52 NB LANES BEHIND P.C.B. AS FOLLOWS:

- STA 34+21 +/- TO STA 35+63 +/- -L-: CENTER & RIGHT LANES PLUS OUTSIDE SHOULDER (27.67 FT). [SEE TCP-27 & SECTION J-J]
- STA 35+63 +/- TO NB BRIDGE. ALL 3 LANES PLUS OUTSIDE
- SHOULDER (39.67 FT). [SEE TCP-27 & SECTION K-K]
- NB BRIDGE TO STA 57+80 +/- -L-: BOTH LANES PLUS OUTSIDE SHOULDER (34.67 FT). (WIDTH VARIES FROM NB BRIDGE TO STA 49+60 +/-; 34.67 FT FROM STA 49+60 +/- TO STA 57+80 +/-) [SEE TCP-27 & TCP-28 AND SECTION M-M ON TCP-28]
- STA 57+80 +/- TO STA 60+00+/- -L-: RIGHT LANE AND OUTSIDE SHOULDER ONLY (22.67 FT). [SEE TCP-28 & TCP-29 AND SECTION N-N ON TCP-28]

USING RSD NO. 1101.03, SHEETS 8 & 9 OF 9 TO TEMPORARILY STOP TRAFFIC ON LIBERTY ST -Y3- DURING OVERNIGHT PERIODS, DEMOLISH EXISTING NB BRIDGE OVER LIBERTY ST -Y3- AND ERECT GIRDERS FOR NEW US 52 NB BRIDGE OVER LIBERTY ST -Y3- (SEE NOTE LN-3).

INSTALL AND COVER OFF-SITE US 52 NORTH ALTERNATE ROUTE SIGNING AS SHOWN ON TCP-62.

ONE WEEK PRIOR BEGINNING PHASE II, STEP 5, INSTALL AND ACTIVATE OFFSITE CHANGEABLE MESSAGE SIGNS (C.M.S.) AND HAVE DIVISION 9 PERSONNEL ACTIVATE PERMANENT OVERHEAD DYNAMIC MESSAGE SIGNS (D.M.S.) TO DISPLAY MESSAGES AS SHOWN ON TCP-62 TO ADVISE MOTORISTS OF UPCOMING LANE REDUCTION ON US 52 NORTH.

THE CONTRACTOR SHALL COMPLETE PHASE II, STEPS 5 THRU 9 WITHIN 60 CALENDAR DAYS.

STEP 5: SEE PHASE II OVERVIEW 3 ON TCP-30

UNCOVER US 52 NORTH ALTERNATE ROUTE SIGNING INSTALLED IN PREVIOUS STEP. REVISE MESSAGES ON OFF-SITE CHANGEABLE MESSAGE SIGNS (C.M.S.) AND HAVE DIVISION 9 PERSONNEL REVISE MESSAGES ON PERMANENT OVERHEAD DYNAMIC MESSAGE SIGNS (D.M.S.) TO WARN MOTORISTS OF ONE-LANE US 52 NB AND INFORM THEM OF ALTERNATE ROUTE. [SEE TCP-62 FOR ALTERNATE ROUTE SIGNING.]

INSTALL DETOUR SIGNING, PLACE BARRICADES AND CLOSE -Y- ON-RAMP TO US 52 NB AS SHOWN ON TCP-36. -Y- ON RAMP TO REMAIN CLOSED WHILE US 52 NB IS IN SINGLE LANE PATTERN TO CONSTRUCT CONCRETE TIE-INS.

USING RSD NO. 1101.02, SHEET 3 OF 9 AND TCP-31 TO TEMPORARILY CLOSE LEFT LANE OF US 52 NB:

- RESET P.C.B. AND ASSOCIATED CRASH CUSHION ALONG LEFT SIDE OF US 52 NB AT SOUTH TIE-IN AS SHOWN ON SHEETS TCP-32 AND TCP-33. [SEE SECTION P-P ON TCP-32]
- INSTALL TEMPORARY YELLOW EDGE LINE AT SOUTH TIE-IN AS SHOWN ON SHEET TCP-32.
- INSTALL TEMPORARY WHITE EDGE LINE FROM STA 28+00 +/- -L- TO STA 35+62 +/- AT SOUTH TIE-IN [SEE TCP-32 & TCP-33] AND FROM STA 57+80 +/- TO STA 66+50 /- -L- AT NORTH TIE-IN. [SEE TCP-34 & TCP-35]

USING RSD NO. 1101.02, SHEET 3 OF 9 ALONG WITH TCP-31 & TCP-32 TO SHIFT TRAFFIC INTO LEFT LANE OF US 52 NB THROUGH THE WORK AREA AS SHOWN ON TCP-32 THRU TCP-35:

- COMPLETE INSTALLATION OF TEMPORARY WHITE EDGE LINE AT SOUTH TIE-IN FROM STA 22+15 +/- -L- TO STA 28+00 +/- -L-. [SEE TCP-32]
- RESET AND EXTEND P.C.B AND ASSOCIATED CRASH CUSHION ALONG RIGHT SIDE OF US 52 NB FROM STA 27+06 +/- -L- TO STA 35+63 +/- -L- AT SOUTH END AND FROM STA 56+35 +/- -L-TO STA 64+02 +/- -L-AT NORTH END AS SHOWN ON TCP-32 THRU TCP-35.

STEP 6: CONSTRUCT US 52 NB CONCRETE PAVEMENT BEHIND P.C.B. AT SOUTH AND NORTH TIE-INS AS FOLLOWS:

- STA 28+95 +/- TO STA 34+21+/-: HALF OF MIDDLE LANE, RIGHT LANE AND OUTSIDE SHOULDER. (21.67 FT) [SEE TCP 32 & TCP-33 AND SECTION P-P ON TCP-32]
- STA 34+21 +/- TO STA 35+63 +/-: LEFT LANE ONLY. (12 FT) [SEE TCP-33]
- STA 57+80 +/- TO STA 60+00 +/-: LEFT LANE ONLY. (12 FT) [SEE TCP-34 & TCP-35]
- STA 60+00 +/- TO STA 60+53 +/-: BOTH LANES PLUS OUTSIDE SHOULDER. (34.67 FT) [SEE TCP-35]
- STA 60+53 +/- TO STA 64+02 +/-: RIGHT LANE AND OUTSIDE SHOULDER. (22.67 FT) [SEE TCP-35]

TO PREPARE FOR UPCOMING SHIFT OF NB TRAFFIC TO NEW NB PAVEMENT, PLACE TEMPORARY PAVEMENT MARKINGS, DRUMS AND P.C.B. ON NEW US 52 NB LANES AS MUCH AS POSSIBLE BEHIND P.C.B. FROM STA 29+00 +/- -L- TO STA 64+02 +/- -L- [SEE TCP-38 THRU TCP-41]

PHASE II CONTINUES ON NEXT SHEET

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APPROVED: DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PROJECT PHASING
PHASE II

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

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

REVISIONS

CADD FILE tc_tcp04_05.dgn

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12054 AT RALSGRTMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-5A

PHASING

Phase II (cont.)

STEP 7: SEE PHASE II OVERVIEW 4 ON TCP-37

USE RSD 1101.02, SHEETS 3 & 9 OF 9 TO SHIFT SINGLE LANE OF US 52 NB TRAFFIC ONTO NEWLY COMPLETED US 52 NB PAVEMENT AS FOLLOWS [SEE TCP-38 THRU TCP-41]:

- REMOVE CONFLICTING P.C.B. BETWEEN STA 27+06 +/- AND STA 28+60 +/- -L- AND RELOCATE CRASH CUSHION ON APPROACH END OF NEW LINE OF P.C.B. LINE AT STA 28+60 +/- -L-.
- REVISE WHITE EDGE LINE AT SOUTH AND NORTH TIE-INS (STA 21+84 +/- TO STA 29+00 +/- -L- AND STA 64+02 +/- -L- TO STA 67+38 +/- -L-)
- REPOSITION DRUMS AND SHIFT TRAFFIC ONTO NEW NB RIGHT LANE
- REVISE YELLOW EDGE LINE AT SOUTH AND NORTH TIE-INS (STA 23+14+/- -L- TO STA 29+00 +/- -L- AND STA 64+02 +/- -L- TO STA 69+05 +/- -L-).

STEP 8: BEHIND P.C.B., CONSTRUCT REMAINING CONCRETE PAVEMENT ON LEFT SIDE OF US 52 NB AT PROJECT TIE-INS AS FOLLOWS:

- STA 29+09 +/- TO STA 34+21+/-: 2ND HALF OF MIDDLE LANE PLUS LEFT LANE. (18 FT) [SEE SECTION R-R AND TCP-38 & TCP-39]
- STA 60+53 +/- TO STA 64+02 +/-: LEFT LANE ONLY. (12 FT) [SEE SECTION U-U AND TCP-41]

SUBJECT TO THE APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY BEGIN THE FOLLOWING CONSTRUCTION OF PROPOSED US 52 SB BEHIND P.C.B. AS SHOWN ON TCP-43 THRU TCP-46 (NOTE: THIS IS NOT PART OF THE 60-CALENDAR-DAY INTERMEDITATE CONTRACT TIME):

- REMOVAL OF EXISTING US 52 SB PAVEMENT AND EARTHWORK FOR PROPOSED US 52 SB LANES.
- DEMOLITION OF EXISTING US 52 SB BRIDGE. WHEN WORKING DIRECTLY OVER -Y3-, TEMPORARILY STOP TRAFFIC DURING OVERNIGHT PERIODS USING RSD. 1101.03, SHEETS 8 & 9 OF 9 [SEE LN-3]. WHEN REMOVING EXISTING BRIDGE GIRDERS, THE CONTRACTOR MAY USE ROLLING ROADBLOCK ON US 52 DURING OVERNIGHT PERIODS PER RSD 1101.02, SHEET 9 OF 9.

STEP 9: USING RSD NO. 1101.02, SHEETS 3 & 9 OF 9, RESET P.C.B. AND CRASH CUSHIONS, REVISE PAVEMENT MARKINGS, REPOSITION DRUMS AND OPEN US 52 NB LANES TO PHASE III TEMPORARY PATTERN AS SHOWN ON TCP-43 THRU TCP-46.

REOPEN ON-RAMP FROM -Y- TO US 52 NB.

COVER OFFSITE SIGNING AND DEACTIVATE C.M.S. AND D.M.S. FOR US 52 NORTH ALTERNATE ROUTE.

Phase III

OBJECTIVE: CONSTRUCT US 52 SB BRIDGE AND US 52 SB CONCRETE PAVEMENT. CONSTRUCT PAVEMENT AS POSSIBLE WITHOUT REDUCING LANES ON US 52. REDUCE US 52 SB TO SINGLE LANE (WITH 18-FT CLEAR WIDTH FOR WIDE LOADS) WHILE CONSTRUCTING CONCRETE PAVEMENT TIE-INS AT NORTH AND SOUTH PROJECT LIMITS. SHIFT SB TRAFFIC ONTO NEWLY CONSTRUCTED SB CONCRETE PAVEMENT AND NEW SB BRIDGE. INSTALL FOUNDATIONS FOR ALL CANTILEVER OVERHEAD SIGN STRUCTURES. ERECT PROPOSED OVERHEAD SIGN STRUCTURE ON US 52 SB ONLY.

SEE PHASE III OVERVIEW 1 ON TCP-42 FOR STEP 1
SEE PHASE III OVERVIEW 2 ON TCP-47 FOR STEPS 2 & 3

STEP 1: SEE PHASE III OVERVIEW 1 ON TCP-42

COMPLETE DEMOLITION OF EXISTING SB BRIDGE AND CONSTRUCT NEW US 52 SB BRIDGE OVER -Y3-. WHEN WORKING DIRECTLY OVER LIBERTY ST -Y3-, TEMPORARILY STOP TRAFFIC ON LIBERTY ST -Y3- DURING OVERNIGHT PERIODS USING RSD NO. 1101.03, SHEETS 8 & 9 OF 9. [SEE NOTE LN-3] WHEN REMOVING EXISTING BRIDGE GIRDERS AND ERECTING NEW BRIDGE GIRDERS, THE CONTRACTOR MAY USE ROLLING ROADBLOCK ON US 52 DURING OVERNIGHT PERIODS PER RSD NO. 1101.02, SHEET 9 OF 9.

WORKING BEHIND P.C.B., COMPLETE REMOVAL OF EXISTING US 52 SB PAVEMENT AND COMPLETE EARTHWORK AS MUCH AS POSSIBLE. CONSTRUCT PROPOSED CONCRETE PAVEMENT FOR US 52 SB LANES AS FOLLOWS:

- STA 32+25 +/- TO STA 33+20 +/-: LEFT LANE ONLY. (12 FT) [SEE TCP-43]
- STA 33+20 +/- TO SB BRIDGE: TWO LEFT LANES ONLY (24 FT) [SEE SECTION V-V ON TCP-43 AND TCP-43 & TCP-44]
- SB BRIDGE TO STA 58+00 +/-: ALL LANES PLUS OUTSIDE SHOULDER. (VARIES 46.67 FT TO 34.67 FT [SEE SECTION W-W AND TCP-44 & TCP-45]
- STA 58+00 +/- TO STA 61+21+/-: LEFT LANE ONLY. (12 FT) [SEE TCP-45 & TCP-46]

WORKING BEHIND P.C.B., COMPLETE DRAINAGE CONSTRUCTION IN MEDIAN AND CONSTRUCT PROPOSED 14-FT ASPHALT MEDIAN ALONG WITH CONCRETE MEDIAN BARRIER FROM STA 32+25 +/- -L- TO STA 61+21+/- -L-. [SEE TCP-43 THRU TCP-46]

USING RSD NO. 1101.02, SHEETS 3 & 7 OF 9 DURING OVERNIGHT PERIODS, CONSTRUCT THE FOUNDATIONS FOR THE PROPOSED OVERHEAD CANTILEVER SIGN STRUCTURES ON US 52 NB AND US 52 SB APPROACHING EXIT 111.
[SEE SIGNING PLANS AND TCP-42 & TCP-43]

INSTALL AND COVER OFF-SITE US 52 SOUTH ALTERNATE ROUTE SIGNING AS SHOWN ON TCP-62.

ONE WEEK PRIOR TO BEGINNING PHASE III, STEP 2, INSTALL AND ACTIVATE OFFSITE CHANGEABLE MESSAGE SIGNS (C.M.S.) AND HAVE DIVISION 9 PERSONNEL ACTIVATE PERMANENT OVERHEAD DYNAMIC MESSAGE SIGNS (D.M.S.) TO DISPLAY MESSAGES AS SHOWN ON TCP-62 TO ADVISE MOTORISTS OF UPCOMING LANE REDUCTION ON US 52 SOUTH.

THE CONTRACTOR SHALL COMPLETE PHASE III, STEPS 2 THRU 6 WITHIN 60 CALENDAR DAYS.

STEP 2: SEE PHASE III OVERVIEW 2 ON TCP-47

UNCOVER US 52 SOUTH ALTERNATE ROUTE SIGNING INSTALLED IN PREVIOUS STEP. REVISE MESSAGES ON OFF-SITE CHANGEABLE MESSAGE SIGNS (C.M.S.) AND HAVE DIVISION 9 PERSONNEL REVISE MESSAGES ON PERMANENT OVERHEAD DYNAMIC MESSAGE SIGNS (D.M.S.) TO WARN MOTORISTS OF ONE-LANE US 52 SB AND INFORM THEM OF ALTERNATE ROUTE. SEE TCP-62 FOR ALTERNATE ROUTE SIGNING

TEMPORARILY CLOSE EXIT RAMP FROM US 52 SB TO LIBERTY ST -Y3- AND DETOUR TRAFFIC TO LIBERTY ST VIA EXIT 110C TO THE SOUTH AS SHOWN ON TCP-47 & TCP-48.

USING RSD NO. 1101.02, SHEET 3 OF 9 AND TCP-51 TO TEMPORARILY CLOSE LEFT LANE OF US 52 SB AND SHIFT TRAFFIC INTO RIGHT LANE:

- INSTALL TEMPORARY YELLOW EDGE LINE AT NORTH AND SOUTH TIE-INS AS SHOWN ON SHEETS TCP-48 AND TCP-50.

STEP 2 CONTINUES NEXT COLUMN

STEP 2 (CONT.)

- RESET P.C.B AND ASSOCIATED CRASH CUSHION ALONG LEFT SIDE OF US 52 SBDET AT NORTH TIE-IN FROM STA 58+20 +/- -L- TO STA 65+70 +/- -L- AS SHOWN ON TCP-50. [SEE SECTION AA-AA ON TCP-50]
- RESET P.C.B. AND ASSOCIATED CRASH CUSHION ALONG LEFT SIDE OF US 52 SBDET AT SOUTH TIE-IN FROM STA 29+40 +/- -L- TO STA 38+54 +/- -SBDET- AS SHOWN ON SHEETS TCP-48 & TCP-49 [SEE SECTION Y-Y ON TCP-48 AND SECTION Z-Z ON TCP-49]

STEP 3: WORKING BEHIND P.C.B. AND AWAY FROM TRAFFIC, CONSTRUCT US 52 SB CONCRETE PAVEMENT AT TIE-INS AS FOLLOWS:

- STA 29+34 +/- TO STA 32+25+/-: LEFT LANE PLUS HALF OF MIDDLE LANE. (18 FT) [SEE SECTION Y-Y AND TCP-48]
- STA 32+25 +/- TO STA 33+20 +/-: LEFT HALF OF MIDDLE LANE. (6 FT) [SEE TCP-48]
- STA 33+20 +/- TO SB BRIDGE: RIGHT LANE AND OUTSIDE SHOULDER (15.67 FT) PLUS SHOULDER BERM GUTTER AND GUARDRAIL. [SEE SECTION Z-Z AND TCP-48 & TCP-49]
- STA 58+00 +/- TO STA 59+36 +/-: RIGHT LANE AND OUTSIDE SHOULDER (22.67 FT) PLUS SHOULDER BERM GUTTER AND GUARDRAIL. [SEE TCP-50]
- STA 59+36 +/- TO STA 61+21 +/-: RIGHT LANE (12 FT) [SEE TCP-50]
- STA 61+21 +/- TO STA 64+02 +/-: LEFT LANE PLUS HALF OF RIGHT LANE (18 FT) [SEE TCP-50 AND SECTION AA-AA]

WORKING BEHIND P.C.B., COMPLETE DRAINAGE CONSTRUCTION IN MEDIAN AND CONSTRUCT PROPOSED 14-FT ASPHALT MEDIAN ALONG WITH CONCRETE MEDIAN BARRIER FROM STA 29+43 +/- -L- TO STA 32+25+/- -L- AND FROM STA 61+21+/- -L- TO STA 64+02 +/- -L-. CONSTRUCT CONCRETE MEDIAN BARRIER ONLY FROM STA 64+02 +/- -L- TO STA 67+15 +/- -L-.
[SEE TCP-48 & TCP-50]

TO PREPARE FOR UPCOMING SHIFT OF US 52 SB TRAFFIC TO NEW SB PAVEMENT, PLACE TEMPORARY PAVEMENT MARKINGS, DRUMS AND P.C.B. ON NEW US 52 SB LANES AND INSTALL PERMANENT GROUND-MOUNTED SIGNING AS MUCH AS POSSIBLE BEHIND P.C.B. FROM STA 29+00 +/- -L- TO STA 65+70 +/- -L- [SEE TCP-52 THRU TCP-56 FOR INITIAL PHASE IV TRAFFIC PATTERN, AND SEE SIGNING PLANS]

STEP 4: SEE PHASE III OVERVIEW 3 ON TCP-52

MAINTAIN EXISTING LEFT LANE CLOSURE ON US 52 SB APPROACHING NORTHERN PROJECT LIMITS AND SHIFT DRUMS BETWEEN STA 65+00 +/- -L- TO STA 69+60 +/- -L- TO REDIRECT SINGLE LANE OF US SB TRAFFIC ONTO NEWLY COMPLETED SB PAVEMENT AS SHOWN ON TCP-53 THRU TCP-56.

ONCE US 52 SB TRAFFIC HAS BEEN SHIFTED TO NEW PAVEMENT, REVISE PAVEMENT MARKINGS AND DRUMS ON US 52 SB FROM STA 26+08+/- -L- TO STA 29+40 +/- -L- AND FROM STA 65+00 +/- -L- TO STA 69+60 +/- -L- TO TEMPORARY PATTERN SHOWN ON TCP-53 AND TCP-55. RESET P.C.B. AND ASSOCIATED CRASH CUSHIONS FROM STA 29+40 +/- -L-TO STA 35+20 +/- -L- AND FROM STA 64+05 +/- -L- TO STA 65+70 +/- -L- AS SHOWN ON TCP-53 THRU TCP-55.
[SEE SECTION CC-CC ON TCP-53 AND SECTION DD-DD ON TCP-55]

REOPEN EXIT RAMP FROM US 52 SB TO LIBERTY ST -Y3- AS SHOWN ON TCP-53. COVER AND REMOVE DETOUR SIGNS ROUTING LIBERTY ST TRAFFIC TO EXIT 110C.

PHASE III CONTINUES ON NEXT SHEET

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APPROVED: J. Todd Brooks DATE: 4/24/09

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PROJECT PHASING PHASE II (cont.) & PHASE III

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

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

REVISIONS

CADD FILE tc_tcp04_05.dgn

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PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP- 5B

PHASING

Phase III (cont.)

STEP 5: WORKING BEHIND P.C.B., CONSTRUCT DRAINAGE ON WEST SIDE OF US 52 SB BETWEEN STA 30+50 +/- AND STA 32+00 +/- AS SHOWN ON TCP-53.

WORKING BEHIND P.C.B. AND AWAY FROM TRAFFIC, CONSTRUCT REMAINING US 52 SB CONCRETE PAVEMENT AT TIE-INS AS FOLLOWS:

- STA 29+40 +/- TO STA 33+20+/-: RIGHT LANE PLUS SECOND HALF OF MIDDLE LANE ALONG WITH OUTSIDE SHOULDER, SHOULDER BERM GUTTER AND GUARDRAIL (21.67 FT) [SEE TCP-53 AND SECTION CC-CC]
- STA 59+36 +/- TO STA 61+21 +/-: OUTSIDE SHOULDER (10.67 FT), SHOULDER BERM GUTTER AND GUARDRAIL. [SEE TCP-55]
- STA 61+21 +/- TO STA 64+02 +/-: REMAINING HALF OF RIGHT LANE PLUS OUTSIDE SHOULDER (16.67 FT), SHOULDER BERM GUTTER AND GUARDRAIL. [SEE TCP-55 AND SECTION DD-DD]

UPON COMPLETION OF THE US 52 SB CONCRETE PAVEMENT ABOVE, PLACE TEMPORARY MARKINGS IN PROPOSED FINAL PATTERN ON NEW US 52 SB PAVEMENT AS MUCH AS POSSIBLE BEHIND P.C.B. ERECT CANTILEVER OVERHEAD SIGN STRUCTURE AND SIGN FOR EXIT 111 AT STA 30+00 +/- -L- ON US 52 SB AWAY FROM TRAFFIC AS SHOWN ON TCP-53. [SEE PAVEMENT MARKING PLANS AND SIGNING PLANS]

SUBJECT TO THE APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY BEGIN REMOVAL OF THE FOLLOWING BEHIND P.C.B. AS SHOWN ON TCP-57 & TCP-58 (NOTE: THIS IS NOT PART OF THE 60-CALENDAR-DAY INTERMEDIATE CONTRACT TIME):

- EXISTING US 52 SB DETOUR PAVEMENT AND FILL EMBANKMENT.
- US 52 SB TEMPORARY BRIDGE ON -SBDET- OVER -Y3-. WHEN WORKING DIRECTLY OVER -Y3-, TEMPORARILY STOP TRAFFIC DURING OVERNIGHT PERIODS USING RSD NO. 1101.03, SHEETS 8 & 9 OF 9 [SEE NOTE LN-3].

STEP 6: REMOVE P.C.B. AND CRASH CUSHION ON US 52 SB FROM STA 29+40 +/- TO STA 35+20 +/- -L- AND FROM STA 59+36 +/- TO STA 65+70 +/- -L-. REPLACE P.C.B. WITH DRUMS SPACED 55 FT C-C (MAX.).

USING RSD NO. 1101.02, SHEETS 3, 6, 7 & 9:

- REVISE MARKINGS ON US 52 SB TO PROPOSED FINAL PATTERN USING PAINT BETWEEN STA 26+08 +/- -L- AND STA 29+40 +/- -L- AND REVISE SOUTHBOUND WHITE EDGE LINE ON US 52 SB TO PROPOSED FINAL PATTERN USING PAINT BETWEEN STA 64+02 +/- -L- AND STA 69+35 +/- -L-. [SEE PAVEMENT MARKING PLAN]

- SHIFT DRUMS FROM STA 65+00 +/- TO STA 69+60 +/- TO CHANNEL US 52 SB TRAFFIC INTO NEW OUTSIDE THROUGH LANE WHILE MAINTAINING CLOSURE OF LEFT THROUGH LANE. COMPLETE REVISION OF PAVEMENT MARKINGS TO PROPOSED FINAL PATTERN WITHIN CLOSED LEFT LANE.

IMMEDIATELY UPON COMPLETION OF ALL US 52 SB PAVEMENT MARKING REVISIONS, OPEN ALL US 52 SB LANES TO TRAFFIC.

COVER AND SUBSEQUENTLY REMOVE OFFSITE SIGNING FOR US 52 SOUTH ALTERNATE ROUTE. DEACTIVATE AND REMOVE C.M.S. FOR US 52 SOUTH ALTERNATE ROUTE. HAVE DIVISION PERSONNEL DEACTIVATE MESSAGES ON OVERHEAD DMS.

Phase IV

OBJECTIVE: REMOVE TEMPORARY BRIDGE AND SB DETOUR. COMPLETE CURB & GUTTER AND SIDEWALK CONSTRUCTION ALONG EAST SIDE OF -Y3-. PLACE FINAL LAYER ON -Y- LINES AND FINAL PAVEMENT MARKINGS ON ALL ROADS. ERECT CANTILEVER OVERHEAD SIGN STRUCTURES ON US 52 NB AND REMOVE EXISTING OVERHEAD SIGN STRUCTURES.

SEE PHASE IV OVERVIEW ON TCP-57 FOR STEPS 1 THRU 3

STEP 1:

-L-

BEGIN (OR CONTINUE IF BEGUN IN PHASE III, STEP 5) REMOVAL OF THE FOLLOWING AS SHOWN ON TCP-57 & TCP-58:

- EXISTING US 52 SB DETOUR PAVEMENT AND FILL EMBANKMENT
- US 52 SB TEMPORARY BRIDGE ON -SBDET- OVER -Y3- WHEN WORKING DIRECTLY OVER -Y3-, TEMPORARILY STOP TRAFFIC DURING OVERNIGHT PERIODS USING RSD NO. 1101.02, SHEETS 8 & 9 OF 9. [SEE NOTE LN-3]

USING RSD NO. 1101.02, SHEET 1 OF 9, BEGIN CONSTRUCTION OF PROPOSED PERMANENT DRIVEWAY -DR1- WHILE MAINTAINING TRAFFIC ON TEMPORARY DRIVEWAY -DR1TEMP-. [SEE TCP-57]

USING RSD NO. 1101.02, SHEETS 3 & 7 OF 9 DURING OVERNIGHT PERIODS, ERECT THE PROPOSED OVERHEAD CANTILEVER SIGN STRUCTURES AND THEIR SIGNS FOR EXIT 111 ON THE FOUNDATIONS CONSTRUCTED EARLIER IN PHASE III, STEP 1 (SEE TCP-42) ON US 52 NB. [SEE SIGNING PLANS AND TCP-57]

ONCE NEW OVERHEAD CANTILEVER SIGN STRUCTURES AND THEIR SIGNS HAVE BEEN INSTALLED, REMOVE EXISTING FULL-SPAN OVERHEAD SIGN STRUCTURE FOR EXIT 111 OVER US 52 NB LANES SOUTH OF 25TH ST DURING OVERNIGHT PERIODS, USING RSD NO. 1101.02, SHEET 9 OF 9 FOR REMOVAL OF THE HORIZONTAL SPAN AND RSD NO. 1101.02, SHEET 3 OF 9 FOR REMOVAL OF THE LEFT AND RIGHT UPRIGHTS.

BEGIN INSTALLATION OF REMAINING GROUND-MOUNTED GUIDE SIGNS AND REMOVAL OF EXISTING GROUND-MOUNTED GUIDES SIGNS USING RSD NO. 1101.02, SHEETS 3, 6 & 7 OF 9 AND RSD NO. 1101.04. [SEE SIGNING PLANS]

-Y3-

INSTALL TEMPORARY CONSTRUCTION FENCE ALONG BACK EDGE OF EXISTING SIDEWALK ON EAST SIDE OF LIBERTY ST -Y3- FROM STA 14+50 +/- TO STA 17+20 +/- AS SHOWN ON TCP-58. [SEE SECTION EE-EE ON TCP-58]

USING RSD 1101.02, SHEETS 1 & 4 OF 9, REVISE PAVEMENT MARKINGS ON LIBERTY ST -Y3- TO TEMPORARY TWO-LANE, TWO-WAY PATTERN AS SHOWN ON TCP-58 AND TCP-59. [SEE SECTION FF-FF ON TCP-58]

SHIFT AND EXTEND TEMPORARY PEDESTRIAN WALKWAY ALONG EAST SIDE OF LIBERTY ST -Y3- BY RESETTING AND EXTENDING W.F.B. AND P.C.B. AS SHOWN ON TCP-58. [SEE SECTION FF-FF ON TCP-58]

TEMPORARILY CLOSE SIDEWALK ON EAST SIDE OF -Y3- FROM STA 17+40 +/- -Y3- TO STA 26+50 +/- -Y3- (30TH STREET) AND DETOUR PEDESTRIANS ONTO TEMPORARY PEDESTRIAN WALKWAY AS SHOWN ON TCP-58. [SEE SECTION FF-FF ON TCP-58]

STEP 2: CONSTRUCT CURB & GUTTER AND SIDEWALK ON EAST SIDE OF LIBERTY ST -Y3- BEHIND EXISTING SIDEWALK FROM STA 14+50 +/- TO STA 17+20 +/- WHILE MAINTAINING PEDESTRIANS ON EXISTING SIDEWALK. AS SOON AS SIDEWALK IS COMPLETED, PLACE PEDESTRIANS ON NEW SIDEWALK, REMOVE OLD SIDEWALK AND CONSTRUCT PAVEMENT WIDENING FROM STA 14+50 +/- TO STA 17+20 +/- -Y3-. [SEE TCP-58 AND SECTION EE-EE]

WORKING BEHIND P.C.B. AND WHILE MAINTAINING PEDESTRIANS ON TEMPORARY WALKWAY, CONSTRUCT PROPOSED C&G AND SIDEWALK AND PAVEMENT WIDENING ALONG EAST SIDE OF LIBERTY ST -Y3- FROM STA 17+40 +/- TO STA 26+50 +/- (I.E., 30TH STREET). [SEE TCP-58 AND SECTION FF-FF ON TCP-58]

NOTE: WHEN TEMPORARY ENCROACHMENT ON PEDESTRIAN PATH IS UNAVOIDABLE, PROVIDE FLAGGERS TO TEMPORARILY STOP PEDESTRIANS UNTIL PATH IS CLEAR AND TO GUIDE PEDESTRIANS THRU THE WORK AREA.

STEP 3:

-Y3-

SHIFT PEDESTRIANS TO NEWLY CONSTRUCTED SIDEWALK ALONG EAST SIDE OF LIBERTY ST -Y3- FROM STA 17+40 +/- TO 30TH ST.

USING RSD NO. 1101.02, SHEET 1 OF 9, REMOVE P.C.B. AND W.F.B. AND REPLACE W.F.B. WITH DRUMS SPACE 20 FT C-C.

USING RSD NO. 1101.02, SHEETS 1 THRU 4 OF 9, PLACE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS ON ALL -Y- LINES. [SEE PAVEMENT MARKING PLAN]

-L-

COMPLETE ALL SIGNING WORK. [SEE SIGNING PLANS]

COMPLETE THE REMOVAL OF:
- US 52 SB DETOUR PAVEMENT AND EMBANKMENT.
- US 52 SB TEMPORARY BRIDGE.
- US 52 NB OFF-RAMP TO -Y3-

USING RSD NO. 1101.02, SHEET 1 OF 9:
- COMPLETE CONSTRUCTION OF -DR1-
- SHIFT TRAFFIC FROM -DR1TEMP- TO -DR1-
- REMOVE -DR1TEMP- WHILE MAINTAINING TRAFFIC ON -DR1-

USING RSD NO. 1101.02, SHEETS 3, 5, 6 & 7 OF 9, REMOVE P.C.B. AND ASSOCIATED CRASH CUSHIONS FROM US 52 NB LANES AND REPLACE P.C.B. WITH DRUMS SPACED 55 FT C-C (MAX).

USING RSD NO. 1101.02, SHEETS 3, 5, 6 & 7 OF 9, REMOVE CONFLICTING TEMPORARY PAINT MARKINGS AND PLACE FINAL PAVEMENT MARKINGS AND MARKERS ON US 52 -L-. [SEE PAVEMENT MARKING PLAN]

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APPROVED: DATE: 4/24/09

SEAL

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PROJECT PHASING
PHASE III (cont.) & PHASE IV

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

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

REVISIONS

CADD FILE tc_tcp04_05.dgn

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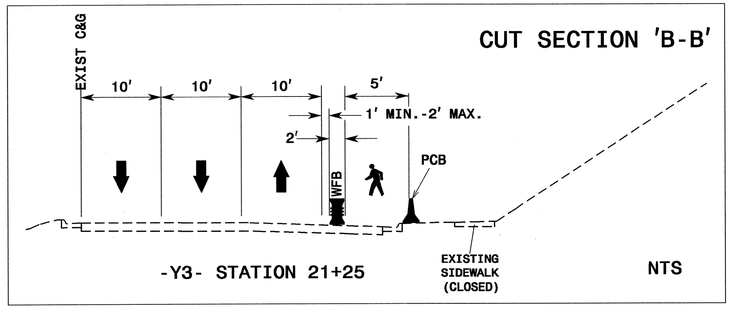
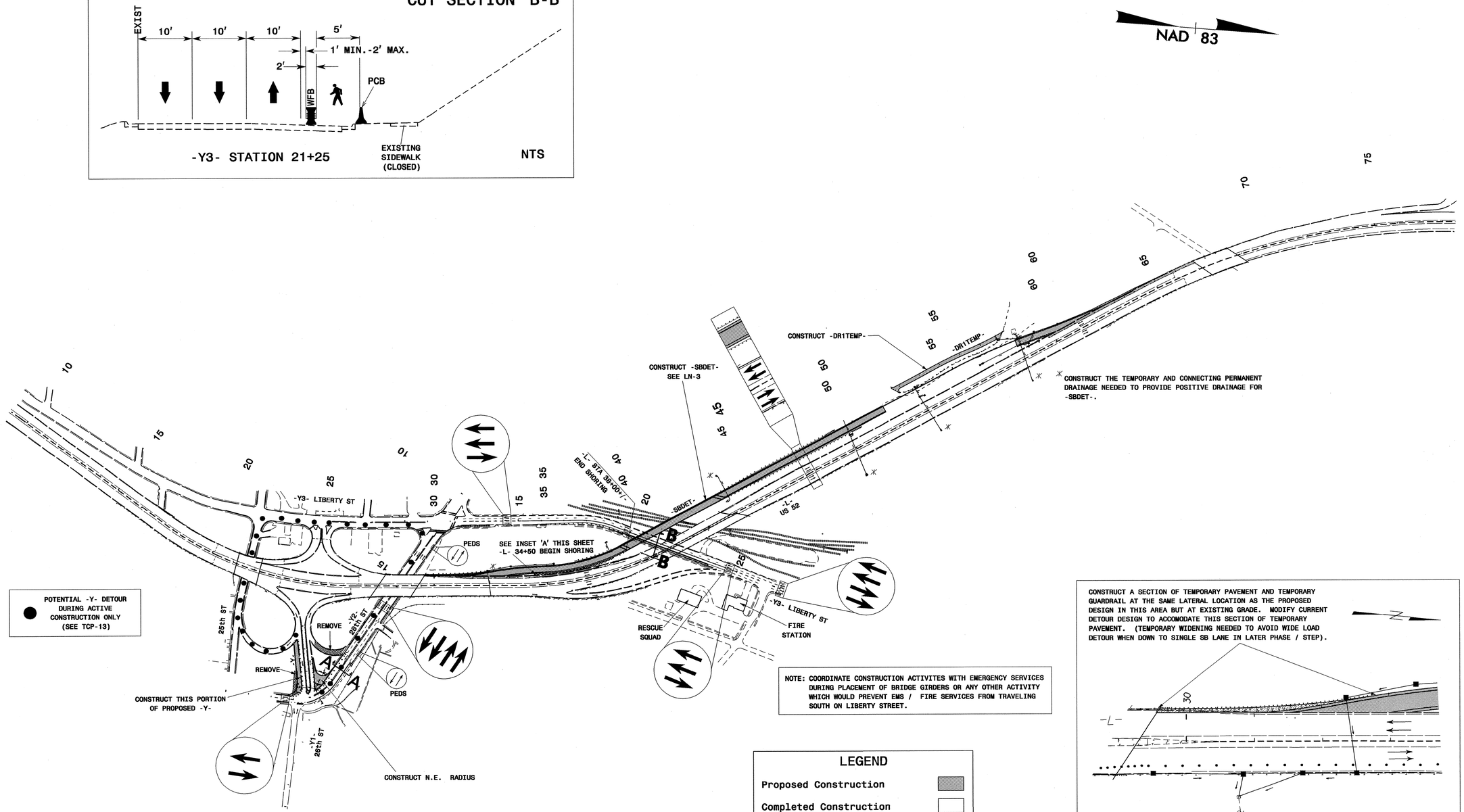
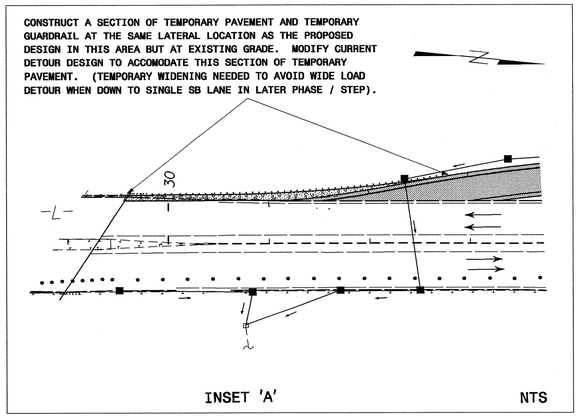
12.54 AT RALSGK1MCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-6



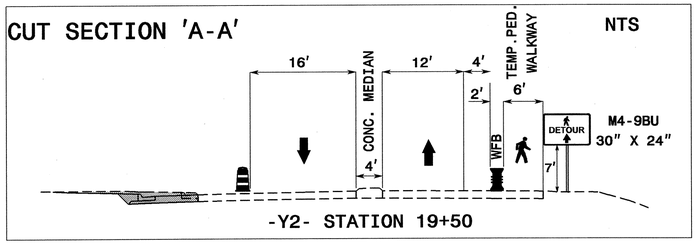


NOTE: COORDINATE CONSTRUCTION ACTIVITES WITH EMERGENCY SERVICES DURING PLACEMENT OF BRIDGE GIRDERS OR ANY OTHER ACTIVITY WHICH WOULD PREVENT EMS / FIRE SERVICES FROM TRAVELING SOUTH ON LIBERTY STREET.



INSET 'A'

NTS



LEGEND

- Proposed Construction
- Completed Construction
- Proposed Temporary Widening

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: [signature] DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE I OVERVIEW 1

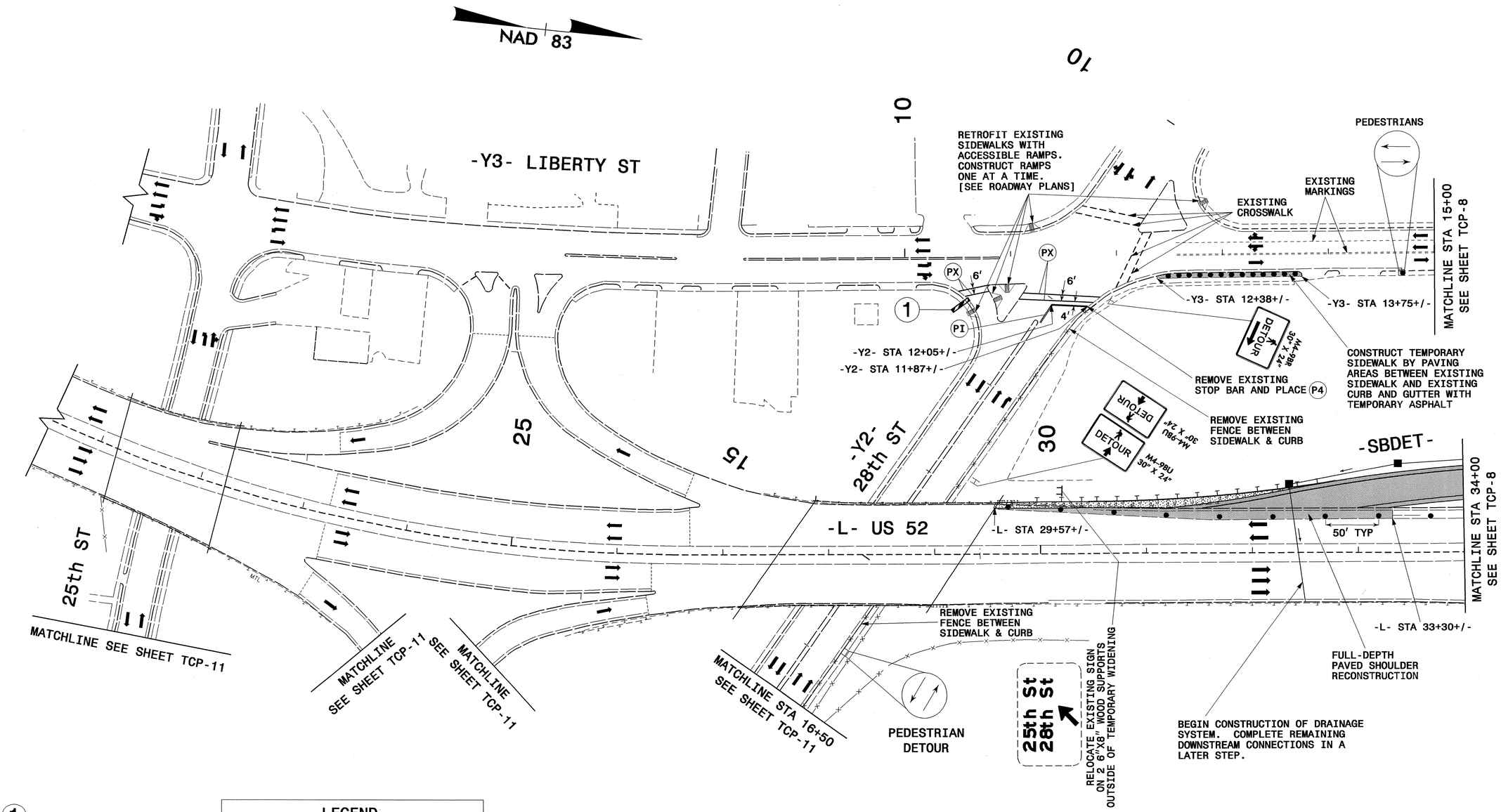
SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

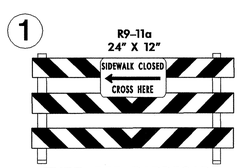
REVISIONS

CADD FILE

23-APR-2009 14:19
G:\TEG\Curr\100006004 U2826A\TCP\u2826a_tc_TCP06.dgn
12054 AT RAL5GKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-7





TYPE III BARRICADE

LEGEND

Proposed Construction	
Completed Construction	
Proposed Temporary Widening	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	• • •

PAVEMENT MARKING SCHEDULE

PX	WHITE CROSSWALK LINE	PAINT (8")
P4	WHITE STOP BAR	PAINT (24")
PI	YELLOW DOUBLE CENTER	PAINT (4")

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: [signature] DATE: 5/29/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE I DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE

07-MAY-2009 13:18
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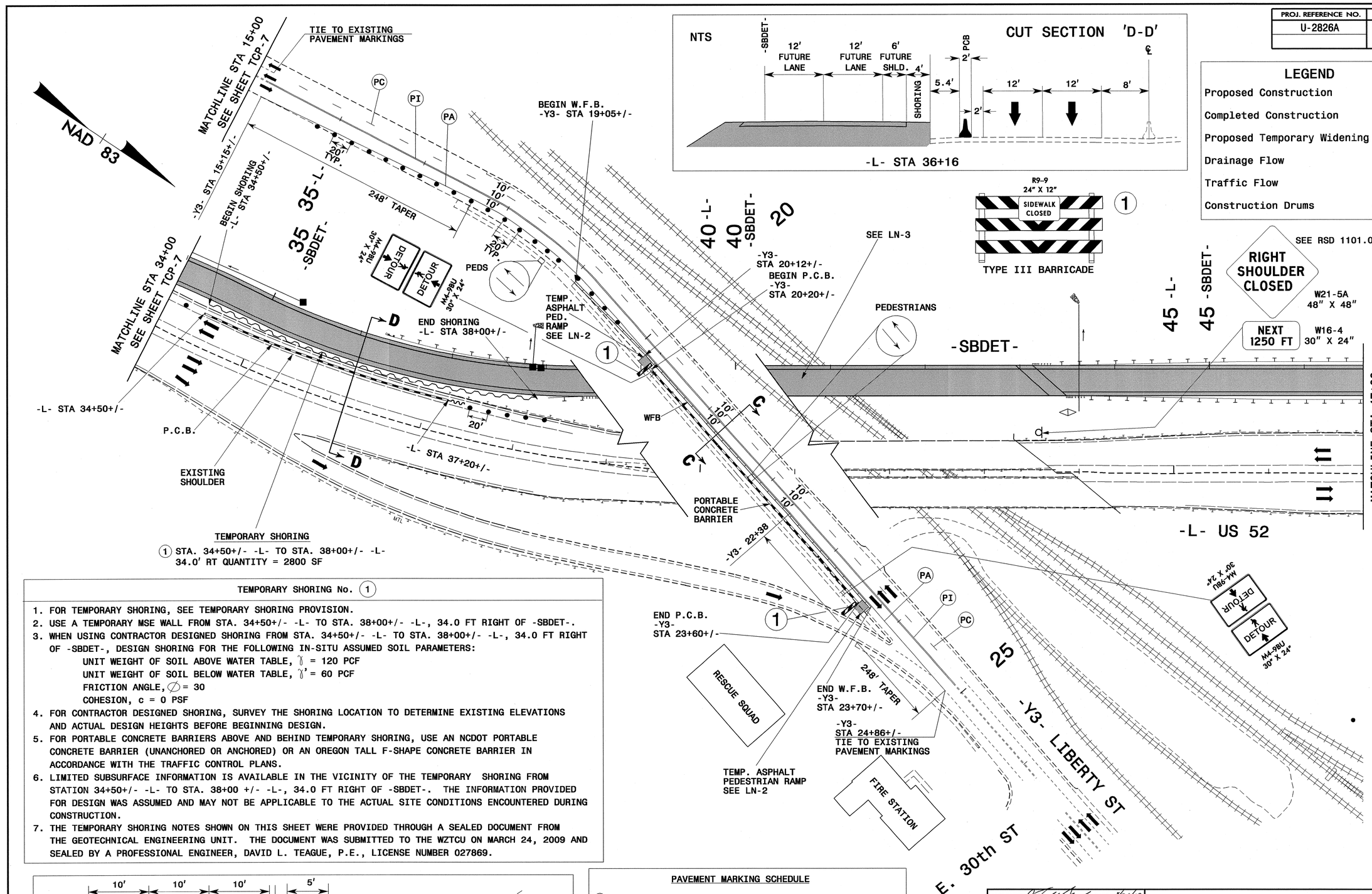
13833 AT RALBJVXRHI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-8



LEGEND

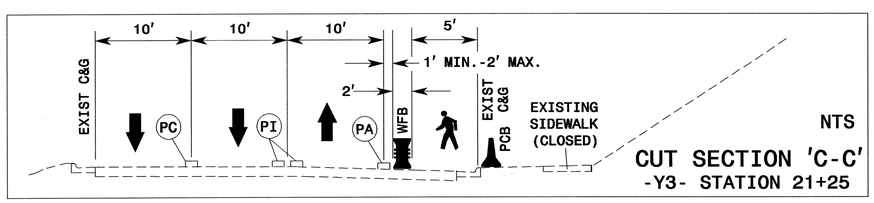
- Proposed Construction
- Completed Construction
- Proposed Temporary Widening
- Drainage Flow
- Traffic Flow
- Construction Drums

TEMPORARY SHORING

(1) STA. 34+50+/- -L- TO STA. 38+00+/- -L- 34.0' RT QUANTITY = 2800 SF

TEMPORARY SHORING No. (1)

1. FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.
2. USE A TEMPORARY MSE WALL FROM STA. 34+50+/- -L- TO STA. 38+00+/- -L-, 34.0 FT RIGHT OF -SBDET-.
3. WHEN USING CONTRACTOR DESIGNED SHORING FROM STA. 34+50+/- -L- TO STA. 38+00+/- -L-, 34.0 FT RIGHT OF -SBDET-, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
   - UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
   - UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
   - FRICTION ANGLE, $\varnothing$ = 30
   - COHESION, c = 0 PSF
4. FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.
5. 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.
6. LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 34+50+/- -L- TO STA. 38+00 +/- -L-, 34.0 FT RIGHT OF -SBDET-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.
7. THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON MARCH 24, 2009 AND SEALED BY A PROFESSIONAL ENGINEER, DAVID L. TEAGUE, P.E., LICENSE NUMBER 027869.



PAVEMENT MARKING SCHEDULE

(PA)	WHITE EDGELINE	PAINT (4")
(PC)	10 FT. WHITE SKIP	PAINT (4")
(PI)	YELLOW DOUBLE CENTER	PAINT (4")

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE I DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AWKE
DESIGN BY:	AWKE
REVIEWED BY:	TB

REVISIONS

CADD FILE

23-APR-2009 14:20
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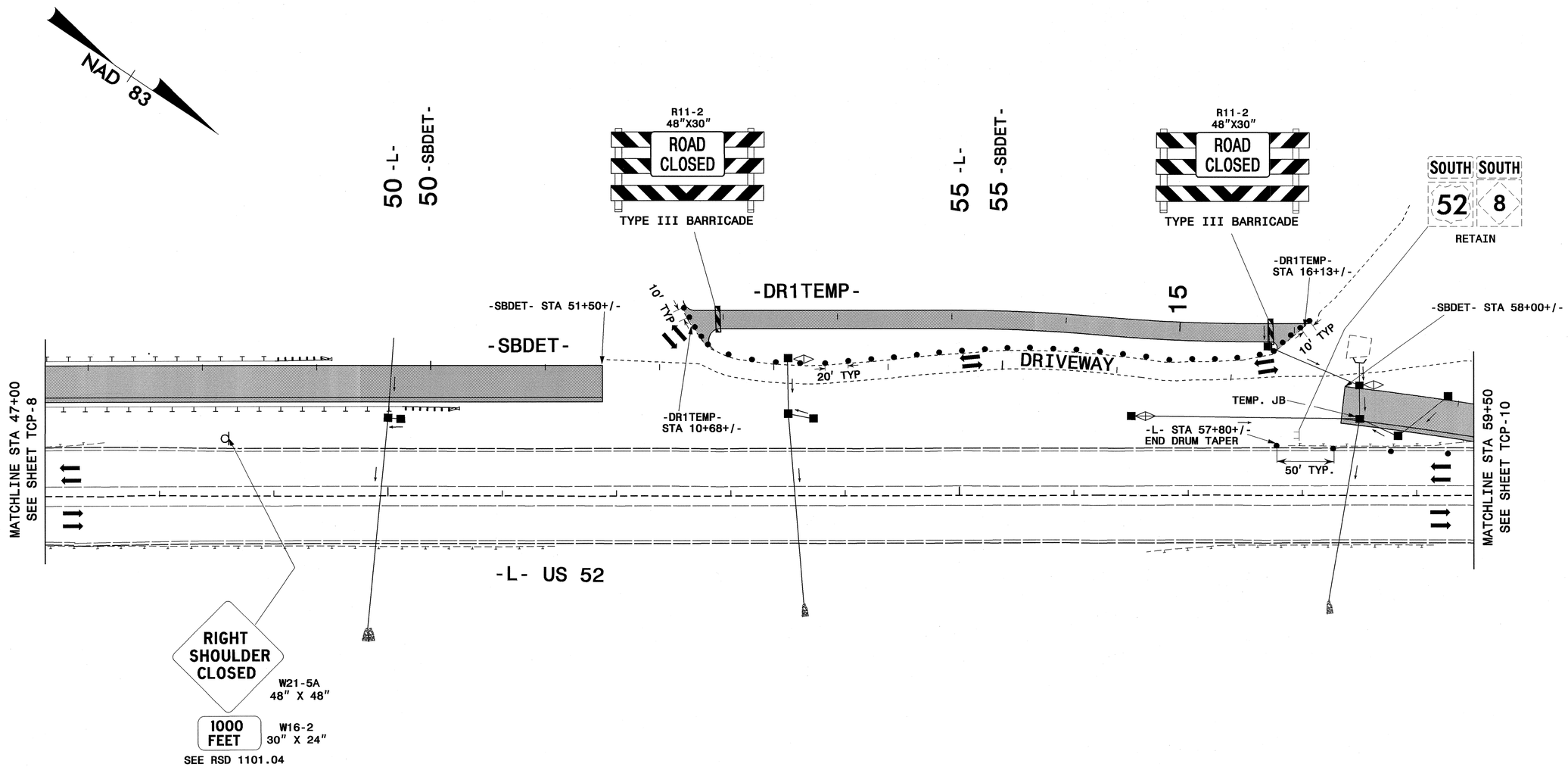
12.54 AT RALEIGHWCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-9



LEGEND

Proposed Construction	
Completed Construction	
Proposed Temporary Widening	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	● ● ●

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/23/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE I DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

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

REVISIONS

CADD FILE

23-APR-2009 14:20
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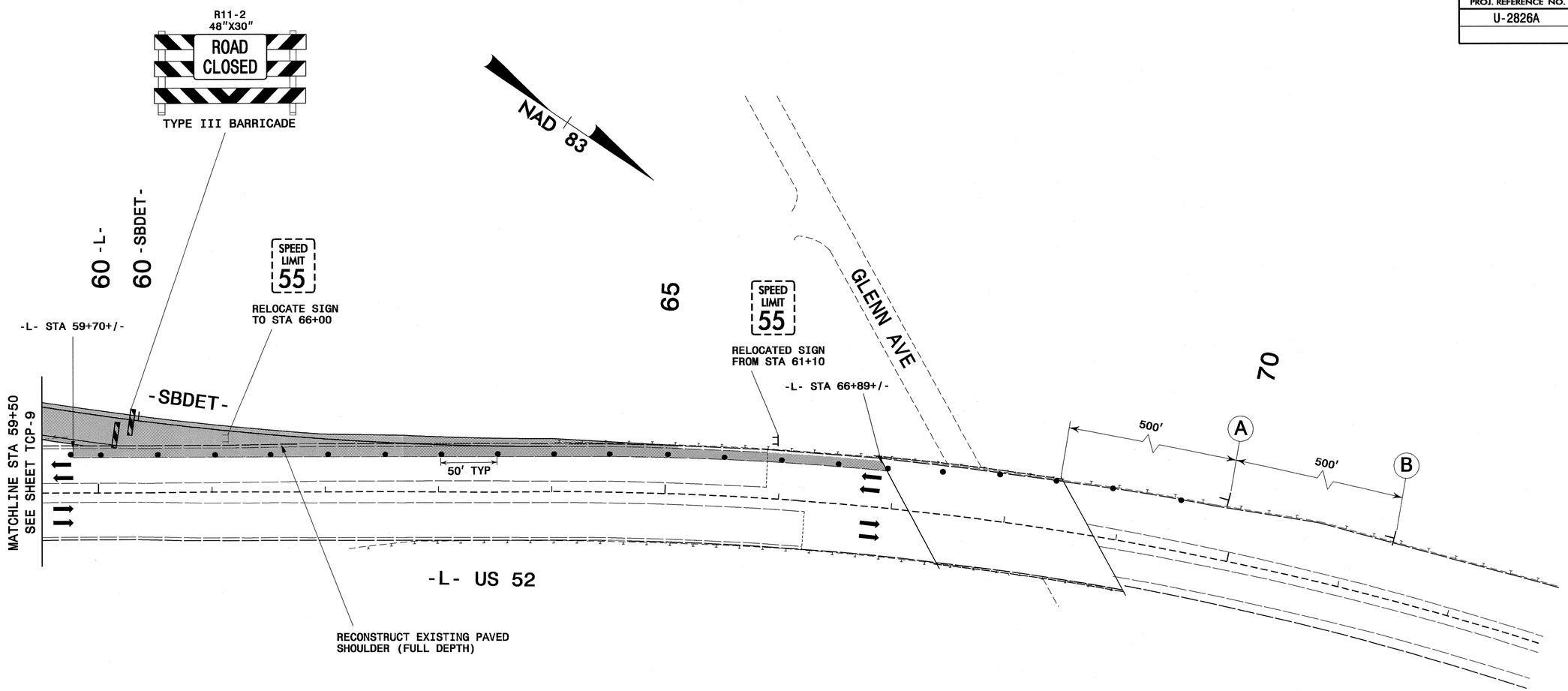
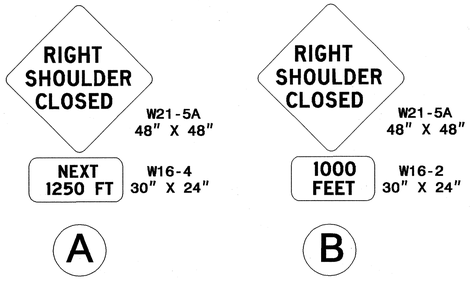
2094 AT RALSKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-10



LEGEND

- Proposed Construction
- Completed Construction
- Proposed Temporary Widening
- Drainage Flow
- Traffic Flow
- Construction Drums



SEE RSD 1101.04 FOR TEMPORARY SHOULDER CLOSURE

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE I DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

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

REVISIONS

CADD FILE

23-APR-2009 14:20
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12454 AT RALEGKYMCI

PROJ. REFERENCE NO.	SHEET NO.
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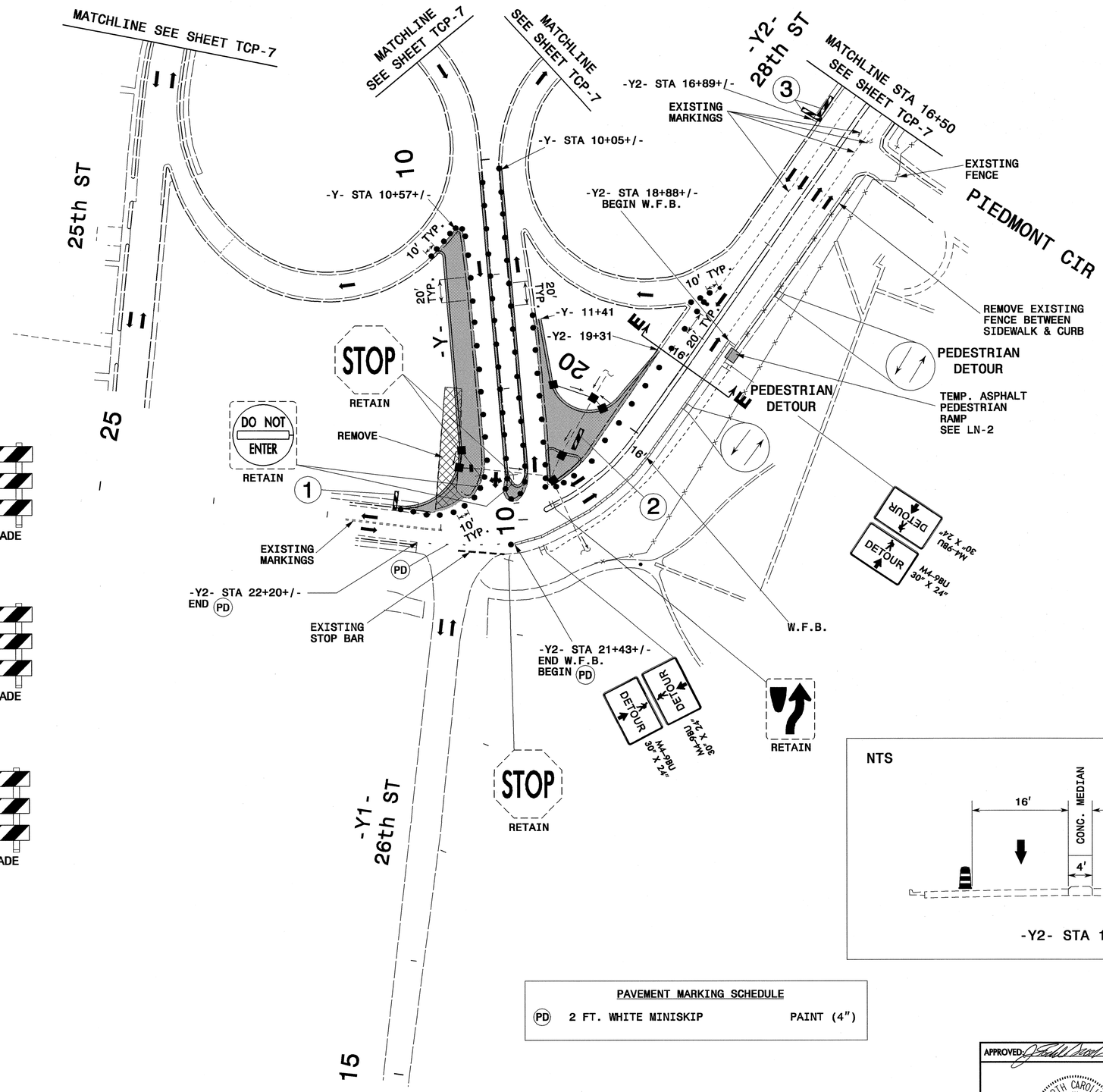

PAVEMENT MARKING SCHEDULE

PD	2 FT. WHITE MINISKIP	PAINT (4")

APPROVED: DATE: 4/23/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE I DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE

PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

23-APR-2009 14:21
G:\TEG\Curr\U00006004 U2826A\TCP\u2826a_tc_TCP11.dgn
12054 AT RALSGRMCI

PROJ. REFERENCE NO.	SHEET NO.
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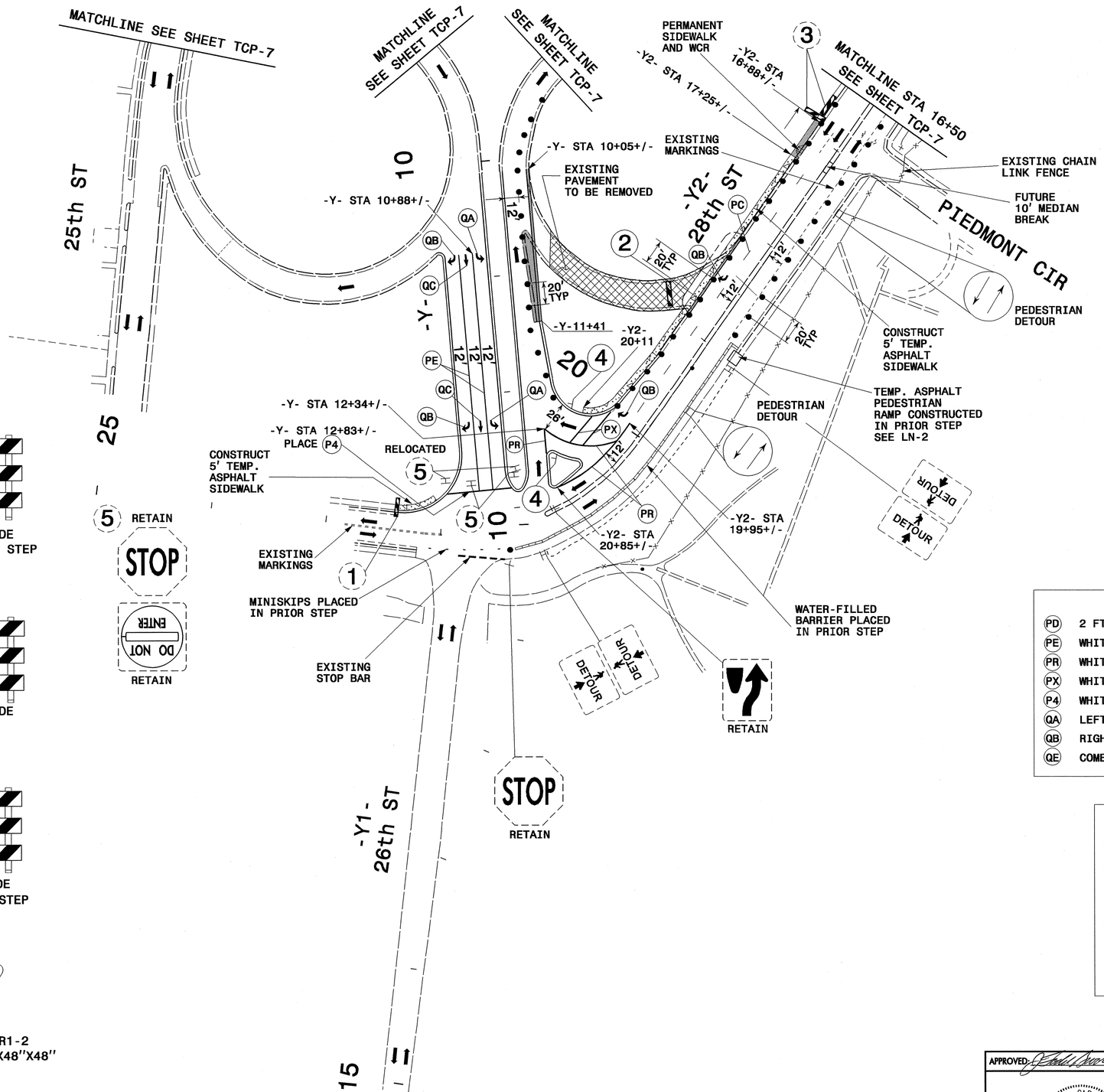
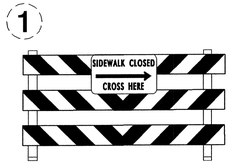




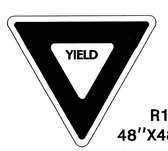
1 TYPE III BARRICADE PLACED IN PREVIOUS STEP

5 RETAIN

RETAIN

2 TYPE III BARRICADE

3 TYPE III BARRICADE PLACED IN PREVIOUS STEP



4 R1-2 48"X48"X48"

PAVEMENT MARKING SCHEDULE

PD	2 FT. WHITE MINISKIP	PAINT (4")
PE	WHITE SOLID LANE LINE	PAINT (4")
PR	WHITE GORE LINE	PAINT (8")
PX	WHITE CROSSWALK LINE	PAINT (8")
P4	WHITE STOP BAR	PAINT (24")
QA	LEFT TURN ARROW MARKING SYMBOLS	PAINT
QB	RIGHT TURN ARROW MARKING SYMBOLS	PAINT
QE	COMBO. STRAIGHT/RIGHT MARKING SYMBOLS	PAINT

LEGEND

- Proposed Construction
- Completed Construction
- Proposed Temporary Widening
- Drainage Flow
- Traffic Flow
- Construction Drums

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

PHASE I DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE

PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

23-APR-2009 14:21
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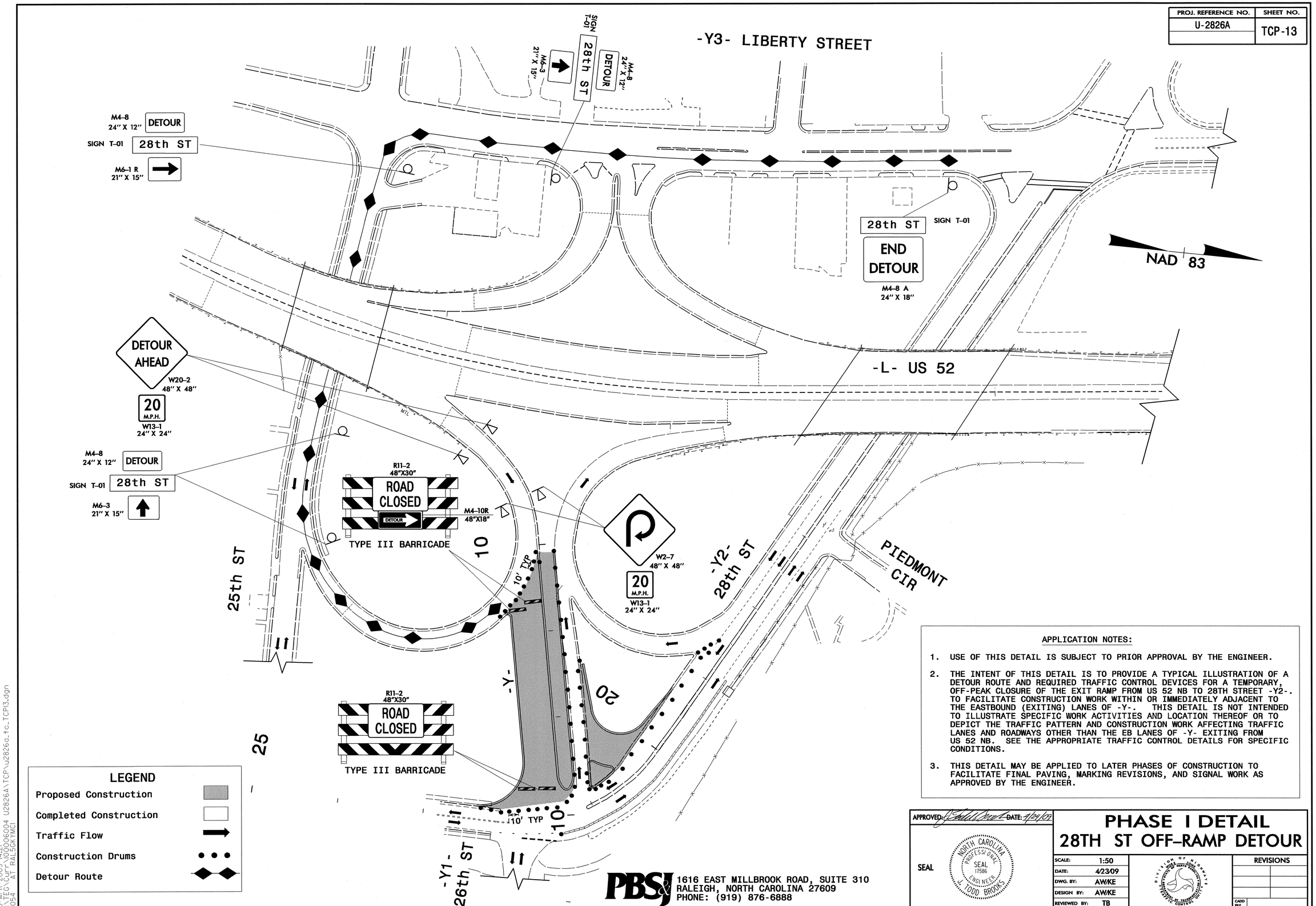
02054 AT RALSGK\MGI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-13



LEGEND

- Proposed Construction
- Completed Construction
- Traffic Flow
- Construction Drums
- Detour Route

APPLICATION NOTES:

1. USE OF THIS DETAIL IS SUBJECT TO PRIOR APPROVAL BY THE ENGINEER.
2. THE INTENT OF THIS DETAIL IS TO PROVIDE A TYPICAL ILLUSTRATION OF A DETOUR ROUTE AND REQUIRED TRAFFIC CONTROL DEVICES FOR A TEMPORARY, OFF-PEAK CLOSURE OF THE EXIT RAMP FROM US 52 NB TO 28TH STREET -Y2-. TO FACILITATE CONSTRUCTION WORK WITHIN OR IMMEDIATELY ADJACENT TO THE EASTBOUND (EXITING) LANES OF -Y-. THIS DETAIL IS NOT INTENDED TO ILLUSTRATE SPECIFIC WORK ACTIVITIES AND LOCATION THEREOF OR TO DEPICT THE TRAFFIC PATTERN AND CONSTRUCTION WORK AFFECTING TRAFFIC LANES AND ROADWAYS OTHER THAN THE EB LANES OF -Y- EXITING FROM US 52 NB. SEE THE APPROPRIATE TRAFFIC CONTROL DETAILS FOR SPECIFIC CONDITIONS.
3. THIS DETAIL MAY BE APPLIED TO LATER PHASES OF CONSTRUCTION TO FACILITATE FINAL PAVING, MARKING REVISIONS, AND SIGNAL WORK AS APPROVED BY THE ENGINEER.

APPROVED: DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE I DETAIL
28TH ST OFF-RAMP DETOUR

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS · TRAFFIC ENGINEERING · TRAFFIC CONTROL

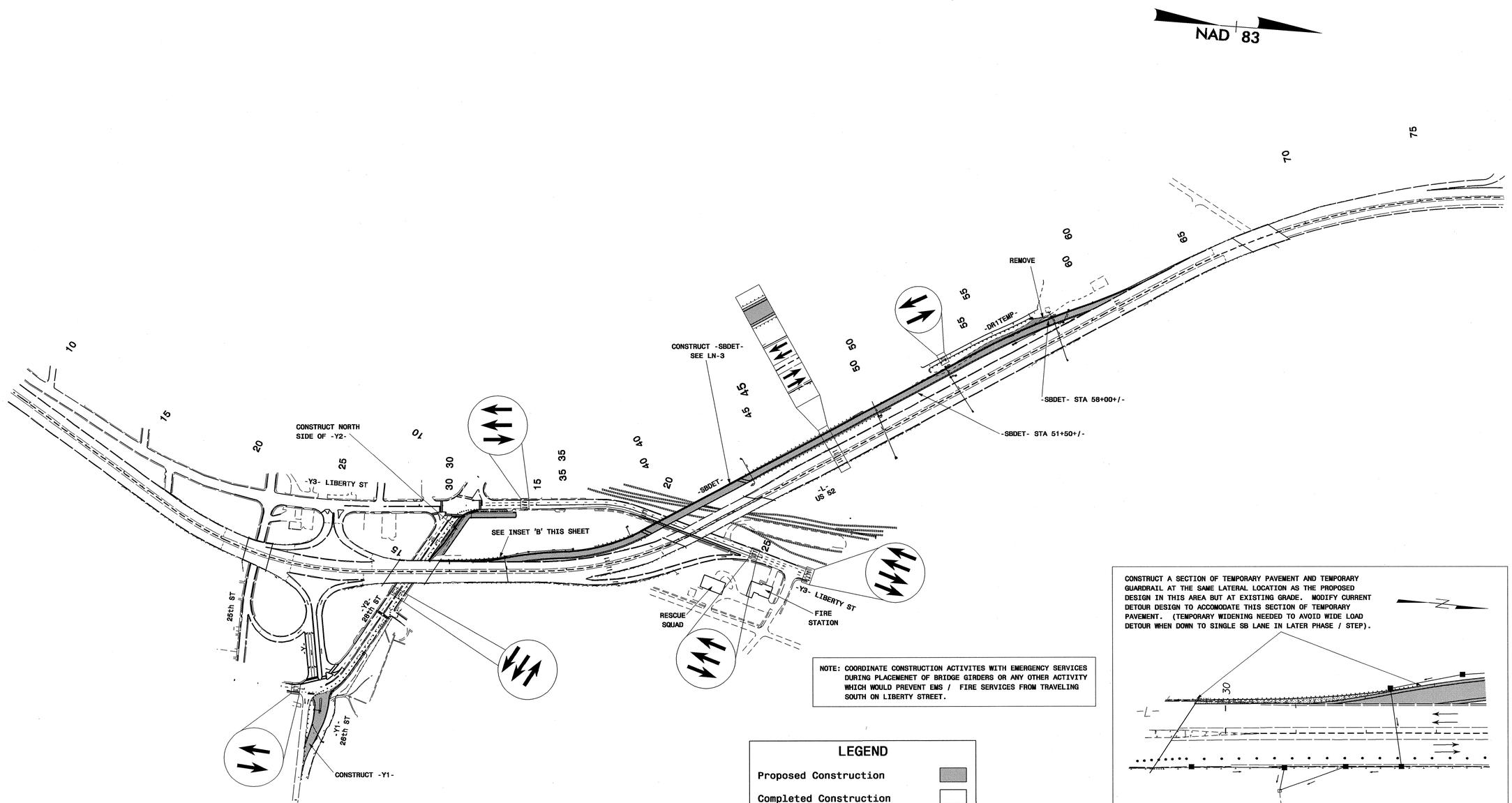
REVISIONS

CADD FILE

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

23-APR-2009 14:21
G:\TEG\CAD\10006004 U2826A\TCP\u2826a_tc_TCP13.dgn
12054 AT RALSGKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-14



NOTE: COORDINATE CONSTRUCTION ACTIVITES WITH EMERGENCY SERVICES DURING PLACEMENET OF BRIDGE GIRDERS OR ANY OTHER ACTIVITY WHICH WOULD PREVENT EMS / FIRE SERVICES FROM TRAVELING SOUTH ON LIBERTY STREET.

LEGEND

- Proposed Construction
- Completed Construction
- Proposed Temporary Widening

CONSTRUCT A SECTION OF TEMPORARY PAVEMENT AND TEMPORARY GUARDRAIL AT THE SAME LATERAL LOCATION AS THE PROPOSED DESIGN IN THIS AREA BUT AT EXISTING GRADE. MODIFY CURRENT DETOUR DESIGN TO ACCOMODATE THIS SECTION OF TEMPORARY PAVEMENT. (TEMPORARY WIDENING NEEDED TO AVOID WIDE LOAD DETOUR WHEN DOWN TO SINGLE SB LANE IN LATER PHASE / STEP).

INSET 'B' NTS

APPROVED: DATE: 4/23/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE I OVERVIEW 2

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

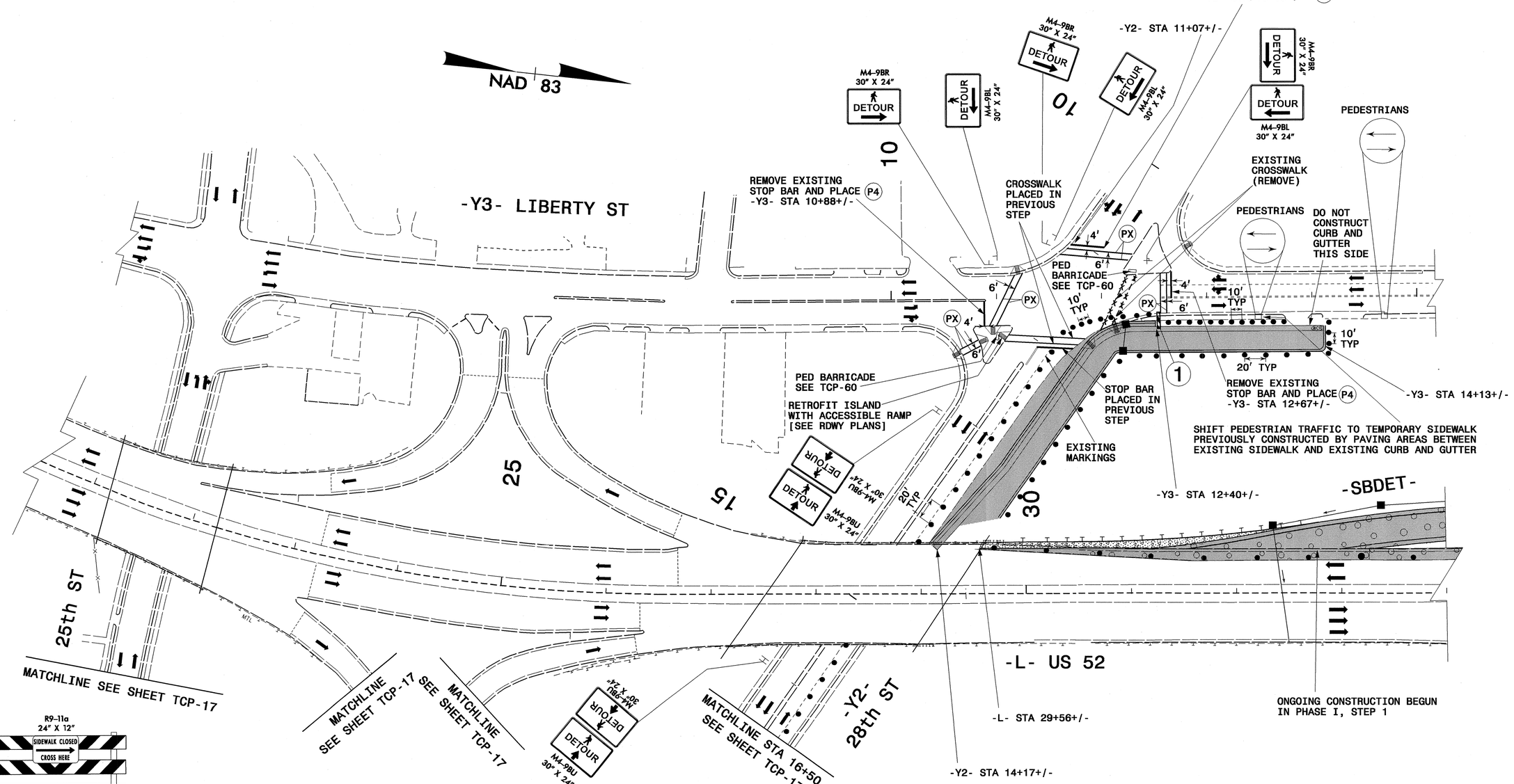
REVISIONS

CADD FILE

PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

23-APR-2009 14:21
G:\TEG\Curr\100006004 U2826A\TCP\u2826a_tc_TCP14.dgn
12054 AT RAL5GR1MCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-15



LEGEND

Proposed Construction	
Ongoing Construction Begun During an Earlier Step	
Completed Construction	
Proposed Temporary Widening	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	• • •

PAVEMENT MARKING SCHEDULE

(PX)	WHITE CROSSWALK LINE	PAINT (8")
(P4)	WHITE STOP BAR	PAINT (24")

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: [signature] DATE: 4/29/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE I DETAIL

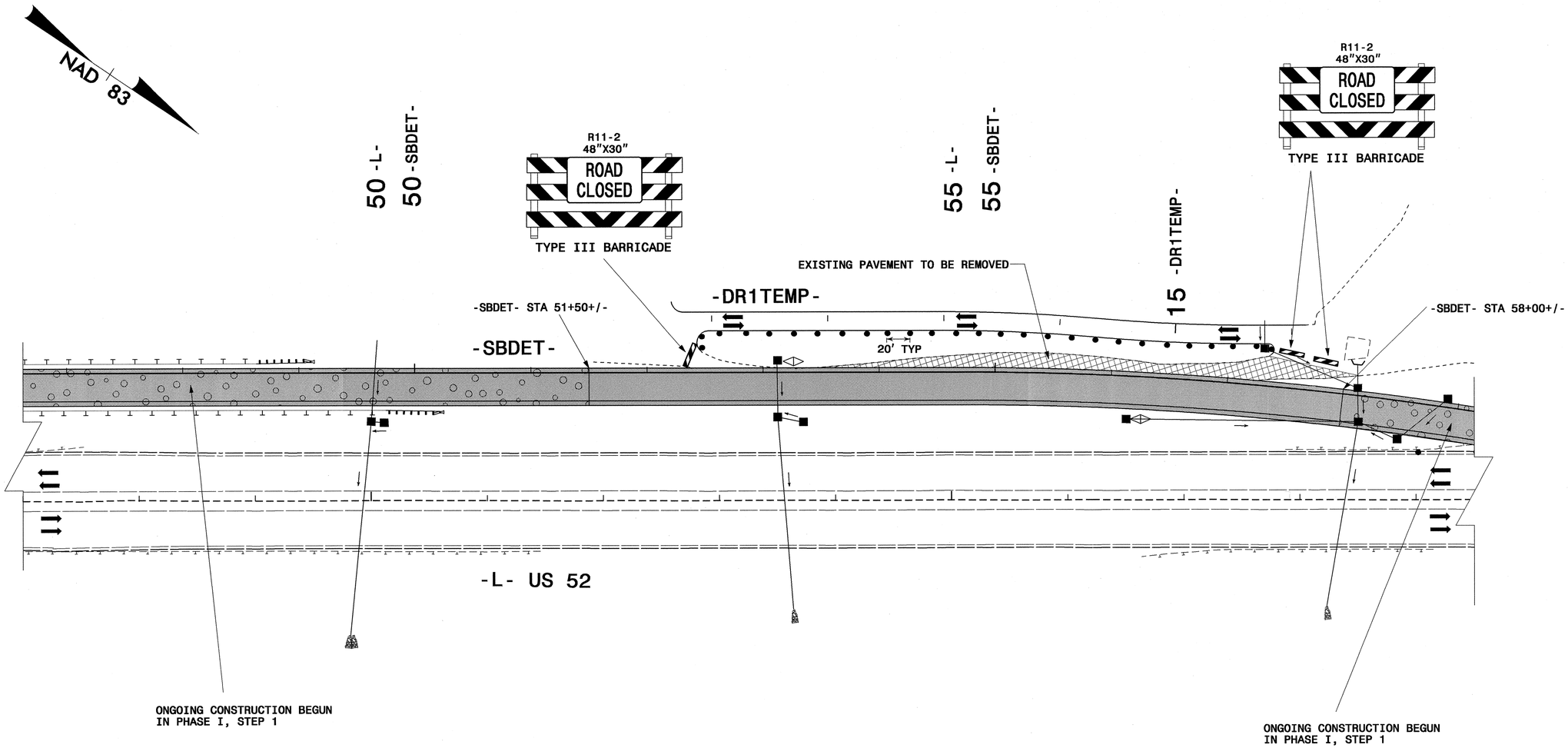
SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE

23-APR-2009 14:21
G:\TEG\Curr\100006004 U2826A\TCP\u2826a_tc_TCP15.dgn
12054 AT RAL5GKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-16



LEGEND

- Proposed Construction
- Ongoing Construction Begun During an Earlier Step
- Completed Construction
- Proposed Temporary Widening
- Drainage Flow
- Traffic Flow
- Construction Drums

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: DATE: 4/23/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE I DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS — STATE OF NORTH CAROLINA — DEPARTMENT OF TRANSPORTATION — TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

23-APR-2009 14:21
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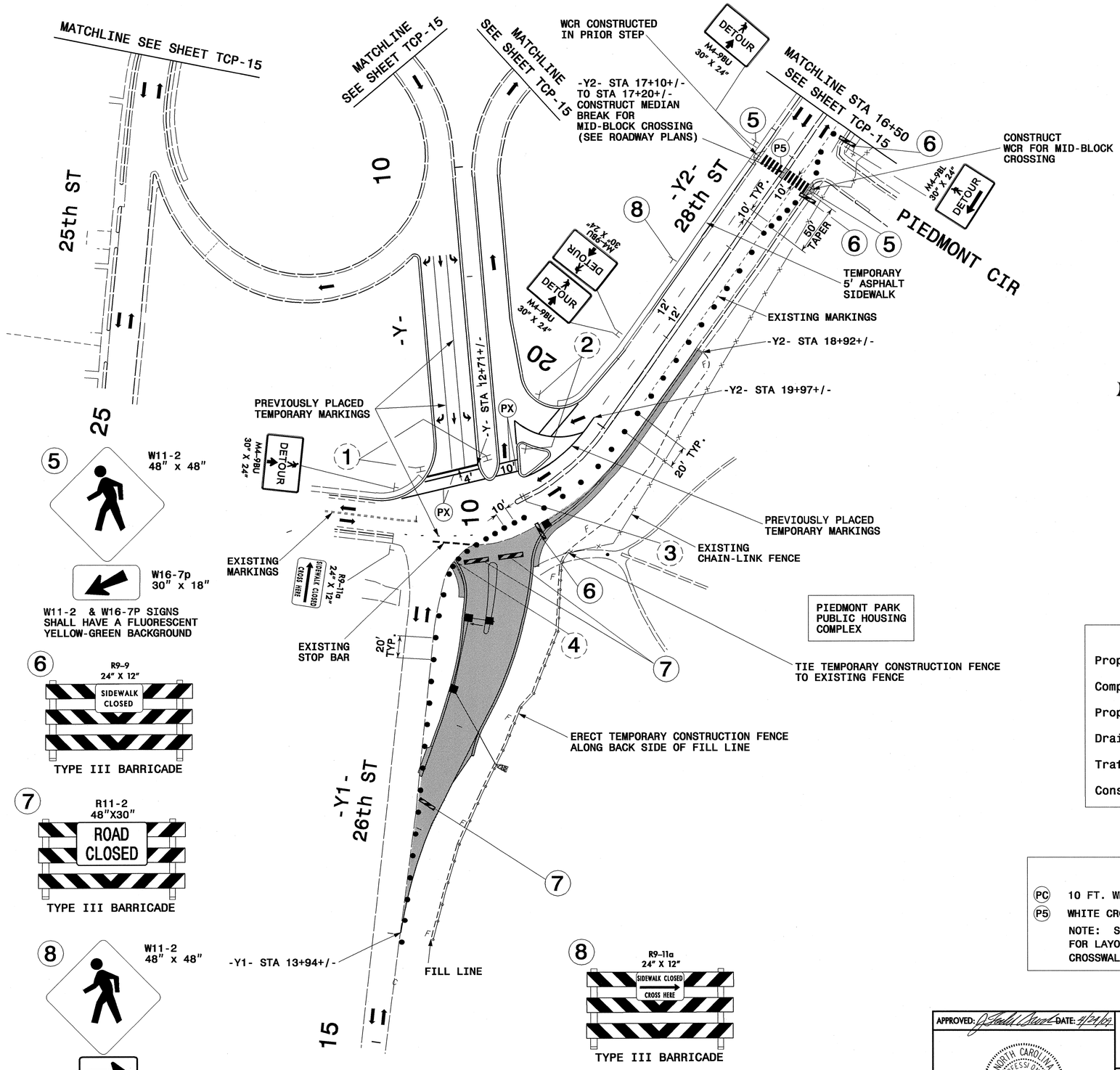
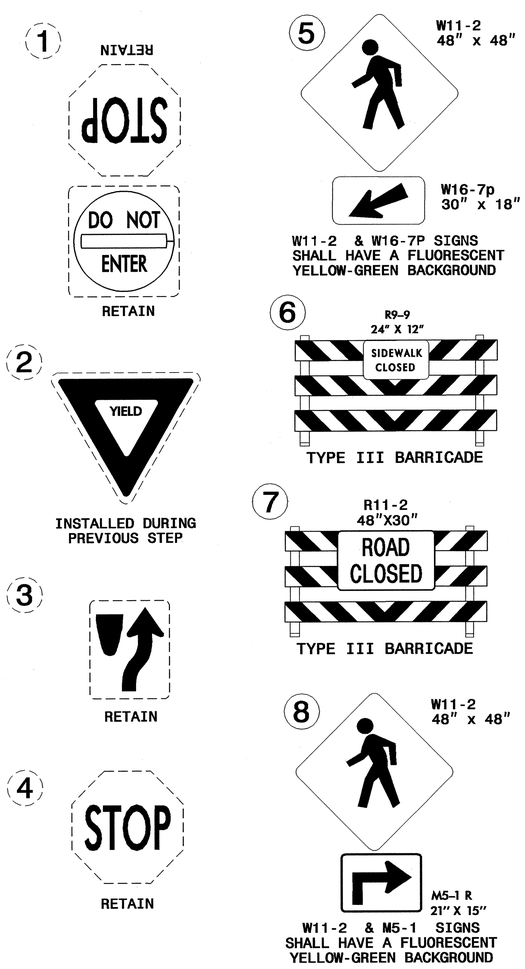
12954 AT RALSGKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-17





LEGEND

- Proposed Construction
- Completed Construction
- Proposed Temporary Widening
- Drainage Flow
- Traffic Flow
- Construction Drums

PAVEMENT MARKING SCHEDULE

PC	10 FT. WHITE SKIP	PAINT (4")
P5	WHITE CROSSWALK LINE	PAINT (24")

NOTE: SEE RSD 1205.07 SHEET 1 OF 1 FOR LAYOUT OF HI-VISIBILITY CROSSWALK

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE I DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AWKE
DESIGN BY:	AWKE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS NORTH CAROLINA DEPARTMENT OF TRANSPORTATION CONTROL

REVISIONS

CADD FILE

23-APR-2009 14:21
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12054 AT RAL5GKYMCI

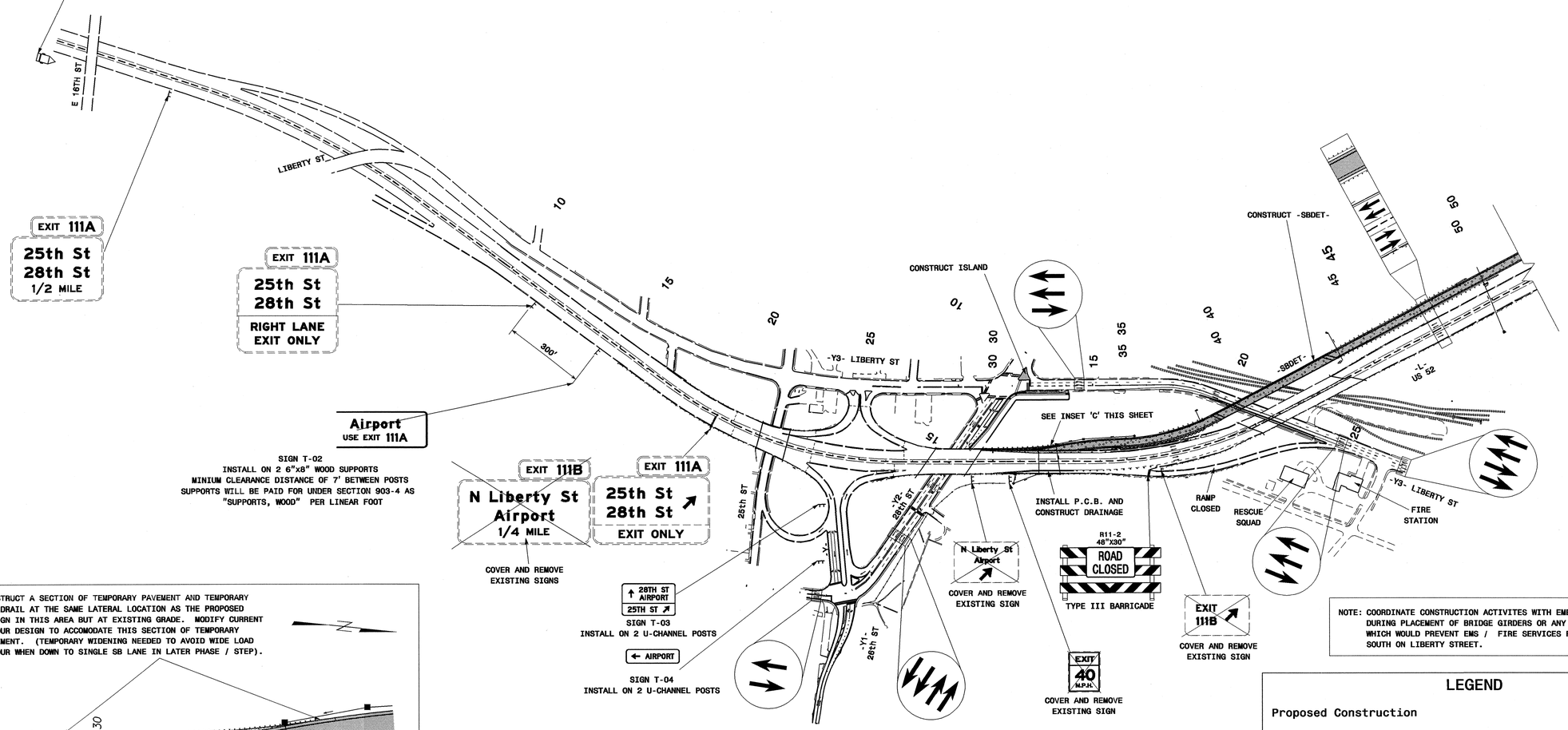
PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-18

NAD 83

CMS NO. 1

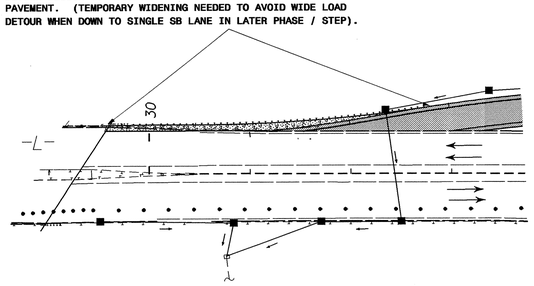
MESSAGE NO. 1	MESSAGE NO. 2
EXIT 111B CLOSED	LIBERTY AIRPORT USE 111A

CHANGEABLE MESSAGE SIGN



SIGN T-02
INSTALL ON 2 6"x8" WOOD SUPPORTS
MINIUM CLEARANCE DISTANCE OF 7' BETWEEN POSTS
SUPPORTS WILL BE PAID FOR UNDER SECTION 903-4 AS "SUPPORTS, WOOD" PER LINEAR FOOT

CONSTRUCT A SECTION OF TEMPORARY PAVEMENT AND TEMPORARY GUARDRAIL AT THE SAME LATERAL LOCATION AS THE PROPOSED DESIGN IN THIS AREA BUT AT EXISTING GRADE. MODIFY CURRENT DETOUR DESIGN TO ACCOMODATE THIS SECTION OF TEMPORARY PAVEMENT. (TEMPORARY WIDENING NEEDED TO AVOID WIDE LOAD DETOUR WHEN DOWN TO SINGLE SB LANE IN LATER PHASE / STEP).



INSET 'C' NTS

NOTE: COORDINATE CONSTRUCTION ACTIVITES WITH EMERGENCY SERVICES DURING PLACEMENT OF BRIDGE GIRDERS OR ANY OTHER ACTIVITY WHICH WOULD PREVENT EMS / FIRE SERVICES FROM TRAVELING SOUTH ON LIBERTY STREET.

LEGEND

- Proposed Construction
- Ongoing Construction Begun During an Earlier Step
- Completed Construction
- Proposed Temporary Widening

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE I OVERVIEW 3

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

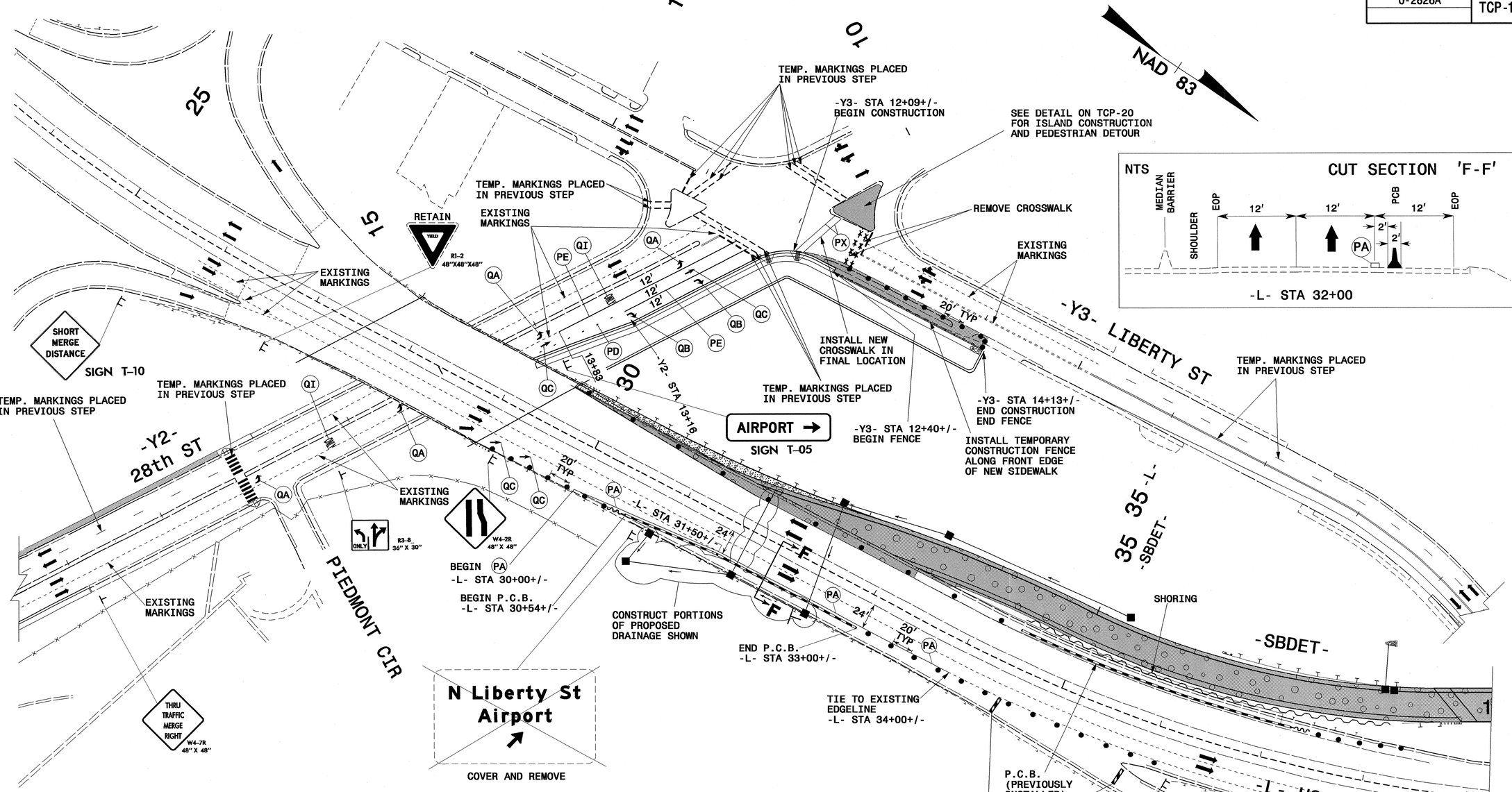
REVISIONS

CADD FILE

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

23-APR-2009 14:22
G:\TEG\Curr\0006004 U2826A\TCP\u2826a_tc_TCP18.dgn
12054 AT RALSGKMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-19



LEGEND

- Proposed Construction
- Ongoing Construction Begun During an Earlier Step
- Completed Construction
- Proposed Temporary Widening
- Drainage Flow
- Traffic Flow
- Construction Drums

PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PC	10 FT. WHITE SKIP	PAINT (4")
PD	2 FT. WHITE MINISKIP	PAINT (4")
PE	WHITE SOLID LANE LINE	PAINT (4")
PX	WHITE CROSSWALK LINE	PAINT (8")
QA	LEFT TURN ARROW MARKING SYMBOLS	PAINT
QB	RIGHT TURN ARROW MARKING SYMBOLS	PAINT
QC	STRAIGHT ARROW MARKING SYMBOLS	PAINT
QI	ALPHANUMERIC CHARACTER	PAINT

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE I DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

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

REVISIONS

CADD FILE

23-APR-2009 14:22
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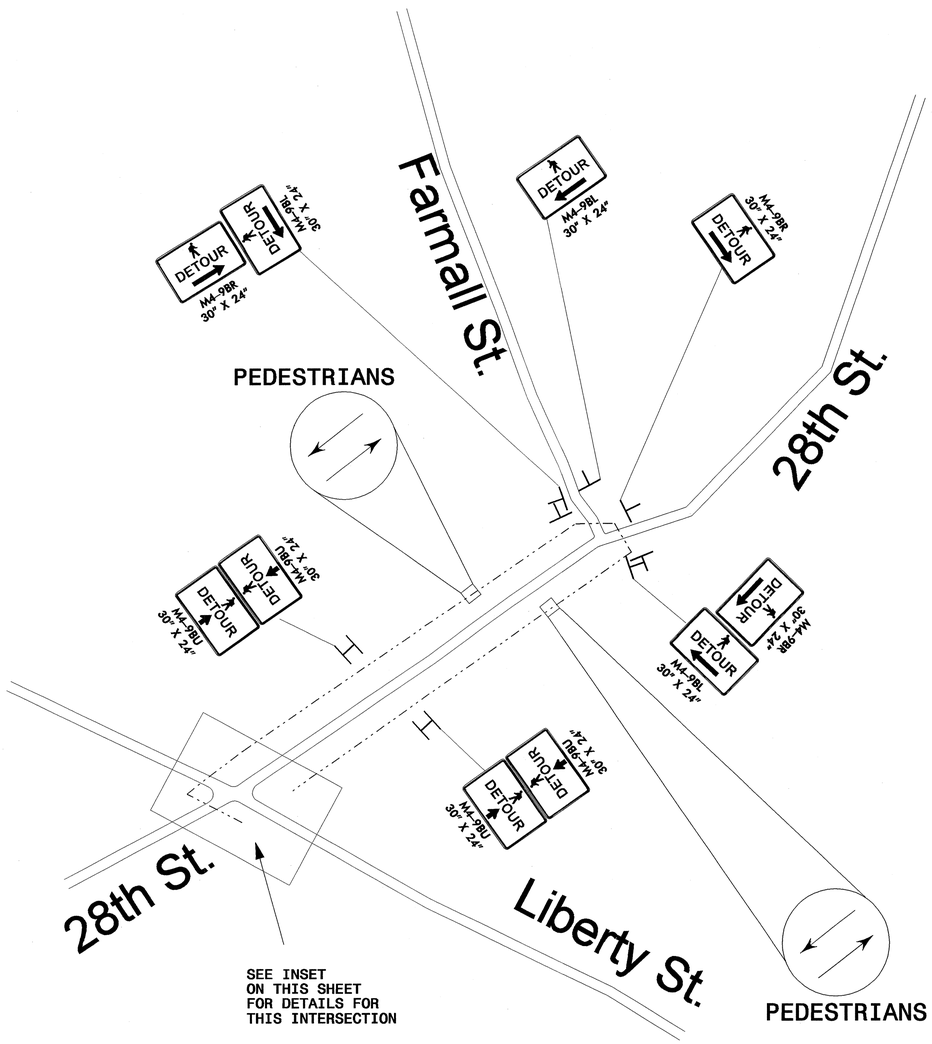
12954 AT RALSGRYMC1

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-20

PEDESTRIAN DETOUR



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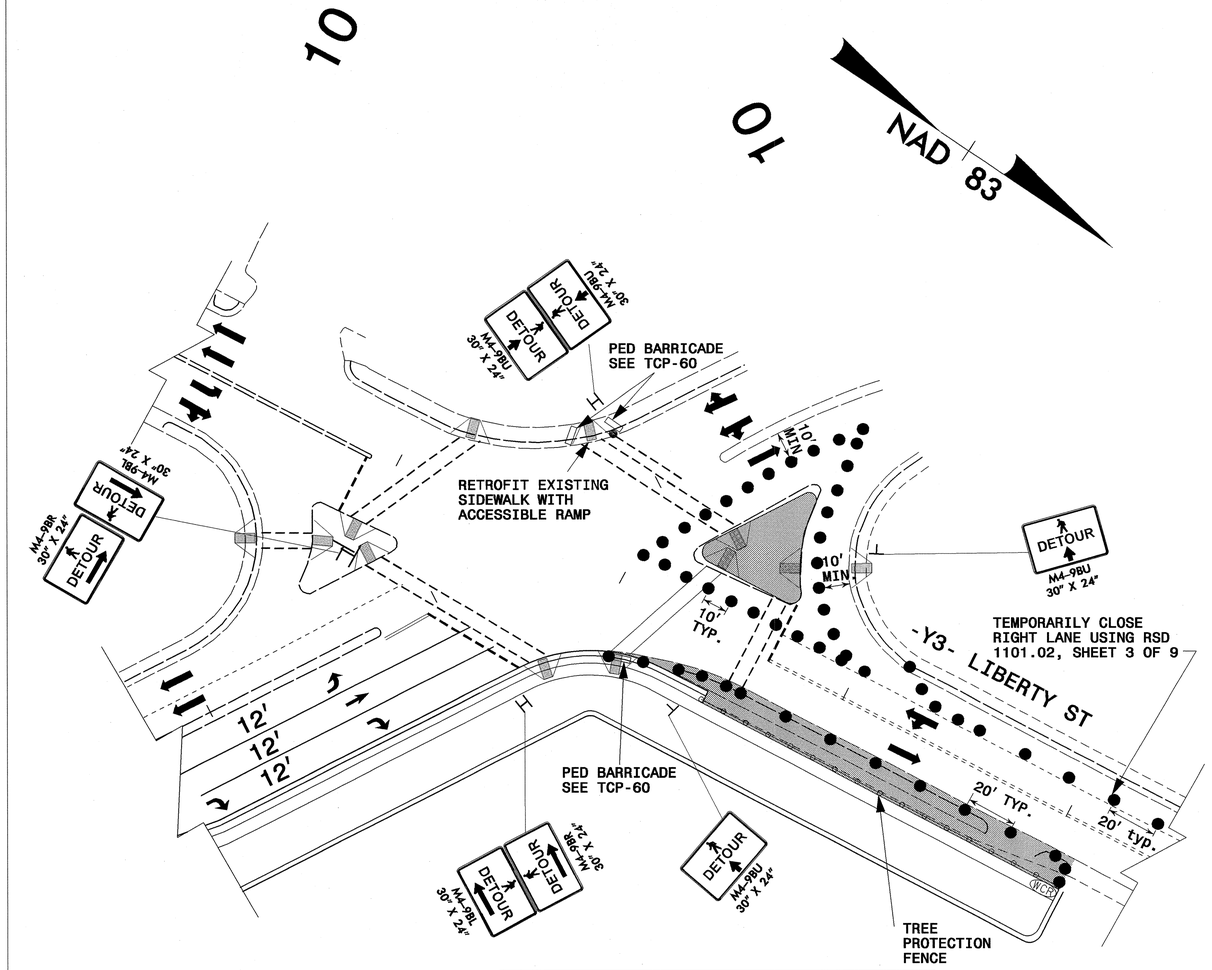


LEGEND

Proposed Construction	
Completed Construction	
Proposed Temporary Widening	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	● ●

APPROVED: J. Todd Brooks DATE: 4/23/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE I DETAIL

SCALE:	1:30
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS TRAFFIC CONTROL

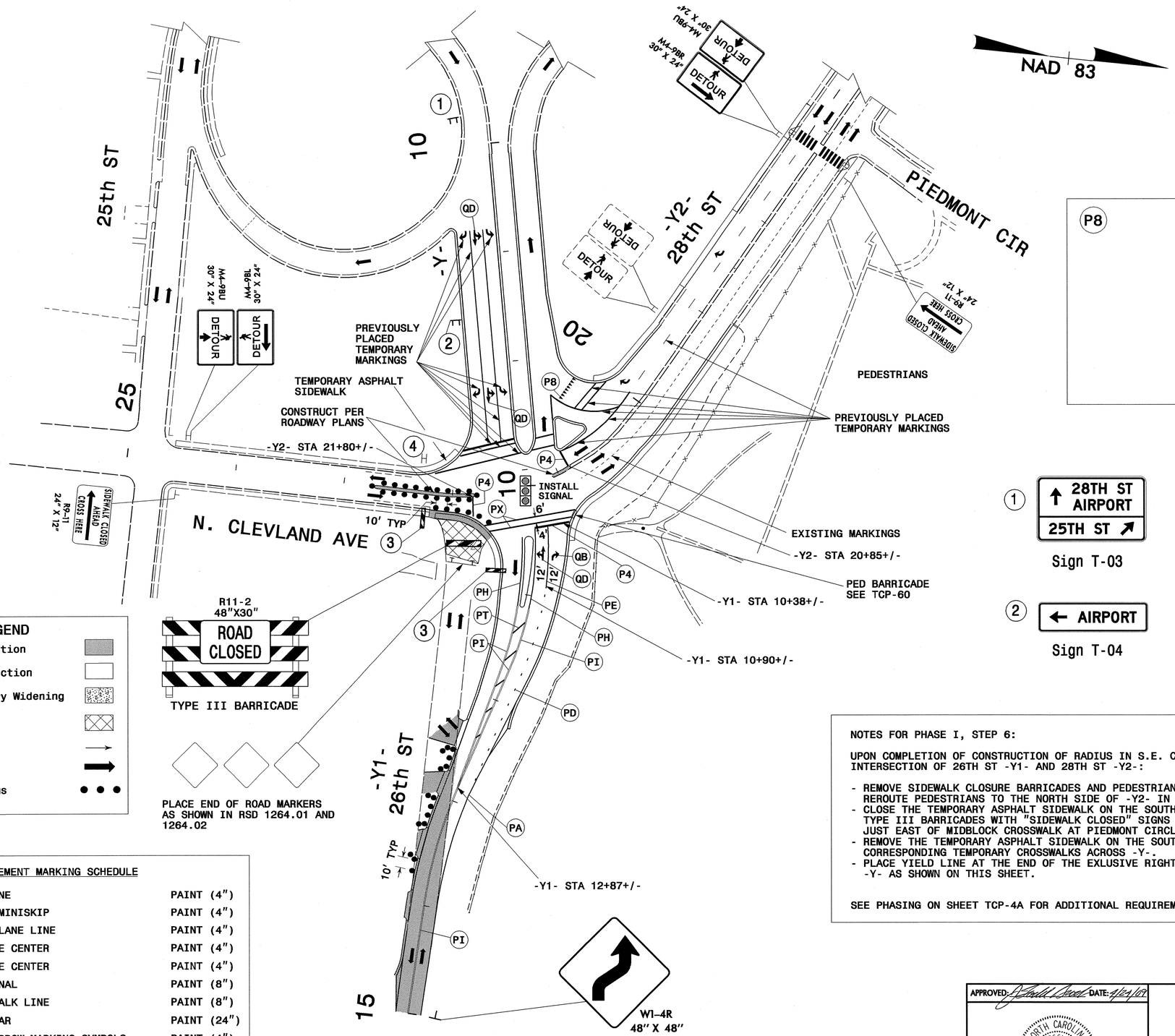
REVISIONS

CADD FILE

PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

23-APR-2009 14:22
G:\TEG\Curr\U0006004 U2826A\TCP\u2826a_tc_tcp20.dgn
12054 AT RALSGKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-21



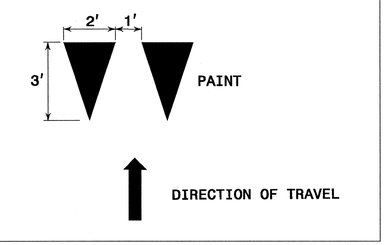
LEGEND

- Proposed Construction
- Completed Construction
- Proposed Temporary Widening
- Pavement Removal
- Drainage Flow
- Traffic Flow
- Construction Drums

PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PD	2 FT. WHITE MINISKIP	PAINT (4")
PE	WHITE SOLID LANE LINE	PAINT (4")
PH	YELLOW SINGLE CENTER	PAINT (4")
PI	YELLOW DOUBLE CENTER	PAINT (4")
PT	YELLOW DIAGONAL	PAINT (8")
PX	WHITE CROSSWALK LINE	PAINT (8")
P4	WHITE STOP BAR	PAINT (24")
QB	RIGHT TURN ARROW MARKING SYMBOLS	PAINT (4")
QD	COMBO. STRAIGHT/LEFT MARKING SYMBOLS	PAINT

P8 YIELD LINE LAYOUT NTS



1 ↑ 28TH ST AIRPORT / 25TH ST ↗
Sign T-03

2 ← AIRPORT
Sign T-04

3 R9-9 24" X 12" SIDEWALK CLOSED
TYPE III BARRICADE

4 DETOUR M4-9BU 30" X 24" / DETOUR M4-9BU 30" X 24"

NOTES FOR PHASE I, STEP 6:

UPON COMPLETION OF CONSTRUCTION OF RADIUS IN S.E. CORNER OF THE INTERSECTION OF 26TH ST -Y1- AND 28TH ST -Y2-:

- REMOVE SIDEWALK CLOSURE BARRICADES AND PEDESTRIAN DETOUR SIGNING AND REROUTE PEDESTRIANS TO THE NORTH SIDE OF -Y2- IN THE FINAL PATTERN.
- CLOSE THE TEMPORARY ASPHALT SIDEWALK ON THE SOUTH SIDE OF -Y2- BY INSTALLING TYPE III BARRICADES WITH "SIDEWALK CLOSED" SIGNS ATTACHED ACROSS SIDEWALK JUST EAST OF MIDBLOCK CROSSWALK AT PIEDMONT CIRCLE AND SOUTH OF -Y-.
- REMOVE THE TEMPORARY ASPHALT SIDEWALK ON THE SOUTH SIDE OF -Y2- AND THE CORRESPONDING TEMPORARY CROSSWALKS ACROSS -Y-.
- PLACE YIELD LINE AT THE END OF THE EXLUSIVE RIGHT TURN LANE FROM -Y2- TO -Y- AS SHOWN ON THIS SHEET.

SEE PHASING ON SHEET TCP-4A FOR ADDITIONAL REQUIREMENTS.

PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/23/09

SEAL — NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE I DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS — NORTH CAROLINA DEPARTMENT OF TRANSPORTATION — TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

24-APR-2009 08:35
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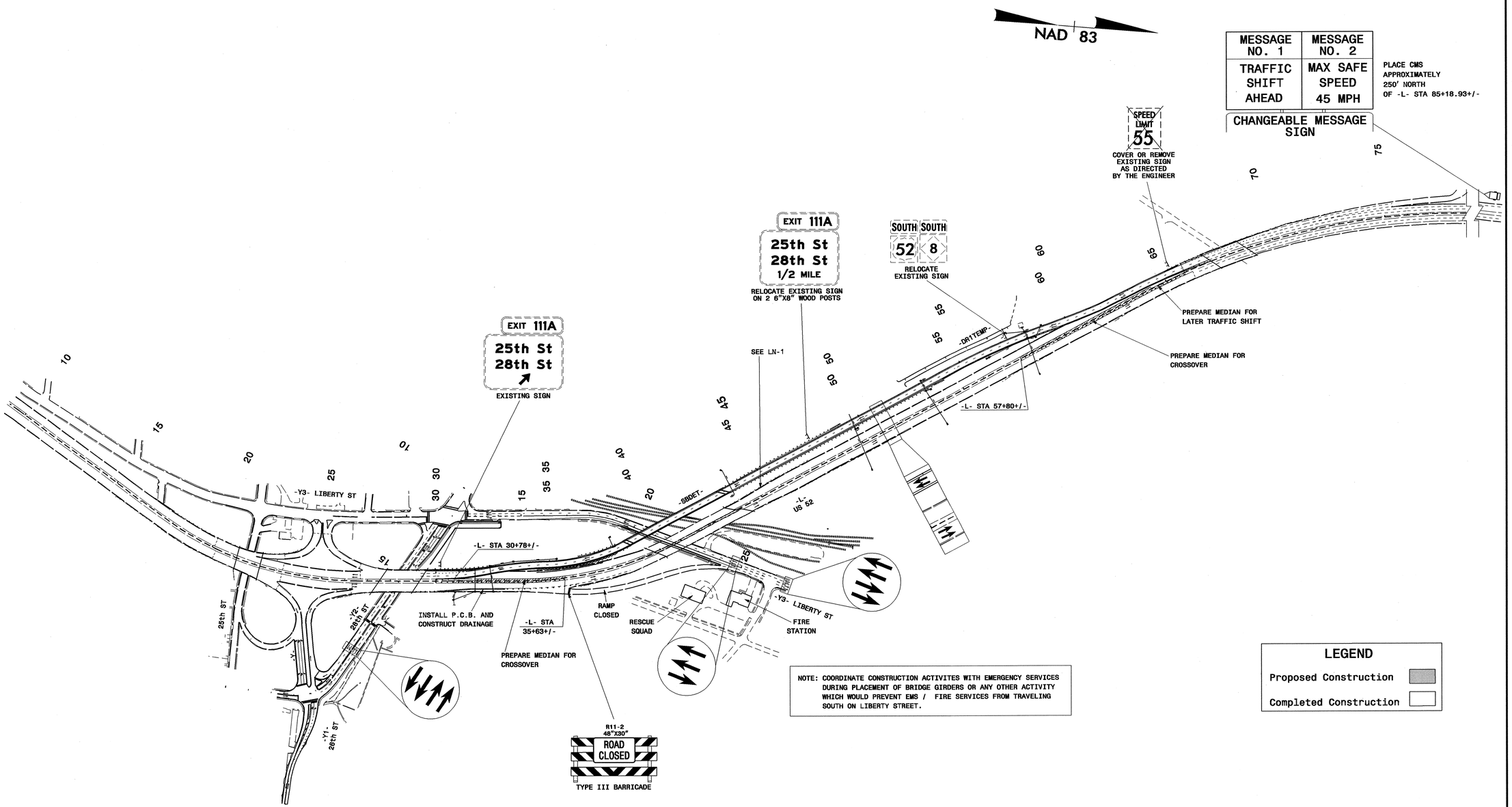
12054 AT RAL5GKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-22



NOTE: COORDINATE CONSTRUCTION ACTIVITES WITH EMERGENCY SERVICES DURING PLACEMENT OF BRIDGE GIRDERS OR ANY OTHER ACTIVITY WHICH WOULD PREVENT EMS / FIRE SERVICES FROM TRAVELING SOUTH ON LIBERTY STREET.

LEGEND

- Proposed Construction
- Completed Construction

PBS&J
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: [signature] DATE: 5/29/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II OVERVIEW 1

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE

07-MAY-2009 13:18
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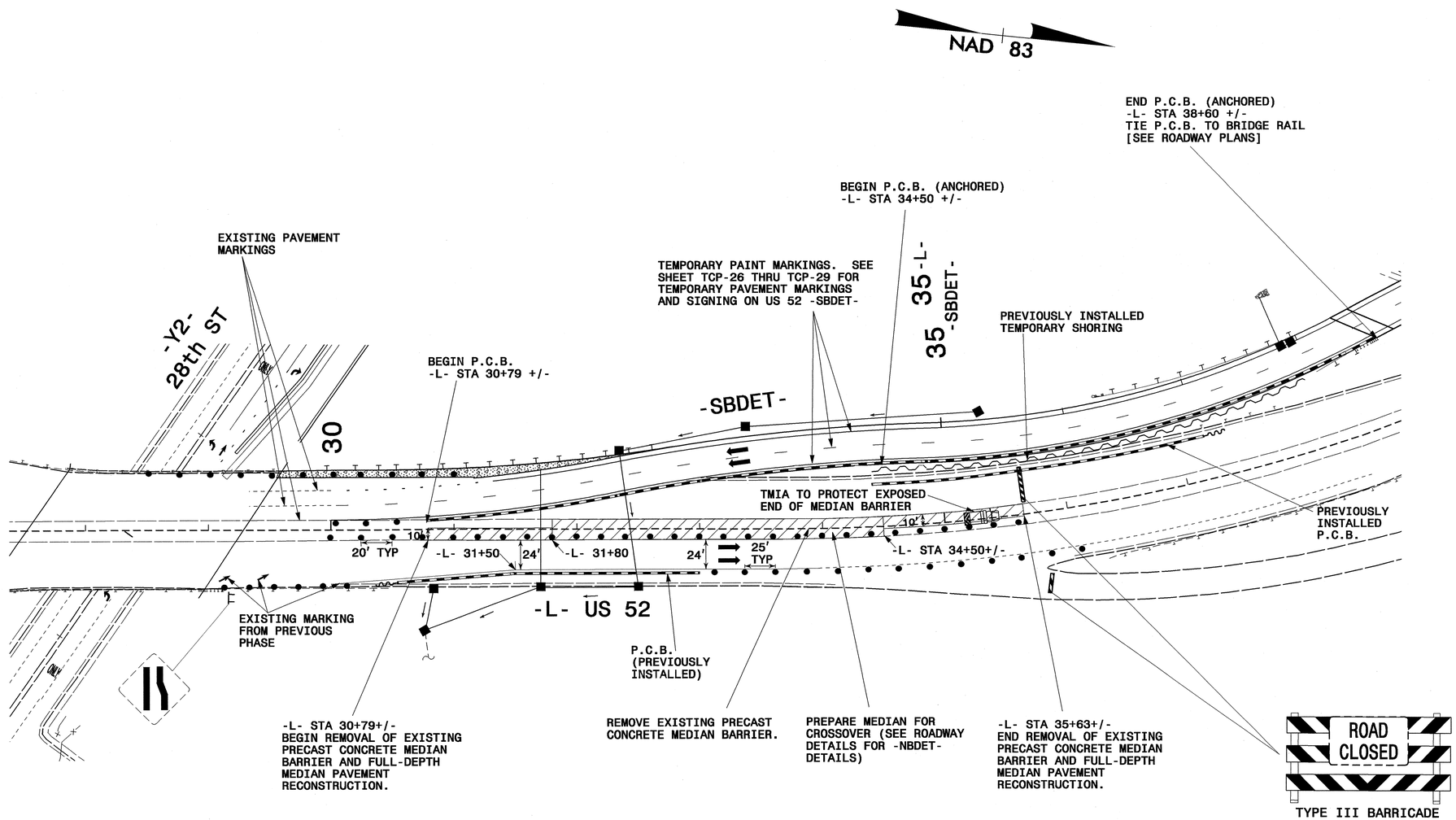
13833 AT RALBJVXRHI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-23



LEGEND

- Proposed Construction
- Completed Construction
- Proposed Temporary Widening
- Drainage Flow
- Traffic Flow
- Construction Drums

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: DATE: 4/24/09

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NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS — STATE OF NORTH CAROLINA — DEPARTMENT OF TRANSPORTATION — TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

23-APR-2009 14:22
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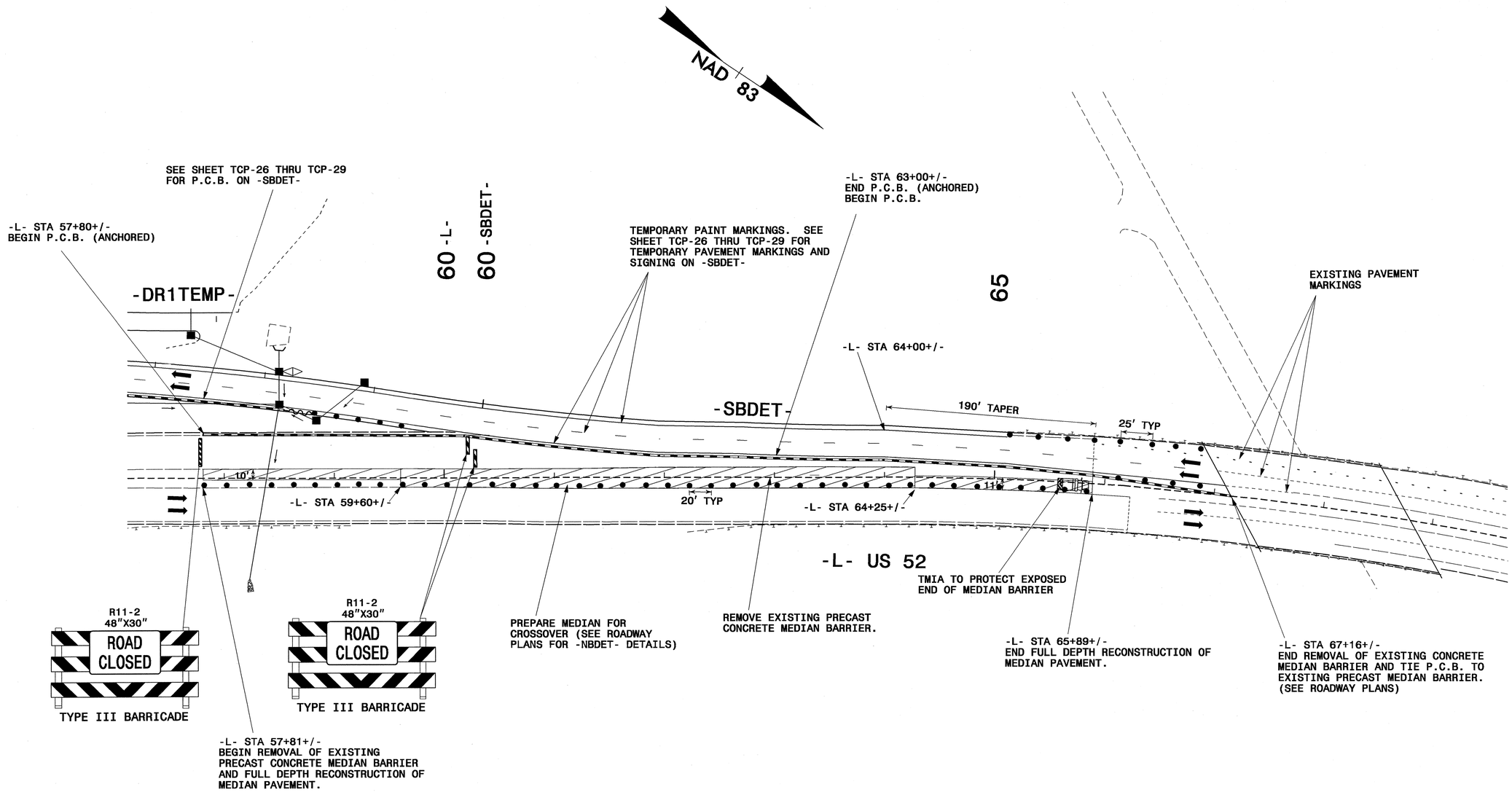
12054 AT RALSGKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-24



LEGEND

- Proposed Construction
- Completed Construction
- Proposed Temporary Widening
- Drainage Flow
- Traffic Flow
- Construction Drums
- Existing Precast Concrete Barrier

PBSJ
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RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/23/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

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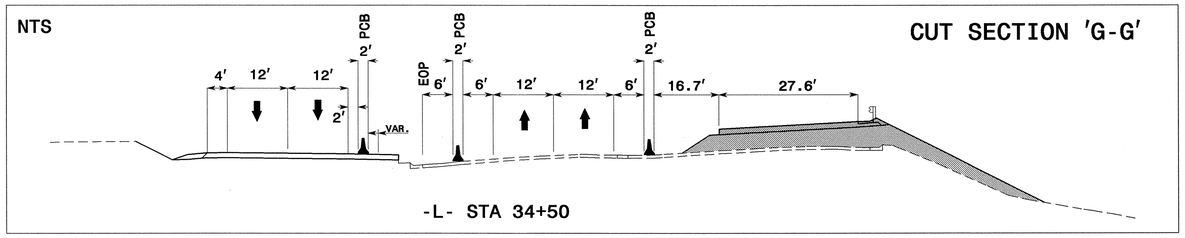
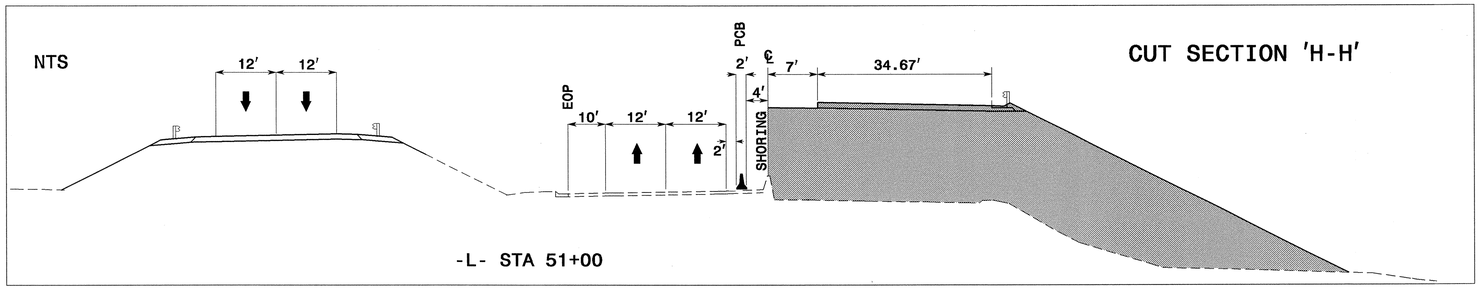
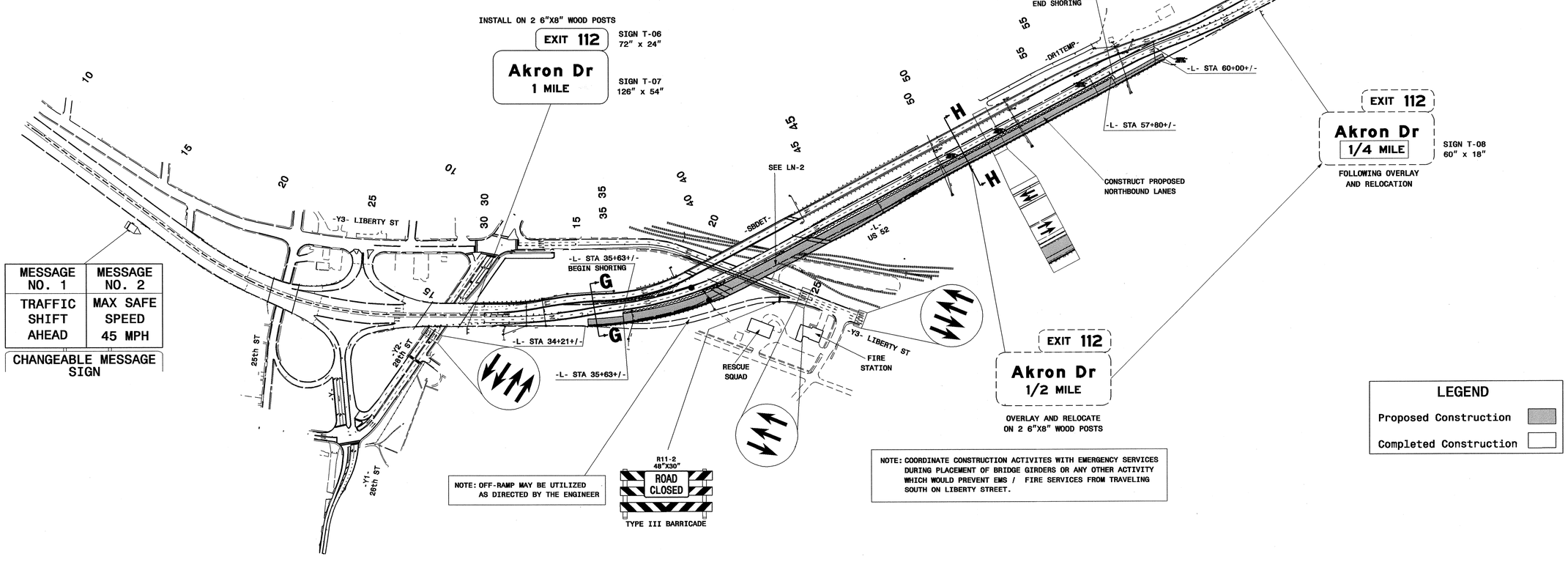
12054 AT RAL56XYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-25







NOTE: OFF-RAMP MAY BE UTILIZED AS DIRECTED BY THE ENGINEER

NOTE: COORDINATE CONSTRUCTION ACTIVITES WITH EMERGENCY SERVICES DURING PLACEMENT OF BRIDGE GIRDERS OR ANY OTHER ACTIVITY WHICH WOULD PREVENT EMS / FIRE SERVICES FROM TRAVELING SOUTH ON LIBERTY STREET.

MESSAGE NO. 1	MESSAGE NO. 2
TRAFFIC SHIFT AHEAD	MAX SAFE SPEED 45 MPH

CHANGEABLE MESSAGE SIGN

LEGEND

- Proposed Construction
- Completed Construction

APPROVED: [signature] DATE: 5/29/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II OVERVIEW 2

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

07-MAY-2009 13:18
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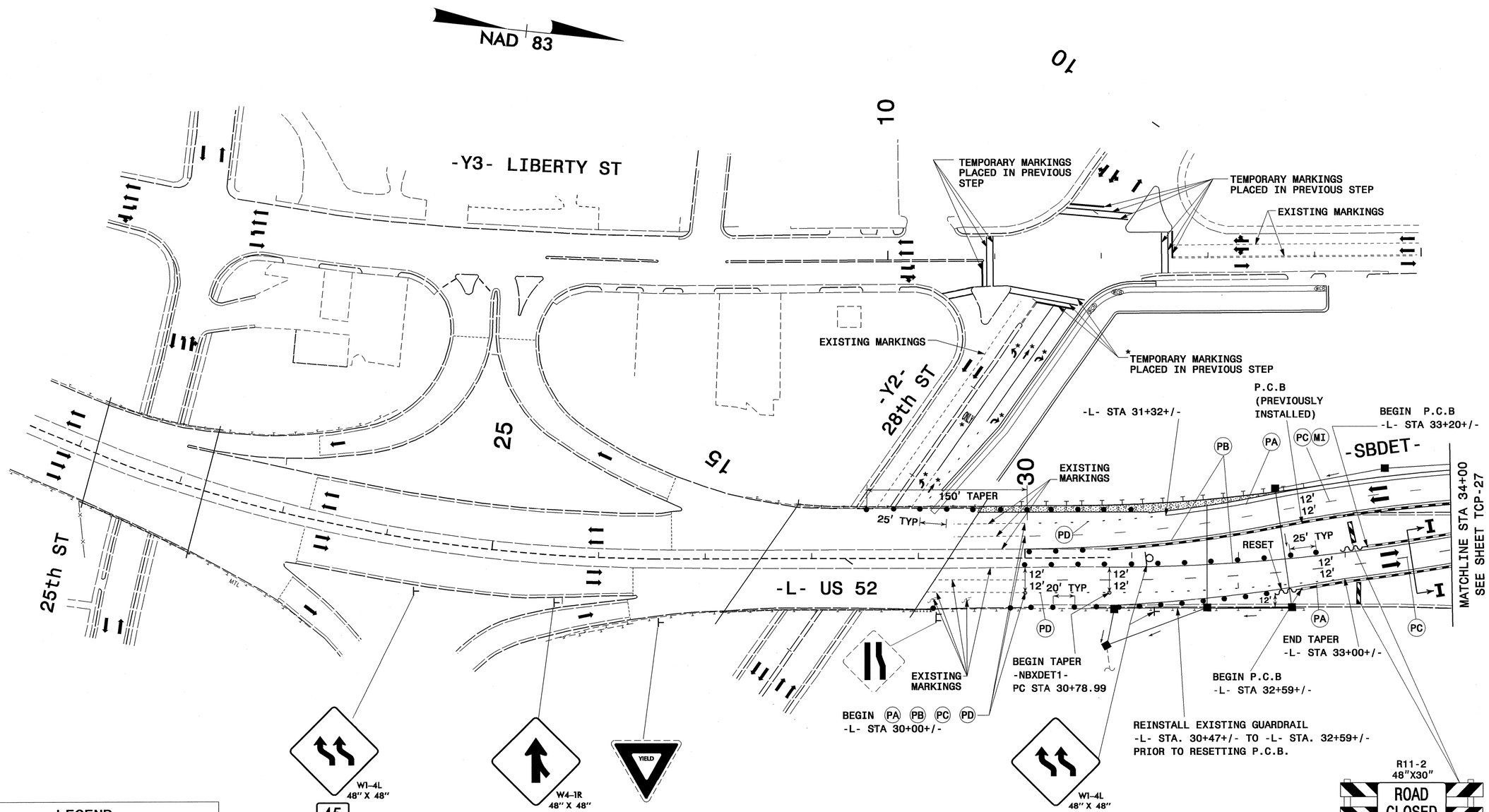
13833 AT RALBJVXRHI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-26



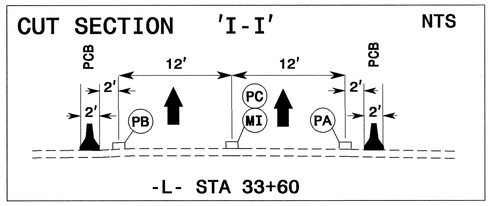
LEGEND

- Proposed Construction
- Completed Construction
- Proposed Temporary Widening
- Drainage Flow
- Traffic Flow
- Construction Drums

PAVEMENT MARKING SCHEDULE

(PA)	WHITE EDGELINE	PAINT (4")
(PB)	YELLOW EDGELINE	PAINT (4")
(PC)	10 FT. WHITE SKIP	PAINT (4")
(PD)	2 FT. MINI-SKIP LINES	PAINT (4")
(MI)	CRYSTAL AND RED	TEMP. RAISED PAVEMENT MARKERS

CUT SECTION 'I-I' NTS



-L- STA 33+60

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS

REVISIONS

CADD FILE

24-APR-2009 08:43
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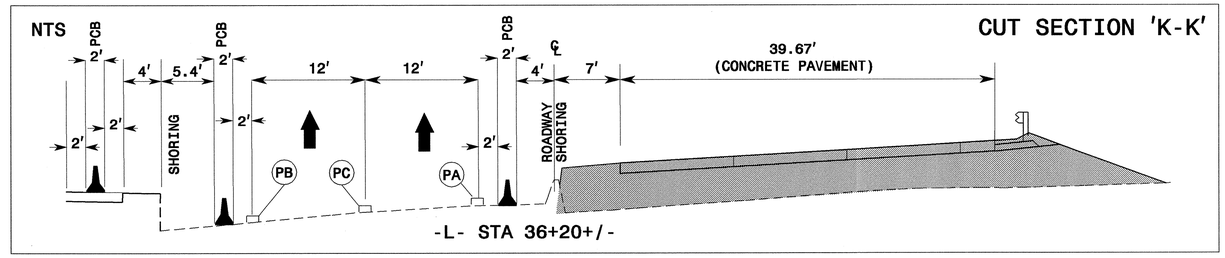
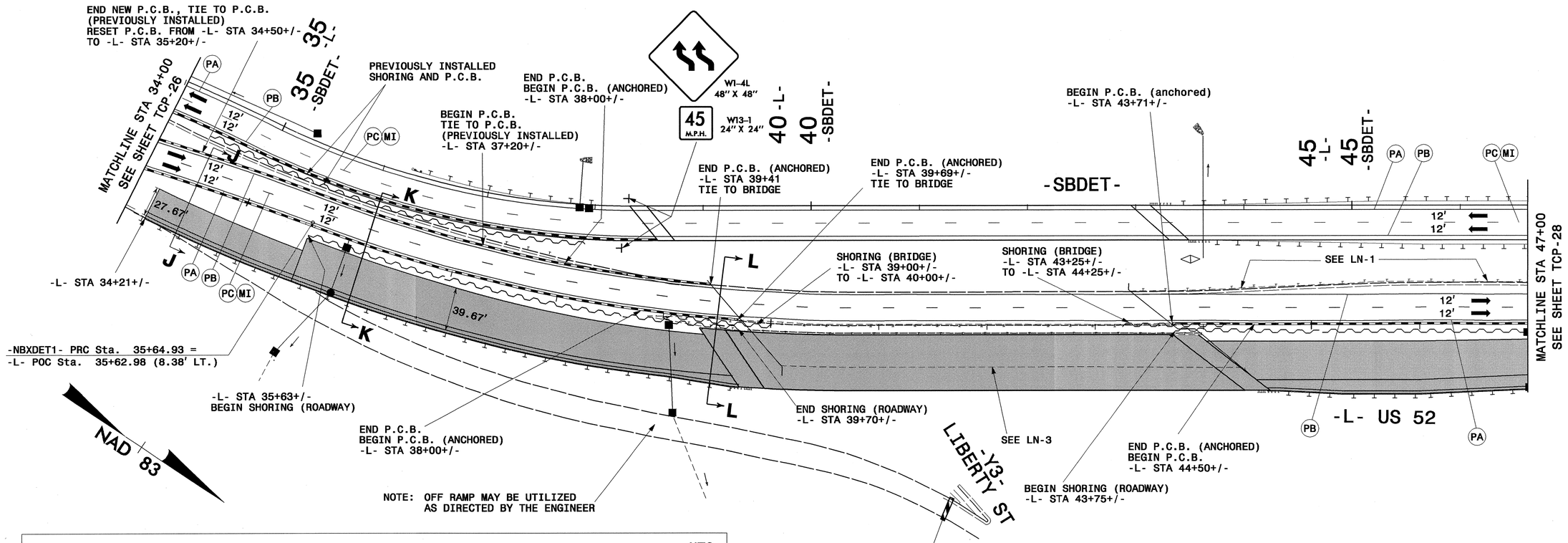
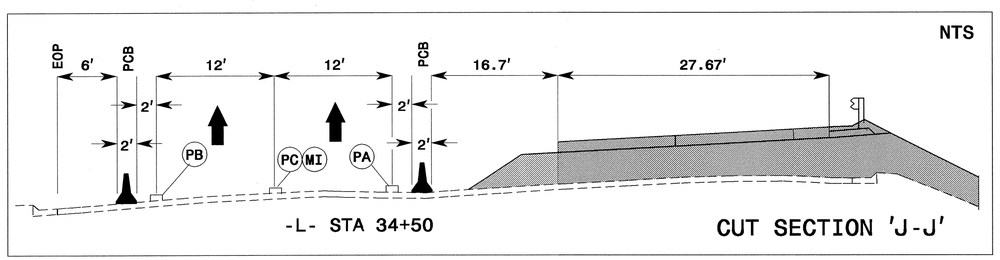
12054 AT RALSGKYMCI

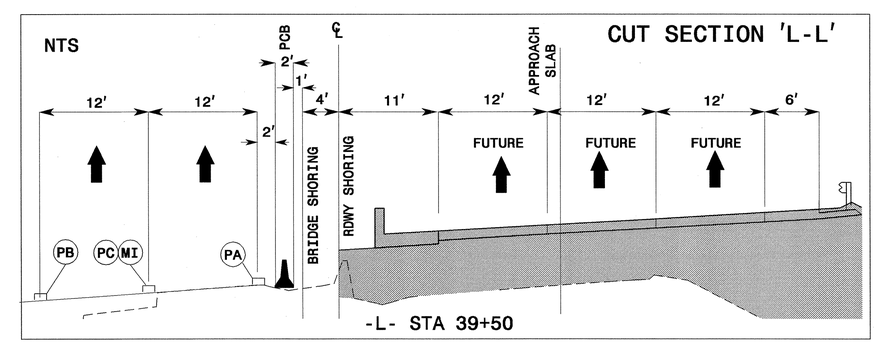
PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-27

SEE SHEET TCP-27A FOR SHORING INFORMATION









LEGEND

- Proposed Construction
- Completed Construction
- Drainage Flow
- Traffic Flow
- Construction Drums

PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PB	YELLOW EDGELINE	PAINT (4")
PC	10 FT. WHITE SKIP	PAINT (4")
MI	CRYSTAL AND RED	TEMP. RAISED PAVEMENT MARKERS

R11-2
48"X30"
ROAD CLOSED
TYPE III BARRICADE

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 7/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS TRAFFIC CONTROL

REVISIONS

CADD FILE

23-APR-2009 14:32
S:\TEG\Curr\U0006004 U2826A\TCP\u2826a_tc_tcp27.dgn
12094 AT RALSOKTMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-27A

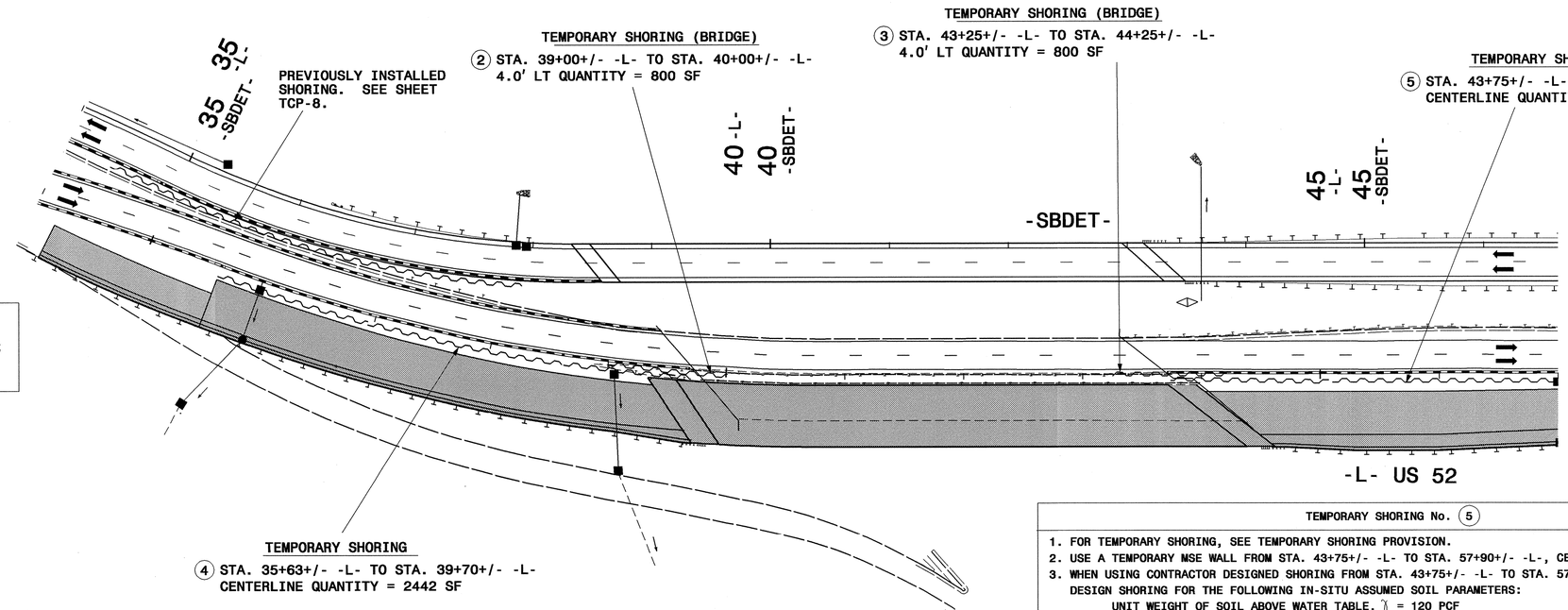
TEMPORARY SHORING No. 2

1. FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.
2. DO NOT USE A TEMPORARY MSE WALL FROM STA. 39+00+/- -L- TO STA. 40+00+/- -L-, 4.0 FT LEFT.
3. WHEN USING CONTRACTOR DESIGNED SHORING FROM STA. 39+00+/- -L- TO STA. 40+00+/- -L-, 4.0 FT LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
   UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
   UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
   FRICTION ANGLE, $\varnothing$ = 30
   COHESION, c = 0 PSF
4. FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.
5. LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 39+00+/- -L- TO STA. 40+00 +/- -L-, 4.0 FT LEFT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.
6. THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON MARCH 24, 2009 AND SEALED BY A PROFESSIONAL ENGINEER, DAVID L. TEAGUE, P.E., LICENSE NUMBER 027869.

TEMPORARY SHORING No. 3

1. FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.
2. DO NOT USE A TEMPORARY MSE WALL FROM STA. 43+25+/- -L- TO STA. 44+25+/- -L-, 4.0 FT LEFT.
3. WHEN USING CONTRACTOR DESIGNED SHORING FROM STA. 43+25+/- -L- TO STA. 44+25+/- -L-, 4.0 FT LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
   UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
   UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
   FRICTION ANGLE, $\varnothing$ = 30
   COHESION, c = 0 PSF
4. FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.
5. LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 43+25+/- -L- TO STA. 44+25 +/- -L-, 4.0 FT LEFT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.
6. THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON MARCH 24, 2009 AND SEALED BY A PROFESSIONAL ENGINEER, DAVID L. TEAGUE, P.E., LICENSE NUMBER 027869.

NAD 83



SEE SHEET TCP-27 FOR CORRESPONDING TRAFFIC CONTROL PLAN SHEET

TEMPORARY SHORING No. 4

1. FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.
2. USE A TEMPORARY MSE WALL FROM STA. 35+63+/- -L- TO STA. 39+70+/- -L-, CENTERLINE.
3. WHEN USING CONTRACTOR DESIGNED SHORING FROM STA. 35+63+/- -L- TO STA. 39+70+/- -L-, CENTERLINE, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
   UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
   UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
   FRICTION ANGLE, $\varnothing$ = 30
   COHESION, c = 0 PSF
4. FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.
5. 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.
6. WHEN BACKFILL FOR REINFORCED BRIDGE APPROACH FILL OVERLAPS WITH THE REINFORCED ZONE OF A TEMPORARY MSE WALL, USE EITHER SHORING BACKFILL OR THE MATERIAL SPECIFIED FOR THE REINFORCED BRIDGE APPROACH FILL, WHICHEVER IS BETTER, IN THE REINFORCED ZONE.
7. LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 35+63+/- -L- TO STA. 39+70+/- -L-, CENTERLINE. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.
8. THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON MARCH 24, 2009 AND SEALED BY A PROFESSIONAL ENGINEER, DAVID L. TEAGUE, P.E., LICENSE NUMBER 027869.

TEMPORARY SHORING No. 5

1. FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.
2. USE A TEMPORARY MSE WALL FROM STA. 43+75+/- -L- TO STA. 57+90+/- -L-, CENTERLINE.
3. WHEN USING CONTRACTOR DESIGNED SHORING FROM STA. 43+75+/- -L- TO STA. 57+90+/- -L-, CENTERLINE, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
   UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
   UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
   FRICTION ANGLE, $\varnothing$ = 30
   COHESION, c = 0 PSF
4. FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.
5. 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.
6. WHEN BACKFILL FOR A RETAINING WALL OR REINFORCED BRIDGE APPROACH FILL OVERLAPS WITH THE REINFORCED ZONE OF A TEMPORARY MSE WALL, USE EITHER SHORING BACKFILL OR THE MATERIAL SPECIFIED FOR THE RETAINING WALL OR THE REINFORCED BRIDGE APPROACH FILL, WHICHEVER IS BETTER, IN THE REINFORCED ZONE.
7. LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 43+75+/- -L- TO STA. 57+90+/- -L-, CENTERLINE. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.
8. THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON MARCH 24, 2009 AND SEALED BY A PROFESSIONAL ENGINEER, DAVID L. TEAGUE, P.E., LICENSE NUMBER 027869.

PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II DETAIL SHORING DATA

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

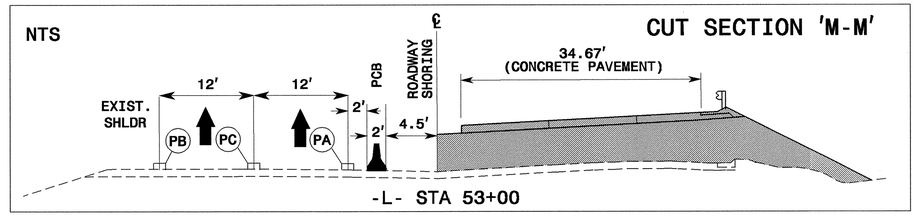
CADD FILE

23-APR-2009 14:32
G:\TEG\Curr\0006004 U2826A\TCP\u2826a_tc_tcp27A.dgn
12054 AT RALSKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-28

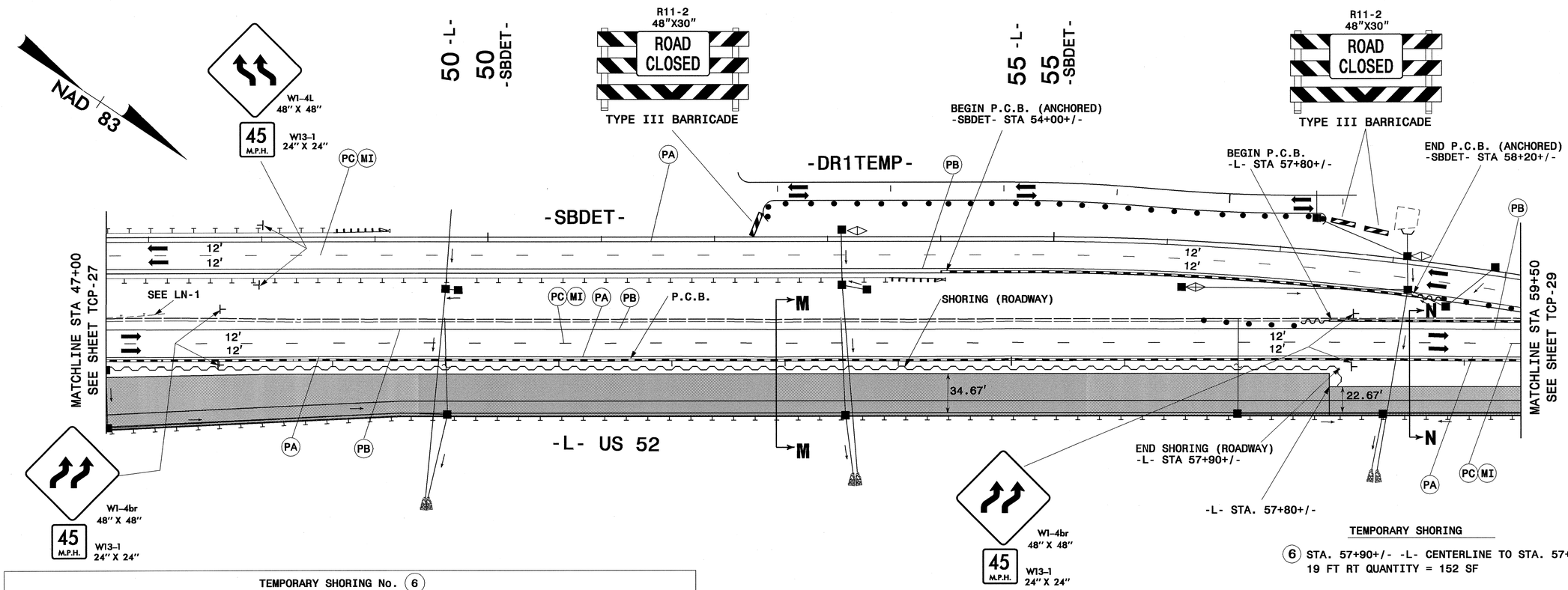
PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PB	YELLOW EDGELINE	PAINT (4")
PC	10 FT. WHITE SKIP	PAINT (4")
MI	CRYSTAL AND RED	TEMP. RAISED PAVEMENT MARKERS



LEGEND

- Proposed Construction
- Completed Construction
- Drainage Flow
- Traffic Flow
- Construction Drums

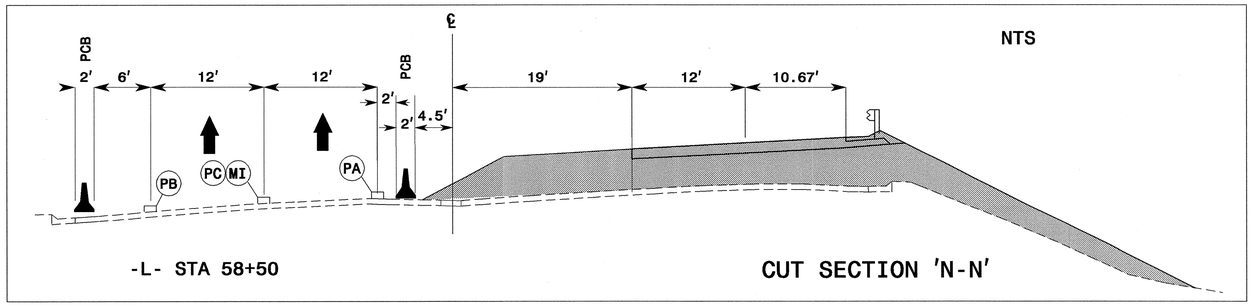


TEMPORARY SHORING

(6) STA. 57+90+/- -L- CENTERLINE TO STA. 57+90+/- -L-
19 FT RT QUANTITY = 152 SF

TEMPORARY SHORING No. (6)

1. FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.
2. USE A TEMPORARY MSE WALL FROM STA. 57+90+/- -L- CENTERLINE TO STA. 57+90+/- -L-, 19.0 FT RT.
3. WHEN USING CONTRACTOR DESIGNED SHORING FROM STA. 57+90+/- -L- CENTERLINE TO STA. 57+90+/- -L-, 19.0 FT RT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
   - UNIT WEIGHT OF SOIL ABOVE WATER TABLE, γ = 120 PCF
   - UNIT WEIGHT OF SOIL BELOW WATER TABLE, γ' = 60 PCF
   - FRICTION ANGLE, $\varnothing$ = 30
   - COHESION, c = 0 PSF
4. FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.
5. 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.
6. WHEN BACKFILL FOR REINFORCED BRIDGE APPROACH FILL OVERLAPS WITH THE REINFORCED ZONE OF A TEMPORARY MSE WALL, USE EITHER SHORING BACKFILL OR THE MATERIAL SPECIFIED FOR THE REINFORCED BRIDGE APPROACH FILL, WHICHEVER IS BETTER, IN THE REINFORCED ZONE.
7. LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 57+90+/- -L- CENTERLINE TO STA. 57+90+/- -L-, 19.0 FT RT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.
8. THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON MARCH 24, 2009 AND SEALED BY A PROFESSIONAL ENGINEER, DAVID L. TEAGUE, P.E., LICENSE NUMBER 027869.



PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

23-APR-2009 14:32
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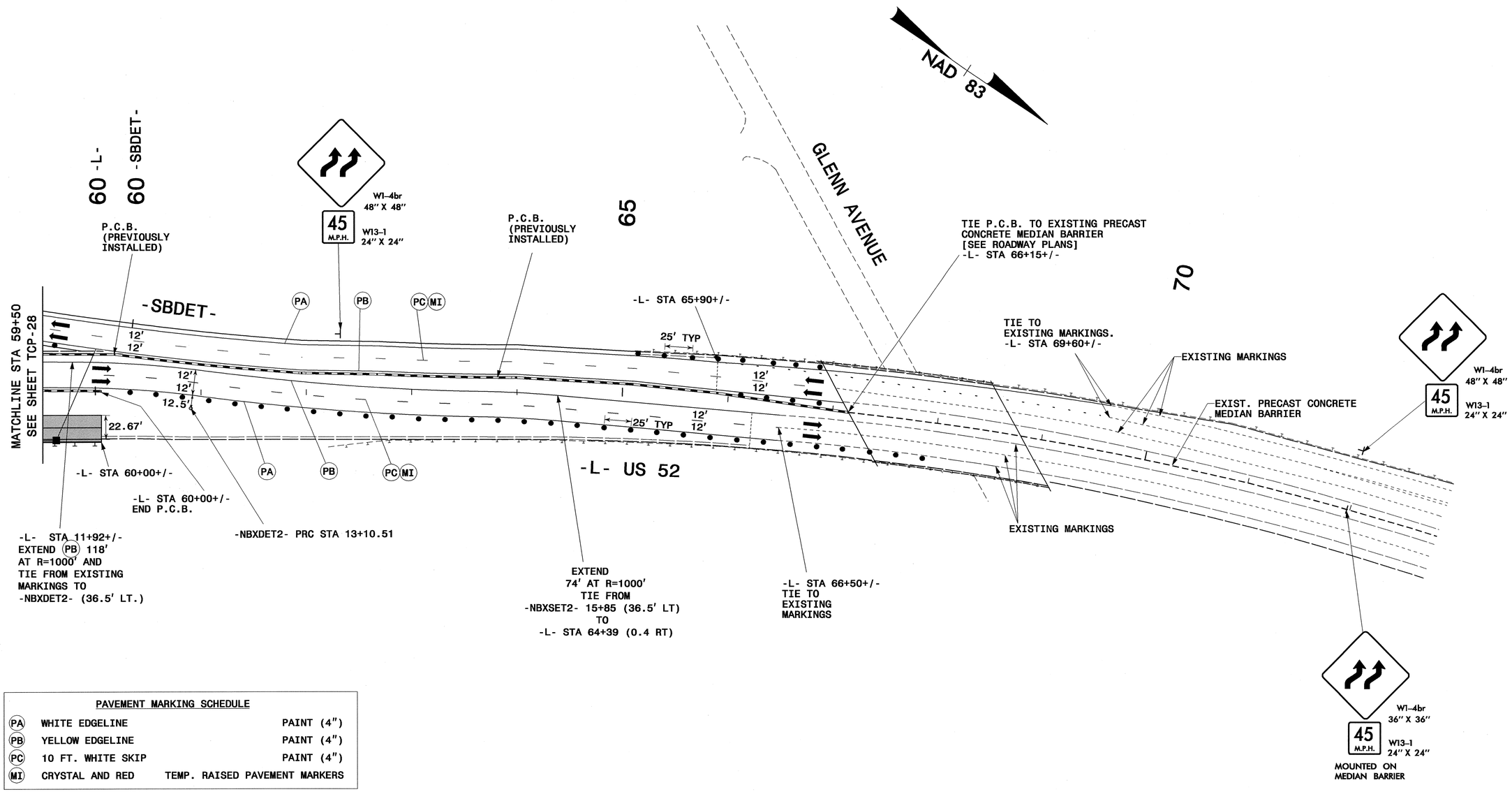
12954 AT TRALSKY\MCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-29



PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PB	YELLOW EDGELINE	PAINT (4")
PC	10 FT. WHITE SKIP	PAINT (4")
MI	CRYSTAL AND RED	TEMP. RAISED PAVEMENT MARKERS

LEGEND

Proposed Construction	
Completed Construction	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	• • •

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AWKE
DESIGN BY:	AWKE
REVIEWED BY:	TB

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

REVISIONS

CADD FILE

24-APR-2009 08:25
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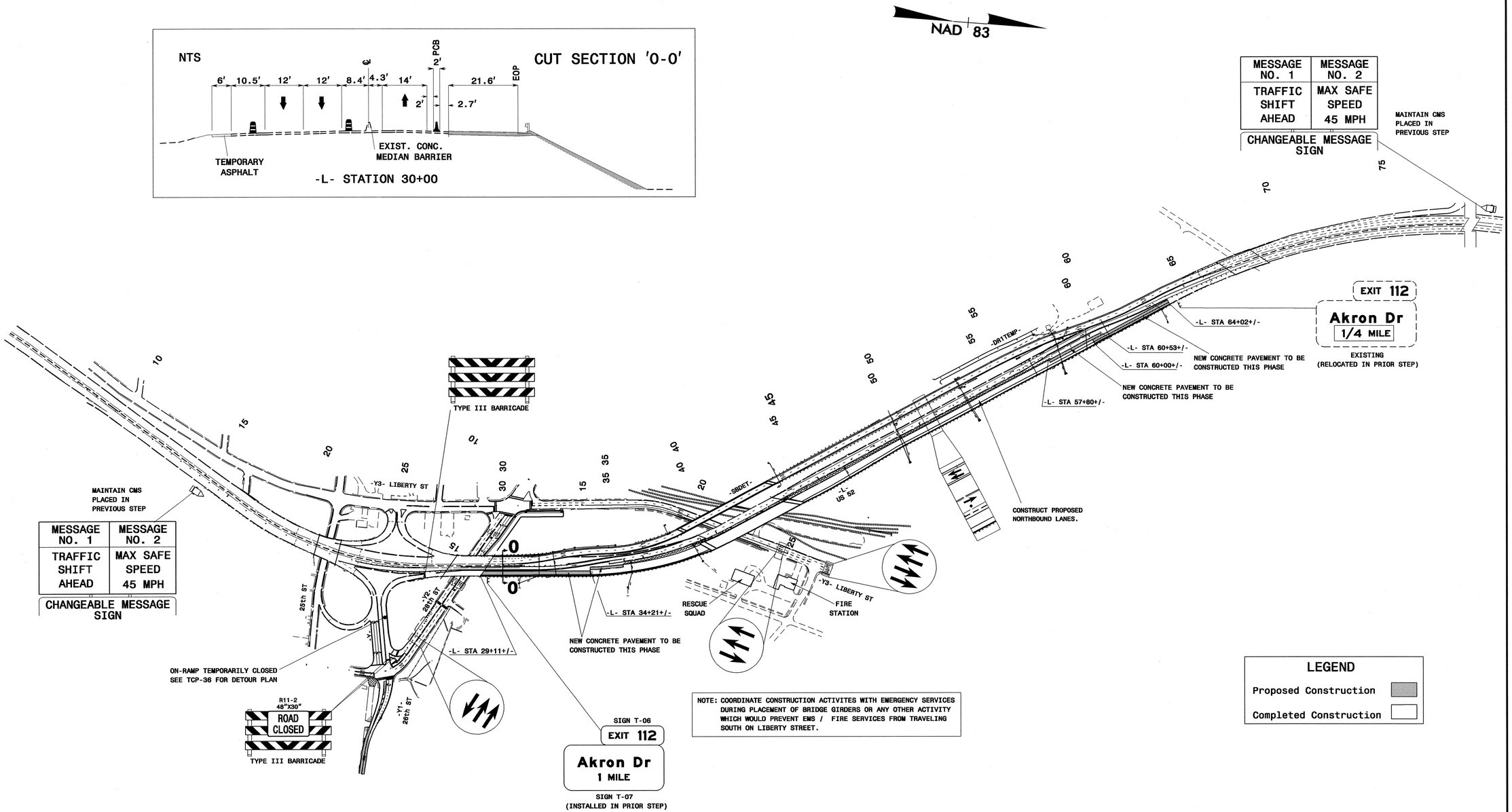
12054 AT RALSGRYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-30



NOTE: COORDINATE CONSTRUCTION ACTIVITES WITH EMERGENCY SERVICES DURING PLACEMENT OF BRIDGE GIRDERS OR ANY OTHER ACTIVITY WHICH WOULD PREVENT EMS / FIRE SERVICES FROM TRAVELING SOUTH ON LIBERTY STREET.

LEGEND

- Proposed Construction
- Completed Construction

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II OVERVIEW 3

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE

PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

23-APR-2009 14:33
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12054 AT RALSGKYMCI

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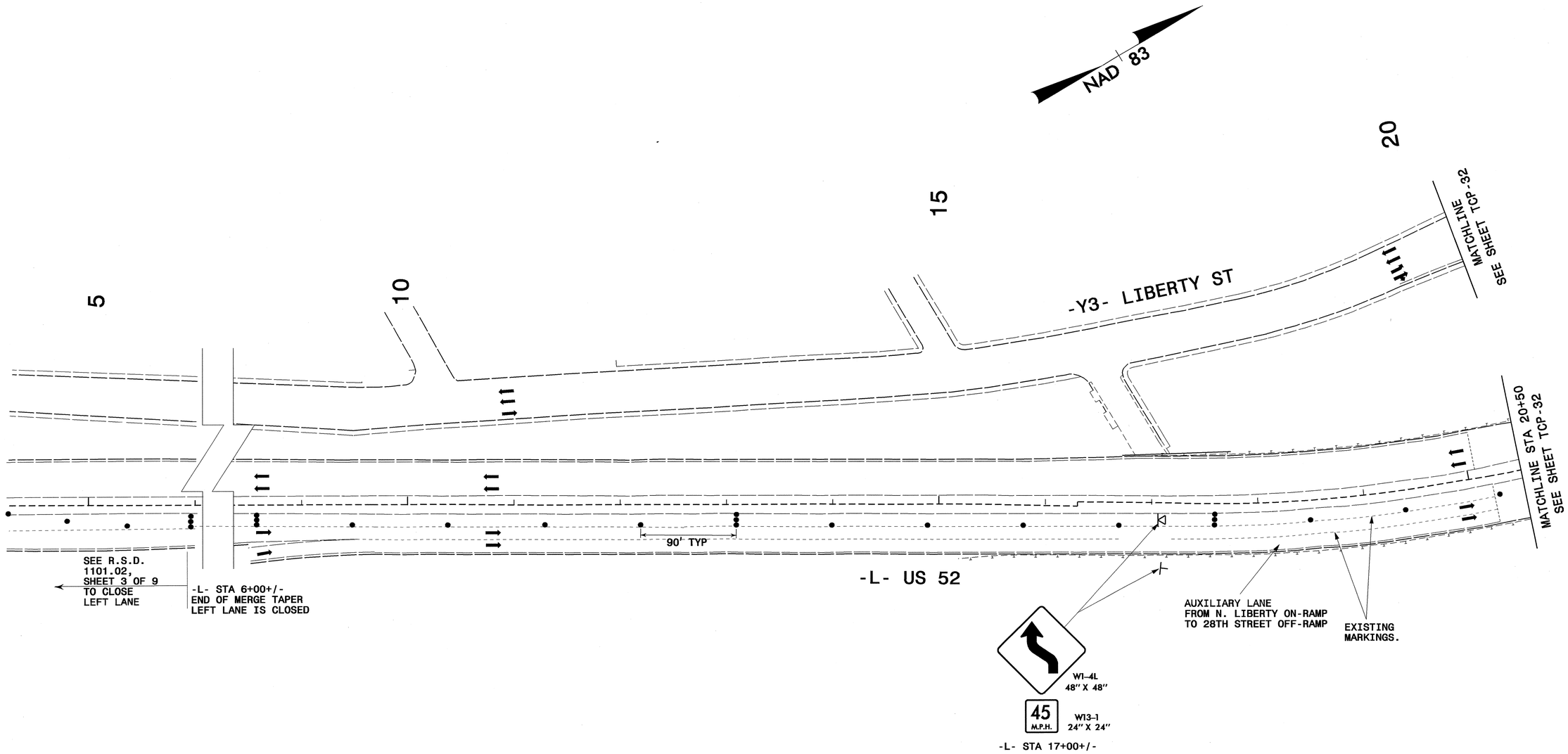

LEGEND

Traffic Flow

Construction Drums

PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: [signature] DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE

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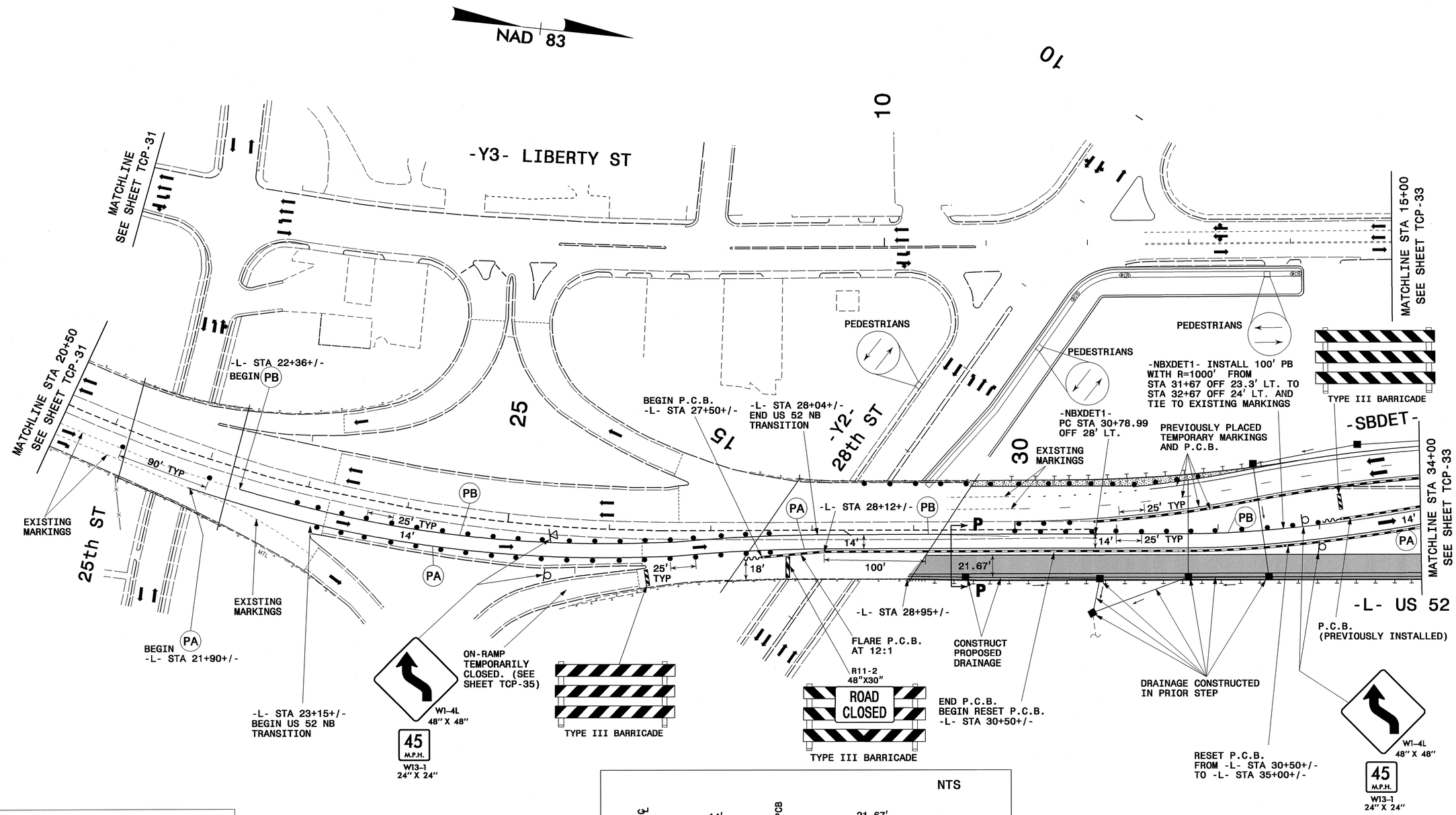


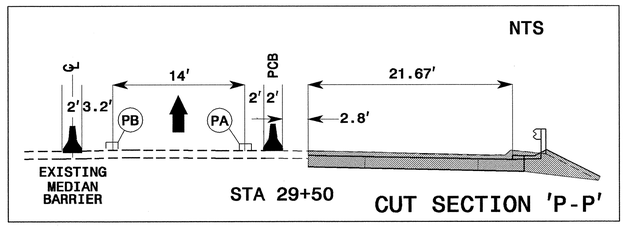
LEGEND

- Proposed Construction
- Completed Construction
- Drainage Flow
- Traffic Flow
- Construction Drums

PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PB	YELLOW EDGELINE	PAINT (4")

NTS



PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: DATE: 4/29/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE

24-APR-2009 08:26
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2054 AT RALSOKTMCI

PROJ. REFERENCE NO.	SHEET NO.
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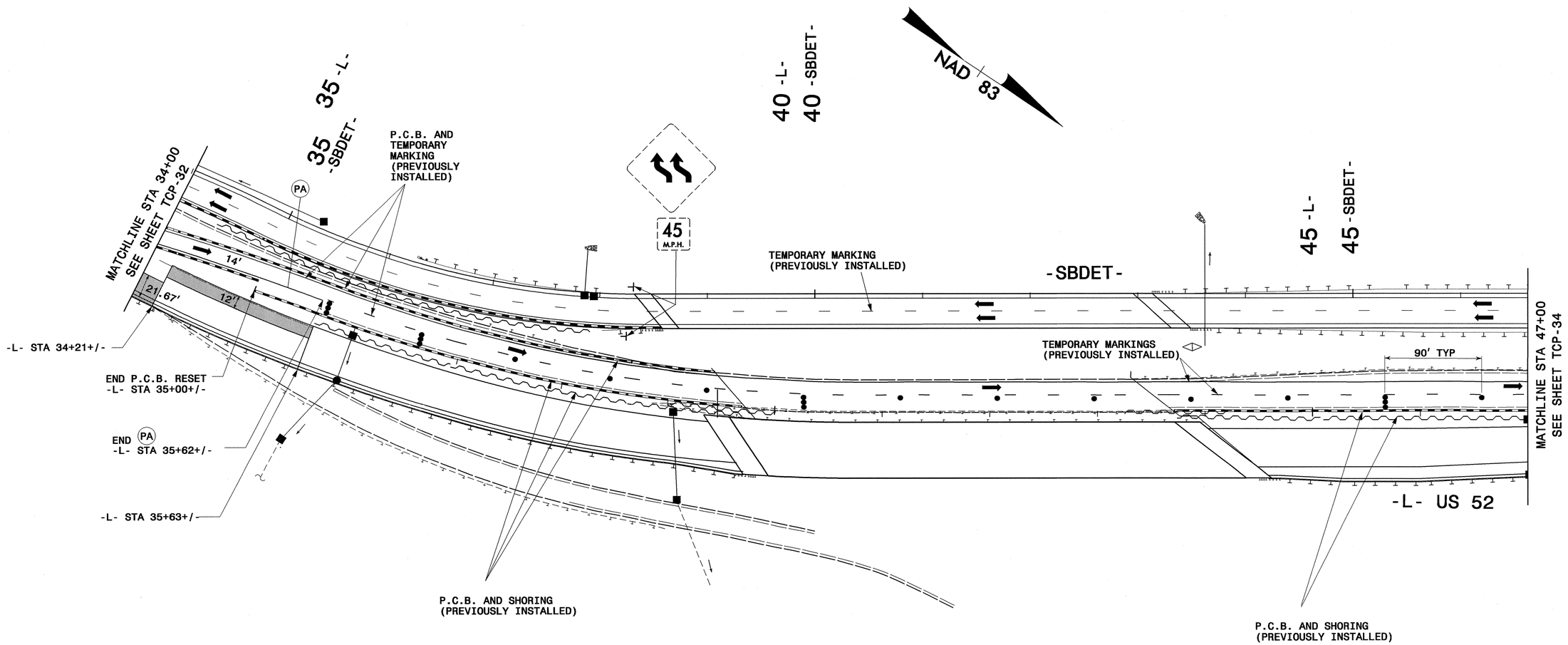

LEGEND

Proposed Construction	
Completed Construction	
Proposed Temporary Widening	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	● ● ●

PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PB	YELLOW EDGELINE	PAINT (4")

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

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

REVISIONS

CADD FILE

23-APR-2009 14:33
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22094 AT RALSOKWCI

PROJ. REFERENCE NO.	SHEET NO.
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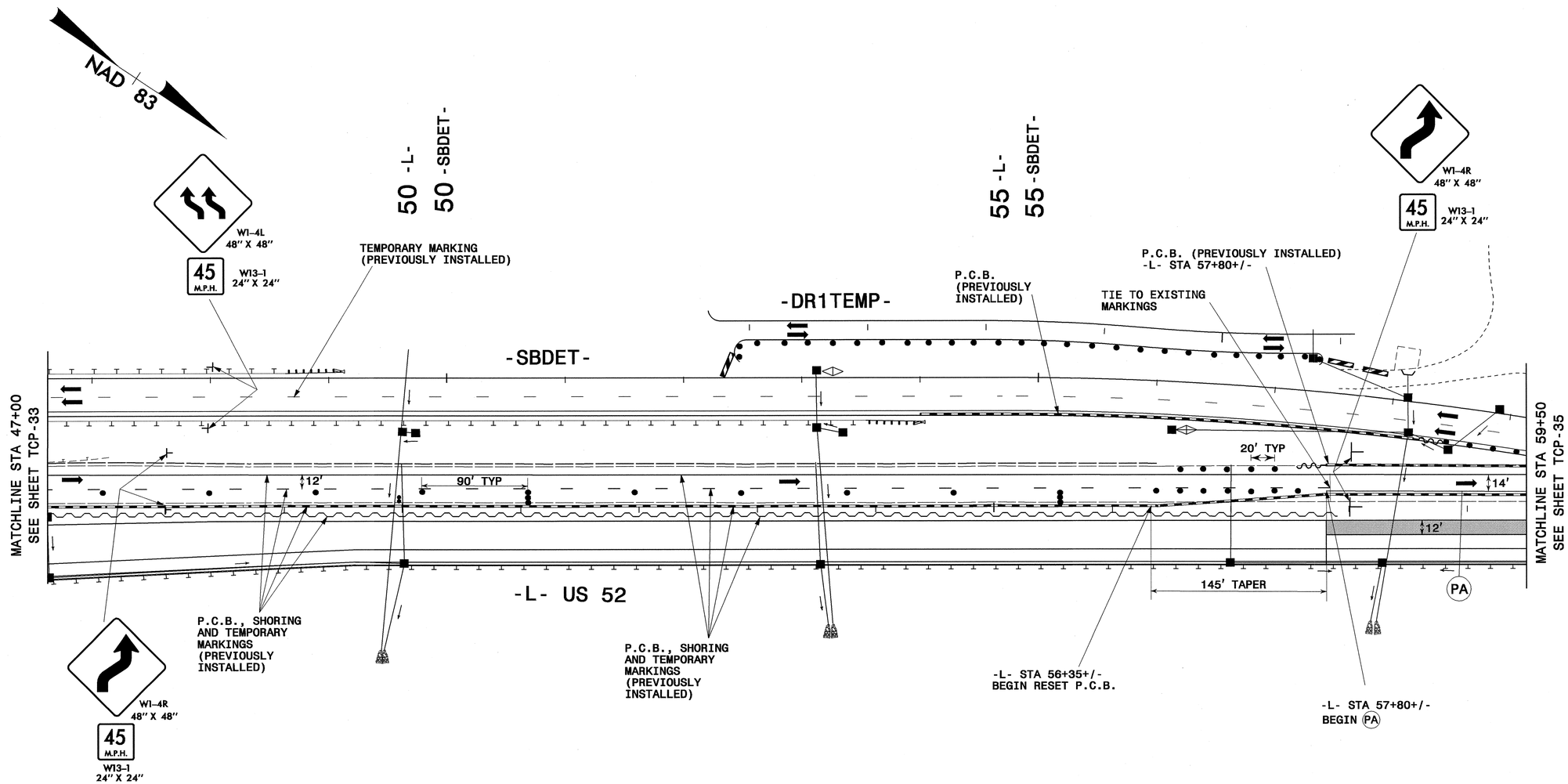

LEGEND

Proposed Construction	
Completed Construction	
Proposed Temporary Widening	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	● ● ●

PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PB	YELLOW EDGELINE	PAINT (4")

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

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

REVISIONS

CADD FILE

23-APR-2009 14:33
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12054 AT RALSOKYMCI

PROJ. REFERENCE NO.	SHEET NO.
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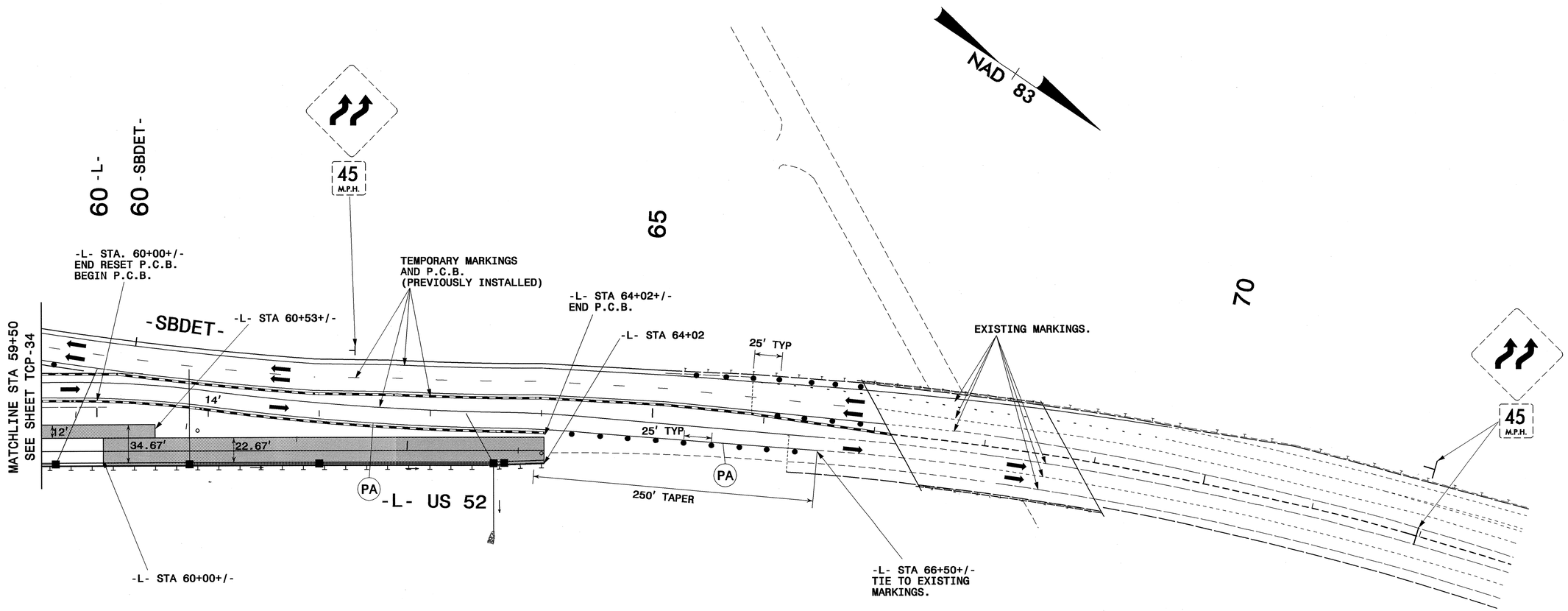

PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")

LEGEND

Proposed Construction	
Completed Construction	
Proposed Temporary Widening	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	● ● ●

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

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

REVISIONS

CADD FILE

24-APR-2009 08:26
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12054 AT RALSOKYMCI

PROJ. REFERENCE NO.	SHEET NO.
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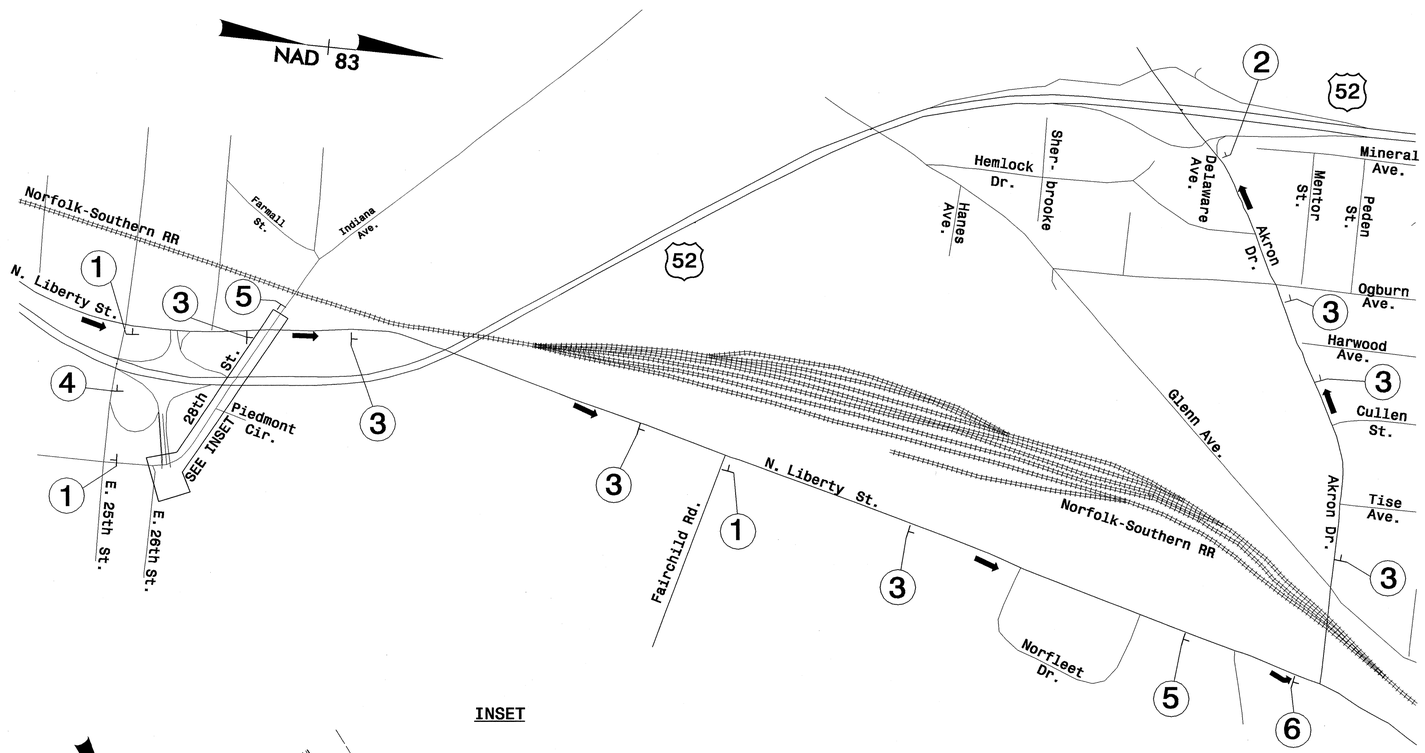

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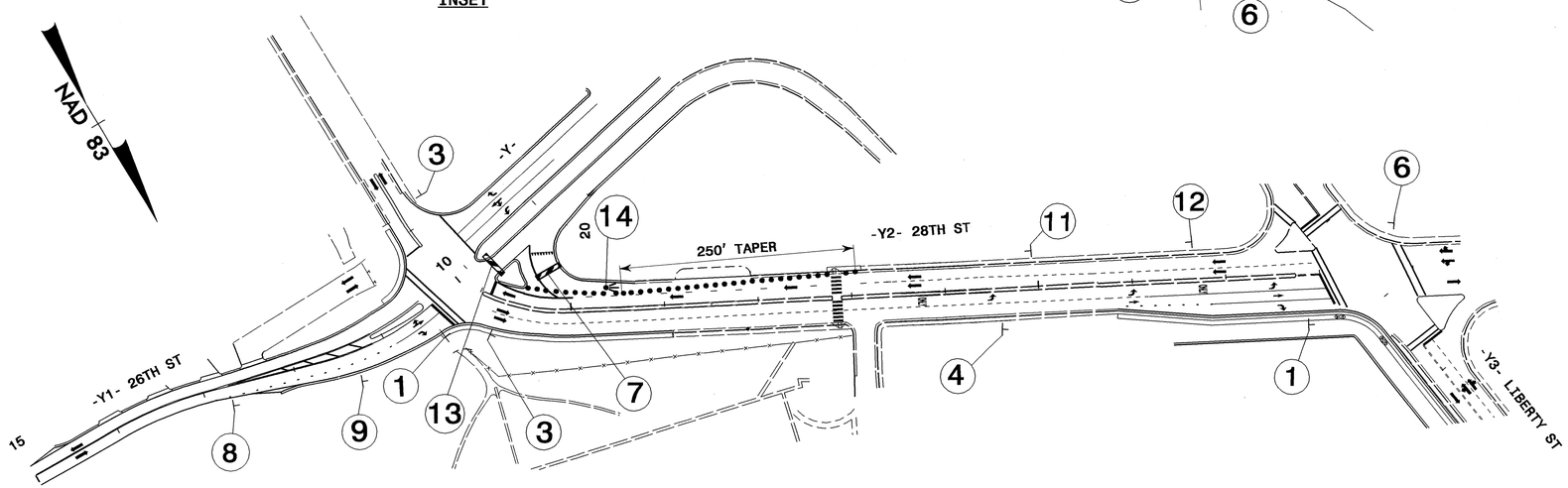

1 — M4-8 24" X 12" / M4-5 / M3-1 24" X 12" / M1-5 / M6-1 21" X 15"

2 — M4-8 24" X 12" / M4-5 / M3-1 24" X 12" / M1-5 / M6-2 21" X 15"

3 — M4-8 24" X 12" / M4-5 / M3-1 24" X 12" / M1-5 / M6-3 21" X 15"

4 — M4-8 / M4-5 / M3-1 / M1-5 / M5-1 R 21" X 15"

5 — M4-8 / M4-5 / M3-1 / M1-5 / M5-1 L 21" X 15"

6 — M4-8 / M4-5 / M3-1 / M1-5 / M6-1 L 21" X 15"

7 — R11-2 48"X30" ROAD CLOSED — TYPE III BARRICADE

8 — RAMP CLOSED AHEAD W20-3 48" X 48"

9 — DETOUR AHEAD W20-2 48" X 48"

10 — ROAD CLOSED AHEAD W20-3 48" X 48"

11 — RIGHT LANE CLOSED W20-5 R 48" X 48"

12 — W4-2 R 48" X 48"

13 — R11-2 48"X30" ROAD CLOSED W1-6 48"X24" — TYPE III BARRICADE

14

LEGEND

Traffic Flow

Construction Drums

APPROVED: DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II
-Y- ON-RAMP TO US 52 NB
Detour Plan

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

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

REVISIONS

CADD FILE

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

23-APR-2009 14:34
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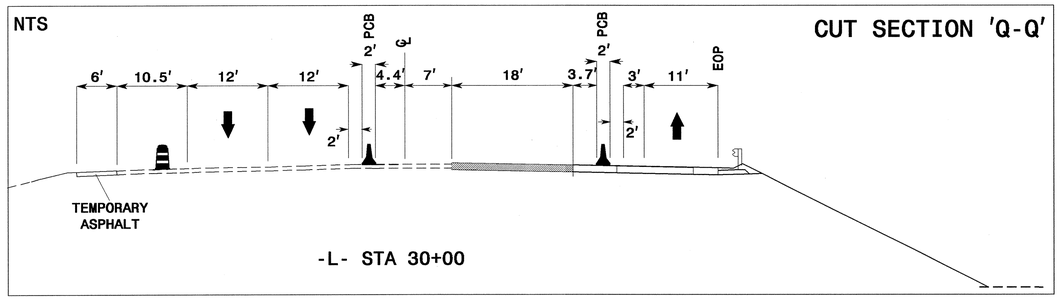
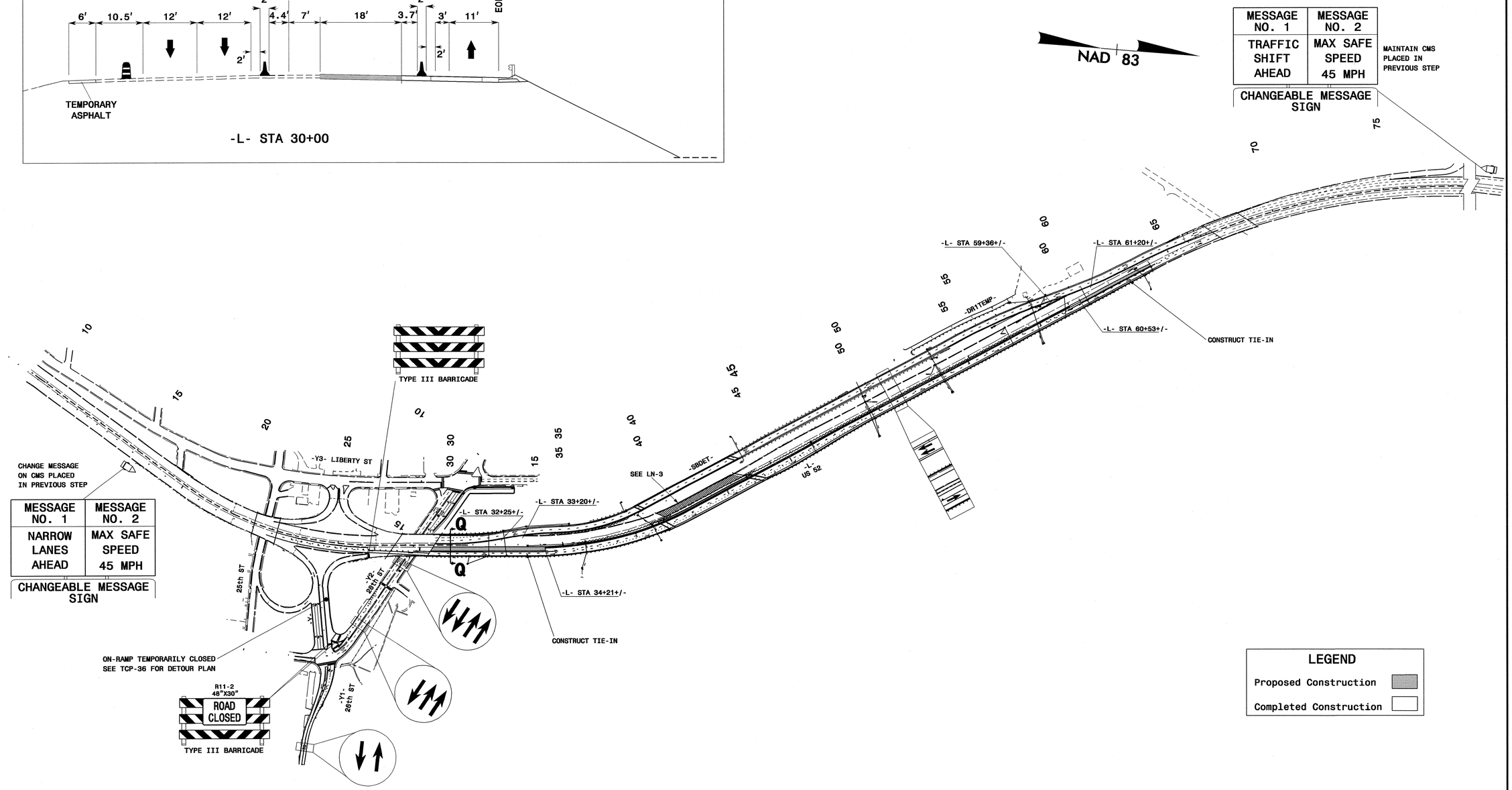
12054 AT RALSGKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-37





LEGEND

- Proposed Construction
- Completed Construction

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II OVERVIEW 4

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

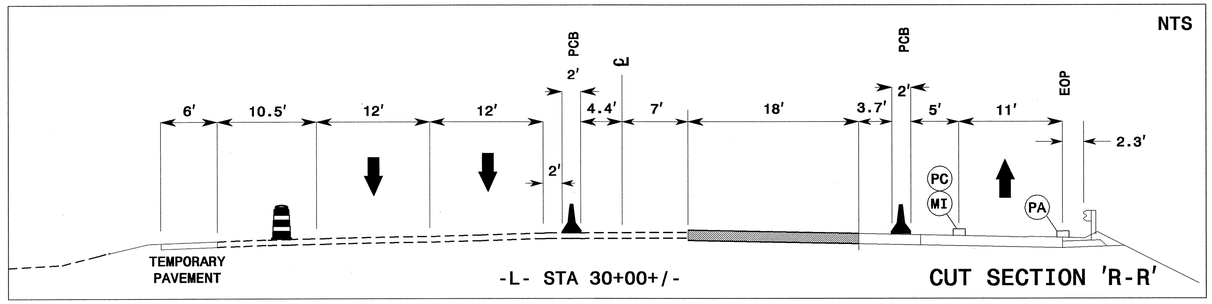
REVISIONS

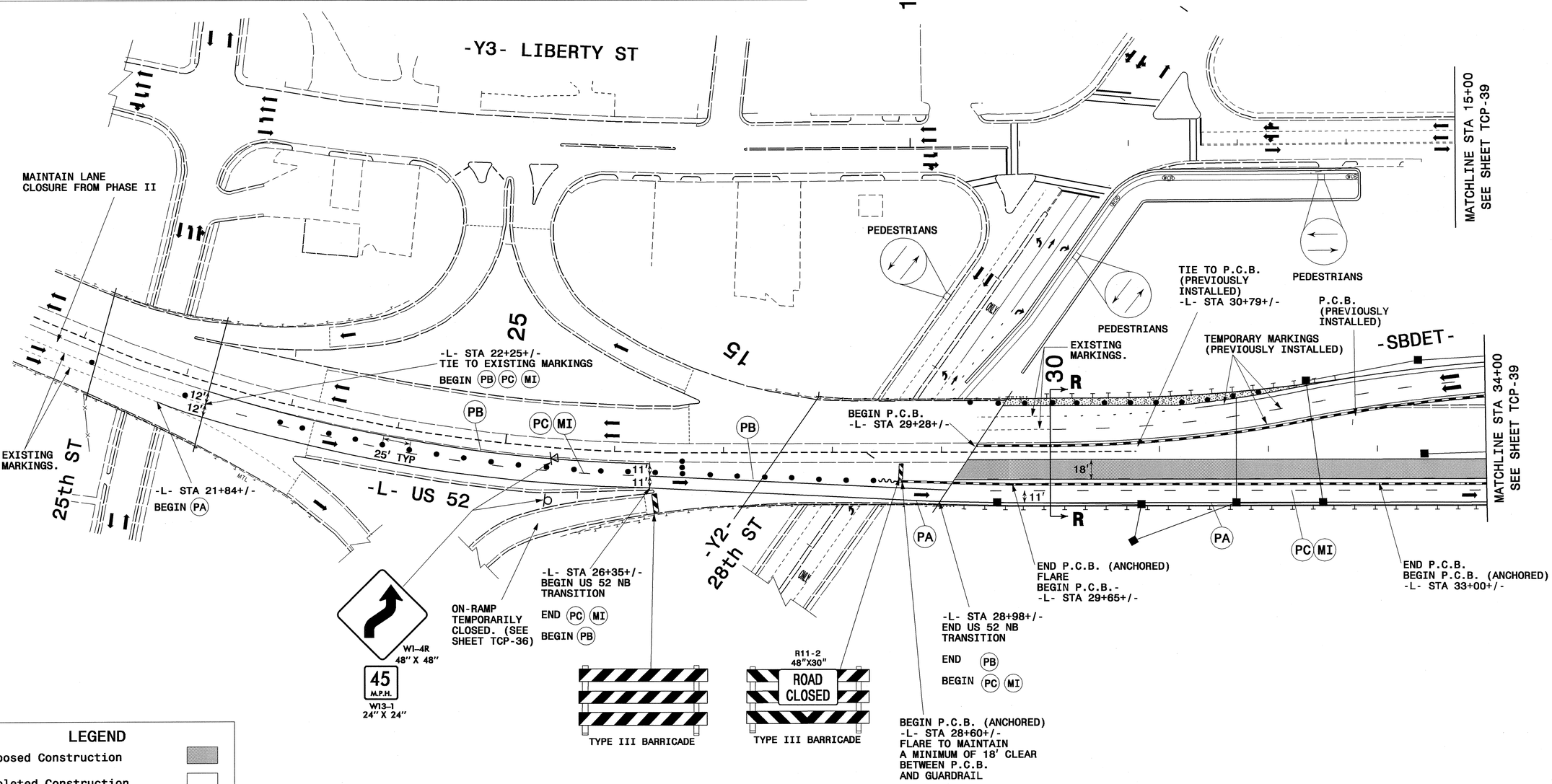
CADD FILE

PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

23-APR-2009 14:34
G:\TEG\Cur\U0006004 U2826A\TCP\u2826a_tc_TCP37.dgn
12094 AT RALSGKMC

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-38





LEGEND

- Proposed Construction
- Completed Construction
- Proposed Temporary Widening
- Drainage Flow
- Traffic Flow
- Construction Drums

PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PB	YELLOW EDGELINE	PAINT (4")
PC	10 FT.- 13 FT. WHITE SKIP	PAINT (4")
MI	CRYSTAL & RED TEMP. RAISED PAVEMENT MARKER	

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

REVISIONS

CADD FILE

23-APR-2009 14:34
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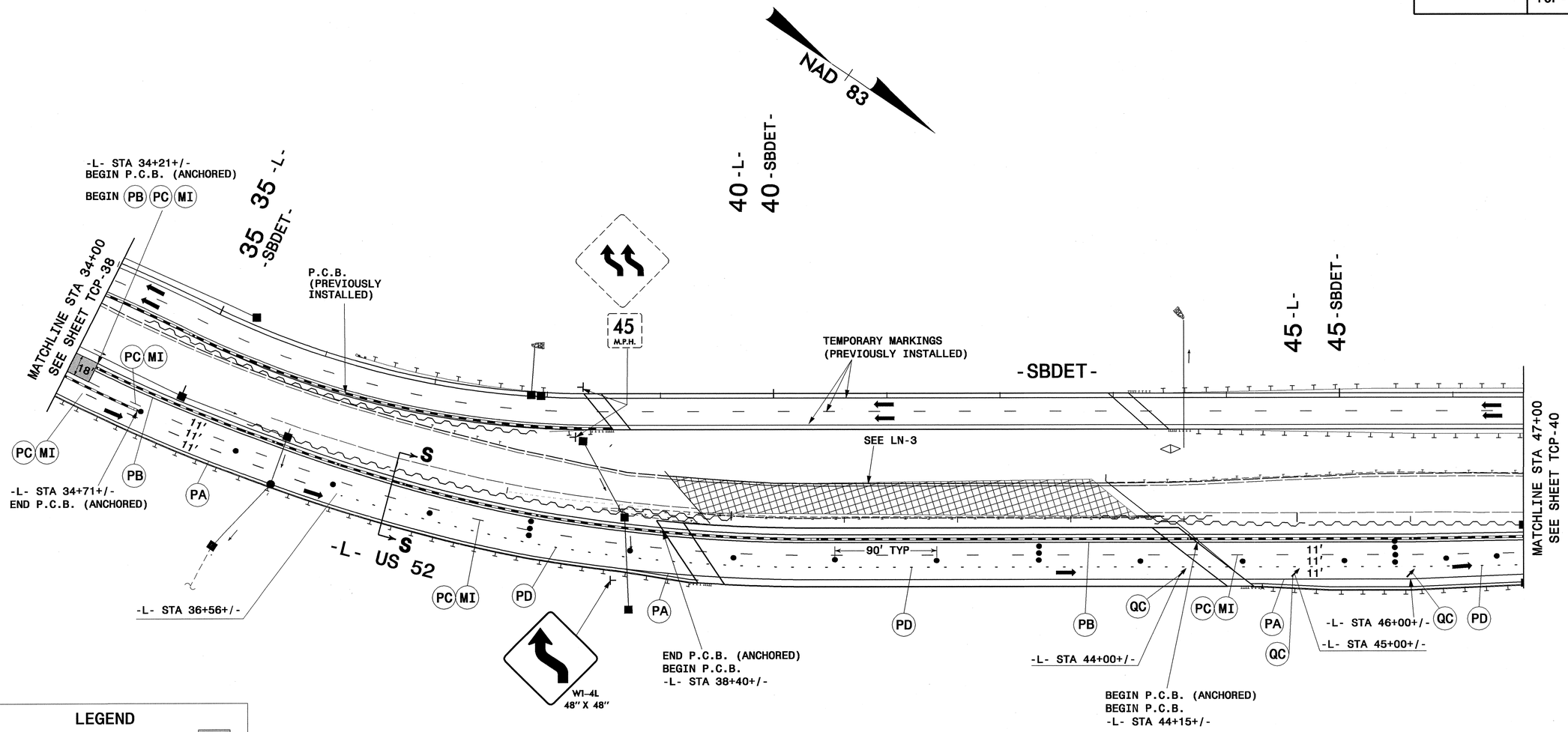
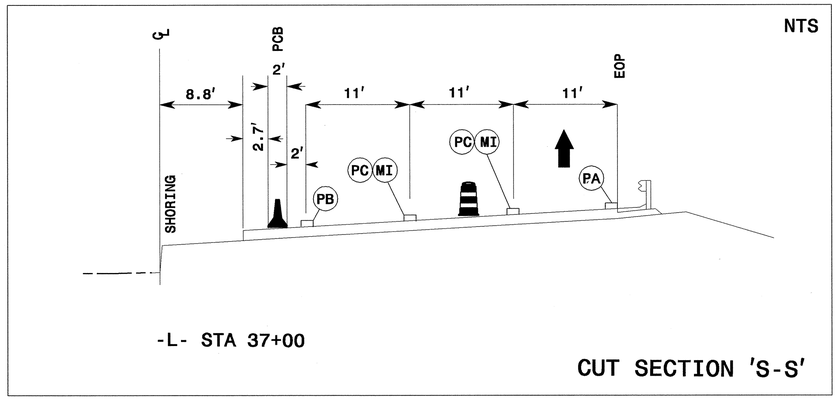
12054 AT RAL5GR1MCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-39



LEGEND

Proposed Construction	
Completed Construction	
Proposed Temporary Widening	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	● ● ●



PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PB	YELLOW EDGELINE	PAINT (4")
PC	10 FT.- 13 FT. WHITE SKIP	PAINT (4")
PD	2 FT.- 13 FT. WHITE MINISKIP	PAINT (4")
QC	STRAIGHT ARROW MARKING SYMBOL	PAINT
MI	CRYSTAL & RED TEMP. RAISED PAVEMENT MARKER	

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/23/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

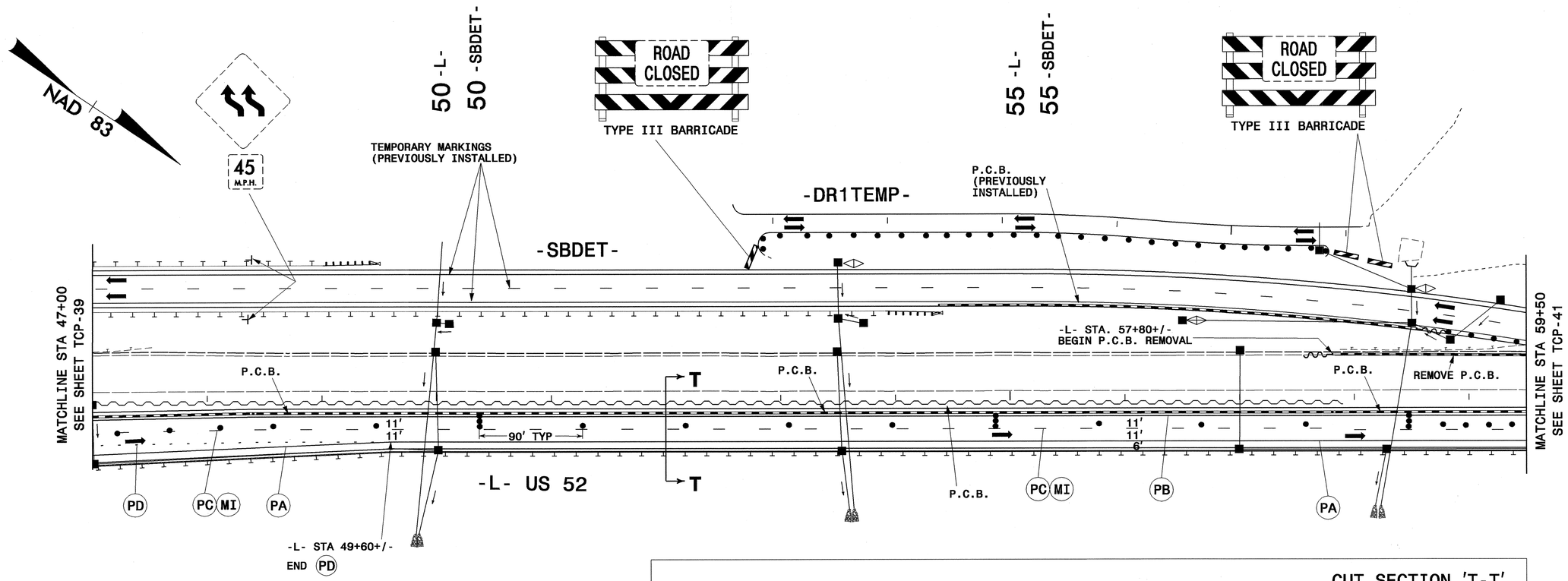
DIVISION OF HIGHWAYS

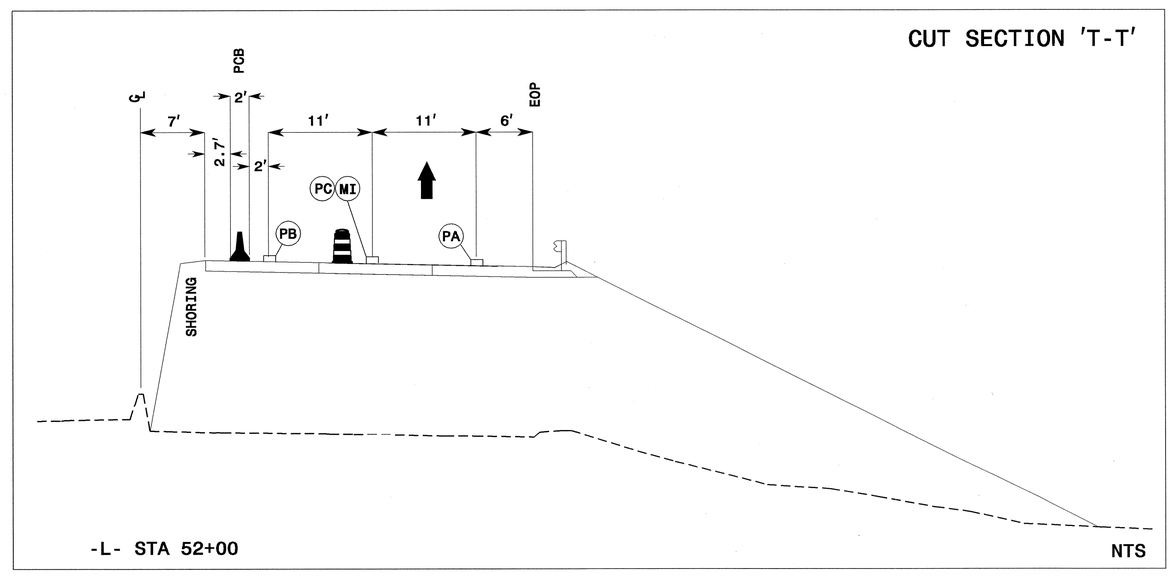
REVISIONS

CADD FILE

24-APR-2009 08:33
G:\TEG\Curr\U0006004 U2826A\TCP\u2826a_tc_TCP39.dgn
12054 AT RAL5GKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-40





LEGEND

Proposed Construction	
Completed Construction	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	● ● ●

PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PB	YELLOW EDGELINE	PAINT (4")
PC	10 FT.- 13 FT. WHITE SKIP	PAINT (4")
PD	2 FT.- 13 FT. WHITE MINISKIP	PAINT (4")
MI	CRYSTAL & RED TEMP. RAISED PAVEMENT MARKER	

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

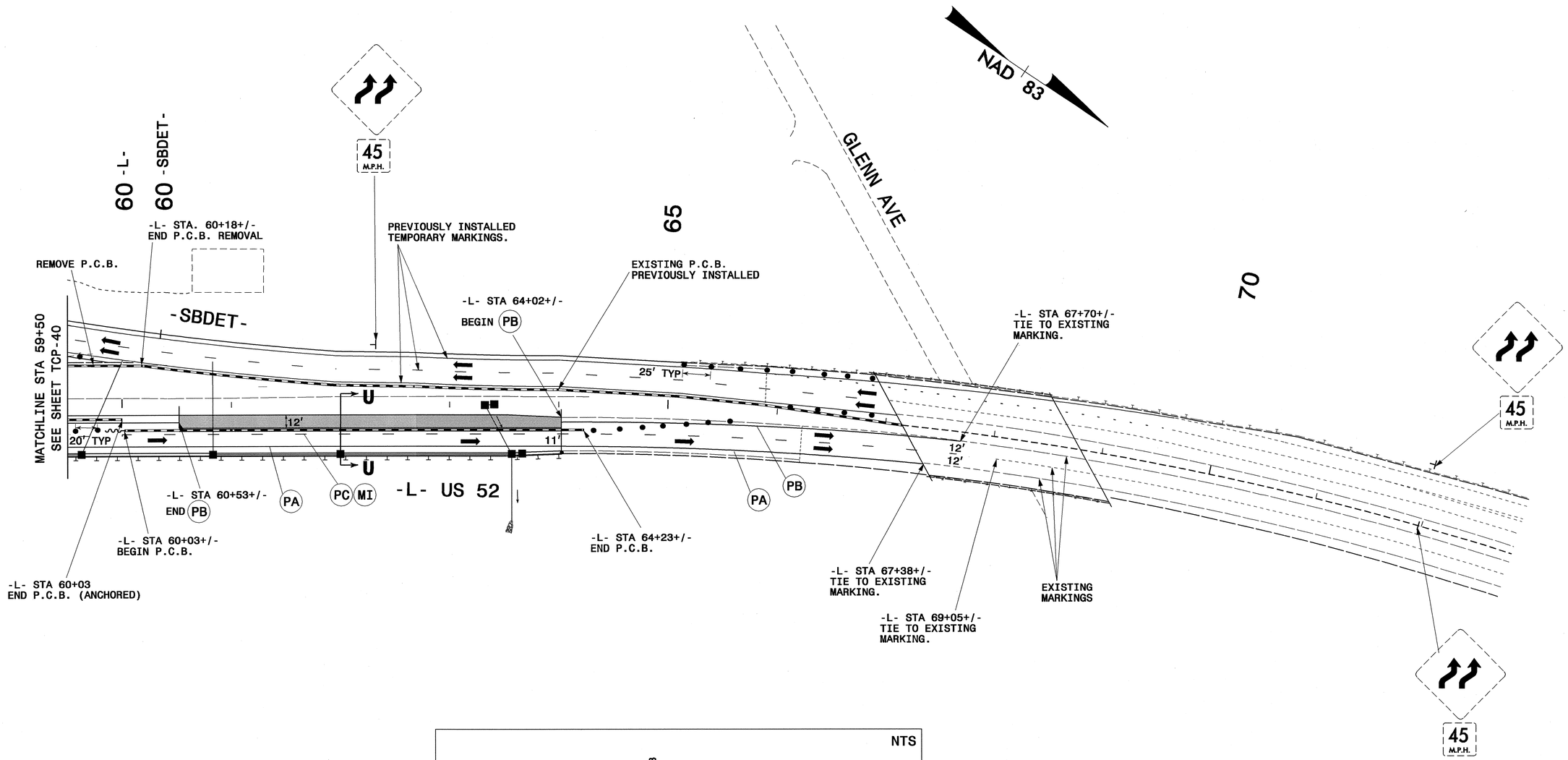
DIVISION OF HIGHWAYS — STATE OF NORTH CAROLINA — DEPARTMENT OF TRANSPORTATION — TRAFFIC CONTROL

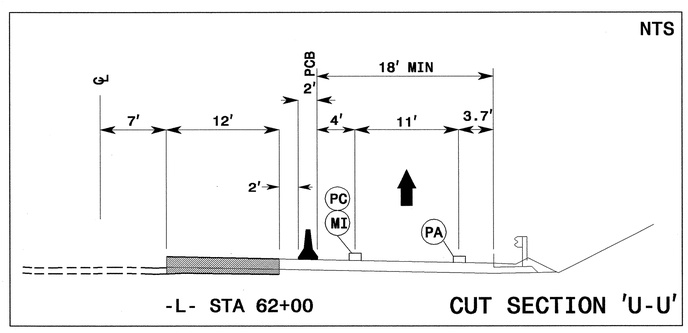
REVISIONS

CADD FILE

24-APR-2009 08:27
G:\TEG\Curr\U0006004 U2826A\TCP\u2826a_tc_TCP40.dgn
12054 AT RALSOKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-41





LEGEND

Proposed Construction	
Completed Construction	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	• • •

PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PB	YELLOW EDGELINE	PAINT (4")

PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE II DETAIL

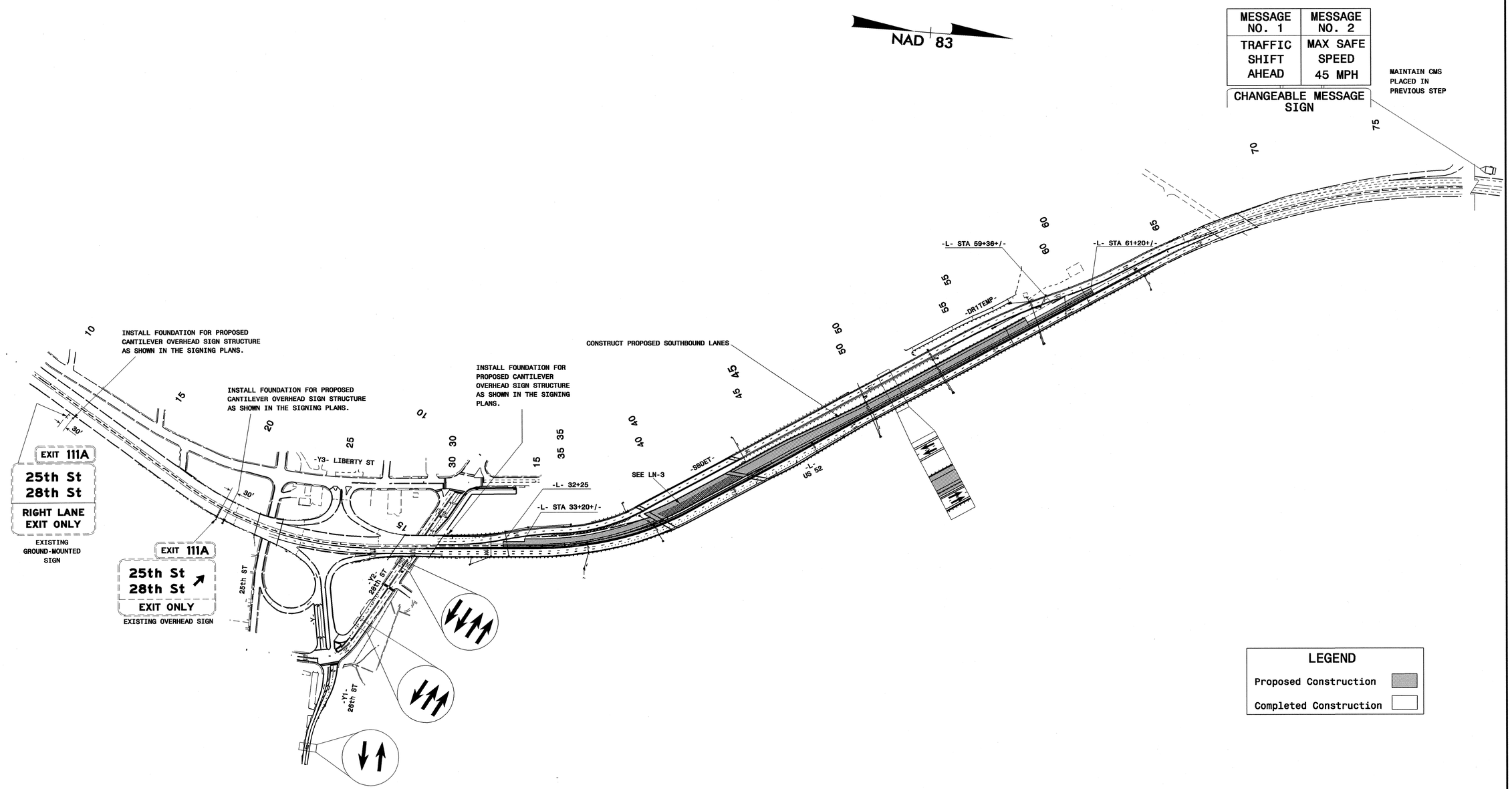
SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE

24-APR-2009 08:27
G:\TEG\Curr\U00006004 U2826A\TCP\u2826a_tc_TCP41.dgn
12054 AT RAL5GKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-42



LEGEND

Proposed Construction

Completed Construction

APPROVED: [signature] DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE III OVERVIEW 1

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

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

REVISIONS

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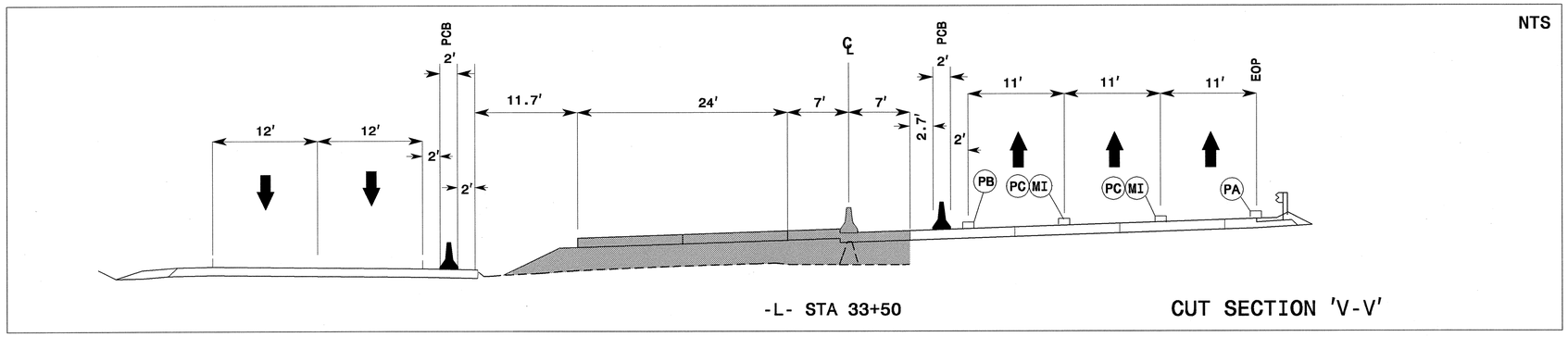
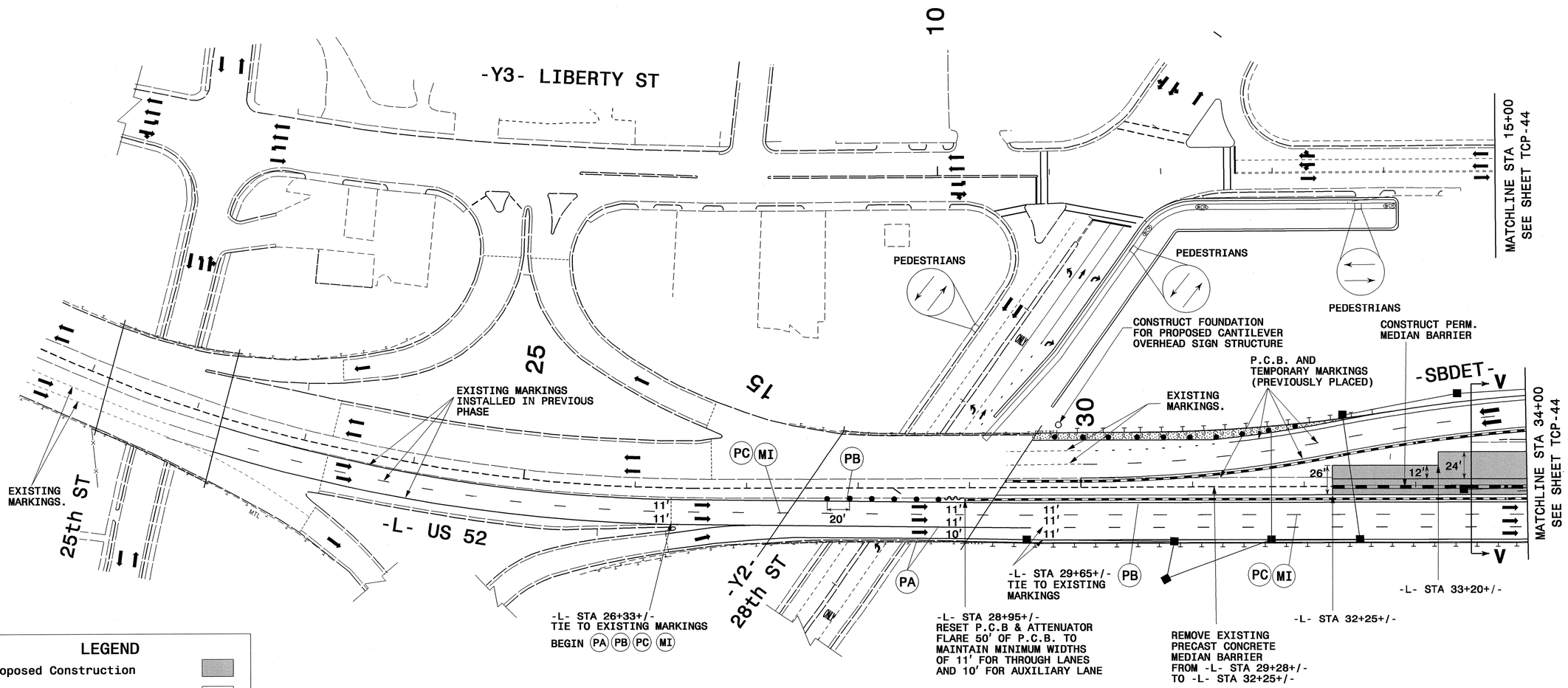
PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

23-APR-2009 14:34
G:\TEG\Curr\100006004 U2826A\TCP\u2826a_tc_TCP42.dgn
12954 AT TALSGRYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-43



NAD 83



LEGEND

- Proposed Construction
- Completed Construction
- Proposed Temporary Widening
- Drainage Flow
- Traffic Flow
- Construction Drums

PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PB	YELLOW EDGELINE	PAINT (4")
PC	10 FT.- 13 FT. WHITE SKIP	PAINT (4")
MI	CRYSTAL & RED TEMP. RAISED PAVEMENT MARKER	

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE III DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

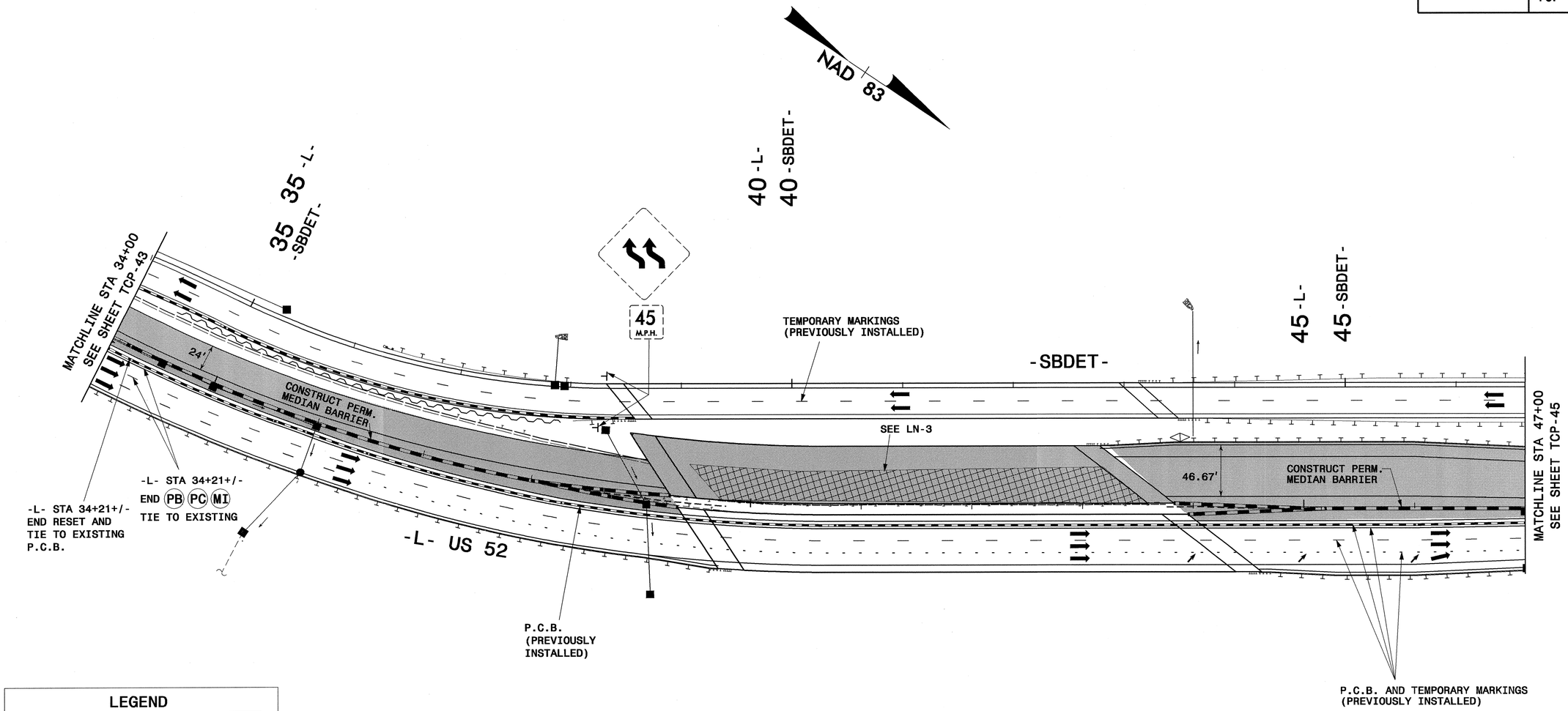
DIVISION OF HIGHWAYS

REVISIONS

CADD FILE

23-APR-2009 14:34
G:\TEG\Curr\U0006004 U2826A\TCP\u2826a_tc_TCP43.dgn
12054 AT RALSOKTMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-44



LEGEND

Proposed Construction	
Completed Construction	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	• • •

PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PB	YELLOW EDGELINE	PAINT (4")
PC	10 FT.- 13 FT. WHITE SKIP	PAINT (4")
PD	2 FT.- 13 FT. WHITE MINISKIP	PAINT (4")
MI	CRYSTAL & RED TEMP. RAISED PAVEMENT MARKER	

PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: [signature] DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE III DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE

23-APR-2009 14:53
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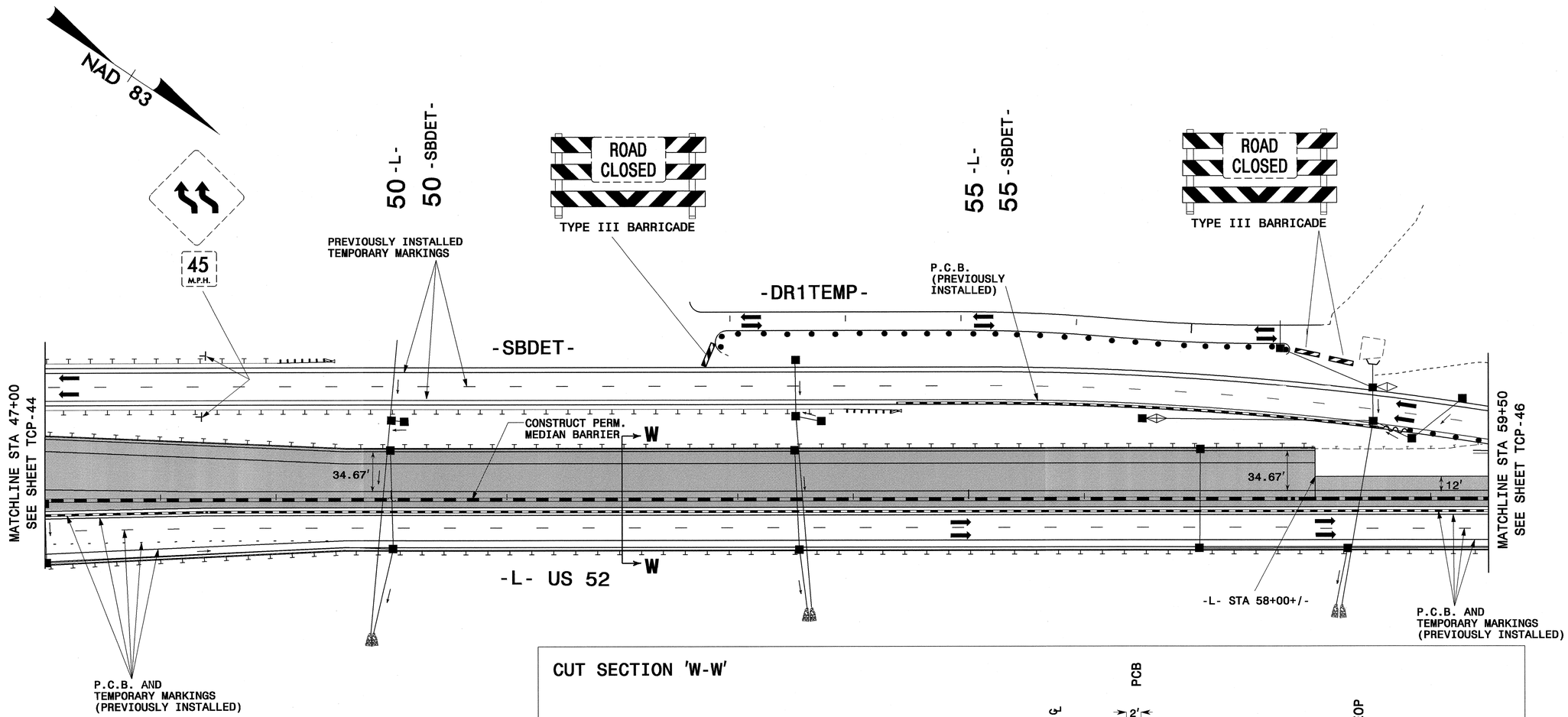
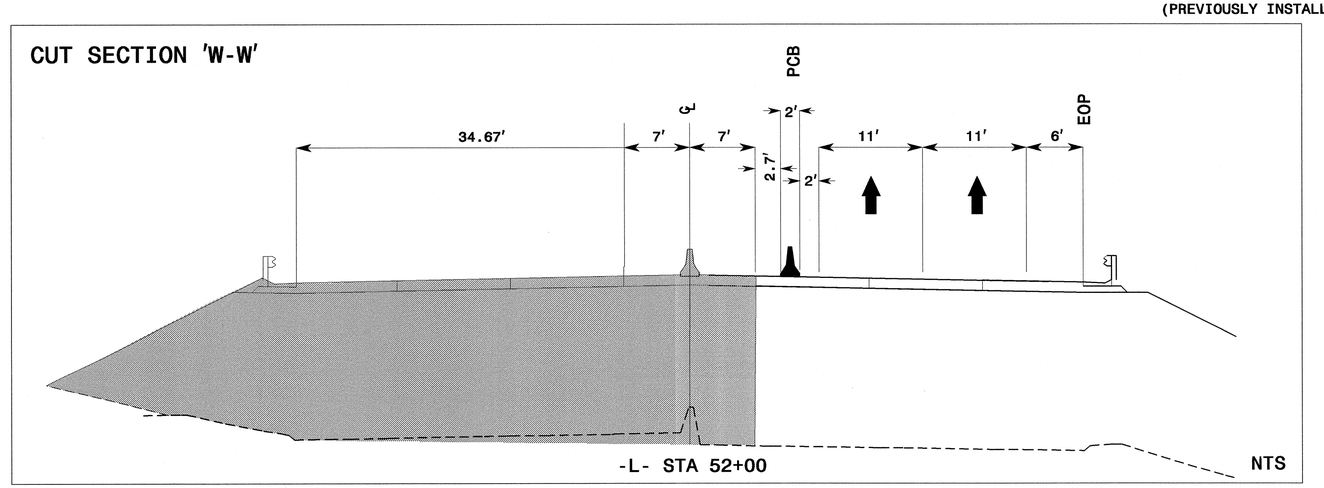
12054 AT RAL5GKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-45



LEGEND

- Proposed Construction
- Completed Construction
- Drainage Flow
- Traffic Flow
- Construction Drums



APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE III DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

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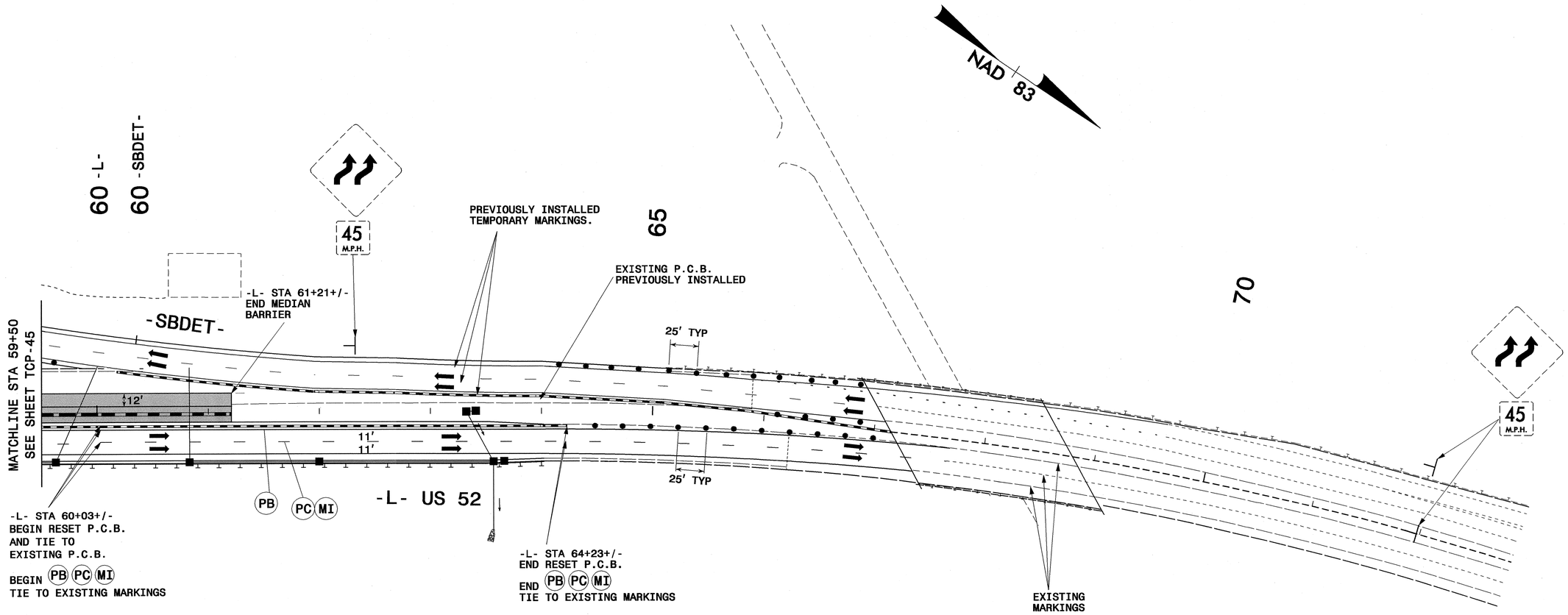
PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

23-APR-2009 14:34
G:\TEG\Curr\100006004 U2826A\TCP\u2826a_tc_TCP45.dgn
12054 AT RAL5GKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-46



LEGEND

Proposed Construction	
Completed Construction	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	• • •

PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PB	YELLOW EDGELINE	PAINT (4")
PC	10 FT.- 13 FT. WHITE SKIP	PAINT (4")
MI	CRYSTAL & RED TEMP. RAISED PAVEMENT MARKER	

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE III DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE

24-APR-2009 08:27
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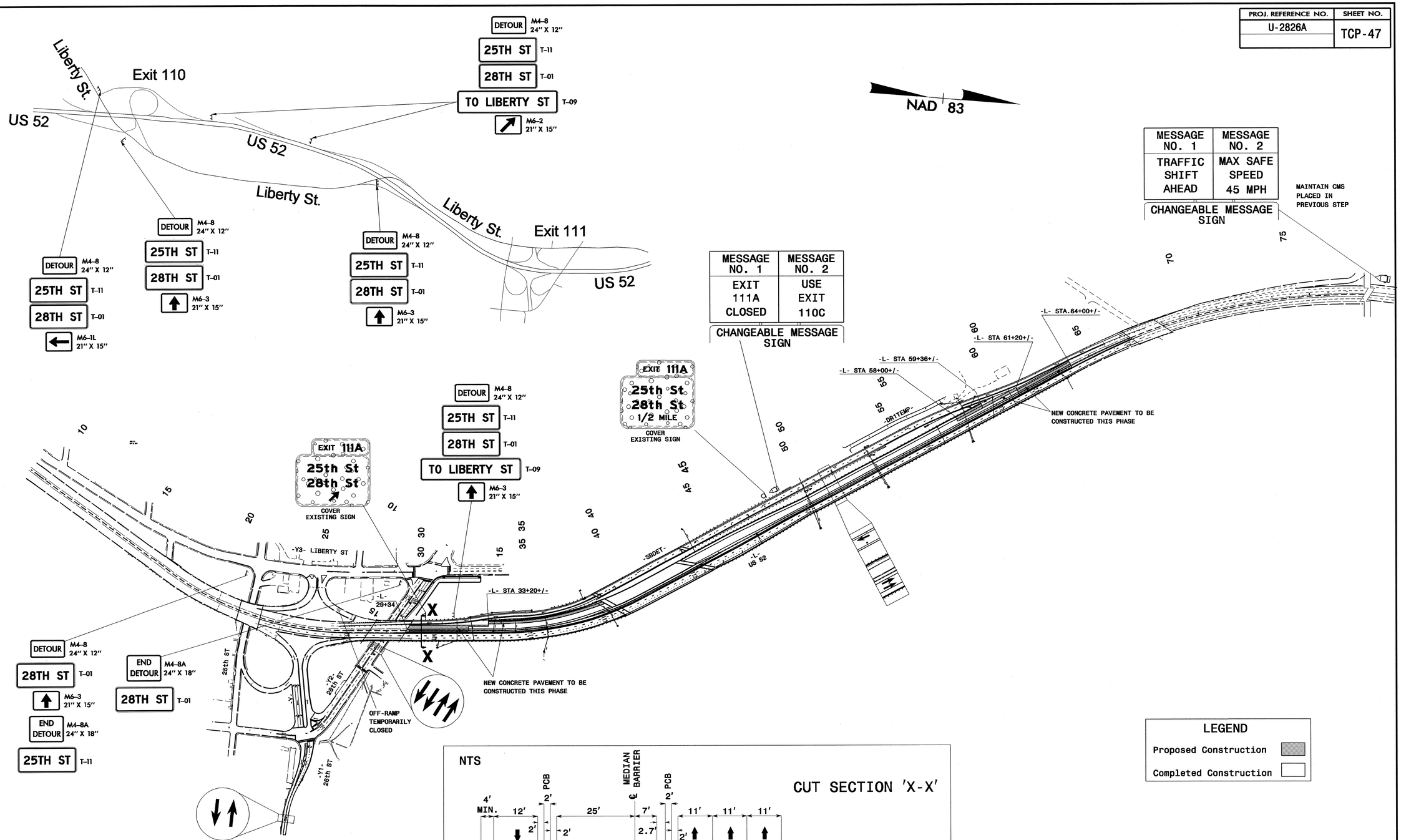
12054 AT RAL5GKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-47



PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE III OVERVIEW 2

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

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

REVISIONS

CADD FILE

23-APR-2009 14:35
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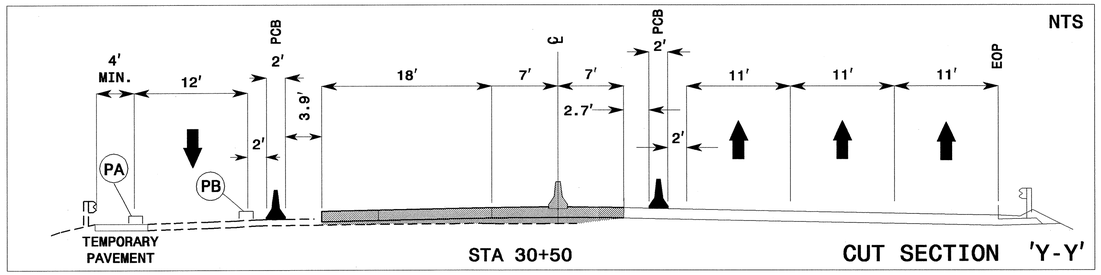
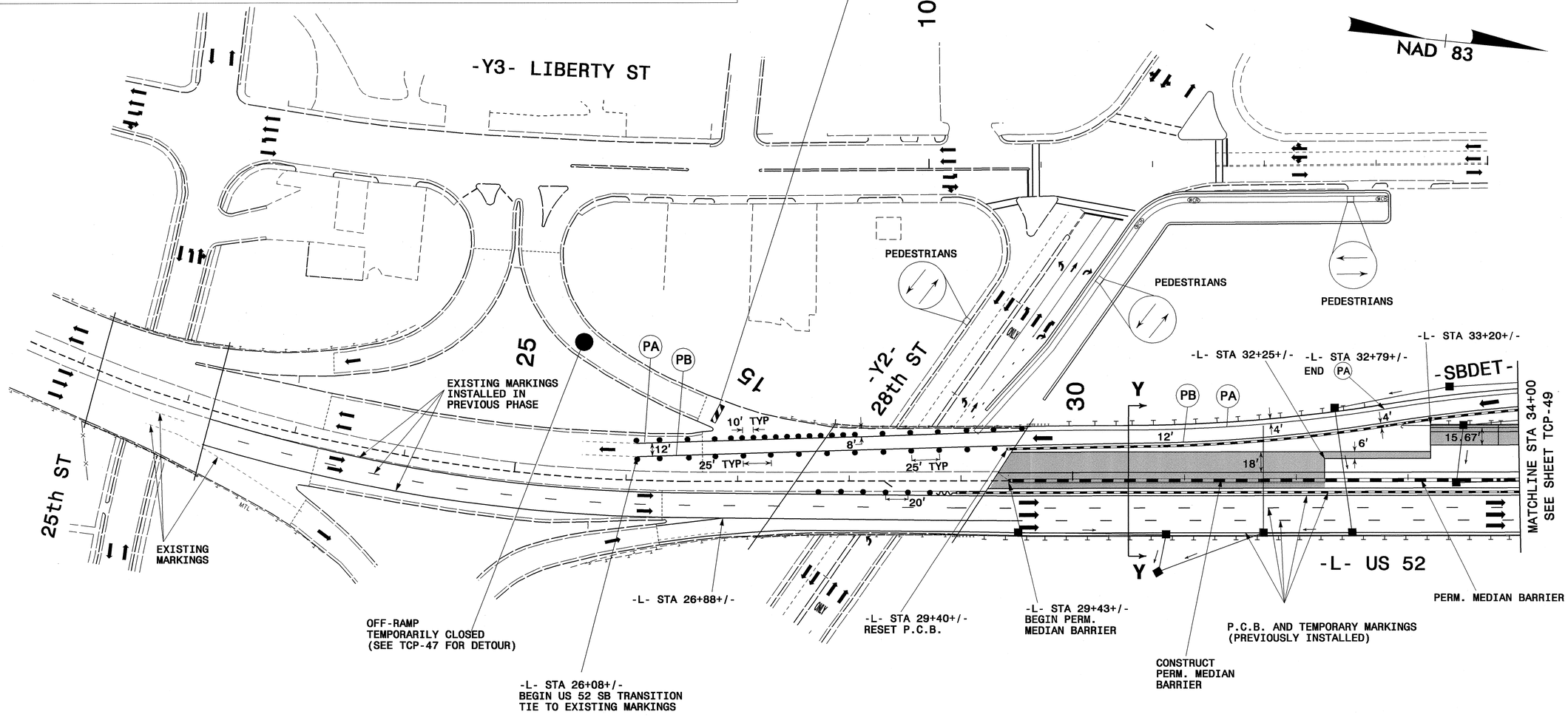
12954 AT RALSGKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-48

SEE SHEET TCP-47 FOR 25TH ST / 28TH ST RAMP CLOSURE DETOUR





LEGEND

Proposed Construction	
Completed Construction	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	• • •

PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PB	YELLOW EDGELINE	PAINT (4")
PC	10 FT.- 30 FT. WHITE SKIPS	PAINT (4")
MI	CRYSTAL & RED TEMP. RAISED PAVEMENT MARKER	

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: [signature] DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE III DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE

23-APR-2009 14:35
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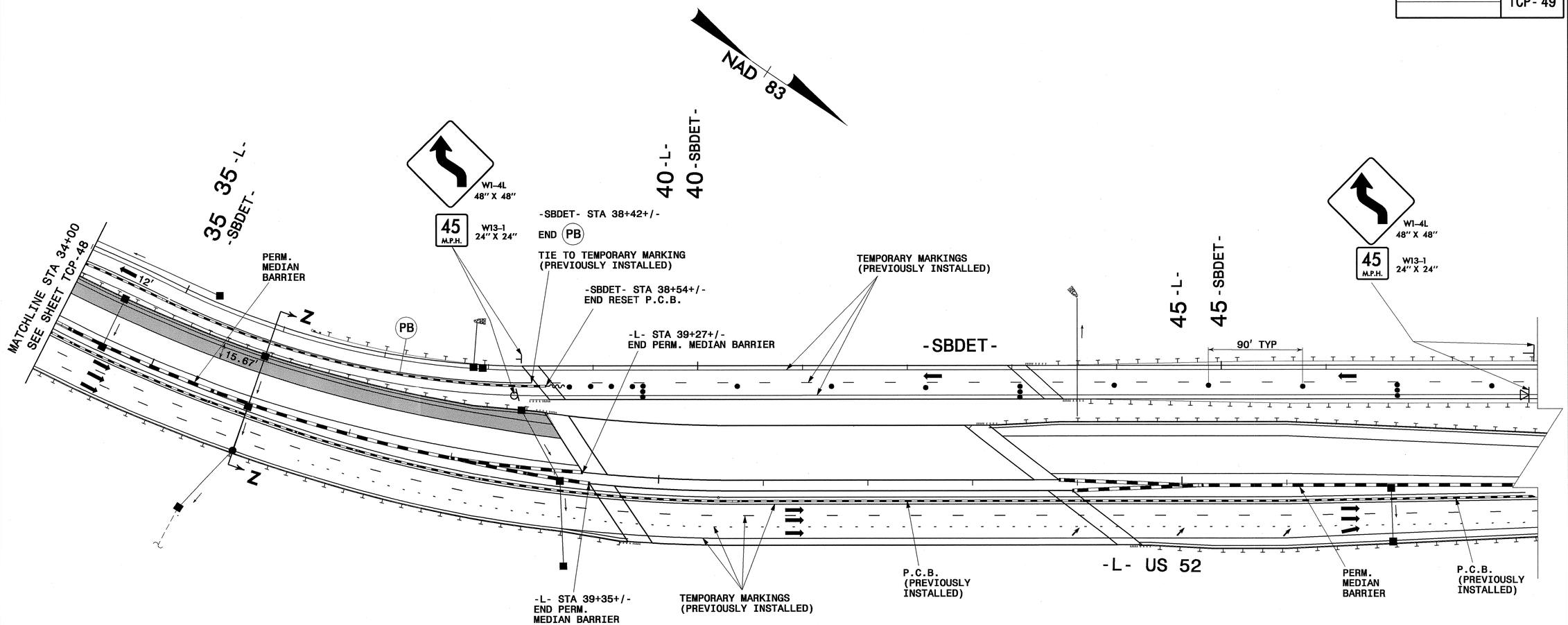
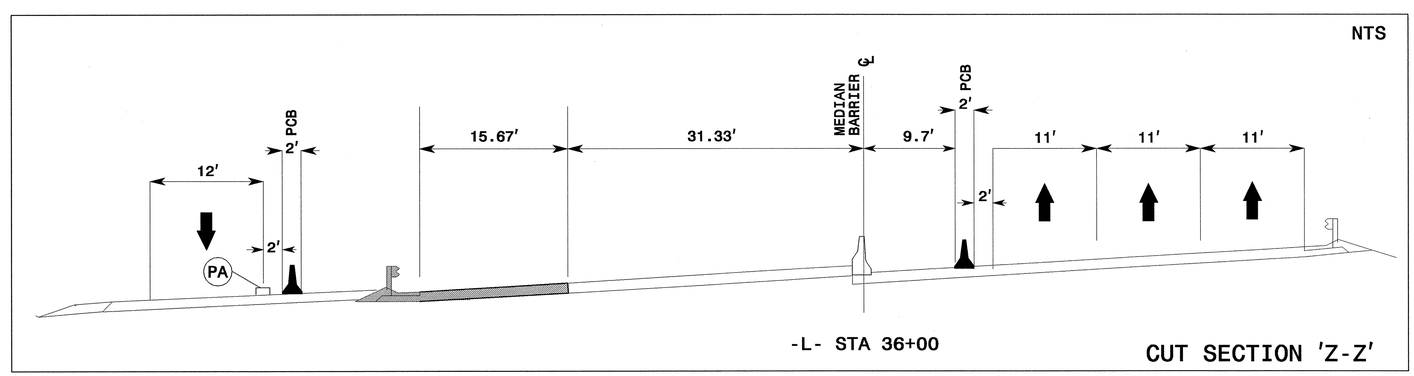
12054 AT RAL5GKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP- 49





LEGEND

- Proposed Construction
- Completed Construction
- Drainage Flow
- Traffic Flow
- Construction Drums

PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PB	YELLOW EDGELINE	PAINT (4")

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE III DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

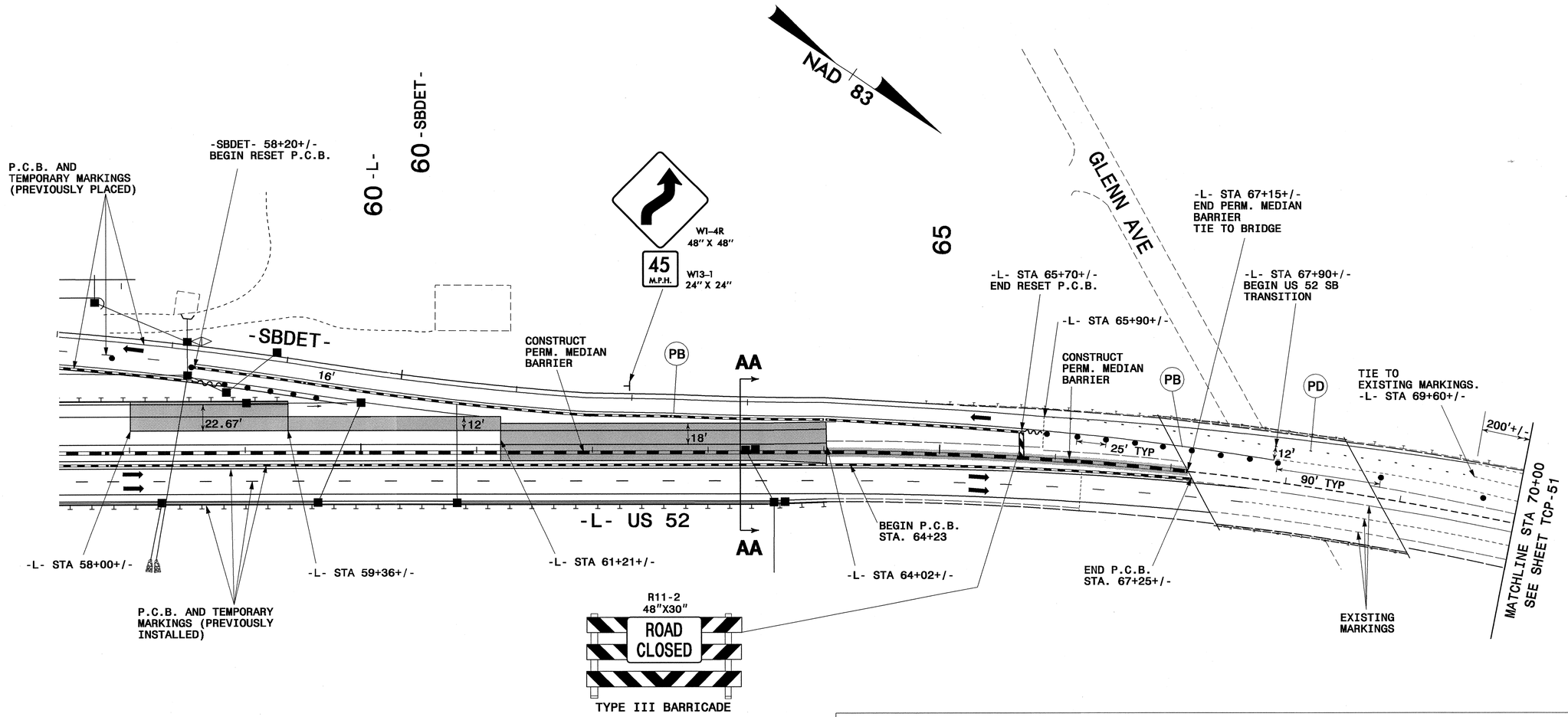
DIVISION OF HIGHWAYS — STATE OF NORTH CAROLINA — DEPARTMENT OF TRANSPORTATION — TRAFFIC CONTROL UNIT

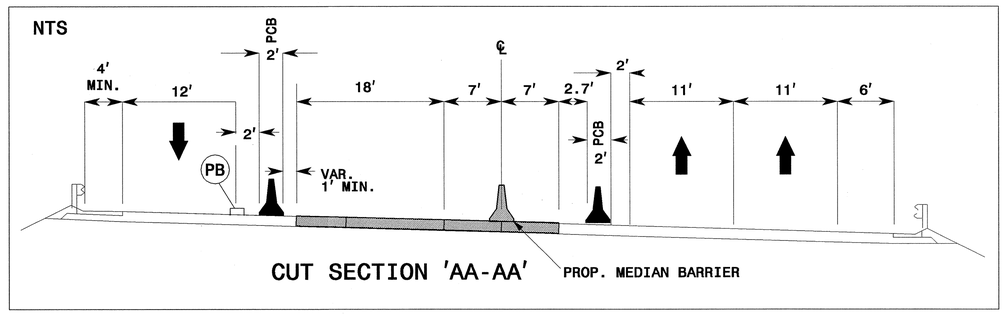
REVISIONS

CADD FILE

23-APR-2009 14:35
G:\TEG\CUF\10006004 U2826A\TCP\u2826a_tc_TCP49.dgn
12094 AT RALSOKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-50





LEGEND

Proposed Construction	
Completed Construction	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	● ● ●

PAVEMENT MARKING SCHEDULE

PB	YELLOW EDGELINE	PAINT (4")
PC	10 FT. WHITE SKIP	PAINT (4")
PD	2 FT. WHITE MINISKIP	PAINT (4")

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: DATE: 4/24/09

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NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE III DETAIL

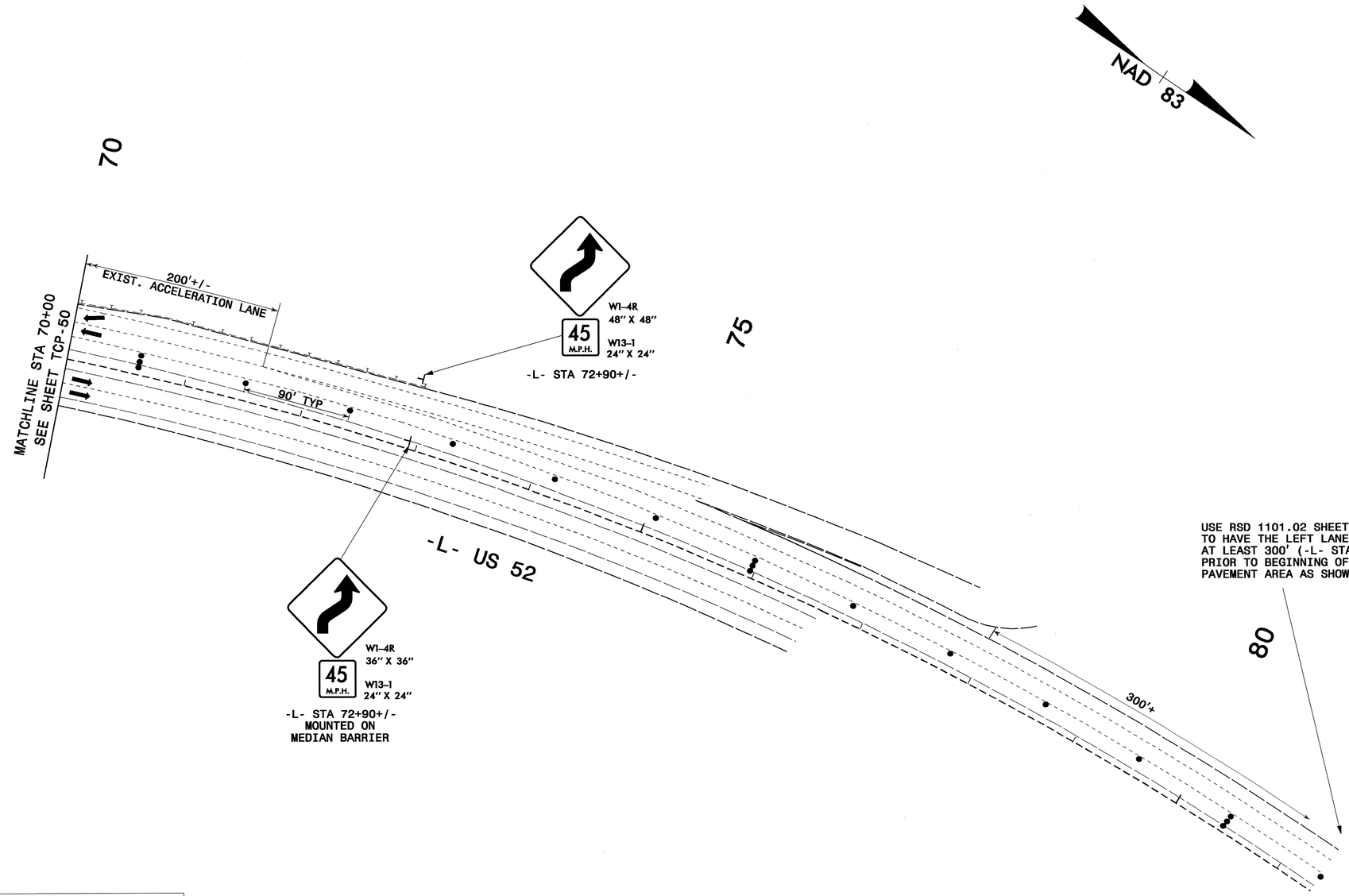
SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE

24-APR-2009 08:28
G:\TEG\Curr\U0006004 U2826A\TCP\u2826a_tc_TCP50.dgn
12034 AT RALSOKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-51



LEGEND

Proposed Construction	
Completed Construction	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	● ● ●

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE III DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

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

REVISIONS

CADD FILE

23-APR-2009 14:35
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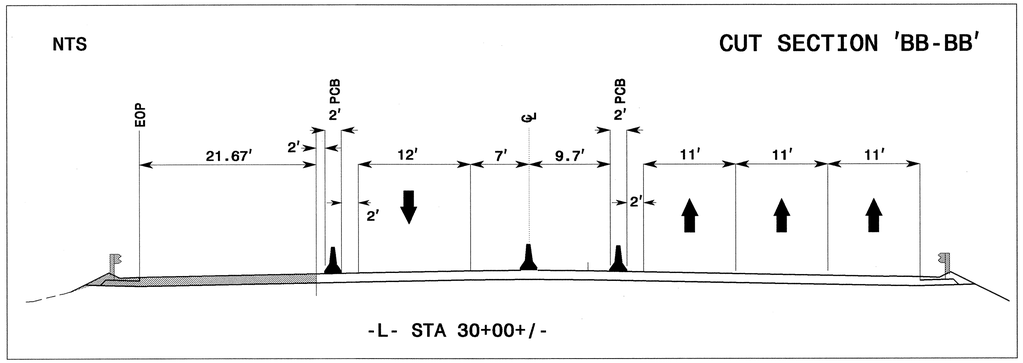
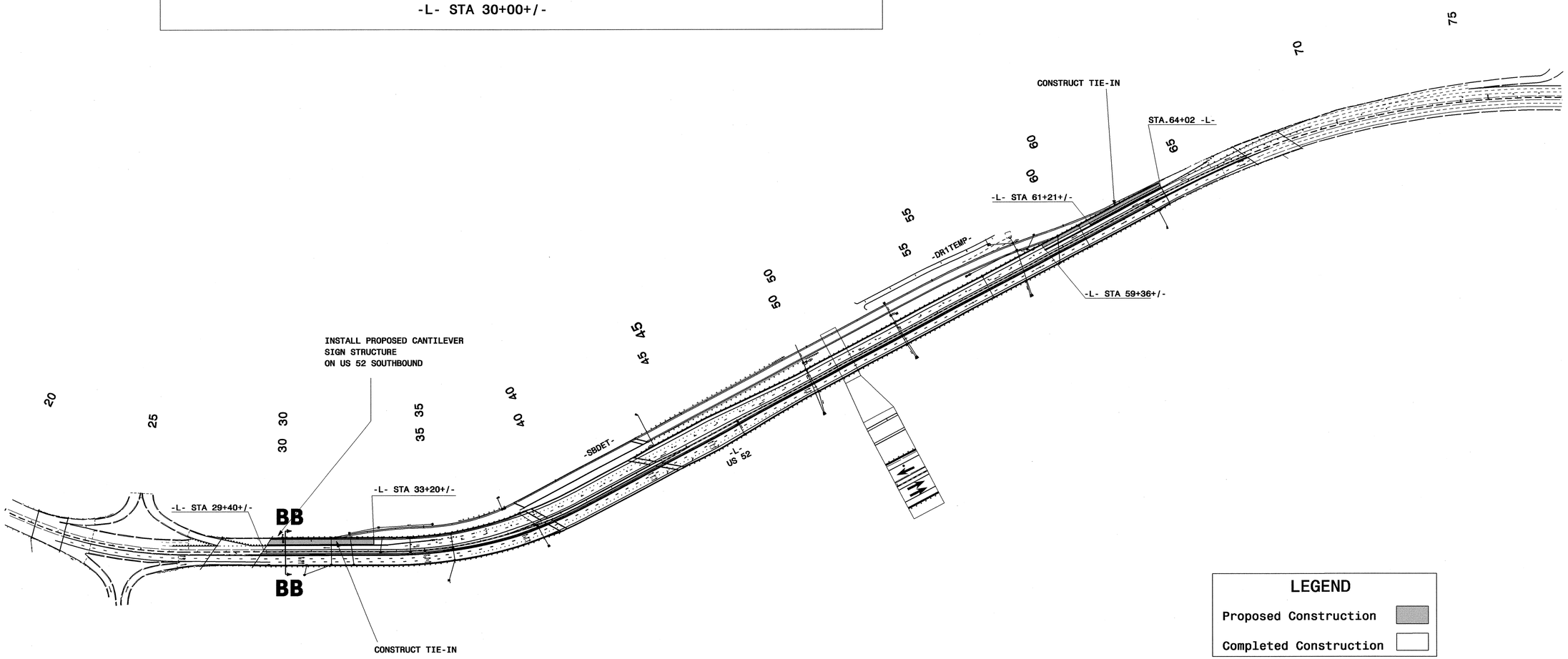
12054 AT RALSGRTMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-52





LEGEND

Proposed Construction

Completed Construction

APPROVED: DATE: 4/23/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE III OVERVIEW 3

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AWKE
DESIGN BY:	AWKE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS — STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION — TRAFFIC CONTROL UNIT

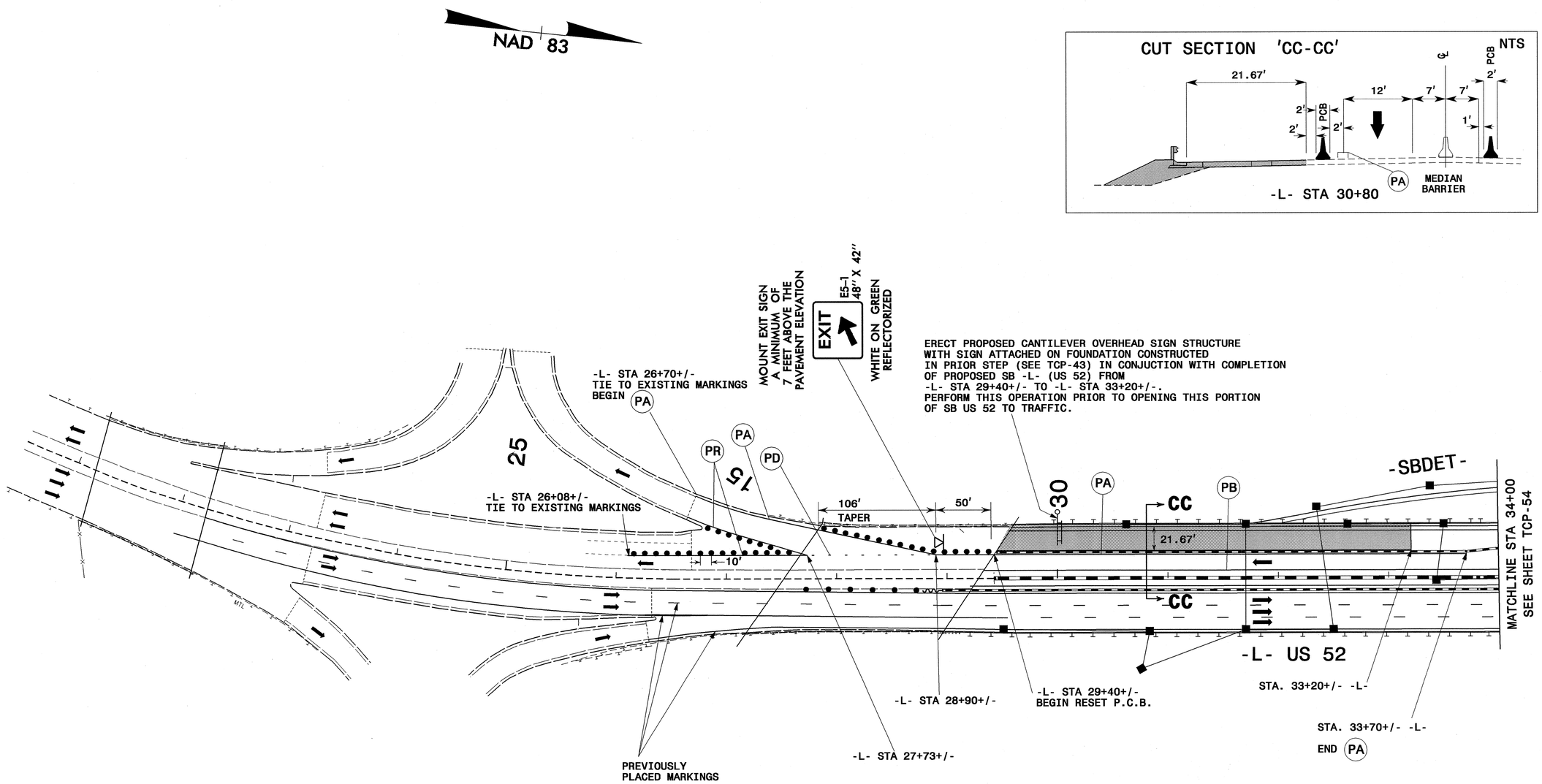
REVISIONS

GADD FILE

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

23-APR-2009 14:54
G:\TEG\Curr\U0006004 U2826A\TCP\U2826a_Tc_TCP52.dgn
12054 AT RAL56KYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-53



LEGEND

Proposed Construction	
Completed Construction	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	• • •

PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PD	2 FT.- 13 FT. WHITE MINISKIPS	PAINT (4")
PR	WHITE GORE LINE	PAINT (8")

PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: [signature] DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE III DETAIL

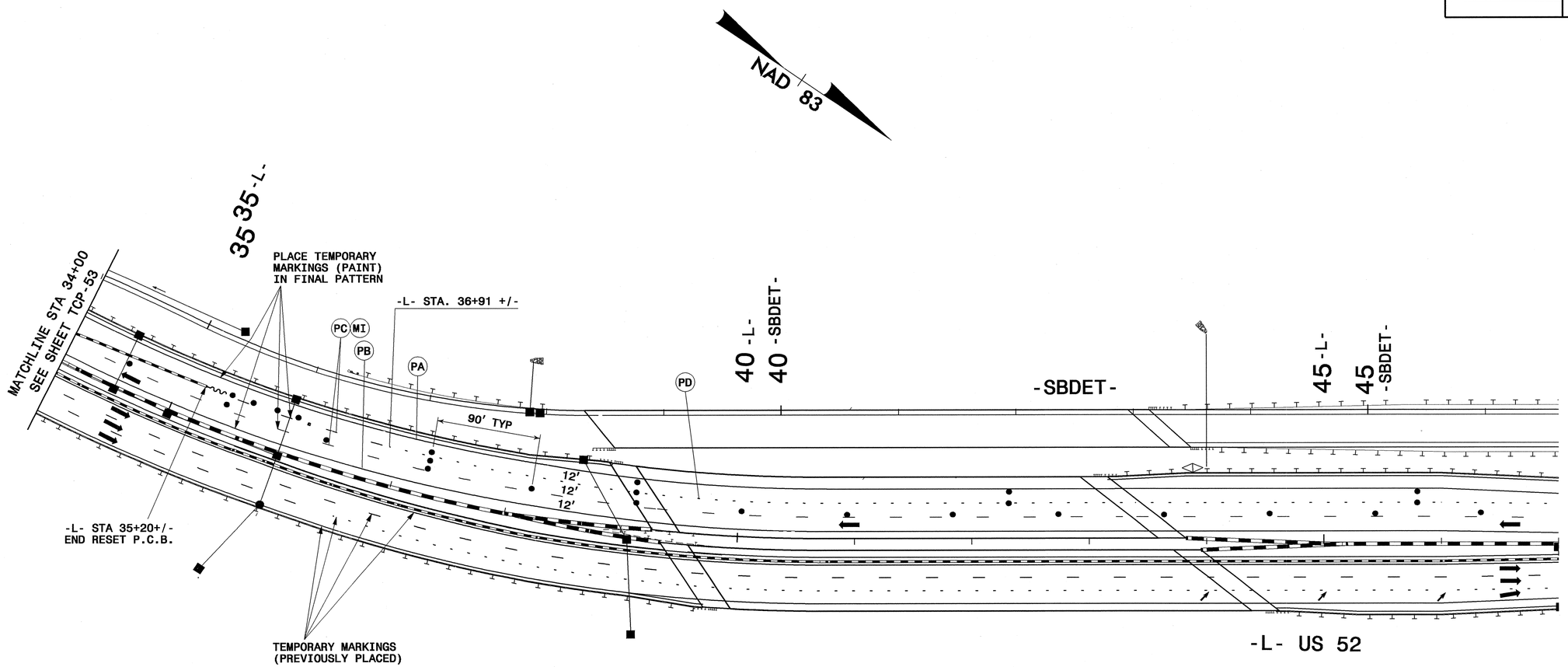
SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE

23-APR-2009 14:39
G:\TEG\Curr\100006004 U2826A\TCP\u2826a_tc_TCP53.dgn
12054 AT RAL5GKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP- 54



PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PB	YELLOW EDGELINE	PAINT (4")
PC	10 FT.- 30 FT. WHITE SKIP	PAINT (4")
PD	2 FT.- 13 FT. WHITE MINISKIP	PAINT (4")
PI	YELLOW DOUBLE CENTERLINE	PAINT (4")
MI	CRYSTAL & RED	TEMPORARY RAISED PAVEMENT MARKER

LEGEND

Proposed Construction	
Completed Construction	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	• • •

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: [signature] DATE: 4/29/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE III DETAIL

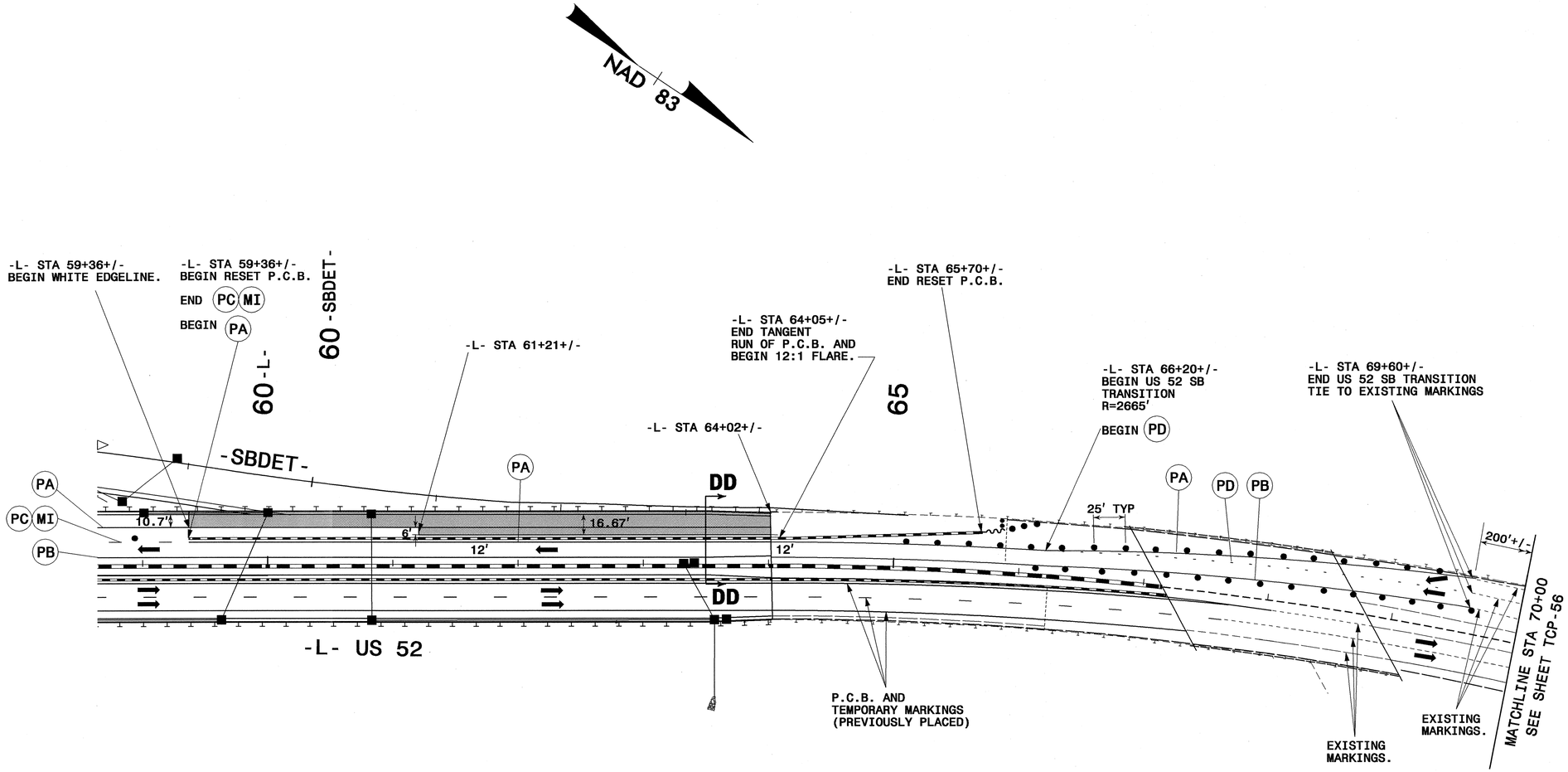
SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

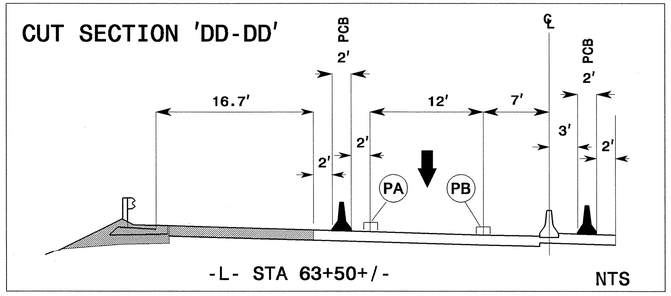
REVISIONS

CADD FILE

23-APR-2009 14:40
G:\TEG\Curr\100006004 U2826A\TCP\u2826a_tc_TCP54.dgn
12054 AT RAL5GKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-55





LEGEND

Proposed Construction	
Completed Construction	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	● ● ●

PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PB	YELLOW EDGELINE	PAINT (4")
PC	10 FT. WHITE SKIP	PAINT (4")
PD	2 FT. WHITE MINISKIP	PAINT (4")
MI	CRYSTAL AND RED TEMP. RAISED PAVEMENT MARKERS	

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE III DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

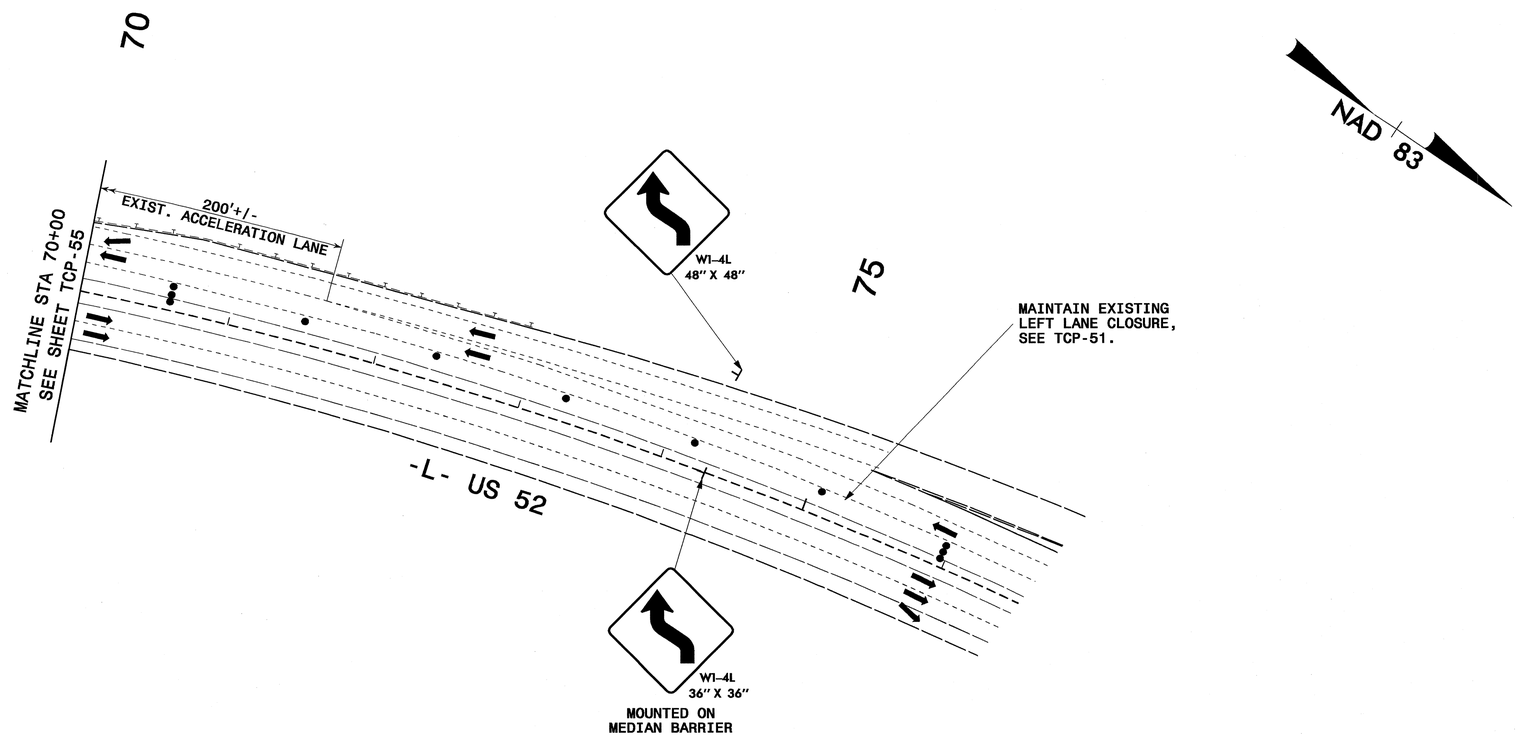
REVISIONS

CADD FILE

PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

23-APR-2009 14:40
G:\TEG\Curr\U0006004 U2826A\TCP\u2826a_tc_TCP55.dgn
02054 AT RALSGKINCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP- 56



LEGEND

Proposed Construction	
Completed Construction	
Proposed Temporary Widening	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	● ● ●

PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE III DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

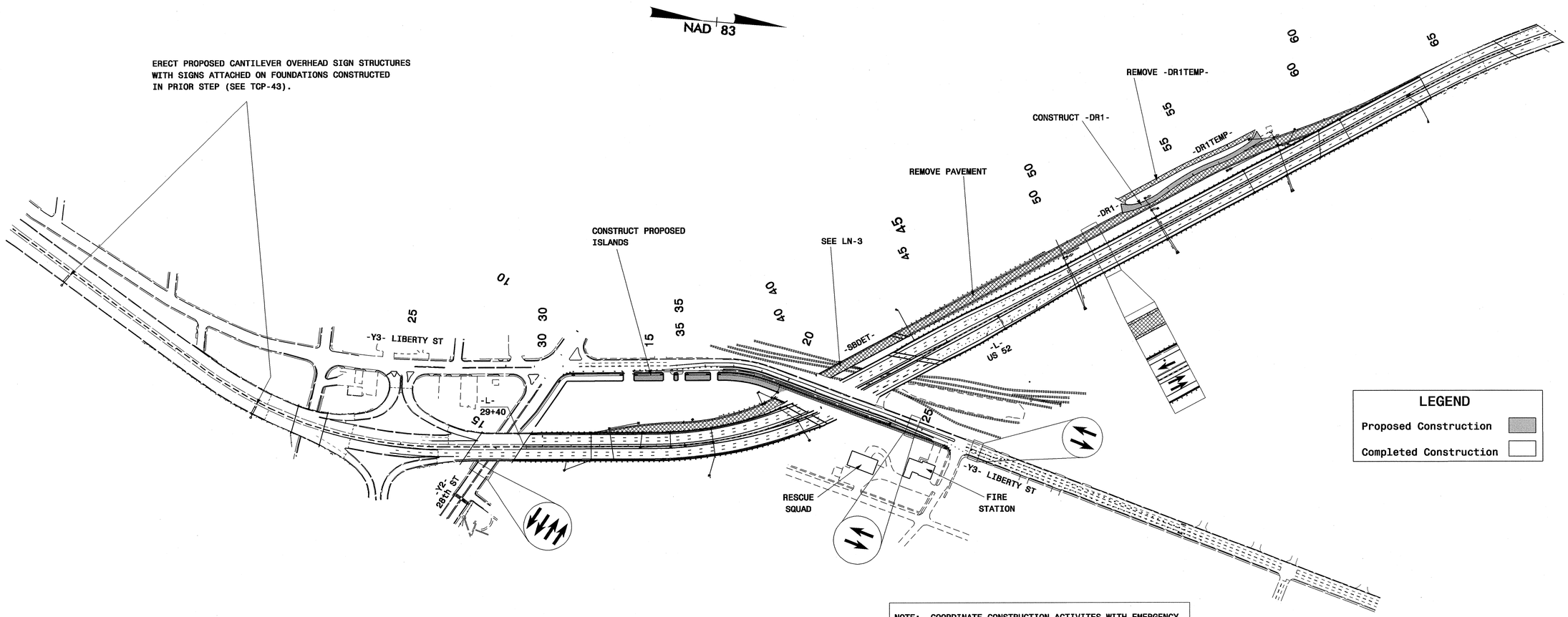
DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · TRAFFIC CONTROL

REVISIONS

CADD FILE

23-APR-2009 14:40
G:\TEG\Cur\U0006004 U2826A\TCP\u2826a_tc_TCP56.dgn
12094 AT RALSGRTMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-57



LEGEND

Proposed Construction

Completed Construction

NOTE: COORDINATE CONSTRUCTION ACTIVITES WITH EMERGENCY SERVICES DURING PLACEMENT OF BRIDGE GIRDERS OR ANY OTHER ACTIVITY WHICH WOULD PREVENT EMS / FIRE SERVICES FROM TRAVELING SOUTH ON LIBERTY STREET.

APPROVED: DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE IV OVERVIEW

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS TRAFFIC CONTROL

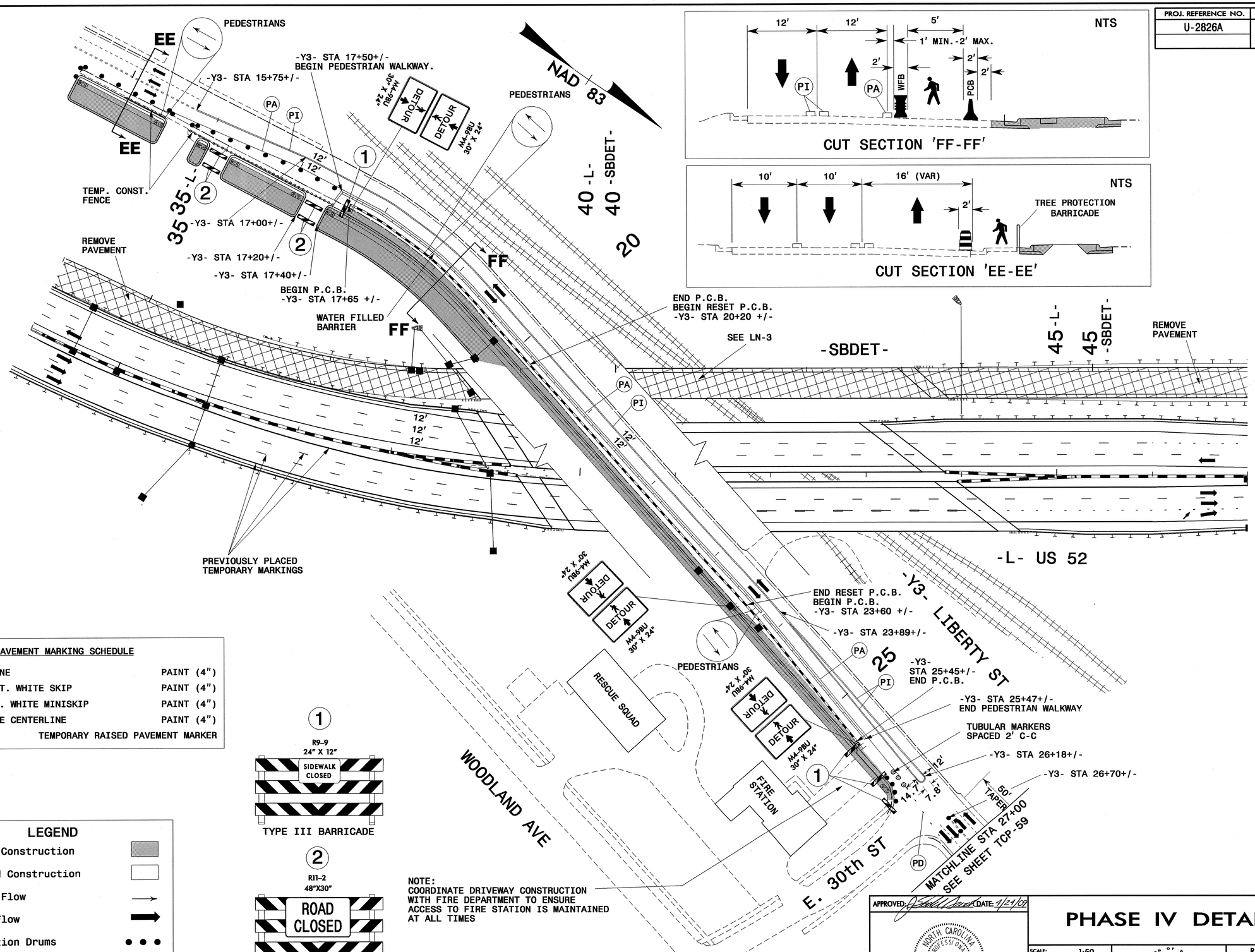
REVISIONS

CADD FILE

PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

23-APR-2009 14:41
G:\TEG\Curr\U0006004 U2826A\TCP\u2826a_tc_TCP57.dgn
2054 AT RALSKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP- 58



PAVEMENT MARKING SCHEDULE

PA	WHITE EDGELINE	PAINT (4")
PC	10 FT.- 30 FT. WHITE SKIP	PAINT (4")
PD	2 FT.- 13 FT. WHITE MINISKIP	PAINT (4")
PI	YELLOW DOUBLE CENTERLINE	PAINT (4")
MI	CRYSTAL & RED	TEMPORARY RAISED PAVEMENT MARKER

LEGEND

- Proposed Construction
- Completed Construction
- Drainage Flow
- Traffic Flow
- Construction Drums

1
R9-9
24" X 12"
SIDEWALK CLOSED
TYPE III BARRICADE

2
R11-2
48"X30"
ROAD CLOSED
TYPE III BARRICADE

NOTE:
COORDINATE DRIVEWAY CONSTRUCTION WITH FIRE DEPARTMENT TO ENSURE ACCESS TO FIRE STATION IS MAINTAINED AT ALL TIMES

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE IV DETAIL

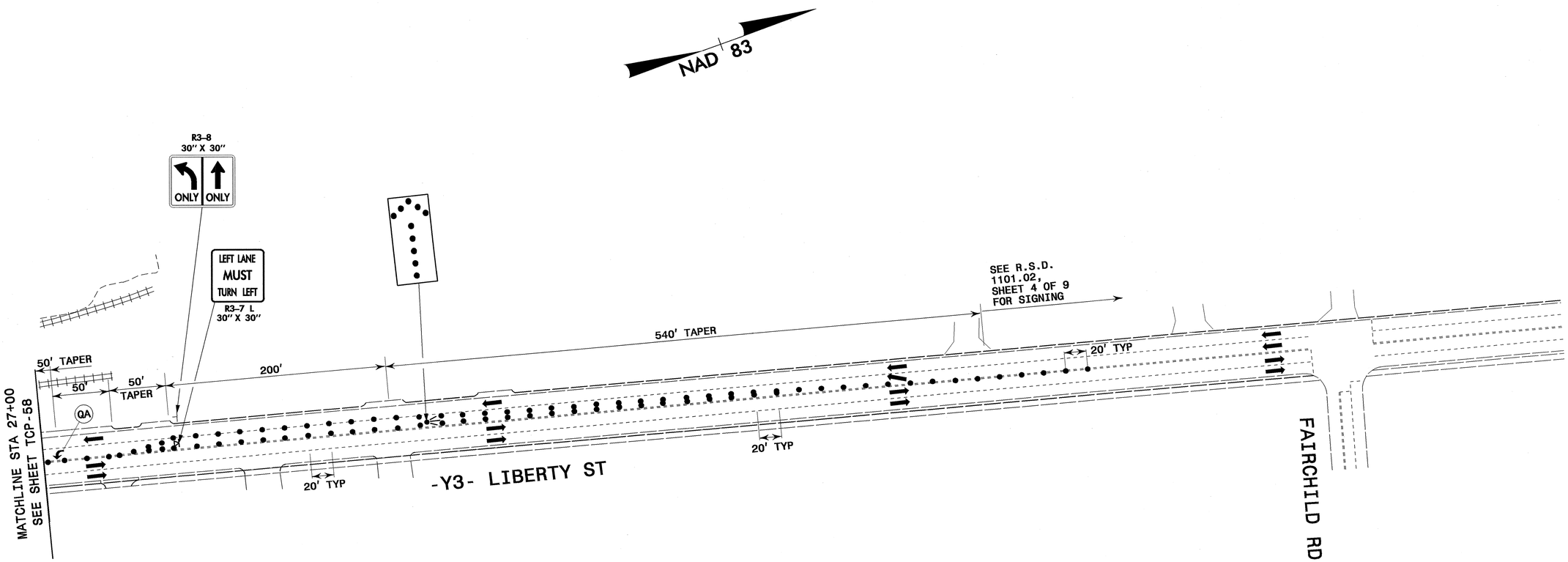
SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE

24-APR-2009 09:22
G:\TEG\Curr\100006004 U2826A\TCP\u2826a_tc_TCP58.dgn
12054 AT RAL5GKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-59



LEGEND

Proposed Construction	
Completed Construction	
Drainage Flow	→
Traffic Flow	➡
Construction Drums	● ● ●

PAVEMENT MARKING SCHEDULE

QA	LEFT TURN ARROW MARKING SYMBOLS	PAINT

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

PHASE IV DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

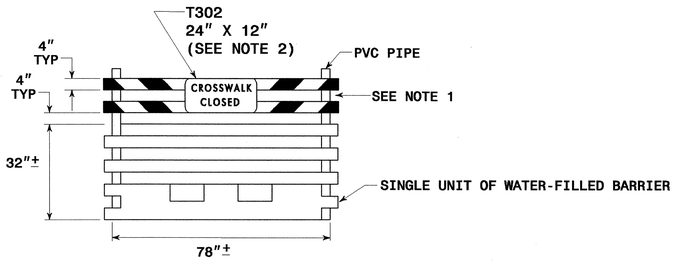
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL

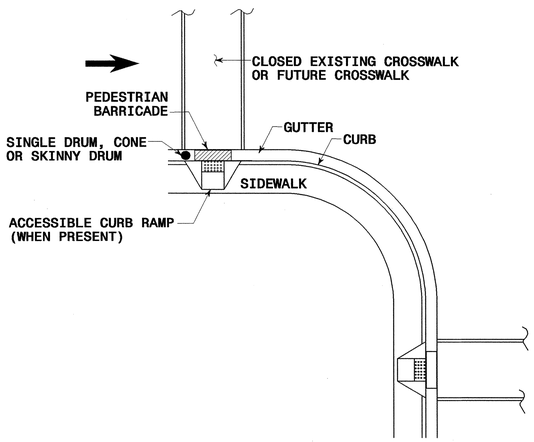
REVISIONS

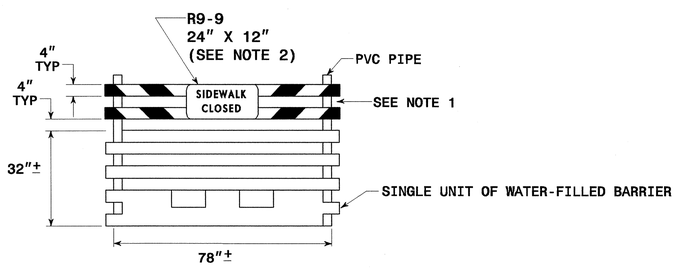
CADD FILE

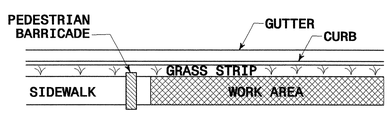
24-APR-2009 09:22
G:\TEG\Curr\U0006004 U2826A\TCP\u2826a_tc_TCP59.dgn
12054 AT RALSKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP- 60









SIGN NUMBER: T302
TYPE: D
QUANTITY: 8

SIGN WIDTH: 2'-0"
HEIGHT: 1'-0"
TOTAL AREA: 2.0 Sq.Ft.

BORDER TYPE: RECESSED
RECESS: 0.38"
WIDTH: 0.63"
RADII: 1.5"

NO. Z BARS:
LENGTH:

BACKG COLOR: White
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT'L: 0.063" (1.6 mm) ALUMINUM

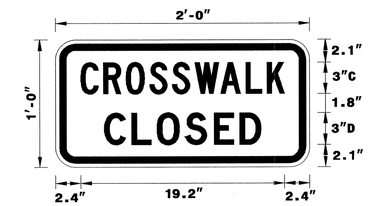
DESIGN BY: LM Moon
PROJECT ID: 37976

CHECKED BY: JT Brooks
DIV: 6

STD #: 0
DATE: May 13, 2008

USE NOTES: 2, 4

1. Legend and border shall be direct applied Type III reflective sheeting.
2. Legend and border shall be direct applied non-reflective sheeting.
3. Shields shall be Type III reflective sheeting on 0.032" (0.8mm) aluminum and demountable.
4. Background shall be Type III 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:



BORDER
R=1.5"
TH=0.63"
IN=0.38"

LETTER POSITIONS

Letter spacings are to start of next letter

												Series/Size Text Length
		C	R	O	S	S	W	A	L	K		C3
	2.4	2.1	2.1	2.2	2.1	2.1	2.4	2.4	2	1.6	2.4	19.2
		C	L	O	S	E	D					D3
	4.6	2.6	2.4	2.7	2.7	2.4	2	4.6				14.8

Spacing Factor is 1 unless specified otherwise

FILENAME: GuidSign
NORTH CAROLINA D.O.T. SIGN DETAILS

NOTES:

1. HORIZONTAL BARRICADE RAILS MAY BE CONSTRUCTED OF APPROVED COMPOSITE, HOLLOW/CORRUGATED EXTRUDED RIGID POLYOLEFIN, HIGH DENSITY POLYETHYLENE, OR OTHER NCDOT APPROVED MATERIAL. PLASTIC TYPE RAILS MUST BE FLAME TREATED BY THE MANUFACTURER SO THAT REFLECTIVE SHEETING MAY ADHERE PROPERLY.
2. SIGN R9-10, R9-11 OR R9-11a MAY BE SUBSTITUTED FOR R9-9 OR T302 AS DIRECTED BY THE ENGINEER AND AS FIELD CONDITIONS WARRANT.

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: DATE: 4/24/09

SEAL

PEDESTRIAN BARRICADE AND CROSSWALK /SIDEWALK CLOSURE DETAIL

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

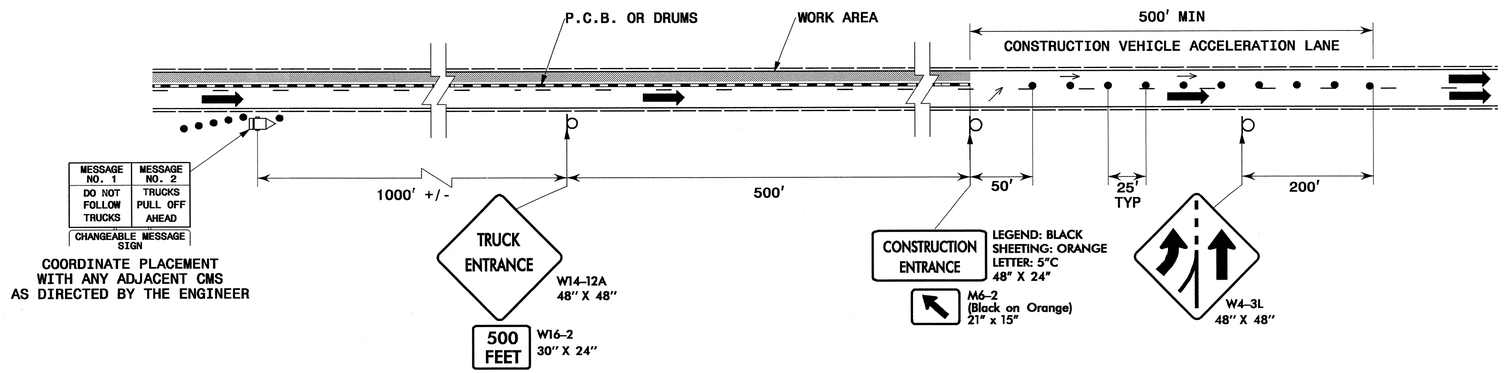
CADD FILE

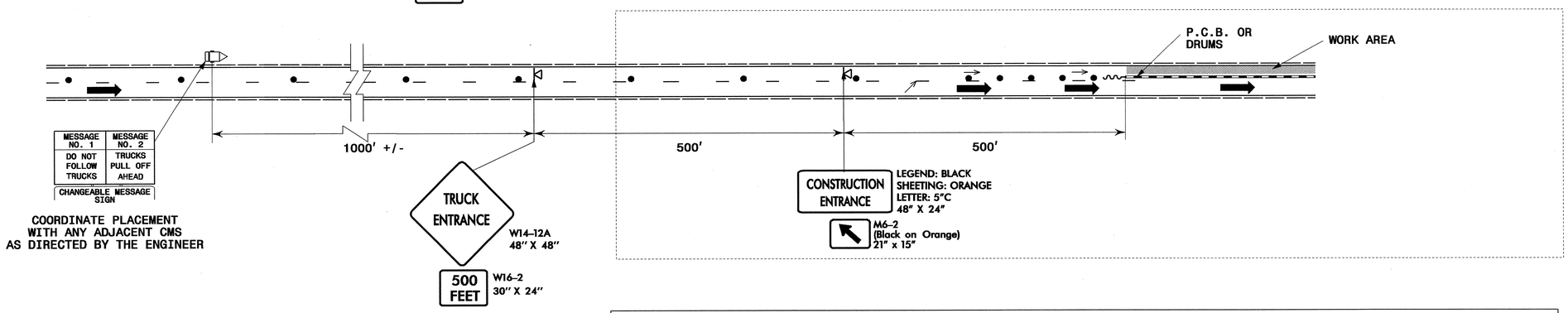
24-APR-2009 13:50
G:\TEG\Curr\00006004 U2826A\TCP\U2826a_tc_TCP60.dgn
J3833 AT RALBJVXRHI

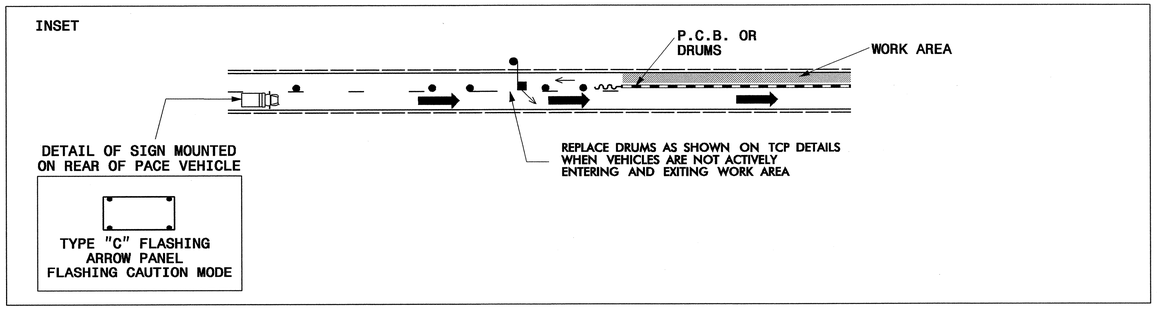
PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-61

WORK ZONE VEHICLE ACCESS TYPICAL DETAIL

FOR USE WHILE US 52 IS REDUCED TO ONE LANE.







LEGEND

- Proposed Construction
- Changeable Message Sign
- Truck - Pace Vehicle
- Portable Sign
- Stationary or Portable Sign
- Crash Cushion
- Traffic Flow
- Construction Vehicles
- Construction Drums
- Flagger

NOTES:

1. RADIO COMMUNICATION BETWEEN ALL VEHICLES AND GROUND CREWS IS REQUIRED.
2. PACE VEHICLE REQUIRED WHEN CONSTRUCTION VEHICLES MUST RE-ENTER TRAFFIC LANE FROM APPROACH END OF WORK AREA. PACE VEHICLE DOES NOT STOP TRAFFIC BUT MOVES AT REDUCED SPEED TO CREATE GAP IN TRAFFIC STREAM AND ALLOW CONSTRUCTION VEHICLE TO ENTER TRAFFIC AND ACCELERATE TO POSTED SPEED.
3. FOR WORK AREAS ON RIGHT SIDE, USE RECIPROCAL OF THIS DETAIL.
4. PROVIDE FLAGGER TO CONTROL CONSTRUCTION VEHICLES EXITING WORK AREA FROM APPROACH END. EQUIP FLAGGER WITH RADIO TO COMMUNICATE WITH APPROACHING PACE VEHICLE.

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

WORK ZONE VEHICLE ACCESS TYPICAL DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

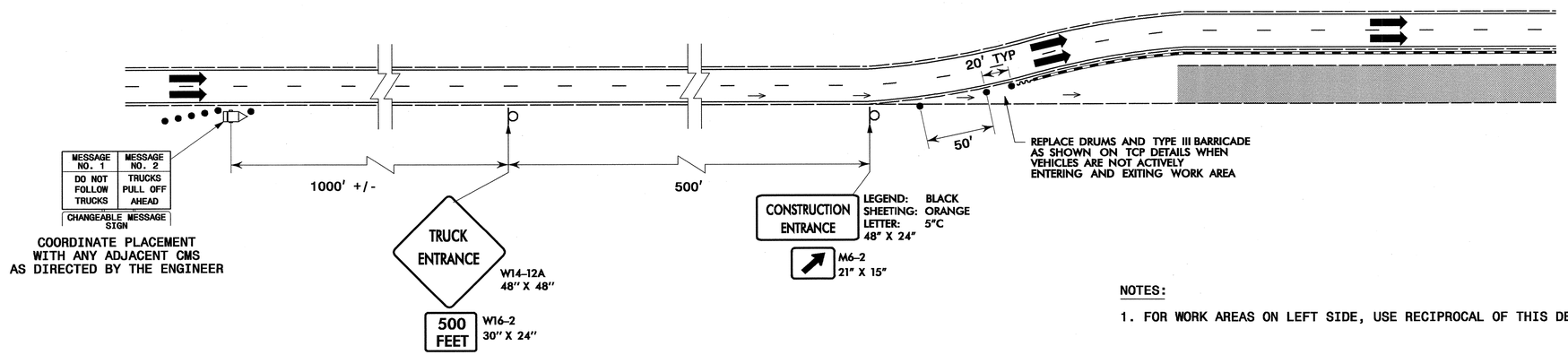
CADD FILE

24-APR-2009 13:23
G:\TEG\Curr\100006004 U2826A\TCP\u2826a_tc_TCP61.dgn
13833 AT RALBJVXRHI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-61A

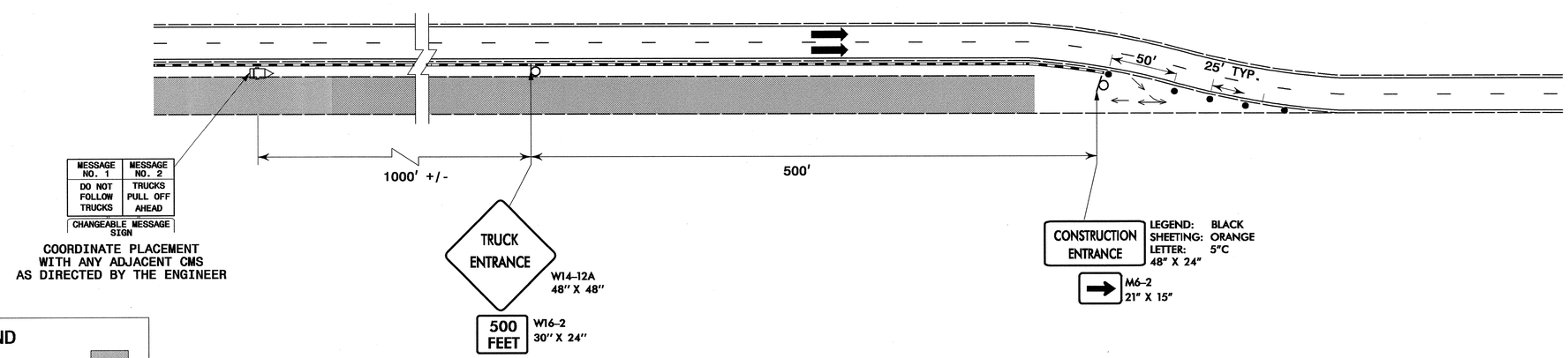
WORK ZONE VEHICLE ACCESS TYPICAL DETAIL

FOR USE WHILE TRUCKS ARE ENTERING WORK AREA.



NOTES:

1. FOR WORK AREAS ON LEFT SIDE, USE RECIPROCAL OF THIS DETAIL.



LEGEND

- Proposed Construction
- Changeable Message Sign
- TrUck - Pace Vehicle
- Portable Sign
- Stationary or Portable Sign
- Crash Cushion
- Traffic Flow
- Construction Vehicles
- Construction Drums

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

WORK ZONE VEHICLE ACCESS TYPICAL DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

REVISIONS

CADD FILE

24-APR-2009 12:55
G:\TEG\Curr\100006004 U2826A\TCP\u2826a_tc_TCP61B.dgn
13833 AT RALBJVXRHI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-61B

WORK ZONE VEHICLE ACCESS - TYPICAL DETAIL

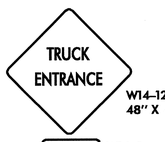
FOR USE WHILE TRUCKS ARE EXITING WORK AREA.

MESSAGE NO. 1	MESSAGE NO. 2
DO NOT FOLLOW TRUCKS	TRUCKS PULL OFF AHEAD

CHANGEABLE MESSAGE SIGN

COORDINATE PLACEMENT WITH ANY ADJACENT CMS AS DIRECTED BY THE ENGINEER

(A)



W14-12A
48" X 48"

500 FEET

W16-2
30" X 24"

(B)

CONSTRUCTION ENTRANCE

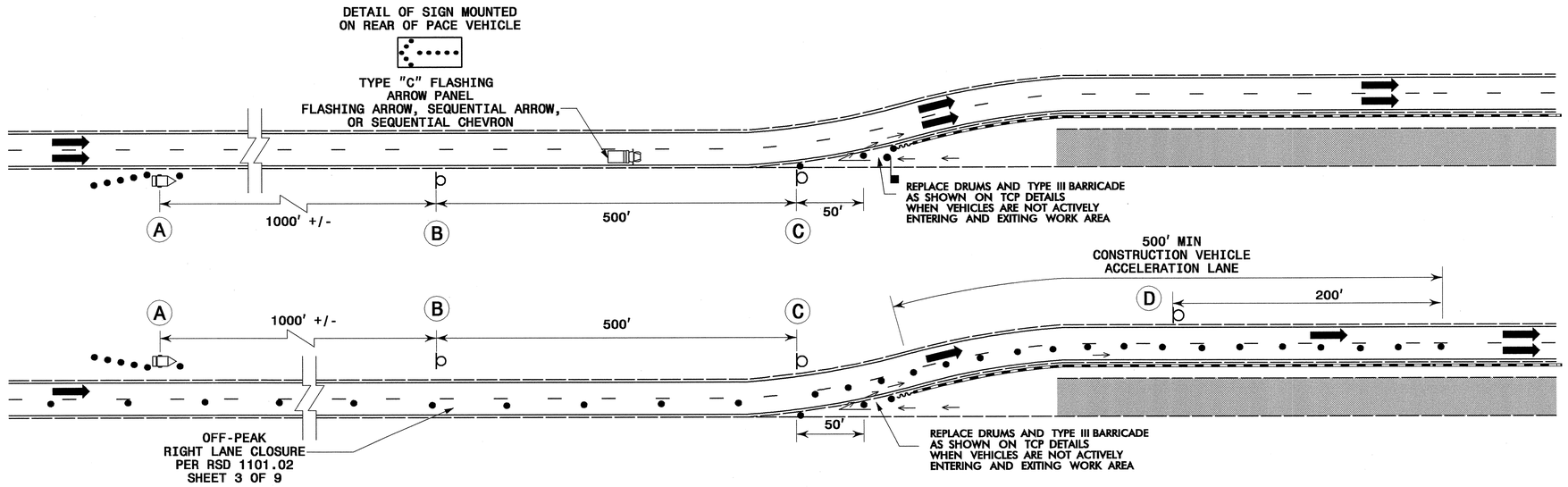
LEGEND: BLACK
SHEETING: ORANGE
LETTER: 5"C
48" X 24"

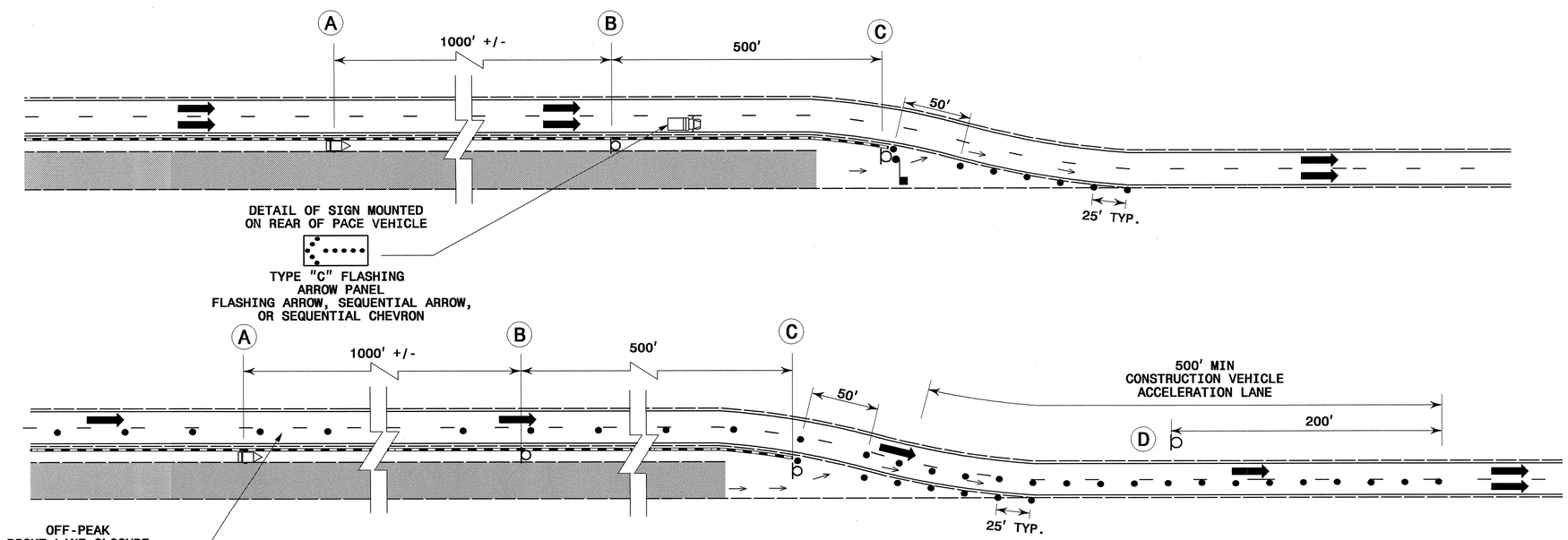
M6-2
(Black on Orange)
21" x 15"

(C)

W4-3R
48" X 48"

(D)





LEGEND

- Proposed Construction
- Changeable Message Sign
- Truck - Pace Vehicle
- Portable Sign
- Stationary or Portable Sign
- Crash Cushion
- Traffic Flow
- Construction Vehicles
- Construction Drums
- Flagger

NOTES:

1. RADIO COMMUNICATION BETWEEN ALL VEHICLES AND GROUND CREWS IS REQUIRED.
2. PACE VEHICLE REQUIRED WHEN CONSTRUCTION VEHICLES MUST RE-ENTER TRAFFIC LANE FROM WORK AREA WHILE ADJACENT TRAFFIC LANE IS OPEN. PACE VEHICLE DOES NOT STOP TRAFFIC BUT MOVES AT REDUCED SPEED TO CREATE GAP IN TRAFFIC STREAM AND ALLOW CONSTRUCTION VEHICLE TO ENTER TRAFFIC AND ACCELERATE TO POSTED SPEED.
3. FOR WORK AREAS ON LEFT SIDE, USE RECIPROCAL OF THIS DETAIL.
4. PROVIDE FLAGGER TO CONTROL CONSTRUCTION VEHICLES EXITING WORK AREA WHILE ADJACENT TRAFFIC LANE IS OPEN. EQUIP FLAGGER WITH RADIO TO COMMUNICATE WITH APPROACHING PACE VEHICLE.

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 4/24/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

WORK ZONE VEHICLE ACCESS TYPICAL DETAIL

SCALE:	1:50
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

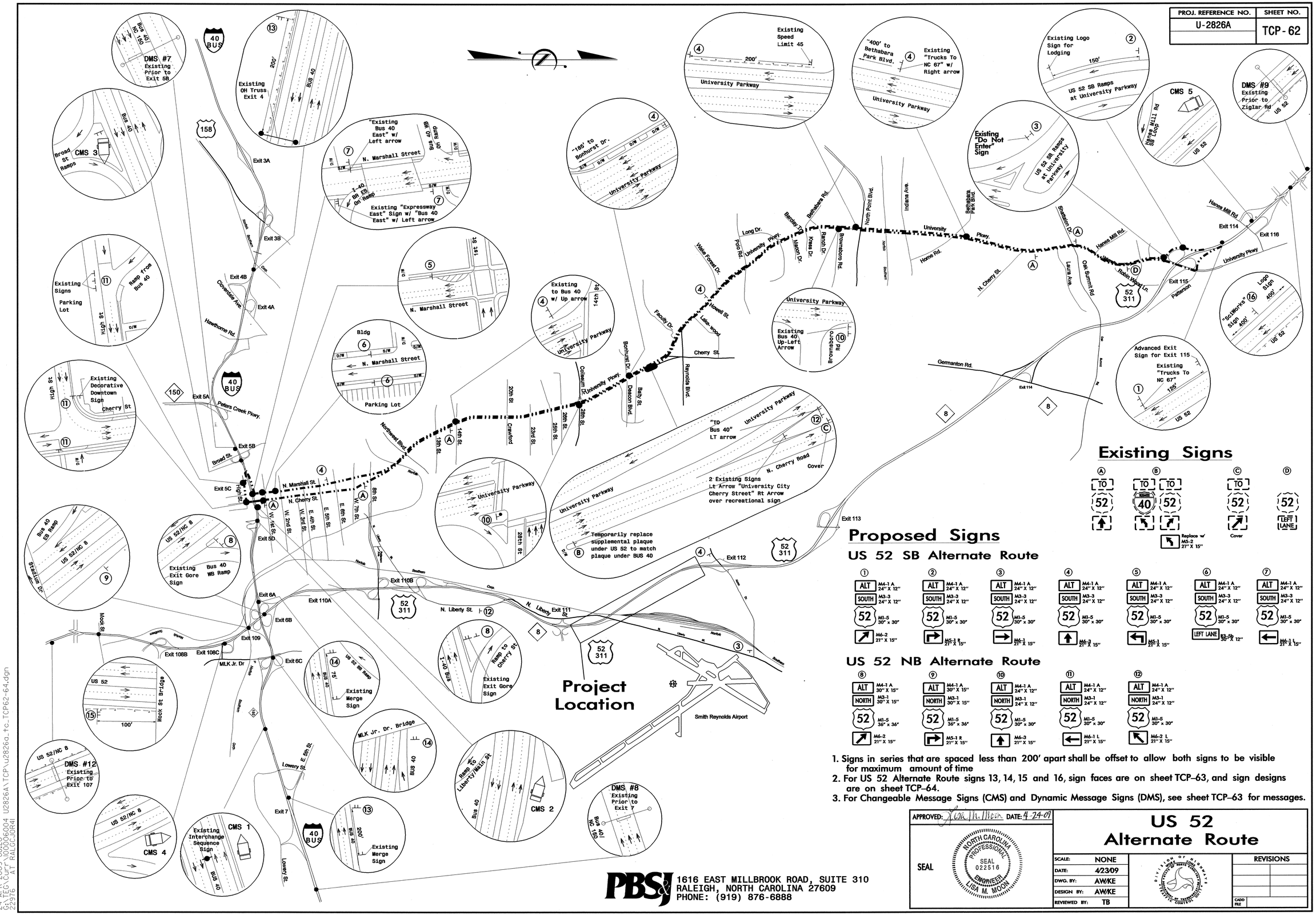
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL

REVISIONS

CADD FILE

24-APR-2009 13:23
G:\TEG\Curr\0000606004 U2826A\TCP\u2826a_tc_TCP61C.dgn
13835 AT RALEJVARH

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-62



Existing Signs

Proposed Signs

US 52 SB Alternate Route

US 52 NB Alternate Route

1. Signs in series that are spaced less than 200' apart shall be offset to allow both signs to be visible for maximum amount of time
2. For US 52 Alternate Route signs 13, 14, 15 and 16, sign faces are on sheet TCP-63, and sign designs are on sheet TCP-64.
3. For Changeable Message Signs (CMS) and Dynamic Message Signs (DMS), see sheet TCP-63 for messages.

APPROVED: Lisa M. Moon DATE: 4-24-09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

US 52 Alternate Route

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA TRAFFIC ENGINEERING BRANCH

REVISIONS

CADD FILE

PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 PHONE: (919) 876-6888

24-APR-2009 08:20
G:\TEG\Curr\U00006004 U2826A\TCP\u2826a_tc_TCP62-64.dgn
22976 AT RALGCJOR41

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-63

BUS 40 Westbound

DMS #8

PRIOR TO 1 LANE PATTERN	AT START OF 1 LANE PATTERN
US 52 NB CONST EXIT 111 TO 112 BEGINS XX-XX-XX	US 52 NB CONST EXIT 111 TO 112 EXPECT DELAYS
	US 52 NB ALT USE EXIT 5C CHERRY ST

(13)

NORTH 52 UNDER CONSTRUCTION
ALT ROUTE USE EXIT 5C

CMS 1

PRIOR TO NEW PATTERN		DURING 1 LANE PATTERN	
MESSAGE NO. 1	MESSAGE NO. 2	MESSAGE NO. 1	MESSAGE NO. 2
US 52 NB 1 LANE PATTERN	BEGINS XX-XX-XX	US 52 NB 1 LANE PATTERN	USE ALT ROUTE EXIT 5C
CHANGEABLE MESSAGE SIGN		CHANGEABLE MESSAGE SIGN	

(14)

One before & one after
US 52 Interchange

ALT NORTH 52 EXIT 5C

CMS 2

PRIOR TO NEW PATTERN		DURING 1 LANE PATTERN
MESSAGE NO. 1	MESSAGE NO. 2	MESSAGE NO. 1
US 52 NB 1 LANE PATTERN	BEGINS XX-XX-XX	US 52 NB ALTRNATE NEXT RHT
CHANGEABLE MESSAGE SIGN		CHANGEABLE MESSAGE SIGN

BUS 40 Eastbound

(13)

NORTH 52 UNDER CONSTRUCTION
ALT ROUTE USE EXIT 5C

DMS #7

PRIOR TO 1 LANE PATTERN	AT START OF 1 LANE PATTERN
US 52 NB CONST EXIT 111 TO 112 BEGINS XX-XX-XX	US 52 NB CONST EXIT 111 TO 112 EXPECT DELAYS
	US 52 NB ALT USE EXIT 5C CHERRY ST

CMS 3

PRIOR TO NEW PATTERN		DURING 1 LANE PATTERN
MESSAGE NO. 1	MESSAGE NO. 2	MESSAGE NO. 1
US 52 NB 1 LANE PATTERN	BEGINS XX-XX-XX	US 52 NB ALTRNATE NEXT RHT
CHANGEABLE MESSAGE SIGN		CHANGEABLE MESSAGE SIGN

US 52 Northbound

DMS #12

PRIOR TO 1 LANE PATTERN	AT START OF 1 LANE PATTERN
US 52 NB CONST EXIT 111 TO 112 BEGINS XX-XX-XX	US 52 NB CONST EXIT 111 TO 112 EXPECT DELAYS
	US 52 NB ALT USE EXIT 109B BUSINESS 40

(15)

NORTH 52 UNDER CONSTRUCTION
ALT ROUTE USE EXIT 109B

CMS 4

PRIOR TO NEW PATTERN		DURING 1 LANE PATTERN	
MESSAGE NO. 1	MESSAGE NO. 2	MESSAGE NO. 1	MESSAGE NO. 2
US 52 NB 1 LANE PATTERN	BEGINS XX-XX-XX	US 52 NB 1 LANE AHEAD	USE ALT ROUTE EXT 109B
CHANGEABLE MESSAGE SIGN		CHANGEABLE MESSAGE SIGN	

US 52 Southbound

DMS #9

PRIOR TO 1 LANE PATTERN	AT START OF 1 LANE PATTERN
US 52 SB CONST EXIT 111 TO 112 BEGINS XX-XX-XX	US 52 SB CONST EXIT 111 TO 112 EXPECT DELAYS
	US 52 SB ALT USE EXIT 115 UNIVERSITY PKWY

(16)

SOUTH 52 UNDER CONSTRUCTION
ALT ROUTE USE EXIT 115

CMS 5

PRIOR TO NEW PATTERN		DURING 1 LANE PATTERN	
MESSAGE NO. 1	MESSAGE NO. 2	MESSAGE NO. 1	MESSAGE NO. 2
US 52 SB 1 LANE PATTERN	BEGINS XX-XX-XX	US 52 SB 1 LANE AHEAD	USE ALT ROUTE EXIT 115
CHANGEABLE MESSAGE SIGN		CHANGEABLE MESSAGE SIGN	

INSTALL SIGNS 13, 14, 15 & 16 ON TWO 6" x 8" WOOD POSTS WITH MINIUM CLEARANCE DISTANCE OF 7 FEET BETWEEN POSTS. SUPPORTS WILL BE PAID FOR UNDER SECTION 903-4 AS "SUPPORTS, WOOD" PER LINEAR FOOT

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: Lisa M. Moon DATE 4-24-09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

US 52 ALT ROUTE DMS, CMS, & A SIGNS

SCALE:	NA
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

REVISIONS

CADD FILE

23-APR-2009 16:36
G:\TEG\Curr\00006004 U2826A\TCP\u2826a_tc_TCP62-64.dgn
12054 AT RALSCRYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-64

SIGN NUMBER: 13
TYPE: STATIONARY
QUANTITY: SEE PLANS
SIGN WIDTH: 13'-0"
HEIGHT: 5'-0"
TOTAL AREA: 65.0 Sq.Ft.
BORDER TYPE: INSET
RECESS: 0.75"
WIDTH: 1.25"
RADII: 6"
NO. Z BARS: 2
LENGTH: 148.0

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

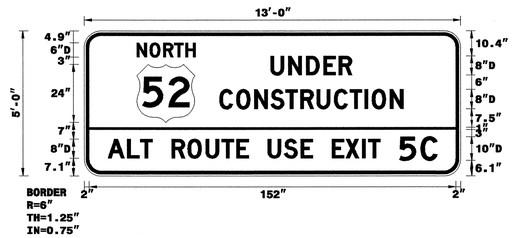
SYMBOL	X	Y	WID	HT
M1_4	21.8	22.1	24	24

MAT'L: 0.080" (2.0 mm) ALUMINUM

DESIGN BY: LM Moon
PROJECT ID: U-2826A
CHECKED BY: JT Brooks
DIV: 09
DATE: Mar 18, 2009

USE NOTES: 1,2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be Grade B fluorescent orange retroreflective sheeting.



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																												Series/Size Text Length
		N	O	R	T	H																						D 2000
	21.8	5.4	5.6	4.6	4.6	4.1	110																					24.2
		U	N	D	E	R																						D 2000
	77.2	7.4	7.4	7.2	6.3	5.4	45.1																					33.7
		C	O	N	S	T	R	U	C	T	I	O	N															D 2000
	56	7	7.4	6.8	6.1	6.2	6.8	7.2	6.5	6.2	3	7.4	5.4	23.9														76.1
		A	L	T		R	O	U	T	E		U	S	E			E	X	I	T		5	C					D 2000
	9.8	8	5.4	5	8	6.6	7.4	6.6	6.2	5	8	6.8	6.8	5	8	5.8	6.8	2.5	5	8	8.8	6.8	9.8					136.4

FILENAME: Tcp_guidesigndesigns

NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 15
TYPE: STATIONARY
QUANTITY: SEE PLANS
SIGN WIDTH: 13'-0"
HEIGHT: 5'-0"
TOTAL AREA: 65.0 Sq.Ft.
BORDER TYPE: INSET
RECESS: 0.75"
WIDTH: 1.25"
RADII: 6"
NO. Z BARS: 2
LENGTH: 148.0

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

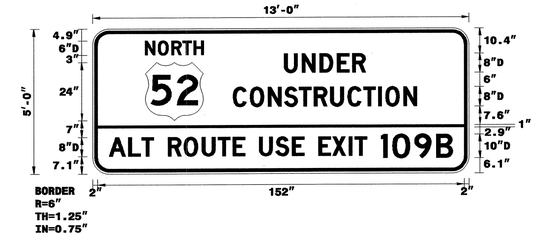
SYMBOL	X	Y	WID	HT
M1_4	21.9	22.1	24	24

MAT'L: 0.080" (2.0 mm) ALUMINUM

DESIGN BY: LM Moon
PROJECT ID: U-2826A
CHECKED BY: JT Brooks
DIV: 09
DATE: Mar 18, 2009

USE NOTES: 1,2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be Grade B fluorescent orange retroreflective sheeting.



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																												Series/Size Text Length
		N	O	R	T	H																						D 2000
	21.7	5.4	5.6	4.6	4.6	4.1	110																					24.2
		U	N	D	E	R																						D 2000
	79.4	7.4	7.4	7.2	6.3	5.4	42.9																					33.7
		C	O	N	S	T	R	U	C	T	I	O	N															D 2000
	58.2	7	7.4	6.8	6.1	6.2	6.8	7.2	6.5	6.2	3	7.4	5.4	21.7														76.1
		A	L	T		R	O	U	T	E		U	S	E			E	X	I	T		1	0	9	B			D 2000
	6.8	8	5.4	5	6	6.6	7.4	6.6	6.2	5	6	6.8	6.8	5	6	5.8	6.8	2.5	5	6	4.7	9.1	9	6.8	6.8			142.4

FILENAME: Tcp_guidesigndesigns

NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 14
TYPE: STATIONARY
QUANTITY: SEE PLANS
SIGN WIDTH: 4'-6"
HEIGHT: 6'-0"
TOTAL AREA: 27.0 Sq.Ft.
BORDER TYPE: INSET
RECESS: 0.75"
WIDTH: 1.25"
RADII: 6"
NO. Z BARS: 2
LENGTH: 46.0

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

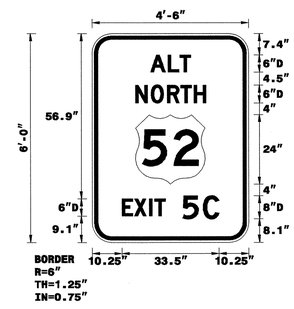
SYMBOL	X	Y	WID	HT
M1_4	15	20.1	24	24

MAT'L: 0.080" (2.0 mm) ALUMINUM

DESIGN BY: LM Moon
PROJECT ID: U-2826A
CHECKED BY: JT Brooks
DIV: 09
DATE: Mar 18, 2009

USE NOTES: 1,2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be Grade B fluorescent orange retroreflective sheeting.



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																												Series/Size Text Length
		A	L	T																								D 2000
	20.2	6	4.1	3.7	20																							13.8
		N	O	R	T	H																						D 2000
	15	5.4	5.6	4.6	4.6	4.1	14.8																					24.2
		E	X	I	T		5	C																				D 2000
	10.3	4.3	5.1	1.9	3.7	6	7	5.4	10.3																			33.5

FILENAME: Tcp_guidesigndesigns

NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 16
TYPE: STATIONARY
QUANTITY: SEE PLANS
SIGN WIDTH: 13'-0"
HEIGHT: 5'-0"
TOTAL AREA: 65.0 Sq.Ft.
BORDER TYPE: INSET
RECESS: 0.75"
WIDTH: 1.25"
RADII: 6"
NO. Z BARS: 2
LENGTH: 148.0

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

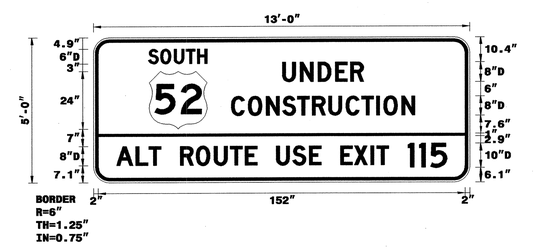
SYMBOL	X	Y	WID	HT
M1_4	23.1	22.1	24	24

MAT'L: 0.080" (2.0 mm) ALUMINUM

DESIGN BY: LM Moon
PROJECT ID: U-2826A
CHECKED BY: JT Brooks
DIV: 09
DATE: Mar 18, 2009

USE NOTES: 1,2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be Grade B fluorescent orange retroreflective sheeting.



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																												Series/Size Text Length
		S	O	U	T	H																						D 2000
	22.8	5	5.6	5	4.6	4.1	108.9																					24.2
		U	N	D	E	R																						D 2000
	78.3	7.4	7.4	7.2	6.3	5.4	44																					33.7
		C	O	N	S	T	R	U	C	T	I	O	N															D 2000
	57.1	7	7.4	6.8	6.1	6.2	6.8	7.2	6.5	6.2	3	7.4	5.4	22.8														76.1
		A	L	T		R	O	U	T	E		U	S	E			E	X	I	T		1	1	5				D 2000
	9.5	8	5.4	5	8	6.6	7.4	6.6	6.2	5	8	6.8	6.8	5	8	5.8	6.8	2.5	5	8	4.7	4.7	6.8	9.5				137

FILENAME: Tcp_guidesigndesigns

NORTH CAROLINA D.O.T. SIGN DETAIL

APPROVED: Lisa M. Moon DATE: 4-24-09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

US 52 ALT ROUTE SIGN DESIGNS

SCALE:	NA
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

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

REVISIONS

CADD FILE

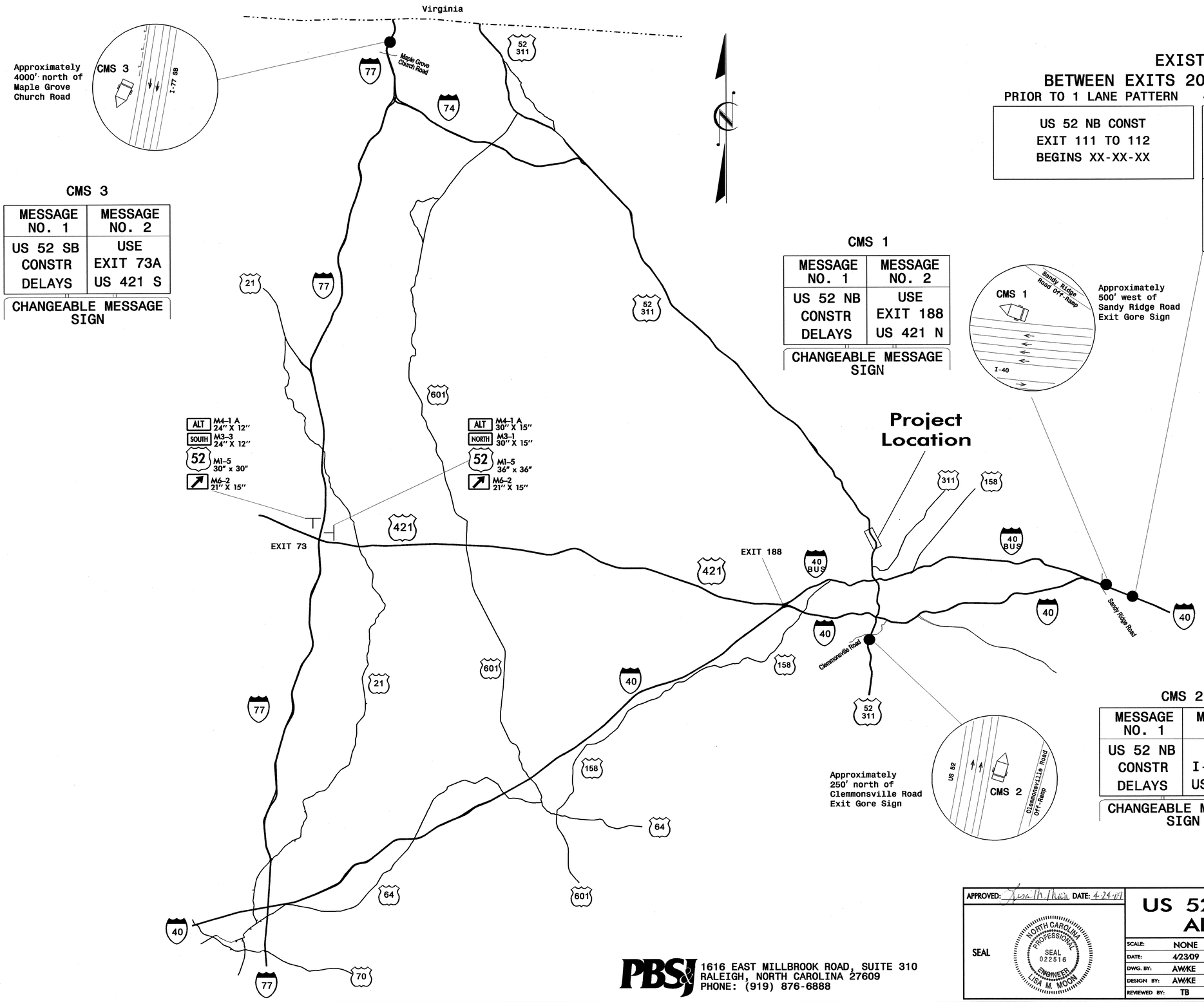
PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

23-APR-2009 16:37
G:\TEG\Curr\00006004 U2826A\TCP\u2826a_tc_TCP62-64.dgn
12054 AT RAL5GKYMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-65

EXISTING DMS
BETWEEN EXITS 208 & 210 ON WB I-40

PRIOR TO 1 LANE PATTERN	AT START OF 1 LANE PATTERN
US 52 NB CONST EXIT 111 TO 112 BEGINS XX-XX-XX	US 52 NB CONST EXIT 111 TO 112 EXPECT DELAYS
	US 52 NB ALT USE I-40 TO EXIT 188 US 421 N



CMS 3

MESSAGE NO. 1	MESSAGE NO. 2
US 52 SB CONSTR DELAYS	USE EXIT 73A US 421 S

CHANGEABLE MESSAGE SIGN

CMS 1

MESSAGE NO. 1	MESSAGE NO. 2
US 52 NB CONSTR DELAYS	USE EXIT 188 US 421 N

CHANGEABLE MESSAGE SIGN

CMS 2

MESSAGE NO. 1	MESSAGE NO. 2
US 52 NB CONSTR DELAYS	USE I-40W TO US 421 N

CHANGEABLE MESSAGE SIGN

APPROVED: Lisa M. Moon DATE: 4-24-09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

US 52 Through Traffic Alternate Route

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

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

REVISIONS

CADD FILE

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

24-APR-2009 08:21
G:\TEG\Curr\U00006004 U2826A\TCP\u2826a_tc_TCP65.dgn
22976 AT RALGOUR41

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP- 66

SIGN NUMBER: T-01
TYPE: STATIONARY
QUANTITY: SEE PLANS
SIGN WIDTH: 3'-6"
HEIGHT: 1'-4"
TOTAL AREA: 4.7 Sq.Ft.
BORDER TYPE: INSET
RECESS: 0.38"
WIDTH: 0.63"
RADII: 1.5"
NO. Z BARS:
LENGTH:

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT'L: 0.080" (2.0 mm) ALUMINUM

DESIGN BY: KG Eggleston
PROJECT ID: U-2826A
CHECKED BY: LM Moon
DIV: 09
DATE: Mar 18, 2009

USE NOTES: 1,2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be Grade B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter										Series/Size Text Length
	2	8	T	H		S	T			D 2000
4.4	5.3	4.9	4.6	4.1	6	4.6	3.7	4.4		33.1

FILENAME: Tcp_guidesigndesigns
NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: T-02
TYPE: A
QUANTITY: 1
SIGN WIDTH: 13'-0"
HEIGHT: 4'-6"
TOTAL AREA: 58.5 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 2"
RADII: 6"
NO. Z BARS: 2
LENGTH: 148.0

BACKG COLOR: Green
COPY COLOR: White

SYMBOL	X	Y	WID	HT

MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: KG Eggleston
PROJECT ID: U-2826A
CHECKED BY: LM Moon
DIV: 09
DATE: Apr 01, 2009

USE NOTES: 1,2

1. Legend and border shall be direct applied Grade B sheeting.
2. Background shall be Grade C reflective sheeting.
3. Shields shall be on 0.032" (0.8mm) aluminum and demountable.
4. Shields shall be Grade B sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter											Series/Size Text Length
	A	i	r	p	o	r	t				EM 2000
40.5	16.7	8	9.9	11.7	13.2	8.5	6.9	40.5			74.9
	U	S	E		E	X	I	T			E 2000
30.4	8.1	8.1	6	8	7.1	8.6	2.8	6	71		54.6
	1	1	1	A							E 2000
95	6.4	6.4	5.6	12.2	30.4						30.6

FILENAME: Tcp_guidesigndesigns
NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: T-03
TYPE: D
QUANTITY: 1
SIGN WIDTH: 5'-0"
HEIGHT: 3'-0"
TOTAL AREA: 15.0 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 0.75"
RADII: 3"
NO. Z BARS:
LENGTH:

BACKG COLOR: Green
COPY COLOR: White

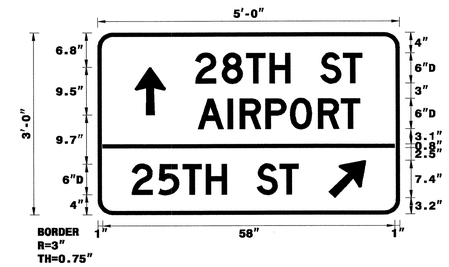
SYMBOL	X	Y	WID	HT
ARMED	7.4	19.8	6	9.5
ARMED	45.9	3.3	6	9.5

MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: KG Eggleston
PROJECT ID: U-2826A
CHECKED BY: LM Moon
DIV: 09
DATE: Mar 18, 2009

USE NOTES: 1,2

1. Legend and border shall be direct applied Grade C sheeting.
2. Background shall be Grade C reflective sheeting.



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter											Series/Size Text Length
	2	8	T	H		S	T				D 2000
19.4	5.3	4.9	4.6	4.1	6	4.6	3.7	7.4			33.1
	A	I	R	P	O	R	T				D 2000
19.9	6	2.4	5.1	4.9	5.6	4.6	3.7	7.9			32.2
	2	5	T	H		S	T				D 2000
6.8	5.3	4.9	4.6	4.1	6	4.6	3.7	20.1			33.1

FILENAME: Tcp_guidesigndesigns
NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: T-04
TYPE: D
QUANTITY: 1
SIGN WIDTH: 5'-0"
HEIGHT: 1'-4"
TOTAL AREA: 6.7 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 0.75"
RADII: 3"
NO. Z BARS:
LENGTH:

BACKG COLOR: Green
COPY COLOR: White

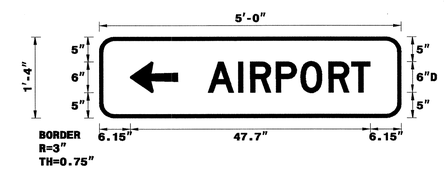
SYMBOL	X	Y	WID	HT
ARMED	6.2	5	6	9.5

MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: KG Eggleston
PROJECT ID: U-2826A
CHECKED BY: LM Moon
DIV: 09
DATE: Mar 18, 2009

USE NOTES: 1,2

1. Legend and border shall be direct applied Grade C sheeting.
2. Background shall be Grade C reflective sheeting.



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter											Series/Size Text Length
	A	I	R	P	O	R	T				D 2000
21.6	6	2.4	5.1	4.9	5.6	4.6	3.7	6.2			32.2

FILENAME: Tcp_guidesigndesigns
NORTH CAROLINA D.O.T. SIGN DETAIL

APPROVED: Lisa M. Moon DATE: 4-24-09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

TEMPORARY GUIDE SIGN DETAILS

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

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

REVISIONS

CADD FILE

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

23-APR-2009 15:08
G:\TEG\Curr\00006004 U2826A\TCP\U2826a_tc_TCP66.dgn
02054 AT RALSGKIMCI

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP- 67

SIGN NUMBER: T-05
TYPE: D
QUANTITY: 1
SIGN WIDTH: 5'-0"
HEIGHT: 1'-4"
TOTAL AREA: 6.7 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 0.75"
RADII: 3"
NO. Z BARS:
LENGTH:

BACKG COLOR: Green
COPY COLOR: White

SYMBOL	X	Y	WID	HT
ARMED	44.4	5	6	9.5

MAT'L: 0.125" (3.2 mm) ALUMINUM

USE NOTES: 1,2

1. Legend and border shall be direct applied Grade C sheeting.
2. Background shall be Grade C reflective sheeting.

DESIGN BY: KG Eggleston
PROJECT ID: U-2826A
CHECKED BY: LM Moon
DIV: 09
DATE: Mar 18, 2009

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																												Series/Size Text Length
		A	I	R	P	O	R	T																				D 2000
	6.2	6	2.4	5.1	4.9	5.6	4.6	3.7	21.6																			32.2

FILENAME: Tcp_guidesigndesigns

NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: T-06
TYPE: D
QUANTITY: 1
SIGN WIDTH: 6'-0"
HEIGHT: 2'-0"
TOTAL AREA: 12.0 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 2"
RADII: 3"
NO. Z BARS:
LENGTH:

BACKG COLOR: Green
COPY COLOR: White

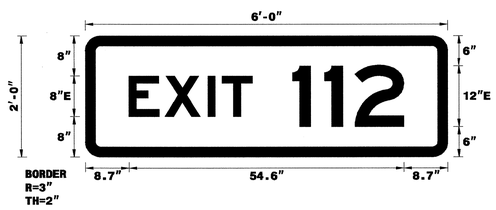
SYMBOL	X	Y	WID	HT

MAT'L: 0.125" (3.2 mm) ALUMINUM

USE NOTES: 1,2

1. Legend and border shall be direct applied Grade C sheeting.
2. Background shall be Grade C reflective sheeting.
3. Shields shall be on 0.032" (0.8mm) aluminum and demountable.
4. Shields shall be Grade B sheeting.

DESIGN BY: KG Eggleston
PROJECT ID: U-2826A
CHECKED BY: LM Moon
DIV: 09
DATE: Feb 27, 2009



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																												Series/Size Text Length
		E	X	I	T		1	1	2																			E 2000
	8.7	7.1	8.6	2.8	6	8	6.4	6	9.7	8.7																		54.6

FILENAME: Tcp_guidesigndesigns

NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: T-07
TYPE: B
QUANTITY: 1
SIGN WIDTH: 10'-6"
HEIGHT: 4'-6"
TOTAL AREA: 47.3 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 2"
RADII: 6"
NO. Z BARS: 2
LENGTH: 118.0

BACKG COLOR: Green
COPY COLOR: White

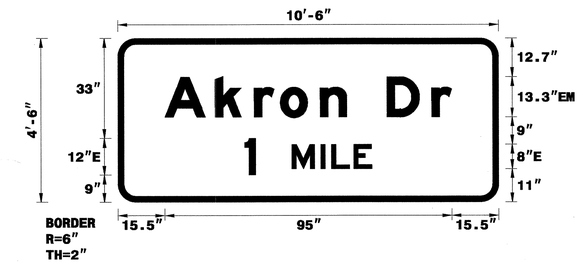
SYMBOL	X	Y	WID	HT

MAT'L: 0.125" (3.2 mm) ALUMINUM

USE NOTES: 1,2

1. Legend and border shall be direct applied Grade C sheeting.
2. Background shall be Grade C reflective sheeting.
3. Shields shall be on 0.032" (0.8mm) aluminum and demountable.
4. Shields shall be Grade B sheeting.

DESIGN BY: KG Eggleston
PROJECT ID: U-2826A
CHECKED BY: LM Moon
DIV: 09
DATE: Feb 27, 2009



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																												Series/Size Text Length
		A	k	r	o	n		D	r																			EM 2000
	15.5	16.7	12.9	8.7	13.2	8.8	13.3	14.8	6.7	15.5																		95
		1		M	I	L	E																					E 2000
	42	3.6	12	9.6	3.5	7.4	6	42																				42.1

FILENAME: Tcp_guidesigndesigns

NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: T-08
TYPE: D
QUANTITY: 1
SIGN WIDTH: 5'-0"
HEIGHT: 1'-6"
TOTAL AREA: 7.5 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 0"
RADII: 0"
NO. Z BARS:
LENGTH:

BACKG COLOR: Green
COPY COLOR: White

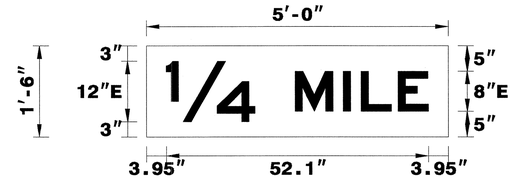
SYMBOL	X	Y	WID	HT

MAT'L: 0.063" (1.6 mm) ALUMINUM

USE NOTES: 1,2

1. Legend and border shall be direct applied Grade C sheeting.
2. Background shall be Grade C reflective sheeting.

DESIGN BY: KG Eggleston
PROJECT ID: U-2826A
CHECKED BY: LM Moon
DIV: 09
DATE: Feb 27, 2009



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																												Series/Size Text Length
		1/4		M	I	L	E																					E 2000
	4	17.6	8	9.6	3.5	7.4	6	4																				52.1

FILENAME: Tcp_guidesigndesigns

NORTH CAROLINA D.O.T. SIGN DETAIL

APPROVED: Lisa M. Moon DATE: 4-24-09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

TEMPORARY GUIDE SIGN DETAILS

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING — TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

23-APR-2009 15:08
G:\TEG\CUFT\00006004 U2826A\TCP\U2826a_tc_TCP67.dgn
(2034 AT RALSGRYMCL)

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP- 68

SIGN NUMBER: T-09
TYPE: STATIONARY
QUANTITY: SEE PLANS
SIGN WIDTH: 6'-0"
HEIGHT: 1'-4"
TOTAL AREA: 8.0 Sq.Ft.
BORDER TYPE: INSET
RECESS: 0.38"
WIDTH: 0.63"
RADII: 1.5"
NO. Z BARS:
LENGTH:

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

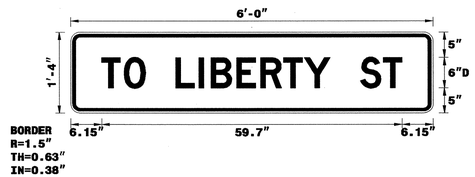
SYMBOL	X	Y	WID	HT

MAT'L: 0.080" (2.0 mm) ALUMINUM

DESIGN BY: KG Eggleston
PROJECT ID: U-2826A
CHECKED BY: LM Moon
DIV: 09
DATE: Mar 18, 2009

USE NOTES: 1,2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be Grade B fluorescent orange retroreflective sheeting.



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter																												Series/Size Text Length
		T	O		L	I	B	E	R	T	Y		S	T														D 2000
	6.2	4.5	4.3	6	4.6	2.4	5.1	4.7	4.6	4.1	5.2	6	4.6	3.7	6.2													59.7

FILENAME: Tcp_guidesigndesigns

NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: T-11
TYPE: STATIONARY
QUANTITY: SEE PLANS
SIGN WIDTH: 3'-6"
HEIGHT: 1'-4"
TOTAL AREA: 4.7 Sq.Ft.
BORDER TYPE: INSET
RECESS: 0.38"
WIDTH: 0.63"
RADII: 1.5"
NO. Z BARS:
LENGTH:

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT'L: 0.080" (2.0 mm) ALUMINUM

DESIGN BY: KG Eggleston
PROJECT ID: U-2826A
CHECKED BY: LM Moon
DIV: 09
DATE: Mar 18, 2009

USE NOTES: 1,2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be Grade B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter																												Series/Size Text Length
		2	5	T	H		S	T																				D 2000
	4.4	5.3	4.9	4.6	4.1	6	4.6	3.7	4.4																			33.1

FILENAME: Tcp_guidesigndesigns

NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: T-10
TYPE: STATIONARY
QUANTITY: SEE PLANS
SIGN WIDTH: 5'-6"
HEIGHT: 5'-6"
TOTAL AREA: 30.4 Sq.Ft.
BORDER TYPE: INSET
RECESS: 0.75"
WIDTH: 1.25"
RADII: 1.38"
NO. Z BARS: 2
LENGTH: 58.1

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

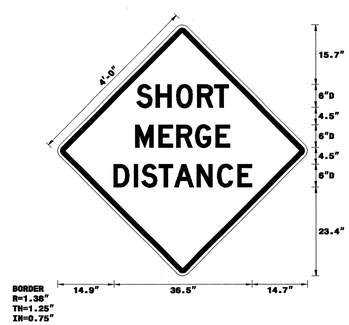
SYMBOL	X	Y	WID	HT

MAT'L: 0.080" (2.0 mm) ALUMINUM

DESIGN BY: KG Eggleston
PROJECT ID: U-2826A
CHECKED BY: LM Moon
DIV: 09
DATE: Feb 27, 2009

USE NOTES: 1,2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be Grade B fluorescent orange retroreflective sheeting.



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter																												Series/Size Text Length
		S	H	O	R	T																						D 2000
	21	5.1	5.4	5.6	4.6	3.7	20.8																					24.4
		M	E	R	G	E																						D 2000
	20.7	6.1	4.7	5	5.4	3.7	20.5																					25
		D	I	S	T	A	N	C	E																			D 2000
	14.9	5.4	2	4.6	4.1	6	5.4	5.4	3.7	14.7																		36.5

FILENAME: Tcp_guidesigndesigns

NORTH CAROLINA D.O.T. SIGN DETAIL

23-APR-2009 15:08
G:\TEG\Curr\U0006004 U2826A\TCP\U2826a_tc_TCP68.dgn
(2D54 AT RALSKYMC)

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: Lisa M. Moon DATE: 4-24-09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

TEMPORARY GUIDE SIGN DETAILS

SCALE:	NONE
DATE:	4/23/09
DWG. BY:	AW/KE
DESIGN BY:	AW/KE
REVIEWED BY:	TB

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

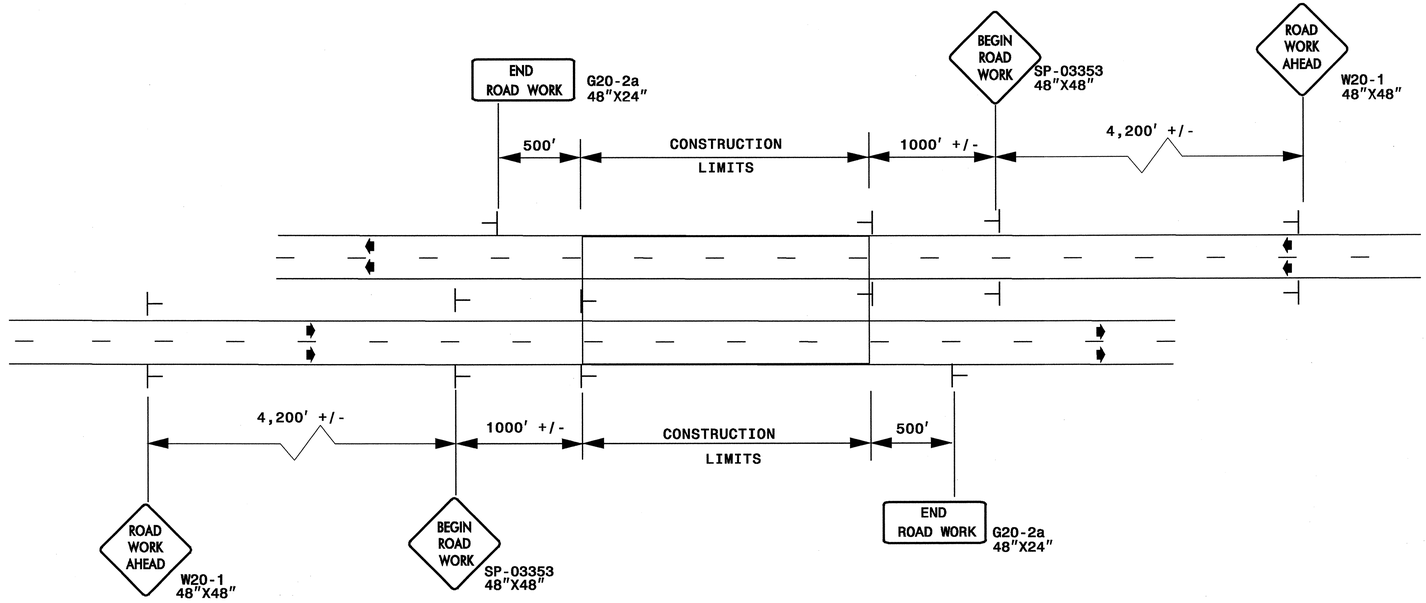
REVISIONS

CADD FILE

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

PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-69

DETAIL A

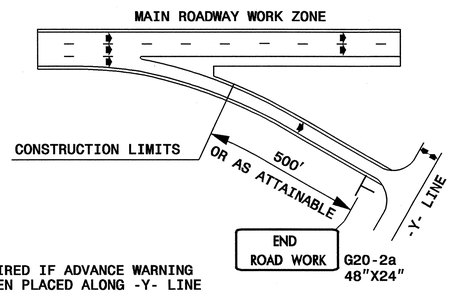


LEGEND

- ├ STATIONARY SIGN
- ➧ DIRECTION OF TRAFFIC FLOW

DETAIL B

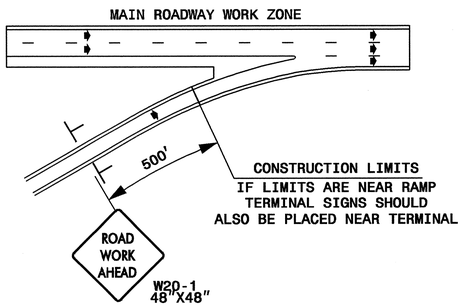
EXIT RAMPS



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.

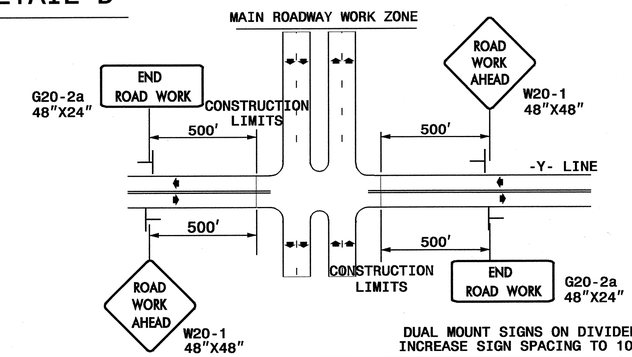
DETAIL C

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.

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: J. Todd Brooks DATE: 7/24/09

SEAL — NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

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

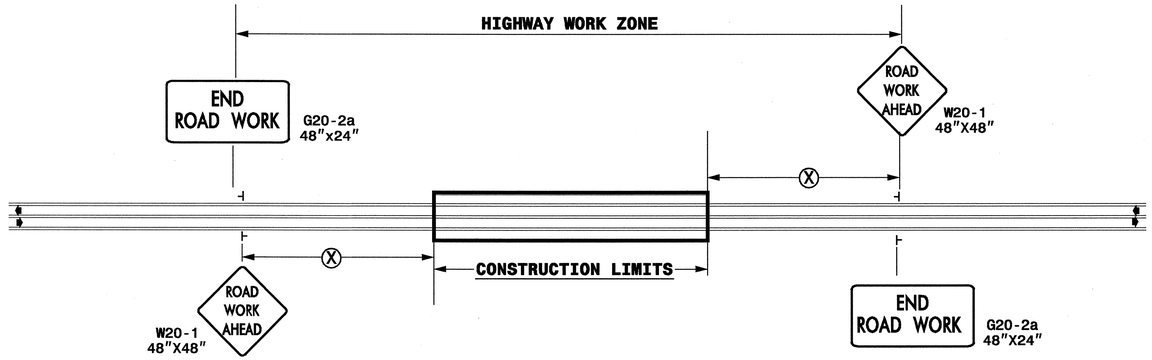
SCALE:	NONE	REVISIONS	
DATE:	8/03	03/04	
DWG. BY:	JI		
DESIGN BY:	JI		
REVIEWED BY:		CADD FILE	

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

23-APR-2009 15:21
G:\TEG\Curr\100006004 U2826A\TCP\u2826a_tc_TCP69.dgn
12054 AT RALSGKYMCI

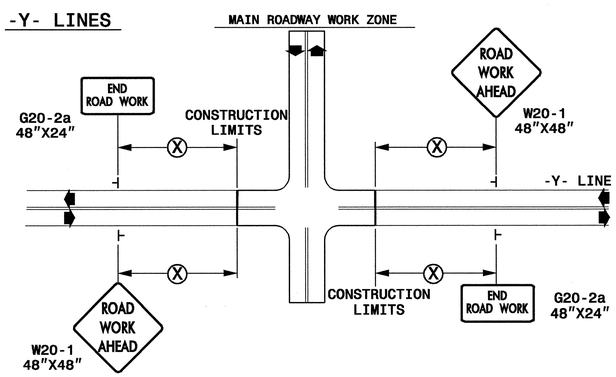
PROJ. REFERENCE NO.	SHEET NO.
U-2826A	TCP-70

TWO-WAY UNDIVIDED ** (L-LINES)



POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING (X)
≤ 50	500'
≥ 55	1000'

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



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

PBSJ
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

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: DATE: 4/29/09

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

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

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

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

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

CADD FILE

23-APR-2009 15:24
G:\TEG\Curr\00006004 U2826A\TCP\u2826a_tc_TCP70.dgn
12054 AT RALSGRYMCI