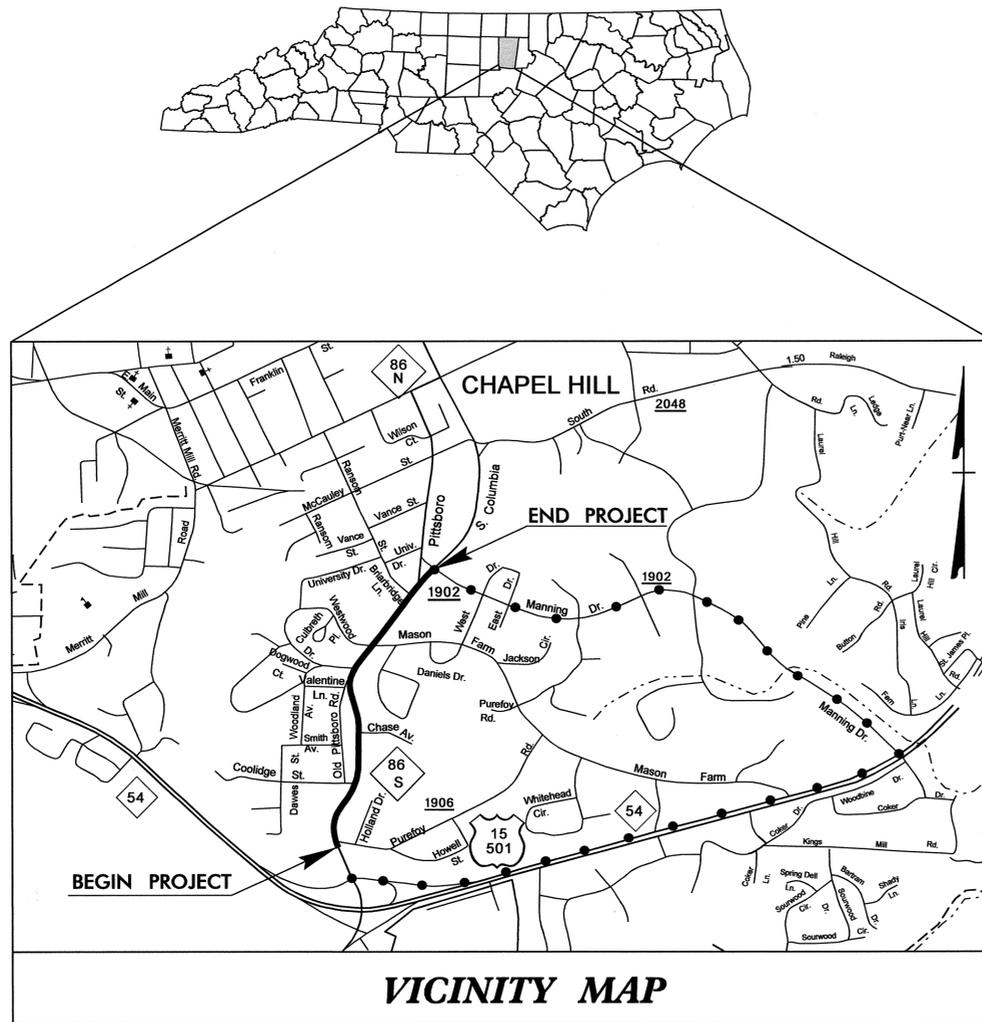


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN
AND FINAL PAVEMENT MARKING PLAN**

ORANGE COUNTY



VICINITY MAP

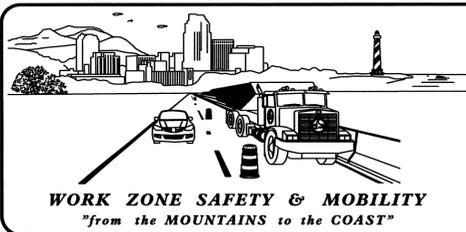
INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND AND TEMPORARY PAVEMENT MARKING
TMP-1B	TRANSPORTATION OPERATIONS PLAN: MANAGEMENT STRATEGIES AND PROJECT NOTES
TMP-2	DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS - WORK ZONE WARNING SIGNS
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4	PHASE I OVERVIEW - STEPS 2 THRU 6
TMP-5	PHASE I - STEPS 3 THRU 6 - TYPICAL SECTION
TMP-6	DETAIL 1 - PHASE I, SOUTH NC 86 (S. COLUMBIA ST) OFF-SITE ONE-WAY DETOUR ROUTE
TMP-7 THRU TMP-9	DETAILS 2 THRU 4 - PHASE I TRAFFIC PATTERN STEPS 3 THRU 6
TMP-10	PHASE I OVERVIEW - STEPS 7 & 8
TMP-11	PHASE I - STEPS 7 & 8 - TYPICAL SECTION
TMP-12 THRU TMP-14	DETAILS 5 THRU 7 - PHASE I TRAFFIC PATTERN STEPS 7 & 8
TMP-15	PHASE II OVERVIEW
TMP-16	PHASE II TYPICAL SECTION
TMP-17 THRU TMP-19	DETAILS 8 THRU 10 - PHASE II TRAFFIC PATTERN
SD - 1	SPECIAL SIGN DESIGN
PM-1 THRU PM-4	FINAL PAVEMENT MARKING PLAN

SHEET NO.
TMP-1

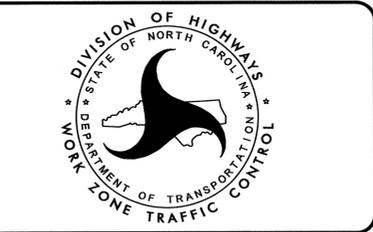
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N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSG) RALEIGH, NC 27699-1561
3750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
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JOSEPH ISHAK, P.E. TRAFFIC CONTROL PROJECT ENGINEER
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ALLA LYUDMIRSKAYA TRAFFIC CONTROL DESIGN ENGINEER



PLANS PREPARED BY:
NCDOT
WORK ZONE
TRAFFIC CONTROL
AND
HNTB HNTB NORTH CAROLINA, P.C.
343 E. SIX FORKS ROAD, SUITE 200
RALEIGH, NORTH CAROLINA 27609

APPROVED: *Michelle Ward*
DATE: 8/2/2011

SEAL

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN 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 ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - THRU LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS
1264.02	PLACEMENT OF OBJECT MARKERS

LEGEND

GENERAL

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

TRAFFIC CONTROL DEVICES

- TYPE I BARRICADE
- TYPE II BARRICADE
- TYPE III BARRICADE
- CONE
- DRUM SKINNY DRUM
- FLASHING ARROW PANEL (TYPE C)
- STATIONARY SIGN
- PORTABLE SIGN
- STATIONARY OR PORTABLE SIGN
- CRASH CUSHION
- CHANGEABLE MESSAGE SIGN
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- POLICE
- FLAGGER
- CHAIN LINK FENCE

PAVEMENT MARKINGS

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

TEMPORARY PAVEMENT MARKINGS

PAVEMENT MARKING LINES

- PAINT (4"):
- PA WHITE EDGELINE
 - PB YELLOW EDGE LINE
 - PC 10 FT WHITE SKIP
 - PD 2 FT WHITE MINISKIP
 - PE WHITE SOLID LANE LINE
 - PF 10 FT YELLOW SKIP
 - PG 2 FT YELLOW MINISKIP
 - PH YELLOW SINGLE CENTER LINE
 - PI YELLOW DOUBLE CENTER LINE

PAINT (8"):

- PR WHITE GORELINE
- PS WHITE DIAGONAL
- PV YELLOW DIAGONAL
- PX WHITE CROSSWALK LINE

PAINT (24"):

- P4 WHITE STOP BAR
- P5 WHITE CROSSWALK LINE

PAVEMENT MARKING SYMBOLS & CHARACTERS

- PAINT SYMBOL:
- QA LEFT TURN ARROW
 - QB RIGHT TURN ARROW
 - QC STRAIGHT ARROW
 - QD COMBO STRAIGHT & LEFT TURN ARROW
 - QE COMBO STRAIGHT & RIGHT TURN ARROW
 - QK BICYCLE LANE STRAIGHT ARROW SYMBOL
 - QL BICYCLE W/ RIDER SYMBOL
 - QN 24" YIELD LINE TRIANGLE

PAINT CHARACTER:

- QI ALPHANUMERIC CHARACTER

NOTE: FOR EACH PAINT PAVEMENT MARKING ITEM, REFER TO GENERAL NOTE (DD) FOR NUMBER OF APPLICATIONS.

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APPROVED: <i>M. W. Ward</i> DATE: <i>8/2/11</i>		
ROADWAY STANDARD DRAWINGS, LEGEND AND TEMPORARY PAVEMENT MARKING		

MANAGEMENT STRATEGIES

THIS PROJECT AREA IS IN THE TOWN OF CHAPEL HILL AND S. COLUMBIA STREET (NC 86) IS A MAIN ROUTE TO AND FROM THE UNIVERSITY OF CHAPEL HILL AND HOSPITAL. THERE IS A HIGH VOLUME OF PEDESTRIAN TRAFFIC IN THE AREA AS WELL AS CHAPEL HILL TRANSIT BUSES THAT ARE MAINTAINED ALONG THIS ROUTE. IT IS IMPORTANT TO MINIMIZE IMPACT TO ALL MODES OF TRANSPORTATION. THE TRANSPORTATION MANAGEMENT PLAN MAINTAINS AT LEAST A 4' PEDESTRIAN WALKWAY ALONG THE PROJECT CORRIDOR AS WELL AS RELOCATES THE BUS STOPS AT PUREFOY ROAD AND THE DAY CARE CENTER TO ONE LOCATION IN FRONT OF MERRITT'S STORE.

IN PHASE I, TRAFFIC WILL BE MAINTAINED USING A ONE-WAY PATTERN WHILE CONSTRUCTION TAKES PLACE ON THE RIGHT SIDE OF S. COLUMBIA STREET FROM PUREFOY ROAD TO MASON FARM ROAD. NORTHBOUND TRAFFIC WILL REMAIN ON S. COLUMBIA STREET WHILE SOUTHBOUND TRAFFIC WILL BE DETOURED OFF-SITE VIA MANNING DRIVE AND US 15-501. PEDESTRIANS WILL BE MAINTAINED USING A 4' PEDESTRIAN WALKWAY ALONG THE RIGHT SIDE OF THE ROAD. THIS ONE-WAY PATTERN WILL REMAIN IN PLACE NO LONGER THAN 6 MONTHS. (SEE SPECIAL PROVISIONS AND LIQUIDATED DAMAGES FOR PHASE I, STEPS 3-9)

ONCE THE WORK HAS BEEN COMPLETED IN PHASE I, TRAFFIC WILL BE PLACED IN A TWO-LANE/ TWO-WAY PATTERN ON THE NEW CONSTRUCTION ON THE RIGHT SIDE OF S. COLUMBIA STREET. CONSTRUCTION WILL THEN TAKE PLACE ON THE LEFT SIDE OF S. COLUMBIA STREET FROM PUREFOY ROAD TO MASON FARM ROAD, AS WELL AS BOTH THE LEFT SIDE AND RIGHT SIDE OF S. COLUMBIA STREET FROM MASON FARM ROAD TO MANNING DRIVE.

IN THE AREA FROM MASON FARM ROAD TO MANNING DRIVE, CONSTRUCTION WILL TAKE PLACE ON THE LEFT SIDE OF S. COLUMBIA STREET FIRST, WHILE MAINTAINING PEDESTRIAN ACCESS ALONG THE NEW SIDEWALK ON THE RIGHT SIDE OF THE ROAD. ONCE THE CONSTRUCTION IS COMPLETE ON THE LEFT SIDE (INCLUDING SIDEWALK), WORK MAY BEGIN ON THE RIGHT SIDE OF THE ROAD WHILE MAINTAINING PEDESTRIANS ON THE NEW SIDEWALK ON THE LEFT SIDE.

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
1. -L- (NC 86), US 15-501 (FORDHAM BLVD.), & ALL -Y- LINES	MONDAY-SUNDAY: 9:00PM-7:00AM

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

ROAD NAME
1. -L- (NC 86), US-15-501 (FORDHAM BLVD.), & ALL -Y- LINES

HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 7:00 A.M. DECEMBER 31ST TO 9:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN UNTIL 9:00 P.M. THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 7:00 A.M. THURSDAY AND 9:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY TO 9:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 7:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.

- FOR LABOR DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY TO 9:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 7:00 A.M. TUESDAY TO 9:00 P.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 7:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
- FOR UNC-CHAPEL HILL FOOTBALL AND BASKETBALL GAMES OCCURRING AT UNC-CHAPEL HILL CAMPUS BETWEEN TWO (2) HOURS BEFORE THE START AND TWO (2) HOURS AFTER THE END OF THE UNC-CHAPEL HILL FOOTBALL AND BASKETBALL GAMES.

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
ANY ROADS	MONDAY-SUNDAY: 9:00PM-7:00AM	30 MINUTES INSTALLING DRAINAGE STRUCTURES AND PIPES ACROSS THE ROAD & INSTALLATION OF SIGNALS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
1. -L- (NC 86), US 15-501 (FORDHAM BLVD.), & ALL -Y- LINES	MONDAY-SUNDAY: 9:00PM-7:00AM

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

ROAD NAME	DAY AND TIME RESTRICTIONS
1. -L- (NC 86), US 15-501 (FORDHAM BLVD.), & ALL -Y- LINES	MONDAY-FRIDAY: 4:00PM-6:00PM 9:00PM-9:00AM SATURDAY-SUNDAY: 9:00PM-7:00AM

F) 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 CLOSURE REQUIREMENTS

- REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED, OR AS DIRECTED BY THE ENGINEER.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- 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 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.
- DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY RAMP OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- DO NOT INSTALL MORE THAN 1/2 MILE OF LANE CLOSURE ON NC 86 (S. COLUMBIA ST.), MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
DO NOT INSTALL MORE THAN 600 FT. OF LANE CLOSURE ON ALL -Y- LINES, MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- DO NOT INSTALL MORE THAN ONE LANE CLOSURE, IN ANY ONE DIRECTION, ON NC 86 (S. COLUMBIA ST.).
- PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:
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.
- DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 350 FT. IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- 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.
- PROVIDE PERMANENT SIGNING.
- PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.
PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.
- COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.
COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.
- ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 350 FT. IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

- 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.

TRAFFIC CONTROL DEVICES

- SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADIUS, AND 3 FT OFF THE EDGE OF AN OPENED 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.
- PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES (DRUMS/SKINNY DRUMS) PERPENDICULAR TO THE EDGE OF THE TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

- INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS SHOWN IN THE PAVEMENT MARKING PLAN.
- INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
1. NC 86 (S. COLUMBIA ST.)	PAINT (4")	NONE
-Y7- (MASON FARM RD.)		
-Y8- (PITTSBORO RD.)		
-Y9- (MANNING DR.)		

- 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.

- TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

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

- TRACE THE PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO INSTALLATION. PLACE SKINNY DRUMS TO DELINEATE ANY PROPOSED MONOLITHIC ISLANDS BEFORE INSTALLATION.

TEMPORARY / FINAL SIGNALS

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

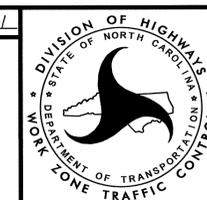
MISCELLANEOUS

- LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS, AS DIRECTED BY THE ENGINEER. NCDOT WILL PROVIDE LAW ENFORCEMENT AT NO ADDITIONAL COST TO THE CONTRACTOR.
- ALL WHEELCHAIR RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING SHOWN ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE SIGNING AND DELINEATION UNIT.
- CONTRACTOR SHALL MAINTAIN SIDEWALK ACCESS AT ALL TIMES 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 NOTE

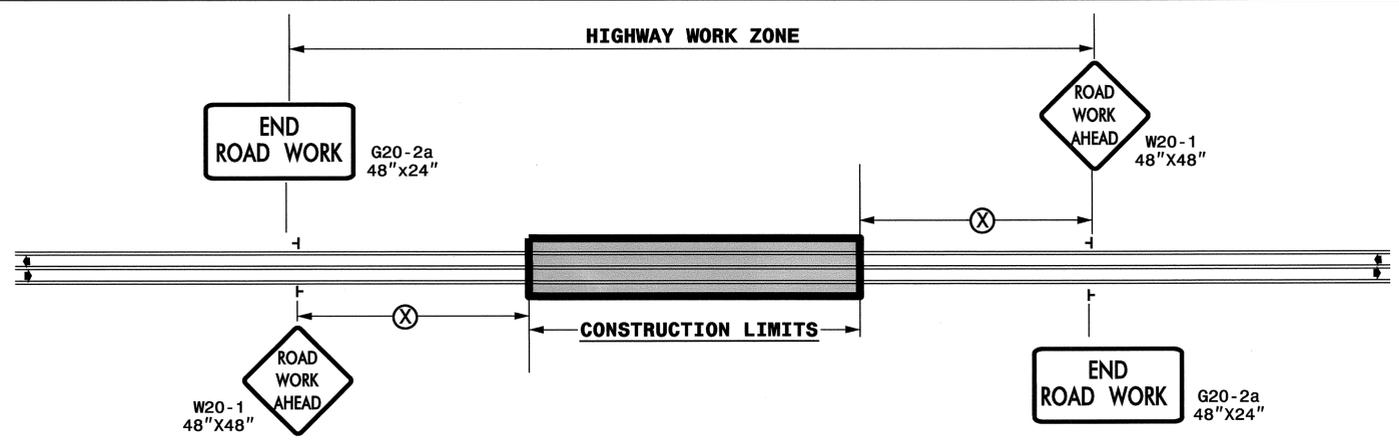
- TEMPORARILY PLUG AND BLOCK PIPES AND STRUCTURES UNTIL REMAINDER OF DOWNSTREAM DRAINAGE SYSTEM IS IN PLACE.

APPROVED *Michelle Ward* DATE 4-22-11



TRANSPORTATION OPERATIONS PLAN

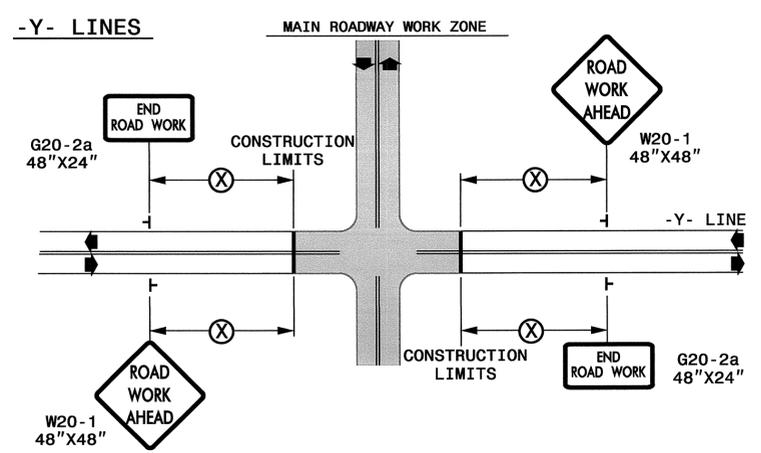
TWO-WAY UNDIVIDED ** (L-LINES)



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

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

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



DETAIL DRAWING FOR
 TWO-WAY UNDIVIDED
 WORK ZONE WARNING SIGNS

GENERAL NOTES

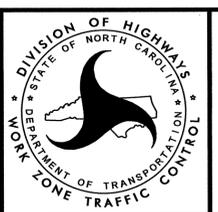
- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, 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

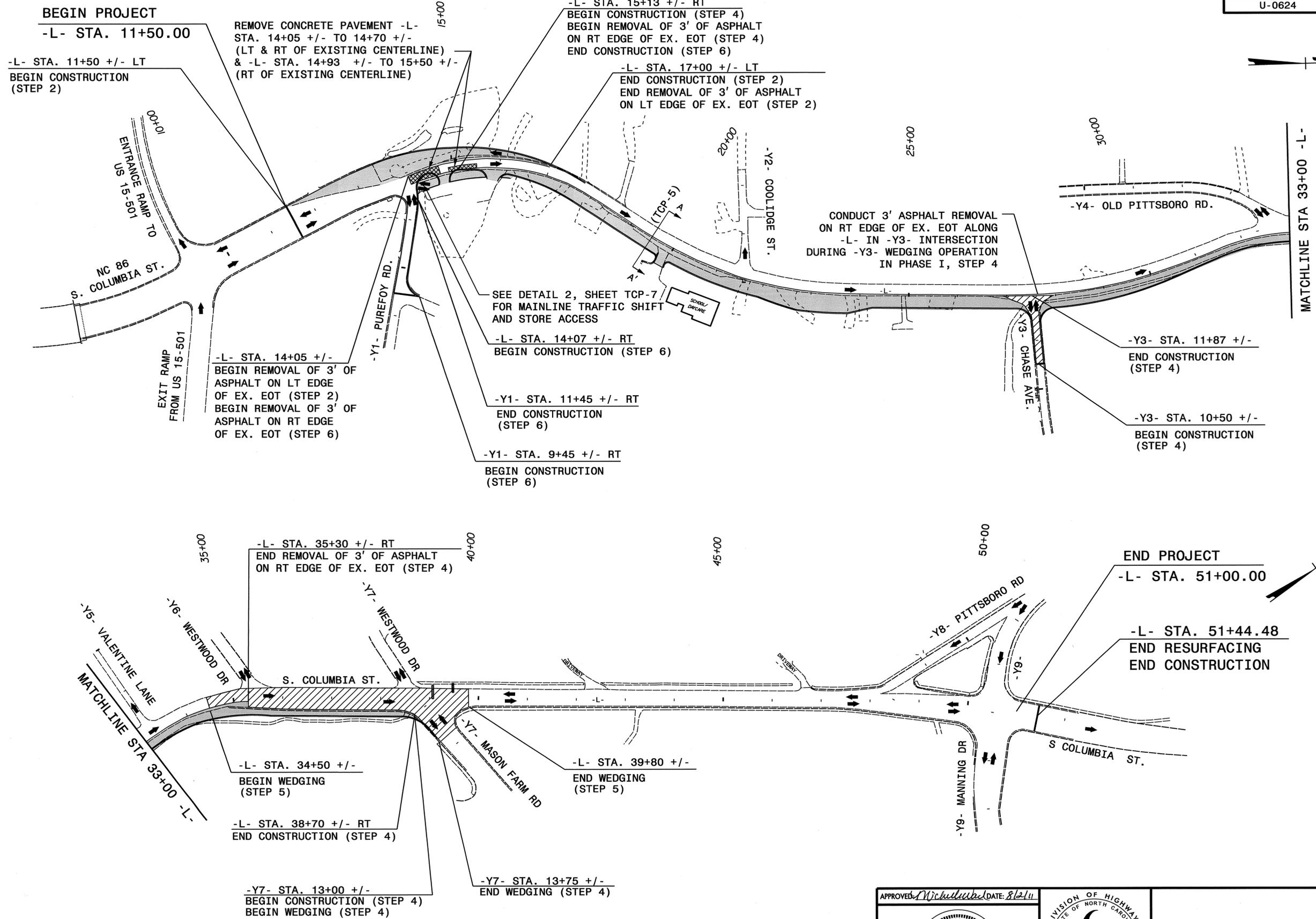
◀ DIRECTION OF TRAFFIC FLOW

APPROVED: *Nichelle Ward* DATE: 8/1/11



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

02-AUG-2011 07:08
 \\dot\dfs\001\N5P-Proj\TIP-Proj\Projects-U\U0624-TrafficControl\TCP\U-0624-TC-TMP-02-AWZ2way-Undiv.dgn
 glyudml AT 1E241741



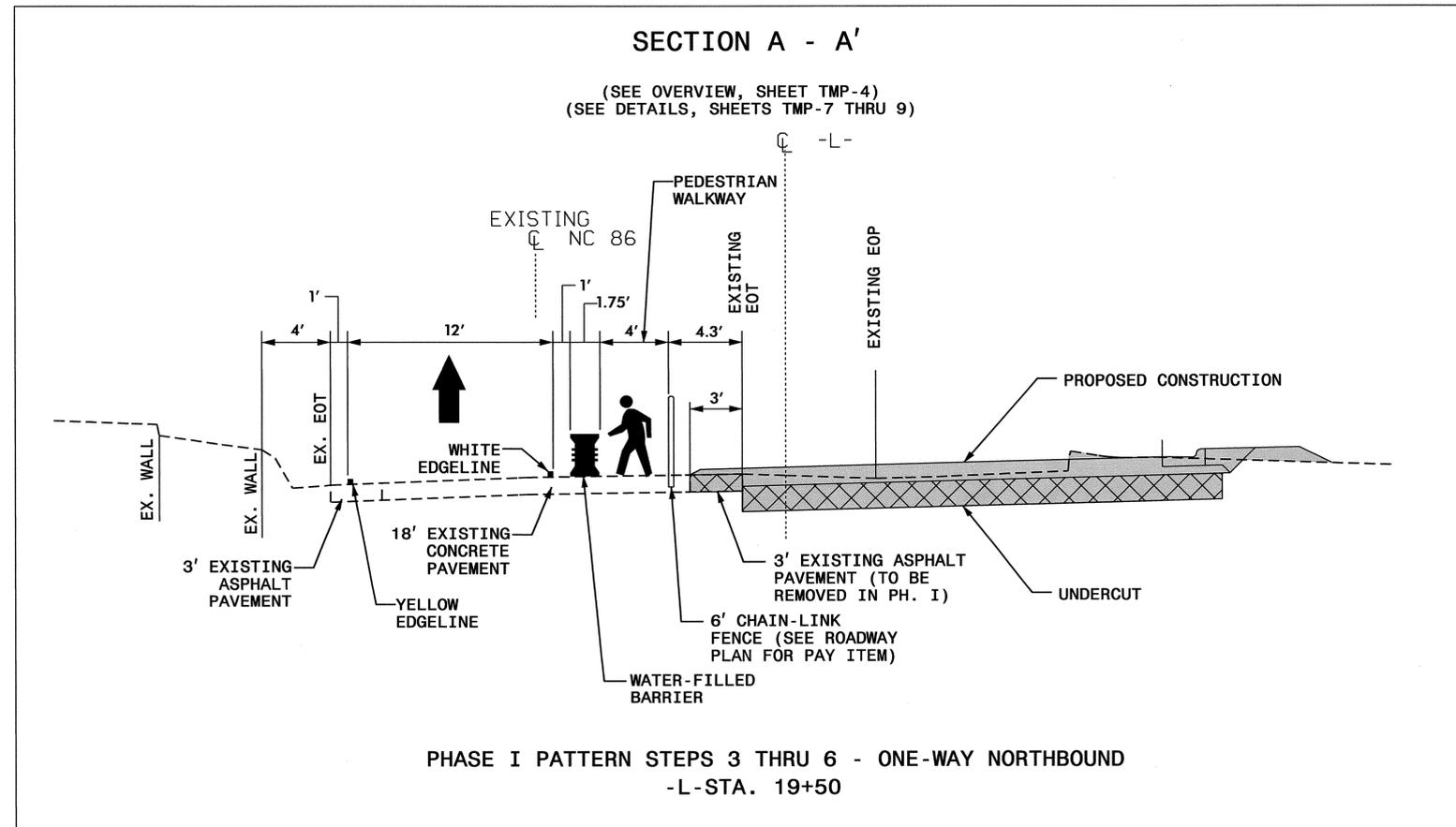
02-AUG-2011 07:11:01 \\nsppro\proj\TIP\Projects-U\U0624\TrafficControl\TCP\U-0624_TC_TCP_04_PH_10VRRW2-5.dgn
 g:\ygm\at\1224741

APPROVED *Michelle Ward* DATE: 8/21/11

SEAL

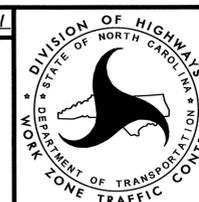


PHASE I OVERVIEW
STEPS 2 THRU 6



02-AUG-2011 10:14:25
 \\dot\ofsr\proj\021241741\TIPProjects-U\U0624\TrafficControl\TCP\U-0624_TC-TCP_05_PH I-St 2-5_Typical.dgn
 ghlydm AT 1E241741

APPROVED *Michelle Ward* DATE: 8/2/11



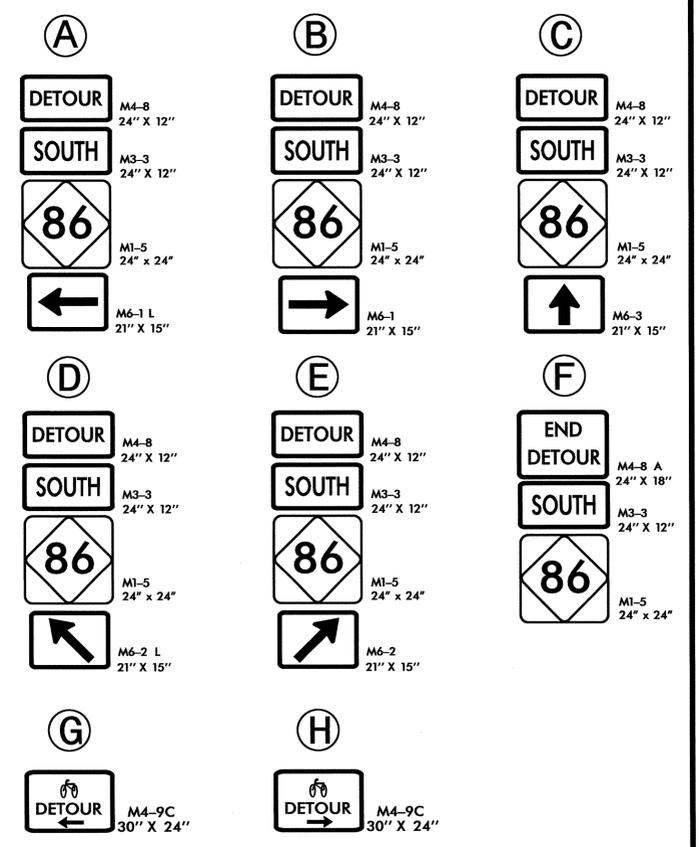
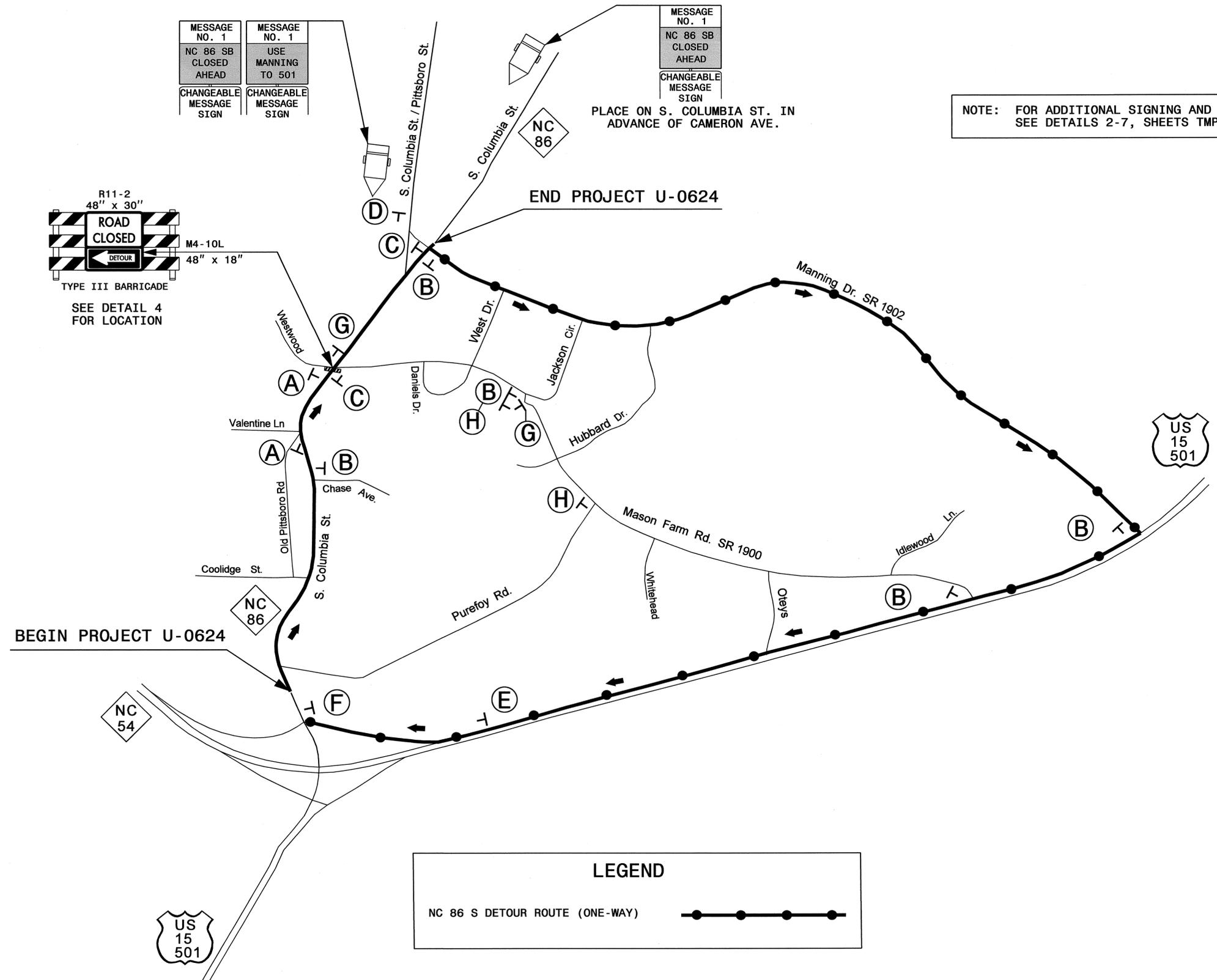
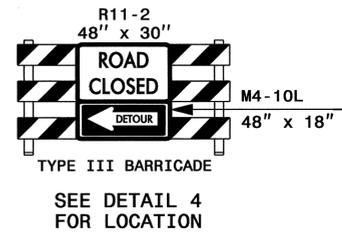
PHASE I - STEPS 3 THRU 6
TYPICAL SECTION

MESSAGE NO. 1 NC 86 SB CLOSED AHEAD CHANGEABLE MESSAGE SIGN	MESSAGE NO. 1 USE MANNING TO 501 CHANGEABLE MESSAGE SIGN
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MESSAGE NO. 1 NC 86 SB CLOSED AHEAD CHANGEABLE MESSAGE SIGN

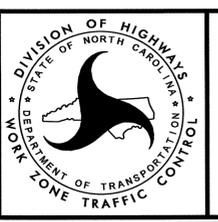
PLACE ON S. COLUMBIA ST. IN
ADVANCE OF CAMERON AVE.

NOTE: FOR ADDITIONAL SIGNING AND MESSAGES,
SEE DETAILS 2-7, SHEETS TMP-7-9 & 12-14.

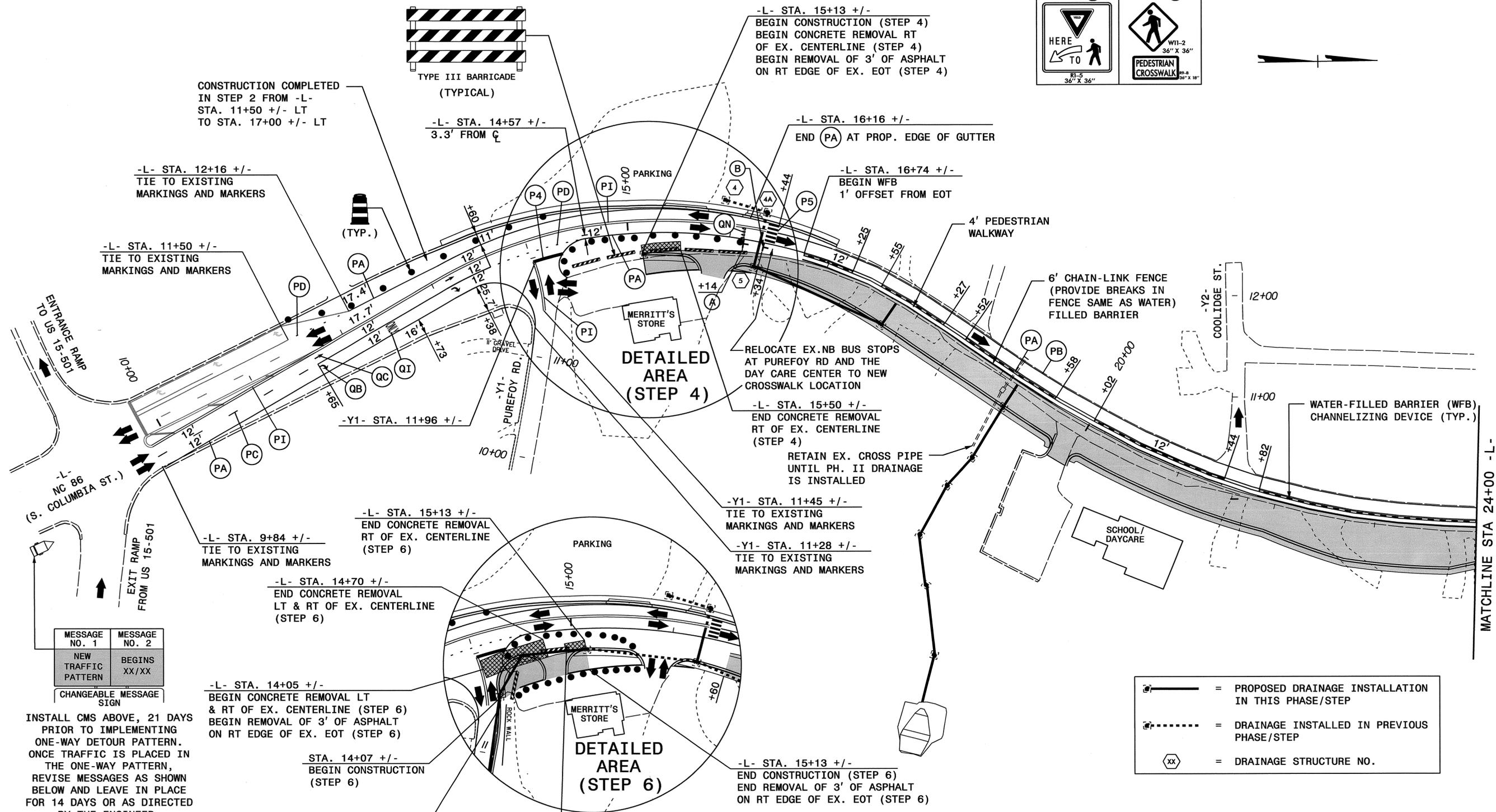
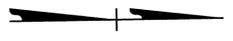
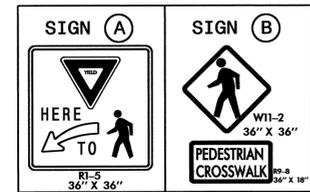


02-AUG-2010 10:16 AM \\dot\ofsr\02-AUG-2010\Projects\U0624\TrafficControl\TCP-U-0624_TC_TCP_06_Phil_Detail.dgn ghydm AT 12:44:14

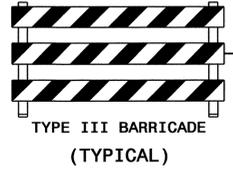
APPROVED: *Nichelle Ward* DATE: 8/2/11



DETAIL 1- PHASE I
SOUTH NC 86
(S. COLUMBIA ST.)
OFF-SITE ONE-WAY
DETOUR ROUTE



CONSTRUCTION COMPLETED
IN STEP 2 FROM -L-
STA. 11+50 +/- LT
TO STA. 17+00 +/- LT



-L- STA. 14+57 +/-
3.3' FROM CL

-L- STA. 15+13 +/-
BEGIN CONSTRUCTION (STEP 4)
BEGIN CONCRETE REMOVAL RT
OF EX. CENTERLINE (STEP 4)
BEGIN REMOVAL OF 3' OF ASPHALT
ON RT EDGE OF EX. EOT (STEP 4)

-L- STA. 16+16 +/-
END (PA) AT PROP. EDGE OF GUTTER

-L- STA. 16+74 +/-
BEGIN WFB
1' OFFSET FROM EOT

-L- STA. 12+16 +/-
TIE TO EXISTING
MARKINGS AND MARKERS

-L- STA. 11+50 +/-
TIE TO EXISTING
MARKINGS AND MARKERS

4' PEDESTRIAN
WALKWAY

6' CHAIN-LINK FENCE
(PROVIDE BREAKS IN
FENCE SAME AS WATER)
FILLED BARRIER

DETAILED
AREA
(STEP 4)

RELOCATE EX. NB BUS STOPS
AT PUREFOY RD AND THE
DAY CARE CENTER TO NEW
CROSSWALK LOCATION

-L- STA. 15+50 +/-
END CONCRETE REMOVAL
RT OF EX. CENTERLINE
(STEP 4)

RETAIN EX. CROSS PIPE
UNTIL PH. II DRAINAGE
IS INSTALLED

WATER-FILLED BARRIER (WFB)
CHANNELIZING DEVICE (TYP.)

ENTRANCE RAMP
TO US 15-501

-L- NC 86
(S. COLUMBIA ST.)

EXIT RAMP
FROM US 15-501

-L- STA. 9+84 +/-
TIE TO EXISTING
MARKINGS AND MARKERS

-L- STA. 15+13 +/-
END CONCRETE REMOVAL
RT OF EX. CENTERLINE
(STEP 6)

-Y1- STA. 11+45 +/-
TIE TO EXISTING
MARKINGS AND MARKERS

-Y1- STA. 11+28 +/-
TIE TO EXISTING
MARKINGS AND MARKERS

-L- STA. 14+70 +/-
END CONCRETE REMOVAL
LT & RT OF EX. CENTERLINE
(STEP 6)

-L- STA. 14+05 +/-
BEGIN CONCRETE REMOVAL LT
& RT OF EX. CENTERLINE (STEP 6)
BEGIN REMOVAL OF 3' OF ASPHALT
ON RT EDGE OF EX. EOT (STEP 6)

STA. 14+07 +/-
BEGIN CONSTRUCTION
(STEP 6)

-Y1- STA. 11+45 +/- RT
END CONSTRUCTION
(STEP 6)

DETAILED
AREA
(STEP 6)

-L- STA. 15+13 +/-
END CONSTRUCTION (STEP 6)
END REMOVAL OF 3' OF ASPHALT
ON RT EDGE OF EX. EOT (STEP 6)

-L- STA. 14+93 +/-
BEGIN CONCRETE REMOVAL
RT OF EX. CENTERLINE
(STEP 6)

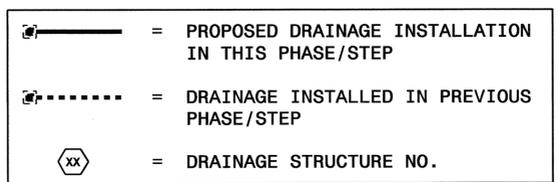
MESSAGE NO. 1	MESSAGE NO. 2
NEW TRAFFIC PATTERN	BEGINS XX/XX

CHANGEABLE MESSAGE SIGN

INSTALL CMS ABOVE, 21 DAYS PRIOR TO IMPLEMENTING ONE-WAY DETOUR PATTERN. ONCE TRAFFIC IS PLACED IN THE ONE-WAY PATTERN, REVISE MESSAGES AS SHOWN BELOW AND LEAVE IN PLACE FOR 14 DAYS OR AS DIRECTED BY THE ENGINEER.

MESSAGE NO. 1	MESSAGE NO. 2
NEW TRAFFIC PATTERN	ONE-WAY TRAFFIC ON NC 86

CHANGEABLE MESSAGE SIGN

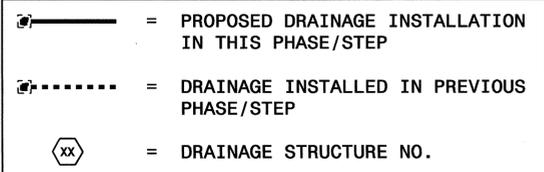
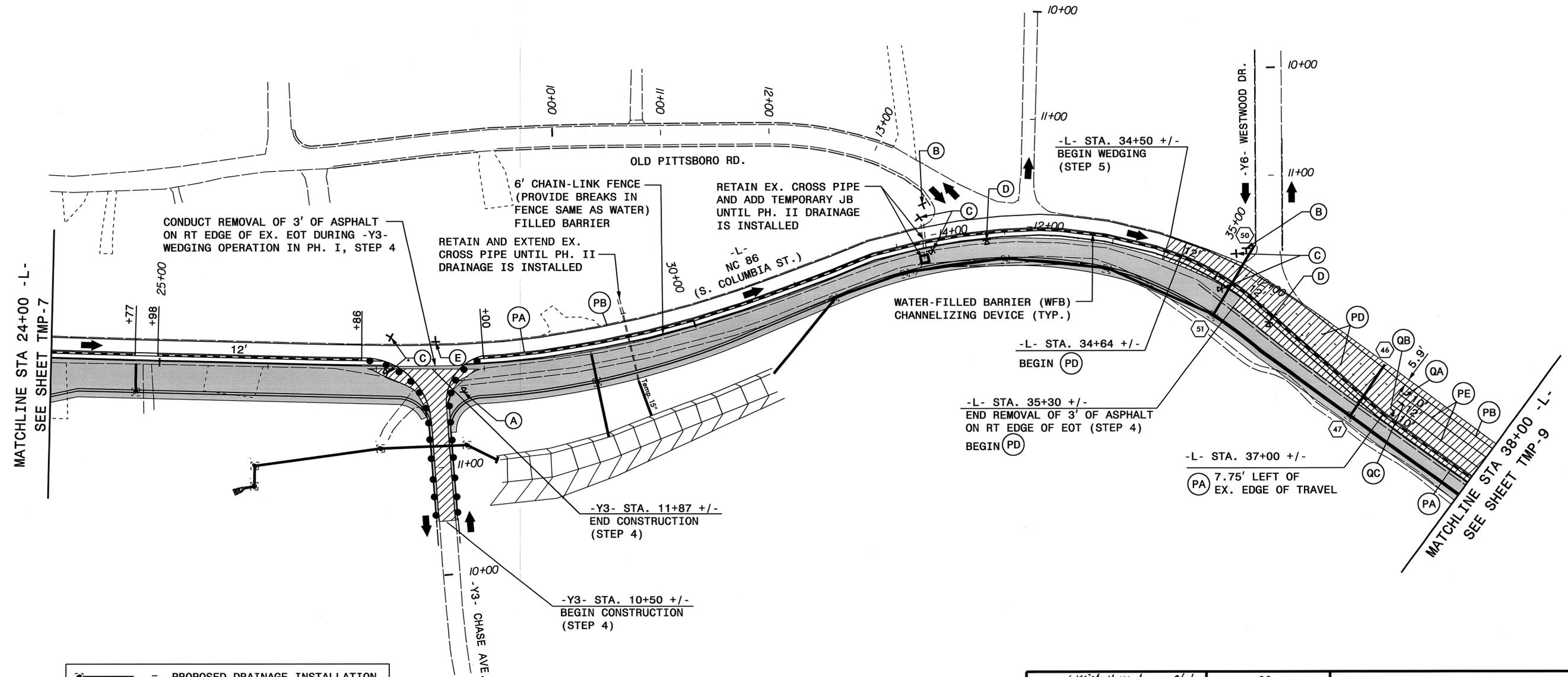
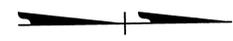
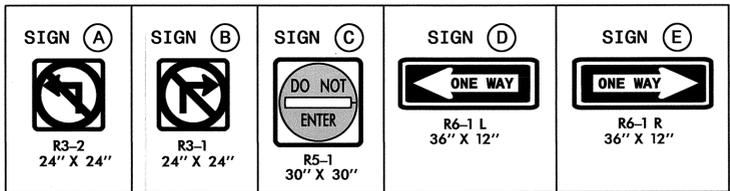


MATCHLINE STA 24+00 -L-
SEE SHEET TMP-8

APPROVED *Michelle Ward* DATE: 8/2/11

DETAIL 2 - PHASE I
TRAFFIC PATTERN -
STEPS 3 THRU 6

02-AUG-2011 07:17
\\dot\dfs\02101\NSP\proj\TIP\Projects-U\U0624\TrafficControl\TCP\U-0624_TC_TCP_07_PFI_DETAIL2.dgn
gwydm AT 12:24:14



APPROVED: *Michelle Ward* DATE: 8/3/11

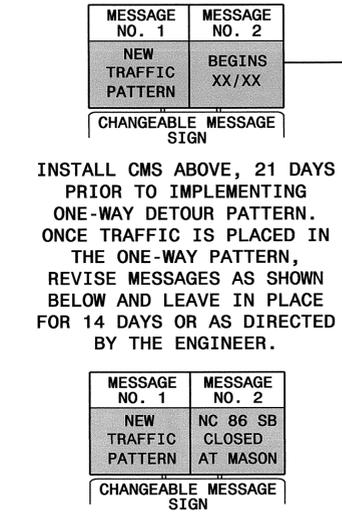
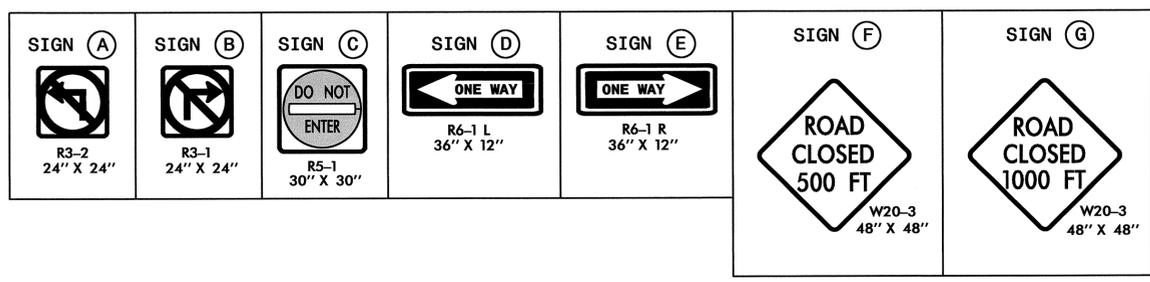
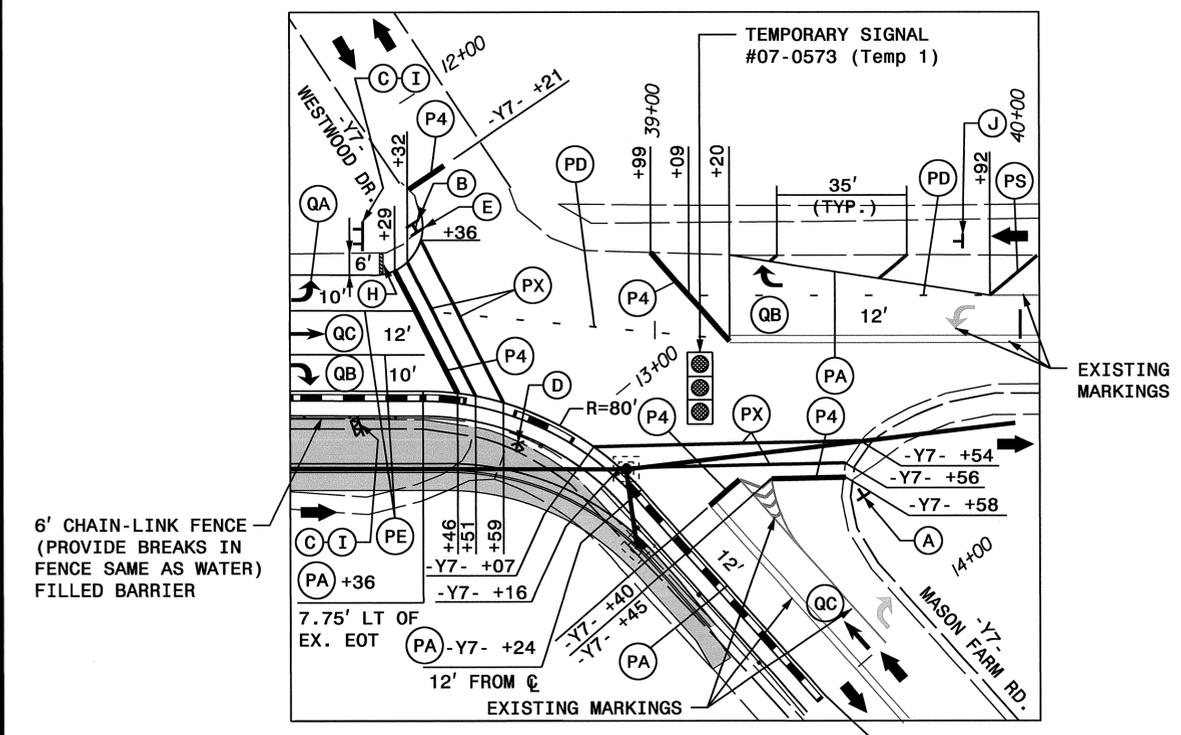
SEAL



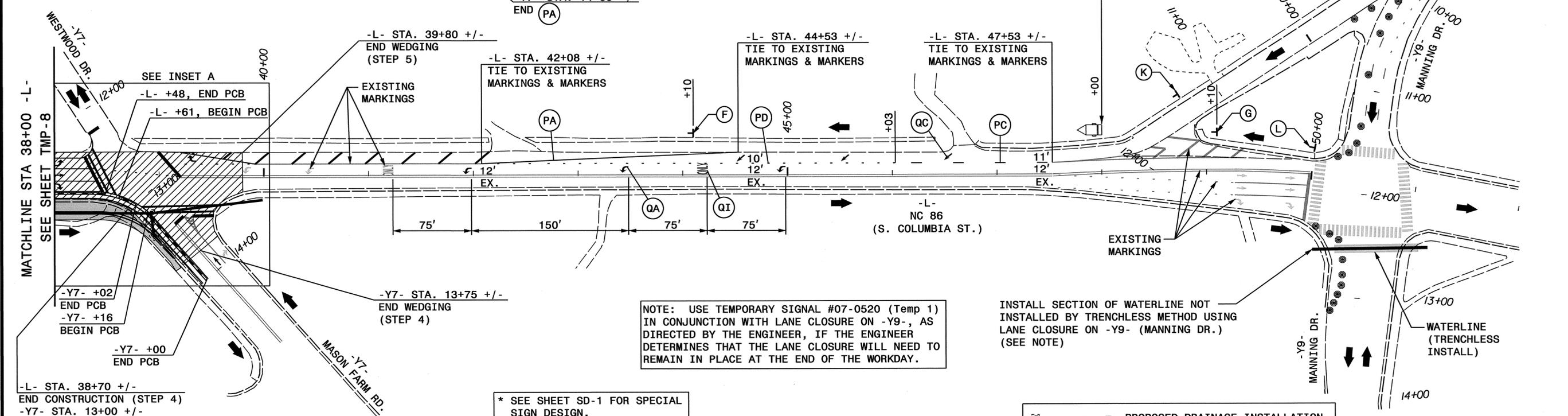

**DETAIL 3 - PHASE I
TRAFFIC PATTERN -
STEPS 3 THRU 6**

02-AUG-2011 07:48
 C:\DOT\GIS\02-AUG-2011\Projects\U0624\Traffic\TrafficControl\TCP-U-0624-TC-TCP-08-PHI-DETAIL3.dgn
 DWG: AT-1EE24741

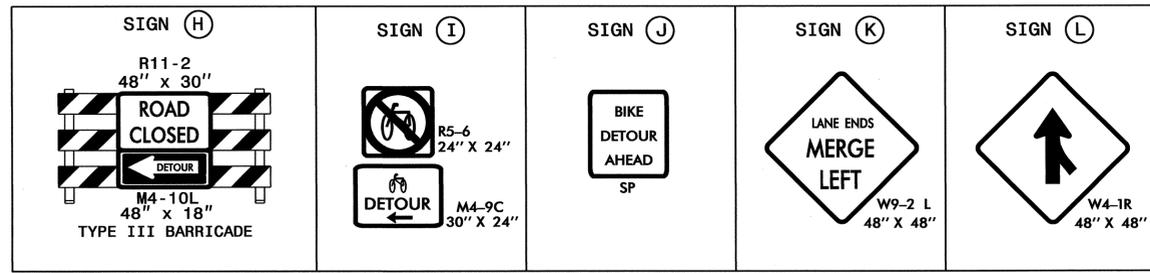
INSET A



CLOSE RIGHT LANE IN ADVANCE OF -Y8- (PITTSBORO RD) USING RSD 1101.02, SHEET 3 OF 9, FOR INSTALLATION OF WATERLINE NOT INSTALLED BY TRENCHLESS METHOD ON -Y9- (MANNING DR), STA. 12+50 +/- RT.



* SEE SHEET SD-1 FOR SPECIAL SIGN DESIGN.

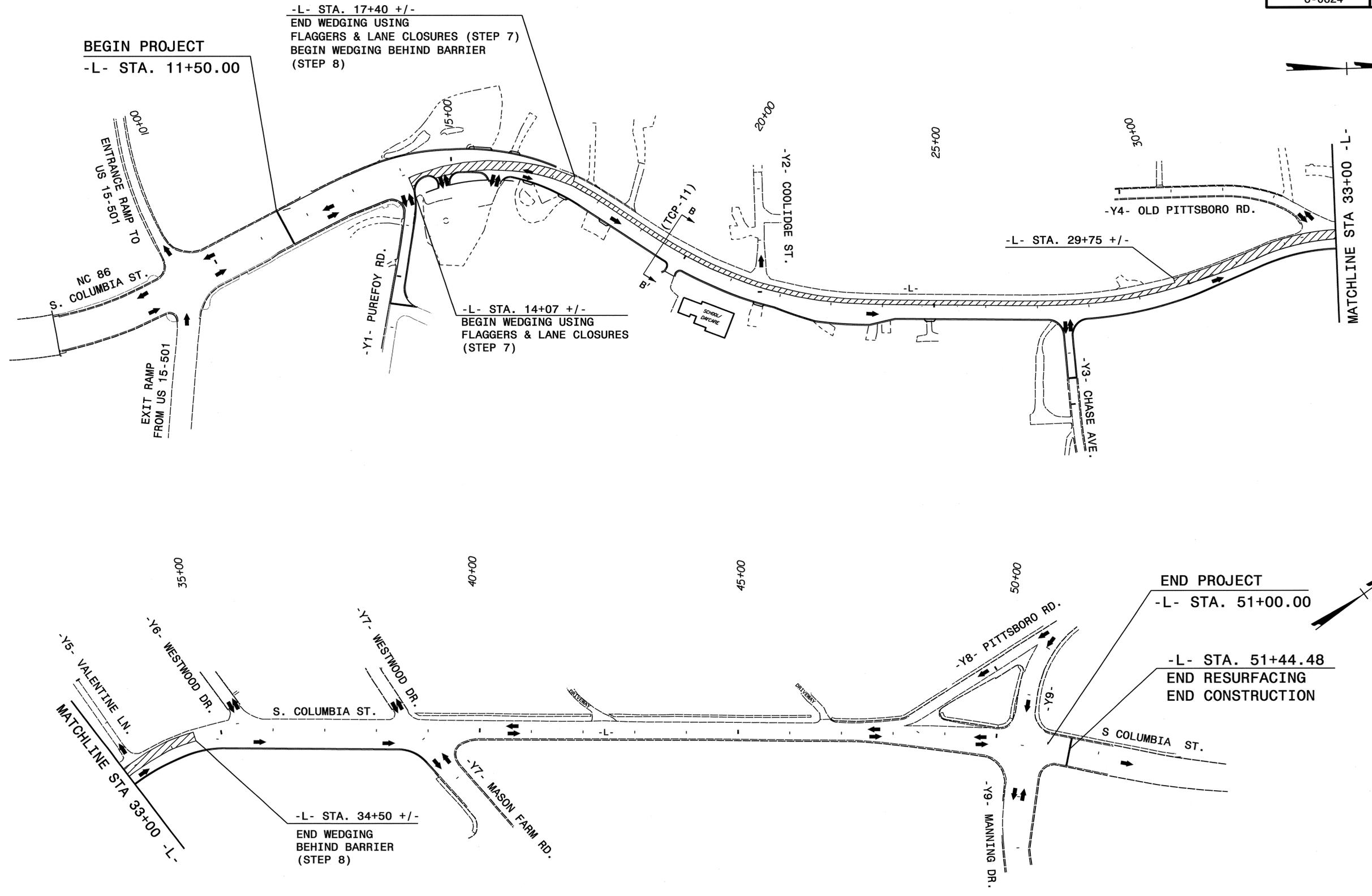


APPROVED *Michelle Ward* DATE: 8/1/11

SEAL

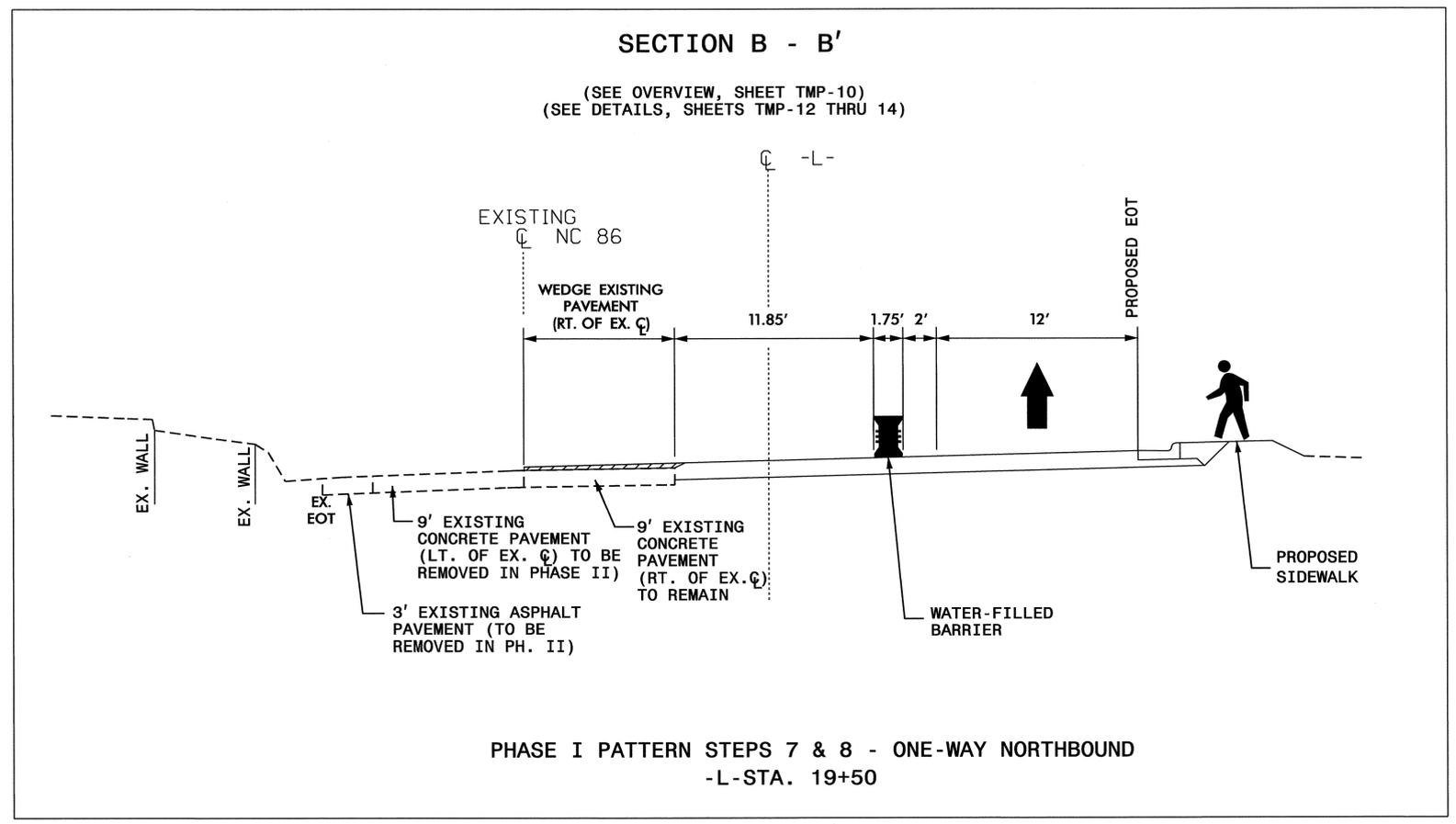
DETAIL 4 - PHASE I
TRAFFIC PATTERN -
STEPS 3 THRU 6

02-AUG-2011 11:27
 \\dot\dfs\03\Projects\0624\Traffic\TrafficControl\TCP\U-0624_TC_TCP_09_PHL_DETAIL4.dgn
 G:\ydcim AT 11:24:41



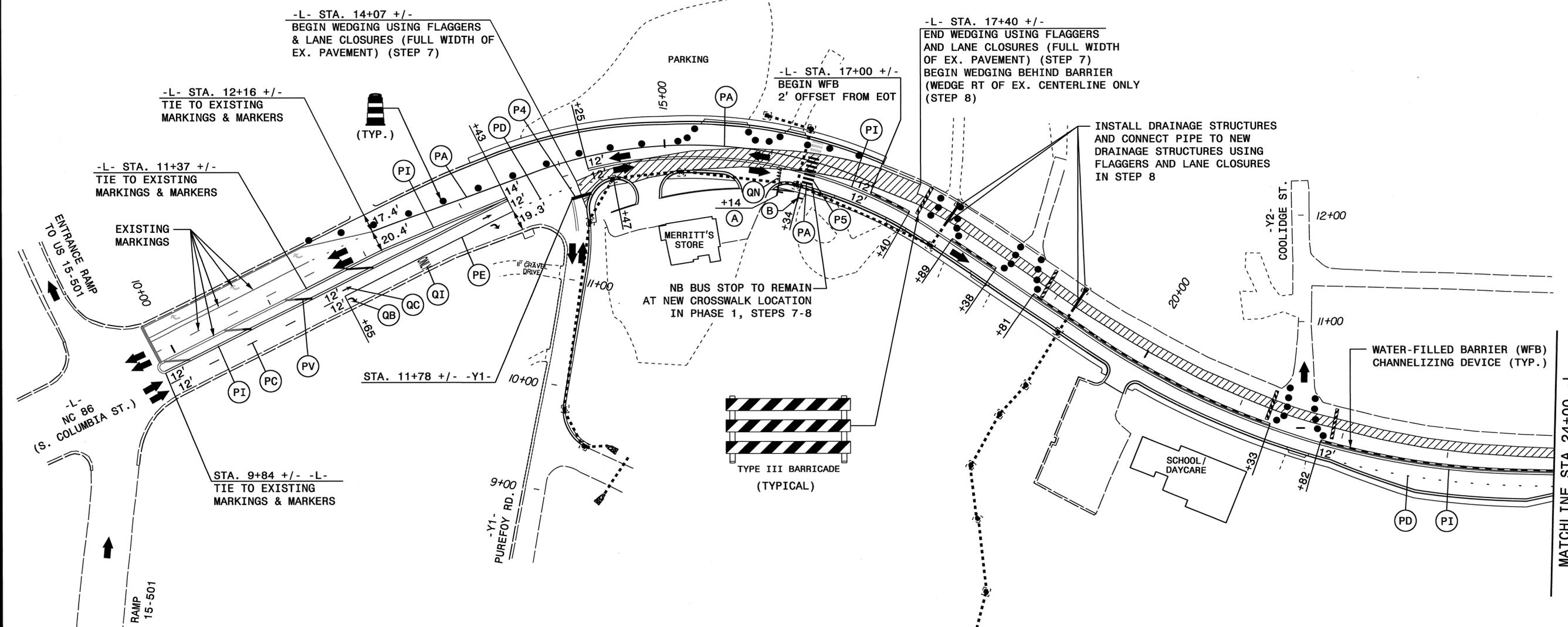
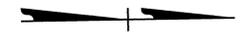
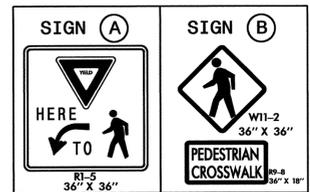
02-AUG-2011 07:20
 \\dot\dfs\02\DOT\NSP\Proj\TIP\Projects-U\U0624\TrafficControl\TCP-U-0624_TC-TCP_ID_PH_10VRVW6-7.dgn
 gbydml AT 12:44:14

APPROVED: <i>Michelle Ward</i> DATE: 8/2/11  SEAL	 DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL	PHASE I OVERVIEW STEPS 7 AND 8
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02-AUG-2010 07:21
 \\dot\cfe\02\NSP\Proj\TIP\Projects-U\0624\TrafficControl\TCP\U-0624_TC_TCP_ILPH I-St 6-7_Typical.dgn
 alyudml AT 1E24474I

APPROVED <i>Michelle Ward</i> DATE: <i>8/2/11</i>  SEAL		PHASE I - STEPS 7 & 8 TYPICAL SECTION
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= PROPOSED DRAINAGE INSTALLATION IN THIS PHASE/STEP
 = DRAINAGE INSTALLED IN PREVIOUS PHASE/STEP

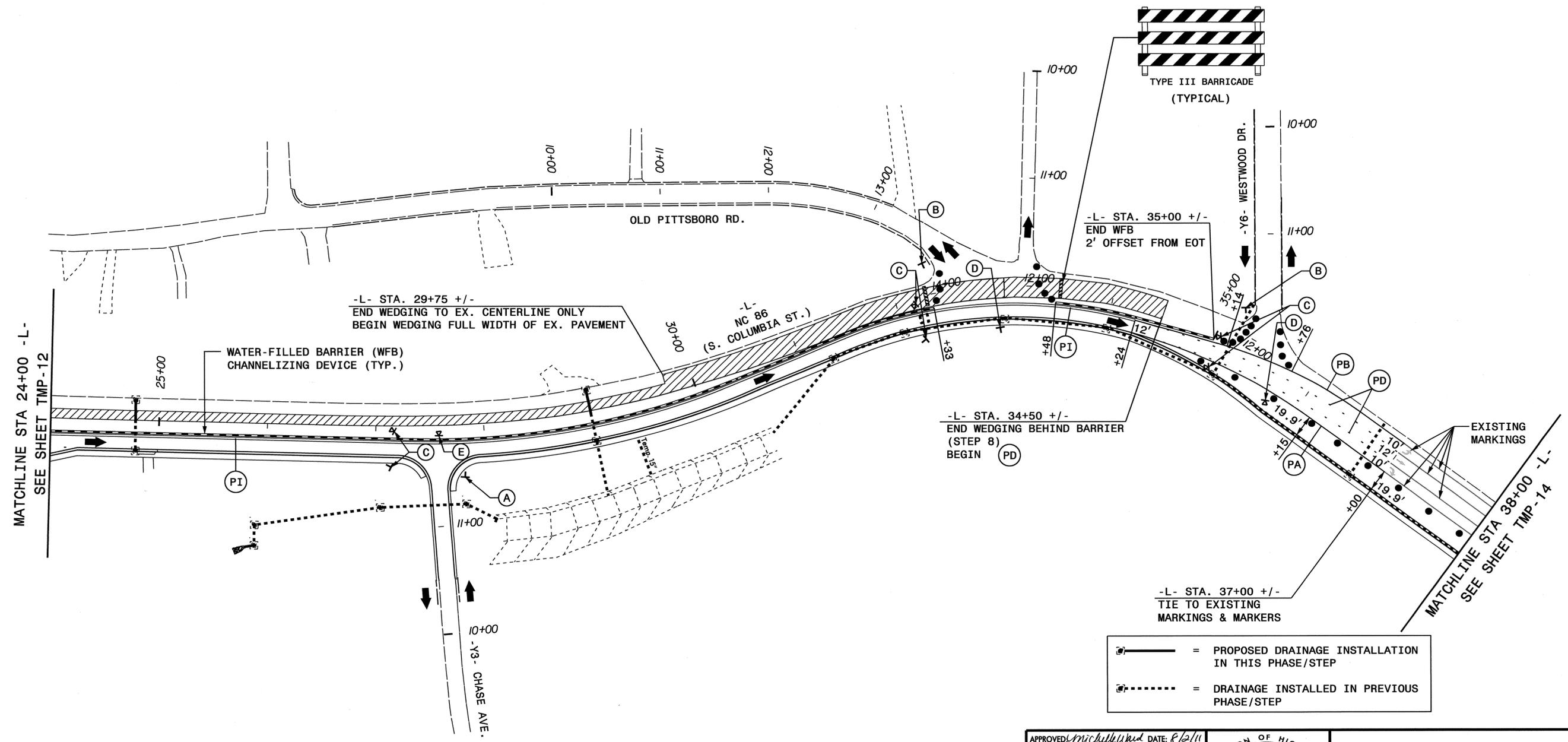
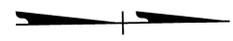
Q2-AUG-2011 07:22
 C:\p\0624\NSP\proj\TIP\Projects-U0624\TrafficControl\TCP-U-0624-TC-TCP_12_Phi_Detail5.dgn
 User: AT-1224741

APPROVED *Michelle Ward* DATE: 8/2/11

DETAIL 5 - PHASE I
TRAFFIC PATTERN -
STEPS 7 & 8

MATCHLINE STA 24+00 -L-
 SEE SHEET TMP-13

SIGN (A) 	SIGN (B) 	SIGN (C) 	SIGN (D) 	SIGN (E)
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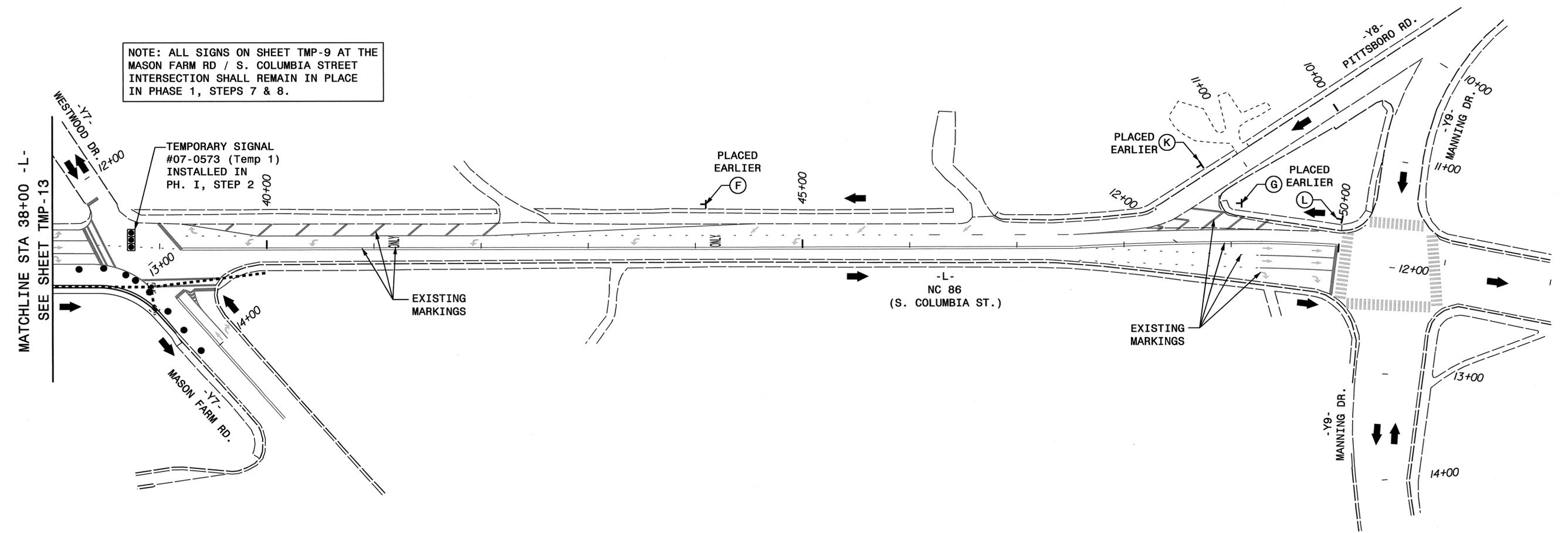


02-AUG-2011 07:23
 C:\Users\jst01\Documents\Projects\U0624\TrafficControl\TCP\U-0624-TC-TCP-13_Phi_Detail6.dgn
 jst01 AT 11:24:41

APPROVED <i>Michelle Ward</i> DATE: <i>8/2/11</i> SEAL	 DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL	DETAIL 6 - PHASE I TRAFFIC PATTERN - STEPS 7 & 8
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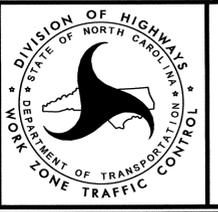
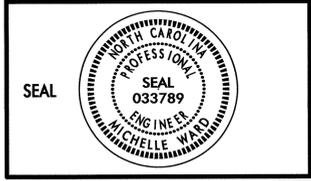
NOTE: ALL SIGNS ON SHEET TMP-9 AT THE MASON FARM RD / S. COLUMBIA STREET INTERSECTION SHALL REMAIN IN PLACE IN PHASE 1, STEPS 7 & 8.



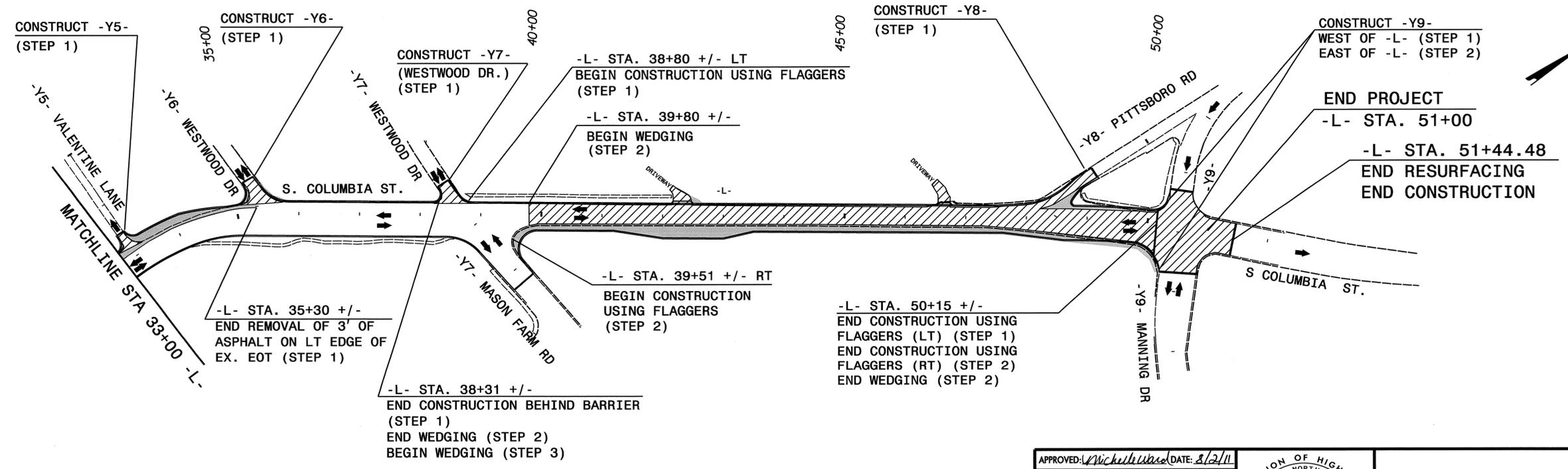
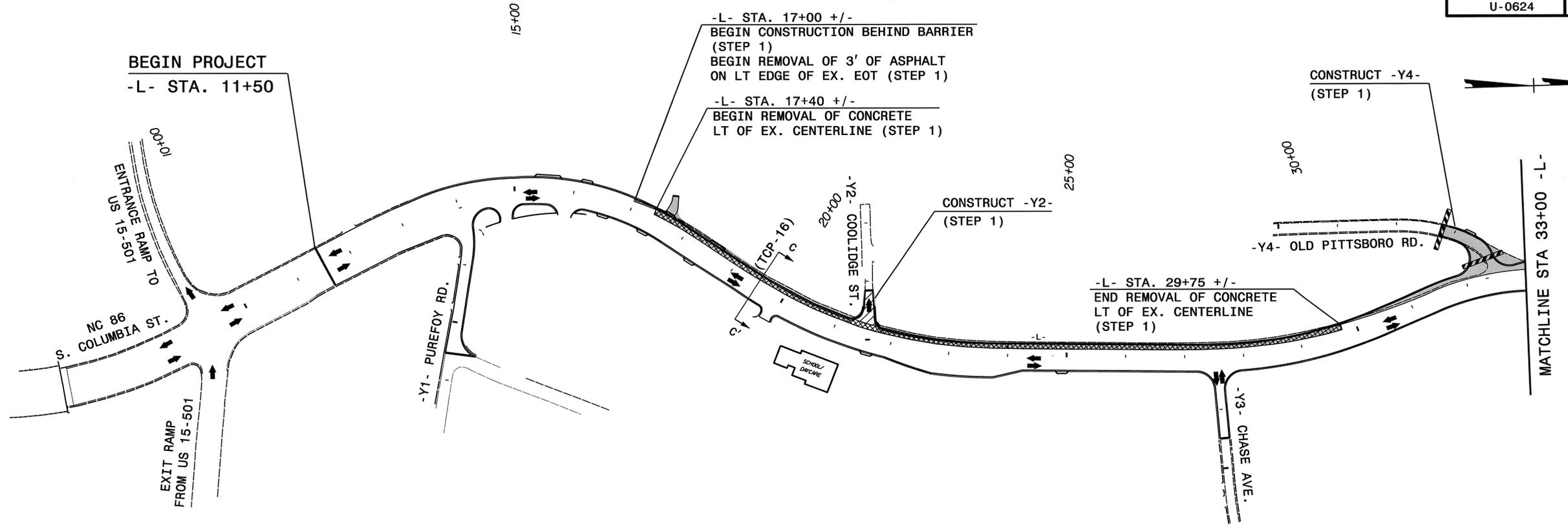
= PROPOSED DRAINAGE INSTALLATION IN THIS PHASE/STEP
 = DRAINAGE INSTALLED IN PREVIOUS PHASE/STEP

02-AUG-2011 07:24
 \\dot\ofst\02\DOT\NSP\Proj\TIP\Projects-U\U0624\Traffic\TrafficControl\TCP\U-0624_TC_TCP_14_PHL_DETAIL 7.dgn
 ghydmr AT 12:24:14

APPROVED: *Michelle Ward* DATE: *8/2/11*

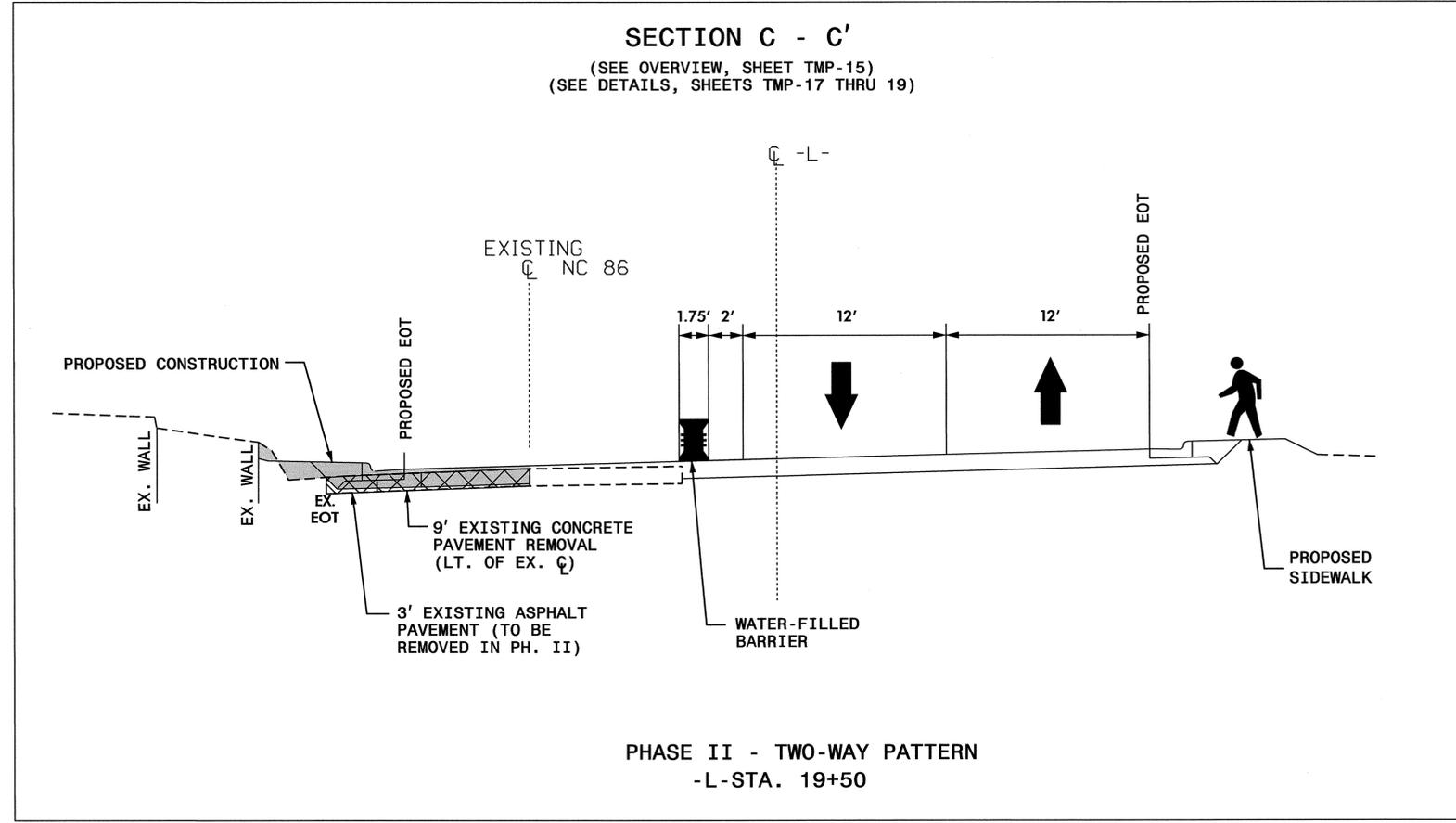


**DETAIL 7 - PHASE I
TRAFFIC PATTERN -
STEPS 7 & 8**



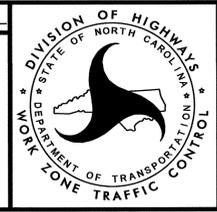
02-AUG-2011 07:26
 \\goi\dfs\0124741
 0124741.dwg
 0124741

APPROVED: <i>Michelle Ward</i> DATE: 8/2/11 		<h2>PHASE II OVERVIEW</h2>
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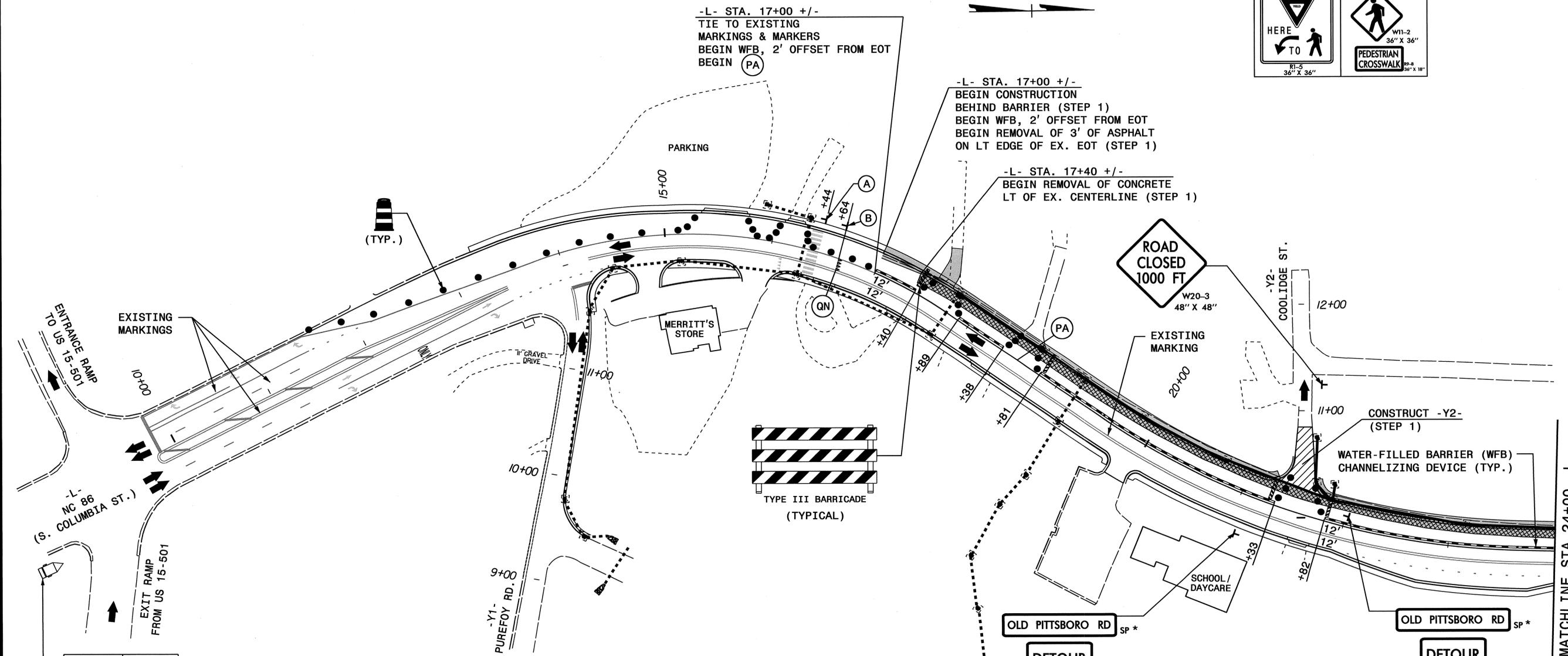
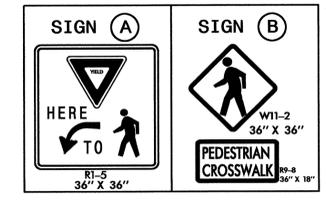


02-AUG-2011 07:26
 \\cdot\dfs\proj\NSP\proj\TIP\Projects-U\U0624\TrafficControl\TCP\U-0624_TC_TCP_16_PH II Typical.dgn
 alyudml AT 1E241741

APPROVED *Michelle Ward* DATE: 8/2/11

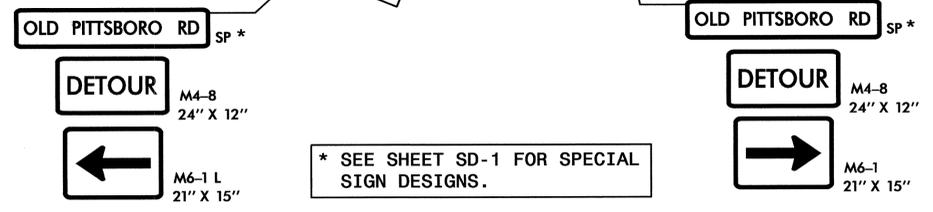


PHASE II
TYPICAL SECTION



MESSAGE NO. 1	MESSAGE NO. 2
NEW TRAFFIC PATTERN	BEGINS XX/XX
CHANGEABLE MESSAGE SIGN	

INSTALL 21 DAYS PRIOR TO IMPLEMENTING TWO-WAY TRAFFIC PATTERN. AFTER TRAFFIC IS PLACED IN THE PHASE II TRAFFIC PATTERN, REMOVE MESSAGE NO. 2 AND LEAVE MESSAGE BOARD IN PLACE WITH MESSAGE NO. 1 FOR 14 DAYS OR AS DIRECTED BY THE ENGINEER.



* SEE SHEET SD-1 FOR SPECIAL SIGN DESIGNS.



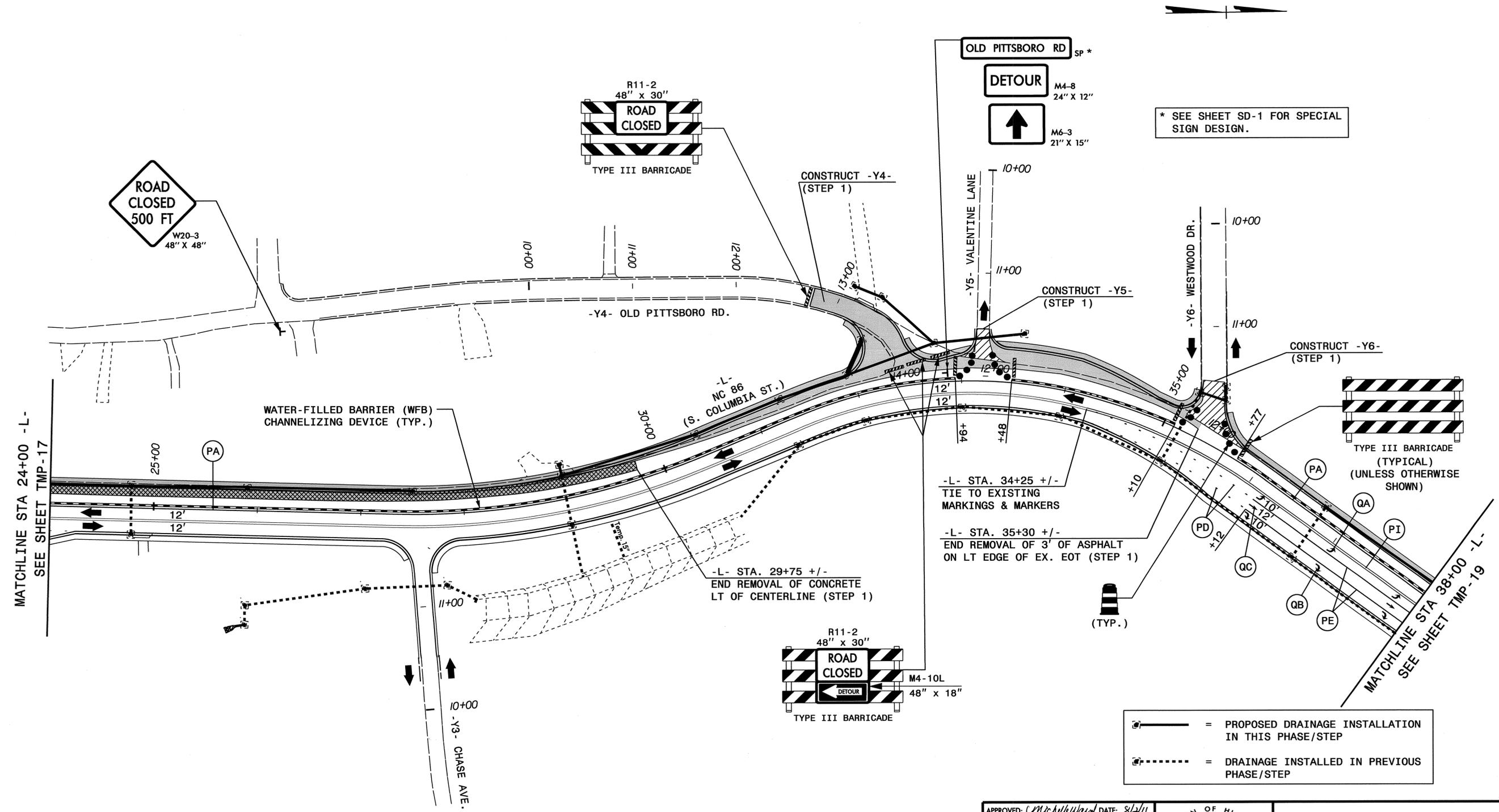
02-AUG-2010 07:28 C:\GIS\Projects\U0624\TrafficControl\U0624.TC.TCP.IT.PHI.DETAIL8.dgn

APPROVED: *Michelle Ward* DATE: *8/2/11*



**DETAIL 8
PHASE II TRAFFIC PATTERN**

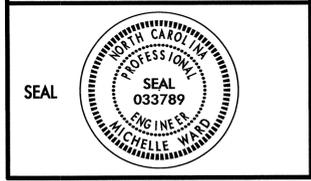
MATCHLINE STA 24+00 -L-
SEE SHEET TMP-18



* SEE SHEET SD-1 FOR SPECIAL SIGN DESIGN.

= PROPOSED DRAINAGE INSTALLATION IN THIS PHASE/STEP
 = DRAINAGE INSTALLED IN PREVIOUS PHASE/STEP

APPROVED: *Michelle Ward* DATE: 8/2/11



**DETAIL 9
PHASE II TRAFFIC PATTERN**

02-AUG-2011 07:29
 \\dot\cfs\0624\NSP\Proj\TIP\Projects-U\0624\TrafficControl\TCP\U-0624_TC_TCP_18_Phil_Detail9.dgn
 ghlydm AT 1E241741

