

**This electronic collection of documents is provided  
for the convenience of the user  
and is Not a Certified Document –**

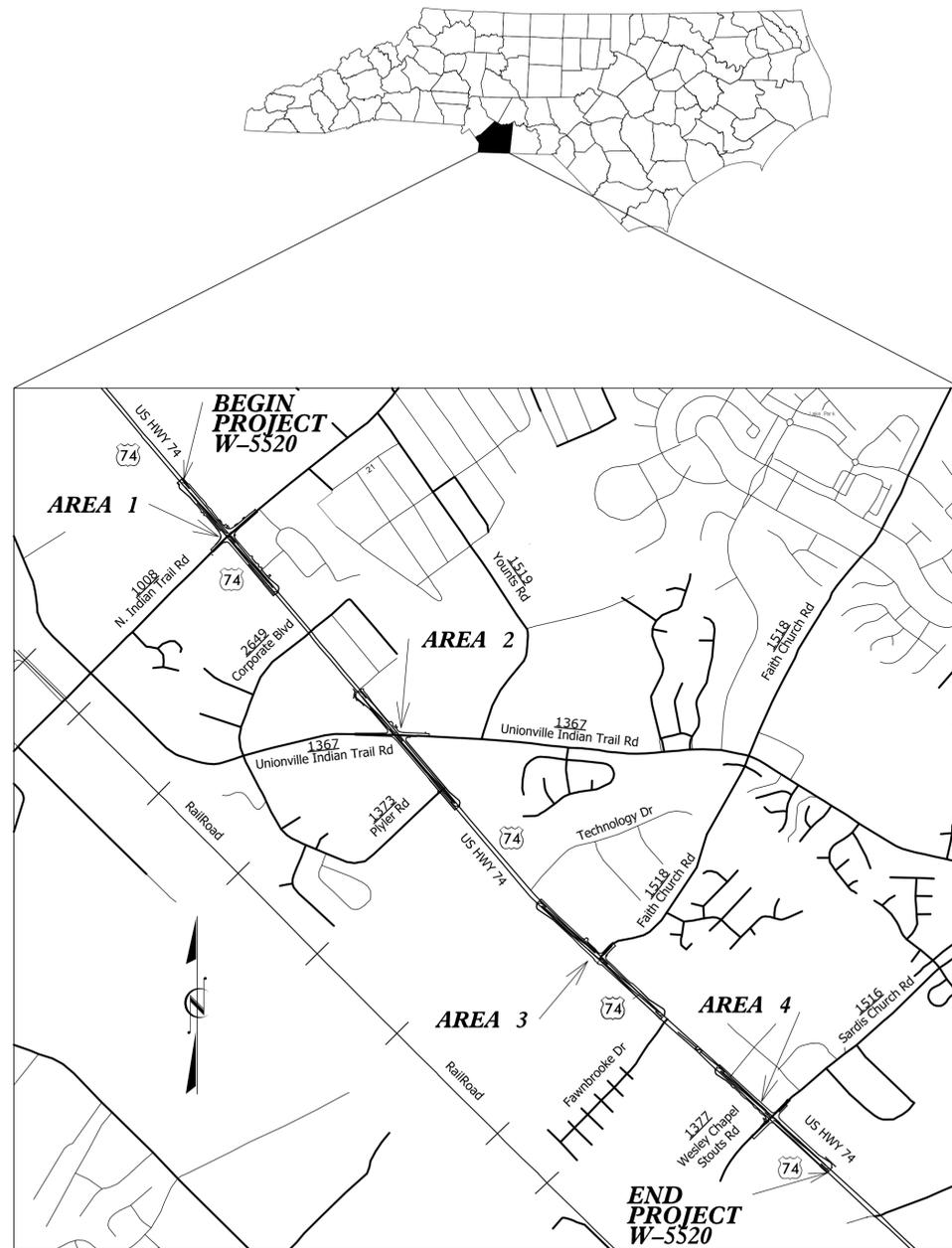
**The documents contained herein were originally issued  
and sealed by the individuals whose names and license  
numbers appear on each page, on the dates appearing  
with their signature on that page.**

**This file or an individual page  
shall not be considered a certified document.**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**UNION COUNTY**



SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B - 1C	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, AND LOCAL NOTES)
TMP-2	DETAIL SHEET (PCB AT TEMP. SHORING LOCATIONS)
TMP-2A	SPECIAL SIGN DETAIL (U-TURN SIGN)
TMP-3 - 3A	AREA 1 TEMPORARY TRAFFIC CONTROL PHASING
TMP-4	AREA 1 OVERVIEW, PHASE I
TMP-5 - 6	AREA 1 PHASE I, DETAIL SHEETS 1-2
TMP-7	AREA 1 OVERVIEW, PHASE II
TMP-8 - 9	AREA 1 PHASE II, DETAIL SHEETS 3-4
TMP-10 - 10A	AREA 2 TEMPORARY TRAFFIC CONTROL PHASING
TMP-11	AREA 2 OVERVIEW, PHASE I
TMP-12 - 13	AREA 2 PHASE I, DETAIL SHEETS 5-6
TMP-14	AREA 2 OVERVIEW, PHASE II
TMP-15- 16	AREA 2 PHASE II, DETAIL SHEETS 7-8
TMP-17	AREA 2 OVERVIEW, PHASE III
TMP-18 - 19	AREA 2 PHASE III, DETAIL SHEETS 9-10
TMP-20 - 20A	AREA 3 TEMPORARY TRAFFIC CONTROL PHASING
TMP-21	AREA 3 OVERVIEW, PHASE I
TMP-22 -23	AREA 3 PHASE I, DETAIL SHEETS 11-12
TMP-24	AREA 3 OVERVIEW, PHASE II
TMP-25 - 26	AREA 3 PHASE II, DETAIL SHEETS 13-14
TMP-27 - 27A	AREA 4 TEMPORARY TRAFFIC CONTROL PHASING
TMP-28	AREA 4 OVERVIEW, PHASE I
TMP-29 - 30	AREA 4 PHASE I, DETAIL SHEETS 15-16
TMP-31	AREA 4 OVERVIEW, PHASE II
TMP-32 - 33	AREA 4 PHASE II, DETAIL SHEETS 17-18

SHEET NO.  
TMP-1

**W-5520**

**TIP PROJECT:**

2/10/2017 14:W-5520 US74\TrafficControl\TCPW5520\_TC\_PSH\_01.dgn  
USEB04421



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

J.S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER  
J.S. KITE, JR., P.E. TRAFFIC CONTROL PROJECT ENGINEER  
R.M. GARRETT TRAFFIC CONTROL PROJECT DESIGN ENGINEER  
TRAFFIC CONTROL DESIGN ENGINEER



**WSP** | **PARSONS BRINCKERHOFF**  
Transportation & Infrastructure  
1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
(T) 704.342.5401 • (F) 704.342.8472  
www.pbworld.com  
NC License Number: F-0165

APPROVED: *Eric W. Bowman*  
DATE: 2/10/2017

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

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1170.01	POSITIVE PROTECTION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

# LEGEND

## GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)

- WORK AREA
- MILLING & WEDGING

## SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

## PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

## TRAFFIC CONTROL DEVICES

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

## TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

## PAVEMENT MARKERS

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

## PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

## TEMPORARY PAVEMENT MARKING

	PAINT (24")		PAINT (8")
P2	WHITE STOPBAR	P13	3 FT. - 9 FT. WHITE MINI SKIP
	PAINT (4")	PN	WHITE GORELINE
		PR	WHITE SOLID LANE LINE
P8	2 FT. - 6 FT. WHITE MINI SKIP		PAINT MARKING SYMBOLS
P9	2 FT. - 6 FT. YELLOW MINI SKIP	QA	LEFT TURN ARROW
PA	WHITE EDGELINE	QB	RIGHT TURN ARROW
PB	YELLOW EDGELINE	QI	ALPHANUMERIC CHAR.
PC	10 FT. WHITE SKIP	QT	U-TURN ARROW
PD	3 FT. - 9 FT. WHITE MINI SKIP		
PE	WHITE SOLID LANE LINE		
PF	10 FT. YELLOW SKIP		
PH	YELLOW SINGLE CENTER		
PI	YELLOW DOUBLE CENTER		

2/10/2017 4:41:55 PM US74\TrafficControl\TCP\W5520\_TC\_PSH\_01.dgn USEB04421

**WSP | PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017

SEAL

ROADWAY STANDARD DRAWINGS & LEGEND

## **MANAGEMENT STRATEGIES**

### TRAFFIC MANAGEMENT STRATEGIES

W-5520 US 74 SUPERSTREET CONVERSION IS DIVIDED INTO FOUR AREAS.

AREA 1: US 74 EAST OF SMITH FARM RD. (WESTERN PROJECT LIMITS) TO WEST OF CORPORATE BLVD., FROM -L1- STA. 106+10 +/- TO -L1- STA. 126+50 +/-

AREA 2: US 74 EAST OF CORPORATE BLVD. TO WEST OF TECHNOLOGY DR., FROM -L2- STA. 205+10 +/- TO -L2- STA. 226+15 +/-

AREA 3: US 74 EAST OF TECHNOLOGY DR. TO WEST OF FAWN BROOKE DR., FROM -L3- STA. 303+20 +/- TO -L3- STA. 326+50 +/-

AREA 4; US 74 EAST OF FAWN BROOKE DR. TO WEST OF HELMSVILLE RD. (THE EASTERN PROJECT LIMITS), FROM -L4- STA. 401+20 +/- TO -L4- STA. 429+40 +/-

ALL AREAS WILL BE CONSTRUCTED USING A COMBINATION OF LANE CLOSURES UTILIZING FLAGGERS AS NEEDED, TEMPORARY LANE SHIFTS, TEMPORARY PORTABLE CONCRETE BARRIERS, AND TEMPORARY SIGNALS.

CONTRACTOR SHALL WORK IN AREAS 1 THROUGH 4 CONTINUOUSLY EXCEPT FOR REQUIRED WORK WITH INTERSECTION CLOSURES WHICH SHALL BE CONSTRUCTED FROM EAST TO WEST IN THE SEQUENCE OF AREA 4, AREA 3, AREA 2, AND LASTLY AREA 1. UPON COMPLETION OF EACH CONSTRUCTION AREA UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS, THE SUPERSTREET TRAFFIC PATTERN SHALL BE ACTIVATED FROM EAST TO WEST IN THE SEQUENCE OF AREA 4, AREA 3, AREA 2, AND LASTLY AREA 1.

INTERSECTION CLOSURES SHALL BE LIMITED AS SPECIFIED IN INTERMEDIATE CONTRACT TIME (ICT).

## **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 UNDESIRABLE 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 74 (-L-) & -Y- LINES	MONDAY THRU SUNDAY 6:00 AM TO 9:00 PM

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

ROAD NAME
US 74 (-L1-, -L2-, -L3-, & -L4-), INDIAN TRAIL-FAIRVIEW RD (-Y1- & -Y2-), UNIONVILLE-INDIAN TRAIL RD (-Y3- & -Y4-), FAITH CHURCH RD (-Y5-), HARRIS TEETER DISTRIBUTION CENTER (-Y6-), SARDIS CHURCH RD (-Y7-), AND WESLEY CHAPEL STOUTS RD (-Y8-)

### HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 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 6:00 A.M. THURSDAY AND 9:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 9:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 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 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 9:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 9:00 P.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

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

### LANE AND SHOULDER CLOSURE REQUIREMENTS

D) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.

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

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

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

I) DO NOT INSTALL MORE THAN 2 SIMULTANEOUS LANE CLOSURES IN ANY ONE DIRECTION ON US 74.

### PAVEMENT EDGE DROP OFF REQUIREMENTS

J) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

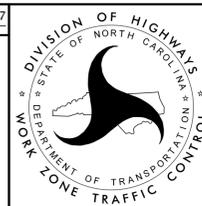
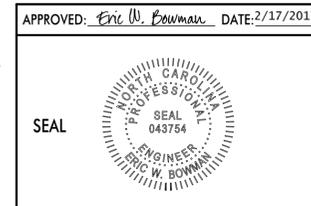
BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

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

K) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

2/17/2017 4:41:55 PM US74-TrafficControl\TC\W5520\_TC\_PSH\_02.dgn USEB0442



# TRANSPORTATION OPERATIONS PLAN

## GENERAL NOTES CON'T

### TRAFFIC PATTERN ALTERATIONS

- L) NOTIFY THE ENGINEER, COUNTY EMS, AND SCHOOL OFFICIALS THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

### SIGNING

- M) 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.
- N) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.
- O) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- P) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

### TRAFFIC BARRIER

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

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

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

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

### TRAFFIC CONTROL DEVICES

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

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

ROAD NAME	MARKING	MARKER
US 74 (-L-)	PAINT	RAISED
ALL -Y- LINES	PAINT	NONE

- W) 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.

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

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

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

### MISCELLANEOUS

- AA) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

- BB) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) AND RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

- CC) ALL CURB 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.

- DD) 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.).

### DRAINAGE STRUCTURE CONSTRUCTION

- EE) UNLESS OTHERWISE SHOWN IN THE PHASING OR INSTRUCTED BY THE ENGINEER, THE CONTRACTOR SHALL INSTALL TEMPORARY STEEL PLATES WHILE CONSTRUCTING DRAINAGE STRUCTURES ADJACENT TO TRAFFIC, AND WORK IN A CONTINUOUS FASHION IN THE FOLLOWING SEQUENCE.

1. CLOSE THE APPROPRIATE TRAVEL LANE TO TRAFFIC USING ROADWAY STANDARD DRAWINGS 1101.02.
2. CONSTRUCT PROPOSED STRUCTURES OR INSTALL PRE-CAST DRAINAGE STRUCTURES AS SHOWN IN THE CONSTRUCTION PLANS AND COVER WITH STEEL PLATES TO PROTECT STRUCTURES DURING CURING.
3. OPEN TRAVEL LANE TO EXISTING AND APPROPRIATE TEMPORARY TRAFFIC PATTERN BY THE END OF THE EACH WORK PERIOD.
4. WHEN PROPERLY CURED, CLOSE THE APPROPRIATE TRAVEL LANE USING ROADWAY STANDARDS 1101.02. BACKFILL AND PAVE, IF REQUIRED, UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT (SEE CONSTRUCTION PLANS).
5. OPEN TRAVEL LANE TO EXISTING AND APPROPRIATE TEMPORARY TRAFFIC PATTERN BY THE END OF EACH WORK PERIOD.

### STANDARD TEMPORARY SHORING

- FF) FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

- GG) TEMPORARY SHORING IS REQUIRED FOR THE PIPE, INLET or UTILITY INSTALLATION AT THE FOLLOWING LOCATIONS AS SHOWN ON PLANS:

LOCATION\_1: FROM STATION 427+57 -L4-, 13.33 FT (LT), TO STATION 428+07 -L4-, 13.34 FT (LT).

LOCATION\_2: FROM STATION 427+57 -L4-, 13.66 FT (RT), TO STATION 428+07 -L4-, 13.72 FT (RT).

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

- II) DESIGN TEMPORARY SHORING FOR LOCATION 1 AND LOCATION 2 AS SHOWN BELOW WITH THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT ( $\gamma$ ) = 120 LB/CF  
 FRICTION ANGLE ( $\phi$ ) = 30 DEGREES  
 GROUNDWATER ELEVATION = 634.9 FT

LOCATION\_1: FROM STATION 427+57 -L4-, 13.33 FT (LT), TO STATION 428+07 -L4-, 13.34 FT (LT).

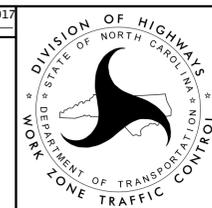
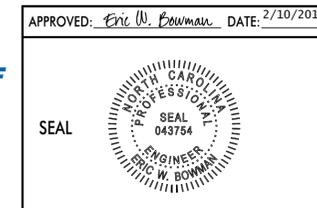
LOCATION\_2: FROM STATION 427+57 -L4-, 13.66 FT (RT), TO STATION 428+07 -L4-, 13.72 FT (RT).

- JJ) AT THE CONTRACTOR'S OPTION, USE STANDARD SHORING FOR TEMPORARY SHORING AT LOCATION 1 AND LOCATION 2 AS LISTED BELOW. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING ALONG WITH THE 2012 TEMPORARY SHORING SPECIAL PROVISION (SP11R02).

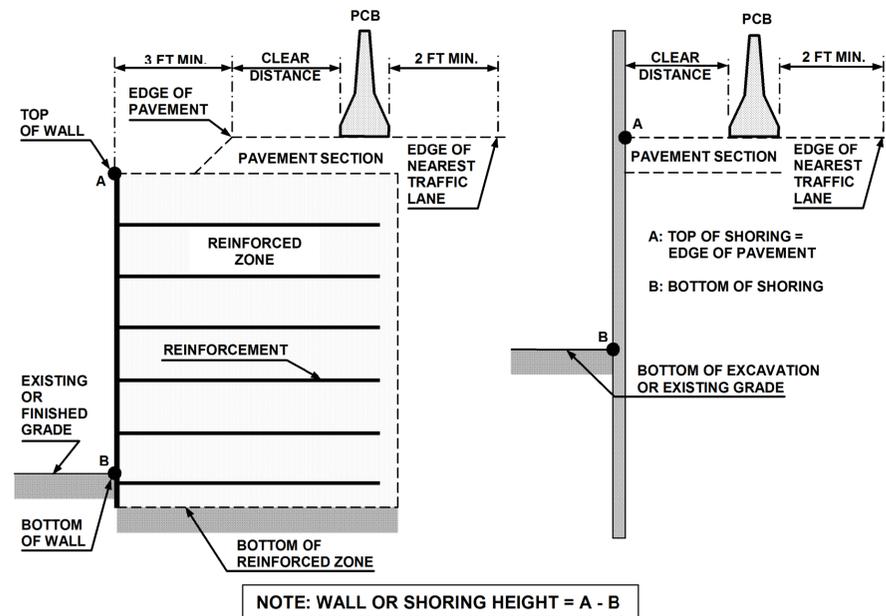
LOCATION\_1: FROM STATION 427+57 -L4-, 13.33 FT (LT), TO STATION 428+07 -L4-, 13.34 FT (LT).

LOCATION\_2: FROM STATION 427+57 -L4-, 13.66 FT (RT), TO STATION 428+07 -L4-, 13.72 FT (RT).

2/10/2017 14:41:55:20 US74\TrafficControl\TCN\W5520\_TC\_PSH\_02.dgn USEB0442



## TRANSPORTATION OPERATIONS PLAN



## FIGURE A

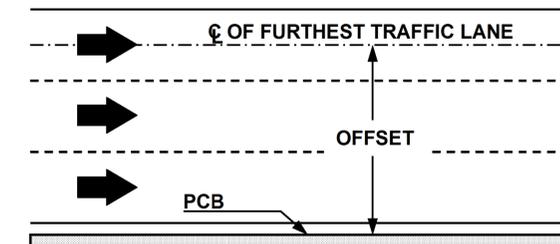
### NOTES

- REFER TO THE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS AND NOTES.
- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR INFORMATION ABOUT TEMPORARY SHORING AND PORTABLE CONCRETE BARRIER (PCB).
- PCB IS REQUIRED IF TEMPORARY SHORING IS LOCATED WITHIN THE CLEAR ZONE IN ACCORDANCE WITH THE AASHTO ROADSIDE DESIGN GUIDE. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).
- BASED ON THE CLEAR DISTANCE, OFFSET, DESIGN SPEED AND PAVEMENT TYPE, CHOOSE AN UNANCHORED OR ANCHORED PCB FROM THE TABLE SHOWN IN FIGURE B. CLEAR DISTANCE IS DEFINED AS SHOWN IN FIGURE A AND OFFSET IS DEFINED AS SHOWN IN FIGURE B.
- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET PCB NEXT TO AND UP AGAINST THE TRAFFIC SIDE OF THE TEMPORARY SHORING EXCEPT FOR BARRIER ABOVE TEMPORARY WALLS. PCB WITH THE MINIMUM REQUIRED CLEAR DISTANCE IS REQUIRED ABOVE TEMPORARY WALLS.
- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- PCB REQUIREMENTS FOR TEMPORARY WALLS APPLY TO TEMPORARY MECHANICALLY STABILIZED EARTH (MSE) WALLS AND TEMPORARY SOIL NAIL WALLS.
- SET PCB WITH A MINIMUM HORIZONTAL DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A UNLESS OTHERWISE SHOWN IN THE PLANS AND OR AS APPROVED BY THE ENGINEER.
- FOR PCB ABOVE AND BEHIND TEMPORARY WALLS, PROVIDE A MINIMUM DISTANCE OF 3 FT BETWEEN THE EDGE OF PAVEMENT AND THE WALL FACE AS SHOWN IN FIGURE A. IF THESE MINIMUM REQUIRED DISTANCES ARE NOT AVAILABLE, CONTACT THE ENGINEER.
- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS. BARRIER DEFLECTIONS AND RESULTING MINIMUM REQUIRED CLEAR DISTANCES MIGHT VARY SIGNIFICANTLY FOR LARGER HEAVIER VEHICLES, RUNS OF BARRIER LESS THAN 200 FT IN LENGTH AND WET OR DRY PAVEMENT.

### MINIMUM REQUIRED CLEAR DISTANCE, inches

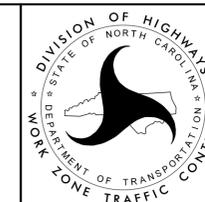
Barrier Type	Pavement Type	Offset * ft	Design Speed, mph					
			<30	31-40	41-50	51-60	61-70	71-80
Unanchored PCB	Asphalt	<8	24	26	29	32	36	40
		8-14	26	28	31	35	38	42
		14-20	27	29	34	36	39	43
		20-26	28	31	35	38	40	44
		26-32	29	32	36	39	42	45
		32-38	30	34	38	41	43	46
		38-44	31	34	41	43	45	48
		44-50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

\* See Figure Below



## FIGURE B

DETAIL PROVIDED BY NCDOT



PORTABLE CONCRETE BARRIER  
AT  
TEMPORARY SHORING LOCATIONS

SIGN NUMR: SP-1  
 TYPE: F Ground  
 QUANTITY: 2

BACKG. COLOR: White  
 COPY COLOR: Black

DESIGN BY:  
 PROJECT ID:

CHK BY:  
 DIV:

STD #:  
 DATE:

N. C. DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 TRANSPORTATION MOBILITY & SAFETY  
 SIGNING & DELINEATION UNIT



SIGN WIDTH: 1'-9"  
 HEIGHT: 1'-9"  
 TOTAL AREA: 3.1 Sq.Ft.

MAT'L: 0.063" ALUMINUM

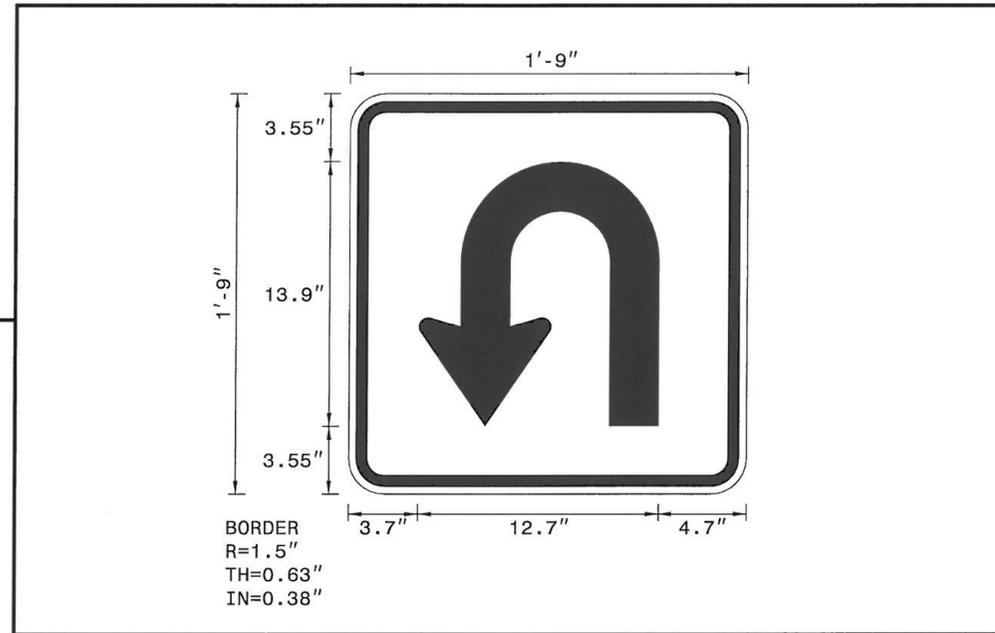
BORDER TYPE: RECESSED  
 RECESS: 0.38"  
 WIDTH: 0.63"  
 RADII: 1.5"

NO. Z BARS:  
 LENGTH:

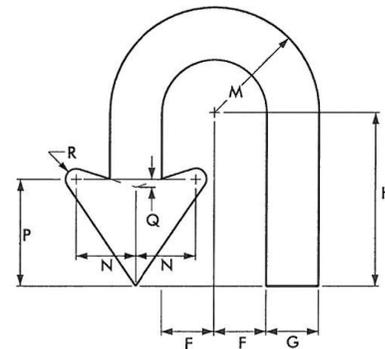
SYMBOL	X	Y	WID	HT
u arrow	3.7	3.5	12.7	13.9

NOTES:

- Legend and border shall be direct applied  
Non-reflective sheeting.
- Background shall be Grade C reflective sheeting.



Arrow Details



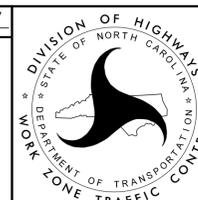
ARROW DIMENSIONS (INCHES)	F	G	H	M	N	P	Q	R
	2.625	2.625	8.659	5.25	3	5.25	0.375	0.5

Spacing Factor is 1 unless specified otherwise  
 FILENAME: GSENG

2/10/2017 14:41:55 US74\TrafficControl\CPN\W5520\_TC\_PSH\_02.dgn  
 USEB04421

**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 3/9/2017



**SPECIAL SIGN DETAIL  
 (U-TURN SIGN)**

# AREA 1 TRAFFIC CONTROL PHASING

INSTALL WORK ZONE ADVANCE WARNING SIGNS PER RSD 1101.01.

UNLESS OTHERWISE NOTED BELOW, MAINTAIN ACCESS TO ALL DRIVES AND -Y- LINES THROUGHOUT THE DURATION OF CONSTRUCTION.

CONTRACTOR SHALL WORK IN AREAS 1 THROUGH 4 CONSECUTIVELY, FROM EAST TO WEST IN THE SEQUENCE OF AREA 4, AREA 3, AREA 2, AND LASTLY AREA 1. FOLLOW THE TIME RESTRICTIONS AND REQUIREMENTS SHOWN IN GENERAL NOTES AND AS DIRECTED BY THE ENGINEER. UPON COMPLETION OF EACH CONSTRUCTION AREA UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS, THE SUPERSTREET INTERSECTION TRAFFIC OPERATION PATTERN SHALL BE ACTIVATED FROM EAST TO WEST IN THE SEQUENCE OF AREA 4, AREA 3, AREA 2, AND LASTLY AREA 1.

IN AREA 1, TRAFFIC CONTROL SHALL BE COORDINATED BETWEEN TIP PROJECT W-5520 AND THE MONROE BYPASS PROJECT R-3329/R-2559 WHERE THE PROJECTS JOIN AND/OR OVERLAP.

## AREA 1: WESTERN PROJECT LIMITS TO WEST OF CORPORATE BLVD.

### PHASE I: MEDIAN U-TURN CONSTRUCTION (TMP-4 THRU TMP-6)

**STEP 1:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02), CLOSE EASTBOUND LEFT-TURN LANE AT STA 110+50+/- AND WESTBOUND U-TURN LANE AT STA 106+00+/- AND MAINTAIN TRAFFIC ALONG -L1- (US 74) IN ITS EXISTING TRAFFIC PATTERN.

**STEP 2:**

AWAY FROM TRAFFIC, AND USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, CONSTRUCT PROPOSED INSIDE SHOULDER AND MEDIAN U-TURN LANES, INCLUDING DRAINAGE STRUCTURES AND CONCRETE ISLANDS, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE AS FOLLOWS:

- L1- FROM STA 106+10+/- TO STA 115+43+/- (LT & RT SIDES)
- L1- FROM STA 116+80+/- TO STA 126+50+/- (LT & RT SIDES)

AWAY FROM TRAFFIC, AND USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, CONSTRUCT PROPOSED ROADWAY WIDENING ALONG -L1- AT THE SOUTHBOUND TURNOUT AT -Y1- AND THE NORTHBOUND TURNOUT AT -Y2- AS MUCH AS POSSIBLE WHILE MAINTAINING THE EXISTING TRAFFIC SIGNAL EQUIPMENT (SEE TMP-6).

CONSTRUCT WEDGING AS NEEDED TO PROVIDE A SMOOTH TRANSITION TO EXISTING PAVEMENT AND APPROPRIATE CROSS SLOPES TO ENSURE POSITIVE DRAINAGE. REPLACE EXISTING PAVEMENT MARKINGS WHERE REQUIRED.

TRAFFIC WILL BE IN ITS EXISTING PATTERN ON -Y1- AND ITS TEMPORARY TRAFFIC PATTERN ALONG -L1- WITH THE MEDIAN CLOSED TO TRAFFIC AT THE END OF EACH WORK DAY.

**STEP 3:**

UPON COMPLETION OF THE WORK REQUIRED IN PHASE I STEP 2, AWAY FROM TRAFFIC AND USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, CONSTRUCT ROAD WIDENING AND BULBOUTS FOR U-TURN MOVEMENTS UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:

- L1- FROM STA 106+44+/- TO STA 110+00+/- (RT SIDE ONLY)
- L1- FROM STA 120+62+/- TO STA 126+39+/- (LT SIDE ONLY)

CONSTRUCT WEDGING AS NEEDED TO PROVIDE A SMOOTH TRANSITION TO EXISTING PAVEMENT AND APPROPRIATE CROSS SLOPES TO ENSURE POSITIVE DRAINAGE. REPLACE EXISTING PAVEMENT MARKINGS WHERE REQUIRED.

MAINTAIN TEMPORARY TRAFFIC PATTERN ALONG -L1- WITH THE PROPOSED MEDIAN U-TURN LANES AND BULBOUT LOCATIONS CLOSED AT THE END OF EACH WORK DAY. TRAFFIC ON -Y1- WILL REMAIN IN ITS EXISTING PATTERN.

**STEP 4:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, INSTALL PERMANENT TRAFFIC SIGNALS AND SIGNS AT MEDIAN U-TURN LOCATIONS AND THE TEMPORARY TRAFFIC SIGNAL AT THE INTERSECTION OF -L1-, AND -Y1-/-Y2-. KEEP BOTH THE SIGNAL HEADS AND SIGNS COVERED.

INSTALL TEMPORARY PAVEMENT MARKINGS NECESSARY FOR THE SIGNALIZED MEDIAN U-TURN OPERATIONS. MEDIAN U-TURN LANES AND BULBOUT LOCATIONS SHALL REMAIN CLOSED TO TRAFFIC.

ICT: COMPLETE THE WORK REQUIRED IN PHASE I STEP 5 FROM 9:00 P.M. ON A FRIDAY TO 6:00 A.M. THE FOLLOWING SATURDAY, SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

**STEP 5:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02), FLAGGERS, AND LAW ENFORCEMENT AS NEEDED, ACTIVATE THE PERMANENT TRAFFIC SIGNALS AT THE MEDIAN U-TURN LOCATIONS, AND OPEN THE MEDIAN U-TURN LANES AND BULBOUTS TO TRAFFIC.

INSTALL CLOSELY SPACED DRUMS ALONG ON THE INSIDE EDGE OF TRAVELED WAY (BOTH DIRECTIONS) FROM -L1- STA 114+88+/- TO STA 117+52+/- (LT & RT SIDE) TO CLOSE MEDIAN CROSSOVER AND LEFT-TURN LANES ON -L1- AT ITS INTERSECTION WITH -Y1- & -Y2-, AND ACTIVATE THE TEMPORARY TRAFFIC SIGNAL. SHIFT US 74 LEFT-TURN TRAFFIC AND -Y1- , -Y2- TRAFFIC IN A TEMPORARY TRAFFIC PATTERN USING MEDIAN U-TURNS:

OBLITERATE EXISTING CONFLICTING PAVEMENT MARKINGS AND SYMBOLS AND PLACE TEMPORARY PAVEMENT MARKINGS AND SYMBOLS (SEE SHEET TMP-8 & TMP-9):

- Y1- FROM TIE IN AT -L1- TO STA 15+26+/-
- Y2- FROM TIE IN AT -L1- TO STA 12+50+/-
- L1- FROM STA 106+10+/- TO STA 115+43+/-
- L1- FROM STA 116+80+/- TO STA 126+50+/-

### PHASE II: INTERSECTION SUPERSTREET CROSS-OVER CONSTRUCTION AND -Y- LINE WIDENING (TMP-7 THRU TEMP-9)

ICT: COMPLETE THE WORK REQUIRED IN PHASE II STEPS 1 AND 2 IN SIXTY (60) CONSECUTIVE CALANDER DAYS, SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

**STEP 1:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, AWAY FROM TRAFFIC, CONSTRUCT MEDIAN DIRECTIONAL CROSS-OVER ON -L1- AND ROAD WIDENING ON -Y1- AND -Y2-, EXCLUDING THE MONOLITHIC CONCRETE ISLAND ON -Y1- , UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:

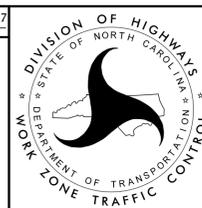
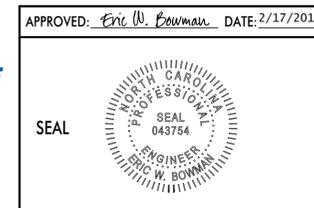
- L1- FROM STA 114+88+/- TO STA 117+52+/- (LT & RT SIDE)
- Y1- FROM TIE IN AT -L1- TO STA 15+26+/- (LT & RT SIDE)
- Y2- FROM TIE IN AT -L1- TO STA 12+50+/- (LT & RT SIDE)

CONSTRUCT WEDGING AS NEEDED TO PROVIDE A SMOOTH TRANSITION TO EXISTING PAVEMENT AND APPROPRIATE CROSS SLOPES TO ENSURE POSITIVE DRAINAGE. REPLACE EXISTING PAVEMENT MARKINGS WHERE REQUIRED.

INSTALL SIGNS AND NEW TRAFFIC SIGNAL HEADS FOR THE PERMANENT TRAFFIC SIGNAL AT THE INTERSECTION OF -L1- AND -Y1- /-Y2-. KEEP THE NEW SIGNAL HEADS AND SIGNS COVERED.

TRAFFIC SHALL REMAIN IN ITS TEMPORARY TRAFFIC PATTERN ON -L1-, -Y1-, AND -Y2- WITH THE PROPOSED INTERSECTION CROSSOVER AND -Y- LINE ROAD WIDENING AREAS CLOSED TO TRAFFIC AT THE END OF EACH WORK PERIOD.

2/17/2017 14:41:55 US74\TrafficControl\TCP\W5520\_TC\_PSH\_03.dgn USEB0442



## TEMPORARY TRAFFIC CONTROL PHASING

# AREA 1 TRAFFIC CONTROL PHASING

## AREA 1: WESTERN PROJECT LIMITS TO WEST OF CORPORATE BLVD. (CONTINUED)

### PHASE II: (CONTINUED)

ICT: COMPLETE THE WORK REQUIRED IN PHASE II STEP 2 FROM 9:00 P.M. ON A FRIDAY TO 6:00 A.M. THE FOLLOWING SATURDAY, SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

**STEP 2:**

UPON COMPLETION OF THE WORK REQUIRED IN PHASE II STEP 1, USING TEMPORARY LANE CLOSURES (RSD 1101.02), FLAGGERS AND LAW ENFORCEMENT AS NEEDED PLACE TEMPORARY PAVEMENT MARKINGS (SEE FINAL PAVEMENT MARKING PLANS FOR DIMENSIONS), OPEN MEDIAN DIRECTIONAL CROSS-OVER AND PLACE -L1- , -Y1-, AND -Y2- TRAFFIC IN ITS PERMANENT TRAFFIC PATTERN, AND ACTIVATE THE FINAL TRAFFIC SIGNAL AT THE INTERSECTION OF -L1-, AND -Y1- /-Y2-.

### PHASE III: WEDGING, TEMPORARY PAVEMENT MARKING, AND MONOLITHIC CONCRETE ISLAND ON -Y1-

**STEP 1:**

USING ALTERNATING LANE CLOSURES (RSD. 1101.02 SHEET 3 OF 15), COMPLETE CONSTRUCTION OF -L1-, -Y1-, AND -Y2- INCLUDING WEDGING AND MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED) ON -Y1-. INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY MARKERS AND THEN SHIFT TRAFFIC INTO FINAL PATTERN. FINAL LAYER OF SURFACE COURSE AND PERMANENT PAVEMENT MARKINGS AND MARKERS WILL BE COMPLETED ONCE ALL OTHER AREAS ARE CONSTRUCTED.

- L1- FROM STA 106+10+/- TO STA 126+50+/-
- Y1- FROM TIE IN AT -L1- TO STA 15+26+/-
- Y2- FROM TIE IN AT -L1- TO STA 12+50+/-

**STEP 2:**

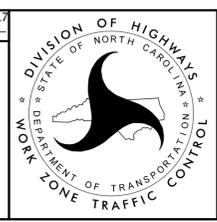
UPON COMPLETION OF CONSTRUCTION OF AREA 4, AREA 3, AREA 2, AND LASTLY AREA 1 IN CONSECUTIVE ORDER INSTALL FINAL LAYER OF SURFACE COURSE, PERMANENT PAVEMENT MARKINGS, AND PAVEMENT MARKERS ALONG U.S. 74 AND ALL Y-LINES FROM THE BEGINNING OF TIP PROJECT W-5520 TO THE ENDING OF TIP PROJECT W-5520. TRAFFIC SHALL BE IN ITS FINAL TRAFFIC PATTERN.

2/10/2017 14:51:55 US74\TrafficControl\TCP\W5520\_TC\_PSH\_03.dgn USEB04421

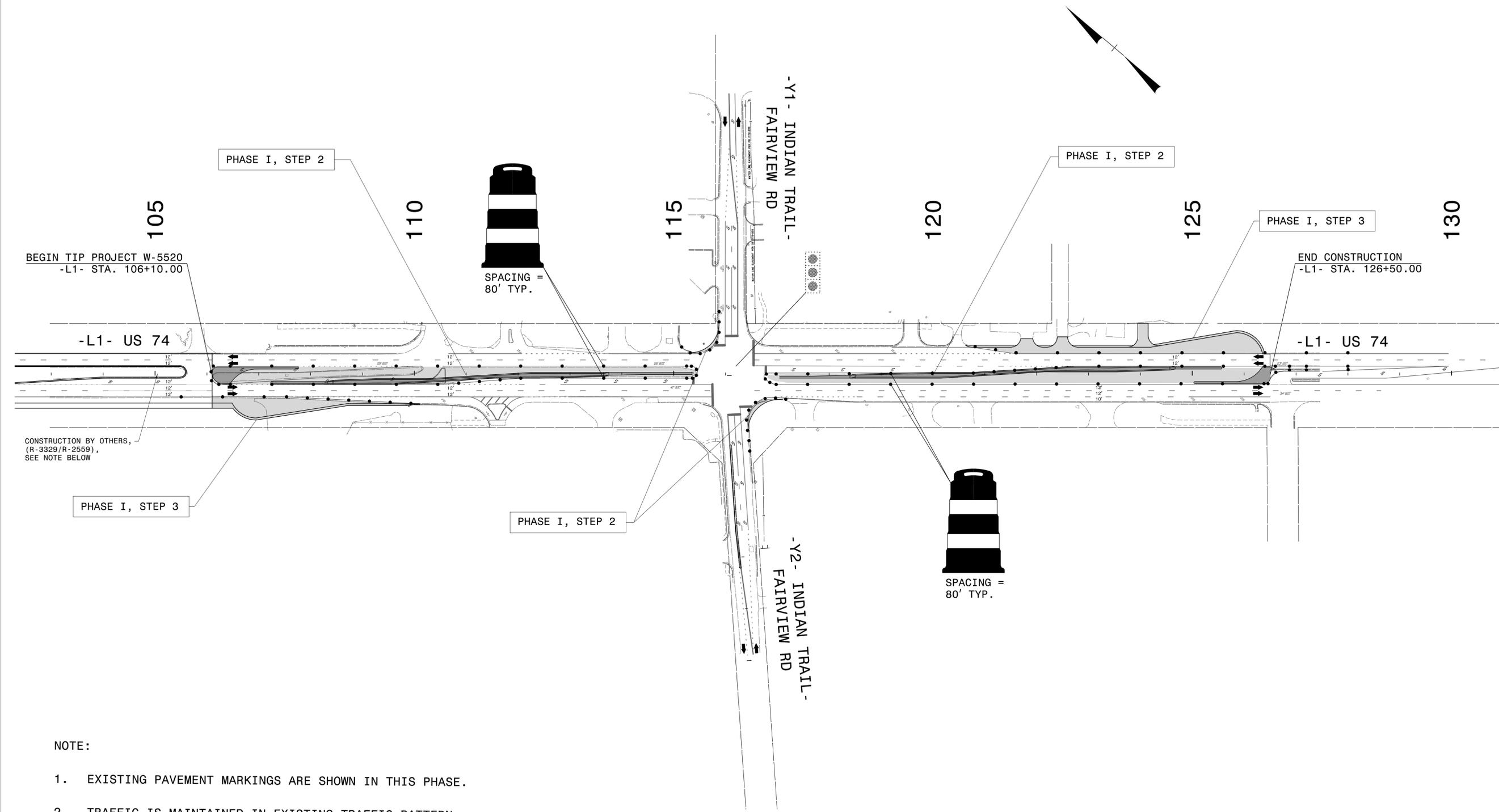


**Transportation & Infrastructure**  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bonman* DATE: 2/10/2017

## TEMPORARY TRAFFIC CONTROL PHASING



NOTE:

1. EXISTING PAVEMENT MARKINGS ARE SHOWN IN THIS PHASE.
2. TRAFFIC IS MAINTAINED IN EXISTING TRAFFIC PATTERN UNLESS OTHERWISE SHOWN ON PLAN.
3. TRAFFIC CONTROL FOR TIP PROJECT W-5520 AND THE MONROE BYPASS PROJECT R-3329/R-2559 SHOULD BE COORDINATED WHERE THE TWO PROJECTS JOIN AND/OR OVERLAP.

2/10/2017 14:51:55 US74-TrafficControl\TC\W5520\_TC\_Area\_1-Phase1OverView.dgn

**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

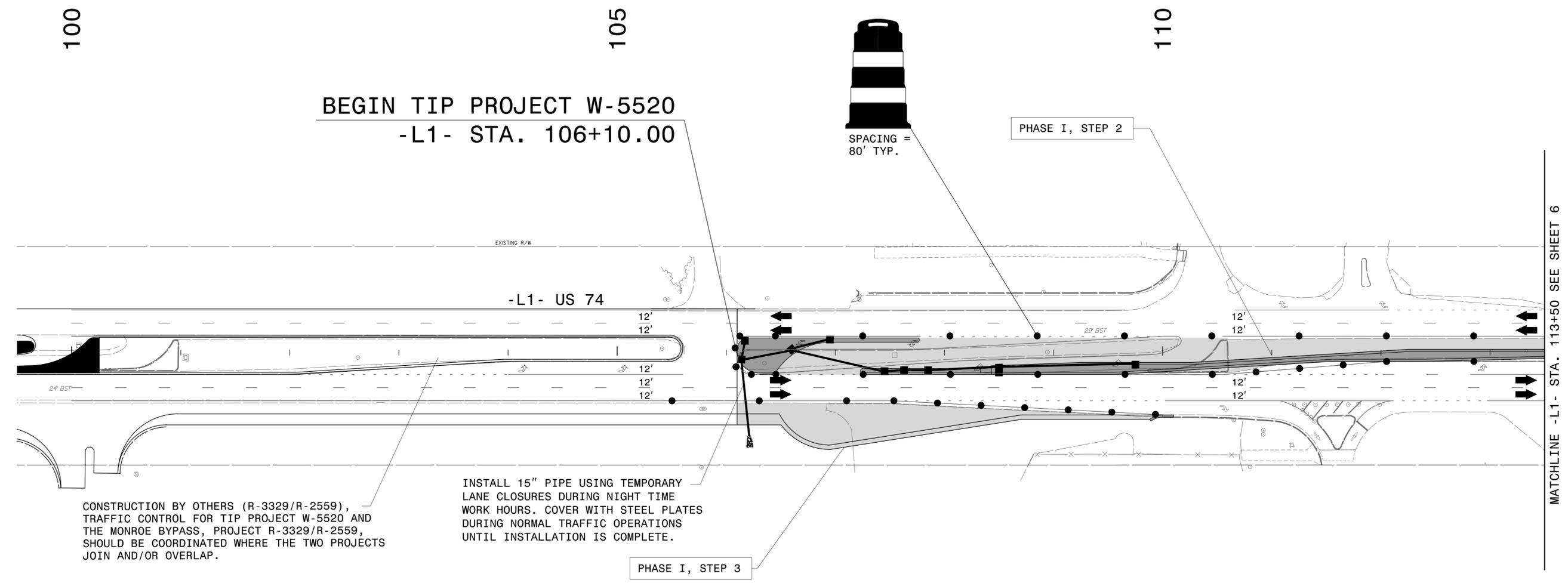
APPROVED: *Eric W. Bowman* DATE: 2/10/2017

SEAL

AREA 1 OVERVIEW,  
PHASE I

NOTE:

- EXISTING PAVEMENT MARKINGS ARE SHOWN IN THIS PHASE UNLESS OTHERWISE SHOWN.
- TRAFFIC IS MAINTAINED IN EXISTING TRAFFIC PATTERN UNLESS OTHERWISE SHOWN.



CONSTRUCTION BY OTHERS (R-3329/R-2559), TRAFFIC CONTROL FOR TIP PROJECT W-5520 AND THE MONROE BYPASS, PROJECT R-3329/R-2559, SHOULD BE COORDINATED WHERE THE TWO PROJECTS JOIN AND/OR OVERLAP.

INSTALL 15" PIPE USING TEMPORARY LANE CLOSURES DURING NIGHT TIME WORK HOURS. COVER WITH STEEL PLATES DURING NORMAL TRAFFIC OPERATIONS UNTIL INSTALLATION IS COMPLETE.

PHASE I, STEP 3

MATCHLINE -L1- STA. 113+50 SEE SHEET 6

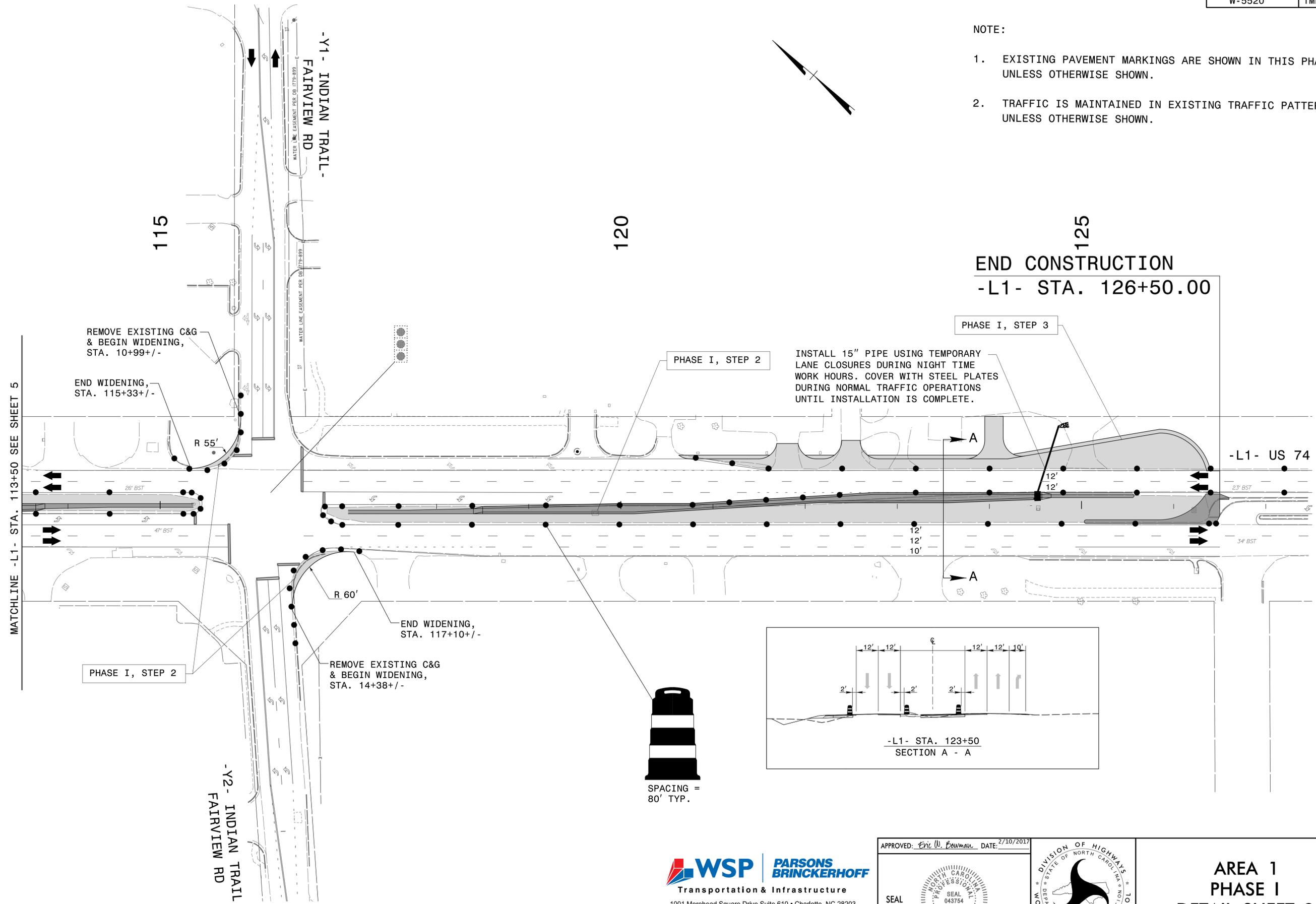
2/10/2017 14:41:55 US74-TrafficControl\TCP\W5520\_TC\_TMP\_Area 1-Phase1.dgn USEB04421

**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017

SEAL

**AREA 1**  
**PHASE I**  
**DETAIL SHEET 1**



- NOTE:
- EXISTING PAVEMENT MARKINGS ARE SHOWN IN THIS PHASE UNLESS OTHERWISE SHOWN.
  - TRAFFIC IS MAINTAINED IN EXISTING TRAFFIC PATTERN UNLESS OTHERWISE SHOWN.

2/10/2017  
 US74-TrafficControl\TCP\W5520\_TC\_TMP\_Area 1-Phase1-2.dgn  
 USEB04421

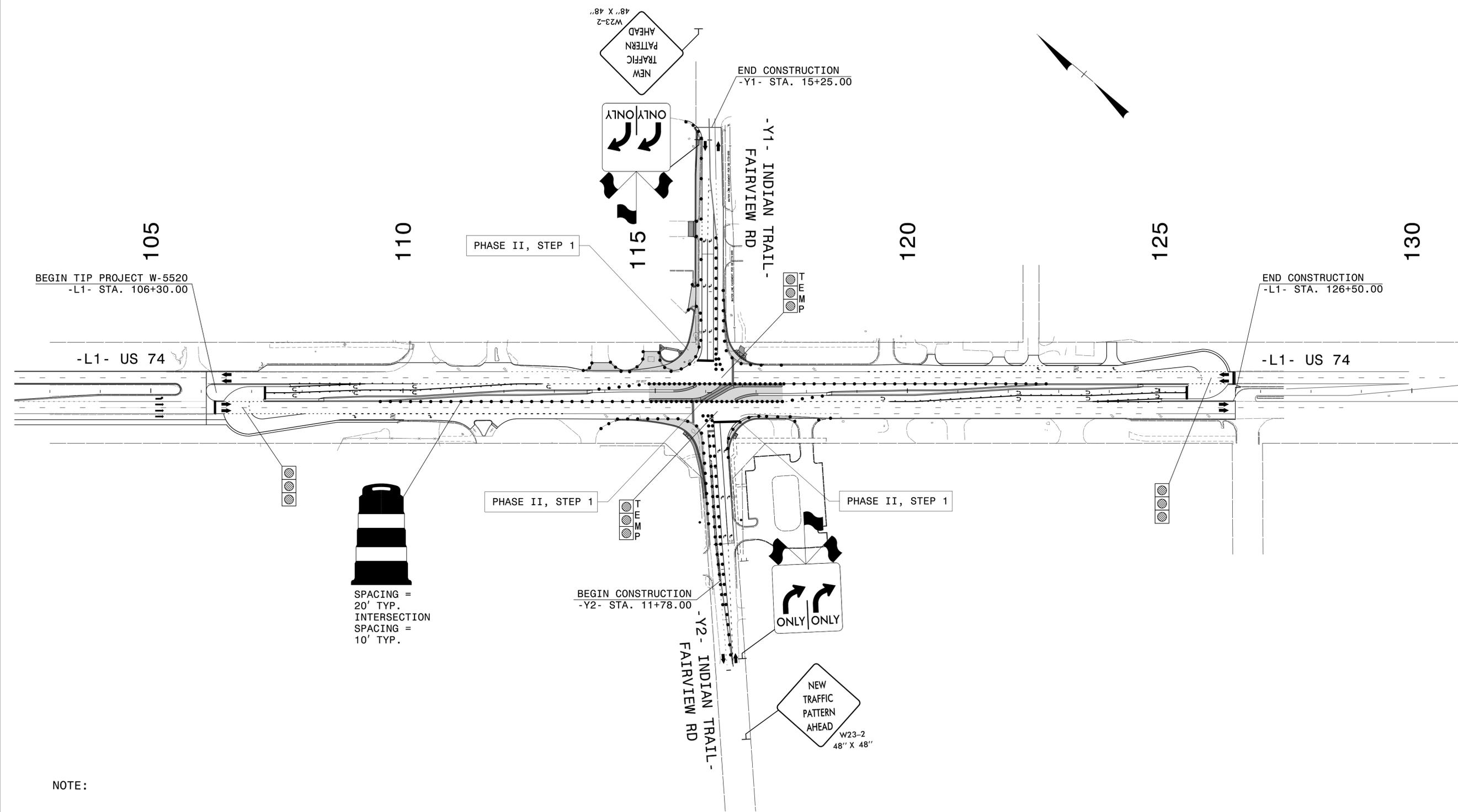
**WSP** | **PARSONS BRINCKERHOFF**
  
 Transportation & Infrastructure
   
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203
   
 (T) 704.342.5401 • (F) 704.342.8472
   
 www.pbworld.com
   
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017

SEAL

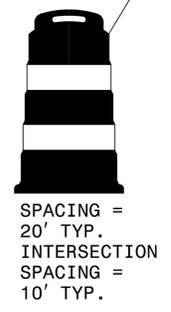
DIVISION OF HIGHWAYS  
 STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 WORK ZONE TRAFFIC CONTROL

**AREA 1**  
**PHASE I**  
**DETAIL SHEET 2**



NOTE:

1. CONTRACTOR SHALL COORDINATE WITH DIVISION TRAFFIC ENGINEER TO COORDINATE TEMPORARY SIGNAL TIMINGS PRIOR TO TEMPORARY TRAFFIC PATTERN.

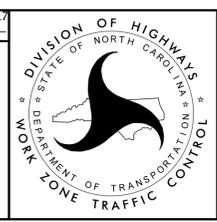


2/10/2017 4:51:55 PM US74-TrafficControl\TCP\W5520\_TC\_Area 1-Phase2\_Overview.dgn USEB04421

**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017

SEAL

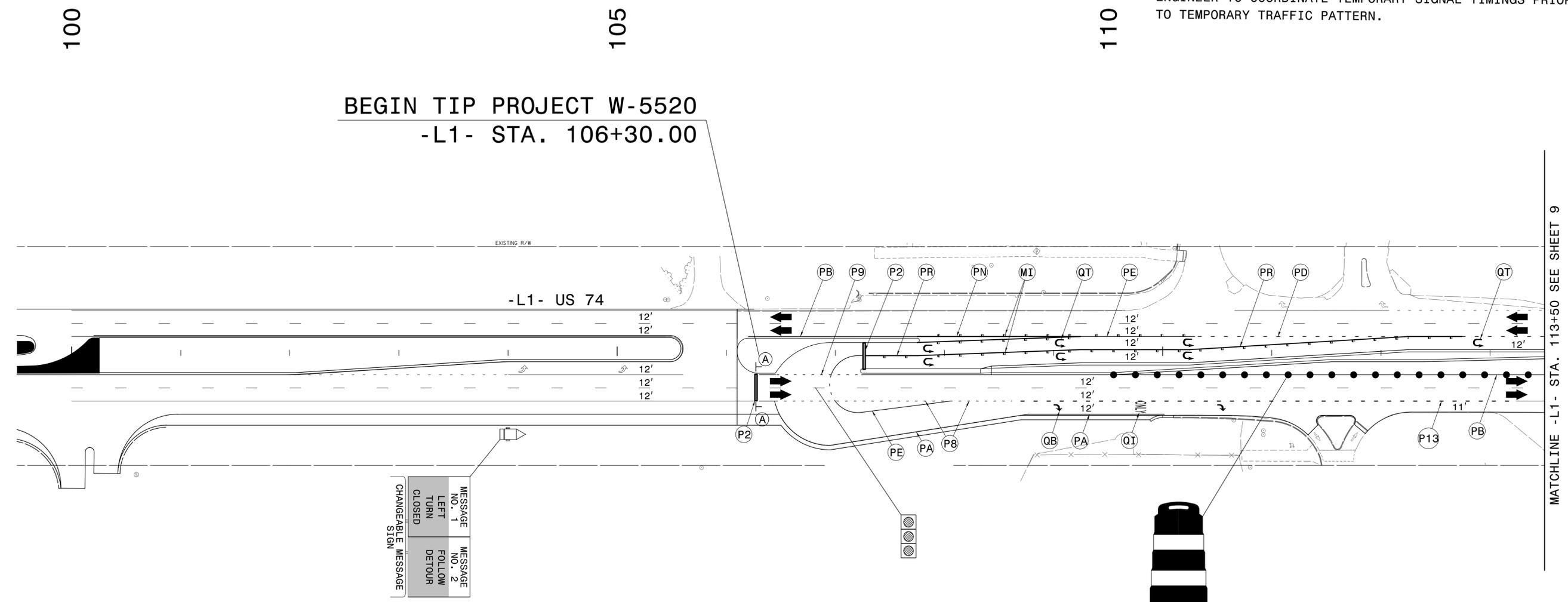


**AREA 1 OVERVIEW,  
 PHASE II**

PROJ. REFERENCE NO.	SHEET NO.
W-5520	TMP-8

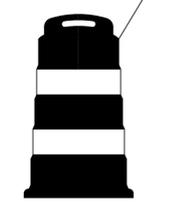
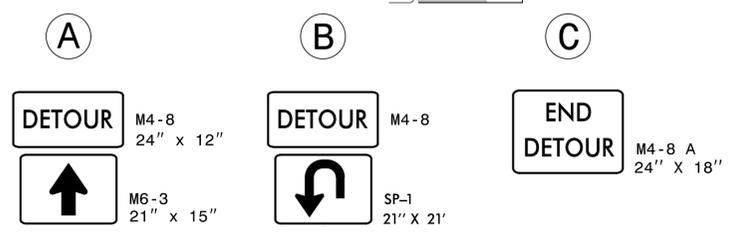
NOTE:

1. TEMPORARY PAVEMENT MARKINGS ARE USED IN THIS PHASE.
2. TRAFFIC OPERATES IN A TEMPORARY TRAFFIC PATTERN UNLESS OTHERWISE SHOWN.
3. REFER TO RSD 1101.02 FOR ADVANCE WARNING SIGN SPACING.
4. CONTRACTOR SHALL COORDINATE WITH ENGINEER FOR LOCATION OF CMS BOARD.
5. CONTRACTOR SHALL COORDINATE WITH DIVISION TRAFFIC ENGINEER TO COORDINATE TEMPORARY SIGNAL TIMINGS PRIOR TO TEMPORARY TRAFFIC PATTERN.



BEGIN TIP PROJECT W-5520  
-L1- STA. 106+30.00

CHANGEABLE MESSAGE SIGN	MESSAGE NO. 1	MESSAGE NO. 2
	LEFT TURN CLOSED	FOLLOW DETOUR



SPACING = 20' TYP.  
INTERSECTION SPACING = 10' TYP.

MATCHLINE -L1- STA. 113+50 SEE SHEET 9

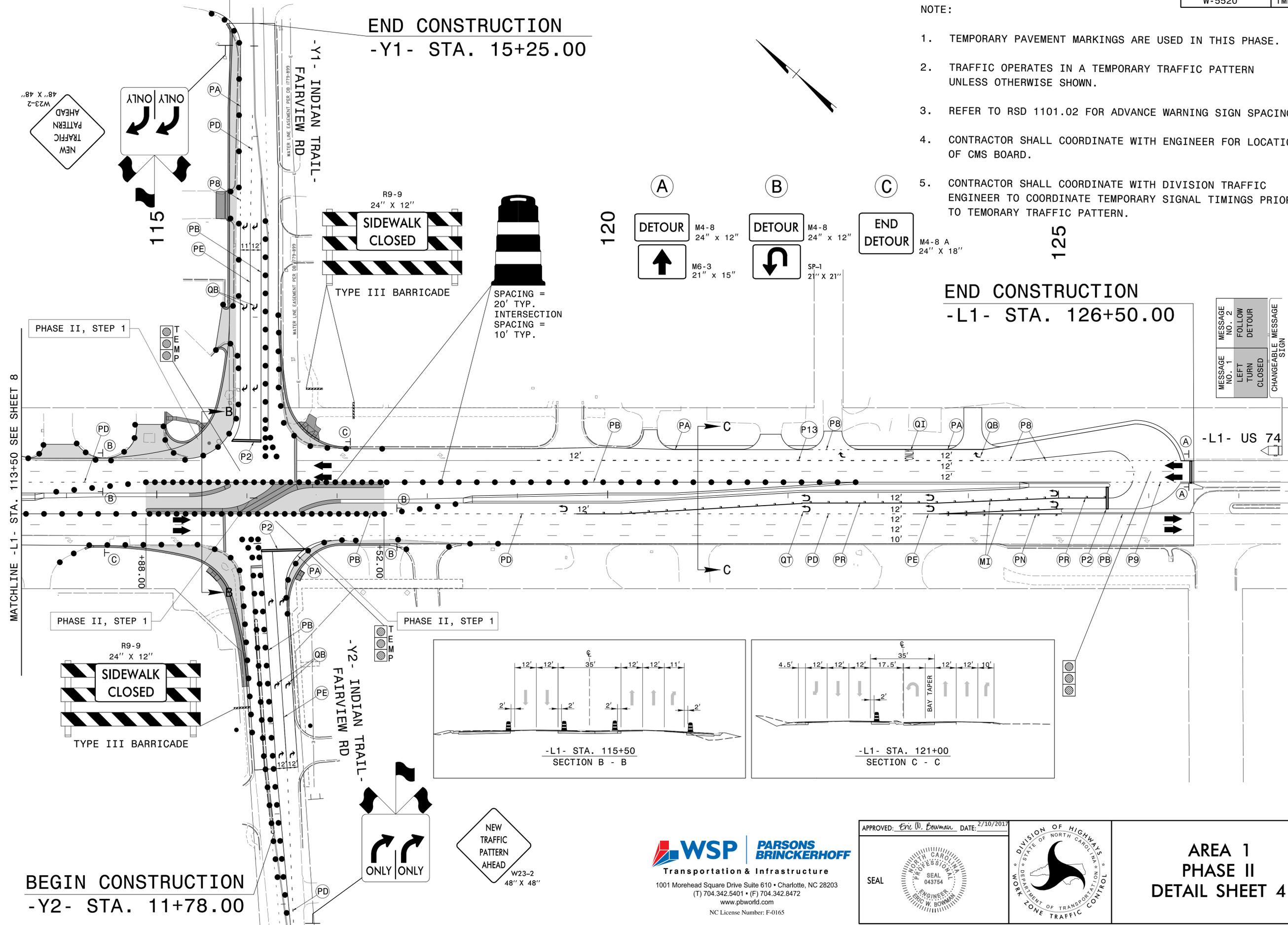
2/10/2017 4:41:55 PM US74-TrafficControl\TC\W5520-TC-TMP-Area I-Phase2-1.dgn USEB04421

**WSP** **PARSONS BRINCKERHOFF**  
Transportation & Infrastructure  
1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
(T) 704.342.5401 • (F) 704.342.8472  
www.pbworld.com  
NC License Number: F-0165

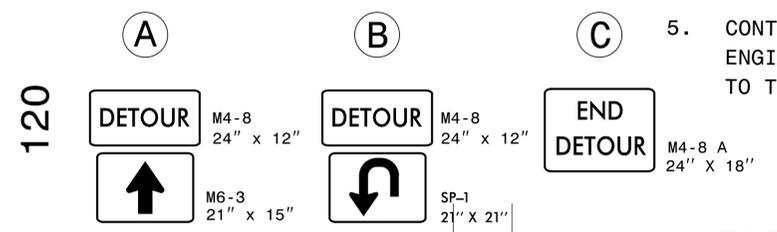
APPROVED: *Eric W. Bowman* DATE: 2/10/2017

SEAL

**AREA 1  
PHASE II  
DETAIL SHEET 3**

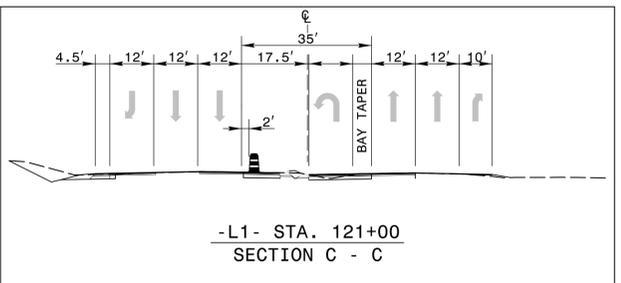
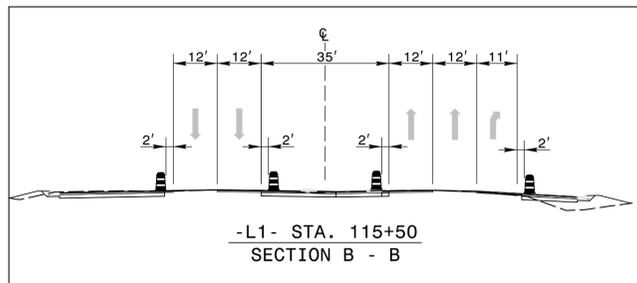


- NOTE:
- TEMPORARY PAVEMENT MARKINGS ARE USED IN THIS PHASE.
  - TRAFFIC OPERATES IN A TEMPORARY TRAFFIC PATTERN UNLESS OTHERWISE SHOWN.
  - REFER TO RSD 1101.02 FOR ADVANCE WARNING SIGN SPACING.
  - CONTRACTOR SHALL COORDINATE WITH ENGINEER FOR LOCATION OF CMS BOARD.
  - CONTRACTOR SHALL COORDINATE WITH DIVISION TRAFFIC ENGINEER TO COORDINATE TEMPORARY SIGNAL TIMINGS PRIOR TO TEMPORARY TRAFFIC PATTERN.



END CONSTRUCTION  
-L1- STA. 126+50.00

MESSAGE NO. 1	LEFT TURN CLOSED	CHANGEABLE MESSAGE SIGN
MESSAGE NO. 2	FOLLOW DETOUR	



2/10/2017 4:41:55 PM US74-TrafficControl\TCN\W5520\_TC\_TMP\_Area I-Phase2-2.dgn USEB04421

**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017

SEAL

**AREA 1  
PHASE II  
DETAIL SHEET 4**

# AREA 2 TRAFFIC CONTROL PHASING

INSTALL WORK ZONE ADVANCE WARNING SIGNS PER RSD 1101.01.

UNLESS OTHERWISE NOTED BELOW, MAINTAIN ACCESS TO ALL DRIVES AND -Y- LINES THROUGHOUT THE DURATION OF CONSTRUCTION.

CONTRACTOR SHALL WORK IN AREAS 1 THROUGH 4 CONSECUTIVELY, FROM EAST TO WEST IN THE SEQUENCE OF AREA 4, AREA 3, AREA 2, AND LASTLY AREA 1. FOLLOW THE TIME RESTRICTIONS AND REQUIREMENTS SHOWN IN GENERAL NOTES AND AS DIRECTED BY THE ENGINEER. UPON COMPLETION OF EACH CONSTRUCTION AREA UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS, THE SUPERSTREET INTERSECTION TRAFFIC OPERATION PATTERN SHALL BE ACTIVATED FROM EAST TO WEST IN THE SEQUENCE OF AREA 4, AREA 3, AREA 2, AND LASTLY AREA 1.

## AREA 2: EAST OF CORPORATE BLVD. TO WEST OF TECHNOLOGY DR.

### PHASE I: EB US 74 WEDGING AND MEDIAN U-TURN CONSTRUCTION (TMP-11 THRU TMP13)

**STEP 1:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, CONSTRUCT MILLING AND WEDGING ON -L2- (US 74) FROM STA 220+75 +/- TO STA 226+15 +/-, AND INSTALL TEMPORARY PAVEMENT MARKINGS. MAINTAIN TRAFFIC IN ITS EXISTING PATTERN ALONG -L2- AT THE END OF THE WORK PERIOD.

**STEP 2:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, CONSTRUCT PROPOSED INSIDE SHOULDER AND MEDIAN U-TURN LANES, INCLUDING DRAINAGE STRUCTURES AND CONCRETE ISLANDS, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE AS FOLLOWS:

-L2- FROM STA 213+77 +/- TO STA 226+15 +/- (LT & RT SIDES)

THE CONTRACTOR SHALL USE TRENCHLESS INSTALLATION FOR THE DRAINAGE PIPE UNDER US 74.

-L2- STA. 221+32 +/-

CONSTRUCT WEDGING AS NEEDED TO PROVIDE A SMOOTH TRANSITION TO EXISTING PAVEMENT AND APPROPRIATE CROSS SLOPES TO ENSURE POSITIVE DRAINAGE. REPLACE EXISTING PAVEMENT MARKINGS WHERE REQUIRED.

MAINTAIN TRAFFIC IN ITS EXISTING PATTERN AT THE END OF EACH WORK PERIOD.

**STEP 3:**

AWAY FROM TRAFFIC, USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, CONSTRUCT ROAD WIDENING AND BULBOOTS FOR U-TURN MOVEMENTS UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:

-L2- FROM STA 214+65 +/- TO STA 226+04 +/- (LT SIDE ONLY)

CONSTRUCT WEDGING AS NEEDED TO PROVIDE A SMOOTH TRANSITION TO EXISTING PAVEMENT AND APPROPRIATE CROSS SLOPES TO ENSURE POSITIVE DRAINAGE. REPLACE EXISTING PAVEMENT MARKINGS WHERE REQUIRED.

MAINTAIN TRAFFIC IN ITS EXISTING PATTERN AT THE END OF EACH WORK PERIOD.

**STEP 4:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, INSTALL PERMANENT TRAFFIC SIGNAL AND SIGNS AT THE EASTBOUND MEDIAN U-TURN. KEEP BOTH THE SIGNAL HEADS AND SIGNS COVERED.

INSTALL TEMPORARY PAVEMENT MARKINGS NECESSARY FOR THE SIGNALIZED EASTBOUND MEDIAN U-TURN OPERATIONS. THE PROPOSED MEDIAN U-TURN LANE AND BULBOUT LOCATION SHALL REMAIN CLOSED TO TRAFFIC.

ICT: COMPLETE THE WORK REQUIRED IN PHASE I STEP 5 FROM 9:00 P.M. ON FRIDAY TO 6:00 A.M. THE FOLLOWING SATURDAY, SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

**STEP 5:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02), FLAGGERS, AND LAW ENFORCEMENT AS NEEDED, ACTIVATE THE PERMANENT TRAFFIC SIGNAL AT THE EASTBOUND MEDIAN U-TURN LOCATIONS, AND OPEN THE MEDIAN U-TURN LANE AND BULBOUT TO TRAFFIC.

INSTALL CMS AND DETOUR SIGNS ON EASTBOUND US 74 AS SHOWN ON TMP-15 & TMP-16, CLOSE THE EASTBOUND LEFT-TURN LANES WITH DRUMS AT THE INTERSECTION OF -L2- AND -Y3- / -Y4-, AND PLACE THE EASTBOUND LEFT-TURN TRAFFIC TO ITS TEMPORARY DETOUR ROUTE USING THE DOWNSTREAM MEDIAN U-TURN BULBOUT. MODIFY THE EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF -L2- AND -Y3- / -Y4- FOR THE TEMPORARY TRAFFIC PATTERN.

OBLITERATE EXISTING CONFLICTING PAVEMENT MARKINGS AND SYMBOLS AND PLACE TEMPORARY PAVEMENT MARKINGS AND SYMBOLS (SEE SHEET TMP-15 & TMP-16). TRAFFIC ON -Y3- AND -Y4- SHALL REMAIN IN ITS EXISTING TRAFFIC PATTERN AT THE END OF THE WORK PERIOD.

### PHASE II: WB US 74 MEDIAN U-TURN CONSTRUCTION (TMP-14 THUR TMP-16)

**STEP 1:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, CONSTRUCT PROPOSED INSIDE SHOULDER AND MEDIAN U-TURN LANES, INCLUDING DRAINAGE STRUCTURES AND CONCRETE ISLANDS, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE AS FOLLOWS:

-L2- FROM STA 205+10 +/- TO STA 212+29 +/- (LT & RT SIDES)

CONSTRUCT WEDGING AS NEEDED TO PROVIDE A SMOOTH TRANSITION TO EXISTING PAVEMENT AND APPROPRIATE CROSS SLOPES TO ENSURE POSITIVE DRAINAGE. REPLACE EXISTING PAVEMENT MARKINGS WHERE REQUIRED.

TRAFFIC WILL BE IN ITS EXISTING PATTERN ON -Y3- / -Y4- AND ITS TEMPORARY TRAFFIC PATTERN ALONG -L2- WITH THE MEDIAN AND EASTBOUND LEFT-TURN LANES CLOSED TO TRAFFIC AT THE END OF EACH WORK PERIOD. MAINTAIN THE EASTBOUND LEFT-TURN DETOUR ROUTE.

**STEP 2:**

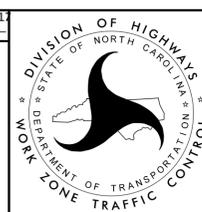
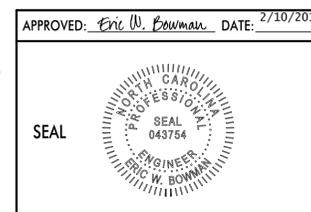
UPON COMPLETION OF THE WORK REQUIRED IN PHASE II STEP 1, CLOSE ENTRANCE TO KATE'S SKATE ON EASTBOUND US 74 NEAR STA. L2- 205+50 +/- . AWAY FROM TRAFFIC, USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, CONSTRUCT PROPOSED ENTRANCE TO KATE'S SKATE, ROAD WIDENING AND BULBOUT FOR U-TURN MOVEMENT UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:

-L2- FROM STA 205+19 +/- TO STA 207+95 +/- (RT SIDE ONLY)

CONSTRUCT WEDGING AS NEEDED TO PROVIDE A SMOOTH TRANSITION TO EXISTING PAVEMENT AND APPROPRIATE CROSS SLOPES TO ENSURE POSITIVE DRAINAGE. REPLACE EXISTING PAVEMENT MARKINGS WHERE REQUIRED.

MAINTAIN THE EASTBOUND LEFT-TURN DETOUR ROUTE AND THE TEMPORARY TRAFFIC PATTERN ALONG -L2- WITH THE PROPOSED ENTRANCE TO KATE'S SKATE, WESTBOUND MEDIAN U-TURN LANE AND BULBOUT LOCATION CLOSED AT THE END OF EACH WORK PERIOD. TRAFFIC ON -Y3- / -Y4- WILL REMAIN IN ITS EXISTING PATTERN.

2/10/2017 14:41:55 US74\TrafficControl\CPN\W5520\_TC\_PSH\_03.dgn USEB0442



## TEMPORARY TRAFFIC CONTROL PHASING

# AREA 2 TRAFFIC CONTROL PHASING

## AREA 2: EAST OF CORPORATE BLVD. TO WEST TECHNOLOGY DR. (CONTINUED)

### PHASE II: (CONTINUED)

**STEP 3:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, INSTALL PERMANENT TRAFFIC SIGNAL AND SIGNS AT THE WESTBOUND MEDIAN U-TURN LOCATION AND THE TEMPORARY TRAFFIC SIGNAL AT THE INTERSECTION OF -L2-, AND -Y3-/-Y4-. KEEP BOTH THE SIGNAL HEADS AND SIGNS COVERED.

INSTALL TEMPORARY PAVEMENT MARKINGS NECESSARY FOR THE SIGNALIZED WESTBOUND MEDIAN U-TURN OPERATIONS. MEDIAN U-TURN LANES AND BULBOUT LOCATIONS SHALL REMAIN CLOSED TO TRAFFIC.

ICT: COMPLETE THE WORK REQUIRED IN PHASE II STEP 4 FROM 9:00 P.M. ON A FRIDAY TO 6:00 A.M. THE FOLLOWING SATURDAY, SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

**STEP 4:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02), FLAGGERS, AND LAW ENFORCEMENT AS NEEDED, ACTIVATE THE PERMANENT TRAFFIC SIGNAL AT THE WESTBOUND MEDIAN U-TURN LOCATIONS, AND OPEN THE MEDIAN U-TURN LANE, BULBOUT AND KATE\*S SKATE ENTRANCE TO TRAFFIC.

INSTALL CLOSELY SPACED DRUMS ALONG THE INSIDE EDGE OF TRAVELED WAY (BOTH DIRECTIONS) FROM -L2- STA 211+88+/- TO STA 214+27+/- (LT & RT SIDE) TO CLOSE MEDIAN CROSSOVER AND WESTBOUND LEFT-TURN LANE ON -L2- AT ITS INTERSECTION WITH -Y3- & -Y4-, AND ACTIVATE THE TEMPORARY TRAFFIC SIGNAL. REMOVE THE EASTBOUND LEFT-TURN DETOUR ROUTE AND SHIFT US 74 LEFT-TURN TRAFFIC AND -Y3- , -Y4- TRAFFIC IN A TEMPORARY TRAFFIC PATTERN USING MEDIAN U-TURNS:

OBLITERATE EXISTING CONFLICTING PAVEMENT MARKINGS AND SYMBOLS AND PLACE TEMPORARY PAVEMENT MARKINGS AND SYMBOLS (SEE SHEET TMP-8):

- Y3- FROM TIE IN AT L2- TO STA 14+60+/-
- Y4- FROM TIE IN AT L2- TO STA 11+40+/-
- L2- FROM STA 205+10+/- TO STA 212+29+/-
- L2- FROM STA 213+77+/- TO STA 226+15+/-

### PHASE III: INTERSECTION SUPERSTREET CROSS-OVER CONSTRUCTION AND -Y3- WIDENING (TMP-17 THRU-19)

ICT: COMPLETE THE WORK REQUIRED IN PHASE III STEPS 1 AND 2 IN FORTY-FIVE (45) CONSECUTIVE CALANDER DAYS, SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

**STEP 1:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, CONSTRUCT MEDIAN DIRECTIONAL CROSS-OVER AND ROAD WIDENING ON -Y3- UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:

- L2- FROM STA 211+88+/- TO STA 214+27+/- (LT & RT SIDE)
- Y3- FROM TIE IN AT -L2- TO STA 14+60 (LT ONLY, EXCLUDING THE MONOLITHIC KEY-IN ISLAND)

INSTALL PERMANENT TRAFFIC SIGNAL AND SIGNS AT THE INTERSECTION OF -L2- AND -Y3- /-Y4-. KEEP THE NEW SIGNAL HEADS AND SIGNS COVERED.

TRAFFIC SHALL REMAIN IN ITS TEMPORARY TRAFFIC PATTERN ON -L2-, -Y3-, AND -Y4-.

### PHASE III: (CONTINUED)

ICT: COMPLETE THE WORK REQUIRED IN PHASE III STEP 2 FROM 9:00 P.M. ON A FRIDAY TO 6:00 A.M. THE FOLLOWING SATURDAY, SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

**STEP 2:**

UPON COMPLETION OF THE WORK REQUIRED IN PHASE II STEP 1, USING TEMPORARY LANE CLOSURES (RSD 1101.02), FLAGGERS AND LAW ENFORCEMENT AS NEEDED PLACE TEMPORARY PAVEMENT MARKINGS AND SIGNS (SEE FINAL PAVEMENT MARKING PLANS FOR DIMENSIONS), OPEN MEDIAN DIRECTIONAL CROSS-OVER AND PLACE -L2- , -Y3-, AND -Y4- TRAFFIC IN ITS PERMANENT TRAFFIC PATTERN, AND ACTIVATE THE FINAL TRAFFIC SIGNAL AT THE INTERSECTION OF -L2-, -Y3-, AND -Y4-.

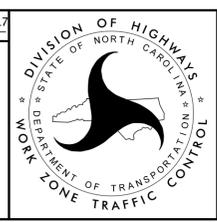
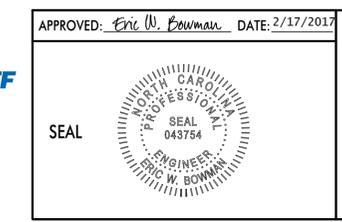
### PHASE IV: WEDGING, TEMPORARY PAVEMENT MARKINGS, AND MONOLITHIC CONCRETE ISLAND ON -Y3-

**STEP 1:**

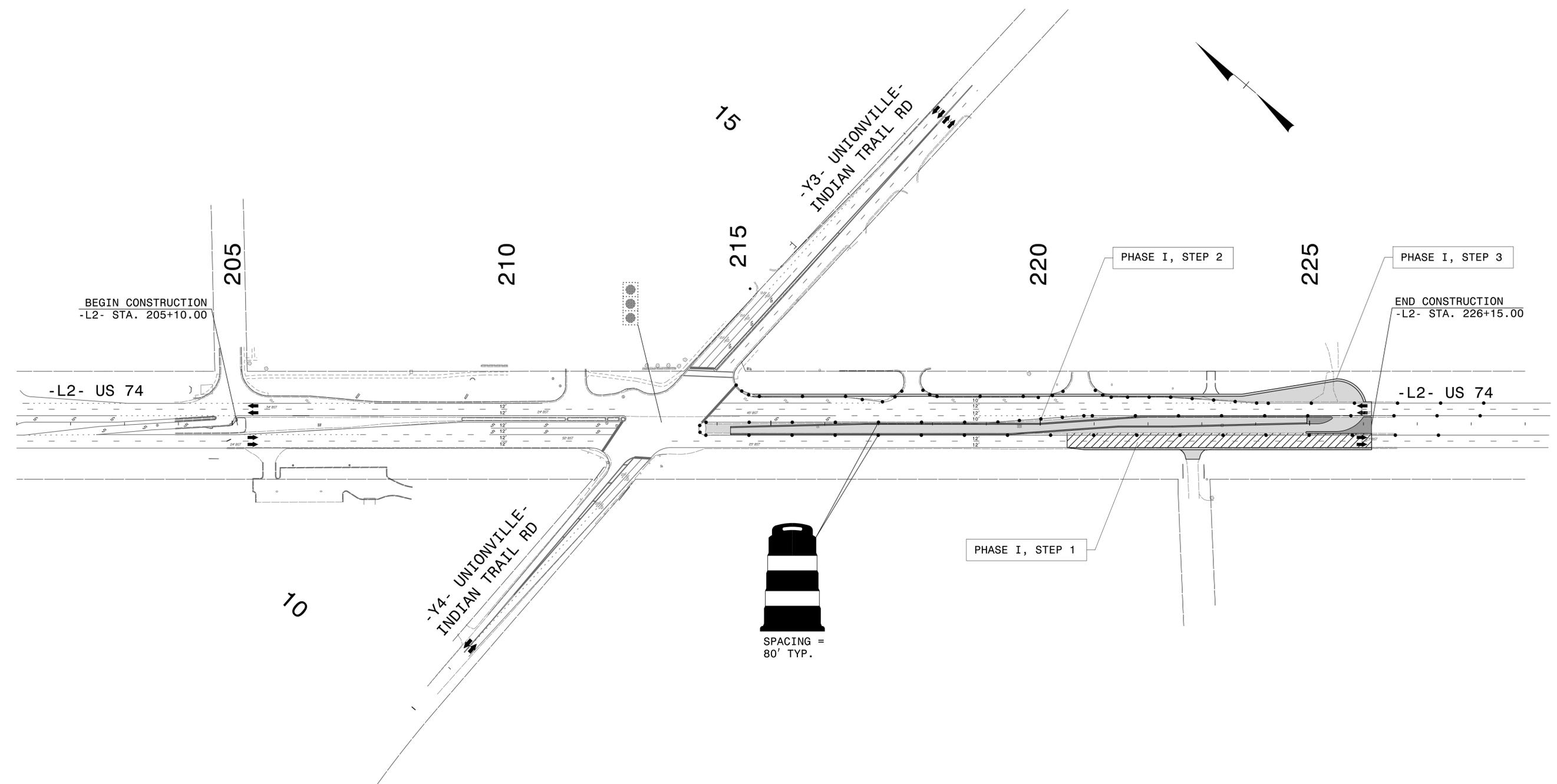
USING ALTERNATING LANE CLOSURES (RSD. 1101.02 SHEET 3 OF 15), COMPLETE CONSTRUCTION OF -L2-, -Y3-, AND -Y4- INCLUDING WEDGING AND MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED) ON -Y3-. INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY MARKERS AND THEN SHIFT TRAFFIC INTO FINAL TRAFFIC PATTERN. FINAL LAYER OF SURFACE COURSE AND PERMANENT PAVEMENT MARKINGS AND MARKERS WILL BE COMPLETE ONCE ALL OTHER AREAS ARE CONSTRUCTED.

- L2- FROM STA 205+10+/- TO STA 226+15+/-
- Y3- FROM TIE IN AT L2- TO STA 14+60+/-
- Y4- FROM TIE IN AT L2- TO STA 11+40+/-

2/17/2017 14:41:55 W-5520 US74\TrafficControl\TCP\W5520\_TC\_PSH\_03.dgn USEB04421



## TEMPORARY TRAFFIC CONTROL PHASING



NOTE:

1. EXISTING PAVEMENT MARKINGS ARE SHOWN IN THIS PHASE.
2. TRAFFIC IS MAINTAINED IN EXISTING TRAFFIC PATTERN UNLESS OTHERWISE SHOWN ON PLAN.

2/10/2017 14:51:55 US74-TrafficControl\TCP\W5520\_TC\_Area\_2-Phase1Overview.dgn USEB04421

**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017

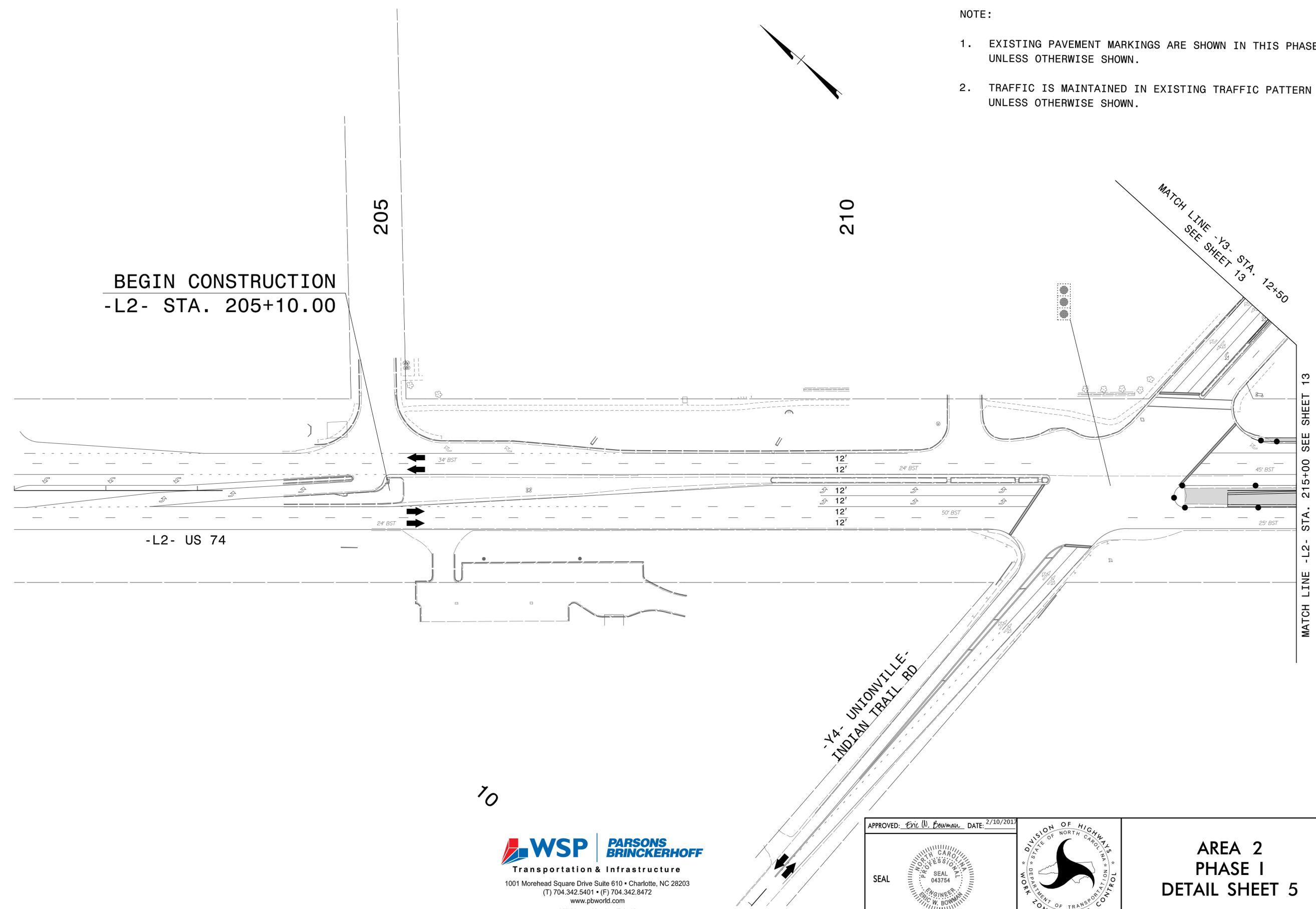
SEAL

**AREA 2 OVERVIEW,  
PHASE I**

PROJ. REFERENCE NO.	SHEET NO.
W-5520	TMP-12

NOTE:

- EXISTING PAVEMENT MARKINGS ARE SHOWN IN THIS PHASE UNLESS OTHERWISE SHOWN.
- TRAFFIC IS MAINTAINED IN EXISTING TRAFFIC PATTERN UNLESS OTHERWISE SHOWN.



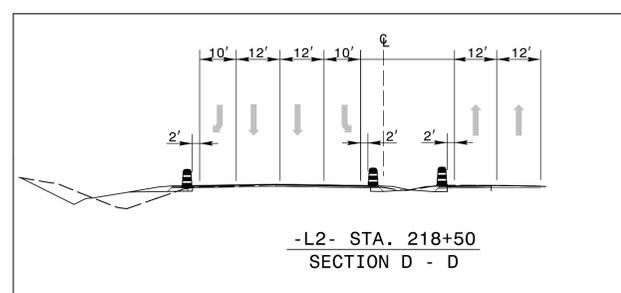
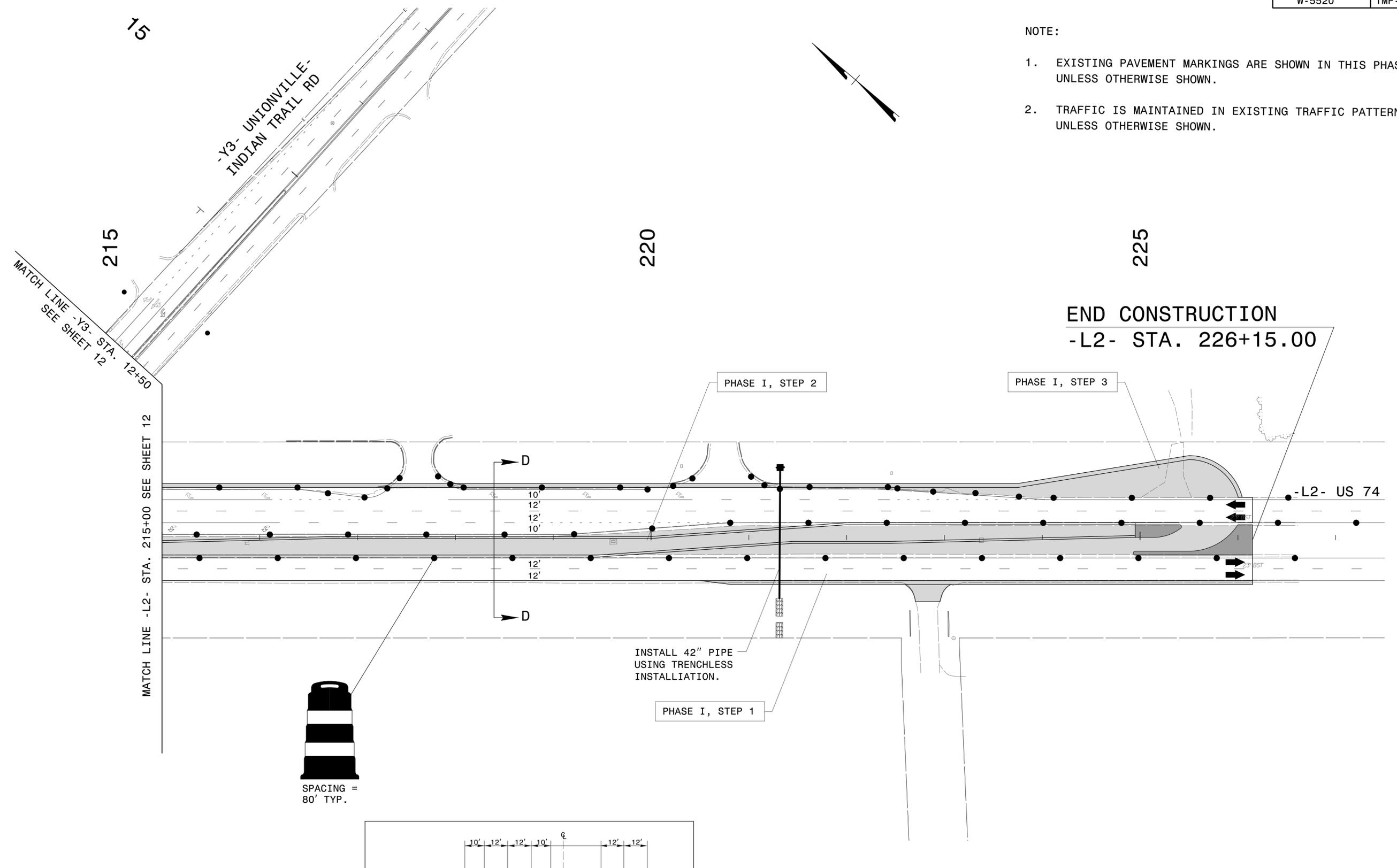
2/10/2017 4:54:50 PM US74-TrafficControl\TOP\W5520\_TC\_TMP\_Area 2-Phase1.dgn USEB04421

**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017

SEAL

**AREA 2  
 PHASE I  
 DETAIL SHEET 5**



INSTALL 42" PIPE USING TRENCHLESS INSTALLIATION.

PHASE I, STEP 1

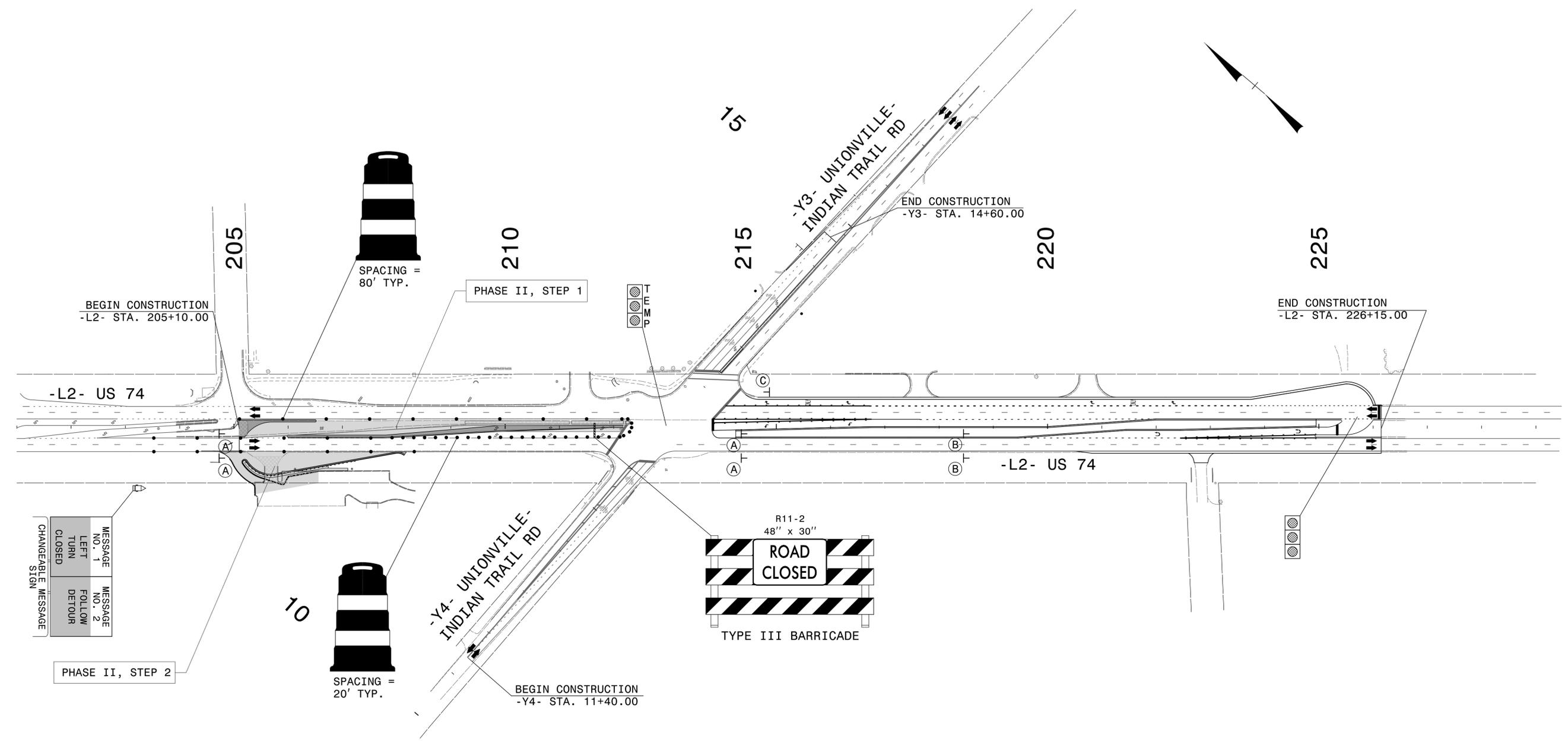
**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017  
 SEAL

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

**AREA 2  
 PHASE I  
 DETAIL SHEET 6**

2/10/2017 4:41:42 PM US74-TrafficControl\TC\W5520\_TC\_TMP\_Area 2-Phase1-2.dgn USEB0442



CHANGEABLE MESSAGE SIGN

MESSAGE NO. 1	MESSAGE NO. 2
CLOSED LEFT TURN	FOLLOW DETOUR

PHASE II, STEP 2

**A**

DETOUR M4-8 24" x 12"

M6-3 21" x 15"

**B**

DETOUR M4-8 24" x 12"

SP-1 21" x 21"

**C**

END DETOUR M4-8 A 24" x 18"

NOTE:

- CONTRACTOR SHALL COORDINATE WITH DIVISION TRAFFIC ENGINEER TO COORDINATE TEMPORARY SIGNAL TIMINGS PRIOR TO TEMPORARY TRAFFIC PATTERN.

2/10/2017 14:51:55 US74-TrafficControl\TOP\W5520\_TC\_Area 2-Phase2\_Overview.dgn USEB0442

**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017

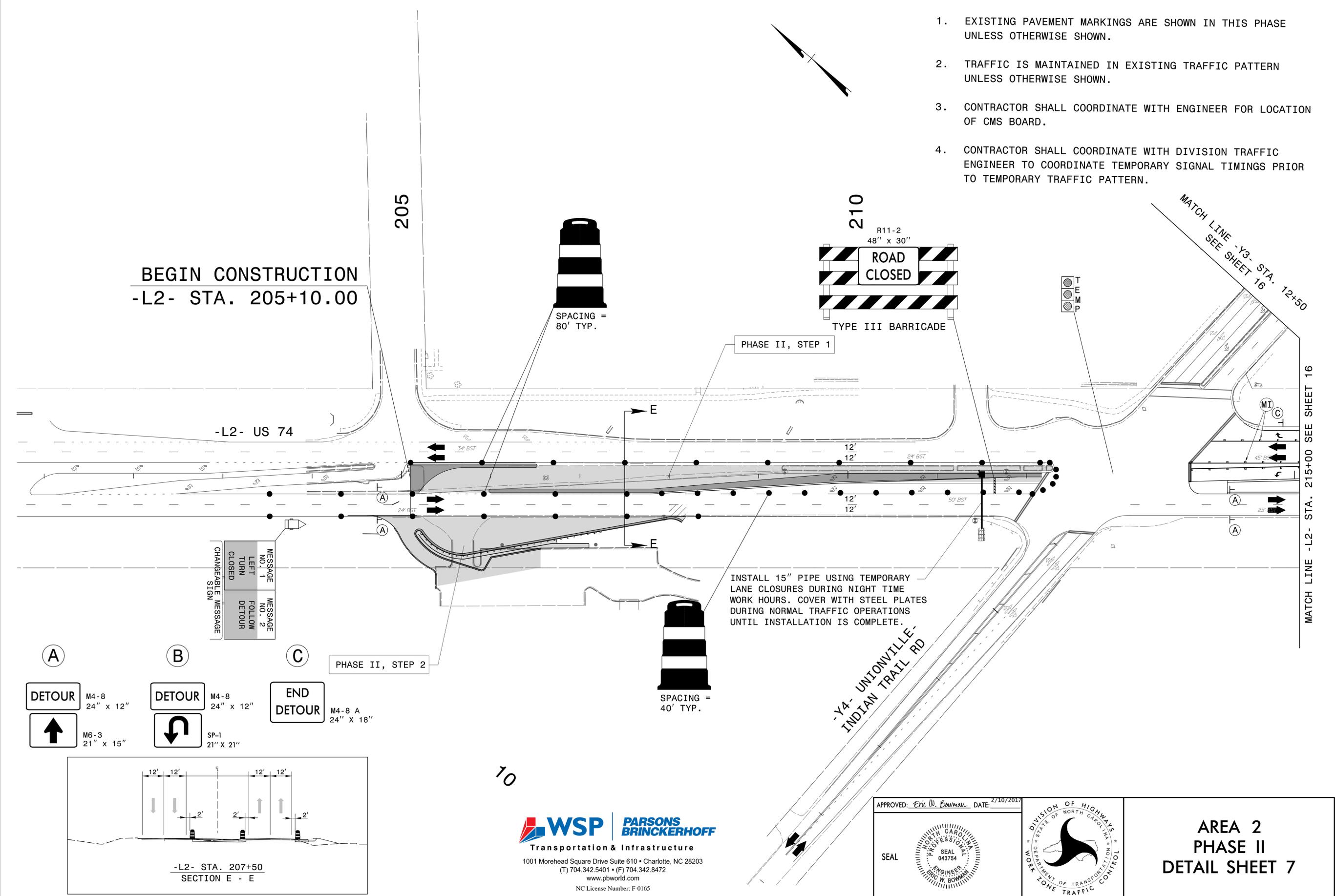
SEAL

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

**AREA 2 OVERVIEW,  
 PHASE II**

NOTE:

- EXISTING PAVEMENT MARKINGS ARE SHOWN IN THIS PHASE UNLESS OTHERWISE SHOWN.
- TRAFFIC IS MAINTAINED IN EXISTING TRAFFIC PATTERN UNLESS OTHERWISE SHOWN.
- CONTRACTOR SHALL COORDINATE WITH ENGINEER FOR LOCATION OF CMS BOARD.
- CONTRACTOR SHALL COORDINATE WITH DIVISION TRAFFIC ENGINEER TO COORDINATE TEMPORARY SIGNAL TIMINGS PRIOR TO TEMPORARY TRAFFIC PATTERN.



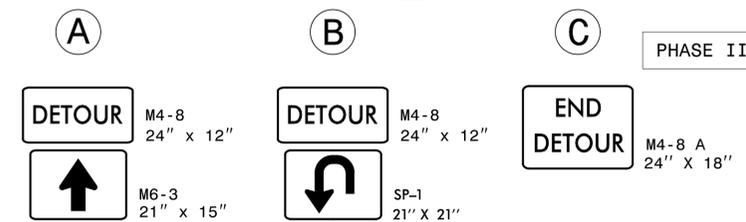
BEGIN CONSTRUCTION  
-L2- STA. 205+10.00

SPACING =  
80' TYP.

R11-2  
48" x 30"  
ROAD  
CLOSED  
TYPE III BARRICADE

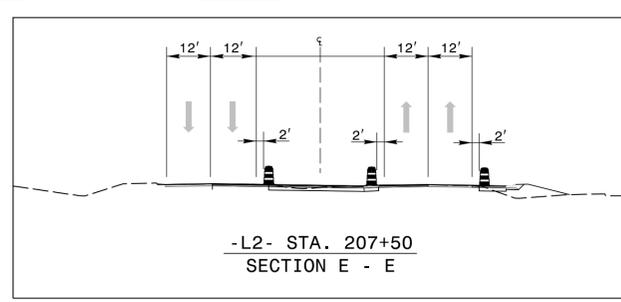
PHASE II, STEP 1

CHANGEABLE MESSAGE SIGN	MESSAGE NO. 1	MESSAGE NO. 2
	LEFT TURN CLOSED	FOLLOW DETOUR



INSTALL 15" PIPE USING TEMPORARY LANE CLOSURES DURING NIGHT TIME WORK HOURS. COVER WITH STEEL PLATES DURING NORMAL TRAFFIC OPERATIONS UNTIL INSTALLATION IS COMPLETE.

SPACING =  
40' TYP.



10

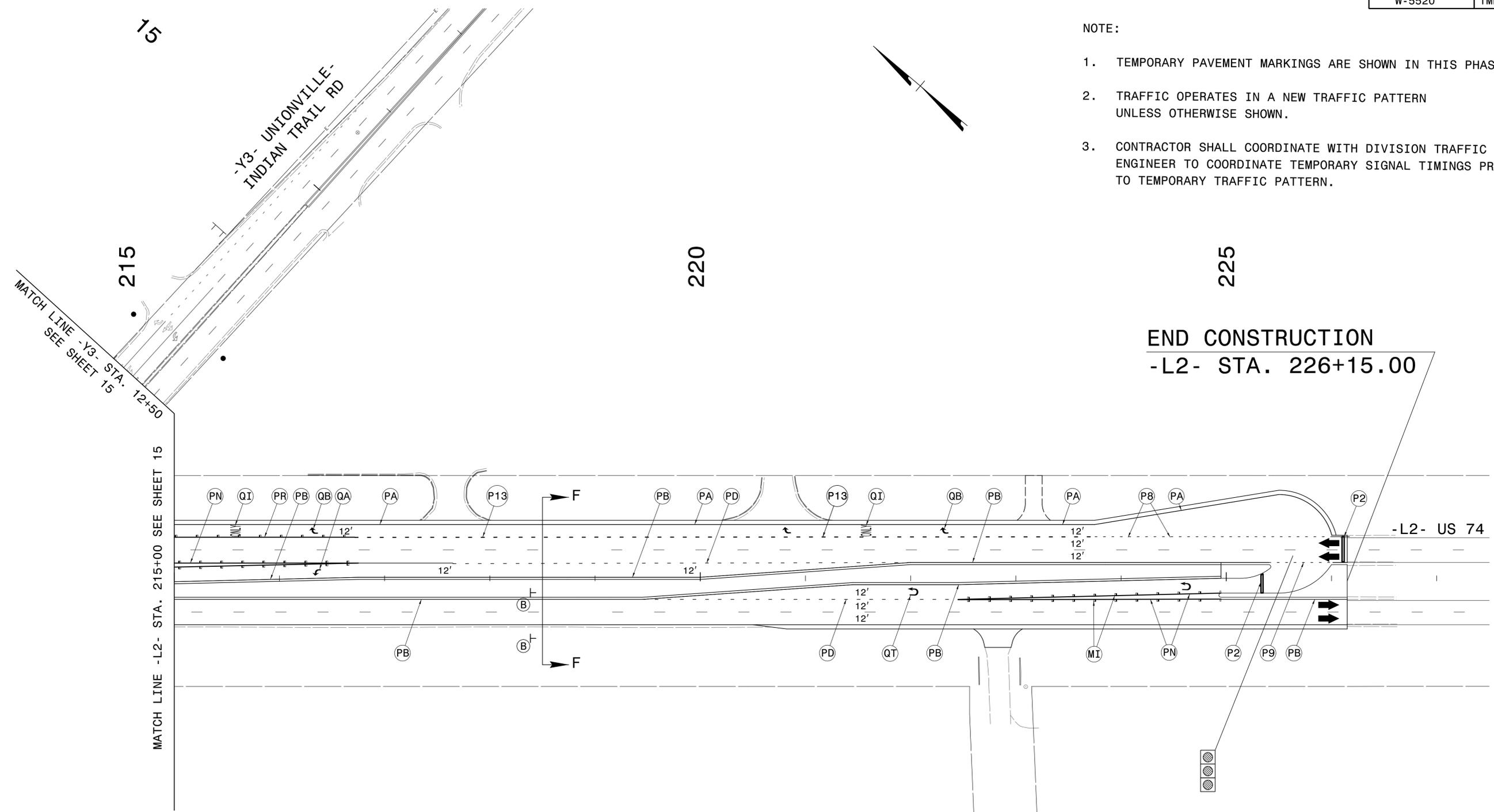
**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017  
 SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 ERIC W. BOWMAN  
 043754

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

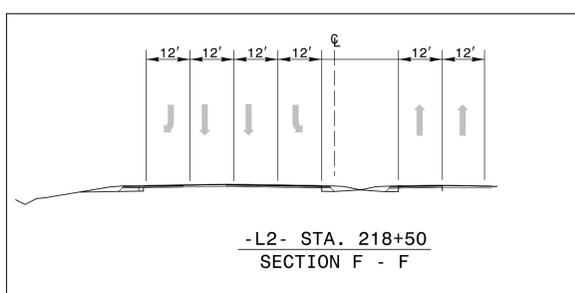
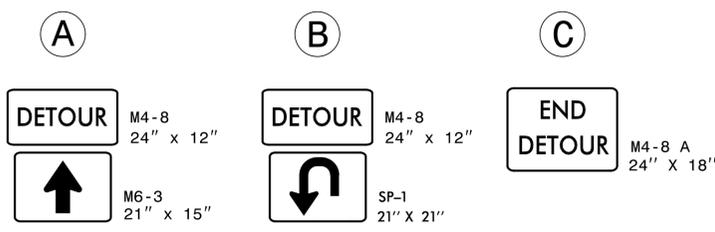
AREA 2  
 PHASE II  
 DETAIL SHEET 7

2/10/2017 4:41:55 PM US74\\TrafficControl\TOP\W5520\_TC\_TMP\_Area 2-Phase2-ldgn USEB0442



- NOTE:
- TEMPORARY PAVEMENT MARKINGS ARE SHOWN IN THIS PHASE.
  - TRAFFIC OPERATES IN A NEW TRAFFIC PATTERN UNLESS OTHERWISE SHOWN.
  - CONTRACTOR SHALL COORDINATE WITH DIVISION TRAFFIC ENGINEER TO COORDINATE TEMPORARY SIGNAL TIMINGS PRIOR TO TEMPORARY TRAFFIC PATTERN.

**END CONSTRUCTION**  
**-L2- STA. 226+15.00**

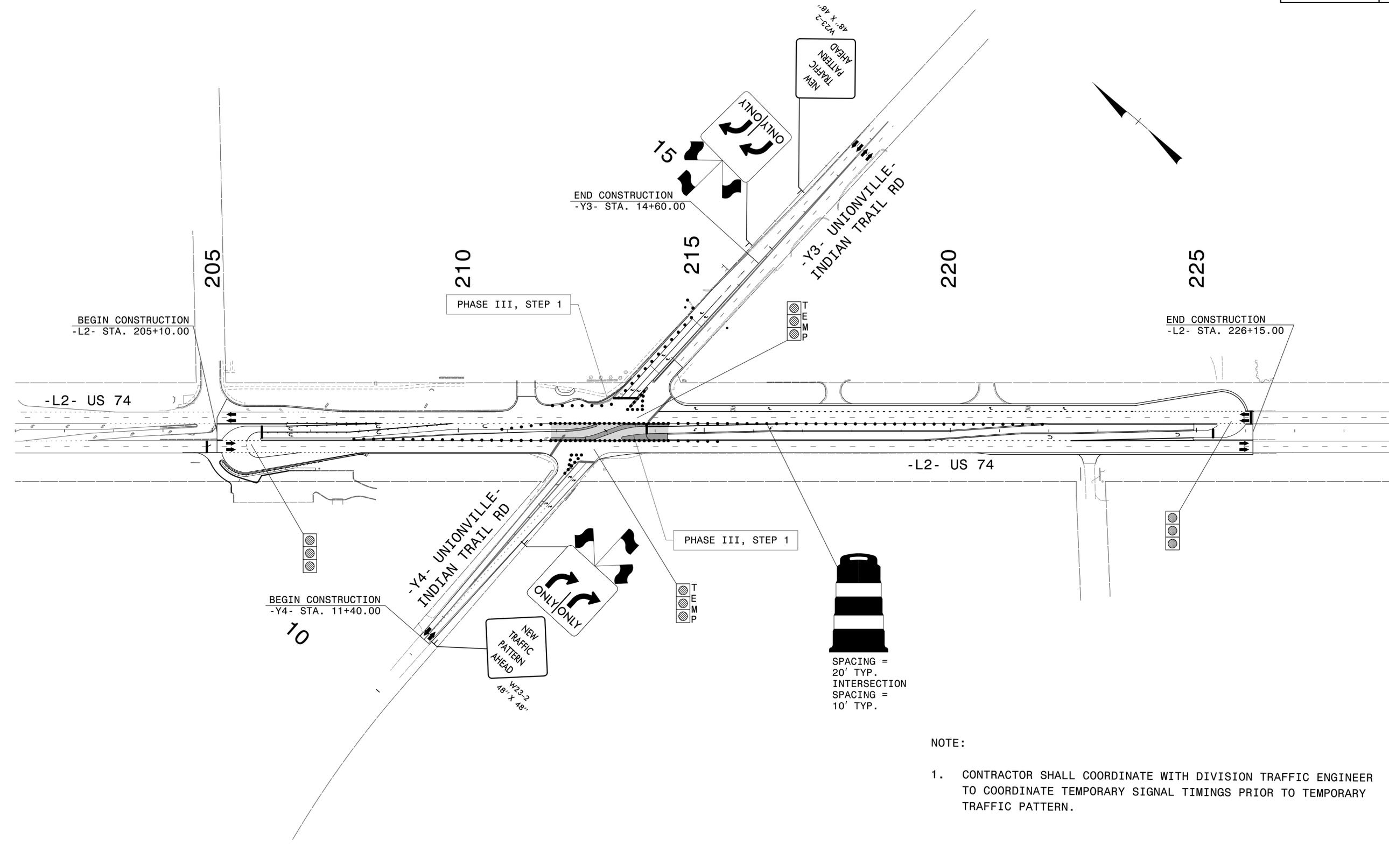


2/10/2017 14:41:55 US74-TrafficControl\TC\W5520\_TC\_TMP\_Area 2-Phase2-2.dgn USEB04421

**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017  
 SEAL

**AREA 2**  
**PHASE II**  
**DETAIL SHEET 8**



NOTE:

- CONTRACTOR SHALL COORDINATE WITH DIVISION TRAFFIC ENGINEER TO COORDINATE TEMPORARY SIGNAL TIMINGS PRIOR TO TEMPORARY TRAFFIC PATTERN.

2/10/2017  
 4:51W-5520 US74-TrafficControl\TCP\W5520\_TC\_Area 2-Phase3 OverView.dgn  
 USEB04421

**WSP** | **PARSONS BRINCKERHOFF**
  
 Transportation & Infrastructure
   
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203
   
 (T) 704.342.5401 • (F) 704.342.8472
   
 www.pbworld.com
   
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017

SEAL

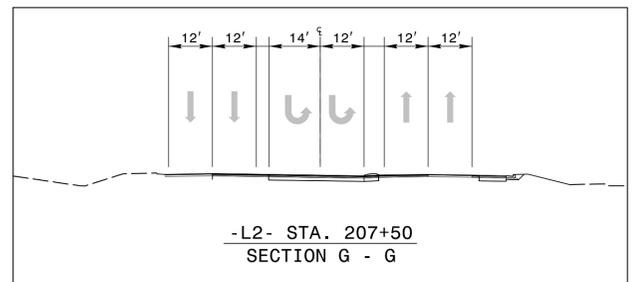
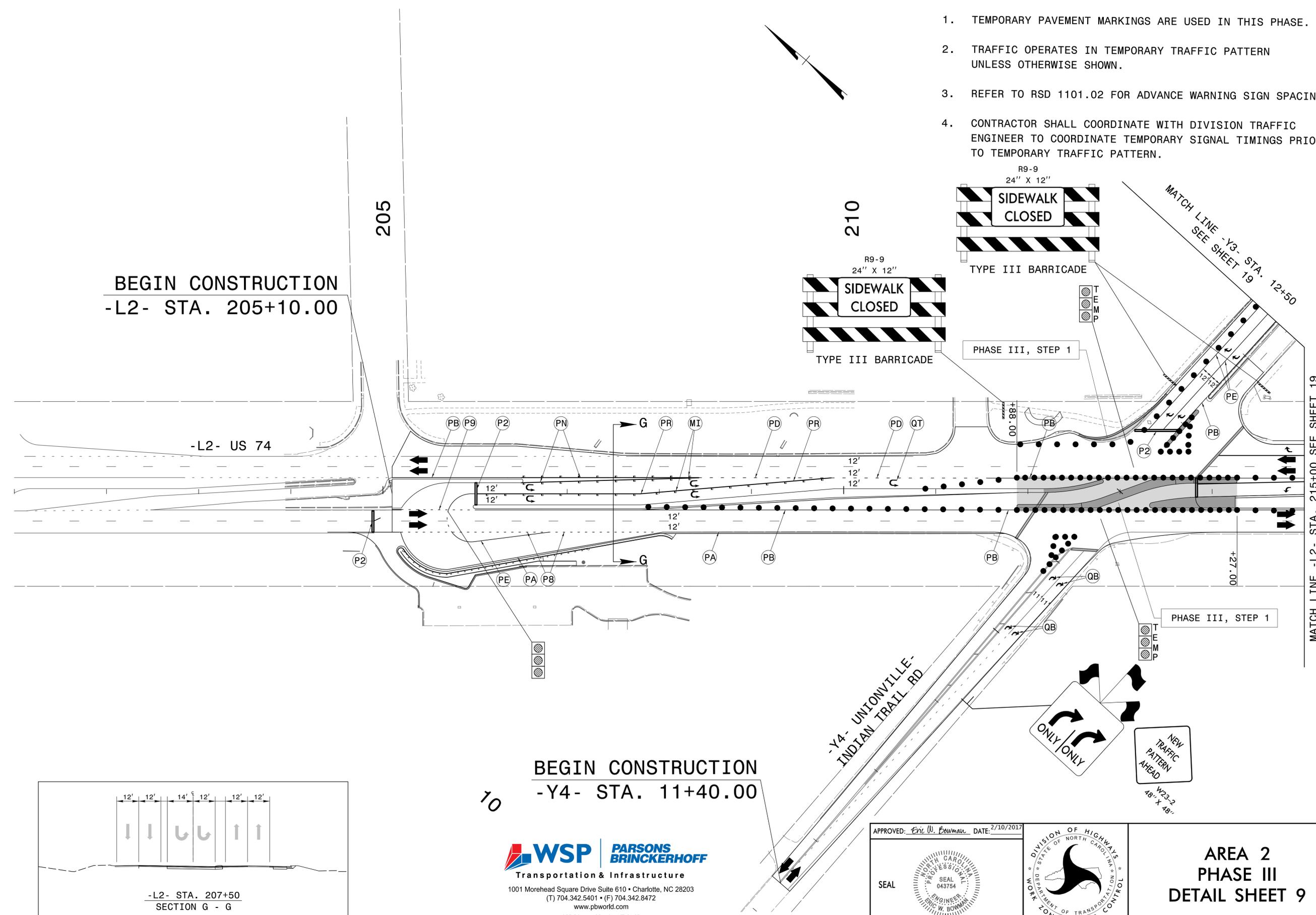
DIVISION OF HIGHWAYS  
 STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 WORK ZONE TRAFFIC CONTROL

## AREA 2 OVERVIEW, PHASE III

PROJ. REFERENCE NO.	SHEET NO.
W-5520	TMP-18

NOTE:

1. TEMPORARY PAVEMENT MARKINGS ARE USED IN THIS PHASE.
2. TRAFFIC OPERATES IN TEMPORARY TRAFFIC PATTERN UNLESS OTHERWISE SHOWN.
3. REFER TO RSD 1101.02 FOR ADVANCE WARNING SIGN SPACING.
4. CONTRACTOR SHALL COORDINATE WITH DIVISION TRAFFIC ENGINEER TO COORDINATE TEMPORARY SIGNAL TIMINGS PRIOR TO TEMPORARY TRAFFIC PATTERN.



10  
 BEGIN CONSTRUCTION  
 -Y4- STA. 11+40.00

**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017  
 SEAL

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

AREA 2  
 PHASE III  
 DETAIL SHEET 9

2/10/2017 US74\TrafficControl\TCP\W5520\_TC\_TMP\_Area 2-Phase3-ldgn  
 USW-5520  
 USEB0442

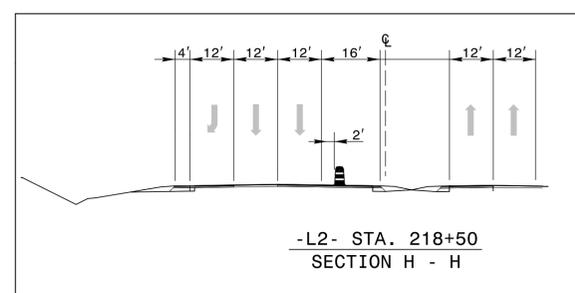
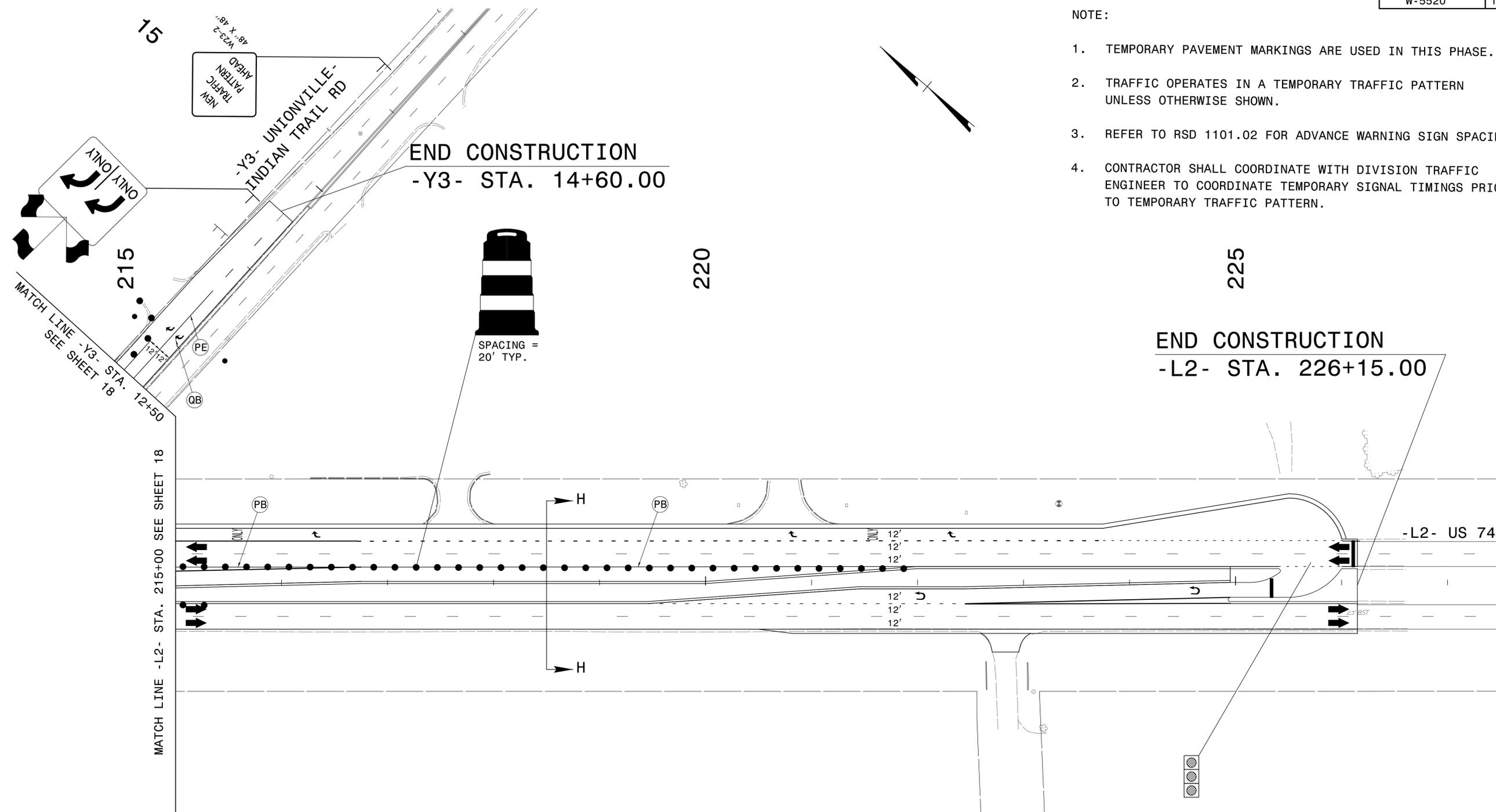
MATCH LINE -L2- STA. 215+00 SEE SHEET 19

MATCH LINE -Y3- STA. 12+50  
SEE SHEET 19

PROJ. REFERENCE NO.	SHEET NO.
W-5520	TMP-19

NOTE:

1. TEMPORARY PAVEMENT MARKINGS ARE USED IN THIS PHASE.
2. TRAFFIC OPERATES IN A TEMPORARY TRAFFIC PATTERN UNLESS OTHERWISE SHOWN.
3. REFER TO RSD 1101.02 FOR ADVANCE WARNING SIGN SPACING.
4. CONTRACTOR SHALL COORDINATE WITH DIVISION TRAFFIC ENGINEER TO COORDINATE TEMPORARY SIGNAL TIMINGS PRIOR TO TEMPORARY TRAFFIC PATTERN.



2/10/2017 14:41:55 US74\TrafficControl\TCP\W5520\_TC\_TMP\_Area 2-Phase3-2.dgn USEB04421

**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017

SEAL

**AREA 2  
PHASE III  
DETAIL SHEET 10**

PROJ. REFERENCE NO.	SHEET NO.
W-5520	TMP-20

# AREA 3 TRAFFIC CONTROL PHASING

INSTALL WORK ZONE ADVANCE WARNING SIGNS PER RSD 1101.01.

UNLESS OTHERWISE NOTED BELOW, MAINTAIN ACCESS TO ALL DRIVES AND -Y- LINES THROUGHOUT THE DURATION OF CONSTRUCTION.

CONTRACTOR SHALL WORK IN AREAS 1 THROUGH 4 CONSECUTIVELY, FROM EAST TO WEST IN THE SEQUENCE OF AREA 4, AREA 3, AREA 2, AND LASTLY AREA 1. FOLLOW THE TIME RESTRICTIONS AND REQUIREMENTS SHOWN IN GENERAL NOTES AND AS DIRECTED BY THE ENGINEER. UPON COMPLETION OF EACH CONSTRUCTION AREA UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS, THE SUPERSTREET INTERSECTION TRAFFIC OPERATION PATTERN SHALL BE ACTIVATED FROM EAST TO WEST IN THE SEQUENCE OF AREA 4, AREA 3, AREA 2, AND LASTLY AREA 1.

## AREA 3: EAST OF TECHNOLOGY DR. TO WEST OF FAWNBROOKE DR.

### PHASE I: MEDIAN U-TURN CONSTRUCTION (TMP-21 THRU TMP-23)

**STEP 1:**

AWAY FROM TRAFFIC, AND USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, CONSTRUCT PROPOSED INSIDE SHOULDER AND MEDIAN U-TURN LANES, INCLUDING DRAINAGE STRUCTURES, CONCRETE ISLANDS, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE AS FOLLOWS:

-L3- FROM STA 303+20+/- TO STA 314+20+/- (LT & RT SIDES)

-L3- FROM STA 315+04+/- TO STA 326+50+/- (LT & RT SIDES)

CONSTRUCT WEDGING AS NEEDED TO PROVIDE A SMOOTH TRANSITION TO EXISTING PAVEMENT AND APPROPRIATE CROSS SLOPES TO ENSURE POSITIVE DRAINAGE. REPLACE EXISTING PAVEMENT MARKINGS WHERE REQUIRED.

TRAFFIC WILL BE IN ITS EXISTING PATTERN ON -L3-, -Y5- AND -Y6- AT THE END OF EACH WORK PERIOD.

**STEP 2:**

UPON COMPLETION OF THE WORK REQUIRED IN PHASE I STEP 1, CLOSE WESTBOUND RIGHT-TURN LANE ON -L3- FROM STA. 321+45+/- TO STA. 325+35 +/-.

AWAY FROM TRAFFIC, USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, CONSTRUCT ROAD WIDENING AND BULBOUTS FOR U-TURN MOVEMENTS UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:

-L3- FROM STA 303+34+/- TO STA 306+25+/- (RT SIDE ONLY)

-L3- FROM STA 323+45+/- TO STA 326+39+/- (LT SIDE ONLY)

CONSTRUCT WEDGING AS NEEDED TO PROVIDE A SMOOTH TRANSITION TO EXISTING PAVEMENT AND APPROPRIATE CROSS SLOPES TO ENSURE POSITIVE DRAINAGE. REPLACE EXISTING PAVEMENT MARKINGS WHERE REQUIRED.

MAINTAIN EXISTING TRAFFIC PATTERN ON -Y5-, -Y6-, AND -L3- AT THE END OF EACH WORK PERIOD WITH THE PROPOSED MEDIAN U-TURN LANES AND BULBOUT LOCATIONS CLOSED TO TRAFFIC.

**STEP 3:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, INSTALL PERMANENT TRAFFIC SIGNALS AND SIGNS AT MEDIAN U-TURN LOCATIONS AND THE TEMPORARY TRAFFIC SIGNAL AT THE INTERSECTION OF -L3-, AND -Y5-/-Y6-. KEEP BOTH THE SIGNAL HEADS AND SIGNS COVERED.

INSTALL TEMPORARY PAVEMENT MARKINGS NECESSARY FOR THE SIGNALIZED MEDIAN U-TURN OPERATIONS. MEDIAN U-TURN LANES AND BULBOUT LOCATIONS SHALL REMAIN CLOSED TO TRAFFIC.

ICT: COMPLETE THE WORK REQUIRED IN PHASE I STEP 4 FROM 9:00 P.M. ON A FRIDAY TO 6:00 A.M. THE FOLLOWING SATURDAY, SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

**STEP 4:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02), FLAGGERS, AND LAW ENFORCEMENT AS NEEDED, ACTIVATE THE PERMANENT TRAFFIC SIGNALS AT THE MEDIAN U-TURN LOCATIONS, AND OPEN THE MEDIAN U-TURN LANES, AND BULBOUTS TO TRAFFIC.

INSTALL CLOSELY SPACED DRUMS ALONG THE INSIDE EDGE OF TRAVELED WAY (BOTH DIRECTIONS) FROM -L3- FROM STA 312+73+/- TO STA 316+02+/- (LT & RT SIDE) TO CLOSE MEDIAN CROSSOVER AND LEFT-TURN LANES ON -L3- AT ITS INTERSECTION WITH -Y5- & -Y6-, AND ACTIVATE THE TEMPORARY TRAFFIC SIGNAL. SHIFT US 74 LEFT-TURN TRAFFIC AND -Y5-, -Y6- TRAFFIC IN A TEMPORARY TRAFFIC PATTERN USING MEDIAN U-TURNS:

OBLITERATE EXISTING CONFLICTING PAVEMENT MARKINGS AND SYMBOLS AND PLACE TEMPORARY PAVEMENT MARKINGS AND SYMBOLS (SEE SHEET TMP-25 & TMP-26):

-Y5- FROM TIE IN AT -L3- TO STA 12+80+/-

-Y6- FROM TIE IN AT -L3- TO STA 10+00+/-

-L3- FROM STA 303+20+/- TO STA 314+20+/-

-L3- FROM STA 315+04+/- TO STA 326+50+/-

### PHASE II: INTERSECTION SUPERSTREET CROSS-OVER CONSTRUCTION (TMP-24 THRU TMP-26)

ICT: COMPLETE THE WORK REQUIRED IN PHASE II STEPS 1 AND 2 IN FORTY-FIVE (45) CONSECUTIVE CALANDER DAYS, SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

**STEP 1:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, CONSTRUCT MEDIAN DIRECTIONAL CROSS-OVER INCLUDING DRAINAGE AND MONOLITHIC CONCRETE ISLAND UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:

-L3- FROM STA 312+73+/- TO STA 316+02+/- (LT & RT SIDE)

INSTALL PERMANENT TRAFFIC SIGNAL AND SIGNS AT THE INTERSECTION OF -L3- AND -Y5- /-Y6-. KEEP THE NEW SIGNAL HEADS AND SIGNS COVERED.

TRAFFIC SHALL REMAIN IN ITS TEMPORARY TRAFFIC PATTERN ON -L3-, -Y5-, AND -Y6-.

2/17/2017 14:41:55 US74\TrafficControl\TCP\W5520\_TC\_PSH\_03.dgn USEB0442



**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/17/2017




## TEMPORARY TRAFFIC CONTROL PHASING

# AREA 3 TRAFFIC CONTROL PHASING

## AREA 3: EAST OF TECHNOLOGY DR. TO WEST OF FAWNBROOKE DR. (CONTINUED)

### PHASE II: (CONTINUED)

ICT: COMPLETE THE WORK REQUIRED IN PHASE II STEP 2 FROM 9:00 P.M. ON A FRIDAY TO 6:00 A.M. THE FOLLOWING SATURDAY, SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATION DAMAGES.

**STEP 2:**

UPON COMPLETION OF THE WORK REQUIRED IN PHASE II STEP 1, USING TEMPORARY LANE CLOSURES (RSD 1101.02), FLAGGERS AND LAW ENFORCEMENT AS NEEDED PLACE TEMPORARY PAVEMENT MARKINGS AND SIGNS (SEE FINAL PAVEMENT MARKING PLANS FOR DIMENSIONS), OPEN MEDIAN DIRECTIONAL CROSS-OVER AND PLACE -L3-, -Y5-, AND -Y6- TRAFFIC IN ITS PERMANENT TRAFFIC PATTERN, AND ACTIVATE THE FINAL TRAFFIC SIGNAL AT THE INTERSECTION OF -L3-, -Y5-, AND -Y6-.

### PHASE III: WEDGING, TEMPORARY PAVEMENT MARKINGS, AND MONOLITHIC CONCRETE ISLAND ON -Y5-

**STEP 1:**

USING ALTERNATING LANE CLOSURES (RSD. 1101.02 SHEET 3 OF 15), COMPLETE CONSTRUCTION OF -L4-, -Y7-, AND -Y8- INCLUDING WEDGING AND MONOLITHIC CONCRETE ISLANDS (SURFACE MOUNTED) ON -Y7- AND -Y8-. INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY MARKERS AND THEN SHIFT TRAFFIC INTO FINAL PATTERN. FINAL LAYER OF SURFACE COURSE AND PERMANENT PAVEMENT MARKINGS AND MARKINGS WILL BE COMPLETED ONCE ALL OTHER AREAS ARE CONSTRUCTED.

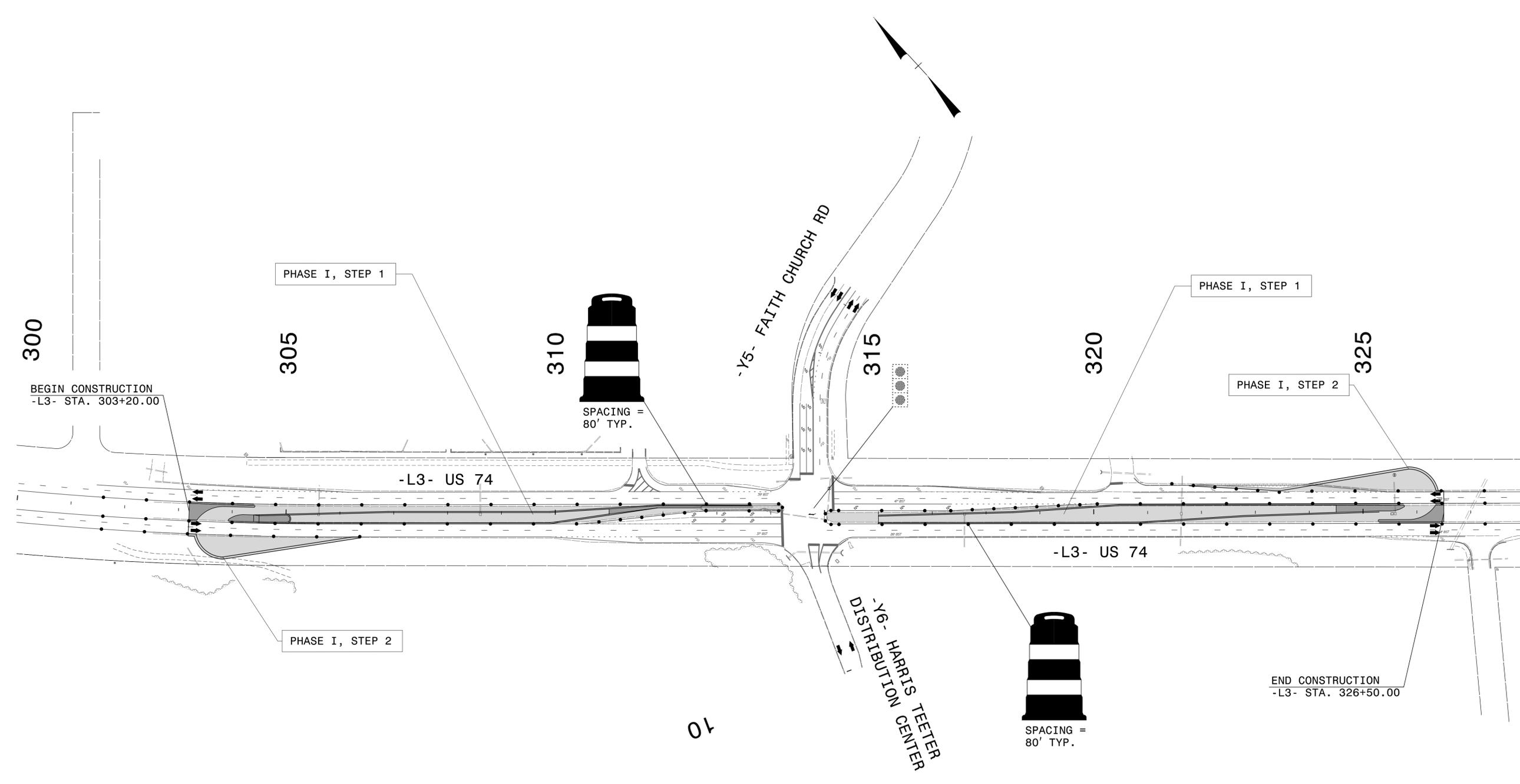
- L4- FROM STA 401+20+/- TO STA 429+40+/-
- Y7- FROM TIE IN AT L4- TO STA 13+40+/-
- Y8- FROM TIE IN AT L4- TO STA 13+20+/-

2/10/2017 14:41:55 US74\TrafficControl\TCP\W5520\_TC\_PSH\_03.dgn  
 USEB04421

**WSP | PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bonman* DATE: 2/10/2017

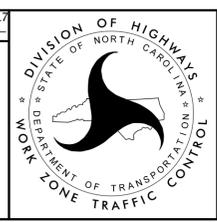
## TEMPORARY TRAFFIC CONTROL PHASING



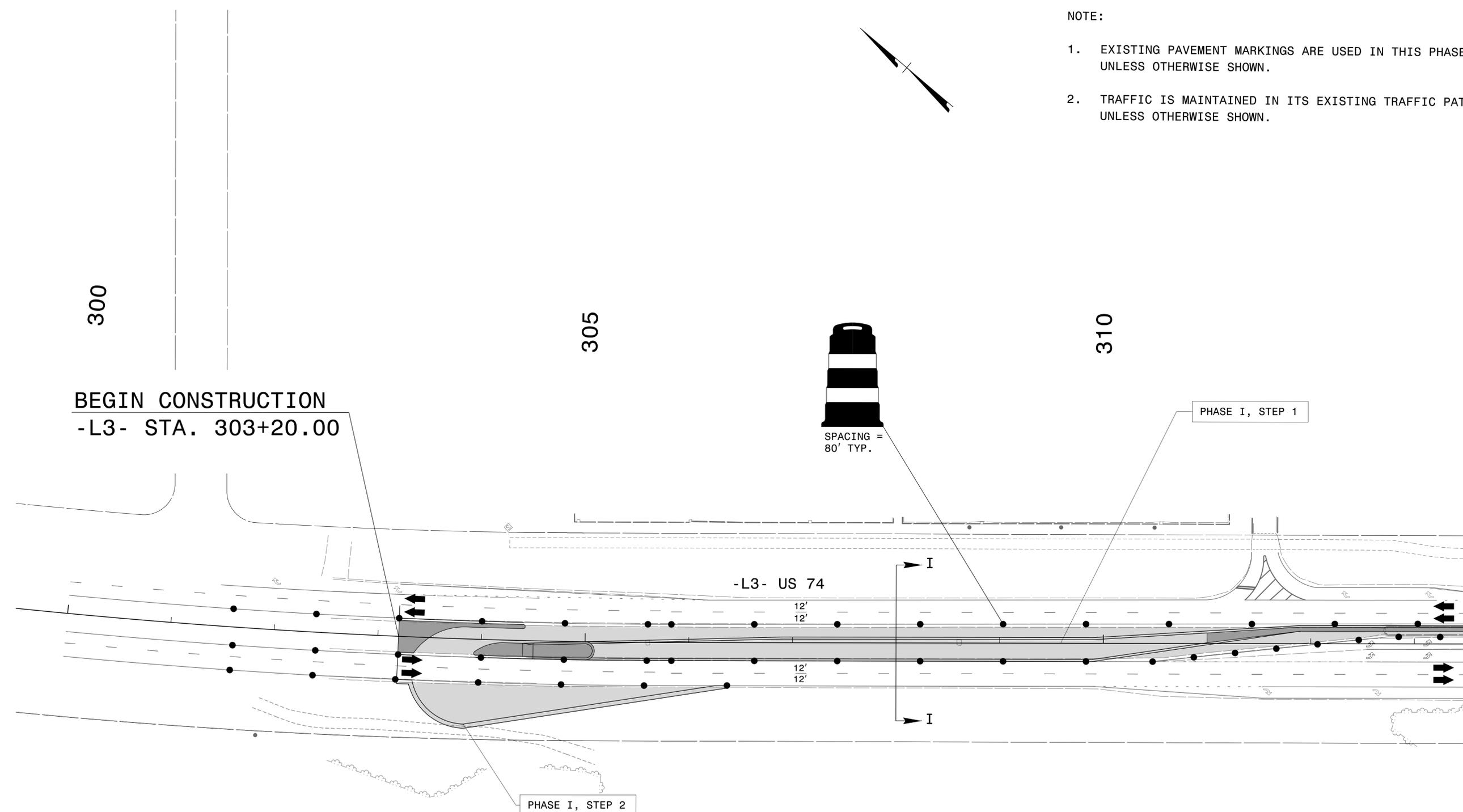
2/10/2017  
 US74-TrafficControl\TCP\W5520\_TC\_Area\_3-PhaseIOverview.dgn  
 USEB04421


**PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017  



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

## AREA 3 OVERVIEW, PHASE I



- NOTE:
- EXISTING PAVEMENT MARKINGS ARE USED IN THIS PHASE UNLESS OTHERWISE SHOWN.
  - TRAFFIC IS MAINTAINED IN ITS EXISTING TRAFFIC PATTERN UNLESS OTHERWISE SHOWN.

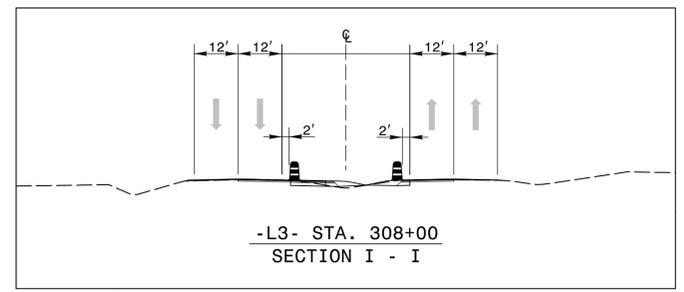
BEGIN CONSTRUCTION  
-L3- STA. 303+20.00



PHASE I, STEP 1

PHASE I, STEP 2

MATCH LINE -L3- STA. 313+50 SEE SHEET 23

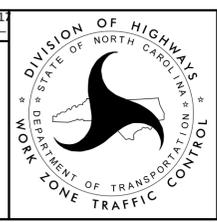


2/10/2017 14:51:55 US74-TrafficControl\TOP\W5520\_TC\_TMP\_Area\_3-Phase1-I.dgn USEB04421

**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017

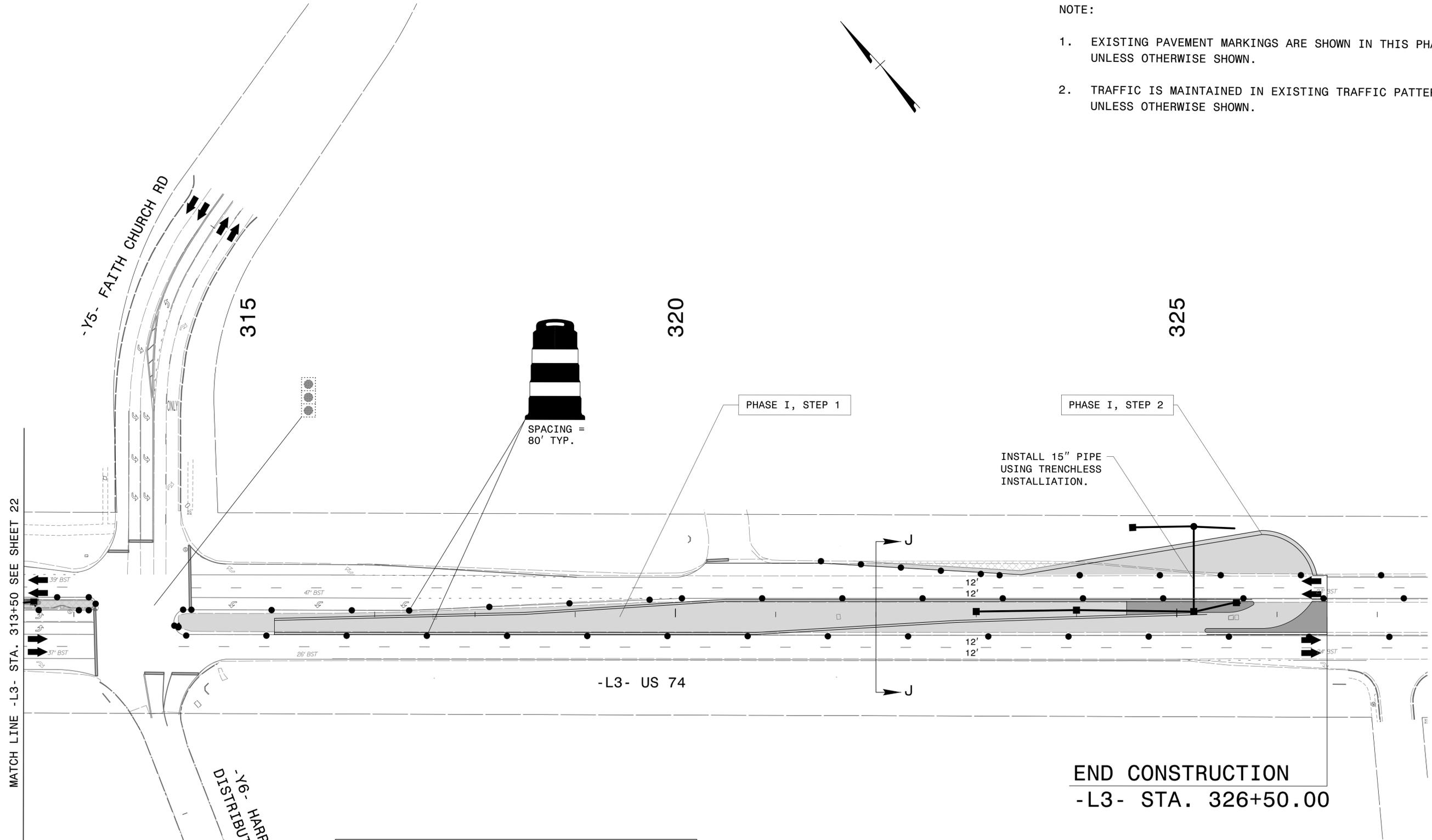
SEAL



**AREA 3  
PHASE I  
DETAIL SHEET 11**

NOTE:

- EXISTING PAVEMENT MARKINGS ARE SHOWN IN THIS PHASE UNLESS OTHERWISE SHOWN.
- TRAFFIC IS MAINTAINED IN EXISTING TRAFFIC PATTERN UNLESS OTHERWISE SHOWN.



MATCH LINE -L3- STA. 313+50 SEE SHEET 22

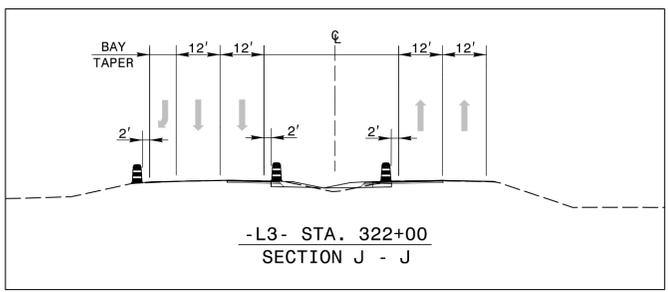
SPACING = 80' TYP.

PHASE I, STEP 1

PHASE I, STEP 2

INSTALL 15" PIPE USING TRENCHLESS INSTALLATION.

END CONSTRUCTION  
-L3- STA. 326+50.00



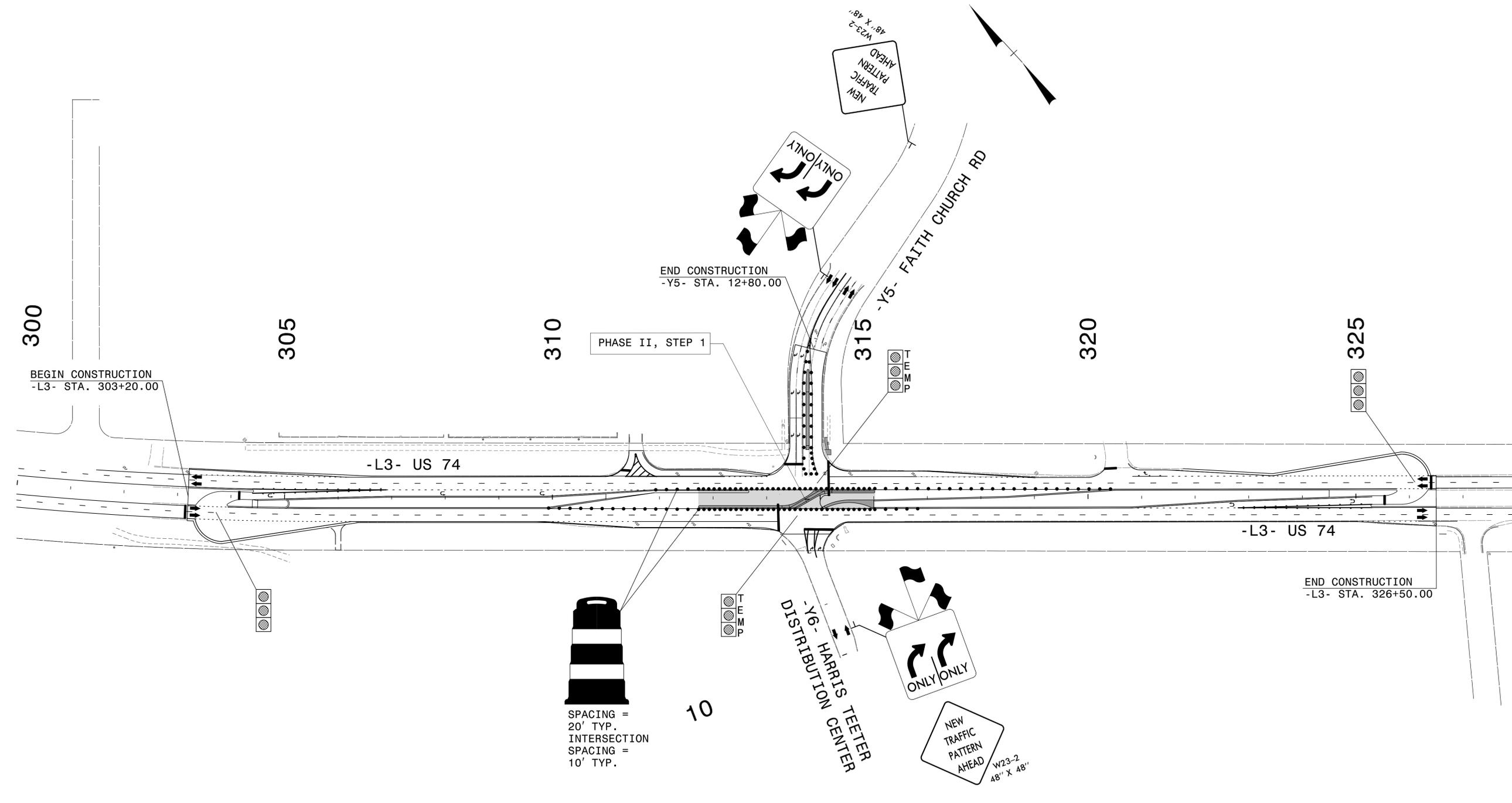
2/10/2017 14:41:55 US74-TrafficControl\TCP\W5520\_TC\_TMP\_Area\_3-Phase1-2.dgn USEB04421

**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017

SEAL

**AREA 3  
 PHASE I  
 DETAIL SHEET 12**



NOTE:

- CONTRACTOR SHALL COORDINATE WITH DIVISION TRAFFIC ENGINEER TO COORDINATE TEMPORARY SIGNAL TIMINGS PRIOR TO TEMPORARY TRAFFIC PATTERN.

2/10/2017 4:54:55 PM US74-TrafficControl\TCP\W5520\_TC\_Area\_3-Phase2\_OverView.dgn USEB04421

**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

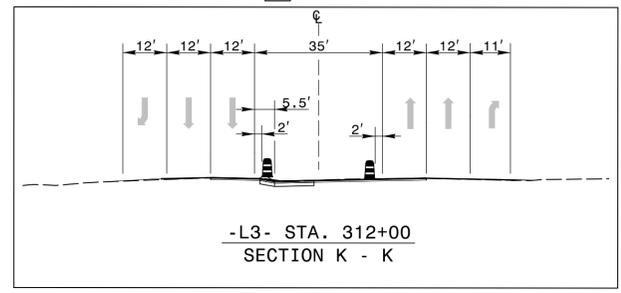
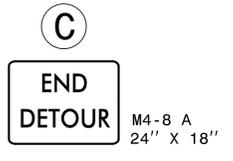
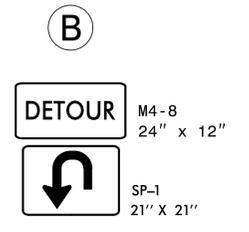
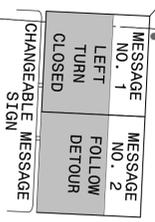
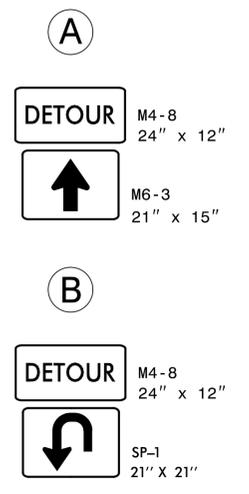
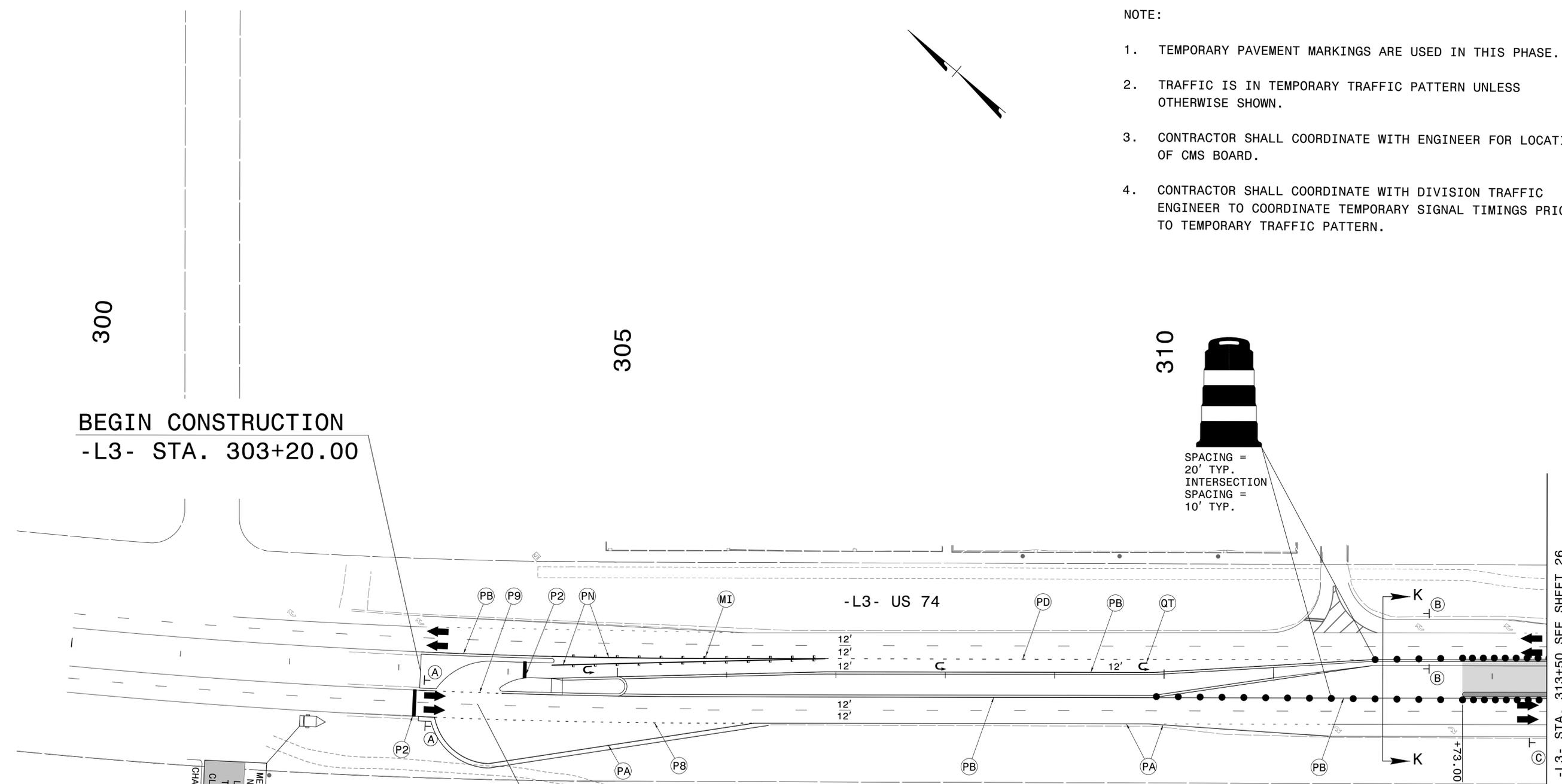
APPROVED: *Eric W. Bowman* DATE: 2/10/2017

SEAL

**AREA 3 OVERVIEW,  
 PHASE II**

NOTE:

1. TEMPORARY PAVEMENT MARKINGS ARE USED IN THIS PHASE.
2. TRAFFIC IS IN TEMPORARY TRAFFIC PATTERN UNLESS OTHERWISE SHOWN.
3. CONTRACTOR SHALL COORDINATE WITH ENGINEER FOR LOCATION OF CMS BOARD.
4. CONTRACTOR SHALL COORDINATE WITH DIVISION TRAFFIC ENGINEER TO COORDINATE TEMPORARY SIGNAL TIMINGS PRIOR TO TEMPORARY TRAFFIC PATTERN.



MATCH LINE -L3- STA. 313+50 SEE SHEET 26

2/10/2017 4:47:55 PM US74-TrafficControl\TOP\W5520\_TC\_TMP\_Area\_3-Phase2-1.dgn USEB04421

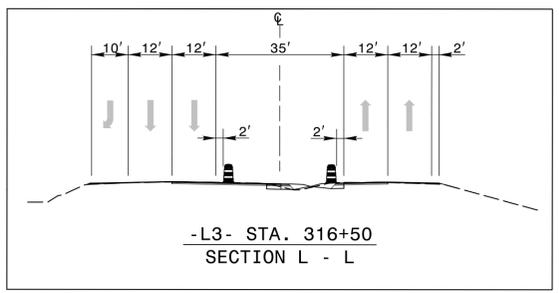
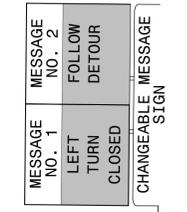
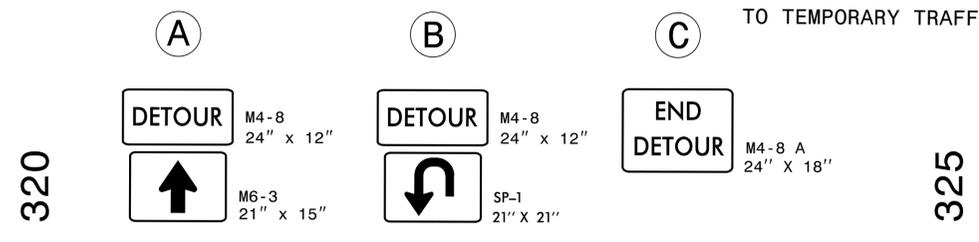
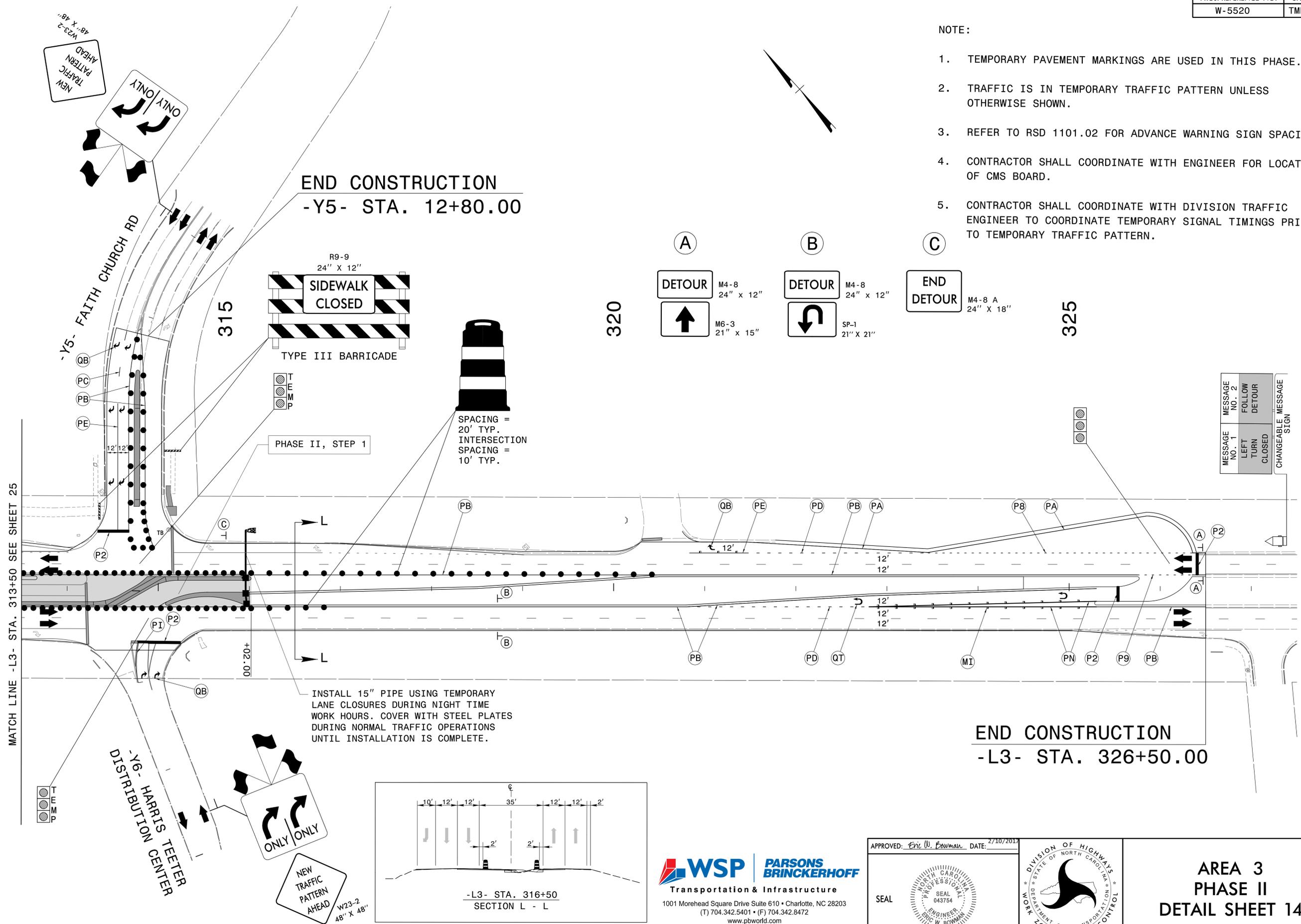
**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017

**AREA 3  
 PHASE II  
 DETAIL SHEET 13**

NOTE:

- TEMPORARY PAVEMENT MARKINGS ARE USED IN THIS PHASE.
- TRAFFIC IS IN TEMPORARY TRAFFIC PATTERN UNLESS OTHERWISE SHOWN.
- REFER TO RSD 1101.02 FOR ADVANCE WARNING SIGN SPACING.
- CONTRACTOR SHALL COORDINATE WITH ENGINEER FOR LOCATION OF CMS BOARD.
- CONTRACTOR SHALL COORDINATE WITH DIVISION TRAFFIC ENGINEER TO COORDINATE TEMPORARY SIGNAL TIMINGS PRIOR TO TEMPORARY TRAFFIC PATTERN.



2/10/2017 4:41:55 PM U:\74\TrafficControl\TOP\W5520\_TC\_TMP\_Area 3-Phase2-2.dgn USEB04421

**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017

SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 ERIC W. BOWMAN  
 043754

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

**AREA 3  
 PHASE II  
 DETAIL SHEET 14**

# AREA 4 TRAFFIC CONTROL PHASING

INSTALL WORK ZONE ADVANCE WARNING SIGNS PER RSD 1101.01.

UNLESS OTHERWISE NOTED BELOW, MAINTAIN ACCESS TO ALL DRIVES AND -Y- LINES THROUGHOUT THE DURATION OF CONSTRUCTION.

CONTRACTOR SHALL WORK IN AREAS 1 THROUGH 4 CONSECUTIVELY, FROM EAST TO WEST IN THE SEQUENCE OF AREA 4, AREA 3, AREA 2, AND LASTLY AREA 1. FOLLOW THE TIME RESTRICTIONS AND REQUIREMENTS SHOWN IN GENERAL NOTES AND AS DIRECTED BY THE ENGINEER. UPON COMPLETION OF EACH CONSTRUCTION AREA UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS, THE SUPERSTREET INTERSECTION TRAFFIC OPERATION PATTERN SHALL BE ACTIVATED FROM EAST TO WEST IN THE SEQUENCE OF AREA 4, AREA 3, AREA 2, AND LASTLY AREA 1.

## AREA 4: EAST OF FAWNBROOKE DR. TO EASTERN PROJECT LIMIT

### PHASE I: MEDIAN U-TURN CONSTRUCTION (TMP-28 THRU TMP-30)

**STEP 1:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02), CLOSE EASTBOUND U-TURN LANE AND WESTBOUND LEFT-TURN LANE AT -L4- STA 405+00+/- AND MAINTAIN TRAFFIC ALONG -L4- (US 74) IN ITS EXISTING TRAFFIC PATTERN.

NOTE: STEP 2 AND STEP 3 MAY BE PERFORMED SIMULTANEOUSLY.

**STEP 2:**

AWAY FROM TRAFFIC, AND USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, CONSTRUCT PROPOSED MEDIAN WIDENING, INCLUDING DRAINAGE STRUCTURES, CONCRETE ISLANDS, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE AS FOLLOWS:

-L4- FROM STA 401+20+/- TO STA 408+40+/- (LT & RT SIDES)

CONSTRUCT WEDGING AS NEEDED TO PROVIDE A SMOOTH TRANSITION TO EXISTING PAVEMENT AND APPROPRIATE CROSS SLOPES TO ENSURE POSITIVE DRAINAGE. REPLACE EXISTING PAVEMENT MARKINGS WHERE REQUIRED.

TRAFFIC WILL BE IN ITS EXISTING TRAFFIC PATTERN ALONG -L4- WITH THE MEDIAN CLOSED TO TRAFFIC AT THE END OF EACH WORK PERIOD.

**STEP 3:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, INSTALL PORTABLE CONCRETE BARRIER (PCB) TO CLOSE THE INSIDE SHOULDERS ALONG -L4- IN THE VICINITY OF THE PROPOSED JUNCTION BOX AT STA 427+82 (SEE TMP-27).

AWAY FROM TRAFFIC, BEHIND PORTABLE CONCRETE BARRIERS AND USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS, AND SHORING AS NEEDED, CONSTRUCT PROPOSED INSIDE SHOULDER AND MEDIAN U-TURN LANES, INCLUDING DRAINAGE STRUCTURES, CONCRETE ISLANDS, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE AS FOLLOWS:

-L4- FROM STA 408+40+/- TO STA 418+18+/- (LT & RT SIDES)

-L4- FROM STA 419+25+/- TO STA 429+40+/- (LT & RT SIDES)

CONSTRUCT WEDGING AS NEEDED TO PROVIDE A SMOOTH TRANSITION TO EXISTING PAVEMENT AND APPROPRIATE CROSS SLOPES TO ENSURE POSITIVE DRAINAGE. REPLACE EXISTING PAVEMENT MARKINGS WHERE REQUIRED.

TRAFFIC WILL BE IN ITS EXISTING PATTERN ON -Y7-/-Y8- AND ITS EXISTING TRAFFIC PATTERN ALONG -L4- WITH THE MEDIAN CLOSED TO TRAFFIC AT THE END OF EACH WORK PERIOD.

**STEP 4:**

INSTALL TEMPORARY PAVEMENT MARKINGS AND OPEN THE DIRECTIONAL MEDIAN CROSSOVER TO TRAFFIC.

**STEP 5:**

CLOSE THE DRIVEWAY ENTRANCE ON EASTBOUND US 74 NEAR STA. -L4- 408+90 +/- . AWAY FROM TRAFFIC, AND USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, CONSTRUCT ROAD WIDENING AND BULBOUTS FOR U-TURN MOVEMENTS UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:

-L4- FROM STA 408+57+/- TO STA 410+80+/- (RT SIDE ONLY)

-L4- FROM STA 426+28+/- TO STA 429+40+/- (LT SIDE ONLY)

CONSTRUCT WEDGING AS NEEDED TO PROVIDE A SMOOTH TRANSITION TO EXISTING PAVEMENT AND APPROPRIATE CROSS SLOPES TO ENSURE POSITIVE DRAINAGE. REPLACE EXISTING PAVEMENT MARKINGS WHERE REQUIRED.

MAINTAIN THE EXISTING TRAFFIC PATTERN ALONG -L4- WITH PROPOSED MEDIAN U-TURN LANES AND BULBOUT LOCATIONS CLOSED AT THE END OF EACH WORK PERIOD. TRAFFIC ON -Y7-/-Y8- WILL REMAIN IN ITS EXISTING PATTERN.

**STEP 6:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, INSTALL PERMANENT TRAFFIC SIGNALS AND SIGNS AT MEDIAN U-TURN LOCATIONS AND THE TEMPORARY TRAFFIC SIGNAL AT THE INTERSECTION OF -L4-, AND -Y7-/-Y8-. KEEP BOTH THE SIGNAL HEADS AND SIGNS COVERED.

INSTALL TEMPORARY PAVEMENT MARKINGS NECESSARY FOR THE SIGNALIZED MEDIAN U-TURN OPERATIONS. MEDIAN U-TURN LANES AND BULBOUT LOCATIONS SHALL REMAIN CLOSED TO TRAFFIC.

ICT: COMPLETE THE WORK REQUIRED IN PHASE I STEP 7 FROM 9:00 P.M. ON A FRIDAY TO 6:00 A.M. THE FOLLOWING SATURDAY, SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

**STEP 7:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02), FLAGGERS, AND LAW ENFORCEMENT AS NEEDED, ACTIVATE THE PERMANENT TRAFFIC SIGNALS AT THE MEDIAN U-TURN LOCATIONS, AND OPEN THE MEDIAN U-TURN LANES, AND BULBOUTS TO TRAFFIC.

INSTALL CLOSELY SPACED DRUMS ALONG THE INSIDE EDGE OF TRAVELED WAY (BOTH DIRECTIONS) FROM -L4- FROM STA 417+25+/- TO STA 420+52+/- (LT & RT SIDE) TO CLOSE MEDIAN CROSSOVER AND LEFT-TURN LANES ON -L4- AT ITS INTERSECTION WITH -Y7- & -Y8-, AND ACTIVATE THE TEMPORARY TRAFFIC SIGNAL. SHIFT US 74 LEFT-TURN TRAFFIC AND -Y7- , -Y8- TRAFFIC IN A TEMPORARY TRAFFIC PATTERN USING MEDIAN U-TURNS:

OBLITERATE EXISTING CONFLICTING PAVEMENT MARKINGS AND SYMBOLS AND PLACE TEMPORARY PAVEMENT MARKINGS AND SYMBOLS (SEE SHEET TMP-32 & TMP-33):

-Y7- FROM TIE IN AT L4- TO STA 13+40+/-

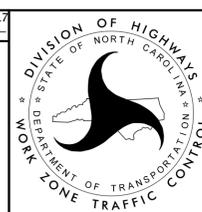
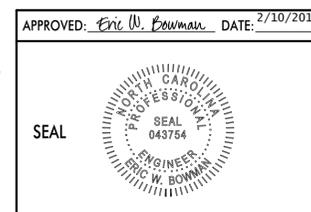
-Y8- FROM TIE IN AT L4- TO STA 13+20+/-

-L4- FROM STA 401+20+/- TO STA 418+18+/-

-L4- FROM STA 419+25+/- TO STA 429+40+/-

02/09/17

2/10/2017 14:41:55 US74\TrafficControl\TCP\W5520\_TC\_PSH\_03.dgn USEB04421



## TEMPORARY TRAFFIC CONTROL PHASING

# AREA 4 TRAFFIC CONTROL PHASING

## AREA 4: EAST OF FAWNBROOKE DR. TO EASTERN PROJECT LIMITS (CONTINUED)

### PHASE II: INTERSECTION SUPERSTREET CROSS-OVER CONSTRUCTION (TMP-31 THRU TMP-33)

ICT: COMPLETE THE WORK REQUIRED IN PHASE II STEPS 1 AND 2 IN FORTY-FIVE (45) CONSECUTIVE CALANDER DAYS, SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

**STEP 1:**

USING TEMPORARY LANE CLOSURES (RSD 1101.02) AND FLAGGERS AS NEEDED, CONSTRUCT MEDIAN DIRECTIONAL CROSS-OVER INCLUDING DRAINAGE AND MONOLITHIC CONCRETE ISLAND UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:

-L4- FROM STA 417+25+/- TO STA 420+02+/- (LT & RT SIDE)

INSTALL PERMANENT TRAFFIC SIGNAL AND SIGNS AT THE INTERSECTION OF -L4- AND -Y7- /-Y8-. KEEP THE NEW SIGNAL HEADS AND SIGNS COVERED.

TRAFFIC SHALL REMAIN IN ITS TEMPORARY TRAFFIC PATTERN ON -L4-, -Y7-, AND -Y8-.

ICT: COMPLETE THE WORK REQUIRED IN PHASE II STEP 2 FROM 9:00 P.M. ON A FRIDAY TO 6:00 A.M. THE FOLLOWING SATURDAY, SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

**STEP 2:**

UPON COMPLETION OF THE WORK REQUIRED IN PHASE II STEP 1, USING TEMPORARY LANE CLOSURES (RSD 1101.02), FLAGGERS AND LAW ENFORCEMENT AS NEEDED PLACE TEMPORARY PAVEMENT MARKINGS AND SIGNS (SEE FINAL PAVEMENT MARKING PLANS FOR DIMENSIONS), OPEN MEDIAN DIRECTIONAL CROSS-OVER AND PLACE -L4-, -Y7-, AND -Y8- TRAFFIC IN ITS PERMANENT TRAFFIC PATTERN, AND ACTIVATE THE FINAL TRAFFIC SIGNAL AT THE INTERSECTION OF -L4-, -Y7-, AND -Y8-.

### PHASE III: WEDGING, TEMPORARY PAVEMENT MARKING, AND MONOLITHIC CONCRETE ISLAND ON -Y7- AND -Y8-

**STEP 1:**

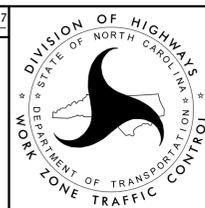
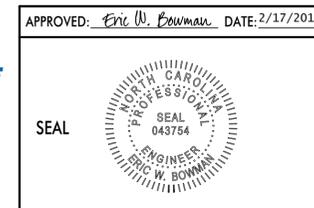
USING ALTERNATING LANE CLOSURES (RSD. 1101.02 SHEET 3 OF 15), COMPLETE CONSTRUCTION OF -L4-, -Y7-, AND -Y8- INCLUDING WEDGING AND MONOLITHIC CONCRETE ISLANDS (SURFACE MOUNTED) ON -Y7- AND -Y8-. INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY MARKERS AND THEN SHIFT TRAFFIC INTO FINAL PATTERN. FINAL LAYER OF SURFACE COURSE AND PERMENANT PAVEMENT MARKINGS AND MARKINGS WILL BE COMPLETED ONCE ALL OTHER AREAS ARE CONSTRUCTED.

-L4- FROM STA 401+20+/- TO STA 429+40+/-

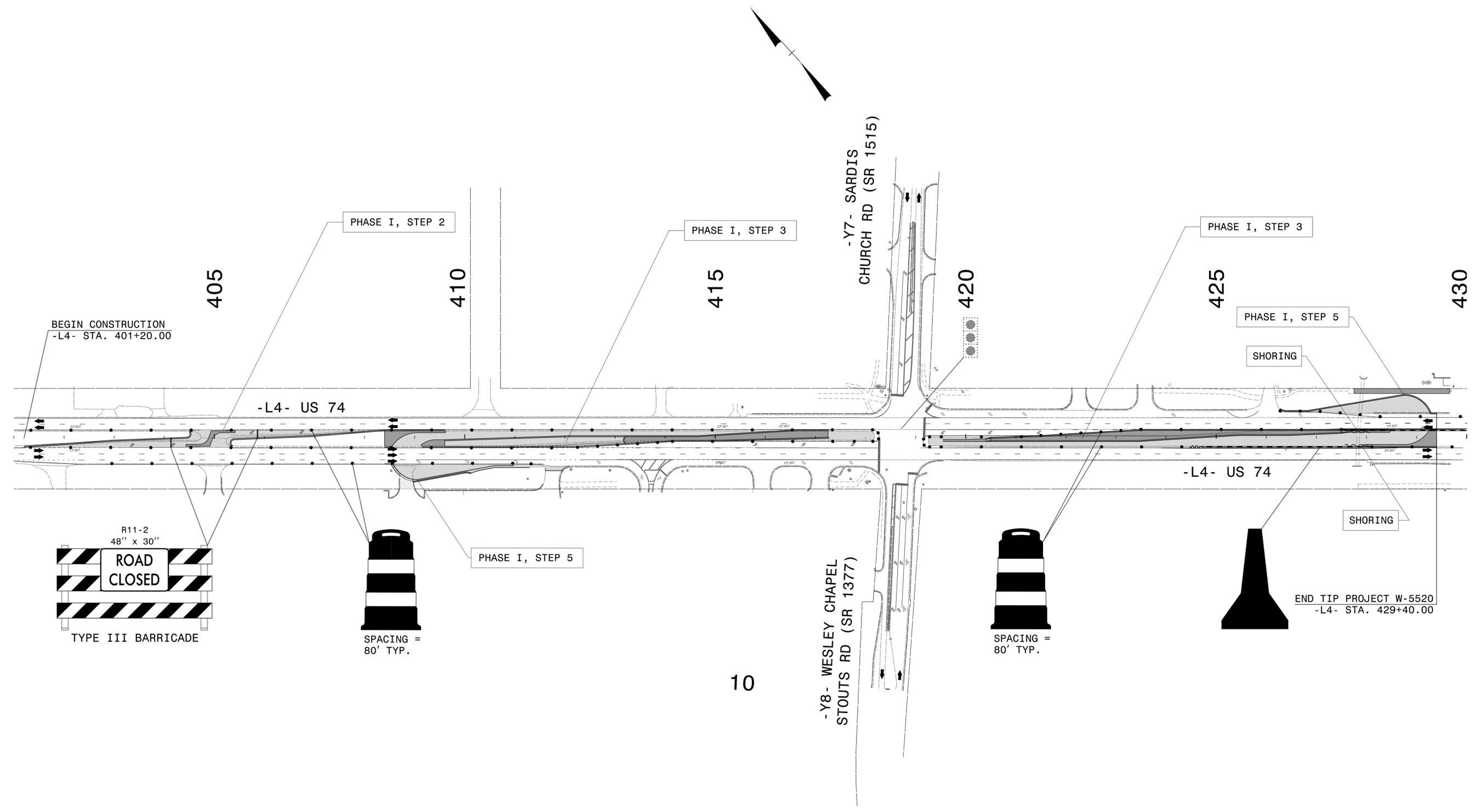
-Y7- FROM TIE IN AT L4- TO STA 13+40+/-

-Y8- FROM TIE IN AT L4- TO STA 13+20+/-

2/17/2017 14:41:55 US74\TrafficControl\CPN\W5520\_TC\_PSH\_03.dgn  
US74\TrafficControl\CPN\W5520\_TC\_PSH\_03.dgn  
US74\TrafficControl\CPN\W5520\_TC\_PSH\_03.dgn



## TEMPORARY TRAFFIC CONTROL PHASING



2/10/2017  
 US74-TrafficControl\TCP\W5520\_TC\_Area\_4-PhaseI\Overview.dgn  
 USEB04421


**PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

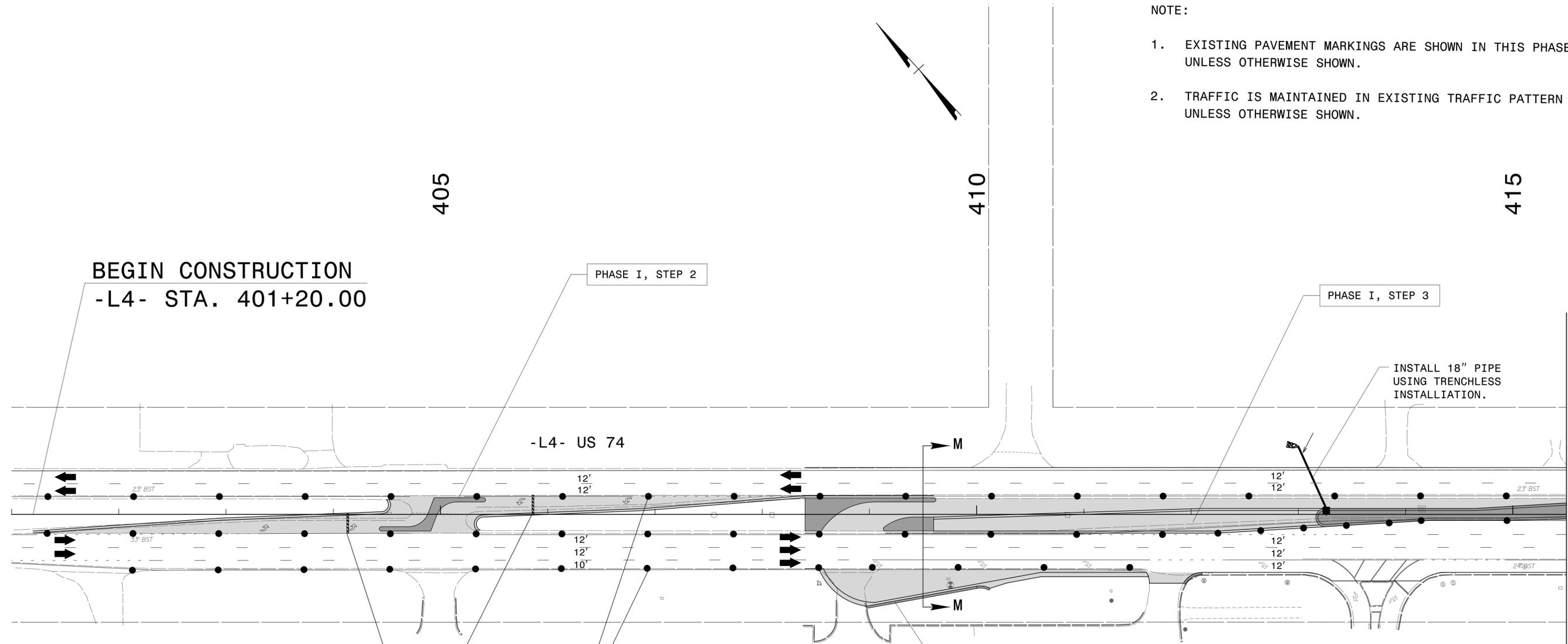
APPROVED: *Eric W. Bowman* DATE: 2/10/2017  




**AREA 4 OVERVIEW,  
 PHASE I**

NOTE:

- EXISTING PAVEMENT MARKINGS ARE SHOWN IN THIS PHASE UNLESS OTHERWISE SHOWN.
- TRAFFIC IS MAINTAINED IN EXISTING TRAFFIC PATTERN UNLESS OTHERWISE SHOWN.



BEGIN CONSTRUCTION  
-L4- STA. 401+20.00

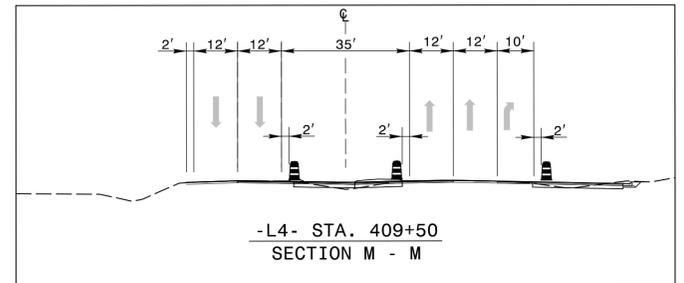
PHASE I, STEP 2

PHASE I, STEP 3

INSTALL 18" PIPE  
USING TRENCHLESS  
INSTALLATION.

PHASE I, STEP 5

MATCH LINE -L4- STA. 415+50 SEE SHEET 30



2/10/2017  
4:41:55 PM  
US74-TrafficControl\TC-TMP-Area 4-Phase1.dgn  
USEB04421

**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

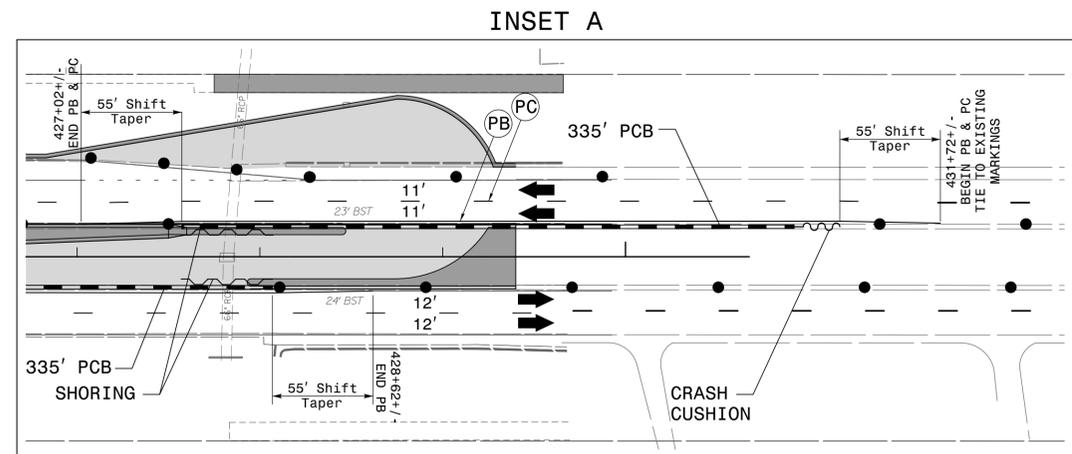
APPROVED: *Eric W. Bonman* DATE: 2/10/2017

**AREA 4  
 PHASE I  
 DETAIL SHEET 15**

MATCH LINE -L4- STA. 415+50 SEE SHEET 29

-Y7- SARDIS CHURCH RD (SR 1515)

-Y8- WESLEY CHAPEL STOUTS RD (SR 1377)



NOTE:

- EXISTING PAVEMENT MARKINGS ARE SHOWN IN THIS PHASE UNLESS OTHERWISE SHOWN.
- TRAFFIC IS MAINTAINED IN EXISTING TRAFFIC PATTERN UNLESS OTHERWISE SHOWN.
- TRAFFIC IS MAINTAINED AT THE EASTBOUND AND WESTBOUND APPROACH WHERE SHORING IS SHOWN WITH 335' OF CONCRETE BARRIER ALONG WITH CRASH CUSHIONS.

420

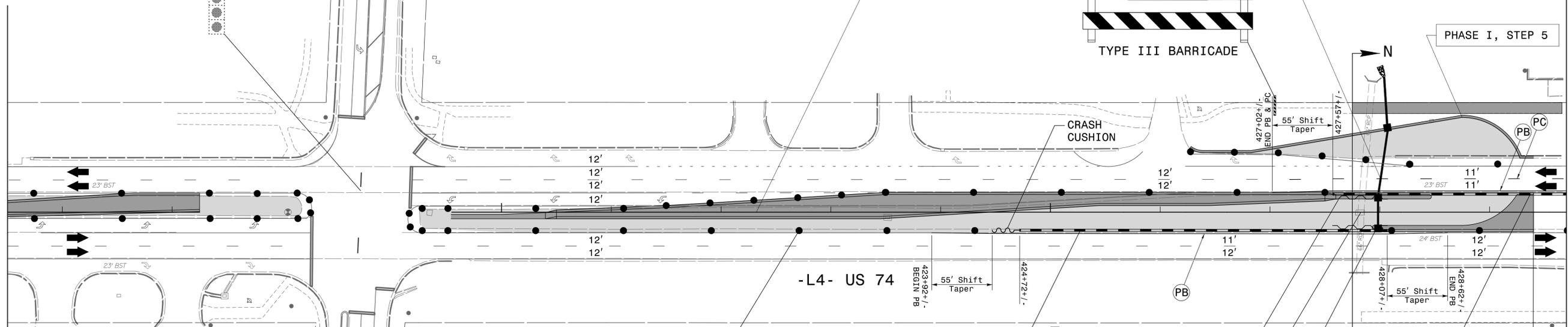
425

PHASE I, STEP 3



INSTALL 15" PIPE USING TEMPORARY LANE CLOSURES DURING NIGHT TIME WORK HOURS. COVER WITH STEEL PLATES DURING NORMAL TRAFFIC OPERATIONS UNTIL INSTALLATION IS COMPLETE.

PHASE I, STEP 5

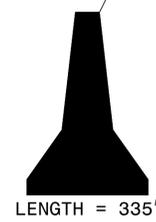
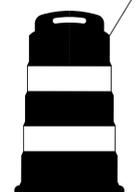


-L4- US 74

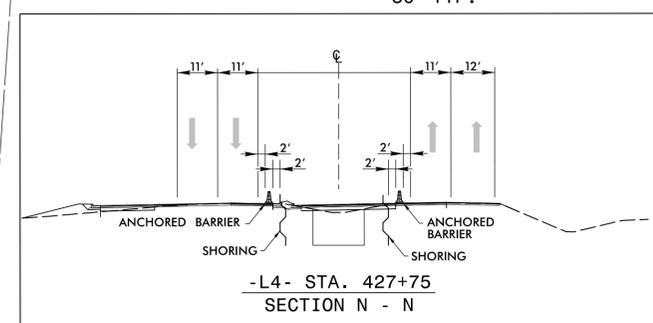
① TEMPORARY SHORING FROM -L4- STA. 427+57, 13.33' LT TO -L4- STA. 428.07, 13.34' LT QUANTITY = 288 SQ FT

REMOVE DAMAGED STRUCTURE REPLACE WITH TB W/SLAB LID

② TEMPORARY SHORING FROM -L4- STA. 427+57, 13.66' RT TO -L4- STA. 428.07, 13.72' RT QUANTITY = 288 SQ FT



END TIP PROJECT W-5520  
-L4- STA. 429+40.00



-L4- STA. 427+75 SECTION N - N

2/10/2017 4:41:55 PM US74\TrafficControl\TCP\W5520\_TC\_TMP\_Area 4-Phase1-2.dgn USEB0442

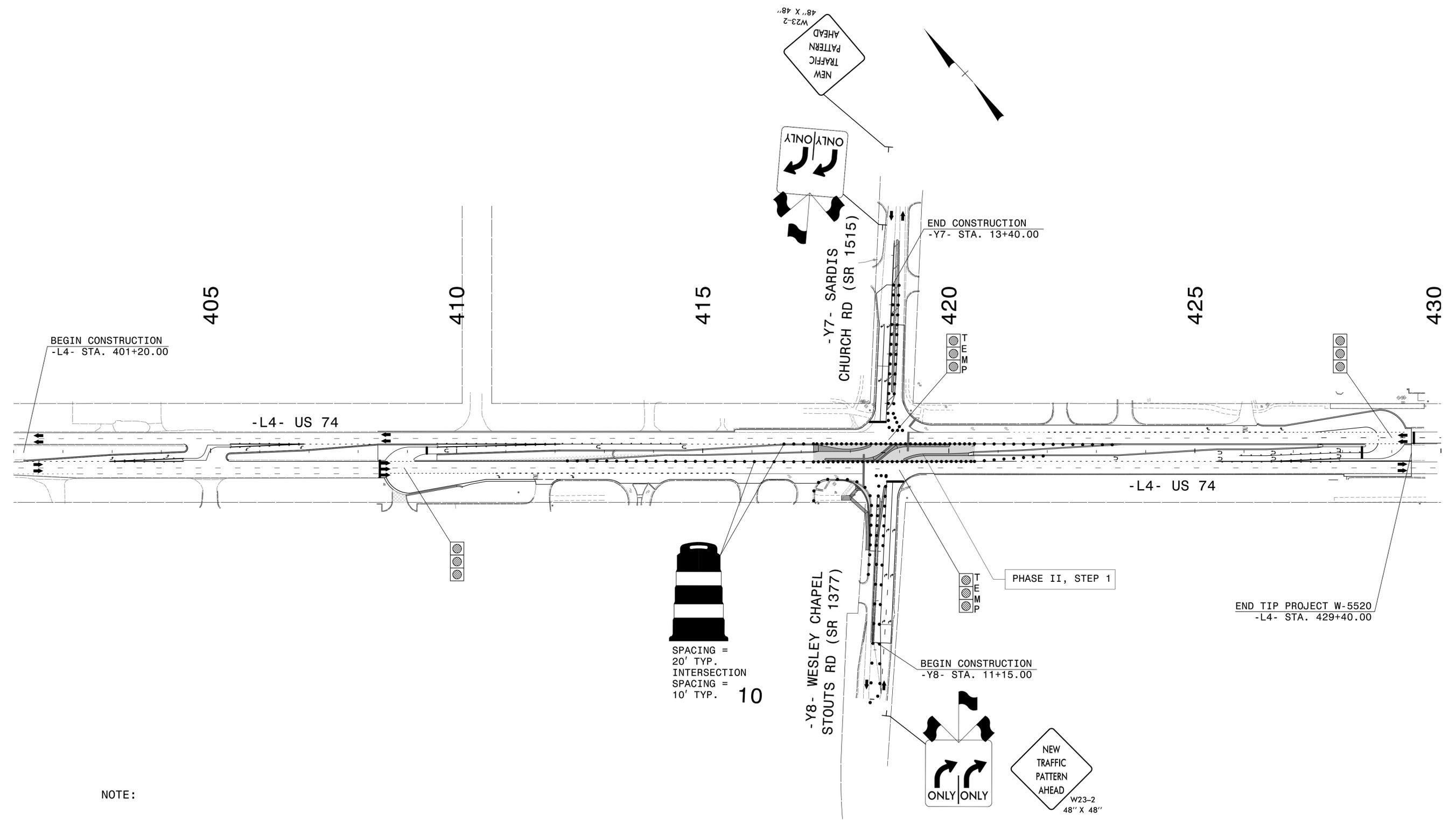
**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: Eric W. Bowman DATE: 2/10/2017  
 SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 ERIC W. BOWMAN  
 043754

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

AREA 4  
 PHASE I  
 DETAIL SHEET 16

SEE INSET A ON THIS SHEET



NOTE:

1. CONTRACTOR SHALL COORDINATE WITH DIVISION TRAFFIC ENGINEER TO COORDINATE TEMPORARY SIGNAL TIMINGS PRIOR TO TEMPORARY TRAFFIC PATTERN.

2/10/2017  
 4:W-5520 US74-TrafficControl\TC\W5520\_TC\_Area 4-Phase2\_OverView.dgn  
 USEB04421

**WSP | PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017

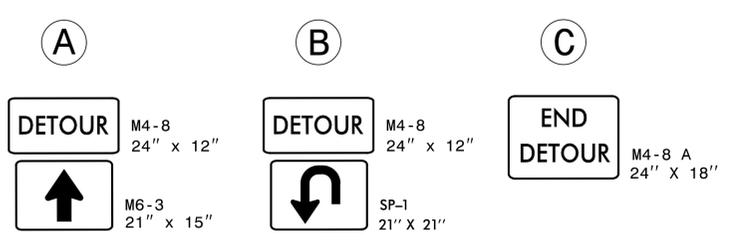
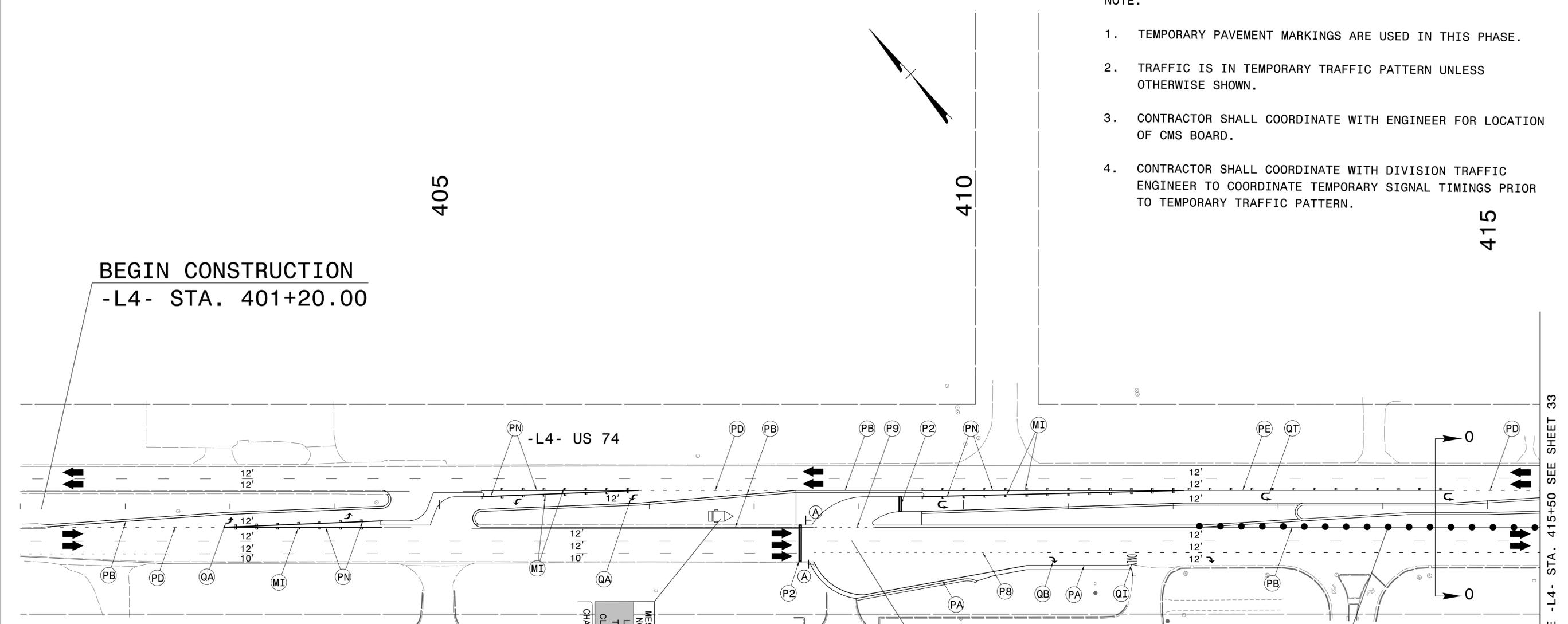
SEAL

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

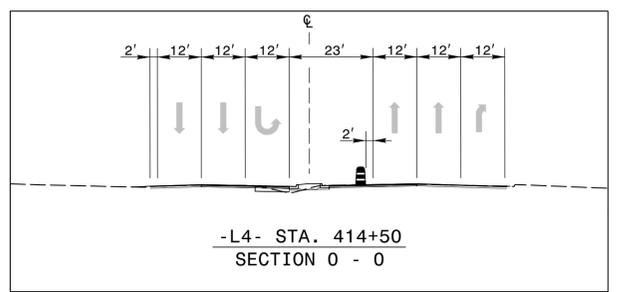
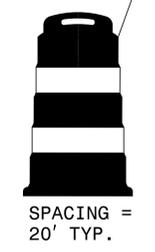
AREA 4 OVERVIEW,  
 PHASE II

NOTE:

- TEMPORARY PAVEMENT MARKINGS ARE USED IN THIS PHASE.
- TRAFFIC IS IN TEMPORARY TRAFFIC PATTERN UNLESS OTHERWISE SHOWN.
- CONTRACTOR SHALL COORDINATE WITH ENGINEER FOR LOCATION OF CMS BOARD.
- CONTRACTOR SHALL COORDINATE WITH DIVISION TRAFFIC ENGINEER TO COORDINATE TEMPORARY SIGNAL TIMINGS PRIOR TO TEMPORARY TRAFFIC PATTERN.



CHANGEBLANK MESSAGE SIGN	MESSAGE NO. 1	MESSAGE NO. 2
	LEFT TURN CLOSED	FOLLOW DETOUR



MATCH LINE -L4- STA. 415+50 SEE SHEET 33

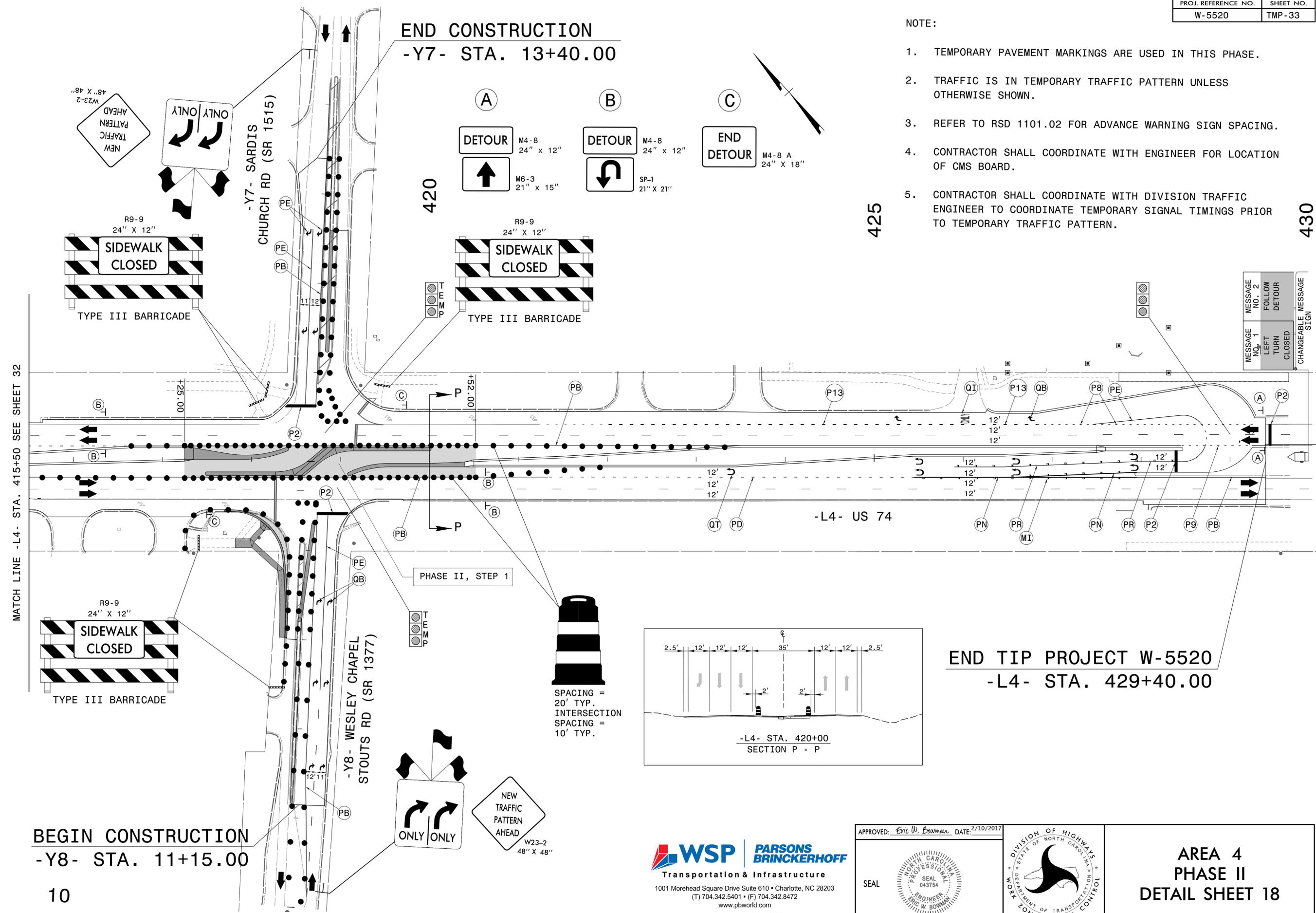
2/10/2017 4:41:55 PM US74-TrafficControl\TC-TMP-Area 4-Phase2-ldgn USEB04421

**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017

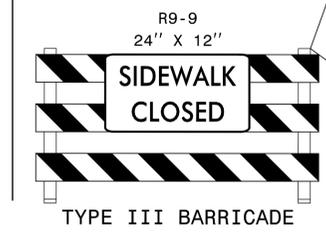
SEAL

**AREA 4  
 PHASE II  
 DETAIL SHEET 17**

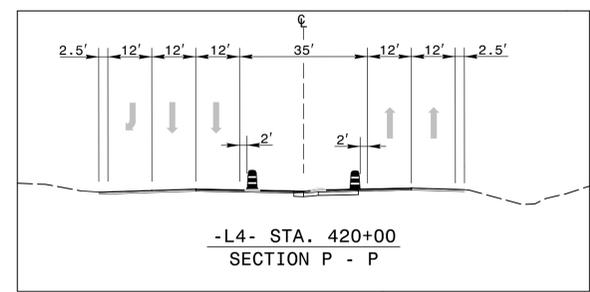
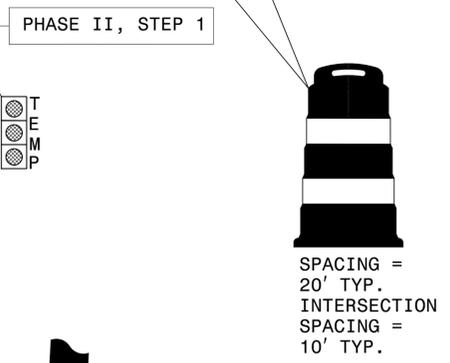


- NOTE:
- TEMPORARY PAVEMENT MARKINGS ARE USED IN THIS PHASE.
  - TRAFFIC IS IN TEMPORARY TRAFFIC PATTERN UNLESS OTHERWISE SHOWN.
  - REFER TO RSD 1101.02 FOR ADVANCE WARNING SIGN SPACING.
  - CONTRACTOR SHALL COORDINATE WITH ENGINEER FOR LOCATION OF CMS BOARD.
  - CONTRACTOR SHALL COORDINATE WITH DIVISION TRAFFIC ENGINEER TO COORDINATE TEMPORARY SIGNAL TIMINGS PRIOR TO TEMPORARY TRAFFIC PATTERN.

MATCH LINE -L4- STA. 415+50 SEE SHEET 32



BEGIN CONSTRUCTION  
-Y8- STA. 11+15.00  
10



END TIP PROJECT W-5520  
-L4- STA. 429+40.00

2/10/2017 14:41:55 US74-TrafficControl\CPN\W5520\_TC\_TMP\_Area 4-Phase2-2.dgn USEB0442

**WSP** | **PARSONS BRINCKERHOFF**  
 Transportation & Infrastructure  
 1001 Morehead Square Drive Suite 610 • Charlotte, NC 28203  
 (T) 704.342.5401 • (F) 704.342.8472  
 www.pbworld.com  
 NC License Number: F-0165

APPROVED: *Eric W. Bowman* DATE: 2/10/2017

SEAL



AREA 4  
PHASE II  
DETAIL SHEET 18