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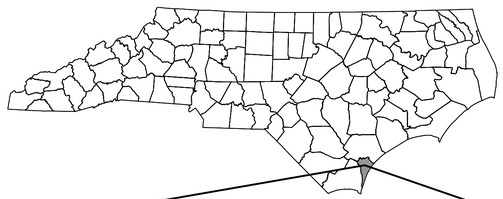
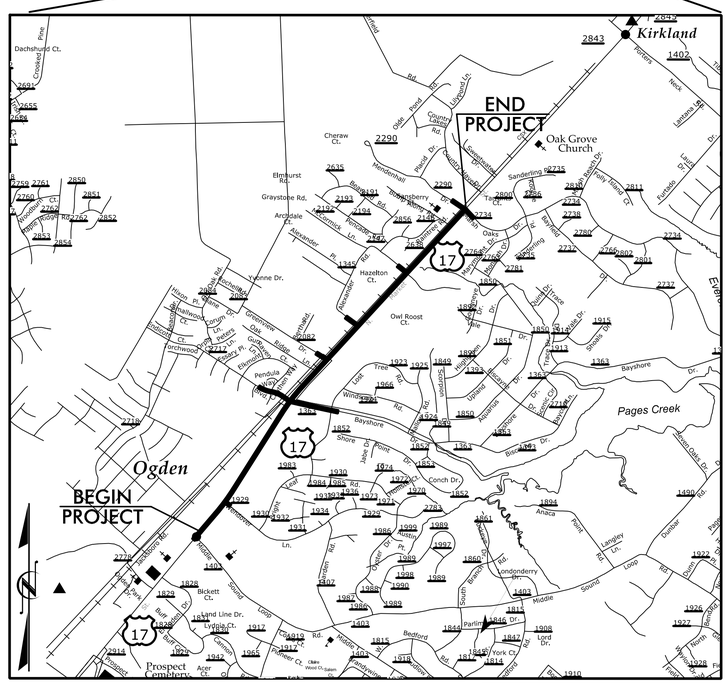
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

NEW HANOVER COUNTY





LOCATION: US 17 (MARKET STREET) FROM SR 1403 (MIDDLE SOUND LOOP ROAD) TO SR 2290 (MENDENHALL DRIVE)/SR 2734 (MARSH OAKS DRIVE)

INDEX OF SHEETS

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 AND GENERAL NOTES
TMP-2	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
TMP-2A & 2B	TEMPORARY SHORING DATA
TMP-2C	OFFSITE DETOUR (ALEXANDER ROAD)
TMP-3	PHASING
TMP-4 & 4A	PHASE I OVERVIEW
TMP-5	PHASE I CUTS
TMP-6 THRU TMP-6B	PHASE I STEP 3 DETAILS
TMP-7 THRU TMP-7B	PHASE I STEP 4 DETAILS
TMP-8 THRU TMP-13	PHASE II DETAILS
TMP-14 THRU TMP-19	PHASE III DETAILS

SHEET NO.
TMP-1

U-4902D

TIP PROJECT:

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

PLANS PREPARED BY:

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PROJECT ENGINEER

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DATE: 7/24/2018

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U-4902D	TMP-1A

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 JANAUARY 2018 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
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1205.11	PAVEMENT MARKINGS - RAILROAD CROSSINGS
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)
- WORK AREA
- REMOVAL
- WEDGE / WIDEN (USING LANE CLOSURES AND/OR FLAGGERS)
- TEMPORARY PAVEMENT
- ONGOING CONSTRUCTION
- INCIDENTAL STONE

SIGNALS

EXISTING PROPOSED TEMPORARY

TEMPORARY PAVEMENT MARKING

SYMBOL	DESCRIPTION	PAY ITEM
PAVEMENT MARKING LINES		
		PAINT (4")
P8	2'/6' WHITE MINISKIP	
P9	2'/6' YELLOW MINISKIP	
PA	WHITE EDGELINE	
PB	YELLOW EDGELINE	
PC	10' WHITE SKIP	
PD	3FT - 9FT/SP WHITE MINISKIP	
PE	WHITE SOLID LANE LINE	
PI	DOUBLE YELLOW CENTERLINE	
PF	10 FT. YELLOW SKIP	
PH	YELLOW SINGLE CENTER	
PAVEMENT MARKERS		
		TEMPORARY RAISED
MH	YELLOW & YELLOW	
MI	CRYSTAL & RED	

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

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

PAVEMENT MARKINGS

EXISTING LINES
TEMPORARY LINES

		PAINT (24")
P2	WHITE STOPBAR	
P3	WHITE CROSSWALK LINE	
		PAINT (8")
PN	WHITE GORELINE	
PQ	WHITE CROSSWALK LINE	
		PAINT (12")
PU	WHITE DIAGONAL	
PV	YELLOW DIAGONAL	

PAVEMENT MARKING SYMBOLS AND CHARACTERS

QA	LEFT TURN ARROW
QB	RIGHT TURN ARROW
QC	STRAIGHT ARROW
QE	COMBO STRAIGHT/RIGHT ARROW
QT	U-TURN ARROW

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

TRANSPORTATION MANAGEMENT PLAN

ROADWAY STANDARD DRAWINGS & LEGEND

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MANAGEMENT STRATEGIES

LARGE PIPES THAT CROSS TRAFFIC LANES HAVE BEEN IDENTIFIED. INSTALL THE PIPES WITH THE FOLLOWING STRATEGIES:

CONSTRUCT TEMPORARY PAVEMENT AND SHORING TO ACCOMMODATE TRAFFIC SHIFTS NEEDED TO INSTALL PROPOSED DRAINAGE. ICTS WILL BE IMPLEMENTED TO MINIMIZE DISRUPTION TO NORMAL TRAFFIC.

WEDGE AND WIDEN MARKET STREET (-L-) AND COMPLETE ROADWAY, CURB AND GUTTER, AND SIDEWALK CONSTRUCTION. USING LANE CLOSURES AND FLAGGERS AS NEEDED FOR DRIVEWAYS AND Y-LINE TRAFFIC, CONSTRUCT CONCRETE MEDIANS AND FINAL LAYER OF SURFACE. PLACE FINAL PAVEMENT MARKINGS AND MARKERS.

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS, OR RESULT IN DUPLICATE, OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES, AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
US 17 (MARKET ST)	MONDAY THRU SUNDAY 6:00 AM - 8:00 PM

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

ROAD NAME

ALL ROADS

HOLIDAY

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

2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31ST TO 8:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN UNTIL 8:00 P.M. THE FOLLOWING TUESDAY.

3. FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 8:00 P.M. MONDAY.

4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 8:00 P.M. TUESDAY.

5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.

6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 8:00 P.M. TUESDAY.

7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 8:00 P.M. MONDAY.

8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

9. FOR THE WEEK OF THE ANNUAL NORTH CAROLINA AZALEA FESTIVAL IN APRIL, DO NOT PERFORM ANY WORK BETWEEN THE HOURS OF 6:00 AM THURSDAY BEFORE THE FESTIVAL THROUGH 8:00 PM MONDAY AFTER THE FESTIVAL WITHOUT THE PRIOR APPROVAL OF THE ENGINEER AND THE CITY OF WILMINGTON TRAFFIC ENGINEER. CALL (910) 794-4650 OR VISIT THE FESTIVAL'S WEBSITE AT WWW.NCAZALEAFESTIVAL.ORG TO CONFIRM THE DATES OF THE FESTIVAL.

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
US 17 (MARKET ST)	SUNDAY THRU THURSDAY 5:00 AM - 10:00 PM	15 MINUTES FOR SIGNAL MAST ARM
	FRIDAY AND SATURDAY ANYTIME	

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.

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 2500 FT OF LANE CLOSURE ON MARKET ST (-L-) MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.

J) DO NOT INSTALL MORE THAN 2 SIMULTANEOUS LANE CLOSURES IN ANY ONE DIRECTION ON MARKET ST (-L-).

K) PROVIDE A MINIMUM OF 1 MILE BETWEEN LANE CLOSURES MEASURED FROM THE END OF ONE CLOSURE TO THE FIRST SIGN OF THE NEXT LANE CLOSURE.

PAVEMENT EDGE DROP OFF REQUIREMENTS

L) 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.

M) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 350 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THOUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

N) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

O) 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.

P) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

Q) PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

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

S) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 350 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

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

TRANSPORTATION MANAGEMENT PLAN

MANAGEMENT STRATEGIES & GENERAL NOTES

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GENERAL NOTES

TRAFFIC BARRIER

T) 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.

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

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

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

TRAFFIC CONTROL DEVICES

V) 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.

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

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

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
ALL ROADS	PAINT	TEMPORARY RAISED

Z) 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.

AA) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES

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

CC) 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

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

EE) 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.

FF) COORDINATION BETWEEN CONTRACTORS SHALL TAKE PLACE WITH U-4751 AS DIRECTED BY THE ENGINEER.

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

TRANSPORTATION MANAGEMENT PLAN

GENERAL NOTES

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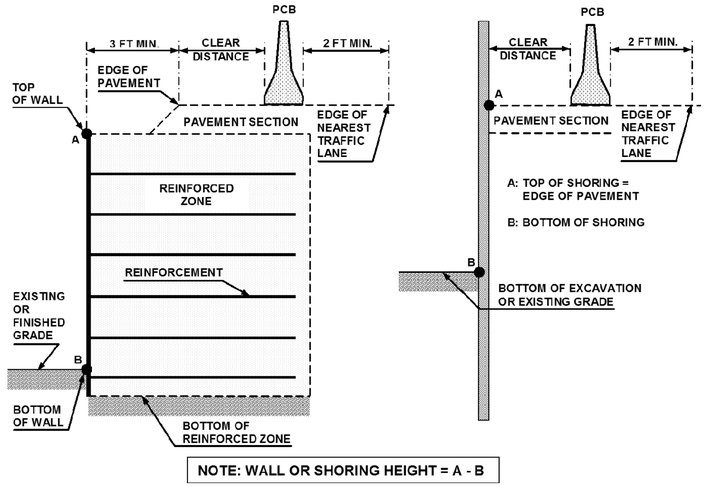

FIGURE A

NOTES

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

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

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

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

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

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

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

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

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

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

MINIMUM REQUIRED CLEAR DISTANCE, inches

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

* See Figure Below

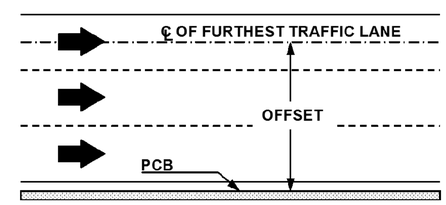

FIGURE B

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

TRANSPORTATION MANAGEMENT PLAN

PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

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PROJ. REFERENCE NO.	SHEET NO.
U-4902D	TMP-2A

SHORING NOTES

TEMPORARY SHORING NO. 1

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

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

DESIGN TEMPORARY SHORING FROM STATION -L- 256+57±, 27.9±FT LEFT, TO STATION -L- 257+55±, 27.9± FT LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
UNIT WEIGHT γ = 120 LB/CF
FRICTION ANGLE φ = 0 DEGREES
COHESION c = 0 LB/SF
GROUNDWATER ELEVATION = 0.0 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 256+57±, 27.9±FT LEFT, TO STATION -L- 257+55±, 27.9± FT LEFT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 256+57±, 27.9±FT LEFT, TO STATION -L- 257+55, 27.9± FT LEFT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING NO. 2

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

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

DESIGN TEMPORARY SHORING FROM STATION -L- 256+51±, 17.9±FT LEFT, TO STATION -L- 257+47±, 17.9± FT LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
UNIT WEIGHT γ = 120 LB/CF
FRICTION ANGLE φ = 0 DEGREES
COHESION c = 0 LB/SF
GROUNDWATER ELEVATION = 0.0 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING STATION -L- 256+51±, 17.9±FT LEFT, TO STATION -L- 257+47±, 17.9± FT LEFT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 256+51±, 17.9±FT LEFT, TO STATION -L- 257+47±, 17.9± FT LEFT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

TEMPORARY SHORING NO. 3

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

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

DESIGN TEMPORARY SHORING FROM STATION -L- 277+47±, 6.7±FT LEFT, TO STATION -L- 279+77±, 6.7± FT LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
UNIT WEIGHT γ = 120 LB/CF
FRICTION ANGLE φ = 0 DEGREES
COHESION c = 0 LB/SF
GROUNDWATER ELEVATION = 0.0 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 277+47±, 6.7±FT LEFT, TO STATION -L- 279+77±, 6.7± FT LEFT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 277+47±, 6.7±FT LEFT, TO STATION -L- 279+77±, 6.7± FT LEFT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING NO. 4

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

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

DESIGN TEMPORARY SHORING FROM STATION -L- 277+47±, 6.7±FT LEFT, TO STATION -L- 277+47±, 5.3± FT RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
UNIT WEIGHT γ = 120 LB/CF
FRICTION ANGLE φ = 0 DEGREES
COHESION c = 0 LB/SF
GROUNDWATER ELEVATION = 0.0 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 277+47±, 6.7±FT LEFT, TO STATION -L- 277+47±, 5.3± FT RIGHT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 277+47±, 6.7±FT LEFT, TO STATION -L- 277+47±, 5.3± FT RIGHT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING NO. 5

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

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

DESIGN TEMPORARY SHORING FROM STATION -L- 279+77±, 6.7±FT LEFT, TO STATION -L- 279+77±, 5.3± FT RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
UNIT WEIGHT γ = 120 LB/CF
FRICTION ANGLE φ = 0 DEGREES
COHESION c = 0 LB/SF
GROUNDWATER ELEVATION = 0.0 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 279+77±, 6.7±FT LEFT, TO STATION -L- 279+77±, 5.3± FT RIGHT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 279+77±, 6.7±FT LEFT, TO STATION -L- 279+77±, 5.3± FT RIGHT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING NO. 6

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

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

DESIGN TEMPORARY SHORING FROM STATION -L- 277+47±, 6.7±FT LEFT, TO STATION -L- 277+47±, 18.7± FT LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
UNIT WEIGHT γ = 120 LB/CF
FRICTION ANGLE φ = 0 DEGREES
COHESION c = 0 LB/SF
GROUNDWATER ELEVATION = 0.0 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 277+47±, 6.7±FT LEFT, TO STATION -L- 277+47±, 18.7± FT LEFT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 277+47±, 6.7±FT LEFT, TO STATION -L- 277+47±, 18.7± FT LEFT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH SEALED DOCUMENTS FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENTS WERE SUBMITTED TO DIVISON 3 ON JUNE 8, 2018 BY PROFESSIONAL ENGINEER CHRISTOPHER A. KREIDER, P.E. LICENSE #019769

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TRANSPORTATION MANAGEMENT PLAN

SHORING NOTES

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TEMPORARY SHORING NO. 7

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

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

DESIGN TEMPORARY SHORING FROM STATION -L- 279+77±, 6.7±FT LEFT, TO STATION -L- 279+77±, 18.7± FT LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT γ = 120 LB/CF
FRICTION ANGLE φ= 0 DEGREES
COHESION c = 0 LB/SF
GROUNDWATER ELEVATION = 0.0 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 279+77±, 6.7±FT LEFT, TO STATION -L- 279+77±, 18.7± FT LEFT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 279+77±, 6.7±FT LEFT, TO STATION -L- 279+77±, 18.7± FT LEFT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH SEALED DOCUMENTS FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENTS WERE SUBMITTED TO DIVISON 3 ON JUNE 8, 2018 BY PROFESSIONAL ENGINEER CHRISTOPHER A. KREIDER, P.E. LICENSE #019769

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TRANSPORTATION MANAGEMENT PLAN

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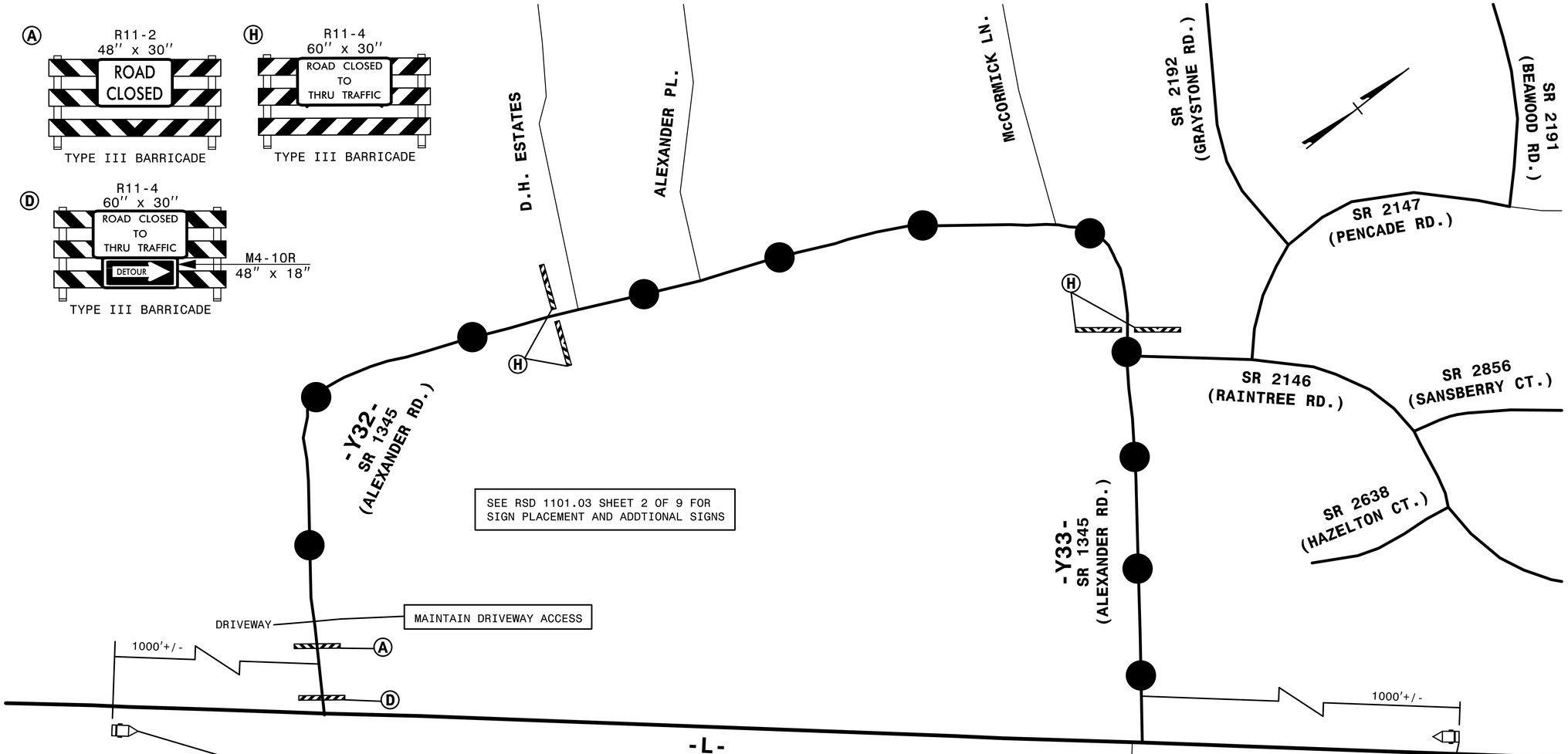

*2 WEEKS IN ADVANCE

MESSAGE NO. 1	MESSAGE NO. 2
NEXT LEFT CLOSED AHEAD	XX/XX/XX TO___ XX/XX/XX

CHANGEABLE MESSAGE SIGN

MESSAGE NO. 1	MESSAGE NO. 2
NEXT LEFT CLOSED AHEAD	USE__ 2ND__ ACCESS

CHANGEABLE MESSAGE SIGN

NOTE: USE RECOMMENDED MESSAGE OR MESSAGE DETERMINED BY THE ENGINEER

*2 WEEKS IN ADVANCE

MESSAGE NO. 1	MESSAGE NO. 2
ALEXAND NO THRU TRAFFIC	XX/XX/XX TO___ XX/XX/XX

CHANGEABLE MESSAGE SIGN

MESSAGE NO. 1	MESSAGE NO. 2
ALEXANDR NO THRU TRAFFIC	TAKE_ NEXT_ RIGHT

CHANGEABLE MESSAGE SIGN

NOTE: USE RECOMMENDED MESSAGE OR MESSAGE DETERMINED BY THE ENGINEER

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TRANSPORTATION MANAGEMENT PLAN

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PROJ. REFERENCE NO.	SHEET NO.
U-4902D	TMP-3

PHASING

NOTES:

REPLACE MARKINGS AND RETURN TO THE CURRENT TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

MAINTAIN VEHICULAR ACCESS TO ALL RESIDENCES AND BUSINESSES DURING THE LIFE OF THE CONTRACT UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

COMPLETE ANY PROPOSED WIDENING IN SUCH A MANNER THAT PONDING OF WATER WILL NOT OCCUR IN THE TRAVEL LANE. THIS MAY REQUIRE A COMBINATION OF INSTALLATION OF PROPOSED PIPES, TEMPORARY PIPES, STEEL PLATES, TEMPORARY MEDIAN, AND OUTSIDE DITCHES.

PAVE PROPOSED CONSTRUCTION UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE, IN ALL PHASES UNTIL STATED TO INSTALL FINAL LAYER IN PHASING.

THE TERM RSD REFERS TO ROADWAY STANDARD DRAWINGS.

PHASE I

STEP 1:

USING RSD 1101.01 (SHEET 3 OF 3), INSTALL ADVANCE WARNING SIGNS ON -L- (MARKET STREET), -Y28- (WENDOVER LANE), -Y29- (TORCHWOOD BLVD), -Y30- (BAYSHORE DRIVE), -Y31- (GREENVIEW DRIVE), -Y32- (ALEXANDER ROAD), -Y33- (ALEXANDER ROAD), -Y34- (MENDENHALL DRIVE), AND -Y35- (MARSH OAKS DRIVE).

NOTE: BEGIN WATER AND SANITARY UTILITY CONSTRUCTION WHERE AVAILABLE, IN COORDINATION WITH UBO RELOCATIONS, TO CLEAR CONSTRUCTION CONFLICTS PRIOR TO STARTING PHASE I STEP 2.

STEP 2:

USING RSD 1101.02 (SHEET 3 OF 14) AND FLAGGERS AS NEEDED FOR DRIVEWAYS AND -Y- LINES, CONSTRUCT TEMPORARY PAVEMENT AND TEMPORARY PIPE AS SHOWN IN TMP-5, 6 AND 7. INSTALL TEMPORARY PAVEMENT MARKINGS AS MUCH AS POSSIBLE WITHOUT DISTURBING EXISTING TRAFFIC. (SEE TMP-6A AND TMP-7A)

INSTALL AND COVER DETOUR SIGNS AS SHOWN ON SHEET TMP-2C.

NOTE: STEP 3 AND STEP 4 MAY BE DONE IN ANY ORDER, BUT NOT SIMULTANEOUSLY

COMPLETE THE REQUIREMENTS OF PHASE 1, STEP 3 IN 60 (SIXTY) CONSECUTIVE DAYS (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

STEP 3: COMPLETE THE REQUIREMENTS OF STEP 3A THRU 3E.

3A: UNCOVER DETOUR SIGNS (PLACED IN STEP 2) AND CLOSE -Y32- (ALEXANDER ROAD) TO TRAFFIC AS SHOWN ON TMP-2C. USING RSD 1101.02 (SHEET 7 OF 14), SHIFT -L- (MARKET STREET) TO OUTSIDE LANES (WITH WB TRAFFIC IN NEW PATTERN) AND INSTALL REMAINING TEMPORARY PAVEMENT MARKINGS. USING RSD 1101.03 (SHEET 3 OF 9), SHIFT TRAFFIC ON -L- (MARKET STREET) TO TRAFFIC PATTERN SHOWN ON TMP-6A. USING RSD 1101.02 (SHEET 3 OF 14), INSTALL TEMPORARY PCB AS SHOWN ON TMP-6A.

3B: AWAY FROM TRAFFIC, INSTALL SHORING AND REPLACE RIGHT SIDE OF 96″ PIPE AND DRAINAGE SYSTEM. REPAIR PAVEMENT. (TMP-6A)

3C: USING RSD 1101.02 (SHEET 3 OF 14) AS NEEDED, INSTALL TEMPORARY PAVEMENT MARKING AND MARKERS AND TEMPORARY PCB FOR EASTBOUND LANES AS SHOWN ON TMP-6B. SHIFT EASTBOUND TRAFFIC ON -L- (MARKET STREET) TO NEW TRAFFIC PATTERN ON RIGHT. USING RSD 1101.02 (SHEET 3 OF 14) AS NEEDED, INSTALL TEMPORARY PAVEMENT MARKING AND MARKERS FOR WESTBOUND LANES AS SHOWN ON TMP-6B AND SHIFT WESTBOUND TRAFFIC ON -L- (MARKET STREET) TO NEW TRAFFIC PATTERN. REMOVE DETOUR SIGNS AND OPEN -Y32- TO TRAFFIC. REMOVE PCB PLACED IN PHASE 1, STEP 3A.

3D: AWAY FROM TRAFFIC, REMOVE TEMPORARY PAVEMENT. REMOVE SHORING #1, COMPLETE 96″ PIPE REPLACEMENT, AND INSTALL DRAINAGE SYSTEM ALONG LEFT SIDE. REMOVE SHORING #2 AND REPAIR PAVEMENT.

3E: USING RSD 1101.02 (SHEET 3 OF 14), REMOVE TEMPORARY PCB AND INSTALL TEMPORARY PAVEMENT MARKINGS AND MARKERS AND SHIFT TRAFFIC BACK TO ORIGINAL TRAFFIC PATTERN.

COMPLETE THE REQUIREMENTS OF PHASE 1, STEP 4 IN 60 (SIXTY) CONSECUTIVE DAYS (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

STEP 4: COMPLETE THE REQUIREMENTS OF STEP 4A THRU 4E.

4A: CLOSE AMBERLEIGH SHORES ACCESS. USING RSD 1101.02 (SHEET 7 OF 14), SHIFT -L- (MARKET STREET) TO OUTSIDE LANES (WITH WB TRAFFIC IN NEW PATTERN) AND INSTALL REMAINING TEMPORARY PAVEMENT MARKINGS. USING RSD 1101.03 (SHEET 3 OF 9), SHIFT TRAFFIC ON -L- (MARKET STREET) TO TRAFFIC PATTERN SHOWN ON TMP-7A. USING RSD 1101.02 (SHEET 3 OF 14), INSTALL TEMPORARY PCB AS SHOWN ON TMP-7A.

4B: AWAY FROM TRAFFIC, INSTALL SHORING, COMPLETE ROADWAY EXCAVATION AND REPLACE RIGHT SIDE OF 54″ PIPE AND DRAINAGE SYSTEM. REMOVE SHORING #4 AND #5 AND CONSTRUCT RIGHT SIDE OF -L- FROM STA 276+00+/- TO STA 281+00+/-. (REFER TO GEOTECH SPECIAL PROVISION FOR ROADWAY EXCAVATION AND PAVEMENT REPAIR)

4C: USING RSD 1101.02 (SHEET 3 OF 14) AS NEEDED, PROVIDE TEMPORARY GRADE TO TIE IN TO EXISTING PAVEMENT AND INSTALL TEMPORARY PAVEMENT MARKING, MARKERS, AND RESET TEMPORARY PCB (AS MUCH AS POSSIBLE AWAY FROM TRAFFIC USING TMA AS NEEDED). SHIFT EASTBOUND TRAFFIC ON -L- (MARKET STREET) TO NEW PATTERN SHOWN ON TMP-7B. USING RSD 1101.02 (SHEET 3 OF 14) AS NEEDED, PROVIDE TEMPORARY GRADE TO TIE IN TO EXISTING PAVEMENT, INSTALL TEMPORARY PAVEMENT MARKINGS, MARKERS, AND REMAINING TEMPORARY PCB (RESET CRASH CUSHION). USING RSD 1101.03 (SHEET 3 OF 9), SHIFT WESTBOUND TRAFFIC ON -L- (MARKET STREET) TO PHASE 1A TRAFFIC PATTERN. (SEE TMP-7B)

4D: INSTALL SHORING #6 AND #7. REMOVE TEMPORARY PAVEMENT USED FOR PHASE 1 TRAFFIC PATTERN. COMPLETE ROADWAY EXCAVATION, 54″ PIPE REPLACEMENT, AND DRAINAGE SYSTEM. REMOVE ALL SHORING AND CONSTRUCT LEFT SIDE OF -L-. (REFER TO GEOTECH SPECIAL PROVISION FOR ROADWAY EXCAVATION AND PAVEMENT REPAIR)

4E: USING RSD 1101.02 (SHEET 3 OF 14) AS NEEDED, REMOVE TEMPORARY PCB AND PROVIDE TEMPORARY GRADE TO TIE IN TO EXISTING PAVEMENT AND INSTALL TEMPORARY PAVEMENT MARKING AND MARKERS BEFORE PLACING TRAFFIC BACK TO ORIGINAL TRAFFIC PATTERN.

PHASE II

STEP 1:

USING RSD 1101.02 (SHEETS 1, 2, 3 AND 7 OF 14) AS NEEDED, COMPLETE WIDENING OF -L- (MARKET STREET), INCLUDING SIDEWALKS AND GREENWAY. WEDGE UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE.

NOTE: BUILD MEDIAN DRAINAGE STRUCTURES (TO TEMPORARY ELEVATION AND COVER WITH STEEL PLATES.

NOTE: MAINTAIN ORIGINAL TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD UNTIL ALL OF PHASE II WORK IS COMPLETE.

STEP 2:

PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS AND SHIFT TRAFFIC TO FINAL PATTERN. (SEE FINAL PAVEMENT MARKING PLANS)

PHASE III

STEP 1:

USING RSD 1101.02 (SHEET 3 OF 14), CLOSE THE INSIDE TRAVEL LANE AND COMPLETE MEDIAN WORK.

NOTE: PLACE SKINNY DRUMS ALONG OUTSIDE EDGE OF CONCRETE ISLANDS AT THE END OF EACH WORK PERIOD, WHEN LANE CLOSURES ARE NO LONGER IN EFFECT.

STEP 2:

COMPLETE ALL REMAINING WORK.

USING RSD 1101.02 (SHEETS 1, 2, 3 AND 7 OF 14) AS NEEDED, PLACE FINAL LAYER OF SURFACE AND FINAL PAVEMENT MARKINGS AND MARKERS.

STEP 3:

REMOVE ALL TRAFFIC CONTROL DEVICES.

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TRANSPORTATION MANAGEMENT PLAN

PHASING

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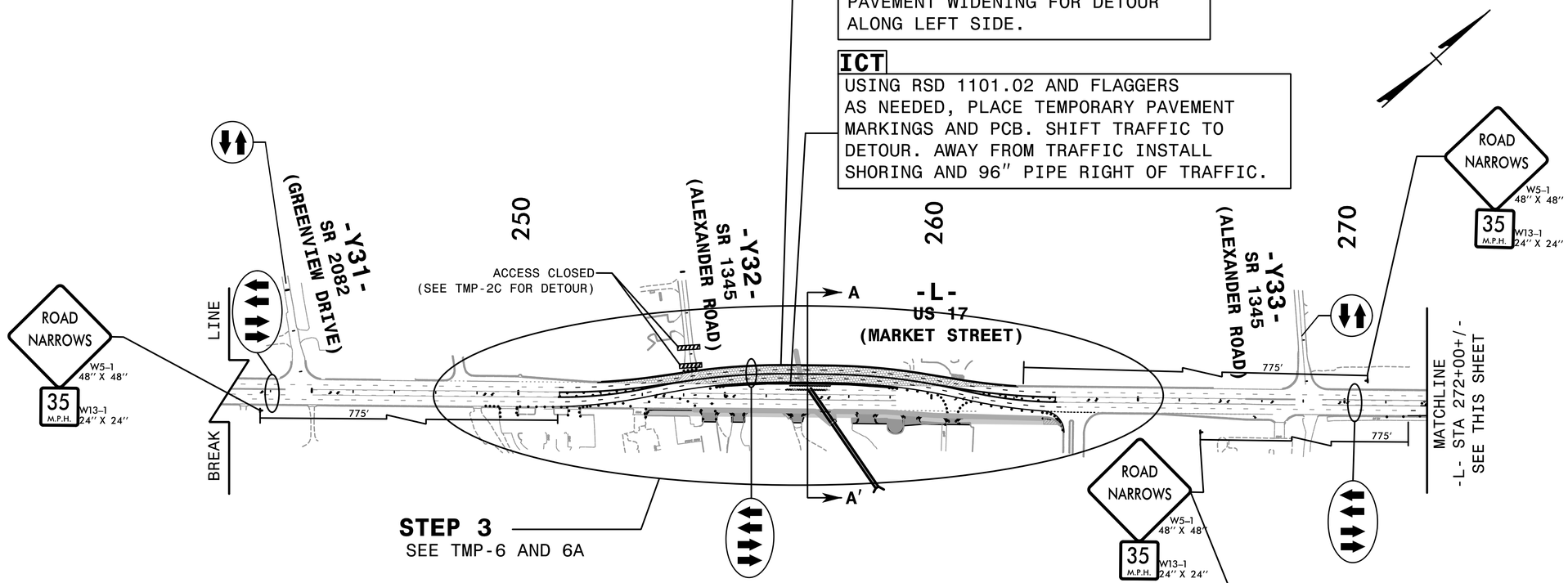
U-4902D	TMP-4

USING RSD 1101.02 AND FLAGGERS AS NEEDED, CONSTRUCT TEMPORARY PAVEMENT WIDENING FOR DETOUR ALONG LEFT SIDE.

ICT
USING RSD 1101.02 AND FLAGGERS AS NEEDED, PLACE TEMPORARY PAVEMENT MARKINGS AND PCB. SHIFT TRAFFIC TO DETOUR. AWAY FROM TRAFFIC INSTALL SHORING AND 96″ PIPE RIGHT OF TRAFFIC.



SIGN PLACEMENT FOR STEP 4

ICT
USING RSD 1101.02 AND FLAGGERS AS NEEDED, PLACE TEMPORARY PAVEMENT MARKINGS AND PCB. SHIFT TRAFFIC TO DETOUR. AWAY FROM TRAFFIC TO INSTALL SHORING, COMPLETE ROADWAY EXCAVATION, AND INSTALL 54″ PIPE RIGHT OF TRAFFIC. CONSTRUCT -L- RIGHT OF SHORING.

USING RSD 1101.02 AND FLAGGERS AS NEEDED, CONSTRUCT TEMPORARY PAVEMENT WIDENING FOR DETOUR ALONG LEFT SIDE.

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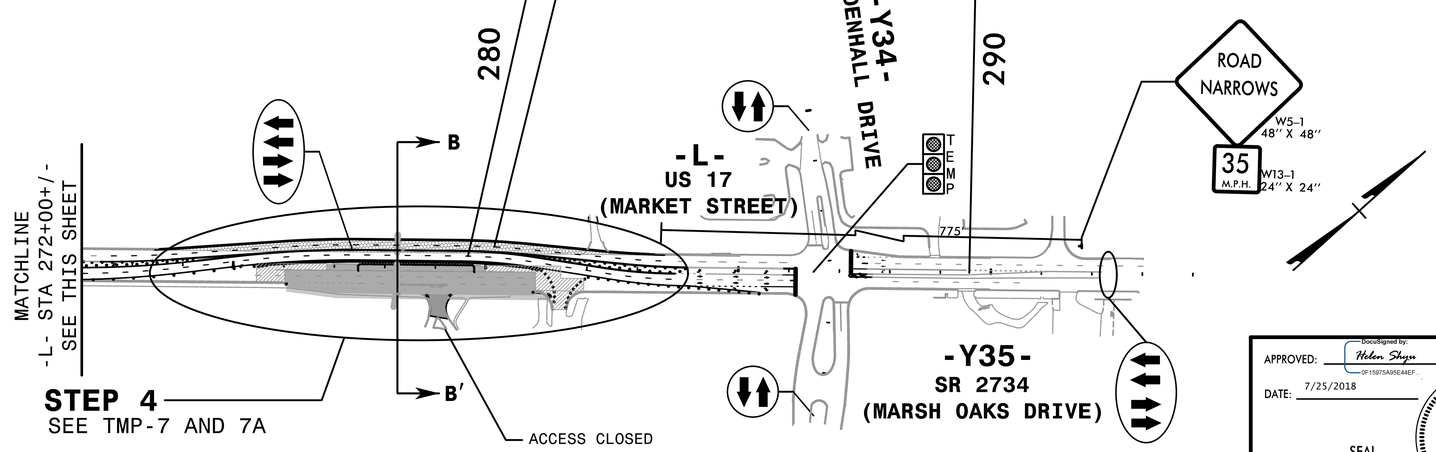
-L- STA 289+51.00



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TRANSPORTATION MANAGEMENT PLAN

PHASE I OVERVIEW

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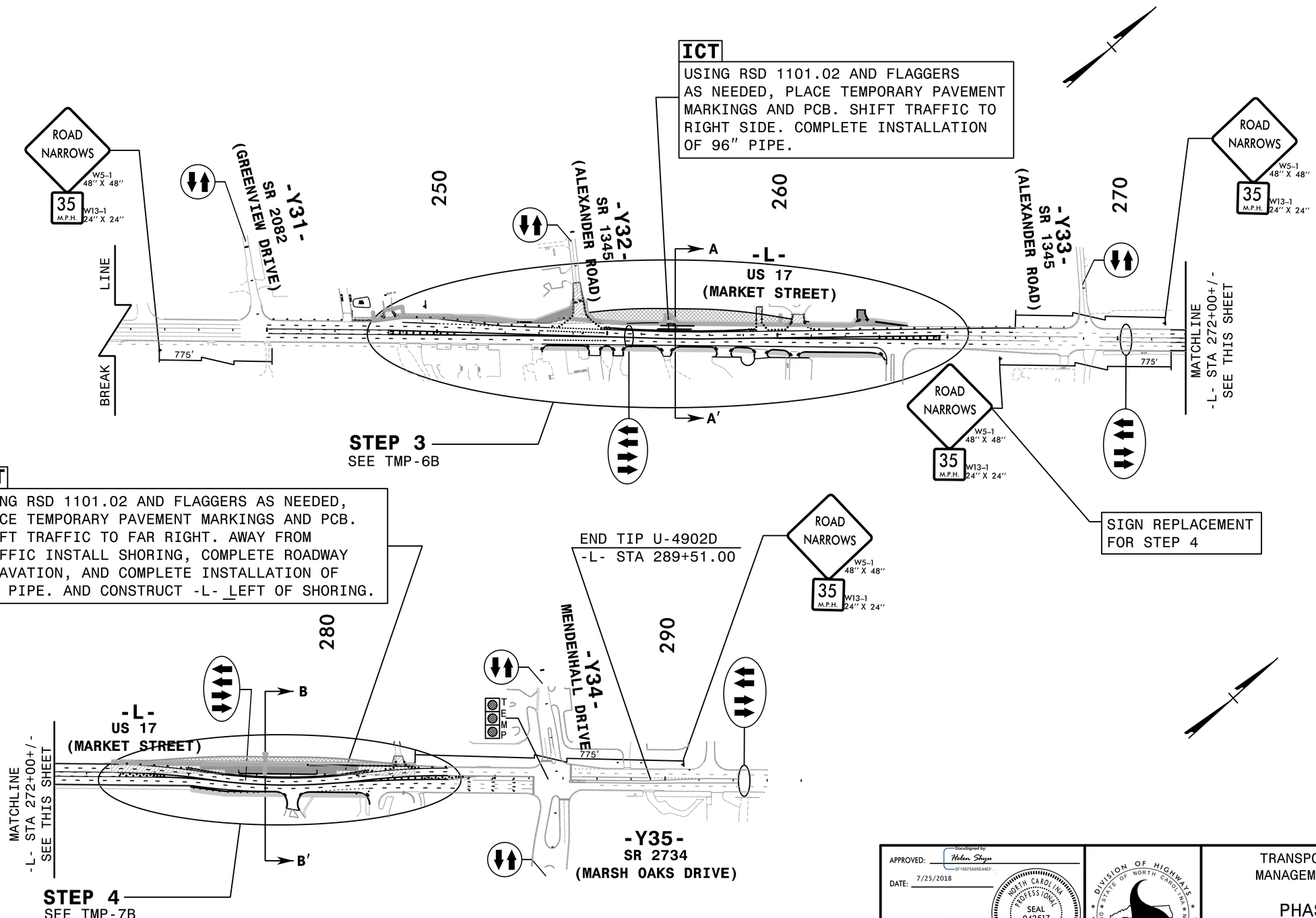
U-4902D	TMP-4A



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

TRANSPORTATION MANAGEMENT PLAN

PHASE I OVERVIEW

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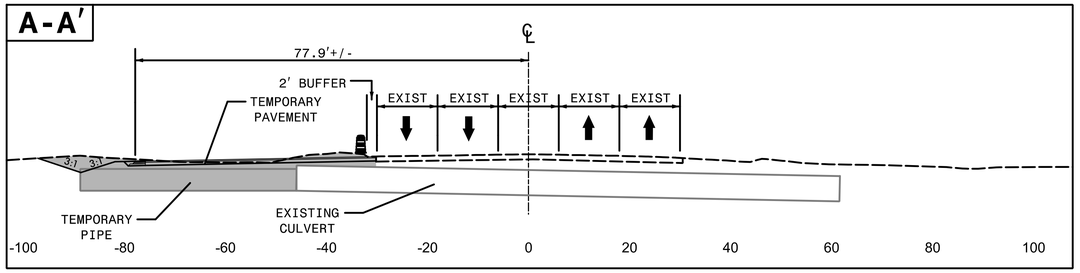
U-4902D	TMP-5

-L- 257+00+/-



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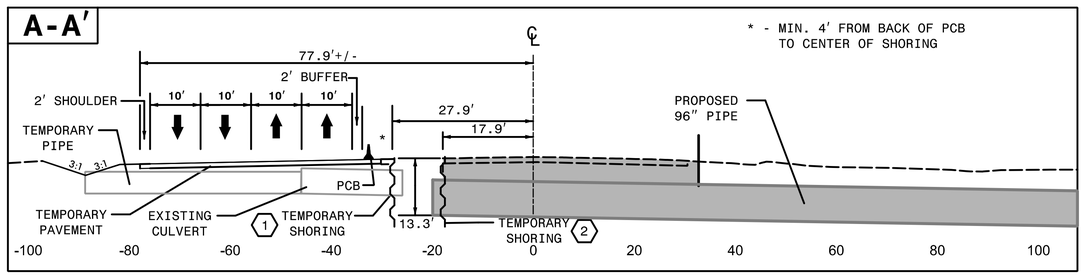
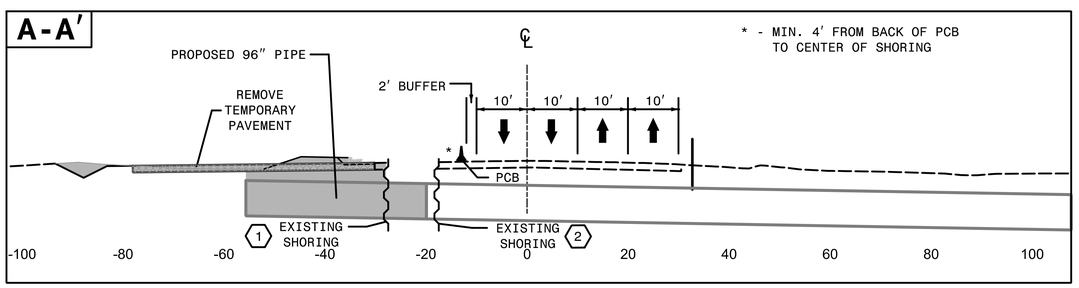
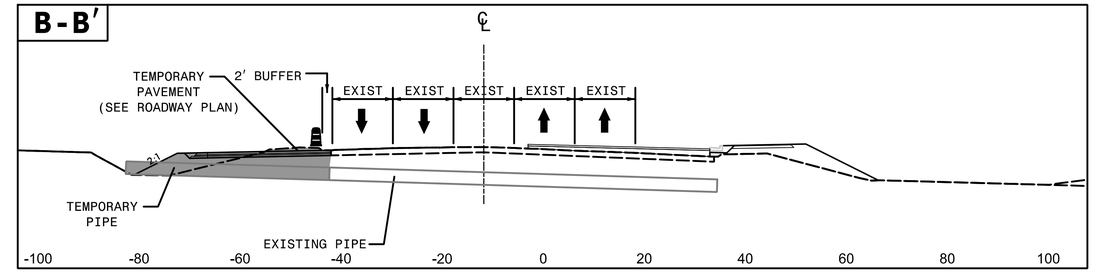


STEPS 3A AND 3B



STEPS 3C AND 3D

-L- 278+00+/-



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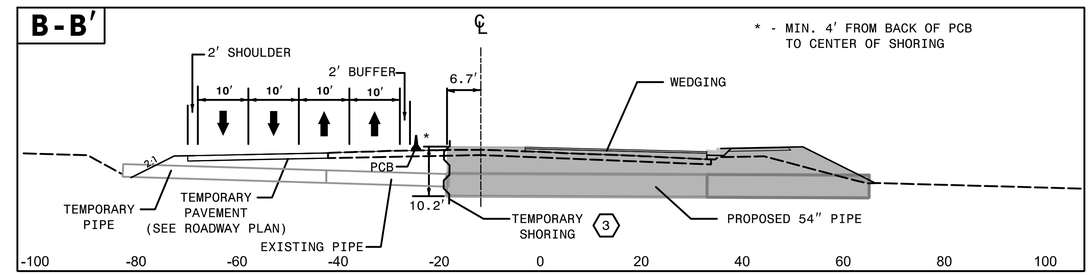

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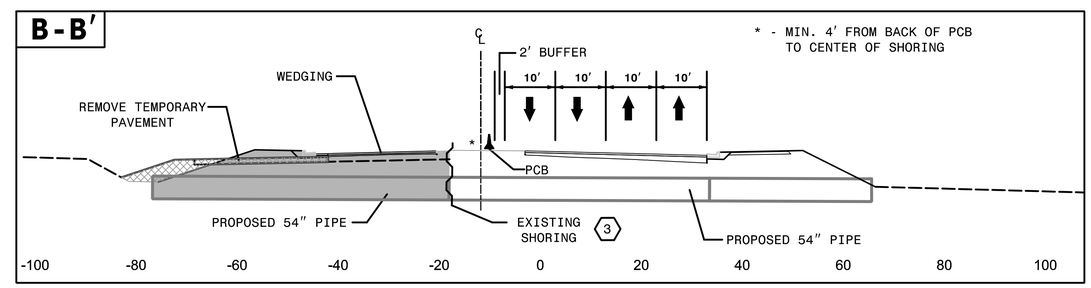

STEPS 4C AND 4D

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TRANSPORTATION MANAGEMENT PLAN

PHASE I
CUT SECTIONS

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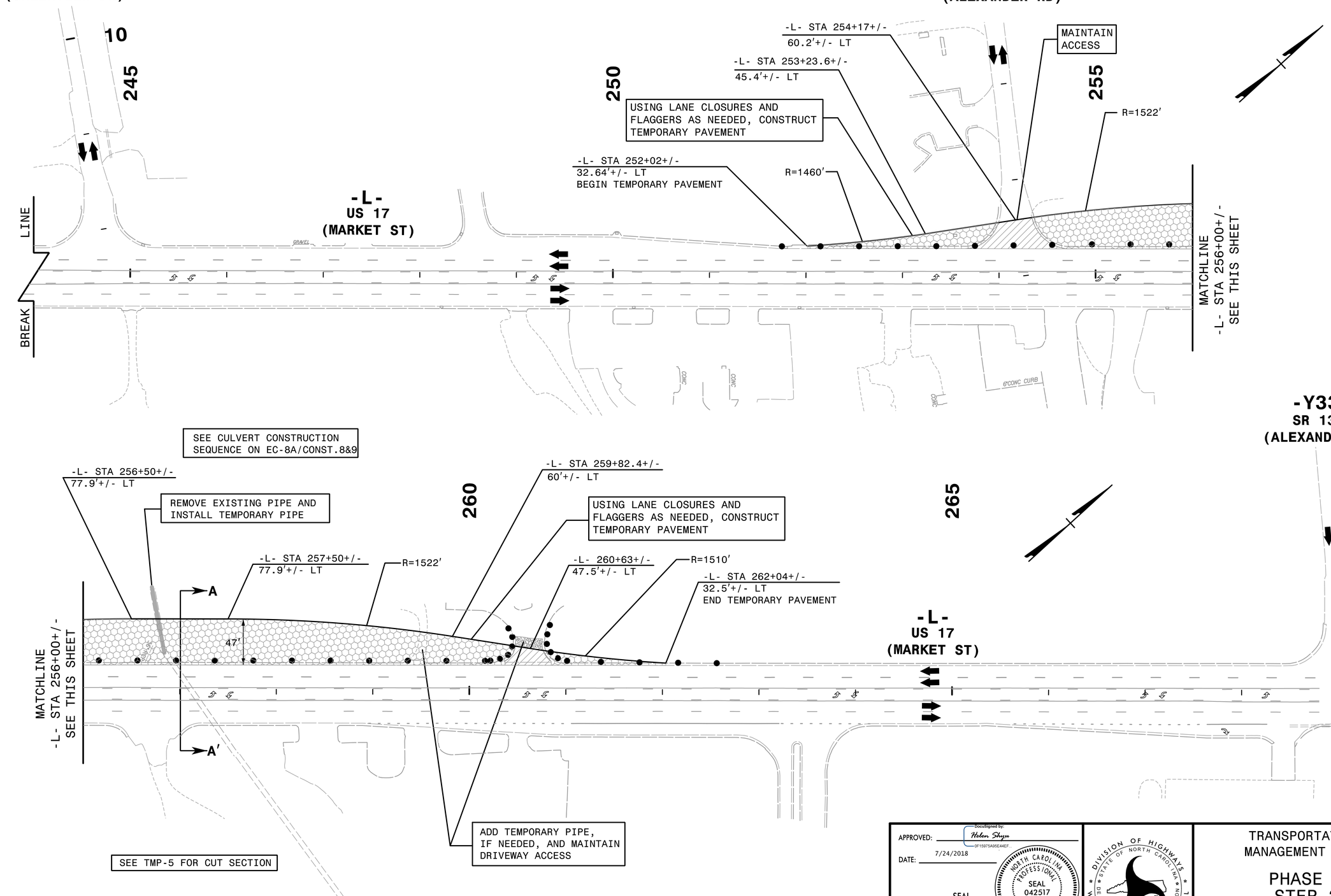

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TRANSPORTATION MANAGEMENT PLAN

PHASE I
STEP 2
DETAIL

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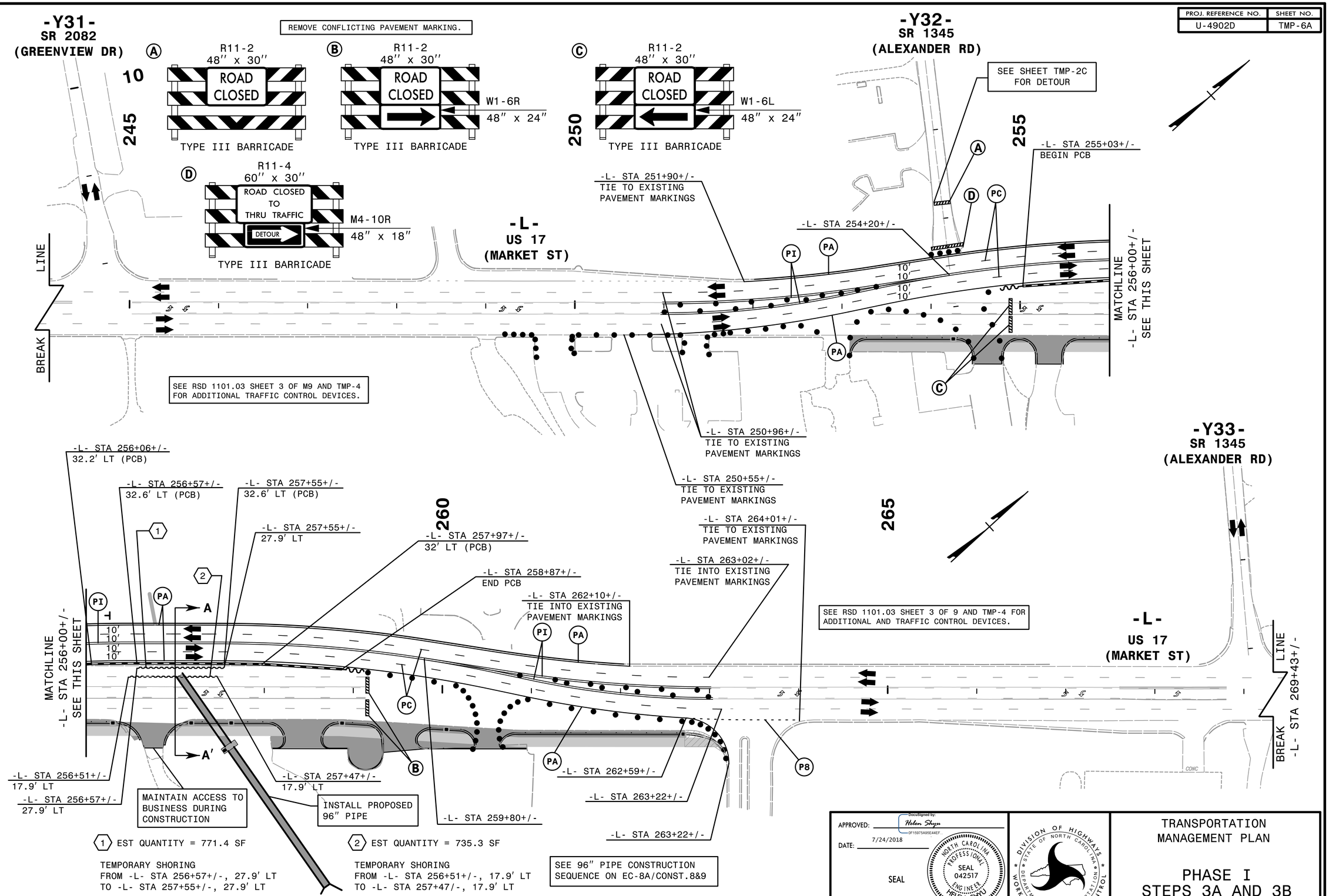

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PHASE I STEPS 3A AND 3B DETAIL

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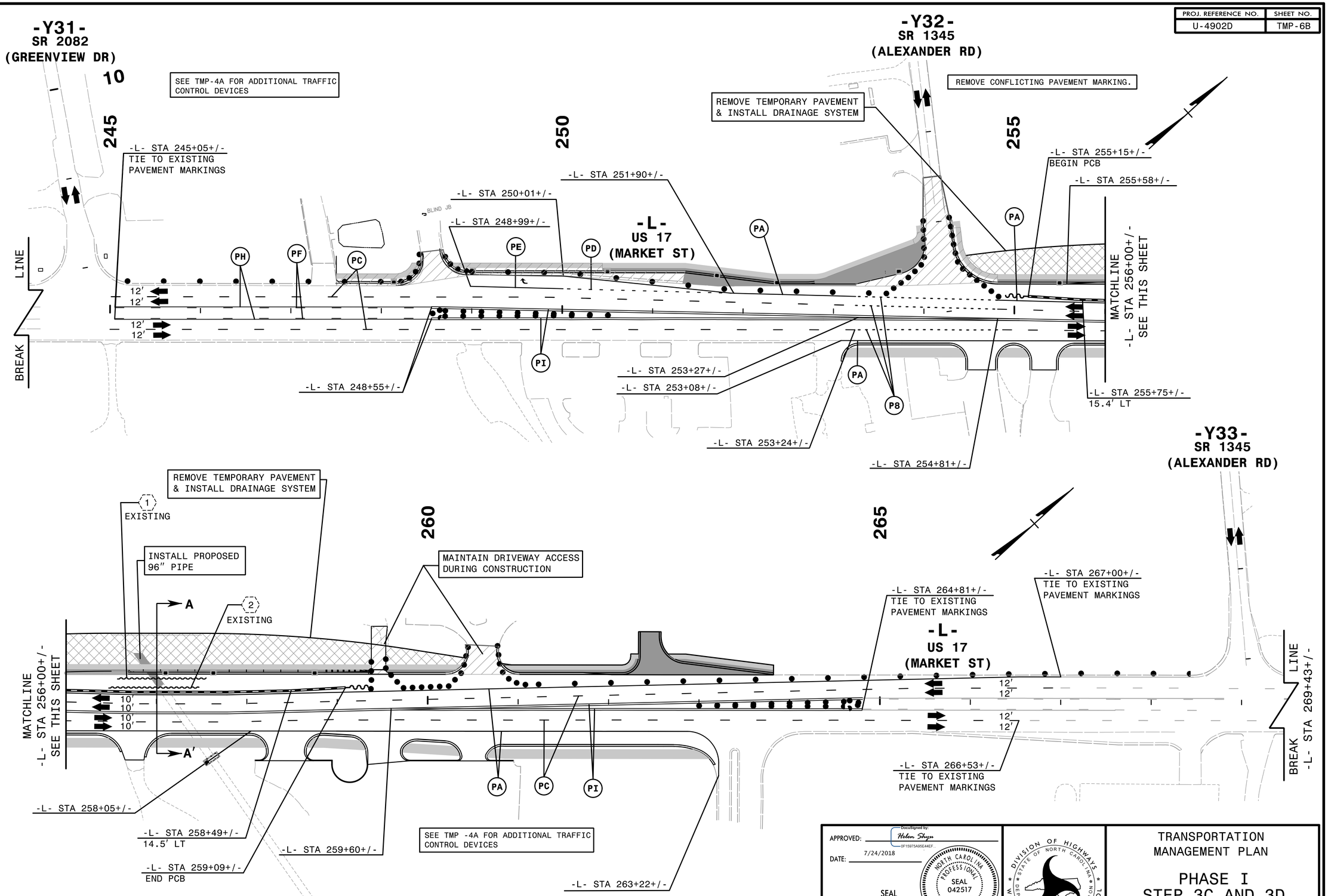

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PHASE I
STEP 3C AND 3D
DETAIL

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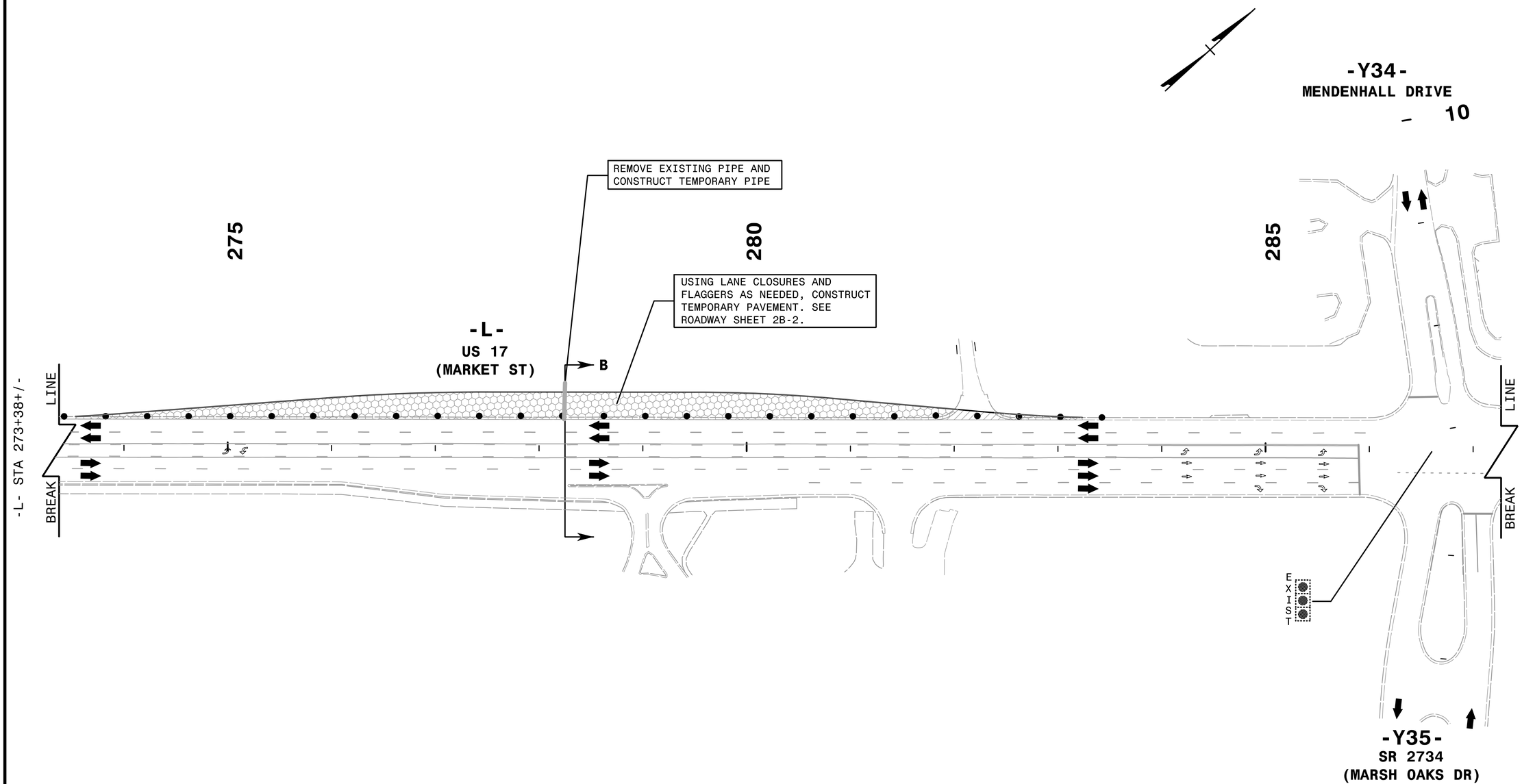
U-4902D	TMP-7



SEE TMP-5 FOR CUT SECTION

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TRANSPORTATION MANAGEMENT PLAN

PHASE I
AREA 2
DETAIL

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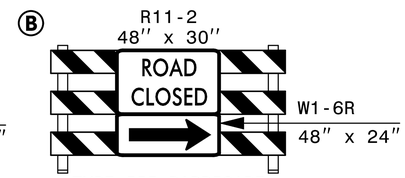
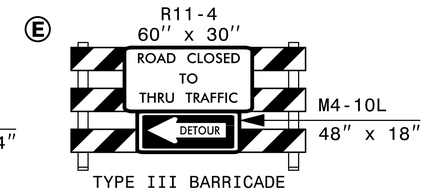
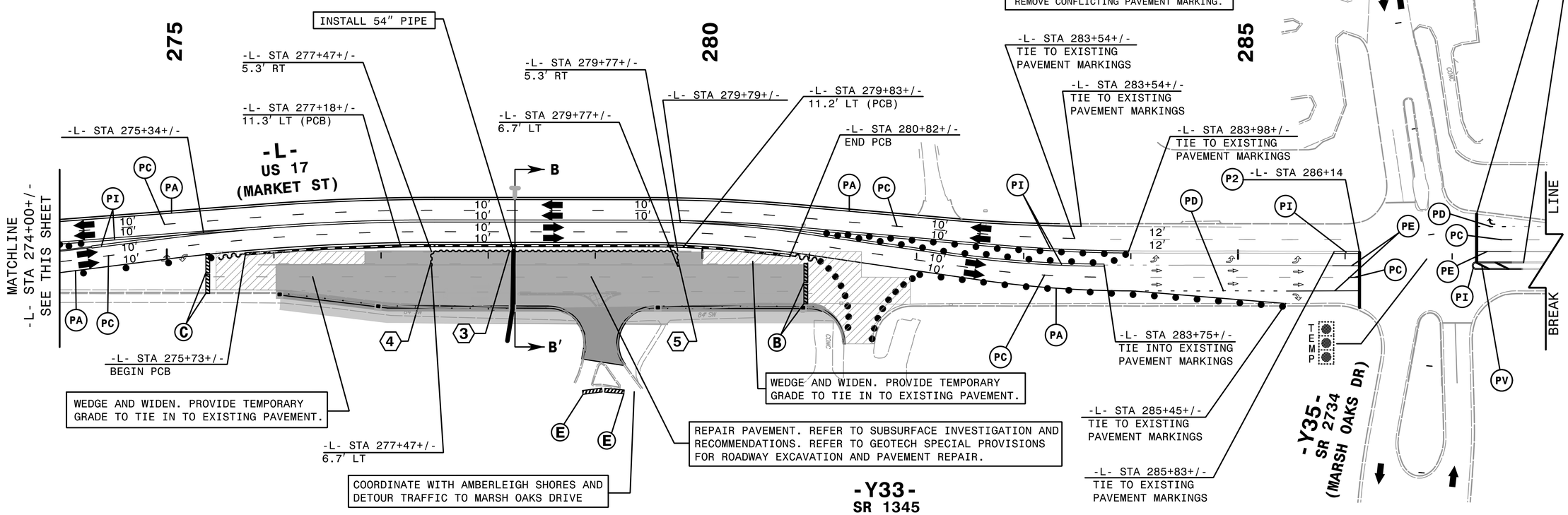
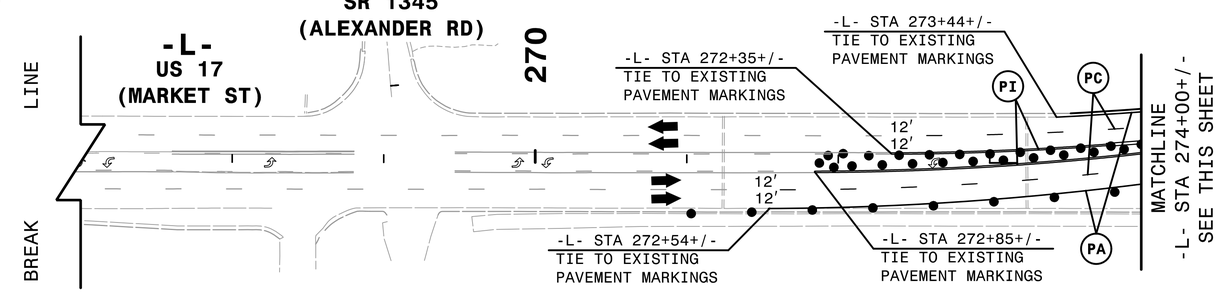
U-4902D	TMP-7A









3 EST QUANTITY = 1893.45 SF

TEMPORARY SHORING
FROM -L- STA 277+47+/-, 6.7' LT
TO -L- STA 279+77/-, 6.7' LT

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

4 EST QUANTITY = 72 SF

TEMPORARY SHORING
FROM -L- STA 277+47+/-, 6.7' LT
TO -L- STA 277+47+/-, 5.3' RT

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

5 EST QUANTITY = 72 SF

TEMPORARY SHORING
FROM -L- STA 279+77+/-, 6.7' LT
TO -L- STA 279+77+/-, 5.3' RT

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

SEE RSD 1101.03 SHEET 3 OF 9
AND TMP -4 FOR ADDITIONAL
TRAFFIC CONTROL DEVICES AS
INSTRUCTED IN GENERAL NOTES 8.

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WORK ZONE TRAFFIC CONTROL

TRANSPORTATION
MANAGEMENT PLAN

PHASE I
STEPS 4A AND 4B
DETAIL

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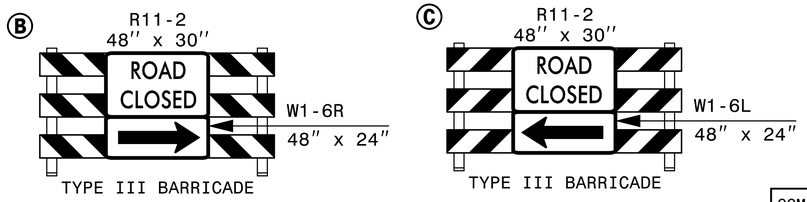
PROJ. REFERENCE NO.	SHEET NO.
U-4902D	TMP-7B



SEE RSD 1101.03 SHEET 3 OF 9 AND TMP-4 FOR ADDITIONAL TRAFFIC CONTROL DEVICES.

REMOVE CONFLICTING PAVEMENT MARKING.

COMPLETE ROADWAY EXCAVATION AND CONSTRUCT -L- LEFT OF SHORING

INSTALL REMAINDER OF 54" PIPE

REMOVE TEMPORARY PAVEMENT & INSTALL DRAINAGE SYSTEM

275 280 285

-Y34-
MENDENHALL DRIVE

-L- STA 277+00+/-
6.2' LT

-L- STA 276+18+/-
BEGIN PCB

-L- STA 280+66+/-

-L- STA 281+04+/-
16.2' LT
END PCB

-L- STA 282+65+/-

-L- STA 280+66+/-
6.3' LT

-L-
US 17 BUSINESS
(MARKET ST)

MATCHLINE
-L- STA 274+00+/-
SEE THIS SHEET

LINE

BREAK

-L- STA 275+04+/-

-L- STA 276+93+/-

-L- STA 277+47+/-
18.7' LT

-L- STA 277+47+/-
6.7' LT

-L- STA 278+01+/-

-L- STA 279+56+/-

EXISTING

-L- STA 279+77+/-
18.7' LT

-L- STA 279+77+/-
6.7' LT

-L- STA 281+48+/-

STEEL PLATE REQUIRED

-L- STA 283+81
TIE TO EXISTING PAVEMENT MARKINGS

-L- STA 283+63
TIE TO EXISTING PAVEMENT MARKINGS

TEMP

-L- STA 272+69+/-
TIE TO EXISTING PAVEMENT MARKINGS

270

-Y33-
SR 1345
ALEXANDER RD

-Y35-
SR 2734
MARSH OAKS DR

-L-
US 17 BUSINESS
(MARKET ST)

-L- STA 267+00+/-
LINE

BREAK

MATCHLINE
-L- STA 274+00+/-
SEE THIS SHEET

-L- STA 271+56+/-
TIE TO EXISTING PAVEMENT MARKINGS

-L- STA 273+73

6 EST QUANTITY = 72 SF

TEMPORARY SHORING
FROM -L- STA 277+47+/-, 6.7' LT
TO -L- STA 277+47+/-, 18.7' LT

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

7 EST QUANTITY = 72 SF

TEMPORARY SHORING
FROM -L- STA 279+77+/-, 6.7' LT
TO -L- STA 279+77+/-, 18.7' LT

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

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TRANSPORTATION MANAGEMENT PLAN

PHASE I
STEPS 4C AND 4D
DETAIL

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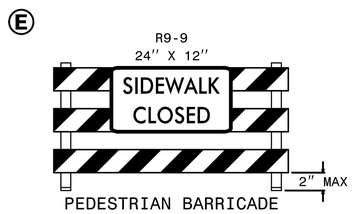

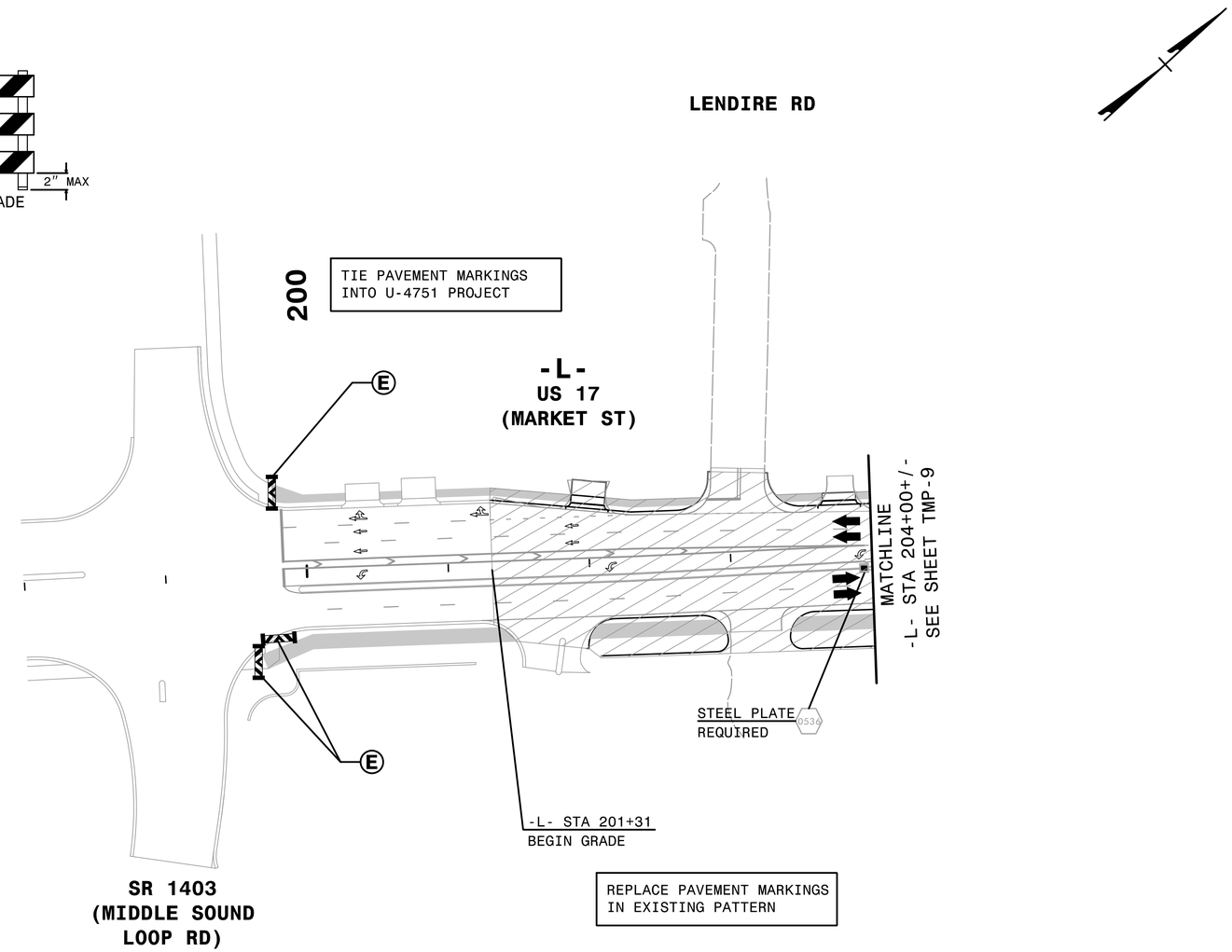

REMOVE/RELOCATE BARRICADES
AS SIDEWALK IS COMPLETED

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WORK ZONE TRAFFIC CONTROL

TRANSPORTATION
MANAGEMENT PLAN

PHASE II
DETAIL

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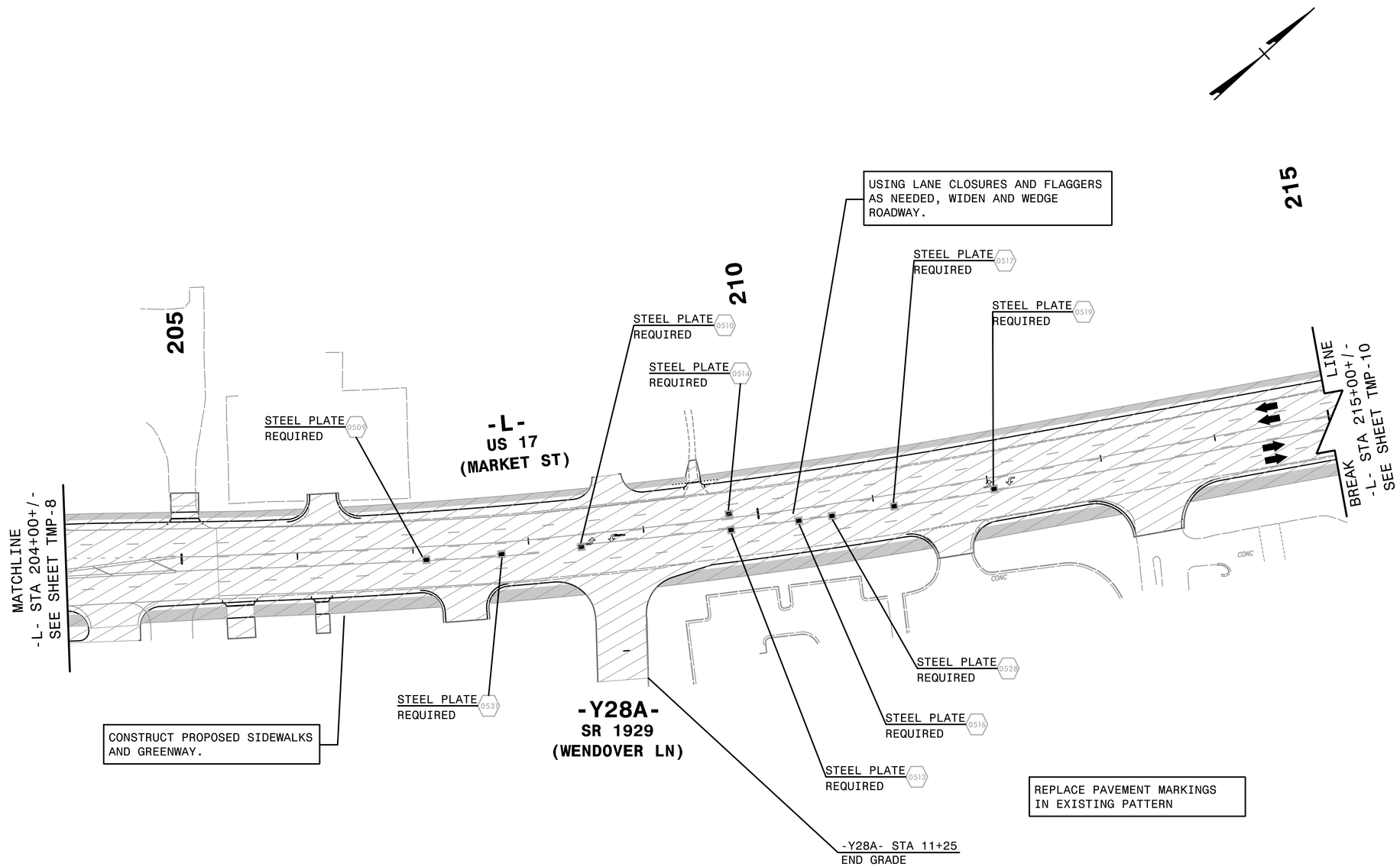
PROJ. REFERENCE NO.	SHEET NO.
U-4902D	TMP-9



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TRANSPORTATION MANAGEMENT PLAN

PHASE II DETAIL

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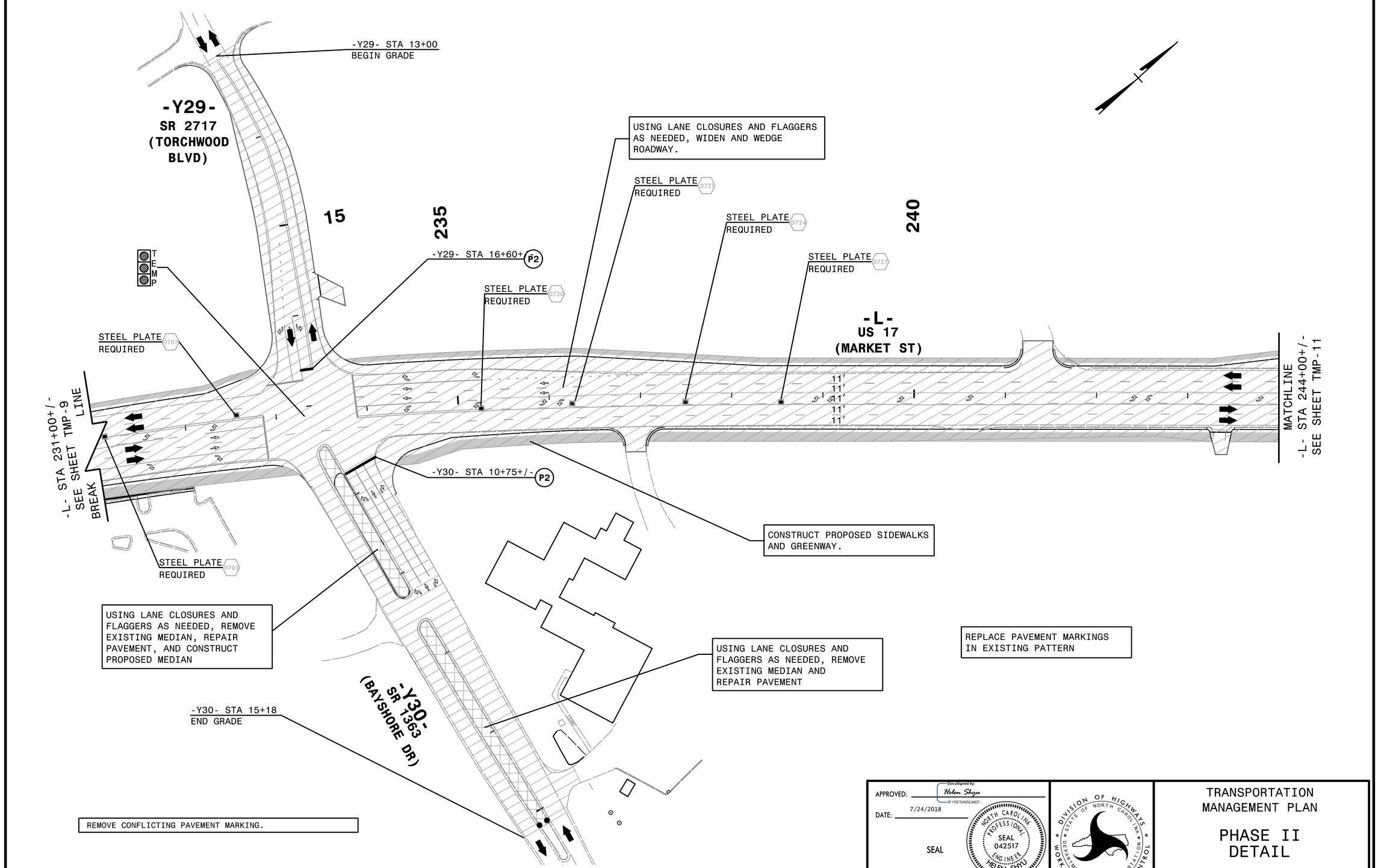

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TRANSPORTATION MANAGEMENT PLAN

PHASE II DETAIL

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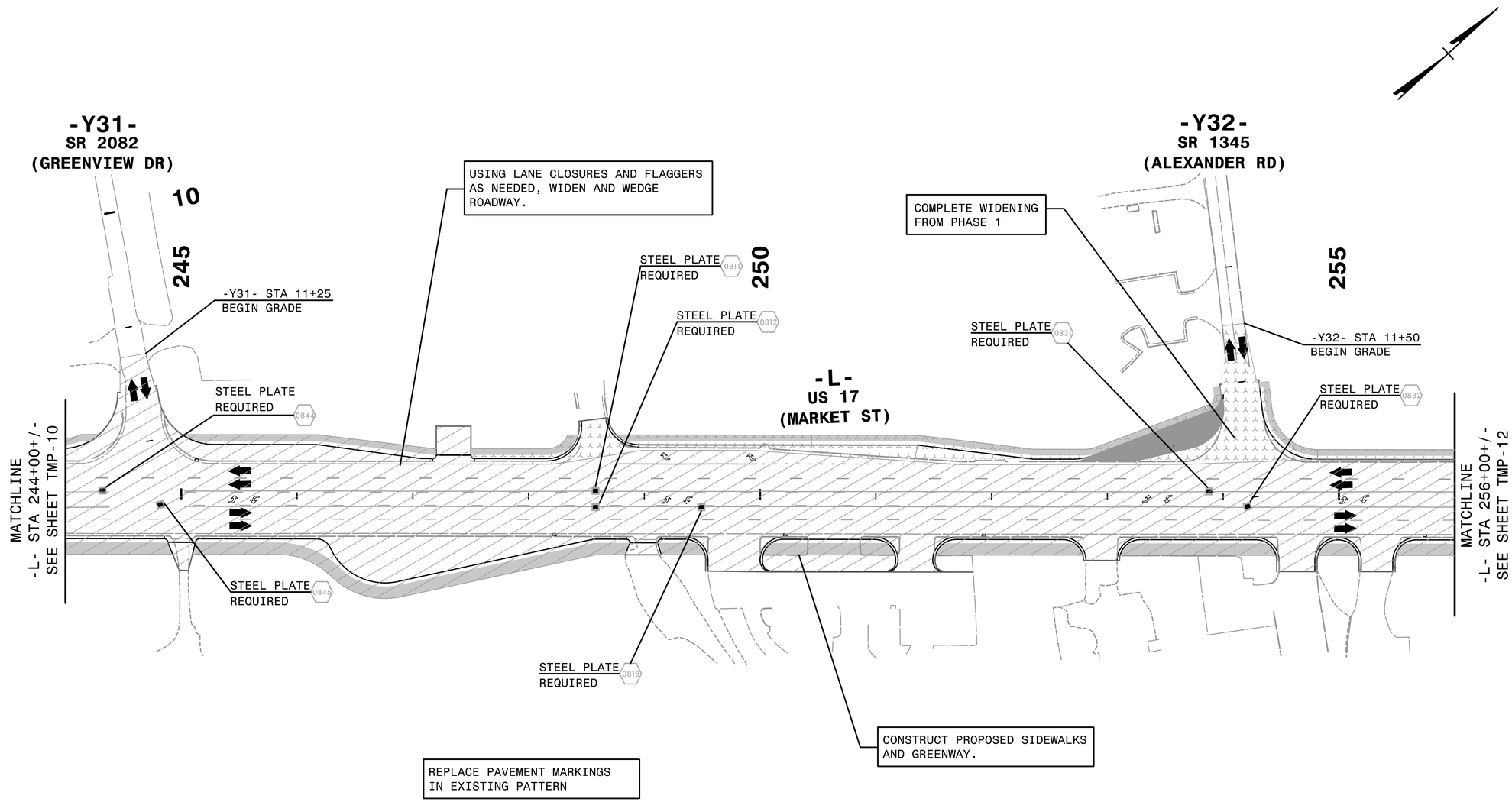

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TRANSPORTATION MANAGEMENT PLAN

PHASE II DETAIL

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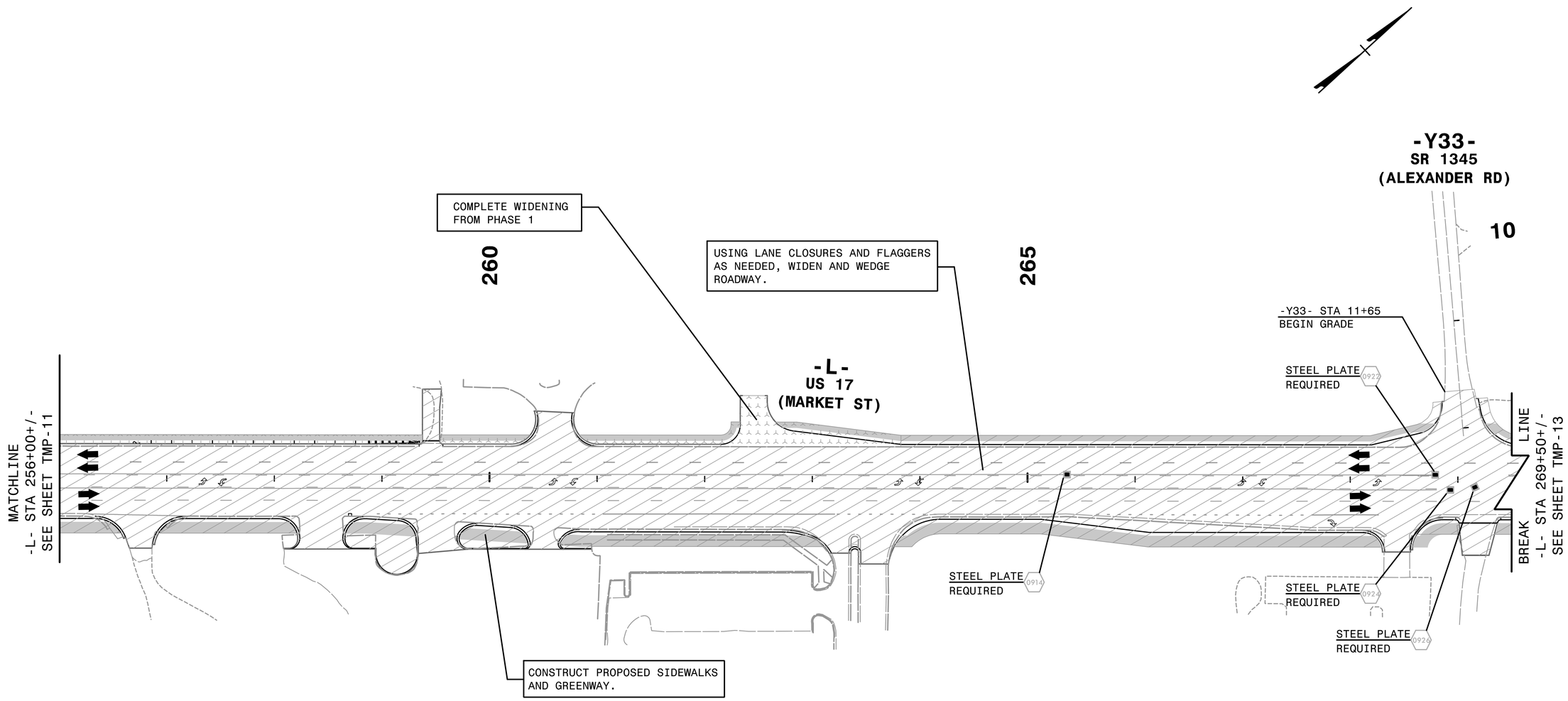

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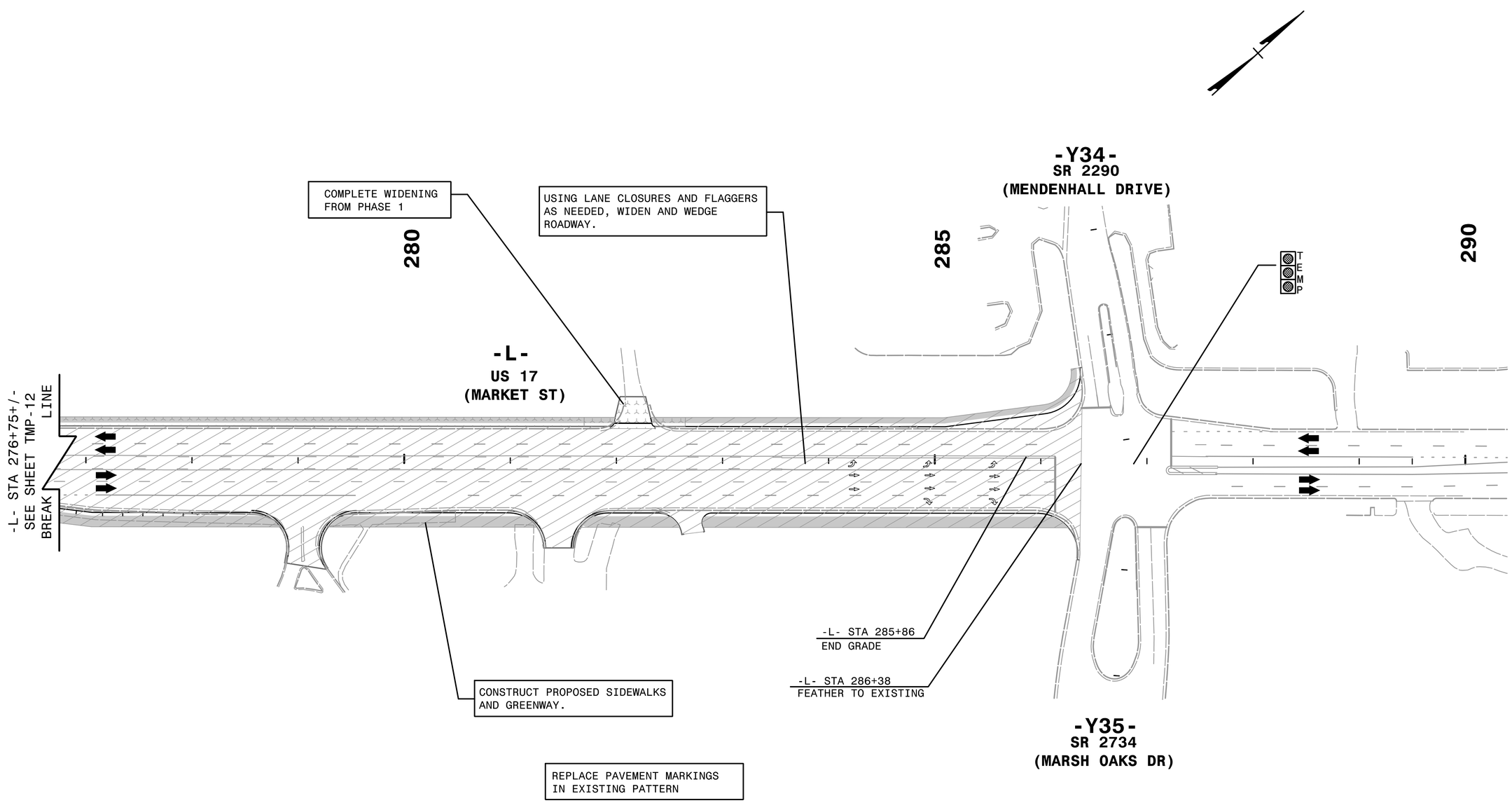

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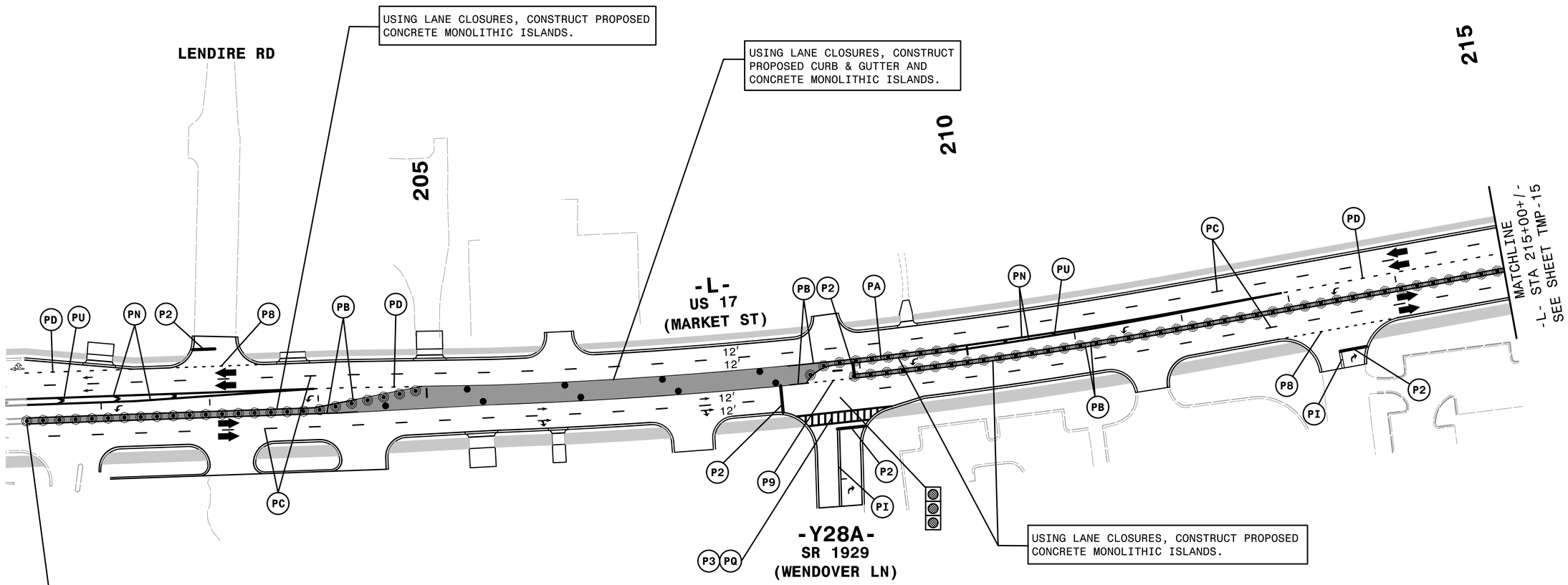

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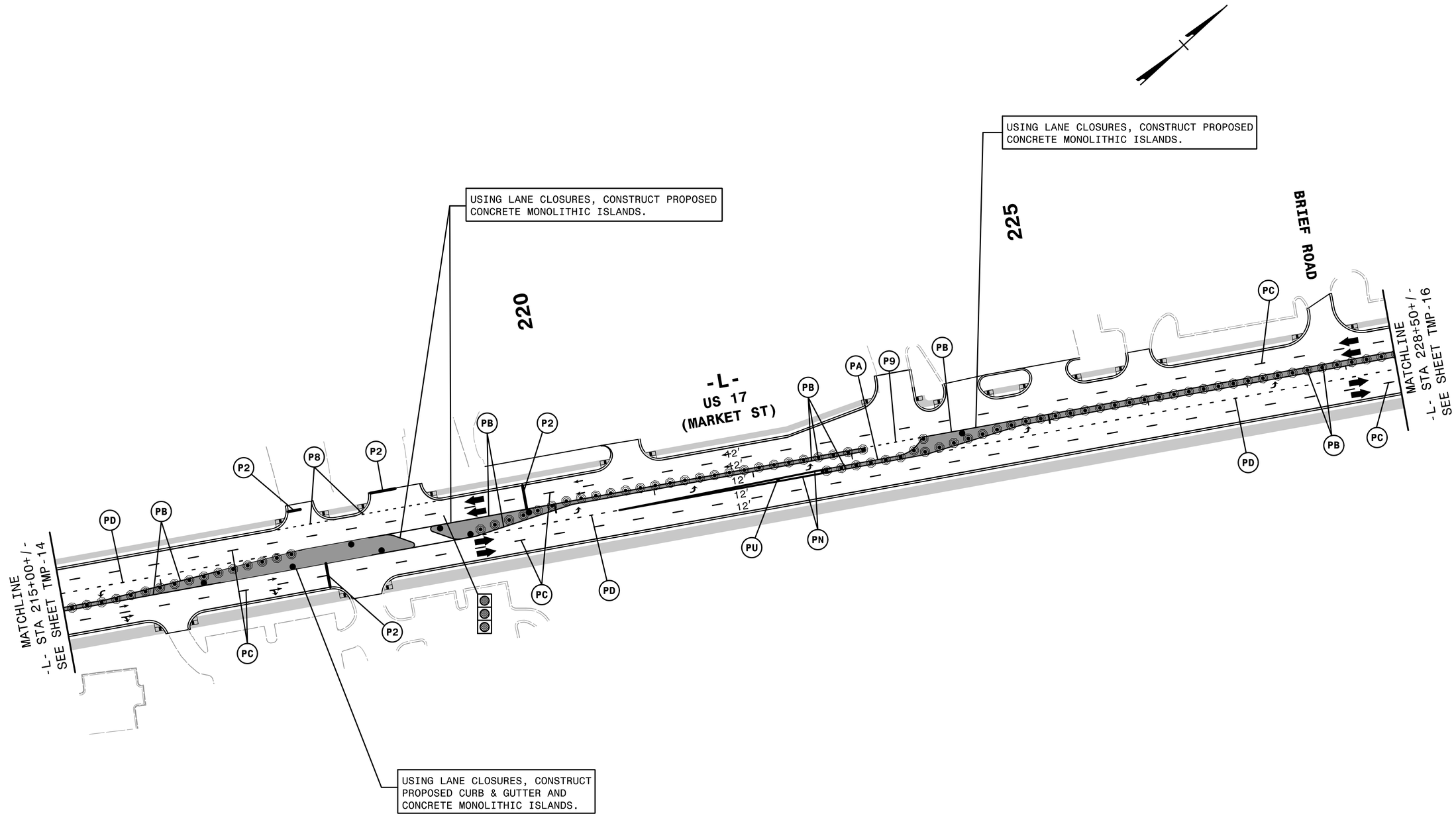

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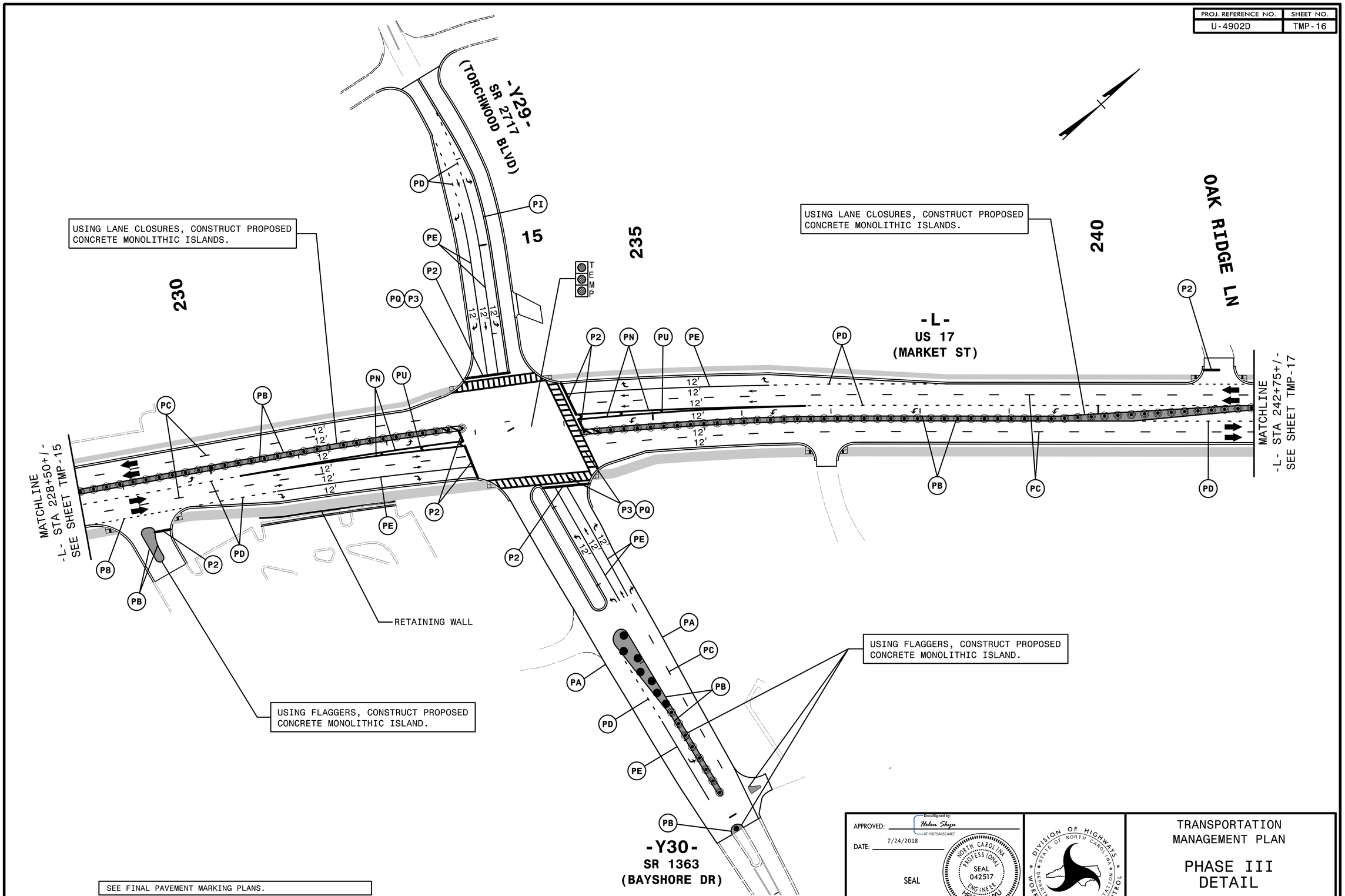

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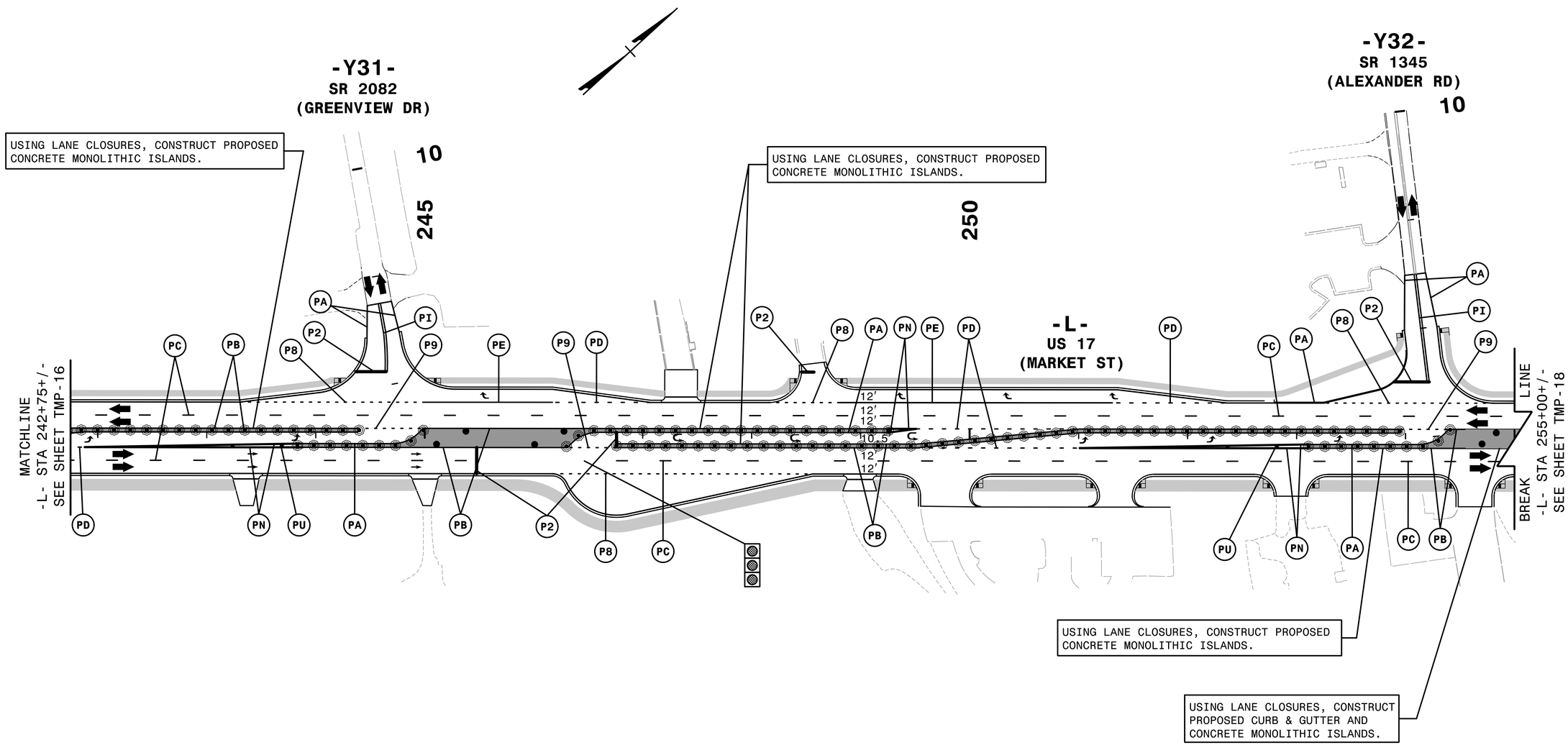

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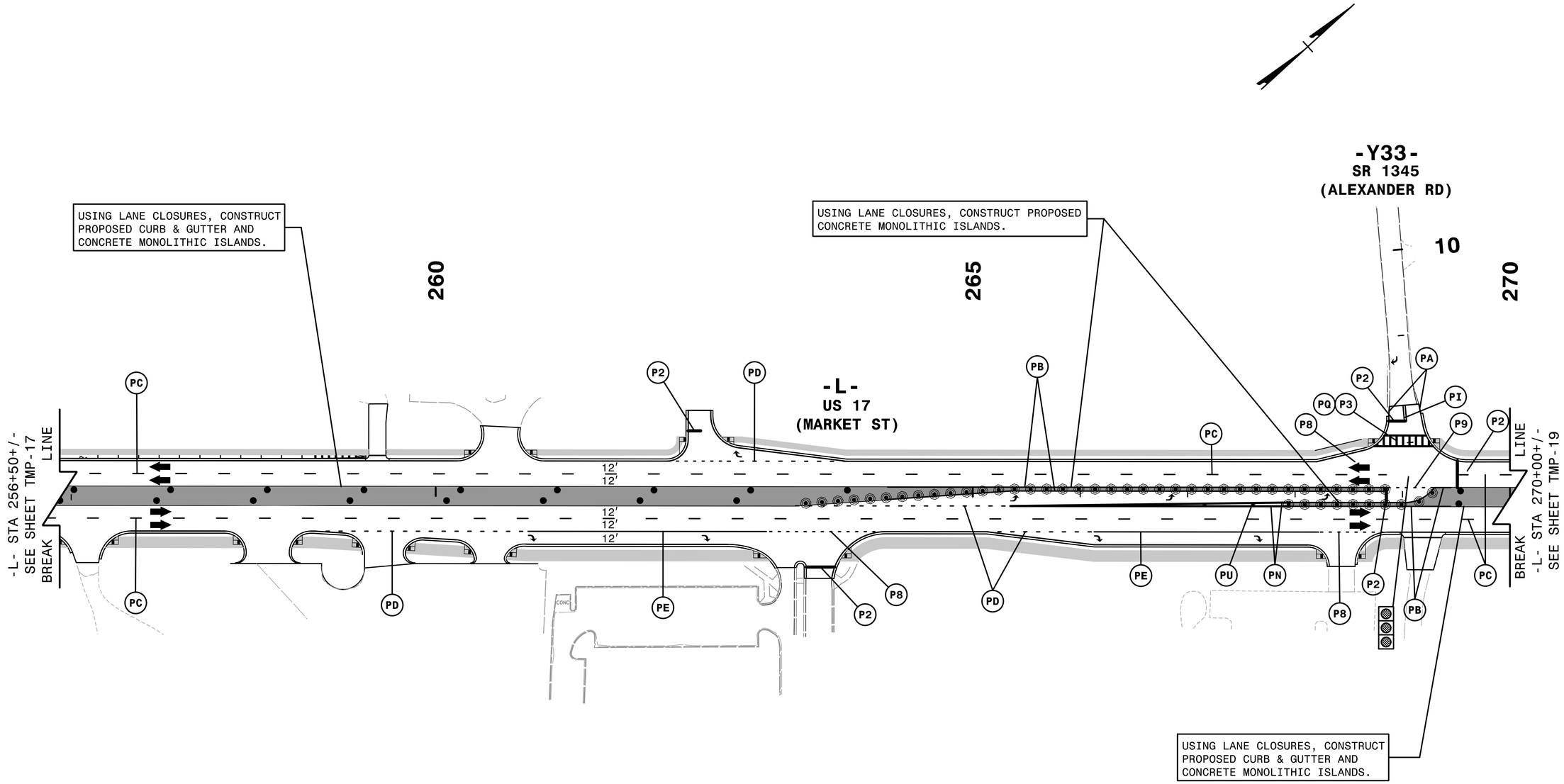

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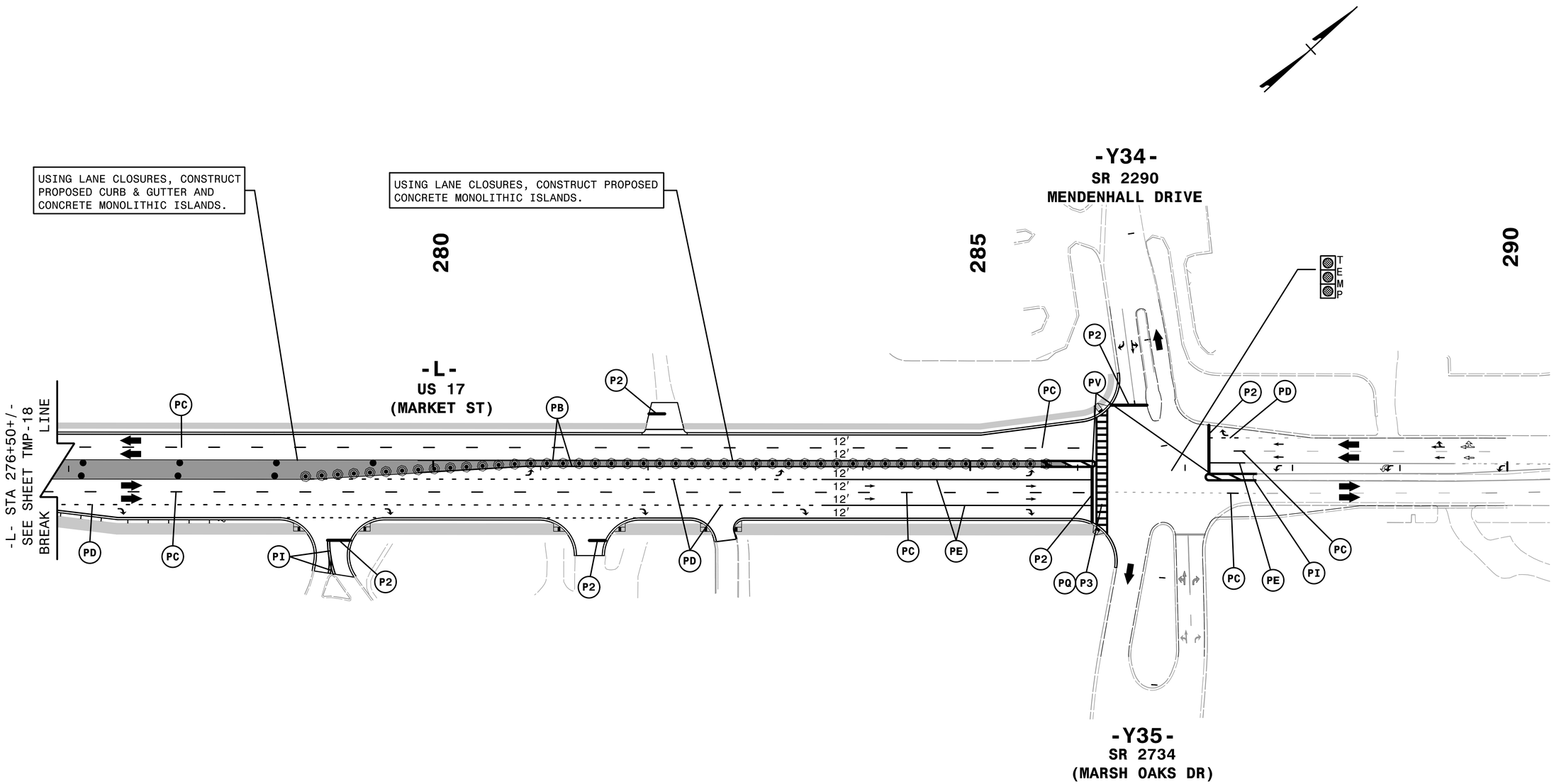

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