

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO.	SHEET NO.
W-4404	TCP-1

**PLAN FOR PROPOSED
TRAFFIC CONTROL, MARKING & DELINEATION
WAKE COUNTY**

W-4404

ROADWAY STANDARD DRAWINGS

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

STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW PANELS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - INTERCHANGES
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - THRU LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
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1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS (TEMPORARY & PERMANENT)
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

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PM-1 THRU PM-8	PAVEMENT MARKING

TEMPORARY PAVEMENT MARKING

SYMBOL	DESCRIPTION	BREAKDOWN	TOTAL QUANTITY
PAINT (4")			
PC	10 FT. WHITE SKIP		11000 LF
PD	2 FT. WHITE MINISKIP		1894 LF
PI	YELLOW DOUBLE CENTER		2000 LF
		TOTAL	14894 LF
PAINT (8")			
PV	YELLOW DIAGONAL		600 LF
PX	WHITE CROSSWALK LINE		600 LF
		TOTAL	1200 LF
PAINT (24")			
P4	WHITE STOPBAR		1100 LF
P5	WHITE CROSSWALK LINE		48 LF
		TOTAL	1148 LF
PAINT MARKING CHARACTERS			
QI	ALPHANUMERIC CHAR.		12 EA
		TOTAL	12 EA
PAINT MARKING SYMBOLS			
QA	LEFT TURN ARROW		27 EA
QB	RIGHT TURN ARROW		10 EA
QC	STRAIGHT ARROW		27 EA
QF	COMBO.LEFT/RIGHT		9 EA
QG	COMBO.LEFT/STRAIGHT/RIGHT		9 EA
		TOTAL	82 EA

LEGEND

- GENERAL**
- DIRECTION OF TRAFFIC FLOW
 - NORTH ARROW
 - PROPOSED PVMT. EXIST. PVMT.
 - WORK AREA
 - REMOVAL OF EXISTING PAVEMENT
- TRAFFIC CONTROL DEVICES**
- TYPE I BARRICADE
 - TYPE II BARRICADE
 - TYPE III BARRICADE
 - CONE
 - DRUM SKINNY DRUM
 - FLASHING ARROW PANEL (TYPE C)
 - STATIONARY SIGN
 - PORTABLE SIGN
 - STATIONARY OR PORTABLE SIGN
 - WARNING FLAGS
 - CRASH CUSHION
 - CHANGEABLE MESSAGE SIGN
 - TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
 - POLICE
 - FLAGGERS
- PAVEMENT MARKINGS**
- CRYSTAL/CRYSTAL PAVEMENT MARKER
 - YELLOW/YELLOW PAVEMENT MARKER
 - CRYSTAL/RED PAVEMENT MARKER
 - PAVEMENT MARKING SYMBOLS
 - GRAY EXISTING

TIP PROJECT:

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mmantiquez AT WZTC224099

APPROVED:	PLAN PREPARED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL UNIT
DATE: 12/12/06	
SEAL	S. Bourne, PE <u> </u> TRAFFIC CONTROL ENGINEER
	M. McDiarmid, PE <u> </u> TRAFFIC CONTROL PROJECT ENGINEER
	C. Howard <u> </u> TRAFFIC CONTROL PROJECT DESIGN ENGINEER
	M. Manriquez <u> </u> TRAFFIC CONTROL DESIGN ENGINEER

PROJECT NOTES

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

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:

<u>ROAD NAME</u>	<u>DAY AND TIME RESTRICTIONS</u>
WAKE FOREST RD.	MONDAY THRU SATURDAY 6:00A.M. TO 9:00P.M.

- B) ALLOWABLE WORKING TIME FOR THE MARATHON WEEKENDS AS FOLLOWS:

<u>ROAD NAME</u>	<u>DAY AND TIME RESTRICTIONS</u>
WAKE FOREST RD.	FRIDAY 9:00 PM TO MONDAY 6:00 A.M.

- C) MARATHON WEEKENDS SHALL NOT BE USED ON HOLIDAYS AS FOLLOWS:

<u>ROAD NAME</u>
WAKE FOREST RD.
<u>HOLIDAY</u>
NEW YEAR'S DAY
EASTER
MEMORIAL DAY
INDEPENDENCE DAY
LABOR DAY
THANKSGIVING DAY
CHRISTMAS

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 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.
- F) 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.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- G) 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 A DROP-OFF AS FOLLOWS:

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

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

- H) DO NOT EXCEED A DIFFERENCE OF 1.5 inches IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT IN ADVANCE AND A MINIMUM OF ONCE EVERY MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- J) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 100 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

WHEN NO WORK IS BEING CONDUCTED FOR A PERIOD LONGER THAN ONE WEEK, REMOVE OR COVER ALL ADVANCE WORK ZONE WARNING SIGNS, AS DIRECTED BY THE ENGINEER, AT NO COST TO THE DEPARTMENT.

- K) PROVIDE PERMANENT SIGNING.
- L) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

- M) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADIUS, AND 3 FT OFF THE EDGE OF AN OPEN TRAVEL WAY, WHEN LANE CLOSURES ARE NOT IN EFFECT.
- N) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY. STAGGER OR OVERLAP BARRICADES TO ALLOW FOR INGRESS OR EGRESS.

PAVEMENT MARKINGS AND MARKERS

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

<u>ROAD NAME</u>	<u>MARKING</u>	<u>MARKER</u>
WAKE FOREST RD., -Y1-, -Y2-, -Y3- AND DRIVES	THERMOPLASTIC	PERMANENT RAISED

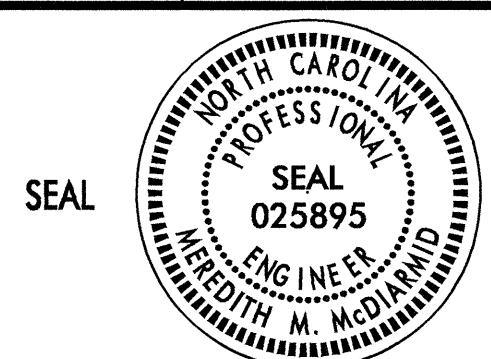



- P) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

<u>ROAD NAME</u>	<u>MARKING</u>
WAKE FOREST RD., -Y1-, -Y2-, -Y3- AND DRIVES	PAINT

- Q) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- R) REPLACE ANY PAVEMENT MARKINGS THAT HAVE BEEN DAMAGED BY THE END OF EACH DAY'S OPERATION.
- S) TRACE THE EDGE OF PROPOSED MONOLITHIC ISLANDS WITH THE PROPER COLOR PAVEMENT MARKING PRIOR TO INSTALLATION OF A PROPOSED MONOLITHIC ISLAND.
- T) PLACE AT LEAST TWO APPLICATIONS OF PAINT ON NEW ASPHALT WITH TEMPORARY TRAFFIC PATTERNS WHICH WILL REMAIN IN PLACE OVER THREE (3) MONTHS. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON SUFFICIENT DRYING TIME, AS DETERMINED BY THE ENGINEER.

MISCELLANEOUS

- U) REFER TO MUTCD, PART 6D AND 6H1, AND PROVIDE FOR PEDESTRIAN SAFETY AND ACCESSIBILITY CONSIDERATIONS.

APPROVED: <i>M. W. Williams</i> DATE: 11/1/06 	<h2 style="margin: 0;">PROJECT NOTES</h2> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">SCALE: NONE</td> <td rowspan="4" style="width: 30%; text-align: center;">  </td> <td style="width: 40%; text-align: center;">REVISIONS</td> </tr> <tr> <td>DATE: MAR 06</td> <td></td> </tr> <tr> <td>DESIGN BY: MRM</td> <td></td> </tr> <tr> <td>REVIEWED BY: CBH</td> <td></td> </tr> </table>	SCALE: NONE		REVISIONS	DATE: MAR 06		DESIGN BY: MRM		REVIEWED BY: CBH	
SCALE: NONE		REVISIONS								
DATE: MAR 06										
DESIGN BY: MRM										
REVIEWED BY: CBH										

PHASING

PRIOR TO ANY CONSTRUCTION OPERATIONS, PLACE ADVANCE WORK ZONE SIGNING IN ACCORDANCE WITH SHEETS TCP-10 AND TCP-11.

A MARATHON WEEKEND IS DEFINED AS ANY FOUR (4) WEEKENDS, EXCLUDING HOLIDAYS, PER DIRECTION THE CONTRACTOR IS ALLOWED TO CLOSE MULTIPLE LANES IN A SINGLE DIRECTION AND SHALL OCCUR INDEPENDENTLY OF ONE ANOTHER PER DIRECTION. (SEE INTERMEDIATE CONTRACT TIME #2 AND LIQUIDATED DAMAGES).

AT THE END OF EACH WORK DAY, MOVE CHANNELIZING DEVICES TO THE SHOULDER AND RESTORE TRAFFIC TO THE EXISTING PATTERN UNLESS THE WORKDAY FALLS ON A MARATHON WEEKEND OR AS SPECIFIED IN THE PLANS.

CLOSE ALL SIDEWALKS WITHIN THE PROJECT LIMITS WITH "SIDEWALK CLOSED" (R9-9) SIGN AS REQUIRED BY THE MUTCD. INSTALL ADDITIONAL SIGNING, TYPE III BARRICADES AND OTHER DEVICES TO INSURE THE SAFETY AND ACCESSIBILITY OF PEDESTRIANS WHEN CONSTRUCTION IS ENCROACHING. PROVIDE APPROPRIATE LOCATIONS FOR PEDESTRIAN CROSSINGS AND TRAVEL THROUGHOUT THE CONSTRUCTION SITE AS APPROVED BY THE ENGINEER.

CLOSE ALL EXISTING PEDESTRIAN CROSSINGS WHEN CONSTRUCTION IS ENCROACHING. DETOUR PEDESTRIANS TO APPROPRIATE EXISTING CROSSING, SEE GENERAL NOTE (U)

DO NOT RUN TAPERS FOR LANE CLOSURES THROUGH DRIVES, INTERSECTIONS OR OTHER -Y- LINE UNLESS DESCRIBED IN THE PLANS. IF CORRECT MERGING TAPERS CANNOT BE OBTAINED AND ARE NOT SHOWN IN THE PLANS, CMS BOARDS SHALL BE USED AND OBTAIN AS MUCH TAPER LENGTH AS POSSIBLE AS APPROVED BY THE ENGINEER.

LOCATIONS THAT ARE TO BE OPEN CUT FOR PIPE INSTALLATION BEHIND EXISTING CURB & GUTTER DO NOT HAVE TO BE CONSTRUCTED UP TO EXISTING ELEVATION AT THE END OF THE WORK DAY UNLESS SPECIFIED IN THE PHASING.

PLACE DRUMS, CMS BOARDS AND FAPS AS SHOWN IN THE PLANS. LOCATE CMS BOARDS AND FAPS TO MAXIMIZE THEIR SIGHT DISTANCE. OBTAIN APPROVAL FROM THE ENGINEER IF THE CMS BOARDS AND FAPS ARE TO BE IN A LOCATION OTHER THAN WHAT IS SHOWN IN THE PLANS.

POLICE SHOULD BE USED AT INTERSECTIONS TO DIRECT TRAFFIC.

PHASE I

STEP 1:
- USING ROADWAY STANDARD DRAWING 1101.02 SHEET 3 OF 9, FLAGGERS AND POLICE, RELOCATE SIGNAL POLE AND INSTALL TEMPORARY DESIGN 1 BUT DO NOT ACTIVATE TEMPORARY DESIGN 1. SEE SIGNAL PLAN AND TCP-5.

NOTE: ONCE NB AND SB WAKE FOREST RD WIDENING IS COMPLETE, PLACE PARALLEL DRUMS APPROXIMATELY 3' FROM THE EXISTING EDGE SO THE NEWLY CONSTRUCTED WIDENING IS CLOSED TO TRAFFIC.

- INSTALL CMS BOARDS AND TRAFFIC CONTROL DEVICES AND CONSTRUCT PROPOSED SB WAKE FOREST RD. INCLUDING CURB AND GUTTER, SIDEWALK, DRAINAGE, PIPE RELOCATION AND RETAINING WALL. PAVE THE PROPOSED WIDENING UP TO EDGE AND ELEVATION OF EXISTING ROADWAY FROM (SEE SHEETS TCP-4 & TCP-5):

- L- STA. 10+50+/- (SB) TO -L- STA. 23+15+/- (SB)
- L- STA. 23+60+/- (SB) TO -L- STA. 28+44+/- (SB)
- L- STA. 28+79+/- (SB) TO -L- STA. 30+18+/- (SB)
- L- STA. 30+53+/- (SB) TO -L- STA. 33+05+/- (SB)

- INSTALL CMS BOARDS AND TRAFFIC DEVICES CONTROL AND CONSTRUCT PROPOSED NB WAKE FOREST RD. INCLUDING CURB AND GUTTER, SIDEWALK, DRAINAGE, PIPE RELOCATION, RETAINING WALL AND MAY INCLUDE FIRST LAYER OF SURFACE COURSE UP TO EDGE AND ELEVATION OF EXISTING ROADWAY FROM (SEE SHEETS TCP-4 & TCP-5):

- L- STA. 10+62+/- (NB) TO -L- STA. 12+82+/- (NB)
- L- STA. 13+21+/- (NB) TO -L- STA. 15+08+/- (NB)
- L- STA. 15+60+/- (NB) TO -L- STA. 20+81+/- (NB)
- L- STA. 21+07+/- (NB) TO -L- STA. 23+20+/- (NB)
- L- STA. 23+55+/- (NB) TO -L- STA. 26+35+/- (NB)
- L- STA. 26+68+/- (NB) TO -L- STA. 30+00+/- (NB)
- L- STA. 30+20+/- (NB) TO -L- STA. 33+87+/- (NB)
- L- STA. 34+22+/- (NB) TO -L- STA. 37+05+/- (NB)

- CLOSE DRIVE 1 AT -L- STA. 15+30+/- AND INSTALL 15" RCP. ONCE THE PIPE INSTALLATION IS COMPLETE, CONSTRUCT THE ROADWAY TO THE EXISTING ELEVATION AND OPEN DRIVE 1 TO TRAFFIC (SEE SHEET TCP-4).

- STAGE CONSTRUCT THE 15" RCP AT DRIVE 2 -L- STA. 28+55+/- USING FLAGGERS. CONSTRUCT THE ROADWAY BACK TO EDGE AND ELEVATION OF EXISTING ROADWAY BY THE END OF THE WORK DAY. ONCE PIPE INSTALLATION IS COMPLETE AND THE ROADWAY IS CONSTRUCTED TO THE EXISTING ELEVATION, CLOSE THE LEFT TURN LANE FOR DRIVE 2 USING A PAINTED ISLAND (SEE SHEETS TCP-5 AND TCP-6).

- REMOVE EXISTING CONCRETE ISLANDS AT DRIVE A / -L- STA. 26+50+/-, -Y1- / -L- STA. 30+00+/- AND -Y2- RAMP / -L- STA. 34+40+/- AND CONSTRUCT ROADWAY BACK TO EXISTING ELEVATION. PLACE CONES, PAINT OR TUBULAR MARKERS TO OUTLINE THE LOCATION OF THE PROPOSED ISLANDS AT DRIVE A AND -Y1- (SEE SHEET TCP-5).

- ACTIVATE TEMPORARY DESIGN 1, OPEN CUT AND REPLACE SECTION OF 18" EXISTING PIPE LOCATED AT -L- STA. 29+00+/- WITH 24" PROPOSED PIPE AS SHOWN ON TCP-5, SECTION B-B' AND ROADWAY PLAN. TEMPORARILY TIE-IN PROPOSED PIPE WITH EXISTING PIPE AND CONTINUE ROADWAY CONSTRUCTION. CONSTRUCT THE ROADWAY BACK TO EDGE AND ELEVATION OF EXISTING ROADWAY FOR THE PHASE II TRAFFIC SHIFT. THIS WORK MAY BE DONE DURING A MARATHON WEEKEND. DO NOT LEAVE AN OPEN CUT WHEN WORK IS NOT BEING PURSUED. ONCE PIPE IS INSTALLED ACTIVATE SIGNAL TO EXISTING TRAFFIC PATTERN.

- CONSTRUCT THE PROPOSED WIDENING ALONG RIGHT/LEFT SIDE OF EXISTING RAMP -Y1- INDEPENDENTLY OF ONE ANOTHER UP TO EDGE AND ELEVATION USING ROADWAY STANDARD DRAWING 1101.02 SHEET 7 OF 9 FROM (SEE SHEET TCP-5):

- RIGHT -Y1- STA. 10+50+/- TO -Y1- STA. 18+63+/-
- LEFT -Y1- STA. 10+50+/- TO -Y1- STA. 16+16+/-

- CONSTRUCT -Y2- WIDENING UP TO EDGE AND ELEVATION OF EXISTING ROADWAY USING ROADWAY STANDARD DRAWING 1101.02 SHEET 7 OF 9 FROM (SEE SHEET TCP-5):

- Y2- STA. 11+09+/- TO -Y2- STA. 17+83+/-

- REVISE EXISTING SIGNALS AT THE INTERSECTIONS OF WAKE FOREST RD. / -Y3- AND AT WAKE FOREST RD. / -Y2- TO TEMPORARY DESIGN 2 USING ROADWAY STANDARD 1101.02 SHEET 3 OF 9, FLAGGERS AND POLICE (DO NOT ACTIVATE TEMPORARY DESIGN 2). SEE SIGNAL PLANS TEMPORARY DESIGN 2 AND TCP-5.

NOTE: USE LANE CLOSURES ACCORDING TO ROADWAY STANDARD DRAWING 1101.02 SHEET 3 OF 9, FLAGGERS, POLICE AND TCP-5 WHEN INSTALLING LOOPS. INSTALL LOOPS BEFORE CONSTRUCTING THE FINAL LAYER OF SURFACE COURSE.

STEP 2: TEMPORARY TRAFFIC SHIFT

(COMPLETE THE FOLLOWING WORK, STEPS A) THRU C) DURING A MARATHON WEEKEND. SEE INTERMEDIATE CONTRACT TIME #2 FOR ALLOWABLE WORKING TIMES AND LIQUIDATED DAMAGES).

A) -PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) ALONG -L- (WAKE FOREST ROAD) AS SHOWN ON SHEET TCP-6 USING RDWY. STD. DRAWING 1101.02 SHEET 3, 6 AND 7 OF 9. USE FLAGGERS AND POLICE TO DIRECT TRAFFIC THROUGH THE INTERSECTION OF WAKE FOREST RD. AND -Y3- (I-440 INNER BELTLINE OFF RAMP).

-ACTIVATE TEMPORARY DESIGN 2 USING FLAGGERS AND POLICE. SIMULTANEOUSLY INSTALL TRAFFIC CONTROL DEVICES AND SHIFT TRAFFIC TO TEMPORARY PATTERN (SEE SHEET TCP-6 AND SIGNAL PLANS TEMPORARY DESIGN 2).

B) -COMPLETE 24" PROPOSED PIPE INSTALLATION AS SHOWN ON SHEET TCP-6 AND SECTION C-C'.

C) -USING FLAGGERS AND POLICE, PLACE PAVEMENT MARKINGS, TRAFFIC CONTROL DEVICES, ACTIVATE TEMPORARY DESIGN 3 AND SHIFT TRAFFIC TO NEW TEMPORARY PATTERN AS SHOWN ON SHEETS TCP-7 AND TCP-8. THIS PATTERN MAY BE LEFT OVERNIGHT AND LIQUIDATED DAMAGES SHALL NOT APPLY. SEE SIGNAL PLANS FOR TEMPORARY DESIGN 3.

PHASE II

STEP 1:
- USING THE TRAFFIC CONTROL ON SHEETS TCP-7 AND TCP-8, REMOVE THE EXISTING RAISED MEDIAN ISLANDS ON -L- (WAKE FOREST ROAD) AND CONSTRUCT ROADWAY BACK TO EXISTING ELEVATION OF EXISTING ROADWAY. PLACE DRUMS TO OUTLINE THE LOCATIONS OF THE PROPOSED ISLANDS AS SHOWN ON TCP-7 AND TCP-8. LEAVE THE TRAFFIC CONTROL DEVICES IN PLACE AT THE END OF THE WORK DAY AS SHOWN ON SHEETS TCP-7 AND TCP-8. LIQUIDATED DAMAGES FOR LANE CLOSURES LEFT AT THE END OF THE WORK DAY SHALL NOT APPLY.

STEP 2:
- USING RDWY. STD. DRAWINGS 1101.02 SHEET 3, 6 AND 7 OF 9, FLAGGERS AND POLICE, WEDGE AND RESURFACE -L- (WAKE FOREST RD.) AND ALL -Y- LINES UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE. PLACE PAINT PAVEMENT MARKINGS BY THE END OF EACH WORK DAY. SEE SHEETS TCP-7 AND TCP-8 FOR TRAFFIC PATTERN WHEN WORK IS NOT IN PROGRESS.

STEP 3:
- USING THE TRAFFIC CONTROL ON SHEETS TCP-7 AND TCP-8, CONSTRUCT THE PROPOSED ISLANDS ON -L- (WAKE FOREST ROAD) AND DRIVE A. EACH ISLAND MAY BE CONSTRUCTED SIMULTANEOUSLY OR INDEPENDENTLY OF ONE ANOTHER. ONCE AN ISLAND IS CONSTRUCTED, REMOVE ANY CONFLICTING MARKINGS AND INSTALL PROPOSED MARKINGS (PAINT) AND ACTIVATE THE PROPOSED SIGNALS TO THE FINAL PATTERN. SEE SHEETS TCP-7, TCP-8, ROADWAY PLANS AND SIGNAL PLANS.


STEP 4:
- ONCE THE ISLANDS AND TEMPORARY MARKINGS (PAINT) ARE COMPLETE, ACTIVATE PROPOSED FINAL SIGNALS AND PLACE FINAL LAYER OF SURFACE COURSE. USE ROADWAY STANDARD 1101.02 SHEET 3, 6 AND 7 OF 9, POLICE AND FLAGGERS TO DIRECT TRAFFIC THRU THE INTERSECTIONS.

PHASE III

STEP 1:
- USING THE SAME TRAFFIC CONTROL AS IN PHASE II, STEP 2, PLACE FINAL MARKINGS (THERMOPLASTIC) AND MARKERS (RAISED). SEE SHEETS PM-1 THRU PM-8

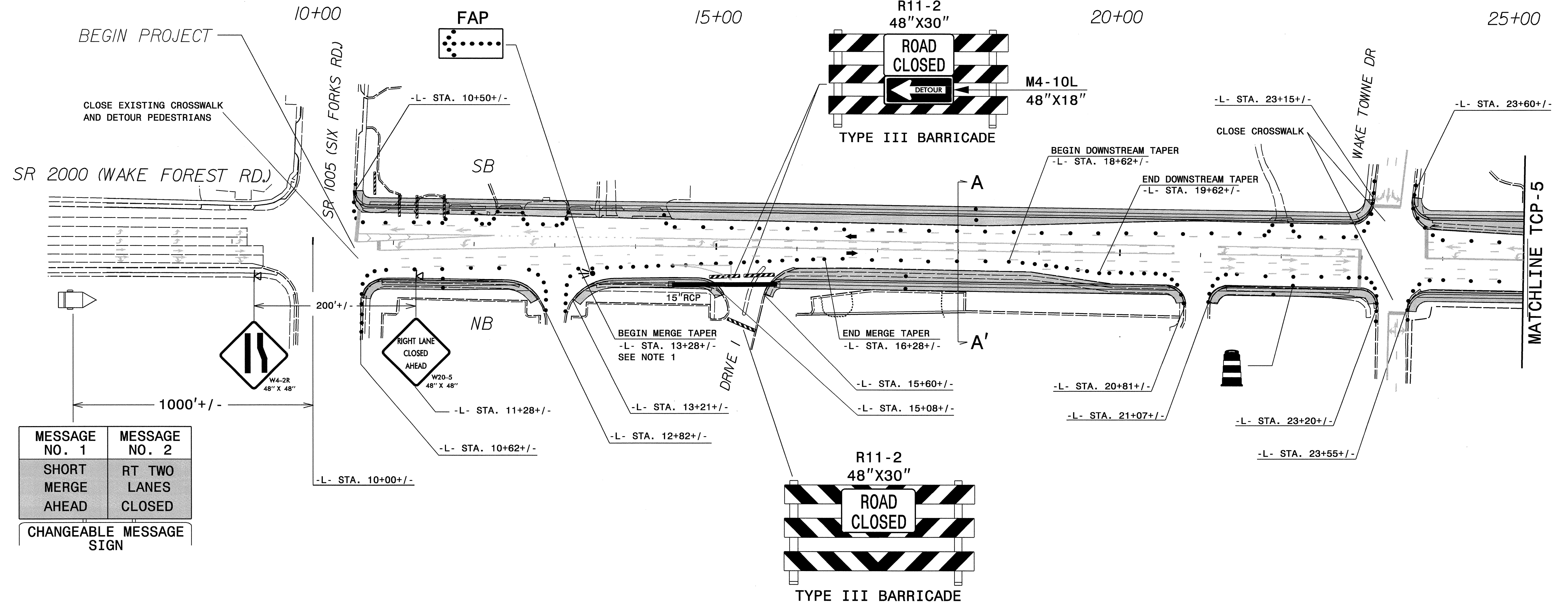
STEP 2:
- REMOVE ALL TRAFFIC CONTROL DEVICES AND OPEN WAKE FOREST ROAD, DRIVES AND -Y- LINES TO PROPOSED PATTERN.

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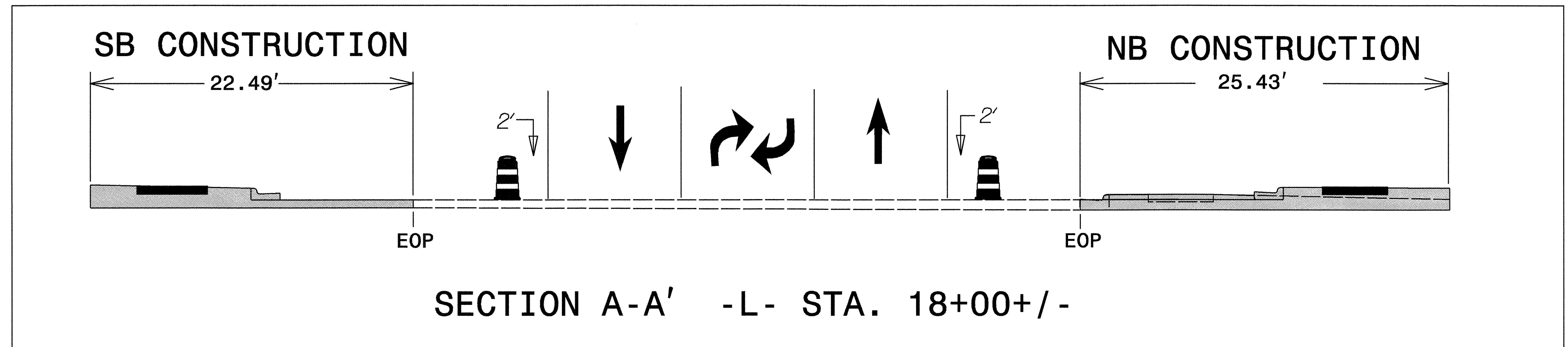
APPROVED: <i>M. McDermid</i> DATE: <i>11/1/06</i>	PHASING																			
	<table border="1" style="width: 100%; font-size: 0.8em;"> <tr><td>SCALE:</td><td>NONE</td></tr> <tr><td>DATE:</td><td>MAR 06</td></tr> <tr><td>DWG. BY:</td><td>MRM</td></tr> <tr><td>DESIGN BY:</td><td>MRM</td></tr> <tr><td>REVIEWED BY:</td><td>CBH</td></tr> </table>	SCALE:	NONE	DATE:	MAR 06	DWG. BY:	MRM	DESIGN BY:	MRM	REVIEWED BY:	CBH	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: left; font-size: 0.8em;">REVISIONS</th> </tr> <tr> <td style="width: 5%; text-align: center; font-size: 0.7em;">NO.</td> <td style="font-size: 0.7em;">DESCRIPTION</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	REVISIONS		NO.	DESCRIPTION				
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WAKE FOREST RD. (NB)/(SB) PROPOSED WIDENING AND DRIVE 1 PIPE INSTALLATION

PROJ. REFERENCE NO.	SHEET NO.
W-4404	TCP-4



MESSAGE NO. 1	MESSAGE NO. 2
SHORT MERGE AHEAD	RT TWO LANES CLOSED
CHANGEABLE MESSAGE SIGN	



-EXISTING MARKINGS ARE SHOWN IN GRAY
 -NEW MARKINGS ARE SHOWN IN BLACK

APPROVED: *M. M. ...* DATE: 11/1/06

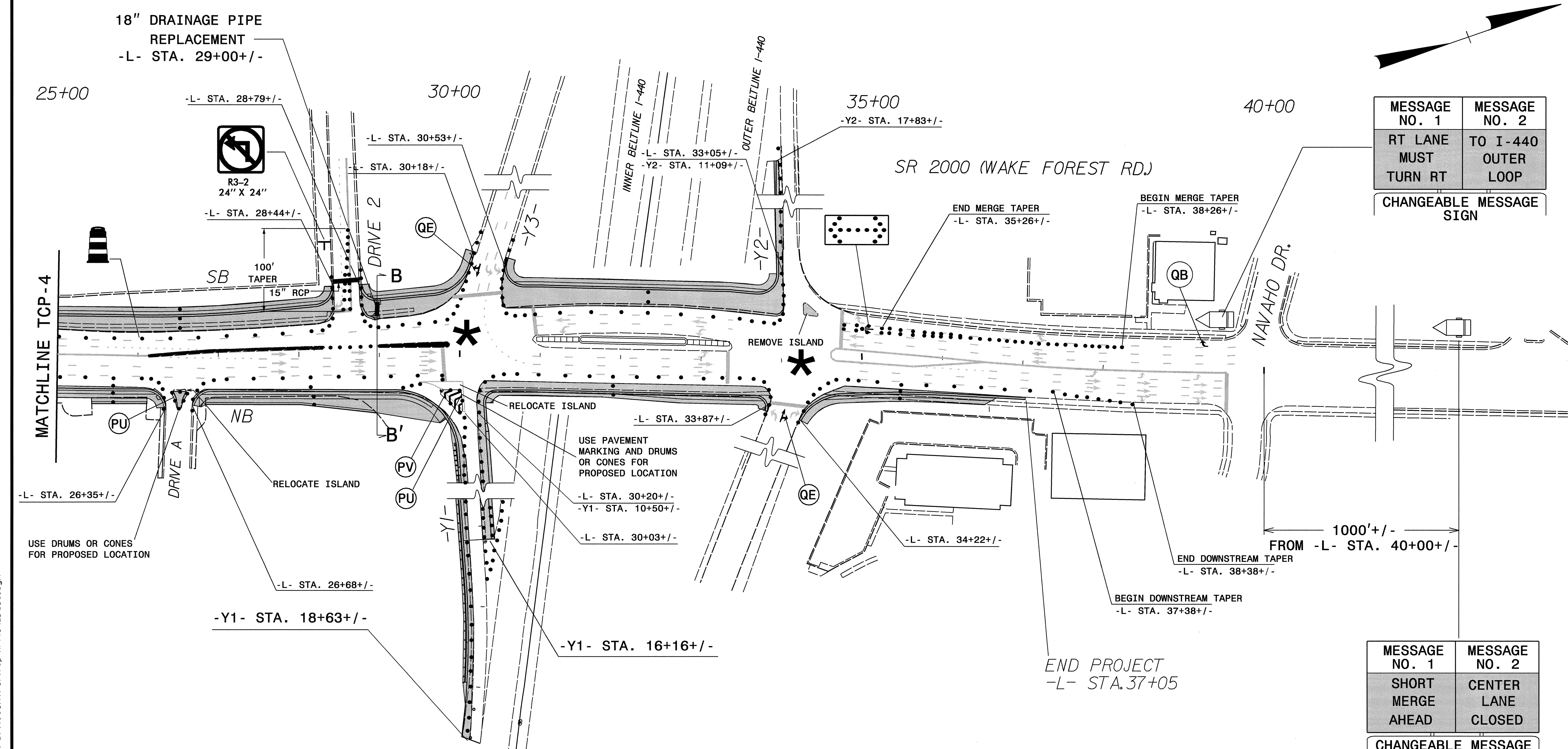
PHASE I, STEP 1

SCALE: NONE		REVISIONS
DATE: MAR 06		
DWG. BY: MRM		
DESIGN BY: MRM		
REVIEWED BY: CBH		

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 \\dot\cristoforo\projects\w4404\traffic\control\tcp\w4404_base.dgn
 mrm\mrm AT WZTC22099

WAKE FOREST RD. NB AND SB PROPOSED WIDENING CONT.
(MARATHON WEEKEND)

PROJ. REFERENCE NO. W-4404	SHEET NO. TCP-5
-------------------------------	--------------------



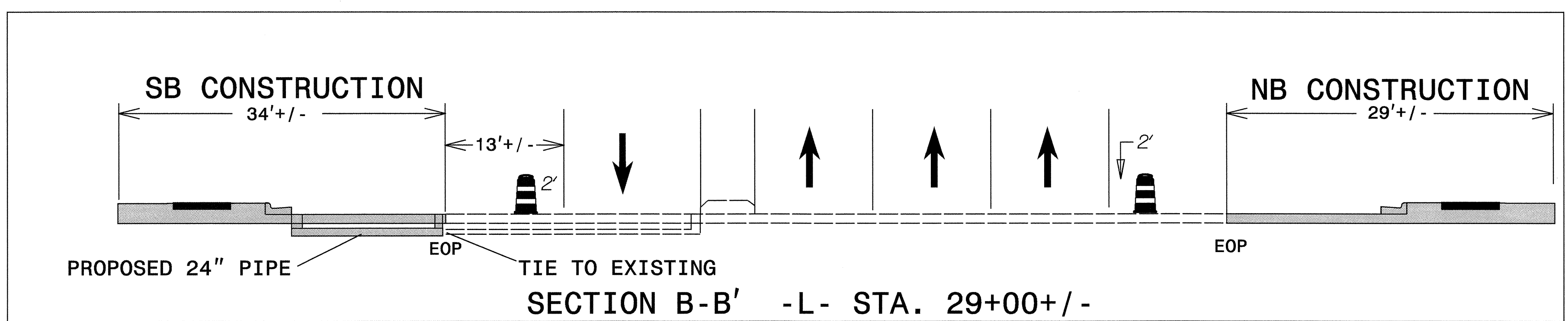
MESSAGE NO. 1 RT LANE MUST TURN RT	MESSAGE NO. 2 TO I-440 OUTER LOOP
---	--

CHANGEABLE MESSAGE SIGN

MESSAGE NO. 1 SHORT MERGE AHEAD	MESSAGE NO. 2 CENTER LANE CLOSED
--	---

CHANGEABLE MESSAGE SIGN

* TEMPORARY DESIGN 1



-EXISTING MARKINGS ARE SHOWN IN GRAY
-NEW MARKINGS ARE SHOWN IN BLACK

APPROVED: *[Signature]* DATE: 11/1/06



PHASE I, STEP 1

SCALE: NONE
DATE: MAR 06
DWG. BY: MRM
DESIGN BY: MRM
REVIEWED BY: CBH

REVISIONS

31-OCT-2006 15:22
 \\go1\dfs\control\projects\w4404\traffic\traffic\control\tcp\w4404_base.dgn
 mcmr\lqiez AT: MZ1222099

18" DRAINAGE PIPE REPLACEMENT OPEN CUT CONSTRUCTION (MARATHON WEEKEND)

PROJ. REFERENCE NO. W-4404	SHEET NO. TCP-6
-------------------------------	--------------------

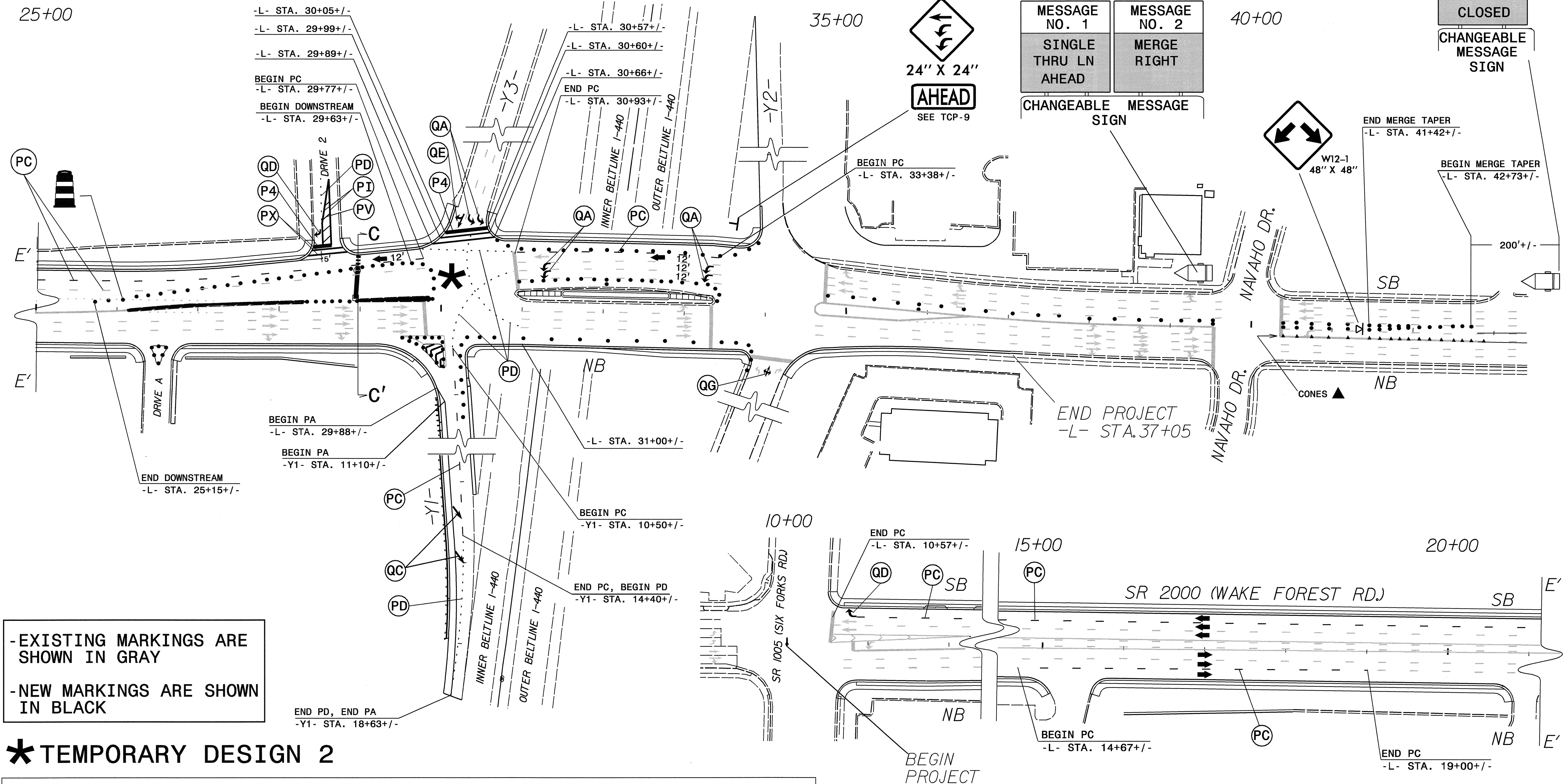
SR 2000 (WAKE FOREST RD.)

25+00

30+00

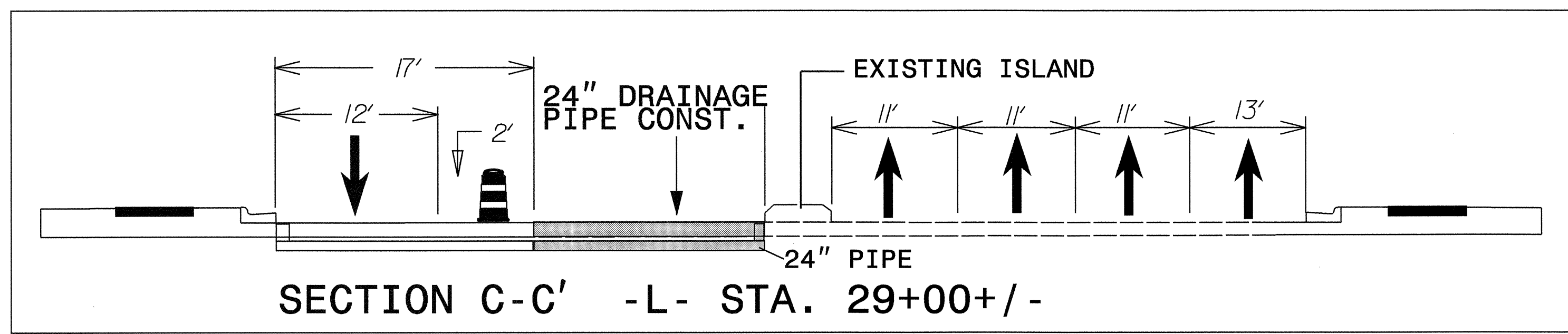
35+00

40+00



-EXISTING MARKINGS ARE SHOWN IN GRAY
 -NEW MARKINGS ARE SHOWN IN BLACK

★ TEMPORARY DESIGN 2

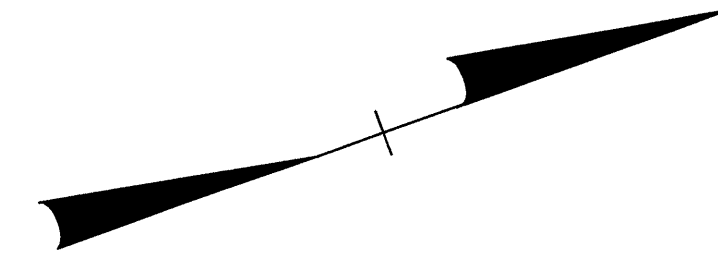


APPROVED: <i>M. McDermid</i> DATE: 11/1/06 SEAL 	<h3 style="margin: 0;">PHASE I, STEP 2</h3>	SCALE: NONE DATE: MAR 06 DWG. BY: MRM DESIGN BY: MRM REVIEWED BY: CBH	REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>						

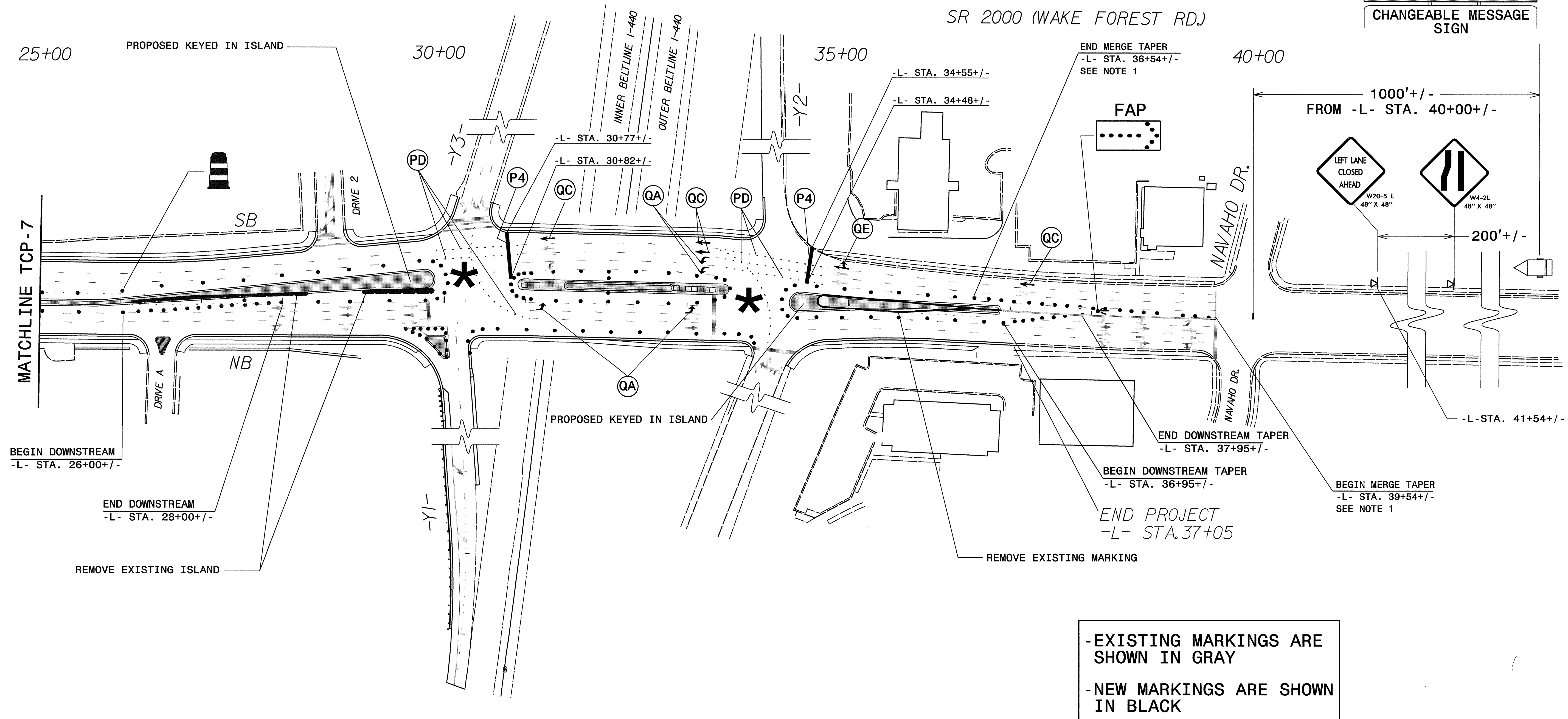
3-0CT-2006 1521
 \\go1\drive\projects\w4404\tr\affia\tr\afficontrol\tcp\w4404_base.dgn
 11/1/06 11:22:40 AM

CONSTRUCTION OF MONOLITHIC ISLANDS (KEYED IN) CONST.

PROJ. REFERENCE NO. W-4404	SHEET NO. TCP-8
-------------------------------	--------------------



MESSAGE NO. 1 LEFT LANE CLOSED	MESSAGE NO. 2 MERGE RIGHT
CHANGEABLE MESSAGE SIGN	

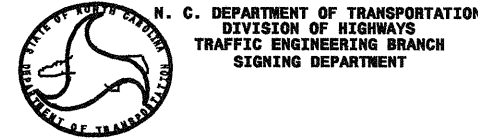


*** TEMPORARY DESIGN 3**

- EXISTING MARKINGS ARE SHOWN IN GRAY
- NEW MARKINGS ARE SHOWN IN BLACK

APPROVED: <i>M. McDermid</i> DATE: 11/1/06	PHASE II, STEP 1	
	SCALE: NONE	
	DATE: MAR 06	
	DWG. BY: MRM	
	DESIGN BY: MRM	
REVIEWED BY: CBH	REVISIONS	

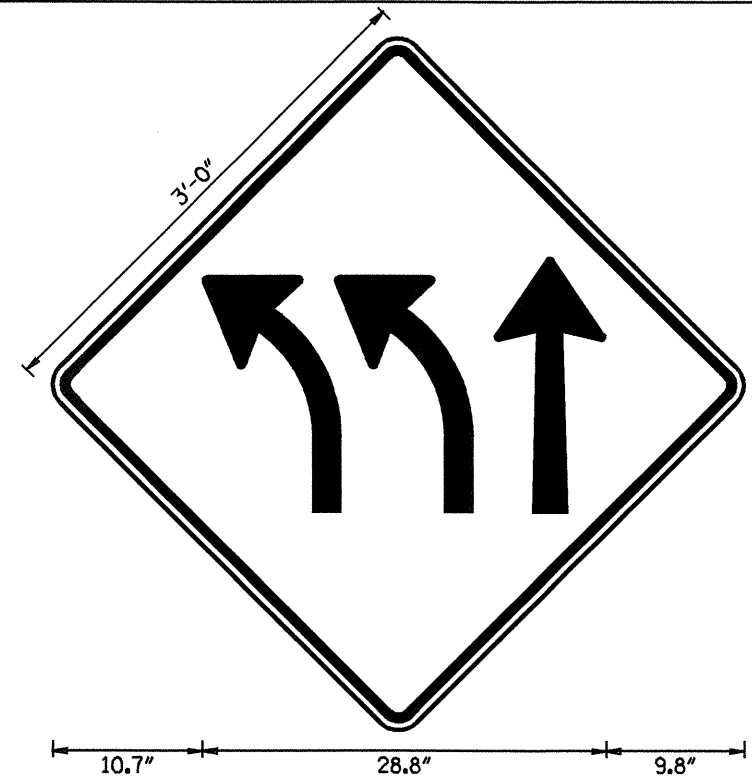
31-OCT-2006 15:20
 \\dot\dfs\root\proj\1100\projects-w\4404\traffic\control\tcp\w4404_base.dgn
 mmm\lspz AT WZC22099



SIGN NUMBER: Turns
 TYPE: E
 QUANTITY: 1
 SIGN WIDTH: 4'-1"
 HEIGHT: 4'-1"
 TOTAL AREA: 16.9 Sq.Ft.
 BORDER TYPE: RECESSED
 RECESS: 0.625"
 WIDTH: 0.875"
 RADII: 2.250"
 NO. Z BARS: BACKING MAT'L: 0.080" ALUMINUM
 LENGTH: 0.079" COMPOSITE

SYMBOL	X	Y	WID	HT
ARPCL1	10.7	15.5	9.9	17
ARPCL1	20.1	15.5	9.9	17
ARLONG	31.5	15.5	8	18.4

DESIGN BY: R.Tung
 PROJECT ID: R-4404
 CHECKED BY: D.E.Mitch
 DIV: 5
 STD #: DATE: May 02, 2006



BORDER
 R=2.25"
 TH=0.88"
 IN=0.63"

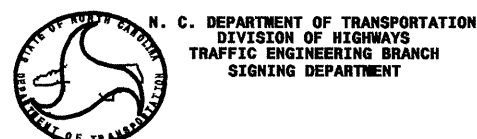
- USE NOTES:
- Legend and border shall be direct applied non-reflective sheeting.
 - Background shall be Type VII, VIII or IX (prismatic) reflective sheeting.

LETTER POSITIONS

Letter locations are panel edge to lower left corner

										Series/Size
										Text Length
										C 2000
										19.5

Spacing Factor is 1 unless specified otherwise



SIGN NUMBER: AHEAD
 TYPE: E
 QUANTITY: 1
 SIGN WIDTH: 2'-0"
 HEIGHT: 1'-0"
 TOTAL AREA: 2.0 Sq.Ft.
 BORDER TYPE: RECESSED
 RECESS: 0.38"
 WIDTH: 0.63"
 RADII: 1.5"
 NO. Z BARS: BACKING MAT'L: 0.063" ALUMINUM
 LENGTH: 0.079" COMPOSITE

SYMBOL	X	Y	WID	HT

DESIGN BY: R.Tung
 PROJECT ID: W-4404
 CHECKED BY: D.M.Eaton
 DIV: 5
 STD #: DATE: May 01, 2006



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

- NOTES:
- Legend and border shall be direct applied non-reflective sheeting.
 - Background shall be Type VII, VIII or IX (prismatic) reflective sheeting.

LETTER POSITIONS

Letter locations are panel edge to lower left corner

										Series/Size
										Text Length
A	H	E	A	D						C 2000
2.3	6.6	10.7	14.1	18.4						19.5

Spacing Factor is 1 unless specified otherwise

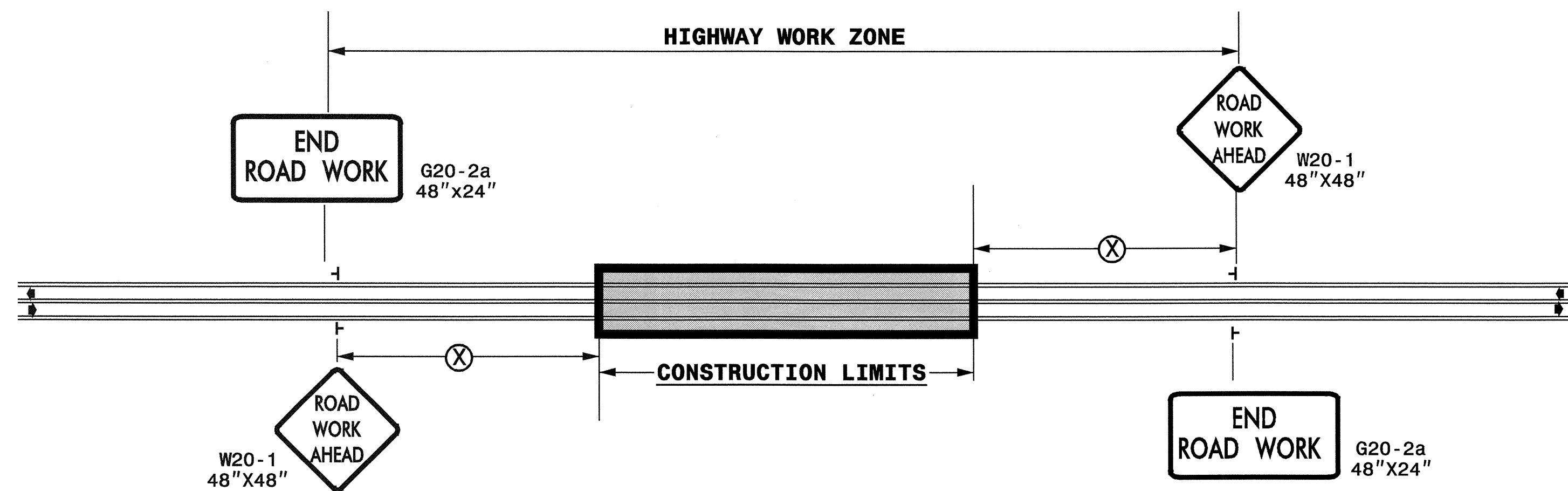
3-OCT-2006 15:20 \\dot\dfsroot\proj\ncdot\projects-w\w4404\traffic\control\top\w4404_base.dgn

APPROVED: *M. McDaniel* DATE: *4/1/06*

SIGN DESIGN

SCALE: NONE		REVISIONS
DATE: MAR 06		
DESIGN BY: MRM		
REVIEWED BY: CBH		

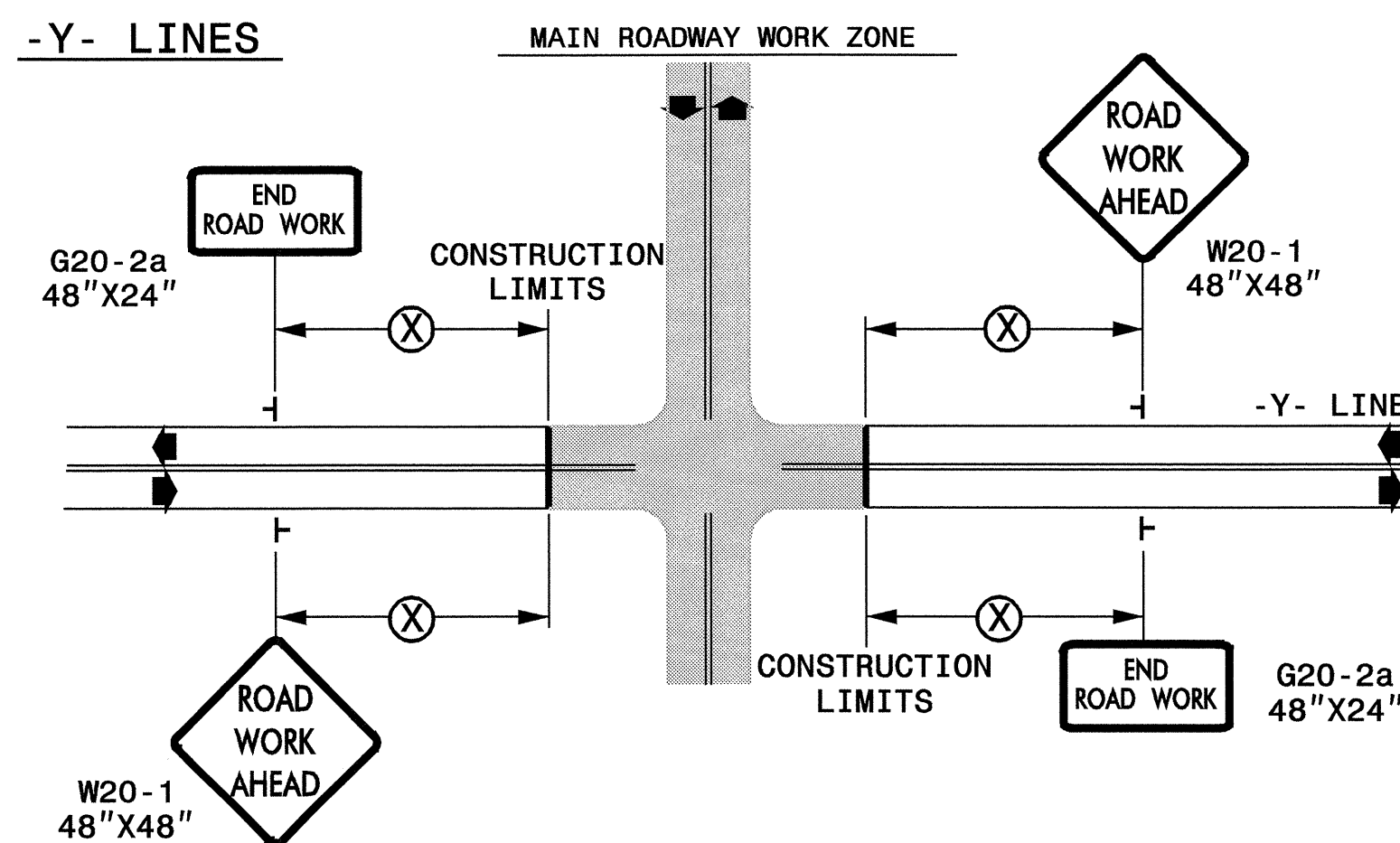
TWO-WAY UNDIVIDED ** (L-LINES)



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

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

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



DETAIL DRAWING FOR
TWO-WAY UNDIVIDED
WORK ZONE WARNING SIGNS

GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.
- ** TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

LEGEND

- ┆ STATIONARY SIGN
- ◀ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1

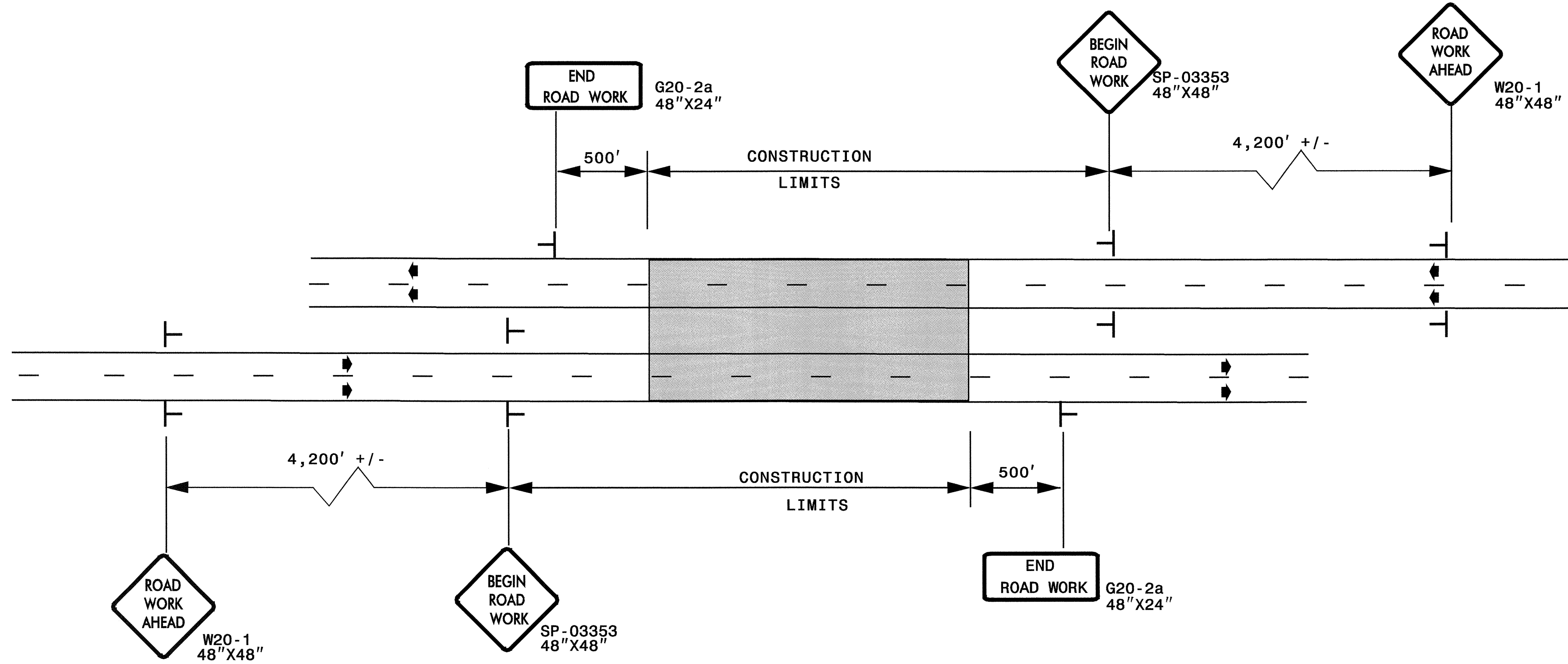
APPROVED: <i>M. McSwain</i> DATE: 11/10/06	DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS	
	SCALE: NONE	REVISIONS
	DATE: MAR 06	7-98 10/01
	DWG. BY: MRM	10-98 03/04
	DESIGN BY: MRM	01/01 11/04
REVIEWED BY: CHB		CAD FILE

31-OCT-2006 15:20
 \\s01\dfsroot\p02\p02\projects\w4404\TrafficControl\top\w4404_base.dgn
 mmm\miquelz AT 12/22/09

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

PROJ. REFERENCE NO.	SHEET NO.
W-4404	TCP-11

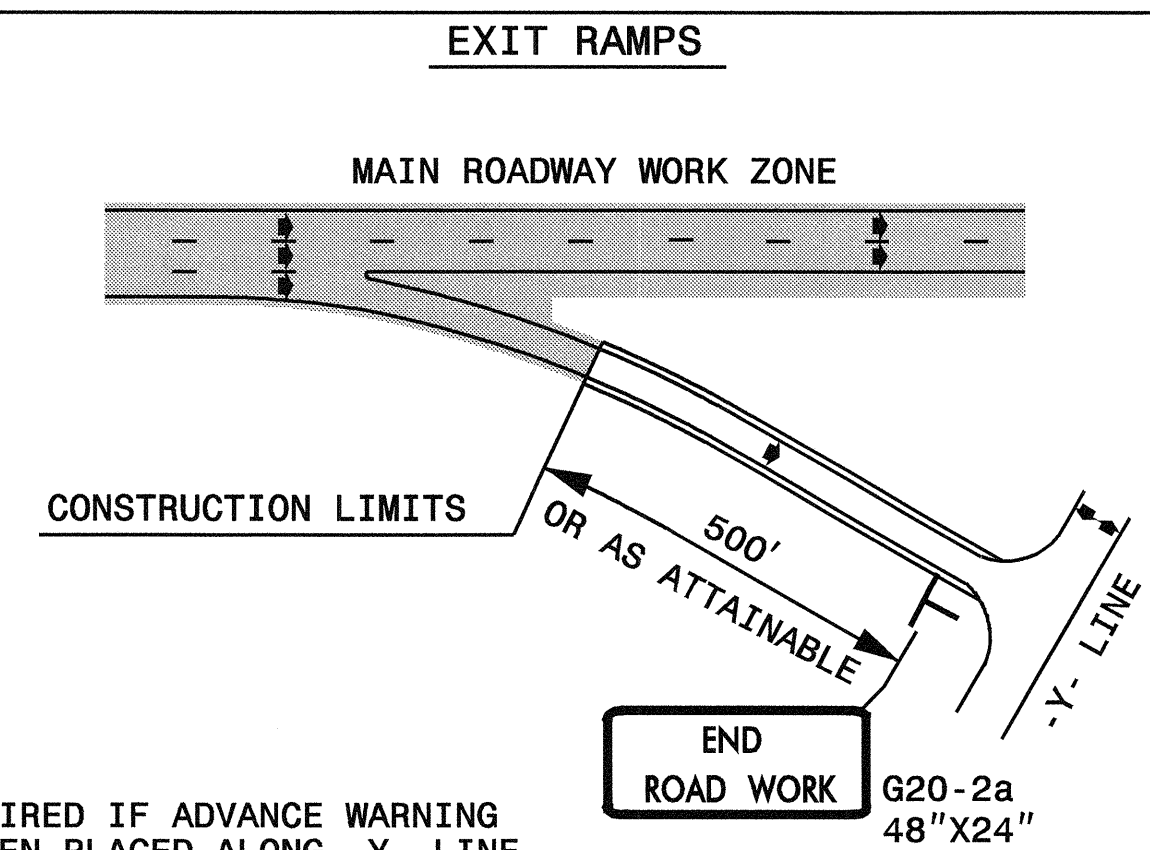
DETAIL A



LEGEND

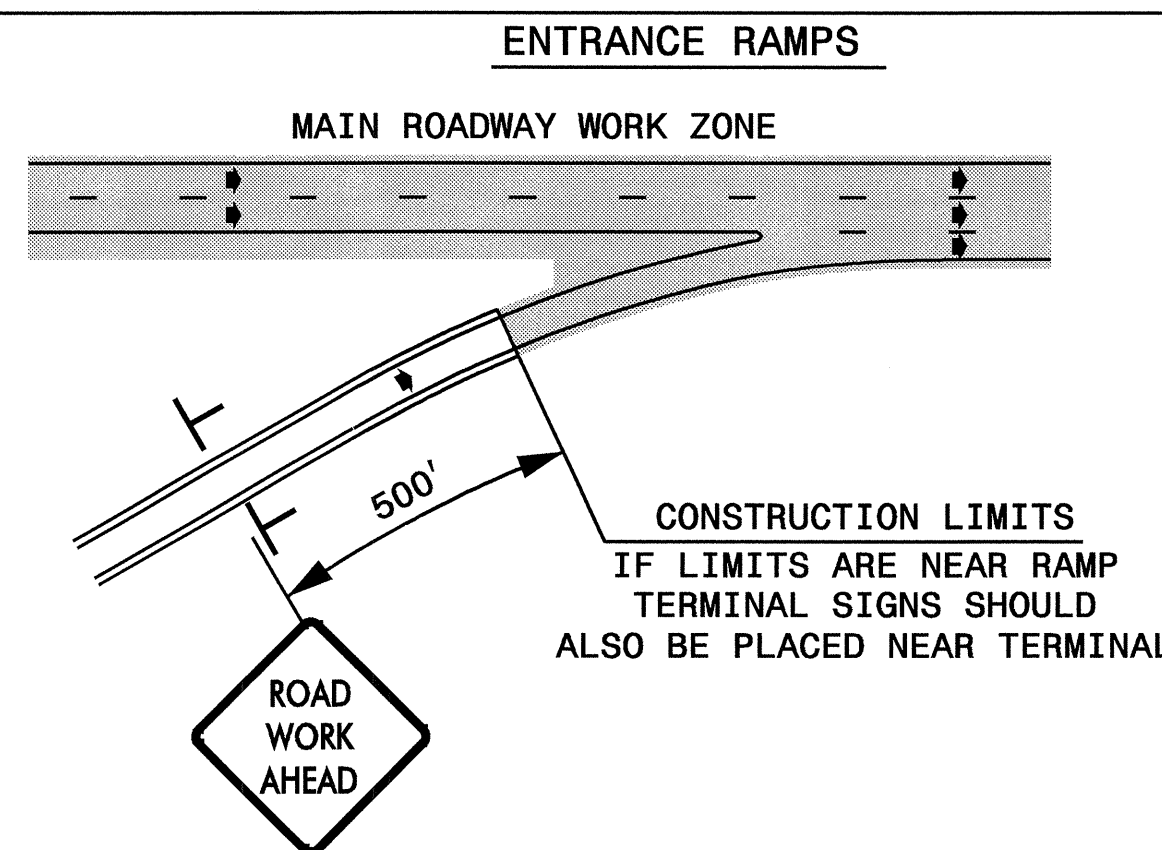
	STATIONARY SIGN
	DIRECTION OF TRAFFIC FLOW

DETAIL B

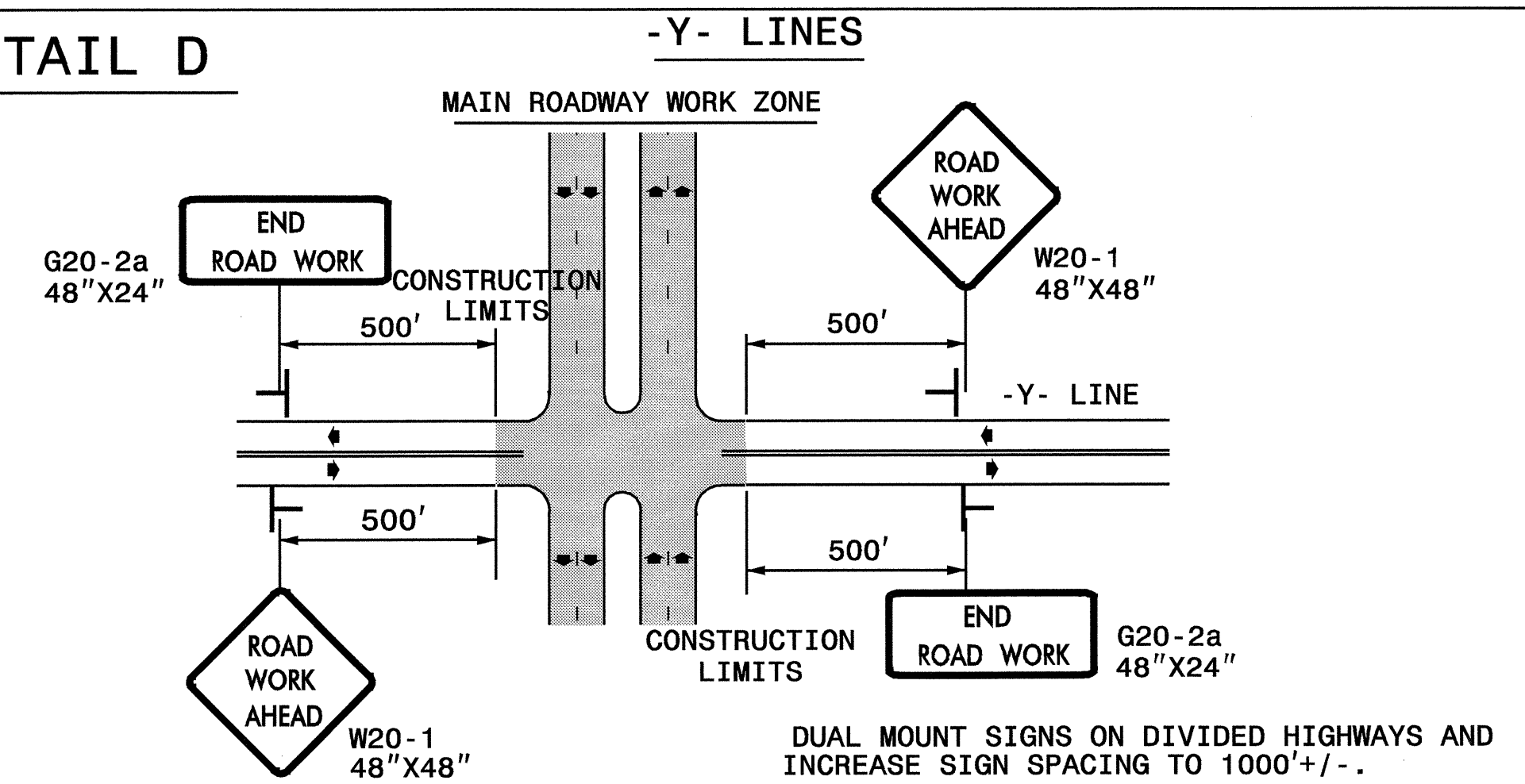


NOTE: SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

DETAIL C



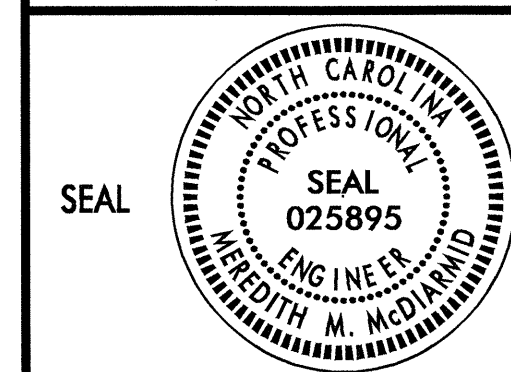
DETAIL D



GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.

APPROVED: *M. McDaniel* DATE: *1/1/06*



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

SCALE: NONE		REVISIONS
DATE: MAR 06		03/04
DWG. BY: MRM		
DESIGN BY: MRM		
REVIEWED BY: CHB		CADD FILE

31-OCT-2006 15:19 \\dot\dfs\rod\01\work\1110.01\1110.01\1110.01\tr\traffic\control\tcp\w4404_base.dgn
 miramir.dqez AT 12/12/2009