



# GENERAL NOTES

PROJ. REFERENCE NO. B-3337	SHEET NO. TCP-2
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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 UNDESIRABLE 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:

ROAD NAME	DAY AND TIME RESTRICTIONS
CHURCH STREET (-L-)	MON. - FRI. 7AM - 7PM

B) DO NOT STOP TRAFFIC FOR MORE THAN 15 MINUTES AS FOLLOWS:

ROAD NAME	OPERATIONS
CHURCH STREET (-L-)	TRAFFIC SHIFTS AND OTHER OPERATIONS AS DIRECTED BY THE ENGINEER

C) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR OTHERWISE 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 40 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.

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, ON BOTH SIDES OF AN OPEN TRAVELWAY, WITHIN THE SAME LOCATION, ON A TWO-LANE, TWO-WAY ROAD.

I) DO NOT PERFORM WORK INVOLVING HEAVY EQUIPMENT WITHIN 15 FT OF THE EDGE OF TRAVELWAY WHEN WORK IS BEING PERFORMED BEHIND A LANE CLOSURE ON THE OPPOSITE SIDE OF THE TRAVELWAY.

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

PAVEMENT EDGE DROP OFF REQUIREMENTS

K) 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 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.

L) 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

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

SIGNING

N) 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.

O) STATE FORCES WILL PROVIDE PERMANENT SIGNING.

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

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

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

TRAFFIC BARRIER

S) INSTALL MOVABLE/PORTABLE CONCRETE BARRIER ACCORDING TO THE TRAFFIC CONTROL PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE MOVABLE/PORTABLE CONCRETE BARRIER IS INSTALLED AT ANY LOCATION, PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

ONCE MOVABLE/PORTABLE CONCRETE BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE MOVABLE/PORTABLE CONCRETE BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE/RESET MOVABLE/PORTABLE CONCRETE BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS, BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

T) 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
LESS THAN 50 MPH	20 FT
50 MPH or HIGHER	30 FT

INSTALL MOVABLE/PORTABLE CONCRETE BARRIER WITH THE TRAFFIC FLOW, BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE MOVABLE/PORTABLE CONCRETE 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 CLOSED THE SECTION OF THE ROADWAY UNTIL THE BARRIER CAN BE PLACED OR AFTER BARRIER IS REMOVED.

TRAFFIC CONTROL DEVICES

U) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT.

V) 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.

W) PLACE SETS OF THREE DRUMS PERPENDICULAR TO THE EDGE OF THE TRAVELWAY ON 200 FT CENTERS WHEN UNOPEN LANES ARE CLOSED TO TRAFFIC. THESE DRUMS SHALL BE IN ADDITION TO CHANNELIZING DEVICES.

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
ALL ROADS	POLYUREA	PERMANENT RAISED

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

ROAD NAME	MARKING	MARKER
ALL ROADS AND EXISTING BRIDGE	PAINT	TEMPORARY RAISED
PROPOSED BRIDGE	COLD APPLIED PLASTIC TYPE 4 (REMOVEABLE TAPE)	TEMPORARY RAISED

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

AA) REPLACE ANY PAVEMENT MARKINGS THAT HAVE BEEN DAMAGED BY THE END OF EACH DAY'S OPERATION.

BB) REMOVE ALL CONFLICTING PAVEMENT MARKINGS BY THE END OF EACH DAY'S OPERATION.

CC) 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.

TEMPORARY / FINAL SIGNALS

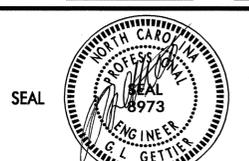
DD) NOTIFY THE ENGINEER TWO (2) MONTHS BEFORE A TRAFFIC SIGNAL INSTALLATION BY OTHERS IS REQUIRED.

EE) OTHERS WILL SHIFT OR REVISE SIGNAL HEADS AS SHOWN ON THE SIGNAL PLANS.

MISCELLANEOUS

FF) POLICE MAY BE USED TO MAINTAIN TRAFFIC THROUGH INTERSECTIONS.

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**PHASE I**

- STEP 1: - CONTRACTOR SHALL PLACE ADVANCE WORK ZONE WARNING SIGNS ALONG EXISTING CHURCH STREET (-L-) AND ALL -Y- LINES AS SHOWN ON SHEET TCP-8.
- CONTRACTOR SHALL INSTALL CHANGEABLE MESSAGE SIGNS (CMS) ON CHURCH STREET (-L-) AND/OR GOLDEN GATE DRIVE (-Y-) AS DIRECTED BY THE ENGINEER.
- STEP 2: - CONTRACTOR, USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1, 2, 3 & 4 OF 9:
- MAY BEGIN CLEARING/GRUBBING & GRADING OPERATIONS, AND CONSTRUCTION OF PROPOSED DRAINAGE (NOT INCLUDING CURB & GUTTER) ALONG & ACROSS EXISTING CHURCH STREET (-L-) AND -Y- LINE/DRIVEWAYS, AS DIRECTED BY THE ENGINEER (SEE CONSTRUCTION PLANS).
- NOTE: WHEN CONSTRUCTING DRAINAGE STRUCTURES ADJACENT TO TRAFFIC, INSTALL TEMPORARY STEEL PLATES, AS DIRECTED BY THE ENGINEER. MAY WORK EACH LOCATION INDEPENDENTLY OR CONCURRENTLY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. WORK IN A CONTINUOUS MANNER TO PERFORM THE WORK IN THE FOLLOWING SEQUENCE, IN STEPS 'A' THRU 'E'.
- A: CLOSE THE APPROPRIATE TRAVEL LANE TO TRAFFIC USING ROADWAY STANDARD DRAWING NO. 1101.02 SHEETS 1, 2, 3 & 4 OF 9.
- B: CONSTRUCT PROPOSED DRAINAGE STRUCTURES/PIPING AS SHOWN IN THE CONSTRUCTION PLANS AND COVER EXCAVATED AREAS WITH TEMPORARY STEEL PLATES FOR PROTECTION DURING CURING.
- C: OPEN TRAVEL LANE TO EXISTING TRAFFIC PATTERN BY THE END OF EACH WORK PERIOD.
- D: WHEN PROPERLY CURED, CLOSE THE APPROPRIATE TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEETS 1, 2, 3 & 4 OF 9. BACKFILL & PAVE, IF REQUIRED, UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT (SEE CONSTRUCTION PLANS).
- E: OPEN TRAVEL LANE TO EXISTING TRAFFIC PATTERN BY THE END OF THE WORK PERIOD.
- PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) AND TEMPORARY RAISED PAVEMENT MARKERS ON THE LEFT SIDE OF CHURCH STREET (-L-) FROM STA. 16+50 +/- -L- TO STA. 26+10 +/- -L- FOR AN INTERMEDIATE TWO-LANE, TWO-WAY PATTERN AND SHIFT TRAFFIC TO THE INTERMEDIATE TRAFFIC PATTERN (SEE SHEET TCP-4).
- NOTE: PLACE TYPE III BARRICADES AND/OR DRUMS AT ALL -Y- LINES/DRIVEWAYS TO KEEP EXISTING CLOSED TO TRAFFIC.
- INSTALL PORTABLE CONCRETE BARRIER (PCB) (ANCHORED ON BRIDGE) AND TEMPORARY CRASH CUSHIONS (TCC) ON THE RIGHT SIDE OF THE INTERMEDIATE TRAFFIC PATTERN OF CHURCH ST. (-L-) FROM STA. 19+85 +/- -L- TO STA. 21+85 +/- -L- (SEE SHEET TCP-4).
- INSTALL TYPE III BARRICADES WITH "SIDEWALK CLOSED" (R9-9) SIGNS AS SHOWN ON SHEET TCP-4 TO CLOSE THE EXISTING SIDEWALK ON THE RIGHT SIDE OF CHURCH ST. (-L-).
- STEP 3: - CONTRACTOR SHALL, USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1, 2, 3 & 4 OF 9:
- CONSTRUCT RIGHT SIDE OF PROPOSED WIDENING (INCLUDING STAGE I OF PROPOSED BRIDGE) AND TEMPORARY PAVEMENT OF CHURCH STREET (-L-) FROM STA. 16+50 +/- -L- TO STA. 26+10 -L- (INCLUDING ALL DRIVEWAYS, AND PROPOSED DRAINAGE, UP TO THE EDGE AND ELEVATION OF EXISTING (SEE CONSTRUCTION PLANS AND SHEET TCP-4).
- NOTE: PROPOSED DRAINAGE GRATES, LOCATED IN THE TEMPORARY PAVEMENT, NEEDS TO BE TRAFFIC BEARING AND THE CONTRACTOR SHALL WELD THEM TO THE STEEL FRAME TO KEEP THEM IN PLACE FOR THE TRAFFIC SHIFT IN PHASE II, STEP 1.
- PLACE TEMPORARY PAVEMENT MARKINGS (PAINT ON ASPHALT AND REMOVEABLE TAPE ON BRIDGE) AND TEMPORARY RAISED PAVEMENT MARKERS, AS MUCH AS POSSIBLE WITHOUT INTERFERING WITH TRAFFIC ON THE NEWLY COMPLETED WIDENING AND THE TEMPORARY PAVEMENT ON THE RIGHT SIDE OF CHURCH STREET (-L-) FROM STA. 16+50 +/- -L- TO STA. 26+10 +/- -L- FOR AN INTERMEDIATE TWO-LANE, TWO-WAY PATTERN (SEE SHEET TCP-5).
- INSTALL PORTABLE CONCRETE BARRIER (PCB) (ANCHORED ON BRIDGE) AND TEMPORARY CRASH CUSHIONS (TCC) ON THE LEFT SIDE OF THE NEWLY COMPLETED WIDENING ON CHURCH STREET (-L-) FROM STA. 19+70 +/- -L- TO STA. 23+00 +/- -L- (SEE SHEET TCP-5).
- NOTE: THE PCB MAY BE ADJUSTED SOUTH OF THE PROPOSED BRIDGE TO ENSURE THAT THERE IS SUFFICIENT TURNING ROOM FOR THE FIRE DEPARTMENT'S VEHICLES.
- NOTE: THE CONTRACTOR MAY UTILIZE TIMIA'S AND RESET TEMPORARY CRASH CUSHIONS AT THE DIRECTION OF THE ENGINEER.

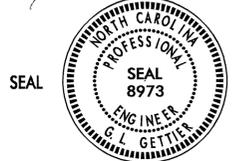
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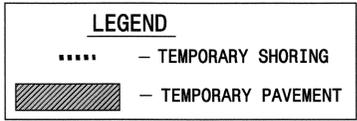
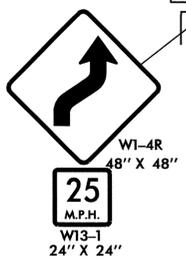
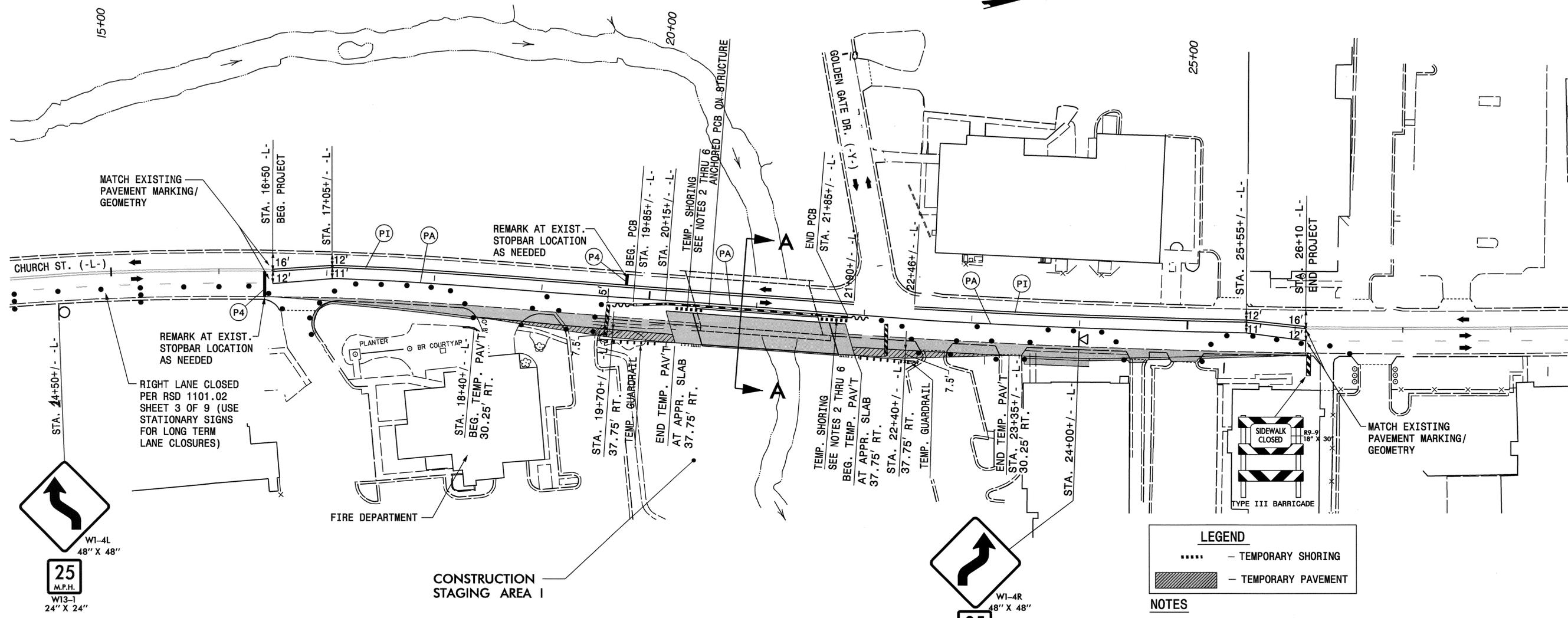
- STEP 1: - CONTRACTOR SHALL, USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1, 2, 3 & 4 OF 9:
- PLACE REMAINDER OF TEMPORARY PAVEMENT MARKINGS (PAINT ON ASPHALT AND REMOVEABLE TAPE ON BRIDGE) AND TEMPORARY RAISED PAVEMENT MARKERS ON THE NEWLY COMPLETED PROPOSED WIDENING (-L-)/ TEMPORARY PAVEMENT FROM STA. 16+50 +/- -L- TO STA. 26+10 +/- -L- AND SHIFT TRAFFIC TO THE INTERMEDIATE TRAFFIC PATTERN (SEE SHEET TCP-5).
- NOTE: CONTRACTOR SHALL PLACE TYPE III BARRICADES AT -Y- LINES/DRIVEWAYS AND/OR DRUMS TO CLOSE EXISTING TO TRAFFIC.
- CONTRACTOR SHALL, USING ROADWAY STANDARD DRAWING NO. 1101.03, SHEETS 1 & 2 OF 9, AND SHEETS TCP-5 AND TCP-7 CLOSE GOLDEN GATE DRIVE (-Y-) AND PLACE TRAFFIC ONTO THE OFF-SITE DETOUR.
- STEP 2: - CONTRACTOR SHALL, USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1, 2, 3 & 4 OF 9:
- CONSTRUCT THE LEFT SIDE OF PROPOSED WIDENING (INCLUDING STAGE II OF PROPOSED BRIDGE) OF CHURCH STREET (-L-) FROM STA. 16+50 +/- -L- TO STA. 26+10 -L-, PROPOSED GOLDEN GATE DRIVE, ALL DRIVEWAYS, SIDEWALK AND PROPOSED DRAINAGE (INCLUDING CURB & GUTTER) UP TO THE EDGE AND ELEVATION OF EXISTING (SEE CONSTRUCTION PLANS AND SHEET TCP-5).
- PLACE TEMPORARY PAVEMENT MARKINGS (PAINT ON ASPHALT AND REMOVEABLE TAPE ON BRIDGE) AND TEMPORARY RAISED PAVEMENT MARKERS, AS MUCH AS POSSIBLE WITHOUT INTERFERING WITH TRAFFIC, ON THE NEWLY COMPLETED WIDENING OF THE LEFT SIDE OF CHURCH STREET (-L-) FROM STA. 16+50 +/- -L- TO STA. 26+10 +/- -L- AND ON GOLDEN GATE DRIVE (-Y-)(SEE SHEET TCP-6).
- STEP 3: - CONTRACTOR SHALL, USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1, 2, 3 & 4 OF 9:
- REMOVE PORTABLE CONCRETE BARRIER (PCB) & TEMPORARY CRASH CUSHIONS (TCC), AND PLACE REMAINDER OF TEMPORARY PAVEMENT MARKINGS (PAINT ON ASPHALT AND TAPE ON BRIDGE) & TEMPORARY RAISED PAVEMENT MARKERS ON PROPOSED CHURCH STREET (-L-) FROM STA. 16+50 +/- -L- TO STA. 26+10 +/- -L-, REMOVE GOLDEN GATE DRIVE DETOUR SIGNS AND BARRICADES AND SHIFT TRAFFIC TO FINAL TRAFFIC PATTERN SHOWN ON SHEET TCP-6.
- NOTE: OUTSIDE NORTHBOUND LANE OF PROPOSED CHURCH STREET (-L-) SHALL REMAIN CLOSED FOR CONSTRUCTION OF PROPOSED CURB & GUTTER AND SIDEWALKS ON THE RIGHT SIDE OF CHURCH STREET (-L-).
- OPEN PROPOSED SIDEWALK ON THE LEFT SIDE OF CHURCH STREET (-L-).
- STEP 4: - CONTRACTOR SHALL, USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1, 2, 3 & 4 OF 9:
- CONSTRUCT THE PROPOSED CURB & GUTTER, SIDEWALK AND COMPLETE THE DRAINAGE ON THE RIGHT SIDE OF CHURCH STREET (-L-) FROM STA. 18+40 +/- -L- TO STA. 23+35 +/- -L- (SEE CONSTRUCTION PLANS AND SHEET TCP-6).
- NOTE: CONTRACTOR SHALL OPEN ALL LANES OF PROPOSED CHURCH STREET (-L-) WHEN CONSTRUCTION IS COMPLETED, OR AS DIRECTED BY THE ENGINEER (SEE SHEET PM-2).

**PHASE III**

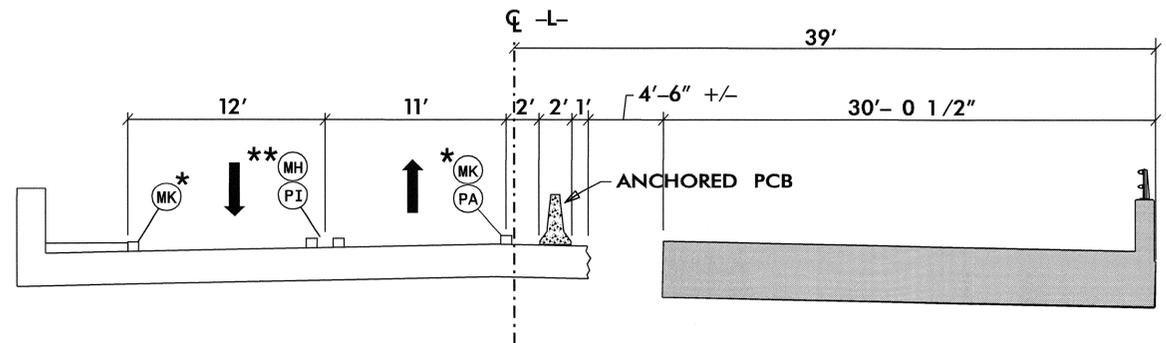
- STEP 1: - CONTRACTOR SHALL, USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1, 2, 3 & 4 OF 9:
- CONDUCT MILLING OPERATIONS, PLACE THE FINAL LAYER OF SURFACE COURSE, FINAL PAVEMENT MARKINGS (POLYUREA) & PERMANENT RAISED PAVEMENT MARKINGS ON PROPOSED CHURCH STREET (-L-), GOLDEN GATE DRIVE (-Y-) AND PROPOSED BRIDGE FOR THE FINAL PATTERN (SEE CONSTRUCTION PLANS AND SHEET PM-2).
- OPEN PROPOSED CHURCH STREET (-L) AND GOLDEN GATE DRIVE (-Y-) TO THE FINAL TRAFFIC PATTERN (SEE SHEET PM-2).

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- NOTES**
- SEE SHEET NUMBER PM-1 FOR PAVEMENT MARKING SCHEDULE.
  - FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.
  - TEMPORARY SHORING IS REQUIRED FROM STA. 20+25 -L- TO STA. 20+50 -L- 6'-0" RIGHT OF THE CENTERLINE AND ALSO FROM STA. 21+60 -L- TO STA. 21+85 -L- OFFSET 6'-0" TO THE RIGHT OF THE CENTERLINE. USE SOIL PARAMETERS AS SHOWN ON THIS SHEET.
  - FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATIONS TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.
  - FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL "F" SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.
  - DO NOT USE TEMPORARY MSE WALL FROM STA. 20+25 -L- TO STA. 20+50 -L- AND ALSO FROM STA. 21+60 -L- TO STA. 21+85 -L-.



**TEMPORARY SHORING SOIL PARAMETERS**

UNIT WEIGHT OF SOIL ABOVE WATER,  $\gamma = 120$  pcf  
 UNIT WEIGHT OF SOIL BELOW WATER TABLE,  $\gamma' = 60$  pcf  
 FRICTION ANGLE,  $\phi = 30$   
 COHESION,  $c = 0$  psf

**STAGE I (A-A)**

- \* PLACE CRYSTAL/CRYSTAL MARKERS ON 20' SPACING FOR THE ENTIRE LENGTH OF THE PROJECT.
- \*\* PLACE YELLOW/YELLOW MARKERS ON 40' SPACING FOR THE ENTIRE LENGTH OF THE PROJECT.

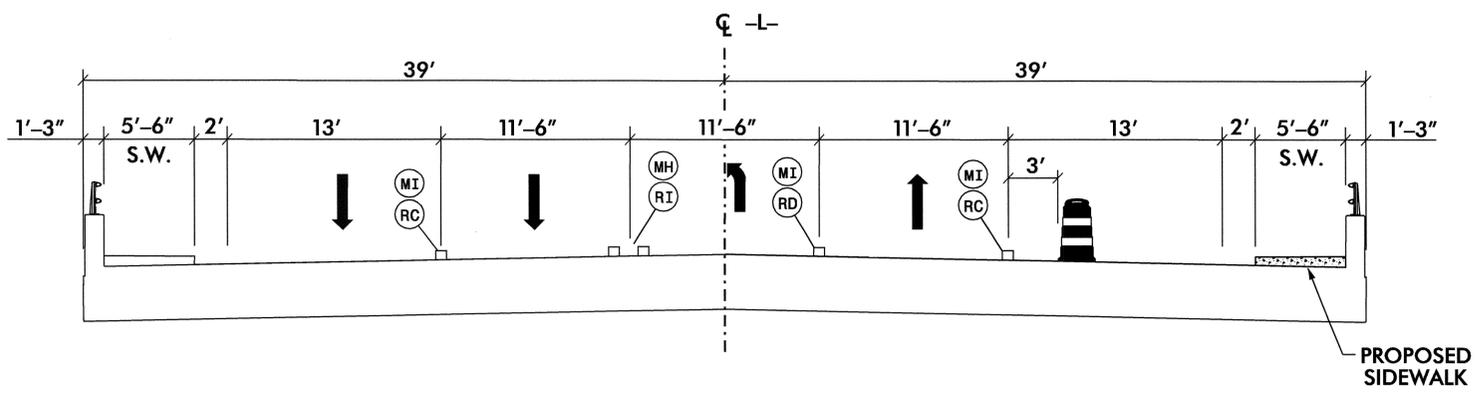
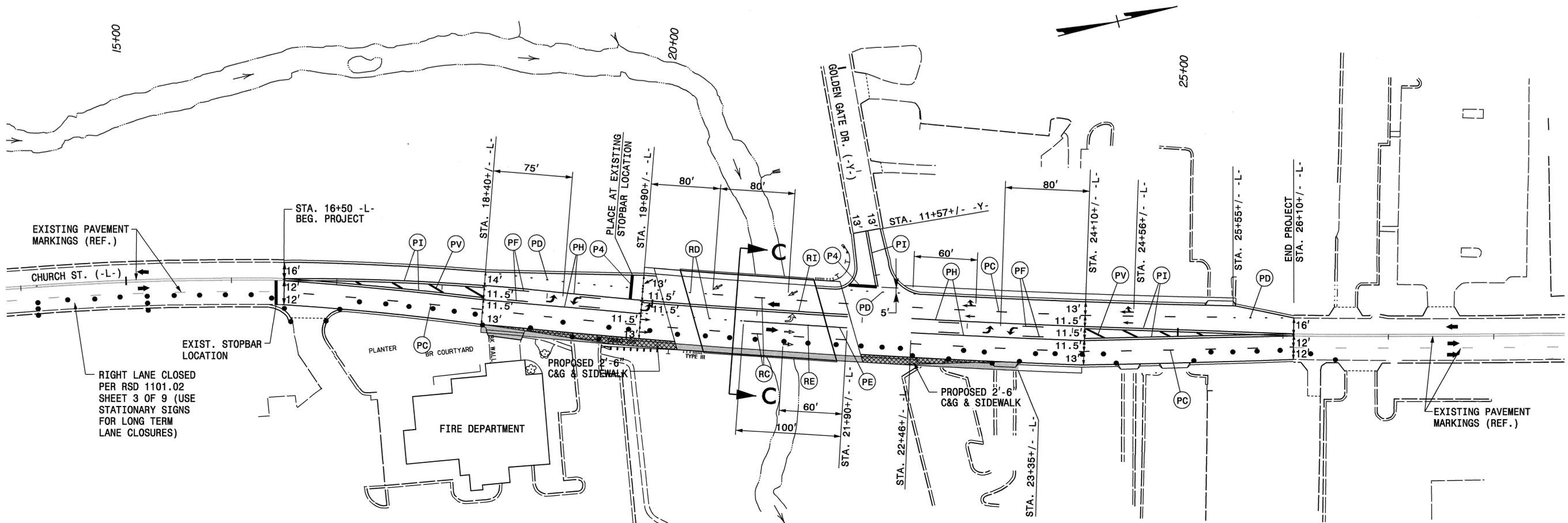
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**PHASE I**

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PAVEMENT MARKING SYMBOLS	
↘	QA
→	QC
↙	QE
↘	SA
→	SC

- NOTES:
- SEE SHEET NUMBER PM-1 FOR PAVEMENT MARKING SCHEDULE.
  - SEE ROADWAY STANDARD DRAWING NUMBERS 1250.01 AND 1251.01 FOR PAVEMENT MARKER SPACING AND RAISED PAVEMENT MARKERS.

APPROVED: _____	DATE: 5/1/07	<b>PHASE II, STEPS 2, 3 &amp; 4</b>								
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Sign Number: Detour Sign  
 Type: D Ground  
 Quantity: 1

Design By: SWJ  
 Project ID: B-3337

Check By: KJ  
 DIV: 7

STD #: N/A  
 Date: Feb 24, 2006

N. C. DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 TRAFFIC ENGINEERING BRANCH  
 SIGNING SECTION

Sign Width: 4'-0"  
 Height: 2'-6"  
 Total Area: 10.0 Sq.Ft.

Background Color: Fluorescent Orange  
 Legend & Border Color: Black

Border Type: Recessed  
 Recess: 0.375"  
 Width: 0.375"  
 Radii: 1.5"

Backing Material: 0.063" Aluminum  
 0.079" Composite

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

BORDER  
 R=1.5"  
 TH=0.375"

Letter spacings are to start of next letter													Series/Size	
													Text Length	
G	O	L	D	E	N	G	A	T	E				C4	
8.6	2.9	3.2	2.7	3	2.7	2.2	4	2.9	2.7	2.7	2	8.6	30.9	
D	R	I	V	E									C4	
17.8	3	3	1.2	3.1	2	17.8							12.4	
C	L	O	S	E	D	A	H	E	A	D			C4	
6.8	2.9	2.7	3	3	2.7	2.2	4	3.2	3	2.5	3.2	2.2	6.8	34.4

Spacing Factor is 1 unless specified otherwise  
 FILENAME: qs40\_ENGL

Sign Number: Detour Sign  
 Type: D Ground  
 Quantity: 6

Design By: SWJ  
 Project ID: B-3337

Check By: KJ  
 DIV: 7

STD #: N/A  
 Date: Feb 24, 2006

N. C. DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 TRAFFIC ENGINEERING BRANCH  
 SIGNING SECTION

Sign Width: 3'-6"  
 Height: 2'-0"  
 Total Area: 7.0 Sq.Ft.

Background Color: Fluorescent Orange  
 Legend & Border Color: Black

Border Type: Recessed  
 Recess: 0.375"  
 Width: 0.375"  
 Radii: 1.5"

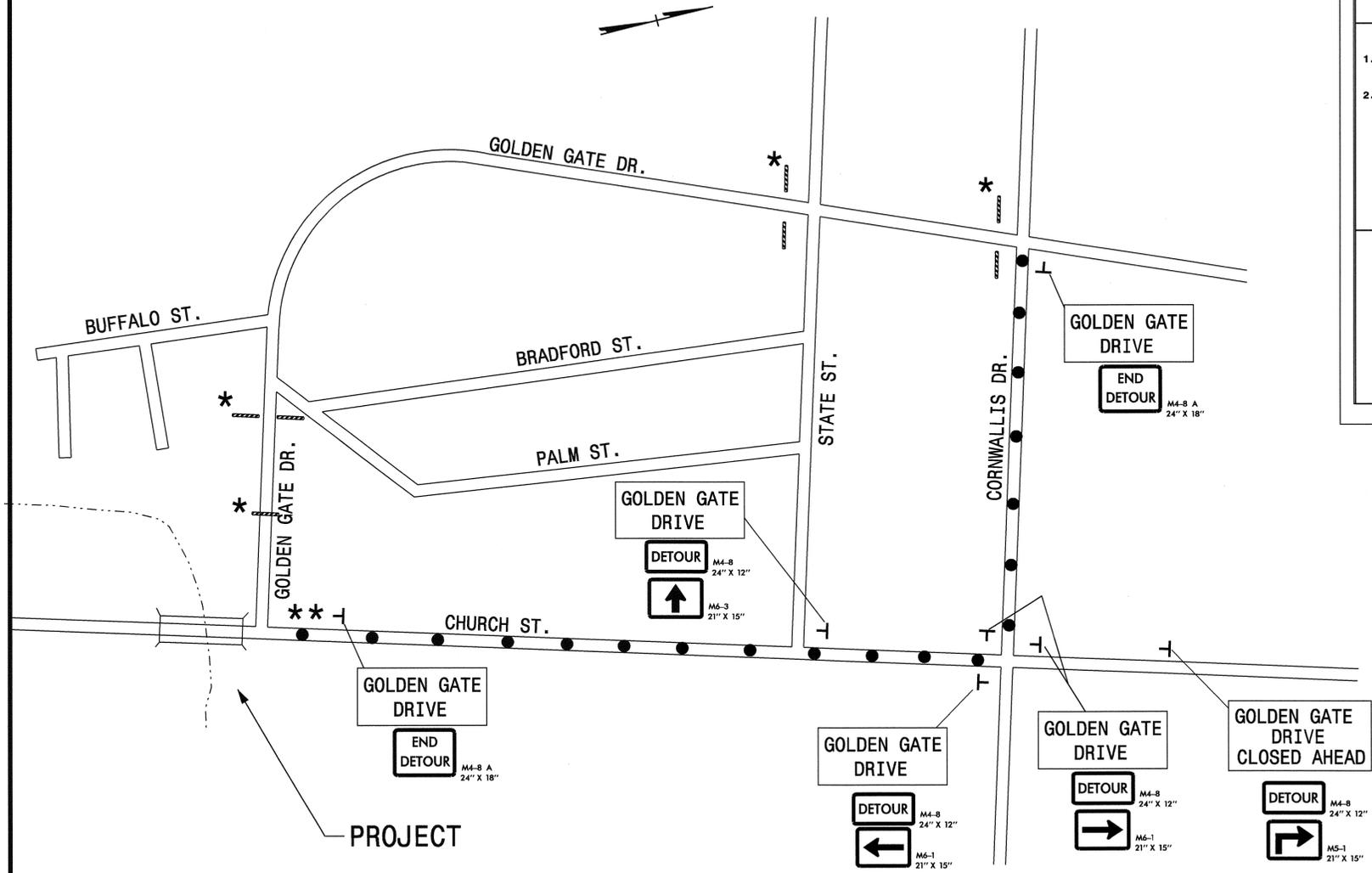
Backing Material: 0.063" Aluminum  
 0.079" Composite

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

BORDER  
 R=1.5"  
 TH=0.375"

Letter spacings are to start of next letter													Series/Size
													Text Length
G	O	L	D	E	N	G	A	T	E				C4
5.6	2.9	3.2	2.7	3	2.7	2.2	4	2.9	2.7	2.7	2	5.6	30.9
D	R	I	V	E									C4
14.8	3	3	1.2	3.1	2	14.8							12.4

Spacing Factor is 1 unless specified otherwise  
 FILENAME: qs40\_ENGL



**LEGEND**

- \* - CLOSE ROAD PER RSD 1101.03 SHEET 1 OF 9 AND SHEET TCP-5.
- \*\* - CLOSE ROAD PER RSD 1101.03 SHEET 2 OF 9 AND SHEET TCP-5
- - DETOUR ROUTE

16-MAY-2006 10:37  
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 kbroadwell AT WZTC224240

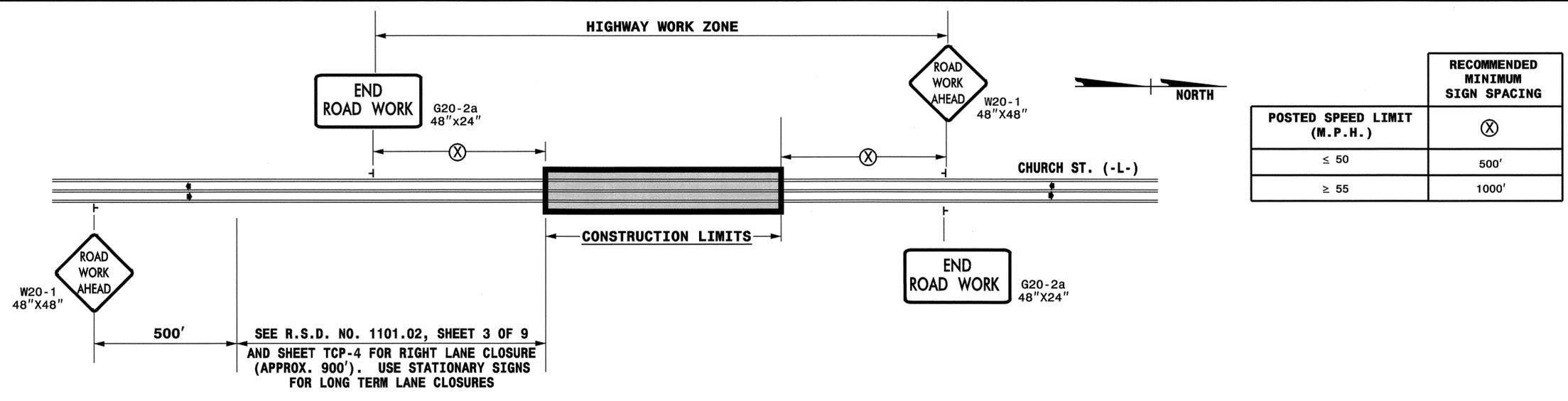
APPROVED: DATE: 2/24/06

SEAL:

**DETOUR DETAILS**

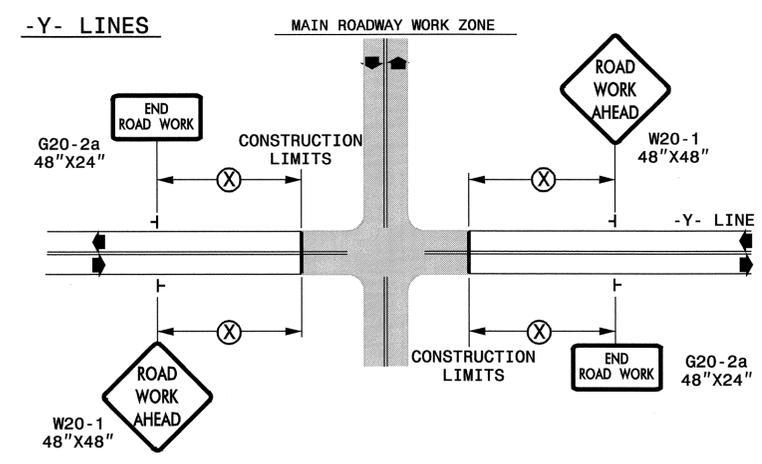
SCALE: NONE		REVISIONS
DATE: 5/06		
DWG. BY: KPB		
DESIGN BY: KPB		
REVIEWED BY: JWG		CADD FILE

**TWO-WAY UNDIVIDED \*\* (L-LINES)**



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**

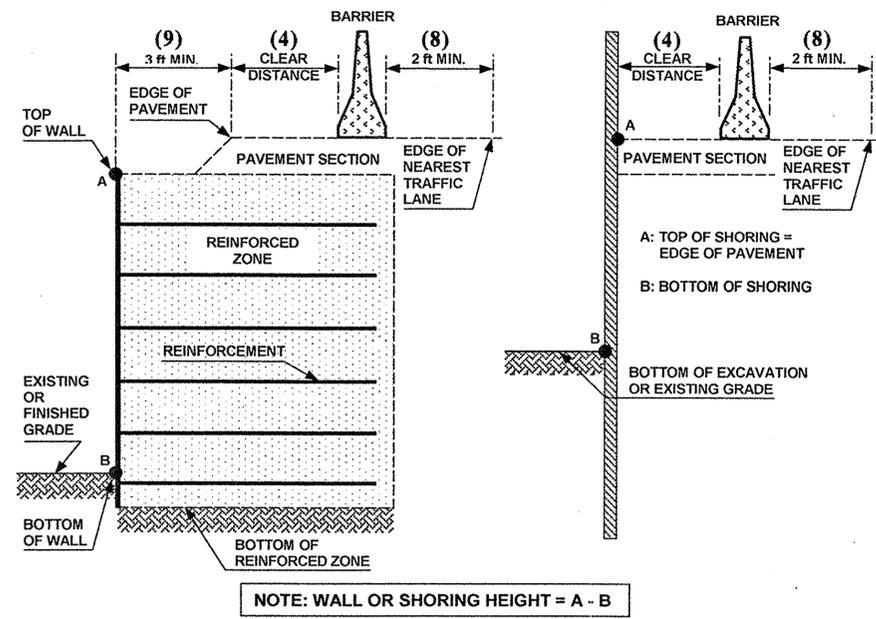
┆ STATIONARY SIGN

◀ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1

APPROVED:	DATE: 11/06	DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS			
SEAL 	SCALE: NONE				
	DATE: 3/06			REVISIONS	
	DWG. BY: KPB			7-98	10/01
	DESIGN BY: KPB			10-98	03/04
REVIEWED BY: JWG	01/01	11/04	CADD FILE		

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KDRoadwell AT WZTC224240



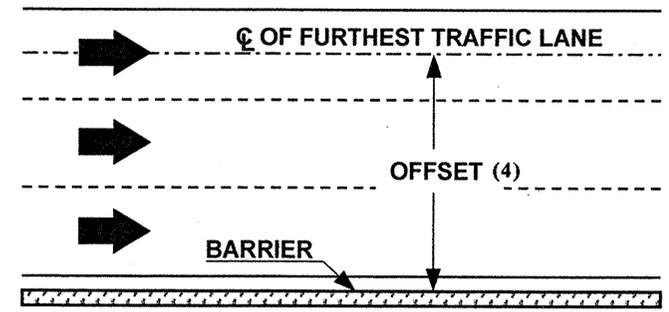
**FIGURE A**

**NOTES**

- REFER TO THE TRAFFIC CONTROL PLANS FOR SHORING LOCATIONS AND SOIL PARAMETERS.
- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR MORE INFORMATION ABOUT TEMPORARY SHORING, MEASUREMENT AND PAYMENT.
- PROVIDE PORTABLE CONCRETE BARRIER TO PROTECT TEMPORARY SHORING IF SHORING IS LOCATED WITHIN THE CLEAR ZONE AS DEFINED IN THE AASHTO ROADSIDE DESIGN GUIDE.
- BASED ON THE CLEAR DISTANCE, OFFSET, DESIGN SPEED AND PAVEMENT TYPE, CHOOSE AN UNANCHORED PCB, ANCHORED PCB OR AN OREGON BARRIER FROM THE TABLE SHOWN IN FIGURE B. FOR TRAFFIC LANES AND PORTABLE CONCRETE BARRIER LOCATED ABOVE AND BEHIND TEMPORARY SHORING, THE FOLLOWING ARE DEFINED AS:  
  
CLEAR DISTANCE - HORIZONTAL DISTANCE FROM THE BACK FACE OF THE BARRIER TO THE EDGE OF PAVEMENT FOR TEMPORARY MSE WALL OR TO THE FACE OF NON-ANCHORED TEMPORARY SHORING AS SHOWN IN FIGURE A.  
  
OFFSET - HORIZONTAL DISTANCE FROM THE FRONT FACE OF THE BARRIER TO CENTERLINE OF THE FURTHEST TRAFFIC LANE AS SHOWN IN FIGURE B FOR 3 TRAFFIC LANES.
- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET AN UNANCHORED PCB AGAINST THE TRAFFIC SIDE OF THE SHORING AND DESIGN SHORING FOR TRAFFIC IMPACT OR USE THE "SURCHARGE CASE WITH TRAFFIC IMPACT" FOR THE STANDARD TEMPORARY SHORING.
- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- USE OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH DETAIL DRAWING AND SPECIAL PROVISION OBTAINED FROM: [HTTP://WWW.NCDOT.ORG/DOH/PRECONSTRUCT/WZTC/DESRES/ENGLISH/DESRESENG.HTML](http://www.ncdot.org/DOH/PRECONSTRUCT/WZTC/DESRES/ENGLISH/DESRESENG.HTML)
- UNLESS NOTED OTHERWISE ON THE PLANS, SET PORTABLE CONCRETE BARRIER WITH A MINIMUM DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A.
- FOR PORTABLE CONCRETE BARRIER ABOVE AND BEHIND TEMPORARY MSE 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 AND WET OR DRY PAVEMENT.

**MINIMUM REQUIRED CLEAR DISTANCE, inches**

Barrier Type	Pavement Type	Offset (4) 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 or Oregon Barrier	Asphalt	All Offsets (4)	24 for All Design Speeds					
Anchored PCB or Oregon Barrier	Concrete (including bridge approach slabs)	All Offsets (4)	12 for All Design Speeds					



**FIGURE B**

APPROVED: <i>[Signature]</i>	DATE: 1/07	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS	
	SCALE: NONE		REVISIONS
	DATE: 1/07		
	DWG. BY: JI		
	DESIGN BY: JI		
	REVIEWED BY: JI		

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 mgarrrett AT WZTCC22291