# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO. SHEET NO. U - 4715 A BTCP-1

# PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION

# BUNCOMBE COUNTY

### 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			
1101.11	TRAFFIC CONTROL DESIGN TABLES			
1110.02	PORTABLE WORK ZONE SIGNS			
1115.01	FLASHING ARROW PANELS			
1130.01	DRUM			
1135.01	CONES			
1145.01	BARRICADES			
1150.01	FLAGGING DEVICES			
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR			
1180.01	SKINNY-DRUM			
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS			
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 AND WORD MESSAGES			

## PAVEMENT MARKING SCHEDULE

DESCRIPTION

PAY ITEM QUANTITY BREAKDOWN

TOTAL QUANTITY

FINAL PAVEMENT MARKINGS

THERMOPLASTIC (24", 120 MILS)

WHITE STOPBAR

300 LF

1 EA

1 EA

**TOTAL** 300 LF

3 EA

THERMOPLASTIC PAVEMENT MARKING SYMBOLS (90 MILS)

LEFT TURN ARROW STRAIGHT ARROW

COMBO.STRAIGHT/RIGHT

1 EA

INDEX OF SHEETS

SHEET NO.

TITLE

PHASING, INDEX OF SHEETS AND PAVEMENT MARKING SCHEDULE

TCP-1 LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS.

TCP-2

**GENERAL NOTES** 

TCP-3

TYPICAL DRAWING FOR SIDEWALK CLOSURES

TCP-4

R.S.D. 1101.03,

R.S.D. 1101.03,

DETAIL OF TEMPORARY 1" STEEL COVER OVER DRAINAGE STRUCTURE

**PHASING** 

STEP 1: PERFORM ALL WORK ASSOCIATED WITH THE INSTALLATION OF THE PROPOSED SIGNALS AND TRAFFIC MANAGEMENT SYSTEM AS SHOWN IN THE CONTRACT. CONSTRUCTION PLANS AND/OR SPECIAL PROVISIONS IN ACCORDANCE WITH THE "NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES - JULY 2006" AND USING THE FOLLOWING ROADWAY STANDARD DRAWINGS:

R.S.D.	1101.02,	SHEET	1	0F	9
	1101.02,	SHEET		-	_
	1101.02,	SHEET		-	_
	1101.02,	SHEET	-	_	-
	1101.02.	SHEET			-

NOTE: INSTALL CHANGEABLE MESSAGE SIGNS IN ADVANCE OF THE PORTABLE WORK ZONE AS DIRECTED BY THE ENGINEER.

SHEET 8 OF 9

SHEET 9 OF 9

NOTE: REMOVE ALL TEMPORARY TRAFFIC CONTROL LANE CLOSURE DEVICES AND RETURN TRAFFIC TO IT'S EXISTING TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD.

WHEN CONSTRUCTING/REMOVING SIGNAL POLE STRUCTURES OR FOOTINGS ADJACENT TO TRAFFIC OR SIDEWALKS, INSTALL TEMPORARY STEEL PLATES (SEE SHEET TCP-4), 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 OF 9.

USING SHEET TCP-3 AS A GUIDE, AND AS DIRECTED BY THE ENGINEER CLOSE THE APPROPRIATE SIDEWALK UTILIZING TYPE III BARRICADES WITH SIGNS ATTACHED.

- B: CONSTRUCT PROPOSED OR REMOVE EXISTING STRUCTURE AS SHOWN IN THE SIGNAL PLANS AND COVER WITH STEEL PLATES (SEE SHEET TCP-4) TO PROTECT STRUCTURE DURING CURING OR EXCAVATION AREA.
- C: OPEN TRAVEL LANE OR SIDEWALK 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 OF 9;

USING SHEET TCP-3 AS A GUIDE, AND AS DIRECTED BY THE ENGINEER CLOSE THE APPROPRIATE SIDEWALK UTILIZING TYPE III BARRICADES WITH SIGNS ATTACHED:

BACKFILL & PAVE, IF REQUIRED, UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT OR SIDEWALK (SEE SIGNAL PLANS).

E: OPEN TRAVEL LANE OR SIDEWALK TO EXISTING TRAFFIC PATTERN BY THE END OF THE WORK PERIOD.

STEP 2: UPON COMPLETION OF THE PROJECT, REMOVE ALL TRAFFIC CONTROL DEVICES.

Millien. APPROVED:\_ PLAN PREPARED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL UNIT DATE: 4 May 06 J. S. BOURNE, P.E. TRAFFIC CONTROL ENGINEER G. L. GETTIER, P.E. TRAFFIC CONTROL PROJECT ENGINEER SEAL J. W. GILSTRAP TRAFFIC CONTROL PROJECT DESIGN ENGINEER KEN BROADWELL TRAFFIC CONTROL DESIGN ENGINEER

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U-4715AB

TCP-2

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:

ROAD NAME

DAY AND TIME RESTRICTIONS

1. PATTON AVENUE

MONDAY THRU FRIDAY

2. COLLEGE STREET

3:00 PM TO 6:00 PM

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

#### ROAD NAME

- 1. PATTON AVENUE
- 2. COLLEGE STREET

#### HOLIDAY

- 1. FOR ANY EVENT THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- 2. FOR ANY SPECIAL EVENT OCCURRING BETWEEN 3 HOURS BEFORE THE START AND 3 HOURS AFTER THE END OF THE SPECIAL EVENT, AS DIRECTED BY THE ENGINEER.
- C) DO NOT STOP TRAFFIC OR CLOSE ROADS AS FOLLOWS:

ROAD NAME

DAY AND TIME RESTRICTIONS

1. PATTON AVENUE

MONDAY THRU SUNDAY

2. COLLEGE STREET

6:00 AM TO 10:00 PM

D) DO NOT STOP TRAFFIC FOR MORE THAN 30 MINUTES AS FOLLOWS:

**ROAD NAME** 

**OPERATIONS** 

1. PATTON AVENUE

HANGING OVERHEAD LINES

2. COLLEGE STREET

AND ASSOCIATED SIGNAL EQUIPMENT

E) 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

- F) 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.
- G) 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.

H) 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.

- I) DO NOT WORK SIMULTANEOUSLY, ON BOTH SIDES OF AN OPEN TRAVELWAY WITHIN THE SAME LOCATION, ON A TWO-LANE, TWO-WAY ROAD.
- J) 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.

#### 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.

#### TRAFFIC PATTERN ALTERATIONS

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

#### SIGNING

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

#### TRAFFIC CONTROL DEVICES

- N) 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.
- O) PLACE SETS OF THREE DRUMS PERPENDICULAR TO THE EDGE OF THE TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC. THESE DRUMS SHALL BE IN ADDITION TO CHANNELIZING DEVICES.

#### PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME

MARKING

MARKER

ALL ROADS

THERMOPLASTIC

NONE

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

#### MISCELLANEOUS

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

SEAL

SEAL

SEAL

SCALE:

DATE:

DWG. B

DESIGN

REVIEW

## PROJECT NOTES

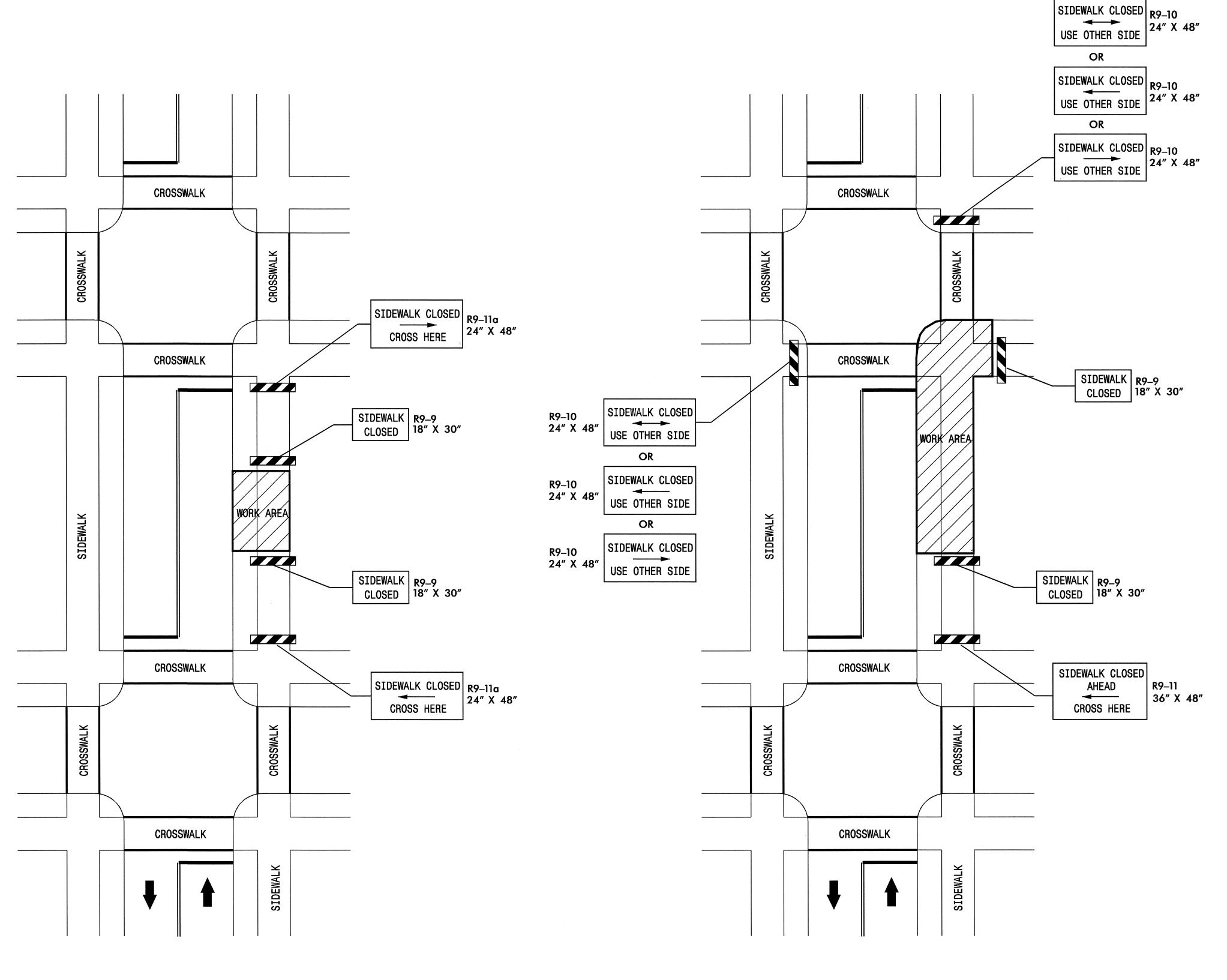
DATE: MAY 2006
DWG. BY: KPB
DESIGN BY: KPB
REVIEWED BY: JWG

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REVISIONS

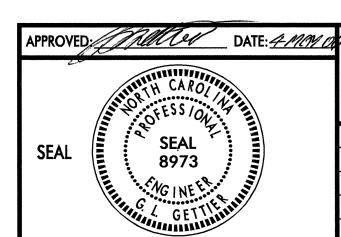
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**LEGEND** 

— TYPE III BARRICADE

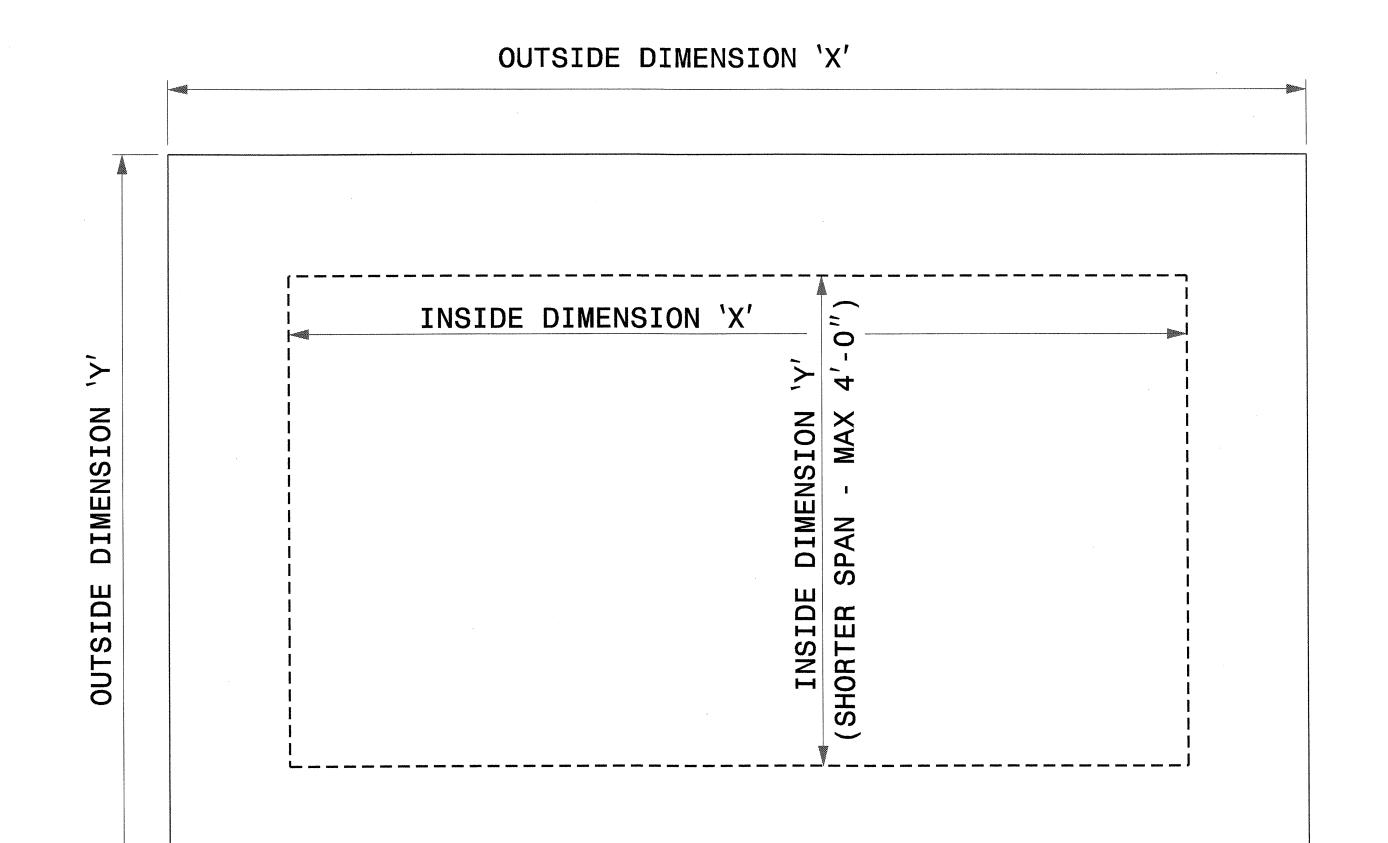


TYPICAL DRAWING FOR SIDEWALK CLOSURES

DATE: MAY 2006 DWG. BY: KPB DESIGN BY: KPB REVIEWED BY: JWG



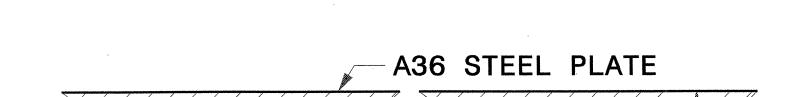
REVISIONS



### GENERAL NOTES:

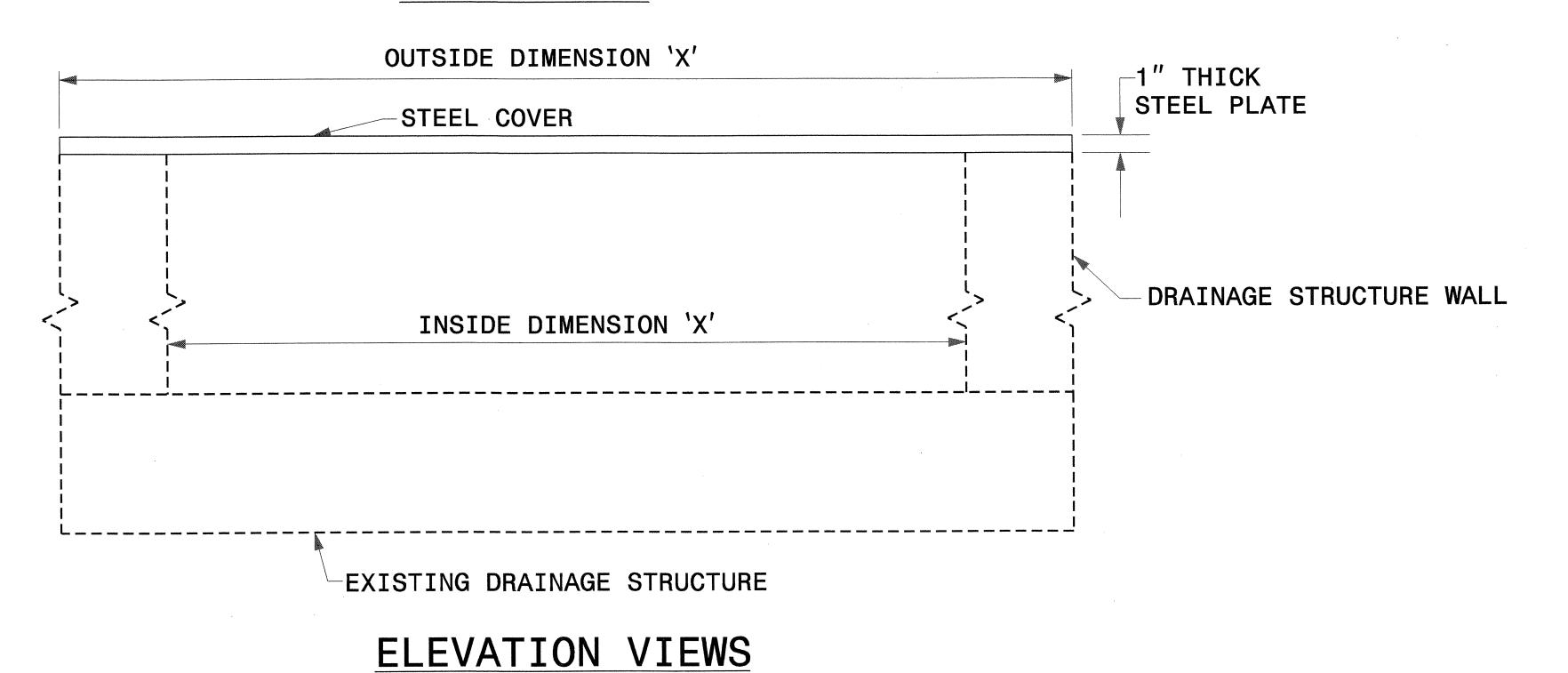
- -USE GRADE A36 STEEL
  -STEEL COVERS ARE FOR TEMPORARY USE DURING PHASE CONSTRUCTION.
- -FILL SHALL BE PLACED DIRECTLY OVER THE STEEL PLATES.

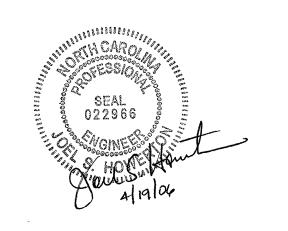
-QUANTITIES TO BE PAID FOR AT THE UNIT PRICE BID PER EACH.



SECTION VIEW OF STEEL TOP PLATE

## PLAN VIEWS





PROJECT SERVICES UNIT STANDARDS AND SPECIAL DESIGN Office 919-250-4128 FAX 919-250-4119

DETAIL OF TEMPORARY 1" STEEL COVER OVER DRAINAGE STRUCTURE

ORIGINAL BY: DATE: 04-19-06

MODIFIED BY: rnbritt, DATE: 04-19-06

CHECKED BY: DATE: 4/19/06

FILE SPEC.: details/nbritt/english/misc/steelcover.dgn