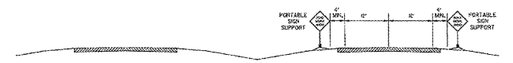
REFERENCES

FOUR LANE DIVIDED HIGHWAY WITH PAVED SHOULDERS



FOUR LANE DIVIDED HIGHWAY WITH EARTH SHOULDERS

FIVE LANE ROAD / TWO LANE ROAD WITH CURB & GUTTER

FIVE LANE ROAD / TWO LANE ROAD WITH EARTH SHOULDERS

GENERAL NOTES

1. ALL SIGN LOCATIONS ARE TO BE MEASURED FROM THE WORK AREA. WORK LIMITS FOR THE PROJECT WILL BE DETERMINED BY THE ENGINEER AND AS INDICATED IN THE CONTRACT.
2. INSTALL ADVANCE WARNING SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS NO LESS THAN 4 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH EARTH SHOULDERS AND NO LESS THAN 6 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE OR ROADWAYS WITH PAVED SHOULDERS, WHICH CURB & GUTTER IS PRESENT, INSTALL THE SIGN NO LESS THAN 2 FEET FROM THE NEAR EDGE OF THE SIGN TO THE FACE OF THE CURB.
3. ALL SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 5 FEET FROM THE GROUND TO THE BOTTOM OF THE SIGN. ALL SIGNS MOUNTED ON GROUND MOUNTED U-CHANNEL POSTS OR SQUARE STEEL TUBE POSTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 7 FEET FROM THE GRADE ELEVATION OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE TO THE BOTTOM OF THE SIGN UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. INSURE ALL SIGNS STRAIGHT AND LEVEL AND WITH THE FACE OF THE SIGNS PERPENDICULAR TO THE SURFACE OF THE ROADWAY.
4. REFLECTORIZE ORANGE ADVANCE WARNING SIGNS AND ANY ORANGE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A FLUORESCENT ORANGE COLORED PRISMATIC RETROREFLECTIVE SHEETING. REFLECTORIZE WHITE REGULATORY SIGNS AND ANY WHITE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A WHITE COLORED PRISMATIC RETROREFLECTIVE SHEETING.
5. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH ALL NCHRP REPORT 350 REQUIREMENTS AND SHALL BEARING APPROVAL BY THE DEPARTMENT. ONLY THOSE TRAFFIC CONTROL DEVICES INCLUDED ON THE "APPROVED PRODUCTS LIST FOR TRAFFIC CONTROL DEVICES IN WORK ZONES" ARE CONSIDERED ACCEPTABLE FOR USE. THIS LIST MAY BE ACCESSED ON THE DEPARTMENT'S WEB SITE AT: www.scdot.org.
6. ONLY THOSE PORTABLE SIGN SUPPORTS INCLUDED ON THE "APPROVED PRODUCTS LIST FOR TRAFFIC CONTROL IN WORK ZONES" ARE CONSIDERED ACCEPTABLE. ALL PORTABLE SIGN SUPPORTS UTILIZED FOR DISTANCE WORK SHALL PROVIDE A MINIMUM MOUNTING HEIGHT OF 5 FEET FROM THE GROUND TO THE BOTTOM OF THE SIGN ON ALL ROADWAYS. MOUNTING HEIGHTS LESS THAN 5 FEET ARE UNACCEPTABLE FOR DISTANCE WORK.
7. FABRICATE ALL SIGNS INTENDED FOR MOUNTING ON PORTABLE SIGN SUPPORTS FROM ONLY THOSE SIGN SUBSTRATES INCLUDED ON THE "APPROVED PRODUCTS LIST FOR TRAFFIC CONTROL DEVICES IN WORK ZONES".
8. PROVIDE AND UTILIZE ANY SPECIAL SIGN MOUNTING ASSEMBLIES AND HARDWARE THAT MAY BE NECESSARY FOR INSTALLING AND MOUNTING SIGNS IN AREAS WHERE CONCRETE MEDIAN BARRIERS, SINGLE PARAPET WALLS OR DOUBLE-FACED GUARDRAIL ARE PRESENT.
9. THESE ILLUSTRATIONS ARE INTENDED FOR INFORMATION ONLY. SIMILARITY BETWEEN THOSE ILLUSTRATIONS AND ANY SPECIFIC DEVICE OR SYSTEM IS COINCIDENTAL AND IS NOT INTENDED AS EITHER A RECOMMENDATION OR AN ENDORSEMENT OF A SPECIFIC DEVICE OR DESIGN.
10. INSTALL AND PLACE ADVANCE WARNING SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS AS ILLUSTRATED ON THIS TYPICAL TRAFFIC CONTROL STANDARD DRAWING.

SIGNING AND MARKING ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 23845 MARK H. ARTHUR

SIGNATURE

2-11-08
DATE

5			
4			
3	1-5-12	JCS	GENERAL UPDATE
2	8-10-07	JCS	DRAWING NO. UPDATE
1	8-16-05	DAE	REVISION
DESCRIPTION	CK'D	DATE	BY

SCDOT

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

STANDARD SIGNS

651-115-00

DEPT 2003 | EFFECTIVE LETTING DATE

THIS DRAWING IS NOT TO SCALE

SOUTH CAROLINA STANDARD SIGNS

DETAILED DRAWIINGS FOR MOST SIGNS ARE CONTAINED IN THE STANDARD SIGNING BOOK. DETAILED DRAWINGS FOR ALL OTHER SIGNS ARE AVAILABLE FROM THE DIRECTOR OF TRAFFIC ENGINEERING.

REGULATORY SIGNS OVERHEAD APPLICATIONS (TYPE VIII OR IX REFLECTIVE SHEETING)

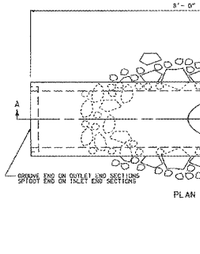
DESCRIPTION	SIZE	NUMBER	SIGN
BACKGROUND: RED-REFL. LEGEND & BORDER: WHITE	18"x18"	D101-1-06	STOP
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	18" x 18"	R3-1L-09	ONLY
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	30" x 18"	R3-1L-24	ONLY
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	12" x 18"	R3-1L-36	ONLY
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	18" x 18"	R3-1L-48	ONLY
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	12" x 18"	R3-1L-60	ONLY

REGULATORY SIGNS (TYPE III REFLECTIVE SHEETING)

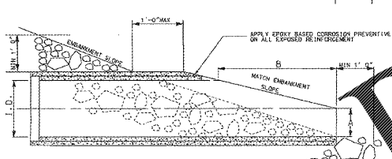
DESCRIPTION	SIZE	NUMBER	SIGN
BACKGROUND: WHITE-REFL. LETTERING & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-4-24 R3-4-30 R3-4-48	ONLY
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 48" 30" x 60" 42" x 84"	R3-5-24 R3-5-30 R3-5-42	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-6-24 R3-6-30 R3-6-48	
SYMBOL: RED-REFL. LEGEND & BACKGROUND: WHITE-REFL.	24" x 30" 30" x 36" 48" x 60"	R3-7-24 R3-7-30 R3-7-48	
BACKGROUND: RED-REFL. LEG. & BORDER: WHITE-REFL.	30" x 30" 36" x 36" 48" x 48"	R3-10-24 R3-10-30 R3-10-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	18" x 18"	R3-10S-06	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 24" 30" x 30" 36" x 36"	R3-11-24 R3-11-30 R3-11-36	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-12-24 R3-12-30 R3-12-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-13-24 R3-13-30 R3-13-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-14-24 R3-14-30 R3-14-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-15-24 R3-15-30 R3-15-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-16-24 R3-16-30 R3-16-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-17-24 R3-17-30 R3-17-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-18-24 R3-18-30 R3-18-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-19-24 R3-19-30 R3-19-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-20-24 R3-20-30 R3-20-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-21-24 R3-21-30 R3-21-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-22-24 R3-22-30 R3-22-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-23-24 R3-23-30 R3-23-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-24-24 R3-24-30 R3-24-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-25-24 R3-25-30 R3-25-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-26-24 R3-26-30 R3-26-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-27-24 R3-27-30 R3-27-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-28-24 R3-28-30 R3-28-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-29-24 R3-29-30 R3-29-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-30-24 R3-30-30 R3-30-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-31-24 R3-31-30 R3-31-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-32-24 R3-32-30 R3-32-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-33-24 R3-33-30 R3-33-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-34-24 R3-34-30 R3-34-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-35-24 R3-35-30 R3-35-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-36-24 R3-36-30 R3-36-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-37-24 R3-37-30 R3-37-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-38-24 R3-38-30 R3-38-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-39-24 R3-39-30 R3-39-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-40-24 R3-40-30 R3-40-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-41-24 R3-41-30 R3-41-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-42-24 R3-42-30 R3-42-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-43-24 R3-43-30 R3-43-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-44-24 R3-44-30 R3-44-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-45-24 R3-45-30 R3-45-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-46-24 R3-46-30 R3-46-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-47-24 R3-47-30 R3-47-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-48-24 R3-48-30 R3-48-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-49-24 R3-49-30 R3-49-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R3-50-24 R3-50-30 R3-50-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	30" x 30"	R3-70L-06	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	30" x 30"	R3-70R-06	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R4-1-24 R4-1-30 R4-1-48	
BACKGROUND: NON-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R4-2-24 R4-2-30 R4-2-48	
BACKGROUND: WHITE-REFL. LEGEND & BORDER: BLACK	24" x 30" 30" x 36" 48" x 60"	R4-6-24 R4-6-30 R4-6-48	

* LAST DIGITS DESIGNATE M.P.H.

THIS DRAWING IS NOT TO SCALE



PLAN



SECTION A-A

NOTES:

1. BEVELED END SECTIONS WILL BE MANUFACTURED IN ACCORDANCE WITH SCDOT SUPPLEMENTAL TECHNICAL SPECIFICATIONS SC-M-714 . THESE SPECIAL PIPE SECTIONS WILL BE MADE DURING THE MANUFACTURING OF OTHER STATE APPROVED REINFORCED CONCRETE PIPE.
2. THE PIPE BEVEL MAY BE RAMED IN THE FIELD (A LESS OF BEING MANUFACTURED. IN FIELD SAWING, THE PIPE SPANNING HALF CORE TO A POINT AT THE PIPE CREST RATHER THAN A FAILURE IS APPROVED BY THE PIPE MANUFACTURER. ALTERNATE PIPE FOR SIDE TIES MUST HAVE EACH END BEVELED TO MATCH THE ADJACENT SLOPES.
3. PLACE RIPRAP AS DIRECTED BY THE RCE.
4. PAYMENT FOR BEVELED END SECTIONS WILL BE AS DIRECTED IN SC-M-714.
5. THE PAY ITEM SHALL BE:

7190100 BEVELING OF PIPE ENDS ..... EA.
804XXXX RIPRAP(CLASS) ..... TON
8098XXX GEOTEXTILE FOR EROSION CONTROL UNDER RIPRAP(CLASS) TYPE ..... S.Y.

CHART FOR RIPRAP PLACEMENT

CLASS	D (FT)	THICKNESS (FT)
B	0.75	1.50
C	1.30	2.60

TABLE 719-610A
EMBANKMENT SLOPE

	6:1	5:1	4:1	3:1	2:1
	6	5	4	3	2
I.D.(IN)	A(IN)	B (BEVELED LENGTH) (IN)			
15	6	54	49	36	27	18
18	9	54	45	36	27	18
24	10	NA	70	55	42	28
30	12	NA	69	72	54	36
36	15	NA	NA	NA	63	42
42	20	NA	NA	NA	85	44
48	24	NA	NA	NA	72	48
54	24	NA	NA	NA	NA	60
60	24	NA	NA	NA	NA	72

REFERENCES

SECTION(S) DOCUMENTS

STANDARD DRAWINGS
SCDOT SUPPLEMENTAL TECHNICAL SPECIFICATION SC-M-714

PRECONSTRUCTION SUPPORT ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 21242 JAMES W. KENDALL, JR.

SIGNATURE

AUGUST 25, 2017
DATE

5			
4			
3	8/2017	ENG	SECTION A-A UPDATE
2	1/2008	ENG	GENERAL REVISIONS
1	6/2005	ENG	CORR. 719-610A
0	1/2005	ENG	ORIGINAL REVISIONS
#	DATE	BY	DESCRIPTION

SCDOT

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

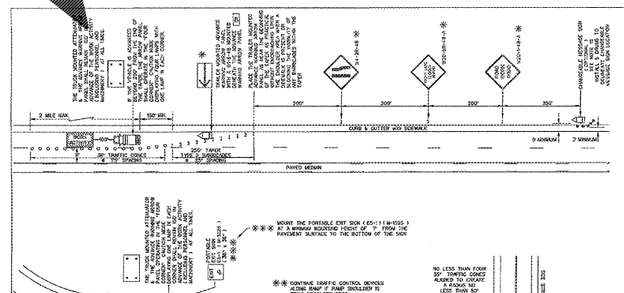
STANDARD DRAWING

END TREATMENT (RCP BEVELED END)

719-610-00

EFFECTIVE LETTING DATE: JAN. 2003

THIS DRAWING IS NOT TO SCALE



GENERAL NOTES

1. ALL SIGN LOCATIONS ARE TO BE MEASURED FROM THE WORK AREA. SIGN LISTED FOR THE PROJECT WILL BE DETERMINED BY THE ENGINEER AND AS INDICATED IN THE CONTRACT.
2. INSTALL ADVANCE WARNING SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS NO LESS THAN 4 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH EARTH SHOULDERS AND NO LESS THAN 6 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH PAVED SHOULDERS, WHICH CURB & GUTTER IS PRESENT, INSTALL THE SIGN NO LESS THAN 2 FEET FROM THE NEAR EDGE OF THE SIGN TO THE FACE OF THE CURB.
3. SPACINGS INDICATED ARE FOR NORMAL CONDITIONS. ADJUSTMENTS MAY BE REQUIRED DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENTS OR OTHER SIGHT DISTANCE RESTRICTIONS.
4. ALL SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 5 FEET FROM THE GROUND TO THE BOTTOM OF THE SIGN. ALL SIGNS MOUNTED ON GROUND MOUNTED U-CHANNEL POSTS OR SQUARE STEEL TUBE POSTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 7 FEET FROM THE GRADE ELEVATION OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE TO THE BOTTOM OF THE SIGN UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. MOUNT ALL SIGNS STRAIGHT AND LEVEL AND WITH THE FACE OF THE SIGNS PERPENDICULAR TO THE SURFACE OF THE ROADWAY.
5. REFLECTORIZE ORANGE ADVANCE WARNING SIGNS AND ANY ORANGE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A FLUORESCENT ORANGE COLORED PRISMATIC RETROREFLECTIVE SHEETING. REFLECTORIZE WHITE REGULATORY SIGNS AND ANY WHITE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A WHITE COLORED PRISMATIC RETROREFLECTIVE SHEETING.
6. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH ALL NCHRP REPORT 350 REQUIREMENTS AND SHALL BEARING APPROVAL BY THE DEPARTMENT. ONLY THOSE TRAFFIC CONTROL DEVICES INCLUDED ON THE "APPROVED PRODUCTS LIST FOR TRAFFIC CONTROL DEVICES IN WORK ZONES" ARE CONSIDERED ACCEPTABLE FOR USE. THIS LIST MAY BE ACCESSED ON THE DEPARTMENT'S WEB SITE AT: www.scdot.org
7. THE CONTRACTOR SHALL PROVIDE AND UTILIZE ANY SPECIAL SIGN MOUNTING ASSEMBLIES AND HARDWARE THAT MAY BE NECESSARY FOR INSTALLING AND MOUNTING SIGNS IN AREAS OF CONCRETE MEDIAN BARRIERS, SINGLE PARAPET WALLS OR DOUBLE-FACED GUARDRAIL.
8. REFLECTORIZATION OF 30" TOWTRC CONES USED DURING DAYLIGHT HOURS IS NOT REQUIRED. ALL TOWTRC CONES USED DURING NIGHTTIME HOURS SHALL BE EQUIPPED WITH TYPE A FLASHING TRAFFIC CONES WITH EITHER PORTABLE PLASTIC DRUMS OR 42" ENCLOSED TRAFFIC CONES. REFLECTORIZE ALL PORTABLE PLASTIC DRUMS AND 42" ENCLOSED TRAFFIC CONES WITH TYPE A FLEXIBLE PRISMATIC RETROREFLECTIVE SHEETING UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
9. REFLECTIVITY OF ALL BARRICADES WITH A STRIPE WIDTH OF 3 FEET UNLESS OTHERWISE SHEETING ON ALL PROJECTS LET TO CONTRACT AFTER MAY 1, 2012 UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
10. TYPE 3 BARRICADES SHALL HAVE A MINIMUM WIDTH OF 3 FEET UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
11. CONDUCT THE WORK IN SUCH A MANNER THAT WILL ENSURE ENCROACHMENT OF TRAFFIC CONTROL DEVICES, EQUIPMENT, PERSONNEL, MATERIALS OR ANY WORK RELATED VEHICLES ONTO AN ADJACENT TRAVEL LANE OPEN TO TRAFFIC. INSTALL, MAINTAIN AND ADJUST THE TRAFFIC CONTROL DEVICES AS NECESSARY TO ENSURE PROPER DELINEATION OF THE WORK AREA.
12. LANE CLOSURES ARE RESTRICTED TO MAXIMUM LENGTHS OF 2 MILES UNLESS OTHERWISE DIRECTED BY THE SPECIAL PROVISIONS AND/OR THE ENGINEER.
13. IF WORK IS BEING CONDUCTED SIMULTANEOUSLY AT TWO DIFFERENT LOCATIONS WITHIN THE SAME DIRECTION BUT WITHIN DIFFERENT TRAVEL LANES WHICH REQUIRE THE SIGNIFICANT SEPARATION OF THE TWO CLOSURES BY NO LESS THAN 2 MILES FROM THE END OF THE FIRST CLOSURE THAT A MOTORIST WILL ENCOUNTER TO THE BEGINNING OF THE THIRD LANE OF THE SECOND CLOSURE.
14. IF WORK IS BEING CONDUCTED SIMULTANEOUSLY AT TWO DIFFERENT LOCATIONS IN THE SAME DIRECTION BUT WITHIN DIFFERENT TRAVEL LANES WHICH DO NOT REQUIRE LANE CLOSURES OR A LOW SPEED URBAN ROADWAY, SEPARATE THE TWO LANE CLOSURES BY NO LESS THAN 2 MILES FROM THE END OF THE FIRST CLOSURE THAT A MOTORIST WILL ENCOUNTER TO THE BEGINNING OF THE TAPER OF THE SECOND CLOSURE.
15. UTILIZATION OF A CHANGEABLE MESSAGE SIGN (CMS) OR OPTIONAL WITH THIS TRAFFIC CONTROL SETUP. HOWEVER, WHEN A CHANGEABLE MESSAGE SIGN IS UTILIZED, INSTALL THE SIGN AS ILLUSTRATED ON THIS STANDARD DRAWING UNLESS OTHERWISE DIRECTED BY THE SPECIAL PROVISIONS, THE PLANS AND/OR THE ENGINEER. INSTALL THE CHANGEABLE MESSAGE SIGN NO LESS THAN 8 FEET FROM THE NEAR EDGE OF THE ADJACENT TRAVEL LANE AND NO LESS THAN 12 FEET FROM THE NEAR EDGE OF THE ADJACENT TRAVEL LANE WHEN USED FOR DELINEATION AS ILLUSTRATED. OFF-SHOULDER TRAFFIC CONES OR 42" ENCLOSED TRAFFIC CONES ARE PROHIBITED AS SUBSTITUTES FOR THE PORTABLE PLASTIC DRUMS IN THIS APPLICATION. DURING A NIGHT LANE CLOSURE, THE SIGN TEMPLATE FLASH ALTERNATELY TO READ "ROAD LANE CLOSED", "MERGE LEFT" AT A RATE THAT WILL PROVIDE MOTORISTS TO READ BOTH MESSAGES AT LEAST ONCE.
16. THE DEPARTMENT RESERVES THE RIGHT TO RESTRICT WORK OPERATIONS AND/OR METHODS IN ORDER TO MINIMIZE THE LENGTH OF LANE CLOSURES. WORK SHALL BE PERFORMED AS DIRECTED BY THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, THE STANDARD DRAWINGS, THE PLANS AND/OR THE ENGINEER.
17. THIS TYPICAL TRAFFIC CONTROL SETUP APPLIES TO THE INSTALLATION OF A LANE CLOSURE ON AN URBAN ROADWAY WITH A POSTED REGULATORY SPEED LIMIT OF 35 MPH OR LESS.

WORK ZONE TRAFFIC CONTROL ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 24242 WILLIE E. McCONNELL, JR.

SIGNATURE

8/12/12
DATE

5			
4			
3			
2	1-5-12	JCS	GENERAL UPDATE
1	8-10-07	JCS	DRAWING NO. UPDATE
0	8-16-05	DAE	REVISION
#	DATE	BY	DESCRIPTION

SCDOT

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

LANE CLOSURE DAYTIME URBAN LOW SPEED
< / = 35 MPH

610-010-00

EFFECTIVE LETTING DATE: JAN. 2003

PORTABLE TRUCK MOUNTED ATTENUATOR

1. UTILIZE A TRUCK MOUNTED ATTENUATOR ATTACHED TO THE REAR OF A TRUCK WITH A MINIMUM GROSS VEHICULAR WEIGHT RATING OF 15,000 POUNDS FACTUAL WEIGHTS. IF THE ADDITION OF SUPPLEMENTAL WEIGHT TO THE VEHICLE AS BALLAST IS NECESSARY, CONTAIN THE MATERIAL WITHIN A STRUCTURE CONSTRUCTION OF STEEL. CONSTRUCT THIS STEEL STRUCTURE TO HAVE A MINIMUM OF FOUR SIDES AND A BOTTOM. A TOP IS OPTIONAL. BOLT THIS STRUCTURE TO THE FRAME OF THE TRUCK. UTILIZE A SUFFICIENT NUMBER OF FASTENERS FOR ATTACHMENT OF THE STEEL STRUCTURE TO THE FRAME OF THE TRUCK TO ENSURE THE STRUCTURE WILL NOT SEPARATE FROM THE FRAME OF THE TRUCK DURING IMPACT BY A VEHICLE. FILL THE STEEL STRUCTURE WITH SAND, GRAVEL OR OTHER LOOSE FINE OR SIZED, NONFROZEN CONCRETE FOR BALLAST MATERIAL. WITHIN THE STEEL SUBSTRUCTURE TO ACHIEVE THE NECESSARY WEIGHT. THE BALLAST MATERIAL SHALL REMAIN CONTAINED WITHIN THE CONFINES OF THE STEEL STRUCTURE AND SHALL NOT PROTRUDE FROM THE STEEL STRUCTURE IN ANY MANNER.
2. LOCATE THE TRUCK MOUNTED ATTENUATOR 100 FEET IN ADVANCE OF THE WORK AREA UNLESS OTHERWISE SPECIFIED.
3. PROVIDE, INSTALL AND MAINTAIN THE TRUCK MOUNTED ATTENUATOR AS SPECIFIED BY THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.
4. DUE TO THE WEIGHT OF A TRUCK MOUNTED ATTENUATOR, THE TRUCK MOUNTED ATTENUATOR SUPPLEMENTED WITH AN ADVANCE WARNING ARROW PANEL MAY BE REPLACED WITH A TRAILER MOUNTED ADVANCE WARNING ARROW PANEL WHEN THIS TRAFFIC CONTROL SETUP IS UTILIZED FOR ASPHALT CONCRETE PAVEMENT OPERATIONS. REPLACEMENT WITH A TRAILER MOUNTED ADVANCE WARNING ARROW PANEL SHALL REQUIRE THE ENGINEER'S APPROVAL.

ADVANCE WARNING ARROW PANEL

ALL ADVANCE WARNING ARROW PANELS SHALL BE 48" x 96" WITH A MINIMUM 13 MODALITY DISTANCE OF 1 MILE. PLACEMENT OF AN ADVANCE WARNING ARROW PANEL MAY REQUIRE ADJUSTMENTS DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENT OR OTHER SIGHT DISTANCE RESTRICTIONS. ALL ADVANCE WARNING ARROW PANELS SHALL BE NONREFLECTIVE BLACK. ALL ADVANCE WARNING ARROW PANELS SHALL COMPLY WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

WHEN AN ADVANCE WARNING ARROW PANEL IS REQUIRED TO OPERATE IN THE CAUTION MODE, THE PANEL SHALL DISPLAY A MINIMUM OF 11 LAMPS. THE 11 LAMPS SHALL BE ARRANGED WITH ONE LAMP IN EACH CORNER. DISPLAY OF ANY OTHER TYPE OF CAUTION MODE, EITHER THAN THE "FOUR CORNERS" CAUTION MODE SUCH AS THE "FLASHING BAR" OR THE "ALTERNATING DIAMOND" CAUT