

## Application for Encroachment Permit

S.C. Department of Transportation  
Form 637 (Rev 09/2015)

### Contact Information

**Applicant:** CityofGeorgetown  
**Street:** PO Box 939  
  
**City:** Georgetown  
**State:**   **Zip Code:** 29442  
**Phone:** (843)325-9417 **Fax:** (843)520-2779  
**Email:** jmooney@cogsc.com  
**Contact:** Justin Mooney

### Project Location

**Primary County:**

County	Road Name
Georgetown	Cannon St (S-159)

**1. Type of Encroachment:** SEWER  
 Sewer replacement

**2. Description of Location:**  
 Replace approx. 1315 LF of 8" sewer from intersection of Cannon and Prince North towards Church St.

(Attach sketch indicating roadway features such as: pavement width, shoulder width, sidewalk and curb and gutter location, significant drainage structure, north arrow, right of way width, and location of the proposed encroachment with respect to the roadway centerline and the nearest intersecting road on the State system.)

Customer Agreement

3. The undersigned applicant hereby requests the SCDOT to permit encroachment on the SCDOT right of way as described herein. It is expressly understood that the encroachment, if and when constructed, shall be installed in accordance with the sketch attached hereto and made a part hereof. The applicant agrees to comply with and be bound by the SCDOT's "A Policy for Accommodating Utilities on Highways Rights of way", "Standard Specifications for Highway Construction", the "General Provisions" and "Special Provisions", attached hereto or made a part hereof by reference, during the installation, operation and maintenance of said encroachment within the SCDOT's Right of Way. DISCHARGES OF STORM WATER AND NON-STORM WATER: Work within State Highway right-of-way shall be conducted in compliance with all applicable requirements of the National Pollutant Discharge Elimination System (NPDES) permit(s) issued to the Department of Transportation (Department), to govern the discharge of storm water and non-storm water from its properties. Work shall also be in compliance with all other applicable Federal, State and Local laws and regulations, and with the Department's Encroachment Permits Manual and encroachment permit. The encroachment permit will not be issued until the applicant has received an NPDES construction permit from SC Department of Health and Environmental Control.

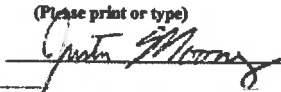
The applicant agrees to comply with all current SCDOT Standards Specifications for Highway Construction including all Supplemental Technical Specifications. The applicant hereby further agrees, and binds his/her/its heirs, personal representatives, successors, assigns, to assume any and all liability for accidents or injuries to persons, or damage to property, including the highway, that may be caused by the construction, maintenance, use, moving or removing of the physical appurtenances contemplated herein.

Applicant's Name: Justin Mooney

Date: 01/11/2019

(Please print or type)

Applicant's Sig:



Title: Civil Engineer

For Office Use Only

**For Office Use Only**

In accordance with your request and subject to all the provisions, terms, conditions, and restrictions stated in the application and the general and special provisions attached hereto, the SCDOT hereby approves your application for an encroachment permit. This permit shall become null and void unless the work contemplated herein shall have been completed prior to:

See Attached Special Provision and/or Permit Requirements

NPDES Permit  
Nbr:

(Date received by res. Maint. Engr.)

Britt, Timothy W  
(SCDOT Approval)

Digitally signed by Britt, Timothy W  
DN: o=SCDOT, email=BrittTW@scdot.org, cn=Britt, Timothy W  
Date: 2019.01.14 07:55:57 -0500  
(Date)

## General Provisions

**Application for Encroachment Permit**  
**General Provisions**

1. **DEFINITIONS:** The word "Permittee" used herein shall mean the name of the person, firm, or corporation to whom this permit is addressed, his, her, its, heirs, personal representatives, successors and assigns. The word "DEPARTMENT" shall mean the South Carolina Department of Transportation.
2. **NOTICE PRIOR TO STARTING WORK:** Before starting the work contemplated herein within the limits of the highway right of way, the Department's Resident Maintenance Engineer in the county in which the proposed work is located shall be notified 24 hours in advance so that he may be present while the work is under way.
3. **PERMIT SUBJECT TO INSPECTION:** This permit shall be kept at the site of the work at all times while said work is under way and must be shown to any representative of the Department or law enforcement officer on demand.
4. **PROTECTION OF HIGHWAY TRAFFIC:** The applicant shall be responsible for the protection of the highway traffic at all times during the construction, maintenance, removing or moving of the encroachment permitted herein. Detours, barricades, warning signs and flagmen, as necessary, shall be provided by and at the expense of the Permittee and shall be in accordance with the "Manual on Uniform Traffic Control Devices" (MUTCD). The work shall be planned and carried out so that there will be the least possible inconvenience to the motoring public. The Permittee agrees to observe all rules and regulations of the Department while carrying on the work contemplated herein and take all other precautions that circumstances warrant.
5. **STANDARDS OF CONSTRUCTION:** All work shall conform to the Department's standards of construction and shall be performed in a workman-like manner. The applicant shall make adequate provisions for maintaining the proper drainage of the highway as it may be affected by the encroachment permitted herein. All work shall be subject to the supervision and satisfaction of the Department.
6. **FUTURE MOVING OF PHYSICAL APPURTENANCES:** If, in the opinion of the State Highway Engineer, it should ever become necessary to move or remove the physical appurtenances, or any part thereof contemplated herein, on account of change in location of the highway, widening of the highway, or for any other sufficient reason, such moving shall be done on demand of the Department at the expense of the Permittee.
7. **RESTORATION OF HIGHWAY FACILITIES UPON MOVING OR REMOVING OF PHYSICAL APPURTENANCES:** If, and when, the physical appurtenances contemplated herein shall be moved or removed, either on the demand of the Department or at the option of the Permittee, the highway and facilities shall immediately be restored to their original condition at the expense of the Permittee.
8. **COSTS:** All work in connection with the construction, maintenance, moving or removing of the physical appurtenances contemplated herein shall be done by and at the expense of the Permittee.
9. **ADDITIONAL PERMISSIONS:**
  - (a) It is distinctly understood that this permit does not in any way grant or release any rights lawfully possessed by the abutting property owners. The Permittee shall secure any such rights, as necessary, from said abutting property owners.
  - (b) The Permittee shall be responsible for obtaining all other approvals or permits necessary for installation of the encroachment from other government entities.

- (c) There shall be no excavation of soil nearer than two feet to any public utility line or appurtenant facility except with the consent of the owner thereof, or except upon special permission of this Department after an opportunity to be heard is given the owner of such line or appurtenant facility.
10. **ADDITIONAL WORK PERFORMANCE:**
- (a) All crossings over the highway shall be constructed in accordance with "Specifications for Overhead Crossings of Light and Power Transmission Lines and Telegraph Lines over each other and over Highway Rights of Way in South Carolina," as approved by the Public Service Commission of South Carolina and effective as of date of this permit.
- (b) All tunneling, boring, or jacking shall be done in such a way as not to disturb the highway surfacing.
- (c) No pavement shall be cut unless specifically authorized herein.
- (d) No excavation shall be nearer than three feet to the edge of pavement unless specifically authorized herein.
- (e) Underground facilities will be located at minimum depths as defined in the "Utility Accommodations Manual" for the transmittant, generally as follows: 4 feet minimum for hazardous or dangerous transmittant, 3 feet minimum for other lines. The Department may approve shallower depths if adequate protection is provided. Such approval must be obtained in writing.
- (f) Service and other small diameter pipes shall be jacked, driven, or otherwise forced underneath the pavements on any surfaced road without disturbing the pavement. The section under the highway pavement and within a distance of three (3) feet on either side shall be continuous without joints.
11. **ACCESS:**
- (a) Permittee is responsible for maintaining reasonable access to private driveways during construction.
- (b) It is expressly provided that, with respect to any limited access highway, the Permittee shall not have or gain access from the main traveled way of the highway, or the on or off ramps to such facility, except upon approval by the Department.
12. **DRIVEWAYS:**
- (a) The existing crown of the highway shall be continued to the outside shoulder line of the highway.
- (b) If the driveway or approach is concrete pavement, the pavement shall be constructed at least 6 inches thick and with a minimum of class 2500 concrete. There shall be a bituminous expansion joint, not less than 3/4 inches in thickness, placed between the highway paving and the paving of the approach for the full width of the approach.
13. **BEAUTIFICATION:**
- (a) All trees, plants, flowers, etc. shall be placed in accordance with the provisions specifically stipulated herein.
- (b) All trees, plants, flowers, etc. shall be maintained by, and at the expense of, the Permittee and the provisions of this permit shall become null and void, if and when said Permittee ceases to maintain aid trees, plants, flowers, etc.
14. **AS-BUILT PLANS:**
- (a) The applicant shall provide the Department with survey-quality as-built plans in accordance with the requirements set forth in the Department's "A Policy for Accommodating Utilities on Highway Rights of Way".

**SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION  
Encroachment Permit**

Permit No : 219836

Permit Decision Date :  
1/14/2019

Expiration Date : 1/14/2020

Type Permit :SEWER

Location:

<u>District</u>	<u>Work County</u>	<u>Type</u>	<u>Route</u>	<u>Aux</u>	<u>Begin MP</u>	<u>End MP</u>
5	Georgetown, SC	S-	159	None	0.029	0.306

Contact Information

Applicant: CityofGeorgetown

Phone:

Contact: Justin Mooney

Address: PO Box 939,

City: Georgetown

State: SC

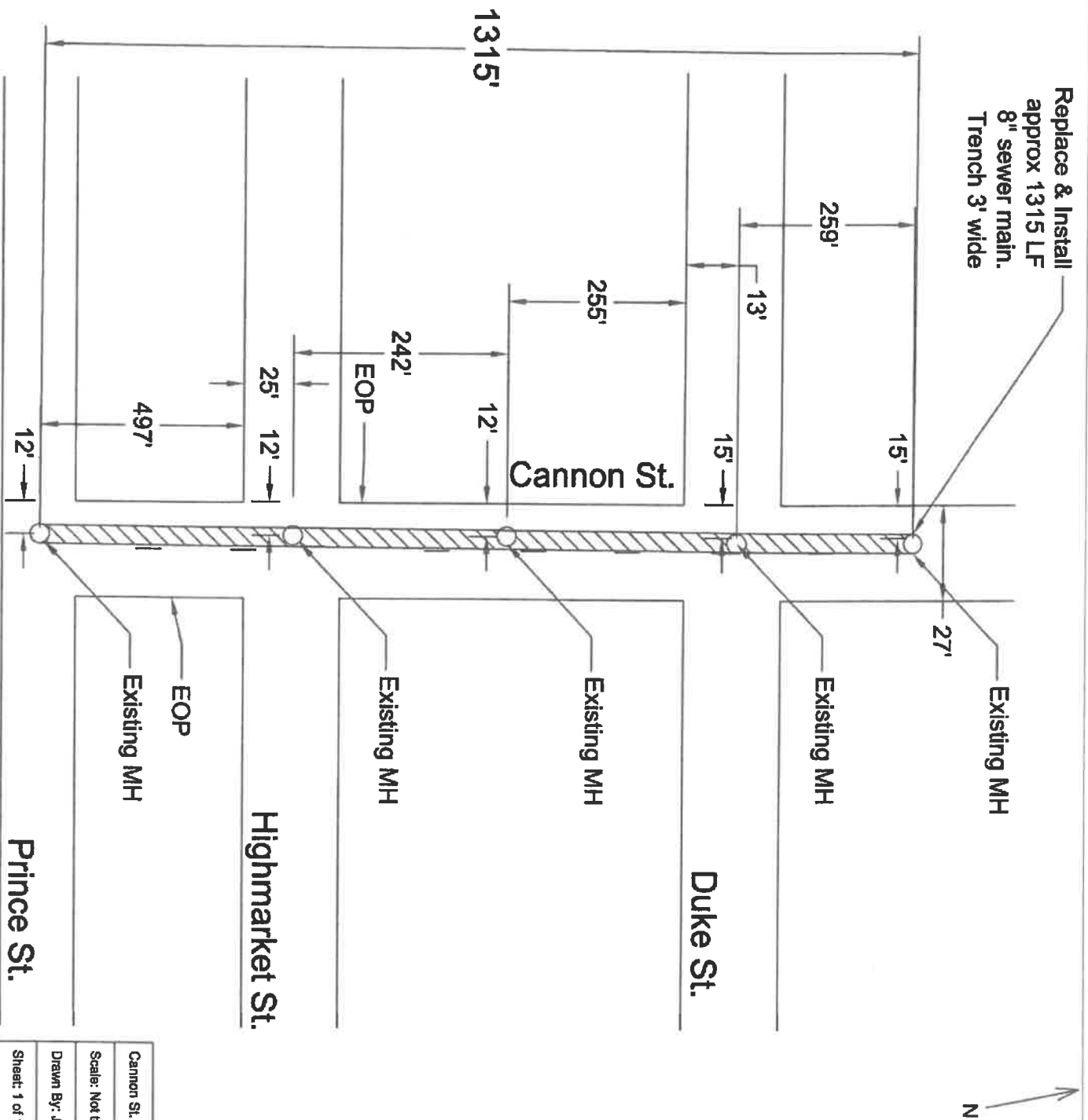
Zip: 29442

Comments

Replace approx. 1315 LF of 8" sewer from intersection of Cannon  
and Prince North towards Church St.

Special Provisions:

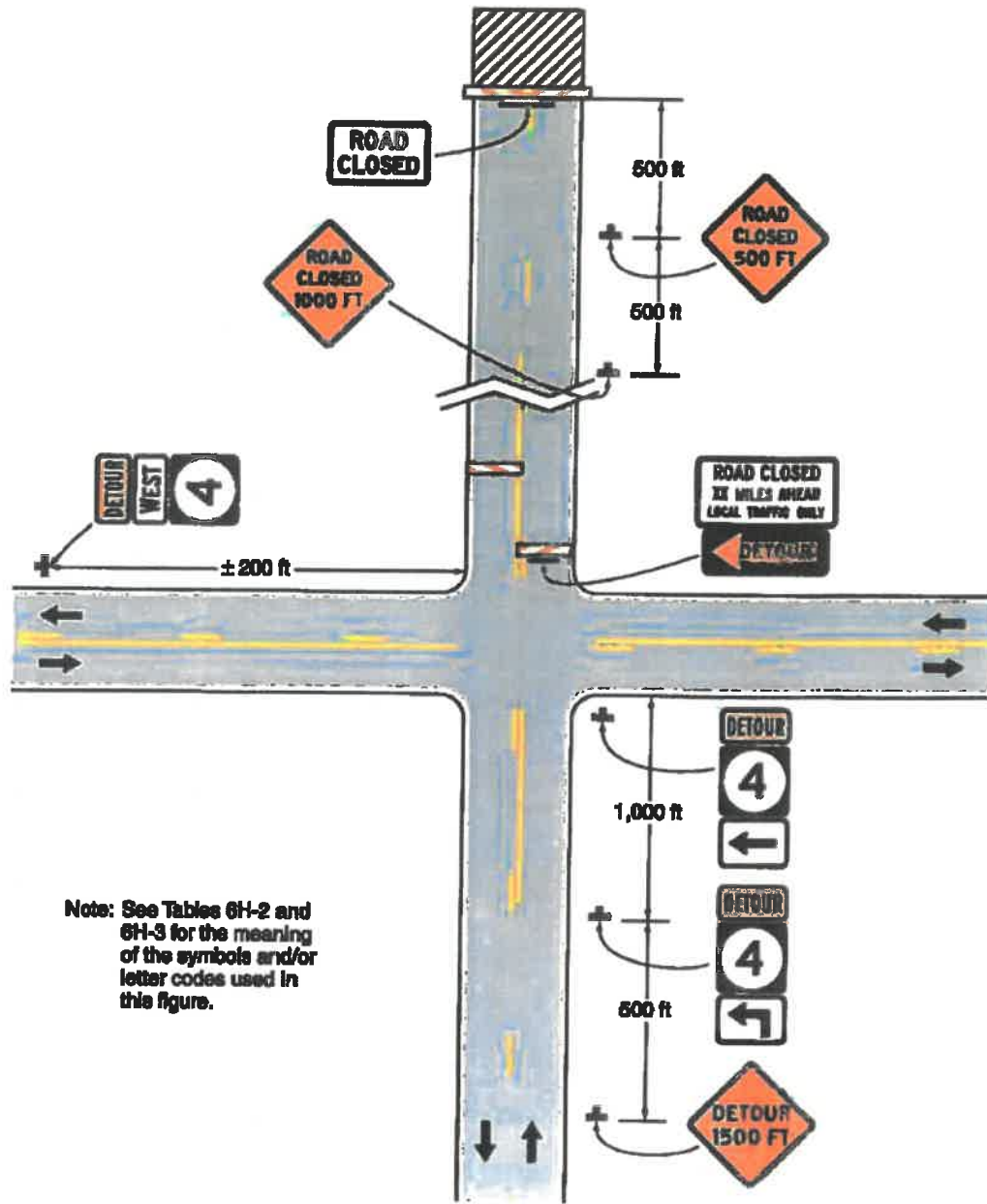
9999 - See Attached for Additional Special Provisions



Replace & Install  
 approx 1315 LF  
 8" sewer main.  
 Trench 3' wide

Cannon St. Sewer replacement
Scale: Not to Scale
Drawn By: Justin Mooney 1/11/19
Sheet: 1 of 1

Figure 6H-8. Road Closure with an Off-Site Detour (TA-8)



Typical Application 8

**DETOUR SIGNING  
FOR  
SECONDARY ROUTES**

1. Measure all sign locations as indicated.
2. The minimum mounting height for a detour sign assembly with multiple sign panels mounted on a ground mounted post is no less than 5 feet from the grade elevation of the near edge of the adjacent travel lane to the bottom of the route sign or the detour sign panel (M4-9) unless otherwise directed by the Department.  
The mounting height for regulatory and advance warning sign assemblies mounted on a ground mounted post is 7 feet to 8 feet from the grade elevation of the near edge of the adjacent travel lane to the bottom of the primary sign panel.
3. Determine the lateral location of a detour sign assembly adjacent to the roadway by measuring from the nearest edge of the detour sign assembly to the critical point. See *Table 19, Detour Sign Assembly Guidelines for Lateral Location (Secondary Routes) (Drawing No. 805-02)*. Reduction of these distances is acceptable in locations where the necessary shoulder widths are unavailable.

**Table 19** *Detour Sign Assembly Guidelines for Lateral Location  
(Secondary Routes)  
(Drawing No. 805-02)*

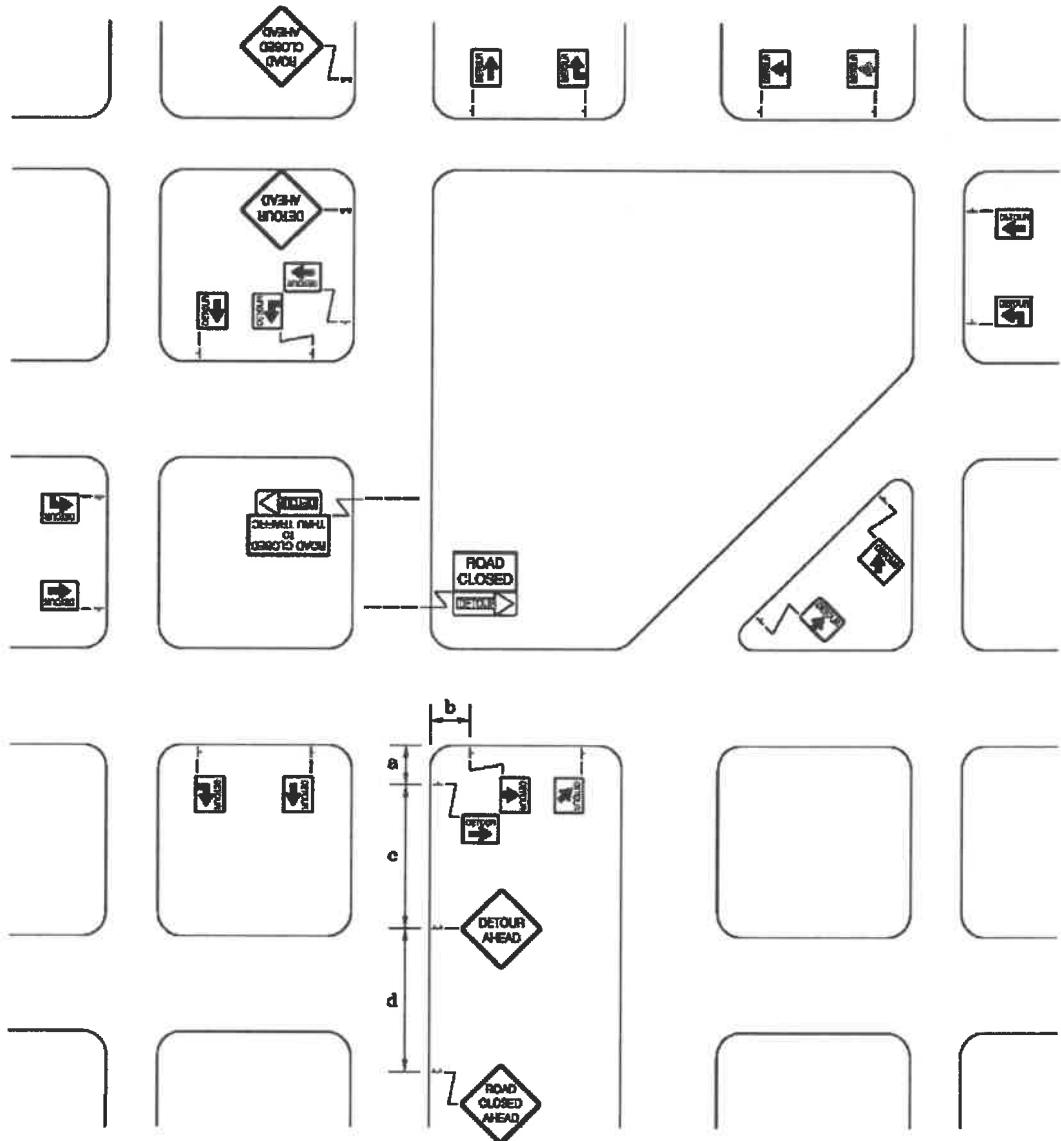
<b>TYPE of ROADWAY EDGE</b>	<b>DISTANCE</b>	<b>CRITICAL POINT</b>
Grass Shoulders	6 to 12 Feet	Near Edge of Adjacent Travel Lane
Paved Shoulders	2 Feet	Edge of Pavement
Curb & Gutter	2 Feet	Face of Curb

4. The sign placement intervals indicated on the illustration are for normal conditions. Adjustments to the distance intervals between the signs may be necessary due to sight distance restrictions such as curves and hills.
5. All supplemental signs attached to Type III barricades shall be constructed of an approved retroreflective roll-up material or an approved aluminum laminate composite rigid sign substrate material such as "Alpolic", "Dibond", or "Reynolite". Other rigid sign substrates such as 0.08 and 0.10 aluminum sign blanks are PROHIBITED for attachment to a Type III barricade.



















DRAWING 805-02  
DETOUR SIGNING  
FOR  
SECONDARY ROUTES

SIGN PLACEMENT AND SPACING INTERVALS				
SPEED LIMIT	a	b	c	d
35 MPH or LESS	50'	100'	200'	200'
40 MPH to 50 MPH	75'	150'	350'	350'
55 MPH or GREATER	100'	200'	500'	500'



**TYPICAL SIGNS**

 W20-2-48-A	 W20-3-48-A	 M4-9-30	 M4-9L-30	 M4-9.R-30	 M4-9.2L-30	 M4-9.2R-30	 M4-10L-48	 R11-2-48	 R11-3b-60-XX
			 M4-9R-30	 M4-9.W-30	 M4-9.2R-30	 M4-10R-48	 R11-4-60	 R11-3b-60-XX	

## Buried Utility Special Provisions

**This permit is valid ONLY for the requested work listed on the Application for Encroachment Permit.**

- a. **Application # :** 200064380  
b. **Permit # :** 219836  
c. **Type:** Sewer

### **Construction Notes:**

1. Applicant will make a continuous effort to keep all utilities, existing and new installs, as close to the right of way as possible.
2. All utilities will be placed a minimum of 48" deep under the roadway, 42" deep between the edge of pavement and ditch line, 36" below designed ditch/swale depth, 36" deep below drainage lines and 36" deep between the ditch line and right of way.
3. Utilities running parallel to the paved roadway should be installed a minimum 5' from edge of pavement.
4. All bore pits will be a minimum of 5' from edge of pavement.
5. No meters, valves, junction boxes or manholes will be allowed in the ditch line.
6. All meters and valves will be flush with existing grade of the shoulder.
7. No utility installation will be allowed to continue past 1000' without completing shoulder and ditch line grading.
8. All road signs and mailboxes, removed as a result of this installation, will be replaced without delay.
9. All open cuts will be repair according to the attached detail "Highway Repair".



## General Notes:

1. The applicant is responsible for obtaining all necessary permits for this project.
2. This permit is only applicable for SCDOT Right of Ways within Georgetown County.
3. The applicant is required to have a performance bond on all work under this permit for a period of 5 years from the completion date to cover any roadway failures.
4. The applicant is responsible for issuing a work schedule and negotiating any and all scheduling conflicts due to additional projects in the area.
5. Any field changes shall be submitted in writing to the Department for review/approval prior to any work being done.
6. The applicant/contractor is responsible for any damages incurred to roadway, shoulder, ditches, existing drainage, pavement markings, etc. due to the project under this permit. All repairs, if needed, shall be required prior to the release of this permit at no cost to the Department.
7. Applicant/contractor is responsible for installing any swales or slopes in right of way to ensure proper storm water runoff. No ponding in roadway, shoulder or apron permitted.
8. Applicant is responsible for scheduling a pre-construction meeting with the Department.
9. Applicant is responsible for requesting a final inspection to the Department. Please allow for a minimum of 2 business weeks to receive a punch list or release documents.
10. Traffic control, lights, signs and flag-men will be furnished by the applicant and will conform to part VI of the Manual on Uniform Traffic Control Devices.
11. Sediment and erosion control devices shall be used to minimize the movement of sediment.
12. All work performed in connection with this permit shall conform to the SCDOT "A Policy for Accommodating Utilities on Highway Right of Way" most current edition.
13. No excavation shall be left open along the highway.
14. There should be a disposal plan for Drilling Fluids.
15. Grass seeding shall follow the attached seeding tables.
16. 70% grass re-growth, 100% shoulder/ditch line stabilization to any area disturbed and no more than a 2" drop-off/or a 3:1 ditch slope is required within the Right of Way prior to the release of this permit.



17. If the site is within 1200' (feet) of a signalized intersection, you must call in advance for a signal line location. SCDOT is not on PUPS. You must call Glenn Collins at 843-661-4812 to schedule a signal line location before you begin any excavation in the SCDOT right-of-way.

### **Traffic Control:**

- a. Notify SCDOT three days before setting up any lane closures.
- b. When working within 1 foot of the nearby travel lane, a full lane closure is required. See SCDOT Standard Drawings attached for lane closure and shoulder closure.
- c. Proper traffic control is required to be set up and taken down daily.
- d. 5 foot vertical sign clearance required under each temporary traffic control sign.
- e. Lane closure restrictions: See attached if any. Contact your inspector if you have any questions or require clarification.

The applicant may write or email the Department regarding the special provisions of this permit application as noted herein prior to starting construction. The Department assumes all work shall be completed to these conditions.



**TABLE 3**  
**MINIMUM COVER FOR DIRECTIONAL DRILLED UTILITY PIPE**

<b>Casing\Carrier Pipe Diameter</b>	<b>Minimum Cover</b>
Greater than 2 inches up to 6 inches	4 feet
Greater than 6 inches up to 14 inches	10 feet
Greater than 14 inches up to 24 inches	15 feet
Greater than 24 inches up to 48 inches	25 feet

## Appendix B: Pipelines

Figure 1 – Example of Features for Encased Pipeline Crossings

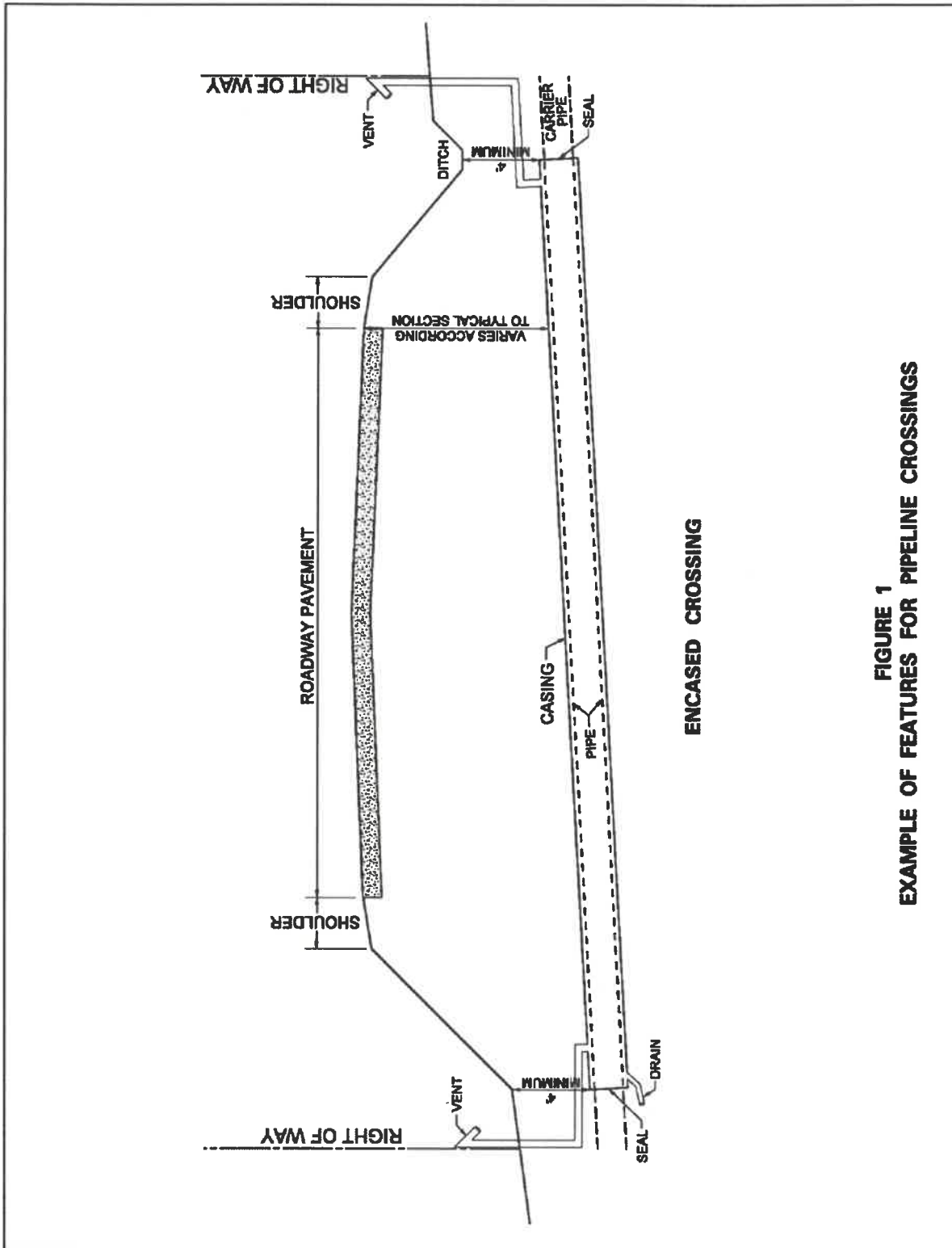


FIGURE 1  
EXAMPLE OF FEATURES FOR PIPELINE CROSSINGS

## Appendix B: Pipelines

Figure 1A – Example of Features for Unencased Pipeline Crossings

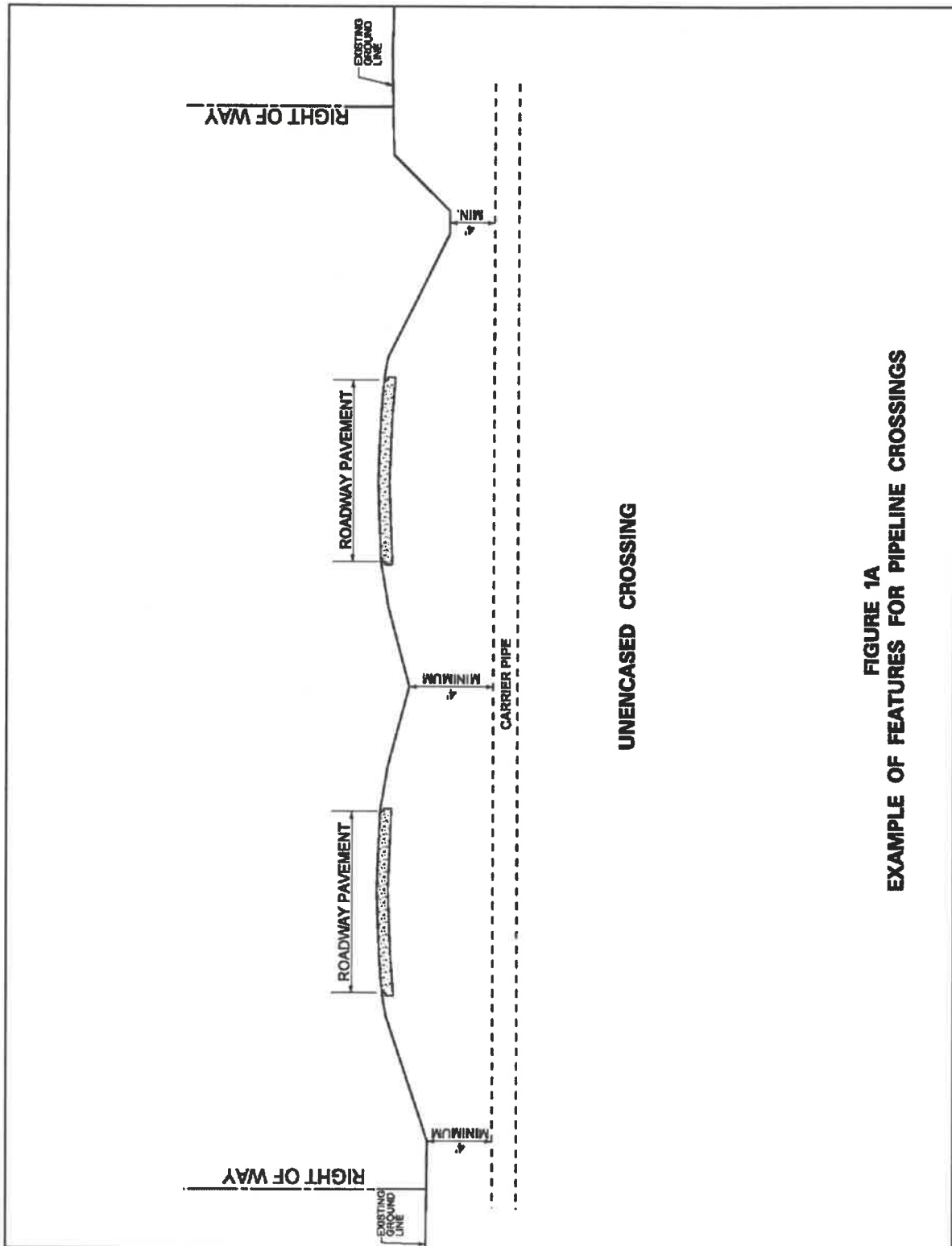
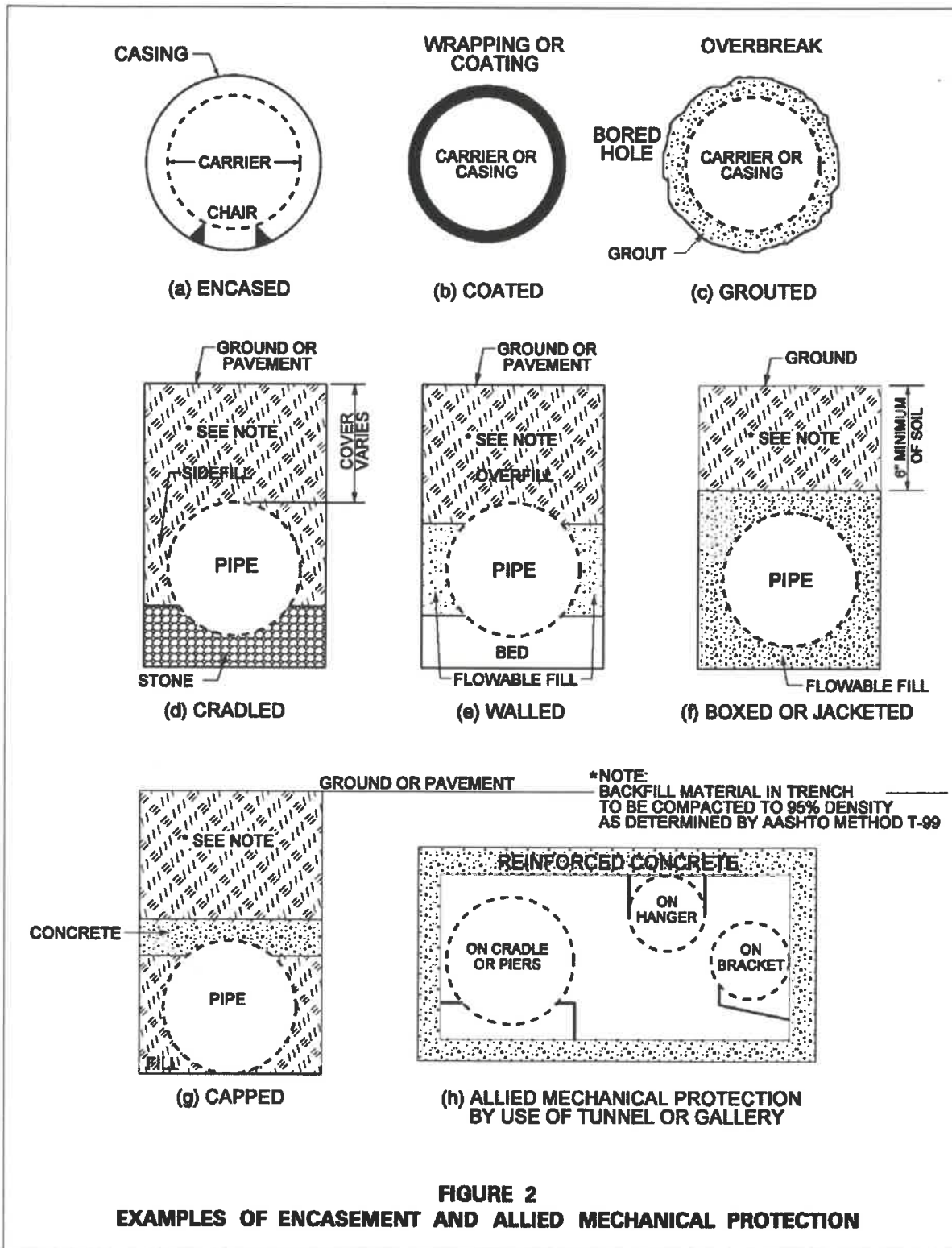


FIGURE 1A  
EXAMPLE OF FEATURES FOR PIPELINE CROSSINGS

## Appendix B: Pipelines

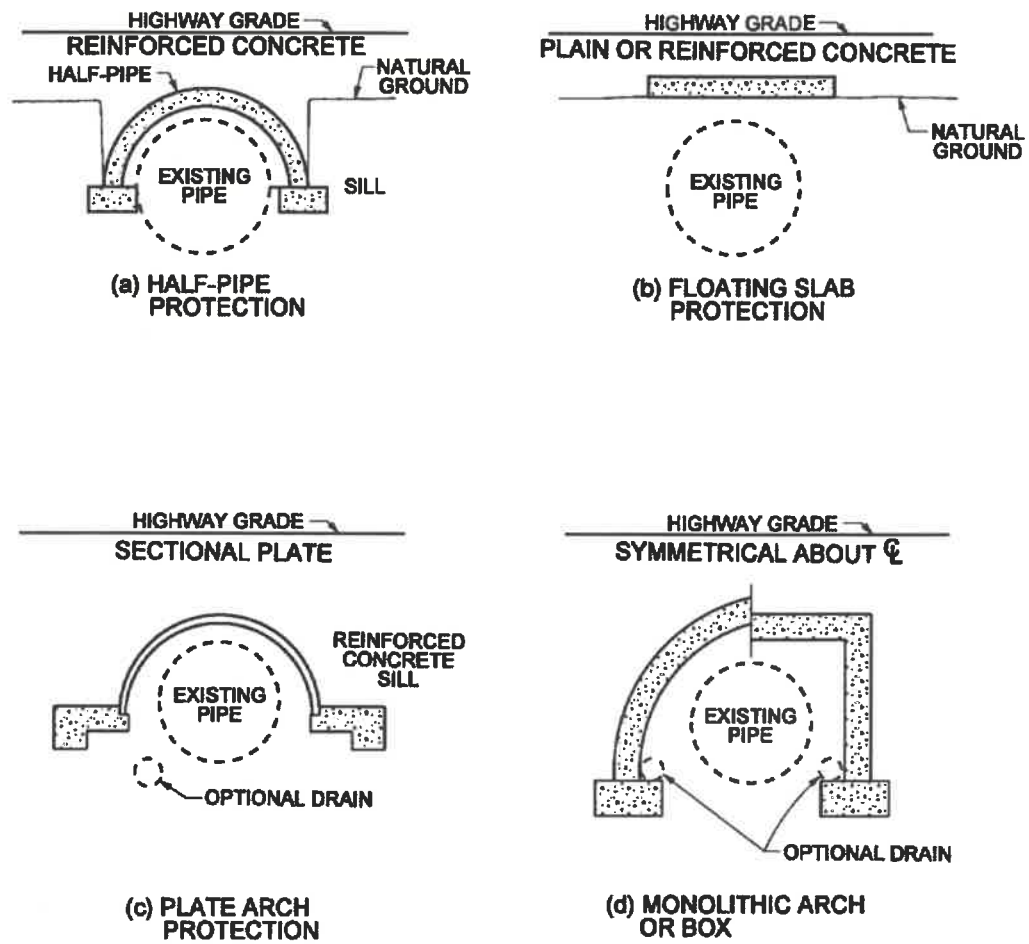
Figure 2 – Examples of Encasement and Allied Mechanical Protection





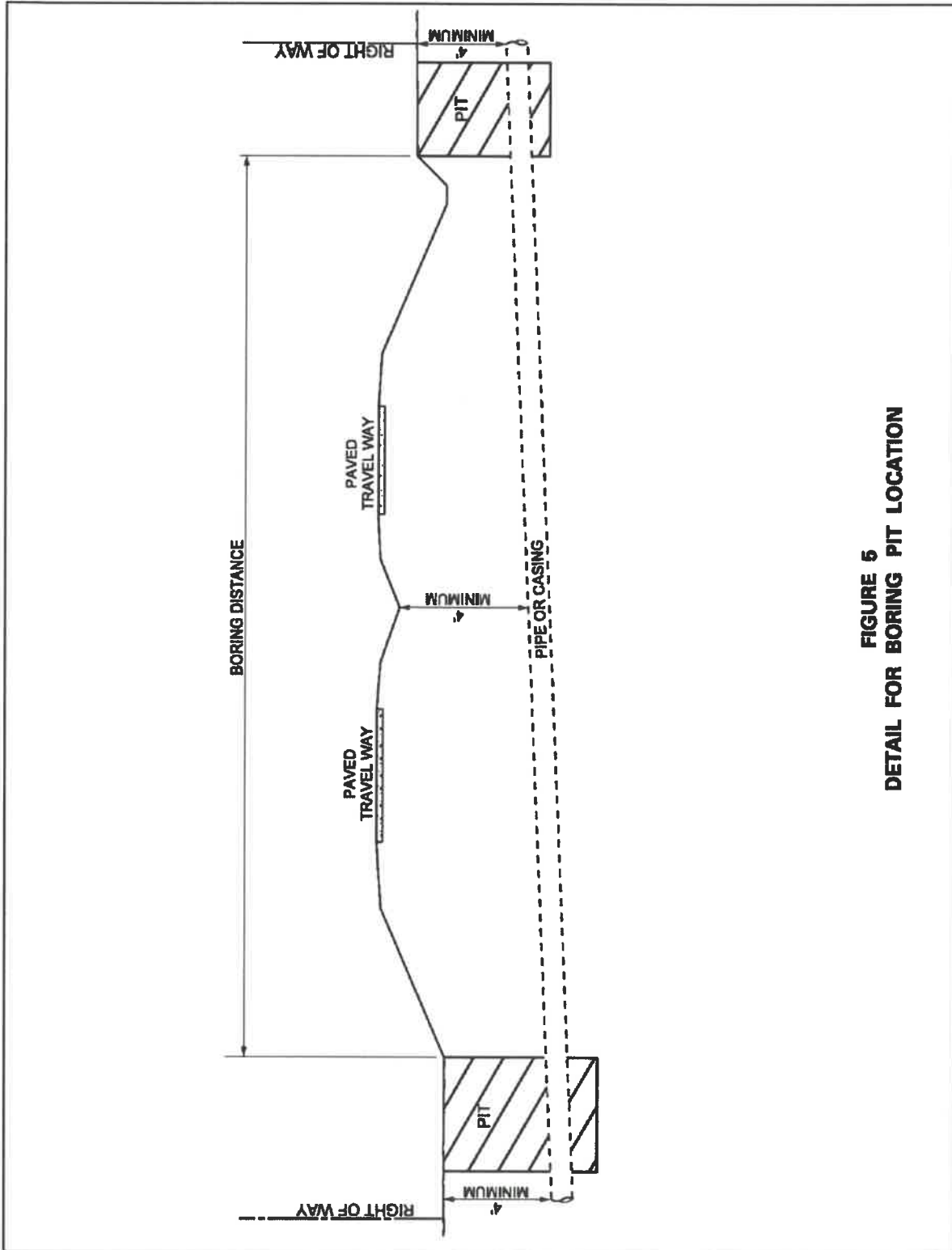
## Appendix B: Pipelines

Figure 3 – Examples of Protection of Existing Pipelines



**FIGURE 3**  
**EXAMPLES OF PROTECTION OF EXISTING PIPELINES**

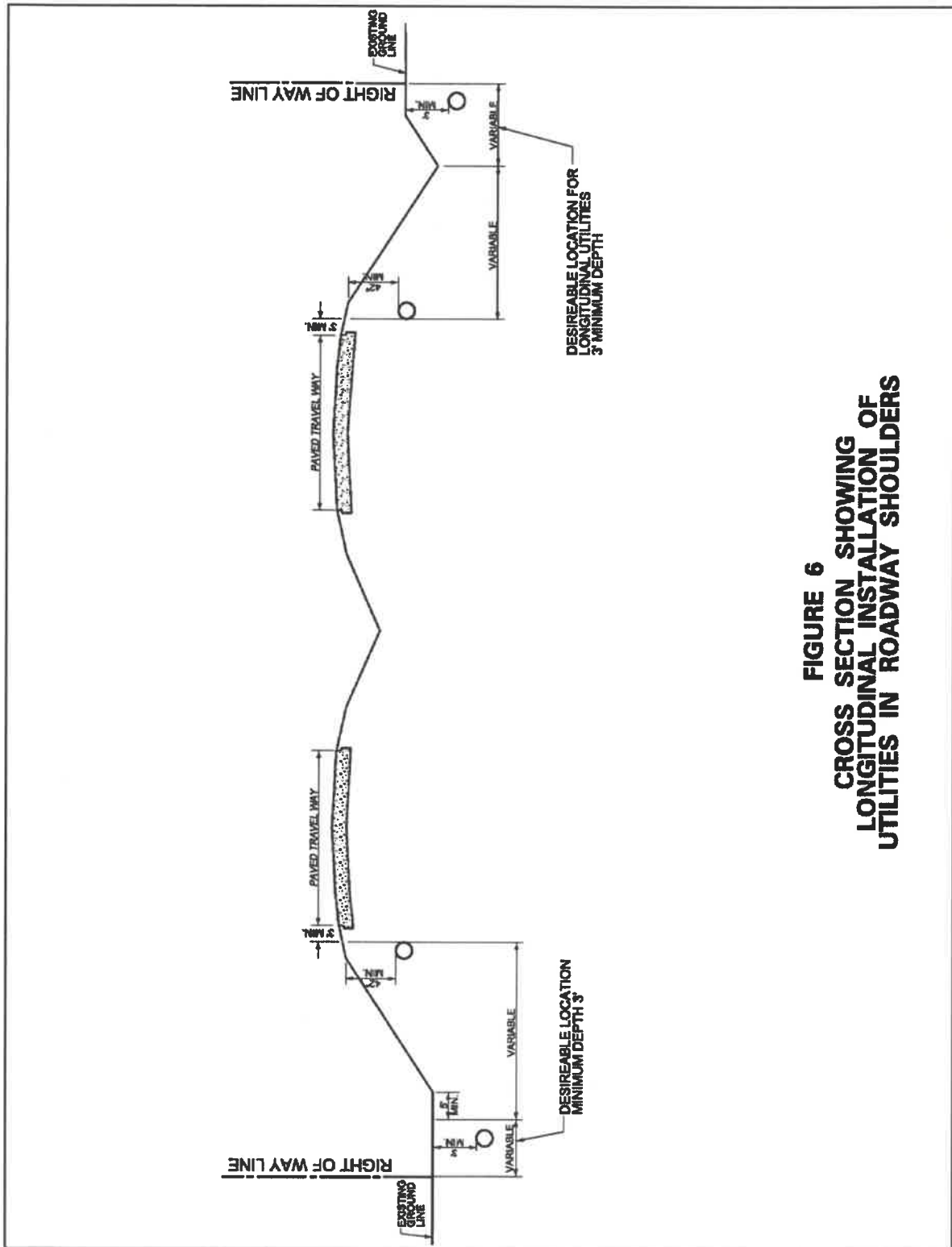
**Appendix B: Pipelines**  
**Figure 5 – Detail for Boring Pit Location**



**FIGURE 5**  
**DETAIL FOR BORING PIT LOCATION**

## Appendix B: Pipelines

### Figure 6 – Longitudinal Installation of Utilities in Roadway Shoulders



**FIGURE 6  
CROSS SECTION SHOWING  
LONGITUDINAL INSTALLATION OF  
UTILITIES IN ROADWAY SHOULDERS**

DISTRICT 5 (continued)

**GEORGETOWN COUNTY**

**Note 1**      *The Department prohibits lane closures on designated routes from 7:00 am of the Thursday before Memorial Day until 6:00 pm of the Tuesday after Labor Day where seasonal restrictions are noted.*

ROAD NUMBER	TERMINI FROM	TERMINI TO	HOURLY LANE CLOSURE PROHIBITIONS
US 17	Horry County Line	Road S-266	<p><b>Seasonal Lane Closure Restrictions - See Note 1</b></p> <p>-----</p> <p><b>Lane Closure Restrictions From 6:00 PM of the Tuesday after Labor Day To 7:00 AM of the Thursday before Memorial Day -</b></p> <p><b><u>Northbound</u></b>            MON-THU: 7A-6P            FRI: 7A-8P            SAT: 10A-7P            SUN: 12P(Noon)-5P</p> <p><b><u>Southbound</u></b>            MON-THU: 7A-6P            FRI: 7A-7P            SAT: 10A-7P            SUN: 10A-6P</p>
US 17	Road S-266	Road S-80	<p>MON-FRI: 7AM - 9AM                              4PM - 6PM            SAT: -----            SUN: -----</p>
US 17	Road S-80	Road S-42	<p><b>Seasonal Lane Closure Restrictions - See Note 1</b></p> <p>-----</p> <p><b>Lane Closure Restrictions From 6:00 PM of the Tuesday after Labor Day To 7:00 AM of the Thursday before Memorial Day -</b></p> <p><b><u>Northbound</u></b>            MON-THU: 7A-6P            FRI: 7A-8P            SAT: 10A-7P            SUN: 12P(Noon)-5P</p> <p><b><u>Southbound</u></b>            MON-THU: 7A-6P            FRI: 7A-7P            SAT: 10A-7P            SUN: 10A-6P</p>

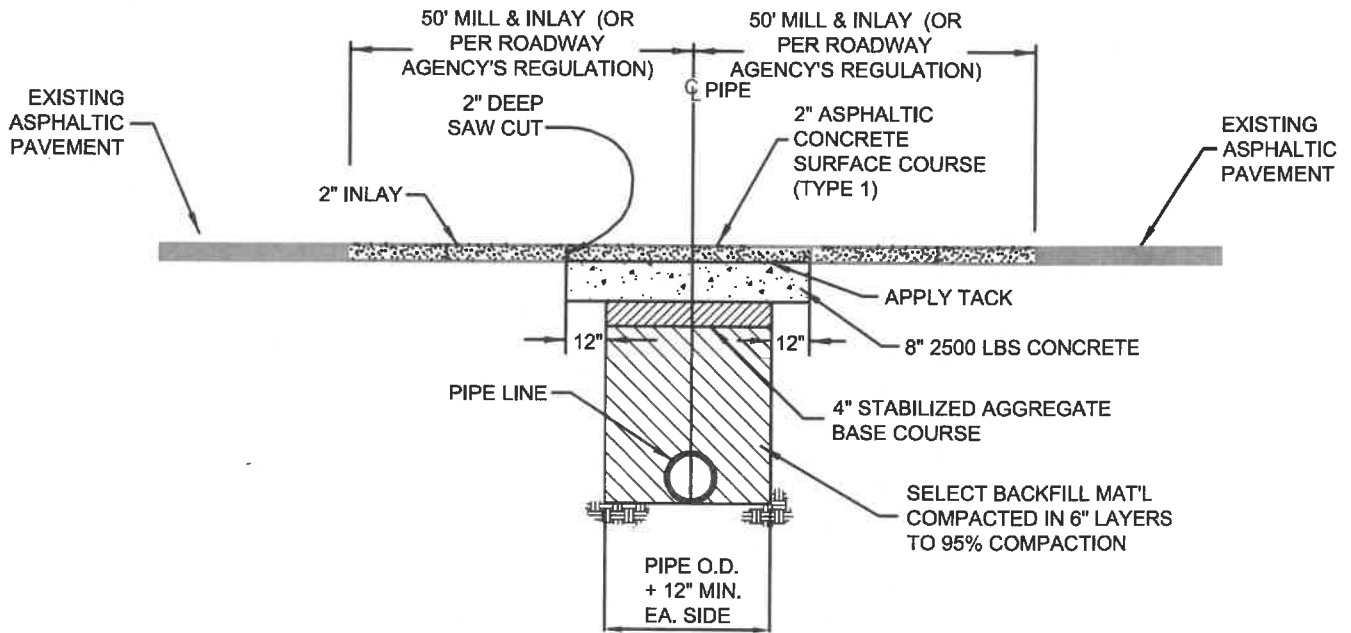
August 10, 2015

DISTRICT 5 (continued)

**GEORGETOWN COUNTY** (continued)

**Note 1**      *The Department prohibits lane closures on designated routes from 7:00 am of the Thursday before Memorial Day until 6:00 pm of the Tuesday after Labor Day where seasonal restrictions are noted.*

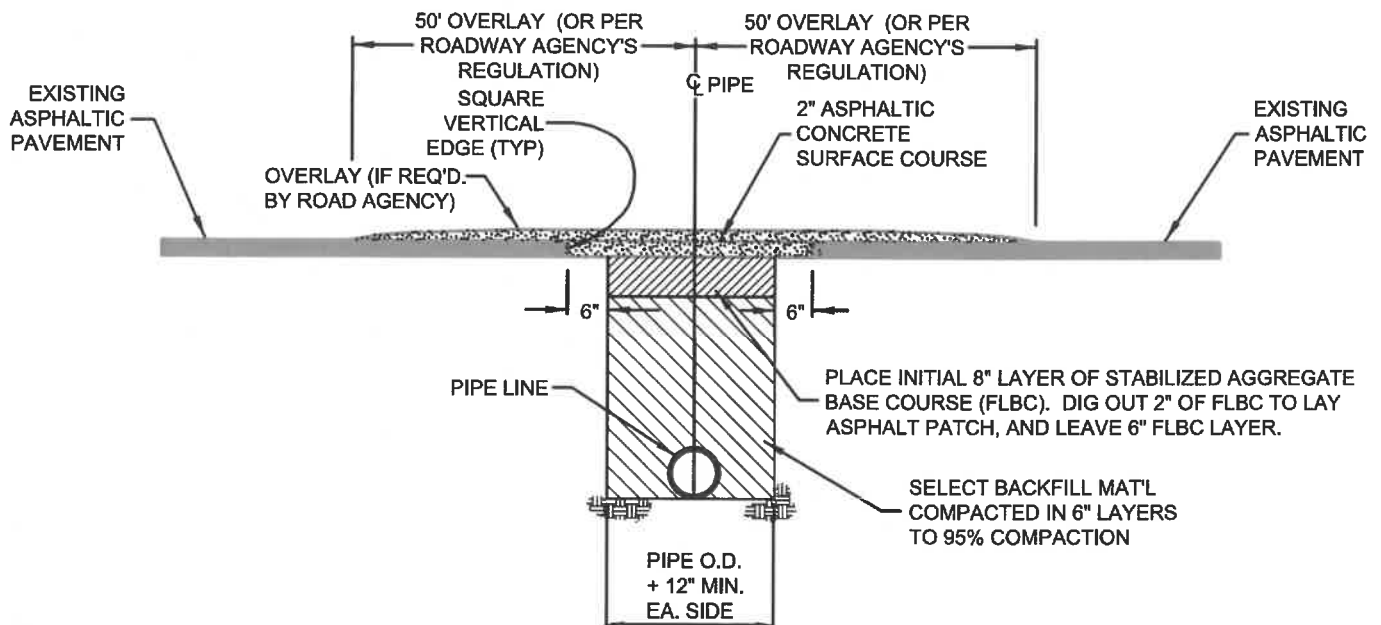
ROAD NUMBER	TERMINI FROM	TERMINI TO	HOURLY LANE CLOSURE PROHIBITIONS
US 521	US 17	Road S-20	MON-FRI: 7AM - 9AM 4PM - 6PM SAT: ----- SUN: -----
US 701	US 521	SC 51	MON-FRI: 7AM - 9AM 4PM - 6PM SAT: ----- SUN: -----



**NOTES:**

1. PAVEMENT CUT TO EXTEND 12" BEYOND EDGES OF TRENCH AS SHOWN. PAVEMENT SHALL BE CUT TO TRUE LINE AND REMOVED BEFORE TRENCH IS CUT. ALL PAVEMENT REPAIRS TO BE IN ACCORDANCE WITH ROAD AGENCY SPECS.
2. IF PAVEMENT CUT IS ON A HIGH VOLUME MAIN ROAD NEAR A PAVED INTERSECTION, AND THE EDGE OF THE INTERSECTING ROAD IS ONLY A FEW FEET BEYOND THE NORMAL 50' (ONE SIDE DIMENSION) INLAY, THE INLAY IS TO BE EXTENDED TO THE EDGE OF THE INTERSECTING ROAD.

**OPEN CUT REPAIR FOR HIGH VOLUME ASPHALT PAVEMENT**



**NOTES:**

1. PAVEMENT CUT TO EXTEND 6" BEYOND EDGES OF TRENCH AS SHOWN. PAVEMENT SHALL BE CUT TO TRUE LINE AND REMOVED BEFORE TRENCH IS CUT. ALL PAVEMENT REPAIRS TO BE IN ACCORDANCE WITH ROAD AGENCY SPECS.
2. ROAD AGENCY MAY REQUIRE A CUT & PATCH OF TRENCH AREA AND AN OVERLAY OF ENTIRE APRON OR ENTRANCE FROM THE EDGE OF THE MAIN ROAD TO THE EDGE OF THE ROAD RIGHT-OF-WAY (SEE ENCROACHMENT PERMIT).
3. WHERE EXISTING PAVEMENT IS INSUFFICIENT THICKNESS TO DEVELOP TIGHT SEAL WITH NEW SURFACE, NEW PAVEMENT SHALL LAP EXISTING SURFACE WITH AT LEAST A 10' OVERLAP ON BOTH SIDES FOR SMOOTH TRANSITION OR AS PER SPEC'S. OF ROAD AGENCY.

**OPEN CUT REPAIR FOR LOW VOLUME ASPHALT PAVEMENT**

**TABLE 1: PERENNIALS** \* Months shaded in gray represent applicable planting dates.

COMMON NAME <sup>5</sup>	BOTANICAL NAME	APPROVED SITE(S)	PLANTING RATE (lbs/acre)	PLANTING LOCATION	Planting Dates*																				
					JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC									
<b>TURF-TYPE GRASSES (SELECT ONE)</b>																									
Bahia <sup>1</sup>	Paspalumnotatum	Slopes	30	Upper State Lower State																					
Common Bermudagrass <sup>2</sup> (hulled = hull absent)	Cynodondactylon	Shoulders, Slopes, or Medians	25	Upper State Lower State																					
Common Bermudagrass <sup>2</sup> (unhulled = hull present)	Cynodondactylon	Shoulders, Slopes, or Medians	30	Upper State Lower State																					
Carpet Grass	Axonopusaffinis	Shoulders, Slopes or Medians	15	Upper State Lower State																					
Tall Fescue	Festucaaruninacea	Shoulders, Slopes, or Medians	50	Upper State Lower State																					
Centpedegrass	Eremochloaophiuro ides	Shoulders, Medians	10	Upper State Lower State																					
<b>GRASSES</b>																									
Weeping Lovegrass	Eragrostiscurvula	Slopes	5	Inner State Lower State																					
Indiangrass	Sorghastrumnutans	Slopes	10	Upper State Lower State																					
Little Bluestem	Andropogonscopari us	Slopes	10	Upper State Lower State																					
Coastal Panicgrass	Panicummanum	Slopes	20	Upper State Lower State																					
Switchgrass	Panicumvirgatum	Slopes	10	Upper State Lower State																					
Perennial Rye Grass <sup>3</sup>	Loliumperrene	Shoulders, Slopes, or Medians	15	Upper State Lower State																					
Virginia Wild Rye	Elymusvirginicus	Shoulders, Slopes, or Medians	6	Upper State Lower State																					
<b>LEGUMES<sup>4</sup></b>																									
White Clover	Trifoliumrepens	Shoulders, Slopes	5	Upper State Lower State																					
Sericea Lespedeza (Scarified seed)	Lespedeza cuneta	Slopes	50	Upper State Lower State																					
Sericea Lespedeza (Unscarified seed)	Lespedeza cuneta	Slopes	80	Upper State Lower State																					

<sup>1</sup>Bahia grass: Bahia grass may be used as an optional turf-type permanent cover at the discretion of the RCE. \* Months shaded in gray represent applicable planting dates.

<sup>2</sup>Common Bermudagrass: Do not use Giant Bermudagrass (K-37).

<sup>3</sup>Perennial Rye Grass: Do not use Annual Italian Rye Grass (Loliummultiflorum).

<sup>4</sup>Only use pre-inoculated legumes or use an appropriate inoculant with the seed at planting.

<sup>5</sup>If the Common Name of the seed listed in Table 1 is not available, use seed with the listed Botanical Name.



**Drawing No. 405-01-A**

**FLAGGING OPERATIONS  
MULTIPLE FLAGGERS  
TWO-LANE TWO-WAY ROADWAYS  
PRIMARY & SECONDARY ROUTES**

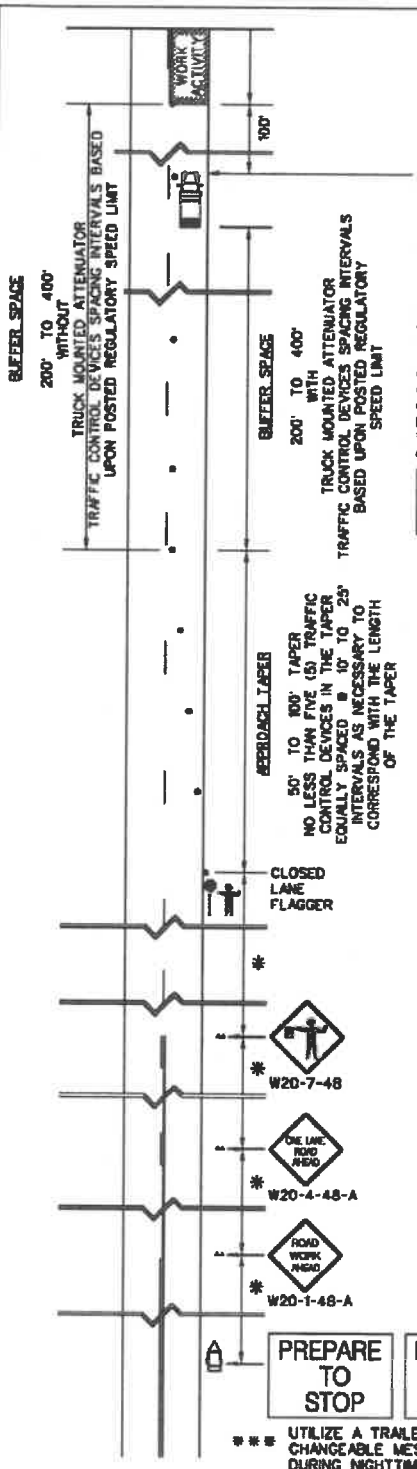
1. In the "Work Zone Traffic Control Procedures" section, see the subsection entitled, "Flagging Operations", for the standard requirements regarding all flagging operations.

2. In accordance with this traffic control setup, install, maintain and conduct multiple flagger flagging operations for a work zone that is present within the travel lane of a two-lane two-way roadway that does not encroach upon an intersection or the approaches of an intersection.

However, when an intersection is involved, see those drawings listed below dependent upon the following scenarios:

<b>SCENARIO</b>	<b>STANDARD DRAWING</b>
Work Activity Area Passes by a Stop Sign Controlled Side Road	Drawing No. 405-01-B(1)
Work Activity Area Passes through a 4-Way Stop Sign Controlled Intersection	Drawing No. 405-01-B(2)
Work Activity Area Passes through a Traffic Signal Controlled Intersection - All Traffic Directed Through the Intersection by Uniformed Law Enforcement Officer(s)	Drawing No. 405-01-C(1)
Work Activity Area Passes through a Traffic Signal Controlled Intersection - All Traffic Directed Through the Intersection by Flaggers	Drawing No. 405-01-C(2)
Work Activity Area Begins at an Intersection with a Two-Lane Two-Way Roadway and is Present within the Departure lane	Drawing No. 405-01-D(1)
Work Activity Area Terminates at an Intersection with a Two-Lane Two-Way Roadway and is Present in the Approach Lane within 900 Feet to 1800 Feet of the Intersection	Drawing No. 405-01-D(2)
Work Activity Area Begins or Terminates at an Intersection with a Low Speed ( $\leq$ 35 MPH ) Multilane Roadway	Drawing No. 405-01-E(1) Drawing No. 405-01-E(2)
Work Activity Area Begins or Terminates at an Intersection with an Intermediate Speed to High Speed ( 40 MPH -60 MPH ) Multilane Roadway	Drawing No. 405-01-F(1) Drawing No. 405-01-F(2)

# DRAWING 405-01-A FLAGGING OPERATIONS MULTIPLE FLAGGERS TWO-LANE TWO-WAY ROADWAYS PRIMARY & SECONDARY ROUTES



**TRUCK MOUNTED ATTENUATOR (OPTIONAL)**

WHEN A TRUCK MOUNTED ATTENUATOR IS UTILIZED, OPERATE AS FOLLOWS:

THE TRUCK MOUNTED ATTENUATOR SHALL REMAIN APPROXIMATELY 100' IN ADVANCE OF THE WORK ACTIVITY (INCLUDING PERSONNEL AND MACHINERY) AT ALL TIMES.

AN ADVANCE WARNING ARROW PANEL IS OPTIONAL ON THIS VEHICLE. AN ADVANCE WARNING ARROW PANEL ON THIS VEHICLE SHALL OPERATE IN THE "FOUR CORNER" CAUTION MODE DISPLAYING FOUR LAMPS WITH ONE LAMP IN EACH CORNER.

TRAFFIC CONTROL DEVICE SPACING INTERVALS BASED UPON POSTED REGULATORY SPEED LIMIT

TRAFFIC CONTROL DEVICE SPACING INTERVALS BASED UPON POSTED REGULATORY SPEED LIMIT

50' TO 100' TAPER NO LESS THAN FIVE (5) TRAFFIC CONTROL DEVICES IN THE TAPER EQUALLY SPACED @ 10' TO 25' INTERVALS AS NECESSARY TO CORRESPOND WITH THE LENGTH OF THE TAPER

CLOSED LANE FLAGGER

\*\*\* UTILIZE A TRAILER MOUNTED CHANGEABLE MESSAGE SIGN DURING NIGHTTIME FLAGGING OPERATIONS \*\*\*

**Table A**

TRAFFIC CONTROL DEVICE SPACING INTERVALS WORK ACTIVITY AREA	
SPEED LIMIT	SPACING INTERVALS
≤ 35 MPH	25 FEET
40 - 55 MPH	50 FEET

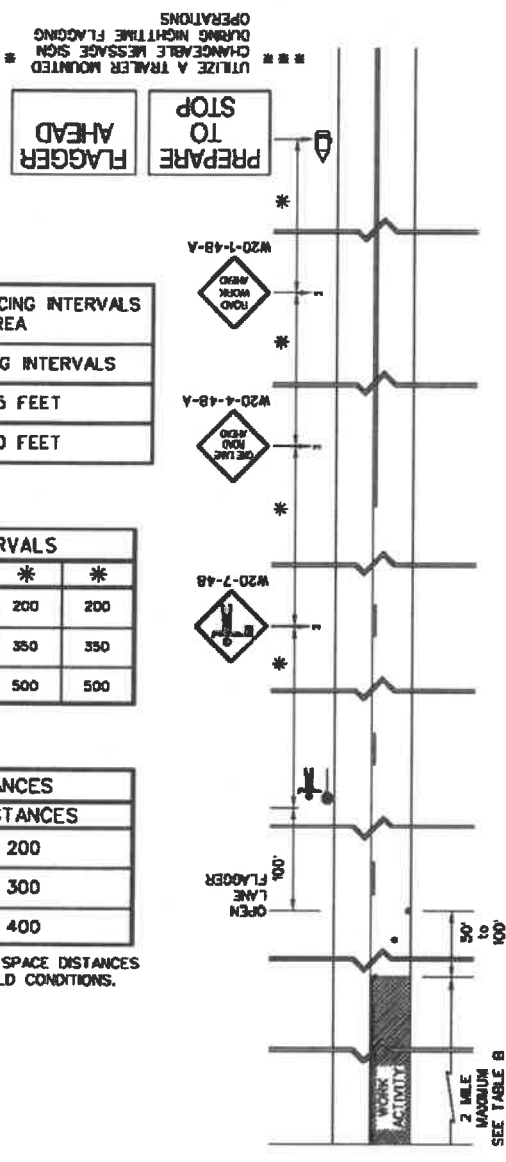
**Table B**

SIGN PLACEMENT INTERVALS			
SPEED LIMIT	*	*	*
LOW SPEED ≤ 35 MPH	200	200	200
INTERMEDIATE SPEED 40 - 50 MPH	350	350	350
HIGH SPEED 55 MPH	500	500	500

**Table C**

BUFFER SPACE DISTANCES	
SPEED LIMIT	DISTANCES
LOW SPEED ≤ 35 MPH	200
INTERMEDIATE SPEED 40 - 50 MPH	300
HIGH SPEED 55 MPH	400

NOTE: ADJUSTMENTS TO THE BUFFER SPACE DISTANCES MAY BE REQUIRED DUE TO FIELD CONDITIONS.



**NIGHTTIME FLAGGING OPERATIONS**

ALL FLAGGERS SHALL WEAR CLASS 3 HIGH VISIBILITY SAFETY APPAREL MEETING ANSI/ISEA 107 REQUIREMENTS.

UTILIZE CHANGEABLE MESSAGE SIGNS ON EACH ROADWAY APPROACH DURING ALL PLANNED NIGHTTIME WORK ACTIVITIES THAT REQUIRE FLAGGING OPERATIONS.

ILLUMINATE EACH FLAGGER STATION.

UTILIZE PORTABLE PLASTIC DRUMS OR 42" OVERSIZED CONES INSTEAD OF STANDARD TRAFFIC CONES.

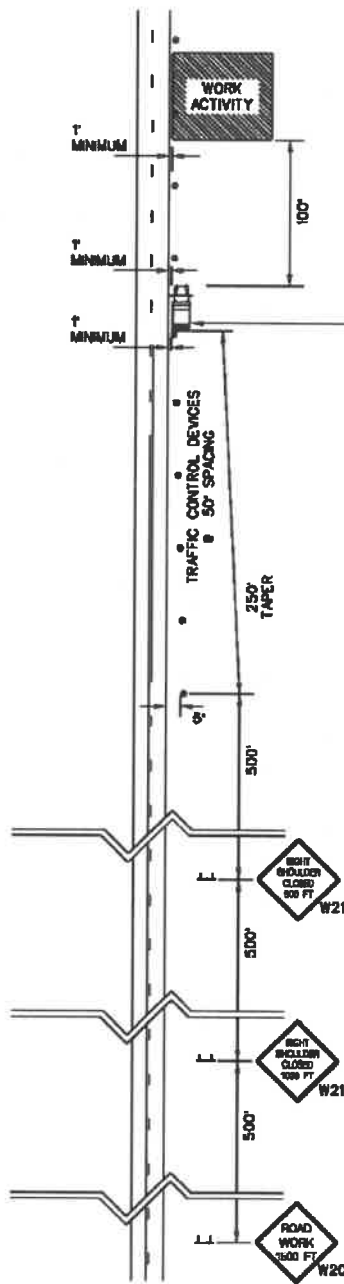
**SPECIAL NOTE:**

DURING UNPLANNED NIGHTTIME EMERGENCY OPERATIONS, THE CHANGEABLE MESSAGE SIGNS MAY BE OMITTED, THE REQUIREMENT FOR THE CHANGEABLE MESSAGE SIGNS SHALL BE MAINTAINED FOR ALL PLANNED NIGHTTIME WORK ACTIVITIES THAT REQUIRE FLAGGING OPERATIONS.

**RIGHT SHOULDER CLOSURE  
( CASE I / CASE II )  
TWO-LANE TWO-WAY ROADWAY  
PRIMARY & SECONDARY ROUTES**

1. Install all advance warning signs as illustrated.
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 grass 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. When a 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. On primary and secondary routes, the minimum mounting height of signs mounted on portable sign supports is 1 foot from the ground to the bottom edge of the sign during this traffic control setup.
4. The advance warning sign placement intervals illustrated are for normal conditions. Adjustments to the distance intervals between the signs may be necessary due to sight distance restrictions such as curves and hills.
5. During daytime hours, 28" or 36" standard traffic cones or 42" oversized traffic cones may be utilized for delineation of a shoulder closure. Standard traffic cones, 28" or 36" traffic cones, used during daytime hours are not required to be reflectorized. Delineation of a shoulder closure during nighttime hours with 28" or 36" standard traffic cones or 42" oversized traffic cones is PROHIBITED.
6. During nighttime hours, portable plastic drums are required for delineation of a shoulder closure.
7. If a daytime shoulder closure must be maintained into the nighttime hours, replace the 28" or 36" standard traffic cones or 42" oversized traffic cones with portable plastic drums.
8. Reflectorize all portable plastic drums and 42" oversized traffic cones with Type III flexible microprismatic retroreflective sheeting.
9. On primary and secondary roadways, install shoulder closures as follows:
  - CASE I: Install advance warning signs and traffic control devices to provide a 250 foot taper in advance of the closed shoulder area and to delineate the closed shoulder area when a work zone occupies the shoulder area within 15 feet but not closer than 1 foot from the near edge of the adjacent travel lane. A truck mounted attenuator is optional.
  - CASE II: Only advance warning signs are required to be installed whenever a short term stationary or longer term work zone occupies any portion of the shoulder area beyond 15 feet but within 30 feet of the near edge of the adjacent travel lane.
10. When a truck mounted attenuator is used, maintain the truck mounted attenuator approximately 100 feet in advance of the work activities. Maintain a minimum distance of 1 foot or greater between the truck mounted attenuator and the near edge of the adjacent travel lane.
11. Conduct the work in such a manner to avoid encroaching within 1 foot of the near edge of the adjacent travel lane. If the work activities cannot be performed under this traffic control setup without encroaching within 1 foot of the near edge of the adjacent travel lane, close the adjacent travel lane to traffic and conduct flagging operations.
12. If work is being conducted at two different locations at the same time, separate the two locations by no less than 1 mile from the end of the first shoulder closure to the beginning of the taper of the second shoulder closure.
13. This traffic control setup for a right shoulder closure applies to closures of the right shoulder areas of secondary and primary routes.

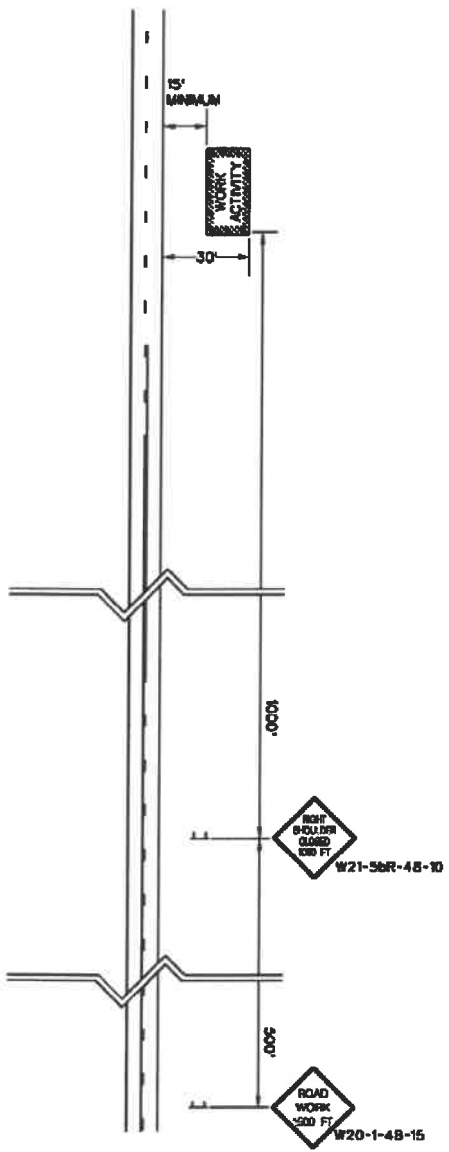
**DRAWING 515-01-A  
RIGHT SHOULDER CLOSURE  
( CASE I / CASE II )  
TWO-LANE TWO-WAY ROADWAY  
PRIMARY & SECONDARY  
ROUTES**



**TRUCK MOUNTED ATTENUATOR**  
WHEN A TRUCK MOUNTED ATTENUATOR IS UTILIZED, OPERATE AS FOLLOWS:

THE TRUCK MOUNTED ATTENUATOR SHALL REMAIN APPROXIMATELY 100' IN ADVANCE OF THE WORK ACTIVITY ( INCLUDING PERSONNEL AND MACHINERY ) AT ALL TIMES.

AN ADVANCE WARNING ARROW PANEL IS OPTIONAL ON THIS VEHICLE. WHEN THE VEHICLE OPERATES ON THE SHOULDER, THE ADVANCE WARNING ARROW PANEL SHALL OPERATE IN THE "FOUR CORNER" CAUTION MODE DISPLAYING FOUR LAMPS WITH ONE LAMP IN EACH CORNER.



**CASE I**

**CASE II**

**NOTE 1**  
INSTALL TRAFFIC CONTROL DEVICES AT 50' SPACING AND SIGNS AS ILLUSTRATED. TRAFFIC CONTROL DEVICES SHOULD EXTEND NO LESS THAN 30' BEYOND THE WORK AREA.

**CANNON STREET SEWER IMPROVEMENTS  
PROJECT NO. 1814  
PLAN VIEW**



**Notes:**

1. Remove and Replace 8-in. Sewer Main from MH 1066 to MH 1070
2. Verify invert elevations of existing manholes and pipe slope. Install new gravity sewer line to match existing slope.
3. Minimize width of pavement cuts.

**Legend**

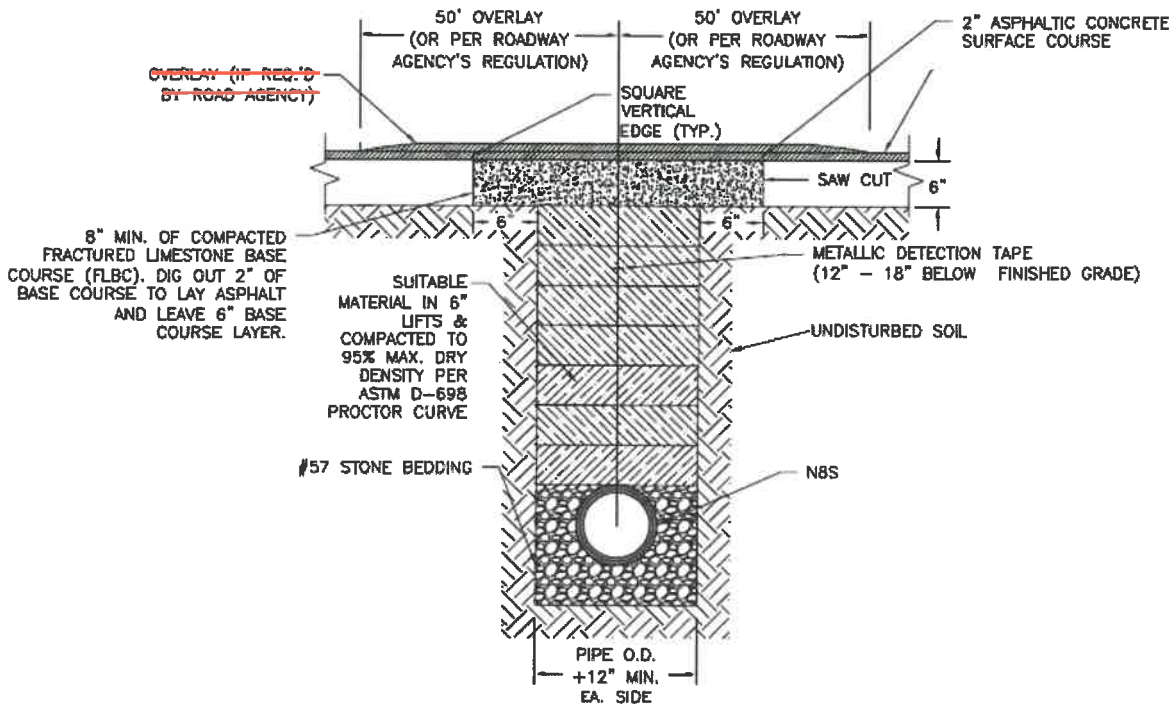
- sewmhs
- sewpipes
- cityparcels
- citystreets

DISCLAIMER: This map is a graphical representation of data obtained from various sources. It does not constitute a warranty of accuracy or liability. The user assumes all responsibility and liability for the use of this map.

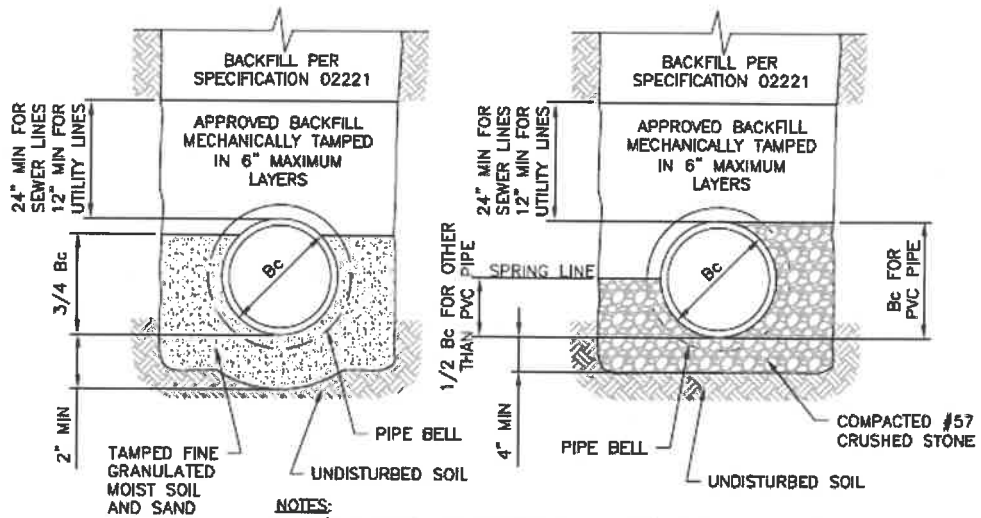
**CANNON STREET SEWER IMPROVEMENTS  
PROJECT NO. 1814  
DETAILS**

**NOTES:**

1. SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2007 EDITION. PRIME COAT APPLICATION SECTION 305.4.6 PAGE 165.
2. REFER TO HIGHWAY DEPARTMENT PERMITS FOR ADDITIONAL REQUIREMENTS.
3. PAVEMENT CUT TO EXTEND 6" BEYOND EDGES OF TRENCH AS SHOWN. PAVEMENT SHALL BE CUT TO TRUE LINE AND REMOVED BEFORE TRENCH OS CUT. ALL PAVEMENT REPAIRS TO BE IN ACCORDANCE WITH ROAD AGENCY SPECS.
4. ROAD AGENCY MAY REQUIRE A CUT & PATCH OF TRENCH AREA AND AN OVERLAY OF ENTIRE APRON OR ENTRANCE FROM THE EDGE OF THE MAIN ROAD TO THE EDGE OF THE ROAD RIGHT-OF-WAY (SEE ENCROACHMENT PERMIT)
5. WHERE EXISTING PAVEMENT IS INSUFFICIENT THICKNESS TO DEVELOP TIGHT SEAL WITH NEW SURFACE, NEW PAVEMENT SHALL LAP EXISTING SURFACE WITH AT LEAST 10' OVERLAP ON BOTH SIDES FOR SMOOTH TRANSITION OR AS PER SPEC.'S OF ROAD AGENCY.



**DETAIL  
PAVEMENT REPLACEMENT  
& RESURFACING (LOW VOLUME)  
NOT TO SCALE**

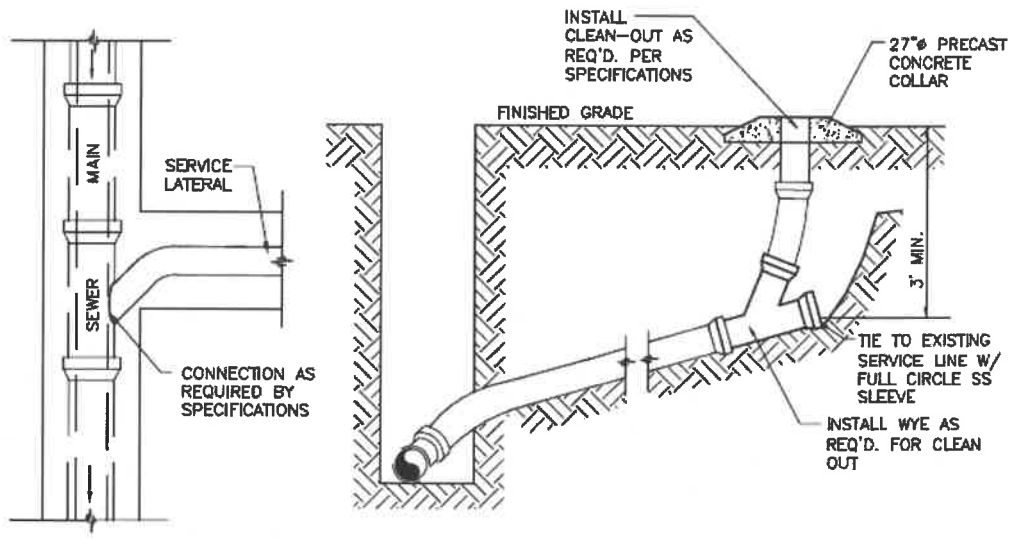


**NOTES:**  
 1.  $1/4 B_c$  HAND SHAPED BOTTOM - SHAPE BELL HOLES FOR USE IN DRY EARTH TRENCHES ONLY. APPLICABLE TO BOTH EARTH AND ROCK TRENCHES.

TYPE 1

TYPE 2

DETAIL  
CLASS "B" BEDDING  
 NOT TO SCALE



PLAN

SECTION

**DETAIL**  
**SEWER SERVICE CONNECTION**  
 NOT TO SCALE

**BID DOCUMENTS**  
 THESE DOCUMENTS ARE FOR THE  
 PURPOSE OF SOLICITATION OF BIDS AND  
 ARE NOT FOR USE FOR CONSTRUCTION