

**June 3, 2008**

## **Horry County Traffic Calming Program Policy and Procedures for Installation of Speed Humps**

Funding for speed hump installation through the Horry County Traffic Calming Program will be disbursed through a data-driven process as described below and in the Horry County Speed Hump Policy (Attachment A).

Speed humps are different from the typical speed bumps that are commonplace in shopping center or apartment complex parking lots. Speed bumps are usually about a foot in length while a speed hump is generally the same height as a speed bump (three to four inches), but it is elongated with a typical length of 14 feet (Attachment B). The design of the speed hump will slow traffic down to speeds that are intended for residential streets without the severe reductions in speeds that are needed to safely traverse a typical speed bump.

The Horry County Speed Hump Policy employs a data-driven methodology that will be used to determine ranking of speed hump installation requests. The following data is used to determine the ranking and eligibility of a particular street:

- Average daily traffic volume (ADT)
- Estimated percentage of cut-through (non-local) traffic
- Speed profile (85<sup>th</sup> percentile speed compared to posted speed limit)
- Presence of pedestrian activity in neighborhood

All requests for use of county funding for speed hump installation will be subject to the ranking list as determined by the policy. If neighborhood Homeowner Associations wish not to be subject to the ranking list, they may pay for and install speed humps through submittal and approval of an encroachment permit (Attachment C) if their neighborhood streets meet the minimum criteria within the policy. Encroachment permits are not required for those neighborhoods seeking county funding.

Please review the attached materials, and if you are interested in scheduling a traffic study for your neighborhood, please send a written request to the Horry County Engineering Department with the required homeowner association information as described within the policy.

If you have any questions, please do not hesitate to contact the Horry County Engineering Department at (843) 915-5160.

**HORRY COUNTY  
SOUTH CAROLINA  
POLICY FOR INSTALLATION OF SPEED HUMPS**

**June 3, 2008**

**I. DEFINITIONS**

**85<sup>TH</sup> Percentile Speed** - an index of traffic speeds for a road segment used by transportation professionals for traffic analysis purposes. The 85<sup>th</sup> percentile speed is the speed at which 85 percent of the motorists are driving at or below.

**Affected Street(s)** - the actual street(s) proposed for speed hump installation. Affected street property owners are the owners of the lots with any frontage, including side frontage, on the street(s) proposed for speed hump installation.

**ADT** - stands for average daily traffic and is a unit of measure used by transportation professionals for traffic volume analysis. Average daily traffic for the purpose of this policy refers to the traffic in both directions on a particular street within a 24-hour time period.

**Contact Person(s)** - the person(s) requesting a study to determine if their particular subdivision or neighborhood area qualifies for the installation of speed humps. In most cases, a board member or officer from a Homeowners' Association (HOA) will be the point of contact for a given community or subdivision

**Speed Hump** - a vertical type traffic-calming device designed to reduce motorists' speeds to the posted speed limit.

**Speed Hump Study Area**- a subdivision or neighborhood area being studied for possible speed hump installation. Speed hump study areas include affected street property owners and property owners fronting adjacent side streets where the County Engineer considers it likely that the motorist will traverse speed humps in order to access their lots.

**Traffic Calming** - a term used by transportation professionals to refer to reducing traffic speeds.

**II. POLICY OVERVIEW**

The objective of the Horry County Speed Hump Policy is to provide a process whereby subdivisions or neighborhood areas, referred to as speed hump study areas, may obtain speed humps on residential streets with a maximum posted speed limit of 30 mph. To qualify for the installation of speed humps, speed hump study areas must meet all requirements set forth in this Policy.

## Horry County Speed Hump Policy

### **III. REQUIREMENTS FOR STUDY**

The following criteria must be met before a particular subdivision or neighborhood area is studied for possible speed hump installation:

**Local, Residential Street** – the Horry County Engineering Department must confirm that the requested streets are local, residential streets serving direct access to residential lots with a maximum posted speed limit of 30 mph. The street must be a public roadway maintained by Horry County.

**Request (in writing)** – the Horry County Engineering Department must receive a written request for a traffic study to determine a given roadway's eligibility for the installation of speed humps from either A) an established Homeowners' Association (HOA) or B) an individual resident or group of residents that do not have an established HOA in their particular subdivision / neighborhood.

- A) All written requests received from communities with established HOA's must be on HOA letterhead and signed by either the HOA president, board member, officer, or an authorized property manager on behalf of the HOA.
- B) All requests received from individual residents in communities without established HOA's must be accompanied by a petition signed by a majority of residents living along the street proposed for installation of speed humps. Horry County reserves the right to approve or disapprove any petitions received.

All written requests must clearly identify each individual street where the traffic study and installation of speed humps is requested.

All written requests received from subdivisions / neighborhood areas that meet the above criteria will be added to the Horry County Speed Hump Study Area List. The Horry County Engineering Department will conduct the traffic study at no direct cost to the requesting community.

### **IV. TRAFFIC STUDY CRITERIA**

The following traffic study criteria have been established to determine a) if individual public streets qualify for the possible installation of speed humps, and b) to determine each community's county-wide priority ranking for the installation of speed humps.

Traffic data will be collected from identified / requested public roadways maintained by Horry County to determine the 85<sup>th</sup> percentile traffic speed and the ADT. The two-way ADT shall be between 300 and 4000 vehicles in order to be considered for speed hump installation. The speed hump study area shall be graded as follows:

## Horry County Speed Hump Policy

- 1) Average daily traffic volume (ADT):
  - 300 – 500 ADT = 2 points
  - 500 – 750 ADT = 4 points
  - 750 – 1000 ADT = 6 points
  - 1000 – 1500 ADT = 10 points
  - 1500 – 2000 ADT = 15 points
  - 2000 – 3000 ADT = 25 points
  - 3000 – 4000 ADT = 35 points
  
- 2) Estimated percentage of cut-through (non-local) traffic:

Estimated % of cut through traffic shall be equal to the number of points assigned. For example, a site with 23% cut through traffic would receive 23 points for this criterion.
  
- 3) Speed profile (85<sup>th</sup> percentile speed compared to posted speed limit):

The 85<sup>th</sup> percentile speed must be greater than five (5) mph over the posted speed limit for the location to be considered for speed hump installation. The measured 85<sup>th</sup> percentile speed (in mph) subtracted by the posted speed limit (in mph) shall be multiplied by five (5) to determine the number of points assigned. For example, a roadway with a measured 85<sup>th</sup> percentile speed of 31 mph and a posted speed limit of 25 mph would receive  $(31-25)*5$  points =  $6*5 = 30$  points.
  
- 4) Presence of sidewalks / pedestrian activity in neighborhood:

This is a subjective measurement of the level of (or potential for) pedestrian activity in the neighborhood that will be determined by the Horry County Engineering Department. Surrounding features such as schools and parks will be considered.

  - Little to no pedestrian activity (or potential activity) = 0 points
  - Moderate pedestrian activity (or potential activity) = 5 points
  - Heavy pedestrian activity (or potential activity) = 10 points.

Total points shall be summed for each of the above criterion for each location studied within a particular Speed Hump Study Area. The study area's overall score and ranking on the Horry County Speed Hump Study Area List shall be determined by the study location (within the study area) with the highest total score.

The number of speed humps installed each year will be based on available funding with the top ranking areas on the list receiving first priority. Communities can be grouped by the time period of when the request for the study was received by the county in order to allow lower ranking, but eligible communities to receive speed humps. Scheduling of all installations will be subject to a review of current pavement conditions and the Horry County roadway resurfacing program to avoid unnecessary speed hump removal and reinstallation expenses.

If the minimum criteria set forth in this policy is met, HOAs can still pay for and install speed humps, at their sole expense, through an encroachment permit if they wish to not

## Horry County Speed Hump Policy

be subject to the ranking list. The HOAs installing speed humps through an encroachment permit will be subject to the terms and conditions on the permit. All other requests (not through an encroachment permit) will be subject to the ranking list as determined by this policy.

### **V. SPEED HUMP DESIGN STANDARDS**

The geometric design of speed humps is a crucial factor in their effectiveness. All speed humps installed on public roads maintained by Horry County shall conform to the attached SCDOT specifications. Speed humps made of rubber or other suitable material may be installed in lieu of asphalt speed humps upon approval of the County Engineer.

### **VI. INSTALLATION OF SPEED HUMPS**

Speed hump installations shall be funded by Horry County or by the HOA (through an approved encroachment permit and their private contractor). Installation of speed humps with county funds will be performed by either a private contractor (contracted by Horry County), or by Horry County Public Works. Installation of speed humps will not be considered final until the Horry County Engineering Department inspects the humps for compliance with design standards set forth in this Policy.

### **IX. REMOVAL PROCESS**

For publicly funded speed humps, the Horry County Engineering Department will provide a petition for removal of speed humps only upon written request. For subdivisions/neighborhoods where homeowner associations exist, the same requirements that apply to the request for the traffic study also apply to the written request for removal of speed humps (HOA board must provide the written request). A similar letter is required for subdivisions/neighborhoods without HOAs. Removal petitions will not be approved by Horry County until speed humps have been installed for a minimum of five years. At least 75 percent of residents that live on the streets where speed humps have been installed must sign the petition requesting removal of any speed humps. The County Engineer reserves the right to remove speed humps for any reason.

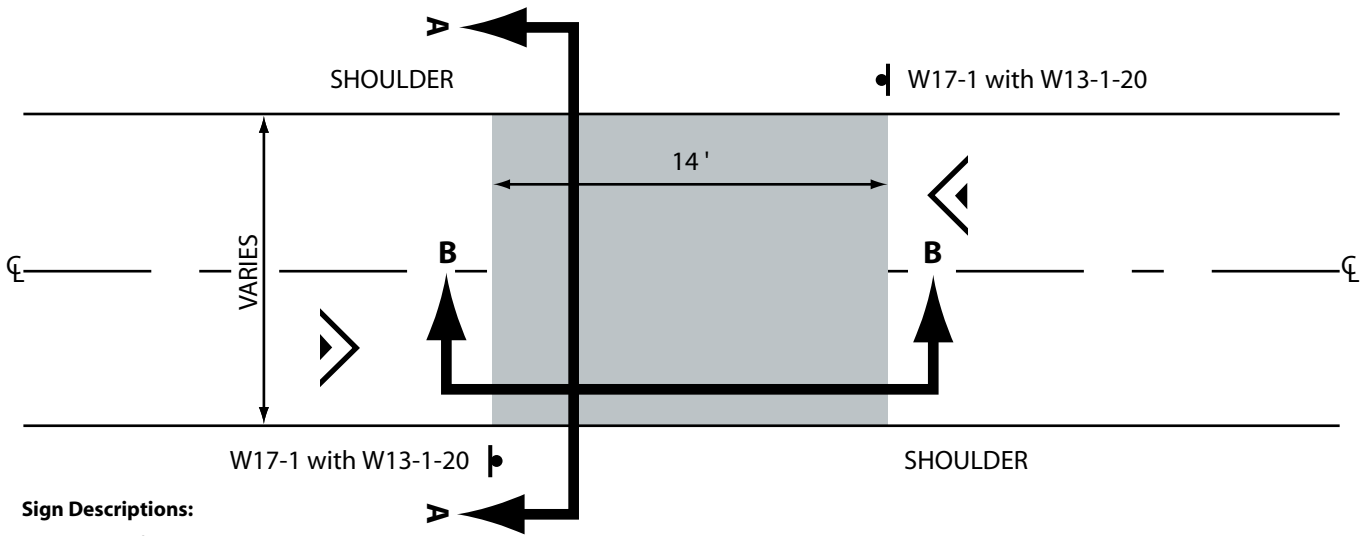
### **IX. CONTACT INFORMATION**

Residents and Homeowners' Associations shall send written correspondence to:

Horry County Engineering Department  
Speed Humps / Traffic Calming Program  
P.O. Box 1236  
Conway, SC 29528

# Construction Detail

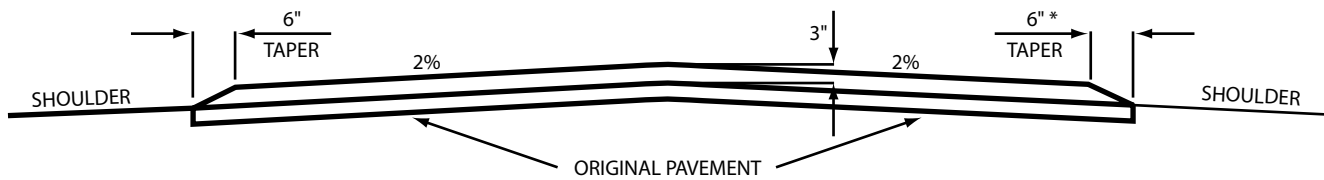
Not to Scale



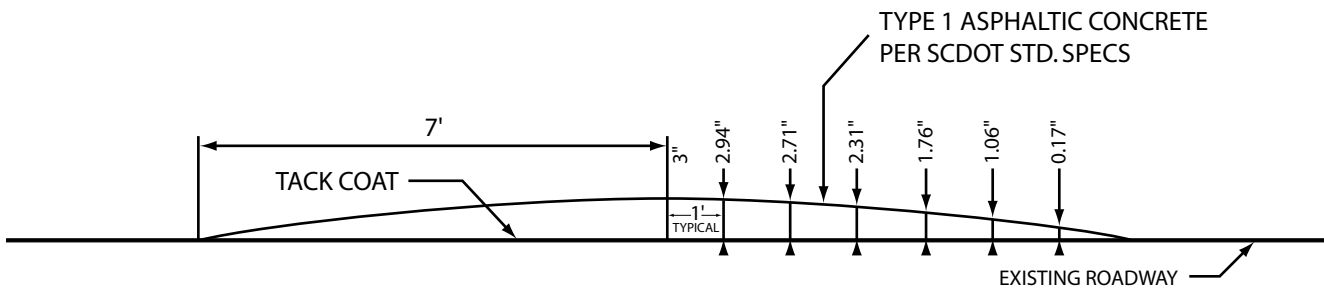
**Sign Descriptions:**

- W17-1 (Speed Hump Sign)
- W13-1 (Advisory Speed Plaque)

\* Use 12" taper with curb & gutter, not encroaching into gutter area.



**Section A-A**



**PARABOLIC CROWN**

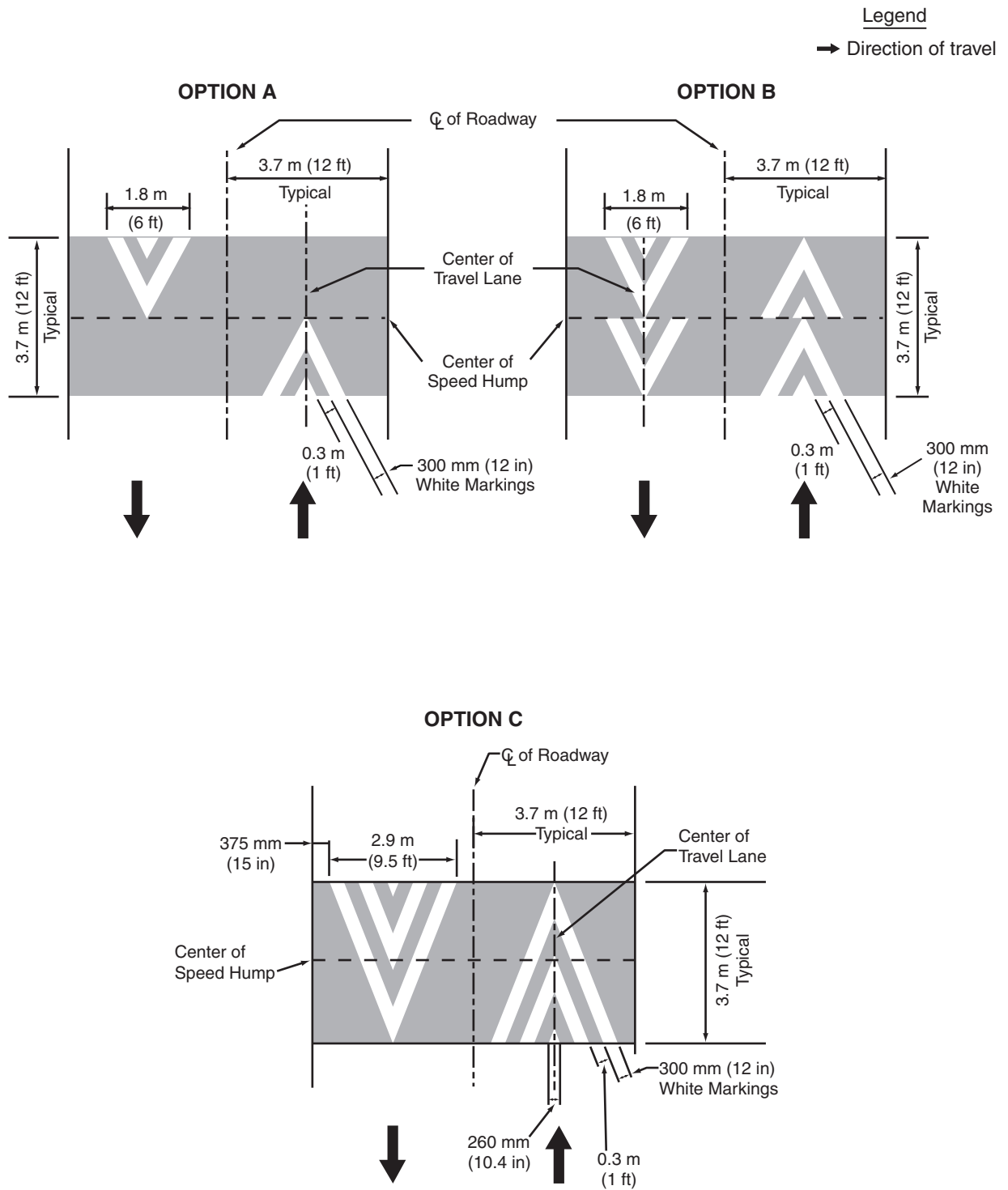
**Section B-B**

**Note:**

1. Materials must be approved by Resident Maintenance Engineer.
2. Decorative asphalt paving may be used if in accordance with SCDOT standards.

## PARABOLIC SPEED HUMP

**Figure 3B-29. Examples of Pavement Markings for Speed Humps Without Crosswalks**



Attachment C

**HORRY COUNTY  
ENCROACHMENT PERMIT**

PERMIT NO. \_\_\_\_\_

EXPIRES \_\_\_\_\_

Horry County Engineering Department  
PO Box 1236  
4401 Privetts Road  
Conway, SC 29528

Road Seg. No. \_\_\_\_\_

Tel. 843-915-5160  
Fax 843-365-2170

<b>Applicant:</b>	<b>Road Name:</b>
<b>Address:</b>	<b>Location:</b>
<b>Tel. No.</b>	

The undersigned applicant hereby applies to the County of Horry for permission for encroachment on County right-of-way or easement and agrees to comply with all conditions noted herein and all applicable Local, State and Federal laws.

Description:

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**GENERAL PROVISIONS**

1. Notice shall be given at least 72 hours prior to starting work covered by this permit.
2. Upon completion of the work all County road right-of-way and easement areas disturbed shall be restored to at least as good a condition as existed prior to the start of work.
3. Work covered by this permit is subject to inspection for compliance with the terms of the permit. This permit may be revoked if the terms and conditions are not adhered to. A copy of this permit shall be kept on-site while work is underway.
4. Traffic control within the construction area shall be the responsibility of the Permittee and shall comply with State and local law and shall be as indicated in the current edition of the SCDOT Manual on Uniform Traffic Control Devices for Streets and Highways Through traffic to be maintained at all times with no trenches or excavations left open overnight. Traffic may be reduced to one lane during daylight hours if flagmen are utilized, however at the end of each workday traffic shall be returned to two lanes.
5. All materials and construction methods are to be in accordance with the current edition of the SCDOT Standard Specifications for Highway Construction.
6. Future moving of the encroachment : If in the opinion of Horry County, it becomes necessary to move, remove or relocate the encroachment permitted herein, all such work including restoration of the roadway, shall be done on demand of the County at the sole expense of the Permittee.
7. There shall be no excavation nearer than two feet of any other utility line or facility without the express permission of the owner of said line or facility.
8. All construction shall be subject to final inspection by the Horry County Engineer or his approved representative. The Permittee shall be subject to a warranty period of one (1) year from the date of final acceptance. Deficiencies such as settling of the roadbed, erosion, failure of grass to establish, etc. caused by the work permitted herein shall be repaired by the Permittee within 30days of notification by the County or sooner if a hazardous situation develops.
9. The Permittee agrees to hold Horry County, its officers and employees harmless from any liability for any accident, loss or damage as a result of any claim arising as a result of the work covered by this permit and that said liability is hereby assumed by the applicant.

This permit for installation shall expire six months from the date of approval shown below unless otherwise shown above.

<b>APPLICANT:</b>	<b>APPROVED:</b>
<b>DATE:</b>	<b>DATE:</b>



**HORRY COUNTY  
ENCROACHMENT PERMIT**

**SPECIAL PROVISIONS**

1. Shoulders and ditches which are disturbed shall be replanted in accordance with section 810 of the SCDOT Standard Specifications noted above and a satisfactory stand of grass is required.
2. No obstructions or earth to be placed on pavement without permission.
3. Any areas disturbed beneath pavement or across driveways or within any portion of the traveled roadway shall be stabilized with an acceptable base material immediately after backfilling operations. Suitable material shall be defined as coquina (shell aggregate) or a suitable grade of crusher run stone (stabilized aggregate).
4. Any excess spoil material resulting from construction shall be removed immediately following backfilling operations. Horry County shall reserve the authority to halt all construction activities if spoil material prohibits proper road or ditch drainage, or creates any hazardous conditions that might endanger pedestrian or automobile traffic.
5. Roadbeds and drainage ditches shall be rebuilt to provide proper service after every 500 feet of construction, at the end of each day's work, or after County inspection of a major situation.
6. When County drain pipes or other facilities are damaged, the County should be notified immediately and the repairs or replacement made under County supervision.

**DRIVEWAYS**

1. Horry County is not responsible for maintenance or repair of driveways located within the road right of way. The driveway area within the right-of-way shall be maintained in a safe condition by the property owner or the County may require that it be removed.
2. The existing road crown slope shall be continued to the outside edge of the shoulder except in curb and gutter situations.
3. Concrete driveways shall be a minimum of 4 inches thick for single family residential use and a minimum of 6 inches thick for all other uses. Expansion joints shall be provided over drainage tiles to facilitate replacement or repair of the tile. These joints shall be located 12 inches on either side of the pipe.

**UTILITY LINES**

1. Pavement cuts are not allowed unless specifically permitted herein. Any pavement cuts which are permitted shall be saw cut and repaired as indicated in the approved plans or as ordered by Horry County.
2. No excavation shall closer than 3 feet from the edge of the pavement.
3. All underground lines shall be placed a minimum of 36 inches deep.

**ENVIRONMENTAL REQUIREMENTS**

The following is a general guideline for Stormwater, Erosion and Sediment Control:

1. The size of the disturbed area shall be kept to a minimum. Erosion and sediment control, and revegetation must be in accordance with The South Carolina Department of Transportation (SCDOT) specifications and Horry County ordinances. Adequate measures shall be taken to prevent erosion and to restore vegetation along the length of the construction area. Unsatisfactory restoration work shall be promptly corrected by the applicant. If necessary, unsatisfactory restoration work will be accomplished by the Division and billed to the permittee. Issuance of an Encroachment Permit does not relieve the Permittee from complying with other applicable Federal, State or Local laws, rules or regulations.
2. When land disturbance will be adjacent to wetlands or any waterbody silt fence shall be installed to protect the waterbody or wetland from any run off. Silt fence shall meet the requirements of SCDHEC's Best Management Practices.
3. All drainage inlets immediately down stream from the land disturbance shall be protected as per the requirements of SCDHEC's Best Management Practices Manual
4. Where sediment from the project site can enter into a drainage ditch the ditch shall be protected with an adequate check dam immediately downstream from the disturbed area and removed upon completion of final soil stabilization.
5. Stockpiles and spoil piles shall be kept off the pavement and protected with silt fence to contain any sediment runoff.

APPLICANT:	APPROVED:
DATE:	DATE:

**HORRY COUNTY  
ENCROACHMENT PERMIT**

**PLAN**

<b>APPLICANT:</b>	<b>ROAD:</b>
	<b>LOCATION:</b>

The undersigned applicant hereby applies to the County of Horry for encroachment on County right-of-way as shown on the plan below.

(provide plans and details showing the work)

<b>APPLICANT:</b>	<b>APPROVED:</b>
<b>DATE:</b>	<b>DATE:</b>

**HORRY COUNTY  
ENCROACHMENT PERMIT**

**LOCATION MAP**

<b>APPLICANT:</b>	<b>ROAD:</b>
	<b>LOCATION:</b>

The undersigned applicant hereby applies to the County of Horry for encroachment on County right-of-way at the location shown on the map below.

(provide a sketch or map of the location)

<b>APPLICANT:</b>	<b>APPROVED:</b>
<b>DATE:</b>	<b>DATE:</b>