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1. Introduction and General Standards

1.1 Function of the Douglas County Speed Hump Program

In response to numerous complaints about speeding problems in neighborhoods, the Douglas County Department of Engineering has studied other similar communities and how those communities have addressed residential speeding problems. One popular and cost effective measure is the installation of speed humps. When properly designed and installed, and with strong community support, speed humps are effective at reducing speeds in neighborhoods. After much experimentation and testing, transportation authorities worldwide have formally endorsed the use of speed humps. In the United States, a special committee of the Institute of Transportation Engineers (ITE) has developed a policy on the use of speed humps. The following policy has been established for the citizens of Douglas County who want to pursue the installation of speed humps in their neighborhoods.

1.2 Street Classification

Douglas County will only consider installation of speed humps on streets classified as local, residential streets. Traffic engineering studies may indicate that speed humps would be unnecessary or unsafe at certain locations. Data obtained from traffic engineering studies of physical and traffic related factors should be used in determining where speed humps are appropriate.

1.3 Legal Authority

Only the authority of the Board of Commissioners, in accordance with Article IV, Sections 14-51 through 14-70, of the Douglas County Code of Ordinance, shall place speed humps.

1.4 Standardization of Application

In keeping with the general recommendation of the Manual of Uniform Traffic Control Devices (MUTCD), uniformity aids in the recognition and understanding of traffic control devices.¹ Strict adherence to the standards and guidelines outlined in this manual will help ensure that any given speed hump installation will be equally recognizable and require the same action on the part of the motorists regardless of where it is encountered.

¹ MUTCD, 1998 Edition, U.S. Department of Transportation, Federal Highway Administration, p. 1A-2.

2. Program Elements

2.1 Speed Criteria

Traffic studies must find that a speeding problem exists, based on the standard of an 85th percentile speed of at least 11 mph over the posted speed limit of 25 mph.² The 85th percentile speed is an excellent indicator of street character.

- A. **BELOW SPEED CRITERIA** – Since research has determined that 22 foot humps reduce 85th percentile speeds to approximately 28-30 mph, installing humps on streets with an 85th percentile below criteria speed does not meet generally accepted cost/benefit ratios and is not recommended.
- B. **DESIGN SPEED OVER 25 MPH** – The application of a speed reduction device which lowers the 85th percentile speed more than 15 mph will tend to create a pronounced “sine wave-type” velocity profile. Such a velocity profile may be inappropriate in regards to traffic safety. Since research has determined that 22-foot humps reduce 85th percentile speeds to approximately 28-30 mph, installing humps on streets with *design speed* of 45 mph or greater is not recommended.

2.2 Establishment of a Special Assessment District

If a street or street section meets or exceeds the speed criteria **and** meets the classification criteria, the Department of Engineering will create a special assessment district which will consist of those properties which directly abut the street with the proposed speed humps. Properties should be excluded from the special assessment district if it seems that such properties would receive no, or only a remote, benefit from the traffic calming effect caused by the speed humps. Properties should not be added to or deleted from special assessment districts in an attempt to alter voting ratios.

² Residential speed limit under statutory law.

2.3 Speed Hump Proposal

Department personnel will plan the placement of speed humps on streets meeting program criteria using the following guidelines³:

- A. **GRADE** – Speed humps should not be installed on street sections with grades greater than 8%.
- B. **NUMBER OF HUMPS IN A SERIES** – Speed humps are not to be used to slow traffic at a given “point,” but rather to reinforce a safe speed along a street or street section. For this reason, a single hump is not recommended. Usually, a series of humps should not exceed three-quarters of a mile. If the street or street section to be treated exceeds a mile, speed humps can be used in conjunction with other traffic calming devices, such as traffic circles, thus reducing the number of speed humps necessary to achieve targeted speed reduction.
- C. **SPACING** – Research indicates that spacing humps between 350 and 500 feet apart is most effective at lowering the 85th percentile speed to the targeted speed range.
- D. **LOCATION** – The first hump in a series should normally be located in a position where it cannot be approached at high speed from either direction. To achieve this objective, the first hump in a series is typically installed within 100 and 200 feet of a small-radius curve or stop sign. Care should be taken so that humps are not planned which conflict with utility access, manhole covers, and driveway cuts.

2.4 Petition for Speed Humps

The Department will forward the speed hump proposal along with petition forms to the homeowners representative. A properly executed petition is a generally accepted method to effect a public action. The following rules and requirements, which will be included with the petition forms, help ensure the fairness and integrity of the petition process:

³ Based on ITE *Guidelines for the Design and Application of Speed Humps*, May 1993

The objective of the Douglas County Speed Hump Program is to provide property owners a process to install asphalt speed humps on County maintained neighborhood roads, where engineering studies indicate that their use would meet the desired results of reducing neighborhood speeds and their installation is favored by a majority of the property owners in the area.

To have speed humps installed in Douglas County, a petition must be submitted to this office. All of the property owners in the subdivision or defined service area should be contacted and given opportunity to sign this petition, indicating their “yes” or “no” concerning the installation of speed humps. Unless property is undergoing change of ownership, a wife’s signature will not be acceptable if she is not the legal owner. If both husband and wife are joint legal owners, both signatures are required. A “Mr. and Mrs.” signature is not acceptable. All owners must sign individually. This includes owners of undeveloped lots. Renting tenants are not an acceptable substitute for the legal property owner. No signature will be withdrawn from the petition after it is filed with the Department of Engineering. All signatures must be witnessed by a disinterested party who will not be affected by the creation of a speed hump district, i.e., not a resident of the proposed speed hump district or of any area directly affected by the creation of the speed hump district. The purpose of the witness’ signature is to verify the signatures of the property owners, if in question. The percentages will be calculated, based on individual lots where owners sign affirmatively, defined by the total number of lots in the plotted subdivision, units, or “defined service area.” Each lot counts as only one vote, regardless of the number of owners signing. At least 70% of the property owners must vote in favor of the speed humps, before petitions can be presented to the Board of Commissioners.

The completed petition must be signed, notarized and then returned to this office, where it will be checked against tax records and land lot maps to insure that it meets all requirements. It will be returned to the sender if it does not meet the requirements. Petitions that do meet the requirements will be presented to the Commissioners at their regular Tuesday meeting. A public hearing will be announced at that time for each petition. The petition will be approved or disapproved by the Board of Commissioners at the Public Hearing.

Speed humps installed in existing subdivisions shall be constructed by the Douglas County Public Works Department, Roads and Bridges Division. Installation of speed humps by developer/contractor in new subdivisions shall not be considered final until personnel of the Douglas County Department of Engineering inspect the humps for compliance with design specifications

Annualized charges for initial installation, maintenance and repair of speed humps are added to the property tax bills at the end of the year. Each platted lot, whether developed or not, will be subject to the assessed charges. The rate for participation in the speed hump program will be \$12.00 per year per property in the “defined service area.”

Removal of speed humps can proceed if the County is presented a petition requesting that speed humps be removed. At least 70% of the property owners must vote in favor of removing the speed humps. Petition may be signed by property owners only. In case of multiple owners, each owner must sign. Rental tenants are not an acceptable substitute for the legal homeowner. The percentages will be calculated based on individual lots where owners sign in favor of removal of the speed humps, divided by the total number of lots in the plotted subdivision, units or “defined service area.” Each lot counts as only one vote, regardless of the number of owners signing. Such a petition for removal will only be considered after speed humps have been in place for a period of at least one year after installation.

For subdivisions not completely built out, a minimum of 30% of the total units must be occupied before a petition for the installation of speed humps will be considered. A minimum of 60% of the total units must be occupied before a petition for the removal of speed humps will be considered.

3. General Construction Guidelines

3.1 Contract Requirements

A contract, if awarded, will be “Open End” type to provide for the requirements of Douglas County on an as-needed basis. The quantities of items may be increased or decreased, as necessary, to satisfy the needs of the County.

3.2 Materials

All materials furnished and/or installed by a Contractor shall be from sources certified by the Georgia Department of Transportation, and shall meet all specifications set forth by the Georgia Department of Transportation (GDOT). Hot Mix Recycled Asphaltic Concrete may be furnished and placed in lieu of virgin mix; mix; in accordance with Section 402 of the Georgia Department of Transportation Standards Specifications. The contractor must notify the County prior to using the recycled material, and the finished work must meet the required density and gradation specifications.

3.3 Inspections

Douglas County does not commit to furnishing full-time inspection or testing of the work in progress, or a material sources. Absence of inspections and/or testing by the County will in no way relieve the Contractor of his responsibility and liability to provide quality workmanship in accordance with the specifications.

3.4 Subletting of Contract

As provided for in Section 108, Georgia Department of Transportation Standards Specifications; the contractor shall not sublet, sell, transfer, assign, or otherwise dispose of the Contract, or any portion thereof, without written consent of the Douglas County Department of Engineering.

3.5 Progression of Work

Contractor shall proceed with the work within ten (10) working days of receiving written notice by the County of the projects to be constructed. Failure to proceed within the prescribed time can result in the awarding of the contract to the next lowest qualified bidder, or re-bidding of the remaining work, as determined by the County. Contractor shall provide the County with at least a 24 hour notice before proceeding.

3.6 Keeping the Road Open to Traffic

The work shall be performed in such a manner as to maintain at least one lane of traffic at all times. Contractor shall phase his construction such that traffic across the completed work shall be minimal until such time that the asphalt has sufficiently cooled and paint sufficiently dried to prevent damage to the work. When directed by the Douglas County Department of Engineering, contractor will limit his hours of operation to avoid peak hour traffic.

3.7 Traffic Control

The contractor shall furnish, install, maintain and remove all necessary traffic signs, barricades, lights, signals, cones and other traffic control devices; and all flagging and other means of traffic protection and guidance as required by the Standard Specifications of the Georgia Department of Transportation, and the Manual on Uniform Traffic Control Devices. Such work shall be considered incidental to the overall contract, and no additional compensation will be made.

3.8 Alternative Design and Installation

Section 3.9 “Installing Asphaltic Concrete Speed Humps” outlines the method of construction used by Douglas County in its speed hump program. Alternate designs and construction methods will be considered, provided that the required lines and grades are met, and the effectiveness of the Speed Hump is maintained.

To be considered, alternate designs and/or their unit prices, must be submitted along with a bid for the recommended Speed Hump, at the time of the Bid Submittal. Prior to the award of the contract, and apparent low bidder using an alternate design will be required to construct said alternate for evaluation by the Douglas County Engineering Department. This construction will be at no cost to Douglas County, and shall be a location adequate for evaluation of the serviceability, ride quality, skid resistance and overall effectiveness of the alternate.

The Douglas County Engineering Department will make the final decision regarding the acceptance or rejection of any alternative designs or methods. No changes will be allowed to the signing or striping requirements.

3.9 Installing Asphaltic Concrete Speed Humps

The procedure for installing the asphaltic concrete speed humps shall be as follows:

1. Immediately prior to construction, the contractor shall thoroughly clean the designated locations of all dirt, loose stone and other debris.

2. The designated locations shall be tacked, in accordance with Section 413 of the GDOT Standards Specifications, at the rate of .04-.06 gallons per square yard. Special care shall be taken to avoid spraying the bituminous tack coat on adjacent curbs, driveways and miscellaneous structures. Contractor will be responsible for all clean-up should such over spray occur.
3. Concrete cap blocks shall be set in a straight line and secured to prevent movement during paving.
4. Contractor shall place Asphaltic Concrete “E” Mix, to the lines and grades specified for the Flat Topped Speed Hump, in the attached diagram. The placing and rolling operation shall be such that the concrete cap blocks are not displaced, the required compaction is achieved and the final profile and thickness is within 1/4” tolerance of the grade indicated. Any Speed Hump whose finished grade exceeds the allowable 1/4” tolerance will be removed and replaced by the Contractor, at no additional cost to Douglas County.
5. The contractor shall schedule the work such that an installation at a particular location is completed by the end of the day on which it is started. Speed Humps extending across only one lane will not be permitted to be left overnight.

3.10 Sign and Markings

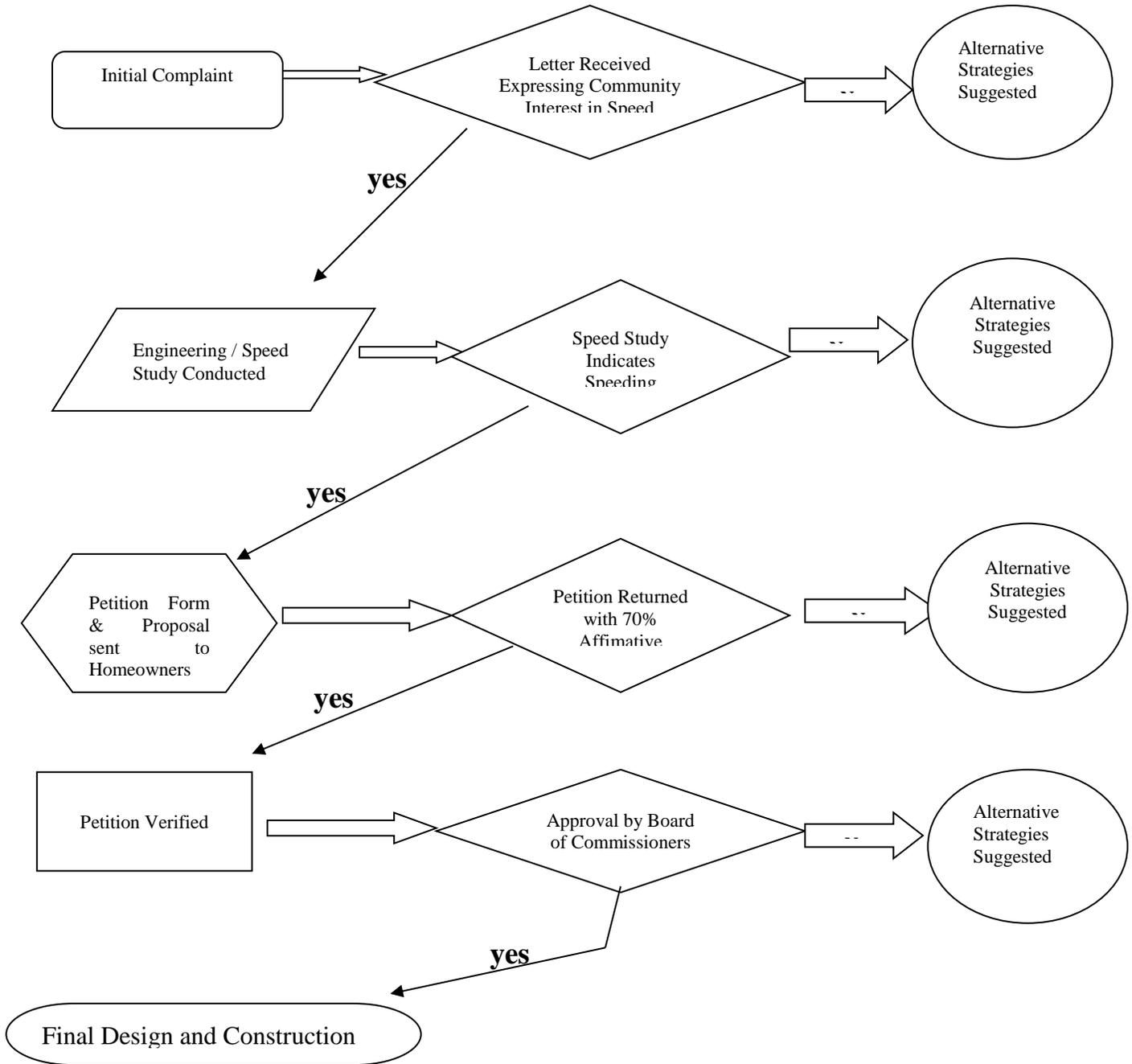
- A. **CONTRACTOR RESPONSIBILITY-** The contractor shall be responsible for the installation of pavement markings and traffic control signs for each speed hump and speed zone district.
- B. **PAVEMENT MARKINGS -** All pavement markings shall be eight (8) inches wide. All pavement markings shall be white PLASTI-BAR and will be supplied by the contractor. All markings are to contain glass spheres for reflectivity. The dry markings will have a thickness of 15 mils. All pavement markings shall be laid out by the contractor as shown in page 15 of this manual.
- C. **DISTRICT SIGNS –** The contractor shall place two (2) “District Speed” signs at the ends of each established district at the locations pre-marked by the County (see page 16).

- D. **SPEED HUMP SIGN & ADVISORY PLATES** – The Contractor shall install two (2) “Speed Humps” and “20 MPH” signs at each speed hump. One set shall be on either side of the hump in the location pre-marked by the County and as shown on page 15 of this manual.
- E. **MATERIAL SUPPLY** – The County will supply all signs, posts and hardware for installation in Parts C and D.

3.11 Method of Payment

The above paving, signing and striping work shall be paid for at the bid unit price per each unit, for “Asphaltic Concrete Speed Humps-Complete.” Payment shall be based upon actual field measurements of the complete work; and shall be full compensation for labor, materials (except signs and posts noted in Part 2, C and D) and equipment used in the cleaning, tacking, paving, signing and striping operations, as well as for all traffic control, clean up and incidental work involved.

Appendix A. Flowchart of Program Elements



Appendix B – Petition Cover Letter

DOUGLAS COUNTY
DEPARTMENT OF PUBLIC WORKS

DEPARTMENT

ENGINEERING

8700 Hospital Drive
Douglasville, GA. 30134
(770) 920-7242

PETITION FOR SPEED HUMPS

WE THE UNDERSIGNED, ALL BEING PROPERTY OWNERS OF THE
SUBDIVISION LEGALLY TITLED
“ _____ ”. UNITS (S)
_____, DO HEREBY PETITION THROUGH OUR SUBDIVISION OR UNIT (S)
FOR INSTALLATION OF SPEED HUMPS.

EACH OF US DOES HEREBY PLEDGE AND CONSENT TO THE LEVYING OF A
LIEN BY DOUGLAS COUNTY AGAINST PROPERTY WE OWN FOR THE PURPOSE
OF PAYMENT OF THE COST OF INSTALLING AND MAINTAINING THE SPEED
HUMPS. THERE ARE _____ NUMBER OF LOTS CURRENTLY EXISTING
IN “ _____,” AND EACH OWNER AS
SHOWN ON THE TAX RECORDS HAS AFFIRMATIVELY SIGNED THIS PETITION OR
THEIR INDICATION FOR DISAPPROVAL IS NOTED HEREIN.

THIS PETITION REPRESENTS _____% OR MORE OF THE PROPERTY OWNERS
OF THIS SUBDIVISION TO BE AFFECTED JOIN N THIS REQUEST. (PLEASE DO NOT
FILL IN ANY BLANK SPACES THAT APPEAR ABOVE).

SPECIAL NOTE

YOUR SIGNATURE ON THIS PETITION INDICATES THAT
YOU HAVE READ AND FULLY UNDERSTAND ALL INFORMATION
CONCERNING THE SPEED HUMP PROGRAM

Personally appeared before me a Notary Public, the undersigned affiant, who says an oath that
_____ is one of the subscribing witness to the within instrument; that each of
said witnesses saw the execution and delivery of the same by each grantor therein for the purpose
set forth; and that each of said witnesses signed the same as purported.

Sworn to the Subscribed before me.

This _____ day of _____, 20____.



Appendix C – Petition Form

DOUGLAS COUNTY SPEED HUMP PROGRAM: SUBDIVISION NAME: _____

(Signature as appears on Tax Bill) Page _____ of _____.

Yes

No

1. _____

↑

↑

Print Name (First, Last)

Witness

Lot #: _____

2. _____

↑

↑

Print Name (First, Last)

Witness

Lot #: _____

3. _____

↑

↑

Print Name (First, Last)

Witness

Lot #: _____

4. _____

↑

↑

Print Name (First, Last)

Witness

Lot #: _____

5. _____

↑

↑

Print Name (First, Last)

Witness

Lot #: _____

6. _____

Print Name (First, Last)

↑

↑

Witness

Lot #: _____