NOTES

TO:

Honorable Mayor and City Council Members

FROM:

Ken A. Graves Assistant City Manager

DATE:

January 15, 2020

SUBJECT:

Materials for Your Information

Please find attached the following materials for your information:

- 1. A memo from Gary Fenton, Recreation and Parks Director, regarding the beach volleyball groundbreaking ceremony on Thursday, January 16, 2020 at 4 p.m. at H. Boyd Lee Park.
- 2. A memo from Lisa Kirby, Engineering Director, regarding the NPDES MS4 Phase II (Stormwater) Permit Audit-Notice of Compliance
- 3. A memo from Lisa Kirby, Engineering Director, regarding Traffic Calming Guidelines

mc

Attachments





Find yourself in good company®

To:

Ann Wall, City Manager

From:

Gary Fenton, Director of Recreation and Parks

Date:

January 15, 2020

Re:

Beach Volleyball Groundbreaking Tomorrow

Recreation and Parks staff have been working with Farrior & Sons, Inc. Construction on the beach volleyball facility being built at H. Boyd Lee Park. Construction will begin within the next couple of weeks and is expected to take 120 days, weather permitting. A ground breaking ceremony has been scheduled for tomorrow, Thursday, January 16th at 4pm at the site of the new facility. The courts, located in the northern portion of the park, will activate a currently unused area and provide Recreation and Parks staff the opportunity to offer new recreational services for individuals of all ages within the community.

Recreation staff within the Athletics Division are currently planning new youth and adult beach volleyball programming which is set to begin in fall 2020. The programs will include leagues, clinics and specified times for open play. The facility will also allow the City to offer summer and after school clinics in 2021 for children and teenagers throughout the community. The programs will provide new recreational opportunities and create the chance for youth to foster new relationships with others from diverse backgrounds.

Staff are also developing a fee structure which will allow the facility to be rented/reserved by the public when events and/or programs are not being held. This will provide the opportunity for outside tournaments to be held and for the community to rent the facility for birthday parties or for general use. Reservations will be managed by Athletics staff and the procedure will be the same as current rentals for tennis courts, ballfields and other athletic sites.

The facility will also provide the city the ability to host various regional beach volleyball tournaments. The four court set-up will allow for a maximum tournament of twenty teams per age group, which will bring an economic impact to the community and allow for local players to stay in Greenville instead of traveling two hours or more to compete. Staff will work with the local volleyball community, various sanctioned organizations and the Greenville-Pitt County Sport Commission to recruit tournaments, which will likely begin in 2021. The hope is for the city to host four to six tournaments annually which will provide an economic impact each year of approximately \$200,000-\$300,000.

Staff will provide updates to City Council Members as well as the public as progress continues with the facility and its programming opportunities.

Please let me know if there are any questions.

cc: Michael Cowin, Assistant City Manager

MEMO



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To:

Ann E. Wall, City Manager

From:

Lisa Kirby, PE, Director of Engineering

Date:

January 15, 2020

Subject:

NPDES MS4 Phase II (Stormwater) Permit Audit - Notice of Compliance

On January 13, 2020 the Engineering Department received a notice of compliance from NC Department of Environmental Quality (DEQ) after an intense and exhaustive audit conducted over a three day period (December 3-5, 2019). NC Department of Environmental Quality (DEQ) performed a Municipal Separate Storm Sewer System (MS4) permit compliance audit which included a comprehensive detailed evaluation of all components of our Stormwater Program. This includes:

- Development review
- Inspections
- Illicit discharge enforcement
- · Public education and outreach, and
- Municipal facilities/operations.

The audit identified no deficiencies with the components of the permit. Attached is the associated Notice of Compliance (NOC).

There are currently 109 active NPDES MS4 permits in North Carolina. **Greenville is only the second MS4 community in the state to receive a NOC to date**. Several departments; Police, Fire-Rescue, Recreation and Parks, Public Works, and Engineering worked diligently to prepare for the audit and continue to work keeping City operations in compliance with the permit. Greenville is a leader in North Carolina and the Engineering Department appreciates the team effort.

If you have any questions or would like additional information, please contact Daryl Norris at 329-4350 or myself at 329-4683.

Attachments

Thank you,

LK

cc: Daryl Norris, PE, Civil Engineer III - Stormwater

ROY COOPER Governor MICHAEL S. REGAN Secretary S. DANIEL SMITH Director



January 13, 2020

CERTIFIED MAIL 7019 1120 0000 5077 1308 RETURN RECEIPT REQUESTED

City of Greenville Attn: Ann E. Wall, City Manager 200 West Fifth Street Greenville, NC 27858

Subject: NOTICE OF COMPLIANCE (NOC-2020-PC-0113)

City of Greenville

NPDES MS4 Permit No. NCS000437

Pitt County

Dear Ms. Wall:

On December 3-5, 2019, staff from the North Carolina Department of Environmental Quality (DEQ) conducted a compliance audit of the City of Greenville (City) National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit. The audit identified no major deficiencies with the specific components of the MS4 permit that were reviewed. For your reference, a copy of the MS4 Program Audit Report issued by DEQ is enclosed with this notice.

The City should self-evaluate the permit components that were not reviewed by DEQ for compliance: Part II Section B: Public Education and Outreach; Section C, Public Involvement and Participation; and Section E: Construction Site Runoff Controls. The MS4 Phase II Audit Template on the DEQ stormwater web site can be used for this purpose.

In accordance with Part VI of the permit and DEQ policy, a new 5-year MS4 permit will be issued in response to the audit. As such, the City is required to complete the following actions:

- (1) Respond in writing within thirty (30) calendar days from the date of receipt of this notice to acknowledge these requirements and the intent to comply.
- (2) Develop a Stormwater Management Plan (SWMP) which details specific actions, measurable goals, and implementation timelines for the stormwater management program over the new 5-year permit term. The SWMP must be documented utilizing the DEQ Phase II MS4 SWMP Template. The City shall submit the SWMP to DEQ for



review and comment within one hundred twenty (120) calendar days from the date of receipt of this letter.

- (3) Submit an NPDES MS4 permit application within thirty (30) days of receiving written DEQ concurrence that the submitted SWMP documents a compliant stormwater management program. A new 5-year NPDES MS4 permit will be public noticed along with the submitted SWMP.
- (4) Respond to public comments on the Draft SWMP and submit a Final SWMP for DEQ approval and final permit issuance. The final DEQ-approved SWMP shall become an enforceable component of the NPDES MS4 permit.

Required documentation shall be submitted via e-mail to Jeanette.Powell@ncdenr.gov, or to:

DEQ-DEMLR Stormwater Program Attn: Jeanette Powell, MS4 Program Coordinator 1612 Mail Service Center Raleigh, NC 27699-1612

Thank you for your attention to this matter. Should you have any questions, please contact me at (919) 707-3620 or <u>Jeanette.Powell@ncdenr.gov</u>.

Sincerely,

Jeanette Powell, MS4 Program Coordinator Division of Energy, Mineral and Land Resources

Enclosures:

DEQ MS4 Program Audit Report (01/13/2020, City of Greenville)

Documents via Email:

Copy of NPDES MS4 Permit No. NCS000437 (current permit) SWMP Template & Instructions Draft Permit Template (permit to be issued)

Cc via Email:

Kevin Mulligan, Public Works Director
Lisa Kirby, Engineering Director
Daryl Norris, Stormwater Program Administrator
Annette Lucas, Stormwater Program Supervisor
Alaina Morman, DEMLR Stormwater Compliance & Enforcement



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Memorandum

To:

Ann E. Wall, City Manager

From: Lisa Ann Kirby, PE, Director of Engineering

Date: January 15, 2020

Subject: Traffic Calming Guidelines Update

The Engineering Department Traffic Division presented revisions to the City's Traffic Calming Guidelines at the City Council Workshop on December 12, 2019. The purpose for the revision was to remove the petition process that is currently required by the neighborhood or "area of influence". Comments received during the presentation have been incorporated into the final guidelines (Attachment A).

Over the next several weeks notices will be sent as identified in the revised guidelines to qualifying neighborhoods. Those neighborhoods are identified below:

- 1. Sterling Point Neighborhood
- 2. Bent Creek Neighborhood
- 3. Wyneston Road
- 4. River Hills Neighborhood
- 5. Dunhagan Road

If you have any questions or would like more information, please contact Stacey Pigford at 329-4678 or myself at 329-4683.

Attachment

Thank you,

LK

cc: Rik DiCesare, PE, Traffic Engineer

Stacey Pigford, PE, Assistant Traffic Engineer

City of Greenville Neighborhood Traffic Calming Guidelines

Presented by:
The City of Greenville
Engineering Department
Traffic Engineering Division



Adopted: October 11, 2001 Revised: December 8, 2008 Revised: March 16, 2015 Revised: January 14, 2020

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City of Greenville Neighborhood Traffic Calming Guidelines

Purpose

The City of Greenville continually strives to strengthen and protect its neighborhoods by improving the quality of life in residential areas. Traffic conditions on residential streets can greatly affect neighborhood livability. Speeding traffic and unnecessary through traffic in neighborhoods create safety hazards on residential streets. When traffic problems become a daily occurrence, our sense of community and personal well-being are threatened.

In 1997, the City of Greenville began its *Traffic Calming Pilot Program* to assess the methods of studying, planning with neighborhood residents, and applying traffic calming strategies. The Westhaven, Moyewood, Lynndale/Grayleigh, East Meadowbrook, Brook Valley, and Lake Ellsworth neighborhoods were studied and traffic calming devices were installed. The *City of Greenville Neighborhood Traffic Calming Guidelines* was developed to guide City staff and inform residents about the processes and procedures for implementing traffic calming on residential streets. Under the *Guidelines*, the City's Traffic Engineering Division of the Public Works Department will work with residents to identify traffic problems in their neighborhoods and seek appropriate solutions.

The primary purpose of the City of Greenville Neighborhood Traffic Calming Guidelines is to describe several important procedures. First, the Guidelines outline how citizens can request that their street or streets be added to the list of streets being evaluated by the City. Second, the Guidelines describe in detail how the City will evaluate streets and neighborhoods for Traffic Calming. Finally, procedures are outlined to develop and implement a plan for traffic calming in a neighborhood once a traffic calming project has been selected.

The City of Greenville is committed to obtaining significant levels of citizen participation when developing traffic calming projects. Experience in other cities and through the aforementioned *Traffic Calming Pilot Project Program* has shown that traffic calming projects that are implemented without involving the neighborhood are typically unsuccessful, often resulting in the removal of traffic calming measures. The City's goal is to give the people who live and work in the project area the opportunity to become actively involved in the planning and decision-making process. The *City of Greenville Neighborhood Traffic Calming Guidelines* clearly outlines the methodology for including neighborhood residents.

Qualifying Criteria for Traffic Calming Devices

In order to qualify for traffic calming devices under the City of Greenville Neighborhood Traffic Calming Program, the roadway being considered for the traffic calming device(s):

 Must be a City-maintained public street classified as a two-lane standard residential or minor residential street under the City of Greenville's Manual of Standard Designs and Details (MSDD).

- Must have a roadway width of less than or equal to 40 feet (back-of-curb to back-of-curb).
- Must have a posted speed limit of 25 mph.

Traffic Calming for local residential streets within the City of Greenville is determined by the following point system (minimum of 30 points required):

CRITERIA	BASIS FOR POINT ASSIGNMENT	POINTS
Speed	0 to 45 points : 3 points assigned for every 1 mph of the 85 th percentile speed that exceeds the posted speed limit (example: 28 mph for 25 mph posted speed limit = 9 points)	
Pedestrian Activity	 0 to 20 points: 5 points assigned for each school, church, bus stop, public park, community center, senior center, senior living facility or shopping center that is likely to generate a significant number of pedestrians crossing on the traffic calmed street. 5 points: 5 points if there are no sidewalks present 	
Volume	0 to 20 points: 4 points assigned for every 400 vehicles per day	
Other Factors	0 to 10 points : 5 points assigned for each road condition (such as Sight Distance problems) that can be improved with traffic calming measures.	
TOTAL POINTS	100 Points Maximum Score*	

^{*} Traffic Calming Device recommendation(s) are made based on severity of the problem – scores between 30 and 60 are identified as low priority projects and scores above 60 are high priority projects.

Special Conditions and Considerations

In addition to the previously listed technical criteria, the following conditions may warrant the installation of a traffic calming device:

- City park located on street within limits of the traffic calming request;
- Special condition, unique to a location that is not covered by the general criteria listed in the above point system table.

Procedure for Applying for Traffic Calming Devices

1. Residents of the proposed traffic calming project area must initiate the process via a request from the neighborhood contact person to the City Traffic Engineer. The City Traffic Engineer, with assistance from other staff of the City Traffic Engineering Division of the Engineering Department, will determine the "area of influence" affected by the proposed traffic calming devices. This "area of influence" also includes streets that have a potential of

being used as detours to avoid the traffic calming devices. Once this "area of influence" is determined Traffic Engineering will perform a week long study to collect traffic volume/speed data.

2. The City Traffic Engineer will analyze the results of the survey and determine if the area meets the criteria for traffic calming (see "Qualifying Criteria for Traffic Calming Devices" above).

Data to be collected and reviewed is as follows:

- Roadway classification
- Roadway width
- Traffic speed data
- Traffic volume data
- Crash data per year
- Pedestrian volume
- 3. A response is sent to the neighborhood contact person(s) notifying them of the outcome of the study. If the data does not meet the above criteria, alternative measures are offered for discussion. Once a neighborhood has been studied another study will not be conducted unless traffic patterns, volumes, or qualifying criteria change. If a neighborhood feels that special circumstances necessitate another study that decision will be at the discretion of the City Traffic Engineer.
- 4. If the data meets the criteria, the site data and site inspections are used to evaluate which traffic calming device(s) (speed hump, traffic circle, diverter, etc.) will be the most effective. Once a "Traffic Calming Plan" is developed by Traffic Engineering staff notices showing the proposed locations of the traffic calming devices will be mailed to all residents and businesses located within the "area of influence". The City will also send out an automated call to all residents in the "area of influence" informing them that notices have been mailed. The City will allow a 2-week period for all residents and businesses to make comments on the proposed plan. If majority of comments received are in favor of the proposal, the project will move forward to the construction phase. The Traffic Engineering Division will determine if a public meeting will be needed with the residents of the neighborhood based on comments received.
- 5. Once the traffic calming plan is approved (and funds permit), construction will begin to put the devices in place. The City reserves the right to identify the type and location of all traffic calming devices.

Funding

The City will absorb all costs for requests in qualifying areas (see "Qualifying Criteria for Traffic Calming Devices" above). The residents must also agree to maintain any landscaping via an agreement with the City.

Types of Traffic Calming Devices

- Speed Cushion: A 6'x7' (approximate) device made from 100% recycled rubber. Typical installation is 2-3 speed cushions per location. Its main purpose is to reduce the speed of vehicles. See specifications in Appendix J.
- Speed Hump: A long platform from 14-22 feet in length. Its main purpose is to reduce the speed of vehicles. They are usually 21 feet in size. See specifications in Appendix F and G.
- Traffic Circle: These are used to reduce vehicle speeds by creating a diversion from a straight-line path to a slight curve around an island. See specifications in Appendix H and I.
- Diverter: A channelized island used to divert traffic away from an area by prohibiting certain vehicular movements.
- Edge Line Pavement Markings: A pair of solid 6-inch white lines 20 feet apart are placed, preferably without a centerline, to slow vehicle speeds. The solid white edge line delineates the travel lanes from the parking area.

Requirements for Specific Traffic Calming Devices

1. Speed Cushions

- The grade of the roadway must be less than or equal to 8 percent.
- The roadway should have a horizontal radius of more than or equal to 300 feet.
- If this treatment is recommended by staff, all adjacent property owners must approve the location.
- The roadway is not the primary emergency vehicle route. The City Traffic Engineer will contact the Police and Fire/Rescue Departments to determine if the speed cushion will interfere with the response to emergency calls.

2. Speed Humps

- The grade of the roadway must be less than or equal to 8 percent.
- The roadway should have a horizontal radius of more than or equal to 300 feet.
- If this treatment is recommended by staff, all adjacent property owners must approve the location.
- The roadway is not the primary emergency vehicle route. The City Traffic Engineer will contact the Police and Fire/Rescue Departments to determine if the speed hump will interfere with the response to emergency calls.

3. Traffic Circles

- If landscaping is installed, the residents must agree to install and maintain vegetation via an agreement with the City.
- This must be a 4-way intersection.

4. Diverters

• If landscaping is installed, residents agree to install and maintain vegetation via an agreement with the City.

• A documented significant cut-through problem should exist.

5. Edge Line Pavement Markings

- Streets should have a minimum width of 36 feet (back-of-curb to back-of-curb).
- On-street parking should show underutilization.
- The marking should be a maximum of 8 feet from edge line to face of curb (or 6 feet from edge of pavement) to prevent confusing the outside area with a travel lane.

<u>Placement of Traffic Calming Devices</u>

1. Speed Cushions

- Cushions should be placed at least 400 feet apart.
- The stopping sight distance should be greater than or equal to 200 feet.
- Speed cushions should be at least 200 feet from a major intersection.
- They should be as close to property lines as possible.
- If possible, the cushions should be placed under streetlights for greater visibility.
- They should be placed at least 10 feet from driveways.

2. Speed Humps

- Humps should be placed at least 400 feet apart.
- The stopping sight distance should be greater than or equal to 200 feet.
- Speed humps should be at least 200 feet from a a major intersection.
- They should be as close to property lines as possible.
- If possible, the humps should be placed under streetlights for greater visibility.
- They should be placed at least 10 feet from driveways.

3. Traffic Circles

• The typical placement of a traffic circle is in the middle of a four-way intersection. The size of the intersection determines the exact placement and size of the traffic circle.

4. Diverters

• The typical placement of diverters are at intersections. The size and shape of the diverter will depend on the vehicular movements being prohibited at the intersection.

5. Edge Line Pavement Markings

- White solid edge lines are spaced 20 feet apart, preferably without a centerline.
- The width of the line is 6 inches.
- The shoulder width from the edge of pavement to the center of the edge line shall be no greater than 6 feet.
- The shoulder area is intended to primarily separate parking areas from travel lanes.

COG-#102929-v8-Traffic Calming_Guidelines

Appendix A

Sample Letter from City Acknowledging Traffic Calming Request

Date

Name Address City, State, Zip

Dear <Name>

This is in reference to your recent letter regarding traffic concerns in the <name of neighborhood> neighborhood.

The Greenville Engineering Department is currently reviewing requests for traffic calming devices on a first-come first-serve basis. The requested neighborhood has been added to our request list and will be evaluated for traffic calming devices in accordance with our *Neighborhood Traffic Calming Guidelines*. We expect to collect traffic count data <insert date>. Once we have completed our initial analysis, we will notify you of our findings.

Enclosed is an information package to be used in formally applying for traffic calming devices. Included is a copy of the City of Greenville Neighborhood Traffic Calming Guidelines and a traffic calming request form. Please complete the traffic calming request form and return to me at the enclosed address.

We appreciate your concern for roadway safety. Should you have any further questions or need additional information, please contact me at 329-4678.

Sincerely,

<Name>
City Traffic Engineer

Enclosures

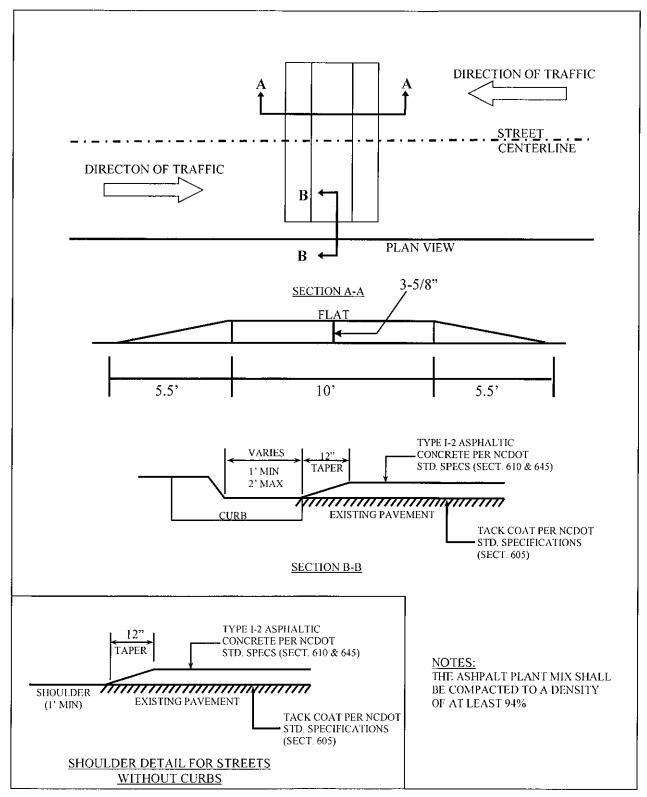
Appendix B

Traffic Calming Request Form

This section is to be filled out by the Neighborhood Contact Person:

Na	me:
	dress:
	Code: Telephone (day):
Fax	: E-mail:
Ne	ghborhood:
	eet:
	at is the Nature of the problem and where is it occurring?
Qu	alifying Criteria Checklist (this section is to be verified and filled out by the City Traffic tineer):
	This street is a City-maintained public street classified as a two-lane standard residential or minor residential under the City of Greenville's <i>Manual of Standard Designs and Details (MSDD)</i> .
	This street has a roadway width of less than or equal to 40 feet (back-of-curb to back-of-curb) The street has a posted speed limit of 25 mph.
	The street obtains a minimum of six (6) points on the criteria chart.
Nο	e. This is a request for the consideration of installing a traffic colming device on the street

Note: This is a request for the consideration of installing a traffic calming device on the street noted. The criteria for placement of these devices must be met before installation can occur. This form does not guarantee that a device will be placed in the above-mentioned area.



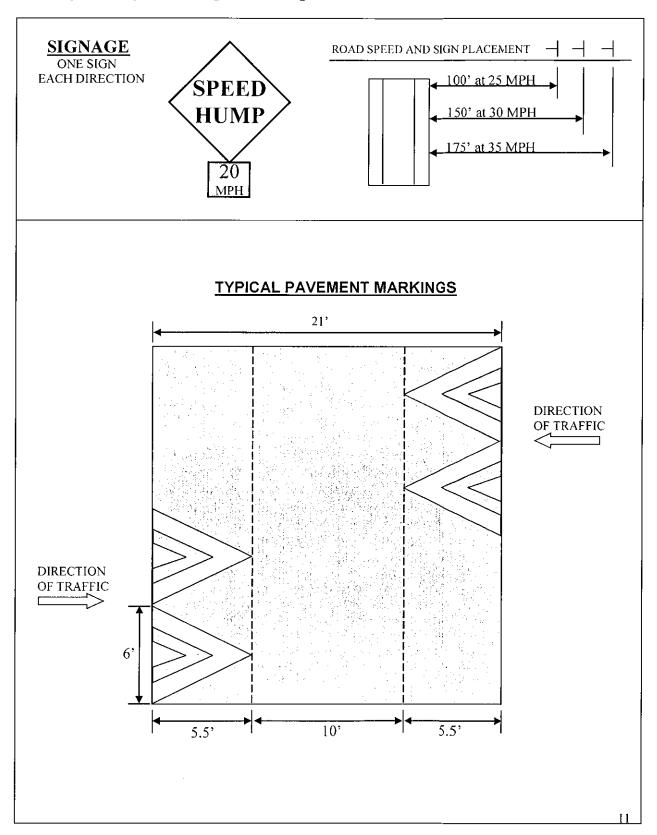
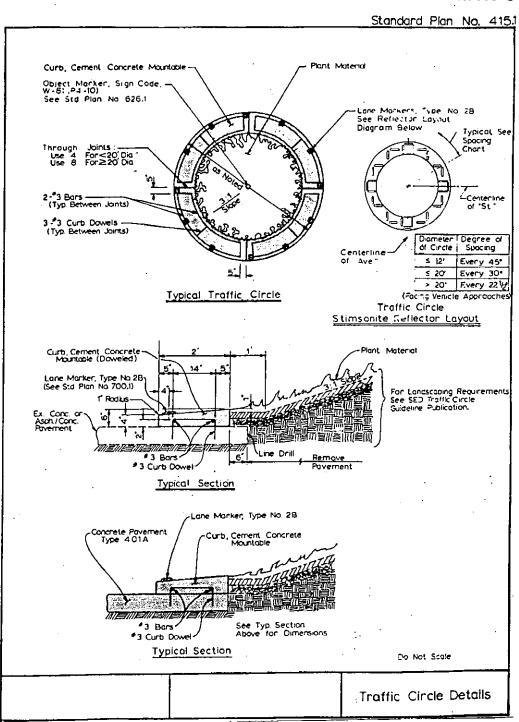
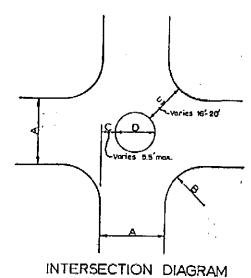


Exhibit 9



Appendix I Placement of a Traffic Circle



- Legend:
 A Street Width
 B Curb Return Radius
 C Off-Set Distance
 D Circle Diameter
 E Opening Width

OPTIMUM CRITERIA

Off-Set	Opening
<u>Distance</u>	Width
5.5 max 5.0	16' min
5.0′	17'+
4,5]	18′±
4.0	,19′±
3.5 on less	20'

13



V3 Series Speed Cushions

All modules have interlocking tongue and grooves. Assists with installed cushion impact stability. Reduces installation time.

V3 Speed Cushion SPECIFICATIONS

Dimensions of the modules:

Width: 18" (+/- 1/16") Length: 42" (+/- 1/8") Thickness: 3" (+/- 1/8")

Dimensions of the Speed Cushions (widths and lengths are adjustable) Width: from 6' and up by 1.5' increments Length: from 7' and up by 3.5' increments

Height: 3"

Standard Dimensions of the Speed Cushion as

shown. Width: 6' Length: 7' Height: 3"

Entrance and exit gradient: 1:15

Side gradient: 1:3

Physical properties:

Material: 100% recycled synthetic and natural

rubber composite

Tensile strength: minimum 500 psi

Shore hardness: minimum 70A

Specific gravity: 1.1

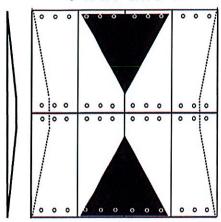
Markings: V3 Series

Rubber modules are available in all black, black with large white reflective arrows. Markings are embedded into rubber during manufacturing.



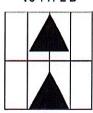
Tongue and groove design replaces need for angle irons as required by others with similar cushions

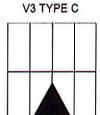
6'W x 7'L x 3" H



V3 TYPE A

V3 TYPE B





Not Shown: V3 TYPE D - No Arrows; All Black







Typical Layouts Include









Traffic Logix Corp 3 Harriett Lane Spring Valley, NY 10977 Phone: 866.915.6449 ww.trafficlogix.com



Grand Prairie, TX

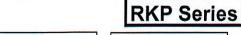
972.623.9885

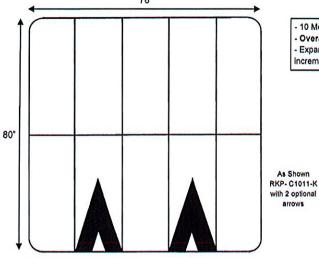
Toll Free 1-800.942.9305

www.roadkare.com

TECHNICAL DATA SHEET

ROAD KOP™ Speed Cushions





78"

16"

80"

As Shown

arrows

10:1

increments

- Overall size 78" X 80"

- 10 Module Speed Cushion Installation hardware kit is included (Lag Bolts; Washers; - Expandable in 16" X 40" Caps; Anchors; Connectors and Adhesive)

PRODUCT SPECIFICATIONS

- Each component unit shall be 3" high
- Side gradient shall be between 1:4 and 1:8
- Ramp gradient shall be between 1:8 and 1:10
- Leading transition edge shall not exceed .5"
- Cushion length minimum is 80"
- Cushion width minimum is 78"
- Cushions are black in color
- Markings in a white split leg triangular shape and integral to the pre-formed rubber composite

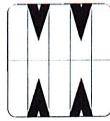
MATERIAL SPECIFICATIONS

- Recycled Rubber composite
- Tensile Strength 500 psl (minimum)
- Hardness 65 Shore A (minimum)
- Specific Gravity 1.13
- Skid Resistance 89 (Dry)
- Deform Rate None (100% Recovery)
- Chemical Resistance Impervious to engine oil, road salts, transmission fluid, anti-freeze, gasoline/ diesel fuel, solvents, outdoor exposure including extreme hot or cold temperatures.
- Conformable to pavement variances without curling.



40"

RKP- C1011-1-K



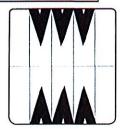
40"

4:1

RKP- C1012-K



RKP- C1011-3-K



RKP- C1011-6-K



Road Kare International 530 Jesse St. Grand Prairie, TX 75051 Phone: 972.623.9885 Fax: 972.641.0851 sales@roadkare.com

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Speed Cushion Spacing

