
Traffic Calming Plan

Sunset Heights Neighborhood

Prepared by the City of Harrisonburg
Department of Public Works

May 28, 2021



EXECUTIVE SUMMARY

This Traffic Calming Plan was created in response to citizen concerns in the Sunset Heights neighborhood about the high volume of cut-through traffic using neighborhood streets in the general vicinity south of W. Market Street and west of S. High Street. The Sunset Heights neighborhood was formally enrolled in the City's Neighborhood Traffic Calming Program (NTCP) in June 2018, after completing a number of prerequisite steps for enrollment. In April 2019, City Council approved a Traffic Calming Plan for the neighborhood. The City of Harrisonburg Department of Public Works led the development of the plan, in partnership with the Harrisonburg Police Department and neighborhood residents.

The plan below describes the step-by-step process the neighborhood went through to reach enrollment in the NTCP and adoption of the Traffic Calming Plan. It also identifies traffic calming measures that were implemented in the neighborhood as phase I of the plan, and measures to be implemented as phase II of the plan. The phase II measures have been revised from those included in the April 2019 Plan, due to multiple circumstances that were not known at the time of Plan adoption and additional neighborhood outreach that has been completed. The proposed locations for the traffic calming practices can be found in Appendix A, and representative pictures of the practices can be found in Appendix B. The proposed measures include speed cushions, raised intersections, mini roundabouts, a speed hump, and street trees. Finally, the plan discusses the evaluation process that occurs after each phase, to determine whether additional phases are needed.

INTRODUCTION

The concerns of speeding and cut-through traffic in the Sunset Heights neighborhood have been persistent over the years. Citizens have been in contact with the Public Works Department various times since as early as 2007 about drivers using Dogwood Drive and Chestnut Avenue as a way to avoid S. High Street, as well as drivers illegally passing vehicles driving the speed limit and stopped school buses. The latest effort to seek improvements to these conditions began in the Spring of 2015. Staff concluded that the most appropriate way to comprehensively address the traffic issues was for the neighborhood to work toward enrollment in the City's Neighborhood Traffic Calming Program, which exists to address such issues. In June 2018, City Council formally enrolled the neighborhood in the program, following the completion of prerequisite steps, and City Council approved the Traffic Calming Plan in April 2019. These steps are described below.

NEIGHBORHOOD TRAFFIC CALMING PROGRAM

The Neighborhood Traffic Calming Program (NTCP) is a partnership between the residents of the affected neighborhood, the Harrisonburg Police Department, and the Department of Public Works. The purpose of traffic calming is to address problems related to speeding and cut-through traffic conditions in residential neighborhoods, on local or residential streets. Traffic Calming focuses on slowing traffic without restricting movement. The program is based on the “5 E’s” often referred to in improving traffic safety. The five E’s are a progressive set of strategies that can be used to calm traffic to a safer and more tolerable condition by changing the behavior of drivers. They begin with passive, inexpensive strategies, and progress to physical strategies that require more resources to implement, and rely more on physical geometry of the street to slow traffic, rather than driver self-control. The five E’s are listed below, and are implemented in the order they appear. If traffic has calmed as a result of efforts made in the earlier stages, the neighborhood does not proceed to the next phase.

- Education – education of residents and other drivers in the neighborhood to create awareness that there is a problem with speeding, cut-through traffic, and/or other traffic issues in the neighborhood that are adversely affecting residents. In this initial phase, neighbors begin communicating with each other about the problem and participate in the Team Up to Slow Down campaign.
- Encouragement – neighbors encourage each other to obey traffic controls and be respectful of the neighborhood setting, which often includes children’s safety, when navigating the neighborhood. Education and encouragement occur at the same time, during the same activities listed under education. The Harrisonburg Police Department also uses its portable radar unit in neighborhoods to make drivers aware of their speed, and promote self-regulation of the speed limit.
- Enforcement – the neighborhood requests increased enforcement with traffic controls, including speeding, obeying speed limits, and other driving laws.
- Engineering – the neighborhood works with the Department of Public Works during this phase to identify appropriate physical practices to implement that change the geometry of the street, causing drivers to slow down to a speed that feels more comfortable and safe in a more restricted environment. A traffic study, petition of the neighborhood, and City Council approval are required before progressing to this phase. Engineering practices are implemented in phases, so that no more than the minimum amount of traffic flow restriction necessary to address the issues is imposed upon the neighborhood.
- Evaluation – after each phase of traffic calming implementation, an evaluation occurs to determine whether the issues have been addressed satisfactorily. Evaluation includes neighborhood feedback, and traffic studies following each phase of engineered practice implementation.

PROGRAM PROCESS

The Sunset Heights neighborhood conducted the education, encouragement, and enforcement activities on the dates listed below. The neighborhood is now in the engineering phase, with Phase I efforts completed and evaluated.

TRAFFIC CALMING PHASE/ACTIVITY	TIMEFRAME
• Education & encouragement	March – May 2015
• Increased enforcement	March 2015
• Neighborhood meeting with Harrisonburg Police Department & Public Works	June 2015
• Traffic study of neighborhood (approved by City Council)	Fall 2015
• Petition of neighborhood	Winter 2015 – Spring 2018
• Enrollment approved by City Council	June 2018
• Neighborhood representative meeting with Public Works (initial plan development)	August 2018
• Neighborhood open-house meeting (open to public) to review and provide feedback on the draft Traffic Calming Plan	January 2019
• Plan supported by Transportation Safety & Advisory Commission	February 2019
• Endorsement of Plan by City Council	April 2019
• Implementation of Phase I of Plan	Summer/Fall 2019
• Traffic Study following Phase I implementation	Feb/March 2020
• Neighborhood representative meeting with Public Works to discuss revisions to Phase II of the Plan	May 2020
• Online survey for residents regarding potential measures	July 2020
• Neighborhood representative meeting with Public Works to review survey results and identify preferred measures	April 2021
• Online survey for residents regarding proposed measures	May 2021
• Revised Plan supported by Transportation Safety & Advisory Commission	May 2021

TRAFFIC STUDIES OF THE NEIGHBORHOOD

The neighborhood submitted a request to City Council asking for the Public Works Department to conduct a traffic study of the neighborhood, which was approved by City Council in July 2015. The study area included streets on which there were significant concerns, and surrounding streets, to get the baseline traffic conditions. The results of the study were shared with the neighborhood in December 2015 and concluded that multiple neighborhood streets met the criteria to enroll in the Neighborhood Traffic Calming Program. Listed below is the minimum criteria to enroll in the program. Neighborhood streets must meet at least one of the conditions in the list. The study concluded that portions of S. Dogwood Drive, Maryland Avenue, W. Grace Street, and S. Willow Street met one or more of the criteria.

- Streets meeting minimum volume requirements – daily traffic greater than 600 vehicles
- Streets meeting 85th percentile speed requirements – 10 mph over posted speed limit

- Documented cut-through traffic

Following Implementation of the measures identified as Phase I of the Traffic Calming Plan, a traffic study was completed to evaluate impact of the measures and whether any streets continued to meet the criteria for traffic calming measures. This study, completed in late February/early March 2020 (prior to JMU spring break and subsequent disruptions related to the Covid-19 pandemic), concluded that portions of S. Dogwood Drive, Maryland Avenue, W. Grace Street, Chestnut Drive, and S. Willow Street met one or more of the criteria.

Crash data was also analyzed as part of the traffic study. Crash rates were generally low, and patterns of crashes were not found, with the exception of the intersection of Chestnut Avenue at New York Avenue. While traffic volumes are much lower at this intersection than some others throughout the neighborhood, it has experienced twice to three times the number of accidents of other, higher volume intersections. After reviewing crash reports for this intersection, it was determined that crashes were not of similar cause, and no specific countermeasure would address all or the majority of causes.

Origin-destination information was also collected as part of the study. It was found that Google Maps directs drivers to use S. Dogwood Drive to Maryland Avenue when trips begin at Westover Park or west of Dogwood Drive and end south of Maryland Avenue. Staff and neighborhood representatives acknowledged that the location of the Cecil F. Gilkerson Community Center, Westover Park, and the pool at the park are all major destinations for the 53,000+ residents of the City, and that while there may be some diversion of this traffic due to traffic calming measures, it is likely to continue to be used by many. However, those using the route are expected to obey traffic laws and drive like they are in a neighborhood, and traffic calming measures are intended to increase compliance with traffic laws.

GOALS OF THE TRAFFIC CALMING PLAN

There are two main goals of this Traffic Calming Plan:

- 1) To reduce speeds on S. Dogwood Drive, Maryland Avenue, S. Willow Street and Chestnut Drive.
- 2) To change the perception that S. Dogwood Drive and S. Willow Street are alternatives to S. High Street for through traffic.

The Traffic Calming Plan builds upon an existing enforcement strategy to reduce speeding and cut-through traffic. The Harrisonburg Police Department already has the authority to impose increased fines for speeding on S. Dogwood Drive and Maryland Avenue. This ability is authorized by state code, and was put into place in 2005 as a measure to address speeding and cut through traffic. Between the increased fine and slower travel time, some traffic is expected to divert off of this route.

The engineering strategy is based on the design of the street, which influences driver behavior. The engineering strategy will introduce minor horizontal or vertical impediments that that will slow speeds and increase the travel time to through the neighborhood. The engineered strategy will also enhance stop-controlled intersections with the intent of increasing compliance with stop signs. Safety is expected to increase due to slower speeds and increased compliance with stop signs.

TRAFFIC CALMING PRACTICES & PHASES

The Traffic Calming Plan establishes phases of implementation for engineered traffic calming strategies, as the goal is to implement only as many strategies as are necessary to reduce cut-through traffic and increase traffic control compliance to acceptable levels. The phases identified by the neighborhood, in partnership with the Harrisonburg Police Department and Department of Public Works are shown in the table below. A map showing the proposed location of the practices can be found in Appendix A. Photos of each type of recommended practice, excluding those that have already been completed, can be found in Appendix B. The Public Works Department is responsible for implementing the measures, as planned.

PHASE/PRACTICE
Phase I - Completed
1) Intersection of S. High Street and Maryland Avenue: <ul style="list-style-type: none">• Add a leading pedestrian phase crossing S. High Street• Study intersection to determine if warrants are met for “Turning vehicles yield to pedestrians” signs <u>Support:</u> The intersection is used as a safe route to school.
2) Maryland Avenue: <ul style="list-style-type: none">• Digital speed radar sign <u>Support:</u> The expected result is that drivers will reduce their speed when they can see how far above the speed limit they are driving.
3) Intersections bound by South Avenue, W. Grace Street, S. High Street and S. Dogwood Drive: <ul style="list-style-type: none">• Add stop bars at all stop signs <u>Support:</u> Increase compliance with stop signs will improve safety. Stop bars will help correct confused that may be caused by Maryland Avenue being the only east-west street to have no stop signs (since it is the major movement, as a neighborhood collector), while all other east-west streets are stop controlled at every intersection.
4) S. Dogwood Drive: <ul style="list-style-type: none">• Add centerline in bend north of Dixie Avenue
Phase II
1) S. Dogwood Drive near Westover Park entrance: <ul style="list-style-type: none">• Speed cushion <u>Support:</u> The measure will reduce vehicle speeds while maintaining efficient travel by emergency vehicles.
2) S. Dogwood Drive south of Dixie Avenue: <ul style="list-style-type: none">• Speed cushion <u>Support:</u> The measure will reduce vehicle speeds while maintaining efficient travel by emergency vehicles.
3) S. Willow Street & Bruce Street intersection: <ul style="list-style-type: none">• Raised intersection <u>Support:</u> The measure will reduce vehicle speeds on Willow Street.
4) S. Willow Street: <ul style="list-style-type: none">• Speed hump

Support: The measure will reduce vehicle speeds on Willow Street.

5) Intersection of Willow Street, Chestnut Drive, W. Grace Street

- Mini Roundabout

Support: The intersection will operate more intuitively, and more safely serve the traffic volumes of the adjacent institutional land use (James Madison University, Memorial Hall) by reducing conflict points.

6) Chestnut Drive & Ohio Avenue intersection:

- Raised intersection

Support: The measure will reduce vehicle speeds on Chestnut Drive.

7) Intersection of S. Dogwood Drive & Maryland Avenue:

- Mini Roundabout

Support: An intersection control will reduce speeds by inducing yielding on the uncontrolled approaches, and in the case of the miniroundabout, greatly reduce conflict points, thereby increasing safety for all modes.

8) Maryland Avenue:

- Speed cushion

Support: The measure will reduce vehicle speeds while maintaining efficient travel by emergency vehicles.

9) S. Dogwood Drive; S. Willow Street:

- Street trees

Support: The measure will, over time, create the perception of a less open environment that is intended to reduce vehicle speeds.

With Paving Schedule - completed

1) Willow Street

- When next paved, remove double yellow line, except at stop or yield controls.

Support: Removing the centerline favors local road design, the intended purpose of which is to provide access to properties, instead of a design more appropriate for a collector street that may encourage through traffic use.

EVALUATION

After each phase of implementation, there will be a waiting period of two to three months, to allow time for traffic patterns can readjust. After traffic has readjusted, the Public Works Department will conduct a new traffic study to determine the effectiveness of the new practices. The waiting period will be adjusted based on the James Madison University semester schedule. Studies will not be performed while students are away, nor within the first couple of weeks of any semester, or exam time, as traffic patterns are not the norm during these periods. Should the traffic study conducted after the implementation of phase II measures show that street segments remain eligible for traffic calming, Public Works staff will work with the neighborhood representatives committee to identify appropriate next steps and potential measures to propose as phase III of the Traffic Calming Plan. No additional phases will be implemented if the traffic study indicates that cut-through traffic and speeding has reduced to acceptable levels. Education, encouragement, and enforcement can continue to be utilized strategies, as needed.

Appendix A: Completed and Proposed Traffic Calming Measures

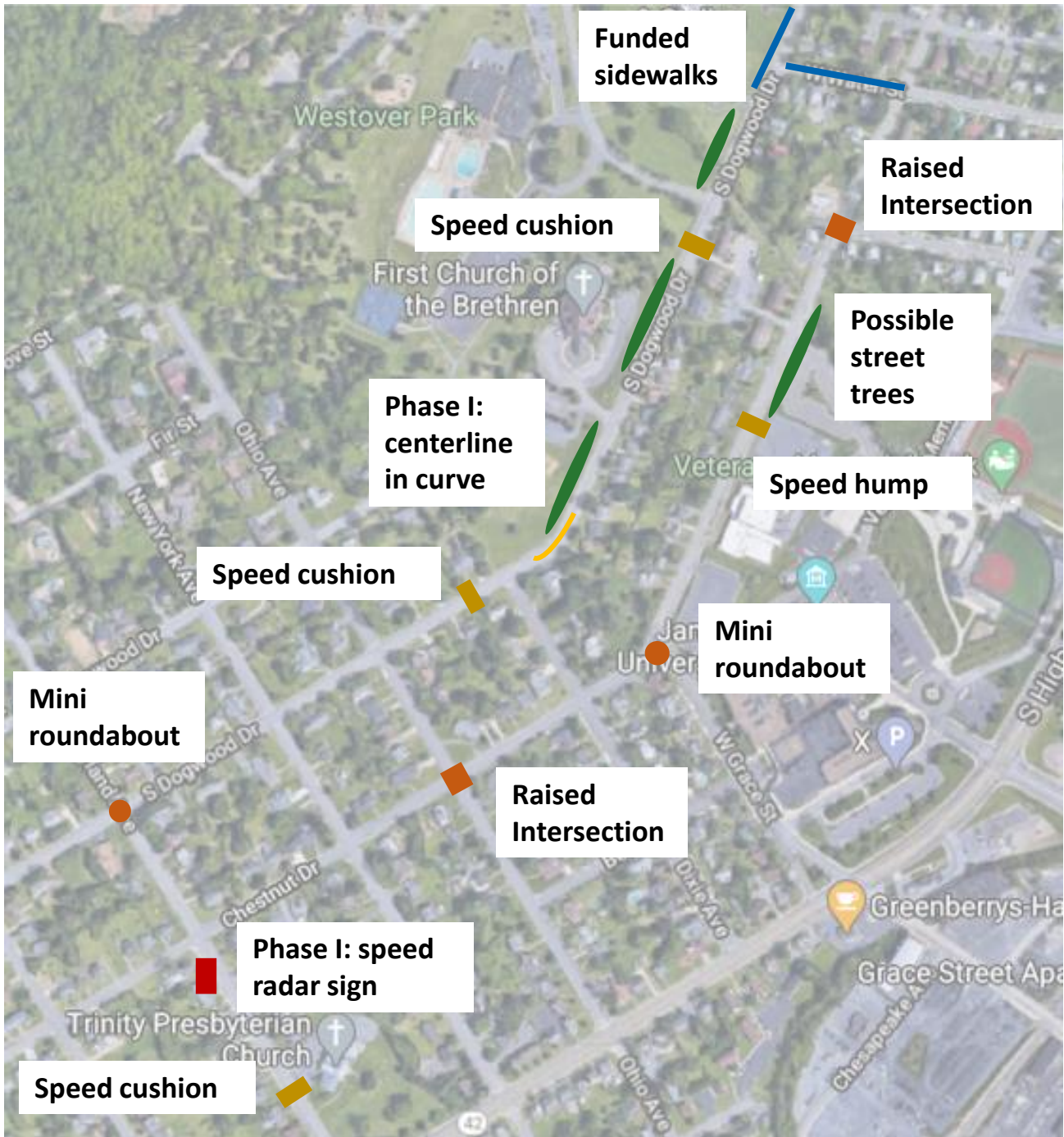
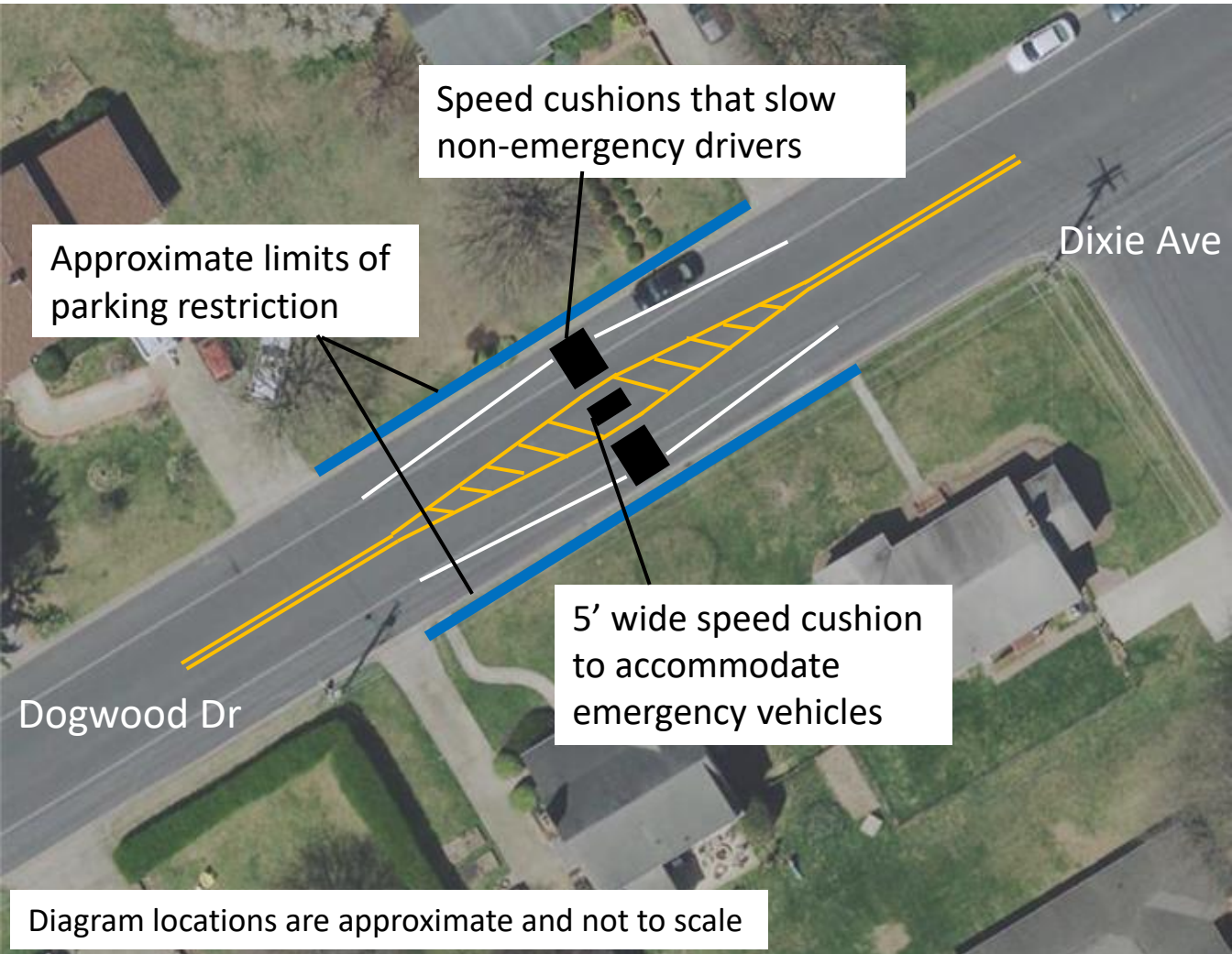


Diagram locations are approximate and not to scale

Appendix B: Proposed Measures

Raised intersection, speed cushion, speed hump



Appendix B: Proposed Measures

Mini Roundabout examples

