



Response to Public Comments Neighborhood Traffic Safety Program (NTSP)

During May 2016, the City of Knoxville received numerous comments in response to its request for public input on the City's proposed Neighborhood Traffic Safety Program (NTSP).

All of the individual comments received by email, via an online survey and in two public meetings can be found on the City's website here: www.knoxvilletn.gov/trafficsafety.

This document, however, focuses on a smaller number of comments. If several individuals made identical or nearly identical comments, just one representative comment was selected for response. But we have also made an effort to include every unique idea, question, suggestion and criticism to provide the full range of feedback on the NTSP. Not all comments listed here required a response. Also, comments that did not offer direct feedback on the NTSP or related issues were not included.

Please Note: Many individuals took the opportunity to request assistance to address speeding problems on specific streets. These comments certainly reinforce the need for traffic calming, but the City cannot act on these specific requests. As outlined in the NTSP Program Guide, requests for assistance with speeding on local streets should be made through an Application for a Traffic Safety Study once the NTSP is launched.

Bike Lanes

There are not enough bike lanes, some bike lanes are segmented, and some bike lanes are hard to use because of on-street parking and speeding cars.

The City's [Bicycle Facility Plan](#) is the blueprint that the City follows for installing bike lanes and other dedicated bicycle infrastructure. These facilities are prescribed for collector and arterial roadways (i.e. busier roads with faster moving traffic).

The NTSP focuses on local streets (and certain minor collectors) where a shared roadway is more appropriate. Traffic-calmed shared roadways are sometimes called bicycle boulevards or neighborhood greenways. They are a key component to the bicycle network and provide connection to bike lanes.

Citizen Speed Watch Programs

Here's a program that others have used to "crowd source" some of the tedious work of documenting the speeding problems. Usually neighbors are motivated to document the issue. Reliability could be an issue, particularly if they want to cook the numbers to show higher speeds. There are some ways around this though (use a GoPro camera simultaneously for example). Also, as I mentioned, traffic calming is quite heavily featured

in several of my classes and this fall will be no exception. There might be opportunities to get students out there for some field work.

http://guide.saferoutesinfo.org/enforcement/neighborhood_speed_watch_program.cfm

Thank you for the suggestion, and we are certainly open to the idea of crowd sourcing in general and to partnerships utilizing college or graduate students. However, the City cannot support the idea of using citizen-generated data to verify speeding for the purposes of the NTSP. First, as we have said elsewhere, staff time is limited. Someone on staff would have to review video and then quantify and process the gathered data. Secondly, Traffic Engineering can get more reliable data more efficiently from hoses that track volume, speed, and exact timing. The same is true for portable, stand-alone, electronic radar units that can record and upload speed data.

On the other hand, the City would certainly welcome any data, including video, supplied by a Neighborhood with its application or later in the process. There also may be opportunities for deploying staff-operated radar guns as part of a Neighborhood-led education program.

Closing Streets

What about closing a street? Whitehall Drive seems to be an extra place that could be closed so that drivers cannot "cut through" as much.

Can roads be closed off, and who decides?

As noted in the Program Guide, Appendix D, Traffic Calming Toolbox, one possible traffic calming measure is a modified road closure such as making a street one-way only or diverting traffic in one direction at an intersection. In order not to impede the flow of traffic on public streets, such modified road closures are usually contemplated only if other proposed solutions are not adequate or cost effective. In consultation with other departments as well as affected users, the Engineering Department can make the decision to make a modified road closure.

This type of closure is distinctly different from a permanent road closure, which requires approval by both the Metropolitan Planning Commission and Knoxville City Council, and results in the surrender of right-of-way to adjacent property owners.

Cross Walks

I walk across Gill Ave. at Luttrell St. twice a day. Not one time have I had a car stop at the crosswalks on Gill. Traffic on Gill is also much too fast.

Speeding on Gill can be addressed by the City if and when the neighborhood organization applies for the program. In the meantime, KPD periodically conducts speed enforcement on Gill.

Unfortunately, not all drivers pay attention to pedestrians standing at a crosswalk, even enhanced crosswalks such as those at the intersection of Gill Avenue and Luttrell Street.

Drivers are not required to stop for a pedestrian merely standing on the curb. Both state law (TCA 55-8-134) and City Code (17-473) say that drivers must yield the right-of-way to pedestrians crossing a roadway within a crosswalk when the pedestrian is on the half of the roadway the vehicle is travelling in or when the pedestrian is approaching from the other half of the roadway so closely as to be in danger.

On the other hand, pedestrians must exercise caution. State law and local ordinance both state that “[n]o pedestrian shall suddenly leave a curb or other place of safety and walk or run into the path of a vehicle which is so close that it is impossible for the driver to yield.”

Cut-Through Traffic

People are trying to avoid the main arterials (e.g. avoid the traffic lights on Magnolia), so they are using the sub-arterials. [We are] going to have to control the sub-arterials: We need to force (vehicles) back on the main streets.

As noted in the Program Guide, the primary purpose of the NTSP is to reduce speeding. By reducing speeding, the program may also reduce cut-through traffic.

How do we get a “No Through Traffic” sign? Do these help? Are they enforced?

“No Through Traffic” signs do not reduce through traffic and are very difficult to enforce by KPD. In some ways, they show motorists where it is possible to cut through, whereas otherwise they might not know.

If a road through a neighborhood is considered a cut thru, sidewalks should be constructed.

Traffic calming measures may be deployed to address speeding (whether by neighborhood residents or pass-through drivers) and very high volumes of cut-through traffic. Sidewalks are built using different criteria. See “Sidewalks” below.

I feel that the main reasons that folks are cutting thru residential areas is because the main roads are congested with too many bicycle lanes, unnecessary sidewalks, traffic calming devices, and poor traffic controls. The Traffic Engineering department has done a poor job of managing these problems. When the Traffic Engineering department is offered solutions to these problems, they ignore these solutions.

Bike lanes and new sidewalk are installed and constructed only on streets where they will not cause significant traffic delays. The City is in the process of installing new traffic systems and signal controllers, and these will help reduce congestion on the main roadways.

Citizens should call 311 and report traffic signals or other controls they believe are the primary cause of congestion on main roads and/or traffic taking short cuts through a residential neighborhood.

Decision Making

I think the program should just allow the community, people who live on the specific street (after petition has been met with a majority concerned) to decide what method of traffic engineering they want to implement. If to the people who live there a stop sign makes sense, let them have it. If speed bumps, so be it. If a roundabout, again let it happen after it has been determined there is room. Don't restrain what the people want if there is a majority truly concerned with the problem. Let them decide what to do. If the proposed solution doesn't end up working, let them petition for something else.

The NTSP is an effort to combine the professional expertise of the City's traffic engineers with the experience and observations of the residents who suffer from speeding in their neighborhoods. But traffic signals, stop signs, traffic calming measures, and other traffic control devices must be installed using established engineering practice. Otherwise the City is liable for injuries and damages that occur from improperly installed traffic controls.

There should be no vote, leave it to professionals.

If the City determines that traffic calming will be effective in reducing an excessive amount of speeding and increasing public safety, it will obtain Neighborhood input to develop a traffic calming plan, but the decision on whether to implement the plan rests with the City. There is no formal vote.

I'm a little confused as to why an improvement can be petitioned if in fact there is a traffic safety issue and a law being broken. Public choices and discussions on what improvements or application types makes sense, but (if) there is a real and critical safety issue, I'm not quick sure it even makes sense to NOT respond to it. Public services are set up to protect the health, safety and welfare of its citizens. And inconvenience or dislike is not a viable argument.

The petition is the City's way of ensuring that neighbors advocating for a traffic calming study are reaching out to other impacted neighbors and involving them in the process. However, if a citizen believes there is a "real and critical safety issue," that person should contact the City immediately through the 311 Call Center. City staff will evaluate the concern and respond as needed.

Design Limitations

The roads in our area are narrow and curvy. There are no sidewalks. In the 20 years I've lived in this house, the number of walkers has increased a thousand fold. And we want people to walk more for their health. Greenways are a blessing if they are near your house, but exercise needs to be convenient if people are going to do it.

The Adair Gardens/Fountain City area has a big problem with our narrow streets and short setbacks. I do not know if the scope of this program will be able to look at the overarching problem in our area, which makes it tough to create a safer traffic and pedestrian situation.

Street patterns, lot sizes and other features of subdivisions designed decades ago can contribute to speeding and cut-through traffic — and also present real challenges for meaningful solutions. A traffic calming concept plan has to fit the particular neighborhood.

Education

Overall, I applaud the effort. I can see the need for some ability to compare situations in different neighborhoods... I see a message that speeders come from the neighborhoods affected. Although that is true to some extent, some neighborhood streets are used as shortcuts to avoid traffic on Broadway, Kingston Pike, etc. Neighborhood education is not going to be as effective with these drivers.

Education efforts may indeed be more effective vis-à-vis speeders who live in the neighborhood versus those who are cutting through. We hope to learn from the experiences of many neighborhoods to identify the most effective approach.

I was not convinced by the program guide that education was going to be very effective at all. Maybe this section of the program guide can be fleshed out more. I agree with all the steps in the plan, but need a little more information there about the effectiveness of neighborhood education.

In my opinion, these sorts of efforts are an inefficient use of time and money. I could be wrong. The sign that tells me how fast to go is the road design, plain and simple. Give me a design signal and I'll slow down. Most research resoundingly shows that design matters most. Bumper sticker and yard sign campaigns simply delay safety improvements that ultimately increases risk of injury or death (not to mention making the neighborhoods less livable at the same time). People respond to enforcement and engineering, they know what speed limit signs mean. Best example is to look at NY City's engineering department. One of their engineers recently told me that their entire transportation group has become a traffic calming group, doing a tremendous amount of rapid-response in-house traffic calming projects that are extremely cost effective. Example calculation: how many hours of enforcement does it take to pay off the cost of one raised crosswalk? I'm fed up with speeding, and I'll do whatever it takes to get more action on more livable, safe, and walkable streets, but the educational part should only be in concert with a very visible infrastructure program (again, see NYC).

It is absolutely correct that street design — more than education, enforcement and signage — is the key to slowing traffic. Traffic calming measures address inadequate street design that encourages speeding. However, as noted by the Institute for Traffic Engineers, Education and Enforcement are also important components of a comprehensive program.

In the NTSP, Education is not intended to replace traffic calming measures when they are needed. Instead, the education toolbox is available to neighborhoods

that do not qualify for traffic calming in the near term and to those neighborhoods that are waiting on traffic calming design and construction.

Over time, the installation of traffic calming measures will reduce the need for Enforcement in those areas. But the savings likely will still be dedicated to Enforcement, which will be needed for the foreseeable future.

Enforcement

More police presence.

The highest volume of traffic appears to be between 7 and 9 am and again after 3pm. KPD is not usually out running radar during these hours when the most traffic volume takes place.

The Chapman and Stone Road intersection has a very high rate of red light runners. Dangerous!! Seems to me that a red-light camera could help enforce existing laws and raise some needed coin as well. The one Knoxville cop usually in this area parks his car at the corner of Magazine and Alleen and tickets people going 5 miles over speed limit (30)...useless waste of taxpayer funds on an early Sunday morning. Get out on Chapman at Stone and raise some money and slow that intersection down. Lower speed zones DO NOT matter if lazy cops do not enforce the established zones within critical zones. Do not just scoop the low-fruit on a lazy back road for a monthly quota. Pitiful.

The Knoxville Police Department is committed to strengthen and protect city neighborhoods by improving the quality of life in residential areas. The desirability of Knoxville neighborhoods as places to live and raise a family is directly affected by local traffic conditions.

While traffic enforcement is a priority for the Police Department, the hours between 7 and 9 am and after 3 pm are peak times for all types of Calls for Service. Many times, call volume dictates the Police Department's ability to dedicate an officer to a particular location for the sole purpose of traffic enforcement. We have dedicated traffic units that specialize in traffic related issues. Many times during those hours the traffic units find themselves responding to "rush hour" crashes and traffic-related problems associated with those times of the day.

We constantly review crash data and citizen complaints to determine where to deploy enforcement efforts. The goal of traffic enforcement is to gain voluntary compliance with traffic laws and change driver behavior, not generate revenue. Unfortunately, most motorists only obey speed limits when officers are present, and therefore we vary our enforcement times to create an environment of omnipresence. If we simply place a police car at a location every day between the hours of 7 and 9 am, people tend to obey the law during that time and disregard laws the other 22 hours of the day. We strive for compliance by combining Education and Enforcement.

Tennessee's speed laws are referred to as "Absolute Speed Laws". This type of law is very straightforward. Absolute speed laws allow statutes and ordinances

to set a numerical speed limit and if that is exceeded, can result in a violation. Therefore if the speed limit is 35 mph and it can be proven the motorist was traveling at 36 mph, a violation has occurred. It is rare that officers issue speeding citations unless speed limits are blatantly exceeded, but that possibility does exist. Most times the officer will seek out the reason the motorist is exceeding the speed limit (emergency, mechanical problem, etc.....) and make a determination on whether or not to issue a citation based on a number of factors. In addition to the reason for the violation, the officer also takes into account the location. A motorist exceeding the speed limit by 5 mph on I-40 may not create an overtly unsafe environment, whereas a motorist exceeding the speed limit by 5 mph in a residential neighborhood while children are playing certainly creates an unsafe environment.

Red Light Camera or Automated Enforcement is another tool KPD uses to alter bad driver behavior. We have found this tool to be a safe and effective way to reduce the number of crashes, thus reducing injury and costs associated with crashes at intersections. The Police Department and Traffic Engineering recently completed a study of this intersection. A new turn lane is now in the planning stages, and a red light camera may be installed.

New Development

New development coming in will increase traffic volume. A portion of the money developers give to cities should be set aside to pay for sidewalks.

Incremental traffic impacts of new development are not addressed in any direct and consistent manner currently. The threshold for requiring a traffic impact analysis is the estimated traffic generated by a new development or redevelopment. Currently the threshold for a development is 750 daily trips, with the trip generation evaluated using the most recent version of the Trip Generation Manual. If the development does not meet the threshold for submittal of a traffic impact analysis, the traffic impact is not addressed in any detail.

There is a statement on the MPC staff report for all new developments (that we review) stating the traffic estimated to be generated by the development, but this does not involve requirements for transportation system improvements. This can mean that 2 or 3 developments, each of which fall below the threshold for a traffic impact analysis, can locate in an area where traffic for the developments use the same roads but the impacts of the total traffic is not required to be addressed by the developers. The same occurs with incremental traffic increases that occur over time as new development takes place. These incremental impacts are expected to be addressed by the City's transportation system improvements, which are funded by the tax revenue generated by the new development.

Transportation system improvements required as a result of recommendations of traffic impact analyses prepared for new developments do not address requirements for pedestrian facilities (sidewalks). The sidewalks are sometimes a part of the overall transportation improvement, with road enhancements being the major component, and are not required as a stand-alone improvement as a

result of the traffic impact analysis. Recommendations for construction of sidewalks can be, and often are, made by MPC and/or Knoxville Department of Engineering staff.

Neither incremental traffic impacts nor sidewalks are being addressed in the updated subdivision regulations. The traffic impact analysis standards are set by MPC staff and the Department of Engineering in the subdivision regulations. It is anticipated that the draft subdivision regulations, now under review, will require that new subdivisions in the City of Knoxville comply with City sidewalk standards. A staff committee and a subcommittee of MPC Commissioners are developing a recommended sidewalk policy that may establish requirements for sidewalk construction if adopted by the Knoxville City Council. [See the draft walkability ordinance.](#)

Local Streets, Collectors and Arterials

I am concerned that Alta Vista Way is not included in the Knoxville-Knox County Major Road Plan of 2011. Has the weighting of factors already occurred? I see that Arrowhead Trail is included in the Plan and I seriously doubt that Arrowhead has more problems than Alta Vista Way.

If a street is not listed in MPC's [Major Road Plan](#), it is a local street. Alta Vista Way is not listed, so it is a local street. Arrowhead Trail is listed, because MPC classifies the street as a minor collector.

Is there an appeal process for street classification?

The Metropolitan Planning Commission determines street classifications based on several criteria. However, none of these criteria involve traffic calming. There is no process for appealing a street classification.

How was the local street determination made?

The City's decision to focus on local streets was made for several reasons, with concerns about emergency response time being a significant factor. However, the program has now been amended to also include minor collectors that are located within residential neighborhoods. See Program Guide, Appendix F, Frequently Asked Questions, Question #1.

I think some thruways will not qualify for calming because they are on emergency vehicle routes; however these same roads are the only ones with sidewalks so there are more walkers, more cars, and more speeding cars!

Sidewalks are not confined to emergency vehicle routes. Sidewalks located on higher-volume, higher-speed roads such as arterials provide a safe haven for pedestrians.

There needs to be an appeal process for minor collectors that are residential.

There were numerous comments in this vein. After careful review, the City has decided to review requests to include minor collectors that are located within residential neighborhoods. This determination will be made on a case by case basis by the Engineering, Fire and Police departments.

What is our recourse if the NTSP is limited to local streets and we have speeding problems on arterials and connectors?

Concerns about speeding problems on major collectors and both minor and major arterials should be directed to Jeff Branham, Director of Traffic Engineering, 3131 Morris Avenue, Knoxville, TN 37909, or jbranham@knoxvilletn.gov.

Neighborhoods with Existing Traffic Calming

Thank you for developing the program and soliciting feedback. I serve as the president of the Historic Fourth + Gill Neighborhood Organization, and our board asked that I convey our thoughts regarding the provision that would restrict an application from our neighborhood until year three of the program. We all agree that neighborhoods that do not yet have traffic calming devices should be served before ones that do. However, even though our neighborhood has recently received traffic calming treatments, we still experience problems with speeding and visibility at certain intersections. We would like for program developers to consider creating a way for the handful of neighborhoods in the same category as ours to benefit from the NTSP. But for the year three application restriction, Fourth + Gill could be eligible to receive city support for the education and enforcement prongs of the program. While it may be possible for a neighborhood to develop its own safety campaign and to use the toolbox created by the Office of Neighborhoods, an educational program developed specifically for our neighborhood, in conjunction with and partially funded by the NTSP, would prove more valuable than a self-developed initiative. Giving Fourth + Gill and other similarly-situated neighborhoods the opportunity to qualify for advanced level safety educational programs and enforcement measures, while stopping short of implementing any engineering projects, would inherently limit the amount of necessary funds and would allow engineering resources to be used in other communities. On behalf of the Historic Fourth + Gill Neighborhood Organization Board of Directors, I respectfully ask that you consider creating a limited program - if not this year, one that would begin in year two - in which a small portion of NTSP funds could be allocated to education and enforcement initiatives only.

As noted in the Program Guide, KPD's speed enforcement program will continue to operate as a stand-alone program. KPD can evaluate your situation to determine whether one or more streets should be included in the rotation program. Contact the Knoxville Police Department's Traffic Services Coordinator (865-215-7000) or the City of Knoxville 311 with traffic complaints or suggestions.

Most of the Education Toolbox will be available online to any neighborhood that wishes to download the program.

Parking

Schools, parks, and recreation centers should provide adequate parking so there is no/decreased parking on neighborhood streets. Nearby streets to these and other structures that have high flow traffic should have posted "No Parking" on one side of the street if street is less than 30 feet wide and "No Parking" signs on both sides if less than 20-25 feet wide. The signs should not have to be requested because many citizens do not know this code.

The City of Knoxville Code specifies that each street should have 10 feet for emergency vehicle passage on unstriped streets and that lanes should not be blocked (meaning there should also be 10 feet between the vehicle and any centerline on the roadway. For an unstriped roadway and a vehicle width of 8' that width works out to 26'. No parking signs are important in these situations to let citizens and KPD know the regulations. Please let us know the specific locations so we can investigate.

Good start, I like it. Enforcement has made a huge difference in my neighborhood, especially on Edgewood. The thing that helped most on Orlando is increased on-street parking, narrowing the road. More enforcement of the front yard parking ordinance could be a strategy?

Speed should not be the only factor for traffic calming. In my neighborhood, due to lot sizes and topology, there is not sufficient off street parking. This means that most streets have parked cars on both sides, and there is only one passable lane in the middle of the street. There is a 25 mph speed limit but even that can be too fast when there's a car coming head on. Also, drivers that ignore stop signs are as much a danger as speeders.

The above two comments illustrate completely opposite views of the impact of on-street parking on slowing down traffic. On-street parking does narrow the road, visually constricting the street. This can be deployed as an effective traffic calming strategy. On the other hand, the narrower passage may become more problematic if some drivers insist on speeding despite the restricted roadway. There is no "one size fits all" approach to traffic calming. Each situation must be examined on its merits. If the solutions don't work, or have negative consequences, Traffic Engineering will be there to work with the Neighborhood to find an alternative response.

Pedestrians

The problem with speeding is not confined to cars and drivers being unsafe. It translates to the pedestrians that are walking, families that are crossing and cyclists that must choose between using pedestrian sidewalks or taking their chances in the road. I hope the city will consider these observations from a resident when making decisions for traffic calming in Edgewood Park.

The safety of bicyclists and pedestrians is a primary concern of the NTSP.

Point System

The city asked for feedback on factors that should be used, in addition to speeding and volume, to determine if a Neighborhood should qualify for Engineering. We also asked for suggestions on how these factors should be weighted relative to one another, i.e. how many points each should receive in a Point Criteria Chart. We received a very wide range of opinion on these questions:

- Not just nearby school but nearby route to a school
- Old Neighborhoods should get at end of line (bad original development).
- Injury or death data not very useful when people will not walk or bike on a road they perceive as unsafe due to speed and volume of traffic. No one wants to be that statistic.
- Layout of Streets
- Traffic Signal Avoidance
- Cut Through Potential
- If a neighborhood is subject to a high volume of cut-through speeders, how can this be factored into the point system?
- Prevalence of children playing outside could/should be another measurable factor; also, consider Bicycle Routes that aren't designated as "official"-- a lot of commuters to downtown use Luttrell Street as a connector.
- Neighborhood Connectors
- The conditions in each location. 40mph in a 25mph zone is common, but produces few injury accidents with other vehicles. It is the pedestrians, pets and children, bicyclists and people mowing their lawns who are forced to leap for their lives.
- Compare out cut-thru neighborhood to others in the city.
- Ability of street to handle larger, modern vehicles.
- Proximity to a meth house or other dealer? Speeding is often a consequence of perceived risk.
- None of these are issues of concern, only speeding.
- Volume and speed counts may depend heavily on which SECTION of the street is measured. "Points for traffic counts are valid, however on our street the volume tends to be incredibly excessive at the main intersection with Nadine St, as people use this as an excuse to drag-race and speed up excessively in a short distance."
- In terms of pedestrian generators – I would argue that the distance to schools should be increased to at least 2500 ft – even possibly 2500ft (nearly half a mile), as I know that for High School especially there are many kids who walk at least this amount to get to school.
- Noise
- Lack of parks and playgrounds ought to be **more** points. Number of children should be more points. Nowhere for children to play except in the streets.
- Street width -- Narrow streets, large SUVs/trucks going into yards/ditches to allow room for oncoming vehicles.
- Limited Visibility: Another factor to consider is high rate of speed. Additionally, restricted visibility at intersections poses a problem in Fourth + Gill. While limited visibility should be a factor, it may be difficult to develop a way to measure whether there a driver is hindered by restricted visibility at an intersection.
- Number of pedestrians (i.e. active walkers) using neighborhood streets.

- School Bus Routes
- Number of children in the neighborhood.
- Crosswalks
- Availability/presence of alternative, safer routes for pedestrian and bicycle traffic, not just official bike routes.
- Slope of the grade or pitch of a hill causes inadvertent speed.
- Blind drives and turns (limited or obstructed view).
- Width of lanes may give false sense of security, pull-off lanes or median for turns.
- Blind Spots (e.g. hill connect Cypress to McNabb).
- Wooden Fences close to street at corners.
- Percent of speeders out of elevated traffic volume.
- Volume of traffic: Give some examples. What is a typical volume of traffic on a local street, e.g. 400 cars per day? What is the threshold? Or just a point system?
- How do you determine when the volume of traffic is excessive on a street?
- Another consideration is older neighborhoods where residents must park on the streets. Parents of young children are trying to load children in car seats while traffic whizzes by at high speed.
- Adding historic district streets to traffic calming also makes sense in terms of historic preservation and blight reduction. High volume of traffic can damage historic buildings through vibration.
- Crawford, Sanders, Adair, they don't qualify for much on the criteria list but there is a big traffic problem.
- Priority should be given to people in wheelchairs.
- Be open to assessing each neighborhood. Things should be done on a case by case basis and not a point system because every neighborhood is set up differently. Be open to assessing each neighborhood.
- Rather than develop arbitrary criteria etc, let the engineers do their job and apply their well-developed engineering training and judgment to develop appropriate solutions where they have the biggest impact. Who chooses the weights/points for such arbitrary systems? Transportation systems are very complex, let the professionals handle it and leave the public to raising known issues.

Originally the City proposed adding points for a relatively few number of conditions (e.g. lack of sidewalks and proximity to pedestrian generators such as parks). But the feedback suggests that if these few factors are to be scored, so should quite a few other environmental factors. Also, it was argued that the proximity of a nearby park (pedestrian generator) should not necessarily score more heavily than the absence of a nearby park and the corresponding lack of a playground except in or near the street. Finally, some citizens argued that each neighborhood should be evaluated on its own merits, or that the only factor should be speed.

This feedback has helped us to realize that major changes were needed in the original program design. Accordingly, we have revised the program so that the decision on whether a particular street or neighborhood should get traffic calming devices now focuses primarily on speed and, to some extent, volume of traffic

and accident history. Other factors will be considered by the Engineering and Police Departments, but the point criteria chart has been dropped.

Neighborhoods can still make note of important local conditions, and the Engineering and Police departments will still take these extra factors into account when deciding which potential projects should move on to the Concept Plan stage and ultimately to Final Design. But the primary factor will be speed.

Process: Application

I am concerned that 3 signatures on an Application may be too high.

The City will depend on residents to communicate with one another during various phases of the program; getting those signatures is the first step in a broad-based communication effort by the applicant neighborhood. However, if even this first step becomes an obstacle, the Office of Neighborhoods is available to discuss the situation.

Process: Petition

There's a large number of rental houses in OLP, and the tenants often do not have vested interest in improving the neighborhood. I suspect that this will make it hard to reach the 50% of households threshold to advance a petition. This also puts OLP (and other similar neighborhoods) to a significant disadvantage compared to neighborhoods with a majority of owner-occupied houses. I think it would be more fair to set the required signature threshold to be in proportion to owner-occupied houses in the neighborhood.

Most renters are just as likely to be concerned about speeding as homeowners, and in any case it would be extremely difficult to determine the number of owner-occupied homes in a neighborhood. Remember that the petition is to be presented to residents only on the streets or sections of streets where the speeding is occurring, not the entire neighborhood. We will maintain the 50% threshold requirement for now.

Process: Petition Impact Area

Who defines the Neighborhood --- the residents or the City?

Neighborhood residents — through their neighborhood organization — define the boundaries of their neighborhoods. The Office of Neighborhoods occasionally helps neighborhood groups settle boundary overlaps. A neighborhood group is recognized by the City if it is resident-controlled and resident led, operates democratically, and registers with the Office of Neighborhoods.

Under the NTSP, a neighborhood organization or, if there is no neighborhood organization, a group of three or more individual households may initiate the process for a traffic safety study [Program Guide, Page 6].

The Neighborhood defines the streets and street segments where the speeding is occurring — both for the Application and for the purposes of the Petition [Program Guide, Page 7]. Prior to circulating the Petition, the Neighborhood, after

consulting with the City, may wish to revise the impact area, but this is the Neighborhood's decision.

The Neighborhood should have the major role in defining the geographic area, given that the neighborhood is most familiar with the area, and patterns of movement (vehicular and pedestrian) within the area.

The impact area is defined by the Neighborhood and consists of streets and street segments where the speeding is occurring. The petition effort needs to be aimed only at the households in the impact area.

Rather than start the process with a "Kick-Off Meeting," it is recommended that the process instead start with a review by each Neighborhood of the Program Guide, Flow Chart (as it may be amended), AND the available data on traffic volumes, speed, street geometrics, number of driveway cuts, intersecting streets, etc.).

The NTSP process is designed to verify, first, whether speeding is occurring to a significant degree. This finding, in turn, determines whether further study is warranted. The further study, including such things as "street geometrics," requires much more staff time. It would be a misuse of limited staff time to research and provide the suggested information only to later determine that speeding is not serious enough to warrant traffic calming measures.

Process: Flow Chart

Transparency is welcome but lengthy process may be over cautious and too reactive in design... Sometimes governments must take steps ahead of public opinion or inertia to improve the community.

As noted on Page 1 of the Program Guide, "experience in other cities has shown that traffic safety initiatives that are implemented without involving the neighborhood are frequently unsuccessful, and therefore citizen participation is a key component of this program." Also, see the responses in the "Decision Making" section above.

I appreciate the logical and detailed steps in the process described but it seems rather lengthy, which could delay needed change and intimidate advocates. It seems some steps could be combined: C through D, for example; E & B.

Step C (*Alternate Solutions*) and the first Decision Box (*Further Study Indicated?*) were included only because it is possible that, in rare instances, a Neighborhood may present problems that can be solved outside of the NTSP. In the final draft of the Program Guide, these steps have been eliminated, and other steps have been simplified.

Also how much of this can be done via email / online, in the effort to reduce meetings? Factual output (e.g. results of H) could be posted and an online survey / poll could be opened to see if there is enough dissent to prevent the action / recommendation of the committee. If so THEN a meeting...? I do realize that eliminates one Neighborhood

Engagement step, and that would favor participation by folks with internet access... so maybe not this exact example... but by the same token, this very survey is an internet platform... so it MUST be acceptable..? But reduction of the steps even by a little would reduce the appearance / specter of bureaucracy a bit, and activate more engagement.

Some steps may be eliminated depending on neighborhood preferences and/or the outcome of City research.

We realize the process seems cumbersome. Indeed, there could be four or more meetings between the City and the Neighborhood. But the City believes in the value of bringing neighbors together with City staff. Neighbors may learn from one another and think of new facts or solutions. They will be able to ask questions. City staff will learn from neighbors.

Flow Chart is “bureaucracy at its finest.” Is there just one point person, or will things fall through the cracks?

The Office of Neighborhoods will receive the Applications, determine the degree to which the Applicants need support, and then forward the Applications to Steve King, the Deputy Director of Engineering, who has charge of the program. He is the point person.

As noted elsewhere, the process of assessing streets for traffic calming devices has been greatly simplified, and therefore the Flow Chart is no longer deemed necessary. It has been dropped from the final draft of the Program Guide.

Why does the process take 18 months?

Our estimate – and it is just an estimate – is that it will take 12-18 months from the initial Application to the completion of construction of traffic calming measures. The actual length of time depends on a variety of factors, including the number of applications in the queue, limitations on staff time and budget, and construction schedules. Please note that the City was not able to add any new staff members for this program. For more, see the answer to Question 4 in the Program Guide, Appendix F, Frequently Asked Questions.

Process – Inactive & Less Affluent Neighborhoods

The reactive approach also favors more affluent communities; those with more active neighborhood organizations (and likely more affluent populations who can devote time and resources to such organizations) are more likely to pursue this lengthy process, to gain headway, and to earn the City's attention and resources, which further increases differences and inequalities in neighborhood safety and livability.

This is a valid concern, and the City is sensitive to it. First, we encourage and provide for involvement in the NTSP even if there is no organized neighborhood. The Office of Neighborhoods (OON) is available to assist individuals in unorganized neighborhoods who wish to pursue a traffic safety study. Moreover, the OON is available to advise less active neighborhood groups on how to get organized to take full advantage of the NTSP.

Ranking

What can a neighborhood do to expedite the program, such as paying for devices?

The best way for a neighborhood to expedite the program is to apply for the Neighborhood Traffic Safety Study, involve neighbors early and often, respond in timely manner to City requests for meetings and information, and call on the Office of Neighborhoods if help is needed. Once a Concept Plan has been developed for a Neighborhood, the decision on whether to advance the project to the Detailed Design phase will depend on a variety of factors. One of these may be “the degree to which the project is partially or wholly funded by the applicant Neighborhood, thereby freeing up funds for other projects funded totally by the City.” (See Program Guide, Page 10.)

Neighborhoods who cannot pay for traffic calming should be treated equally with neighborhoods that can pay.

Availability of funds — including a guarantee by an applicant Neighborhood that it will pay a specified portion of the traffic calming bill — will be one factor in determining how many projects, and which projects, advance to the design stage. Use of private funds would free up public monies for other projects that are waiting in line. In no case, however, will a neighborhood’s ability to help defray expenses trump pressing safety issues in a neighborhood that cannot raise funding.

Sidewalks

Sidewalks are the best solution for pedestrian safety, especially for children walking to and from schools --- more expensive (than traffic calming) but a better long-term investment.

We would agree, but the NTSP will provide an alternative to sidewalks, particularly on streets that are scoring low for sidewalks. Installation of traffic calming on a street will not diminish that street’s scoring for a sidewalk.

Sidewalk on Maynard Avenue is in complete disrepair that extends only part of the street and only one side of the street.

Sidewalks that are in disrepair should be reported to 311.

Sidewalk Alternatives: Traffic issues on most heavily traveled streets in our neighborhood (non-local streets cited) will probably not be helped by speed humps... Sidewalks are just too expensive to be feasible. Could we not think about greenway-type paths (but narrower so they fit in with easements) to at least give some protection?

The city funds at least \$1 million per year for construction of new sidewalks and maintenance of existing sidewalks. Sidewalks are funded at least \$1 million a year for construction and maintenance. They can cost millions for a mile or so stretch. We have hundreds of requests for sidewalks and rank them based on schools, pedestrian activity, etc.

The Engineering Department has studied whether pedestrian paths could be a less costly alternative to sidewalks. However, most of the costs to install a pedestrian path along the road (grading, retaining walls, drainage, and right-of-way acquisition) are independent of the material of the walking path. There is a small increase in the cost if we specify concrete over asphalt, but the durability of concrete makes it a better choice when we consider long term costs.

Cooperating neighbors could connect their properties with their own pathway, but some might need a grading permit to make sure there is compliance with stormwater regulations and to address any intrusion into the City's right-of-way.

It is time to take another look at our process with sidewalks. Do sidewalks slow down speeders in neighborhoods?

Sidewalks separate pedestrians from vehicular traffic. We know of no evidence that sidewalks either increase or decrease vehicular speeding. Clearly pedestrians are safer with sidewalks, regardless of whether vehicles are speeding.

How do we get sidewalks higher on the priority list? Is there an opportunity to help expedite the process by funding some of it? What can we do to push our priorities?

Because of the great need for sidewalks in all parts of the city and our limited resources, we must prioritize requests.

We score proposed sidewalks according to their proximity to schools, whether they link existing sidewalk segments, the amount of pedestrian usage, the road classification and amount of traffic, and whether they are on a KAT bus route. The highest-scoring sidewalk proposals are close to two or more schools, are relatively short missing links, have generators of pedestrian traffic nearby, are on busy roads (collectors or arterials), and are on KAT routes.

In the next few months, the City will begin a more strategic and complete process of evaluating sidewalk connections and network. The process will provide a basis for future funding requests.

Speed Calculations

Guide not very helpful. Define speeding - is it always >9 MPH over the posted speed limit? That means 35mph in a 25mph zone before citation. 35mph is too fast - would kill at least 50% of pedestrians. Also, there are other standards for speed limit besides the 85% standard. Consider the context of the road and the safety of users besides cars.

As noted on Pages 6-7 of this document: Tennessee's speed laws are referred to as "Absolute Speed Laws". This type of law is very straightforward. Absolute speed laws allow statutes and ordinances to set a numerical speed limit and if that is exceeded, can result in a violation. Therefore if the speed limit is 35 mph and it can be proven the motorist was traveling at 36 mph, a violation has occurred. It is rare that officers issue speeding citations unless speed limits are

blatantly exceeded, but that possibility does exist. Most times the officer will seek out the reason the motorists is exceeding the speed limit (emergency, mechanical problem, etc.....) and make a determination on whether or not to issue a citation based on a number of factors. In addition to the reason for the violation, the officer also takes into account the location. A motorist exceeding the speed limit by 5 mph on I-40 may not create an overtly unsafe environment, whereas a motorist exceeding the speed limit by 5 mph in a residential neighborhood while children are playing certainly creates an unsafe environment.

Speed Humps

Several comments supported traffic calming devices and speed humps, and others said they do not like speed humps. These comments can be found throughout the full set of comments located on the [Neighborhood Traffic Safety Program Website](#).

Suggest including speed humps in annual resurfacing program.

Depending on the number of projects, project complexity and timing, some speed humps may be suitable for inclusion in the annual resurfacing program.

Making speed bumps will just force drivers to use other roads to avoid them. So instead of having one mainly used road after the "improvement" you will have two or three which puts more children at risk of getting hurt by someone who doesn't know the neighborhood roads and doesn't pay attention.

It is certainly possible to stop speeding on one street but shift the problem to a parallel street or to a different part of the neighborhood. The NTSP will not install speed humps or other traffic calming measures without examining the impact on neighboring streets. Post construction, the City will also monitor the impact of traffic calming measures and address any unintended negative consequences.

I am concerned that Speed humps will end up being placed in areas with most vocal neighbors, and won't solve overall issue. Dangerous drivers will just speed from one set to the next....

The City will approach traffic calming on a comprehensive basis, even if the Application originated with "the most vocal" residents. Also, if speed humps are needed to reduce excessive speeding, the concept plan will address the spacing between the humps.

We had some much-needed repaving done on our road recently. That would have been an excellent time to survey us on any needed Traffic Calming measures but to my knowledge that didn't happen (or at least it was not communicated to the individual residences). At any rate, the one speed hump that was replaced on Woodburn Drive does not seem as aggressive as the one prior to repaving and frankly, there is probably a need for two speed humps as has been done on Westwood Drive. As a parent, I have real concern for my children to cross the street on Woodburn or even ride bikes on it because of the speed that cars routinely reach on it. There is an occasional police presence in our neighborhood but I

think only the structural changes of making the current hump more aggressive and adding a second one will make the road a more safe and neighborhood friendly road.

If, at any time, there has been a material change to a traffic calming device installed by the City, residents should inform the Traffic Engineering Division of this fact so that appropriate remediation can occur. As for adding a second hump, Woodburn is located in the Westwood neighborhood, which is one of the neighborhoods that has benefitted from traffic calming in the past and therefore cannot apply for traffic calming until the third full year of the NTSP.

Another concern that I have are "speed bumps." These are especially harmful to people with orthopedic problems. My daughter has had two neck surgeries to have vertebra in her neck fused, and my wife has had a complete reverse shoulder replacement. Even when I come to a complete stop for these "speed bumps" it is very painful to them when we must run over these bumps. I would suggest that you speak to some orthopedic doctors and therapists to ask how these bumps affect their patients. If you feel that you must do something, I would suggest that you install rumble strips instead of these bumps. This would save a lot of pain and money.

The NTSP calls for installing speed humps, which are rounded and have less impact on passengers if the vehicle goes over the hump at a crawl. Speed bumps, which are encountered frequently in parking lots, are not as easy to transit.

Even so, some passengers may experience pain with speed humps, especially if the vehicle in which they are riding has worn-out shock absorbers. Any effective solution to excessive speeding comes with trade-offs. The City will solicit public comment, evaluate neighbors' concerns, and weigh these trade-offs before deciding whether to install speed humps.

For the sake of the passengers suffering from neck and spinal injuries, drivers may wish to come to a halt before easing over the hump.

Rumble strips are designed to get a driver's attention as he or she enters a neighborhood or approaches a stop sign. They can be used for that purpose in this program, but they cannot slow traffic in the same way as speed humps and other traffic calming tools.

Speed Limit

People are not aware of default speed limit of 30 mph. Residential speed limit should be reduced to 25 mph citywide.

The City installs residential 25 mph signs in all neighborhoods that make the request. We have been working on this for several years. There should not be a lot left that do not have this already, although the new program will help identify any remaining opportunities to lower the limit to 25mph in residential zones.

Stop Sign Enforcement

I am concerned that your plan does not address stop signs – we don't need one, we just need the existing one enforced. City does not seem to consider the stop sign running very important...

My neighborhood (West Hills) put in MANY 4-way stop signs to calm traffic years ago. Every day I witness numerous people running the stop signs. Some are cutting through our neighborhood and, sadly, a lot are our own neighbors. The stop signs do not calm the traffic. I only notice vehicles respecting the signs right after police have set up to write several tickets in the days before. After about a week it's back to normal. It's not feasible to have officers at every stop sign every day. Something else needs to be done. There are "red light cameras" on Kingston Pike near our neighborhood. Why not put in "stop sign cameras" if we have to keep the stop signs? A camera would make sure all vehicles are stopping correctly, slow traffic and make the roads safer.

Stop signs provide for the safe, sustainable and efficient movement of people and vehicles. Safety is the primary factor of consideration in stop sign placement. Generally, stop signs are placed to prevent crashes where there might be a question about who should have the right of way.

Typically we see that drivers comply with stop signs or they may seek new routes to avoid stop signs. Most people automatically assume stop signs will reduce traffic or speed in a neighborhood. Many times this is not the case. Traffic studies have revealed that many drivers tend to accelerate and increase their speed between signs or intersections to compensate for the time they lost by stopping at the stop sign.

Stop Sign enforcement is something we struggle with regularly. Other than placing an officer at an intersection, we do not have any other options. We currently do not have legal authority (legislation) or technology that allows for Camera Enforcement at these locations.

We can review problem intersections with Traffic Engineering to ensure the intersections are clearly marked and stop lines are painted. Those factors often increase compliance at stop sign intersections.

Stop Signs

I care greatly for my neighbors and pedestrians walking on the streets, as I often do so myself. That said, I am not in favor of speed humps or additional stop signs in our neighborhood. Cars often run stop signs in Sequoyah Hills now, and that is one of the most dangerous conditions. More stop signs will only make it worse.

Stop signs are not designed to control speed and are not part of the NTSP. See full explanation in the Program Guide, Appendix F, Frequently Asked Questions.

Traffic Calming Devices

Which traffic calming devices will be used for which neighborhoods?

If a neighborhood qualifies for traffic calming measures, Traffic Engineering may recommend one or more measures listed in the Traffic Calming Toolbox (Program Guide, Appendix C). Each situation will be evaluated for the most appropriate and most effective traffic calming measure(s).

How will you determine which type of device?

Each traffic calming measure has pros and cons depending on the location and the desired result. Traffic Engineering will work to fit the right measures to each individual situation.

Does the city have any other programs for traffic calming? Overhaul of traffic signals. Create street criteria. Complete streets.

The City incorporates complete streets and traffic calming in larger redevelopment and street scape projects, where appropriate. The computerized traffic signal system is currently undergoing an overhaul.

Traffic Circles

Most of the small "traffic circles" that have been installed are nothing more than traffic hazards that motorists must dodge to get thru the intersections. A lot of emergency and maintenance vehicles have a hard time getting thru these intersections, and some have actually run over these small circles.

We have worked with the Fire Department on the design of these circles, but some of the ones in Old North Knoxville were installed early, and we were only beginning to get experience there. We are working to inspect all existing circles and hope to have them improved soon.

Traffic Circles vs. Roundabouts

The program is planning to use 'traffic circles' – we hope that will be changed to 'roundabouts'. We direct your attention to the article and website below

<http://www.heraldtribune.com/article/20090621/COLUMNIST/906211023>

Our neighborhood screams out for a roundabout at the Beverly Tazewell pike intersection. Likewise, Jacksboro Tazewell pike intersection would hugely benefit from a roundabout system, particularly at the peak hours. Yet only traffic circles are to be considered.

First, Beverly Road and Jacksboro Pike are major collectors. The portion of Tazewell Pike within city limits is classified as a minor arterial. As noted in the Program Guide, the NTSP is focused on local streets and neighborhood minor collectors. The requested projects are outside of the scope of the NTSP.

Regarding traffic circles: The NTSP includes traffic circles in its toolbox. However, these are neighborhood traffic circles as defined by the Institute for Traffic Engineers (ITE). See the description at <http://www.ite.org/traffic/circle.asp>.

These are designed for the intersection of local, neighborhood streets, not large volume streets such as Tazewell Pike. However, terminology can be confusing, so the Program Guide has been revised to indicate that we are talking about neighborhood traffic circles.

The traffic circles described in the Herald Tribune article are no longer favored by traffic engineers. These old-style “rotaries” are very large, like the ones at Columbus Circle in New York and at the Arc de Triomphe in Paris, with islands that are up to 600 feet wide. As noted in [this ITE information brochure](#), these “older-style rotaries enabled high-speed merging and weaving of vehicles that led to a high crash experience.”

Roundabouts typically are larger than neighborhood traffic circles and smaller than the old-style rotaries. As per ITE, “roundabouts feature yield control for all entering traffic, channelized approaches and appropriate geometric curvature to ensure that travel speeds on the circulatory roadway are typically less than 30 mph.”

Roundabouts can differ in size, but as the Federal Highway Administration notes in [“Roundabouts: An Information Guide”](#):

Designing the geometry of a roundabout involves choosing between trade-offs of safety and capacity. Roundabouts operate most safely when their geometry forces traffic to enter and circulate at slow speeds. Horizontal curvature and narrow pavement widths are used to produce this reduced-speed environment. Conversely, the capacity of roundabouts is negatively affected by these low-speed design elements

A roundabout might be appropriate for the Tazewell Pike intersections with Beverly Road and Jacksboro Pike, but this would require the acquisition of additional right-of-way. Also, Tazewell Pike is a state highway, and any changes to that road require TDOT involvement and approval. It is suggested that the affected neighborhoods and businesses come together to submit a formal request to TDOT and the City Traffic Engineering Division to consider a roundabout at one or both of these locations. Start by contacting TDOT at TDOT.comments@tn.gov or 1-877-SmartWay.

Traffic Signals

Suggest “better timed red lights with weight sensors that go to flashing yellow at low traffic times especially early mornings and weekends.”

Traffic Lights: Unnecessary waiting for 3 minutes when there are no other cars around. People speed through traffic lights to try and beat them.

Poor traffic light timing on the main arterials (N. Central Street and Broadway) and the lack of traffic lights on Woodland Ave between Central and Broadway drives traffic to our neighborhood streets. For instance, the traffic light at N. Central and Quincy Ave stops traffic to an empty intersection most of the time and it backs up traffic on N. Central. Drivers cut through the neighborhood at high speeds to avoid the traffic lights.

Traffic Engineering is already engaged in a multi-year project to replace our aged traffic systems with newer, data-ready equipment and to tie together the traffic control systems with a high-speed fiber optic communications network. Phase 1 of this Advanced Traffic Management Systems project is now underway. We are installing new equipment at 88 intersections on three major corridors — 17 on Chapman Highway, 26 on Broadway, and 45 on Kingston Pike. This phase will address about 25 percent of the 386 signalized intersections in the city. At least two more phases are planned.

Drivers are urged to call 311 to report problems with particular traffic signals or to request that Traffic Engineering examine a particular intersection for signalization.

Truck Traffic

Is there a way to limit heavy truck traffic?

Tractor trailer trucks must be eliminated from residential streets especially in historic districts. What matters is what is along the street – houses, parks, children, NOT the strength of the pavement. (Dumbest law I ever encountered!)

City streets, including in those in historic neighborhoods, are open public rights-of-way to all traffic. The City needs a specific basis for limiting any particular type of traffic. Pavement strength is a legitimate reason to bar heavy trucks from certain public roadways, and this has been the primary filter for making this determination. However, as a result of this review, the City Law and Engineering Departments have decided that they will study whether other possible parameters can and should be employed to ban certain classes of vehicles from certain streets. No timetable has been established for this review.

Unintended Impacts and Negative Consequences

Program Guide looks very sensible. I'm not sure this needs to be in the Program Guide, but I hope there is some sensitivity to the negative consequences of engineering measures. Cars run over traffic circles destroying plantings, and possibly resulting in an accident with personal injury. If speed bumps contribute to worse accident damage and collateral damage, I'd like community to be made aware of those risks before engineering changes are implemented. I also have concern about damage to neighbors' cars from vibrations due to the impact of speed bumps. Damage is a function of impact speed and frequency of impact. If a neighbor hits the speed bump 700 times per year going the speed limit for the street what is the impact on his car? Will speed limits be reduced such that frequent impact at the speed limit will cause no damage?

There are advantages and disadvantages to physical traffic calming devices, and these are made clear in the FAQ attached to the program guide, and residents will be so advised in neighborhood meetings.

When speed humps are installed on a particular street, the City will post 25 mph speed limits signs as well as warning signs. However, hitting a speed hump over and over at 25 mph may well damage shocks, steering and other systems in your

vehicle. To avoid the possibility of damage, drivers should creep over speed humps. That's the point: to slow traffic.

Traffic calming devices are designed to slow otherwise responsible and sober drivers. Impaired drivers, or those who are willfully engaged in excessive speed, may wreck at traffic calming and traffic control devices, but there is no evidence to suggest that such drivers would not cause personal injury or property damage without such devices.

Warning Signs Painted in the Street

The painting of "bicycle images" on the roadways is so vivid and catches one's attention! I'd like to see "people or silhouette walker images" painted on streets, namely Sheffield Dr and Wesley Rd in our neighborhood where there is heavy volume traffic and also walkers. Perhaps that would get drivers attention that people would be in the street. Also, painted white SLOW on the streets might get some attention. It gets one's attention when interstate signs or numbers are painted on the highway. These are some suggestions that don't involve actual configurations to the street i.e. humps, etc. and would not interfere with the fire trucks in our neighborhood.

Pavement markings such as warnings and speed limits painted on the street can be an effective way to get the attention of drivers. These will be part of the NTSP. See Program Guide, Appendix E, Other Engineering Tools.

August 22, 2017