Action Item #2 Second Reading - (Neighborhood Traffic Calming Policy)

This policy is being introduced to the Council for consideration as a Second Reading for the Town of Westfield and the Public Works Department to use for recommended practices in planning, designing, and constructing neighborhood traffic calming devices for existing streets within the municipal jurisdiction of Westfield.

This policy has come forth due to various requests by the public to conduct traffic studies in subdivisions and to make recommendations on traffic control devices that will aid in the calming effect to reduce speeding. This policy establishes requirements for initiating a study, how the study will be conducted, and what type of recommendations may come forth as part of this study, and installation of such calming control devices.

These appropriate neighborhood traffic control devices should only be installed to address documented safety or traffic concerns supported by traffic investigations. These investigations will include an examination of the full array of potential actions beginning with a discussion with law enforcement officials concerning enforcement of existing controls.

This policy is attached as “Exhibit B”.

Therefore, the Westfield Public Works Department recommends this policy be considered for adoption by the Westfield Town Council.

"EXHIBIT B"

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NEIGHBORHOOD TRAFFIC CALMING POLICY

Town of Westfield

Approved - June xx, 2007

I. PURPOSE OF TRAFFIC CALMING POLICY

The purpose of this document is to set forth the recommended practices in planning, designing and constructing neighborhood traffic calming devices for existing streets in the Town of Westfield. As defined by the subcommittee on Traffic Calming of the Institute of Transportation Engineers in 1997:

> *"Traffic Calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users."*

The primary objective of traffic calming program is to create safer roads and a better quality of life for the neighborhoods that we live in. The strategic objectives for the Town of Westfield are:

- Reduce speeding
- Reduce accidents
- Improve driver behavior, concentration, and awareness
- Improve safety for pedestrians, bicyclists, children and motorists
- Reduce cut-through traffic
- Reduce stop sign running
- Reduce the need for frequent law enforcement

II. IMPLEMENTATION PROCESS

Appropriate neighborhood traffic control devices should only be installed to address documented safety or traffic concerns supported by traffic investigations. These investigations will include an examination of the full array of potential actions beginning with a discussion with law enforcement officials concerning enforcement of existing controls.

The Westfield Public Works Department (WPWD) will use the following process in order to determine the need for traffic calming and implementation for each independent neighborhood request. The Town may also initiate a traffic calming project if a known problem may be best addressed using a traffic calming solution.

STEP 1: Initial request made by petition (to be provided by Town) of at least **ten (10) percent** of the Property Owners/Neighborhood Association in a recorded or platted subdivision. The petition will be turned into the WPWD and assigned a case number.

STEP 2: The WPWD will conduct a traffic investigation. The following shall be considered:

- ✓ Street classification (from Thoroughfare Plan)
- ✓ Traffic volumes (must be a minimum of 650 vehicles per day)
- ✓ Traffic Speeds (85th percentile speeds must be 5 m.p.h. over existing speed limit)
- ✓ Street width and geometry
- ✓ Document observed safety problems
- ✓ Review accident history, if readily available
- ✓ Obtain input from Public Safety representatives (Police and Fire)
- ✓ Consider safety and traffic calming alternatives and costs
- ✓ Make recommendations for action or do nothing
- ✓ Prepare Preliminary Implementation Plan Report

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STEP 3: Meet with the Property Owners/Neighborhood Association and/or conduct mail survey of directly affected area households (to be determined by WPWD). Affected residents include those property owners/residents living on the subject Street, both adjacent parallel streets and each intersecting street for one block.

- If at least **seventy five (75) percent** of households in the directly affected area (or percentage to be determined acceptable by the WPWD) are in favor of action, go to Step 4.
- If less than **seventy five (75) percent** of households in the directly affected area (or percentage to be determined acceptable by the WPWD) are in favor of action, send a written response to petitioners and/or neighborhood association stating no action will be taken at this time. A petition (to be provided by the Town) will be made available to the Property Owners/Neighborhood Association and/or households in the directly affected area for a follow-up survey.
  If at least **seventy five (75) percent** of households in the directly affected area indicate that they are in favor of implementing the proposed action, go to Step 4.
- If not approved, a written notification to Property Owners/Neighborhood Association, and/or directly affected area households stating that no action will be taken at this time. A new petition for traffic calming implementation will not be considered for a period of at least one year from the date the request was denied by the WPWD.

STEP 4: A Traffic Advisory Committee (T.A.C.) that includes the Public Works Director, Engineer and Citizenry should be established to effectively develop the Traffic Calming Plan, and to monitor it's progress.

STEP 5: Notify the Property Owners/Neighborhood Association, households in the directly affected area of the T.A.C. decision.

- Send written notification of the T.A.C. decision to the Property Owners/Neighborhood Association.
- Property owners/neighborhood association must also send letter of endorsement regarding the proposed traffic calming measures.

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STEP 6: Implement safety improvement and/or traffic calming measures. If a permanent improvement/traffic calming measure is installed, go to **Step 9**. If a temporary safety improvement/traffic calming measure is installed initially, it will be monitored for potential future permanent installation.

- Notify households in directly affected area of implementation.
- Order equipment and/or hire contractor.
- Install temporary traffic calming measure.

STEP 7: Observe performance of temporary safety improvement/ traffic calming measures for a period of at least 3 months. Prepare Evaluation Report.

- If not working well, or causing other problems, notify directly affected area households and remove device. Revisit **Step 2**.
- If working well, and not causing other significant problems, go to **Step 8**.

STEP 8: For temporary traffic calming device installations, conduct survey of directly affected area households request vote on permanent installation.

- If at least **seventy five (75) percent** of households in the directly affected area want a permanent installation; remove temporary installation for use at other potential locations. Install permanent device.
- If less than **seventy five (75) percent** of households in the directly affected area want a permanent installation; remove temporary installation for use at other potential locations. Revisit **Step 2** or discontinue project.

STEP 9: Financing of capital improvements involved in traffic calming infrastructure must be secured by the neighborhood, either by property owner or neighborhood association.

STEP 10: If these conditions are met, the traffic calming measure will be submitted to the Town Council for approval.

STEP 11: Monitor performance of permanent safety improvement/ traffic calming device for a period of approximately one additional year.

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- Long term landscaping will be the responsibility of the neighborhood association.
- If not working well, or causing other significant problems, notify directly affected area households and remove device. Revisit **Step 2** or discontinue project.
- If working well, and not causing other significant problems, close case!

III. DEFINITION OF TERMS

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Directly Affected Area

Before any traffic calming devices can be installed, the WPWD will determine the geographic area directly affected by the proposed device. The criteria for selecting the *Directly Affected Area* will be set by the WPWD. Generally, the *Directly Affected Area* will consist of homes and businesses that do not have the option of avoiding the proposed device, or may be significantly affected by proposed changes.

Traffic Advisory Committee

The Traffic Advisory Committee (T.A.C.) consists of standing membership of the Public Works Director and Engineer and Citizenry. The goal of this committee is to review the findings and recommendations of WPWD staff. The T.A.C. shall approve staff recommendations unless the T.A.C. finds a valid reason not to accept the staff recommendation.

Street Classification

Local neighborhood streets only shall be considered for neighborhood traffic calming device applications. The streets under consideration for traffic calming devices should be residential in nature.

Traffic Volumes

Typically, neighborhood traffic calming devices should be installed on streets with less than 2,000 vehicles per day. All local residential streets in Westfield should meet this criteria.

Traffic Speeds

Neighborhood traffic calming devices should generally be installed on streets where the 85th percentile speed is 30 mph or greater or where safety problems exist. Speed measurements using radar or machine tube counters may be obtained.

Stop Sign Running

Stop sign running is a safety concern that may be addressed by increased law enforcement, removal of the stop sign, or removal and replacement of a stop sign with another traffic control/ traffic calming device.

Geometric Data

Neighborhood traffic calming devices should normally be used on streets with no more than two travel lanes. The location of a traffic calming devise should be carefully considered. Generally, straight tangent sections of roads are the best locations for traffic calming devices such as speed humps.

Accident History

Using engineering judgment, it will be determined if the installation of traffic calming devices will result in a situation less safe than the original condition. Three-year accident history, when readily available, may be reviewed to assist in identifying any safety problems.

Public Safety Input

Public Safety agencies (Police and Fire) will be contacted to determine if services for emergency vehicles will be significantly affected by the proposed changes.

Alternative Traffic Calming Measures

Following is a list of alternative measures that should be considered and discussed with the petitioners. A description of these alternatives, which describes the measures, conditions, and circumstances for their use, is located in the next section.

- Thoroughfare Street Improvements/ Improved Signal Progression
- Speed Humps and Raised Intersections
- Pedestrian Crossings and Refuge Islands
- Street and Lane Narrowing using Pavement Markings
- Curb Radius Reduction
- Chicanes
- Traffic Circles/Roundabout
- Added bike lanes
- Rumble Strips

Evaluation Report

An evaluation of project effectiveness will be conducted within one year after implementation. At a minimum, speeds, accidents, and traffic volumes may be reviewed. The findings and recommendations should be documented in writing.

'. DESCRIPTION OF ALTERNATIVE MEASURES

Thoroughfare Street Improvement and Improved Signal Progression

Vehicles may travel through neighborhoods because thoroughfare streets are over capacity, traffic signals are not synchronized or other progression inefficiencies exist. Widening collector or arterial streets to add left turn lanes or additional through lanes or installing or synchronizing a signal system may improve vehicle safety and efficiency, and may reduce cut through traffic in neighborhoods. The WPWD may conduct an investigation to establish potential improvements to the existing system if observed deficiencies exist.

Speed Humps and Raised Intersections

Speed humps and changes in grade at intersections can reduce vehicle speeds on local streets. The speed hump, speed table or raised intersection can be a raised area, constructed to Town Standards, extending transversely across the street from edge of pavement to edge of pavement. For local streets, speed humps typically are constructed with a longitudinal length of 14 feet. If speed tables are determined to be appropriate for neighborhood collector streets, they shall be constructed with a longitudinal length of 22 feet. These longer raised areas may also be considered on local service streets that serve as primary emergency response routes.

Other criteria to be applied prior to installation of speed humps, speed tables and raised intersections include:

Signing/Marking: Speed humps are required to be signed with a combination of signs and pavement markings to warn motorists and bicyclists of their presence.

Traffic Safety and Diversion: Any use of speed humps must take into consideration the impact the installation will have on long-wheel-based vehicles (fire apparatus, ambulances, snow plows and garbage trucks) and the potential to divert traffic to other adjacent streets. Speed humps should only be installed to address documented safety problems or traffic concerns supported by a traffic investigation.

Street Width: Speed humps should be used on streets with no more than two travel lanes.

Street Grade: Speed humps should only be considered on streets with grades of 3% or less approaching the hump.

Drainage: Speed humps should be located where they will not affect the proper drainage of the street.

Street Alignment: Speed humps should not be placed within severe horizontal curves or vertical curves (hills and valleys) that might result in substantial horizontal or vertical forces on a vehicle traversing the hump. Humps should be avoided within horizontal curves of less than 300 feet centerline radius and on vertical curves (hills/dips) with less than the minimum safe stopping sight distance. If possible, humps should be located on straight (tangent) sections of road rather than curve sections.

Sight Distance: Speed humps should generally be installed only where the minimum safe stopping sight distance (as defined in AASHTO's A Policy on Geometric Design of Streets or INDOT's Design Manual) can be provided.

Traffic Speeds: Speed humps should generally be installed only on streets where the posted or prima facie speed limit is 30 mph or less. Speed humps are not generally recommended, but could be considered on streets where the 85th percentile speed is in excess of 40 mph.

Traffic Volumes: Speed humps should typically be installed only on streets with 2,000 vehicles per day or less. If considered for streets with higher volume, their use should receive special evaluation.

Pedestrian Refuge Island

Pedestrian refuge islands in the middle of the street provide a safe haven for pedestrians to cross the street. If placed at an intersection, the island will function as a diverter to restrict through traffic and reduce vehicle speeds. Some parking removal may be required and some residents may be inconvenienced. The median should be aesthetically pleasing.

Street and Lane Narrowing/ Choker

Motorists tend to drive at speeds they consider safe and reasonable and tend to drive more slowly on narrower roads and traffic lanes than wider ones. Reducing road widths by widening boulevards or sidewalks intermittently or introducing medians, striping for parking, shoulders or bike lanes or installation of "Neckdowns" can reduce traffic speeds. Road narrowing has the added advantage of reducing the expanse of road to be crossed by pedestrians, thus reducing pedestrian crossing time.

Other criteria to be applied and considered prior to street narrowing include:

Bicycle Accommodations: On local streets designated as a bike route or serving a significant volume of bicycle traffic, a sufficiently wide bicycle lane should be provided through the narrowed area. Where traffic and/or bicycle volumes are sufficiently low, exclusive bicycle lanes may not be required.

Snow Removal: The pavement width of streets shall not be narrowed to a point where it becomes an impediment to snow removal.

Parking Restrictions: In most cases on local access streets, street narrowing will require the prohibition of parking at all times along the street curb the full length of the narrowed section plus 20 feet. Refer to the Town of Westfield Street Section Standards for parking prohibitions.

Landscaping: Median landscaping can be selected by neighborhood associations from an approved landscaping materials list provided by the Town. Landscaping will be provided and installed by the Town and will be maintained by the neighborhood association or landscape volunteer. If the landscaping is not maintained, the median will be seeded with grass.

Median Width/Lane Width: Travel lanes should not be narrowed to a width less than 10 feet, exclusive of gutter. Bicycle lanes where required shall be four feet wide exclusive of gutter, unless the gutter is poured integral to the bicycle lane, in which case the bicycle lane will be five feet wide. If parking is allowed, the parking and bicycle lane combination shall be a minimum of 13 feet.

Curb Radius Reductions/ Curb Extensions

The reduction of intersection curb radii is intended to slow turning vehicles and reduce pedestrian crossing path. The radius should accommodate a passenger vehicle. Usually a 10 to 20 foot radius will be required. Primary application is for local streets only.

Curb extensions (or bulbouts) are used at intersections to slow turning vehicles, reduce the length of crosswalks, and to slow the speed of through traffic. Added landscaping, which should not obscure necessary intersection sight distance, can also help to slow traffic by calling attention to the existing intersection.

Chicanes

Chicanes are a form of curb extension built at a 45-degree angle that alternate from one side of the street to the other. They will effectively reduce speed and decrease traffic volumes in the neighborhood. Chicanes can result in additional challenges for snow removal activities, especially if they are covered with snow.

Traffic Circles

Traffic circles are circles of varying diameter formed by curbs. Motorists must drive around the circle, or in the case of longer vehicles, drivers may drive slowly onto and over a mountable concrete curb forming the circle. Traffic circles reduce motor vehicle speeds through the intersections, depending on current intersection controls in place. A Design Plan must be prepared based on a field survey and certified engineer's drawing.

Other criteria to be applied and considered prior to installation include:

Design Considerations: For each intersection the size of the circle will vary depending on the circumstances for that specific intersection. In general, the size of the circle will be determined by the geometry of the intersection.

Where intersecting streets differ significantly in width: It may be more appropriate to design an elongated "circle" using half circles with tangent sections between them. Smaller circles will be constructed on a case-by-case basis. Normally the circle will be located as close to the middle of the intersection as practical. Under special circumstances, such as being on a Fire Department response route, bus route or due to snow removal accommodations, the size and/or location of the circle will be adjusted to more appropriately meet these special circumstances.

Design Considerations for "T" Intersections: For "T" type intersections, all of the above design considerations apply. In addition, curb extensions (or curb bulbs) may be included along the top of the "T" at the entrance and exit to the intersection.

Signage: Appropriate signage for traffic circles will be determined by the Public Works Manager and may vary based on the location of the circle.

Channelization: Where curbs do not exist on the corner radii, painted barrier lines, defining the corners, should be installed. Yellow retroreflective lane line markers shall be placed on top of the circle at its outer edge. Refer to the most recent Town of Westfield Standard Detail Sheets.

Parking Removal: Normally, parking will not be prohibited in the vicinity of the circle beyond that which is prohibited by the Town, i.e., "within the intersection" or "within 20 feet of a crosswalk area". However, where special circumstances dictate, such as where the circle is on a response route for the Fire Department or to accommodate snow removal, or in an area where there is an unusually high use by trucks, additional parking may be prohibited as needed.

Sign Removal: At intersections where circles are to be installed, any previous right-of-way controls may be removed at the time of circle construction completion. However, where special circumstances dictate, the existing traffic control may remain in place or be otherwise modified at the direction of the Public Works Director.

Landscaping: Landscaping will be selected by the affected Neighborhood Association from an approved landscaping materials list provided by the Town. Landscaping will be provided and installed by the Town and will be maintained by the Neighborhood Association. If the landscaping is not maintained, the traffic circle will be seeded with grass.

TRAFFIC CALMING MEASURES

NEIGHBORHOOD TRAFFIC MANAGEMENT DEVICES

Devices	Safety	Speed Reduction	Pedestrian, Bicyclists Access	Traffic Diversion	Noise	Exhaust Emissions	Emergency Services	Acceptable for Traffic Management
Police enforcement	Improvement	Depends on Amount	Possible Improvement	No Effect	No Effect	No Effect	No Effect	Yes
Speed Humps	Unknown	Yes	Mixed Results	Possible Improvement	Increase	Increase	Possible Problem	Yes
Education	Possible Improvement	Possible	Possible Improvement	N.A.	N.A.	N.A.	No Effect	Yes
Entrance Treatments	Possible Improvement	Unlikely	Possible Improvement	Mixed Results	No Effect	No Effect	Possible Problem	Yes
Curb extensions	Improve Ped X-ing	Unlikely	Yes	No Effect	No Effect	No Effect	Possible Problem	Yes
Partial Diverters / Diverters / Cul-de-Sac	Possible Improvement	Possible	Possible Improvement	Yes	Possible Reduction	No Effect	Possible Problem	Possible
Chicanes	Possible Improvement	Possible	Possible Improvement	Possible Improvement	No Effect	Small Increase	Possible Problem	Yes
Traffic Circles	Improved	Yes	Possible Improvement	Possible Improvement	No Effect	No Effect	Possible Problem	Yes
One-way Streets	Possible Improvement	No	Mixed Results	Possible Improvement	No Effect	No Effect	Possible Problem	Yes
Median Barrier	Possible Improvement	No	Mixed Results	Possible Improvement	No Effect	No Effect	Possible Problem	Yes
Improve Arterial Streets	Possible Improvement	Unlikely	Possible Improvement	Possible Improvement	Possible Improvement	Possible Decrease	No Effect	Limited
Traffic Control Devices: e.g. Prohibitory Signing	Possible Improvement	Unlikely	Possible Improvement	Yes	Yes	No Effect	No Effect	Possible

V. REFERENCES

1. Indianapolis Department of Public Works, *Neighborhood Traffic Calming – Recommended Practices*, 1999.

2. Town of Avon, Indiana, Neighborhood Traffic Calming Program, http://www.city.bloomington.in.us/engineering/traffic/ntsp2.html

3. Institute of Transportation Engineers, *Traffic Calming for Communities,* http://www.ite.org

4. Institute of Transportation Engineers, *Traffic Calming, State of the Practice,* prepared by Reid Ewing, August, 1999.

5. City of Seattle, Washington, Neighborhood Traffic Calming Program, http://www.ci.seattle.wa.us./transportation/ntcphome.htm

6. City of Portland, Oregon, Traffic Calming Programs, http://www.trans.ci.pportland.or.us/trafficcalming/xxxx.htm

7. ITE Journal, *Traffic Calming Design Standards for New Residential Streets: A Proactive Approach,* prepared by Joseph E. Womble and W. Martin Bretherton, Jr., March 2003.

8. City of Madison, Wisconsin, Neighborhood Traffic Management Program http://www.ci.madison.wi.us/trafficEngineering/documents/Manual/RPT_2%20version%209_112205.pdf