City of Birmingham
A Walkable Community

MEMORANDUM

DATE: May 21, 2015

TO: Joseph Valentine, City Manager

FROM: Mark Clemence, Deputy Chief of Police
Jana Ecker, Planning Director
Paul O'Meara, City Engineer

SUBJECT: W. Maple Rd. Resurfacing Project
Cranbrook Rd. to Southfield Rd.
Multi-Modal Transportation Board Recommendations

Due to its poor condition, the above 1.2 mile segment of major street had been scheduled for resurfacing for the current 2015 construction season. However, early last year, through participation with the Oakland Co. Federal Aid Committee, an 80% federal grant was secured to assist the City with the cost of this project. The construction cost is currently estimated at $1,320,000, of which $1,020,000 will be funded by a grant. The City will contribute $300,000 to the construction cost, as well as all engineering costs.

Funding for the project will not be available until the 2016 construction season. Due to a pattern of the State obligating more projects than there are funds, it is important that the plans be prepared by September to allow for early approval by the MI Dept. of Transportation.

Multi-Modal Master Plan

The City-wide Multi-Modal Transportation Plan, finished in 2013, presents a long-range plan to improve transportation opportunities in response to the need to improve safety and consider all forms of travel. The Planprovides detailed recommendations for this segment of Maple Rd. It suggested that further traffic study be conducted with the goal of determining if a three lane road could be implemented here as a part of the resurfacing project. The plan noted that converting four lane roads to three lanes is a popular trend nationwide when traffic counts and road conditions permit it as a means of reducing speeds and crashes and improving safety of users of the roadway. The Plan also notes that constructing three lanes would provide the opportunity to install bike lanes and enhanced crosswalks that contain traffic islands at select locations.

W. Maple Rd. Steering Committee

The Multi-Modal Transportation Board (MMTB) began discussing this topic in January. Recognizing the significance of this corridor, as well as the public concern about the possible changes, they decided to create a separate short term committee that could both better represent the various interests in the area, as well as study the issue in greater detail. The W. Maple Steering Committee was composed of the following resident members:

Vionna Adams	MMTB Member
Stuart Bordman	MMTB Member
Lara Edwards	MMTB Member
Karen Rock	Resident North of Maple Rd. (Quarton Lake Sub.)
Eugene Nelson	Resident South of Maple Rd. (Coryell Park Sub.)
Alice Silbergleit	Resident South of Maple Rd. alternate (Coryell Park Sub.)[1]
Michael Clawson	Resident on Maple Rd.
David Underdown	Business Owner from Chesterfield Plaza
Karen Daskas	Business Owner from the CBD
Russ Ives	W. Maple Rd. Churches Representative
Terry Lang	Resident-at-Large

The Steering Committee met four times from January 22 to April 16, 2015. The following is a short summary of the topics covered at each meeting:

January 22 – Norm Cox, author of the Multi-Modal Master Plan, attended and gave the committee members an overview of the goals of the Multi-Modal Master Plan, and how the W. Maple Rd. recommendations fit into this perspective. Mike Labadie, Transportation consultant, also attended the meeting and outlined the type of data that will be collected and studied, and discussed the tools available for analyzing transportation data. The Committee members then made a list of the things they like and dislike about the corridor as it is currently built. The Committee reached consensus on a list of objectives for any improvements proposed for the W. Maple Corridor.

February 16 – Transportation consultant Mike Labadie presented traffic data relative to the current roadway. Software that simulates traffic conditions during peak demand was presented and discussed. Committee members discussed the back up and traffic congestion around the W. Maple and Southfield intersection, the placement and timing of traffic signals, excessive speed, concerns regarding vehicular swerving around turning vehicles, pedestrian crossing issues and the difficulty for drivers to make turns out of the surrounding neighborhoods onto W. Maple at peak periods.

March 19 – Similar traffic data and computer based simulation was presented if the corridor was modified to operate with three lanes. It was noted that the Level of Service at each intersection remains essentially the same, with the exception of Southfield Rd. Mr. Labadie explained how a three lane configuration would significantly reduce accident rates and severity, virtually eliminate sideswipe accidents, reduce speeds, provide a consistent speed for traffic, increase the gaps in traffic through the use of platooning, reduce congestion (particularly in the area of Southfield Road), and would enhance pedestrian conditions and crossings throughout the corridor. Creative modifications to the area from west of Southfield Rd. to Chester St. that can be done with a small increase in cost can reduce the congestion in this area, as outlined below.

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[1] City staff invited the Coryell Park Sub. Homeowners Assoc. (comprising the streets of Arlington Rd. and Shirley Rd.) to suggest a person that could represent the neighborhoods south of Maple Rd. Both Mr. Nelson and Ms. Silbergleit wanted to help, but were concerned that they might miss meetings due to their schedules. Prior to the first meeting, they asked if they could both be members, but only one would attend and vote at any one time. Staff and the Committee agreed to this arrangement from the beginning.

April 16 – Questions raised by the Committee were reviewed by our consultant. Potential pedestrian improvements that can be made, such as enhanced pedestrian crosswalks, were reviewed. The Committee passed the following motion, with a vote of 7-2 (1 member absent):

W. Maple Steering Committee Motion:
The Steering Committee recommends to the Multi-Modal Transportation Board that W. Maple Rd. between Cranbrook Rd. and Southfield Rd. be reconfigured as a three lane road containing two 10 ft. wide through traffic lanes, one 10 ft. continuous left turn lane, two 7 ft. wide shoulder areas (no bike lanes). Further, to add the following additional conditions:

- *(i) A 6 month trial period to commence after the road is repaved with a formal study by the City to consider the effects of the reconfiguration;*
- *(ii) ADA ramps at all corners and crossings;*
- *(iii) Crosswalk marking improvements at the signalized intersections;*
- *(iv) New right turn only lane for eastbound traffic turning south on to Southfield Rd.;*
- *(v) Pedestrian refuge striped crossing islands to the east of Chesterfield Ave., east of Lakepark Dr., and west of the Rouge River bridge, the latter with Rectangular Rapid Flashing Beacons;*
- *(vi) Removal of low use bus stops;*
- *(vii) Enhancement of higher use bus stops (concrete pad, benches, shelters etc.); and*
- *(viii) Use of enhanced technology in signals to control and optimize signal cycle lengths and timing.*

<u>Multi-Modal Transportation Board Response:</u>

The MMTB met at its usual regularly scheduled monthly meeting to review the progress made by the Steering Committee, as well as other regular business on their agenda. The regular meeting of May 7 provided the opportunity for the MMTB to review the W. Maple Rd. findings holistically. A summary presentation of the entire process was given by transportation consultant Mike Labadie. Since there seemed to be a misunderstanding of the direction given by the Committee, staff made an effort to advertise the meeting both in the press, and to each homeowner's association along the corridor. During the meeting presentation, Chair Johanna Slanga offered the public several opportunities to stop and ask questions or provide comment about what was being said.

Staff presented the Steering Committee's recommendation in support of a three lane cross section with two 7' wide shoulder areas and no bike lanes. There was discussion about some of the challenges this may present as the Steering Committee voted not to add bike lanes. The following issues were identified and discussed:

1. The idea of proceeding with a three lane road, but deleting the bike lane component, surfaced for the first time at the meeting of April 16. The Steering Committee recommendation of suggesting three 10 foot wide lanes is problematic in that that leaves 7 feet of unused pavement on both sides. An unspecified area 7 feet wide is problematic when it does not have a designated use, as it will provide an opportunity for unpredictable behaviors:

    a. Drivers may choose to use this area for purposes that are inconsistent with what other drivers may be expecting, such as using it as a right turn deceleration lane at intersections, or worse yet, as a means to pass slower moving vehicles in the through lane.
    b. Bike riders may choose to use this area for biking. Since the current proposal would not contain any references in signage or pavement markings designating this as a bike lane, it would be preferable not to have it used as such.
    c. Since ten feet is narrow for a major street thoroughfare, and up to twelve feet is commonplace, we recommend that the three marked lanes be changed to twelve feet each. This change would result in a four foot space of extra pavement on each side remaining. A four foot unused area would provide far fewer opportunities for unexpected behaviors.

2. A key component of the Steering Committee recommendation is that the three lane configuration is meant to be installed as a temporary test, subject to further scrutiny and possible change if it is not working. Additional detail about what measures should be used in determining the success or failure of a three lane Maple Rd. are needed. By clearly defining the methods of measurement, additional reassurance can be provided to the public that the City is serious about being fair and objective.

3. The Steering Committee recommendation suggested that since the resurfacing was going to be subject to change later, concrete curbed islands in the new left turn lanes would be inappropriate at this time. The recommendation suggested that painted refuge areas be provided at three key locations to enhance crosswalks at those locations. Upon further reflection, it may not be advisable to encourage pedestrians to spend time in the middle of Maple Rd. with only the protection of a painted refuge area. For the two intermediate signalized intersections at Chesterfield Ave. and Lakepark Ave., installing a crosswalk on the side where there are no left turns, painted crosswalks without a refuge area in the middle is appropriate during the interim. If the City later makes the decision to keep the three lane road configuration, it can then proceed to make more permanent crossing improvements. As such, no formal pedestrian crosswalk improvements should be recommended while the road is operating in this "temporary" mode. However, the MMTB has requested that the pedestrian crossing islands not be forgotten or eliminated. If the City later decides to commit to the 3 lane road permanently, staff will study this question further and put together a final recommendation for additional pedestrian crossing improvements, including the potential for crossing islands.

After much discussion and public input, the MMTB passed the following recommendation:

To adopt the recommendation as written originally by the Steering Committee modified to include two 12 ft. wide through traffic lanes, one 12 ft. continuous left turn lane, and two 4 ft. wide shoulder areas without bike lanes. Further, to add the following additional conditions:

1. *A 6 month trial period to commence after the road is repaved with a formal study by the City to consider the effects of the reconfiguration. The W. Maple Rd. Steering Committee will reconvene in April, 2017, to study the following measures, compared to the conditions that existed prior to the project, including:*
   a. *Average speeds;*
   b. *Average daily traffic;*
   c. *Crash rates;*
   d. *Cut through traffic during the PM Peak Hour on the following roads: S. Glenhurst Ave., Larchlea Dr., Chesterfield Ave., Pleasant Ave., Pilgrim Ave., Arlington Rd., Shirley Rd., and Lakepark Dr.; and*
   e. *Level of Service at the Southfield Rd. and Chester St. intersections.*

   The Steering Committee will also actively solicit public input from all interested stakeholders as a part of the process, and make a recommendation for the future of the corridor to the Multi-Modal Transportation Board.
2. *Installation of ADA ramps at all corners and crossings;*
3. *Crosswalk marking improvements to be made at the signalized intersections;*
4. *Congestion relief improvements between Southfield Rd. and Chester St. including a right turn lane for eastbound traffic at Southfield Rd. and dual left turn lanes between Southfield Rd. and Chester St.,*
5. *Installation of marked crosswalks at the Chesterfield Ave. and Lakepark Dr. traffic signals;*
6. *The removal of low use bus stops;*
7. *The enhancement of higher use bus stops (concrete pad, benches, shelters etc.);*
8. *The addition of enhanced technology in the existing signals to control and optimize signal cycle lengths and timing.*

<u>IMPORTANT PUBLIC COMMENTS</u>

1. **Testing the 3 lane concept before resurfacing instead of after resurfacing**

Both the Steering Committee and the MMTB envision that the road should be resurfaced prior to introducing the concept of three lanes. During the May 7 MMTB meeting, some members of the public questioned this, suggesting that the test would be better if it occurred prior to resurfacing. The Engineering Dept. took a neutral position on this question. However, the City's Transportation consultant has advised that he would not recommend conducting a short term test prior to the resurfacing of the road as engineering standards dictate that any such testing would not be statistically valid

unless collected for three years. It is unlikely that the existing pavement will survive an additional three years. It is important to note that the 3 lane recommendation requires an exclusive right turn lane for eastbound traffic at Southfield Rd. Now that the recommendation does not include a bike lane, the entire width of the existing pavement would be needed for traffic lanes under this configuration. Should the Commission wish to re-introduce the concept of bike lanes in this area, the road would have to be widened accordingly.

2. **The lane modifications suggested between Southfield Rd. and Chester St. should be implemented with the rest of the project being 4 lanes.**

Some meeting attendees in favor of a 4 lane road have commented that they support the suggested turning lane extensions / double left turn laneconcept presented between Southfield Rd. and Chester St. as a valid solution to congestion that should be implemented in conjunction with a 4 lane road to the west of Southfield Rd. While it was said at the last meeting that there would not be enough road width to provide two separate full length left turn lanes for westbound traffic turning south on Southfield and another for eastbound traffic turning north on Willits if W. Maple was not converted to a three lane configuration, upon further study, it appears that it would without the need to install additional pavement.

3. **The speed data presented is old and invalid.**

W. Maple Rd. was last resurfaced in 1998. The smooth, good condition that the pavement surface was in during the years soon after resurfacing likely resulted in concern from various members of the public, to which the City responded to conduct several speed studies between 1999 and 2002. Those speed studies are presented and included in the study. Providing new speed study data today would likely result in reduced speeds due to the poor condition of the road at this time. It is our position that the 1999-2002 era data is more valid than current measurements would be, as it reflects the nature of driving on this road when it is in excellent condition. As a result, new speed studies have not been conducted.

The Suggested Resolution found below is essentially accepting the recommendation of the Multi-Modal Transportation Board:

SUGGESTED RESOLUTION:

To direct staff to proceed with plan preparation for the W. Maple Rd. Resurfacing Project from Cranbrook Rd. to Southfield Rd., to include two 12 ft. wide through traffic lanes, one 12 ft. continuous left turn lane, and two 4 ft. wide shoulder areas without bike lanes. Further, to add the following additional conditions:

1. A 6 month trial period to commence after the road is repaved with a formal study by the City to consider the effects of the reconfiguration. The W. Maple Rd. Steering Committee will reconvene in April, 2017, to study the following measures, compared to the conditions that existed prior to the project, including:
   a. Average speeds;
   b. Average daily traffic;

c. Crash rates;
d. Cut through traffic during the PM Peak Hour on the following roads: S. Glenhurst Ave., Larchlea Dr., Chesterfield Ave., Pleasant Ave., Pilgrim Ave., Arlington Rd., Shirley Rd., and Lakepark Dr.; and
e. Level of Service at the Southfield Rd. and Chester St. intersections.

The Steering Committee will also actively solicit public input from all interested stakeholders as a part of the process, and make a recommendation for the future of the corridor to the Multi-Modal Transportation Board.

2. Installation of ADA ramps at all corners and crossings;
3. Crosswalk marking improvements to be made at the signalized intersections;
4. Congestion relief improvements between Southfield Rd. and Chester St. including a right turn lane for eastbound traffic at Southfield Rd. and dual left turn lanes between Southfield Rd. and Chester St.,
5. Installation of marked crosswalks at the Chesterfield Ave. and Lakepark Dr. traffic signals;
6. The removal of low use bus stops;
7. The enhancement of higher use bus stops (concrete pad, benches, shelters etc.);
8. The addition of enhanced technology in the existing signals to control and optimize signal cycle lengths and timing.

City of Birmingham
A Walkable Community

MEMORANDUM

DATE: **May 1, 2015**

TO: **Multi-Modal Transportation Board**

FROM: **Mark Clemence, Deputy Chief of Police**
Jana Ecker, Planning Director
Paul T. O'Meara, City Engineer

SUBJECT: **W. Maple Rd. Resurfacing – Cranbrook Rd. to Southfield Rd.**
W. Maple Steering Committee Recommendation

As you know, in January, the Multi-Modal Transportation Board (MMTB) authorized the creation of the W. Maple Rd. Steering Committee. The Committee was tasked with spending the detailed time needed to come to a conclusion relative to how the W. Maple Rd. resurfacing project should completed with respect to the goals of the Multi-Modal Transportation Plan. A final recommendation was passed at their meeting of April 16, 2015, effectively completing their task at this time. The Suggested Recommendation follows:

The Steering Committee recommends to the Multi-Modal Transportation Board that W. Maple Rd. between Cranbrook Rd. and Southfield Rd. be reconfigured as a three lane road containing two 10 ft. wide through traffic lanes, one 10 ft. continuous left turn lane, two 7 ft. wide shoulder areas without creating bike lanes, with the following additional conditions:

- *(i) A 6 month trial period to commence after the road is repaved with a formal study by the City to consider the effects of the reconfiguration in the last month, with such results to be reviewed by the Steering Committee;*
- *(ii) Installation of ADA ramps at all corners and crossings;*
- *(iii) Crosswalk marking improvements to be made at the signalized intersections;*
- *(iv) The addition of a right turn only lane for eastbound traffic turning south on Southfield Rd.;*
- *(v) The addition of pedestrian refuge striped crossing islands to the east of Chesterfield Ave., east of Lakepark Dr., and west of the Rouge River bridge, the latter with Rectangular Rapid Flashing Beacons;*
- *(vi) The removal of low use bus stops;*
- *(vii) The enhancement of higher use bus stops (concrete pad, benches, shelters etc.); and*
- *(viii) The addition of enhanced technology in the existing signals to control and optimize signal cycle lengths and timing.*

The final recommendation was modified from the ones that had been prepared for consideration by staff. There was not sufficient time or energy at that point in the meeting to think through the technical details of what was being recommended. Now that we (staff and consultant) have had time to discuss the recommendation, there are a few parts that we recommend modifying (while still maintaining the spirit and the intent):

1. Cross-Section

The idea of building a three lane road without bike lanes came up late in the final meeting; it had not been discussed or considered before. The suggested cross-section as described is problematic in that it leaves a seven foot wide area on both sides of the road without a designated purpose. These wide extra areas will be used by motorists in various ways, such as deceleration lanes for right turns, passing lanes if a vehicle is stopped for some reason in the through lane, standing areas for delivery trucks, etc. These various and unclear uses could lead to crashes.

To help resolve this issue, a modified cross-section is proposed. The paved surface between the curbs is 44 ft. Since 12 feet is the standard width for a road of this nature, installing 12 ft. lanes for the through lanes and the left turn lane is recommended, thereby using 36 ft. of the available roadway for its main purpose. The remaining 8 ft. would then be split into two 4 ft. paved shoulders. To clarify that these areas are not to be driven on, sets of three diagonal lines would be installed on each side of each street intersection, as well as mid-block for the few areas where there is a long distance between intersections. The modified cross-section is attached to this memo for your reference.

2. Maple Rd. between Southfield Rd. and Chester St.

As a part of this study, F&V has identified important improvements that can be made to the traffic pavement markings in this area, in conjunction with the suggested new right turn lane for eastbound traffic. It is recommended that the plan as prepared by F&V for this area be made a part of the motion so that it is clear that:

a. Westbound traffic would remain one lane for through vehicles from downtown into this newly configured section of W. Maple Rd.
b. The new right turn lane would be configured to be a "Right Lane MUST Turn Right," which then allows the Southfield Rd. traffic signal to be retimed in a manner that will reduce crashes on Southfield Rd. immediately south of the intersection.
c. Dual left turn lanes will be restriped between Southfield Rd. and Chester St., providing ample storage for all left turning vehicles on this block.

3. Marked Pedestrian Refuge Zones

The Steering Committee saw the value of installing pedestrian refuge islands if a left turn lane is installed. However, they also understood that this investment should not be made initially if the City will be reconsidering going back to a 4 lane cross-section at a later date. To respect this issue, the motion recommended marked pedestrian refuge zones at the three locations

discussed during that meeting. If the refuge islands are not going to be built with curb and gutter, it is our recommendation that it is not best to encourage pedestrians to stop in the middle of this road. Marked crosswalks should clearly be installed at both Chesterfield Ave. and Lakepark Dr. to encourage pedestrians to cross at the signal. However, we do not recommend any indication of a refuge island until the 3 lane evaluation has been completed. If it is decided that three lanes will remain, the City can then move forward with the installation of the concrete curbed refuge islands as a separate project in 2017.

4. Evaluation After Construction

The W. Maple Rd. Steering Committee referenced the need for a defined evaluation of the new road configuration approximately six months after construction. Assuming the new road is finished sometime in late summer, six months later will be during the bad winter weather period of the year. It may also be an inappropriate time to study the area, when traffic can be less in general. It is suggested that the study wait until at least April of the following year (2017). If clear problems are identified, the City would have good weather available to make changes to the pavement markings soon thereafter. If it is decided that the three lane configuration is working and should remain, plans can then be prepared to install concrete crossing islands at the suggested locations later that year (2017). It is also suggested that the items to be studied be identified (e.g.: speed reduction, crash reduction, cut-thru traffic etc.) at this time as a part of the motion.

The suggested recommendation below is a revised version of the Steering Committee recommendation, addressing the items noted above.

SUGGESTED RECOMMENDATION:

The Multi-Modal Transportation Board recommends to the City Commission that W. Maple Rd. between Cranbrook Rd. and Southfield Rd. be reconfigured as a three lane road containing two 12 ft. wide through traffic lanes, one 12 ft. continuous left turn lane, and two 4 ft. wide shoulder areas without bike lanes. Further, to add the following additional conditions:

1. A 6 month trial period to commence after the road is repaved with a formal study by the City to consider the effects of the reconfiguration. The W. Maple Rd. Steering Committee will reconvene in April, 2017, to study the following measures, compared to the conditions that existed prior to the project, including:
    a. Average speeds
    b. Average daily traffic
    c. Crash rates
    d. Cut through traffic during the PM Peak Hour on the following roads: S. Glenhurst Ave., Larchlea Dr., Chestefield Ave., Pleasant Ave., Pilgrim Ave., Arlington Rd., Shirley Rd., and Lakepark Dr.
    e. Level of Service at the Southfield Rd. and Chester St. intersections

    The Steering Committee will also actively solicit public input from all interested stakeholders as a part of the process, and make a recommendation for the future of the corridor to the Multi-Modal Transportation Board.

2. Installation of ADA ramps at all corners and crossings;
3. Crosswalk marking improvements to be made at the signalized intersections;
4. Congestion relief improvements between Southfield Rd. and Chester St. including a right turn lane for eastbound traffic at Southfield Rd. and dual left turn lanes between Southfield Rd. and Chester St.,
5. Installation of marked crosswalks at the Chesterfield Ave. and Lakepark Dr. traffic signals;
6. The removal of low use bus stops;
7. The enhancement of higher use bus stops (concrete pad, benches, shelters etc.); and
8. The addition of enhanced technology in the existing signals to control and optimize signal cycle lengths and timing.

Maple and Southfield

W. MAPLE ROAD
STEERING COMMITTEE REPORT

ACKNOWLEDGEMENTS

STEERING COMMITTEE

Stuart Bordman, MMTB
Mike Clawson, Resident on W. Maple
Lara Edwards, MMTB
Karen Rock, Resident North of W. Maple
Russ Ives, W. Maple Rd. Churches Representative
Terry Lang, Resident at Large
Vionna Adams, MMTB
Karen Daskas, Business Owner from CBD
David Underdown, Business Owner from W. Maple
Eugene Nelson, Resident South of W. Maple

CITY OF BIRMINGHAM STAFF

Jana Ecker, Planning Director
Lauren Chapman, Assistant City Planner
Paul O'Meara, City Engineer
Mark Clemence, Deputy Police Chief

TRANSPORTATION CONSULTANTS

Fleis & VandenBrink

TABLE OF CONTENTS

CHAPTER 1 GLOSSARY OF TERMS

Within this document there are a number of terms that may be unfamiliar to many people. The following is a brief glossary of some of the transportation terms that are found in this document:

Bike Lane – a portion of the roadway designated for bicycle use. Pavement striping and markings sometimes accompanied with signage are used to delineate the lane.

Bike Route –a designation that can be applied to any type of bicycle facility. It is intended as an aid to help bicyclists find their way to a destination where the route is not obvious.

Complete Street- streets that are planned, designed, operated and maintained such that all users may safely, comfortably and conveniently move along and across streets throughout a community.

Crossing Islands – a raised median within a roadway typically set between opposing directions of traffic that permits pedestrians to cross the roadway in two stages.

Crosswalk – the area of a roadway that connects sidewalks on either side at an intersection of roads (whether marked or not marked) and other locations distinctly indicated for pedestrian crossings by pavement markings.

Mid-block– a crosswalk where motorized vehicles are not controlled by a traffic signal or stop sign. Pedestrians wait for a gap in traffic to cross the street; motorists are required to yield to a pedestrian who is in the crosswalk.

Signalized – a crosswalk where motor vehicle and pedestrian movements are controlled by traffic signals. Frequently a part of a signalized roadway intersection but a signal may be installed solely to facilitate pedestrian crossings.

Level of Service (LOS) – a measurement of the motor vehicle flow of a roadway expressed by a letter grade with “A” being best or free flowing and “F” being worst or forced flow/heavily congested.

Mid-block Crossings – locations that have been identified based on land uses, bus stop locations and the difficulty of crossing the street as probable candidates for Mid-block Crosswalks.

Mode – distinct types of transportation (cars, bicycles and pedestrians are all different modes of travel).

Neighborhood Connector / Neighborhood Greenway – a route that utilizes residential streets and short connecting pathways that link destinations such as parks, schools and **Shared**

Rectangular Rapid Flash Beacons (RRFB) – are quickly alternating amber LED lights used in conjunction with a typical crosswalk or school crossing warning sign to supplement the signs visibility when a pedestrian is attempting to cross the road.

Shared Roadway –bicycles and vehicles share the roadway without any portion of the road specifically designated for the bicycle use. Shared Roadways may have certain undesignated accommodations for bicyclists such as wide lanes, paved shoulders, and/or low speeds. These routes may also be signed and include pavement markings such as shared-use arrows.

Shared Lane Markings – a pavement marking consisting of a bike symbol with a double chevron above, also known as “sharrows”. These pavement markings are used for on-road bicycle facilities where the right-of-way is too narrow for designated bike lanes. The shared lane markings alert cars to take caution and allow cyclist to safely travel in these lanes when striping is not possible. They are often used in conjunction with signage.

Shared Use Path – a wide pathway that is separate from a roadway by an open unpaved space or barrier or located completely away from a roadway. A Shared Use Path is shared by bicyclists and pedestrians. There are numerous sub-types of Shared Use Paths.

CHAPTER 2 Introduction and Background

2.1 THE MULTI-MODAL TRANSPORTATION PLAN

In 2011, the City of Birmingham passed a resolution in support of Complete Streets to demonstrate a commitment to enhancing the built environment for all transportation users, including drivers, pedestrians, bicyclists and transit riders of all ages and abilities. In 2013, the City of Birmingham completed a rigorous 15 month process to complete and accept the Birmingham Multi-Modal Transportation Plan ("MMTP") to guide transportation improvements throughout the entire City.

The City of Birmingham's MMTP is a long-range plan to improve and expand opportunities for pedestrians, bicycles and transit users. It is a response to the growing demand for alternative forms of travel and the need to improve the safety of those who choose to walk, bicycle, drive, or take transit. The plan looks at how the City may transform its streets into better public spaces that are friendlier to pedestrians, bicyclists and transit users, while continuing to serve the needs of motorized traffic. The proposed improvements will help the City of Birmingham continue to be an attractive place to live, work, and play and will enhance its desirability among educated youth, entrepreneurs, and senior citizens.

Many of the improvements recommended in the MMTP are designed to accomplish multiple goals. For example, some improvements for pedestrians are also designed to lower traffic speeds to a level appropriate to the residential nature of the roadway and enhance the appearance of the corridor.

Together, the proposed improvements to the built environment will provide residents and visitors additional viable transportation choices. Several communities that have invested in multi-modal facilities have experienced a significant increase in the number of people who walk, bicycle and take transit. Many residents are within convenient walking and bicycling distance to many of their destinations, including the vibrant downtown. The MMTP provides the direction on how to make Birmingham not simply a walkable community, but an outstanding walkable, bikeable and transit friendly community.

In the MMTP, specific recommendations were made for the W. Maple corridor between Cranbrook Road and Southfield Road. Below is an excerpt from the Multi-Modal Transportation Plan regarding the proposed conceptual plans for W. Maple Road.

CITY OF BIRMINGHAM MULTIMODAL TRANSPORTATION PLAN

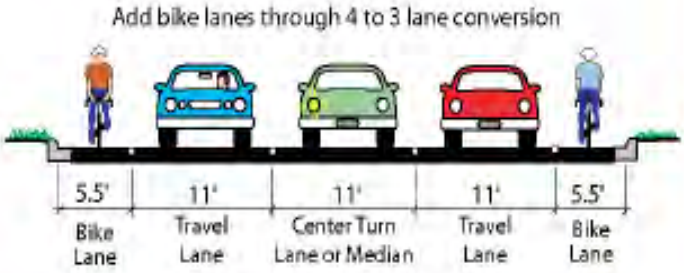
SPECIFIC AREA CONCEPT PLANS

5.2 WEST MAPLE ROAD

The following concept plan is for the segment of W Maple Road between Cranbrook Road and Southfield Road, which is going to be resurfaced in 2015.

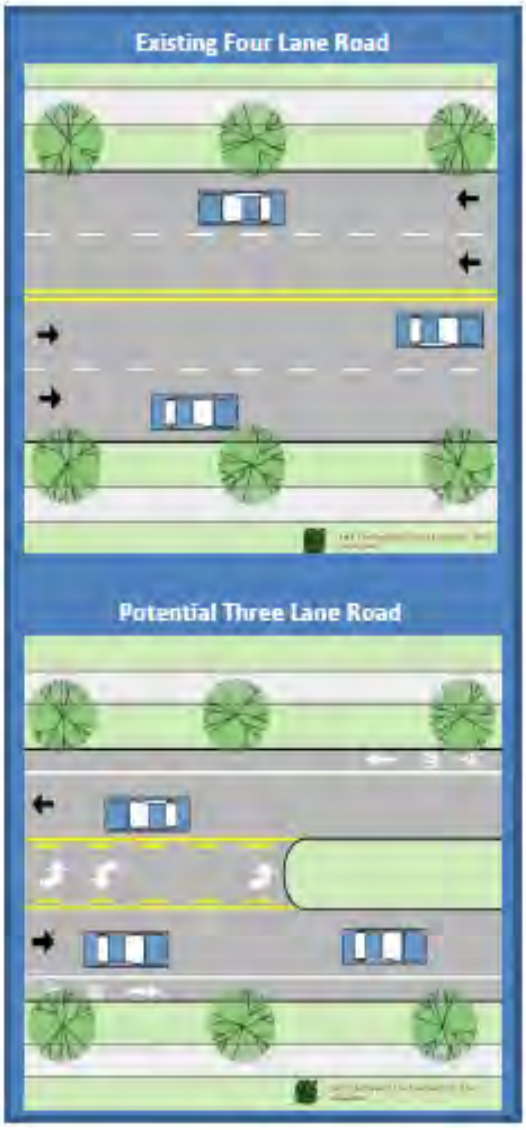
PROPOSED BICYCLE FACILITIES:

A four-lane to three-lane conversion is proposed on W Maple Avenue between Waddington Street and Southfield Road.

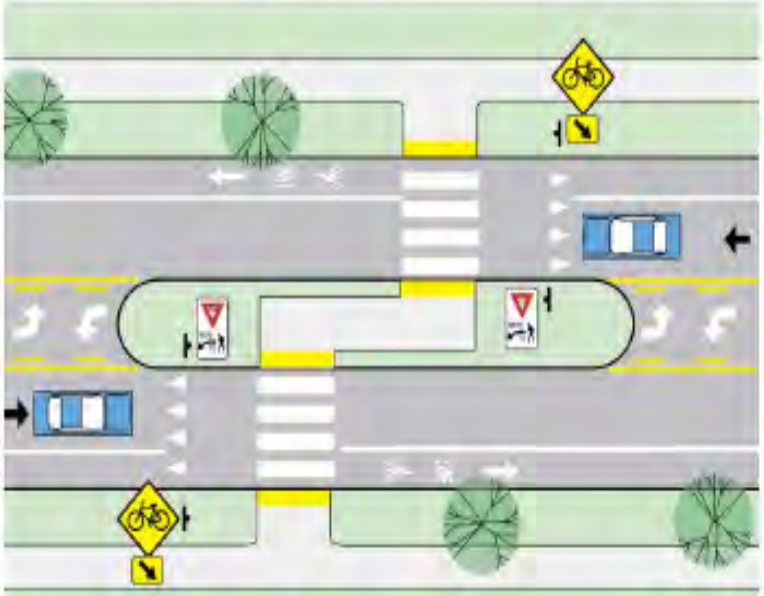


The existing road cross-section should be maintained on W Maple Avenue between Waddington Street and Cranbrook Road in order to allow for motor vehicle stacking at the intersection. A shared lane marking is proposed along this segment, along with signage directing bicyclists to a neighborhood connector route where the bike lane ends and the shared lane marking begins.

Please note that W Maple Road between Cranbrook Road and Southfield Road is at the cusp of where a four-lane to three-lane conversion will function. Additional analysis of the corridor is necessary to determine if the conversion is feasible.



PROPOSED CROSSING ISLANDS:



*ADVANCED WARNINGS SHOULD BE INCLUDED

Crossing islands with rectangular rapid flash beacons are proposed on W Maple Road at:

- Baldwin Road
- Chesterfield Avenue
- Suffield Dr/Pilgrim Ave
- Lake Park Dr/Linden Rd

Please note that this is assuming the existing signal at Lake Park Drive will be removed with the proposed four to three lane conversion.

A crossing island is also proposed at Chesterfield Avenue where there is an existing signal.

Bus stops along W Maple Road should be relocated to be closer to the proposed road crossings.

2.2 THE MULTI-MODAL TRANSPORTATION BOARD

The MMTP recognized the need for oversight on transportation projects from multiple departments, as well as the need for public input from many different perspectives to improve the quality of the transportation system, thus improving the quality of life in the City. The Plan recommended the implementation of a standing committee that represents people with a diverse range of travel mode experience, people of different age groups and people with mobility issues. The Multi-Modal Transportation Board ("MMTB") was created in 2014 by the City Commission as recommended in the MMTB. The Multi-Modal Transportation Board (MMTB) meets the first Thursday of each month at 6 p.m. at the Municipal Building.

2.3 THE MAPLE ROAD STEERING COMMITTEE

Recently, the MMTB finished its work relative to City road projects that will be built in 2015. The W. Maple Road project has been awarded an 80% federally funded construction grant for resurfacing during the 2016 construction season. Due to federal participation, the City is required to start the plan preparation for this project earlier than usual. Once the plans are prepared by our consulting engineer, they then need to be reviewed and approved through the local MDOT office. The plans need to be nearly complete by June of this year, in order to ensure they are submitted in a timely manner.

The MMTB recommended that a separate steering committee be formed for W. Maple Road. While the MMTB is still fully engaged in the process, it was determined that it would be helpful to bring others that are more direct stakeholders into the discussion. With that in mind, the Maple Road Steering Committee was formed to meet more often to fully understand the corridor, and make the best recommendation possible. The following positions were recommended, and approved to create the Ad Hoc W. Maple Steering Committee ("Steering Committee"):

- Three members of the Multi-Modal Transportation Board;
- Two members representing neighborhoods in the area (one from north of and one from south of W. Maple Rd);
- One homeowner with direct frontage on W. Maple ;
- One resident at large;
- One business owner from the corridor (preferably from the plaza located at Chesterfield Rd.);
- One business owner from the central business district; and
- One church staff member or active volunteer representing one of the three large churches along the project route (First United Methodist, First Presbyterian, Lutheran Church of the Redeemer).

The Steering Committee was formed in January of this year, and met over the course of four months to review and discuss the W. Maple Corridor.

CHAPTER 3 STEERING COMMITTEE PLANNING PROCESS

The planning process was a multi-step effort led by the MMTB, the Steering Committee and shaped by public input. The planning process for the discussion of the W. Maple Corridor included the following major tasks:

- An introduction to multi-modal transportation planning, the Birmingham MMTP, and transportation planning data and review standards;
- Review of strengths and weaknesses of the existing W. Maple Corridor;
- Development of goals and objectives for improvements to the W. Maple Corridor;
- Inventory and Analysis of the existing transportation environment in the W. Maple Corridor;
- Identification of opportunities and Complete Streets corridor improvement options;
- Analysis of future improvement options;
- Review of national examples and case study analysis of similar projects;
- Obtaining public input throughout the process; and
- Approving a recommendation to the MMTB on the future configuration of W. Maple.

3.1 INTRODUCTION TO MULTI-MODAL TRANSPORTATION PLANNING

At the steering committee meeting on January 22, 2015, Mr. Norm Cox of the Greenway Collaborative conducted a PowerPoint presentation outlining the basic principles of multi-modal transportation planning, how multi-modal planning can enhance accessibility, allow seniors to age in place and attract millennials, and outlining Michigan's Complete Streets policy. Mr. Cox also introduced some of the design tools communities can use in their street design to meet their specific objectives.

Mr. Mike Labadie of Fleis & VandenBrink also explained the basic types of data that traffic engineers collect and study when considering road improvements, and discussed the tools that will be available to better understand how changes to W. Maple Rd. will impact its Level of Service (LOS) to the public. Staff also provided an overview of the City's Multi-Modal Transportation Master Plan; what the MMTB board has accomplished to date; and how the suggestion of considering a change to W. Maple Rd. came about.

3.2 GOALS AND OBJECTIVES FOR THE W. MAPLE CORRIDOR

At the Steering Committee meeting on January 22, 2015, Steering Committee members and the public were also asked to provide their comments and concerns regarding existing conditions on the W. Maple corridor. Common findings were identified as follows:

- Concern that this section of W. Maple Road is dangerous and does not feel safe;
- Concern about the excessive speed of traffic on W. Maple;
- Concern about vehicles swerving to avoid other vehicles making turns along the corridor;
- Concern about the difficulties of turning onto W. Maple from adjacent side streets;
- Concern about traffic backups at Southfield Road;
- Difficulty for pedestrians to cross W. Maple; and
- Satisfaction with sidewalk conditions along the W. Maple corridor.

Accordingly, the Steering Committee agreed that each of the above common areas of concern should translate into the following **objectives for improvements** considered for the W. Maple corridor:

- Improve the safety of the corridor, especially for vehicular and pedestrian traffic;
- Lower the speed of vehicular traffic in the corridor;
- Reduce the amount of vehicles swerving to avoid cars making turns along the corridor;
- Enhance the ease of vehicles to turn onto W. Maple from adjacent side streets;
- Reduce traffic congestion in the vicinity of the Southfield Road intersection;
- Provide safe and convenient pedestrian crossings along the corridor; and
- Maintain sidewalk facilities in the corridor.

In addition, the steering committee stated that the following objectives should also be included:

- Ensure that any proposed changes in the corridor do not make existing conditions worse; and
- Ensure that any proposed changes in the corridor do not increase cut-through traffic in the surrounding neighborhoods.

3.3 INVENTORY AND ANALYSIS OF EXISTING CONDITIONS

At the Steering Committee meeting on February 26, 2015, Mr. Labadie conducted a presentation to review his findings regarding the existing conditions in the W. Maple corridor. Mr. Labadie reviewed the traffic counts collected (including bicycle and pedestrian counts), turning movement data collected, the most recent 3 year crash history and data, the results of past speed studies, sight distance findings, gap analysis findings, traffic queues and the levels of service for all intersections in the W. Maple corridor. All data was collected at the signalized study intersections during the AM (7:00 AM to 9:00 AM) and PM (4:00 PM to 6:00 PM) peak periods, on Tuesdays, Wednesdays and Thursdays of non-holiday weeks.

Mr. Labadie and Mr. Russo discussed their evaluation of existing peak hour vehicle delays and Levels of Service (LOS) at the study intersections along Maple Road from Cranbrook to Chester based on the existing land use and traffic control, existing peak hour traffic volumes, and the methodologies presented in the Highway Capacity Manual, 2010 (HCM). Typically, LOS D is considered acceptable, with LOS A representing minimal delay, and LOS F indicating failing conditions. Mr. Labadie also reviewed historical crash data from the Traffic Improvement Association of Michigan (TIA) for the most recent available three years (2012-2014) for the study segment of W. Maple Road. In addition to crash data, collision diagrams were obtained and presented for all signalized and unsignalized study intersections. Crash data from the intersection of W. Maple Road and Cranbrook Road were omitted from the analysis as the City of Birmingham only has jurisdiction over one leg of the intersection and no geometric improvements are proposed at the intersection as part of this project. The crash data and collision diagrams are attached and summarized in the appendix.

All data collected was put into a computer modelling SYNCHRO program to illustrate in actual time increments the existing conditions at AM and PM peak periods and throughout the day along the W. Maple corridor. Mr. Labadie responded to questions from steering committee members and the public, and then demonstrated the computerized SYNCHRO model of the actual corridor. The scaled model allows viewers to watch the operation and traffic flow of the corridor, and it becomes evident where the areas of concern exist. Committee members discussed the back up and traffic congestion around the W. Maple and Southfield intersection, the placement and timing of traffic signals, excessive speed, concerns regarding vehicular swerving around turning vehicles, pedestrian crossing issues and the difficulty for drivers to make turns out of the surrounding neighborhoods onto W. Maple at peak periods. The results of the existing conditions analysis are as follows:

1. Sight distance at Maple Road and the cross streets and driveways is adequate;

2. Traffic signals along Maple Road provide for some platooning of vehicles to create gaps in the traffic stream for cross streets and driveways;
3. Presently all of the signalized study intersections operate at an overall LOS C or better during the AM and PM peak periods;
4. All signalized study intersection approaches and movements currently operate acceptably at a LOS D or better during the AM and PM peak periods, except the southbound approach at the intersection of Maple Road and Chester Street which operates at a LOS E, with the southbound right turn movement operating at a LOS F during the PM peak period;
5. In the traffic simulations the intersection of Maple Road and Southfield Road experienced the worst traffic congestion:
    a. At the intersection of Maple Road and Southfield Road, long vehicle queues were observed for the eastbound approach during the AM peak period and the eastbound and northbound approach during the PM peak period.
    b. At the intersection of Maple Road and Chester Street a long vehicle queue is observed for the southbound right turn movement during the PM peak period.
    c. The eastbound right turns onto Southfield southbound do not have an adequate length of lane for merging into southbound traffic from Maple Road.
    d. There is inadequate storage length for eastbound left turns from Maple Road onto Chester Street. This causes left turning vehicles to spill back into the through travel lane along Maple Road and block through traffic.
    e. Field observations indicate that some eastbound through traffic on Maple Road utilizes the outside through lane before and after the Southfield Road intersection and merges over into the through lane or left turn lane between Southfield Road and Chester Street.

Both the data compiled and the computer model created using the data confirmed the perceptions of the Steering Committee members that were previously noted.

3.4 COMPLETE STREET IMPROVEMENT OPTIONS

At the Steering Committee meeting on March 19, 2015, Mr. Labadie reviewed the following complete street / multi-modal design tools that are available for study to meet the objectives established by the Steering Committee for improvements along the W. Maple Corridor:

- ADA ramps at all corners and crossings;
- Sidewalk improvements;

- Crosswalk marking improvements at the signalized intersections;
- Flashing beacons for pedestrian crossings;
- Intersection improvements;
- Installation of pedestrian crossing islands;
- Bike lanes or shared lane markings;
- Removal of low use bus stops and enhancement of higher use bus stops;
- Installation of right turn lane eastbound on Maple, south onto Southfield Road;
- Traffic calming measures (bump-outs, speed tables, signal coordination etc.);
- 4 to 3 lane conversion;
- Reconfiguration of road width; and
- Use of enhanced technology in signals to control and optimize signal cycle lengths and timing.

Mr. Labadie conducted a presentation to review his analysis of existing conditions in the corridor to determine which Complete Street improvement options should be considered for more detailed study.

3.5 ANALYSIS OF FUTURE IMPROVEMENT OPTIONS

3.5.1 UNIVERSAL IMPROVEMENTS

At the Steering Committee meeting on March 19, 2015, Mr. Labadie and Mr. Russo reviewed each of the Complete Street improvement options, and presented their findings as to which options warrant further consideration. Mr. Labadie specifically recommended the addition of ADA ramps at all corners and crossings, sidewalk improvements, bus stop consolidation and enhancement and improved pedestrian crossings, regardless of the configuration of the road in terms of number of lanes, lane width, addition of bike lanes etc.

3.5.2 4 to 3 LANE CONVERSION OPTION

On both March 19, 2015 and April 16, 2015, Mr. Labadie and Mr. Russo also presented a detailed analysis of possible reconfiguration options for the W. Maple Corridor, including a 4 to 3 lane conversion (also known as a road diet) on W. Maple Road from Waddington Road to Southfield Road.

This reconfiguration could include a three lane cross-section with one lane in each direction and a center lane for left turns to improve safety, reduce speeds and make crossings safer. Additionally, 5' bike lanes could be provided in both directions.

A transition zone would be needed east of the intersection of W. Maple and Cranbrook Road from 4 lanes to 3 lanes. As the intersection at Maple and Cranbrook is not fully controlled by the City of Birmingham, no changes would be proposed.

At the east end of the W. Maple Corridor, the 4 to 3 lane conversion would also open up options for addressing existing congestion issues between the intersection of W. Maple Road and Southfield Road, and the intersection of W. Maple and Willits / Chester Street. The intersection of Maple Road & Southfield Road can be improved by eliminating the eastbound channelized right turn and instead have this movement be controlled by the signal with an overlap phase that provides a right turn green arrow for the eastbound right turn movement during the northbound Southfield Road phase. With these improvements, the intersection of Maple Road & Southfield Road would experience minor improvements in overall intersection operations.

There is also currently inadequate storage for eastbound left turns from Maple Road onto Chester Street which causes left turning vehicles to spill back into the through travel lane along Maple Road and block through traffic. In order to increase the storage length for this movement, Southfield Road could be realigned to intersect Maple Road further west, near the existing eastbound channelized right turn lane. This will help to create more storage for left turns between Chester Street and Southfield Road and make Maple Road & Southfield Road intersect closer to a 90 degree angle. This work would also reduce congestion and accidents. This could be possible in the future. Mr. Labadie informed the committee that Southfield Road could be a part of the group's purview, because it affects W. Maple.

A 4 to 3 lane conversion allows not only a continuous center left turning lane, but also provides the opportunity for the addition of pedestrian refuge islands to make crossing W. Maple more comfortable and convenient for pedestrians. Possible locations for such pedestrian crossing islands discussed are shown below.

SUMMARRY OF ANALYSIS FOR 4 TO 3 LANE OPTION

Mr. Labadie and Mr. Russo presented their LOS findings by intersection throughout the corridor both using existing conditions and future conditions in a 4 to 3 lane conversion. All intersections will continue to operate at a LOS C or higher overall (an acceptable LOS is D or higher). Mr. Labadie explained how these improvements would significantly reduce accident rates and accident severity, virtually eliminate sideswipe accidents, reduce speeds, provide a consistent speed for traffic, increase the gaps in traffic through the use of platooning, reduce congestion (particularly in the area of Southfield

Road), and would enhance pedestrian conditions and crossings throughout the corridor. Mr. Labadie also stated that there would not be an increase in cut through traffic if these improvements were made as traffic delays and queues would not increase, thus there would be no need or desire for traffic to divert from the corridor.

Mr. Labadie and Mr. Russo showed the Steering Committee the SYNCHRO model of the W. Maple Corridor showing the AM and PM peak hour conditions in a 4 to 3 lane conversion scenario to evaluate network operations and vehicle queues. The results can be summarized as follows:

1. With a three lane cross-section an eastbound right turn lane must be provided at Maple Road & Southfield Road.
2. Cycle lengths along Maple Road were optimized to 90 seconds.
3. With items 1 & 2 above, all study intersection approaches and movements would continue to operate acceptably during both peak periods, except the southbound approach at the intersection of Maple Road & Chester Street which would continue to operate at a LOS E, with the southbound right turn movement operating at a LOS F during the PM peak period.
4. In the traffic simulations the intersection of Maple Road & Southfield Road experienced the worst traffic congestion.
    a. At the intersection of Maple Road & Chester Street a long vehicle queue is observed for the northbound approach during the AM peak period. During the PM peak period brief periods of long vehicle queues were observed for the eastbound and northbound approaches.
    b. At the intersection of Maple Road & Chester Street a long vehicle queue is observed for the southbound right turn movement during the PM peak period.
5. Pedestrian Crossing Islands should be considered at appropriate locations along the corridor.

All detailed reports and data regarding the findings of the transportation consultant are provided in the Appendix found in Chapter 6 of this report.

CRASH REDUCTION ANALYSIS FOR 4 TO 3 LANE OPTION

Fleis & VandenBrink (“F & V”) conducted research to find previous studies on 4 to 3 lane conversions and specific projects that have undergone a 4 to 3 lane conversion that are comparable to W. Maple Road between Cranbrook Road and Southfield Road. This data was compiled and further scrutinized to determine what, if any, impact a road diet from 4 to 3 lanes would have on the number and types of crashes that occur in the corridor as well as the average travel speed of vehicles.

The largest study completed in Michigan was done by Michigan State University (MSU) in 2012. It not only looked at examples of road diets throughout Michigan but also scrutinized previous studies performed on sites across the nation. While all the studied sites have different ADT, geometrics, intersections business/residential mix, etc., overall the number of crashes and the severity was reduced after completion of the conversion. From examining crash data before and after a four to three lane reduction with the addition of bike lanes, several common trends were revealed:

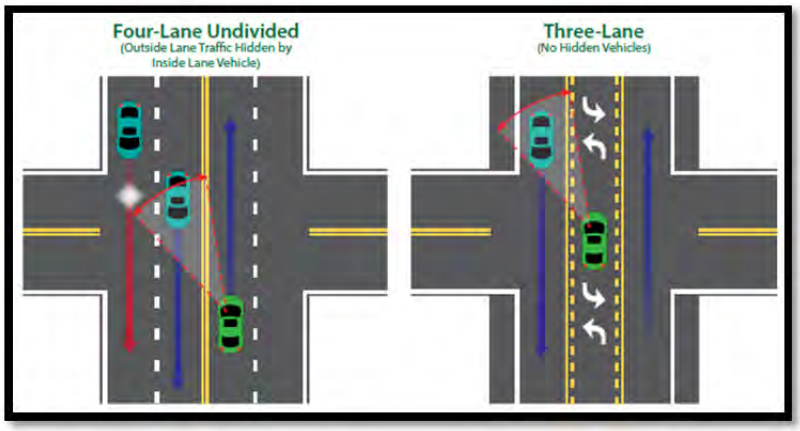
- An overall decrease in the number of crashes with a large decrease due to left turn movements now occurring in a reserved left turn lane at mid-block locations. MSU results show an approximate 9% reduction in accidents while many of the studies show an even greater reduction.
- The Federal Highway Administration (FHWA) suggests a 19-47% reduction in all roadway crashes when a roadway is modified from four travel lanes to two travel lanes with a two way left turn lane (TWLTL).

Crash Reduction

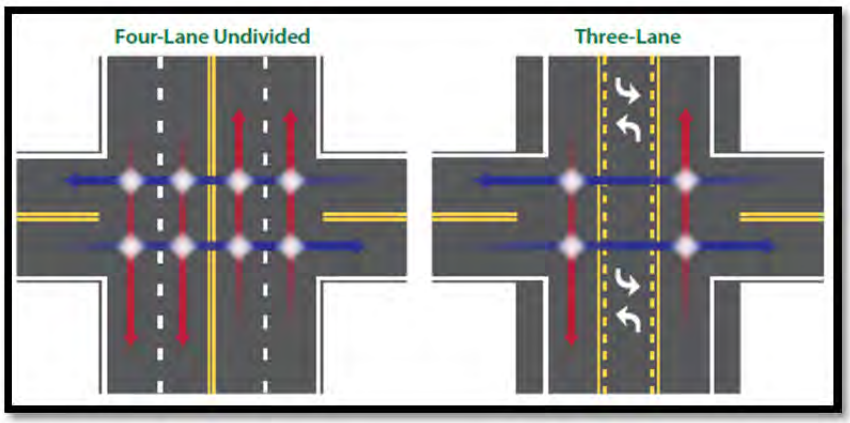
Comparable Sites	City, State	ADT	Crash Reduction	Speed Limit (MPH)	Year Project Completed
Maple Road	Birmingham, MI	21,000	NA	35	NA
N 45th Street*	Seattle, WA	20,000	14 %	30	1972
Madison St.*	Seattle, WA	18,000	-38%	30	1994
East Boulevard**	Charlotte, NC	21,400	-34%	35	2011
Fourth Plain Blvd.**	Vancouver, WA	17,000	-52%	50KM/H (31MPH)	2001
Portland Ave.**	Burnsville, MN	19,200	-32%	30	2011
Edgewater Drive**	Orlando, FL	20,000***	-40%	30	2002
	Average	19,120	-28%	-	

*Parallel parking instead of bike lanes
**Includes bike lanes
***Approximate count not included in average

- A slight increase in the number of crashes (rear-end collisions) where two lanes of through traffic are reduced into one. This is mostly due to the increased volumes in a single lane and unfamiliarity with the new road configuration.
- A decrease in pedestrian and cyclist involved crashes per overall pedestrian/cyclist trips. While the number of incidents in many cases remained the same or slightly increased, most were due in fact to the increased usage of the road and facilities because of the improved infrastructure (bike lanes, pedestrian refuge islands, etc.) No distinction was made in the reduction of crashes on roads with or without bike lanes.
- A reduction in the severity of crashes. Edgewater Drive in Orlando, FL saw a 71% decrease in injuries after project completion.
- A reduction in crashes due to improved site lines and distance.



- A reduction in crashes due to reduced traffic conflict points.



SPEED REDUCTION ANALYSIS FOR 4 TO 3 LANE OPTION

The research conducted by F & V clearly demonstrated that 4 to 3 lane conversions improve safety by reducing the speed differential between vehicles. On a four-lane undivided road, vehicle speeds can vary between travel lanes, and drivers frequently

slow or change lanes due to slower or stopped vehicles (vehicles stopped in the left lane waiting to turn left). Drivers may also weave in and out of the traffic lanes at high speeds. In contrast, on three-lane roads with TWLTLs the vehicle speed differential is limited by the speed of the lead vehicle in the through lane, and through vehicles are separated from left-turning vehicles. Thus, 4 to 3 lane conversions can reduce the vehicle speed differential and vehicle interactions, which can reduce the number and severity of vehicle-to-vehicle crashes. Reducing operating speed decreases crash severity when crashes do occur. A review of numerous sites in the study suggest that not only will a reduction in the 85th percentile speed occur, but there will be a large reduction in the number of people traveling 5 mph or more over the speed limit.

- A study of 35 Iowa, California and Washington project sites reflected a 4-5 mph reduction in the 85th percentile speed and a 30% reduction of cars traveling more than 5 mph over the speed limit.
- A reduction in speed is shown to be a contributing factor in the reduction of accidents.
- East Boulevard (35mph speed limit) in Charlotte, NC with an ADT of 21,000 saw a 7% reduction in the 85th percentile speed.
- Stone Way (30mph speed limit) in Seattle, WA saw a 75% decrease in vehicles traveling 10 mph over the speed limit.
- A study of three road diets in San Francisco found a reduction in speeds of between 4% and 14%.

CUT THROUGH TRAFFIC ANALYSIS FOR 4 TO 3 LANE OPTION

A common concern among neighboring residents of lane reduction projects is the increase in traffic on connecting roads. This is most commonly caused by an increase in delays and reduction of capacity of the main road (reduction in LOS) after conversion from 4 to 3 lanes. However, the detailed Analysis of Future Improvements in Chapter 3 clearly demonstrates that the LOS of all study intersection approaches and movements would remain at an acceptable LOS D or better except for SB Maple Road & Chester Street, which would remain at LOS E. Most intersections LOS and delay remain basically unchanged, ranging between A and C whether 4 lanes or 3. Therefore, no increase in cut through traffic is expected. People will not seek alternative routes and cut through adjacent neighborhoods if there is no increase in delay or reduction in LOS.

PLATOONING ANALYSIS FOR 4 TO 3 LANE OPTION

Platooning occurs when vehicles travel in groups caused by traffic signal coordination. If a 4 lane to 3 lane conversion is done, platooning will occur on Maple Road between Southfield and Cranbrook Road due to the signal timing and the 4 lane to 3 lane road diet. Some benefits of platooning are increases in gaps, reduced speed and reduced speed variation between lanes, and increased capacity. Gaps will be created in traffic

on Maple Road due to traffic signal timing. These gaps will give adequate time for vehicles to complete left turn movements off of adjacent side streets and driveways. When a platoon leaves from a traffic signal the speed of the platoon depends on the leading vehicle. All vehicles trailing the lead vehicle in the platoon will go equal to or less than their speed. This will reduce the average speed along the corridor. Platooning vehicles accelerate and decelerate as a group. This reduces the headway, which in turn increases the capacity of the roadway. Platooning is much less frequent on under-utilized four lane roads such as the existing configuration of W. Maple Rd. because it offers drivers choices, so vehicles spread out more by changing lanes depending on the speed of drivers in each of the two through lanes.

In order for platooning to occur along Maple Road, some additional signal equipment would be required. The additional equipment includes GPS clocks, antennas, and new software. The equipment and installation would cost between $15,000 and $21,000.

CHAPTER 4 STEERING COMMITTEE RECOMMENDATIONS

On April 16, 2015, the Steering Committee completed their review of the data presented, and reviewed their stated objectives for the W. Maple Corridor. The Steering Committee voted 7-2 to recommend to the Multi-Modal Transportation Board that W. Maple Rd. between Cranbrook Rd. and Southfield Rd. be reconfigured from a four lane road to a three lane road containing two 10 ft. wide through traffic lanes, one 10 ft. continuous left turn lane, and two 7 ft. wide shoulder areas without creating bike lanes, with the following additional conditions:

(i) A 6 month trial period is to commence after the road is repaved with a formal study by the City to consider the effects of the reconfiguration in the last month, with such results to be reviewed by the Steering Committee;

(ii) Installation of ADA ramps at all corners and crossings;

(iii) Crosswalk marking improvements to be made at the signalized intersections;

(iv) The addition of a right turn only lane for eastbound traffic turning south on Southfield Rd.;

(v) The addition of pedestrian refuge striped crossing islands to the east of Chester field Ave., east of Lakepark Dr., and west of the Rouge River bridge, the latter with Rectangular Rapid Flashing Beacons;

(vi) The removal of low use bus stops;

(vii) The enhancement of higher use bus stops (concrete pad, benches, shelters etc.); and

(viii) The addition of enhanced technology in the existing signals to control and optimize signal cycle lengths and timing.

CHAPTER 5 NEXT STEPS

The Ad Hoc Steering Committee has completed their role with respect to the W. Maple Road corridor study. No further meetings of the Steering Committee will be held unless so directed by the City Commission. The recommendation of the Steering Committee will be discussed by the MMTB at their next meeting. It is anticipated that the MMTB will study the findings and recommendation of the Steering Committee, and then make a formal recommendation to the City Commission as to the recommended improvements, if any, on the W. Maple Corridor. The City Commission will then consider the input of the Steering Committee, the MMTB and the public and make a final determination of the improvements, if any, to be made to W. Maple in 2016.

CHAPTER 6 APPENDIX

See attached Memos and Data from Transportation Consultant.

MEMO

To:	**Mr. Paul O'Meara, City Engineer** **City of Birmingham**
From:	**Michael J. Labadie, PE** **Fleis & VandenBrink**
CC:	**Ms. Jana Ecker, City Planner** **City of Birmingham**
Date:	**February 20, 2015**
Re:	**Maple Road – Cranbrook to Chester** **City of Birmingham, Michigan** **Traffic & Crash Analysis**

Traffic Analysis

Fleis & VandenBrink evaluated existing peak hour vehicle delays and Levels of Service (LOS) at the study intersections along Maple Road from Cranbrook to Chester based on the existing lane use and traffic control, existing peak hour traffic volumes, and the methodologies presented in the *Highway Capacity Manual, 2010* (HCM). Typically, LOS D is considered acceptable, with LOS A representing minimal delay, and LOS F indicating failing conditions. Additionally, SimTraffic network simulations were reviewed to evaluate network operations and vehicle queues. The results of the existing conditions analysis are attached and summarized below:

1. Vehicular turning movement counts were collected at the signalized study intersections during the AM (7:00 AM to 9:00 AM) and PM (4:00 PM to 6:00 PM) peak periods. Additionally, pedestrian and bicycle volumes were collected at the signalized study intersections and are included in the analysis; however, the number of pedestrians and bicycles are combined under one number and are not distinguishable from one another.
2. F&V analyzed site distance along the study corridor and found sight distance at the Maple Road cross streets and driveways to be adequate.
3. Gaps in the traffic stream along Maple Road represented in the SimTraffic network simulations.
4. Traffic signals along Maple Road provide for platooning of vehicles to create gaps in the traffic stream for cross streets and driveways.
5. Presently all of the signalized study **intersections** operate at an overall LOS C or better during the AM and PM peak periods.
6. All signalized study intersection **approaches and movements** currently operate acceptably at a LOS D or better during the AM and PM peak periods, except the southbound approach at the intersection of Maple Road & Chester Street which operates at a LOS E, with the southbound right turn movement operating at a LOS F during the PM peak period.
7. In the traffic simulations the intersection of Maple Road & Southfield Road experienced the worst traffic congestion:

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Farmington Hills, MI 48334
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F: 248.536.0079
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a. At the intersection of Maple Road & Southfield Road, long vehicle queues were observed for the eastbound approach during the AM peak period and the eastbound and northbound approach during the PM peak period.
b. At the intersection of Maple Road & Chester Street a long vehicle queue is observed for the southbound right turn movement during the PM peak period.
c. The eastbound right turns onto Southfield southbound do not have an adequate length of lane for merging into southbound traffic from Maple Road.
d. There is inadequate storage length for eastbound left turns from Maple Road onto Chester Street. This causes left turning vehicles to spill back into the through travel lane along Maple Road and block through traffic.
e. Field observations indicate that some eastbound through traffic on Maple Road utilizes the outside through lane before and after the Southfield Road intersection and merges over into the through lane or left turn lane between Southfield Road and Chester Street.

Crash Analysis

F&V obtained from the Traffic Improvement Association of Michigan (TIA) historical crash data for the most recent available three years (2012-2014) for the study segment of Maple Road. In addition to crash data, collision diagrams were also obtained for all signalized and unsignalized study intersections. Crash data from the intersection of Maple Road & Cranbrook Road were omitted from the analysis as the City of Birmingham only has jurisdiction over one leg of the intersection and no geometric improvements are proposed at the intersection as part of this project. The crash data and collision diagrams are attached and summarized below.

Maple Road Accident Summary

Intersections	WB Crashes E of Intersection	WB Crashes W of Intersection	EB Crashes W of Intersection	EB Crashes E of Intersection	Crashes on the South Approach	Crashes on the North Approach	Crashes in the Intersection	Total Crashes	AVG Annual Crashes
Bradway / Radnor	4	0	0	0	NA	0	0	4	1.33
Waddington	0	0	0	1	NA	0	1	2	0.67
Westwood	0	1	0	1	NA	0	1	3	1.00
Glenhurst	2	1	7	2	1	2	4	19	6.33
Westchester	0	0	0	0	0	NA	0	0	0.00
Larchlea	5	1	0	4	0	0	5	15	5.00
Chesterfield	3	0	7	1	NA	0	5	16	5.33
Pleasant/Fairfax	1	0	2	2	0	0	5	10	3.33
Suffield	0	0	0	0	0	0	2	2	0.67
Pilgrim/Arlington	4	0	4	0	1	1	1	11	3.67
Puritan	0	0	1	0	NA	0	1	2	0.67
Shirley	0	0	1	0	1	NA	0	2	0.67
Lake Park	1	0	5	0	NA	1	3	10	3.33
Linden	1	0	0	1	0	NA	0	2	0.67
Aspen	1	0	1	0	1	0	0	3	1.00
Hawthorne	2	0	1	0	0	NA	1	4	1.33
Baldwin	0	0	0	0	NA	0	0	0	0.00
Maple Hills	2	0	0	0	0	NA	0	2	0.67
Southfield	6	2	8	0	13	0	4	33	11.00

The Michigan Department of Transportation (MDOT) Michigan Intersection Guide contains data for the average number of crashes per year that occurred during the three year period of 2004 – 2006. This data is

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F: 248.536.0079
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MEMO

broken down by various types of intersections, traffic control, Average Daily Traffic (ADT) volumes, and geographic regions within the State.

Based on the MDOT data, the Average Annual Crash Frequency for a four lane 2-way signalized and usignalized intersection with an ADT volume greater than 20,000 vehicles per day located within the Metro region is approximately 10.5 and 3.5 crashes per intersection, respectively.

Attached:
LOS Descriptions
Synchro Results
Crash Data
Collision Diagrams
Speed Data

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Level of Service Criteria for Stop Sign Controlled Intersections

The level of service criteria are given in Table 17-2. As used here, control delay is defined as the total elapsed time from the time a vehicle stops at the end of the queue until the vehicle departs from the stop line; this time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position, including deceleration of vehicles from free-flow speed to the speed of vehicles in queue.

The average total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. . . .

Exhibit 17-2. Level of Service Criteria for TWSC Intersections

LEVEL OF SERVICE	AVERAGE CONTROL DELAY (sec/veh)
A	$\leq$ 10
B	> 10 and $\leq$ 15
C	> 15 and $\leq$ 25
D	> 25 and $\leq$ 35
E	> 35 and $\leq$ 50
F	> 50

Average total delay less than 10 sec/veh is defined as Level of Service (LOS) A. Follow-up times of less than 5 sec have been measured when there is no conflicting traffic for a minor street movement, so control delays of less than 10 sec/veh are appropriate for low flow conditions. To remain consistent with the AWSC intersection analysis procedure described later in this chapter, a total delay of 50 sec/veh is assumed as the break point between LOS E and F.

The proposed level of service criteria for TWSC intersections are somewhat different from the criteria used in Chapter 16 for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. Additionally, several driver behavior considerations combine to make delays at signalized intersections less onerous than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, where drivers on the minor approaches to unsignalized intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized than signalized intersections. For these reasons, it is considered that the total delay threshold for any given level of service is less for an unsignalized intersection than for a signalized intersection. . . .

LOS F exists when there are insufficient gaps of suitable size to allow a side street demand to cross safely through a major street traffic stream. This level of service is generally evident from extremely long total delays experienced by side street traffic and by queueing on the minor approaches. The method, however, is based on a constant critical gap size - that is, the critical gap remains constant, no matter how long the side street motorist waits. LOS F may also appear in the form of side street vehicles' selecting smaller-than-usual gaps. In such cases, safety may be a problem and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues but may result in adjustments to normal gap acceptance behavior. The latter is more difficult to observe on the field than queueing, which is more obvious.

Source: Highway Capacity Manual, 2000. Transportation Research Board, National Research Council

Level of Service for Signalized Intersections

Level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort and frustration, fuel consumption, and lost travel time. Specifically, level-of-service (LOS) criteria are stated in terms of the average stopped delay per vehicle for a 15-min analysis period. The criteria are given in Exhibit 16-2. Delay may be measured in the field or estimated using procedures presented later in this chapter. Delay is a complex measure and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the *v/c* ratio for the lane group in question.

LOS A describes operations with very low delay, up to 10 sec per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

LOS B describes operations with delay greater than 10 and up to 20 sec per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.

Exhibit 16-2. Level-of-Service Criteria for Signalized Intersections

LEVEL OF SERVICE	STOPPED DELAY PER VEHICLE (SEC)
A	≤10.0
B	> 10.0 and ≤20.0
C	> 20.0 and ≤ 35.0
D	> 35.0 and ≤ 55.0
E	> 55.0 and ≤ 80.0
F	>80.0

LOS C describes operations with delay greater than 20 and up to 35 sec per vehicle. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

LOS D describes operations with delay greater than 35 and up to 55 sec per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high *v/c* ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

LOS E describes operations with delay greater than 55 and up to 80 sec per vehicle. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high *v/c* ratios. Individual cycle failures are frequent occurrences.

LOS F describes operations with delay in excess of 80 sec per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high *v/c* ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Source: Highway Capacity Manual, 2000. Transportation Research Board, National Research Council

Table 1

Intersection Operations *Existing Conditions*

Intersection	Control	Approach	AM Peak Delay (s/veh)	AM Peak LOS	PM Peak Delay (s/veh)	PM Peak LOS
1. Maple Road	Signalized	EB	24.9	C	32.5	C
& Cranbrook Road		WB	31.6	C	35.7	D
		NB	25.7	C	33.9	C
		SB	34.2	C	33.3	C
		Overall	**28.9**	**C**	**34.1**	**C**
2. Maple Road	Signalized	EB	3.5	A	8.4	A
& Chesterfield Avenue		WB	0.7	A	4.4	A
		SB	25.7	C	25.3	C
		Overall	**3.3**	**A**	**7.1**	**A**
3. Maple Road	Signalized	EB	19.9	B	1.1	A
& Lakepark Drive		WB	0.6	A	1.4	A
		SB	25.5	C	25.8	C
		Overall	**12.4**	**B**	**2.0**	**A**
4. Maple Road	Signalized	EB	19.7	B	17.1	B
& Southfield Road		WB	6.3	A	4.9	A
		NB	25.9	C	33.7	C
		Overall	**16.1**	**B**	**16.6**	**B**
5. Maple Road	Signalized	EB	9.2	A	12.1	B
& Chester Street		WB	5.7	A	10.4	B
		NB	25.9	C	28.5	C
		SB	25.8	C	71.9	E
		Overall	**12.5**	**B**	**27.9**	**C**
6. Maple Road	Signalized	EB	1.2	A	1.5	A
& Bates Street		WB	8.6	A	11.2	B
		NB	25.0	C	26.0	C
		SB	24.3	C	25.4	C
		Overall	**6.1**	**A**	**9.2**	**A**

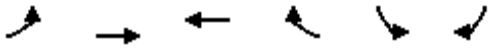
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	77	606	94	149	647	43	70	271	116	56	396	102
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1980	1980	2000	1980	1980	2000	1942	1942	1942	1980	1980	2000
Adj Flow Rate, veh/h	94	739	115	160	696	46	77	298	127	59	417	107
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.82	0.82	0.82	0.93	0.93	0.93	0.91	0.91	0.91	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	1	1	1
Cap, veh/h	371	1195	186	356	1312	87	166	655	557	300	513	132
Arrive On Green	0.08	0.37	0.37	0.03	0.12	0.12	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1886	3263	508	1886	3583	237	866	1942	1649	968	1521	390
Grp Volume(v), veh/h	94	426	428	160	365	377	77	298	127	59	0	524
Grp Sat Flow(s),veh/h/ln	1886	1881	1890	1886	1881	1938	866	1942	1649	968	0	1911
Q Serve(g_s), s	0.0	14.8	14.8	0.0	14.6	14.6	7.0	9.6	4.4	4.1	0.0	20.0
Cycle Q Clear(g_c), s	0.0	14.8	14.8	0.0	14.6	14.6	27.0	9.6	4.4	13.7	0.0	20.0
Prop In Lane	1.00		0.27	1.00		0.12	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	371	689	692	356	689	710	166	655	557	300	0	645
V/C Ratio(X)	0.25	0.62	0.62	0.45	0.53	0.53	0.47	0.45	0.23	0.20	0.00	0.81
Avail Cap(c_a), veh/h	371	689	692	356	689	710	166	655	557	300	0	645
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.0	20.8	20.8	30.6	28.7	28.7	36.6	20.7	19.0	26.1	0.0	24.2
Incr Delay (d2), s/veh	0.4	4.1	4.1	0.9	2.9	2.8	9.1	2.3	1.0	1.5	0.0	10.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	8.5	8.5	3.5	8.2	8.4	2.1	5.5	2.2	1.2	0.0	12.4
LnGrp Delay(d),s/veh	25.4	24.9	24.9	31.5	31.6	31.5	45.7	23.0	20.0	27.5	0.0	34.9
LnGrp LOS	C	C	C	C	C	C	D	C	B	C		C
Approach Vol, veh/h		948			902			502			583	
Approach Delay, s/veh		24.9			31.6			25.7			34.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	35.0		33.0	12.0	35.0		33.0
Change Period (Y+Rc), s	* 5.7	* 5.7		6.0	* 5.7	* 5.7		6.0
Max Green Setting (Gmax), s	* 6.3	* 29		27.0	* 6.3	* 29		27.0
Max Q Clear Time (g_c+I1), s	2.0	16.6		22.0	2.0	16.8		29.0
Green Ext Time (p_c), s	0.3	3.6		2.8	0.3	4.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.9
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



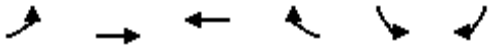
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	19	960	711	18	32	42
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	2000	1980	1961	2000	1942	1942
Adj Flow Rate, veh/h	21	1055	790	20	36	48
Adj No. of Lanes	0	2	2	0	1	1
Peak Hour Factor	0.91	0.91	0.90	0.90	0.88	0.88
Percent Heavy Veh, %	1	1	2	2	3	3
Cap, veh/h	67	2332	2404	61	402	359
Arrive On Green	0.88	0.86	1.00	1.00	0.22	0.22
Sat Flow, veh/h	31	3692	3811	94	1849	1650
Grp Volume(v), veh/h	569	507	396	414	36	48
Grp Sat Flow(s),veh/h/ln	1921	1712	1863	1944	1849	1650
Q Serve(g_s), s	0.0	5.4	0.0	0.0	1.2	1.9
Cycle Q Clear(g_c), s	5.1	5.4	0.0	0.0	1.2	1.9
Prop In Lane	0.04			0.05	1.00	1.00
Lane Grp Cap(c), veh/h	1319	1108	1206	1259	402	359
V/C Ratio(X)	0.43	0.46	0.33	0.33	0.09	0.13
Avail Cap(c_a), veh/h	1319	1108	1206	1259	402	359
HCM Platoon Ratio	1.33	1.33	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	2.3	2.3	0.0	0.0	25.0	25.2
Incr Delay (d2), s/veh	1.0	1.4	0.7	0.7	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	2.7	0.2	0.2	0.7	0.9
LnGrp Delay(d),s/veh	3.3	3.7	0.7	0.7	25.4	26.0
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h		1076	810		84	
Approach Delay, s/veh		3.5	0.7		25.7	
Approach LOS		A	A		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		57.0		23.0		57.0		
Change Period (Y+Rc), s		* 5.2		5.6		* 5.2		
Max Green Setting (Gmax), s		* 52		17.4		* 52		
Max Q Clear Time (g_c+I1), s		7.4		3.9		2.0		
Green Ext Time (p_c), s		11.0		0.2		11.2		

Intersection Summary	
HCM 2010 Ctrl Delay	3.3
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	29	892	642	16	31	15
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	2000	1980	1961	2000	2039	2080
Adj Flow Rate, veh/h	31	959	676	17	40	19
Adj No. of Lanes	0	2	2	0	0	0
Peak Hour Factor	0.93	0.93	0.95	0.95	0.77	0.77
Percent Heavy Veh, %	1	1	2	2	0	0
Cap, veh/h	85	2257	2367	60	281	133
Arrive On Green	0.21	0.21	1.00	1.00	0.22	0.22
Sat Flow, veh/h	58	3630	3811	93	1248	593
Grp Volume(v), veh/h	520	470	339	354	60	0
Grp Sat Flow(s),veh/h/ln	1886	1712	1863	1944	1871	0
Q Serve(g_s), s	0.0	19.1	0.0	0.0	2.1	0.0
Cycle Q Clear(g_c), s	18.1	19.1	0.0	0.0	2.1	0.0
Prop In Lane	0.06			0.05	0.67	0.32
Lane Grp Cap(c), veh/h	1274	1091	1188	1239	421	0
V/C Ratio(X)	0.41	0.43	0.29	0.29	0.14	0.00
Avail Cap(c_a), veh/h	1274	1091	1188	1239	421	0
HCM Platoon Ratio	0.33	0.33	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.6	19.0	0.0	0.0	24.8	0.0
Incr Delay (d2), s/veh	1.0	1.2	0.6	0.6	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	9.4	0.2	0.2	1.1	0.0
LnGrp Delay(d),s/veh	19.6	20.2	0.6	0.6	25.5	0.0
LnGrp LOS	B	C	A	A	C	
Approach Vol, veh/h		990	693		60	
Approach Delay, s/veh		19.9	0.6		25.5	
Approach LOS		B	A		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		56.0		24.0		56.0		
Change Period (Y+Rc), s		* 5		6.0		* 5		
Max Green Setting (Gmax), s		* 51		18.0		* 51		
Max Q Clear Time (g_c+I1), s		21.1		4.1		2.0		
Green Ext Time (p_c), s		8.6		0.1		9.3		

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	593	310	220	429	224	186
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1800	1782	1782	1782	1782
Adj Flow Rate, veh/h	638	0	232	452	249	207
Adj No. of Lanes	2	1	1	2	1	1
Peak Hour Factor	0.93	0.93	0.95	0.95	0.90	0.90
Percent Heavy Veh, %	1	0	1	1	1	1
Cap, veh/h	1139	514	551	2070	403	661
Arrive On Green	0.45	0.00	0.40	1.00	0.24	0.24
Sat Flow, veh/h	3475	1530	1697	3475	1697	1515
Grp Volume(v), veh/h	638	0	232	452	249	207
Grp Sat Flow(s),veh/h/ln	1693	1530	1697	1693	1697	1515
Q Serve(g_s), s	11.1	0.0	0.0	0.0	10.5	0.0
Cycle Q Clear(g_c), s	11.1	0.0	0.0	0.0	10.5	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1139	514	551	2070	403	661
V/C Ratio(X)	0.56	0.00	0.42	0.22	0.62	0.31
Avail Cap(c_a), veh/h	1139	514	551	2070	403	661
HCM Platoon Ratio	1.33	1.33	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	0.0	15.6	0.0	27.3	14.7
Incr Delay (d2), s/veh	2.0	0.0	2.4	0.2	6.9	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	3.5	0.1	5.7	3.2
LnGrp Delay(d),s/veh	19.7	0.0	18.0	0.2	34.2	16.0
LnGrp LOS	B		B	A	C	B
Approach Vol, veh/h	638			684	456	
Approach Delay, s/veh	19.7			6.3	25.9	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	22.0	33.0				55.0		25.0
Change Period (Y+Rc), s	6.1	6.1				6.1		6.0
Max Green Setting (Gmax), s	15.9	26.9				48.9		19.0
Max Q Clear Time (g_c+I1), s	2.0	13.1				2.0		12.5
Green Ext Time (p_c), s	2.8	2.5				3.4		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	241	467	71	23	374	1	24	13	7	2	92	251
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.94	0.98		0.94	0.95		0.95	0.95		0.91
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765	1782	1782	1800	1731	1731	1800	1782	1782	1782
Adj Flow Rate, veh/h	254	492	75	24	394	1	26	14	8	2	97	264
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	4	4	4	1	1	1
Cap, veh/h	594	772	616	529	777	2	255	240	137	361	423	479
Arrive On Green	0.20	0.88	0.88	0.20	0.88	0.88	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1681	1765	1409	1697	1777	5	853	1012	578	1195	1782	1378
Grp Volume(v), veh/h	254	492	75	24	0	395	26	0	22	2	97	264
Grp Sat Flow(s),veh/h/ln	1681	1765	1409	1697	0	1781	853	0	1590	1195	1782	1378
Q Serve(g_s), s	0.0	6.3	0.6	0.0	0.0	4.0	2.0	0.0	0.9	0.1	3.5	3.6
Cycle Q Clear(g_c), s	0.0	6.3	0.6	0.0	0.0	4.0	5.5	0.0	0.9	1.0	3.5	3.6
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	594	772	617	529	0	779	255	0	378	361	423	479
V/C Ratio(X)	0.43	0.64	0.12	0.05	0.00	0.51	0.10	0.00	0.06	0.01	0.23	0.55
Avail Cap(c_a), veh/h	594	772	617	529	0	779	255	0	378	361	423	479
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.6	3.2	2.8	10.7	0.0	3.1	26.8	0.0	23.6	24.0	24.6	21.3
Incr Delay (d2), s/veh	2.2	4.0	0.4	0.2	0.0	2.4	0.8	0.0	0.3	0.0	1.3	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	3.6	0.3	0.3	0.0	2.3	0.5	0.0	0.4	0.0	1.9	1.9
LnGrp Delay(d),s/veh	14.9	7.2	3.3	10.9	0.0	5.4	27.6	0.0	23.9	24.0	25.9	25.8
LnGrp LOS	B	A	A	B		A	C		C	C	C	C
Approach Vol, veh/h		821			419			48			363	
Approach Delay, s/veh		9.2			5.7			25.9			25.8	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.0	41.0		25.0	14.0	41.0		25.0
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	8.0	35.0		19.0	8.0	35.0		19.0
Max Q Clear Time (g_c+I1), s	2.0	6.0		5.6	2.0	8.3		7.5
Green Ext Time (p_c), s	0.6	1.7		1.7	0.6	2.6		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	12.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	455	7	12	390	9	8	23	4	2	14	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.96		0.95	0.96		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1800	1765	1800	1800	1765	1800	1800	1765	1800
Adj Flow Rate, veh/h	15	479	7	13	429	10	11	32	5	3	18	0
Adj No. of Lanes	1	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.91	0.91	0.91	0.73	0.73	0.73	0.77	0.77	0.77
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	594	1086	16	57	1052	24	110	276	38	79	363	0
Arrive On Green	1.00	1.00	1.00	0.63	0.63	0.63	0.23	0.23	0.23	0.23	0.23	0.00
Sat Flow, veh/h	850	1735	25	18	1680	38	238	1207	168	119	1587	0
Grp Volume(v), veh/h	15	0	486	452	0	0	48	0	0	21	0	0
Grp Sat Flow(s),veh/h/ln	850	0	1760	1737	0	0	1612	0	0	1706	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	10.4	0.0	0.0	1.8	0.0	0.0	0.7	0.0	0.0
Prop In Lane	1.00		0.01	0.03		0.02	0.23		0.10	0.14		0.00
Lane Grp Cap(c), veh/h	594	0	1102	1134	0	0	424	0	0	442	0	0
V/C Ratio(X)	0.03	0.00	0.44	0.40	0.00	0.00	0.11	0.00	0.00	0.05	0.00	0.00
Avail Cap(c_a), veh/h	594	0	1102	1134	0	0	424	0	0	442	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	7.5	0.0	0.0	24.5	0.0	0.0	24.1	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	1.3	1.0	0.0	0.0	0.5	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.4	5.4	0.0	0.0	0.9	0.0	0.0	0.4	0.0	0.0
LnGrp Delay(d),s/veh	0.1	0.0	1.3	8.6	0.0	0.0	25.0	0.0	0.0	24.3	0.0	0.0
LnGrp LOS	A		A	A			C			C		
Approach Vol, veh/h		501			452			48			21	
Approach Delay, s/veh		1.2			8.6			25.0			24.3	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		56.0		24.0		56.0		24.0
Change Period (Y+Rc), s		5.9		* 5.7		5.9		* 5.7
Max Green Setting (Gmax), s		50.1		* 18		50.1		* 18
Max Q Clear Time (g_c+I1), s		2.0		2.7		12.4		3.8
Green Ext Time (p_c), s		8.2		0.2		8.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	6.1
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

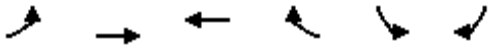
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	108	753	94	62	1015	42	122	326	134	58	147	86
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1980	1980	2000	1980	1980	2000	1980	1980	1980	1980	1980	2000
Adj Flow Rate, veh/h	114	793	99	65	1068	44	128	343	141	63	160	93
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	334	1355	169	390	1482	61	340	693	585	256	410	239
Arrive On Green	0.10	0.40	0.40	0.10	0.40	0.40	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1886	3366	420	1886	3683	152	1131	1980	1672	916	1173	682
Grp Volume(v), veh/h	114	443	449	65	545	567	128	343	141	63	0	253
Grp Sat Flow(s),veh/h/ln	1886	1881	1905	1886	1881	1953	1131	1980	1672	916	0	1854
Q Serve(g_s), s	0.0	22.1	22.1	0.0	29.3	29.3	11.5	16.3	7.2	7.0	0.0	12.3
Cycle Q Clear(g_c), s	0.0	22.1	22.1	0.0	29.3	29.3	23.9	16.3	7.2	23.3	0.0	12.3
Prop In Lane	1.00		0.22	1.00		0.08	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	334	757	767	390	757	786	340	693	585	256	0	649
V/C Ratio(X)	0.34	0.59	0.59	0.17	0.72	0.72	0.38	0.49	0.24	0.25	0.00	0.39
Avail Cap(c_a), veh/h	334	757	767	390	757	786	340	693	585	256	0	649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.6	28.0	28.0	30.9	30.2	30.2	38.3	30.7	27.7	39.8	0.0	29.4
Incr Delay (d2), s/veh	0.6	3.3	3.3	0.2	5.9	5.7	3.2	2.5	1.0	2.3	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	12.1	12.3	1.6	16.4	17.0	3.9	9.4	3.5	1.9	0.0	6.6
LnGrp Delay(d),s/veh	42.2	31.3	31.3	31.1	36.0	35.8	41.5	33.2	28.7	42.1	0.0	31.1
LnGrp LOS	D	C	C	C	D	D	D	C	C	D		C
Approach Vol, veh/h		1006			1177			612			316	
Approach Delay, s/veh		32.5			35.7			33.9			33.3	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.0	54.0		48.0	18.0	54.0		48.0
Change Period (Y+Rc), s	* 5.7	* 5.7		6.0	* 5.7	* 5.7		6.0
Max Green Setting (Gmax), s	* 12	* 48		42.0	* 12	* 48		42.0
Max Q Clear Time (g_c+I1), s	2.0	31.3		25.3	2.0	24.1		25.9
Green Ext Time (p_c), s	0.3	6.7		4.8	0.3	5.7		4.7

Intersection Summary	
HCM 2010 Ctrl Delay	34.1
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



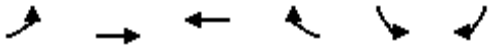
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	31	884	1139	32	49	46
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	2000	1980	1980	2000	2000	2000
Adj Flow Rate, veh/h	33	931	1225	34	62	58
Adj No. of Lanes	0	2	2	0	1	1
Peak Hour Factor	0.95	0.95	0.93	0.93	0.79	0.79
Percent Heavy Veh, %	1	1	1	1	0	0
Cap, veh/h	86	2174	2374	66	438	391
Arrive On Green	0.65	0.63	0.84	0.84	0.23	0.23
Sat Flow, veh/h	60	3514	3838	104	1905	1700
Grp Volume(v), veh/h	491	473	616	643	62	58
Grp Sat Flow(s),veh/h/ln	1772	1712	1881	1962	1905	1700
Q Serve(g_s), s	0.0	11.1	7.2	7.2	2.1	2.2
Cycle Q Clear(g_c), s	9.5	11.1	7.2	7.2	2.1	2.2
Prop In Lane	0.07			0.05	1.00	1.00
Lane Grp Cap(c), veh/h	1200	1087	1195	1246	438	391
V/C Ratio(X)	0.41	0.44	0.52	0.52	0.14	0.15
Avail Cap(c_a), veh/h	1200	1087	1195	1246	438	391
HCM Platoon Ratio	1.00	1.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.0	7.4	2.8	2.8	24.5	24.6
Incr Delay (d2), s/veh	1.0	1.3	1.6	1.5	0.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	5.5	4.0	4.1	1.2	1.1
LnGrp Delay(d),s/veh	8.1	8.6	4.4	4.4	25.2	25.4
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h		964	1259		120	
Approach Delay, s/veh		8.4	4.4		25.3	
Approach LOS		A	A		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		56.0		24.0		56.0		
Change Period (Y+Rc), s		* 5.2		5.6		* 5.2		
Max Green Setting (Gmax), s		* 51		18.4		* 51		
Max Q Clear Time (g_c+I1), s		13.1		4.2		9.2		
Green Ext Time (p_c), s		14.6		0.3		15.0		

Intersection Summary	
HCM 2010 Ctrl Delay	7.1
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	29	853	1123	16	20	21
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	2000	1980	1980	2000	2080	2080
Adj Flow Rate, veh/h	31	898	1208	17	33	35
Adj No. of Lanes	0	2	2	0	0	0
Peak Hour Factor	0.95	0.95	0.93	0.93	0.60	0.60
Percent Heavy Veh, %	1	1	1	1	0	0
Cap, veh/h	85	2194	2422	34	201	213
Arrive On Green	1.00	1.00	1.00	1.00	0.22	0.22
Sat Flow, veh/h	58	3532	3898	53	893	948
Grp Volume(v), veh/h	475	454	598	627	69	0
Grp Sat Flow(s),veh/h/ln	1788	1712	1881	1971	1868	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	2.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	2.4	0.0
Prop In Lane	0.07			0.03	0.48	0.51
Lane Grp Cap(c), veh/h	1210	1091	1199	1256	420	0
V/C Ratio(X)	0.39	0.42	0.50	0.50	0.16	0.00
Avail Cap(c_a), veh/h	1210	1091	1199	1256	420	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	24.9	0.0
Incr Delay (d2), s/veh	1.0	1.2	1.5	1.4	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.4	0.5	0.5	1.3	0.0
LnGrp Delay(d),s/veh	1.0	1.2	1.5	1.4	25.8	0.0
LnGrp LOS	A	A	A	A	C	
Approach Vol, veh/h		929	1225		69	
Approach Delay, s/veh		1.1	1.4		25.8	
Approach LOS		A	A		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		56.0		24.0		56.0		
Change Period (Y+Rc), s		* 5		6.0		* 5		
Max Green Setting (Gmax), s		* 51		18.0		* 51		
Max Q Clear Time (g_c+I1), s		2.0		4.4		2.0		
Green Ext Time (p_c), s		14.7		0.2		14.7		

Intersection Summary	
HCM 2010 Ctrl Delay	2.0
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	565	290	223	773	378	235
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1800	1765	1765	1800	1800
Adj Flow Rate, veh/h	595	0	235	814	430	267
Adj No. of Lanes	2	1	1	2	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.88	0.88
Percent Heavy Veh, %	1	0	2	2	0	0
Cap, veh/h	969	438	531	1882	493	744
Arrive On Green	0.57	0.00	0.40	1.00	0.29	0.29
Sat Flow, veh/h	3475	1530	1681	3441	1714	1530
Grp Volume(v), veh/h	595	0	235	814	430	267
Grp Sat Flow(s),veh/h/ln	1693	1530	1681	1676	1714	1530
Q Serve(g_s), s	9.3	0.0	0.0	0.0	19.1	0.0
Cycle Q Clear(g_c), s	9.3	0.0	0.0	0.0	19.1	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	969	438	531	1882	493	744
V/C Ratio(X)	0.61	0.00	0.44	0.43	0.87	0.36
Avail Cap(c_a), veh/h	969	438	531	1882	493	744
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.2	0.0	16.7	0.0	27.1	12.8
Incr Delay (d2), s/veh	2.9	0.0	2.7	0.7	18.8	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	3.5	0.2	11.5	3.9
LnGrp Delay(d),s/veh	17.1	0.0	19.3	0.7	45.9	14.1
LnGrp LOS	B		B	A	D	B
Approach Vol, veh/h	595			1049	697	
Approach Delay, s/veh	17.1			4.9	33.7	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	22.0	29.0				51.0		29.0
Change Period (Y+Rc), s	6.1	6.1				6.1		6.0
Max Green Setting (Gmax), s	15.9	22.9				44.9		23.0
Max Q Clear Time (g_c+I1), s	2.0	11.3				2.0		21.1
Green Ext Time (p_c), s	4.5	2.2				6.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	16.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	224	483	93	12	517	3	68	74	17	13	37	411
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.88	0.97		0.88	0.92		0.89	0.93		0.82
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1782	1765	1765	1800	1782	1782	1800	1782	1782	1782
Adj Flow Rate, veh/h	252	543	104	13	544	3	82	89	20	15	44	484
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.89	0.89	0.89	0.95	0.95	0.95	0.83	0.83	0.83	0.85	0.85	0.85
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	1	1	1
Cap, veh/h	513	757	565	489	744	4	249	327	73	290	423	466
Arrive On Green	0.22	0.85	0.85	0.22	0.85	0.85	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1697	1782	1330	1681	1752	10	727	1375	309	1085	1782	1244
Grp Volume(v), veh/h	252	543	104	13	0	547	82	0	109	15	44	484
Grp Sat Flow(s),veh/h/ln	1697	1782	1330	1681	0	1761	727	0	1684	1085	1782	1244
Q Serve(g_s), s	0.0	9.4	1.1	0.0	0.0	9.8	7.9	0.0	4.2	0.9	1.5	19.0
Cycle Q Clear(g_c), s	0.0	9.4	1.1	0.0	0.0	9.8	9.5	0.0	4.2	5.1	1.5	19.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	513	757	565	489	0	749	249	0	400	290	423	466
V/C Ratio(X)	0.49	0.72	0.18	0.03	0.00	0.73	0.33	0.00	0.27	0.05	0.10	1.04
Avail Cap(c_a), veh/h	513	757	565	489	0	749	249	0	400	290	423	466
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.8	4.2	3.5	11.9	0.0	4.2	27.6	0.0	24.9	27.0	23.8	25.4
Incr Delay (d2), s/veh	3.3	5.8	0.7	0.1	0.0	6.2	3.5	0.0	1.7	0.3	0.5	52.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	5.1	0.5	0.2	0.0	5.5	1.8	0.0	2.2	0.3	0.8	13.2
LnGrp Delay(d),s/veh	20.1	9.9	4.3	12.0	0.0	10.4	31.1	0.0	26.5	27.3	24.3	77.6
LnGrp LOS	C	A	A	B		B	C		C	C	C	F
Approach Vol, veh/h		899			560			191			543	
Approach Delay, s/veh		12.1			10.4			28.5			71.9	
Approach LOS		B			B			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.0	40.0		25.0	15.0	40.0		25.0
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	9.0	34.0		19.0	9.0	34.0		19.0
Max Q Clear Time (g_c+I1), s	2.0	11.8		21.0	2.0	11.4		11.5
Green Ext Time (p_c), s	0.6	2.5		0.0	0.6	3.0		2.7

Intersection Summary	
HCM 2010 Ctrl Delay	27.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	497	4	33	495	29	26	39	23	16	47	11
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	0.96		0.92	0.94		0.93	0.94		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1800	1765	1800	1800	1765	1800	1800	1765	1800
Adj Flow Rate, veh/h	13	523	4	36	538	32	29	43	25	18	54	13
Adj No. of Lanes	1	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.91	0.91	0.91	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	488	1077	8	81	939	54	136	184	91	104	270	58
Arrive On Green	1.00	1.00	1.00	0.62	0.62	0.62	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	755	1748	13	54	1524	88	325	772	381	209	1130	242
Grp Volume(v), veh/h	13	0	527	606	0	0	97	0	0	85	0	0
Grp Sat Flow(s),veh/h/ln	755	0	1761	1667	0	0	1477	0	0	1581	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	16.4	0.0	0.0	3.8	0.0	0.0	3.2	0.0	0.0
Prop In Lane	1.00		0.01	0.06		0.05	0.30		0.26	0.21		0.15
Lane Grp Cap(c), veh/h	488	0	1085	1075	0	0	411	0	0	432	0	0
V/C Ratio(X)	0.03	0.00	0.49	0.56	0.00	0.00	0.24	0.00	0.00	0.20	0.00	0.00
Avail Cap(c_a), veh/h	488	0	1085	1075	0	0	411	0	0	432	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	9.0	0.0	0.0	24.6	0.0	0.0	24.4	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	1.6	2.1	0.0	0.0	1.3	0.0	0.0	1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.5	8.4	0.0	0.0	1.9	0.0	0.0	1.6	0.0	0.0
LnGrp Delay(d),s/veh	0.1	0.0	1.6	11.2	0.0	0.0	26.0	0.0	0.0	25.4	0.0	0.0
LnGrp LOS	A		A	B			C			C		
Approach Vol, veh/h		540			606			97			85	
Approach Delay, s/veh		1.5			11.2			26.0			25.4	
Approach LOS		A			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		55.0		25.0		55.0		25.0
Change Period (Y+Rc), s		* 5.7		5.9		* 5.7		5.9
Max Green Setting (Gmax), s		* 49		19.1		* 49		19.1
Max Q Clear Time (g_c+I1), s		2.0		5.2		18.4		5.8
Green Ext Time (p_c), s		6.7		0.6		6.4		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	9.2
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Crash Type

Count	Type
0	uncoded
3	single
0	head-on
1	head-on/lt
10	angle
68	rr-end
4	rr-end/lt
2	rr-end/rt
15	ss-same
0	ss-opp
14	unknown
Totals:	117

Light Conditions

Count	Type
0	uncoded
94	day
2	dawn
3	dusk
16	dark/ltd
1	dark/unltd
1	unknown
Totals:	117

Weather

Count	Type
0	uncoded
66	clear
18	cloudy
1	fog/smoke
19	rain
7	snow
1	wind
0	sleet/hail
5	unknown
Totals:	117

Road Condition

Count	Type
0	uncoded
81	dry
25	wet
1	icy
4	snowy
0	muddy
2	slushy
0	debris
4	unknown
Totals:	117

Crashes By Month

Count	Type
7	January
9	February
7	March
13	April
5	May
16	June
7	July
6	August
9	September
18	October
13	November
7	December
Totals:	117

Hazardous Action

Count	Type
136	none
1	speeding
0	imprp/no signal
3	imprp backing
76	unable to stop
2	other
1	unknown
1	reckls driving
1	negl driving
0	spd too slow
23	failed to yield
0	disrgd traffic cntrl
0	wrong way
0	left of center
1	imprp passing
5	imprp lane use
1	imprp turn
Totals:	251

Unit Type

Count	Type
0	Bicyclist
0	Engineer
250	Vehicle
1	Pedestrian
Totals:	251

Crashes By Year

Count	Type
0	2000
0	2001
0	2002
0	2003
0	2004
0	2005
0	2006
0	2007
0	2008
0	2009
0	2010
0	2011
37	2012
43	2013
37	2014
0	2015
Totals:	117

Crash Severity

	FATAL	A	B	C	No Inj	Total
Persons	0	0	6	26	297	329
Crashes	0	0	6	18	93	117

Alcohol in Crashes

	FATAL	PI	PD	Total
Drinking	0	0	3	3
Not Drinking	0	24	90	114
Total	0	24	93	117

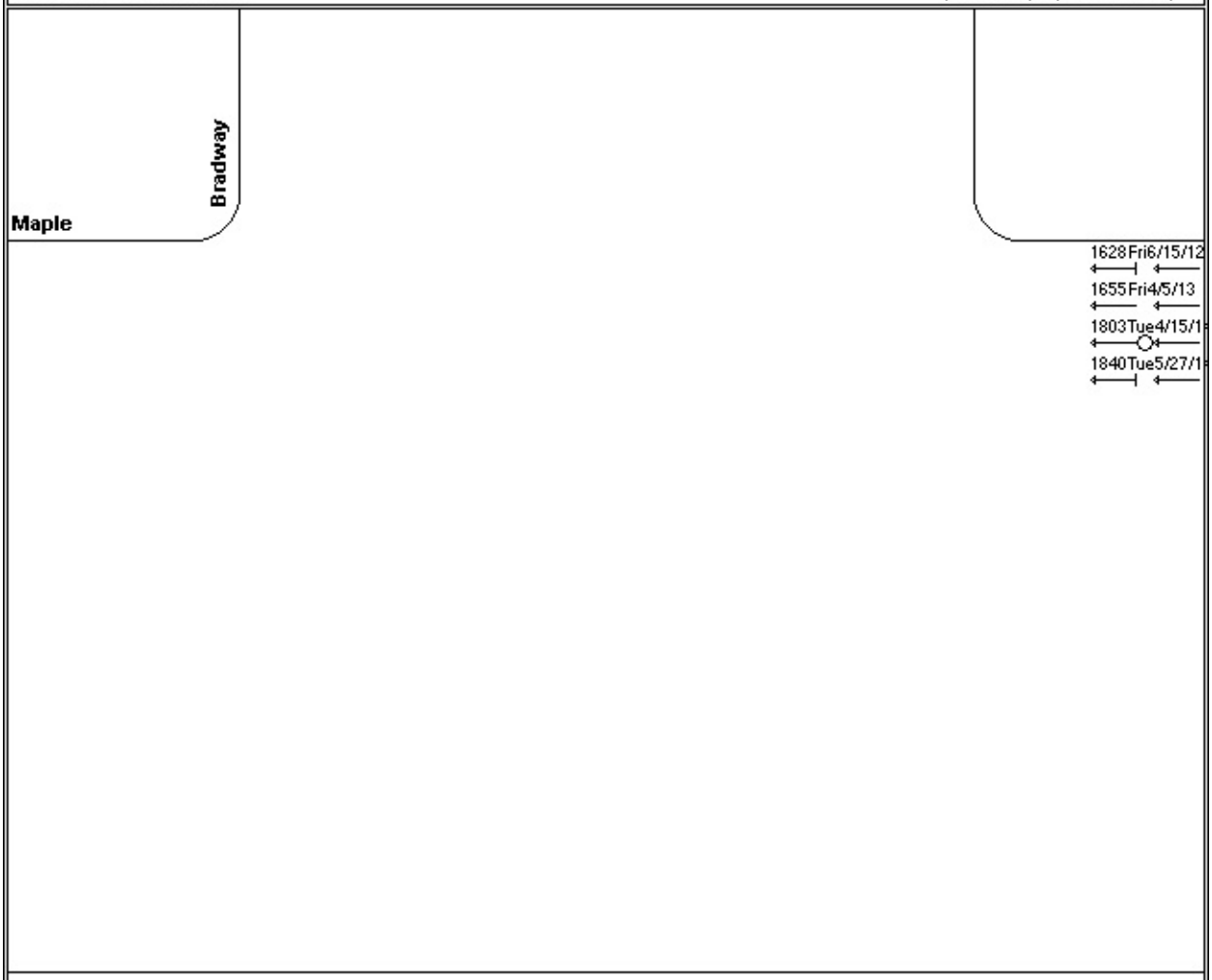
Crashes per Hour by Day

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Unknown	Total
12a - 1a	0	0	0	0	0	0	0	0	**0**
1a - 2a	0	0	0	0	0	0	0	0	**0**
2a - 3a	0	0	0	0	0	0	0	0	**0**
3a - 4a	0	0	0	0	0	0	0	0	**0**
4a - 5a	0	0	0	0	0	0	0	0	**0**
5a - 6a	0	0	0	0	0	0	0	0	**0**
6a - 7a	0	0	0	0	0	0	0	0	**0**
7a - 8a	0	0	1	1	0	1	1	0	**4**
8a - 9a	1	0	0	1	1	3	1	0	**7**
9a - 10a	0	2	0	3	3	2	1	0	**11**
10a - 11a	0	0	0	2	2	0	1	0	**5**
11a - 12p	0	1	1	0	2	3	0	0	**7**
12p - 1p	1	0	0	1	1	1	0	0	**4**
1p - 2p	0	0	1	0	1	2	0	0	**4**
2p - 3p	1	1	1	0	0	1	1	0	**5**
3p - 4p	0	1	2	7	3	2	1	0	**16**
4p - 5p	0	2	2	2	2	5	3	0	**16**
5p - 6p	1	4	1	4	2	0	0	0	**12**
6p - 7p	2	1	5	0	1	3	0	0	**12**
7p - 8p	0	3	0	1	0	4	0	0	**8**
8p - 9p	0	1	1	0	0	1	0	0	**3**
9p - 10p	1	0	0	0	0	0	0	0	**1**
10p - 11p	0	0	0	0	1	0	0	0	**1**
11p - 12a	0	0	0	0	0	1	0	0	**1**
Unknown Time	0	0	0	0	0	0	0	0	**0**
Total	**7**	**16**	**15**	**22**	**19**	**29**	**9**	**0**	**117**

Bradway & Maple
1/1/2012 - 12/31/2014

Bradway Blvd

4 Crashes
(0 crash(es) not drawn)



Straight	Backing	Erratic	Injury	S Sideswipe	N
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/9/2015

Traffic Improvement Association of Michigan

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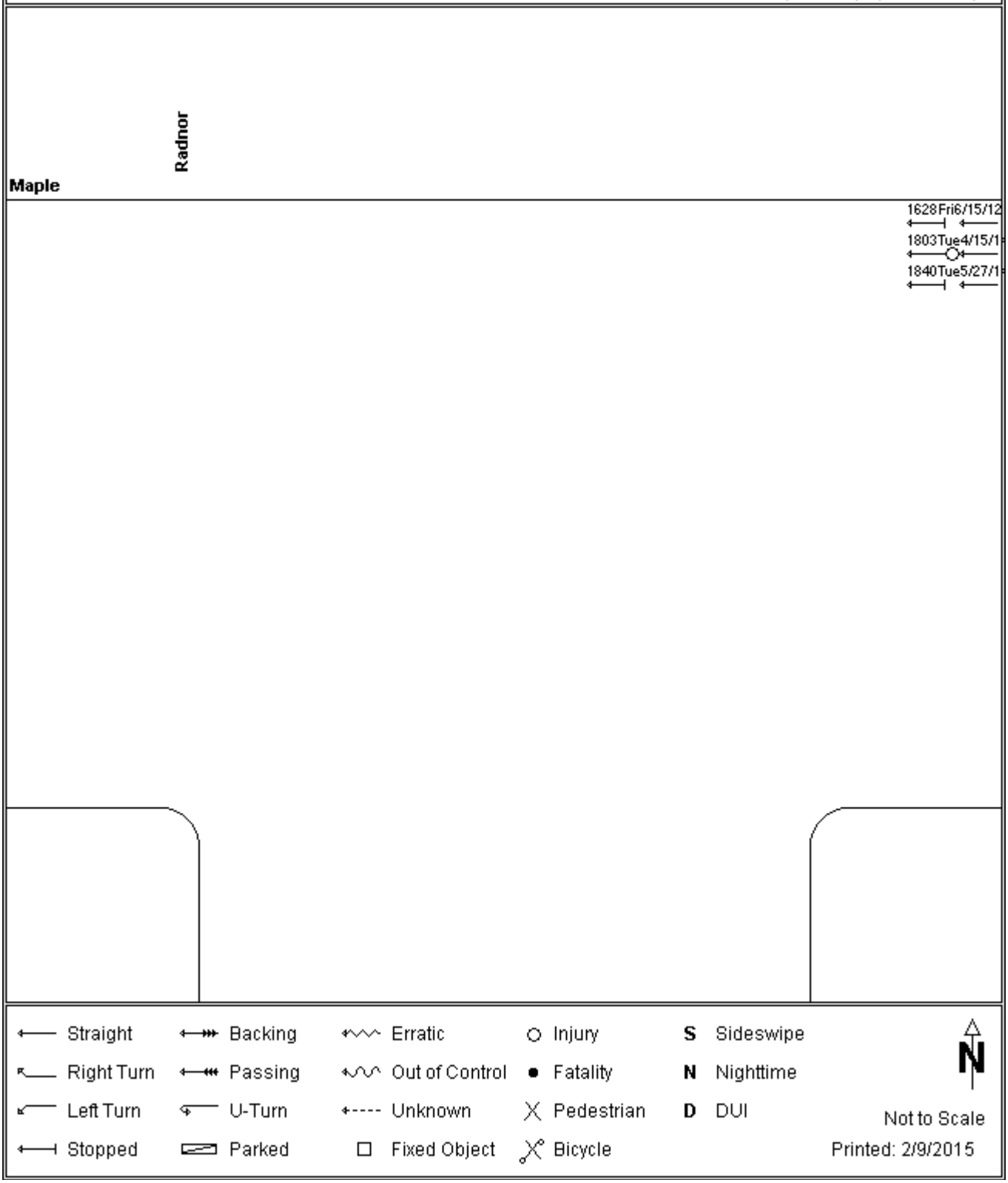
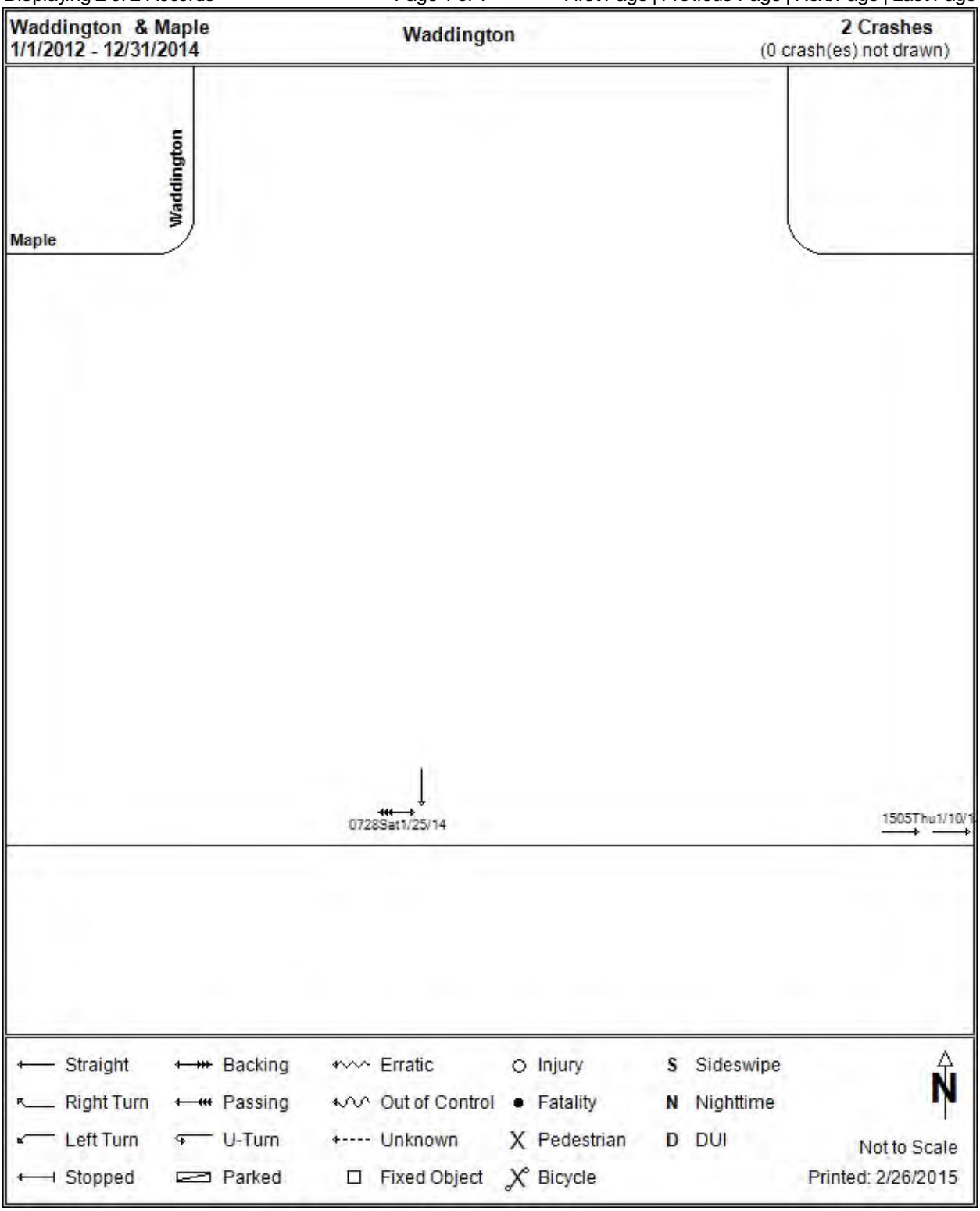
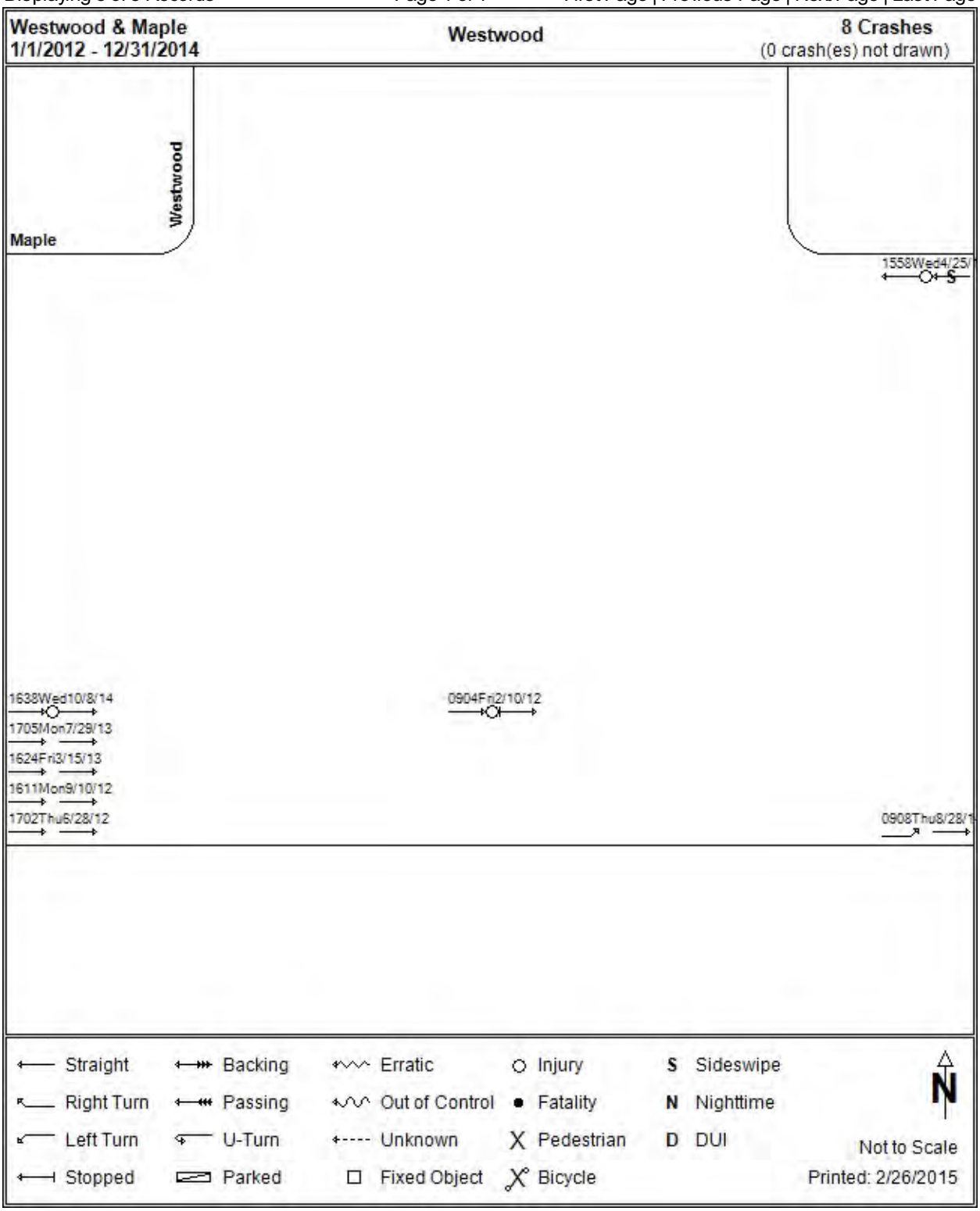
Radnor & Maple
1/1/2012 - 12/31/2014

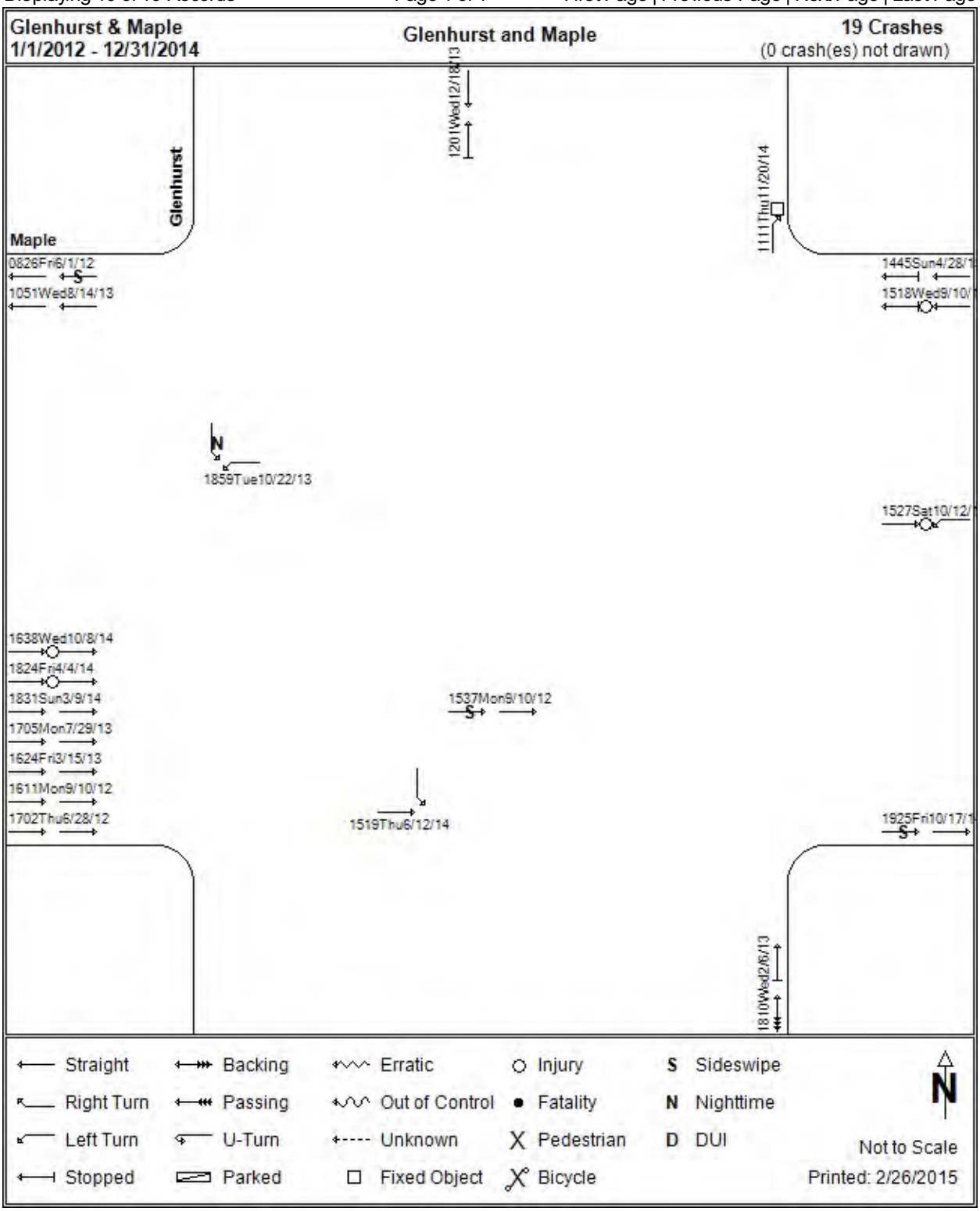
Maple

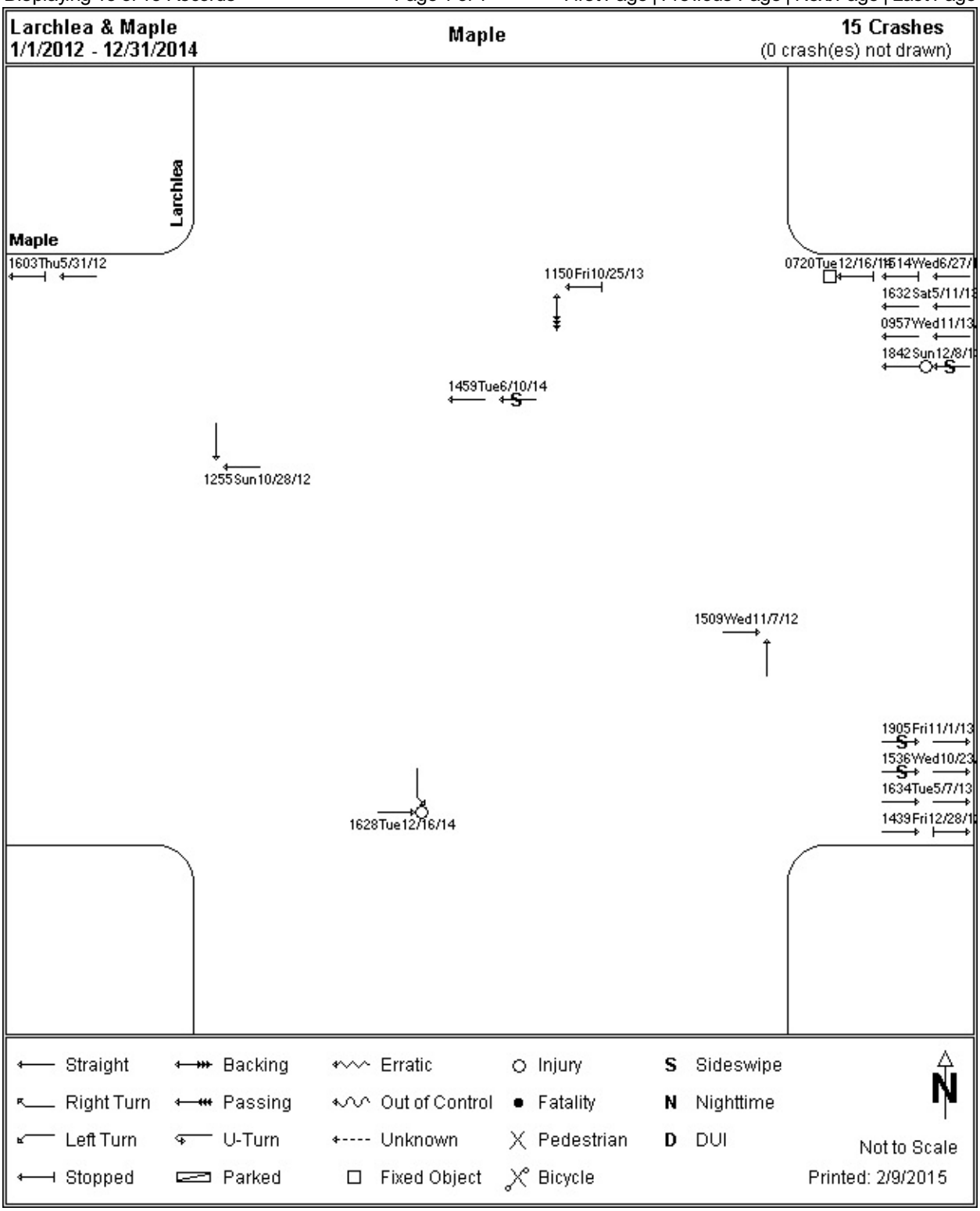
3 Crashes
(0 crash(es) not drawn)

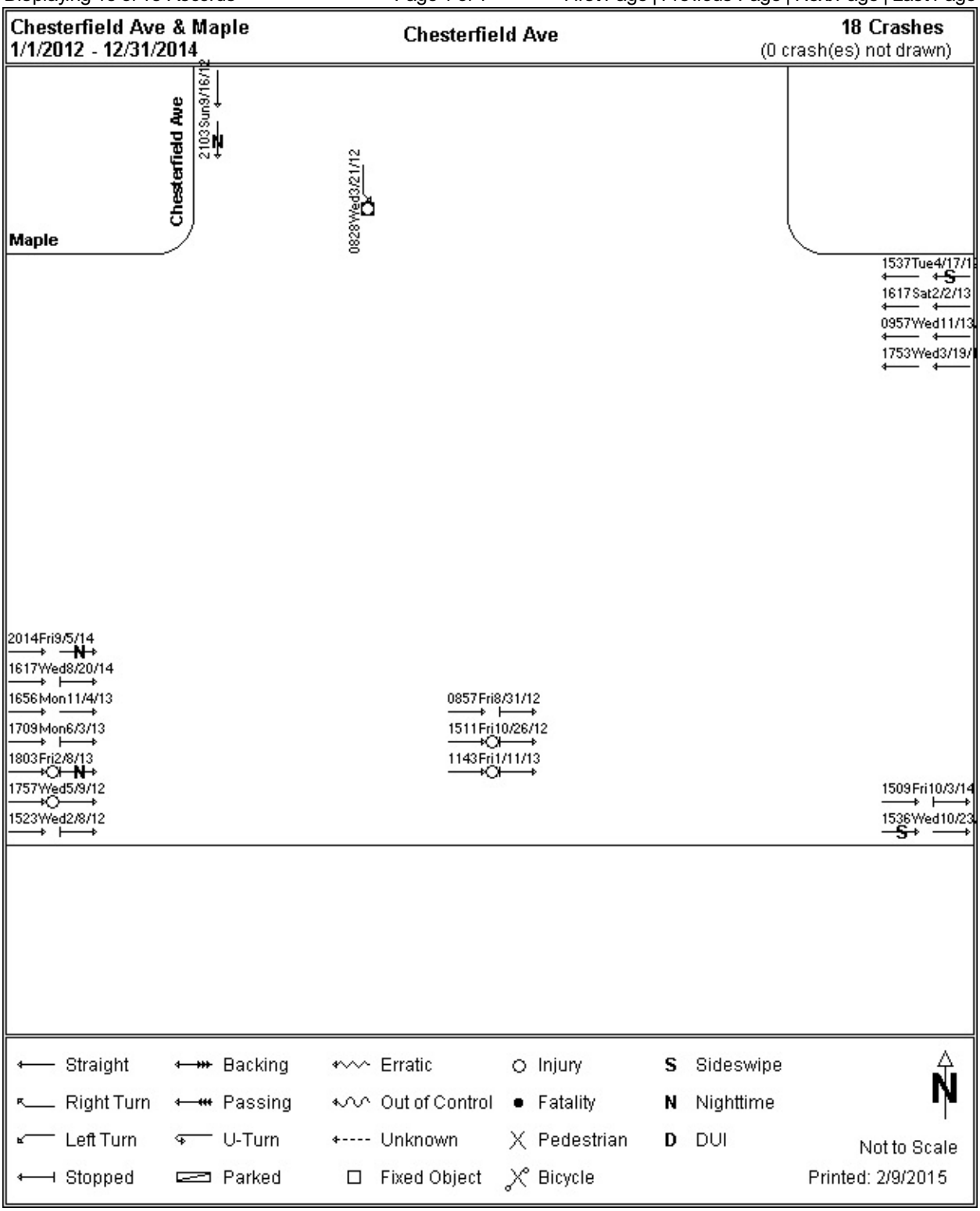


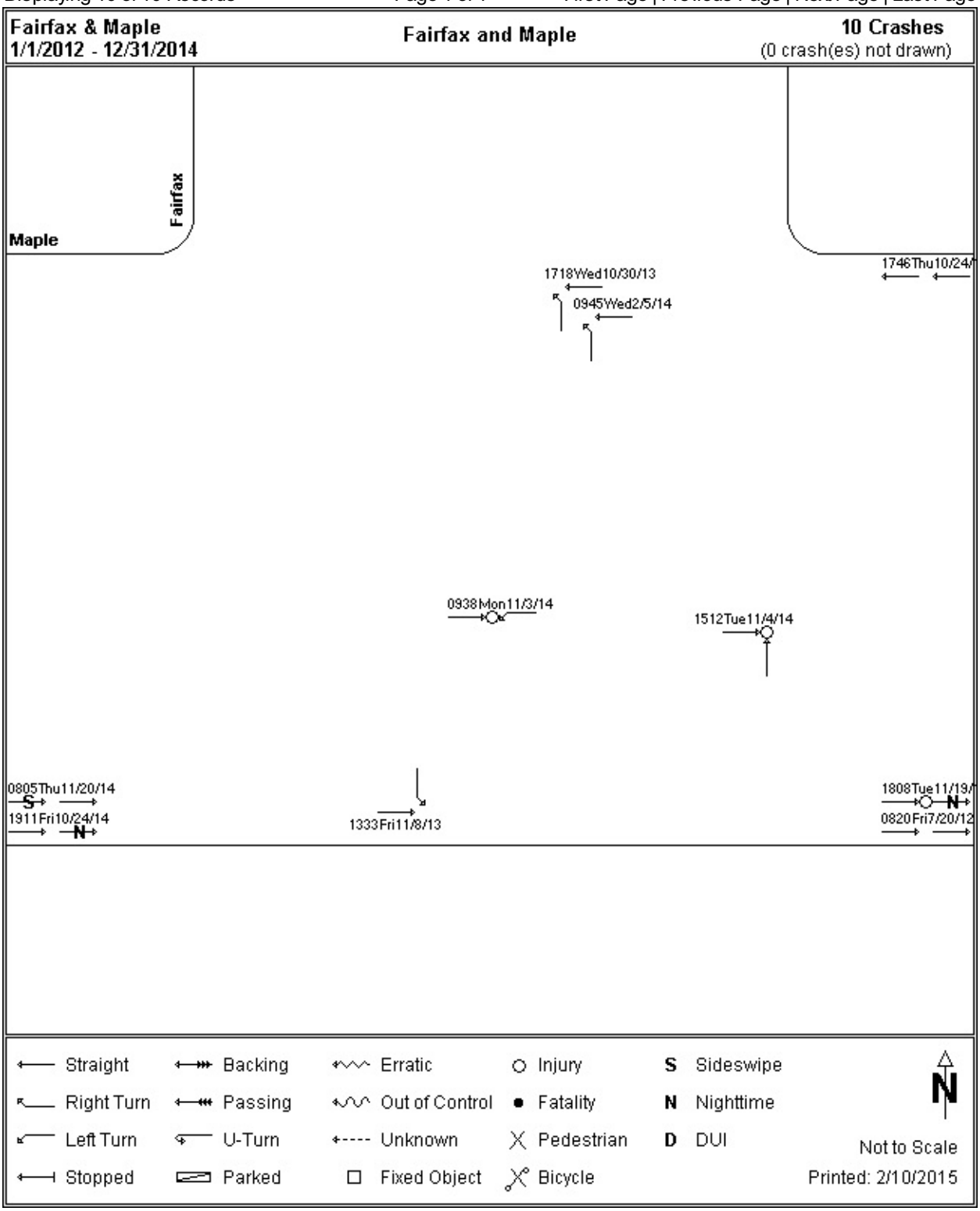

Waddington & Maple
1/1/2012 - 12/31/2014
Waddington
2 Crashes
(0 crash(es) not drawn)
Waddington
Maple
0728Sat1/25/14
1505Thu1/10/1
Straight
Backing
Erratic
Injury
S Sideswipe
Right Turn
Passing
Out of Control
Fatality
N Nighttime
Left Turn
U-Turn
Unknown
Pedestrian
D DUI
Stopped
Parked
Fixed Object
Bicycle
N
Not to Scale
Printed: 2/26/2015


Westwood & Maple
1/1/2012 - 12/31/2014
Westwood
8 Crashes
(0 crash(es) not drawn)
Westwood
Maple
1558Wed4/25/
S
1638Wed10/8/14
1705Mon7/29/13
1624Fri3/15/13
1611Mon9/10/12
1702Thu6/28/12
0904Fri2/10/12
0908Thu8/28/
Straight
Right Turn
Left Turn
Stopped
Backing
Passing
U-Turn
Parked
Erratic
Out of Control
Unknown
Fixed Object
Injury
Fatality
Pedestrian
Bicycle
S Sideswipe
N Nighttime
D DUI
N
Not to Scale
Printed: 2/26/2015


Glenhurst & Maple
1/1/2012 - 12/31/2014
Glenhurst and Maple
19 Crashes
(0 crash(es) not drawn)
Glenhurst
Maple
1201Wed12/18/13
1111Thu11/20/14
0826Fri6/1/12
1051Wed8/14/13
1445Sun4/28/1
1518Wed9/10/1
1859Tue10/22/13
1527Sat10/12/1
1638Wed10/8/14
1824Fri4/4/14
1831Sun3/9/14
1705Mon7/29/13
1624Fri3/15/13
1611Mon9/10/12
1702Thu6/28/12
1537Mon9/10/12
1519Thu6/12/14
1925Fri10/17/1
1810Wed2/6/13
Straight
Right Turn
Left Turn
Stopped
Backing
Passing
U-Turn
Parked
Erratic
Out of Control
Unknown
Fixed Object
Injury
Fatality
Pedestrian
Bicycle
S Sideswipe
N Nighttime
D DUI
N
Not to Scale
Printed: 2/26/2015


Larchlea & Maple
1/1/2012 - 12/31/2014
Maple
15 Crashes
(0 crash(es) not drawn)
Larchlea
Maple
1603 Thu 5/31/12
1150 Fri 10/25/13
0720 Tue 12/16/11
1514 Wed 6/27/
1632 Sat 5/11/1
0957 Wed 11/13
1842 Sun 12/8/1
S
1459 Tue 6/10/14
S
1255 Sun 10/28/12
1509 Wed 11/7/12
1905 Fri 11/1/13
S
1536 Wed 10/23
S
1634 Tue 5/7/13
1439 Fri 12/28/1
1628 Tue 12/16/14
Straight
Backing
Erratic
Injury
S Sideswipe
Right Turn
Passing
Out of Control
Fatality
N Nighttime
Left Turn
U-Turn
Unknown
Pedestrian
D DUI
Stopped
Parked
Fixed Object
Bicycle
N
Not to Scale
Printed: 2/9/2015

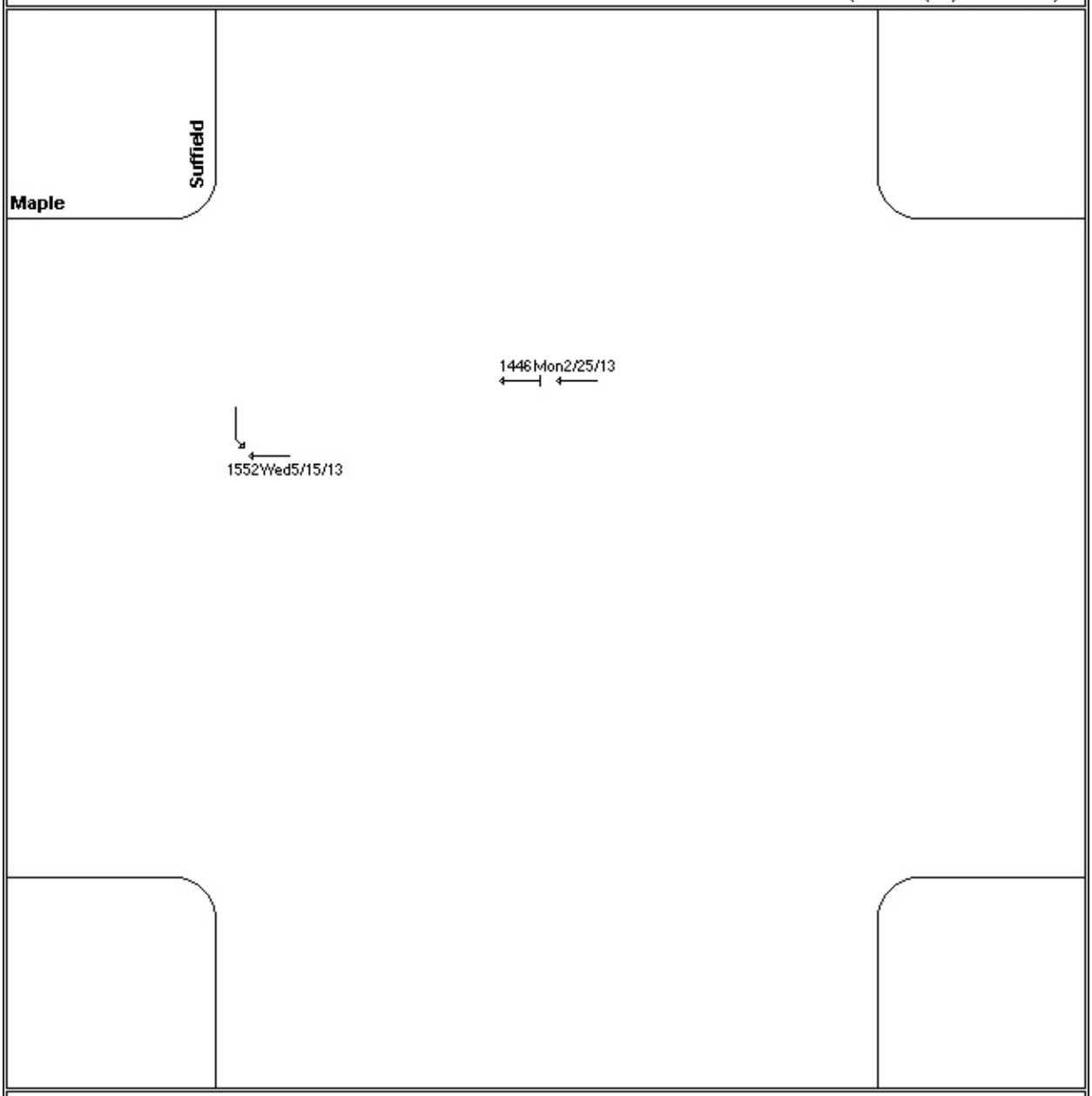

Chesterfield Ave & Maple
1/1/2012 - 12/31/2014
Chesterfield Ave
18 Crashes
(0 crash(es) not drawn)
Chesterfield Ave
Maple
2103Sun3/16/12
0828Wed3/21/12
1537Tue4/17/1
1617Sat2/2/13
0957Wed11/13
1753Wed3/19/
2014Fri9/5/14
1617Wed8/20/14
1656Mon11/4/13
1709Mon6/3/13
1803Fri2/8/13
1757Wed5/9/12
1523Wed2/8/12
0857Fri8/31/12
1511Fri10/26/12
1143Fri1/11/13
1509Fri10/3/14
1536Wed10/23
Straight
Right Turn
Left Turn
Stopped
Backing
Passing
U-Turn
Parked
Erratic
Out of Control
Unknown
Fixed Object
Injury
Fatality
Pedestrian
Bicycle
S Sideswipe
N Nighttime
D DUI
N
Not to Scale
Printed: 2/9/2015


Fairfax & Maple
1/1/2012 - 12/31/2014
Fairfax and Maple
10 Crashes
(0 crash(es) not drawn)
Fairfax
Maple
1718Wed10/30/13
0945Wed2/5/14
1746Thu10/24/
0938Mon11/3/14
1512Tue11/4/14
0805Thu11/20/14
S
1911Fri10/24/14
N
1333Fri11/8/13
1808Tue11/19/
N
0820Fri7/20/12
Straight
Right Turn
Left Turn
Stopped
Backing
Passing
U-Turn
Parked
Erratic
Out of Control
Unknown
Fixed Object
Injury
Fatality
Pedestrian
Bicycle
S Sideswipe
N Nighttime
D DUI
N
Not to Scale
Printed: 2/10/2015

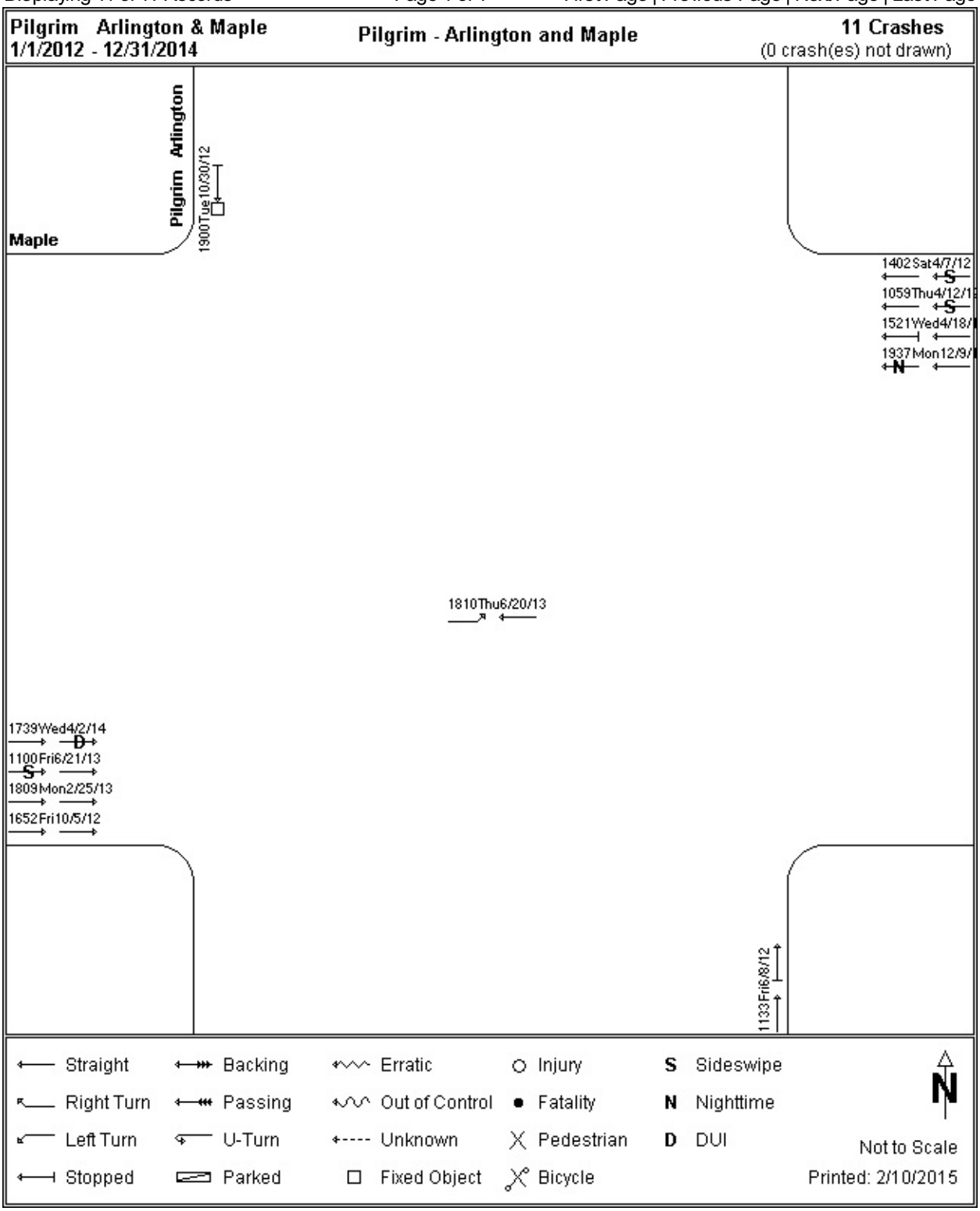
Suffield & Maple
1/1/2012 - 12/31/2014

Suffield and Maple

2 Crashes
(0 crash(es) not drawn)



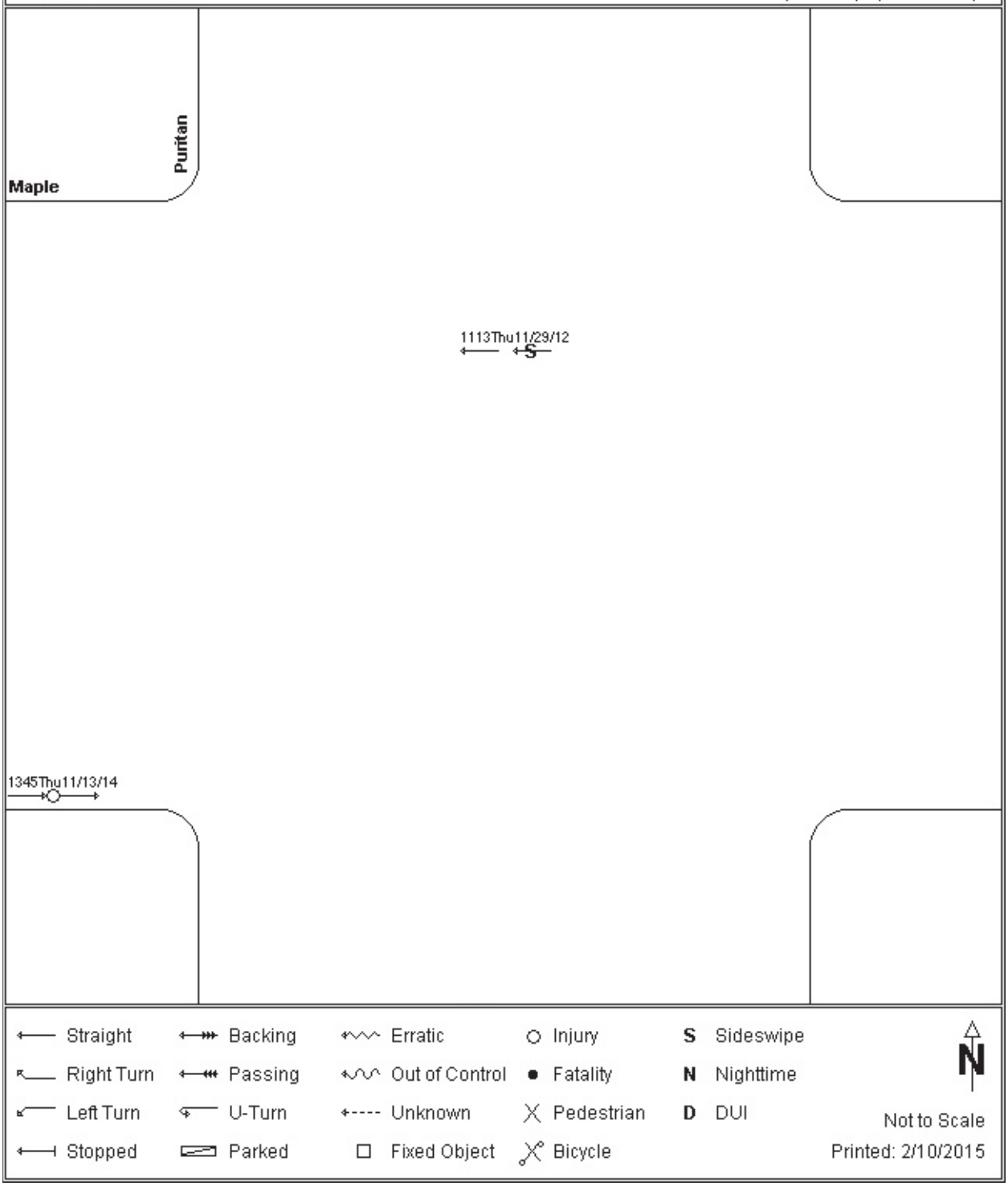
Straight	Backing	Erratic	Injury	S Sideswipe	N
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/10/2015


Pilgrim Arlington & Maple
1/1/2012 - 12/31/2014
Pilgrim - Arlington and Maple
11 Crashes
(0 crash(es) not drawn)
Pilgrim Arlington
Maple
1900 Tue 10/30/12
1402 Sat 4/7/12
S
1059 Thu 4/12/1
S
1521 Wed 4/18/
1937 Mon 12/9/
N
1810 Thu 6/20/13
1739 Wed 4/2/14
D
1100 Fri 6/21/13
S
1809 Mon 2/25/13
1652 Fri 10/5/12
1133 Fri 6/8/12
Straight
Right Turn
Left Turn
Stopped
Backing
Passing
U-Turn
Parked
Erratic
Out of Control
Unknown
Fixed Object
Injury
Fatality
Pedestrian
Bicycle
S Sideswipe
N Nighttime
D DUI
N
Not to Scale
Printed: 2/10/2015

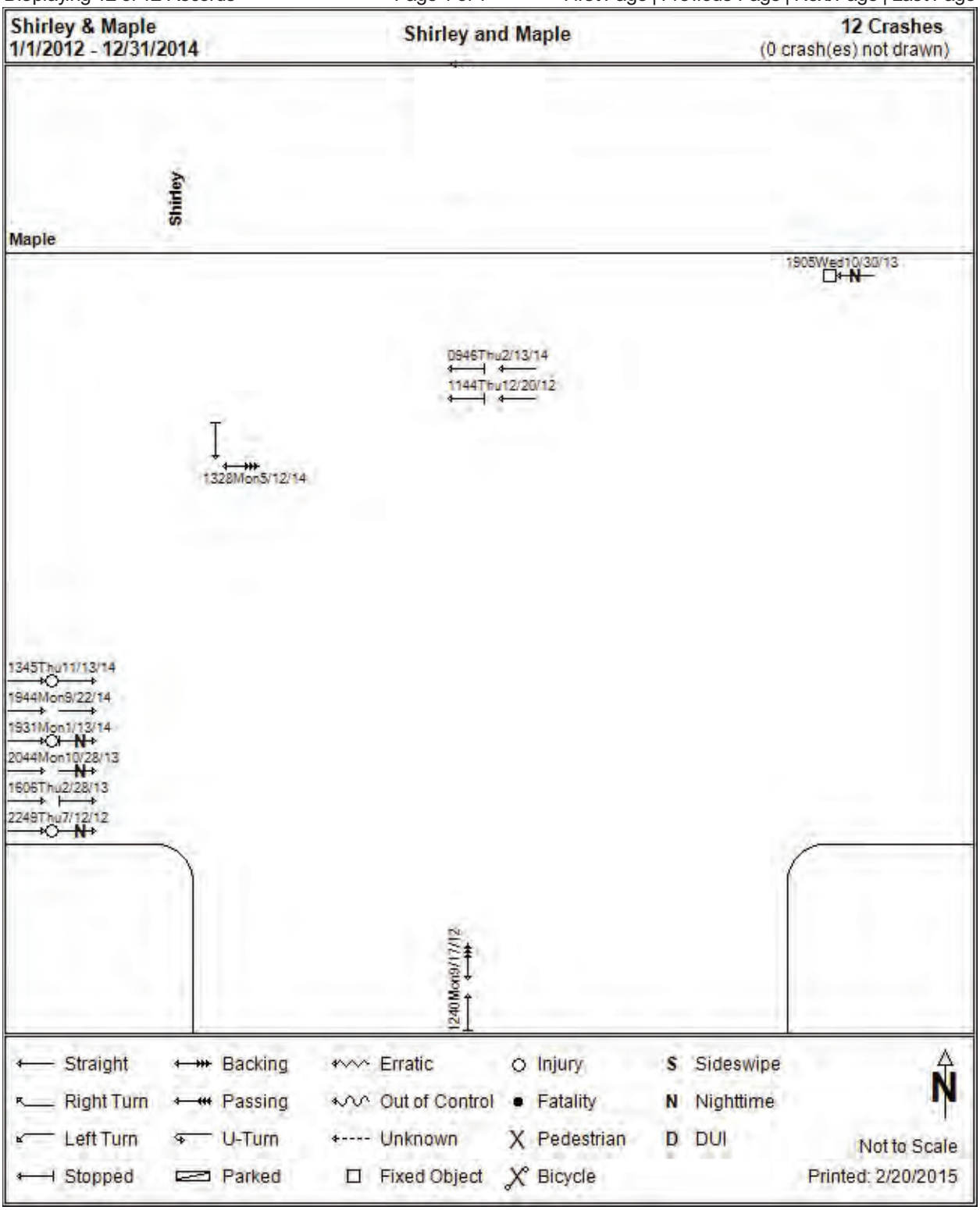
Puritan & Maple
1/1/2012 - 12/31/2014

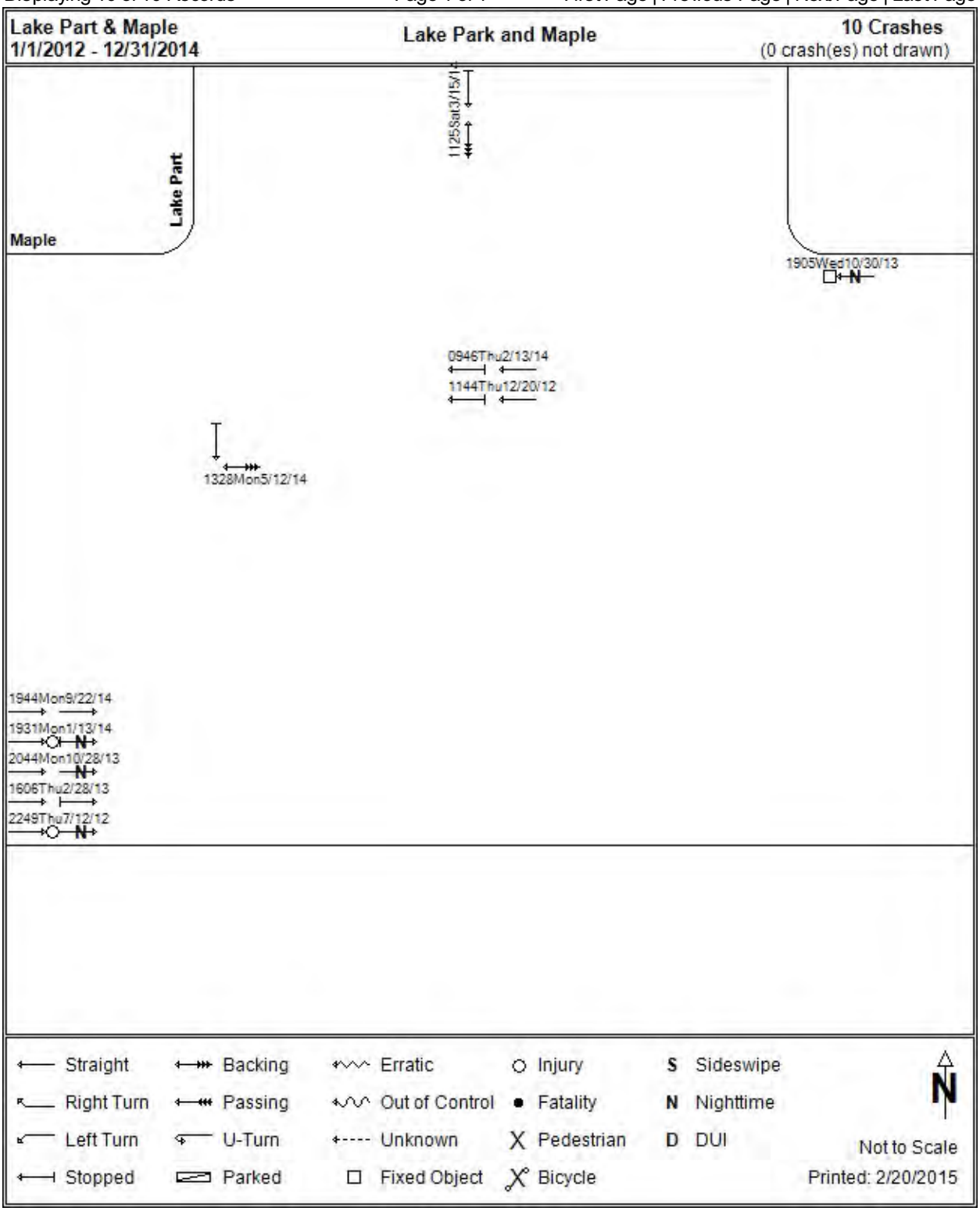
Puritan and Maple

3 Crashes
(0 crash(es) not drawn)



Straight	Backing	Erratic	Injury	S Sideswipe	N
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/10/2015

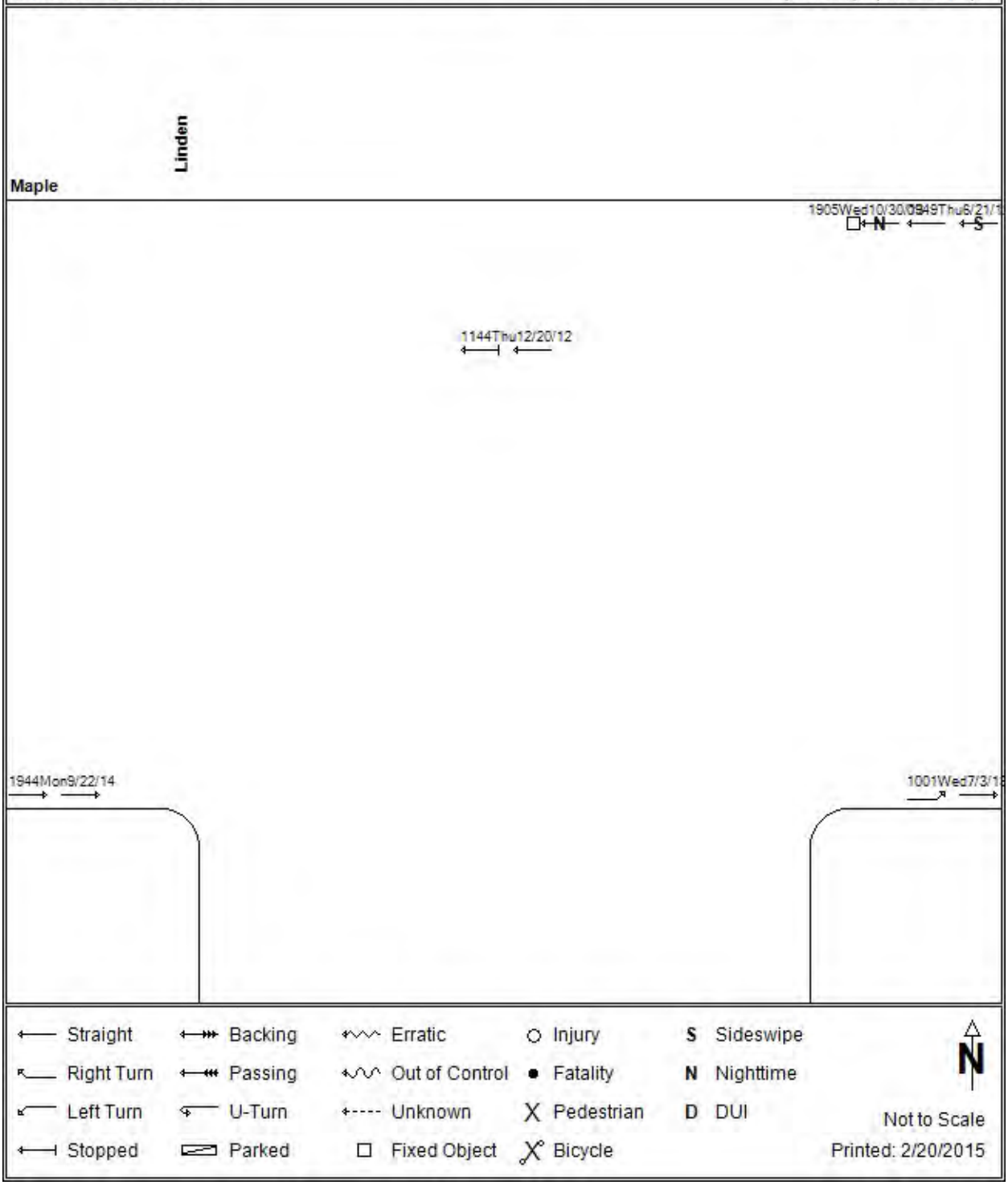

Shirley & Maple
1/1/2012 - 12/31/2014
Shirley and Maple
12 Crashes
(0 crash(es) not drawn)
Shirley
Maple
1905Wed10/30/13
0946Thu2/13/14
1144Thu12/20/12
1328Mon5/12/14
1345Thu11/13/14
1944Mon9/22/14
1931Mon1/13/14
2044Mon10/28/13
1606Thu2/28/13
2249Thu7/12/12
1240Mon9/17/12
Straight
Backing
Erratic
Injury
S Sideswipe
Right Turn
Passing
Out of Control
Fatality
N Nighttime
Left Turn
U-Turn
Unknown
Pedestrian
D DUI
Stopped
Parked
Fixed Object
Bicycle
N
Not to Scale
Printed: 2/20/2015


Lake Part & Maple
1/1/2012 - 12/31/2014
Lake Park and Maple
10 Crashes
(0 crash(es) not drawn)
Lake Part
Maple
1125Sat3/15/14
1905Wed10/30/13
0946Thu2/13/14
1144Thu12/20/12
1328Mon5/12/14
1944Mon9/22/14
1931Mon1/13/14
2044Mon10/28/13
1606Thu2/28/13
2249Thu7/12/12
Straight
Right Turn
Left Turn
Stopped
Backing
Passing
U-Turn
Parked
Erratic
Out of Control
Unknown
Fixed Object
Injury
Fatality
Pedestrian
Bicycle
S Sideswipe
N Nighttime
D DUI
N
Not to Scale
Printed: 2/20/2015

Linden & Maple
1/1/2012 - 12/31/2014

Linden and Maple

5 Crashes
(0 crash(es) not drawn)

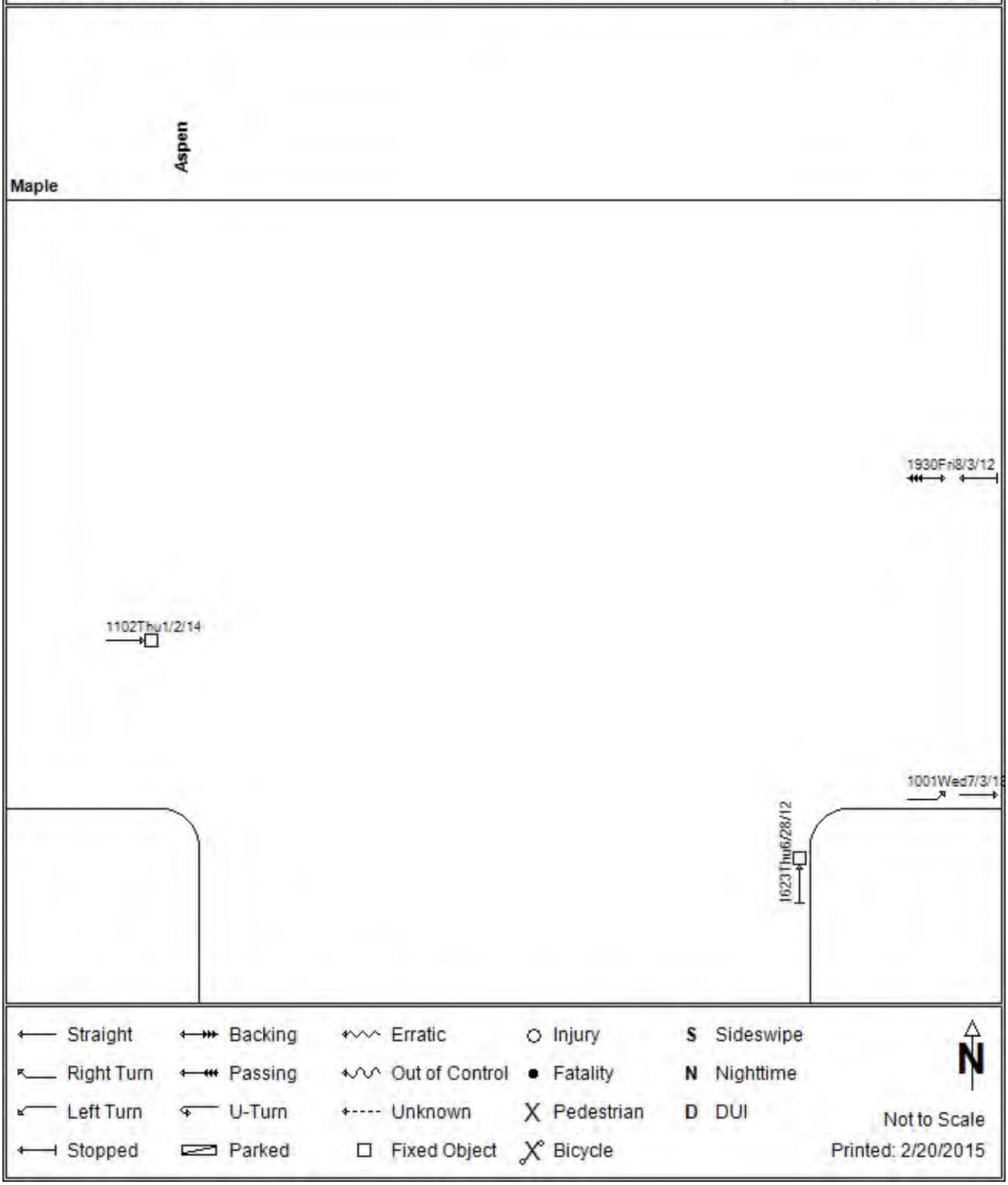


Straight	Backing	Erratic	Injury	S Sideswipe	N
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/20/2015

Aspen & Maple
1/1/2012 - 12/31/2014

Aspen and Maple

4 Crashes
(0 crash(es) not drawn)

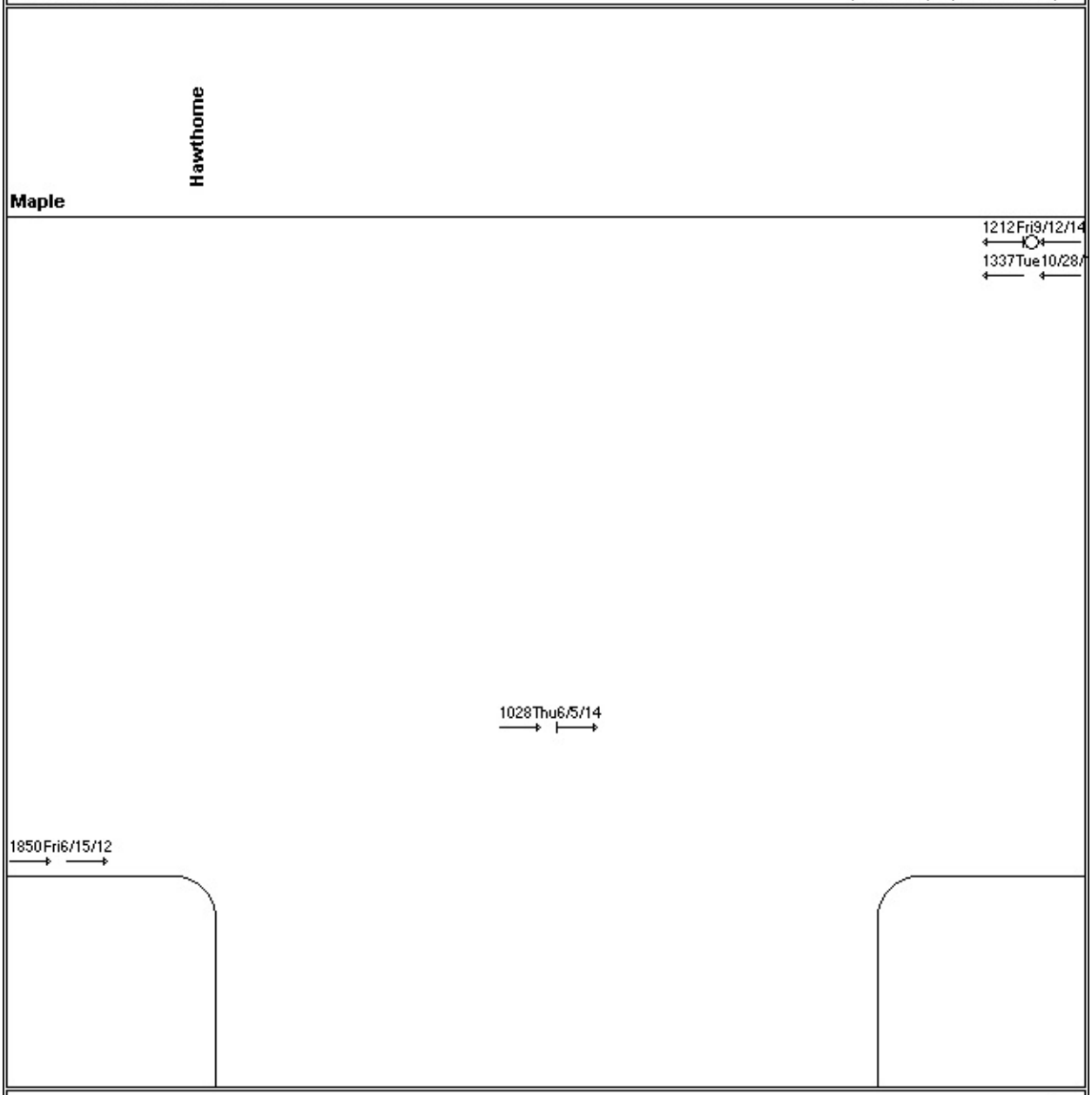


Straight	Backing	Erratic	Injury	S Sideswipe	N
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/20/2015

Hawthorne & Maple
1/1/2012 - 12/31/2014

Maple and Hawthorne

4 Crashes
(0 crash(es) not drawn)

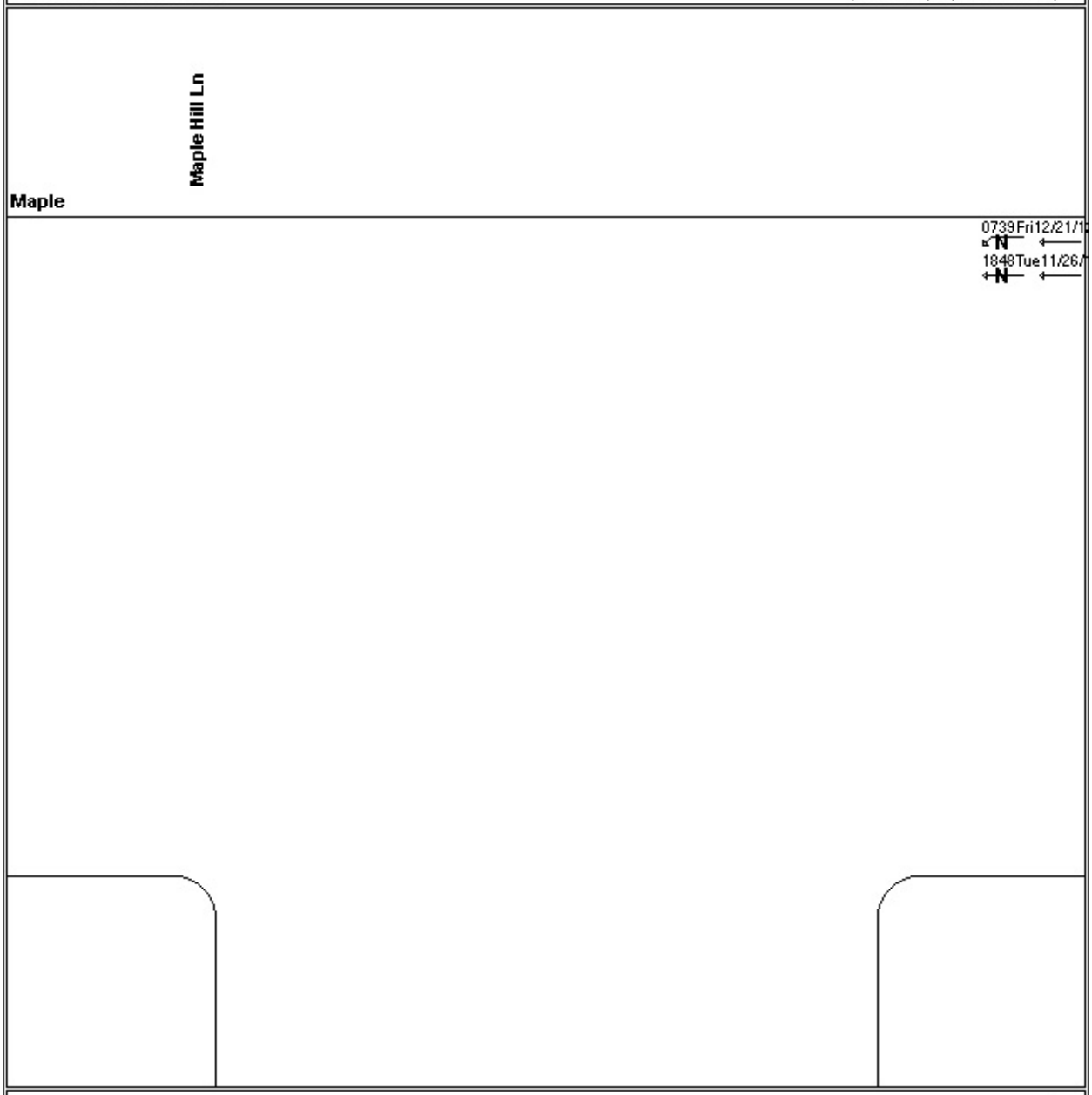


Straight	Backing	Erratic	Injury	S Sideswipe	N
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/10/2015

Maple Hill Ln & Maple
1/1/2012 - 12/31/2014

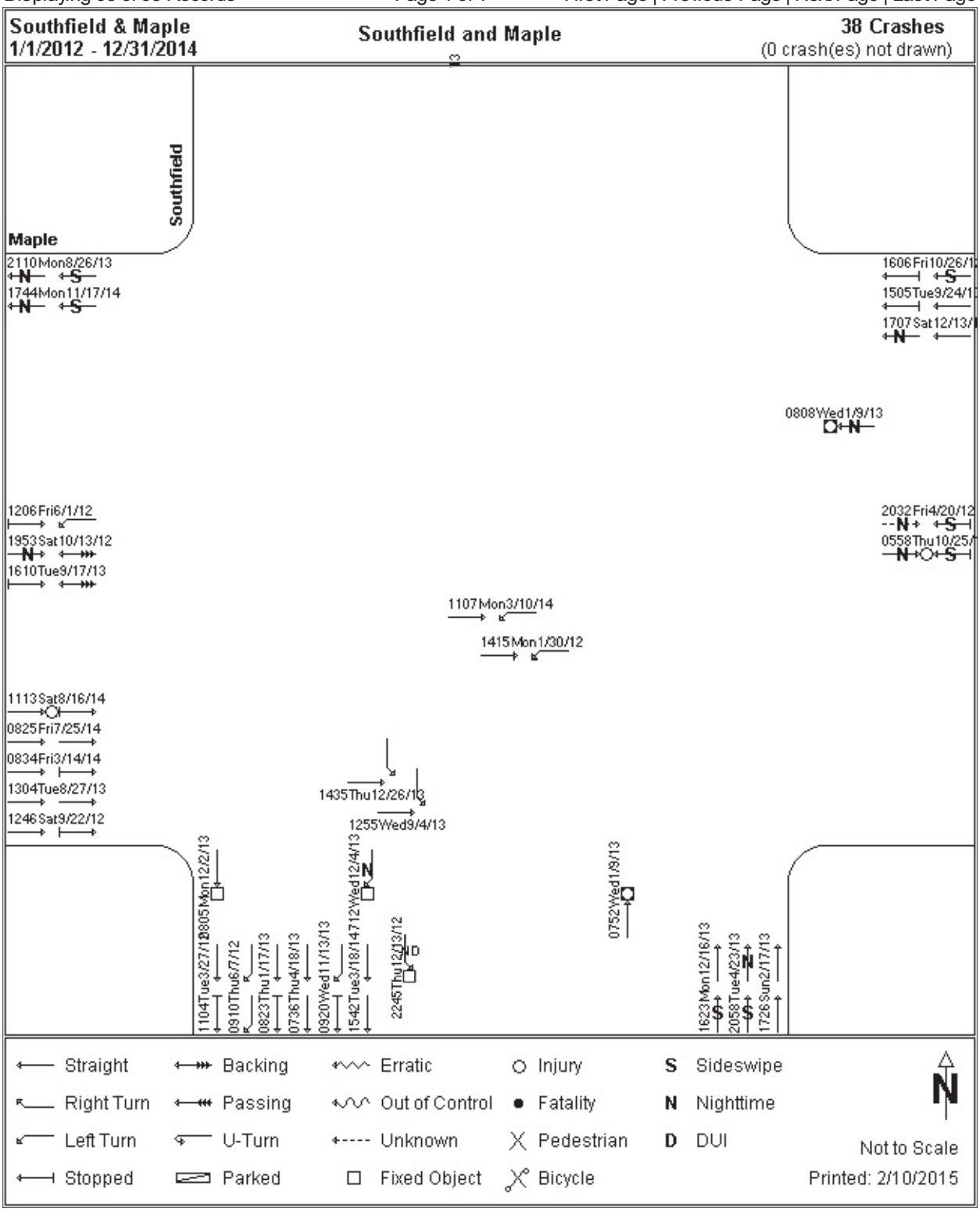
Maple Hill Ln and Maple

2 Crashes
(0 crash(es) not drawn)



Not to Scale

Printed: 2/10/2015


Southfield & Maple
1/1/2012 - 12/31/2014
Southfield and Maple
38 Crashes
(0 crash(es) not drawn)
Southfield
Maple
2110Mon8/26/13
1744Mon11/17/14
1606Fri10/26/12
1505Tue9/24/12
1707Sat12/13/
0808Wed1/9/13
1206Fri6/1/12
1953Sat10/13/12
1610Tue9/17/13
2032Fri4/20/12
0558Thu10/25/
1107Mon3/10/14
1415Mon1/30/12
1113Sat8/16/14
0825Fri7/25/14
0834Fri3/14/14
1304Tue8/27/13
1246Sat9/22/12
1435Thu12/26/13
1255Wed9/4/13
1104Tue3/27/12
0805Mon12/2/13
0910Thu6/7/12
0823Thu1/17/13
0736Thu4/18/13
0920Wed11/13/13
1542Tue3/18/14
712Wed12/4/13
2245Thu12/13/12
0752Wed1/9/13
1623Mon12/16/13
2058Tue4/23/13
1726Sun2/17/13
Straight
Right Turn
Left Turn
Stopped
Backing
Passing
U-Turn
Parked
Erratic
Out of Control
Unknown
Fixed Object
Injury
Fatality
Pedestrian
Bicycle
S Sideswipe
N Nighttime
D DUI
N
Not to Scale
Printed: 2/10/2015

Traffic Improvement Association of Michigan

Crash Detail Report

Request #: 0025229 Printed By: Patrick Cawley Printed On: 2/20/2015

DATE_VAL:	between 1/1/2012 and 12/31/2014
PR/MP	PR 683906 FROM MP 12.166 TO MP 13.492 [W Maple Rd & S Cranbrook Rd to W Maple Rd & Southfield Rd]

#1 **Location:** W MAPLE RD (13.27) 25 feet W of BALDWIN AVE **Crash ID:** 8263442

Crash Date: 01/16/2012 **Day:** Mon **Hour:** 5pm **Weather:** rain **Roadway:** wet **Light:** dark/ltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** ss-same
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	change lanes	veh in transpt	none	none	none	imprp lane use	car	rtside
2	E	go straight	veh in transpt	none	none	none	none	car	lftside

UD-10: 120068566

#2 **Location:** W MAPLE RD (12.66) 30 feet W of CHESTERFIELD AVE **Crash ID:** 8282893

Crash Date: 02/08/2012 **Day:** Wed **Hour:** 3pm **Weather:** unknown **Roadway:** unknown **Light:** unknown
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 120122711

#3 **Location:** W MAPLE RD (12.45) 5 feet SW of S GLENHURST DR **Crash ID:** 8284975

Crash Date: 02/10/2012 **Day:** Fri **Hour:** 9am **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 120128463

#4 **Location:** W MAPLE RD (12.55) 15 feet E of WESTCHESTER WAY **Crash ID:** 8313275

Crash Date: 03/21/2012 **Day:** Wed **Hour:** 12pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 3 **Inj 0:** 0 **How:** rr-end
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 120208035

#5 **Location:** W MAPLE RD (12.67) 20 feet E of CHESTERFIELD AVE **Crash ID:** 8317378

Crash Date: 03/21/2012 **Day:** Wed **Hour:** 8am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 1 **Inj C:** 0 **Inj 0:** 0 **How:** unknown
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	left turn	pedestrian	none	none	none	failed to yield	car	lftfront

2	crossing at inter	veh in transpt	none	none	none	none	ped	none

UD-10: 120219823

#6 **Location:** W MAPLE RD (12.89) 30 feet E of PILGRIM AVE **Crash ID:** 8325723

Crash Date: 04/07/2012 **Day:** Sat **Hour:** 2pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** ss-same
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	change lanes	veh in transpt	none	none	none	failed to yield	sm truck	rtfront
2	W	go straight	veh in transpt	none	none	none	none	car	rtside

UD-10: 120243578

#7 **Location:** W MAPLE RD (12.89) 30 feet E of PILGRIM AVE **Crash ID:** 8326513

Crash Date: 04/12/2012 **Day:** Thu **Hour:** 10am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** ss-same
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	change lanes	veh in transpt	none	none	none	imprp lane use	car	rtfront
2	W	go straight	veh in transpt	none	none	none	none	car	lftside

UD-10: 120245826

#8 **Location:** W MAPLE RD (13.28) 20 feet E of BALDWIN AVE **Crash ID:** 8329940

Crash Date: 04/14/2012 **Day:** Sat **Hour:** 9am **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 1 **How:** unknown
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1		change lanes	other noncoll	none	none	none	unknown	car	none
2	W	go straight	ran off road/r	curb	none	none	none	sm truck	rtfront

UD-10: 120255556

#9 **Location:** W MAPLE RD (13.27) 25 feet W of BALDWIN AVE **Crash ID:** 8329941

Crash Date: 04/14/2012 **Day:** Sat **Hour:** 4pm **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 120255559

#10 **Location:** W MAPLE RD (12.68) 30 feet E of CHESTERFIELD AVE **Crash ID:** 8330984

Crash Date: 04/17/2012 **Day:** Tue **Hour:** 3pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** ss-same
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	change lanes	veh in transpt	none	none	none	failed to yield	sm truck	rtside
2	W	go straight	veh in transpt	none	none	none	none	sm truck	lftside

UD-10: 120258607

#11 **Location:** W MAPLE RD (12.90) 40 feet E of ARLINGTON RD **Crash ID:** 8334230

Crash Date: 04/18/2012 **Day:** Wed **Hour:** 3pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 5 **How:** unknown
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	veh in transpt	none	none	unable to stop	car	lftfront

2	W	stop on road	veh in transpt	veh in transpt	none	none	none	car	rtrear
3	E	go straight	veh in transpt	curb	none	none	none	car	lftfront
4	E	go straight	veh in transpt	veh in transpt	none	none	none	car	lftside
5	W	go straight	veh in transpt	none	none	none	none	car	lftfront

UD-10: 120268042

#12 **Location:** W MAPLE RD (12.43) 95 feet E of WADDINGTON RD **Crash ID:** 8335900

Crash Date: 04/25/2012 **Day:** Wed **Hour:** 3pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 1 **How:** ss-same
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	change lanes	veh in transpt	none	none	none	imprp lane use	car	rtside
2	W	go straight	veh in transpt	none	none	none	none	car	lftfront

UD-10: 120272794

#13 **Location:** W MAPLE RD (12.67) 5 feet W of CHESTERFIELD AVE **Crash ID:** 8345551

Crash Date: 05/09/2012 **Day:** Wed **Hour:** 5pm **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 1 **Inj C:** 0 **Inj 0:** 1 **How:** rr-end
CVT: Birmingham **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	slow/stop on rd	veh in transpt	none	none	none	unable to stop	car	lftfront
2	E	slow/stop on rd	veh in transpt	fell from veh	none	none	none	motorcycle	ctrrear

UD-10: 8345551

#14 **Location:** W MAPLE RD (12.60) 50 feet W of LARCHLEA DR **Crash ID:** 8362303

Crash Date: 05/31/2012 **Day:** Thu **Hour:** 4pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 5 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	stop on road	veh in transpt	none	none	none	none	car	ctrfront
3	W	stop on road	veh in transpt	none	none	none	none	car	ctrrear
4	W	stop on road	veh in transpt	none	none	none	none	van	none

UD-10: 120348384

#15 **Location:** W MAPLE RD (12.50) 32 feet W of N GLENHURST DR **Crash ID:** 8365564

Crash Date: 06/01/2012 **Day:** Fri **Hour:** 8am **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** ss-same
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	loss of control	veh in transpt	none	none	speeding	car	rtfront
2	W	go straight	veh in transpt	utility pole	none	none	none	van	ctrfront

UD-10: 120357849

#16 **Location:** W MAPLE RD (13.27) 75 feet W of BALDWIN AVE **Crash ID:** 8363911

Crash Date: 06/01/2012 **Day:** Fri **Hour:** 9am **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end/lt
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	slow/stop on rd	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 120353027

#17 **Location:** W MAPLE RD (13.26) 100 feet W of BALDWIN AVE **Crash ID:** 8363915

Crash Date: 06/01/2012 **Day:** Fri **Hour:** 1pm **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end/lt
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	slow/stop on rd	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 120353039

#18 **Location:** W MAPLE RD (12.22) 21 feet E of S CRANBROOK RD **Crash ID:** 8376167
Crash Date: 06/15/2012 **Day:** Fri **Hour:** 4pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	slow/stop on rd	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	stop on road	veh in transpt	none	none	none	none	pickup	ctrrear

UD-10: 120388412

#19 **Location:** W MAPLE RD (13.19) 15 feet W of HAWTHORNE RD **Crash ID:** 8374792
Crash Date: 06/15/2012 **Day:** Fri **Hour:** 6pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	go straight	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 120384435

#20 **Location:** W MAPLE RD (13.07) 20 feet E of LINDEN RD **Crash ID:** 8376869
Crash Date: 06/21/2012 **Day:** Thu **Hour:** 9am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** ss-same
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	change lanes	veh in transpt	none	none	none	imprp passing	car	rtfront
2	W	go straight	veh in transpt	none	none	none	none	truck/bus	lftrear

UD-10: 8376869

#21 **Location:** W MAPLE RD (12.62) 30 feet E of LARCHLEA DR **Crash ID:** 8382501
Crash Date: 06/27/2012 **Day:** Wed **Hour:** 3pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	stop on road	veh in transpt	none	none	none	none	car	ctrfront
3	W	stop on road	veh in transpt	none	none	none	none	car	ctrfront
4	W	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 120406312

#22 **Location:** W MAPLE RD (12.49) 20 feet W of S GLENHURST DR **Crash ID:** 8382500
Crash Date: 06/28/2012 **Day:** Thu **Hour:** 5pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	slow/stop on rd	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 120406309

#23 **Location:** W MAPLE RD (13.28) 1 feet W of BALDWIN AVE **Crash ID:** 8391260

Crash Date: 07/08/2012 **Day:** Sun **Hour:** 5pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 1 **How:** rr-end
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 120431704

#24 **Location:** W MAPLE RD (13.03) 15 feet W of LAKEPARK DR **Crash ID:** 8393739

Crash Date: 07/12/2012 **Day:** Thu **Hour:** 10pm **Weather:** clear **Roadway:** dry **Light:** dark/ltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 1 **Inj C:** 0 **Inj 0:** 1 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	pickup	ctrfront
2	E	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 120439018

#25 **Location:** W MAPLE RD (12.75) 26 feet E of PLEASANT AVE **Crash ID:** 8415756

Crash Date: 07/20/2012 **Day:** Fri **Hour:** 8am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end/rt
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	change lanes	veh in transpt	none	none	none	unable to stop	car	rtfront
2	E	slow/stop on rd	veh in transpt	none	none	none	none	car	lftrear

UD-10: 8415756

#26 **Location:** W MAPLE RD (13.13) 10 feet E of ASPEN RD **Crash ID:** 8413239

Crash Date: 08/03/2012 **Day:** Fri **Hour:** 7pm **Weather:** unknown **Roadway:** unknown **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** unknown
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	backing	veh in transpt	none	none	none	imprp backing	pickup	ctrrear
2	W	stop on road	veh in transpt	none	none	none	none	car	ctrfront

UD-10: 120495133

#27 **Location:** W MAPLE RD (12.66) 25 feet SW of CHESTERFIELD AVE **Crash ID:** 8426527

Crash Date: 08/31/2012 **Day:** Fri **Hour:** 8am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	veh in transpt	none	none	none	car	ctrrear
3	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 8426527

#28 **Location:** W MAPLE RD (12.48) 25 feet W of S GLENHURST DR **Crash ID:** 8435967

Crash Date: 09/10/2012 **Day:** Mon **Hour:** 4pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** rr-end
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	slow/stop on rd	veh in transpt	none	none	none	unable to stop	car	ctrfront

2	E	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrfront
3	E	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 120560494

#29 **Location:** W MAPLE RD (12.49) 0 feet X of S GLENHURST DR **Crash ID:** 8435966

Crash Date: 09/10/2012 **Day:** Mon **Hour:** 3pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** ss-same
CVT: Birmingham **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	seperation	veh in transpt	none	negl driving	car	rtfront
2	E	go straight	veh in transpt	none	none	none	none	car	lftfront
3	E	go straight	veh in transpt	none	none	none	none	car	lftfront

UD-10: 8435966

#30 **Location:** W MAPLE RD (12.67) 15 feet N of CHESTERFIELD AVE **Crash ID:** 8439288

Crash Date: 09/16/2012 **Day:** Sun **Hour:** 9pm **Weather:** clear **Roadway:** dry **Light:** dark/ltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** unknown
CVT: Birmingham **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	slow/stop on rd	veh in transpt	none	none	none	other	car	unknown
2	S	go straight	veh in transpt	none	none	none	none	car	lftfront

UD-10: 120570285

#31 **Location:** W MAPLE RD (12.89) 10 feet W of PILGRIM AVE **Crash ID:** 8459652

Crash Date: 10/05/2012 **Day:** Fri **Hour:** 4pm **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 5 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 120629260

#32 **Location:** W MAPLE RD (12.67) 10 feet SW of CHESTERFIELD AVE **Crash ID:** 8477743

Crash Date: 10/26/2012 **Day:** Fri **Hour:** 3pm **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 4 **Inj 0:** 4 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	van	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 120682161

#33 **Location:** W MAPLE RD (12.62) 25 feet E of LARCHLEA DR **Crash ID:** 8480227

Crash Date: 10/28/2012 **Day:** Sun **Hour:** 12pm **Weather:** wind **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** angle
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	leaving parking	veh in transpt	none	none	none	failed to yield	car	lftfront
2	S	go straight	veh in transpt	none	none	none	none	car	rtside

UD-10: 120689306

#34 **Location:** W MAPLE RD (12.61) 35 feet N of LARCHLEA DR **Crash ID:** 8490312

Crash Date: 11/07/2012 **Day:** Wed **Hour:** 3pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** angle
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	failed to yield	car	lftrear
2	E	slow/stop on rd	veh in transpt	none	none	none	none	pickup	lftfront

UD-10: 120718714

#35 **Location:** W MAPLE RD (13.03) 15 feet SE of LAKEPARK AVE **Crash ID:** 8524045

Crash Date: 12/20/2012 **Day:** Thu **Hour:** 11am **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	unable to stop	car	lftfront
2	W	stop on road	veh in transpt	none	none	none	none	car	rtrear

UD-10: 120814915

#36 **Location:** W MAPLE RD (13.36) 5 feet E of WOODLAND VILLA CT **Crash ID:** 8526076

Crash Date: 12/21/2012 **Day:** Fri **Hour:** 7am **Weather:** snow **Roadway:** wet **Light:** dark/ltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** unknown
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	left turn	veh in transpt	none	none	none	imprp turn	pickup	lftfront
2	W	go straight	veh in transpt	ran off road/l	other fixed obj	none	none	pickup	rtfront

UD-10: 120817987

#37 **Location:** W MAPLE RD (12.62) 15 feet E of LARCHLEA DR **Crash ID:** 8537573

Crash Date: 12/28/2012 **Day:** Fri **Hour:** 2pm **Weather:** cloudy **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** inter driveway **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	lftfront
2	E	stop on road	veh in transpt	none	none	none	none	car	rtrear

UD-10: 120833801

#38 **Location:** W MAPLE RD (12.35) 211 feet E of S CRANBROOK RD **Crash ID:** 8550497

Crash Date: 01/10/2013 **Day:** Thu **Hour:** 3pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130000480

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	slow/stop on rd	veh in transpt	none	none	none	unable to stop	pickup	ctrfront
2	E	go straight	veh in transpt	none	none	none	none	car	lftside
3	E	go straight	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130066826

#39 **Location:** W MAPLE RD (12.66) 25 feet SW of CHESTERFIELD AVE **Crash ID:** 8546919

Crash Date: 01/11/2013 **Day:** Fri **Hour:** 11am **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130000517

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130057046

#40 **Location:** W MAPLE RD (12.67) 20 feet E of EB CHESTERFIELD AVE **Crash ID:** 8568742

Crash Date: 02/02/2013 **Day:** Sat **Hour:** 4pm **Weather:** snow **Roadway:** snowy **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end

CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130001672

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	slow/stop on rd	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130118736

#41 **Location:** W MAPLE RD (12.66) 50 feet W of CHESTERFIELD AVE **Crash ID:** 8573403

Crash Date: 02/08/2013 **Day:** Fri **Hour:** 6pm **Weather:** unknown **Roadway:** slushy **Light:** dark/ltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 1 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130001985

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130132429

#42 **Location:** W MAPLE RD (12.83) 60 feet SE of SUFFIELD AVE **Crash ID:** 8588788

Crash Date: 02/25/2013 **Day:** Mon **Hour:** 2pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130002740

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	unable to stop	van	ctrfront
2	W	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130176414

#43 **Location:** W MAPLE RD (12.88) 50 feet W of PILGRIM AVE **Crash ID:** 8588789

Crash Date: 02/25/2013 **Day:** Mon **Hour:** 6pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130002749

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	rtfront
2	E	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130176417

#44 **Location:** W MAPLE RD (13.02) 50 feet W of LAKE PARK DR **Crash ID:** 8588792

Crash Date: 02/28/2013 **Day:** Thu **Hour:** 4pm **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Birmingham **Area:** curved **HBD:** N **Drugs:** N **Complaint No:** 130002907

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130176426

#45 **Location:** W MAPLE RD (13.27) 30 feet SW of BALDWIN AVE **Crash ID:** 8601814

Crash Date: 03/11/2013 **Day:** Mon **Hour:** 5pm **Weather:** unknown **Roadway:** unknown **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130003639

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130214262

#46 **Location:** W MAPLE RD (12.56) 100 feet E of WESTCHESTER AVE **Crash ID:** 8599914

Crash Date: 03/13/2013 **Day:** Wed **Hour:** 7am **Weather:** cloudy **Roadway:** icy **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end

CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130003514

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	stop on road	veh in transpt	none	none	none	none	car	rtrear

UD-10: 130208609

#47 **Location:** W MAPLE RD (12.48) 25 feet W of S GLENHURST DR **Crash ID:** 8605516

Crash Date: 03/15/2013 **Day:** Fri **Hour:** 4pm **Weather:** cloudy **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130003649

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	lftfront
2	E	slow/stop on rd	veh in transpt	none	none	none	none	car	rtrear

UD-10: 130224792

#48 **Location:** W MAPLE RD (13.28) 15 feet NW of BALDWIN AVE **Crash ID:** 8614492

Crash Date: 04/04/2013 **Day:** Thu **Hour:** 3pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 130004585

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	backing	veh in transpt	none	none	none	imprp backing	van	ctrrear
2	S	stop on road	veh in transpt	none	none	none	none	car	ctrfront

UD-10: 130250818

#49 **Location:** W MAPLE RD (12.21) 37 feet E of N CRANBROOK RD **Crash ID:** 8617252

Crash Date: 04/05/2013 **Day:** Fri **Hour:** 4pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 130004902

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	start on rdwy	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130259014

#50 **Location:** W MAPLE RD (12.49) 10 feet E of S GLENHURST RD **Crash ID:** 8631783

Crash Date: 04/28/2013 **Day:** Sun **Hour:** 2pm **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130006107

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130301090

#51 **Location:** W MAPLE RD (12.62) 25 feet E of LARCHLEA DR **Crash ID:** 8637871

Crash Date: 05/07/2013 **Day:** Tue **Hour:** 4pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130006238

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130319035

#52 **Location:** MAPLE (12.61) 10 feet E of W LARCHLEA RD **Crash ID:** 8640020

Crash Date: 05/11/2013 **Day:** Sat **Hour:** 4pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end

CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130006458

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	slow/stop on rd	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130325252

#53 **Location:** W MAPLE RD (12.66) 40 feet W of CHESTERFIELD AVE **Crash ID:** 8657060

Crash Date: 06/03/2013 **Day:** Mon **Hour:** 5pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130007640

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	slow/stop on rd	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130374630

#54 **Location:** W MAPLE RD (13.27) 75 feet W of BALDWIN AVE **Crash ID:** 8666451

Crash Date: 06/15/2013 **Day:** Sat **Hour:** 10am **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** rr-end
CVT: Birmingham **Area:** curved **HBD:** N **Drugs:** N **Complaint No:** 130008276

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	avoid veh-ft/bk	veh in transpt	none	none	none	unable to stop	car	lftfront
2	E	stop on road	veh in transpt	none	none	none	none	car	rtrear

UD-10: 130402261

#55 **Location:** W MAPLE RD (12.89) 0 feet X of PILGRIM AVE **Crash ID:** 8670409

Crash Date: 06/20/2013 **Day:** Thu **Hour:** 6pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 5 **How:** head-on/lt
CVT: Birmingham **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 130008566

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	left turn	veh in transpt	veh in transpt	none	none	failed to yield	car	multiple
2	W	go straight	veh in transpt	none	none	none	none	car	ctrfront
3	S	stop on road	veh in transpt	none	none	none	none	car	lftfront

UD-10: 130413657

#56 **Location:** W MAPLE RD (12.92) 190 feet W of PURITAN AVE **Crash ID:** 8670411

Crash Date: 06/21/2013 **Day:** Fri **Hour:** 11am **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** ss-same
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130008593

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	change lanes	veh in transpt	none	none	none	imprp lane use	car	rtfront
2	E	go straight	veh in transpt	none	none	none	none	car	lftside

UD-10: 130413663

#57 **Location:** W MAPLE RD (13.09) 0 feet E of LAKEPARK DR **Crash ID:** 8682121

Crash Date: 07/03/2013 **Day:** Wed **Hour:** 10am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** unknown
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130009229

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	slow/stop on rd	veh in transpt	none	none	none	unable to stop	car	rtfront
2	E	left turn	veh in transpt	none	none	none	none	car	lftrear
3	E	go straight	veh in transpt	none	none	none	none	car	ctrfront

UD-10: 130447924

#58 **Location:** W MAPLE RD (13.28) 15 feet N of BALDWIN AVE **Crash ID:** 8694169

Crash Date: 07/24/2013 **Day:** Wed **Hour:** 9am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** angle
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 130010365

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	enter rdwy	veh in transpt	none	none	none	failed to yield	car	lftrear
2	W	go straight	veh in transpt	none	none	none	none	car	ctrfront

UD-10: 130482972

#59 **Location:** W MAPLE RD (12.49) 20 feet W of S GLENHURST DR **Crash ID:** 8698914
Crash Date: 07/29/2013 **Day:** Mon **Hour:** 5pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130010635

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	go straight	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130496655

#60 **Location:** W MAPLE RD (12.50) 17 feet W of N GLENHURST DR **Crash ID:** 8708282
Crash Date: 08/14/2013 **Day:** Wed **Hour:** 10am **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 130012470

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130524206

#61 **Location:** W MAPLE RD (13.30) 25 feet W of VALLEY VIEW LN **Crash ID:** 8713019
Crash Date: 08/20/2013 **Day:** Tue **Hour:** 8pm **Weather:** clear **Roadway:** dry **Light:** dark/ltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130011862

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	slow/stop on rd	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	slow/stop on rd	veh in transpt	none	none	none	none	van	ctrrear

UD-10: 130537966

#62 **Location:** W MAPLE RD (13.29) 30 feet E of BALDWIN **Crash ID:** 8731264
Crash Date: 09/13/2013 **Day:** Fri **Hour:** 11pm **Weather:** clear **Roadway:** dry **Light:** dark/ltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** single
CVT: Birmingham **Area:** straight **HBD:** Y **Drugs:** N **Complaint No:** 130013154

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	loss of control	curb	none	none	reckls driving	car	multiple

UD-10: 130591333

#63 **Location:** W MAPLE RD (12.52) 75 feet E of S GLENHURST **Crash ID:** 8759821
Crash Date: 10/12/2013 **Day:** Sat **Hour:** 3pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 1 **Inj C:** 0 **Inj 0:** 3 **How:** unknown
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130014756

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	left turn	veh in transpt	none	none	none	failed to yield	car	rtside
2	E	go straight	veh in transpt	none	none	none	none	car	lftfront

UD-10: 130674194

#64 **Location:** W MAPLE RD (13.27) 30 feet W of BALDWIN AVE **Crash ID:** 8762183
Crash Date: 10/14/2013 **Day:** Mon **Hour:** 9am **Weather:** clear **Roadway:** dry **Light:** day

Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130014823

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130681158

#65 **Location:** W MAPLE RD (12.49) 5 feet N of S GLENHURST DR **Crash ID:** 8768892
Crash Date: 10/22/2013 **Day:** Tue **Hour:** 6pm **Weather:** clear **Roadway:** dry **Light:** dark/ltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** angle
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 130015247

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	left turn	veh in transpt	none	none	none	failed to yield	car	lftfront
2	S	left turn	veh in transpt	none	none	none	none	car	lftrear

UD-10: 130700664

#66 **Location:** W MAPLE RD (12.63) 100 feet E of LARCHLEA DR **Crash ID:** 8772289
Crash Date: 10/23/2013 **Day:** Wed **Hour:** 3pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** ss-same
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130015280

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	change lanes	veh in transpt	none	none	none	failed to yield	car	rtfront
2	E	go straight	veh in transpt	none	none	none	none	car	lftrear

UD-10: 130710688

#67 **Location:** W MAPLE RD (12.75) 50 feet E of FAIRFAX AVE **Crash ID:** 8768893
Crash Date: 10/24/2013 **Day:** Thu **Hour:** 5pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130015346

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 8768893

#68 **Location:** W MAPLE RD (12.63) 200 feet W of CHESTERFIELD AVE **Crash ID:** 8787538
Crash Date: 10/25/2013 **Day:** Fri **Hour:** 11am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** unknown
CVT: Birmingham **Area:** parking **HBD:** N **Drugs:** N **Complaint No:** 130015382

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	backing	veh in transpt	none	none	none	imprp backing	car	lftrear
2	W	stop on road	veh in transpt	none	none	none	none	car	rtside

UD-10: 130755130

#69 **Location:** W MAPLE RD (13.02) 40 feet W of LAKEPARK DR **Crash ID:** 8777623
Crash Date: 10/28/2013 **Day:** Mon **Hour:** 8pm **Weather:** clear **Roadway:** dry **Light:** dark/ltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 130015519

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	change lanes	veh in transpt	none	none	none	unable to stop	car	lftfront
2	E	slow/stop on rd	veh in transpt	veh in transpt	none	none	none	car	rtrear
3	E	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130726396

#70 **Location:** W MAPLE RD (12.74) 5 feet W of FAIRFAX AVE **Crash ID:** 8777624

Crash Date: 10/30/2013 **Day:** Wed **Hour:** 5pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** angle
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130015609

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	left turn	veh in transpt	none	none	none	failed to yield	car	rtfront
2	W	go straight	veh in transpt	none	none	none	none	car	ctrfront

UD-10: 130726399

#71 **Location:** MAPLE DR (13.03) 10 feet E of W LAKEPARK RD **Crash ID:** 8777626
Crash Date: 10/30/2013 **Day:** Wed **Hour:** 7pm **Weather:** clear **Roadway:** dry **Light:** dark/ltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** unknown
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130015615

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	animal	none	none	none	none	car	lftfront

UD-10: 130726405

#72 **Location:** W MAPLE RD (12.62) 50 feet E of LARCHLEA DR **Crash ID:** 8782336
Crash Date: 11/01/2013 **Day:** Fri **Hour:** 7pm **Weather:** unknown **Roadway:** unknown **Light:** dusk
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** ss-same
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130015831

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	change lanes	veh in transpt	none	none	none	failed to yield	car	lftfront
2	E	go straight	veh in transpt	none	none	none	none	car	rtside

UD-10: 130739806

#73 **Location:** W MAPLE RD (12.66) 50 feet W of CHESTERFIELD AVE **Crash ID:** 8783313
Crash Date: 11/04/2013 **Day:** Mon **Hour:** 4pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130015845

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	slow/stop on rd	veh in transpt	none	none	none	none	pickup	none

UD-10: 130742737

#74 **Location:** W MAPLE RD (12.74) 5 feet E of PLEASANT AVE **Crash ID:** 8787539
Crash Date: 11/08/2013 **Day:** Fri **Hour:** 1pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** angle
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130016044

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	left turn	veh in transpt	none	none	none	failed to yield	car	lftfront
2	E	go straight	veh in transpt	none	none	none	none	car	lftfront

UD-10: 130755133

#75 **Location:** W MAPLE RD (12.63) 99 feet E of LARCHLEA DR **Crash ID:** 8790705
Crash Date: 11/13/2013 **Day:** Wed **Hour:** 9am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** rr-end/rt
CVT: Birmingham **Area:** driveway **HBD:** N **Drugs:** N **Complaint No:** 130016251

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	veh in transpt	none	none	unable to stop	car	ctrfront
2	W	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
3	W	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130764610

#76 **Location:** W MAPLE RD (12.74) 5 feet E of PLEASANT AVE **Crash ID:** 8799887

Crash Date: 11/19/2013 **Day:** Tue **Hour:** 6pm **Weather:** clear **Roadway:** dry **Light:** dark/ltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 2 **Inj 0:** 1 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130016533

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	change lanes	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear
3	E	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130791127

#77 **Location:** W MAPLE RD (13.32) 100 feet E of VALLEY VIEW LN **Crash ID:** 8805039
Crash Date: 11/26/2013 **Day:** Tue **Hour:** 6pm **Weather:** clear **Roadway:** dry **Light:** dark/ltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130016855

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	unable to stop	pickup	ctrfront
2	W	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 130806204

#78 **Location:** W MAPLE RD (12.55) 20 feet E of WESTCHESTER WAY **Crash ID:** 8809477
Crash Date: 11/29/2013 **Day:** Fri **Hour:** 4pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130016984

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	slow/stop on rd	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	stop on road	veh in transpt	none	none	none	none	van	ctrrear

UD-10: 130819147

#79 **Location:** W MAPLE RD (12.62) 20 feet E of LARCHLEA DR **Crash ID:** 8819409
Crash Date: 12/08/2013 **Day:** Sun **Hour:** 6pm **Weather:** snow **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 2 **How:** ss-same
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130017366

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	enter rdwy	veh in transpt	none	none	none	failed to yield	car	lftfront
2	W	go straight	veh in transpt	none	none	none	none	car	rtfront

UD-10: 130848684

#80 **Location:** W MAPLE RD (12.89) 25 feet E of PILGRIM AVE **Crash ID:** 8819415
Crash Date: 12/09/2013 **Day:** Mon **Hour:** 7pm **Weather:** clear **Roadway:** dry **Light:** dark/ltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 130017436

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	unable to stop	car	rtfront
2	W	slow/stop on rd	veh in transpt	none	none	none	none	truck/bus	ctrrear

UD-10: 130848702

#81 **Location:** W MAPLE RD (13.13) 30 feet SE of ASPEN **Crash ID:** 8845238
Crash Date: 01/02/2014 **Day:** Thu **Hour:** 11am **Weather:** snow **Roadway:** snowy **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** single
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 140000055

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	avoid veh-angle	curb	utility pole	none	none	none	car	lftside

UD-10: 140047178

#82 **Location:** W MAPLE RD (13.28) 10 feet W of BALDWIN AVE **Crash ID:** 8857719

Crash Date: 01/11/2014 **Day:** Sat **Hour:** 8am **Weather:** fog/smoke **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** Y **Drugs:** N **Complaint No:** 140000512

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	slow/stop on rd	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 140080808

#83 **Location:** W MAPLE RD (13.02) 50 feet W of LAKEPARK DR **Crash ID:** 8864024
Crash Date: 01/13/2014 **Day:** Mon **Hour:** 7pm **Weather:** clear **Roadway:** dry **Light:** dark/ltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 1 **How:** rr-end
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 140000624

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 140096320

#84 **Location:** W MAPLE RD (12.39) 10 feet W of WADDINGTON **Crash ID:** 8881838
Crash Date: 01/25/2014 **Day:** Sat **Hour:** 7am **Weather:** snow **Roadway:** snowy **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** angle
CVT: Birmingham **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 140001678

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	go straight	veh in transpt	none	none	none	failed to yield	car	rtrear
2	E	backing	veh in transpt	none	none	none	none	truck/bus	rtrear

UD-10: 140146936

#85 **Location:** W MAPLE RD (12.74) 5 feet W of FAIRFAX AVE **Crash ID:** 8887701
Crash Date: 02/05/2014 **Day:** Wed **Hour:** 9am **Weather:** snow **Roadway:** snowy **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** angle
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140001789

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	left turn	veh in transpt	none	none	none	failed to yield	car	rtfront
2	W	go straight	veh in transpt	none	none	none	none	car	ctrfront

UD-10: 140163923

#86 **Location:** W MAPLE RD (13.02) 25 feet SW of LAKEPARK DR **Crash ID:** 8900905
Crash Date: 02/13/2014 **Day:** Thu **Hour:** 9am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140002189

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 140202175

#87 **Location:** W MAPLE RD (12.54) 40 feet W of WESTCHESTER WAY **Crash ID:** 8919323
Crash Date: 03/09/2014 **Day:** Sun **Hour:** 6pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140003218

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 140256157

#88 **Location:** W MAPLE RD (12.68) 50 feet E of CHESTERFIELD AVE **Crash ID:** 8924987

Crash Date: 03/19/2014 **Day:** Wed **Hour:** 5pm **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140003719

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	start on rdwy	veh in transpt	none	none	none	unable to stop	van	ctrfront
2	W	start on rdwy	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 140272669

#89 **Location:** W MAPLE RD (12.91) 500 feet W of SHIRLEY DR **Crash ID:** 8935043
Crash Date: 04/02/2014 **Day:** Wed **Hour:** 5pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** Y **Drugs:** N **Complaint No:** 140004352

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	other	car	lftfront
2	E	change lanes	veh in transpt	none	none	none	none	car	rtrear

UD-10: 140301932

#90 **Location:** W MAPLE RD (12.51) 200 feet W of WESTCHESTER WAY **Crash ID:** 8935042
Crash Date: 04/04/2014 **Day:** Fri **Hour:** 6pm **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 1 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140004452

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	slow/stop on rd	veh in transpt	none	none	none	none	car	rtrear

UD-10: 140301929

#91 **Location:** W MAPLE RD (12.25) 25 feet E of S BRADWAY BLVD **Crash ID:** 8941715
Crash Date: 04/15/2014 **Day:** Tue **Hour:** 6pm **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 3 **How:** rr-end
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 140006482

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	slow/stop on rd	veh in transpt	none	none	none	none	pickup	ctrrear

UD-10: 140321500

#92 **Location:** W MAPLE RD (12.25) 50 feet E of S BRADWAY BLVD **Crash ID:** 8972807
Crash Date: 05/27/2014 **Day:** Tue **Hour:** 6pm **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140008913

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 140413091

#93 **Location:** W MAPLE RD (13.20) 25 feet NE of HAWTHORNE RD **Crash ID:** 8978393
Crash Date: 06/05/2014 **Day:** Thu **Hour:** 10am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140007543

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	truck/bus	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 140429602

#94 **Location:** W MAPLE RD (12.61) 0 feet X of LARCHLEA DR **Crash ID:** 9000047

Crash Date: 06/10/2014 **Day:** Tue **Hour:** 2pm **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** ss-same
CVT: Birmingham **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 140007817

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	change lanes	veh in transpt	none	none	none	failed to yield	car	rtfront
2	W	go straight	veh in transpt	none	none	none	none	pickup	lftrear

UD-10: 140493514

#95 **Location:** W MAPLE RD (12.49) 20 feet SE of S GLENHURST DR **Crash ID:** 8983654
Crash Date: 06/12/2014 **Day:** Thu **Hour:** 3pm **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** angle
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140007922

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	left turn	veh in transpt	none	none	none	failed to yield	car	rtrear
2	E	go straight	veh in transpt	none	none	none	none	pickup	ctrfront

UD-10: 140445151

#96 **Location:** W MAPLE RD (13.27) 75 feet W of BALDWIN AVE **Crash ID:** 8988257
Crash Date: 06/15/2014 **Day:** Sun **Hour:** 8am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** single
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140008072

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	animal	none	none	none	none	car	lftfront

UD-10: 140458794

#97 **Location:** W MAPLE RD (13.28) 0 feet X of BALDWIN AVE **Crash ID:** 9009672
Crash Date: 07/17/2014 **Day:** Thu **Hour:** 12pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** rr-end
CVT: Birmingham **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 140009667

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 140521981

#98 **Location:** W MAPLE RD (12.67) 5 feet W of CHESTERFIELD AVE **Crash ID:** 9032476
Crash Date: 08/20/2014 **Day:** Wed **Hour:** 4pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140011377

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 140589399

#99 **Location:** W MAPLE RD (12.45) 15 feet E of WESTWOOD DR **Crash ID:** 9047552
Crash Date: 08/28/2014 **Day:** Thu **Hour:** 9am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end/lt
CVT: Birmingham **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 140011761

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	slow/stop on rd	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	left turn	veh in transpt	curb	none	none	none	car	ctrrear

UD-10: 140634048

#100 **Location:** W MAPLE RD (12.67) 10 feet W of CHESTERFIELD AVE **Crash ID:** 9045830
Crash Date: 09/05/2014 **Day:** Fri **Hour:** 8pm **Weather:** rain **Roadway:** wet **Light:** dark/ltd

Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 8 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140012195

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	go straight	veh in transpt	none	none	none	none	car	ctrrear
3	E	go straight	veh in transpt	none	none	none	none	car	ctrrear
4	E	go straight	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 140628890

#101 **Location:** W MAPLE RD (12.49) 15 feet E of S GLENHURST DR **Crash ID:** 9051415
Crash Date: 09/10/2014 **Day:** Wed **Hour:** 3pm **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 1 **How:** rr-end
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 140015284

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 140645444

#102 **Location:** W MAPLE RD (13.19) 5 feet E of HAWTHORNE RD **Crash ID:** 9054036
Crash Date: 09/12/2014 **Day:** Fri **Hour:** 12pm **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 1 **How:** rr-end
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 140012537

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	slow/stop on rd	veh in transpt	none	none	none	unable to stop	car	rtfront
2	W	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 140653289

#103 **Location:** W MAPLE RD (13.26) 100 feet W of BALDWIN AVE **Crash ID:** 9057051
Crash Date: 09/16/2014 **Day:** Tue **Hour:** 11am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end/lt
CVT: Birmingham **Area:** curved **HBD:** N **Drugs:** N **Complaint No:** 140012737

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	truck/bus	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	truck/bus	ctrrear

UD-10: 140662155

#104 **Location:** W MAPLE RD (13.03) 200 feet W of LINDEN RD **Crash ID:** 9060207
Crash Date: 09/22/2014 **Day:** Mon **Hour:** 7pm **Weather:** clear **Roadway:** dry **Light:** dawn
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140013033

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	none
2	E	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 140671544

#105 **Location:** W MAPLE (12.68) 75 feet E of CHESTERFIELD **Crash ID:** 9073119
Crash Date: 10/03/2014 **Day:** Fri **Hour:** 3pm **Weather:** cloudy **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140013566

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	veh in transpt	none	none	none	car	multiple
3	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 140709802

#106 **Location:** W MAPLE RD (12.48) 20 feet W of S GLENHURST DR **Crash ID:** 9073123

Crash Date: 10/08/2014 **Day:** Wed **Hour:** 4pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140013783

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear
3	E	left turn	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 9073123

#107 **Location:** W MAPLE RD (12.49) 14 feet E of S GLENHURST DR **Crash ID:** 9084402

Crash Date: 10/17/2014 **Day:** Fri **Hour:** 7pm **Weather:** cloudy **Roadway:** dry **Light:** dusk
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** ss-same
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140014246

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	change lanes	veh in transpt	none	none	none	failed to yield	car	rtfront
2	E	go straight	veh in transpt	none	none	none	none	car	lftrear

UD-10: 9084402

#108 **Location:** W MAPLE RD (12.55) 5 feet W of WESTCHESTER WAY **Crash ID:** 9085692

Crash Date: 10/20/2014 **Day:** Mon **Hour:** 11am **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** unknown
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 140014328

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	left turn	veh in transpt	none	none	none	failed to yield	car	rtfront
2	E	go straight	veh in transpt	none	none	none	none	car	lftfront

UD-10: 9085692

#109 **Location:** W MAPLE RD (12.73) 30 feet W of PLEASANT AVE **Crash ID:** 9092506

Crash Date: 10/24/2014 **Day:** Fri **Hour:** 7pm **Weather:** clear **Roadway:** dry **Light:** dark/ltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140014562

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 140767365

#110 **Location:** W MAPLE RD (13.19) 5 feet E of HAWTHORNE RD **Crash ID:** 9094583

Crash Date: 10/28/2014 **Day:** Tue **Hour:** 1pm **Weather:** cloudy **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 140014754

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	unable to stop	car	lftfront
2	W	slow/stop on rd	veh in transpt	none	none	none	none	car	rtrear

UD-10: 140773596

#111 **Location:** W MAPLE RD (12.74) 25 feet SE of PLEASANT AVE **Crash ID:** 9103010

Crash Date: 11/03/2014 **Day:** Mon **Hour:** 9am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 1 **Inj C:** 1 **Inj 0:** 1 **How:** unknown
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140015072

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	left turn	veh in transpt	veh in transpt	none	none	failed to yield	car	ctrfront

2	E	go straight	veh in transpt	veh in transpt	utility pole	none	none	car	ctrfront

UD-10: 140798555

#112 **Location:** W MAPLE RD (12.74) 40 feet SE of PLEASANT AVE **Crash ID:** 9104601

Crash Date: 11/04/2014 **Day:** Tue **Hour:** 3pm **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 1 **How:** unknown
CVT: Birmingham **Area:** driveway **HBD:** N **Drugs:** N **Complaint No:** 140015144

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	enter parking	veh in transpt	none	none	none	failed to yield	car	lftfront
2	E	go straight	veh in transpt	none	none	none	none	car	rtfront

UD-10: 140803325

#113 **Location:** W MAPLE RD (13.27) 50 feet W of BALDWIN AVE **Crash ID:** 9104605

Crash Date: 11/04/2014 **Day:** Tue **Hour:** 5pm **Weather:** rain **Roadway:** wet **Light:** dark/unltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 1 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140015150

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	slow/stop on rd	veh parked	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 140803337

#114 **Location:** W MAPLE RD (12.96) 5 feet W of PURITAN AVE **Crash ID:** 9113073

Crash Date: 11/13/2014 **Day:** Thu **Hour:** 1pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 2 **Inj 0:** 1 **How:** unknown
CVT: Birmingham **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 140015564

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	veh in transpt	none	none	unable to stop	car	ctrfront
2	E	slow/stop on rd	veh in transpt	none	none	none	none	car	rtrear
3	E	go straight	veh in transpt	none	none	none	none	car	lftfront

UD-10: 140828446

#115 **Location:** W MAPLE RD (12.72) 100 feet W of PLEASANT AVE **Crash ID:** 9120718

Crash Date: 11/20/2014 **Day:** Thu **Hour:** 8am **Weather:** snow **Roadway:** slushy **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** ss-same
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140015861

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	change lanes	veh in transpt	none	none	none	imprp lane use	car	rtfront
2	E	go straight	veh in transpt	none	none	none	none	car	lftside

UD-10: 140850745

#116 **Location:** W MAPLE RD (12.61) 0 feet X of LARCHLEA DR **Crash ID:** 9142394

Crash Date: 12/16/2014 **Day:** Tue **Hour:** 4pm **Weather:** rain **Roadway:** wet **Light:** dusk
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 3 **How:** angle
CVT: Birmingham **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 140017058

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	left turn	veh in transpt	none	none	none	failed to yield	car	rtrear
2	E	go straight	veh in transpt	none	none	none	none	van	ctrfront

UD-10: 140914673

#117 **Location:** W MAPLE RD (12.61) 5 feet E of LARCHLEA DR **Crash ID:** 9142392

Crash Date: 12/16/2014 **Day:** Tue **Hour:** 7am **Weather:** rain **Roadway:** wet **Light:** dawn
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Birmingham **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 140017040

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage

1		unknown	veh in transpt	none	none	none	unable to stop	uncoded	none
2	W	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 140914667

2004-2006 4 LANE 2 WAY UNSIGNALIZED INTERSECTIONS
Average Annual Crash Frequency
ADT GREATER THAN 20,000
GRAND, BAY, SOUTHWEST, UNIVERSITY AND METRO REGIONS

AVG ADT = 23,812 TOT INTERSECTIONS = 192

CRASH TYPE	AVERAGE ANNUAL FREQ	AVG ANNUAL CRASHES/INT	% OF TOTAL
TOTAL	675	3.52	100.0%
INJURY ACC	156	0.81	23.1%
FATAL ACC	1	0.01	0.1%
WET	185	0.96	27.4%
ICY	12	0.06	1.8%
DARK	137	0.71	20.3%
MISC SINGLE VEH	3	0.02	0.4%
OVERTURNED	1	0.01	0.1%
TRAIN	0	0.00	0.0%
PRKED VEHICLE	1	0.01	0.1%
MISC MULTI VEH	21	0.11	3.1%
BACKING	9	0.05	1.3%
PARKING	2	0.01	0.3%
PEDESTRIAN	4	0.02	0.6%
FIXED OBJ	27	0.14	4.0%
ON ROAD OBJ	2	0.01	0.3%
ANIMAL	0	0.00	0.0%
BICYCLE	7	0.04	1.0%
HEAD ON	8	0.04	1.2%
ANGLE STRAIT	69	0.36	10.2%
REAR-END	261	1.36	38.7%
ANGLE TURN	56	0.29	8.3%
SIDESWIPE SAME	65	0.34	9.6%
REAR-END LEFT	29	0.15	4.3%
REAR-END RIGHT	10	0.05	1.5%
OTHER DRIVEWAY	9	0.05	1.3%
ANGLE DRIVEWAY	19	0.10	2.8%
REAR-END DRIVE	32	0.17	4.7%
SIDESWIPE OPP	13	0.07	1.9%
HEAD ON LEFT	24	0.13	3.6%
DUAL LEFT TURN	2	0.01	0.3%
DUAL RIGHT TURN	2	0.01	0.3%

DATA SOURCE:
Traffic Count Data (ADT)
Roadway Features
Bureau of Transportation Planning (Sufficiency)

Intersection Data (Location, Traffic Control, Influence Zone)
Traffic and Safety Division

Crash Data
Department of State Police
Analysis includes intersection related crashes only
Animal crashes excluded

2004-2006 4 LANE 2 WAY SIGNALIZED INTERSECTIONS
Average Annual Crash Frequency
ADT GREATER THAN 20,000
GRAND, BAY, SOUTHWEST, UNIVERSITY AND METRO REGIONS

AVG ADT = 23,170 TOT INTERSECTIONS = 61

CRASH TYPE	AVERAGE ANNUAL FREQ	AVG ANNUAL CRASHES/INT	% OF TOTAL
TOTAL	640	10.49	100.0%
INJURY ACC	129	2.11	20.2%
FATAL ACC	1	0.02	0.2%
WET	164	2.69	25.6%
ICY	14	0.23	2.2%
DARK	155	2.54	24.2%
MISC SINGLE VEH	3	0.05	0.5%
OVERTURNED	0	0.00	0.0%
TRAIN	0	0.00	0.0%
PRKED VEHICLE	0	0.00	0.0%
MISC MULTI VEH	15	0.25	2.3%
BACKING	11	0.18	1.7%
PARKING	2	0.03	0.3%
PEDESTRIAN	6	0.10	0.9%
FIXED OBJ	21	0.34	3.3%
ON ROAD OBJ	2	0.03	0.3%
ANIMAL	0	0.00	0.0%
BICYCLE	9	0.15	1.4%
HEAD ON	6	0.10	0.9%
ANGLE STRAIT	77	1.26	12.0%
REAR-END	261	4.28	40.8%
ANGLE TURN	37	0.61	5.8%
SIDESWIPE SAME	67	1.10	10.5%
REAR-END LEFT	12	0.20	1.9%
REAR-END RIGHT	9	0.15	1.4%
OTHER DRIVEWAY	3	0.05	0.5%
ANGLE DRIVEWAY	22	0.36	3.4%
REAR-END DRIVE	29	0.48	4.5%
SIDESWIPE OPP	14	0.23	2.2%
HEAD ON LEFT	29	0.48	4.5%
DUAL LEFT TURN	4	0.07	0.6%
DUAL RIGHT TURN	2	0.03	0.3%

DATA SOURCE:
Traffic Count Data (ADT)
Roadway Features
Bureau of Transportation Planning (Sufficiency)

Intersection Data (Location, Traffic Control, Influence Zone)
Traffic and Safety Division

Crash Data
Department of State Police
Analysis includes intersection related crashes only
Animal crashes excluded

Speed/Volume Traffic Count Summary
Maple

May 17, 18, 1999

Street	85th Percentile	Average Speed	Total Vehicles
West Maple west of Chesterfield			
Westbound	53.46	35.12	10,789
Eastbound	37.28	25.90	16,116

Speed/Volume Traffic Count Summary
Maple

August 3, 4, 2000

Street	85th Percentile	Average Speed	Total Vehicles
West Maple west of Chesterfield			
Westbound	42.93	37.4	14,455
Eastbound	44.20	36.46	16,251

Speed/Volume Traffic Count Summary
Maple

August 7, 8, 2001

Street	85th Percentile	Average Speed	Total Vehicles
West Maple west of Chesterfield			
Westbound			
Lane 1 (curb)			
1200 – 2400	42.3	36.7	4523
0100 – 1100	42.0	35.9	1544
Lane 2			
1200 – 2400	42.1	34.7	5660
0100 – 1100	38.9	24.6	1665
TOTAL			13,392
Eastbound			
Lane 1			
1200 – 2400	41.9	36.5	4566
0100 – 1100	41.5	36.1	2043
Lane 2			
1200 – 2400	40.0	28.0	4835
0100- 1100	39.2	25.7	1833
TOTAL			13,277

Speed/Volume Traffic Count Summary
Maple

August 6, 7, 2002

Street	85th Percentile	Average Speed	Total Vehicles
West Maple at Chesterfield			
Westbound			
Lane 1 (curb)			
1200 – 2400	39.0	31.2	4441
0100 – 1100	39.7	31.3	1321
Lane 2			
1200 - 2400	42.1	36.3	4424
0100 - 1100	42.7	37.3	1607
TOTAL			11,793
Eastbound			
Lane 1			
1200 – 2400	43.0	37.0	4376
0100 – 1100	42.9	37.2	1918
Lane 2			
1200 – 2400	43.4	37.8	4435
0100 – 1100	43.4	38.0	1962
TOTAL			12,691

MEMO

To:	**Mr. Paul O'Meara, City Engineer** **City of Birmingham**
From:	**Michael J. Labadie, PE** **Fleis & VandenBrink**
CC:	**Ms. Jana Ecker, City Planner** **City of Birmingham**
Date:	**March 19, 2015**
Re:	**Maple Road – Cranbrook to Chester** **City of Birmingham, Michigan** **Future Conditions Analysis**

ANALYSIS

Complete Street Improvement Options

Fleis & VandenBrink has reviewed this corridor and suggest the following Complete Streets items be considered in the corridor:

- ALL intersections will receive updated ADA ramps,
- Sidewalk improvements,
- Bus stop enhancements.

Existing Analysis Conditions

Fleis & VandenBrink updated the analysis of existing traffic conditions to account for bus stops located along Maple Road. Bus schedules for Maple Road were obtained from the Suburban Mobility Authority for Regional Transportation (SMART) and indicate that there is the potential for 1-2 buses to travel the study section of Maple Road in each direction during the peak periods. Therefore the number of bus blockages was input at each signalized location with a bus stop located within 250 feet upstream or downstream of the intersection. The results are shown in Table 1 and indicate increases in vehicle delays of 0.1 seconds or less for the Maple Road approaches.

Future Analysis Conditions – 4 to 3 lane conversion

Future peak hour vehicle delays and Levels of Service (LOS) at the study intersections along Maple Road were calculated based on the proposed lane use and traffic control, existing peak hour traffic volumes, and the methodologies presented in the *Highway Capacity Manual, 2010* (HCM). Maple Road from Wadington Road to Southfield Road is being considered for a three lane cross-section with one lane in each direction and a center lane for left turns to improve safety, reduce speeds, and make crossings safer. Additionally, 5' bike lanes would be provided in both directions. Additionally, SimTraffic network simulations were reviewed

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F: 248.536.0079
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to evaluate network operations and vehicle queues. The results of the future conditions analysis are attached and summarized below:

Table 1

Intersection Operations

			Existing Conditions				*Future Conditions**			
			AM Peak		PM Peak		AM Peak		PM Peak	
Intersection	Control	Approach	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
1. Maple Road & Cranbrook Road	Signalized	EB	25.0	C	32.6	C	29.4	C	24.0	C
		WB	31.6	C	35.8	D	27.9	C	26.7	C
		NB	25.7	C	33.9	C	28.0	C	32.4	C
		SB	34.2	C	33.3	C	35.7	D	31.3	C
		Overall	**29.0**	**C**	**34.1**	**C**	**29.9**	**C**	**27.4**	**C**
2. Maple Road & Chesterfield Avenue	Signalized	EB	3.5	A	8.4	A	10.9	B	8.8	A
		WB	0.7	A	4.4	A	1.7	A	9.1	A
		SB	25.7	C	25.3	C	33.8	C	34.5	C
		Overall	**3.3**	**A**	**7.1**	**A**	**8.1**	**A**	**10.3**	**B**
3. Maple Road & Lakepark Drive	Signalized	EB	19.9	B	1.1	A	9.1	A	2.6	A
		WB	0.6	A	1.5	A	1.2	A	7.3	A
		SB	25.5	C	25.8	C	34.8	C	35.2	D
		Overall	**12.4**	**B**	**2.1**	**A**	**6.8**	**A**	**6.2**	**A**
4. Maple Road & Southfield Road	Signalized	EB	19.7	B	17.1	B	6.1	A	25.6	C
		WB	6.3	A	4.9	A	5.2	A	19.3	B
		NB	25.9	C	33.7	C	38.2	D	37.8	D
		Overall	**16.1**	**B**	**16.6**	**B**	**14.0**	**B**	**26.4**	**C**
5. Maple Road & Chester Street	Signalized	EB	9.2	A	12.1	B	9.5	A	12.3	B
		WB	5.7	A	10.4	B	6.4	A	19.2	B
		NB	25.9	C	28.5	C	29.5	C	33.6	C
		SB	25.8	C	71.9	E	26.4	C	69.9	E
		Overall	**12.5**	**B**	**27.9**	**C**	**13.0**	**B**	**30.2**	**C**
6. Maple Road & Bates Street	Signalized	EB	1.2	A	1.5	A	1.1	A	1.2	A
		WB	8.6	A	11.2	B	8.1	A	9.2	A
		NB	25.0	C	26.0	C	29.2	C	32.5	C
		SB	24.3	C	25.4	C	28.3	C	31.7	C
		Overall	**6.1**	**A**	**9.2**	**A**	**6.1**	**A**	**9.1**	**A**

* - Assumes construction of an eastbound right turn lane at the intersection of Maple Road & Southfield Road.

1. With a three lane cross-section an eastbound right turn lane must be provided at Maple Road & Southfield Road.
2. Cycle lengths along Maple Road were optimized to 90 seconds.
3. With items 1& 2 above, all study intersection approaches and movements would continue to operate acceptably during both peak periods, except the southbound approach at the intersection of Maple Road & Chester Street which would continue to operate at a LOS E, with the southbound right turn movement operating at a LOS F during the PM peak period.

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4. In the traffic simulations the intersection of Maple Road & Southfield Road experienced the worst traffic congestion.
    a. At the intersection of Maple Road & Southfield Road, brief periods of long vehicle queues were observed for the northbound approach during the AM peak period. During the PM peak period brief periods of long vehicle queues were observed for the eastbound and northbound approaches.
    b. At the intersection of Maple Road & Chester Street a long vehicle queue is observed for the southbound right turn movement during the PM peak period.
5. Pedestrian Crossing Islands should be considered at appropriate locations along the corridor.

Maple & Southfield Improvements

The intersection of Maple Road & Southfield Road can be improved further by eliminating the eastbound channelized right turn and instead have this movement be controlled by the signal with an overlap phase that provides a right turn green arrow for the eastbound right turn movement during the northbound Southfield Road phase. The results of the analysis with these improvements are summarized in Table 2 and attached.

Table 2

Maple & Southfield Intersection Operations — *Future Conditions** — *No Channelized EB Right Turn*

			AM Peak		PM Peak		AM Peak		PM Peak	
Intersection	Control	Approach	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
4. Maple Road	Signalized	EB	6.1	A	25.6	C	4.3	A	18.0	B
& Southfield Road		WB	5.2	A	19.3	B	6.2	A	19.8	B
		NB	38.2	D	37.8	D	38.2	D	37.8	D
		Overall	**14.0**	**B**	**26.4**	**C**	**12.3**	**B**	**23.9**	**C**

* - Assumes construction of an eastbound right turn lane at the intersection of Maple Road & Southfield Road.

With these improvements, the intersection of Maple Road & Southfield Road would experience minor improvements in overall intersection operations.

Lastly, there is currently inadequate storage for eastbound left turns from Maple Road onto Chester Street which causes left turning vehicles to spill back into the through travel lane along Maple Road and block through traffic. In order to increase the storage length for this movement, Southfield Road should be realigned to intersect Maple Road further west, near the existing eastbound channelized right turn lane. This will help to create more storage for left turns between Chester Street and Southfield Road and make Maple Road & Southfield Road intersect closer to a 90 degree angle.

Attached: Synchro Results

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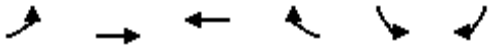
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	77	606	94	149	647	43	70	271	116	56	396	102
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1980	1980	2000	1980	1980	2000	1942	1942	1942	1980	1980	2000
Adj Flow Rate, veh/h	94	739	115	160	696	46	77	298	127	59	417	107
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.82	0.82	0.82	0.93	0.93	0.93	0.91	0.91	0.91	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	1	1	1
Cap, veh/h	433	1130	176	397	1243	82	164	669	568	298	524	134
Arrive On Green	0.11	0.35	0.35	0.11	0.35	0.35	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1886	3250	506	1886	3575	236	866	1942	1649	968	1521	390
Grp Volume(v), veh/h	94	428	426	160	366	376	77	298	127	59	0	524
Grp Sat Flow(s),veh/h/ln	1886	1881	1874	1886	1881	1930	866	1942	1649	968	0	1911
Q Serve(g_s), s	0.0	17.3	17.3	0.0	14.2	14.2	7.9	10.7	4.9	4.5	0.0	22.3
Cycle Q Clear(g_c), s	0.0	17.3	17.3	0.0	14.2	14.2	30.2	10.7	4.9	15.2	0.0	22.3
Prop In Lane	1.00		0.27	1.00		0.12	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	433	654	652	397	654	671	164	669	568	298	0	658
V/C Ratio(X)	0.22	0.65	0.65	0.40	0.56	0.56	0.47	0.45	0.22	0.20	0.00	0.80
Avail Cap(c_a), veh/h	433	654	652	397	654	671	164	669	568	298	0	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.0	24.8	24.8	30.9	23.8	23.8	40.3	22.8	21.0	28.7	0.0	26.6
Incr Delay (d2), s/veh	0.2	5.0	5.1	0.7	3.4	3.4	9.4	2.1	0.9	1.5	0.0	9.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	9.8	9.8	3.6	7.9	8.1	2.3	6.1	2.4	1.3	0.0	13.4
LnGrp Delay(d),s/veh	25.3	29.8	29.8	31.5	27.2	27.1	49.7	25.0	21.9	30.2	0.0	36.3
LnGrp LOS	C	C	C	C	C	C	D	C	C	C		D
Approach Vol, veh/h		948			902			502			583	
Approach Delay, s/veh		29.4			27.9			28.0			35.7	
Approach LOS		C			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.0	37.0		37.0	16.0	37.0		37.0
Change Period (Y+Rc), s	* 5.7	* 5.7		6.0	* 5.7	* 5.7		6.0
Max Green Setting (Gmax), s	* 10	* 31		31.0	* 10	* 31		31.0
Max Q Clear Time (g_c+I1), s	2.0	16.2		24.3	2.0	19.3		32.2
Green Ext Time (p_c), s	0.4	4.0		3.5	0.4	4.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.9
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



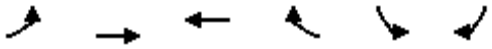
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	19	960	711	18	32	42
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1980	1980	1961	2000	1942	1942
Adj Flow Rate, veh/h	21	1055	790	20	36	48
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.91	0.91	0.90	0.90	0.88	0.88
Percent Heavy Veh, %	1	1	2	2	3	3
Cap, veh/h	568	1426	1365	35	296	264
Arrive On Green	0.72	0.72	1.00	1.00	0.16	0.16
Sat Flow, veh/h	677	1980	1896	48	1849	1650
Grp Volume(v), veh/h	21	1055	0	810	36	48
Grp Sat Flow(s),veh/h/ln	677	1980	0	1944	1849	1650
Q Serve(g_s), s	0.8	28.7	0.0	0.0	1.5	2.3
Cycle Q Clear(g_c), s	0.8	28.7	0.0	0.0	1.5	2.3
Prop In Lane	1.00			0.02	1.00	1.00
Lane Grp Cap(c), veh/h	568	1426	0	1400	296	264
V/C Ratio(X)	0.04	0.74	0.00	0.58	0.12	0.18
Avail Cap(c_a), veh/h	568	1426	0	1400	296	264
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.6	7.6	0.0	0.0	32.4	32.7
Incr Delay (d2), s/veh	0.1	3.5	0.0	1.7	0.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	16.6	0.0	0.7	0.8	1.1
LnGrp Delay(d),s/veh	3.8	11.0	0.0	1.7	33.2	34.2
LnGrp LOS	A	B		A	C	C
Approach Vol, veh/h		1076	810		84	
Approach Delay, s/veh		10.9	1.7		33.8	
Approach LOS		B	A		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		70.0		20.0		70.0		
Change Period (Y+Rc), s		* 5.2		5.6		* 5.2		
Max Green Setting (Gmax), s		* 65		14.4		* 65		
Max Q Clear Time (g_c+I1), s		30.7		4.3		2.0		
Green Ext Time (p_c), s		13.6		0.2		15.7		

Intersection Summary	
HCM 2010 Ctrl Delay	8.1
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	29	892	642	16	31	15
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1980	1980	1961	2000	2039	2080
Adj Flow Rate, veh/h	31	959	676	17	40	19
Adj No. of Lanes	1	1	1	0	0	0
Peak Hour Factor	0.93	0.93	0.95	0.95	0.77	0.77
Percent Heavy Veh, %	1	1	2	2	0	0
Cap, veh/h	625	1430	1370	34	194	92
Arrive On Green	0.72	0.72	1.00	1.00	0.16	0.16
Sat Flow, veh/h	755	1980	1897	48	1247	592
Grp Volume(v), veh/h	31	959	0	693	60	0
Grp Sat Flow(s),veh/h/ln	755	1980	0	1944	1870	0
Q Serve(g_s), s	1.1	23.5	0.0	0.0	2.5	0.0
Cycle Q Clear(g_c), s	1.1	23.5	0.0	0.0	2.5	0.0
Prop In Lane	1.00			0.02	0.67	0.32
Lane Grp Cap(c), veh/h	625	1430	0	1404	291	0
V/C Ratio(X)	0.05	0.67	0.00	0.49	0.21	0.00
Avail Cap(c_a), veh/h	625	1430	0	1404	291	0
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	3.6	6.7	0.0	0.0	33.2	0.0
Incr Delay (d2), s/veh	0.2	2.5	0.0	1.2	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	13.5	0.0	0.5	1.4	0.0
LnGrp Delay(d),s/veh	3.8	9.3	0.0	1.2	34.8	0.0
LnGrp LOS	A	A		A	C	
Approach Vol, veh/h		990	693		60	
Approach Delay, s/veh		9.1	1.2		34.8	
Approach LOS		A	A		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		70.0		20.0		70.0		
Change Period (Y+Rc), s		* 5		6.0		* 5		
Max Green Setting (Gmax), s		* 65		14.0		* 65		
Max Q Clear Time (g_c+I1), s		25.5		4.5		2.0		
Green Ext Time (p_c), s		11.4		0.1		12.1		

Intersection Summary	
HCM 2010 Ctrl Delay	6.8
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	593	310	220	429	224	186
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1800	1782	1782	1782	1782
Adj Flow Rate, veh/h	638	0	232	452	249	207
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.95	0.95	0.90	0.90
Percent Heavy Veh, %	1	0	1	1	1	1
Cap, veh/h	869	746	578	1186	339	470
Arrive On Green	0.98	0.00	0.22	1.00	0.20	0.20
Sat Flow, veh/h	1782	1530	1697	1782	1697	1515
Grp Volume(v), veh/h	638	0	232	452	249	207
Grp Sat Flow(s),veh/h/ln	1782	1530	1697	1782	1697	1515
Q Serve(g_s), s	2.8	0.0	0.0	0.0	12.4	0.0
Cycle Q Clear(g_c), s	2.8	0.0	0.0	0.0	12.4	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	869	746	578	1186	339	470
V/C Ratio(X)	0.73	0.00	0.40	0.38	0.73	0.44
Avail Cap(c_a), veh/h	869	746	578	1186	339	470
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.6	0.0	11.4	0.0	33.8	24.8
Incr Delay (d2), s/veh	5.5	0.0	2.1	0.9	13.2	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	3.5	0.3	7.1	4.5
LnGrp Delay(d),s/veh	6.1	0.0	13.5	0.9	46.9	27.8
LnGrp LOS	A		B	A	D	C
Approach Vol, veh/h	638			684	456	
Approach Delay, s/veh	6.1			5.2	38.2	
Approach LOS	A			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.0	50.0				66.0		24.0
Change Period (Y+Rc), s	6.1	6.1				6.1		6.0
Max Green Setting (Gmax), s	9.9	43.9				59.9		18.0
Max Q Clear Time (g_c+I1), s	2.0	4.8				2.0		14.4
Green Ext Time (p_c), s	2.0	3.0				3.2		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	241	467	71	23	374	1	24	13	7	2	92	251
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.94	0.98		0.94	0.95		0.91	0.92		0.91
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765	1782	1782	1800	1731	1731	1800	1782	1782	1782
Adj Flow Rate, veh/h	254	492	75	24	394	1	26	14	8	2	97	264
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	4	4	4	1	1	1
Cap, veh/h	634	765	610	569	770	2	242	232	133	336	416	523
Arrive On Green	0.27	0.87	0.87	0.27	0.87	0.87	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1681	1765	1408	1697	1777	5	854	994	568	1153	1782	1375
Grp Volume(v), veh/h	254	492	75	24	0	395	26	0	22	2	97	264
Grp Sat Flow(s),veh/h/ln	1681	1765	1408	1697	0	1781	854	0	1563	1153	1782	1375
Q Serve(g_s), s	0.0	7.6	0.7	0.0	0.0	4.8	2.3	0.0	1.0	0.1	4.0	0.0
Cycle Q Clear(g_c), s	0.0	7.6	0.7	0.0	0.0	4.8	6.3	0.0	1.0	1.1	4.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	634	765	610	569	0	772	242	0	365	336	416	523
V/C Ratio(X)	0.40	0.64	0.12	0.04	0.00	0.51	0.11	0.00	0.06	0.01	0.23	0.50
Avail Cap(c_a), veh/h	634	765	610	569	0	772	242	0	365	336	416	523
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.0	3.9	3.4	10.5	0.0	3.7	30.5	0.0	26.8	27.3	28.0	21.9
Incr Delay (d2), s/veh	1.9	4.1	0.4	0.1	0.0	2.4	0.9	0.0	0.3	0.0	1.3	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	4.2	0.3	0.3	0.0	2.5	0.6	0.0	0.5	0.0	2.1	5.5
LnGrp Delay(d),s/veh	13.9	8.0	3.9	10.6	0.0	6.1	31.4	0.0	27.1	27.3	29.3	25.3
LnGrp LOS	B	A	A	B		A	C		C	C	C	C
Approach Vol, veh/h		821			419			48			363	
Approach Delay, s/veh		9.5			6.4			29.5			26.4	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.0	45.0		27.0	18.0	45.0		27.0
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	12.0	39.0		21.0	12.0	39.0		21.0
Max Q Clear Time (g_c+I1), s	2.0	6.8		6.0	2.0	9.6		8.3
Green Ext Time (p_c), s	0.8	1.7		1.8	0.8	2.7		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	455	7	12	390	9	8	23	4	2	14	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.95		0.95	0.96		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1800	1765	1800	1800	1765	1800	1800	1765	1800
Adj Flow Rate, veh/h	15	479	7	13	429	10	11	32	5	3	18	0
Adj No. of Lanes	1	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.91	0.91	0.91	0.73	0.73	0.73	0.77	0.77	0.77
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	610	1139	17	53	1102	25	101	257	36	72	339	0
Arrive On Green	1.00	1.00	1.00	0.66	0.66	0.66	0.21	0.21	0.21	0.21	0.21	0.00
Sat Flow, veh/h	850	1735	25	19	1679	38	242	1199	168	122	1582	0
Grp Volume(v), veh/h	15	0	486	452	0	0	48	0	0	21	0	0
Grp Sat Flow(s),veh/h/ln	850	0	1760	1736	0	0	1609	0	0	1704	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	10.7	0.0	0.0	2.0	0.0	0.0	0.9	0.0	0.0
Prop In Lane	1.00		0.01	0.03		0.02	0.23		0.10	0.14		0.00
Lane Grp Cap(c), veh/h	610	0	1156	1181	0	0	394	0	0	411	0	0
V/C Ratio(X)	0.02	0.00	0.42	0.38	0.00	0.00	0.12	0.00	0.00	0.05	0.00	0.00
Avail Cap(c_a), veh/h	610	0	1156	1181	0	0	394	0	0	411	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	7.1	0.0	0.0	28.6	0.0	0.0	28.1	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	1.1	0.9	0.0	0.0	0.6	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.4	5.5	0.0	0.0	1.0	0.0	0.0	0.4	0.0	0.0
LnGrp Delay(d),s/veh	0.1	0.0	1.1	8.1	0.0	0.0	29.2	0.0	0.0	28.3	0.0	0.0
LnGrp LOS	A		A	A			C			C		
Approach Vol, veh/h		501			452			48			21	
Approach Delay, s/veh		1.1			8.1			29.2			28.3	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		65.0		25.0		65.0		25.0
Change Period (Y+Rc), s		5.9		* 5.7		5.9		* 5.7
Max Green Setting (Gmax), s		59.1		* 19		59.1		* 19
Max Q Clear Time (g_c+I1), s		2.0		2.9		12.7		4.0
Green Ext Time (p_c), s		8.3		0.2		8.2		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	6.1
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

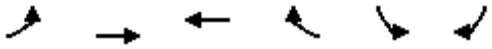
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	108	753	94	62	1015	42	122	326	134	58	147	86
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1980	1980	2000	1980	1980	2000	1980	1980	1980	1980	1980	2000
Adj Flow Rate, veh/h	114	793	99	65	1068	44	128	343	141	63	160	93
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	363	1392	174	421	1520	63	279	572	482	208	339	197
Arrive On Green	0.10	0.41	0.41	0.10	0.41	0.41	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1886	3360	419	1886	3668	151	1129	1980	1669	915	1172	681
Grp Volume(v), veh/h	114	444	448	65	548	564	128	343	141	63	0	253
Grp Sat Flow(s),veh/h/ln	1886	1881	1898	1886	1881	1937	1129	1980	1669	915	0	1853
Q Serve(g_s), s	0.0	16.3	16.3	0.0	21.6	21.7	9.5	13.4	5.9	5.7	0.0	10.1
Cycle Q Clear(g_c), s	0.0	16.3	16.3	0.0	21.6	21.7	19.6	13.4	5.9	19.1	0.0	10.1
Prop In Lane	1.00		0.22	1.00		0.08	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	363	780	786	421	780	803	279	572	482	208	0	535
V/C Ratio(X)	0.31	0.57	0.57	0.15	0.70	0.70	0.46	0.60	0.29	0.30	0.00	0.47
Avail Cap(c_a), veh/h	363	780	786	421	780	803	279	572	482	208	0	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	20.2	20.2	22.1	21.8	21.8	34.4	27.5	24.9	35.8	0.0	26.4
Incr Delay (d2), s/veh	0.5	3.0	3.0	0.2	5.2	5.1	5.3	4.6	1.5	3.7	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	9.0	9.1	1.2	12.2	12.6	3.4	8.1	2.9	1.7	0.0	5.6
LnGrp Delay(d),s/veh	30.6	23.2	23.2	22.2	27.0	26.9	39.8	32.1	26.4	39.5	0.0	29.3
LnGrp LOS	C	C	C	C	C	C	D	C	C	D		C
Approach Vol, veh/h		1006			1177			612			316	
Approach Delay, s/veh		24.0			26.7			32.4			31.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.0	43.0		32.0	15.0	43.0		32.0
Change Period (Y+Rc), s	* 5.7	* 5.7		6.0	* 5.7	* 5.7		6.0
Max Green Setting (Gmax), s	* 9.3	* 37		26.0	* 9.3	* 37		26.0
Max Q Clear Time (g_c+I1), s	2.0	23.7		21.1	2.0	18.3		21.6
Green Ext Time (p_c), s	0.3	6.0		2.2	0.3	5.2		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	27.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



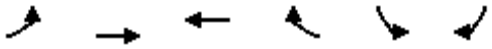
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	31	884	1139	32	49	46
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	0.99	1.00	1.00
Adj Sat Flow, veh/h/ln	1980	1980	1980	2000	2000	2000
Adj Flow Rate, veh/h	33	931	1225	34	62	58
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.95	0.95	0.93	0.93	0.79	0.79
Percent Heavy Veh, %	1	1	1	1	0	0
Cap, veh/h	399	1426	1370	38	305	272
Arrive On Green	0.72	0.72	1.00	1.00	0.16	0.16
Sat Flow, veh/h	443	1980	1902	53	1905	1700
Grp Volume(v), veh/h	33	931	0	1259	62	58
Grp Sat Flow(s),veh/h/ln	443	1980	0	1955	1905	1700
Q Serve(g_s), s	2.0	22.4	0.0	0.0	2.5	2.7
Cycle Q Clear(g_c), s	2.0	22.4	0.0	0.0	2.5	2.7
Prop In Lane	1.00			0.03	1.00	1.00
Lane Grp Cap(c), veh/h	399	1426	0	1408	305	272
V/C Ratio(X)	0.08	0.65	0.00	0.89	0.20	0.21
Avail Cap(c_a), veh/h	399	1426	0	1408	305	272
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.8	6.7	0.0	0.0	32.8	32.9
Incr Delay (d2), s/veh	0.4	2.3	0.0	9.1	1.5	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	12.8	0.0	3.6	1.5	1.4
LnGrp Delay(d),s/veh	4.2	9.0	0.0	9.1	34.3	34.7
LnGrp LOS	A	A		A	C	C
Approach Vol, veh/h		964	1259		120	
Approach Delay, s/veh		8.8	9.1		34.5	
Approach LOS		A	A		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		70.0		20.0		70.0		
Change Period (Y+Rc), s		* 5.2		5.6		* 5.2		
Max Green Setting (Gmax), s		* 65		14.4		* 65		
Max Q Clear Time (g_c+I1), s		24.4		4.7		2.0		
Green Ext Time (p_c), s		21.2		0.3		25.3		

Intersection Summary	
HCM 2010 Ctrl Delay	10.3
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	29	853	1123	16	20	21
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	0.99	1.00	1.00
Adj Sat Flow, veh/h/ln	1980	1980	1980	2000	2080	2080
Adj Flow Rate, veh/h	31	898	1208	17	33	35
Adj No. of Lanes	1	1	1	0	0	0
Peak Hour Factor	0.95	0.95	0.93	0.93	0.60	0.60
Percent Heavy Veh, %	1	1	1	1	0	0
Cap, veh/h	411	1430	1396	20	139	147
Arrive On Green	0.96	0.96	1.00	1.00	0.16	0.16
Sat Flow, veh/h	458	1980	1932	27	893	948
Grp Volume(v), veh/h	31	898	0	1225	69	0
Grp Sat Flow(s),veh/h/ln	458	1980	0	1960	1868	0
Q Serve(g_s), s	0.3	4.1	0.0	0.0	2.9	0.0
Cycle Q Clear(g_c), s	0.3	4.1	0.0	0.0	2.9	0.0
Prop In Lane	1.00			0.01	0.48	0.51
Lane Grp Cap(c), veh/h	411	1430	0	1415	291	0
V/C Ratio(X)	0.08	0.63	0.00	0.87	0.24	0.00
Avail Cap(c_a), veh/h	411	1430	0	1415	291	0
HCM Platoon Ratio	1.33	1.33	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.5	0.6	0.0	0.0	33.3	0.0
Incr Delay (d2), s/veh	0.4	2.1	0.0	7.3	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.4	0.0	2.9	1.6	0.0
LnGrp Delay(d),s/veh	0.9	2.7	0.0	7.3	35.2	0.0
LnGrp LOS	A	A		A	D	
Approach Vol, veh/h		929	1225		69	
Approach Delay, s/veh		2.6	7.3		35.2	
Approach LOS		A	A		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		70.0		20.0		70.0		
Change Period (Y+Rc), s		* 5		6.0		* 5		
Max Green Setting (Gmax), s		* 65		14.0		* 65		
Max Q Clear Time (g_c+I1), s		6.1		4.9		2.0		
Green Ext Time (p_c), s		22.7		0.1		23.1		

Intersection Summary	
HCM 2010 Ctrl Delay	6.2
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	565	290	223	773	378	235
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1800	1765	1765	1800	1800
Adj Flow Rate, veh/h	595	0	235	814	430	267
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.88	0.88
Percent Heavy Veh, %	1	0	2	2	0	0
Cap, veh/h	671	576	381	1018	495	644
Arrive On Green	0.75	0.00	0.18	0.77	0.29	0.29
Sat Flow, veh/h	1782	1530	1681	1765	1714	1530
Grp Volume(v), veh/h	595	0	235	814	430	267
Grp Sat Flow(s),veh/h/ln	1782	1530	1681	1765	1714	1530
Q Serve(g_s), s	22.3	0.0	2.3	25.0	21.4	0.0
Cycle Q Clear(g_c), s	22.3	0.0	2.3	25.0	21.4	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	671	576	381	1018	495	644
V/C Ratio(X)	0.89	0.00	0.62	0.80	0.87	0.41
Avail Cap(c_a), veh/h	671	576	381	1018	495	644
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.7	0.0	30.8	7.4	30.4	18.3
Incr Delay (d2), s/veh	15.9	0.0	7.3	6.6	18.3	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.2	0.0	5.8	13.5	12.7	4.9
LnGrp Delay(d),s/veh	25.6	0.0	38.1	13.9	48.7	20.2
LnGrp LOS	C		D	B	D	C
Approach Vol, veh/h	595			1049	697	
Approach Delay, s/veh	25.6			19.3	37.8	
Approach LOS	C			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	18.0	40.0				58.0		32.0
Change Period (Y+Rc), s	6.1	6.1				6.1		6.0
Max Green Setting (Gmax), s	11.9	33.9				51.9		26.0
Max Q Clear Time (g_c+I1), s	4.3	24.3				27.0		23.4
Green Ext Time (p_c), s	3.3	1.9				5.7		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	26.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	224	483	93	12	517	3	68	74	17	13	37	411
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	0.97		0.88	0.91		0.81	0.89		0.81
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1782	1782	1765	1765	1800	1782	1782	1800	1782	1782	1782
Adj Flow Rate, veh/h	252	543	104	13	544	3	82	89	20	15	44	484
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.89	0.89	0.89	0.95	0.95	0.95	0.83	0.83	0.83	0.85	0.85	0.85
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	1	1	1
Cap, veh/h	484	792	594	548	779	4	227	298	67	253	396	474
Arrive On Green	0.27	0.89	0.89	0.18	0.59	0.59	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1697	1782	1338	1681	1752	10	724	1343	302	1036	1782	1225
Grp Volume(v), veh/h	252	543	104	13	0	547	82	0	109	15	44	484
Grp Sat Flow(s),veh/h/ln	1697	1782	1338	1681	0	1761	724	0	1645	1036	1782	1225
Q Serve(g_s), s	0.0	7.8	0.9	0.0	0.0	19.5	9.2	0.0	5.0	1.1	1.8	20.0
Cycle Q Clear(g_c), s	0.0	7.8	0.9	0.0	0.0	19.5	10.9	0.0	5.0	6.1	1.8	20.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	484	792	594	548	0	783	227	0	366	253	396	474
V/C Ratio(X)	0.52	0.69	0.17	0.02	0.00	0.70	0.36	0.00	0.30	0.06	0.11	1.02
Avail Cap(c_a), veh/h	484	792	594	548	0	783	227	0	366	253	396	474
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.4	3.2	2.8	11.3	0.0	14.2	32.3	0.0	29.2	31.7	27.9	28.2
Incr Delay (d2), s/veh	4.0	4.8	0.6	0.1	0.0	5.1	4.4	0.0	2.1	0.4	0.6	46.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	4.4	0.4	0.2	0.0	10.3	2.1	0.0	2.5	0.3	0.9	12.8
LnGrp Delay(d),s/veh	25.3	8.0	3.5	11.3	0.0	19.3	36.7	0.0	31.2	32.1	28.5	74.8
LnGrp LOS	C	A	A	B		B	D		C	C	C	F
Approach Vol, veh/h		899			560			191			543	
Approach Delay, s/veh		12.3			19.2			33.6			69.9	
Approach LOS		B			B			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.0	46.0		26.0	18.0	46.0		26.0
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	12.0	40.0		20.0	12.0	40.0		20.0
Max Q Clear Time (g_c+I1), s	2.0	21.5		22.0	2.0	9.8		12.9
Green Ext Time (p_c), s	0.7	2.4		0.0	0.7	3.2		2.6

Intersection Summary	
HCM 2010 Ctrl Delay	30.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	497	4	33	495	29	26	39	23	16	47	11
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	0.96		0.92	0.93		0.91	0.93		0.91
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1800	1765	1800	1800	1765	1800	1800	1765	1800
Adj Flow Rate, veh/h	13	523	4	36	538	32	29	43	25	18	54	13
Adj No. of Lanes	1	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.91	0.91	0.91	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	531	1171	9	80	1019	59	116	156	76	89	228	48
Arrive On Green	1.00	1.00	1.00	0.67	0.67	0.67	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	755	1748	13	56	1521	88	317	773	379	204	1131	241
Grp Volume(v), veh/h	13	0	527	606	0	0	97	0	0	85	0	0
Grp Sat Flow(s),veh/h/ln	755	0	1761	1666	0	0	1469	0	0	1576	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	15.9	0.0	0.0	4.5	0.0	0.0	3.8	0.0	0.0
Prop In Lane	1.00		0.01	0.06		0.05	0.30		0.26	0.21		0.15
Lane Grp Cap(c), veh/h	531	0	1180	1158	0	0	347	0	0	365	0	0
V/C Ratio(X)	0.02	0.00	0.45	0.52	0.00	0.00	0.28	0.00	0.00	0.23	0.00	0.00
Avail Cap(c_a), veh/h	531	0	1180	1158	0	0	347	0	0	365	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	7.5	0.0	0.0	30.5	0.0	0.0	30.2	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	1.2	1.7	0.0	0.0	2.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.4	8.1	0.0	0.0	2.2	0.0	0.0	1.9	0.0	0.0
LnGrp Delay(d),s/veh	0.1	0.0	1.2	9.2	0.0	0.0	32.5	0.0	0.0	31.7	0.0	0.0
LnGrp LOS	A		A	A			C			C		
Approach Vol, veh/h		540			606			97			85	
Approach Delay, s/veh		1.2			9.2			32.5			31.7	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		66.0		24.0		66.0		24.0
Change Period (Y+Rc), s		* 5.7		5.9		* 5.7		5.9
Max Green Setting (Gmax), s		* 60		18.1		* 60		18.1
Max Q Clear Time (g_c+I1), s		2.0		5.8		17.9		6.5
Green Ext Time (p_c), s		6.7		0.5		6.6		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	9.1
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	593	310	220	429	224	186
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1800	1782	1782	1782	1782
Adj Flow Rate, veh/h	638	333	232	452	249	207
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.95	0.95	0.90	0.90
Percent Heavy Veh, %	1	0	1	1	1	1
Cap, veh/h	869	1052	495	1186	339	470
Arrive On Green	0.98	0.98	0.22	1.00	0.20	0.20
Sat Flow, veh/h	1782	1530	1697	1782	1697	1515
Grp Volume(v), veh/h	638	333	232	452	249	207
Grp Sat Flow(s),veh/h/ln	1782	1530	1697	1782	1697	1515
Q Serve(g_s), s	2.8	0.5	0.0	0.0	12.4	0.0
Cycle Q Clear(g_c), s	2.8	0.5	0.0	0.0	12.4	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	869	1052	495	1186	339	470
V/C Ratio(X)	0.73	0.32	0.47	0.38	0.73	0.44
Avail Cap(c_a), veh/h	869	1052	495	1186	339	470
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.6	0.2	13.4	0.0	33.8	24.8
Incr Delay (d2), s/veh	5.5	0.8	3.2	0.9	13.2	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.4	4.2	0.3	7.1	4.5
LnGrp Delay(d),s/veh	6.1	1.0	16.5	0.9	46.9	27.8
LnGrp LOS	A	A	B	A	D	C
Approach Vol, veh/h	971			684	456	
Approach Delay, s/veh	4.3			6.2	38.2	
Approach LOS	A			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.0	50.0				66.0		24.0
Change Period (Y+Rc), s	6.1	6.1				6.1		6.0
Max Green Setting (Gmax), s	9.9	43.9				59.9		18.0
Max Q Clear Time (g_c+I1), s	2.0	4.8				2.0		14.4
Green Ext Time (p_c), s	2.0	4.9				3.2		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	565	290	223	773	378	235
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1782	1800	1765	1765	1800	1800
Adj Flow Rate, veh/h	595	305	235	814	430	267
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.88	0.88
Percent Heavy Veh, %	1	0	2	2	0	0
Cap, veh/h	671	1017	361	1018	495	644
Arrive On Green	0.75	0.75	0.18	0.77	0.29	0.29
Sat Flow, veh/h	1782	1526	1681	1765	1714	1530
Grp Volume(v), veh/h	595	305	235	814	430	267
Grp Sat Flow(s),veh/h/ln	1782	1526	1681	1765	1714	1530
Q Serve(g_s), s	22.3	4.0	3.6	25.0	21.4	0.0
Cycle Q Clear(g_c), s	22.3	4.0	3.6	25.0	21.4	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	671	1017	361	1018	495	644
V/C Ratio(X)	0.89	0.30	0.65	0.80	0.87	0.41
Avail Cap(c_a), veh/h	671	1017	361	1018	495	644
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.7	2.3	31.4	7.4	30.4	18.3
Incr Delay (d2), s/veh	15.9	0.8	8.8	6.6	18.3	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.2	3.1	6.0	13.5	12.7	4.9
LnGrp Delay(d),s/veh	25.6	3.0	40.2	13.9	48.7	20.2
LnGrp LOS	C	A	D	B	D	C
Approach Vol, veh/h	900			1049	697	
Approach Delay, s/veh	18.0			19.8	37.8	
Approach LOS	B			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	18.0	40.0				58.0		32.0
Change Period (Y+Rc), s	6.1	6.1				6.1		6.0
Max Green Setting (Gmax), s	11.9	33.9				51.9		26.0
Max Q Clear Time (g_c+I1), s	5.6	24.3				27.0		23.4
Green Ext Time (p_c), s	2.9	2.9				5.7		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	23.9
HCM 2010 LOS	C

MEMO

To:	**Mr. Paul O'Meara, City Engineer** **City of Birmingham**
From:	**Michael J. Labadie, PE** **Fleis & VandenBrink**
CC:	**Ms. Jana Ecker, City Planner** **City of Birmingham**
Date:	**April 14th, 2015**
Re:	**Maple Road – Cranbrook to Chester** **City of Birmingham, Michigan** **Steering Committee**

Topics Overview

- **Crash and Speed Reduction**
- **Cut Through Traffic**
- **Platooning**
- **Maple Road and Southfield Road Intersection Exhibit**
- **Cranbrook Road and Maple Road Intersection Exhibit**
- **Pedestrian Island Exhibits**

Crash and Speed Reduction

Site Studies

F&V investigated numerous studies to find previous projects and sites that compare similarly to Maple Road between Cranbrook Road and Chester Street. This meant finding locations with average daily traffic (ADT) on the higher threshold of what is commonly felt as acceptable for a road diet (20,000 ADT). This data was compiled and further scrutinized to determine what if any impact a road diet from four (4) to three (3) lanes would have on the number and types of crashes that occur and as well as the average travel speed of vehicles.

The main study F&V chose to further examine was completed by Michigan State University in 2012. It not only looked at examples of road diets throughout Michigan but also scrutinized previous studies performed on sites across the nation.

Road Diet Crash Analysis

While all the studied sites have different ADT, geometrics, intersections, business/residential mix, etc., overall the number of crashes and the severity was reduced after completion of the conversion (*All sites included in the memo*. From examining crash data from before and after a four to three lane reduction with the addition of bike lanes, several common trends were revealed:

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- An overall decrease in the number of crashes with a large decrease due to left turn movements now occurring in a reserved left turn lane at mid-block locations. MSU results show an approximate 9% reduction in accidents while many of the studies show an even greater reduction. The Federal Highway Administration (FHWA) suggests a 19-47% reduction in all roadway crashes when a roadway is modified from four travel lanes to two travel lanes with a two way left turn lane (TWLTL).

Crash Reduction

Comparable Sites	City/St	ADT	Crash Reduction	Speed Limit (MPH)	Year Project Completed
Maple Road	Birmingham, MI	21,000	NA	35	NA
N 45th Street*	Seattle, WA	20,000	14 %	30	1972
Madison St.*	Seattle, WA	18,000	-38%	30	1994
East Boulevard**	Charlotte, NC	21,400	-34%	35	2011
Fourth Plain Blvd.**	Vancouver, WA	17,000	-52%	50KM/H (31MPH)	2001
Portland Ave.**	Burnsville, MN	19,200	-32%	30	2011
Edgewater Drive**	Orlando, FL	20,000***	-40%	30	2002
	Average	19,120	-28%	-	

*Parallel parking instead of bike lanes
**Includes bike lanes
***approximate count not included in average

- A slight increase in the number of crashes (rear-end collisions) where two lanes of through traffic are reduced into one. This is mostly due to the increased volumes in a single lane and unfamiliarity with the new road configuration.
- A decrease in pedestrian and cyclist involved crashes per overall pedestrian/cyclist trips. While the number of incidents in many cases remained the same or slightly increased, most were due in fact to the increased usage of the road and facilities because of the improved infrastructure (bike lanes, pedestrian refuge islands, etc.) No distinction was made in the reduction of crashes on roads with or without bike lanes.
- A reduction in the severity of crashes. Edgewater Drive in Orlando, FL saw a 71% decrease in injuries after project completion.

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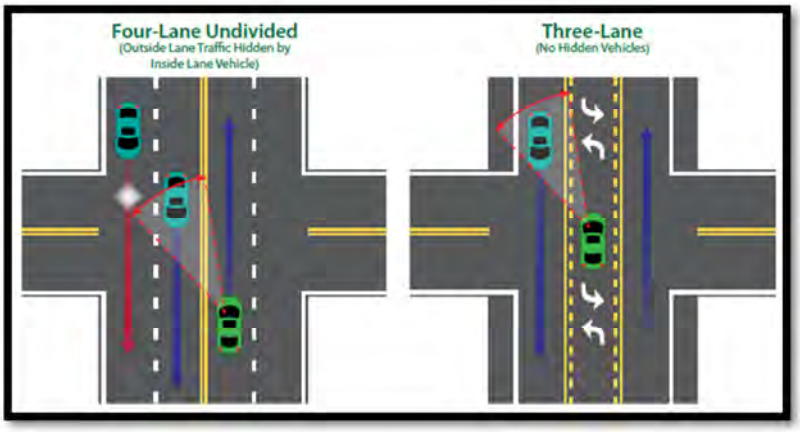
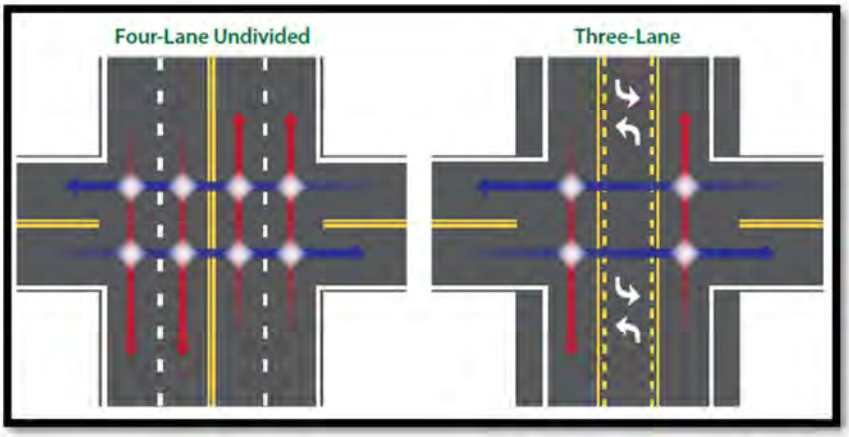
- A reduction in crashes due to improved site lines and distance.



- A reduction in crashes due to reduced traffic conflict points.



Road Diet Speed Reduction Analysis

Road diets improve safety by reducing the speed differential. On a four-lane undivided road, vehicle speeds can vary between travel lanes, and drivers frequently slow or change lanes due to slower or stopped vehicles (vehicles stopped in the left lane waiting to turn left). Drivers may also weave in and out of the traffic lanes at high speeds. In contrast, on three-lane roads with TWLTLs the vehicle speed differential is limited by the speed of the lead vehicle in the through lane, and through vehicles are separated from left-turning vehicles. Thus, Road Diets can reduce the vehicle speed differential and vehicle interactions, which can reduce the number and severity of vehicle-to-vehicle crashes. Reducing operating speed decreases crash severity when crashes do occur. A review of numerous sites in the study suggest that not only will a reduction in the 85% speed occur, but there will be a large reduction in the number of people traveling 5 mph or more over the speed limit.

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- A study of 35 Iowa, California and Washington project sites reflected a 4-5 mph reduction in the 85% speed and a 30% reduction of cars traveling more than 5 mph over the speed limit.
- A reduction in speed is shown to be a contributing factor in the reduction of accidents.
- East Boulevard (35mph speed limit) in Charlotte, NC with an ADT of 21,000 saw a 7% reduction in the 85% speed.
- Stone Way (30mph speed limit) in Seattle, WA saw a 75% decrease in vehicles traveling 10 mph over the speed limit.
- A study of three road diets in San Francisco found a reduction in speeds of between 4% and 14%.

Cut Through Traffic

A common concern among neighboring residents of lane reduction projects is the increase in traffic along connecting roads. This is most commonly caused by an increase in delays and reduction of capacity (reduction in LOS) after conversion from four to three lanes. Based upon the future conditions as provided in the previous memo "Future Conditions Analysis", the LOS of all study intersection approaches and movements would remain at an acceptable LOS D or better except for SB Maple Road & Chester Street, which would remain at LOS E. Most intersections LOS and delay remain basically unchanged, ranging between A and C whether 4 lanes or 3. Therefore no increase in cut through traffic is expected.

Platooning

Platooning occurs when vehicles travel in groups caused by traffic signal coordination.. If a 4 lane to 3 lane conversion is done, platooning will occur on Maple road between Southfield and Cranbrook due to the signal timing and the 4 lane to 3 lane road diet. Some benefits of platooning are increase in gaps, reducing speed and speed variation between lanes, and increasing capacity. Gaps will be created in traffic on Maple road due to traffic signals timing. These gaps will give adequate time for the adjacent minor streets and driveways left turn movements. When a platoon leaves from a traffic signal the speed of the platoon depends on the leading vehicle. All vehicles trailing the lead vehicle in the platoon will go equal to or less than their speed. This will reduce the average speed along the corridor. Platooning vehicles accelerate and decelerate as a group. This reduces the headway which in turn increases the capacity of the roadway.

Platooning is much less frequent on under-utilized four lane roads such as Maple Rd. because it offers drivers choices, so vehicles spread out more depending on the speed of drivers in each of the two through lanes.

In order for platooning to occur along Maple Road some additional signal equipment would be required. The additional equipment includes GPS clocks, antennas, and new software. The equipment and installation would cost between $15,000 and $21,000.

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Maple Road and Southfield Road Intersection Exhibit

Cranbrook Road and Maple Road Intersection Exhibit

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Pedestrian Island Exhibits

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"Road Diet" (Roadway Reconfiguration)

The classic roadway reconfiguration, commonly referred to as a "*road diet*," involves converting an undivided four lane roadway into three lanes made up of two through lanes and a center two-way left turn lane. The reduction of lanes allows the roadway to be reallocated for other uses such as bike lanes, pedestrian crossing islands, and/or parking. Road diets have multiple safety and operational benefits for vehicles as well as pedestrians, such as:

- Decreasing vehicle travel lanes for pedestrians to cross, therefore reducing the multiple-threat crash (when one vehicle stops for a pedestrian in a travel lane on a multi-lane road, but the motorist in the next lane does not, resulting in a crash) for pedestrians,
- Providing room for a pedestrian crossing island,
- Improving safety for bicyclists when bike lanes are added (such lanes also create a buffer space between pedestrians and vehicles),
- Providing the opportunity for on-street parking (also a buffer between pedestrians and vehicles),
- Reducing rear-end and side-swipe crashes, and
- Improving speed limit compliance and decreasing crash severity when crashes do occur.

Background

Midblock locations tend to experience higher travel speeds, contributing to increased injury and fatality rates. More than 80 percent of pedestrians hit by vehicles traveling at 40 mph or faster will die, while less than 10 percent will die when hit at 20 mph or less. When appropriately applied, road diets have generated benefits to users of all modes of transportation, including bicyclists, pedestrians, and motorists. The resulting benefits include reduced vehicle speeds, improved mobility and access, reduced collisions and injuries, and improved livability and quality of life. When modified from four travel lanes to two travel lanes with a two-way left-turn lane, roadways have experienced a 29 percent reduction in all roadway crashes. The benefits to pedestrians include reduced crossing distance and fewer midblock crossing locations, which account for more than 70 percent of pedestrian fatalities.

Road Before

Road After

Best Design Practices for

Walking and Bicycling

in Michigan

Michigan Department of Transportation

Acknowlegements

These best design practices were prepared by **T.Y. Lin International**
at the direction of the **Michigan Department of Transportation**.

Participating Agencies

Center for Education and Research in Safety
Western Michigan University
Corradino Group

Cover photo source: Ann Arbor Downtown Development Authority

Table of Contents

Introduction

The Michigan Department of Transportation (MDOT) has undertaken a research initiative to determine how to optimize pedestrian and bicycle safety while minimizing impacts to vehicular mobility. The best practices in this document provide guidance in the design of nonmotorized improvements that have been shown to reduce crashes involving pedestrians and bicyclists. This best practices report is one of several reports prepared under this research initiative. Other reports prepared include:

- *Pedestrian and Bicycle Crash Data Analysis: 2005-2010*
- *Crash Countermeasures and Mobility Effects*
- *Case Study Report*
- *Review of National Association of City Transportation Officials (NACTO) Bicycle Facilities*

These four reports will then be assembled into one final report entitled *Sharing the Road: Optimizing Pedestrian and Bicycle Safety and Vehicle Mobility Final Report.* This report also will include a review of MDOT design guides and safety reports.

This report is organized as a toolbox for planners and designers. A summary matrix is provided that provides a general comparison of the potential crash reduction, potential mobility impacts, and cost of each best practice.

Potential crashes for each best practice is summarized as either reducing or having no difference on crashes. Potential mobility effects are shown as making mobility better, making no difference, or making mobility worse for one or more modes of transportation.

Mobility is a function of speed, access, and delay. For the purposes of this report, potential mobility impacts refer to a potential change in delay as the result of implementing a best design practice. As bicyclists are considered roadway users to the same extent as motor vehicles per State of Michigan law, the determination of mobility assumes that bicyclists are traveling in the roadway unless otherwise stated.

Cost is summarized as low (up to $20,000), medium ($20,000-$100,000), and high (over $100,000). Best practices are grouped into three categories:

1. Signalized Intersections
2. Unsignalized Pedestrian Crossing Improvements
3. Corridor Improvements

Refencences are provided at the end of the document. Where applicable, references to MDOT manuals, including the Michigan Manual on Uniform Traffic Control Devices (Michigan MUTCD), are provided.

Signalized Intersection Improvements

Best Practice	Potential Crashes			Potential Mobility Effects			Cost
	Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
Proper Walking Speed	No Difference	Reduce	No Difference	Worse	Better	No Difference	Low
Fixed Time Signals/ Pedestrian Push Buttons	No Difference	No Difference	No Difference	No Difference	Better	No Difference	Low
Pedestrian Countdown Signal	Reduce	Reduce	Reduce	No Difference	Better	No Difference	Low
Leading Pedestrian Interval	No Difference	Reduce	No Difference	No Difference	Better	No Difference	Low
Pedestrian-Only Phase (Scramble)	No Difference	Reduce	No Difference	Worse	Better	Worse	Low
Exclusive Left Turn Phase (Leading/Lagging)	Reduce	Reduce	Reduce	Worse	Better	Better	Low
Flashing Yellow Arrow	Reduce	No Difference	No Difference	Better	No Difference	No Difference	Low
Prohibited Left Turns (Michigan Left)	Reduce	Reduce	Reduce	Better	Better	Better	Med/High
Prohibited Right Turn on Red	Reduce	Reduce	No Difference	Worse	Better	Better	Low
Advance Stop Bar	No Difference	Reduce	No Difference	No Difference	Better	No Difference	Low
Pork Chop Island	Reduce	Reduce	No Difference	Better	Better	No Difference	Med/High
Bulb-outs	Reduce	Reduce	No Difference	No Difference	Better	No Difference	Med/High
Roundabout	Reduce	Reduce	Reduce	Better	Better	Better	High
Bicycle Signal Detection	No Difference	No Difference	Reduce	No Difference	No Difference	Better	Low/Med
Intersection Crossing Markings	No Difference	No Difference	Reduce	No Difference	No Difference	Better	Low
Bike Box	No Difference	Reduce	Reduce	No Difference	No Difference	Better	Low
Two-Stage Bike Left Turn	No Difference	No Difference	Reduce	No Difference	No Difference	Better	Low
Combined Bike/Turn Lane	No Difference	No Difference	Reduce	No Difference	No Difference	Better	Low
Bicycle Signals	No Difference	No Difference	Reduce	No Difference	No Difference	Better	Medium

Cost: Low: up to $20K; Med: $20K-$100K; High: over $100K

Proper Walking Speed

What: Pedestrian signal timing is calculated using a walking speed of 3.5 feet/second or slower where there is a significant population of elderly pedestrians or pedestrians with disabilities using the signal.

Where: All new or rehabilitated pedestrian signals should be timed with this signal timing according to the Michigan MUTCD.

Why: Studies have shown that the previous standard walking speed of 4.0 feet/second was an average walking speed and thus was not adequate time to allow most pedestrians to cross the street.[2]

How: See Michigan MUTCD, Section 4E.05.

Image: www.pedbikeimages.org/Dan Burden

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	Reduce	No Difference	Worse	Better	No Difference	Low

Fixed Time Signals or Pedestrian Push-Buttons

What: Fixed time signals have an automatic pedestrian phase built in to the signal cycle. Pedestrian push-buttons allow pedestrians to call up a pedestrian signal where they do not come up automatically.

Where: Fixed time signals should be used where pedestrian traffic is routine. Pedestrian push-buttons should be used where pedestrian crossings are infrequent and pedestrian signals are not automatic.

Why: Requiring pedestrians to call for the pedestrian signal increases their delay and should only be used where pedestrian traffic is limited. Fixed-time signals increase mobility for pedestrians.

How: Traffic signals may need to be re-programmed and/or re-timed to automatically bring up the pedestrian phase.

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	No Difference	No Difference	No Difference	Better	No Difference	Low*

* If signal timing is maintained.

**If signal needs to be re-timed for pedestrian walking speeds, there may be a slight increase in motor vehicle delay.

Pedestrian Countdown Signal

What: Pedestrian countdown signals give pedestrians an indication of how much time is left to cross the street by accompanying the "flashing don't walk" signal with a countdown.

Where: Pedestrian countdown signals are required anywhere a pedestrian signal is used whenever new signals are installed or existing signals are replaced per the Michigan MUTCD.

Why: Pedestrian countdown signals have been shown to reduce all crashes at signalized intersections by 25%. They also increase the incidence of pedestrians completing their crossing before the end of the "flashing don't walk" phase.

How: Adding pedestrian countdown signals typically cost between $10,000 to $15,000 per intersection to replace all pedestrian signal heads to as little as $800 per intersection to add a countdown clock to each existing pedestrian signal head See MUTCD, Section 4E.04.

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
Reduce	Reduce	Reduce	No Difference	Better	No Difference	Low

Leading Pedestrian Interval

What: A leading pedestrian interval (LPI) gives pedestrians a walk signal before the parallel traffic gets the green. This allows pedestrians to get into the crosswalk before turning motor vehicle traffic.

Where: LPIs should be considered where turning vehicles delay or pose a danger to pedestrians, particularly where turns have been shown to cause crashes or create a high number of conflicts with pedestrians.

Why: Where LPIs are used, pedestrians were shown to be less likely to surrender their right of way to turning vehicles and there were fewer conflicts between motorists and pedestrians crossing at the beginning of the WALK phase.[6]

How: To implement a LPI, the signal must be re-timed to allow pedestrians a WALK phase that begins in advance of the vehicular green phase. Right turn on red should be prohibited across the crosswalk where LPIs are used.

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	Reduce	No Difference	No Difference	Better	No Difference	Low

Pedestrian-Only Phase (Scramble)

What: A pedestrian-only phase or pedestrian scramble allows pedestrians to walk in any direction across the intersection, including diagonally, during an exclusive phase in which only pedestrian traffic has the right of way.

Where: This treatment should be limited to intersections where pedestrian volumes are higher than vehicular volumes and where a significant percentage of pedestrians would make a diagonal crossing. Pedestrian-only phases have been shown to significantly increase motor vehicle delay.[5] Engineering judgement should be used in determining locations.

Why: Pedestrian-only phases has been shown to reduce pedestrian crashes by 34%.[1]

How: A pedestrian-only phase adds a phase to the typical traffic signal sequence during which all directions of motor vehicle traffic have a red phase and all directions of pedestrian traffic have a WALK phase. The diagonal crossing sign image to the right can provide additional information to pedestrians and motorists. The MUTCD does not preclude the use of this sign. However, there is no specific MUTCD guidance for signs of this type.

Image: Oakland Chinatown Chamber of Commerce

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	Reduce	No Difference	Worse	Better	Worse	Low

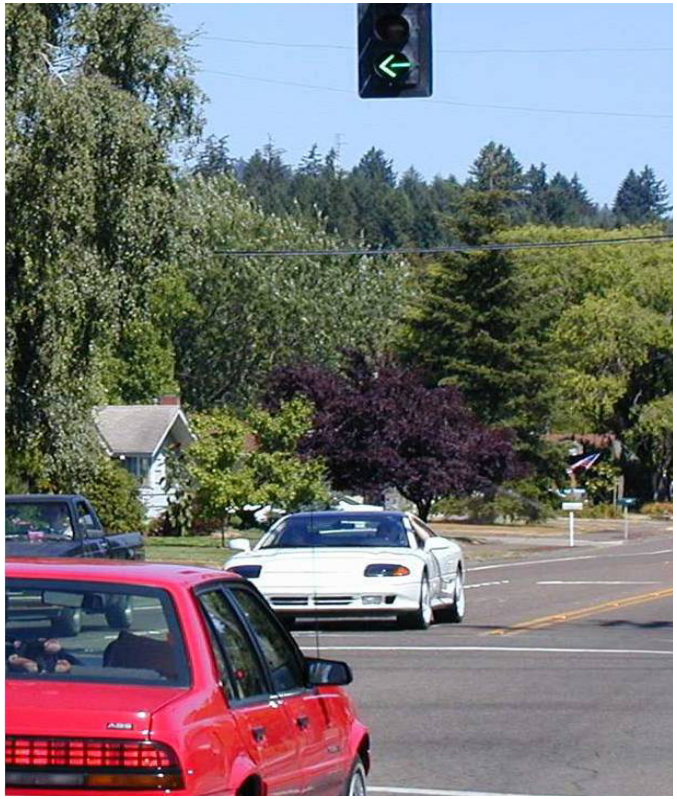
Exclusive Left Turn Phase (Leading/Lagging)

What: Left turning vehicles have an exclusive phase, indicated by a green left arrow. The phase can either be given before the green phase for through traffic (leading) or after (lagging).

Where: An exclusive left turn phase should be considered at intersections where left-turning traffic volumes are high and a Michigan Left is not feasible. A lagging left turn phase should be considered where there is a high number of conflicts between left turning vehicles and pedestrians.

Why: Exclusive left turn phases reduce conflicts between left turns and pedestrians. Pedestrians normally start to cross at the beginning of the through green interval. A lagging left-turn phase strategy allows pedestrians to clear the crossing before left-turning vehicles begin to turn.

How: The signal timing must be adjusted to allow for this exclusive phase.



Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
Reduce	Reduce	Reduce	Worse	Better	Better	Low

Flashing Yellow Arrow

What: For permitted left turns at a signalized intersection, the signal phase is displayed as a flashing yellow arrow rather than a green ball.

Where: This treatment should be considered at intersections where pedestrian crashes have been caused by motorists making a left turn and an exclusive left turn is not desired.

Why: Crash rates at intersections where the flashing yellow arrow was used were found to be lower than intersection with the conventional green ball indication.[4]

How: A three-head signal must be replaced with a four-head signal in order to provide a flashing yellow arrow. The flashing yellow is displayed during the permitted left turn phase.

Image: www.aaroads.com

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
Reduce	No Difference	No Difference	Better*	No Difference	No Difference	Low

* When installed to replace a protected left turn phase.

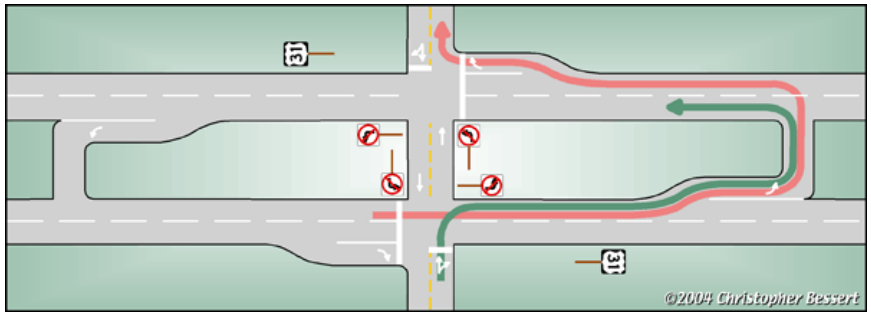
Prohibited Left Turns (Michigan Left)

What: The prohibition of left turns at signalized intersections and providing room for U-turns at median crossovers is known as a Michigan Left. The diagram to the right shows Michigan left turn movements from two approaches.

Where: Michigan Lefts can be implemented on roads with a wide center median or where the cross-street has a wide center median. Michigan Lefts should be considered where there are conflicts or crashes caused by left-turning vehicles or where improved efficiency of left turns is desired.

Why: Prohibiting left turns has been shown to reduce pedestrian intersection crashes by 10%.[3] MDOT has also found that they increase efficiency and reduce congestion and reduce the number and severity of crashes.

How: MDOT provides guidance on left-turn prohibitions in the MDOT Road Design Manual, Pavement Marking Typicals (PAVE-935-A, PAVE-990-A).



Images: www.michiganhighways.org

Image: www.michigan.gov/mdot/0,4616,7-151-9620_10694-161777--,00.html

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
Reduce	Reduce	Reduce	Better	Better	Better*	Med/High

* This assumes that bicyclists make a two-stage left turn. The two-stage left turn is described on page 22.

Prohibited Right Turn on Red

What: Right turns on red are prohibited through the use of regulatory signs.

Where: Right turn on red restrictions should be implemented where right-turning vehicles are involved with crashes with pedestrians or rear-end or angle crashes with vehicles approaching from the left on the cross-street.

Why: Permitted right turns on red pose a threat to pedestrians crossing with the signal, as motorists wanting to turn right are looking to the left for a gap in traffic and may not see a pedestrian approaching from the right. Prohibiting right turn on red also benefits bicyclists in bike lanes, as it prevents right-turn vehicle crashes involving bicyclists.

How: Regulatory signs are posted at the intersection. See MUTCD, Section 2B.54.

Image: www.highwaytrafficsupply.com

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
Reduce	Reduce	No Difference	Worse	Better	Better	Low

Advance Stop Bar

What: An advance stop bar is a stop bar that is marked 15 or more feet in advance of the crosswalk at a signalized intersection, as opposed to the minimum 4-foot setback.

Where: Advance stop bars should be considered where there is a high number of conflicts between vehicles turning right on red and pedestrians. They could also be used at any intersection where improved visibility is desired.

Why: Advance stop bars improve visibility of and for pedestrians. It also gives pedestrians a little more time to get into the crosswalk and establish their position before turning vehicles enter the crosswalk space. Conflicts between drivers and pedestrians were shown to be reduced by 90%[7]

How: This tool involves marking a stop line further from the crosswalk. However, there is a maximum allowable distance; guidance in Section 3B.16 of the MMUTCD suggests that the stop bar should be placed no more than 30 feet from the near edge of the intersecting roadway.

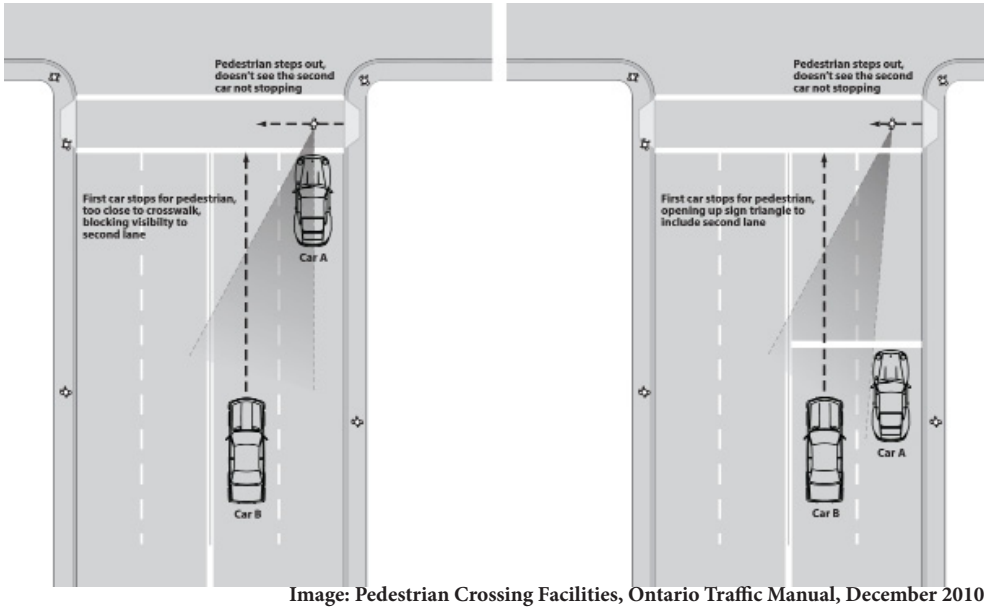


Image: Pedestrian Crossing Facilities, Ontario Traffic Manual, December 2010

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	Reduce	No Difference	No Difference	Better	No Difference	Low

Pork Chop Island

What: A wedge-shaped island between a right-turn lane and through lanes at an intersection.

Where: Pork chop islands should be considered at wide intersections where channelized right turn lanes are desired, or where a large turning radius would otherwise be required to prevent large, right-turning vehicles from encroaching on opposing traffic lanes.

Why: Pork chop islands break up a pedestrian crossing, making the crossing both safer and easier. They have been shown to reduce pedestrian crashes by 29%.

How: Care should be taken to design the right-turn lane to encourage slow speeds and improve visibility of crossing pedestrians by the turning vehicles. Reference *Pedestrian Facilities Users Guide - Providing Safety and Mobility,* p. 59 for more information.

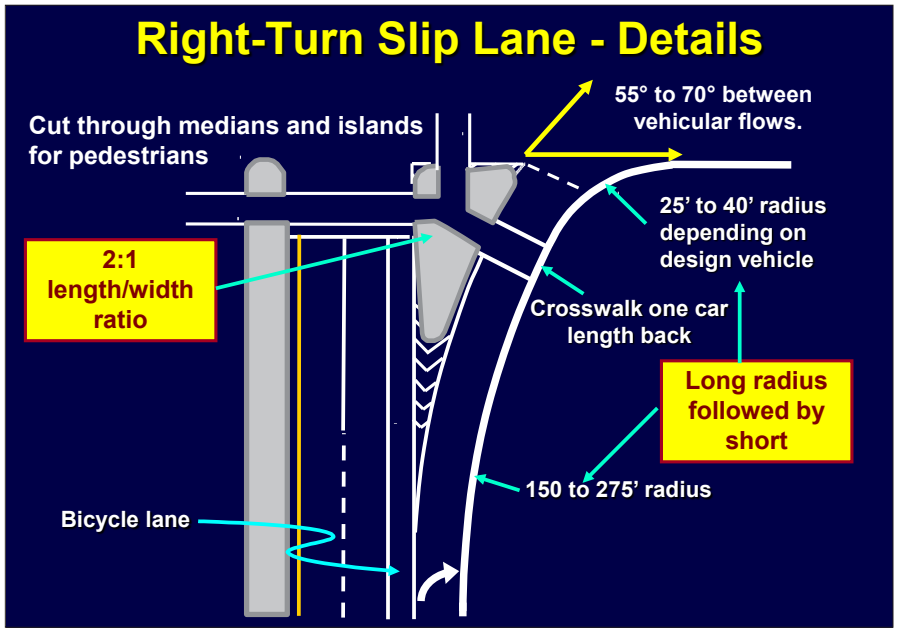


Image: AASHTO

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
Reduce	Reduce	No Difference	Better	Better	No Difference	Med/High

Bulb-Outs

What: Bulb-outs (also known as curb extensions or bump-outs) extend the sidewalk or planting space out into the existing roadway, taking up space in a parking lane.

Where: Bulb-outs may be used anywhere with permitted on-street parallel or angle parking. They should be considered in particular where pedestrian crossings are too long.

Why: Bulb-outs increase visibility between pedestrians and motorists. They also shorten the distance a pedestrian must cross to reach the other side of the street.

How: Curbs must be reconstructed to extend the pedestrian space. The new curb line should not encroach the traveled way where bicyclists or motor vehicles may be traveling.

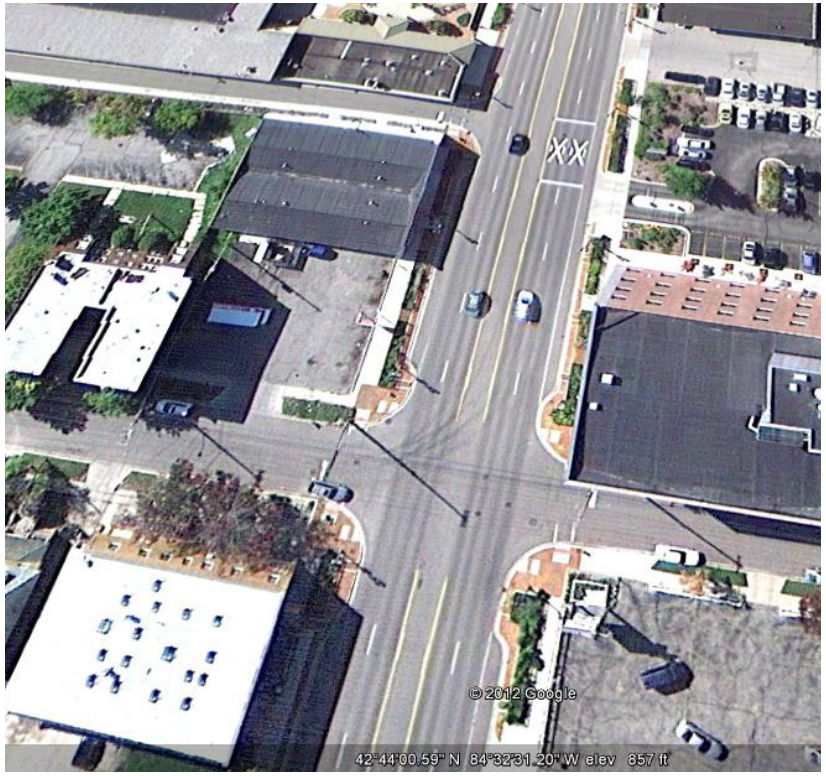


Image: Lansing, Michigan. Source: Google Earth Professional

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
Reduce	Reduce	No Difference	No Difference	Better	No Difference	Med/High

Roundabout

What: In place of a stop-controlled or signalized intersection, a roundabout directs straight and turning traffic through a circular intersection designed to ensure yielding upon entry and slow vehicle speeds through the roundabout.

Where: Single-lane roundabouts can handle traffic volumes up to 26,000 vehicles per day. While multi-lane roundabouts can be used for traffic volumes up to 50,000 vehicles per day, they may complicate pedestrian crossings.[8]

Why: Roundabouts reduce the number of conflict points at a typical four-leg intersection and have been shown to reduce motor vehicle crashes as well as pedestrian crashes. Below the volumes listed above, roundabouts tend to improve the efficiency of the intersection.

How: If future traffic projections identify a need for a multi-lane roundabout, the roundabout should first be installed as a single lane roundabout, with right-of-way reserved to add more lanes later when they become necessary. Refer to the *FHWA Roundabout Technical Summary* and www.michigan.gov/roundabout for more information.

Okemos, MI Image: Google Earth

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
Reduce	Reduce	Reduce	Better	Better	Better	High*

* Cost assumes a retrofit. Cost may be similar to or less than installing a signalized intersection as part of planned roadway construction.

Bicycle Signal Detection

What: Bicycle signal detection is a modification to existing loop detectors or the addition of new loop detectors to detect the presence of bicycles at actuated and semi-actuated signalized intersections. Bicycle location markings and signage is often included to make sure bicyclists are positioned to ensure that they are detected at intersections. Conveniently-located push buttons may be substituted for automatic loop detection.

Where: Bicycle signal detection may be used wherever bicycle connectivity is desired across signalized intersections.

Why: Bicycle signal detection is helpful to reduce the likelihood that a bicyclist would attempt to cross against a signal, or to minimize delay for signalized intersections where a shorter cycle length can be used when bicyclists are not present.

How: Guidance for installation of bike signal detection markings is provided in the AASHTO *Guide for the Development of Bicycle Facilities*.

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	No Difference	Reduce	No Difference	No Difference	Better	Low/Med

Intersection Bike Crossing Markings

What: On streets with bike lanes, pavement markings are continued through the intersection to indicate the intended position for bicyclists, as well as alert motorists that the bicycle facility is carried through the intersection.

Where: Intersection crossing markings should be considered at wide intersections or intersections where the intended direction for bicyclists is complex or unclear.

Why: The markings encourage bicyclists to ride in the most visible position on the roadway, and also raises motorist awareness of the presence of bicyclists.

How: The intended path may be marked using shared lane markings, colored pavement, dashed lines, or some combination. For additional background and design details, refer to the NACTO Urban Bikeway Design Guide: www.nacto.org

Image: Chicago, Illinois. Source: T.Y. Lin International

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	No Difference	Reduce	No Difference	No Difference	Better	Low

Bike Box

What: A bike box provides a space for bicyclists to wait in front of the queue of vehicles at a signalized intersection. It includes an advance stop bar with markings for bicycles in the space between the stop bar and the crosswalk. The bike box may also use colored paverment to denote the space for bicyclists.

Where: Bike boxes can be used in conjunction with bike lanes and may be considered where it may be helpful to provide additional space to separate bicyclists traveling straight or making right turns, or where there is a high number of motorists making right turns. Bike boxes are also useful at complicated intersections. No Turn On Red is required at intersections where bike boxes are used.

Why: Bike boxes improve visibility of bicyclists at intersections, where they are most vulnerable. In particular, they reduce conflicts between right-turning vehicles and bicyclists.

How: Bike bixes are not yet in the MUTCD and will require FHWA approval prior to installation. For design detail information refer to the NACTO Urban Bikeway Design Guide: www. nacto.org

Image: www.pedbikeimages.org/Laura Sandt

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	Reduce	Reduce	No Difference	No Difference	Better	Low

Two-Stage Bike Left Turn

What: A two-stage left turn consists of a queue box marked on the far side of at an intersection to provide a place for bicyclists to wait while making a left turn without having to move to the left-turn lane.

Where: Two-stage left turn queue boxes should be considered where a bicycle facility crosses another facility, or where the facility makes a left turn. These may be installed at intersections with or without medians. The image from NACTO to the right shows the median treatment.

Why: A two-stage left turn is helpful in providing bicyclists with flexibility in making a left turn where it may be uncomfortable or undesirable to move to the left-turn lane, or where multiple left-turn lanes exist.

How: A bicyclist enters a two-stage left turn by crossing the street on which he/she intends on making a left turn and waits in the queue box. Once across, the bicyclists waits for the green light and continues in the direction of traffic, completing the left turn in two stages. Two-stage bike left turns are not yet in the MUTCD and will require FHWA approval prior to installation.

Image: www.nacto.org

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	No Difference	Reduce	No Difference	No Difference	Better	Low

Combined Bike/Turn Lane

What: A combined bike/turn lane most commonly occurs at an intersection where a bike lane and a right-turn lane occupy the same space.

Where: Combined bike/turn lanes should be considered only when a right-turn lane is needed along a street with a bike lane, and there is not enough street width to provide a separate bike lane to the left of the turn lane. The bike lane transitions to a shared lane condition with the motor vehicle turn lane.

Why: Combined bike/turn lanes help to identify the presence and riding location of a bicyclist. Signs help communicate the shared lane condition and that motor vehicles shall yield to bikes in these locations.

How: Pavement markings denoting the shared lane condition and signs posted "RIGHT TURN ONLY EXCEPT BIKES" or shared lane signs are posted to clarify the shared lane condition. Current guidance in the MUTCD suggests a lane drop resulting in a shared through or turn lane. Combined bike/turn lanes are not yet in the MUTCD and will require FHWA approval prior to installation. For more information, consult NACTO *Urban Bikeway Design Guide*.

Image: www.nacto.org

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	No Difference	Reduce	No Difference	No Difference	Better	Low

Bicycle Signals

What: Bicycle signals are signals designated specifically for bicyclists. They may be actuated or pre-timed and may provide an exclusive signal phase for bicylists at an intersection.

Where: Bicycle signals may be used in areas where bicyclists are subject to different traffic control than vehicles, such as at trail crossings, cycle tracks, or bicycle boulevards.

Why: Bike signals are helpful to clarify the separation of bicycle and automobile traffic, to give bicyclists a head start in mixed traffic conditions, or where one bicycle facility transitions to another (e.g. when a shared use path transitions to an on-street bike lane.)

How: Guidance for installation of bike signals is provided in the NACTO *Urban Bikeway Design Guide*.

Image: www.pedbikeimages.org/Dan Burden

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	No Difference	Reduce	No Difference	No Difference	Better	Medium

Unsignalized Pedestrian Crossing Improvements

Best Practice	Potential Crash Reduction			Potential Mobility Effects			Cost
	Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
Marked Crosswalk	No Difference	Reduce	Reduce	No Difference	Better	Better	Low
Advance Yield Markings	No Difference	Reduce	Reduce	No Difference	Better	Better	Low
In-roadway Yield Sign	No Difference	Reduce	No Difference	No Difference	Better	No Difference	Low
Pedestrian / Bicycle Refuge Island	Worse	Reduce	Reduce	No Difference	Better	Better	Low/Med
Rectangular Rapid Flashing Beacon	No Difference	Reduce	No Difference	No Difference	Better	No Difference	Medium
Pedestrian Hybrid Beacon	Reduce	Reduce	No Difference	No Difference	Better	Better	Med/High
Midblock Signal	No Difference	Reduce	Reduce	No Difference	Better	Better	Med/High
Roadway Illumination	No Difference	Reduce	Reduce	No Difference	Better	Better	Medium
Overpass/Underpass	No Difference	Reduce	Reduce	Better	Better	Better	High

Cost: Low: up to $20K; Med: $20K-$100K; High: over $100K

Marked Crosswalk

What: Marked crosswalks indicate to both pedestrians and motorists the intended or preferred crossing location. High-visibility pavement markings to denote the crosswalk, such as those shown at the right, are recommended.

Where: Crosswalks should be marked to indicate the intended path for a pedestrian. At uncontrolled (no stop sign or traffic signal) crossings, crosswalks may be marked on two lane roadways or roadways with less than 12,000 vehicles per day. Marked crosswalks alone are insufficient for roadways with four or more lanes and traffic volumes higher than 12,000 vehicles per day.

Why: Marked crosswalks suggest to pedestrians the most appropriate locations to cross the street. They also raise awareness of pedestrians by motorists.

How: Refer to Federal Highway Administration, *Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations* for additional guidance on how and where to mark crosswalks.

Image: www.pedbikeimages.org/Tom Harned

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	Reduce	Reduce *	No Difference	Better	Better *	Low/Med

* When used as a shared use path midblock crossing

Advance Yield Markings

What: At midblock crosswalks, advance yield markings improve visibility of pedestrians on multilane roadways, particularly by the motorist in the inside lane.

Where: Advance yield markings should be placed with pavement markings at midblock crosswalks on multilane roadways. The markings should be placed 20 to 50 feet in advance of the crosswalk.

Why: On multilane roadways, if a motorist in the outside lane yields or stops close to the crosswalk, that vehicle may block the view of crossing pedestrians by motorists in the inside lane. By advance the yield markings, visibility is improved and conflicts are reduced.

How: Advanced yield markings must be accompanied by a "Yield Here to Pedestrians" sign. See Michigan MUTCD Section 3B.16.

Image: www.walkinginfo.org

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	Reduce	Reduce*	No Difference	Better	Better*	Low

* When used with a shared use path midblock crossing.

In-Roadway Yield Sign

What: In-roadway yield signs are signs placed in the center of the roadway that reinforce state law for motorists to yield to pedestrians in crosswalks at unsignalized locations.

Where: To clarify the state law for yielding to pedestrians, it can be helpful to install in-roadway yield signs at unsignalized, marked crosswalk locations. Usually, they are placed in the center of roadways with only one lane in each direction and can be used as temporary signs by school crossing guards. They work well at midblock crossings as well as unsignalized intersections.

Why: In-roadway yield signs have been shown to significantly improve motorist yielding compliance and reduce pedestrian crashes[9].

How: Refer to Michigan MUTCD Section 2B.11 for guidance on the placement of in-roadway yield signs.

Image: www.fhwa.dot.gov

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	Reduce	No Difference	No Difference	Better	No Difference	Low

Pedestrian / Bicycle Refuge Island

What: Pedestrian / bicycle refuge islands are areas of the roadway where medians or curbs are constructed to protect pedestrians or bicyclists at crossings, allowing them to cross one direction of traffic at a time.

Where: Refuge islands should be considered at multilane pedestrian crossings, particularly where a painted or barrier median already exists or is proposed. At trail crossings, bicyclists also benefit from being able to cross one direction of traffic at a time.

Why: The placement of a refuge island on multilane roadways has been shown to reduce pedestrian crashes by 56%[1].

How: Guidance for the installation of a refuge island can be found in Michigan MUTCD Sections 3I.06 and 4B.04.

Image: www.pedbikeimages.org/Dan Burden

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
Worse*	Reduce	Reduce	No Difference	Better	Better	Low/Med

* If the median nose is not adequately designed or delineated

Rectangular Rapid Flash Beacon

What: A rectangular rapid flashing beacon (RRFB) is a device that consists of two sets of high intensity light emitting diode (LED) lights mounted on poles on each side of an unsignalized pedestrian or bicycle trail crossing. The signals rest in the dark phase until activated by a push button and then flash in a rapid stutter flash pattern.

Where: RRFBs are recommended wherever an unsignalized crossing exists and it is necessary to provide additional notification to motorists of the presence of crossing pedestrians, or where there are insufficient gaps in vehicle traffic to provide a pedestrian crossing opportunity.

Why: RRFBs have been shown to produce an average motorist yielding compliance rate of 83% to a high of 94% for unsignalized crossings.

How: The FHWA provides guidance for the use of RRFB in conjunction with other unsignalized crossing improvements, such as advance stop or yield bars and median refuge islands.

Image: www.pedbikeimages.org/Michael Frederick

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	Reduce	No Difference*	No Difference	Better	No Difference	Medium

*Potential crashes may be reduced for bicyclists if RRFB is used in conjunction with a shared use path trail crossing.

Pedestrian Hybrid Beacon

What: A pedestrian hybrid beacon consists of two red lights above a yellow light. The lights remain dark unless activated by a pedestrian waiting to cross. When activated, the yellow signal flashes to warn motorists and then the red lights are illuminated, indicating that the motorist must stop.

Where: Pedestrian hybrid beacons are appropriate where it is difficult to find a gap in traffic to make a crossing and there are a significant number of pedestrians wanting to cross at a particular location. Hybrid beacons may be used at locations with lower volumes than what is required for a midblock signal.

Why: Pedestrian hybrid beacons have been shown to reduce crashes up to 69% and motorist yielding compliance rates between 94% and 99%.[9]

How: Guidance for the installation of pedestrian hybrid beacons is provided in the Michigan MUTCD.

Image: www.pedbikeimages.org/Mike Cynecki

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
Reduce	Reduce	No Difference	No Difference	Better	Better	Med/High

Midblock Signal

What: A midblock signal is a full traffic signal for vehicles in one direction and pedestrians in the cross direction. The signal is often pedestrian actuated and therefore only interrupts traffic flow at times when pedestrians are wanting to cross.

Where: Midblock signals may be desired where large volumes of pedestrians are crossing midblock to access a particular destination, such as a transit station. The MUTCD has guidelines for the pedestrian volumes warranting a midblock signal.

Why: As a full traffic signal, a midblock signal has a very high compliance rate with motorists. The compliance rate for pedestrians decreases the longer a pedestrian has to wait for a WALK signal. The best compliance was found when pedestrians had to wait less than 30 seconds for the walk signal.

How: See Michigan MUTCD, Section 4C.05

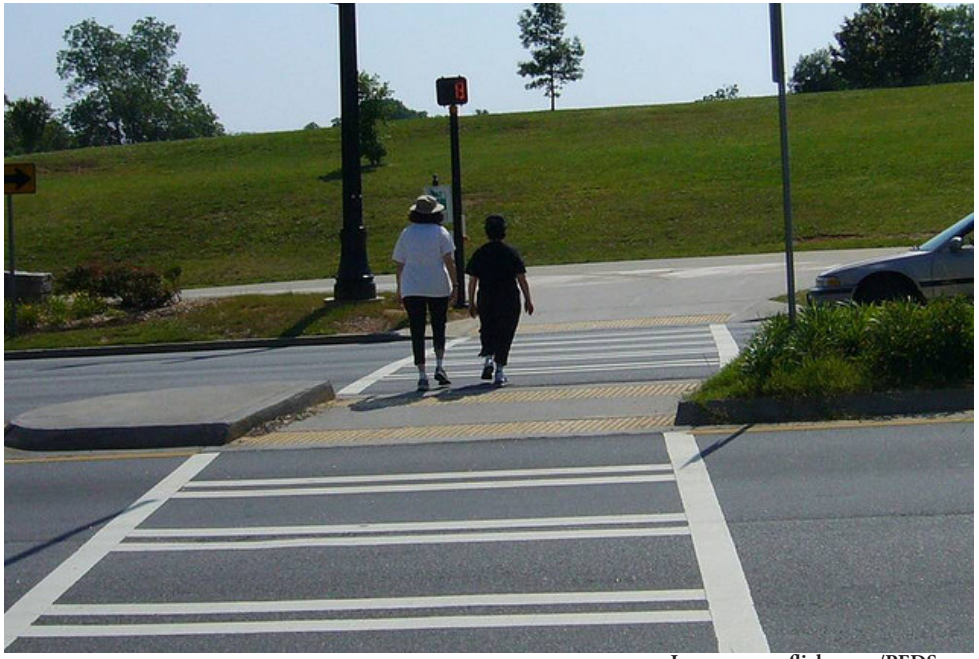


Image: www.flickr.com/PEDS.org

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	Reduce	Reduce*	No Difference	Better	Better*	Med/High

* When used as a shared use path midblock crossing

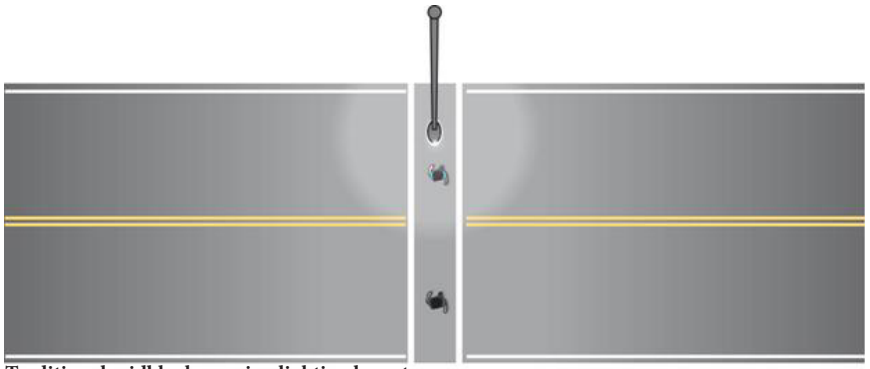
Roadway Illumination

What: Roadway illumination is the provision of sufficient overhead lighting on the roadway surface midblock crossings (as well as intersections) to make pedestrians and bicyclists more visible to motorists.

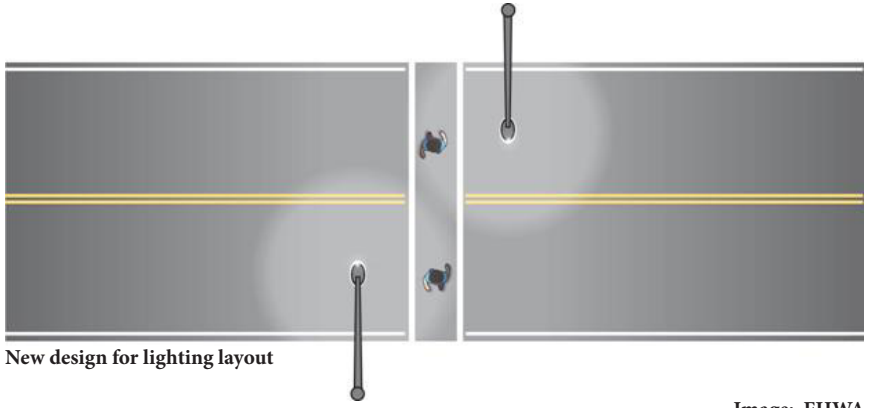
Where: Sufficient roadway illumination should be considered at all marked crossings where pedestrian and bicyclist crossing activity is observed or expected.

Why: Roadway illumination can reduce crashes associated with low light conditions and had been shown to reduce crashes at these locations by 42%-78%[1].

How: Refer to the Michigan Design Manual Section 9.03.01 for guidance on the placement of roadway lighting projects.



Traditional midblock crossing lighting layout



New design for lighting layout

Image: FHWA

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	Reduce	Reduce	No Difference	Better	Better	Medium

Overpass or Underpass

What: Construction of an overpass or underpass completely separates autmobile movements from bicycle and pedestrian movements.

Where: Due to their cost, overpasses and underpasses should be considered only when at-grade treatments are not feasible due to wide crossings and high automobile volumes not subject to traffic controls, such as freeway crossings.

Why: Overpasses and underpasses have been shown to reduce all crashes by 60%-95%[1]. However, if an overpass or underpass is designed in a manner that makes it inconvenient or unappealing, such as a long detour or tunnel effect, it will not be used.

How: Guidance for the placement of overpasses and underpasses can be found in the AASHTO *Guide for the Development of Bicycle Facilities*.

Images: www.pedbikeimages.org/Dan Burden, www.pedbikeimages.org/Sree Gajula

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	Reduce	Reduce	Better	Better*	Better*	High

* If designed to make pedestrian and bicycle usage a simpler and obvious choice.

Corridor Improvements

Best Practice	Potential Crash Reduction			Potential Mobility Effects			Cost
	MotorVehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
Sidewalks and Paved Shoulders	Reduce	Reduce	Reduce	No Difference	Better	Better	Med/High
Road Diet	Reduce	Reduce	Reduce	No Difference	Better	Better	Low/Med
Raised Median	Reduce	Reduce	Reduce	Better	Better	Better	High
On-Street Parking	No Difference	Reduce	Reduce	No Difference	Better	Better	Low
Rear-In Diagonal Parking	Reduce	Reduce	Reduce	No Difference	No Difference	Better	Low/Med
Bike Lane	No Difference	No Difference	Reduce	No Difference	No Difference	Better	Medium
Shared Lane Markings	No Difference	No Difference	Reduce	No Difference	No Difference	Better	Low
Buffered Bike Lane	No Difference	No Difference	Reduce	No Difference	Better	Better	Med/High
Colored Bike Lane	No Difference	No Difference	Reduce	No Difference	No Difference	Better	Medium
Contra-flow Bike Lane	No Difference	No Difference	Reduce	No Difference	No Difference	Better	Medium
Left Side Bike Lane	No Difference	No Difference	Reduce	No Difference	No Difference	Better	Medium
Cycle Track	No Difference	No Difference	Reduce	No Difference	No Difference	Better	High

Cost: Low: up to $20K; Med: $20K-$100K; High: over $100K

Sidewalks and Paved Shoulders

What: Sidewalks are facilites separated from the roadway by a curb and sometimes a setback for the exclusive use by pedestrians. Paved shoulders are paved extensions of the roadway outside the traveled way.

Where: Sidewalks should be installed as part of every urban arterial and collector street where there is developed frontage. Paved shoulders should be considered on any roadway where sidewalk construction is not feasible due to grade or right-of-way constraints.

Why: When sidewalks are added to a roadway, pedestrian crashes are reduced by 88%[1]. When paved shoulders are added to the roadway, pedestrian crashes are reduced by 70%[1]. Additionally, paved shoulders can increase the pavement life of roadways and reduce cracking.

How: Sidewalks and shoulders are most cost effective when incorporated as part of roadway construction. If sidewalks cannot be provided at the time of roadway design, right-of-way should be secured and proper grading should be done in anticipation of sidewalks at a later date. Whenever roadway drainage goes from an open swale to a closed drainage system, sidewalk construction should be considered as a low cost addition to the project.

Images: www.pedbikeimages.org/Dan Burden

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
Reduce	Reduce	Reduce	No Difference	Better	Better	Med/High

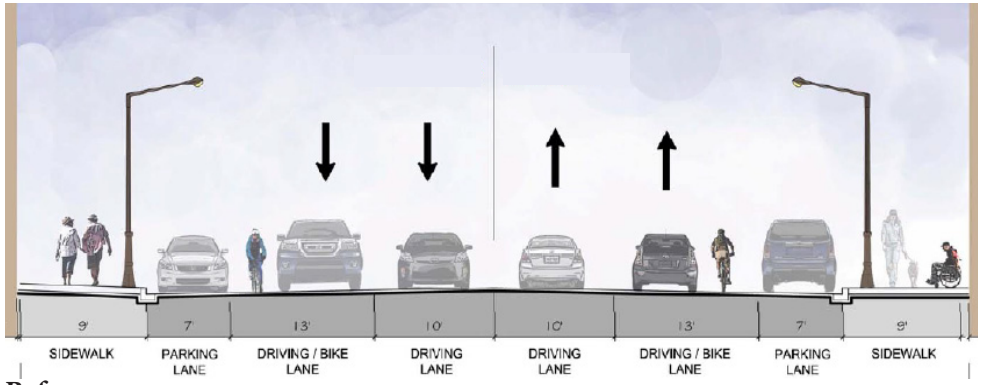
Road Diet

What: A road diet reallocates the through travel lanes of a roadway and adds a center two-way left-turn lane. A typical road diet reduces a 4-lane roadway to 3 lanes and adds bike lanes, sidewalks, or widens existing sidewalks.

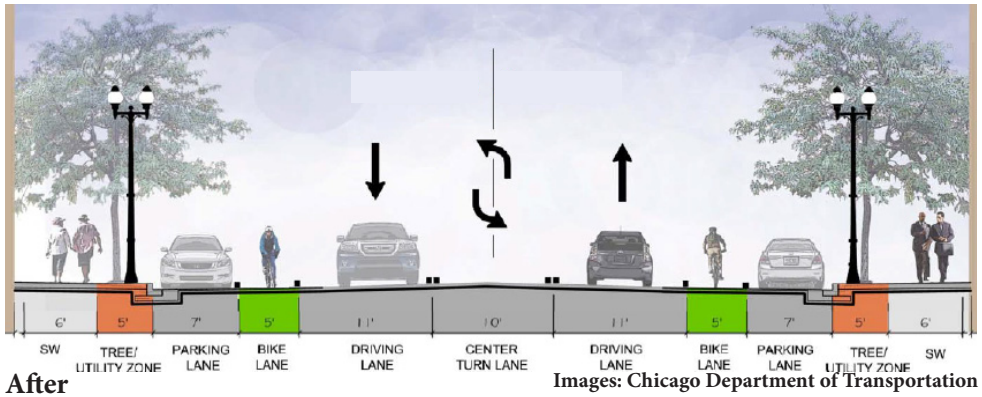
Where: Road diets can be implemented on streets with up to 20,000 vehicles per day without greatly impacting motor vehicle travel.

Why: Road diets improve safety and mobility for all users by reducing read-end, sideswipe, and left-turn crashes, and freeing up one lane in each direction for uninterrupted travel. Total crashes are reduced by 18-44%[11].

How: Because road diets are a reconfiguration of existing roadways, they are feasible on roadways with up to 15,000 ADT, and can be considered under a more detailed traffic analysis for volumes as high as 20,000 ADT.



Before



After

Images: Chicago Department of Transportation

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
Reduce	Reduce	Reduce	No Difference	Better	Better	Low/Med*

* Minimal cost when done as part of a street resurfacing.

Raised Median

What: Raised medians provide a physical separation between lanes of opposite direction of travel. They often serve to provide a refuge in the middle of the street for pedestrians crossing.

Where: Raised medians are useful on multi-lane roadways where there is a need to improve pedestrian crossings. Medians should also be considered where there has been a history of head-on collisions or pedestrians involved in crashes while crossing.

Why: The majority of pedestrian crashes in Michigan are occurring mid-block. At unsignalized locations, raised medians were shown to reduce pedestrian crashes by 69%.

How: The design of raised medians is covered in the Michigan Design Guide Section 7.01.54 and the Michigan MUTCD Section 3I.06.

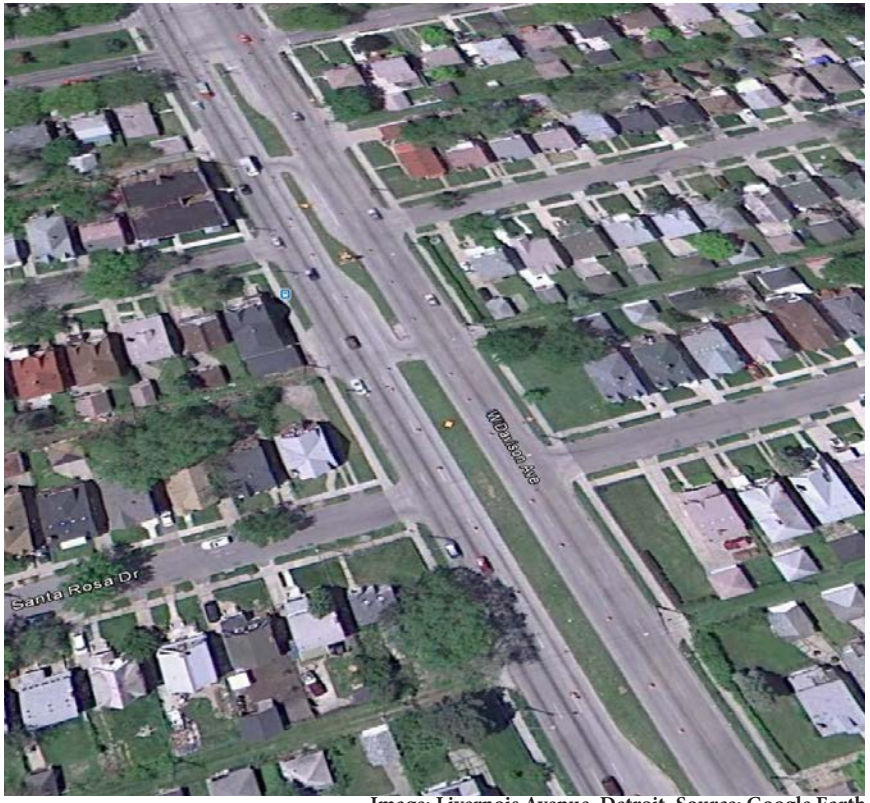


Image: Livernois Avenue, Detroit. Source: Google Earth

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
Reduce	Reduce	Reduce	Better	Better	Better	High

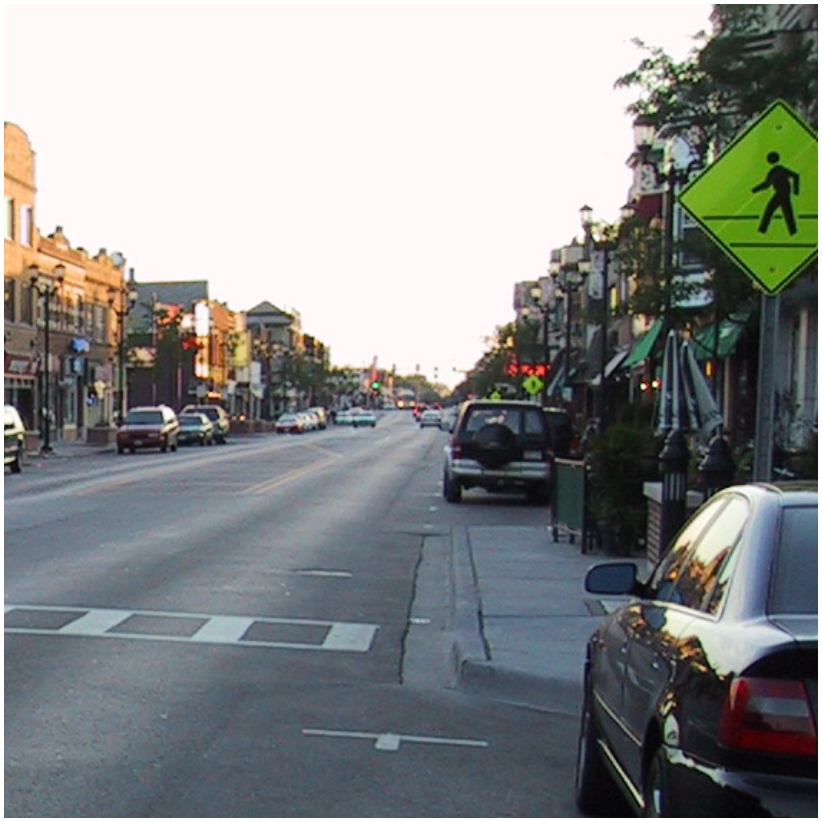
On-Street Parking

What: On-street parking is the placement of parked vehicles on the roadway closest to the curb. On-street parking may be parallel or angle parking.

Where: On-street parking can be placed on most roadways in developed areas and should be considerend whenever it is desirable to provide parking for adjacent land uses and where a buffer between pedestrians and moving vehicles is desired.

Why: The placement of on-street parking reduces travel speeds on the roadway and can reduce the severity of crashes by reducing vehicle speeds. On urban streets with posted speeds of less than 35 mph, streets with on-street parking experience less than half as many severe and fatal crashes than streets without on-street parking [15].

How: Parking lanes are usually 8 feet wide, but 7-foot parking lanes, per state law, can be allowed, particularly where adjacent to a bike lane. If the travel lane adjacent to on-street parking is less than 12 feet wide and is used by bicyclists, shared lane markings may be used to encourage bicyclists to ride outside of the "door zone." Diagonal parking is not permitted on Michigan trunk line highways.



Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	Reduce	Reduce*	No Difference	Better	Better	Low

*When bicyclists ride outside the "door zone."

Rear-In Diagonal Parking

What: Rear-in diagonal parking is the placement of angle parking where the front of the automobile is parked facing the travel lane with the back of the vehicle at the curb.

Where: Rear-in diagonal parking should be considered wherever angle parking exists or is planned.

Why: Rear-in diagonal parking eliminates the blind spots associated with angle parking which particularly helps bicyclists traveling adjacent to the parking lane. Additionally, rear-in diagonal parking directs children exiting vehicles to the curb, and loading items in the trunk also occurs at the curb.

How: Guidance for the placement of angle parking is provided by FHWA as part of *Designing Roads and Parking Areas* for the Recreational Trails Program under the Office of Planning, Environment, and Realty. Per state law, diagonal parking is not permitted on Michigan trunkline highways.

Image: www.pedbikeimages.org/Carl Sundstrom

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
Reduce	Reduce	Reduce	No Difference	No Difference	Better	Low/Med

Bike Lane

What: Bike lanes are portions of the roadway that are delineated with pavement markings for the exclusive use by bicyclists. Normally, one bike lane is provided on each side of the roadway and travels in the same direction as the automobile lane. Bike lane signs can be used to supplement the pavement markings.

Where: Bike lanes should be installed on roadways as part of a bicycle route to improve the visibility of bicyclists to motorists, provide space for bicyclists as part of a bicycle route, reduce the occurrence of wrong-way bicycling in traffic, and reduce the number of bicyclists riding on the sidewalk.

Why: The addition of bike lanes has been shown to reduce bicycle crashes by 50%[10]. Bike lanes are a much more cost-effective method of providing bicycle facilities than a sidepath, which typically requires additional right-of-way and is subject drainage and alignment issues independent of the roadway.

How: Bike lanes currently are considered a design option in the Michigan Design Manual Section 12.12. Additional guidance can be found in the AASHTO *Guide for the Development of Bicycle Facilities*.

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	No Difference	Reduce	No Difference	No Difference	Better	Medium

Shared Lane Markings

What: A shared lane marking is a pavement marking placed on roadways that are recommended for bicycle travel but do not have adequate space for a separate bike lane.

Where: Shared lane markings can be used on any street recommended for bicycle travel, on shared roadways where it is helpful to remind motorists of the presence of bicyclists, or in transition areas where it is important to show the recommended bicycling location for bicyclists.

Why: When applied to roadways, shared lane markings are shown to reduce the occurrence of wrong-way riding and bicycling on the sidewalk, and moving bicyclists out of the way of opening doors in the parking lane, all of which help to reduce crashes[12].

How: Guidance for the application of shared lane markings can be found in MMUTCD Section 9C.07.

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	No Difference	Reduce	No Difference	No Difference	Better	Low

Buffered Bike Lane

What: A buffered bike lane is a bike lane that is separated from traffic by a painted median with or without collapsible posts. It provides a greater horizontal separation between the bike lane and the automobile travel lane.

Where: Buffered bike lanes should be considered wherever greater separation of bicycle and automobile traffic is desired. They may be placed on either side of the bike lane (next to the through travel lane or the parking lane.)

Why: Buffered bike lanes increase the separation between bicycles and automobiles, which may be helpful on roadways with posted speeds above 35 miles per hour.

How: Refer to the NACTO *Urban Bikeway Design Guide* for guidance on the design of buffered bike lanes.

Image: www.pedbikeimages.org/Steven Faust

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	No Difference	Reduce	No Difference	Better	Better	Med/High

Colored Bike Lane

What: A colored bike lane is a portion of a bike lane marked with high-visibility green pavement markings to identify a potential conflict area or transition area of a bicycle facility. Bike lanes are usually colored just in the vicinity of an intersection.

Where: Colored bike lanes should be considered where motor vehicles and bicyclist share a transitioning area of the roadway, such as near turn lanes or when a lane drop occurs for bicycles or motor vehicles.

Why: Colored bike lanes increase the visibility of the bicycle facility and have been shown to increase motorist yielding compliance rates by 11%, and increase bicyclist scanning the roadway for nearby vehicles[13].

How: Green colored bike lanes were given interim approval by FHWA in April 2011 and have been approved for experimental design. This means that they should be included in the next update to the MUTCD. For current information on colored bike lanes, consult the NACTO *Urban Bikeway Design Guide*.

Image: www.nactor.org

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	No Difference	Reduce	No Difference	No Difference	Better	Medium

Contra-flow Bike Lane

What: Contra-flow bike lanes are bike lanes that run in the opposite direction as automobile traffic on a street. The most common applications are on one-way streets where a contra-flow bike lane is placed to provide a link to bicycle facility to avoid placing bicyclists on high-speed or high volume arterial roadways.

Where: Contra-flow bike lanes should be considered wherever bicycle facility connectivity is needed.

Why: Contra-flow bike lanes provide a bicycle facility where demand exists, as demonstrated by wrong-way riding. Additionally, by placing bicyclists in a contra-flow lane, it reduces the likelihood of bicycling on streets not recommended for bicyclists.

How: Guidance for the placement of contra-flow bike lanes is provided in the NACTO *Urban Bikeway Design Guide*.

Image: www.nacto.org

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	No Difference	Reduce	No Difference	No Difference	Better	Medium

Left Side Bike Lane

What: Left side bike lanes are bike lanes painted on the left side of a roadway. Typically, left side bike lanes are placed on one-way streets, or on two way streets adjacent to a barrier median.

Where: Left side bike lanes are appropriate on roadways with frequent driveways, transit service, or on roadway networks with one-way pairs.

Why: Left side bike lanes reduce the need for a bicyclist to cross one or several lanes to make a left turn in areas where a bicycle facility continues to the left, or to avoid conflicting with pedestrians and transit vehicles at transit stops located on the right side of the road. However, right turns are more difficult with this design.

How: Guidance for the placement of left side bike lanes is provided in the NACTO *Urban Bikeway Design Guide*.

Image: www.pedbikeimages.org/Dan Burden

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	No Difference	Reduce	No Difference	No Difference	Better	Medium

Cycle Track

What: A cycle track is a dedicated bicycle facility for bicycles that is physically separated from traffic. It consists of a one or two-way facility for bicycles and is separated from automobile traffic with either a pavement marking buffer, collapsible posts, a curb, a change in elevation, or a combination of these items.

Where: Cycle tracks can be considered for an urban street where a significant amount of protection and separation is desired between automobiles and bicycles. However, cycle tracks can pose a crash risk at intersections where turning automobiles cannot see bicyclists emerging from behind parked cars or standing pedestrians. In these cases, the use of bike signals is recommended.

Why: Cycle tracks physically separate bicycle and automobile traffic, which has been shown to reduce injury crashes by 28%[14].

How: Guidance for the placement of cycle tracks is provided in the NACTO *Urban Bikeway Design Guide*.

Image: www.nacto.org

Potential Crashes			Potential Mobility Improvements			Cost
Motor Vehicles	Pedestrians	Bicyclists	Motor Vehicles	Pedestrians	Bicyclists	
No Difference	No Difference	Reduce	No Difference	No Difference	Better	High

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CITY OF BIRMINGHAM
W. MAPLE RD. STEERING COMMITTEE
A subcommittee of the Multi-Modal Transportation Board

THURSDAY, JANUARY 22, 2015
6:00 PM
ROOMS 202 & 203
151 MARTIN STREET, BIRMINGHAM

Minutes of the initial meeting of the W. Maple Rd. Steering Committee held Thursday, January 22, 2015. The meeting was convened at 6 p.m.

A. INTRODUCTIONS

Present: Ad-Hoc Committee Members
Stuart Bordman (MMTB)
Mike Clawson (Resident on W. Maple)
Karen Daskas (Business Owner from CBD)
Lara Edwards (MMTB)
Eugene Nelson (Resident South of W. Maple)
Karen Rock (Resident North of W. Maple)
David Underdown (Business Owner from W. Maple)
Russ Ives (Church Member)

Absent: Vionna Adams (MMTB)
Terry Laing (Resident at Large)

Administration: Paul O'Meara, City Engineer
Jana Ecker, Planning Director
John Heiney, Principal Shopping District
Lauren Chapman, Assistant City Planner
Mark Clemens, Deputy Police Chief

Guests: Joe Wolf- S. Glenhurst resident
Mike Labadie - Fleis & Vandenbrink
Norm Cox - The Greenway Collaborative
Jeff Van Dorn- President of President's Council

B. ELECTION OF CHAIR AND VICE-CHAIR

Mr. O'Mara explained the roster and why people were asked to be members.

Mr. Underdown volunteered to serve as chair of the committee

Motion by Mr. Boardman
Seconded by Mr. Nelson to have Mr. Underdown serve as chair.
Motion carried, 8-0.

Mr. Bordman volunteered to serve as vice chair

Motion by Mr. Nelson

Seconded by Mr. Underdown to have Mr. Bordman serve as vice-chair.
Motion carried, 8-0.

C. ESTABLISH DATE AND TIME FOR REGULAR MEETING SCHEDULE

The committee established the 3rd Thursday from 6-8 pm as the scheduled meeting dates and time. However, due to several board members being unavailable on the 3rd Thursday of February, the next meeting will be held on Thursday, February 26th.

D. OVERVIEW OF STEERING COMMITTEE MISSION

Mr. O'Meara reviewed why steering committee was created.

E. INTRODUCTION TO MULTI-MODAL TRANSPORTATION PLANNING AND THE CITY'S MULTI-MODAL TRANSPORTATION MASTER PLAN

SPECIAL GUEST NORM COX, THE GREENWAY COLLABORATIVE

Mrs. Ecker explained the meeting's purpose and introduced Norm Cox.

Mr. Cox presented on: the state of roads one hundred years ago; the number of injuries each year due to crashes; PA135 of 2010- Michigan Complete Streets policy; the Federal Government's policies on complete streets, and Birmingham's desire to have connectivity in the transportation system. He also presented the concepts of complete streets and multi-modal planning, including the positive effects, such as: helping seniors age in place and maintain accessibility and independence, reduce inactivity for citizens, reduce the number and severity of crashes and their social and economic tolls, and the ability to attract millennials. He then generally reviewed the City's Multi-Modal Plan.

Mr. Cox spoke on the possible effects of four to three lane conversions.

Mr. Ives observed that many pedestrians walk in the street even when there are sidewalks. He asked Mr. Cox if such pedestrians skew crash data and if multi-modal planning helps alleviate that.

Mr. Cox replied that it could possibly, but it is unlikely. Most crashes are on major roads and the ones that are on minor roads result in fewer or less severe because the level of use is lower, as are the speeds on minor roads.

Mr. O'Meara noted that the City Commission passed a Resolution of Support for Complete Streets in July 2011 indicating the City's commitment to the complete street principal to build streets that work for all modes of transit, and all users, regardless of age or ability.

F. DISCUSSION OF EXISTING CONDITIONS ON W. MAPLE RD.

Mr. Clawson stated that he has lived on Maple and Pilgrim for twenty-six years. He expressed that he feels that Maple Road in its current condition is not safe, especially westbound traffic; the traffic is very fast. As an avid runner he has found the road to be hard to cross except at

traffic signals. He believes that Maple serves as a good east-west pedestrian route to downtown. He has observed many crashes, including: cars hitting his fence, cyclists getting hit, and he has been rear ended turning left.

Mr. Bordman walks on Maple often and agreed with Mr. Clawson on the safety of the road. He also feels that crossing as a pedestrian is dangerous. He believes that the four lane layout is conducive to the current traffic volume for Maple. He finds that many drivers swerve around left turners adding to the dangerous situation.

Mr. Nelson feels that the traffic is too fast; the fast traffic continues onto Shirley. He believes that much of the traffic on Shirley is cut-through traffic. However, he understands why people go faster. He has observed many drivers run lights, especially westbound at Lake Park. He finds turning onto Maple (especially left) to be a challenge due to speed and volume; peak hours are especially difficult. He thinks the sidewalks are good.

Mrs. Rock believes the sidewalks are good. She stated that she would not bike on Maple. She has observed many people ignore the stop sign on Pilgrim and Pine; she wonders if it is cut-through traffic. She also doesn't want to see cut-through get worse. She has also observed many drivers run lights, especially westbound. She often finds that traffic is backed up at the Southfield and Maple intersection.

Mrs. Edwards thinks that Maple is a lovely road. She finds it to be fun to jog on. She believes that the sidewalks could be wider. She finds using the road to be stressful because of the amount of drivers who weave around other drivers. She often finds that service vehicles contribute to back-ups especially east bound and at Southfield. When she walks on Maple she finds crossing to be dangerous because traffic is too fast. She believes that there is natural spot for crossing at waterfall, but no crosswalk. She has found that there is a greater demand for left turns on to the south side of Maple.

Mr. Underdown feels that the traffic on the road is too fast, but it does move efficiently. He finds Maple to be especially crowded at the Telegraph and Southfield intersections. He observed that many drivers swerve around left turners enabling accidents. He finds making a left on to Maple challenging. He thinks that Lake Park is an awkward intersection.

Mr. Ives finds that rush-hour creates challenges, especially for left turns and believes that traffic signals help create needed gaps for turns onto Maple, specifically the one at Chesterfield. He thinks that the road serves as a solid and convenient east-west connector. Maple is the main thoroughfare for people attending church; many leave church via Pleasant. The sidewalk is in good condition. Often he finds that there are backups at Southfield. The cross streets not being aligned creates challenges crossing Maple. Some of the vegetation can impair visibility.

Mrs. Daskas appreciates the sidewalks and traffic signals. She worries about the existing cut-through traffic; she thinks that it is too fast. She finds that there is a high volume of eastbound heavy truck traffic.

Mr. Van Dorn observed that there is often severe speeding on Maple especially westbound.

Mr. Wolf believes there are many drivers who ignore the road laws. He plans to use Lincoln instead because it's tough to turn left onto Maple.

Mrs. Ecker reviewed the most common comments provided for the group regarding the existing conditions on W Maple between Cranbrook and Southfied: this section of road is dangerous and does not feel safe, traffic moves too fast, problems are worst going westbound, traffic backs up at Southfield, there is too much swerving of vehicles to avoid left turning vehicles, it is difficult to turn left onto W. Maple,it is very difficult for pedestrians to cross the street, and the existing sidewalks are adequate. Sub-committee members agreed that improving on each of these areas of concern should be the objectives of any improvements on W. Maple. It was further agreed that any changes to the corridor should not make the the existing conditions worse, and any changes, and should not increase cut-through traffic in the neighborhoods.

G. INTRODUCTION TO TRANSPORTATION ENGINEERING TOOLS AND DATA

Mr. Labadie will look at crashes; intensity, pattern, location, etc. He and his team will count traffic during peak hours 7-9 a.m. and 4-6 p.m., Tuesday, Wednesday, and Thursday during a non-holiday week. They will use a Synchro computer model to create a model of the distribution of traffic between intersections, all roads will be counted and put into model. The model can be created with four lanes and another with three. Signals as they are will be in the model. Mr. Labadie went on to discuss signal coordination. He then gave the attendees examples of traffic counts that are currently in progress. The data collected showing existing conditions on W. Maple will be presented at the next sub-committee meeting on February 26, 2015.

H. MISCELLANEOUS COMMUNICATIONS

None

I. MEETING OPEN TO THE PUBLIC FOR ITEMS NOT ON THE AGENDA

None

K. ADJOURNMENT

No further business being evident, the chairperson adjourned the meeting at 8:13 p.m.

CITY OF BIRMINGHAM
W. MAPLE RD. STEERING COMMITTEE
A subcommittee of the Multi-Modal Transportation Board

THURSDAY, FEBRUARY 26, 2015
6:00 PM
ROOMS 202 & 203
151 MARTIN STREET, BIRMINGHAM

Minutes of the initial meeting of the W. Maple Rd. Steering Committee held Thursday, February 26, 2015. The meeting was convened at 6 p.m.

A. ROLL CALL

Present: Ad-Hoc Committee Members
Stuart Bordman (MMTB)
Mike Clawson (Resident on W. Maple)
Lara Edwards (MMTB)
Eugene Nelson (Resident South of W. Maple)
Karen Rock (Resident North of W. Maple)
Russ Ives (Church Member)
Terry Lang (Resident at Large)

Absent: Vionna Adams (MMTB)
Karen Daskas (Business Owner from CBD)
David Underdown (Business Owner from W. Maple)

Administration: Paul O'Meara, City Engineer
Jana Ecker, Planning Director
Lauren Chapman, Assistant City Planner
Mark Clemens, Deputy Police Chief

B. INTRODUCTIONS

Guests: Joe Wolf- S. Glenhurst resident
Mike Labadie - Fleis & Vandenbrink
Steven Russo - Fleis & Vandenbrink
Julie Fielder- Bloomfield Village Resident
Jim Fielder- Bloomfield Village Resident
Don Beasley- Birmingham Resident

C. REVIEW OF THE AGENDA

D. APPROVAL OF MINUTES, MEETING OF JANUARY 22, 2015

Mr. Lang noted that he was marked as present for the January 22 meeting ,but should have been marked absent as he was not there.

Motion by Mr. Clawson
Seconded by Mr. Nelson to approve the Minutes of January 22, 2015 as presented.

Motion carried, 7-0.

E. TRANSPORTATION ENGINEER MIKE LABADIE PRESENTATION

Mr. Labadie and Mr. Russo presented on the existing conditions on W. Maple Rd.

Fleis & VandenBrink evaluated existing peak hour vehicle delays and Levels of Service (LOS) at the study intersections along Maple Road from Cranbrook to Chester based on the existing land use and traffic control, existing peak hour traffic volumes, and the methodologies presented in the Highway Capacity Manual, 2010 (HCM). LOS D is considered acceptable, with LOS A representing minimal delay, and LOS F indicating failing conditions. Additionally, SimTraffic network simulations were reviewed to evaluate network operations and vehicle queues. The results of the existing conditions analysis are attached and summarized below:

1. Vehicular turning movement counts were collected at almost all intersections during the AM (7:00 AM to 9:00 AM) and PM (4:00 PM to 6:00 PM) peak periods. Additionally, pedestrian and bicycle volumes were collected at the signalized study intersections and are included in the analysis; however, the number of pedestrians and bicycles are combined under one number and are not distinguishable from one another.
2. F & V analyzed sight distance along the study corridor and found sight distance at the Maple Road cross streets and driveways to be adequate.
3. Gaps in the traffic stream along Maple Road represented in the SimTraffic network simulations.
4. Traffic signals along Maple Road provide for platooning of vehicles to create gaps in the traffic stream for cross streets and driveways.
5. Presently all of the signalized study intersections operate at an overall LOS C or better during the AM and PM peak periods.
6. All signalized study intersection approaches and movements currently operate acceptably at a LOS D or better during the AM and PM peak periods, except the southbound approach at the intersection of Maple Road and Chester Street which operates at a LOS E, with the southbound right turn movement operating at a LOS F during the PM peak period.
7. In the traffic simulations the intersection of Maple Road and Southfield Road experienced the worst traffic congestion:
    a. At the intersection of Maple Road and Southfield Road, long vehicle queues were observed for the eastbound approach during the AM peak period and the eastbound and northbound approach during the PM peak period.
    b. At the intersection of Maple Road and Chester Street a long vehicle queue is observed for the southbound right turn movement (from Willits St.) during the PM peak period.
    c. The eastbound right turns onto Southfield southbound do not have an adequate length of lane for merging into southbound traffic from Maple Road.
    d. There is inadequate storage length for eastbound left turns from Maple Road onto Chester Street. This causes left turning vehicles to spill back into the through travel lane along Maple Road and block through traffic.
    e. Field observations indicate that some eastbound through traffic on Maple Road utilizes the outside through lane before and after the Southfield Road

intersection and merges over into the through lane or left turn lane between Southfield Road and Chester Street.

F & V obtained from the Traffic Improvement Association of Michigan (TIA) historical crash data for the most recent available three years (2012-2014) for the study segment of Maple Road. In addition to crash data, collision diagrams were also obtained for all signalized and unsignalized study intersections. Crash data from the intersection of Maple Road and Cranbrook Road were omitted from the analysis as the City of Birmingham only has jurisdiction over one leg of the intersection and no geometric improvements are proposed at the intersection as part of this project.

F. MISCELLANEOUS COMMUNICATIONS

1. CITIZEN LETTERS RE: WEST MAPLE ROAD

Mrs. Ecker informed the committee that any letters received by the city regarding W. Maple will be passed on to the committee.

G. MEETING OPEN TO THE PUBLIC FOR ITEMS NOT ON THE AGENDA

Mr. Fielder stated that it is currently difficult to turn left onto Maple from the side streets.

Mrs. Ecker informed him that that had been previously identified as an issue.

K. ADJOURNMENT

No further business being evident, the chairperson adjourned the meeting at 7:55 p.m.

CITY OF BIRMINGHAM
W. MAPLE RD. STEERING COMMITTEE
A subcommittee of the Multi-Modal Transportation Board

THURSDAY, MARCH 19, 2015
6:00 PM
ROOMS 202 & 203
151 MARTIN STREET, BIRMINGHAM

Minutes of the meeting of the W. Maple Rd. Steering Committee held Thursday, March 19, 2015. The meeting was convened at 6 p.m.

A. ROLL CALL

Present: Ad-Hoc Committee Members
Stuart Bordman (MMTB)
Mike Clawson (Resident on W. Maple)
Lara Edwards (MMTB)
Karen Rock (Resident North of W. Maple)
Russ Ives (Church Member)
Terry Lang (Resident at Large)
Vionna Adams (MMTB)
Karen Daskas (Business Owner from CBD)

Absent: David Underdown (Business Owner from W. Maple)
Eugene Nelson (Resident South of W. Maple)

Administration: Paul O'Meara, City Engineer
Jana Ecker, Planning Director
Lauren Chapman, Assistant City Planner
Mark Clemence, Deputy Police Chief

B. INTRODUCTIONS

Guests: Mike Labadie - Fleis & VandenBrink
Steven Russo - Fleis & VandenBrink
Jim Mirro – Arlington resident
Julie Fielder- Bloomfield Village Resident
Jim Fielder- Bloomfield Village Resident
Stuart Borman- Birmingham Resident

C. REVIEW OF THE AGENDA

D. APPROVAL OF MINUTES, MEETING OF FEBRUARY 26, 2015

Motion by Mr. Clawson
Seconded by Mrs. Edwards to approve the Minutes of February 19, 2015 as presented.

Motion carried, 7-0.

E. TRAFFIC ANALYSIS – W. MAPLE RD. FUTURE OPTIONS

Mr. Labadie and Mr. Russo presented information on Complete Street Improvement Options, existing analysis conditions, future analysis conditions, including a 4 to 3 lane conversion, Maple & Southfield improvements, and Synchro Results.

Complete Street Improvement Options

Fleis & VandenBrink has reviewed the corridor and suggest the following Complete Streets items be considered in the corridor:

- ALL intersections receive updated ADA ramps.
- Sidewalk improvements.

  Mrs. Edwards suggested that the sidewalk should be widened to accommodate cyclists, especially from Quarton Lake Park to Downtown. Deputy Chief Clemence advised that bicyclists in Michigan are not permitted to ride on the sidewalk.

- Bus stop enhancements.

  It was suggested that the number of bus stops along the corridor be reduced. The stops that remain could be made to be more visible and noticeable by installing bus shelters. There are currently 14 stops along W Maple Road, only one has a shelter.

Existing Analysis Conditions

F & V updated the analysis of existing traffic conditions to account for bus stops located along Maple Road. Bus schedules for Maple Road were obtained from the Suburban Mobility Authority for Regional Transportation (SMART) and indicated that there is the potential for 1-2 buses to travel the study section of Maple Road in each direction during the peak periods. Therefore the number of bus blockages was input at each signalized location with a bus stop located within 250 feet upstream or downstream of the intersection. The results indicated increases in vehicle delays of 0.1 seconds or less for Maple Road approaches.

Future Analysis Conditions- 4 to 3 lane conversion Option

Future peak hour vehicle delays and Levels of Service (LOS) at the study intersections along Maple Road were calculated based on the proposed lane use and traffic control, existing peak hour traffic volumes, and the methodologies presented in the *Highway Capacity Manual, 2010* (HCM). Maple Road from Waddington Road to Southfield Road is being considered for a three lane cross-section with one lane in each direction and a center lane for left turns to improve safety, reduce speeds and make crossings safer. Additionally, 5' bike lanes could be provided in both directions. Additionally, SimTraffic network simulations were reviewed to evaluate network operations and vehicle queues. The results are summarized below:

1. With a three lane cross-section an eastbound right turn lane must be provided at Maple Road & Southfield Road.
2. Cycle lengths along Maple Road were optimized to 90 seconds.
3. With items 1&2 above, all study intersection approaches and movements would continue to operate acceptably during both peak periods, except the southbound approach at the

intersection of Maple Road & Chester Street which would continue to operate at a LOS E, with the southbound right turn movement operating at a LOS F during the PM peak period.

4. In the traffic simulations the intersection of Maple Road & Southfield Road experienced the worst traffic congestion.
    a. At the intersection of Maple Road & Chester Street a long vehicle queue is observed for the northbound approach during the AM peak period. During the PM peak period brief periods of long vehicle queues were observed for the eastbound and northbound approaches.
    b. At the intersection of Maple Road & Chester Street a long vehicle queue is observed for the southbound right turn movement during the PM peak period.
5. Pedestrian Crossing Islands should be considered at appropriate locations along the corridor.

Maple & Southfield Road Improvements

The intersection of Maple Road & Southfield Road could be improved further by eliminating the eastbound channelized right turn and instead have this movement be controlled by the signal with an overlap phase that provides a right turn green arrow for the eastbound right turn movement during the northbound Southfield Road phase. The results of the analysis with these improvements are summarized below:

With these improvements, the intersection of Maple Road & Southfield Road would experience minor improvements in overall intersection operations.

Lastly, there is currently inadequate storage for eastbound left turns from Maple Road onto Chester Street which causes left turning vehicles to spill back into the through travel lane along Maple Road and block through traffic. In order to increase the storage length for this movement, Southfield Road should be realigned to intersect Maple Road further west, near the existing eastbound channelized right turn lane. This will help to create more storage for left turns between Chester Street and South field Road and make Maple Road & Southfield Road intersect closer to a 90 degree angle.

F. MISCELLANEOUS COMMUNICATIONS

1. CITIZEN LETTERS RE: WEST MAPLE ROAD

G. MEETING OPEN TO THE PUBLIC FOR ITEMS NOT ON THE AGENDA

Mr. Mirro distributed a packet to the committee and guests regarding citizen responses to possible changes to W. Maple Road.

Mrs. Daskas noted that only 41 residents voted in the Quarton Lake neighborhood and that is only a representation of 4% of the entire neighborhood.

Mr. Mirro stated that the sample size for that neighborhood was 10% and that the majority of those voting are against a possible 4 to 3 lane conversion.

Mr. Clemence stated that many who are opposed have not examined the issue based on actual conditions and possible future conditions. He requested that Mr. Mirro ask his constituents to learn of what the steering committee has done.

Mr. Mirro responded that he publishes the minutes from the steering committee meetings and that many of the constituents have not seen anything to change their minds. Mr. Mirro stated that he worries of future death of a cyclist if Maple Road does have bike lanes installed. He said that he doesn't think that the accidents that occur on Maple with its current configuration would compare to what accidents could occur if bike lanes are included in a future configuration.

Mr. Clawson stated that the committee's goals are: to slow down traffic on the road, create better platooning, and make turning easier. He cited that there were two accidents in the past week. He also stated that the road is currently not safe and that something has to be done.

Mr. Borman stated that he sees congestion already. He attempts to avoid the congestion by using Harmon St. He believes that there is not enough enforcement. He stated that the current road condition requires one to drive slowly.

Mr. Bordman stated that when the road is repaved, people will not have that same impediment to speeding and that the committee is looking for ways to slow down traffic.

Mrs. Fielder said that she too sees people drive too fast. She sees better platooning as a viable solution. She wonders why the city will do something that won't result in significant improvement, since there isn't much turning at the non-signalized intersections. She noted that head to head turning is much more intimidating.

Mr. Mirro interjected that the City of Birmingham is expected to receive a letter from an official from Bloomfield Village. He stated that the city needs to consider non-resident commuters.

Mrs. Ecker responded to Mrs. Fielder, stating that the City Commission and the Multi-Modal Transportation Board want the most information on the current and future possible conditions on Maple Road. And that that is why the steering committee was created. The committee seeks to strike a balance between all modes. She referenced that at the first meeting the committee examined various concerns and positives of the corridor, and established goals for the improvement of W Maple Road.

Mrs. Fielder believes that the road can still have 4 lanes and meet enough objectives.

Mr. Mirro interjected that Maple Road serves as an important evacuation route.

Mr. Borman suggested that more lights be added to meet objectives.

Mr. Bordman noted that more lights are not warranted. He also noted that adding traffic lights will stop traffic as opposed to moving traffic slower.

Mr. Ives questioned what could be done to better optimize the existing signals.

Mr. Labadie stated that the timing of the lights would need to be changed if the road were to undergo a 4 to 3 lane conversion. He noted that he had done such projects in the past, such as Adams Road. He stated that 4 lane roads have more speed variation versus 3 lane roads. There will almost always be better signal optimization at 3 lanes.

Mr. Bordman noted that in the analysis there is mention of Maple & Southfield Road and that Southfield is not a part of the group's purview.

Mr. Labadie stated that it could be, however, because it does affect Maple. He examined the possibility of making a dedicated right turn lane at Southfield where part of the park is. Doing that would improve congestion and reduce accidents. He stated that it could be possible in the future.

K. ADJOURNMENT

No further business being evident, the meeting was adjourned at 8:12 p.m.

CITY OF BIRMINGHAM
W. MAPLE RD. STEERING COMMITTEE
A subcommittee of the Multi-Modal Transportation Board

THURSDAY, APRIL 16, 2015
6:00 PM
ROOMS 202 & 203
151 MARTIN STREET, BIRMINGHAM

Minutes of the initial meeting of the W. Maple Rd. Steering Committee held Thursday, April 16, 2015. The meeting was convened at 6 p.m.

A. ROLL CALL

Present: Ad-Hoc Committee Members
Stuart Bordman (MMTB)
Mike Clawson (Resident on W. Maple)
Lara Edwards (MMTB)
Karen Rock (Resident North of W. Maple)
Terry Lang (Resident at Large)
Vionna Adams (MMTB)
Karen Daskas (Business Owner from CBD)
David Underdown (Business Owner from W. Maple)
Alice Silbergleight (Alternate resident South of W. Maple)

Absent: Russ Ives (Church Member)

Administration: Paul O'Meara, City Engineer
Jana Ecker, Planning Director
Lauren Chapman, Assistant City Planner
Mark Clemens, Deputy Police Chief

B. INTRODUCTIONS

Guests: Mike Labadie - Fleis & VandenBrink
Jim Mirro- 737 Arlington
John Lazar- 515 Pleasant
Tom Booth- 430 Aspen
Johanna Slanga- 1875 Winthrop
Lionel Finkelstein- 577 Arlington
Jim Petcoff- 968 Arlington
Bill Dow- 1347 Yorkshire
Dorian Gluckman- 1111 Dorchester

C. REVIEW OF THE AGENDA

D. APPROVAL OF MINUTES, MEETING OF MARCH 19, 2015

Mrs. Rock noted that the minutes stated that Mrs. Daskas made a statement that she herself had made.

Motion by Mr. Clawson
Seconded by Mrs. Edwards to approve the Minutes of March 19, 2015 as presented.

Motion carried, 9-0.

E. TRAFFIC ANALYSIS – W. MAPLE RD. CORRIDOR

Mr. Labadie presented on Crash and Speed Reduction, Cut-Through Traffic, Platooning, Maple Road and Southfield Road Intersection Exhibit, Cranbrook Road and Maple Road Intersection Exhibit, and Pedestrian Island Exhibits.

CRASH AND SPEED REDUCTION

Site Studies
Fleis & VandenBrink investigated numerous studies to find previous projects and sites that compare similarly to Maple Road between Cranbrook Road and Chester Street. This data was compiled and further scrutinized to determine what if any impact on the average travel speed of vehicles and the number and types of crashes that occur.

The main study F&V chose to further examine was completed by Michigan State University (MSU) in 2012. It looked at examples of road diets throughout Michigan and scrutinized previous studies performed on sites across the nation.

Road Diet Crash Analysis
While all the studied sites are different in various ways, overall the number of crashes and the severity of crashes were reduced after completion of the conversion. From examining crash data from before and after a four to three lane reduction with the addition of bike lanes, several common trends were revealed:

- A reduction in crashes due to: improved site lines and distance; reduced traffic conflict points; left turn movements now occurring in a reserved left turn lane at mid-block locations.
- A reduction in the severity of crashes.
- There was an approximate 9% reduction in accidents. The Federal Highway Administration (FHWA) suggests a 19-47% reduction in all roadway crashes when a roadway is modified from four travel lanes to two travel lanes with a two way left turn lane (TWLTL).
- A slight increase in the number of crashes (rear-end collisions) where two lanes of through traffic are reduced into one. This is mostly due to the increased volumes in a single lane and unfamiliarity with the new road configuration.
- A decrease in pedestrian and cyclist involved crashes per overall pedestrian/cyclist trips. While the number of incidents in many cases remained the same or slightly increased, most were due in fact to the increased usage of the road and facilities because of the improved infrastructure.

Speed Reduction Analysis

Road diets improve safety by reducing the speed differential. On a four-lane undivided road, vehicle speeds can vary between travel lanes, and drivers frequently slow or change lanes due to slower or stopped vehicles (vehicles stopped in the left lane waiting to turn left). Drivers may also weave in and out of the traffic lanes at high speeds. In contrast, on three-lane roads with TWLTLs the vehicle speed differential is limited by the speed of the lead vehicle in the through lane, and through vehicles are separated from left-turning vehicles. Thus, Road Diets can reduce the vehicle speed differential and vehicle interactions. Reducing operating speed decreases crash severity when crashes do occur. A review of numerous sites in the study suggest that a reduction in the 85th percentile speed occur and there will be a large reduction in the number of people traveling 5 mph or more over the speed limit. A reduction in speed is shown to be a contributing factor in the reduction of accidents.

Cut Through Traffic

A common concern among neighboring residents of lane reduction projects is the increase in traffic along connecting roads. This is most commonly caused by an increase in delays and reduction of capacity (reduction in Level of Service) after conversion from four to three lanes. Based upon the future conditions as provided in the previous memo “Future Conditions Analysis”, the Level of Service (LOS) of all study intersection approaches and movements would remain at an acceptable LOS D or better except for SB Maple Road & Chester Street, which would remain at LOS E. Most intersections LOS and delay remain basically unchanged, ranging between A and C whether 4 lanes or 3. Therefore no increase in cut through traffic is expected.

Platooning

Platooning occurs when vehicles travel in groups caused by traffic signal coordination. If a 4 lane to 3 lane conversion is done, platooning will occur on Maple road between Southfield and Cranbrook due to the signal timing and the 4 lane to 3 lane road diet. Some benefits of platooning are increase in gaps, reducing speed and speed variation between lanes, and increasing capacity. Gaps will be created in traffic on Maple Road due to traffic signals timing. These gaps will give adequate time for the adjacent minor streets and driveways left turn movements. When a platoon leaves from a traffic signal the speed of the platoon depends on the leading vehicle. This will reduce the average speed along the corridor. Platooning vehicles accelerate and decelerate as a group. This reduces the headway which in turn increases the capacity of the roadway.

Platooning is much less frequent on under-utilized four lane roads such as Maple Rd. because it offers drivers choices, so vehicles spread out more depending on the speed of drivers in each of the two through lanes.

In order for platooning to occur along Maple Road some additional signal equipment would be required. The additional equipment includes GPS clocks, antennas, and new software. The equipment and installation would cost between $15,000 and $21,000.

Maple Road and Southfield Road Intersection and Cranbrook Road and Maple Road Exhibit

Pedestrian Island Exhibits

F. MISCELLANEOUS COMMUNICATIONS

1. CITIZEN LETTERS RE: WEST MAPLE ROAD

G. MEETING OPEN TO THE PUBLIC FOR ITEMS NOT ON THE AGENDA

Mr. Lazar questioned why many of the comparable sites in the F & V Memo were not comparable in regards to weather conditions. He also questioned what the volume of the road was. Staff clarified that it has an Average Daily Traffic (ADT) of 21,000 vehicles per day (vpd). He also mentioned that he spoke with a firefighter at the Maple Rd. station who didn't know how they would navigate a reconfigured Maple Rd.

Mr. Dow believes that the number of accidents on E Maple, 117, were not significant in comparison to the number of vehicles that travel the road.

Mr. Petcoff believes that there is congestion on Maple in its existing condition and that there is cut-through traffic on side streets already. He noted that some of the side streets do not have sidewalks and that might increase the possibility of accidents involving a pedestrian and a car.

Dr. Finkelstein believes that putting bike lanes on Maple is idiotic and would be similar to putting them on Woodward.

Mr. Gluckman believes that the presentation of the proposed 4 to 3 lane conversion was poor. He stated that he is an engineer, not a traffic engineer, however, and that he was insulted by the presentation.

Mrs. Slanga asked the public if any one of them want to be one of the 117 accidents on Maple.

Mr. Mirro stated that he does want to be in an accident because current accidents are minor and that he believes that if the road is reconfigured the accidents that occur will be major. He stated that getting sideswiped or rear-ended is not serious. He also believes that the number of accidents on the side streets will increase. He believes that the review was not unbiased and not scientific. He also stated that it was his understanding that the FHWA upper threshold for a 4 to 3 lane conversion is an ADT of 20,000 (vpd).

Mr. Labadie informed the public that just because the FHWA sets 20,000 (vpd) as a suggested maximum ADT does not mean that others are outlawed or out the window. The FHWA website actually states that "The FHWA advises that roadways with ADT of 20,000 vpd or less may be good candidates for a Road Diet and should be evaluated for feasibility." And that "A 2011 Kentucky study showed Road Diets could work up to an ADT of 23,000 (vpd)." He also reminded the public that the curb to curb width of the road and the number and location of the existing traffic lights will remain the same regardless of the way the committee votes.

Mr. Booth suggested that the board could endorse a temporary restriping in order to explore the real pros and cons.

Mr. Clawson asked how long would be appropriate for a test period.

Mr. Labadie suggested 6 months. He stated that he facilitated 4 to 3 lane conversions in both Rochester and Frankenmuth. In both communities they first tested the conversion out for a period of six month before they decided to keep the roads as 3 lane roads.

Mrs. Silbergleit asked how the committee would test the road to measure its success or failure.

Mrs. Ecker answered that it depends on the measures that the committee chooses. She noted that there are many measures to choose from including: speed, cut through traffic, and public reaction.

Mr. Lang asked if the committee would need current bike data and then later measure it against future data.

Mrs. Ecker answered that it is important to look at the road as a whole and not simply because of one mode, such as bikes.

Mrs. Daskas noted that many business owners are unaware that narrowing of W Maple is even being discussed.

Mr. Underdown doesn't believe that the narrowing will hurt businesses. He is currently worried about the accidents that occur.

Mr. Bordman noted that with the current road, he sometimes turns into the neighborhood sooner than his street because there is a break in traffic. In this example, he believes that cut-through traffic may decrease because having a left turn only lane will eliminate stoppage in through lanes.

Mr. Petcoff asked if traffic flows would be improved if the "island" at Southfield and W. Maple were removed creating two through lanes eastbound.

Mr. Labadie stated that doing that wouldn't make a noticeable difference because when the street goes through Downtown in narrows to one through lane at Chester until it crosses Peabody.

Mrs. Slanga asked if the Level of Service (LOS) would change for the 4 to 3 lane conversion.

Mr. Labadie stated that the LOS of all study intersection approaches and movements would remain at an acceptable LOS D or better except for SB Maple Road & Chester Street, which would remain at LOS E. Most intersections LOS and delay remain basically unchanged, ranging between A and C whether 4 lanes or 3.

Mr. Mirro stated he felt that the committee could only vote on the proposals as written, either suggested recommendation A or suggested recommendation B. He told the

committee that they couldn't do a test and that doing a test would not be good because it sends a bad message and creates opportunities for drivers to make bad decisions.

Mr. Gluckman believes that the ADT doesn't reflect reality. He admitted that people are swerving more than they probably should, but it's not right to create a linear correlation because people make adjustments based on the particular situation. Having one lane would eliminate the opportunity for drivers to make adjustments.

Mr. Dow thinks that there is an agenda to push the Multi-Modal Transportation Plan and not to react to a concern about speeding or accidents. He stated that he spoke to Carmine Palumbo, the Deputy Director of SEMCOG who told him that every street doesn't have to account for every mode. He stated that he doesn't believe that the merchants will be happy. He stated that some of the congestion comes from traffic coming to and going from Seaholm High School. If you add to that congestion you will divert traffic and create congestion on Lincoln, Harmon, or Oak.

The steering committee closed the meeting to public comment in order to vote on the proposed recommendations.

Motion by Mr. Clawson, seconded by Mrs. Adams:
The Steering Committee recommended to the Multi-Modal Transportation Board that W. Maple Rd. between Cranbrook Rd. and Southfield Rd. be reconfigured as a three lane road containing two 10 ft. wide through traffic lanes, one 10 ft. continuous left turn lane, two 7 ft. wide shoulder areas (no bike lanes). Further, to add the following additional conditions:

(i) A 6 month trial period to commence after the road is repaved;
(ii) ADA ramps at all corners and crossings;
(iii) Crosswalk marking improvements at the signalized intersections;
(iv) New right turn only lane for eastbound traffic turning south on to Southfield Rd.;
(v) Pedestrian refuge striped crossing islands to the east of Chesterfield Ave., east of Lakepark Dr., and west of the Rouge River bridge, the latter with Rectangular Rapid Flashing Beacons;
(vi) Removal of low use bus stops;
(vii) Enhancement of higher use bus stops (concrete pad, benches, shelters etc.); and
(viii) Use of enhanced technology in signals to control and optimize signal cycle lengths and timing.

Motion failed, 5-4.
Yays:
Mike Clawson (Resident on W. Maple)
Karen Rock (Resident North of W. Maple)

Terry Lang (Resident at Large)
Vionna Adams (MMTB)
David Underdown (Business Owner from W. Maple)

Nays:
Stuart Bordman (MMTB)
Lara Edwards (MMTB)
Karen Daskas (Business Owner from CBD)
Alice Silbergleit (Alternate resident South of W. Maple)

Absent: Russ Ives (Church Member)

Mrs. Edwards asked what would be the criteria for the motion to carry on to the next level. Did the committee want a simple majority or a consensus?

Mrs. Ecker stated that a consensus is often preferred but it is not necessary. She then reminded the committee that their decision will go to the Multi-Modal Board, who will then either pass that recommendation or another one on to the City Commission. The ultimate decision however rests with the City Commission.

Mrs. Silbergleit stated that she worries about the possibility of increased cut through traffic, especially with there being no sidewalks on some of the side streets.

Mrs. Ecker stated that the committee would have to consider all of the objectives that were outlined and how most of them could be accomplished.

Mr. Bordman suggested that a bike lane should be accommodated if there is to be a shoulder on Maple Rd.

Mr. Underdown suggested that to reduce the possibility of increased cut through traffic, signs could be posted restricting turning during certain time periods.

Deputy Chief Clemence stated that with such signage most of the violators are residents.

Mrs. Silbergleit stated that it only makes sense that cut through traffic would increase if there were fewer through lanes on Maple.

Mrs. Ecker stated that sometimes the solutions to problems are counter-intuitive. There is the science/ fact based side and the emotional/ political side to such issues.

Mr. Underdown noted that even though the specifics are different, business owners on N. Old Woodward found that the road narrowing benefitted businesses.

Mrs. Edwards suggested that the committee outline their plan of action after the proposed six month trial period; such as working with the surrounding neighborhoods to address any increased cut through traffic. She stated that the committee could commission Fleis and Vandenbrink to present new data and new ideas if needed. She stated that she would be more likely to vote for the motion if that safeguard was built into it.

Motion by Mr. Clawson, seconded by Ms. Edwards:
The Steering Committee recommends to the Multi-Modal Transportation Board that W. Maple Rd. between Cranbrook Rd. and Southfield Rd. be reconfigured as a three lane road containing two 10 ft. wide through traffic lanes, one 10 ft. continuous left turn lane, two 7 ft. wide shoulder areas (no bike lanes). Further, to add the following additional conditions:

(i) A 6 month trial period to commence after the road is repaved with a formal study by the City to consider the effects of the reconfiguration;
(ii) ADA ramps at all corners and crossings;
(iii) Crosswalk marking improvements at the signalized intersections;
(iv) New right turn only lane for eastbound traffic turning south on to Southfield Rd.;
(v) Pedestrian refuge striped crossing islands to the east of Chesterfield Ave., east of Lakepark Dr., and west of the Rouge River bridge, the latter with Rectangular Rapid Flashing Beacons;
(vi) Removal of low use bus stops;
(vii) Enhancement of higher use bus stops (concrete pad, benches, shelters etc.); and
(viii) Use of enhanced technology in signals to control and optimize signal cycle lengths and timing.

Motion by Mr. Clawson
Seconded by Mrs. Edwards to approve the proposed changes to W. Maple Road as presented above.

Motion carried, 7-2.
Yays:
Mike Clawson (Resident on W. Maple)
Lara Edwards (MMTB)
Karen Rock (Resident North of W. Maple)
Terry Lang (Resident at Large)
Vionna Adams (MMTB)
David Underdown (Business Owner from W. Maple)
Alice Silbergleight (Alternate resident South of W. Maple)

Nays: Stuart Bordman (MMTB)

Karen Daskas (Business Owner from CBD)

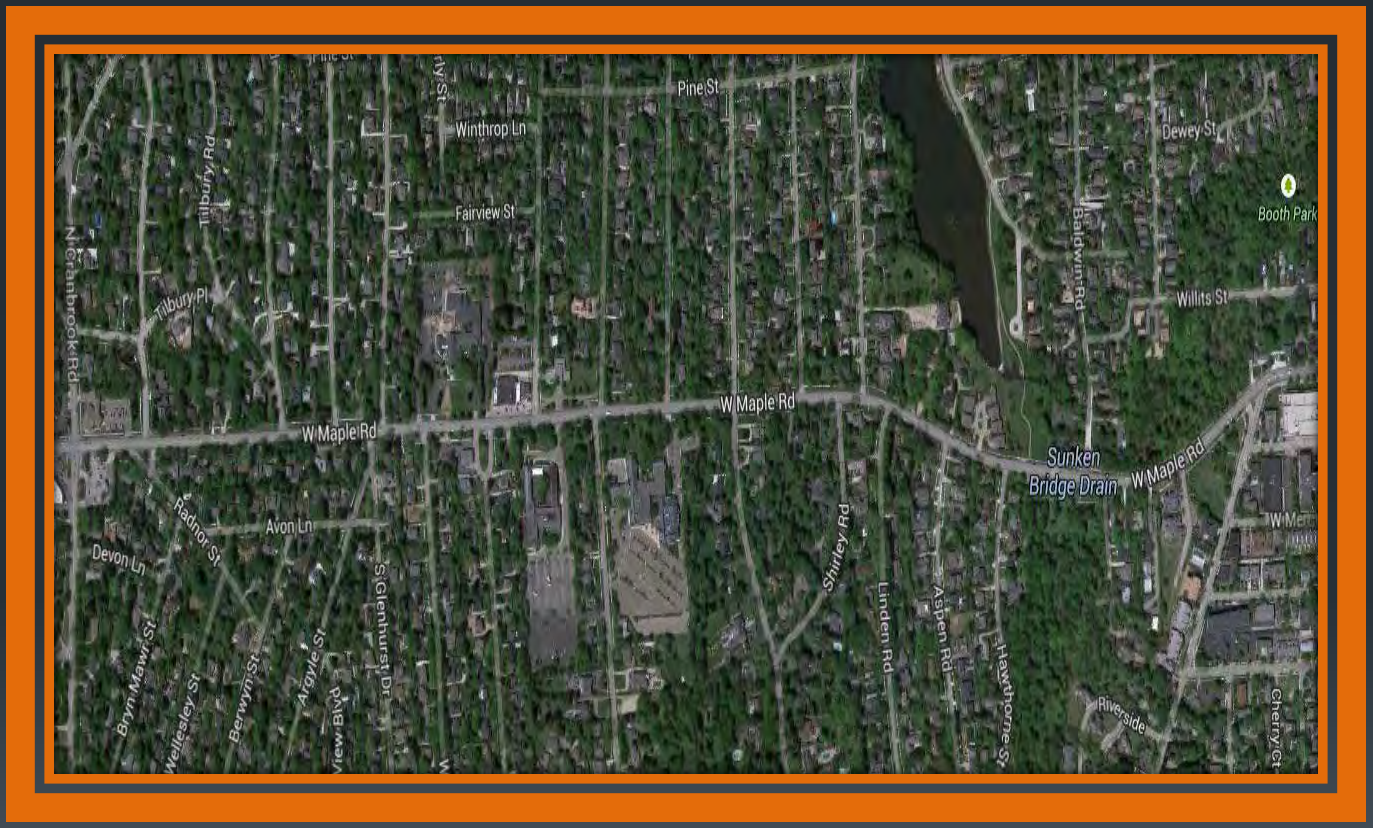
Absent: Russ Ives (Church Member)

The next meeting of the Steering Committee is projected to be held six months after the repaving and restriping of W. Maple Road is complete. They will be meeting to evaluate new data regarding the 4 to 3 lane conversion. This timetable is contingent on approval by the Multi-Modal Transportation Board and the City Commission.

K. ADJOURNMENT

No further business being evident, the meeting was adjourned at 8:47 p.m.

W. Maple Rd. Steering Committee



Final Report

January – April 2015

Introduction and Background

- 2011 - City Commission passed a resolution in support of Complete Streets
- 2013 – City completed a 15 month process to prepare and adopt the Multi-Modal Plan Transportation Plan (“MMTP”) to guide transportation improvements in the City
- 2014 – City Commission created the Multi-Modal Transportation Board (“MMTB”) as recommended in the Plan
- 2014 – MMTB reviewed the City’s planned 2015 road projects based on the recommendations provided in the MMTP and public input
- 2015 – MMTB began reviewing the City’s planned 2016 project to resurface W. Maple between Cranbrook and Southfield

Concept Plan for W. Maple Road

CITY OF BIRMINGHAM MULTIMODAL TRANSPORTATION PLAN

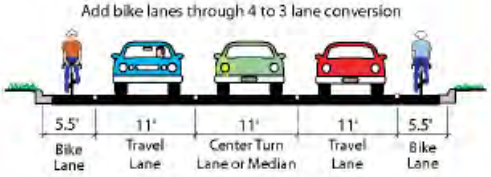
SPECIFIC AREA CONCEPT PLANS

5.2 WEST MAPLE ROAD

The following concept plan is for the segment of W Maple Road between Cranbrook Road and Southfield Road, which is going to be resurfaced in 2015.

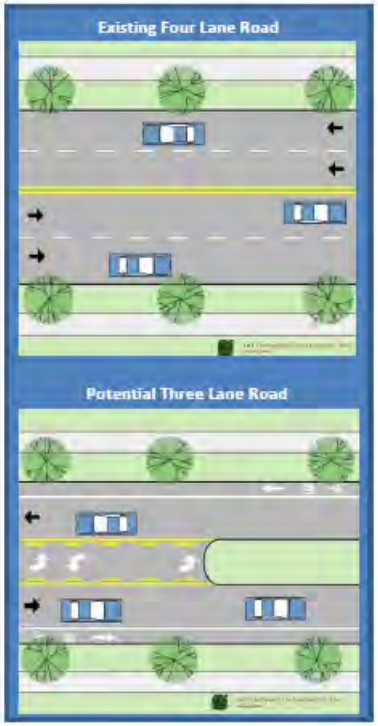
PROPOSED BICYCLE FACILITIES:

A four-lane to three-lane conversion is proposed on W Maple Avenue between Waddington Street and Southfield Road.

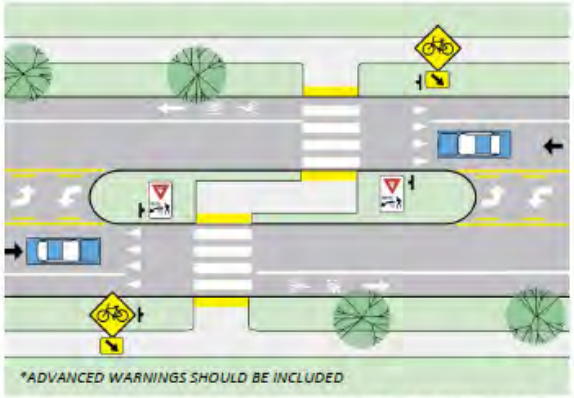


The existing road cross-section should be maintained on W Maple Avenue between Waddington Street and Cranbrook Road in order to allow for motor vehicle stacking at the intersection. A shared lane marking is proposed along this segment, along with signage directing bicyclists to a neighborhood connector route where the bike lane ends and the shared lane marking begins.

Please note that W Maple Road between Cranbrook Road and Southfield Road is at the cusp of where a four-lane to three-lane conversion will function. Additional analysis of the corridor is necessary to determine if the conversion is feasible.



PROPOSED CROSSING ISLANDS:



Crossing islands with rectangular rapid flash beacons are proposed on W Maple Road at:

- Baldwin Road
- Chesterfield Avenue
- Suffield Dr/Pilgrim Ave
- Lake Park Dr/Linden Rd

Please note that this is assuming the existing signal at Lake Park Drive will be removed with the proposed four to three lane conversion.

A crossing island is also proposed at Chesterfield Avenue where there is an existing signal.

Bus stops along W Maple Road should be relocated to be closer to the proposed road crossings.

W. Maple Rd. Steering Committee

A subcommittee of the Multi-Modal Transportation Board

Multi-Modal Board	Vionna Adams
Multi-Modal Board	Stuart Bordman (Vice-Chair)
Multi-Modal Board	Lara Edwards
Downtown Merchant	Karen Daskas
W. Maple Merchant	David Underdown (Chair)
W. Maple Resident	Michael Clawson
Maple North Resident	Karen Rock
Maple South Resident	Eugene Nelson
	Alice Silbergleit (Alternate)
W. Maple Church Rep.	Russ Ives
Resident at Large	Terry Lang

Steering Committee Planning Process

- Introduction to multi-modal transportation planning, the Birmingham MMTP, and transportation planning data and review standards;
- Review of strengths and weaknesses of the existing W. Maple Corridor;
- Development of goals and objectives for improvements to the W. Maple Corridor;
- Inventory and analysis of the existing environment in the W. Maple Corridor;
- Identification of opportunities and Complete Streets corridor improvement options;
- Analysis of future improvement options;
- Review of national examples and case study analysis of similar projects;
- Collection of public input throughout the process; and
- Approval of a recommendation to the MMTB on the future configuration of W. Maple.

Strengths and Weaknesses - Existing Conditions on W. Maple

Common findings were identified by the Steering Committee:

General Consensus on Problems:

- W. Maple Road is dangerous and does not feel safe;
- Speeds are excessive;
- Vehicles swerve to avoid other vehicles making turns;
- Turning onto W. Maple from adjacent side streets is difficult;
- Congestion/delays at Southfield Road; and
- Pedestrians crossing W. Maple is difficult;

General Consensus on Positive Amenities:

- Sidewalk conditions are generally good.

Committee Objectives for W. Maple Road Improvements

- Improve safety, especially for vehicular and pedestrian traffic;
- Lower the average speed of vehicular traffic;
- Reduce the amount of vehicles swerving to avoid cars making turns;
- Make it easier to turn onto W. Maple from adjacent side streets;
- Reduce traffic congestion at Southfield Road;
- Provide safe and convenient pedestrian crossings; and
- Maintain sidewalk facilities.

Committee Objectives for W. Maple Road Improvements

In general, the steering committee stated that, no matter what, the following conditions should apply:

- Ensure that any proposed changes in the corridor do not make existing conditions worse; and
- Ensure that any proposed changes in the corridor do not increase cut-through traffic in the surrounding neighborhoods.

Inventory and Analysis of Existing Conditions

- Daily Traffic Volume
- Peak Hour Turning Movement Counts
- Level of Service at Intersections
- Crash Data
- Vehicular Speed Data
- Gap Analysis
- Traffic Queuing
- Sight Distance Analysis

Daily Traffic Volume and Peak Hour Turning Movement Counts

- W. Maple Road currently carries Average Daily Traffic (ADT) volume of approximately 20,000 vehicles per day.
- Existing weekday peak hour turning movement counts collected at all signalized study intersections between 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM.
- Weekday PM peak hour turning movement counts collected at all unsignalized (STOP controlled) residential streets between 4:00 PM to 6:00 PM.
- All counts collected on a Tuesday, Wednesday, or Thursday of a non-holiday week while schools were in session.

Level of Service at Intersections

Existing Intersection Operations

Intersection	Control	Approach	AM Peak Delay (s/veh)	AM Peak LOS	PM Peak Delay (s/veh)	PM Peak LOS
1. Maple Road & Cranbrook Road	Signalized	EB	25.0	C	32.6	C
		WB	31.6	C	35.8	D
		NB	25.7	C	33.9	C
		SB	34.2	C	33.3	C
		Overall	**29.0**	**C**	**34.1**	**C**
2. Maple Road & Chesterfield Avenue	Signalized	EB	3.5	A	8.4	A
		WB	0.7	A	4.4	A
		SB	25.7	C	25.3	C
		Overall	**3.3**	**A**	**7.1**	**A**
3. Maple Road & Lakepark Drive	Signalized	EB	19.9	B	1.1	A
		WB	0.6	A	1.5	A
		SB	25.5	C	25.8	C
		Overall	**12.4**	**B**	**2.1**	**A**
4. Maple Road & Southfield Road	Signalized	EB	19.7	B	17.1	B
		WB	6.3	A	4.9	A
		NB	25.9	C	33.7	C
		Overall	**16.1**	**B**	**16.6**	**B**
5. Maple Road & Chester Street	Signalized	EB	9.2	A	12.1	B
		WB	5.7	A	10.4	B
		NB	25.9	C	28.5	C
		SB	25.8	C	71.9	E
		Overall	**12.5**	**B**	**27.9**	**C**
6. Maple Road & Bates Street	Signalized	EB	1.2	A	1.5	A
		WB	8.6	A	11.2	B
		NB	25.0	C	26.0	C
		SB	24.3	C	25.4	C
		Overall	**6.1**	**A**	**9.2**	**A**

Level of Service at Intersections

- AM peak hour operations are acceptable.

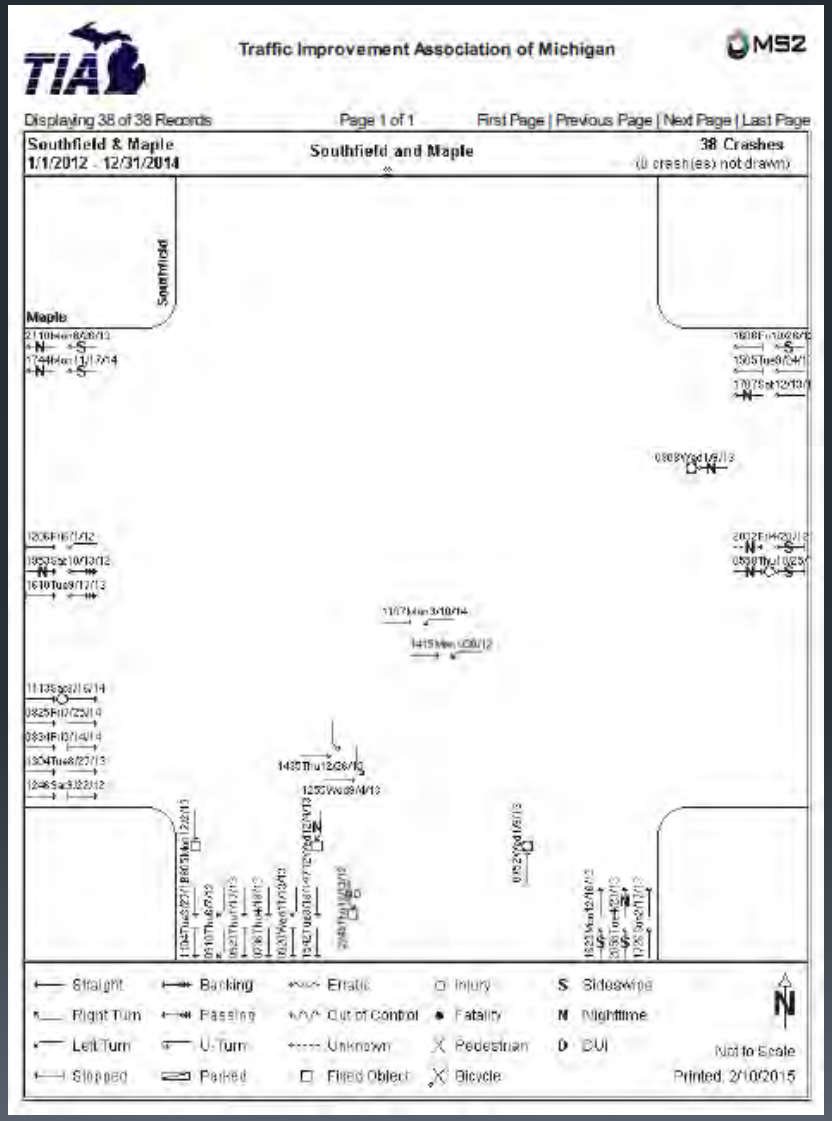
- PM peak period
  - Southbound approach at Maple Road & Chester Street operates at a LOS E, with the southbound right turn movement operating at a LOS F.

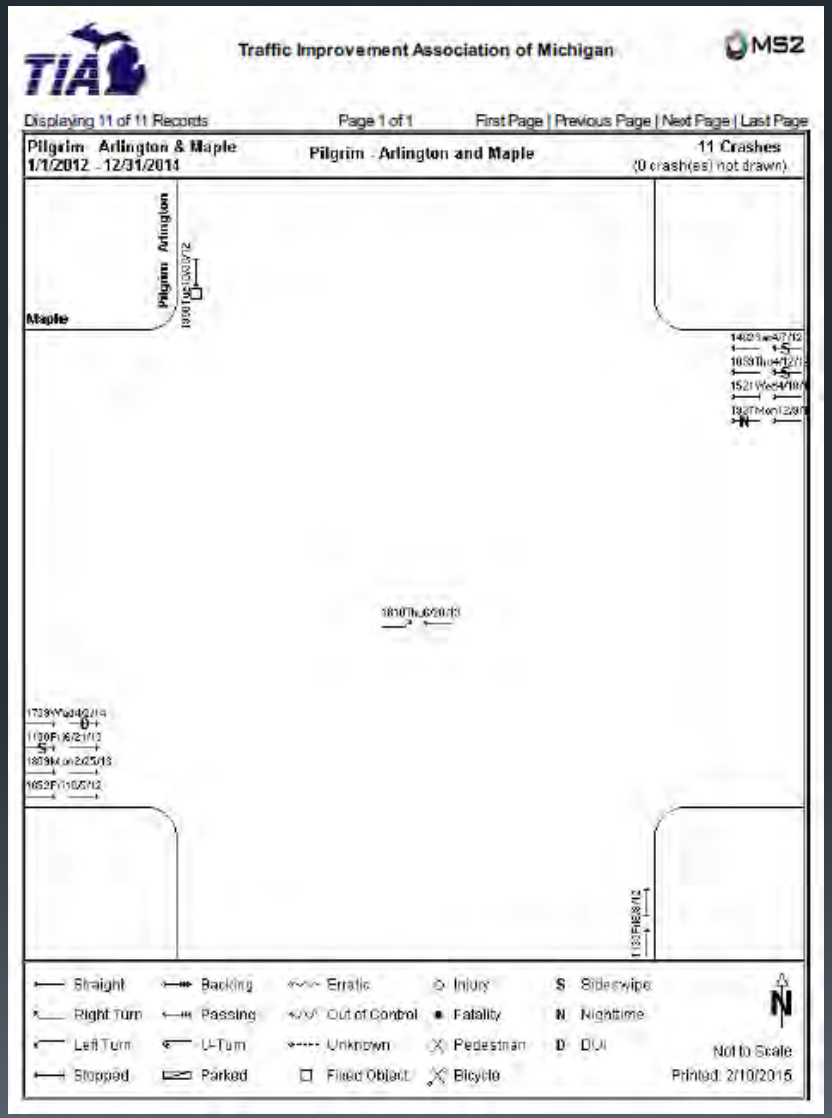
Crash Data

Maple Road Accident Summary

Intersections	WB Crashes E of Intersection	WB Crashes W of Intersection	EB Crashes W of Intersection	EB Crashes E of Intersection	Crashes on the South Approach	Crashes on the North Approach	Crashes in the Intersection	Total Crashes	AVG Annual Crashes
Bradway / Radnor	4	0	0	0	NA	0	0	4	1.33
Waddington	0	0	0	1	NA	0	1	2	0.67
Westwood	0	1	0	1	NA	0	1	3	1.00
Glenhurst	2	1	7	2	1	2	4	19	6.33
Westchester	0	0	0	0	0	NA	0	0	0.00
Larchlea	5	1	0	4	0	0	5	15	5.00
Chesterfield	3	0	7	1	NA	0	5	16	5.33
Pleasant/Fairfax	1	0	2	2	0	0	5	10	3.33
Suffield	0	0	0	0	0	0	2	2	0.67
Pilgrim/Arlington	4	0	4	0	1	1	1	11	3.67
Puritan	0	0	1	0	NA	0	1	2	0.67
Shirley	0	0	1	0	1	NA	0	2	0.67
Lake Park	1	0	5	0	NA	1	3	10	3.33
Linden	1	0	0	1	0	NA	0	2	0.67
Aspen	1	0	1	0	1	0	0	3	1.00
Hawthorne	2	0	1	0	0	NA	1	4	1.33
Baldwin	0	0	0	0	NA	0	0	0	0.00
Maple Hills	2	0	0	0	0	NA	0	2	0.67
Southfield	6	2	8	0	13	0	4	33	11.00

Crash Data


TIA
Traffic Improvement Association of Michigan
MS2
Displaying 38 of 38 Records
Page 1 of 1
First Page | Previous Page | Next Page | Last Page
Southfield & Maple
1/1/2012 - 12/31/2014
Southfield and Maple
38 Crashes
(0 crash(es) not drawn)
Southfield
Maple
Straight
Right Turn
Left Turn
Stopped
Backing
Passing
U-Turn
Parked
Erratic
Out of Control
Unknown
Fixed Object
Injury
Fatality
Pedestrian
Bicycle
S Sideswipe
N Nighttime
D DUI
N
Not to Scale
Printed: 2/10/2015


TIA
Traffic Improvement Association of Michigan
MS2
Displaying 11 of 11 Records
Page 1 of 1
First Page | Previous Page | Next Page | Last Page
Pilgrim - Arlington & Maple
1/1/2012 - 12/31/2014
Pilgrim - Arlington and Maple
11 Crashes
(0 crash(es) not drawn)
Pilgrim
Arlington
Maple
Straight
Right Turn
Left Turn
Stopped
Backing
Passing
U-Turn
Parked
Erratic
Out of Control
Unknown
Fixed Object
Injury
Fatality
Pedestrian
Bicycle
S Sideswipe
N Nighttime
D DUI
N
Not to Scale
Printed: 2/10/2015

Vehicular Speed Data

Speed Summary

Roadway	Direction	1999 85th Percentile	1999 Average Speed	2000 85th Percentile	2000 Average Speed	2001 85th Percentile	2001 Average Speed	2002 85th Percentile	2002 Average Speed
W. Maple Road	EB	37.3	35.1	44.2	36.5	40.8	31.9	43.2	37.5
	WB	53.5	25.9	42.9	37.4	41.8	34.3	40.7	34.0

Gap Analysis and Queuing

- Gap Analysis
  - Signal coordination can help create gaps along Maple Road for side street movements.
  - Outdated time clock technology causes signals to lose coordination over time, reducing gaps.

- Queuing
  - Maple Road & Southfield Road
    - Long vehicle queues for the eastbound approach during the AM peak period and eastbound and northbound approaches during the PM peak period.
  - Maple Road & Chester Street
    - Long vehicle queue for the southbound right turn movement during the PM peak period.
  - Inadequate storage length for eastbound left turns from Maple Road onto Chester Street. Queue spills back into the through travel lane.

Sight Distance Analysis

- Sight distance evaluated for all unsignalized minor side streets and driveways.
- American Association of State Highway and Transportation Officials (AASHTO) standards.
- Sight distance was determined to be adequate.

SYNCHRO Model of Existing Conditions

- Synchro – Traffic analysis computer program for modeling, analyzing, and optimizing signalized and unsignalized intersections.
- Input existing road geometry, traffic volume data, and signal timing data.
- Calculates Levels of Service (LOS) and delay at intersections based on methodology of the Highway Capacity Manual, 2010 (HCM).
- SimTraffic – Simulates real world traffic conditions.

Existing Simulations

Improvement Options Reviewed

- ADA ramps at all corners and crossings
- Sidewalk improvements
- Crosswalk striping
- Pedestrian crossing islands
- Flashing beacons for pedestrian crossings
- Intersection improvements
- Bike lanes or shared lane markings
- Bus stop relocation /consolidation
- Bus stop enhancements
- 4 to 3 lane conversion
- Roundabouts
- Reconfiguration of road width
- Traffic calming measures (curb bump-outs, tree extensions, speed tables, signal coordination, road narrowing, public art, landscaping etc.)

Intersection Operations

Intersection	Control	Approach	*Existing Conditions* AM Peak Delay (s/veh)	LOS	*Existing Conditions* PM Peak Delay (s/veh)	LOS	*Future Conditions** AM Peak Delay (s/veh)	LOS	*Future Conditions** PM Peak Delay (s/veh)	LOS
1. Maple Road & Cranbrook Road	Signalized	EB	25.0	C	32.6	C	29.4	C	24.0	C
		WB	31.6	C	35.8	D	27.9	C	26.7	C
		NB	25.7	C	33.9	C	28.0	C	32.4	C
		SB	34.2	C	33.3	C	35.7	D	31.3	C
		Overall	**29.0**	**C**	**34.1**	**C**	**29.9**	**C**	**27.4**	**C**
2. Maple Road & Chesterfield Avenue	Signalized	EB	3.5	A	8.4	A	10.9	B	8.8	A
		WB	0.7	A	4.4	A	1.7	A	9.1	A
		SB	25.7	C	25.3	C	33.8	C	34.5	C
		Overall	**3.3**	**A**	**7.1**	**A**	**8.1**	**A**	**10.3**	**B**
3. Maple Road & Lakepark Drive	Signalized	EB	19.9	B	1.1	A	9.1	A	2.6	A
		WB	0.6	A	1.5	A	1.2	A	7.3	A
		SB	25.5	C	25.8	C	34.8	C	35.2	D
		Overall	**12.4**	**B**	**2.1**	**A**	**6.8**	**A**	**6.2**	**A**
4. Maple Road & Southfield Road	Signalized	EB	19.7	B	17.1	B	6.1	A	25.6	C
		WB	6.3	A	4.9	A	5.2	A	19.3	B
		NB	25.9	C	33.7	C	38.2	D	37.8	D
		Overall	**16.1**	**B**	**16.6**	**B**	**14.0**	**B**	**26.4**	**C**
5. Maple Road & Chester Street	Signalized	EB	9.2	A	12.1	B	9.5	A	12.3	B
		WB	5.7	A	10.4	B	6.4	A	19.2	B
		NB	25.9	C	28.5	C	29.5	C	33.6	C
		SB	25.8	C	71.9	E	26.4	C	69.9	E
		Overall	**12.5**	**B**	**27.9**	**C**	**13.0**	**B**	**30.2**	**C**
6. Maple Road & Bates Street	Signalized	EB	1.2	A	1.5	A	1.1	A	1.2	A
		WB	8.6	A	11.2	B	8.1	A	9.2	A
		NB	25.0	C	26.0	C	29.2	C	32.5	C
		SB	24.3	C	25.4	C	28.3	C	31.7	C
		Overall	**6.1**	**A**	**9.2**	**A**	**6.1**	**A**	**9.1**	**A**

* - Assumes construction of an eastbound right turn lane at the intersection of Maple Road & Southfield Road.

Simulation of 4 to 3 Lane Conversion

Case Studies of 4 to 3 Lane Conversions Across the Country

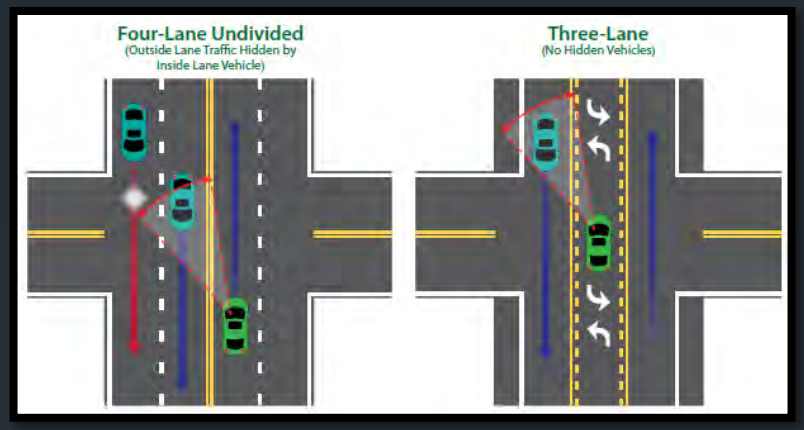
- Speed Reduction
  - Reduction in speeds due to reduced speed differential
- Crash Reduction
  - Reduction in overall number of crashes
  - Reduction in severity of crashes

Comparable Sites	City/St	ADT	Crash Reduction	Speed Limit (MPH)	Year Project Completed
Maple Road	Birmingham, MI	21,000	NA	35	NA
N 45th Street*	Seattle, WA	20,000	14 %	30	1972
Madison St.*	Seattle, WA	18,000	-38%	30	1994
East Boulevard**	Charlotte, NC	21,400	-34%	35	2011
Fourth Plain Blvd.**	Vancouver, WA	17,000	-52%	50KM/H (31MPH)	2001
Portland Ave.**	Burnsville, MN	19,200	-32%	30	2011
Edgewater Drive**	Orlando, FL	20,000***	-40%	30	2002
	Average	19,120	-28%	-	

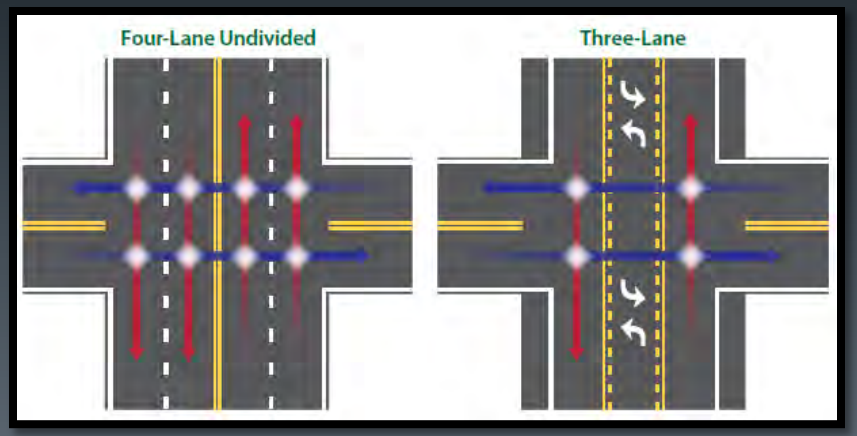
* - Parallel Parking
** - Includes Bike Lanes
*** - Approximate count not included in average

Case Studies of 4 to 3 Lane Conversions Across the Country

- A reduction in crashes due to improved site lines and distance.



- A reduction in crashes due to reduced traffic conflict points



Maple & Southfield Improvements

- Exclusive right turn lane for the eastbound approach
- Side by side left turn lanes between Southfield Road and Chester Street for increased storage capacity.

Multi-Modal Transportation Board Suggested Recommendation:

The Multi-Modal Transportation Board recommends to the City Commission that W. Maple Rd. between Cranbrook Rd. and Southfield Rd. be reconfigured as a three lane road containing two 12 ft. wide through traffic lanes, one 12 ft. continuous left turn lane, and two 4 ft. wide shoulder areas without bike lanes. Further, to add the following additional conditions:

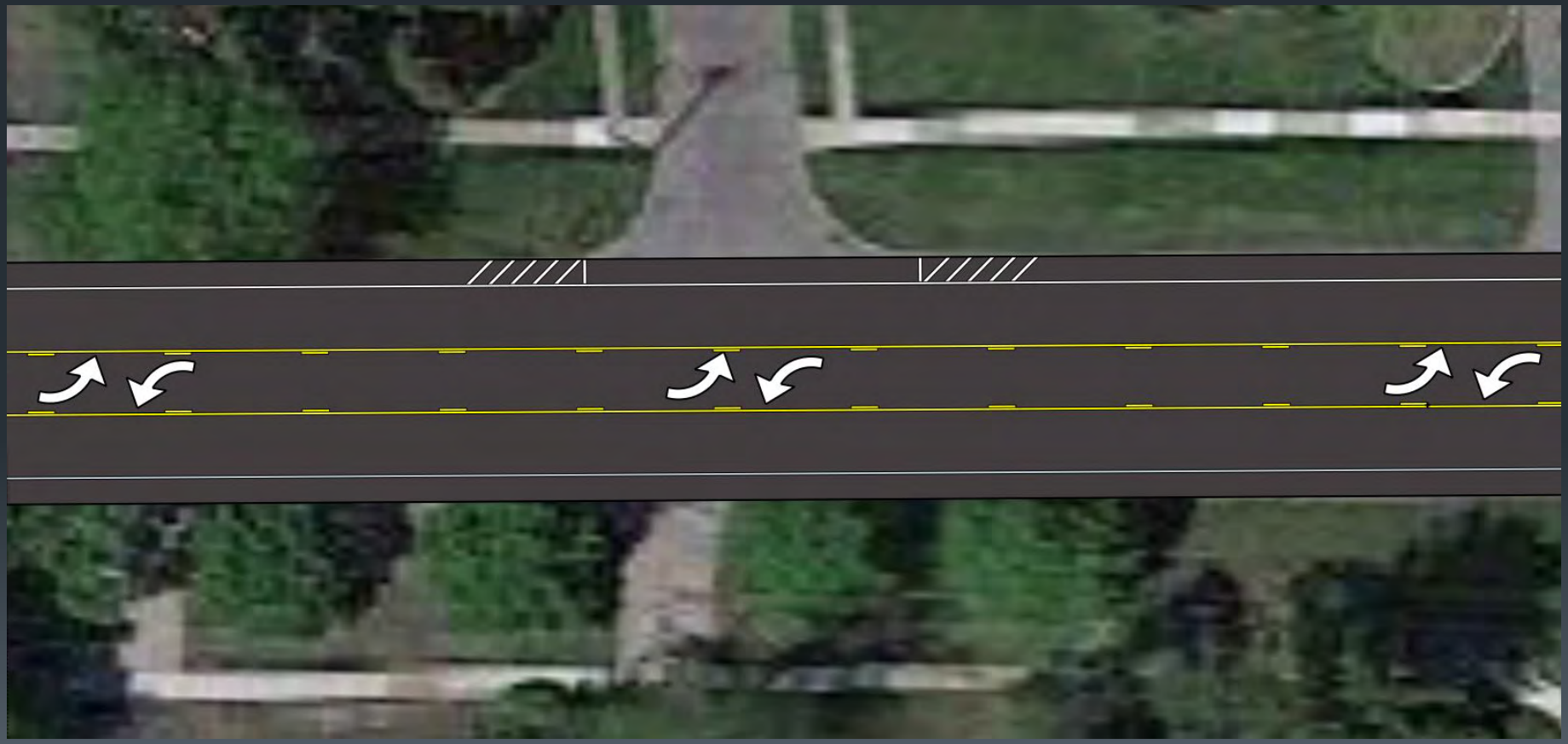
1. A 6 month trial period to commence after the road is repaved with a formal study by the City to consider the effects of the reconfiguration. The W. Maple Rd. Steering Committee will reconvene in April, 2017, to study the following measures, compared to the conditions that existed prior to the project, including:
   a) Average speeds
   b) Average daily traffic
   c) Crash rates
   d) Cut through traffic during the PM Peak Hour on the following roads: S. Glenhurst Ave., Larchlea Dr., Chesterfield Ave., Pleasant Ave., Pilgrim Ave., Arlington Rd., Shirley Rd., and Lakepark Dr.
   e) Level of Service at the Southfield Rd. and Chester St. intersections.

   The Steering Committee will also actively solicit public input from all interested stakeholders as a part of the process, and make a recommendation for the future of the corridor to the Multi-Modal Transportation Board.

Multi-Modal Transportation Board Suggested Recommendation Part 2:

2. Installation of ADA ramps at all corners and crossings;
3. Crosswalk marking improvements to be made at the signalized intersections;
4. Congestion relief improvements between Southfield Rd. and Chester St. including a right turn lane for eastbound traffic at Southfield Rd. and dual left turn lanes between Southfield Rd. and Chester St.,
5. Installation of marked crosswalks at the Chesterfield Ave. and Lakepark Dr. traffic signals;
6. The removal of low use bus stops;
7. The enhancement of higher use bus stops (concrete pad, benches, shelters etc.); and
8. The addition of enhanced technology in the existing signals to control and optimize signal cycle lengths and timing.

Recommended Configuration



Next Steps:

- Recommendation of Multi-Modal Committee
- Public Hearing at City Commission
- Construction in Summer 2016

CITY OF BIRMINGHAM
MULTI-MODAL TRANSPORTATION BOARD
THURSDAY, MAY 7, 2014
City Commission Room
151 Martin Street, Birmingham, Michigan

Minutes of the regular meeting of the City of Birmingham Multi-Modal Transportation Board held Thursday, May 7, 2014. Chairperson Johanna Slanga convened the meeting at 6:05 p.m.

A. ROLL CALL

Present: Chairperson Johanna Slanga; Board Members Stuart Bordman, Lara Edwards, Michael Surnow, Amanda Warner (left at 8 p.m.); Student Representative Daniel Evans

Absent: Board Members Vionna Adams, Andy Lawson; Student Representative Rebecca Mendel

Administration: Lauren Chapman, Asst. City Planner
Mark Clemence, Deputy Chief of Police
Jana Ecker, Planning Director
Austin Fletcher, Asst. City Engineer
Paul O'Meara, City Engineer
Carole Salutes, Recording Secretary

Also Present: Mike Labadie from Fleis & Vandenbrink ("F&V"), Transportation Engineering Consultants

B. INTRODUCTIONS

Mr. O'Meara introduced Austin Fletcher, the new Asst. City Engineer. Ms. Ecker introduced Michael Surnow who is the new Bicyclist Representative board member.

C. REVIEW AGENDA (no change)

D. APPROVAL OF MINUTES, MEETING OF APRIL 9, 2015

Moved and seconded to approve the Minutes of April 9, 2015 as presented.

Motion carried, 5-0.

E. W. MAPLE RD. RESURFACING PROJECT

1. W. Maple Rd. Steering Committee Recommendation

Ms. Ecker took everyone through the process leading to this meeting. The W. Maple Rd. Steering Committee was formed in January by this board and asked to come to a conclusion relative to how the W. Maple Rd. resurfacing project should be completed with respect to the goals of the Multi-Modal Transportation Plan. One of the recommendations that the Multi-Modal Plan suggested for further study was to look at a four-to-three lane conversion along W. Maple Rd.; one traffic lane in each direction and a left-hand turn lane running throughout the middle. After setting their objectives, the Steering Committee reviewed all of the different options and passed a final recommendation at their meeting of April 16, 2015.

Mr. Labadie presented a power point that went through an inventory and analysis of existing conditions. The following points were covered:

- The analysis procedure that was followed is accepted practice;
- Daily traffic and peak hour turning movement counts;
- Existing level of service at intersections (a depiction of how well an intersection is processing the traffic - average stop delay per vehicle);
- Crash data from the last three years (typically more crashes at traffic signals or in places where the geometry is a little different);
- Vehicular speed data that has been collected by the City (he noted the 85th percentile speed which is that speed at which 85% of the cars are going at or less. This is higher than the 35 mph limit. The top 15% is the number that enforcement believes they can enforce);
- Gap analysis and queuing (how long the gaps are and whether or not a vehicle can enter from side streets or driveways);
- Sight distance analysis (important when trying to get out of side streets or driveways);
- Daily traffic and peak hour turning movement counts (average daily traffic is about ten times the p.m. peak hour number which is higher than the a.m. peak hour number that has no problems related to delay).

The chairperson took comments from the audience at 6:28 p.m.

Ms. Judith Keefer, 505 E. Lincoln, asked why the Chester and Bates intersections were studied. She received confirmation that traffic flows outside the study section were incorporated in order to ensure the influence would be typical. The worst congestion is at the Southfield to Chester,area and it backs up into the study corridor which is why it is relevant.

Mr. Jim Mirro, 737 Arlington, said he represents the neighborhood organization. He noted the numbers show peak level of service and that is not what he just experienced in driving over tonight. Squeezing down from four lanes to two will decrease the level of service even more. Mr. O'Meara answered that right now traffic has gotten worse because Quarton Rd. is closed for repairs. Chairperson Slanga added they don't design for every exception.

Mr. Labadie presented more data.

The chairperson opened public comment at 6:35 p.m.

Mr. Jim Mirro said with respect to the crash data there will always be accidents. Taking the road down from four lanes to three lanes will back up traffic when an accident occurs.

Mr. Stuart Lockman, 315 Fairfax, received confirmation that the numbers for the three most recent years are cumulative.

Mr. Bill Dow, 1347 Yorkshire, asked Mr. Labadie whether he feels there is a serious accident problem in this stretch of road that has had 140 accidents in three years with 21,000,000 cars traversing it with no fatalities and no pedestrian injuries. Mr. Labadie responded that accidents happening at Southfield are a re-occurring problem that should be addressed. Accidents at Glenhurst and Larchlea are a pattern that should not be happening but it is a function of the geometry. A lot of accidents happen because the road is four lanes. With the three lane road the turns are separated from the through traffic, not causing the through traffic to have to stop.

Mr. William Spencer, 400 Yarmouth, questioned the data because the condition of the curb lane is deplorable and people don't drive on that road the way it was intended.

Mr. Jim Mirro asked Mr. Labadie why it is more important to incur all of the problems associated with going from a four to a two-plus-one lane road than to just solve the particular problems on Southfield. Mr. Labadie responded that Mr. Mirro is assuming they are going to create big problems to solve a few small ones. That is not the case.

Mr. Labadie continued with more information based on the existing road:

- Simulation model of existing conditions;
- Comparison of level of service between existing and future conditions which would be if the road went from four to three lanes (for the most part, there is no difference).

- Proper length transition is needed when going from four lanes to three (in this case about 1,000 ft. is adequate distance to merge);

Chairperson Slanga invited questions from the public at 7:17 p.m.

Mr. Stuart Lockman noticed there is no level of service improvement in any of the areas they looked at. Mr. Labadie said for the most part there is no level of service change. Mr. Lockman inquired what the expectation is for the 85th percentile with three lanes; and what is the expectation in terms of back-up for the amount of time it will take to traverse from Southfield to Cranbrook as a result. Mr. Labadie replied that with the three lane conversion everything is set up for the 35 mph speed limit. If vehicles drive 35 mph they make the lights and create platoons that allow people to get out of the side streets. The time going through to Cranbrook will be basically the same during peak hours and non-peak hours.

Mr. Lockman then asked if this measures whether people will be able to make a left turn or go straight through the intersection from the side streets. Mr. Labadie replied there will be significant improvement over what exists today because of the better platooning that will be created with just one lane controlling the traffic. With the four lane road the cars are side-by-side and one car can go faster.

Mr. John Ryan, 505 E. Lincoln, said E. Lincoln is a disaster and he does not want to see that repeated with W. Maple Rd. Accidents will increase because people will tailgate, go too fast, and not pay attention.

Ms. Melissa Mark, 635 Puritan, received clarification the light at Lake Park will not be taken out.

Mr. Ed Genheimer, 706 Westchester, said the study totally ignores the impact on the surrounding area. The reduced number of lanes will force traffic through the neighborhoods. People who break the speed limit on W. Maple Rd. are now going to break the speed limit in the quiet neighborhoods.

Mr. William Spencer asked about how the gaps are mathematically calculated. His eye didn't see a lot of gaps developing. Mr. Labadie explained what the program does. Mr. Spencer thought the method of calculation was subjective rather than objective.

Ms. Loretta Mirro, 737 Arlington, asked how effective the flashing speed signs are in terms of slowing people down. Deputy Chief Clemence answered they don't have any effect on some people, but on others they do. Ms. Mirro asked if timing the traffic lights would have the same effect on a four lane road as it does on a three lane road. Mr. Labadie replied the speed is controlled and gaps are better on a three lane road where cars are driving along in single file.

Ms. Nancy Thompson, 286 Puritan, said even if cars are platooned drivers turn right on red at the intersection and people can't get out of the side streets. She wondered if any studies have been made on how the four lane system could be improved rather than taking the road down to three lanes. With the left turn lane people may jockey into it several blocks ahead of their turn and use it as a driving lane.

Mr. Jim Mirro commented the averages shown on the simulation are not reality. They do not reflect such things as road repairs, churches being let out, etc.

Mr. Labadie noted that four lanes to three lanes is not uncommon across the country. It cuts the number of traffic conflict points in half.

Mr. O'Meara reported on the W. Maple Rd. Steering Committee recommendation. Staff and the consultant have discussed the recommendation, and propose modifying a few parts while still maintaining the spirit and the intent.

SUGGESTED RECOMMENDATION:

The Multi-Modal Transportation Board recommends to the City Commission that W. Maple Rd. between Cranbrook Rd. and Southfield Rd. be reconfigured as a three lane road containing two 12 ft. wide through traffic lanes, one 12 ft. continuous left turn lane, and two 4 ft. wide shoulder areas without bike lanes.

Further, to add the following additional conditions:
1. A six-month trial period to commence after the road is repaved with a formal study by the City to consider the effects of the reconfiguration. The W. Maple Rd. Steering Committee will reconvene in April 2017 to study the following measures, compared to the conditions that existed prior to the project, including:
a. Average speeds
b. Average daily traffic
c. Crash rates
d. Cut through traffic during the p.m. peak hour on the following roads: S. Glenhurst Ave., Larchlea Dr., Chesterfield Ave., Pleasant Ave., Pilgrim Ave., Arlington Rd., Shirley Rd., and Lakepark Dr.
e. Level of Service at the Southfield Rd. and Chester St. intersections

The Steering Committee will also actively solicit public input from all interested stakeholders as a part of the process, and make a recommendation for the future of the corridor to the Multi-Modal Transportation Board.

2. Installation of ADA ramps at all corners and crossings;

3. Crosswalk marking improvements to be made at the signalized intersections;

4. Congestion relief improvements between Southfield Rd. and Chester St. including a right turn lane for eastbound traffic at Southfield Rd. and dual left turn lanes between Southfield Rd. and Chester St.;

5. Installation of marked crosswalks at the Chesterfield Ave. and Lakepark Dr. traffic signals;

6. The removal of low use bus stops;

7. The enhancement of higher use bus stops (concrete pad, benches, shelters etc.); and

8. The addition of enhanced technology in the existing signals to control and optimize signal cycle lengths and timing.

The board discussed the recommendations.

Mr. Bordman, who was a member of the Steering Committee, said he voted against the proposal because he is in favor of having bike lanes. Bikers will use the 4 ft. lanes even if they are not striped for bikes. Mr. Surnow noted that as a cyclist he does not agree with the concept of having bike lanes on W. Maple Rd.. However, the 4 ft. may become a defacto bike lane. Mr. O'Meara did not believe there would be a big rush of bikes out there.

Ms. Edwards, also a member of the Steering Committee, thought the road could accommodate bikers if there is that much extra room. Chairperson Slanga did not like the idea of having a six-month trial period with paint. This board needs to make a solid recommendation to the City Commission without wavering. Mr. Surnow said what he likes about the trial period is it provides a chance to test the three lanes for six months, because what he hears tonight is almost an overwhelming disapproval of the idea. Chairperson Slanga noted the feeling she got from some of the e-mails is that people like the idea of a calmer road.

Ms. Edwards said she pushed for a trial in order to give residents a chance to see how cut-through traffic impacts the neighborhoods. The chairperson noted the City can take measures within the neighborhoods to reduce the number of cut-throughs.

Mr. Evans noted the trial period offers a chance to get it right. He thought getting it right is more important than not appearing wishy-washy in front of the City Commission.

The chairperson opened up comments from the public at 8:16 p.m.

Mr. Stuart Lockman observed that the 21,000 vehicles that go through this area every day to get from east to west are not going to disappear. He shares the view that has been expressed by others that there will be a significant deterioration in the way that cars can travel through that area. If a proper study is done for six months he asked that some specific things be changed:

- Measure the average speed today;
- Measure the gaps at different intersections today;
- Measure the amount of time for people to cross W. Maple Rd. today and what it is during the study period;
- The issue that people can't see each other in the jockeying lane wasn't shown;
- Show the effect on traffic on Oak and Lincoln which will be used as alternatives because of the backups that will be on W. Maple Rd.;
- Take a look at what traffic signal calibration will do to the traffic control today.

Ms. Nancy Thompson asked if they haven't done a study to see if four lanes could be improved, how can they automatically say three lanes would be better. A lot of issues could be solved by doing the changes that have been suggested between Chesterfield and Southfield Rd. With bike lanes it is difficult to know if there is a biker coming up from behind when turning right. That creates danger for both the driver of the car and the person on a bike.

Mr. Dave Weir, 3752 Arlington S., asked what happens when busses and emergency vehicles need to get through. Mr. Labadie confirmed there is only one bus that goes through during the peaks. As far as emergency vehicles, everybody goes to the right and vehicles to by.

Ms. Michelle McDermott, 892 W. Southlawn, spoke to say she is totally against changing the four lanes to three lanes. She bikes along W. Maple Rd. If there is that much room, cars will pass on the right. Further, she is worried about the snow removal and where it will go.

Mr. Mike Clawson, 139 Pilgrim, another member of the Steering Committee, noted that when the road is resurfaced the speed will only go up because currently two lanes are pretty much unusable. He spoke in favor of the proposal because there are all kinds of concerns with the road as it is currently configured.

Mr. Bill Dow disagreed. He does not think this proposal is a reaction to any serious accident problems. There is an agenda to implement the Multi-Modal Complete Streets Plan in the City. The surrounding communities and other stake holders such as the Smart Bus System have to be considered. There has been no public demand for this modification. Bloomfield Village passed a resolution opposing this idea. When garbage trucks stop to pick up trash everybody stops. With all of the funneling down and congestion, people will head elsewhere to

shop and dine. He hopes the City will retain the four lanes and look at other ways to slow down traffic such as flashing signs and timed lights.

Ms. Carolyn Avril, 185 Tilberry, Bloomfield Village, did not think the simulation seemed accurate on the side streets. Mr. Labadie replied the counts were taken when traffic was the greatest.

Ms. Catherine Hayes, 560 Southfield, said with respect to the bike lane that her husband and brother would never bike on W. Maple Rd. It seems counter productive to put in a bike lane for a small minority of bikers. Changing to two lanes on Southfield has not done a whole lot to calm traffic there. Another concern is the cut-through traffic on Southfield. Something to think about when changing the configuration to one lane in each direction on W. Maple Rd. is that all of the big trucks heading east are forced to slow down going uphill because of their load. People will get impatient and cut through the neighborhoods.

Ms. Patricia Sonais, 2532 Covington Place, Bloomfield Village, asked if consideration was given to using the easement to increase the width of the road so that a left hand turn lane could be put in. Mr. O'Meara answered that would probably double the cost of the project. Ms. Sonais added that true cyclists do not put their lives in jeopardy and cycle on W. Maple Rd.

Mr. William Spencer said he doesn't see enough technical data to support changing to three lanes.

Ms. Loretta Mirro said she strongly opposes the three lane recommendation. She suggested if the test has to be done, do it now rather than waiting until the road is resurfaced.

Mr. Jim Mirro noted two people in tonight's audience out of 24 people are in favor of the bike lanes. That is 8%, which is the same as the results of a petition that was circulated in four neighborhoods, representing about six hundred people, that asked whether they were in favor of three lanes or opposed. Additionally Mr. Mirro felt that if they put any kind of space on this road near the curb it will encourage an occasional recreational biker. Those are exactly the kind of people who will cause a fatality and that is what the neighborhood organization does not want to happen. He concluded every path that is taken creates more problems than it solves. Therefore, he asked the board members to recommend to the City Commission that W. Maple Rd. be considered for all the other kinds of improvements and see what happens. The next time it has to be resurfaced everything can be looked at again.

Chairperson Slanga noted bikers have the right to bike on any road. It was discussed that with 12 ft. lanes and a 4 ft. lane on the right, people would have

enough room to go through if a bus pulled in temporarily, given the width of the road.

Motion by Mr. Bordman

Seconded by Mr. Surnow to adopt the recommendation as written originally by the Steering Committee that has been modified to include two 12 ft. wide through traffic lanes, one 12 ft. continuous left turn lane, and two 4 ft. wide shoulder areas without bike lanes. Further, to add the following additional conditions:

1. **A 6 month trial period to commence after the road is repaved with a formal study by the City to consider the effects of the reconfiguration. The W. Maple Rd. Steering Committee will reconvene in April, 2017, to study the following measures, compared to the conditions that existed prior to the project, including:**
   a. **Average speeds;**
   b. **Average daily traffic;**
   c. **Crash rates;**
   d. **Cut through traffic during the PM Peak Hour on the following roads: S. Glenhurst Ave., Larchlea Dr., Chesterfield Ave., Pleasant Ave., Pilgrim Ave., Arlington Rd., Shirley Rd., and Lakepark Dr.; and**
   e. **Level of Service at the Southfield Road and Chester St. intersections.**

   The Steering Committee will also actively solicit public input from all interested stakeholders as a part of the process, and make a recommendation for the future of the corridor to the Multi-Modal Transportation Board.
2. **Installation of ADA ramps at all corners and crossings;**
3. **Crosswalk marking improvements to be made at the signalized intersections;**
4. **Congestion relief improvements between Southfield Rd. and Chester St. including a right turn lane for eastbound traffic at Southfield Rd. and dual left turn lanes between Southfield Rd. and Chester St.,**
5. **Installation of marked crosswalks at the Chesterfield Ave. and Lakepark Dr. traffic signals;**

6. **The removal of low use bus stops;**
7. **The enhancement of higher use bus stops (concrete pad, benches, shelters etc.);**
8. **The addition of enhanced technology in the existing signals to control and optimize signal cycle lengths and timing; and**

Ms. Edwards thought if people are going to bike on W. Maple Rd. anyway, she would like to make it safer for them. Mr. Bordman did not think with three lanes people would cut through the neighborhoods. Cars cut through now when they can't get through because they are behind cars turning left.

Amended by Mr. Bordman
And agreed to by the board:

- **Include that the painting will take place after the road has been re-paved.**
- **Number 1 (e) shall read "Level of Service at signalized intersections."**
- **Add as part of Number 1 that during the test period the Multi-Modal Board will evaluate pedestrian crossing island locations and if the test is successful they will be put in.**

Chairperson Slanga took comments on the motion from members of the public at 9:20 p.m.

Ms. Loretta Mirro wanted to know why the test could not be done now, before the road is re-paved. Mr. Bordman explained they cannot get an accurate test now, with the poor condition of the right lanes.

Mr. Bill Dow said the complete streets policy is about setting up a policy to involve all owners of the public road system. Therefore adjoining communities should be consulted. Every street does not have to account for every type of travel in a community. For that reason they don't have to put in a bike lane. The test should be done in the Fall and Winter.

Ms. Michelle McDermitt commented if they want to stop cut-throughs during peak hours put up signs saying right turns are not allowed from 4 p.m. to 6 p.m. and enforce it with tickets. That is her suggestion for Number 1 (d) of the motion.

Ms. Catherine Hayes suggested Hawthorne and Aspen be added to Number 1 (d) of the motion.

Mr. Jim Mirro wanted each person on the board to comment on running a test of three lanes with striping from September to February prior to the re-paving.

Board members were given the opportunity to comment if they chose.

Mr. Labadie advised that Number 4 (the dual left turn lanes between Southfield Rd. and Chester St.) cannot happen with a four lane road.

Motion carried, 4-0.

ROLLCALL VOTE:
Yeas: Bordman, Surnow, Edwards, Slanga
Nays: None
Absent: Adams, Lawson, Warner

F. MEETING OPEN TO THE PUBLIC FOR ITEMS NOT ON THE AGENDA
(no one spoke)

H. MISCELLANEOUS COMMUNICATIONS (none)

I. ADJOURNMENT

No further business being evident, the chairperson adjourned the meeting at 9:30 p.m.

_____
Jana Ecker, Planning Director

_____
Paul O'Meara, City Engineer

City of Birmingham

Paul O'Meara <pomeara@bhamgov.org>

Fwd: Report a Problem

1 message

Marianne Gamboa <mgamboa@bhamgov.org> Mon, Jan 5, 2015 at 2:49 PM
To: Paul O'Meara <Pomeara@bhamgov.org>, "Ecker, Jana" <Jecker@bhamgov.org>
Cc: Laura Pierce <lpierce@bhamgov.org>

Please see the message below submitted via our website.

——— Forwarded message ———
From: <website@bhamgov.org>
Date: Mon, Jan 5, 2015 at 2:42 PM
Subject: Report a Problem
To: lpierce@bhamgov.org
Cc: mgamboa@bhamgov.org

Name=Gail Whitty
Address=165 Baldwin Rd
Address_Line_2=
City_Town=Birmingham
Stat_Prov=MI
Zip_Postal_Code=48009
Phone=2487230105
Email = gwhitty@hotmail.com
Type of Issue:=General Concern
Comments=My husband and I are 40 year residents of Baldwin at Maple. We are both VERY much in favor of the proposal to make West Maple one lane in both directions. We would love for the calming effect – it is hard for us to enter Maple from Baldwin because of the heavy traffic on Maple. Also we are both avid bikers and would love to see more bike lanes including on Maple.

–
Marianne Gamboa
Public Relations Specialist
City of Birmingham
151 Martin Street
Birmingham, Michigan 48009
Phone 248.530.1812
Fax 248.530.1072

City of Birmingham

Paul O'Meara <pomeara@bhamgov.org>

Fwd: Maple Road Narrowing

1 message

Jana Ecker <jecker@bhamgov.org> Mon, Jan 5, 2015 at 4:51 PM
To: "O'Meara, Paul" <Pomeara@bhamgov.org>, Amanda Thomas <athomas@bhamgov.org>

FYI
-------- Forwarded message --------
From: **Matt Twomey** <michigan@gmail.com>
Date: Wed, Dec 31, 2014 at 9:17 AM
Subject: Maple Road Narrowing
To: jecker@bhamgov.org

Hi Jana,
How can I go about supporting the narrowing of Maple into Birmingham? I think it's a tremendous idea and I'd like to help in any way that I can.

Matt Twomey
2048 W Maple Rd
michigan@gmail.com
650-269-6329

--
Jana L. Ecker
Planning Director
City of Birmingham
248-530-1841

City of Birmingham

Jana Ecker <jecker@bhamgov.org>

Cross-Walk on Maple Road to connect Linden Park to Quarton Lake -- Multi-Modal Transportation Board

1 message

mbs@alienguppy.com <mbs@alienguppy.com> Tue, Feb 10, 2015 at 9:24 AM
To: mclemence@bhamgov.org, jecker@bhamgov.org

Good morning Mr. Clemence and Ms. Ecker:

I happened to see the most recent minutes for the Multi-Modal Transportation Board. Looking at the city web site I understand that the two of you are listed as being contacts for the Board. I live at 345 Hawthorne. My contribution to the discussion involving Maple Road's upcoming improvements is that I would really like to more directly connect Linden Park with the park having Quarton Lake by having a formal cross-walk across Maple. A lot of people including me, cross Maple there to get between the two parks on a very regular basis and it is probably not the safest thing to do.

Thank you for your consideration.

--Michael B. Stewart

345 Hawthorne St.

248-808-5565

City of Birmingham

Paul O'Meara <pomeara@bhamgov.org>

Re: Maple Project

1 message

Joe Valentine <jvalentine@bhamgov.org> Tue, Mar 3, 2015 at 3:09 PM
To: Sean Riley <playmaker414@gmail.com>
Cc: Paul O'Meara <Pomeara@bhamgov.org>, Jana Ecker <Jecker@bhamgov.org>, Mark Clemence <Mclemence@bhamgov.org>

Mr. Riley,

Thank you for your email sharing your thoughts on improving Maple Road. I will pass along your email to our Multi-Modal Transportation Board for consideration during their on-going reviews of this stretch of roadway. If you wish to following their efforts on studying W. Maple Road you can do so at www.bhamgov.org/multimodal.

Again, thank you for sharing your input in this process.

Regards,
Joe Valentine

On Tue, Mar 3, 2015 at 2:37 PM, Sean Riley <playmaker414@gmail.com> wrote:

> Going to 3 lanes and adding bike lanes is an excellent idea. It lends itself well to Birmingham "walkability" reputation . The turn lane will actually mitigate traffic and safety concerns better than the current 2 lane both direction design.
>
> Thank you
> Sean Riley
> 2325 W.Maple rd

--
Joseph A. Valentine
City Manager
City of Birmingham
151 Martin Street
Birmingham, MI 48009
(248) 530-1809 Office Direct
(248) 530-1109 Fax
jvalentine@bhamgov.org

Bloomfield Village Association

3595 Bradway Boulevard
Bloomfield Village, Michigan 48301

www.bloomfieldvillage.net

March 18, 2015

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

The Bloomfield Village Board of Trustees is very concerned about the potential negative impact of Multimodal proposal currently being studied by the City of Birmingham. It will not only directly affect several Village streets that are on the north side of Maple Road in the area covered by the proposal, it will also impact the travel and safety of all Village residents.

Specifically, we are concerned about the following:

- If Maple Road is reduced to one traffic lane in each direction from Southfield Road to Cranbrook Road, the traffic congestion will impede east-west travel, especially during rush hours periods. There are no alternative mile roads nearby with the capacity to relieve this congestion.
- To avoid the resulting traffic congestion, many motorists will drive on residential streets through the Village. Traffic on streets like Bradway, Pine and Oak will see marked increases in traffic volumes, creating safety and noise concerns.
- The response time for emergency vehicles from Bloomfield Township will be increased due to the added congestion on Maple, especially during rush hour. These delays will include both the time to reach residents in distress and the time to transport residents to Beaumont Hospital, resulting in potentially life-threatening situations.

We want to go on record as being opposed to the proposal to reduce the number of traffic lanes on Maple from 4 to 2 and urge you to reject this project.

Respectfully,

Jason Weintraub
President, Bloomfield Village Board of Trustees

City of Birmingham

Paul O'Meara <pomeara@bhamgov.org>

RE: Designated Crosswalks for W. Maple Rd.

1 message

Russ Ives <russ.ives@att.net> Fri, Apr 10, 2015 at 9:44 AM
To: Paul O'Meara <pomeara@bhamgov.org>
Cc: Mike Labadie <mlabadie@fveng.com>, "Ecker, Jana" <Jecker@bhamgov.org>, Mark Clemence <Mclemence@bhamgov.org>, johnjudson@fpcbirmingham.org, David Kiehle <dkiehle@earthlink.net>, Sheri Pawlik <spawlik@b2bcfo.com>, Gary Haller <ghaller273@aol.com>

Thanks, Paul, for bringing this idea to my attention.

I know there will be some who would welcome the opportunity to cross there, and if the final plan ends up as a 3 lane design, it is tempting. BUT…

You are correct that the proximity of the church drive is a big concern. I was personally monitoring entrance and egress from that drive on a weekday morning, just a month ago (I think it was midwinter break week). Every weekday morning, there are a number of cars that turn left into that drive for drop-off to the weekday preschool. That positioning, given the number of cars turning left and the regular traffic eastbound at that hour, will definitely create some impediments to passage for westbound traffic. We have a similar situation on Thursday afternoons in particular, with late afternoon activities at the church for children and youth, and similar traffic patterns. The result is bound to be irritated west bound drivers, and quite possibly passing in a bike lane or shoulder. Not a good situation.

I am sharing this with folks from my church, and will try to discuss with them this Sunday. But I doubt their reaction would be much different from mine, and perhaps even more vehement. I don't consider our church to be very far from the traffic light at Chesterfield, and that provides even safer regulated passage across Maple. I would certainly prefer children to use that crossing.

I am unable to attend the meeting next week, as I will be out of state. I have appreciated some of the thinking and data that has been provided, and have tried to be open to the discussed alternatives. But I must say that I still feel that the platooning of a three lane configuration, while better than a design without traffic lights, will create even longer platoons than the current four lane configuration and greater difficulties for entrance and egress for the churches (especially First Presbyterian). I very much support speed management using electronic postings, improved syncing of the stop lights, and enhanced enforcement. I have to say that there is a logic to providing a bit better pedestrian crossing option near the river parks, and if that could be accomplished under the 4 lane design, I think I could support that.

I have to say that in my daily commute I haven't noted the speeding on W Maple in the last month that seemed to show in the most recent study, which was several years old. And I am concerned that the 3 lane

format builds a route for bikes that is not safe and will not be used at a level worth the disruption. An off-road bike option seems the safest and best alternative, although I know that comes with different costs and payers. I wish I could be there Thursday to share that, but I will probably need to communicate via email to the committee members in the next few days to share those thoughts.

I really appreciate the opportunity to share our experience and situational knowledge regarding the designated crosswalks, Paul. Thank you, again.

Russ Ives

From: Paul O'Meara [mailto:pomeara@bhamgov.org]
Sent: Friday, April 10, 2015 9:06 AM
To: Russ Ives
Cc: Mike Labadie; Ecker, Jana; Mark Clemence
Subject: Designated Crosswalks for W. Maple Rd.

Hi Russ -

We are putting together more detailed potential enhancements for W. Maple Rd. if it is resurfaced with a left turn lane in the middle.

The attached plan depicts a proposed crossing island at the midpoint between Suffield and Pilgrim, which is also the midpoint between Chesterfield and Lakepark. Our Multi-Modal Master Plan consultant selected this location to suggest as a good location for this.

Now that we have drawn it, I am personally concerned that it is close to the church driveway. I assume there are periods where a lot of vehicles are turning left into this driveway before services. If this is so, there could be periods where this island is causing traffic backup as the left turn lane would not store many cars at one time. On the other hand, this could also be a plus encouraging those using the church that are within walking distance to feel as though getting to and from is easier. Would you ask around the church and see if people foresee this as a plus or a minus as far as the church is concerned?

I know our meeting is next Thursday, and you won't have much time to get reaction. I will put this as a "tentative" idea for now, pending your input, and we can discuss it more at the Committee meeting.

--

Paul T. O'Meara

City of Birmingham, MI

City Engineer

Jana Ecker <jecker@bhamgov.org>

3-Lane Test & Re-Vote

1 message

jmirro <jmirro@intromarketing.com> Mon, Apr 20, 2015 at 4:39 PM
To: Jana Ecker <jecker@bhamgov.org>
Cc: Paul O'Meara <pomeara@bhamgov.org>, Mark Clemence <mclemence@bhamgov.org>, jvalentine@bhamgov.org, vionnajones@gmai.com, lmedwards08@gmail.com, KGR307@aol.com, sbordman@maddinhauser.com, msc@mikeclawsonlaw.com, kadtender@aol.com, terry.lang@beaumont.edu, eugene.nelson0@gmail.com, Alice Silbergleit <asilbergleit@gmail.com>, Russ Ives <russ.ives@att.net>

Hello Jana,

Thank you for facilitating the 4-16-15 Steering Committee Meeting and for permitting its Chairman, Dave Underdown, to accept questions from the public at the end of each subject discussed during the meeting rather than having all questions held to the end of the meeting. Dave and I, as well as others in the audience, thought that this process led to a more inclusive meeting and helped incorporate improvements to the plan as the meeting progressed.

Despite this positive aspect of the meeting, Dave and I spoke over the past weekend and concluded that the vote held at the very end of the meeting was invalid for a number of reasons outlined in the 1st and 2nd attachments to this email. Because Dave is both the Chairman of the Steering Committee and a member of the Neighborhood organization, he asked me to outline the parameters of a valid 3-lane test which I have done in the 3rd attachment. The 4th attachment is the suggested wording of the Revised Recommendation A and carryover Recommendation B.

Dave further asked me to email all of this to you, the other city managers and the rest of the Steering Committee with a request to meet for a re-vote on this subject on Thursday, 4-30-15 at 6:00 pm which would be two weeks from the last Steering Committee Meeting. It would also be one week prior to the next MMTB Meeting scheduled for 5-7-15. Therefore, this re-vote between Revised Recommendation A (3-lane plan with a test before construction) and carryover Recommendation B (4-lane plan) will provide enough time for you to have the results ready for MMTB review at that meeting.

Dave did not have time to pull together this email and attachments over the past weekend, but asked me to do it for him and he has reviewed all of it. If you wish to confirm this with Dave, you can email him at douglascleaners@hotmail.com or call him on his personal cell phone at 248-909-1072. In order for everyone to plan properly for attending the 4-30-15 meeting, please confirm you approval of the attached plan and meeting date with all addressees by Wednesday, 4-22-15. And, by the way, I am available to be a substitute for any Steering Committee Member who is not able to make this meeting. Thank you.

Jim Mirro

248-420-5113

Neighborhood Representative

Arlington Shirley Lincoln Maple Neighborhood

98% of Voting Residents Opposed to W. Maple Proposal

102 signatures (57 families) reflect 80% of households

Petition to Oppose the West Maple Road Conversion to 3 Lanes

Signature	Street Address
Shelley and Ralph Zygonda	445 Arlington
[illegible]	822 SHIRLEY RD.
[illegible]	822 SHIRLEY
[illegible]	811 Shirley
[illegible]	811 Shirley Rd.
Leslie Macy	708 Shirley Rd
[illegible]	708 Shirley Rd
Lionel Finkelstein, M.D.	577 Arlington
Florence Finkelstein	577 Arlington
[illegible]	318 Arlington
[illegible]	269 Arlington
[illegible]	269 Arlington
[illegible]	353 Shirley
[illegible]	355 Shirley
[illegible]	361 Shirley R'H
[illegible]	361 Shirley
[illegible]	280 Arlington
[illegible]	280 Arlington
[illegible]	1000 Shirley
[illegible]	1000 Shirley
[illegible]	905 Shirley
[illegible]	905 Shirley
[illegible]	377 Arlington St.
[illegible]	377 Arlington St.
[illegible]	400 Arlington St.
[illegible]	400 arlington st
[illegible]	381 Shirley
[illegible]	381 SHIRLEY RD.
[illegible]	503 Arlington St.
[illegible]	503 Arlington St.
[illegible]	600 Arlington St.
[illegible]	600 Arlington St.
[illegible]	843 Arlington
[illegible]	968 Arlington St
[illegible]	968 Arlington St
[illegible]	432 Arlington
Charles Samuels	432 Arlington

Petition to Oppose the West Maple Road Conversion to 3 Lanes

Signature	Street Address
[illegible]	737 Arlington
Diana Marsh	860 Arlington
Kevin Marsh	860 Arlington
Scott Tyler	861 Arlington
[illegible]	861 Arlington
[illegible]	992 Arlington St.
[illegible]	1320 W. Lincoln ST.
[illegible]	1370 W. Lincoln St.
[illegible]	776 Arlington
[illegible]	730 Arlington St.
[illegible]	700 Arlington St
[illegible]	900 Arlington
[illegible]	421 Arlington St.
[illegible]	400 Arlington Rd
[illegible]	345 Arlington Rd
[illegible]	345 Arlington Rd.
[illegible]	316 Arlington St.
[illegible]	222 Arlington St.
[illegible]	222 ARLINGTON ST
E.D. Baughman	117 ARLINGTON
[illegible]	117 Arlington
[illegible]	175 Arlington
Tom McCauley	175 ARLINGTON
Lisa Drake	243 Arlington
[illegible]	" "
[illegible]	914 SHIRLEY
[illegible]	619 Shirley
Barbara Kuhn	" "
[illegible]	414 Arlington
[illegible]	414 Arlington St
Bob McNutt	300 SHIRLEY
[illegible]	300 SHIRLEY
[illegible]	288 SHIRLEY
[illegible]	288 SHIRLEY
[illegible]	345 Shirley
[illegible]	501 Arlington
[illegible]	898 Arlington

Petition to Oppose the West Maple Road Conversion to 3 Lanes

Signature	Street Address
[illegible]	444 Arlington
Ethan Davidson	" "
[illegible]	550 ARLINGTON
[illegible]	550 Arlington
[illegible]	188 Shirley
[illegible]	188 Shirley
[illegible]	550 Shirley
[illegible]	550 Shirley
[illegible]	503 Shirley
[illegible]	503 Shirley
[illegible]	663 Shirley
[illegible]	130 Arlington St.
[illegible]	130 Arlington St.
[illegible]	975 Arlington
[illegible]	975 Arlington
[illegible]	773 Shirley
[illegible]	773 Shirley
[illegible]	663 Shirley
[illegible]	663 Shirley
[illegible]	737 Arlington
[illegible]	640 Shirley
[illegible]	898 Arlington
[illegible]	503 Arlington
[illegible]	770 SHIRLEY
[illegible]	345 Shirley
[illegible]	789 Shirley

Petition to Support the West Maple Road Conversion to 3 Lanes

Signature	Street Address
[illegible]	1331 W MAPLE RD
[illegible]	1331 W MAPLE RD

Petition to Oppose the West Maple Road Conversion to 3 Lanes

Signature	Street Address
	552 Golfview
	576 Golf View Blvd
Debra M. Morris	534 Golf View Blvd.
Richard Morris, Jr.	539 Golf View Blvd.
Christy Dales	510 Golfview Blvd.
Rebecca Rudnick	390 Golfview Blvd.
	311 GOLFVIEW BLVD.
	385 GOLFVIEW BLVD.
Roseann Royle	463 Golfview Blvd.
	411 Golfview
	468 Golfview
	585 Golfview
	559 Golfview Blvd.
Susan C. Ines	552 Golfview Blvd.

Golfview Neighborhood
Birmingham, MI 48009

100% of Voting Residents Opposed
To Maple Road 4/3 Lane Conversion.

14 Signatures (12 Families) Reflect
75% of Households in Neighborhood.

Hawthorne Aspen Linden (HAL) Neighborhood

93% of Voting Residents Opposed to W. Maple Proposal
71 signatures (47 families) reflect 70% of households

Petition to Oppose the West Maple Road Conversion to 3 Lanes

	Signature	Street Address
1.	Barbara Bloedow	475 Linden
	Barbara Bloedow	
2.	Daniel Bloedow	475 Linden
	Daniel Bloedow	
3.	Courtney B Colton	411 Linden Rd
	Courtney B. Colton	
4.	[illegible]	411 Linden Rd
	Mark Colton	
5.	K Walsh	371 Linden Rd
	KATHY WALSH	
6.	[illegible]	371 Linden Rd.
	Don Peasley	
7.	Bruce Herard	437 Linden Rd
	[illegible]	
8.	Susan Herard	437 Linden Rd
	[illegible]	
9.	[illegible]	507 Linden Rd
	Gail Rafson	
10.	Rip Rafson	507 Linden Rd
	Rip Rafson	
11	Susan N Reiter	455 Linden Rd
	Susan N. Reiter	
12	Kimberly Peterson	571 Linden Rd
	[illegible]	571 Linden Rd
13	Bruce D Peterson	
14.	Annemarie Lopez	185 Linden Rd. B'ham 48009
	Annemarie Lopez	
15	[illegible]	185 Linden Rd B'ham, MI 48009
	Ray C. Lopez	
16	Karen Wilmot	147 Linden
	Karen Wilmot	
17	Jeff Wilmot	147 Linden
	Jeff Wilmot	
18	Barbara Thomas	235 Linden
	[illegible] Thomas	
	Terrell Thomas	235 Linden

Petition to Oppose the West Maple Road Conversion to 3 Lanes

Signature	Street Address
[illegible]	483 Aspen
[illegible]	419 Aspen
[illegible]	175 Aspen

Petition to Oppose the West Maple Road Conversion to 3 Lanes

	Signature	Street Address
19.	Patrick [illegible]	255 Linden Road
	Patrick Franssen	
	[illegible] Franssen	255 Linden Rd
	Debra Franssen	
20	[illegible]	
	Robert J Remenar	291 Linden Rd
21	[illegible]	
	GREGORY BOGATKO	355 LINDEN
	Cathy DiSante	
	CATHY DISANTE	355 LINDEN

Petition to Oppose the West Maple Road Conversion to 3 Lanes

Signature	Street Address
Marianne Schwartz	416 Hawthorne St
[illegible]	500 Hawthorne
[illegible] Watts	320 Hawthorne
John C. Watts	320 Hawthorne
Howard Christie	225 Hawthorne
Judy Christie	225 Hawthorne
Jane [illegible]	272 Hawthorne
[illegible] Kelley	390 HAWTHORNE
Elaine M Kelley	390 Hawthorne
[illegible]	512 Hawthorne
[illegible]	512 Hawthorne
[illegible]	345 Hawthorne
Lori Champagne	345 Hawthorne St
[illegible]	318 Hawthorne St

Petition to Oppose the West Maple Road Conversion to 3 Lanes

Signature	Street Address
Jason M. Smith	230 Linden Rd.
[illegible] J. Pallant	200 Linden Rd
[illegible] Pat & Amy Gates	114 Linden Rd
JAMES E Greenlee	294 Linden Rd
[illegible] Greenlee	294 Linden St.
[illegible]	484 Linden
Pat + Bonnie Foley	610 Linden
Carla & John Libbe	648 Linden

Petition to Oppose the West Maple Road Conversion to 3 Lanes

Signature	Street Address
[illegible] Gross	380 Aspen
[illegible]	380 Aspen
[illegible]	312 Aspen
[illegible]	312 Aspen
[illegible] Strasberg	242 Aspen
Rob Strasberg	242 Aspen
[illegible]	110 Aspen
~~[illegible]~~	~~[illegible]~~
[illegible]	110 Aspen
[illegible]	430 Aspen
[illegible]	430 Aspen
JOHN LOCKER	570 Aspen
TODD WEBSTER	270 Aspen
KRISTEN WEBSTER	270 Aspen
Cheryl Daskas	353 Aspen
Karen Daskas	353 Aspen
[illegible]	150 Aspen Rd
[illegible] Malik	350 Aspen Rd.

Petition to Support the West Maple Road Conversion to 3 Lanes

Signature	Street Address
John R. Smith	230 Linden Rd.
[illegible]	252 Linden Rd.
[illegible]	374 Linden
Sophia Balondis	# 562 Linden
Peggy O'Connor	# 680 Linden.

Neighborhood Vote Summary
Regarding W. Maple Road Narrowing

Name of Neighborhood	Number of Signatures Opposed	Support	Total	Percent Opposed
Pleasant	18	0	18	100%
Golfview	14	0	14	100%
Arlington/Shirley	102	2	104	98%
HAL a/	71	5	76	93%
Quarton Lake	28	13	41	69%
Total	233	20	253	92%

a/ HAL = Hawthorne, Aspen, Linden Neighborhood.

Voting Methodology: In the first 4 neighborhoods, homeowners were asked to sign either a petition "opposed" or "in support" of Maple Road narrowing. For Quarton Lake Neighborhood, homeowners were asked to respond to an email survey. The average (mean) sample size for all occupied homes in the neighborhoods shown above is 70% with each neighborhood sample size as follows: Pleasant 30%; Golfview 75%; Arlington/Shirley 98%; HAL 70%; Quarton Lake 10%.

Petition to Oppose the West Maple Road Conversion to 3 Lanes

Signature	Street Address
[illegible]	555 Pleasant St.
[illegible]	629 Pleasant St.
Susan Smith	629 Pleasant St.
Jill Hutchings Robinson	715 Pleasant Street
[illegible]	958 Pleasant street
[illegible]	534 Pleasant
[illegible]	534 Pleasant
[illegible]	555 Pleasant
[illegible]	584 Pleasant.
[illegible]	1050 Pleasant
[illegible]	972 Pleasant
Scott Reid (Scott R. Reid)	957 Pleasant St.
[illegible]	400 Pleasant St.
[illegible]	584 Pleasant
Barbara Resnick	580 Pleasant
NATHAN RESNICK	580 PLEASANT
Janet Henke	515 Pleasant
~~[illegible]~~	~~[illegible]~~
MARY HANGIN	665 PLEASANT

Pleasant Street Neighborhood

100% of Voting Residents Opposed To W. Maple Project

18 Signatures (15 Families) Reflect 30% of Households

12 Reasons to Oppose West Maple 4/3 Lane Conversion

Expected high volume vehicle diversion into surrounding streets.

Expected difficulty when entering and exiting Maple from side streets.

Expected Maple Road traffic delays due to high traffic, artery volume.

Expected traffic congestion due to stopped/non passable bus/refuse trucks.

Infeasible e/w route alternative using 14 Mile Rd (stops at Evergreen).

Infeasible e/w route alternative using Quarton Rd (two lane/already busy).

Unsafe vehicle egress/pedestrian crossing with removal of Lake Park light.

Expected difficulty for 3 large churches, 7 businesses, firehouse, etc.

Need for 4-lane, east/west evacuation route in event of Bhm emergency.

Surveyed biker preference to use sidewalks even if bike paths are built.

Waste of taxpayer money on bike paths/crossings used by few residents.

Litigation costs to taxpayers over bike/vehicle accidents on a busy artery.

Jana Ecker <jecker@bhamgov.org>

Re: Road project (proposed)

1 message

Joe Valentine <jvalentine@bhamgov.org> Wed, Apr 29, 2015 at 12:25 PM
To: Ken Borovich <kborovich@villagedentaloffice.com>
Cc: Scott Moore <sdm984@sbcglobal.net>, George Dilgard <gdilgard@hotmail.com>, Racky Hoff <rackyhoff@hotmail.com>, Tom McDaniel <mcdaniel_tom@hotmail.com>, Mark Nickita <markforbirmingham@yahoo.com>, Gordon Rinschler <gordon4bham@aol.com>, Stuart Sherman <stuart.sherman@sbcglobal.net>, Paul O'Meara <Pomeara@bhamgov.org>, Jana Ecker <Jecker@bhamgov.org>, Mark Clemence <Mclemence@bhamgov.org>

Mr. Borovich,

Thank you for your email sharing your view of West Maple Road. I will have your comments shared with the Multi-Modal Transportation Board that will be reviewing this matter at their next meeting on May 7th at 6:00pm in the Municipal Building. At this meeting they will be reviewing the issues presented by an ad hoc steering committee for West Maple and the information and recommendations that resulted from their study of this issue. You may find this informative should you wish to attend or simply share your views again if you wish.

Regards,
Joe Valentine

On Wed, Apr 29, 2015 at 12:06 PM, Ken Borovich <kborovich@villagedentaloffice.com> wrote:

> City Commissioners,
>
> I am definitely opposed to changing Maple road from Cranbrook to Southfield rd. . Making this section two lanes with a center turn lane I think will impede the flow of traffic. I urge you to vote against this proposal. Thank you.
>
> Ken Borovich

–
Joseph A. Valentine
City Manager
City of Birmingham
151 Martin Street
Birmingham, MI 48009
(248) 530-1809 Office Direct
(248) 530-1109 Fax
jvalentine@bhamgov.org

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City of Birmingham

Paul O'Meara <pomeara@bhamgov.org>

Re: City Commission Meesting Agenda Item

1 message

Joe Valentine <jvalentine@bhamgov.org> Wed, Apr 22, 2015 at 5:28 PM
To: jmirro <jmirro@intromarketing.com>
Cc: Stuart Sherman <stuart.sherman@sbcglobal.net>, Racky Hoff <rackyhoff@hotmail.com>, George Dilgard <gdilgard@hotmail.com>, Tom McDaniel <mcdaniel_tom@hotmail.com>, Scott Moore <sdm984@sbcglobal.net>, Mark Nickita <markforbirmingham@yahoo.com>, Gordon Rinschler <gordon4bham@aol.com>, Jana Ecker <Jecker@bhamgov.org>, Paul O'Meara <Pomeara@bhamgov.org>, Mark Clemence <Mclemence@bhamgov.org>

Mr. Mirro,

Thank you for your email reiterating your perspectives for how you would like the process to proceed. As I mentioned in my April 7th email to you, in order to follow the correct process, the City Commission has indicated it would like a thorough review conducted by the Multi-Modal Transportation Board prior to having this matter come before them so they can make an informed decision based on all data, information and public input. You will have the opportunity and are welcome to offer your input during the open part of the agenda when this is discussed at the next Multi-Modal Transportation Board meeting for their consideration in developing their recommendation. You will have the same opportunity to offer your input when this item is advanced to the City Commission.

I hope you find this explanation of the process helpful to assist you in providing any input you wish to contribute.

Regards,
Joe Valentine

On Wed, Apr 22, 2015 at 9:26 AM, jmirro <jmirro@intromarketing.com> wrote:

> Hello Joe,
>
> As you can see from my April 20 email to Jana Ecker (below), the Neighborhood Organization is working closely with the Steering Committee and the MMTB regarding West Maple Road recommendations. We will continue working with both groups and attending all their meetings while they are creating their recommendations for the City Commission on the future of this road. This does not mean, however, that the Neighborhood organization gives up its right to suggest other ideas to the City Commission for West Maple Road as part of its Neighborhood Multimodal Plan.
>
> On April 7, I sent you an email asking that the Neighborhood organization be given space on the April 9 City Commission Meeting Agenda to express its ideas that are separate from the recommendations provided by the Steering Committee and the MMTB. You wrote back that the April 9 Agenda “has already been set” and “since the MMTB has not yet completed this charge (a thorough review of all data, information and their public review), it is premature to include this as an agenda item for the City Commission.”
>
> In asking for an agenda item on the City Commission Meeting, the Neighborhood organization is not asking for a vote from the City Commission at this time. We are only asking that the Commissioners have an open mind during the study process about hearing other ideas that, for one reason or another, are not being incorporated into the plan by either the Steering Committee or the MMTB. One City Commissioner emailed me on April 10 and stated that “the neighborhood plan has some good ideas.” The Neighborhood organization simply wants the other Commissioners to judge this for themselves.

Toward this end, I am once again asking you to place the Neighborhood Multimodal Plan on the agenda of the next City Commission Meeting which I understand is scheduled for April 27. If the agenda for this meeting is also set, then I would like it placed on the agenda for the May 11 City Commission Meeting. If you are not able to do this either, then the Neighborhood organization needs to question what is meant by "Keep an open mind" which was the headline of your guest editorial in the 1-18-15 Birmingham Eccentric. If the City Commissioners do not get an opportunity to hear all ideas, how can we expect them to "make an informed decision" that you stated as a goal in your April 7 email?

Jim Mirro

737 Arlington

248-420-5113

Neighborhood Representative

P. S. The 4-22-15 response from Jana Ecker (last attachment) underscores the need for the Neighborhood Multimodal Plan to be on an upcoming agenda.

From: jmirro [mailto:jmirro@intromarketing.com]
Sent: Monday, April 20, 2015 4:40 PM
To: 'Jana Ecker'
Cc: 'Paul O'Meara'; 'Mark Clemence'; 'jvalentine@bhamgov.org'; 'vionnajones@gmai.com'; 'lmedwards08@gmail.com'; 'KGR307@aol.com'; 'sbordman@maddinhauser.com'; 'msc@mikeclawsonlaw.com'; 'kadtender@aol.com'; 'terry.lang@beaumont.edu'; 'eugene.nelson0@gmail.com'; 'Alice Silbergleit'; 'Russ Ives'
Subject: 3-Lane Test & Re-Vote

Hello Jana,

Thank you for facilitating the 4-16-15 Steering Committee Meeting and for permitting its Chairman, Dave Underdown, to accept questions from the public at the end of each subject discussed during the meeting rather than having all questions held to the end of the meeting. Dave and I, as well as others in the audience, thought that this process led to a more inclusive meeting and helped incorporate improvements to the plan as the meeting progressed.

Despite this positive aspect of the meeting, Dave and I spoke over the past weekend and concluded that the vote held at the very end of the meeting was invalid for a number of reasons outlined in the 1st and 2nd attachments to this email. Because Dave is both the Chairman of the Steering Committee and a member of the Neighborhood organization, he asked me to outline the parameters of a valid 3-lane test which I have done in the 3rd attachment. The 4th attachment is the suggested wording of the Revised Recommendation A and carryover Recommendation B.

Dave further asked me to email all of this to you, the other city managers and the rest of the Steering Committee with a request to meet for a re-vote on this subject on Thursday, 4-30-15 at 6:00 pm which would

be two weeks from the last Steering Committee Meeting. It would also be one week prior to the next MMTB Meeting scheduled for 5-7-15. Therefore, this re-vote between Revised Recommendation A (3-lane plan with a test before construction) and carryover Recommendation B (4-lane plan) will provide enough time for you to have the results ready for MMTB review at that meeting.

Dave did not have time to pull together this email and attachments over the past weekend, but asked me to do it for him and he has reviewed all of it. If you wish to confirm this with Dave, you can email him at douglascleaners@hotmail.com or call him on his personal cell phone at 248-909-1072. In order for everyone to plan properly for attending the 4-30-15 meeting, please confirm you approval of the attached plan and meeting date with all addressees by Wednesday, 4-22-15. And, by the way, I am available to be a substitute for any Steering Committee Member who is not able to make this meeting. Thank you.

Jim Mirro

248-420-5113

Neighborhood Representative

--
Joseph A. Valentine
City Manager
City of Birmingham
151 Martin Street
Birmingham, MI 48009
(248) 530-1809 Office Direct
(248) 530-1109 Fax
jvalentine@bhamgov.org

CLARK HILL PLC
248.988.5842 (direct) | 248.988.2514(fax) | 248.631.9807(cell)

www.clarkhill.com/HealthCare.aspx

http://trendwatchnow.com/healthcare

Begin forwarded message:

From: "jmirro" <jmirro@intromarketing.com>
Date: April 20, 2015 at 2:39:41 PM MDT
To: "'Jana Ecker'" <jecker@bhamgov.org>
Cc: "'Paul O'Meara'" <pomeara@bhamgov.org>, "'Mark Clemence'" <mclemence@bhamgov.org>, <jvalentine@bhamgov.org>, <vionnajones@gmai.com>, <lmedwards08@gmail.com>, <KGR307@aol.com>, <sbordman@maddinhauser.com>, <msc@mikeclawsonlaw.com>, <kadtender@aol.com>, <terry.lang@beaumont.edu>, <eugene.nelson0@gmail.com>, "'Alice Silbergleit'" <asilbergleit@gmail.com>, "'Russ Ives'" <russ.ives@att.net>
Subject: 3-Lane Test & Re-Vote

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Jim Mirro

248-420-5113

Neighborhood Representative

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4 attachments

- Neighborhood Vote Summary.doc
  22K
- Quarton Lake Assn. Letter.htm
  11K
- Letters & Petitions from Organizations.doc
  24K
- West Maple Road 3-Lane Test.doc
  27K

City of Birmingham

Jana Ecker <jecker@bhamgov.org>

RE: 3-Lane Test & Re-Vote

1 message

jmirro <jmirro@intromarketing.com> Wed, Apr 22, 2015 at 9:11 AM
To: Jana Ecker <jecker@bhamgov.org>
Cc: "David J. Underdown" <douglascleaners@hotmail.com>

Jana,

Thank you for the timely response to my request, although I am disappointed in your decision. Because you did not cc Dave Underdown, I am taking the liberty of sending him a copy of your email since he and I worked together in preparing the request.

Jim Mirro

248-420-5113

From: Jana Ecker [mailto:jecker@bhamgov.org]
Sent: Tuesday, April 21, 2015 4:12 PM
To: jmirro
Cc: Paul O'Meara; Mark Clemence; Joe Valentine; vionnajones@gmai.com; Lara Edwards; Karen Rock; Stuart M. Bordman; Mike Clawson; kadtender@aol.com; Terry Lang; eugene.nelson0@gmail.com; Alice Silbergleit; Russ Ives
Subject: Re: 3-Lane Test & Re-Vote

Mr. Mirro,

Thank you for your comments. The work of the Ad Hoc Steering Committee for the W. Maple Road corridor is now complete. The W. Maple corridor will be discussed next at the Multi-Modal Transportation Board meeting on May 7, 2015 at 6:00 pm.

Jana Ecker

On Mon, Apr 20, 2015 at 4:39 PM, jmirro <jmirro@intromarketing.com> wrote:

Hello Jana,

Thank you for facilitating the 4-16-15 Steering Committee Meeting and for permitting its Chairman, Dave Underdown, to accept questions from the public at the end of each subject discussed during the meeting rather than having all questions held to the end of the meeting. Dave and I, as well as others in the audience, thought that this process led to a more inclusive meeting and helped incorporate improvements to the plan as the meeting progressed.

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Jim Mirro

248-420-5113

Neighborhood Representative

--

Jana L. Ecker

Planning Director

City of Birmingham

248-530-1841

Paul O'Meara <pomeara@bhamgov.org>

City Commission Meeting 4-13-15

1 message

jmirro <jmirro@intromarketing.com> Fri, Apr 10, 2015 at 4:38 PM
To: stuart.sherman@sbcglobal.net, rackyhoff@hotmail.com, gdilgard@hotmail.com, mcdaniel_tom@hotmail.com, sdm984@sbcglobal.net, markforbirmingham@yahoo.com, Gordon Rinschler <gordon4bham@aol.com>
Cc: jvalentine@bhamgov.org, Jana Ecker <jecker@bhamgov.org>, Paul O'Meara <pomeara@bhamgov.org>, Mark Clemence <mclemence@bhamgov.org>, dstudt@bhamgov.org, "David J. Underdown" <douglascleaners@hotmail.com>, jopardee@gmail.com

City Commissioner,

Last evening a dozen Neighborhood representatives and I attended the latest MMTB meeting and spoke with its members to discuss an alternative plan for West Maple Road using a proposal reviewed by all Steering Committee Members last week and approved for submission to the MMTB by its Chairman. I am pleased to report that the Board made a number of helpful suggestions which have been incorporated into the attachments being provided to you today in this email. You may want to read them before Monday's City Commission Meeting.

I was told that there was no space available for the Neighborhood to present its Multimodal Plan as a stand-alone agenda item Monday meeting. So, as the primary representative of the Neighborhood, I will be making my remarks in the public comments portion of the meeting. To be as brief as possible, I will be speaking from only two attachments to this email, Key Points of the Plan and the Bike Paths vs. Bike Lanes Diagram which you may want to print out and bring with you. The remainder of the attachments can be read outside the meeting and include the Neighborhood Multimodal Plan, Greenway Plan Page 1 and Page 2, Steering Committee Concerns, Grass Area Bike Paths and Bloomfield Township Letter.

Because of the importance of this subject, the Steering Committee Chairman and the Neighborhood believe that you should become acquainted with the alternatives related to Maple Road before the final recommendations are made by the Steering Committee and the MMTB. In this way, you may wish to have us and/or the Committee/Board explore an area that might not otherwise be done if we were to wait until the final recommendations are written. The Neighborhood and the Committee/Board will meet again at their next scheduled meetings and, if required, will further update these documents for any new information or new suggestions.

In the meantime, by this email, I am requesting that the Neighborhood Multimodal Plan be placed on the City Commission's 4-27-15 agenda for a more complete review of its elements as a stand-alone agenda item. Hopefully, by this time, you will also have a recommendation from the MMTB to compare with this Plan. If you have any questions about the attachments and want an answer before Monday evening, you may contact me over the weekend either by email or by phone.

Jim Mirro

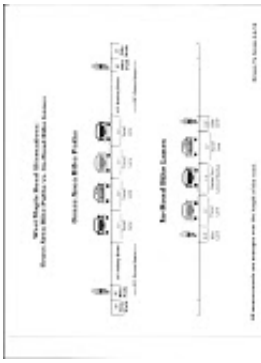
737 Arlington

248-420-5113

8 attachments

Greenway Plan Page 1.jpg
678K

Greenway Plan Page 2.jpg
628K



Bike Paths vs Bike Lanes Diagram.jpg
244K

Bloomfield Village Letter.jpg
596K

Key Points of the Neighborhood Multimodal Plan.doc
26K

Neighborhood Multimodal Plan.doc
29K

Steering Committee Concerns.doc
22K

Grass Area Bike Paths.doc

City of Birmingham

Jana Ecker <jecker@bhamgov.org>

FW: 3-Lane Test & Re-Vote

1 message

Moore, Gregory W. <gmoore@clarkhill.com> Tue, Apr 21, 2015 at 8:42 AM
To: "Ecker, Jana (Jecker@bhamgov.org)" <Jecker@bhamgov.org>, Paul O'Meara <pomeara@bhamgov.org>
Cc: jmirro <jmirro@intromarketing.com>, "Canvasser, Jason R." <JCanvasser@clarkhill.com>, Frank Faga <frankfaga@gmail.com>, John Mucha <jmucha@hfhs.org>, "Bolton, Jordan S." <JBolton@clarkhill.com>, Karen Rock <kgr307@aol.com>, "Michael Fenberg (michael.fenberg@bakertilly.com)" <michael.fenberg@bakertilly.com>, "rmoore2639@wideopenwest.com" <rmoore2639@wideopenwest.com>, Tom Anderson <teanderson97@aol.com>

Jana & Paul,

The Quarton Lake Neighborhood Association has stated no position regarding any of the matters in the attached documents. Mr. Mirro does not represent the QLNA. Despite his self-appointed title of "Neighborhood Representative" and the continuous representation of various positions of "the Neighborhood", Mr. Mirro does not represent QLNA and has not been given any authority to speak on behalf of "the Neighborhood" bound by Bloomfield Village to the West, Lakeside Drive to the East, Quarton Road to the North and Maple Road to the South.

Karen Rock is a member of the QLNA Board of Directors and a member of the Steering Committee. She is keeping us apprised of the developments. In the event the Steering Committee desires input from the QLNA Neighborhood, please let us know.

Thank you

Greg Moore

QLNA President

Gregory W. Moore

CLARK HILL PLC
248.988.5842 (direct) | 248.988.2514(fax) | 248.631.9807(cell)

www.clarkhill.com/HealthCare.aspx

http://trendwatchnow.com/healthcare

City of Birmingham

Jana Ecker <jecker@bhamgov.org>

FW: 3-Lane Test & Re-Vote

1 message

jmirro <jmirro@intromarketing.com> Wed, Apr 22, 2015 at 9:20 AM
To: Jana Ecker <jecker@bhamgov.org>, Paul O'Meara <pomeara@bhamgov.org>
Cc: "Moore, Gregory W." <gmoore@clarkhill.com>, KGR307@aol.com

Jana & Paul,

Neighborhood Multimodal Plan & QLNA: Greg Moore is 100% correct in his statement that I do not represent QLNA and there is nothing in my 4-20-15 email to Jana that suggests otherwise. The Multimodal Neighborhood Plan was created during the past month and includes input from the Arlington Shirley Neighborhood, the HAL Neighborhood, the Pleasant Neighborhood and the Golfview Neighborhood, as well as the 3 churches and 5 businesses on West Maple Road. Greg Moore chose not to provide input to the Plan from the Quarton Lake Neighborhood and there is nothing in the Plan that suggests otherwise.

Previous Documents: Greg is confusing the Neighborhood Multimodal Plan with 3 documents that were published prior to this Plan being created. One document summarizes the results of petitions circulated among the neighborhoods and it also includes the results of an email survey (straw poll) taken in the Quarton Lake neighborhood (1st attachment). The Quarton Lake Neighborhood line on this page was derived from public information contained in a letter that was sent to the City Commissioners from Greg in November, 2013, and forwarded to me by Greg in February, 2014 (2nd attachment). I provided a copy of this document to Greg prior to sending it to the city and made the clarifications he asked me to make. There is nothing on this page that suggests that I am speaking for the QLNA. It simply states the results of 4 circulated petitions and one email survey. I also published a document that listed the Letters & Petitions from Organizations and the Quarton Lake Neighborhood line simply references Greg's letter of 11-23-13 (3rd attachment). Again, this is public information and does not suggest I am speaking for QNLA. All three of these documents have been circulated extensively and no one has informed me of an error in the current versions. If there is an error in any of them, I welcome this input from Greg or anyone else and I will immediately publish a corrected version.

Flawed Voting Process: While I did not intend to bring up this subject, Greg's email leads me to do so. From the tone of Greg's email, I must conclude that he supports the 3-lane plan for West Maple Road which is counter to the majority (69%) of QLNA residents who responded to Greg's email survey in 2013. Karen Rock must also support the 3-lane plan since I believe that she voted for it at the last Steering Committee Meeting. While the QLNA survey represents a relatively small 5% sample of QLNA families (41/900), it certainly is a larger sample than the Greg/Karen sample of .2% (2/900).

Proposed Solution: While the Steering Committee and the MMTB are fine for exploring ideas related to West Maple Road, their membership votes are purely personal votes that bear no relationship to the viewpoints of residents at large. I understand that Karen was appointed to the Steering Committee to represent a viewpoint of a nearby resident north of West Maple Road, but her vote did not represent the majority viewpoint of her neighbors if the QLNA survey was done correctly (and we have no reason to believe otherwise). This is why the Neighborhood organization is recommending that, if a 3-lane test is conducted before road construction, a survey of resident opinions be taken after the test to determine the final configuration of the road (last attachment).

Summary: In the end, neither I nor Greg nor Karen should be speaking for QLNA or for the residents of any neighborhood on such an important subject as configuration of West Maple Road. We should only be recommending alternatives and let all the residents make the final vote on the road configuration they will be using.

Jim Mirro

248-420-5113

Neighborhood Representative

From: Moore, Gregory W. [mailto:gmoore@ClarkHill.com]
Sent: Tuesday, April 21, 2015 8:43 AM
To: Ecker, Jana (Jecker@bhamgov.org); Paul O'Meara
Cc: jmirro; Canvasser, Jason R.; Frank Faga; John Mucha ; Bolton, Jordan S.; Karen Rock; Michael Fenberg (michael.fenberg@bakertilly.com); rmoore2639@wideopenwest.com; Tom Anderson
Subject: FW: 3-Lane Test & Re-Vote

Jana & Paul,

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Karen Rock is a member of the QLNA Board of Directors and a member of the Steering Committee. She is keeping us apprised of the developments. In the event the Steering Committee desires input from the QLNA Neighborhood, please let us know.

Thank you

Greg Moore

QLNA President

Gregory W. Moore

Planning cities for boomers will benefit millennials, too

By Richard Carlisle 11:23 p.m. EDT April 8, 2015

(Photo: 2004 photo by Rashaun Rucker/Detroit Free Press)

Will your community thrive or fail in the next 30 years? The answer, in part, is in how it deals with baby boomers.

The U.S. census tells us that the number of people 65 and older will increase by 50% in the next 30 years. In 2010, 13.8% of the state's population was older than 65. By 2040, it will be 21%, and in southeast Michigan, it will be 24% — a quarter of the entire region, according to the Southeast Michigan Council of Governments (SEMCOG).

This generation of Americans will be well-educated, diverse and fit. Many will be single. They'll have fewer children and more living parents than their predecessors.

The characteristic that will shape our communities most, though is this: They want to age in place. An AARP survey reported that more than 80% of Americans age 45 and older want to remain in their current home as long as possible, even if they need help caring for themselves. Perhaps more important, if they cannot or choose not to remain in their own home, they'd like to live in an attached or small-lot home, ideally with a first-floor master bedroom.

Housing is only the beginning. Older Americans need social engagement — relationships, worship, formal and informal organizations and well-being — mobility, health and fitness and financial security.

Few of our communities can deliver all that. We lack a comprehensive public transportation system. We don't have complete streets. We have remote subdivisions filled with McMansions. We have zoning that separates the functions that should cluster together, like housing, health care, parks and shopping.

Here are some of the ways communities could or should change in response.

■ Building codes should allow — or, better yet, require — accessible configurations and features in new construction that serve a broad range of needs across the age continuum. That means front doors with level thresholds; wider doors, and accessible first-floor bathrooms.

■ Communities should permit accessory dwelling units. That could be a backyard cottage or a self-contained apartment in an existing home.

■ Parks should go beyond swing sets and ball diamonds to offer adult fitness, relaxation and engagement.

■ Zoning should cluster recreation centers, health care and shopping.

■ Sidewalks and crosswalks should make it easy for people to walk to their destinations or just for exercise.

■ Public transportation is essential.

■ Reconsider the zoning for big houses in large-lot subdivisions, to allow them to be divided into multiple residences. Older adults could remain in their home, perhaps sharing it with a younger generation of family members, or supplement their income by renting.

Communities that change to meet the needs of the baby boom will reap a bonus with millennials, because the two generations share similar values. Both millennials and boomers want to live in compact, walkable neighborhoods with public transportation and rich cultural and recreational opportunities.

Ask your elected officials, city manager, township supervisor or planning director what they're doing to meet the needs of the baby boom generation. The transitional housing demanded by that generation is desirable to the millennials who will follow them. Better public transportation can reduce traffic while serving people of all ages who can't or don't choose to drive. Complete streets accommodate kids on scooters as well as seniors with walkers. Compact development preserves open spaces for recreation and beauty.

The 16 years between now and 2030 will go by faster than we think.

Richard Carlisle is president of Ann Arbor-based community planning firm Carlisle/Wortman Associates.

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The only way possible for us to safely drive out at the intersection of Linden Rd. on to Maple Rd. is to wait for the light to stop traffic at the Lake Park intersection. This is a blind intersection and is known as “Henderson’s Corner” where several students have been killed in a fatal crash in the past.

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

I have witnessed several accidents at this intersection including a car hitting a tree by the driver not paying attention. People constantly speed through this area and run the yellow light. This is a very dangerous intersection, and by removing the light you would be asking for a repeat of a fatal accident. Also, you would be inviting lawsuits against the city for removing the light and making the intersection more dangerous than it is now.

My opposition also stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

There is also concern that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

Jeff Wilmot
147 Linden
Birmingham
248-644-6173

Subject: Multi-modal Proposal for Maple Road Between Cranbrook Rd. and Southfield Intersection

I turn left onto Maple from Lake Park five days a week between 7:30 and 8:30 am and cross Birmingham to Troy. As you know the two east bound lanes merge into one east bound lane and a right turn only lane just the Southfield intersection. There is usually a line in the outside lane waiting for a green light, and nearly every morning cars in the right lane go speeding by the cars waiting their turn in line and merge from the "right turn only lane" into the left lane ahead of the cars who waited in line. Some even turn left onto Chester from the right turn only lane. I have never seen any effort by the police to enforce the right turn only lane on Maple.

Aside from the above situation, Maple between Cranbrook and the Southfield intersection during morning and evening rush hours is like a NASCAR raceway. Cars change lanes to pass at high speeds. When impatient cars waiting for cars turning left off Maple onto Fairfax, Suffield or Pilgrim, and other north-south streets, pull out into the right hand lane on Maple, serious accidents occur when they are hit by speeding cars heading east on Maple. I have seen two severe accidents in recent years, and I've observed many near misses. Perhaps a review of Police Department records of accidents on Maple would be in order if it hasn't been done already.

Attached for your information are some pictures that I took recently of Valencia Street in San Francisco. Valencia is a busy east-west thorofare which has been converted to three lanes plus bike lanes and parking on both sides of the street. From what I observed traffic moves more smoothly on Valencia Street than it does on Mission Street which is an adjacent major conventional four lane street plus two parking lanes. On Valencia the central turning lane means that no vehicles are delayed by other vehicles turning left or forced to change lanes to avoid delay and risk a collision with speeding vehicles in the right hand lane (As is the case on Maple Road in Birmingham). In contrast, on Mission street cars are constantly changing lanes in order to pass slower cars or avoid vehicles stopped waiting to turn left (as is the case on Maple Road in Birmingham).

Bottom line, I support the Multi-Modal plan for Maple Road presented recently to the City Commission with the exception of removal of the light at Lake Park. The cost of the conversion would be minimal and the result would improve traffic and pedestrian safety. (I've lived on Pilgrim one-half block north of Maple for the past 41 years.)

Thank you for taking the time to consider my thoughts on this subject.

Sincerely,
Ralph Deeds
382 Pilgrim
Birmingham 48009


Ryder

MICHAEL S. CLAWSON
ATTORNEY AT LAW

41000 Woodward Avenue
Suite 395 East
Bloomfield Hills, MI 48304

November 20, 2013

City Commision
City of Birmingham
151 Martin Street
Birmingham, MI 48009-3368

RE: West Maple Modification Plan

Dear City Commission:

I write to express my sincere support for the proposed plan to modify West Maple Road from Cranbrook to Southfield during its resurfacing in 2015. As a long term resident of Quarton Lake Estates, having lived at the corner of Maple and Pilgrim Road for over 25 years, as a former member of the Quarton Lake Estates Board of Directors and as a former member of the City of Birmingham Traffic Safety Board, I have much experience with the day to day issues presented by the past and present state of West Maple Road. For years, I have personally observed a large number of accidents caused by excessive speeds on this stretch of road and by persons making left turns off of Maple into one of the many side streets. I have also observed countless motorists running the red light at Lake Park and Maple, in fact I observed two persons do it as recently as last night. Further, the speeds at which cars travel down this road pose a real risk to those who walk, run and ride their bikes there. And attempting to cross Maple, even at the designated cross walks involves taking your life in your own hands.

For years, my neighborhood has requested that additional measures be taken to calm the traffic along this part of Maple. Little has been done. Moreover, there is virtually no enforcement of the speed limit there on the part of the City. As I recall, an extensive study was done with Mike Labadie back in the early 2000's and one of the options was to reduce Maple to three lanes and use the middle lane as a turn lane. For whatever reason, that proposal was not pursued and instead a speed monitor was installed at the intersection of Maple and Arlington which has had no effect on the speed or flow of traffic. Virtually every other major roadway in the City has had some significant traffic calming measures taken during the past 10 years with the exception of this stretch of West Maple. I believe the proposed changes are not only long overdue, but will result in a more safe and efficient roadway.

Office 248.433.4366 Fax 248.433.4363 Cell 248.318.9801

msc@mikeclawsonlaw.com

While I recognize that there will be many opinions regarding the proposed plan for Maple, some consistent with mine, some inconsistent, I ask that you please give this matter serious consideration. It is a plan that can work, and I strongly urge that you adopt it. Thank you for your time and consideration.

Very truly yours,

Michael S. Clawson

MSC/jfj

Office 248.433.4366 Fax 248.433.4363 Cell 248.318.9801
msc@mikeclawsonlaw.com

From: Moore, Gregory W. [gmoore@ClarkHill.com]
Sent: Friday, February 28, 2014 11:19 AM
To: jmirro (jmirro@intromarketing.com)
Subject: FW: MULTI MODAL TRANSPORTATION PLAN & QLNA RESPONSE

Gregory W. Moore
CLARK HILL PLC
248.988.5842 (direct) | 248.988.2514(fax) | 248.631.9807(cell)
www.clarkhill.com/HealthCare.aspx

From: Moore, Gregory W.
Sent: Monday, November 25, 2013 2:32 PM
To: sdm984@sbcglobal.net; gdilgard@hotmail.com; rackyhoff@hotmail.com; mcdaniel_tom@hotmail.com; markforbirmingham@yahoo.com; gordon4bham@aol.com; stuart.sherman@sbcglobal.net
Cc: Canvasser, Jason R.; John Mucha ; Jordon Bolton; Karen Rock; Michael Fenberg (michael.fenberg@bakertilly.com); Tom Anderson
Subject: MULTI MODAL TRANSPORTATION PLAN & QLNA RESPONSE

Commissioners,

Greetings. The residents of the Quarton Lake Neighborhood Association and its Board of Directors have been following closely the development of the Multi Modal Transportation Plan ("Plan") which will be up for your consideration this evening. Just last week, we conducted an informal straw poll via email among the QLNA members. The results showed that 69% of those voting where against the plan to take Maple Road from 4 lanes to 3 and various other aspects of the Plan. However, those responding make up less than 10% of the entire neighborhood. Of the 900 or so single family homes in the QLNA area, approximately 600 are members of the QLNA at any given time. We have compiled email addresses for approximately 450 of those members. Prior to any project, like the Maple Road reconstruction project, under the Plan being considered by the Commission and implemented, we will conduct a more intense survey of the neighborhood and deliver those results to the Commission.

We have encouraged our neighbors to forward you their comments on the Plan and to appear at the Commission meeting this evening. However, we also wanted the Commission to understand that as an Association we have elected to keep activity at this point in perspective given the fact that the Plan is merely a guide and doesn't contain any specific projects for approval. This position is consistent with the recent comments from Commissioner Mark Nickita to a Birmingham Resident:

> *There are no specific proposals being studied at this time. The Multi Modal Transportation Plan (MMTP) is a conceptual design recommendation, like all master plans, it requires a full study before any specific implementations. When we begin looking at the actual projects, (West Maple In the next couple of years) we will do a thorough traffic study and analysis to help us determine the best option for the actual design.*
>
> *Keep in mind, that the MMTP is a conceptual plan and the residents will be provided with a more thorough explanation regarding why and how a proposal will work and how it can improve the proposed area of consideration, before we do anything. This will require public interaction, explanation and outreach as the time draws near.*

Should the Plan be approved by the Commission, we ask that you work closely with us in order to exam the impact of specific projects on our neighborhood well in advance of their approval.

Thank you,
QLNA Board of Directors

March 20, 2014

Birmingham City Commission

151 Martin St.

Birmingham, Michigan 48009

Dear Commissioners:

I manage one of the businesses in the Maple Chesterfield Plaza. I have been polling my customers about the planned conversion of West Maple from 4 to 3 lanes. They are concerned about the disruption and congestion this project will cause in this area.

Since most of my customers live in the neighborhood that surround the plaza. I am asking on their behalf as well as my own to delete the West Maple proposal prior to approving the overall Multi-Modal Plan.

Sincerely,

Theresa M. Tubek

Bhm Harriers Running Club Letter

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

May 19, 2014

Dear City Commissioners:

It has come to my attention that the Multimodal Transportation Plan adopted by the city last November contains a provision for the conversion of West Maple Road from 4 to 3 lanes when the road is repaved. This letter is to inform the Commissioners that I am opposed to the conversion plan for the reasons described below.

The Birmingham Harriers was founded to sponsor a 5K walk/run community event to raise awareness around the sport of running/walking and encourage our community to become more active. A hundred percent of the profit from the event helps to support the growing Seaholm High School Cross-Country & Track programs.

Since we are a community event, we mapped out a course that highlights our neighborhoods. The anticipated growth based on last year's success has required us to move off the sidewalk and use the southernmost lane of West Maple Road for part of the course while east bound vehicle traffic continues to use the northernmost eastbound lane. This year the event is scheduled for Sunday, August 3.

Under the 4/3 lane conversion plan, this community event would either not be permitted or would require the closing of West Maple Road to all eastbound traffic which would make life difficult for many residents in the surrounding neighborhoods who have been very supportive of the event last year and this year.

From a broader standpoint, it is my opinion that the conversion would also cause traffic congestion during the rest of the year and divert traffic into surrounding neighborhoods where walkers and runners spend most of their time. As a logical extension of this reasoning, a 4/3 lane conversion would create safety issues from increased vehicle traffic for the very group of residents that the multimodal plan is intended to help—those residents who we, the Birmingham Harriers, are encouraging to develop more active lifestyles.

Furthermore, the crossing of Maple by the bridge where the Quarton Lake cinder trail on north side of Maple Road connects to the wood chip trail along the Rouge River on the south side of Maple Road will be negatively impacted. The trails are frequent running/walking routes for many community members and the 4 / 3 lane conversion will only make this crossing more dangerous as congestion will increase if the plan is implemented.

Please read this letter at your next commission meeting and place it in the minutes of that meeting as an example of opposition to the 4/3 lane conversion portion of the Multimodal Transportation Plan.

Sincerely,

Carl Rundell
Co-Founder of the Birmingham Harriers

Douglas Cleaners, Inc.
1794 West Maple Road
Birmingham, MI 48009

May 3, 2014

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners:

Speaking from the perspective of a small business owner on West Maple and a resident on Suffield, I oppose the proposal to convert West Maple Road from four to three lanes. I feel the financial and functional costs of the proposal far outweigh the proposed benefits. I request the City Commissioners delete the West Maple Road Proposal from the Multimodal Plan.

Sincerely,

David Underdown

Douglas Cleaners' Letter

Golfview Neighborhood
Birmingham, MI 48009

June 10, 2014

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners:

During the past weekend, the residents of Golfview Boulevard were given the opportunity to sign either one of two petitions regarding the proposal to convert West Maple Road from 4 to 3 lanes when the road is resurfaced.

Out of 16 houses on the street, 14 residents representing 12 households, signed the opposed petition, 2 families wanted to think about it and 2 families were not at home. Therefore, 100% of the households that opted to sign a petition chose to sign the petition to oppose the conversion as shown on the attachment.

The following comments represent some of the reasons given when the residents voted:

* A 3-lane Maple Road would make any turns from side roads very difficult, as traffic streams would be heavier and have fewer interruptions.

* Removing traffic lights and narrowing the road will make driving less safe, as the lack of traffic breaks currently caused by the stoplights to be removed would encourage cars entering from cross streets to take more chances squeezing into small traffic gaps.

* A lane conversion would make West Maple like Adams, which is very congested.

* Left turn lanes work best where cross streets are in a direct line rather than like Glenhurst, where the north and south portions of the road are not aligned, and where a center turn lane can create nose-to-nose stalemates for cars in opposing directions.

* There are better and safer places for bike lanes than West Maple Road. Note: This was a comment expressed by 2 residents who enjoy biking in Birmingham now.

* The conversion plan would exacerbate the significant congestion which occurs at morning and afternoon rush hours, and would likely force more traffic over to Lincoln Road, which would be an unwelcome development for many residents.

Based on the petition signatures on the attachment and the reasons cited above, the Golfview Neighborhood is asking the City Commissioners to remove the West Maple Road 4/3 lane conversion proposal from the Multimodal Plan and to read this letter at the next Commission meeting where the Multimodal Plan is discussed.

Sincerely,

Russ Ives
Petition Circulator

Attachment

Petition to Oppose the West Maple Road Conversion to 3 Lanes

Signature	Street Address
[illegible]	552 Golfview
[illegible]	576 Golf View Blvd
[illegible]	534 Golf View Blvd.
[illegible]	539 Golf View Blvd.
[illegible]	510 Golfview Blvd.
Rebecca Rudnick	390 Golfview Blvd.
[illegible]	311 GOLFVIEW BLVD.
[illegible]	385 Golfview Blvd.
Roseann Koyle	463 Golfview Blvd
[illegible]	411 Golfview
[illegible]	408 Golfview
[illegible]	585 Golfview
[illegible]	559 Golfview Blvd.
[illegible]	552 Golfview Blvd.

Golfview Neighborhood
Birmingham, MI 48009

100% of Voting Residents Opposed
To Maple Road 4/3 Lane Conversion.

14 Signatures (12 Families) Reflect
75% of Households in Neighborhood.

Harry G. Kokkinakis

July 21, 2014

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

Approximately one month ago, several petitions circulated in our neighborhood regarding the proposal to convert West Maple Road from four to three lanes. My wife and I did not have an opportunity to sign either petition, however, we are adamant that a change of this magnitude be studied by a traffic engineer prior to expenditure of any funds in the planning of a traffic lane reduction. A decrease in the level of service on West Maple Road will result in an increase of traffic through our neighborhood which is of great concern. Midvale Street has experienced an increase of traffic over the years due to congestion on West Maple Road and we believe that a reduction of traffic lanes will exacerbate the problem in our neighborhood.

Sincerely,

598 Golf View Boulevard Birmingham, Michigan 48009 248.496.2530

Stuart Borman
811 Shirley
Birmingham, MI 48009

August 19, 2014

Birmingham City Commission
151 Merrill Street
Birmingham, MI 48012

Dear Commissioners:

We have lived in Birmingham for many years and wish to voice our opposition to the Multimodal proposal to narrow West Maple Road from 4 to 3 lanes. If the proposal were implemented, we believe that it would increase cut-through traffic on Shirley where we live, increase Maple Road traffic congestion for everyone and endanger the life of anyone who would ride on the proposed bike lanes due to the high volume and speed of vehicles.

While we understand the desire for traffic calming and multimodal benefits, we would like to point out that Maple Road was designed to be a 4-lane artery from its inception many years ago. This can be seen when driving on Maple from Southfield Road all the way to Franklin Road and observing the extensive house setback distances along the way.

To take such an efficient east/west mover of traffic and replace it with one lane of traffic in each direction would be a terrible waste of space in our opinion. The benefits gained do not come close to offsetting the disadvantages of traffic congestion and safety problems for those residents who would dare ride a bike on the proposed bike lanes.

As a resident of Shirley, our family is constantly plagued by high-speed, cut-through traffic between West Maple Road and West Lincoln Road. Converting Maple Road from 4 to 3 lanes will only make this problem worse as motorists will get frustrated by vehicle congestion and traffic backup conditions from cars that slow down to make a right turn and cannot be passed on a 3-lane road.

For all the reasons described above, we are asking the City Commission to delete the 4/3 lane conversion proposal from the Multimodal Plan this year before any money is spent during the 2015 planning stage prior to repaving and paint striping in 2016.

Sincerely,

Stuart Borman

Hilary Borman

Mr. Terrell E. Thomas Jr.
235 Linden
Birmingham, MI 48009

September 23, 2014

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

This letter is written to voice my strong opposition to the West Maple Road proposal included in the Multimodal Plan. Converting Maple Road to 3 lanes will absolutely increase the quantity of traffic along the revised route and spur even greater cut through traffic to Lincoln and Oak.

I am a 3x/week runner along these back/side streets and personally witness the freeway speeds and quantity of through traffic vehicles. This would only increase as a result of reducing West Maple to 3 lanes. In addition I am an avid bike rider during the weekends who has no interest in riding along West Maple Road, especially with the increased traffic. For safety reasons bikers need to stay off the Mile Roads (and Woodward Avenue).

Moreover the idea to eliminate the traffic light at Lake Park is very dangerous in my opinion. I can't tell you the number of times I have looked left, then right and then again left when turning west from Linden onto Maple only to find a car appear from around the bend. This light is frequently the only reason we are able make this turn. I can foresee bad judgment, especially by inexperienced drivers, and the sounds of sirens if this light is eliminated. This light further allows our children to safely cross Maple Road as they head to Mills or visit with friends.

West Maple Road is an important east-west artery for the City of Birmingham. The City Commission has done many wonderful projects to beautify and invigorate our city. For this I express my thanks and gratitude. However reducing Maple to 3 lanes and eliminating the Lake Park traffic light need to be reconsidered. Please delete these from your plan.

Sincerely,

Terry Thomas

9/24/14

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

There is also concern that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,
Marianne S Schwartz
Alan S. Schwartz
416 Hawthorne St.
Birmingham, MI 48009

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

There is also concern that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

Janice M Petcoff
968 Arlington St.
Birmingham, Mi 48009

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

There is also concern that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

James G. Petcoff
968 Arlington
Birmingham, Mi. 48009

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

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In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

Brian Connolly
Mary Connolly
10/5/14

Brian and Mary Connolly
843 Arlington
Birmingham MI 48009

October 8, 2014

Janet Lannen
992 Arlington Road
Birmingham, MI 48009

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

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In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

Janet M Lannen

Janet Lannen

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

October 9, 2014

Dear Commissioners,

My wife and I have lived at 577 Arlington in Birmingham for over 50 years and the purpose of this letter is to voice our strong opposition to the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

Our opposition stems from a certain belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

W also are concerned that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, we are asking the City Commission to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

Lionel Finkelstein MD Florence Finkelstein

Lionel Finkelstein Florence Finkelstein

October 10, 2014

Birmingham City Commission

151 Martin Street

Birmingham, MI 48012

Dear Commissioners,

We want to go on record as strongly opposed to the proposal to reduce the traffic lanes on Maple Road between Cranbrook and Southfield. We feel that the "so-called" advantages of the proposal to bring about calmer traffic, better vehicular movement, and fewer accidents are untrue. In fact, we believe the exact opposite is true. We are convinced that less roadway means less chance to easily exit from our neighborhood streets and means more cut-through traffic coming into in our neighborhood. The traffic is bad enough at times on Maple Road with two lanes in each direction, and it is hard to visualize this much traffic having only one lane to use each way.

Sincerely,

Irvin E. Poston

Irvin E. Poston

288 Shirley Road

Birmingham, MI 49009-3725

ieposton@juno.com

Lois L. Poston

Lois L. Poston

288 Shirley Road

Birmingham, MI 49009-3725

ieposton@juno.com

October 9, 2014

E.J. and Mary Mueller
414 Arlington Road
Birmingham, MI 48009

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

There is also concern that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

E.J. Mueller, MD

Mary Mueller

Gretchen and Ethan Davidson
444 Arlington
Birmingham, MI 48009

October 24, 2014

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

There is also concern that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, the City Commission is asked to please delete the 4/3 lane proposal from the Multimodal Plan.

Sincerely,

Gretchen Ethan

Gretchen and Ethan Davidson

Dear City of Birmingham,

October 28, 2014

I am very opposed to the change in Maple from a four lane to three lane road. The traffic is bad enough as it is, and this would only turn our side streets into "cut throughs" for excess traffic. I am a biker myself, and there are plenty of trails around our immediate area for bikers to enjoy.

Thank you,

Ann Doman
600 Arlington

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

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In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

Robert S. Bradley

ROBERT BRADLEY
640 Shirley
B-ham MI 48009

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

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In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

Joann Z. Baughman

Joann Z. Baughman

October 30, 2014

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

There is also concern that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

Charles F. Schwartz, MD

432 Arlington
Birmingham, MI 48009

Charles F. Schwartz, M.D.
Director, Cardiothoracic Surgery
Elliott Estes Heart Institute
St. Joseph Mercy Oakland
248 858 3850
charles.schwartz@stjoeshealth.org

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

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In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

Jim & Suzanne Reinhart
484 Linden
Birmingham, MI
48009

City of Birmingham

Paul O'Meara <pomeara@bhamgov.org>

Fwd: Opposition to 4/3 Maple Road lane conversion of Multimodal plan

1 message

Laura Pierce <lpierce@bhamgov.org> Sat, Nov 1, 2014 at 5:54 PM
To: Jana Ecker <Jecker@bhamgov.org>, Joe Valentine <Jvalentine@bhamgov.org>, "Clemence, Mark" <Mclemence@bhamgov.org>, "O'Meara, Paul" <Pomeara@bhamgov.org>

City of Birmingham
Laura M. Pierce, MMC | City Clerk | City Clerk's Office |
P.O. Box 3001, 151 Martin | Birmingham, Michigan 48012 |
Phone 248.530.1802 or 248.530.1880 | Fax 248.530.1080 | www.bhamgov.org

——— Forwarded message ———
From: **Gary Saltzgiver** <gsaltzgiver@yahoo.com>
Date: Sat, Nov 1, 2014 at 11:26 AM
Subject: Opposition to 4/3 Maple Road lane conversion of Multimodal plan
To: "lpierce@bhamgov.org" <lpierce@bhamgov.org>

November 1, 2014

To the Birmingham City Commission:

We are 22-year residents of Birmingham who live within the Coryell Park neighborhood on Shirley Drive. We oppose the proposed 4/3 lane conversion of West Maple Road because (as we understand the concept) during peak travel hours it will result in further "bottlenecking" of traffic on Maple Road and stimulate an increase in the number of vehicles "cutting through" the neighborhood, likely at an increased rate of speed. Cars driving eastbound on Maple Road are already backed up significantly from the intersection at Southfield Road in the early morning and late afternoon. As a wider street, Shirley (and Arlington) invites such action as an efficient route to and from Lincoln / Maple Road. We thus request that this proposal be removed from the Multimodal plan.

/s/ Gary Saltzgiver and Elaine C. Hazel
188 Shirley
Birmingham, MI

RECEIVED BY

NOV 17 2014

CITY CLERK'S OFFICE
CITY OF BIRMINGHAM

11-4-14

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

There is also concern that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

Mary P Scott
[illegible]

776 Arlington
Birmingham, Mi 48009

Ann Jurkovitch / 1562 Fairway

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

There is also concern that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

11-4-14

ANN JURKOVITCH
1562 FAIRWAY DRIVE
BIRMINGHAM, MI 48009

Ben Fisher / 538 Pleasant

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

There is also concern that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

11-3-14

538 Pleasant

Ben Fisher

Carol Peterson / 562 Pleasant

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

There is also concern that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

Carol W Peterson - Carol W Peterson 11-3-14

562 Pleasant St

Gregory Benson / 584 Pleasant

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

There is also concern that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

11-3-14

584 PLEASANT STREET

GREGORY A. BENSON

Hollis Huthwaite / 1165 N. Old Woodward

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

There is also concern that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

11-4-14

HOLLIS HUTHWAITE
1165 N OLD WOODWARD #2
BIRMINGHAM, MI 48009

James & Loretta Mirro / 737 Arlington

November 18, 2014

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

As 36 year residents of Birmingham, we want to voice our strong opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project now scheduled for 2016.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

We also have concern that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, the City Commission is being asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

James A. Mirro
737 Arlington

Loretta Mirro
737 Arlington

Janet Henke / 515 Pleasant

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

There is also concern that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

Janet M. Henke 11-3-14
JANET M HENKE
515 PLEASANT ST

John Lazar / 515 Pleasant

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

There is also concern that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

JOHN LAZAR
515 PLEASANT

11-3-14

Jolenne Timmis / 1055 Pilgrim

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

There is also concern that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

Jolenne Timmis

11-4-14

Jolenne Timmis
1055 Pilgrim Ave
Birmingham MI
48009

Kristin Siver / 1770 Banbury

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

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In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

Kristin Siver

11-4-14

Kristin Siver
1770 Banbury
Birmingham, MI
48009

Leslie McLain / 268 Yarmouth

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

The purpose of this letter is to voice opposition with the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project.

This opposition stems from a wide spread belief that the 4/3 plan will cause traffic congestion on West Maple Road, increase cut through traffic on side streets, reduce revenue to local businesses/churches, lose an important 4-lane evacuation route in the event of a city emergency, as well create safety problems for bike lane riders and those who now benefit from the Lake Park traffic light slated for removal under the plan.

There is also concern that the city is subjecting citizens to costly litigation costs from those who may be injured in traffic accidents as a result of adding bike lanes to a busy artery, as well as adding taxpayer costs for bike lanes used by very few residents and not supported by local bikers.

In view of these many concerns, the City Commission is asked to delete the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,

Leslie McLain

Leslie McLain
268 Yarmouth
Bloomfield Village MI 48301

Valerie Timmis
1055 Pilgrim Ave
Birmingham MI
48009

J. Claibourne Kelly
Elaine Moran Kelly
390 Hawthorne
Birmingham, MI 48009

November 5, 2014

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

Dear Commissioners,

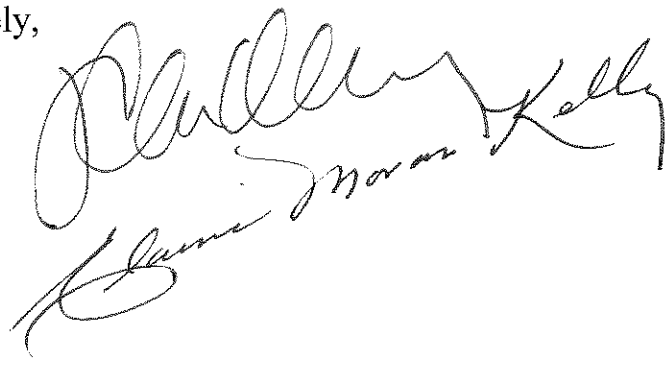
The purpose of this letter is to register our opposition to the Multimodal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project. We have lived on Hawthorne for 23 years. Elaine grew up on Arlington. We are both bike riders.

We believe that the 4/3 plan will cause unnecessary traffic congestion on West Maple Road, substantially increase cut through traffic on side streets, reduce revenue to local businesses/churches, and create safety problems for bike lane riders. Removing the Lake Park traffic light would make left hand turning onto Maple extremely difficult (hard enough already).

We frankly find it rather puzzling that the City seems to be listening to a group from Ann Arbor rather than City residents like us and our neighbors who use West Maple several times each and every day.

In our view, the City made a wise decision in rejecting a similar plan on East Maple. We urge you to do the same by deleting the 4/3 lane proposal from the Multimodal Plan now so that no taxpayer money is spent on studying this proposal as part of the road's resurfacing project.

Sincerely,



Pleasant Street Neighborhood

December 9, 2014

Birmingham City Commission
151 Merrill Street
Birmingham, MI 48012

Dear Commissioners:

During the first weekend of December, the residents of Pleasant Street were asked to sign one of two petitions--either in support of or in opposition to the conversion of West Maple Road from 4 to 3 lanes as described in the Multimodal Transportation Plan. As can be seen from the attachment, 18 residents representing 15 families (30% of occupied houses on Pleasant) signed the "opposed" petition and no one signed the "support" petition.

This 100% opposition vote comes from our residents' belief that the proposed conversion will create unsafe conditions from increased "cut through" traffic on Pleasant as well as congestion/unsafe conditions on W. Maple. At the present time, Pleasant Street experiences a high volume of cut through traffic to Southfield Road and fewer lanes on Maple will only worsen this problem. If Maple were to be reduced from 4 to 3 vehicle lanes with 2 bicycle lanes, not only would traffic flow less efficiently, but the existence of vehicles and bicycles on this artery would produce serious accidents, especially for our younger car drivers and bicyclists.

Because of this expectation, we ask the City Commission to delete the W. Maple 4/3 lane conversion proposal (Section 5.2) from the Multimodal Plan at its next Commission Meeting in 2014 before any taxpayer money is spent by the Multimodal Board in 2015 on studying this proposal. Please read this letter at the next City Commission meeting in December and please take a roll call vote among the Commissioners on this request. Thank you.

Sincerely,

Kelly Talmers

Kelly Talmers, 555 Pleasant
Petition Circulator

Attachment

Petition to Oppose the West Maple Road Conversion to 3 Lanes

Signature	Street Address
[illegible] Holmes	555 Pleasant St.
[illegible]	629 Pleasant St.
Susan Smith	629 Pleasant St.
Jill Hutchings Robinson	715 Pleasant Street
[illegible]	958 Pleasant street
[illegible]	534 Pleasant
[illegible]	534 Pleasant
[illegible]	555 Pleasant
[illegible]	584 Pleasant
[illegible]	1050 Pleasant
[illegible]	972 Pleasant
[illegible] (Scott R. Reid)	957 Pleasant St.
[illegible]	405 Pleasant St.
[illegible]	584 Pleasant
Aurora Pesqueira	580 Pleasant
NATHAN RESNICK	580 PLEASANT
Jessica Pleake	515 Pleasant
[illegible]	[illegible] PLEASANT
MARY HANGIN	665 PLEASANT

Pleasant Street Neighborhood

100% of Voting Residents Opposed To W. Maple Project

18 Signatures (15 Families) Reflect 30% of Households

Gibbs
Planning Group

Urban intelligence

19 December 2014

Mayor Stuart Sherman
151 Martin Street
Birmingham, Michigan 48009

stuart.sherman@sbcglobal.net

Dear Mayor Sherman:

I am writing to support the proposed plan to reduce West Maple Road from four lanes to three. It has been my professional experience that placing roadways on such diets improves both their walkablilty and vehicular capacity.

I have been personally driving West Maple daily for over 30 years and find that it presently functions as a two-lane road (one lane per direction) because of sudden and unexpected stops made by left-turning vehicles. These quick left turns cause near-accidents and long traffic tie-ups. Two maneuvering lanes (one in each direction) with a left turn lane and occasional right turn lanes allow for smooth traffic flows and more capacity.

I realize this is counterintuitive, but I have experienced this in numerous cities, including the City of University Place, Washington.

Please do the right thing and place West Maple Road on a diet!

Sincerely,

Robert J. Gibbs

240 Martin Street · Birmingham, Michigan · 48009
TRADITIONAL TOWN PLANNING + RETAIL CONSULTING + MARKET RESEARCH
Tel. 248.642.4800 Fax. 248.642-5758 www.gibbsplanning.com

City of Birmingham

Paul O'Meara <pomeara@bhamgov.org>

Fwd: Multi-Model Transportation Plan

1 message

Jana Ecker <jecker@bhamgov.org> Tue, Dec 23, 2014 at 3:46 PM
To: "O'Meara, Paul" <Pomeara@bhamgov.org>, Mark Clemence <Mclemence@bhamgov.org>, Amanda Thomas <athomas@bhamgov.org>

FYI
——— Forwarded message ———
From: **Art Johns** <ahjohns04@sbcglobal.net>
Date: Sun, Dec 21, 2014 at 11:54 AM
Subject: Multi-Model Transportation Plan
To: Jecker@bhamgov.org

I am very puzzled by the Multi-Model Transportation Plan that wants to make Maple Road into a two lane road with a turn lane and possibly bike lanes. Do to the shift in population and regional traffic patterns Maple Road has become a major east-west route and Birmingham just can't ignore it. If you want to make Maple safer it should be widened to two lane each way with a center turn lane. Let the bikers use Oak or Lincoln, these streets have predominately local traffic travelling much slower.

If you want an example of a scary bike ride try Adams between Derby and Lincoln. Even with a bike lane, a center turn lane and slower traffic, biking is risky. Try it some time when a eighteen wheeler goes by. Look at the backups on two lane Adams each day, from Derby to Maple. Buckingham Ave has become a major cut through street. You can't squeeze jelly through a hole.

The new Lincoln street is a disaster for biking. The one good feature, the removal of the "milk bottles" was grossly over shadowed by the kick-outs on the curb lanes. Even my wife agrees that the kick-outs are hazardous, they keep bouncing the biker out into the traffic lane. The center islands pose another threat, they just make the traffic zig-zag which moves them into any unsuspecting biker. It is a shame what has happened to Lincoln it used to be a great way to avoid biking though down town Birmingham.

Biking in down town Birmingham is never going to be safe, look at the drivers. They are looking in shop windows, looking for friends, talking and texting on cell phones and looking for parking places. Bikes are an announce to them. So make it safe for the drivers and provide an alternate safe path around town for the bikers.

Arthur H Johns Sr.

1447 Buckingham

Birmingham, MI 48009

Phone: 248.642.2464

Cell: 248.229.1447

City of Birmingham

Paul O'Meara <pomeara@bhamgov.org>

Fwd: Maple Rd

1 message

Laura Pierce <lpierce@bhamgov.org> Thu, Dec 18, 2014 at 3:57 PM
To: Joe Valentine <Jvalentine@bhamgov.org>, Jana Ecker <Jecker@bhamgov.org>, "O'Meara, Paul" <Pomeara@bhamgov.org>, "Clemence, Mark" <Mclemence@bhamgov.org>

See below.

City of Birmingham
Laura M. Pierce, MMC, CMMC | City Clerk | City Clerk's Office |
P.O. Box 3001, 151 Martin | Birmingham, Michigan 48012 |
Phone 248.530.1802 or 248.530.1880 | Fax 248.530.1080 | www.bhamgov.org

-------- Forwarded message --------
From: **Laura Pierce** <lpierce@bhamgov.org>
Date: Thu, Dec 18, 2014 at 3:52 PM
Subject: Re: Maple Rd
To: Paula Butler <psb11@comcast.net>

Thanks Paula,

I will forward your comments to the Commission and the Multi-Modal Transportation Board.

Laura

City of Birmingham
Laura M. Pierce, MMC, CMMC | City Clerk | City Clerk's Office |
P.O. Box 3001, 151 Martin | Birmingham, Michigan 48012 |
Phone 248.530.1802 or 248.530.1880 | Fax 248.530.1080 | www.bhamgov.org

On Thu, Dec 18, 2014 at 3:37 PM, <psb11@comcast.net> wrote:

> I have been reading all the info on the project to narrow Maple Rd down to one lane. I just wanted to express my opinion which is **"definitely not"** go forward with the project. Maple Rd. is congested currently making it one lane would only make the traffic worse. And frankly all for the cyclists, I totally disagree with this. There are many other routes for cyclists in Birmingham and surrounding areas. Would you please pass my opinion on to the project board. Thank you.
>
> On a more positive note, I hope you and your family have a wonderful Christmas and a prosperous New Year.
>
> Paula

City of Birmingham

Paul O'Meara <pomeara@bhamgov.org>

Fwd: Maple Road plans

1 message

Laura Pierce <lpierce@bhamgov.org> Tue, Jan 13, 2015 at 9:52 PM
To: Jana Ecker <jecker@bhamgov.org>, Paul O'Meara <pomeara@bhamgov.org>, "mclemence@bhamgov.org" <mclemence@bhamgov.org>

See below.

Begin forwarded message:

From: george dilgard <gdilgard@hotmail.com>
Date: January 13, 2015 at 8:26:22 PM EST
To: "lpierce@bhamgov.org" <lpierce@bhamgov.org>
Cc: "nummerdo@gmail.com" <nummerdo@gmail.com>
Subject: FW: Maple Road plans

To: Laura Pierce, City Clerk

Please forward Julie Nummer's e-mail to the Multi-Modal Transportation Board for their consideration.

Thanks,

George

Date: Tue, 13 Jan 2015 14:01:09 -0500
Subject: Maple Road plans
From: nummerdo@gmail.com
To: gdilgard@hotmail.com

I live on Devon Lane just southeast of the Maple Cranbrook intersection. I think Maple Road could be reconstructed to 3 lanes--one in each direction and a center turn lane with no roadway bicycle lane. I am a recreational bicyclist but would never use this lane. Instead I would like the sidewalk widened substantially to accomodate walkers and bikers ie. the Little Traverse Wheelway in Petoskey. It is well used and very safe with everyone being very respectful of each other and the common bicycling and passing rules.
I would like to see Maple returned to the way it was before it became a speeding highway! Thank you, George and Birmingham City Commission, Julie Nummer

Paul O'Meara <pomeara@bhamgov.org>

Re: Narrowing of West Maple Rd

1 message

Joe Valentine <jvalentine@bhamgov.org> Mon, Jan 26, 2015 at 3:52 PM
To: Melanie Snyder Lindblom <msnyderlindblom@gmail.com>
Cc: Scott Moore <sdm984@sbcglobal.net>, George Dilgard <gdilgard@hotmail.com>, Racky Hoff <rackyhoff@hotmail.com>, Tom McDaniel <mcdaniel_tom@hotmail.com>, Mark Nickita <markforbirmingham@yahoo.com>, Gordon Rinschler <gordon4bham@aol.com>, Stuart Sherman <stuart.sherman@sbcglobal.net>, Jana Ecker <Jecker@bhamgov.org>, Paul O'Meara <Pomeara@bhamgov.org>, Mark Clemence <Mclemence@bhamgov.org>

Ms. Lindblom,

Thank you for your email and sharing your perspectives for West Maple Road. Interestingly, many of your questions and suggestions are, in fact, part of the data gathering that will occur in the review of West Maple Road for many of the reasons you cite.

We can certainly plan to share the traffic counts as they become available. In addition, I will pass along your comments to the Multi-Modal Transportation Board so they are also aware of them as they prepare to begin their review of the data and input for West Maple.

I'm glad you have taken advantage of the meeting updates that will be provided in order to be kept informed of board's discussions on this issue.

Should you have any further questions, please feel free in contacting me.

Regards,
Joe Valentine

On Sun, Jan 25, 2015 at 3:01 PM, Melanie Snyder Lindblom <msnyderlindblom@gmail.com> wrote:

> Dear City of Birmingham Commissioners,
>
> Today I read a Birmingham Guest column entitled “Over 90 percent of residents oppose narrowing W. Maple” by Birmingham resident Mr. Jim Mirro. Since I too am a resident of Birmingham, I immediately wondered how 90 percent could oppose when I was not queried. That led to my contacting Mr. Mirro directly to discuss his findings. Mr. Mirro is a pleasant fellow who explained that residents of Arlington, Shirley, Hawthorne, Aspen, Linden, Pleasant and Golfview Streets along with Quarton Lake residents were polled by private petition. Mr. Mirro estimates that the population is about ten (10) percent of the total Birmingham population. Thus the article’s claim that 90 percent of residents oppose the narrowing of Maple is inflated and needs to be viewed in the context of 10 percent of the population reporting.
>
> Birmingham is an old community that finds itself surrounded by more developments to the east, west, north and south. The amount of business and residential growth in Oakland County has lead to increased traffic not only by residents of Oakland County but nearby counties as they flock to employment in our county. Newer cities to our east, west, north and south have built residential areas with reduction of traffic in mind, thus residential streets cannot be used as easily as Birmingham streets to access major crossroads. If we as a city are to continue to earn a title of “walkable city” or support the growth of million dollar homes, we need to consider the quality of life issues in our city. Traffic is a quality of life issue.
>
> In the twenty five years plus that I have lived in this city, traffic has changed. It is not only faster but greater. Rudeness is beginning to dominate. I have observed downtown traffic giving the “finger” and cursing out individuals. It is disheartening and I wish we had more police presence to eliminate these behavioral incidents. Mind you, I have not been the receipt of this behavior, just the observer. Birmingham needs to act to get the best of human nature, not the worse. Design is the answer in the long term, policing in the short term. Traffic lights appear to serve as flag bearers in a race, green signaling a race to the next light. Since I

live off of Maple. I daily observe that the traffic is not traveling at 35 miles an hour as the electronic clocking device near Lakepark will attest. Indeed, does that clocking device have a counter so we could have an accurate count of how many cars travel at the speed limit vs. exceeding the speed limit? If so, I would like to be provided that count. The pleasant hum of background traffic now sounds like a freeway. I feel for those who live on Maple and try to exit their driveways. Indeed it is difficult to exit a side street with the traffic flowing at such great speeds and volume. Our neighborhoods were never meant to be inundated with this traffic problem. I have contacted the past and current City Managers with concerns about the ability to access the Quarton Lake Park from the ravine park on the south. The traffic flowing from downtown Birmingham west goes down an incline that increases speeds well beyond 35, rounds a blind curve just as pedestrians are trying to traverse Maple Road. Walkable-no, more like a recipe for pedestrian hits or near misses.

As our leaders, we look to you for a solution to this problem. Changing Lincoln into one lane plus parking has reduced the flow and rate of traffic on Lincoln. The same needs to be done for Maple, however, the residential neighborhoods designed in a grid format on either side of Maple need protection from non residential traffic in order to support the narrowing of Maple. How can traffic be diverted from Maple before it gets to Birmingham boundaries to reduce gridlock with a narrowing of Maple? Would our neighbor to the West consider making a medium on Maple? How can the residential streets be protected by drivers wanting to avoid gridlock? How can the residents of Maple Rd. enter and leave their property without risk of an accident? The current solution does not seem to consider the changes that surround our community that has lead to the increase in traffic. Maple is not well patrolled by our police and tickets are not issued with enough frequency to thwart fast and erratic drivers. There is inadequate crosswalks for the park connections.

Although it is not on the books, why not create a medium on Maple and reduce the traffic to one way in each direction? It would be a visual signal to drivers that they are entering a residential neighborhood. Turning lanes could be incorporated into the mediums. The addition of green would help reduce the noise and dust of traffic and increase the neighborhood feel of Maple. Move beyond the current game-plan to examine and address the issues that are driving traffic to our area. Step up police patrol and earn some dollars from those who do not respect the 35 mile an hour designation. Evergreen Rd. has always been known as a speed trap and fast traffic is quickly addressed by ticket, thus insuring the tranquility of this “Natural Beauty Road.” Let’s put the brakes on speed on Maple and see if local traffic could tolerate two lanes.

I have signed up for updates on this issue and will continue to follow your progress. Please provide forward leadership so our community continues to warrant a positive destination for home ownership.

Sincerely,
Melanie Snyder Lindblom
520 Wellesley
Birmingham Mi 48009
248 644 1629

--
Joseph A. Valentine
City Manager
City of Birmingham
151 Martin Street
Birmingham, MI 48009
(248) 530-1809 Office Direct
(248) 530-1109 Fax
jvalentine@bhamgov.org

Paul O'Meara <pomeara@bhamgov.org>

Re: Eccentric - Maple Rd in Birmingham (1/18/2015)

1 message

Joe Valentine <jvalentine@bhamgov.org> Fri, Jan 23, 2015 at 3:08 PM
To: Eric Gersonde <eric7579@gmail.com>
Cc: jgrossman@hometownlife.com, Larry Ruehlen <lruehlen@hometownlife.com>, monica.drake@oakpress.com, andrew.kidd@oakpress.com, Paul O'Meara <Pomeara@bhamgov.org>, Jana Ecker <Jecker@bhamgov.org>

Mr. Gersonde,

Thank you for your email and sharing your views on the elements to be discussed for West Maple Road. I understand your concern and will just reiterate that no decisions have been made until the public process concludes. The purpose of the review of public roads prior to the planned construction season is to review not only the elements of the Multi-Modal Transportation Plan, but other opportunities to improve mobility along these roadways for all users. There are no predetermined solutions nor is there a single solution for each road. The plan is not definitive, but rather a guide based on prior community input to enhance overall mobility.

This review is not solely focused on narrowing Maple Road, but rather a comprehensive review of the entire roadway from the perspective of all users. The review process will take into account all elements, comments, concerns and input in order to conduct an open public review on what enhancements should be advanced.

To ensure your concerns are included in this process, I will forward them on to the appropriate boards for consideration during their review.

Thank you again for taking the time to share them with me.

Regards,
Joe Valentine

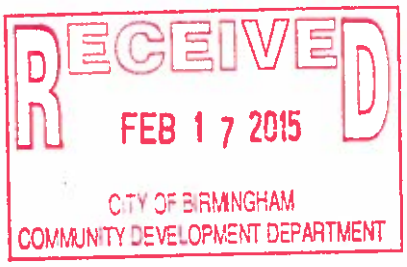
On Thu, Jan 22, 2015 at 10:09 AM, Eric Gersonde <eric7579@gmail.com> wrote:

> SUBJECT : Eccentric 1/18/2015 : "Keep an Open Mind on West Maple" by Mr. Joe Valentine, Birmingham City Manager,
>
> Mr. Valentine,
> Birmingham City Manager
>
> Your long and detailed explanation of our city's new transportation committee (MMTB) concluded with your message, " ....keep an open mind on West Maple".
>
> How can the narrowing of Maple be positive ? If all the current Maple traffic is forced from double to single lanes, the new bumper-to-bumper traffic will promote more north-south vehicles cutting through the neighborhood streets to Oak and Lincoln. Frustrated east-west drivers won't pick alternative 14 or 16 Mile Roads either (they're single-lane roads now). And, why is accommodating bicycle traffic now so important, for every 200+ cars on Maple you might see one bike, and that's only 6 months of the year, plus there is open easement land available today on either side of four-lane Maple for adding bike lanes. And if slowing traffic is your objective, just enforce the speed limits. Since I doubt the narrowing of Maple Road will be determined in an open-vote like last year's defeat of the over-the-top $20 million library, I'm concerned now that the promoted changes

> to West Maple will be approved and "buffalo-ed in" against the wishes of our Birmingham residents. If you want to put the MMTB and your efforts to good use, work on fixing our terrible downtown traffic, fix the city's by-pass by motivating drivers with well-timed green lights, make it work as it did 20 years ago.
>
> So ..... for you and the City of Birmingham, ..." you please, >> keep an open mind", the needs of the many out-way the needs of the few.
> Narrowing Maple Road is a bad idea, and you don't need expensive out-sourced city planners, independent studies and sub-committees to conclude this.
>
> Regards,
>
> Eric Gersonde
> Birmingham, Michigan

--
Joseph A. Valentine
City Manager
City of Birmingham
151 Martin Street
Birmingham, MI 48009
(248) 530-1809 Office Direct
(248) 530-1109 Fax
jvalentine@bhamgov.org

February 5, 2015



Multi Modal Transportation Board

City of Birmingham

151 Martin Street

Birmingham, MI 48009

Dear Ladies and Gentlemen:

I am a long time resident of Pilgrim Avenue in Birmingham. I do not believe the City or this Board has been provided with a real sense of what our community feels regarding the proposed changes to West Maple. I am personally in favor of the changes. To that end, I am enclosing a copy of a letter I wrote to the Eccentric and which was printed last week. It contains my sentiments and those of many of my neighbors.

Thank you for agreeing to serve on this Board and for your time and energy in investigating ALL sides of this issue. I do appreciate it.

Sincerely,

John April

January 28, 2015

To the Editor:

I have lived on Pilgrim Road in the City of Birmingham for the past 25 years. I have been following the debate on the West Maple Road project and believe that the Eccentric has not presented a fair cross-section of public opinion on this matter. I am in favor of the project for the following reasons.

First, Maple road is dangerous in its current configuration. People drive entirely too fast and the City appears to be indifferent about enforcing the speed limit. This presents numerous opportunities for accidents and injuries. Drivers routinely run through the red light at Lake Park and Chesterfield, and who knows what would happen if there were pedestrians using the crosswalk. I have personal knowledge and have witnessed multiple collisions over the years due to excessive speeds and carelessness. This is simply unsafe and unsustainable.

Second, the City has systematically modified major roads throughout its infrastructure over the past several years. Adams, Southfield, Lincoln and Brown are just a few examples of thoroughfares that have been modified and streamlined to calm traffic patterns. It should come as no surprise to residents that the City is embarking in efforts to research and extend their obligations to Maple Road. Most neighbors and friends support this endeavor, which would reduce speed and make the roadways safer.

Finally, despite representations made from those who oppose and distort reasoning for these much needed improvements, the primary purpose behind the proposed changes is to improve traffic patterns and make the road safer and pedestrian friendly for all Birmingham residents. This is apparent in reviewing the Multi Modal Plan for the City. Unlike the Library referendum, which was put to a vote, the West Maple Road project is an issue of public safety assigned to the City Commission for determination. I appreciate differing opinions when all data is weighed equally and sensible conclusions made, but the fact of the matter is the City is going to decide what they feel is in the best safety interest of the residents of Birmingham. I find it difficult to believe that anyone would be opposed to this important public safety initiative, especially if it means the end result is safer streets for residents of all ages. I encourage and hope our City leaders pursue and move forward with the plan.

Sincerely,

John April

Paul O'Meara <pomeara@bhamgov.org>

Re: Maple road proposal

1 message

Jana Ecker <jecker@bhamgov.org> Mon, Feb 9, 2015 at 4:07 PM
To: Helen Smith <hpsmith50@gmail.com>
Bcc: Pomeara@bhamgov.org

Ms. Smith,

Thank you for your comments. I will certainly pass them along to both the sub-committee and the Multi-Modal Transportation Board.

Jana Ecker

On Mon, Feb 9, 2015 at 3:55 PM, Helen Smith <hpsmith50@gmail.com> wrote:

> Dear Ms. Ecker
>
> I am writing you to voice my concerns regarding the recent discussion about the proposal to consider reducing Maple Road between Southfield to three lanes so you may pass them along to the multi-modal transportation board.
>
> First, I'd like to say I think it was a good move to appoint a special study sub committee to conduct a more in-depth review for the transportation board which will allow more community input into the proposal.
>
> I am a 27 year resident of the city and reside on Westchester Way which as you know is a north/south street between Cranbrook and Southfield roads. I do not support reducing Maple Road to three lanes.
>
> These are my concerns:
>
> 1) A reduction to three lanes will make my commute to areas east of my home and through downtown Birmingham more difficult and time consuming. There already is a lot of traffic. A reduction to three lanes will only slow it.
> 2)I fear the new plan could increase traffic on my street as well as others streets north and south of Maples because of cut through traffic trying to avoid the gridlock which will occur on Maples should the road be altered. Our street already get a lot of Seaholm student traffic on my street in the morning because of students avoiding Cranbrook.
> 3)I'm concerned there's not been enough study or conversations with adjoining community's planning and police departments about the impact on 16 Mile and 14 mile roads.Birmingham should not consider this proposal in a vacuum. I hope the committee and the city will make that effort. Eastbound 16 mile road traffic in the morning gets backed up quite a bit. I can only imagine the increased waits in the morning on 16 mile road if the proposal is implemented.Think about the increased traffic on Lincoln which recent changes were designed to slow and discourage. No doubt Oak would pick up a lot of traffic and encourage more traffic in that neighborhood area.
> 4)I do agree traffic travels too fast on Maple. Can't the city step up traffic enforcement to discourage drivers from speeding?
> 5)Instead of using Maple why doesn't the city encourage bikers to use the less heavily traveled Lincoln and Oak. It would be safer for them and drivers!
>
> Thanks for passing my comments along to the committee.
>
> Sincerely,
>
> Helen Smith
> 459 Westchester

Paul O'Meara <pomeara@bhamgov.org>

Re: Cross-Walk on Maple Road to connect Linden Park to Quarton Lake -- Multi-Modal Transportation Board

1 message

Jana Ecker <jecker@bhamgov.org> Tue, Feb 10, 2015 at 11:15 AM
To: mbs@alienguppy.com
Cc: Mark Clemence <mclemence@bhamgov.org>, "O'Meara, Paul" <Pomeara@bhamgov.org>

Mr. Stewart,

Thank you for your comments. We will forward them to the Multi-Modal Transportation Board and the newly created Steering Committee studying the W. Maple corridor.

Have a great day,

Jana Ecker

On Tue, Feb 10, 2015 at 9:24 AM, <mbs@alienguppy.com> wrote:

> Good morning Mr. Clemence and Ms. Ecker:
>
> I happened to see the most recent minutes for the Multi-Modal Transportation Board. Looking at the city web site I understand that the two of you are listed as being contacts for the Board. I live at 345 Hawthorne. My contribution to the discussion involving Maple Road's upcoming improvements is that I would really like to more directly connect Linden Park with the park having Quarton Lake by having a formal cross-walk across Maple. A lot of people including me, cross Maple there to get between the two parks on a very regular basis and it is probably not the safest thing to do.
>
> Thank you for your consideration.
>
> --Michael B. Stewart
>
> 345 Hawthorne St.
>
> 248-808-5565

--
Jana L. Ecker
Planning Director
City of Birmingham
248-530-1841

City of Birmingham

Paul O'Meara <pomeara@bhamgov.org>

Re: Multi-Modal Maple Road commentary

1 message

Joe Valentine <jvalentine@bhamgov.org> Tue, Feb 10, 2015 at 5:49 PM
To: Barry Silver <bnsilver@sbcglobal.net>
Cc: Jana Ecker <Jecker@bhamgov.org>, Paul O'Meara <Pomeara@bhamgov.org>, Mark Clemence <Mclemence@bhamgov.org>

Barry,

It has been a few years, but I believe I do recall talking with you previously.

Thank you for sharing your perspectives on things to consider during the review of West Maple Road. I appreciate you taking the time to provide a detailed outline of the issues you've identified for this road. I will certainly pass them along to the Multi-Modal Transportation Board to review during their analysis of West Maple.

For additional information on this process you can visit our website at www.bhamgov.org/multimodal for agendas and meeting summaries as this discussion evolves.

Best Regards,
Joe Valentine

On Sun, Feb 8, 2015 at 8:17 PM, Barry Silver <bnsilver@sbcglobal.net> wrote:

> Hello Joe,
>
> I won't presume you would remember me, and it's only a reference point as to who am I, but I had lived at a duplex on Haynes, right at Torry, and when passing by your home I had said hello, while you were in the midst
> of reconfiguring your front greenery. It's been a few years, obviously.
>
> I have followed most of the articles on the Complete Streets approach to
> planning roadways and bikeways, and the sum of walkability.
> Often, in more climatically accommodating months, I ride my bike. So, many areas are familiar, as that is my auto-alternative means to get around.
>
> If I may, I'd like to share my observations about the specific road you've discussed in the Observer back on January 18.
> It's not really that I live here, that I have a stake in the progress of such issues, that I'm a home owner.
> Rather, and only, that I see things and, admittedly, it seems a logical assessment in my mind, and it's what I would share.
>
> Maple, east and west from Southfield to Cranbrook, is a commercial roadway.
> It is a major, connecting road passing through a [residential landscape].
> What Maple is not, is a road winding its way through a residential neighborhood. And this is the distinction I make.
> Maple is a significant traffic artery.
> A 'major artery' designation doesn't always have to be consigned, as time-warn usage might have it, only to a multiple of commercial zones,

yet, it remains that Maple, even from Southfield to Cranbrook, is indeed a commercial roadway that has evolved ever more so.
It can't be undone, but it can be made safer.
A life-time ago, and more, homes were built on that section of road. And set back from it. It was a smaller, less traveled, yet still
commercial in nature. It was an artery, and it has become a more vital artery; the road widened to accommodate the increase in vehicle traffic due to the population increase locally and further away, even though more and suburban home styles were built along it and put closer to the road.

What Maple isn't is a Westchester or a Chesterfield or a Pilgrim, as examples, with restricted 25 mph speed, with houses in a row
fronting themselves along every block, with parked vehicles along their ways, with neighbors crossing randomly, with homeowners
raking leaves or moving snow off the drive, kids playing, etc. etc.
These latter reflect what neighborhood streets are, and how they are 'complete'.
Maple is not one of them, nor should it be a reflection of them.
Hence, to narrow Maple to one lane each way, with a center turn lane, in the vein of creating a 'neighborhood' 'complete street', is
incompatible with the larger vision of functional, yet pleasant, and very safe roads, and recognizing their place and function in the vision.
It may have been Mr. Duany's suggestion, but one has to stand on the roadway, every day, at any time, and at length, to internalize
what is going on, and why one 'mode' of thinking doesn't adequately and completely address the specific issues of Maple Road.

The first thought came to mind, what to do with the rapid transit aspect utilizing Maple. The bus, and what to do when the bus stops
at intervals for passenger entry and exit. The bus stops, consequently so does all of the vehicular traffic. And this repeats itself along
the section of Maple at issue.
(That there aren't bus stop shelters is itself an issue - for SMART, not really meant for this moment, but it, too, is a complete street matter;
do bus riders have adequate protection from the elements while waiting; can they sit down inside a glass enclosure, instead of standing in the rain and snow on a patch of worn grass?)
What I would envision happening on a narrowed, one-lane each-direction Maple is that motorists will cross onto the center turn lane only to get around the bus, and it will create copycat behavior in other motorists and, as a pattern of behavior engrained in motorists familiar with the narrowed road, it will occur with regularity. And therein lies a new way to create a traffic accident.
The same kind of copycat behavior that has evolved, and has become engrained, with the 'right turn allowed on red' law.
No one really stops; they barely slow down, and for any pedestrian, or bike rider, crossing against this never stopping,
never slowing mentality, it's frightening.

Reversing the nature of Maple, undermining its major, wider area connectivity function, and having it mirror a side street residential street,
and including a 'bike lane', would not only increase every side street traffic volume, but it

would create multiple, daily traffic bottlenecks
because of its daily, all hour vehicle volume.

And, consider the fire truck or ambulance path, the high speed police car path, that would be necessary.
Narrowing Maple creates a significant problem in the emergency situation:
There would be only one lane, the center lane, to use by the emergency vehicle(s).
One lane, in the center of the entire roadway, is not wide enough for higher speed, instant maneuverability needs of any emergency and public safety vehicle. Consider the needs of a moving, wide, very long fire truck, and the narrow turn lane in the center of the entire roadway, and the house fire that needs critical attention. The Chesterfield Fire Station is on that section of Maple being considered for 'redesign'.
And if that center turn lane is blocked by left-turning drivers, and the east or west traffic lanes are full, where do these turning drivers go to get out of the way of the fire truck, or the emergency ambulance vehicle, or the police vehicle?

Most drivers, the thoughtful, thinking drivers, will slow down and stop in the right lanes, as they exist now, leaving the abutting two left lanes of west/east roadway fully open for those emergency vehicles.

And in winter months, when there is a heavy snow accumulation, an already by-design constricted major artery becomes an even more impassible roadway not just for everyday commercial traffic, or for County Road crews, but for any emergency and public safety vehicle that
must have a close, accessible major route to access a neighborhood street.

Secondly, consider the cost of incorporating a bike lane in each direction for its totality of specific use.
Think of it as square feet cost per usage.
How often would one use this lane, how many would use it, in what months would it be used most, by the most people, on a bike.
Even omitting that vehicle speeds would reduce to 25 mph. There is still the overwhelming vehicle volume vs. bike traffic volume.
It becomes a very expensive bike lane that gets little if any use, and its use would be immediately dictated by the season.
It would not be used in the winter, in the snow, or in the rain. Or in the dark of night.
Yet, motor vehicles would be using this road, and are using this road, at every hour of every day in every season.

Thinking 'outside of the box' is a great creativity motivator. Yet, I sense that the idea of 'complete street' planning could be its own one-fits-all box from which street planning could not escape from itself to find a sensible solution for a specific situation.
The idea of a complete multi-use roadway, sidewalk, and bikeway doesn't quite fit every circumstance.
Maple Road is one of them that doesn't quite fit the 'complete' model from all of the aspects it's trying to apply.

As for myself, as I've heard from others, riding Maple, on the roadway, albeit in a 'bike lane', still would not be the safe idea
it seems to be on paper.

There is now, and there will continue to be an all-day abundance of vehicle drivers, and those drivers are not out for the Sunday drive.
It is as much a commercial road as it is a road traversing a residential sector of a town that local residents use to get somewhere,
somewhere outside of their neighborhood street.
Narrowing it is certain to raise the level of frustration with what is already a limited and/or restrictive flow of traffic, the 35 mph, slower-going road
that is and has been a vital wider area vehicular artery. In reality, too, 35 mph is not what drivers obey.
It should be left as a four lane roadway with, of course, regrading, enhanced curbing, traffic light (speed-abating) controls, more speed limit signs, safer pedestrian crossing opportunities, and more policing. More traffic lights at intervals may cut down on speeding. From repeat observation, this section of Maple is the City's Autobahn, its 'speedster' lanes for the 'inconvenienced driver'.

Third, if you've ever biked Maple, from Southfield to Cranbrook, how have you found the uphill pedaling, west or east?
It's very difficult. Very much like the north section of Old Woodward, as it passes through north downtown, Booth Park,
and over the Rouge River bridge.
(Let's consider that downhill is easier; but, there are people walking the sidewalk, too. It's why I've commented on sidewalk width, below).
On Maple, riding west of Southfield, or riding east to Southfield, it's a long stretch of uphill sidewalk to get back to a level pathway, going down and having to ride up.
So, putting a bike lane on Maple Road, from Southfield to Cranbrook, won't really invite more bike riders. It's still a lengthy uphill ride;
it does not now have that 'abundance' of bike riders, nor will it. The money for two bike lanes would be wasted for that location,
for that purpose.
There's a wealth of true residential streets on which to ride a bike, and vehicle drivers are more cognizant of these biker riders, and have more patience with them, and respect for them.
On Maple? I would not wager that drivers will be patient with and respecting of bike riders.

But, to think outside of the 'box' that is the 'complete street idea', for this section of Maple, if one must have a bike lane on this section of Maple, why not put the bike lane on the sidewalk, where it's much safer to ride along this part of Maple.
Widen the sidewalk on this section of Maple to accommodate the pedestrian, the stroller walker, the dog walker, and the bike rider.
Not every bike rider is moving along at thirty miles per hour, as would the real racer type. These riders prefer the road, and there are plenty of safe residential roads for that segment of bike rider.
Most biker riders are leisure riders. Like me.

While I have it in mind, the section of Maple from Adams to Eton presented the same issue.
The sidewalks could have been widened to accommodate a bike rider and a walking person, and the ease and safety of bike riders
would have been met. I ride this stretch of Maple, on the sidewalk.

Significantly, from near daily driving observation, there are no bike riders on this stretch of Maple, riding on the road, and virtually no bike riders
on the sidewalk. And that is in all of the weather-accommodating months.
A narrowed road with a bike lane demarcation in each direction would not have addressed the 'complete street' vision, nor would it have addressed the commercial need of this part of Maple, even with the abundance of homes fronting it. It was a smaller road, there were homes built on it in spite of it being a commercial roadway, and time and progress have made the road increasingly vital.
There, too, restricting that part of Maple to one lane each way, with a center turn lane, would have created emergency vehicle
passage difficulties, and County Road snow plowing problems.

That stretch of Maple has a speeding problem. On one side, going east, there is one, only one, speed limit sign, 30 mph, at Rugby.
The next 'speed' sign is an instant-reader speed indicator. It's at Cambridge. A third of a mile past the posted 30 mph sign.
No one is obeying the posted speed limit. They're well past it, and they are increasingly heavy on the pedal once they've past Adams.
What should have been put together at Rugby, and duplicated at Cambridge, is a posted 30 mph sign and right below it on the same
post an instant speed indicator. To make the connection with the driver, that the speed limit is 30 and their speed should match
the sign's posted limit.
At Cambridge at the instant speed indicator, drivers don't make the connection with the posted 30 mph sign back at Rugby.
And I can assume they don't care to make it.
It's very likely their assumption that the indicator is 'only measuring' their speed. NOT, that it's indicating they are speeding.
I haven't been able to remember to see where the speed limit signs are posted going west on this section of Maple.
But the need is evident, in both directions.
Policing would help, too.

Thanks for accepting my comments. I do appreciate it.

Barry Silver

--
Joseph A. Valentine
City Manager
City of Birmingham
151 Martin Street
Birmingham, MI 48009

RICHARD C. ROLLINS
466 ASPEN ROAD
BIRMINGHAM, MI 48009-1656

ROLLINSTAX@MSN.COM

(248)932-3500
248) 932-0826 FACSIMILE

February 24, 2015

Mayor Stuart Sherman
City of Birmingham
151 Martin
PO Box 3001
Birmingham, MI 48012-3001

Re: W. Maple

Dear Mayor Sherman:

As a Birmingham resident on Aspen, the duty of government is do what is best for the long term growth and development of Birmingham. To make it more than just an upscale city or one step up from Royal Oak or Ferndale or Berkley. Birmingham is great but it can be so much better. The City has so many opportunities to rise to the challenge of making Birmingham an enriching cultured and truly beautiful city. To make it more functional and aesthetic.

For example, West Maple and Woodward are nothing more than traffic speed lanes to move traffic at a high volume and at high speeds through the city. Maple is being used as the cross cutter for east to west corridor traffic between Telegraph and Woodward, for the middle of Oakland county traffic. Ending high speed pouring traffic into a two lane downtown Birmingham. Cutting north and south Birmingham residential neighborhoods with a high volume, high speed road that is totally ugly . Roads can be so much more. Maple can be so much more. Woodward can be so much more. Making Maple a one lane each with a Blvd with islands with trees in the middle and at the same time slowing traffic down in our residential Birmingham and reducing the noise of Maple. We see what has been done in downtown Birmingham along northern Woodward north of Maple. We noticed Southfield Road is reduced in size and speed as it enters Birmingham from the south from four lanes to two lanes. Would the individuals who object to downsizing Maple Lanes want Southfield Road to be four lanes through Birmingham? The intimacy of Southfield Road is what Maple needs.

I have noticed one of the objections to this change on Maple is a death over many years ago of an individual crossing Maple. I would think that the change would be promoted by these individuals and not objected to it: Less lanes, less traffic, island to cross to, etc. The other objections is it will hurt the Birmingham business district. I also cannot understand this objection either. Downtown Birmingham on Maple is already one lane each way. Booming Santa Barbara has closed all traffic on the main streets. Most of the

traffic just drives through Birmingham onto Woodward; So less speed, less traffic actually makes for a more friendly and inviting city. To me this is a win, win. It makes for a more friendly Birmingham.

Government must do what is best for the long term growth and beauty of a city. Many countries have had Popes and Napoleon and Kings and Emperors to make cities full of life and beauty and boulevards and parks. City government is elected to make the difficult decisions even if many of it's residence want the same as the past.

On another note, outdoor art installations can make a city alive and enriching. Bringing people from within Birmingham, to residences from other cities and States to come to see art throughout a remarkable downtown city Birmingham and improve downtown both for business and beauty. Increased business for downtown retail doesn't come from putting up tent signs in the middle of the sidewalk. It makes retail look desperate for business.

Look at what Grand Rapids is doing with art installations. I have always been amazed that Cranbrook, one of the great art facilities in the world is only two miles from Birmingham and there has been no spinoff from Cranbrook to Birmingham in bringing large art installations to the parks and streets. The art presently in Birmingham is one step up from high school. Where is Richard Serra works in our affluent city. I was on the art board of Birmingham for one day and I quit after I realized they spent a whole meeting discussing the cost of a small art plaque and the art of one of the art board members was actually displayed in our city. Also, when at the same time, they, the city, decided to take City general funds of over $800,000 to build better golf club houses. Please, give me a break.

Let's take the big steps necessary to improve our City. Let us lead and become so much more. Let Birmingham grow to be so much more with Maple as a Blvd with slower and less traffic and more art in our city.

Very truly yours,

RICHARD C. ROLLINS

RCR/dsf

cc: Mayor Pro Tem Rackeline Hoff
Commissioner George Dilgard
Commissioner Tom McDaniel
Commissioner Scott Moore
Commissioner Mark Nickita

February 26, 2015

Birmingham City Commission
Multi-Modal Transportation Board
151 Martin Street
Birmingham, M1 48012

Dear Commissioners and Board Members,

Sorry for the lateness of this letter but I only recently became aware of this issue.

The purpose of my letter is to voice opposition with the Multi-Modal Plan to convert West Maple Road from 4 lanes to 3 lanes as part of the resurfacing project, however I would like to voice my objections in a different slightly different manner.

- While I live in Bloomfield Township (Maple Road and Cranbrook) we do own and pay taxes on property in Birmingham (630 Ann Street, #6)
- Every day I travel 4.4 miles of Maple Road from Cranbrook, through the City of Birmingham to Maplelawn in Troy and back.
- The real issue with Maple Road is that currently it is a 2 lane road not a 4 lane road.
- The right two lanes, the gutter lanes, are practically impassable.
- That is the reason for all the trauma on this roadway.
- Too many vehicles in the left lanes, some driving too fast and some driving too slow.
- Drivers use the right lanes as passing lanes only to get back into the left lanes as soon as possible so they don't have to travel in the practically impassable right lanes.
- The right lanes have become solely for the uninformed or the drivers new to the area.
- Add in the left turns, which many people have forgotten how to use their turn signals and the swerving begins.
- I see it every day.
- I make the same round trip everyday 7-8am in the morning and returning 6-7pm Tuesday, Wednesday, Friday and 9-10pm Monday and Thursday evening.
- Policing during my commute is negligible.
- In reality, what you are proposing is taking <u>two</u> lanes of east bound Maple Road traffic coming from Bloomfield Township and squeezing them down into <u>one</u> east bound lane.
- With 14 Mile Road and 16 Mile Roads not complete thoroughfares, Maple Road has become the main trunk into the City of Birmingham from the west.
- When pressed, drivers will seek alternatives. They will divert through the Bloomfield Township subdivisions of Bloomfield Village North and South to get to Cranbrook then through the Birmingham neighborhoods from there.
- Taking the Shirley/Arlington problem and shifting it to Bloomfield Township is simply not being a good neighbor.

- The City of Birmingham is undergoing tremendous growth both business wise and residential/apartment/condo wise. This growth is stressing already limited parking and navigational means.
- Now is hardly the time to constrict the traffic flow into the City further.
- For me, if this project becomes the nuisance I believe it could become I have choices. I can take Pine, Oak, Raynale or Redding north of Maple Road. Midvale, Lincoln, Fairway or Northlawn south of Maple Road. All through neighborhoods.
- Also worthy of note, isn't this a similar type of proposal that was floated for the stretch of Maple Road between Eton and Adams? I remember when the Lake Park light was put in and the reasons for it. Won't those same reasons still exist if you remove the light?

Thank you for your consideration.

Michael Savoie
2550 Covington Place
Bloomfield Village, MI 48301
msavoie@mikesavoie.com
Mobile: 248-730-3450

Paul O'Meara <pomeara@bhamgov.org>

Re: Maple Project

1 message

Joe Valentine <jvalentine@bhamgov.org> Tue, Mar 3, 2015 at 3:09 PM
To: Sean Riley <playmaker414@gmail.com>
Cc: Paul O'Meara <Pomeara@bhamgov.org>, Jana Ecker <Jecker@bhamgov.org>, Mark Clemence <Mclemence@bhamgov.org>

Mr. Riley,

Thank you for your email sharing your thoughts on improving Maple Road. I will pass along your email to our Multi-Modal Transportation Board for consideration during their on-going reviews of this stretch of roadway. If you wish to following their efforts on studying W. Maple Road you can do so at www.bhamgov.org/multimodal.

Again, thank you for sharing your input in this process.

Regards,
Joe Valentine

On Tue, Mar 3, 2015 at 2:37 PM, Sean Riley <playmaker414@gmail.com> wrote:

> Going to 3 lanes and adding bike lanes is an excellent idea. It lends itself well to Birmingham "walkability" reputation . The turn lane will actually mitigate traffic and safety concerns better than the current 2 lane both direction design.
>
> Thank you
> Sean Riley
> 2325 W.Maple rd

--
Joseph A. Valentine
City Manager
City of Birmingham
151 Martin Street
Birmingham, MI 48009
(248) 530-1809 Office Direct
(248) 530-1109 Fax
jvalentine@bhamgov.org

Ray Massa
125 Aspen
Birmingham, MI 48009

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

March 8, 2015

Dear Commissioners,

I previously sent a letter on October 31, 2014 regarding my support for the West Maple Road Multimodal Road Plan. This is simply a follow-up on some of the objections from residents regarding the city's continuation of evaluating and studying the plan.

It would appear that some opponents do not want the city to continue investigating traffic flow and safety studies. Isn't this how we make informed decisions; by gathering facts based on empirical data rather than popular opinion? We voted the commissioners into office, now we need to let them do their due diligence by researching and fact-finding as much data as possible.

Having well-informed and educated sources on traffic flow, accident and engineering studies based on facts seems to me the right way to make a decision.

We elect our officials to make these choices for us based on their position in government where they have access to intelligent sources of information that the average resident does not. That is what a democratic republic does. Just because the majority of residents want it to be implemented one way, does not necessarily mean it is the best way. Some national elections have proven in hindsight that the majority has not always chosen wisely.

I believe the plan should be a 'city driven' plan and not a 'resident driven' plan. Progress should be made for the many, not just for our immediate neighborhood. I think in concept the city is taking the right approach. If every neighborhood has the ability to micro-manage their own local associations imagine what the city might look like. My primary reason for supporting the plan is to reduce speeding (hopefully making it safer for all) and reduce the noise on Maple and return it to a more subdued road without it feeling like a major roadway.

The commissioners have heard the neighborhood's views and I am in the minority it seems, but I hope that all of those who are in favor of it will voice their support in writing. The probability of it passing may be slim, but I am arguing for the process at this point as well as for the plan. Let the facts tell the story and then make an educated decision. I may not agree with the final path but I can respect how the outcome was achieved.

Sincerely,

Ray Massa
125 Aspen
Birmingham, MI 48009

City of Birmingham

Paul O'Meara <pomeara@bhamgov.org>

Fwd: Multi-Modal Plan - for the good of all?

1 message

Eugene Nelson <eugene.nelson.0@gmail.com> Mon, Mar 16, 2015 at 12:15 PM
To: Paul O'Meara <pomeara@bhamgov.org>, Stuart Moutrie <smoutrie@gmail.com>, Alicia Chandler <aliciablumenfeldchandler@gmail.com>, Alice Silbergleit <asilbergleit@gmail.com>

Hello Paul,

Please see additional input below from a neighbor who lives on the south side of Maple.

Best regards,

Gene Nelson
--
Eugene G. Nelson
248-761-4872 (mobile)
eugene.nelson.0@gmail.com
---------- Forwarded message ----------
From: Alicia Chandler <aliciablumenfeldchandler@gmail.com>
Date: Sat, Mar 14, 2015 at 8:21 PM
Subject: Re: Multi-Modal Plan - for the good of all?
To: Stuart Moutrie <smoutrie@gmail.com>
Cc: "coryellpark@gmail.com" <CoryellPark@gmail.com>, Eugene Nelson <eugene.nelson.0@gmail.com>

Stuart,

I am sharing your comments with our neighbor, Gene Nelson, who sits on the Multi Modal Maple Road subcommittee. The subcommittee is meeting monthly for he next few months to look into this issue.

All my best,
Alicia

On Saturday, March 14, 2015, Stuart Moutrie <smoutrie@gmail.com> wrote:

> Hello!
>
> My wife and I haven't been able to attend many of the social gatherings for our neighborhood, and I know we rarely cross paths with most neighbors, given our location; but I wanted to share with you my point-of-view on the Multi-Modal plan - and this letter I sent to the "Downtown" publication. I've given it quite a bit of thought since we first heard about the plan, and since I'd like to be an active part of the Coryell Park neighborhood, wanted to share my two cents:
>
> I've been reading the resounding response to the proposed "narrowing" of West Maple Rd between Southfield and Cranbrook via the Multi-Modal Plan, and while my wife and I would likely benefit from this new plan, I have to recall the words of my late father, who always emphasized "for the good of all."
>
> Our home sits between Arlington and Shirley, just tucked off Maple Road, but still close enough to hear the busses or delivery trucks rumbling over the disaster that is West Maple (this last winter has not helped the potholes). Before we moved to Birmingham, we lived in a quiet community in Oakland Township, and I grew up in an equally quiet suburb of Rochester Hills, so "living near a main road" was a bit of a shock to me, once we settled in. Frankly, had I appreciated how steady the stream of traffic would be, I may not have bought

this home. I was a bit naive, not having spent much time in Birmingham before moving here.

Nevertheless, we love our home, we love our large piece of property, and we love being walking distance to downtown Birmingham. We planted 28 arbor vitae along the side of our property that faces Maple, and we plan to fill that side of the yard with even more evergreens to help seal us off from the road, so that was a start... And we had hoped this multi-modal plan would, if nothing else, reduce the incessant flow of traffic past our home, while also offering up a viable bike lane. We are some of the few residents who planned, in fact, to use the new bike lanes. Currently, trying to bike into Birmingham on the narrow sidewalks is not ideal, and riding in the road is simply not an option. However, it doesn't surprise me that most residents surveyed said they wouldn't use the bike lanes - and I understand why: the majority of people who drive on West Maple are nonsensical lunatics, who typically drive 45 mph or faster, and like most drivers these days, pay more attention to their phone than the road.

I can also appreciate why my fellow neighbors wouldn't want traffic diverted from a narrower Maple down their own quiet streets. Instead of the lunatics tearing up Maple, they'd be tearing up Arlington or Larchlea or Puritan... And that's where my father's words "for the good of all" reminded me to question my own--admittedly selfish--desire to have the Multi-Modal plan executed in full. Why should only my wife and I (and the handful of other residents whose address reads "Maple Rd" between Southfield and Cranbrook) demand such drastic change for our own benefit? Yes, it would make walking our dog up Maple more enjoyable if there were suddenly less traffic each day, but overall, it doesn't strike me that the Multi-Modal plan is for the good of all the neighbors that surround us.

All that being said, however, if the Multi-Modal plan is scrapped, I would ask the city planners to strongly consider reducing the speed limit on Maple to 25mph, starting at Cranbrook and continuing right into downtown. That is a residential stretch, with numerous homes lining Maple, and I don't see why a reduced speed limit would be unreasonable. The lunatics will still drive 35+ even with speed limit of 25mph, but at least it might deter them from driving 45mph while they update their status on facebook.

One last comment I must make: while I can understand all of the concerns about the possible increased congestion, side road cut-through traffic, dangerous bike lanes, etc., can the opponents of the Multi-Modal Plan please drop this ludicrous argument about the "loss of an emergency evacuation route out of Birmingham"? You can't be serious on this point. It's not as if Birmingham is comparable to Manhattan, where one could be seriously trapped if bridges or tunnels were clogged. Please drop that argument - frankly, it's rather daft, and it does not strengthen the logic of the overall debate.

Sincerely,

Stuart Moutrie

Paul O'Meara <pomeara@bhamgov.org>

Fwd: FW: Proposed changes to West Maple

1 message

Laura Pierce <lpierce@bhamgov.org> Wed, Mar 25, 2015 at 9:17 AM
To: "Clemence, Mark" <Mclemence@bhamgov.org>, "O'Meara, Paul" <Pomeara@bhamgov.org>, Jana Ecker <Jecker@bhamgov.org>, Joe Valentine <Jvalentine@bhamgov.org>

City of Birmingham
Laura M. Pierce, MMC, CMMC | City Clerk | City Clerk's Office |
P.O. Box 3001, 151 Martin | Birmingham, Michigan 48012 |
Phone 248.530.1802 or 248.530.1880 | Fax 248.530.1080 | www.bhamgov.org

---------- Forwarded message ----------
From: James Ryan <jamespatryan@gmail.com>
Date: Wed, Mar 25, 2015 at 12:05 AM
Subject: FW: Proposed changes to West Maple
To: Laura Pierce <lpierce@bhamgov.org>

Dear Laura

The letter below was sent today to both Larry Ruhehlen and Lisa Brody.

I respectfully request that you copy each of the Birmingham City Commissioners.

My name is James P Ryan and I have lived with my wife Rose at 822 Shirley Rd. for the last 32 years.

I am aware of the overwhelming percentage of homeowners in opposition to any West Maple Road street layout changes. I also want to go on record against any narrowing of W. Maple, installing any bike lanes adjacent to motor vehicle traffic lanes, and removal of the critically needed traffic signal at Lake Park.

Both my wife and I have driven safely in this neighborhood, turning to and from West Maple onto Shirley Rd., Arlington St. and just about every street entering or exiting West Maple from Cranbrook to Southfield without harm or occurrence over the last 40 years. Our previous home was on Pilgrim.

Although the traffic has increased over the years, the traffic signals at Cranbrook, Lake Park and Southfield have been adjusted to allow adequate time for lanes to clear, to enter or exit W. Maple.

Proposing to narrow W. Maple to 2 lanes with bike lanes adjacent, is potentially very dangerous.

Paul O'Meara <pomeara@bhamgov.org>

Re: FW: Maple road

1 message

Joe Valentine <jvalentine@bhamgov.org> Mon, Mar 30, 2015 at 4:51 PM
To: "John R. Smith" <johnjrspop@aol.com>
Cc: Jana Ecker <Jecker@bhamgov.org>, Paul O'Meara <Pomeara@bhamgov.org>, Mark Clemence <Mclemence@bhamgov.org>, Laura Pierce <lpierce@bhamgov.org>

Mr. Smith,

Thank you for your communication. I will share it with the City Commission so they are aware of your views. In addition, I will share it with our Multi-Modal Transportation Board as they consider all options for this roadway in the development of a recommendation to the City Commission.

Best Regards,
Joe Valentine

On Mon, Mar 30, 2015 at 8:57 AM, John R. Smith <johnjrspop@aol.com> wrote:

> To: Members of the Birmingham City Commission
>
> Re: West Maple Road 4/3 Lane Conversion
>
> I last sent you a note in June, endorsing the 4/3 lane conversion plan for West Maple Rd put together for you by experts to calm Maple Road traffic. I'm even more convinced today that it's the right plan. It also is important to note that the light at the corner of Lake Park Dr. and Maple should be retained. Recall that there is a bend in Maple near that light, restricting the view of traffic. Because of that, it's very difficult to enter Maple from Linden, Aspen, and Hawthorne. It's especially difficult to turn left on Maple, particularly during rush hours. I invite any of you to try to turn left on Maple during rush hours, even with the aid of the light. The light there was initially installed after a fatal crash there that killed 3 Seaholm students and a young adult in 1965 http://www.detroitnews.com/article/20100118/METRO/1180362 . The picture of the wrecked car that contained the Seaholm students shown at the website is chilling. A book was written about the tragic crash entitled, "Henderson's Light", named after Roger Henderson, one of the students killed in the crash. Incidentally, this was a head-on collision, a typed of collision that would be prevented by the 4/3 conversion.
>
> In the 24 years I've lived on Linden with my wife Joan in the house she has resided in for 45 years, there have been committees convened to deal with the Maple Road traffic problem. After a car careened off of Maple through a stockade fence, ending up in the front yard of a committee member, we were particularly incentivized to make recommendations for Maple. One recommendation was to double the "Henderson" light, making it more visible around the bend for drivers. Thankfully, the light was doubled, and it has helped. Please retain Henderson's light, regardless of how you decide to rebuild West Maple.
>
> On another note, some have said that the 4/3 conversion of West Maple would enhance cut-through traffic in the neighborhoods, and moreover they say that was why residents east of Birmingham killed the 4/3 conversion of East Maple. I want to point out that the potential for cut-through traffic from Maple is very different between Southfield and Cranbrook than it is east of Adams. East of Adams, Big Beaver is 4 lanes, as is 14 Mile Road. So there would be viable alternatives for drivers to cut through to if Maple east of Adams seemed slow. That is not the case for Maple between Southfield and Cranbrook. Big Beaver is 2 lanes west of Adams, and 14 Mile Road does not exist west of Southfield Road. Lincoln is not a through street (it ends at Cranbrook), and is a mix of some 4-lane and some 2-lane west of Southfield, and is 2-lane between Southfield and Woodward. So there are no viable alternatives for drivers to cut through to from West Maple between Southfield and Cranbrook. In conclusion, the cut-through argument against the 4/3 conversion of West Maple is without merit.
>
> Moreover, the fact that West Maple is the only 4-lane road in the area is precisely why the traffic volume on West Maple is currently so high. Commuters flock to West Maple Road. If West Maple traffic were calmed,

commuter traffic volume would be more equitably distributed, and perhaps commuters would avoid the area all together, all leading to a lower traffic volume on West Maple.

Finally, I add a historical note. When much, if not most, of the Birmingham neighborhoods around West Maple were being plotted and homes were being built, West Maple was a 2-lane dirt road. Dave Underdown, who as a boy lived on West Maple near Southfield, told me that in the 40's he remembers West Maple as a 2-lane dirt road. Our home was built in 1938, and many of our neighbor's homes were built in the 30's and 20's. Certainly many of the homes in our neighborhoods were built before 1950. So many of the families that settled here then expected their children to grow up around a West Maple Road that carried traffic at a calm pace, so that children, bikers, and adults could live around it in relative safety. This is the neighborhood that now has a 4-lane roadway of fast moving, dense traffic running through it. Our neighborhood was just not designed and built for that.

Your support of the 4/3 conversion of West Maple and retention of the Henderson light would be greatly appreciated.

All the best,

John Smith

230 Linden Rd

John R. Smith

248-642-6219

248-496-1874 (cell)

johnjrspop@aol.com

--

Joseph A. Valentine
City Manager
City of Birmingham
151 Martin Street
Birmingham, MI 48009
(248) 530-1809 Office Direct
(248) 530-1109 Fax
jvalentine@bhamgov.org

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Visit www.bhamgov.org/aroundtown to sign up.

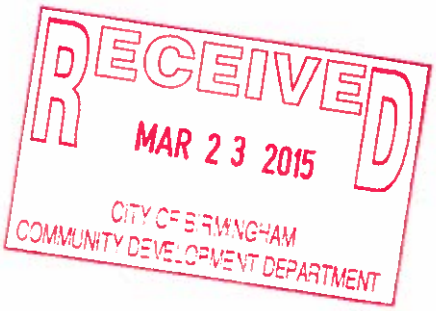
Planners must admit that bottlenecks will occur when residents try to enter W. Maple from any of the side streets at peak morning and evening hours, especially if the traffic light at Lake Park is eliminated! Public Bus transportation will cause further congestion at passenger stops. This domino of congestion will cause (already burdened) side streets to be used as "traffic relief" routes. This is especially true for Arlington and Shirley Rd. as drivers heading East on W. Maple to turn South on Southfield, even today use these streets, (at way above posted speeds), to cut thru to Lincoln, then to Southfield. Arlington and Shirley's extra width is like a expressway to non resident drivers.
My wife and I are bikers and share the belief with the 5 neighborhood majority of 92%, that any type of biking on W. Maples adjacent to vehicle, bus, and trucks would be suicide. In today's litigious world it would not take long for this proposed change to prove costly for the City.

Driving East or West on W. Maple today is as safe as any Urban street that leads to a city in Michigan can be. Although, drivers exceed the speed limit by a wide margin, removing the light at Lake Park would not slow traffic, and it would be very dangerous for homeowners exiting streets like Aspen and Linden or pedestrians trying to cross W. Maple, encouraged by narrower Lanes. Without the Lake Park traffic signal, bikers, walkers, strollers, etc would have to cross at intervals where the proposed traffic plan narrows for crossovers, albeit against faster traffic!
I do not want the Lake Park light removed, W. Maple narrowed to 2 lanes, or bike lanes on W. Maple.

It's not ironic that over 94% of existing homeowners who are very current, educated, and very familiar with their areas roads and traffic patterns, would unanimously bond in the unanimous opinion and from experience, (not statistics), would vote to leave W. Maple as it is.

Respectfully, James P Ryan AIA

3752 Darlington Road South
Bloomfield Hills, MI 48301-2002
March 18, 2015



City of Birmingham
Multi-Modal Transportation Board
151 Martin St.
P.O Box 3001
Birmingham, MI 48012

Dear Board Members:

I travel Maple Road almost every day to or from my neighborhood just off Lahser.

On Saturday, March 14, 2015 at about 8:40 a.m., I was involved in a head-on collision with a distracted driver while I was heading east on Maple Road in front of Mills Pharmacy near Chesterfield Road. The distracted driver and I were both in our respective left lanes, but there was nothing to protect me once he crossed over the double yellow line. I was injured and my vehicle was totaled.

I ask that the Multi-Modal Transportation Board consider plans that will make traveling Maple Road much safer. Maple Road is currently a four-lane thoroughfare with no median and limited intersections that allow for left turn lanes. Additionally, I don't believe there are any right turn lanes. Please consider a constructive plan on Maple Road in Birmingham that eases traffic flow and reduces the potential for accidents without a significant increase in residential traffic in the area.

I know that your Board is also looking to make Maple Road more people-friendly for bikers, joggers, etc., but my main concern is for increased traffic safety due to my recent collision. I understand the time and effort you are using to find the best solutions for Maple Road, and I sincerely appreciate your thoughtful consideration.

Sincerely,

Dave Weir

David J. Weir

JANUARY 18, 2010 AT 1:00 AM

Shattered Dreams

Oakland crash that killed 3 teens still haunts 45 years later

SUSAN WHITALL THE DETROIT NEWS 3 COMMENTS

Purchase Image

This is the car in which three Birmingham Seaholm students were killed by a drunken driver on Jan. 16, 1965. (The Detroit News)

It is a busy stretch of Maple Road. Two lanes of cars hurtle up and down the hill by the Quarton Lake waterfall in Birmingham, so the traffic light at Lake Park, a sleepy cross street, is an annoyance. The light was put there for a reason. Three teenagers and a young adult died here on a frigid Saturday night 45 years ago, four souls cut loose from the Earth in the blink of an eye.

The Jan. 16, 1965, crash ended the life of Roger "Roddy" Henderson, at 16 one of the top swimmers in the state, along with his friends Barbara "Peachie" Barnum, 16, and Sandy Christman, 17.

Print

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Zoom

Also killed was the driver who caused the accident, Mike Drothler, 22, an assistant manager at a local grocery store. Drothler had two cases of beer in his Ford Galaxie when he rocketed down Maple at more than 70 miles per hour, smashing almost head-on into Roddy's Buick Skylark.

The accident left two boys, Mike Adair and Bruce Berridge, both 16, injured and facing multiple surgeries, and devastated family members. But the tragedy also haunts friends and Birmingham Seaholm High School classmates.

"It's a wound that never heals," said Paul "Butch" Fleming, a friend of Roddy's who lives in Indiana. "If there had been grievance counselors, if there had been therapy, that would have helped. But there was nothing."

Jack Torry, a Washington, D.C.-based reporter for the Columbus Dispatch, wrote a book, "Henderson's Light" (Countinghouse Press), about the tragic crash and the effect on friends and family members. "Henderson's Light" is what friends call the traffic light at Lake Park.

Torry never knew the victims or survivors, but as a 13-year-old living in Birmingham, he was haunted by the ruined cars that sat at a local gas station: Roddy's maroon Buick Skylark, buckled in at the front and driver's side, and Drothler's black Ford Galaxie, pancaked into a hulk.

"The memory of those two cars got me into this," said Torry. "The black Galaxie looked like a V, the frame was completely broken. Whenever I saw a crash involving young kids, this would be what I'd think of."

Torry looked for and found the two survivors, Mike and Bruce. He also found parents who suffered early deaths, and family members who struggled with alcohol and emotional issues.

"I fully expected to fail. I thought nobody would want to talk about this," Torry said. "Was I surprised. It's as if they had been waiting for someone to ask."

Everything to live for

Roddy Henderson was just 16, but the lanky junior was the top swimmer on coach Corey Van Fleet's Seaholm Maples. A team with swagger, the Maples would pour a cup of Seaholm water into the opposing team's pool, just because.

A gifted freestyler, Roddy was equally skilled at the butterfly and backstroke, destined for the Olympics.

"He was an effortless athlete," said Bruce, a close friend of Roddy's. Van Fleet's grueling practices didn't faze a bored Roddy, who counted the squares on the bottom of the pool as he cut through the water.

"He was this hot guy who always smiled, good personality," recalled classmate Sue Melcher Pomroy.

Roddy was dating Peachie Barnum, the daughter of an IBM executive and one of four girls who "brought sunshine into the room," according to Mike Adair.

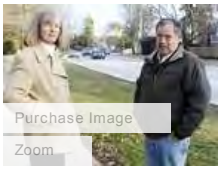
Mike was a standout on the team at backstroke, one of six children of a Birmingham obstetrician. Dubbed "Mouse" for his short stature, Mike had a warm, wry sense of humor. Bruce was quieter, a sensitive yet adventurous boy. Athletic Sandy Christman was a close friend of Peachie's.

That fateful Saturday, Roddy was shaking off the flu, so the Seaholm swimmers suffered a rare loss to Battle Creek Central.

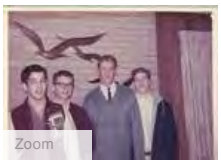
Undaunted, Roddy drove his friends to the Casa Mia pizzeria on Woodward, where Mike and Bruce threw pizza crusts at each other.

"Five teenagers, a restaurateur's nightmare," Mike said.

On the way home, the five were listening to the radio and chattering away.



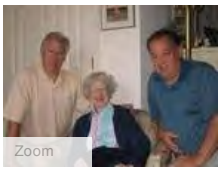
Nancy Henderson, sister of victim Roddy Henderson, and Mike Adair, a ... (Ricardo Thomas The Detroit News)



Roger "Roddy" Henderson, second from right, was part of a close- ... (Henderson family)

The Detroit News' front page Jan. 18, 1965, reports on three fatal ...

Bruce Berridge, center, and Mike Adair, right, with their dates before the ...



Crash survivor Bruce Berridge, left, now a veterinarian in Massachusetts, ...

Roddy drove north on Woodward and then headed west on Maple, going uphill in the left lane.

About 10:30 p.m. Drothler careened across into the westbound lanes and the front left of Roddy's car. He had been drinking. In the best judgment of the police and doctors, nobody knew what hit them. Mike and Bruce remember nothing -- consciously. While unconscious, Bruce screamed for weeks, and night terrors would visit them both.

Roddy died on the way to Beaumont Hospital; Peachie and Sandy perished almost instantly. Mike, sitting in the front with Roddy and Peachie, was thrown into the dashboard. Bruce was tossed out of the car.

Shockingly, Torry discovered that Drothler had crashed his car in the same place on Maple Road four years earlier, in 1961. He was driving a '55 Chevy when he lost control on the same curve past Lake Park, ramming a utility pole and running it into a second pole. He'd been drinking. The Chevy was torn in half but he and a friend were treated only for concussions and bruises at Beaumont. Torry could find no charges against him, no suspension of his license.

"That's what they did back then," Fleming said. "They'd take away your beer, tell you not to do it again and send you on your way."

In the early '60s, there were no groups like Mothers Against Drunk Driving. Drinking and driving was frowned upon, but too often shrugged off. On the flagstone patios overlooking Quarton Lake, everyone had a drink in one hand and a cigarette in the other. Mike remembers a doctor with a cupholder attached to his car dashboard to hold his martini.

The Monday after the crash, Seaholm Assistant Principal J. Howard Clayton announced the deaths over the intercom. Students were told that only a select few could go to the funerals.

"They canceled an assembly," classmate Pomroy remembered. "That was it."

It was the philosophy of the time not to dwell on painful things. Forget it, heal and move on.

Suffering and guilt

The aftermath of the crash and the effect on the families takes up at least a third of Torry's book. "Nobody knew how to handle it," Torry said. "Bruce said, 'The hell with it, I'm not thinking about it anymore.' "

Bruce studied to be a veterinarian at Michigan State University, and bolted from the state soon after. His back is a constant reminder of Jan. 16, 1965.

"There was no physical therapy," he said. "If I'd had that, maybe I wouldn't have such problems with my back."

Mike struggled with his classes at Albion. "He couldn't figure out why he couldn't focus," Torry said.

Months after leaving the hospital, Mike was still picking pieces of windshield glass out of his face. He endured five surgeries, and until they put a screen over the hole in his forehead, his pulse was visible. The parents suffered more. To Mike's regret, his doctor father saw him right after the accident, battered beyond recognition. His dad died at 60.

Peachie's dad, Jack Barnum, the quintessential hard-driving executive, drank heavily and battled stomach problems.

"That accident was the end of their lives," recalled Peachie's older sister, Patty Barnum Moorhead. "My dad was promoted to Germany, but he couldn't go. Mom gave up. All Dad could do was cry, and be sad."

It was when he became a father that it really struck Mike.

"Thinking about Jack Barnum, looking at Dad, I understood," he said. "If

anybody did that to my kids, I'd want to kill them. Dr. Christman (victim Sandy Christman's father) and Jack Barnum were just so angry. They were mad as hell and they couldn't lash out."

There was no obvious target to lash out against. The 22-year-old who caused the deaths was dead. His parents visited the homes of each of the victims to apologize.

Roddy's dad, Ed Henderson, appeared stoic.

"My dad didn't show much emotion, but I think he paid for it later," said Roddy's sister Nancy. "He had stomach problems his whole life."

Today, Mike, 61, and Bruce, 62, are doing well. Married and a father, Bruce is a veterinarian in Massachusetts. Married and a grandfather, Mike analyzes blood at Henry Ford Hospital in Detroit.

Until he points out a faint scar that cuts across his face, you wouldn't know he had endured a violent car crash.

Both men feel lucky, but there was survivor's guilt. "Especially the first year," said Bruce. "That's why it was so hard."

Mike avoided his dead friends' families, fearing he was a bad memory. Today he is close to Bruce, as well as the Hendersons. "I need to talk to the Barnums," Mike said recently. "I need to call them, but it's going to be an emotional call."

Bruce still finds it painful to talk about the crash. "It's opening a scab up," he said.

Over the years, Roddy's sister Nancy struggled with depression and went through rehab. Reading Torry's book was hard at first, but "it's good to have the story told," she says now.

Questions linger

Until Torry started digging, many friends and relatives didn't know what the others had gone through. The Hendersons were surprised so many of Roddy's classmates still thought about him.

At her brother's 40th class reunion, Nancy Henderson discovered that many still visited his grave. It's almost visible through the winter trees from Maple Road, a serene setting for the end of a long life, but too quiet for a 16-year-old.

The question "why?" still lingers. The best grief counseling can't explain why a teenager goes out for a pizza, drives the speed limit and never comes home.

For author Torry, there's an anti-drunken-driving message: The teens died because of an impaired driver who wasn't dealt with after an earlier incident.

Peachie's sister Patty finds solace in her religious beliefs. "I feel we will be reunited," said Patty.

Fleming, one of the friends who visits Roddy's grave, has a harder time making sense of it.

"I have no idea why this happened," Fleming said. "There is no reason."

In the cold, hard view of science: One minute you're alive, the next minute you're gone.

A light on Maple Road is a constant reminder.

swhitall@detnews.com">swhitall@detnews.com (313) 222-2156

About the book

"Henderson's Light: Drinking, Driving and a Deadly Encounter" (Countinghouse Press,

Westchester Village Homeowner Association

www.westchestervillagehoa.com

Catherine Beer
President &
Architectural Review
248-821-9903

Don Hirst
Vice President &
Architectural Review
248-613-8726

Open
Secretary

Rick Beer
Treasurer
248-808-1644

Robin Adams
Director
313-277-3278

William Byrne
Director &
Architectural Review
248-915-9623

Ed Genheimer
Director &
Architectural Review
248-229-5292

Tom Caltrider PE
Architectural Review
248-255-7663

May 4, 2015

Birmingham City Commission
151 Martin Street
Birmingham, MI 48012

The Board and Directors of Westchester Village Homeowner Association would like to express our concerns regarding the City of Birmingham's Multimodal proposal for Maple Road between Cranbrook Road and Southfield Road. Our issues with this proposal concern residential safety and the increased burden this proposal would bring on our neighborhood streets.

With Maple Road's proposed reduction from four to two lanes between Cranbrook and Southfield, traffic congestion will significantly increase. Drivers looking for alternative routes to bypass that congestion, especially at the Maple/Cranbrook intersection, will undoubtedly use Westchester Village streets as pass-throughs to their destinations. The resulting effect of this new traffic to the neighborhood will be compromised safety, increased noise and irresponsible non-residential traffic through the neighborhood.

Westbourne Drive already suffers it share of unwanted traffic as a pass-through between Maple and Cranbrook to/from Lincoln. At both morning and evening rush hours, as well as at Seaholm High School dismissal times, it is difficult to make turns out of the neighborhood, to control excess speeding on our streets and to manage the indiscriminate littering non-residential traffic brings. It is our concern this proposal and the resulting traffic congestion will only increase these issues on Westbourne as well as Middlebury, W. Bradford and Berkshire.

For these reasons, Westchester Village does not support the Multimodal proposal and urges the Birmingham City Commission's rejection of this plan.

Sincerely,

Catherine Beer
President
Westchester Village Homeowner Association
UHOA Bloomfield Twp. Board member

May 11, 2015

Birmingham City Commission
151 Martin Street
Birmingham, MI 48009

As Bloomfield Village residents, we are very concerned about the potential negative impact of the Multimodal proposal along Maple Road. Our street, Westwood Drive, will be directly affected and we are concerned about the travel and safety for all Birmingham and Bloomfield Village residents.

Our concerns are four-fold:

- If Maple Road is reduced to one traffic lane in each direction, the traffic congestion will impede east-west travel, especially during rush hour.
- To avoid the resulting traffic congestion, residential streets like Bradway, Pine and Oak will see a marked increase in traffic thus causing noise and safety concerns.
- Response times for emergency vehicles from Bloomfield Township could be at-risk.
- As cyclists, we enjoy biking in the neighborhood but we would be very reluctant to use the multimodal path on such a busy thoroughfare as Maple.

Please count us among the many residents who are opposed to the Multimodal plan.

Regards,

Claudia & Dan Malone

Claudia and Dan Malone
372 Westwood Drive
Bloomfield Village, MI 48301

Paul O'Meara <pomeara@bhamgov.org>

Fwd: FW: W. Maple Road Project proposal

1 message

Laura Pierce <lpierce@bhamgov.org> Mon, May 18, 2015 at 12:54 PM
To: "Clemence, Mark" <Mclemence@bhamgov.org>, "O'Meara, Paul" <Pomeara@bhamgov.org>, Jana Ecker <Jecker@bhamgov.org>

FYI - See below re: West Maple

City of Birmingham
Laura M. Pierce, MMC, CMMC | City Clerk | City Clerk's Office |
P.O. Box 3001, 151 Martin | Birmingham, Michigan 48012 |
Phone 248.530.1802 or 248.530.1880 | Fax 248.530.1080 | www.bhamgov.org

---------- Forwarded message ----------
From: Joe Valentine <jvalentine@bhamgov.org>
Date: Mon, May 18, 2015 at 11:30 AM
Subject: Re: FW: W. Maple Road Project proposal
To: Art Atkinson <villagemanager@bloomfieldvillage.net>
Cc: barryconnelly@aol.com, Laura Pierce <lpierce@bhamgov.org>

Art,

Thanks for your email. You can send it to our City Clerk, Laura Pierce. I have copied her on this email and she will share Mr. Connelly's email concerns, and any others, with them.

Regards,
Joe

On Fri, May 15, 2015 at 10:06 AM, Art Atkinson <villagemanager@bloomfieldvillage.net> wrote:

> Joe,
>
> What is the best way to forward Bloomfield Village resident's comments to the Birmingham City Commission?
>
> I watched the MMTB Maple Rd Subcommittee meeting where they made their recommendation to proceed with the reduction of travel lanes on W. Maple. So it appears that Bloomfield Village Board letter and Bloomfield Village resident feedback did not change the plan so far.
>
> Art Atkinson
>
> Village Manager

Office: 248.594.8376

Fax: 248.594.8379

From: Barry Connelly [mailto:barryconnelly@aol.com]
Sent: Thursday, May 14, 2015 6:30 PM
To: villagemanager@bloomfieldvillage.net
Subject: W. Maple Road Project proposal

Hello Art,

I want to add my opposition to the subject project as not well thought through by city planners to total impact on our city or residents. I live two houses off Maple on Bradway Blvd. which is only one block east of the Cranbrook light / intersection. Many people already cut through Bradway to avoid waiting for the light and a single lane will cause only 2X more of a back up and more impatience to cycle through the intersection. We look forward to summer and open windows however, this proposal would add twice the noise pollution in the neighborhood and make open windows less enjoyable. The extra patrolling of side streets for added traffic using residential streets by our police will be an undue or unfunded burden to the police budget as well.

Additionally, The Birmingham City Commission has not considered the added waste of gas, the environment and exhaust odors (think Dream Cruise) at each light along Maple by running cars at idle awaiting long backed up intersections again adding to the decrease in the quality of life for all Birmingham and Bloomfield residents along Maple. The traffic using Maple daily will not be reduced, only twice as long and its effect will also have less time where traffic is gone and some peaceful time can be enjoyed as it is currently.

This proposal may also back fire on the businesses of Birmingham, I can more easily go to Lahser or Telegraph for food and shopping with less stress after work then I likely will. The use of Lincoln to avoid Birmingham may also appeal as I can arrive at other Southfield restaurants down Southfield road more easily than driving through a Birminghams stress test.

When I heard Maple was to be redone with a bike lane, I envisioned an added safe bike space by pushing back the curbs or adding it behind the existing curb or even the widening of the existing sidewalk, any of the above is better than the proposed. Adding a bike lane is a fine addition to our community however, attempting to eliminate a road lane is not the answer.

Sincerely,

Barry Connelly

2412 Bradway Blvd.

Bloomfield Village

City of Birmingham

Paul O'Meara <pomeara@bhamgov.org>

Re: City Commission Meesting Agenda Item

1 message

Joe Valentine <jvalentine@bhamgov.org> Wed, Apr 22, 2015 at 5:28 PM
To: jmirro <jmirro@intromarketing.com>
Cc: Stuart Sherman <stuart.sherman@sbcglobal.net>, Racky Hoff <rackyhoff@hotmail.com>, George Dilgard <gdilgard@hotmail.com>, Tom McDaniel <mcdaniel_tom@hotmail.com>, Scott Moore <sdm984@sbcglobal.net>, Mark Nickita <markforbirmingham@yahoo.com>, Gordon Rinschler <gordon4bham@aol.com>, Jana Ecker <Jecker@bhamgov.org>, Paul O'Meara <Pomeara@bhamgov.org>, Mark Clemence <Mclemence@bhamgov.org>

Mr. Mirro,

Thank you for your email reiterating your perspectives for how you would like the process to proceed. As I mentioned in my April 7th email to you, in order to follow the correct process, the City Commission has indicated it would like a thorough review conducted by the Multi-Modal Transportation Board prior to having this matter come before them so they can make an informed decision based on all data, information and public input. You will have the opportunity and are welcome to offer your input during the open part of the agenda when this is discussed at the next Multi-Modal Transportation Board meeting for their consideration in developing their recommendation. You will have the same opportunity to offer your input when this item is advanced to the City Commission.

I hope you find this explanation of the process helpful to assist you in providing any input you wish to contribute.

Regards,
Joe Valentine

On Wed, Apr 22, 2015 at 9:26 AM, jmirro <jmirro@intromarketing.com> wrote:

> Hello Joe,
>
> As you can see from my April 20 email to Jana Ecker (below), the Neighborhood Organization is working closely with the Steering Committee and the MMTB regarding West Maple Road recommendations. We will continue working with both groups and attending all their meetings while they are creating their recommendations for the City Commission on the future of this road. This does not mean, however, that the Neighborhood organization gives up its right to suggest other ideas to the City Commission for West Maple Road as part of its Neighborhood Multimodal Plan.
>
> On April 7, I sent you an email asking that the Neighborhood organization be given space on the April 9 City Commission Meeting Agenda to express its ideas that are separate from the recommendations provided by the Steering Committee and the MMTB. You wrote back that the April 9 Agenda “has already been set” and “since the MMTB has not yet completed this charge (a thorough review of all data, information and their public review), it is premature to include this as an agenda item for the City Commission.”
>
> In asking for an agenda item on the City Commission Meeting, the Neighborhood organization is not asking for a vote from the City Commission at this time. We are only asking that the Commissioners have an open mind during the study process about hearing other ideas that, for one reason or another, are not being incorporated into the plan by either the Steering Committee or the MMTB. One City Commissioner emailed me on April 10 and stated that “the neighborhood plan has some good ideas.” The Neighborhood organization simply wants the other Commissioners to judge this for themselves.

Toward this end, I am once again asking you to place the Neighborhood Multimodal Plan on the agenda of the next City Commission Meeting which I understand is scheduled for April 27. If the agenda for this meeting is also set, then I would like it placed on the agenda for the May 11 City Commission Meeting. If you are not able to do this either, then the Neighborhood organization needs to question what is meant by "Keep an open mind" which was the headline of your guest editorial in the 1-18-15 Birmingham Eccentric. If the City Commissioners do not get an opportunity to hear all ideas, how can we expect them to "make an informed decision" that you stated as a goal in your April 7 email?

Jim Mirro

737 Arlington

248-420-5113

Neighborhood Representative

P. S. The 4-22-15 response from Jana Ecker (last attachment) underscores the need for the Neighborhood Multimodal Plan to be on an upcoming agenda.

From: jmirro [mailto:jmirro@intromarketing.com]
Sent: Monday, April 20, 2015 4:40 PM
To: 'Jana Ecker'
Cc: 'Paul O'Meara'; 'Mark Clemence'; 'jvalentine@bhamgov.org'; 'vionnajones@gmai.com'; 'lmedwards08@gmail.com'; 'KGR307@aol.com'; 'sbordman@maddinhauser.com'; 'msc@mikeclawsonlaw.com'; 'kadtender@aol.com'; 'terry.lang@beaumont.edu'; 'eugene.nelson0@gmail.com'; 'Alice Silbergleit'; 'Russ Ives'
Subject: 3-Lane Test & Re-Vote

Hello Jana,

Thank you for facilitating the 4-16-15 Steering Committee Meeting and for permitting its Chairman, Dave Underdown, to accept questions from the public at the end of each subject discussed during the meeting rather than having all questions held to the end of the meeting. Dave and I, as well as others in the audience, thought that this process led to a more inclusive meeting and helped incorporate improvements to the plan as the meeting progressed.

Despite this positive aspect of the meeting, Dave and I spoke over the past weekend and concluded that the vote held at the very end of the meeting was invalid for a number of reasons outlined in the 1st and 2nd attachments to this email. Because Dave is both the Chairman of the Steering Committee and a member of the Neighborhood organization, he asked me to outline the parameters of a valid 3-lane test which I have done in the 3rd attachment. The 4th attachment is the suggested wording of the Revised Recommendation A and carryover Recommendation B.

Dave further asked me to email all of this to you, the other city managers and the rest of the Steering Committee with a request to meet for a re-vote on this subject on Thursday, 4-30-15 at 6:00 pm which would

248-420-5113

Neighborhood Representative

4 attachments

- Invalid Vote of Steering Committee.pdf
  37K
- Steering Committee Substitute Policy.pdf
  32K
- Wes Maple Road 3-Lane Test.pdf
  37K
- Wording of Recommendations A & B.pdf
  36K

Jana Ecker <jecker@bhamgov.org>

Re: Road project (proposed)

1 message

Joe Valentine <jvalentine@bhamgov.org> Wed, Apr 29, 2015 at 12:25 PM
To: Ken Borovich <kborovich@villagedentaloffice.com>
Cc: Scott Moore <sdm984@sbcglobal.net>, George Dilgard <gdilgard@hotmail.com>, Racky Hoff <rackyhoff@hotmail.com>, Tom McDaniel <mcdaniel_tom@hotmail.com>, Mark Nickita <markforbirmingham@yahoo.com>, Gordon Rinschler <gordon4bham@aol.com>, Stuart Sherman <stuart.sherman@sbcglobal.net>, Paul O'Meara <Pomeara@bhamgov.org>, Jana Ecker <Jecker@bhamgov.org>, Mark Clemence <Mclemence@bhamgov.org>

Mr. Borovich,

Thank you for your email sharing your view of West Maple Road. I will have your comments shared with the Multi-Modal Transportation Board that will be reviewing this matter at their next meeting on May 7th at 6:00pm in the Municipal Building. At this meeting they will be reviewing the issues presented by an ad hoc steering committee for West Maple and the information and recommendations that resulted from their study of this issue. You may find this informative should you wish to attend or simply share your views again if you wish.

Regards,
Joe Valentine

On Wed, Apr 29, 2015 at 12:06 PM, Ken Borovich <kborovich@villagedentaloffice.com> wrote:

> City Commissioners,
>
> I am definitely opposed to changing Maple road from Cranbrook to Southfield rd. . Making this section two lanes with a center turn lane I think will impede the flow of traffic. I urge you to vote against this proposal. Thank you.
>
> Ken Borovich

–
Joseph A. Valentine
City Manager
City of Birmingham
151 Martin Street
Birmingham, MI 48009
(248) 530-1809 Office Direct
(248) 530-1109 Fax
jvalentine@bhamgov.org

Get the latest news from the City of Birmingham delivered to your inbox.
Visit www.bhamgov.org/aroundtown to sign up.

Paul O'Meara <pomeara@bhamgov.org>

RE: Invalid West Maple Road Vote

1 message

jmirro <jmirro@intromarketing.com> Wed, May 6, 2015 at 11:56 PM
To: Joe Valentine <jvalentine@bhamgov.org>
Cc: jopardee@gmail.com, sbordman@maddinhauser.com, lmedwards08@gmail.com, andlawson@deloitte.com, adriana.tatuch@gmail.com, awarner@aol.com, vionnajones@gmai.com, michael@surnow.com, Jana Ecker <jecker@bhamgov.org>, Paul O'Meara <pomeara@bhamgov.org>, Mark Clemence <mclemence@bhamgov.org>, Mike Labadie <mlabadie@fveng.com>

Joe,

I have never claimed to be perfect and so I phoned three guests this evening who attended the last Steering Committee Meeting on 4-16-15. Not one of them remembers seeing a traffic light stop and go simulation at Lake Park and at Chesterfield in Mike's model. But, to clear up this issue, I suggest that Mike present his model again at the 5-7-15 MMTB Meeting and point out the traffic light simulation for everyone to see.

I would further ask that Mike's simulation use rush hour traffic volume with the correct number of cars entering and exiting West Maple Road from all side streets since no one in the audience on 4-16-15 believed that side road traffic in the model was equal to what they regularly see with their own eyes during rush hour. It does little good to simulate West Maple Road traffic flow during an "average period" since rush hour in the morning and the evening is where the congestion and left turn waits will become evident. Even the Committee Chairman at the last Steering Committee Meeting said that he did not understand how the 4 lanes of traffic could be compressed into 2 traffic lanes without congestion, but was willing to go along with a test to keep an open mind that the plan may possibly work.

This brings me to the subject of a test which requires the Planning Department to discuss on Thursday what constitutes success or failure when the test is completed. This issue was glossed over on 4-16-15, but needs a full explanation on Thursday. If we are selling the 3-lane plan primarily on a reduced number of accidents, then we need to track both West Maple and side road accidents during the test period compared with the same period in the previous year. Can and will this be done? In addition, the Neighborhood Organization will only support a test before the road is paved which can easily be done with paint striping to simulate the proposed 3-lane scenario. Is this agreeable to the city? Please have these questions addressed at Thursday's meeting.

As to the cross section of road issue, we need to have a definitive statement regarding what will keep vehicles from illegally passing in the proposed 7' "no man's land" to the right of traffic lanes and what will keep bicyclists from using this space if we consider it too dangerous to be designated as an in-road bike lane. This space may also be used for illegal merging on right turns from side roads. In addition, we need to hear what will keep vehicles from using the middle lane for illegal passing from the traffic lanes and also for making a left turn from a side road while waiting to merge into the traffic lane during long queue situations.

Thursday's meeting might also be a good time for you to see the simulation model and hear the discussion yourself, since this could very well be the last MMTB Meeting before Jana asks its members for their vote. I have been informed that, once this occurs, their recommendation will be turned over to the City Commissioners and, at that point, you own the recommendation being presented to them. To tell the Commissioners that a 3-

lane plan is the consensus recommendation for the City of Birmingham, you need to understand the feelings of both the Board Members and the audience which cannot be done without attending this meeting.

I plan to attend the meeting and hope to see you there too.

Jim Mirro

248-420-5113

Neighborhood Representative

From: Joe Valentine [mailto:jvalentine@bhamgov.org]
Sent: Wednesday, May 06, 2015 4:36 PM
To: jmirro
Cc: jopardee@gmail.com; sbordman@maddinhauser.com; lmedwards08@gmail.com; andlawson@deloitte.com; adriana.tatuch@gmail.com; awarner@aol.com; vionnajones@gmai.com; michael@surnow.com; Jana Ecker; Paul O'Meara; Mark Clemence; Mike Labadie
Subject: Re: Invalid West Maple Road Vote

Mr. Mirro,

I read with interest your concerns expressed in your email of May 5th to the Mutli-Modal Transportation Board (MMTB). After discussing with staff and our traffic consultant, I must clarify that your assertions are not correct. I recognize you have not attended all meetings of the Steering Committee, but thought the following information may be of interest to you.

To clarify, contrary to your statements, the removal of traffic lights was never part of the traffic modeling presented to the Steering Committee.

In regard to the configuration of the lanes, this concept still requires review by the MMTB and your concern about the cross-section of the roadway is a topic that will be discussed in further detail.

As you know, the MMTB will be reviewing this at their next meeting before any recommendations are made. As you referenced, the recommendation by the Steering Committee does require further review by the MMTB in addressing some issues that require further attention.

I hope this resolves any confusion you may have had from your understanding of the issues at the last Steering Committee meeting.

Regards,

Joe Valentine

On Tue, May 5, 2015 at 5:46 PM, jmirro <jmirro@intromarketing.com> wrote:

MMTB Members,

I believe that you will be informed at Thursday's MMTB Meeting that the Steering Committee Members at their 4-16-15 meeting voted by an overwhelming 7 to 2 majority to adopt the 3-lane plan for West Maple Road. As you can see from the email exchange below, I tried to explain to Jana Ecker why this vote was invalid from the viewpoint of parliamentary procedure, but without success. I did not want to do this, but I guess that I have no other alternative but to explain now why this vote was also invalid from the standpoint of conflicting assumptions.

At all of the Steering Committee meetings I have attended this year, traffic consultant Mike Labadie provided traffic studies and computer simulations based on the original assumptions for Recommendation A that West Maple Road would have 3 lanes and no traffic lights. When Jana asked for a new vote during the last 15 minutes of the 4-16-15 Steering Committee Meeting, one of the major changes she made was to tell the Steering Committee Members that both traffic lights would be retained as part of the vote. By doing this, Jana automatically invalidated Mike's computer model regarding manageable traffic queues and vehicle platoons.

With traffic lights back into the equation, acceptable traffic flow with 3 lanes can no longer be assured. This results in unacceptable congestion for through traffic and no space for vehicles turning left onto West Maple Road from side streets during rush hour. Because of this, the city cannot possibly claim that the Steering Committee vote is valid and needs to either call for a re-vote or ask the MMTB members to ignore completely the results of the 4-16-15 vote when casting their votes. All of this could probably have been avoided if the Steering Committee had been permitted to discuss the revised assumptions before calling for a vote as required by Roberts Rules of Order.

I need also to point out that an assumption is needed for the 7' of "no man's land" to the right of traffic lanes since Jana also informed the Steering Committee that in-road bike lanes are no longer being considered as part of the vote. If this space is merely stripe-painted, what will keep frustrated drivers from illegally passing on the right since most cars are 6' wide? If nothing, then we are endangering those passengers from school/SMART buses who are disembarking in this area. So, while 3 lanes of traffic may reduce some left-turn fender-bender accidents, it will increase fatal accidents with bus passengers and those bicyclists who decide to ride in this deadly area because it is available even if not paint striped as a bike lane. Nice multimodal plan.

Clearly the rules are being made up as we go in order to obtain votes that look like a majority of people are in favor of a 3-lane road, when nothing can be further from the truth. Why else did all 12 visitors who attended the 4-16-15 Steering Committee Meeting (and who chose to make a comment) speak against the 3-lane concept? Is anyone listening? And is anyone thinking?

Jim Mirro

248-420-5113

Neighborhood Representative

From: Jana Ecker [mailto:jecker@bhamgov.org]
Sent: Tuesday, April 21, 2015 4:12 PM
To: jmirro
Cc: Paul O'Meara; Mark Clemence; Joe Valentine; vionnajones@gmai.com; Lara Edwards; Karen Rock; Stuart M. Bordman; Mike Clawson; kadtender@aol.com; Terry Lang; eugene.nelson0@gmail.com; Alice Silbergleit; Russ Ives
Subject: Re: 3-Lane Test & Re-Vote

Mr. Mirro,

Thank you for your comments. The work of the Ad Hoc Steering Committee for the W. Maple Road corridor is now complete. The W. Maple corridor will be discussed next at the Multi-Modal Transportation Board meeting on May 7, 2015 at 6:00 pm.

Jana Ecker

On Mon, Apr 20, 2015 at 4:39 PM, jmirro <jmirro@intromarketing.com> wrote:

Hello Jana,

Thank you for facilitating the 4-16-15 Steering Committee Meeting and for permitting its Chairman, Dave Underdown, to accept questions from the public at the end of each subject discussed during the meeting rather than having all questions held to the end of the meeting. Dave and I, as well as others in the audience, thought that this process led to a more inclusive meeting and helped incorporate improvements to the plan as the meeting progressed.

Despite this positive aspect of the meeting, Dave and I spoke over the past weekend and concluded that the vote held at the very end of the meeting was invalid for a number of reasons outlined in the 1st and 2nd attachments to this email. Because Dave is both the Chairman of the Steering Committee and a member of the Neighborhood organization, he asked me to outline the parameters of a valid 3-lane test which I have done in the 3rd attachment. The 4th attachment is the suggested wording of the Revised Recommendation A and carryover Recommendation B.

Dave further asked me to email all of this to you, the other city managers and the rest of the Steering Committee with a request to meet for a re-vote on this subject on Thursday, 4-30-15 at 6:00 pm which would be two weeks from the last Steering Committee Meeting. It would also be one week prior to the next MMTB Meeting scheduled for 5-7-15. Therefore, this re-vote between Revised Recommendation A (3-lane plan with a test before construction) and carryover Recommendation B (4-lane plan) will provide enough time for you to have the results ready for MMTB review at that meeting.

Dave did not have time to pull together this email and attachments over the past weekend, but asked me to do it for him and he has reviewed all of it. If you wish to confirm this with Dave, you can email him at douglascleaners@hotmail.com or call him on his personal cell phone at 248-909-1072. In order for everyone to

plan properly for attending the 4-30-15 meeting, please confirm you approval of the attached plan and meeting date with all addressees by Wednesday, 4-22-15. And, by the way, I am available to be a substitute for any Steering Committee Member who is not able to make this meeting. Thank you.

Jim Mirro

248-420-5113

Neighborhood Representative

--

Jana L. Ecker

Planning Director

City of Birmingham

248-530-1841

--

Joseph A. Valentine

City Manager

City of Birmingham

151 Martin Street

Birmingham, MI 48009

(248) 530-1809 Office Direct

(248) 530-1109 Fax

jvalentine@bhamgov.org

Paul O'Meara <pomeara@bhamgov.org>

Birmingham Charter Amendment Petition Plan

1 message

jmirro <jmirro@intromarketing.com> Tue, May 26, 2015 at 9:44 AM
To: Laura Pierce <lpierce@bhamgov.org>
Cc: rozellj@oakgov.com, "Noble, Kim" <noblek@oakgov.com>, shelleytaub@comcast.net, tcurrier@bhlaw.us.com, Jana Ecker <jecker@bhamgov.org>, Paul O'Meara <pomeara@bhamgov.org>, Joe Valentine <jvalentine@bhamgov.org>, Bill Dow <dowbase@comcast.net>

Laura,

Thanks for the updated information you provided to me on May 18 regarding the Initiatory Petition (below). Based on information provided by you and Joe Rozell/Kim Noble, The Neighborhood Organization has drafted the attached plan for review by you and by the Oakland County Election Division with a requested response date of Thursday, May 28. Could you also let me know by this date if the Birmingham City Commission will be reviewing the Maple Road configuration plan on Monday, June 1? I am on email notification as you suggested, but I have not received a June 1 agenda as of yet.

We have created the proposed petition wording based on 3 sample petitions provided by Oakland County. We have taken the liberty of changing one word used in these sample petitions from “respectively submitted” to “respectfully submitted” which appears more grammatically correct. If the word “respectively” is still required, please let me know and we will use it. As to the street designations, we have used various study documents to determine the appropriate boundary cross streets of Maple Road: Waddington, Southfield, Woodward and Eton. If the Planning and Engineering Departments prefer other designations, they should let me know and we will consider changing these too.

Once the wording of the petition is agreed upon, it will be necessary to have the petition forms printed. The Neighborhood Organization would like to know if the City Clerk’s Office would like to print the petitions or if it prefers to have the Neighborhood Organization do this? If the City Clerk’s Office does the printing, will there be any charge to the Neighborhood Organization which could impact our decision “to raise money for the campaign?” I would also like Oakland County to inform my of any rules we need to follow in asking for donations if faced with the petition printing costs. The circulation of petitions would be done solely on a volunteer basis by Neighborhood residents with no hired circulators used.

After The Neighborhood Organization receives answers to the questions in this letter from the city/county and if the City Commission votes for 3 lanes at one of the June meetings, we will then prepare the letter you requested. In this regard, may we designate two contact persons? If so, I may be the contact for The Neighborhood Organization west of Woodward Avenue and Bill Dow (1347 Yorkshire, Birmingham Estates) may be the contact person for the Neighborhood Organization east of Woodward Avenue. If only one contact person is permitted, I may be the sole contact person and coordinate separately with Bill. The Neighborhood Organization representatives will make this decision at our next meeting

If you see no problem with the proposed petition wording, you are welcome to have Joe add this attachment to the City Commissioner packet on Maple Road. This may be important to some Commissioners who will be campaigning for office during the petition circulation period prior to the November 3 City Commission election

date.

Thanks to you and Tim for your research. I look forward to your answers by May 28 so that we may move forward on this important effort.

Jim Mirro

737 Arlington

248-420-5113

.

From: Laura Pierce [mailto:lpierce@bhamgov.org]
Sent: Monday, May 18, 2015 12:09 PM
To: jmirro
Cc: Joe Valentine; tim currier
Subject: Updated Information Re: Initiatory Petition

Jim,

I appreciate your patience during our busy election and parade cycle. Here is the information you requested regarding a charter amendment:

After further investigation, it was determined that the initiatory petition would fall under the Home Rule Cities Act. According to the Home Rule Cities Act, an initiatory petition requires signatures from only 5% of the registered voters. There are 16,766 registered voters in Birmingham. (5% = 839) Signatures must be collected within one year of the date which you file the petitions.

When you submit the petitions, please submit a letter with the name of the organization, contact person, and contact information for the group who circulated the petitions (in lieu of an affidavit).

If your organization plans to raise money for the campaign, please contact the Oakland County Elections Division for information on campaign finance.

Please let me know if I can be of further assistance.

Laura

City of Birmingham

Laura M. Pierce, MMC, CMMC | City Clerk | City Clerk's Office |

P.O. Box 3001, 151 Martin | Birmingham, Michigan 48012 |

Phone 248.530.1802 or 248.530.1880 | Fax 248.530.1080 | www.bhamgov.org

Birmingham Charter Amendment Petition Plan.doc
22K

RICHARD C. ROLLINS
466 ASPEN ROAD
BIRMINGHAM, MI 48009-1656

ROLLINSTAX@MSN.COM

(248)932-3500
248) 932-0826 FACSIMILE

February 24, 2015

Mayor Stuart Sherman
City of Birmingham
151 Martin
PO Box 3001
Birmingham, MI 48012-3001

Re: W. Maple

Dear Mayor Sherman:

As a Birmingham resident on Aspen, the duty of government is do what is best for the long term growth and development of Birmingham. To make it more than just an upscale city or one step up from Royal Oak or Ferndale or Berkley. Birmingham is great but it can be so much better. The City has so many opportunities to rise to the challenge of making Birmingham an enriching cultured and truly beautiful city. To make it more functional and aesthetic.

For example, West Maple and Woodward are nothing more than traffic speed lanes to move traffic at a high volume and at high speeds through the city. Maple is being used as the cross cutter for east to west corridor traffic between Telegraph and Woodward, for the middle of Oakland county traffic. Ending high speed pouring traffic into a two lane downtown Birmingham. Cutting north and south Birmingham residential neighborhoods with a high volume, high speed road that is totally ugly . Roads can be so much more. Maple can be so much more. Woodward can be so much more. Making Maple a one lane each with a Blvd with islands with trees in the middle and at the same time slowing traffic down in our residential Birmingham and reducing the noise of Maple. We see what has been done in downtown Birmingham along northern Woodward north of Maple. We noticed Southfield Road is reduced in size and speed as it enters Birmingham from the south from four lanes to two lanes. Would the individuals who object to downsizing Maple Lanes want Southfield Road to be four lanes through Birmingham? The intimacy of Southfield Road is what Maple needs.

I have noticed one of the objections to this change on Maple is a death over many years ago of an individual crossing Maple. I would think that the change would be promoted by these individuals and not objected to it: Less lanes, less traffic, island to cross to, etc. The other objections is it will hurt the Birmingham business district. I also cannot understand this objection either. Downtown Birmingham on Maple is already one lane each way. Booming Santa Barbara has closed all traffic on the main streets. Most of the

traffic just drives through Birmingham onto Woodward; So less speed, less traffic actually makes for a more friendly and inviting city. To me this is a win, win. It makes for a more friendly Birmingham.

Government must do what is best for the long term growth and beauty of a city. Many countries have had Popes and Napoleon and Kings and Emperors to make cities full of life and beauty and boulevards and parks. City government is elected to make the difficult decisions even if many of it's residence want the same as the past.

On another note, outdoor art installations can make a city alive and enriching. Bringing people from within Birmingham, to residences from other cities and States to come to see art throughout a remarkable downtown city Birmingham and improve downtown both for business and beauty. Increased business for downtown retail doesn't come from putting up tent signs in the middle of the sidewalk. It makes retail look desperate for business.

Look at what Grand Rapids is doing with art installations. I have always been amazed that Cranbrook, one of the great art facilities in the world is only two miles from Birmingham and there has been no spinoff from Cranbrook to Birmingham in bringing large art installations to the parks and streets. The art presently in Birmingham is one step up from high school. Where is Richard Serra works in our affluent city. I was on the art board of Birmingham for one day and I quit after I realized they spent a whole meeting discussing the cost of a small art plaque and the art of one of the art board members was actually displayed in our city. Also, when at the same time, they, the city, decided to take City general funds of over $800,000 to build better golf club houses. Please, give me a break.

Let's take the big steps necessary to improve our City. Let us lead and become so much more. Let Birmingham grow to be so much more with Maple as a Blvd with slower and less traffic and more art in our city.

Very truly yours,

RICHARD C. ROLLINS

RCR/dsf

cc: Mayor Pro Tem Rackeline Hoff
Commissioner George Dilgard
Commissioner Tom McDaniel
Commissioner Scott Moore
Commissioner Mark Nickita
City Manager, Joseph A. Valentine

May 11, 2015

Mr. Ruehlen and Mr. Valentine,

I can send the following letter electronically if that would assist you in any way. Feel free to contact me at: inked49@me.com. Please do not publicize this e mail address. Thanks!

Bill O'Neill
Birmingham, Michigan Resident

Bill O'Neill

May 11, 2015

Mr. Larry Ruehlen
Managing Editor Digital; Birmingham Editor
Birmingham, Michigan Observer Eccentric

cc: Mr. Joseph Valentine
City Manager
Birmingham, Michigan

Dear Mr. Ruehlen:

As a 35 year resident of Birmingham, with the past 30 years on Larchlea just south of Maple Road, I've been watching the debate concerning narrowing Maple Road with great interest. To date, the conversations have been framed by opinions, consultant forecasts and theoretical speculation. We currently have a real world example of what are the unintended or incorrectly forecast consequences of traffic flow alterations.

Due to some wisdom that escapes me, we currently have significant construction on both Oak and Quarton at the same time, so east-west traffic is currently clogging Maple or Lincoln. In the morning and afternoon, you literally can't enter Lincoln from Larchlea due to the backup in both directions, with lots of school buses and students trying to go to and from. Getting on Maple from our street requires some nice person to allow you to enter traffic or else you sit as traffic backs up at various lights.

The traffic from Maple onto Larchlea in the morning is crowded and at excessive speeds heading for Seaholm. Over recent years, our nice little neighborhood has become a main thoroughfare and cut-through for everything from cars to large trucks. I can only imagine what it will be like when Maple traffic is backed up to Cranbrook and Southfield and impatient drivers dive down side streets to avoid waiting.

If the true intention of this exercise is to slow traffic on Maple, which I agree with, how about a simple, existing approach. Expand the exceptional resource we currently have in Birmingham at minimal expense, and with the potential to generate revenue to off-set or exceed the costs, at the same time enforcing the law. Increase our police presence on Maple. As they say in the NFL, "you can call holding on any play". The same applies on Maple regarding excessive speed! This would also have the intended consequence of more visual presence for our officers deterring those who wish to consider our neighborhoods as easy targets. During this study period has anyone modeled the cost of new officers and vehicles, which I believe would be minimal to none , and the benefits this solution would provide for the community as a whole?

I've copied City Manager Joe Valentine on this letter, asking him to enter this into the files on the subject and mark at least this one citizen as a "NO" vote on the current proposal to narrow Maple Road. We have an amazing city with dedicated officials and residents, and most decisions have benefited those who live here, visit us, and our merchants. This proposal is a non-starter in my opinion.

Respectfully,

Bill O'Neill
Resident of Birmingham, Michigan