MULTI-MODAL TRANSPORTATION BOARD
THURSDAY, March 5, 2015
6:00 PM
CITY COMMISSION ROOM
151 MARTIN STREET, BIRMINGHAM

A. Roll Call

B. Introductions

C. Review of the Agenda

D. Approval of Minutes, Meeting of February 5, 2015

E. W. Maple Rd. Steering Committee
   Update on Activities

F. S. Eton Road Corridor Multi-Modal Improvements

G. Meeting Open to the Public for items not on the Agenda

H. Miscellaneous Communications:
   W. Maple Rd.

I. Adjournment

Notice: Due to Building Security, public entrance during non-business hours is through the Police Department—Pierce St. Entrance only. Individuals with disabilities requiring assistance to enter the building should request aid via the intercom system at the parking lot entrance gate on Henrietta St.

Persons with disabilities that may require assistance for effective participation in this public meeting should contact the City Clerk's Office at the number (248) 530-1880, or (248) 644-5115 (for the hearing impaired) at least one day before the meeting to request help in mobility, visual, hearing, or other assistance.

Las personas con incapacidad que requieren algún tipo de ayuda para la participación en esta sesión pública deben ponerse en contacto con la oficina del escribano de la ciudad en el número (248) 530-1800 o al (248) 644-5115 (para enos un dia antes de la reunión para solicitar ayuda a la movilidad, visual, auditiva, o de otras asistencias. (Title VI of the Civil Rights Act of 1964).

CITY OF BIRMINGHAM
MULTI-MODAL TRANSPORTATION BOARD
THURSDAY, FEBRUARY 5, 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, February 5, 2014. Chairperson Johanna Slanga convened the meeting at 6:03 p.m.

A. ROLL CALL

Present: Chairperson Johanna Slanga; Board Members Vionna Adams, Stuart Bordman, Lara Edwards, Jeff Surnow, Amanda Warner

Absent: Andy Lawson

Administration: Lauren Chapman, Asst. City Planner
Jana Ecker, Planning Director
Paul O'Meara, City Engineer
Carole Salutes, Recording Secretary

Also Present: Mike Labadie from Fleis & Vandenbrink ("F&V"), Transportation Engineering Consultants

B. INTRODUCTIONS (none)

C. REVIEW AGENDA (no change)

D. APPROVAL OF MINUTES, MEETING OF JANUARY 8, 2014

Moved and seconded to approve the Minutes of January 8, 2014 as presented.

Motion carried, 6-0.

E. W. MAPLE RD. AD HOC COMMITTEE

1. Review of first meeting

Ms. Ecker recalled there was a good turnout of committee members and visitors. She summarized that they went through a primer about what multi-modal transportation is. Mr. Norm Cox who did the Multi-Modal Plan for the City talked about what multi-modal planning is and why it is done. Further, he went through

some of the elements of the Plan. Then everyone around the table told about their thoughts on the existing W. Maple Rd. corridor. Everyone agreed they wanted to address making it safer, slowing down traffic, and backups at Southfield Rd. Also they didn't want to make the road worse than it is or to increase cut-through traffic in the neighborhoods.

Then Mr. Labadie offered background on what type of engineering tools and data they would be looking at when deciding on what the existing conditions are on W. Maple Rd. and where they want it to go. By the next meeting all of the data will have been collected to depict existing conditions. Their next meeting will be on Thursday, February 26 from 6 to 8 p.m.

A summary of each MMTB meeting will be posted on the City's website to keep the public informed.

F. SAXON RD. (Southfield Rd. to West City Limit)

1. Traffic Issues (verbal update)

Mr. O'Meara advised that the Deputy Chief of Police has talked with one homeowner who is concerned about speeds and traffic volume and would like to see some changes made. They are limited on things to recommend as the asphalt pavement with gravel shoulders is pretty narrow. It has been suggested that curb and gutter be installed, which would involve Beverly Hills because they own the south side of the street.. Staff will be talking to the homeowner, and Mr. O'Meara wanted the board to be aware about what is happening.

G. UPCOMING MULTI-MODAL BOARD PRIORITIES

Phase 1

Woodward Ave., Oak, Lincoln, N. Eton, Old Woodward Ave. to Willits, Derby.

Mr. O’Meara presented the Phase 2 map contained in the Multi-Modal Master Plan. He noted that the Board should start thinking about projects from Phase 2 they would like to prioritize.

In response to a question, Mr. O'Meara stated Woodward Ave. would not be a City project, and it is a separate phase that will a much broader project than just the two miles in Birmingham. Derby will be resurfaced. Old Woodward Ave. is scheduled to be re-built in 2018 & 2019.

Chairperson Slanga noted the need for an updated phase plan of what has been changed, where the bike paths are currently signed, and what would be quick

and easy to accomplish. Additionally, what are the infrastructure upgrades that need to be made. This board should be able to see as far out as 2020.

Ms. Ecker said staff can put together a background presentation on what the phases are; what has been done so far; what is next that is automatically going to get done because there is already money in the five-year capital improvement program; and then depict what is left. Staff will come in with a recommendation as to what they think are the priorities for the neighborhood connector.

H. MEETING OPEN TO THE PUBLIC FOR ITEMS NOT ON THE AGENDA

(no one spoke)

I. MISCELLANEOUS COMMUNICATIONS

1. W. Maple Rd. Project

Based upon comments he has heard, Mr. Bordman said he is concerned that the public views this board as a decision-making body and that they view the board as having already made up their minds to go from four to three lanes on Maple Rd. He thinks that before comments are taken from the public the board should read a statement reminding the public that neither the Ad Hoc Steering Committee nor the Multi-Modal Board endorses or recommends a W. Maple Rd. reduction. Further, board members are not the decision makers and they have not taken a position; it is their charge from the City Commission to go through this information gathering process.

Chairperson Slanga noted the purpose of this group is to enhance the infrastructure of the community. Ms. Ecker said she is working with the City's public relations person to do summaries of each meeting and to get out the word ~~out~~ about exactly what the process is, where they are in the process, and that public input is welcomed along the way.

It was decided that Mr. Bordman would organize his comments and send them to staff to be included in the members' packets for the next meeting.

Mr. Mike Clawson, 139 Pilgrim, a member of the W. Maple Rd. Steering Committee, noted there was an article in the Eccentric that stated the purpose of this board is to gather data and research what is going on. The board has not taken a position.

J. ADJOURNMENT

No further business being evident, the chairperson adjourned the meeting at 7:17 p.m.

Jana Ecker, Planning Director

Paul O'Meara, City Engineer

City of Birmingham
A Walkable Community

MEMORANDUM

Community Development

DATE: **February 27, 2015**

TO: **Multi-Modal Transportation Board**

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

SUBJECT: **Update on Steering Committee Activities**

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, and introduced some of the design tools communities can use in their street design to meet their specific objectives. Mr. Mike Labadie of Fleis & VandenBrink explained the basic types of data that traffic engineers collect and study when considering road improvements. In addition, steering committee members provided their comments and concerns regarding the 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.

On February 26, 2015, the steering committee met for the second time. Several members of the public also attended this meeting. 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, crash data gathered over the past 3 years, the results of past speed studies, sight distance findings, gap analysis findings and the levels of service for all intersections in the W. Maple corridor. Please see attached memo for an executive summary of the findings, as well as charts and tables of data collected.

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

After reviewing the existing conditions along the corridor, Mr. Labadie reviewed the following complete street / multi-modal design tools that are available for study to meet the objectives for improvements along the W. Maple corridor:

- 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.)

Next Steps:

Over the next month, Mr. Labadie and his team will review the areas of concern along W. Maple and consider options for improvement. All options identified will be analyzed and run through the SYNCHRO model for evaluation. The results will be presented at the next steering committee meeting on **Thursday, March 19, 2015 at 6:00pm** in the City Commission room (as the Board of Review will be using the conference rooms for the month of March).

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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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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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: Synchro Results
Crash Data
Collision Diagrams

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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

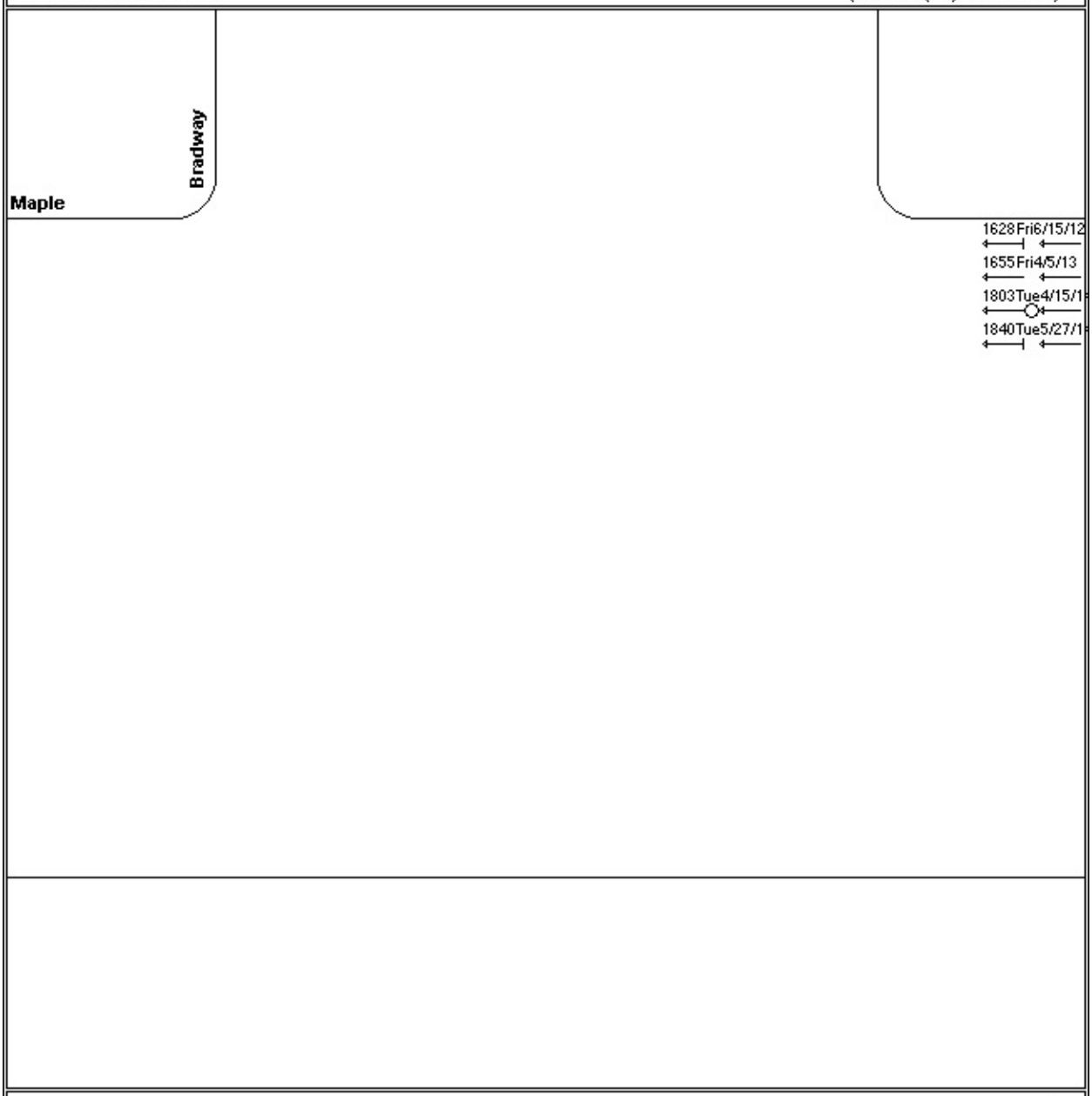
Crashes per Hour by Day

	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	
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

N

Traffic Improvement Association of Michigan

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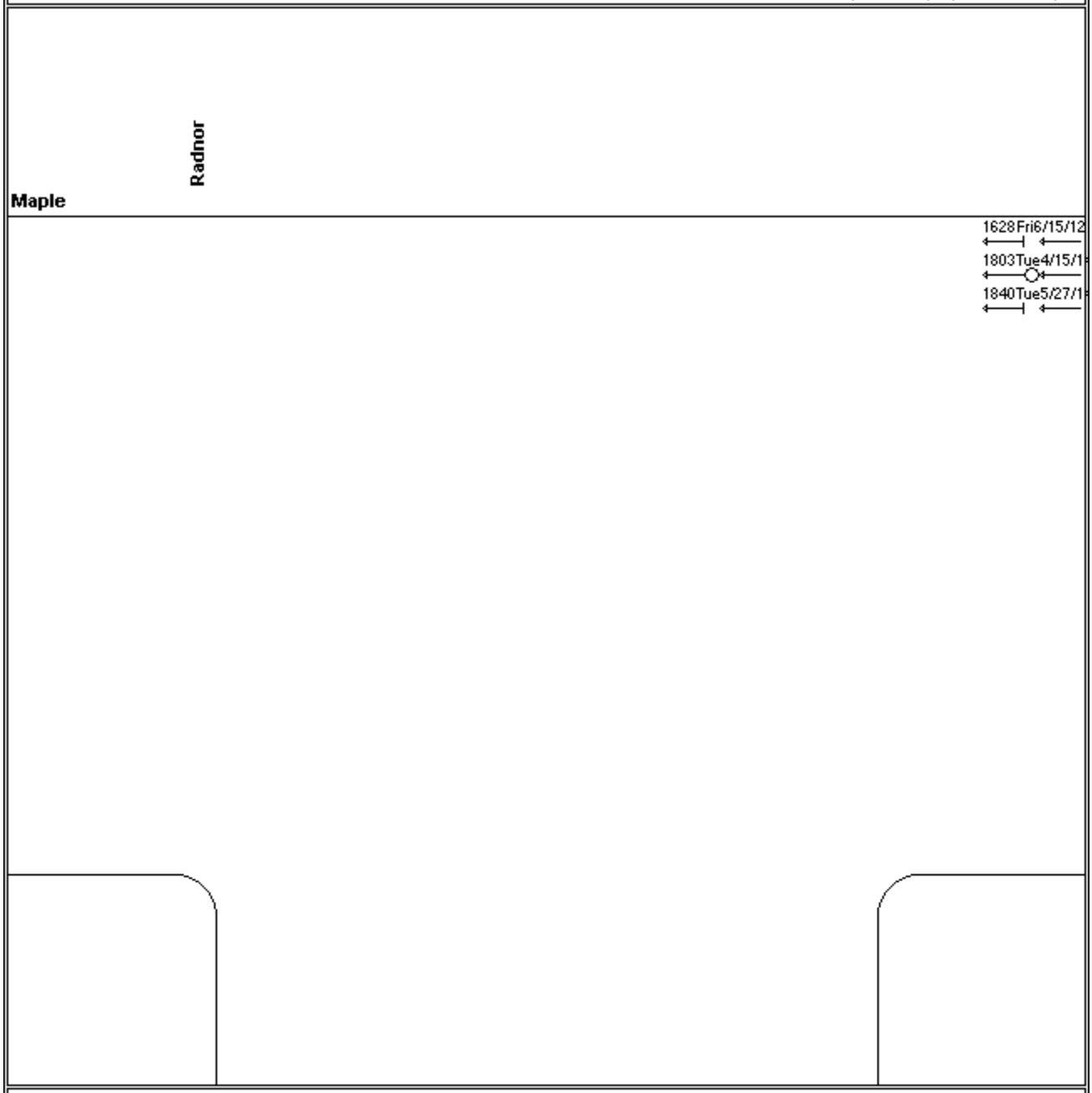
Radnor & Maple
1/1/2012 - 12/31/2014

Maple

3 Crashes
(0 crash(es) not drawn)

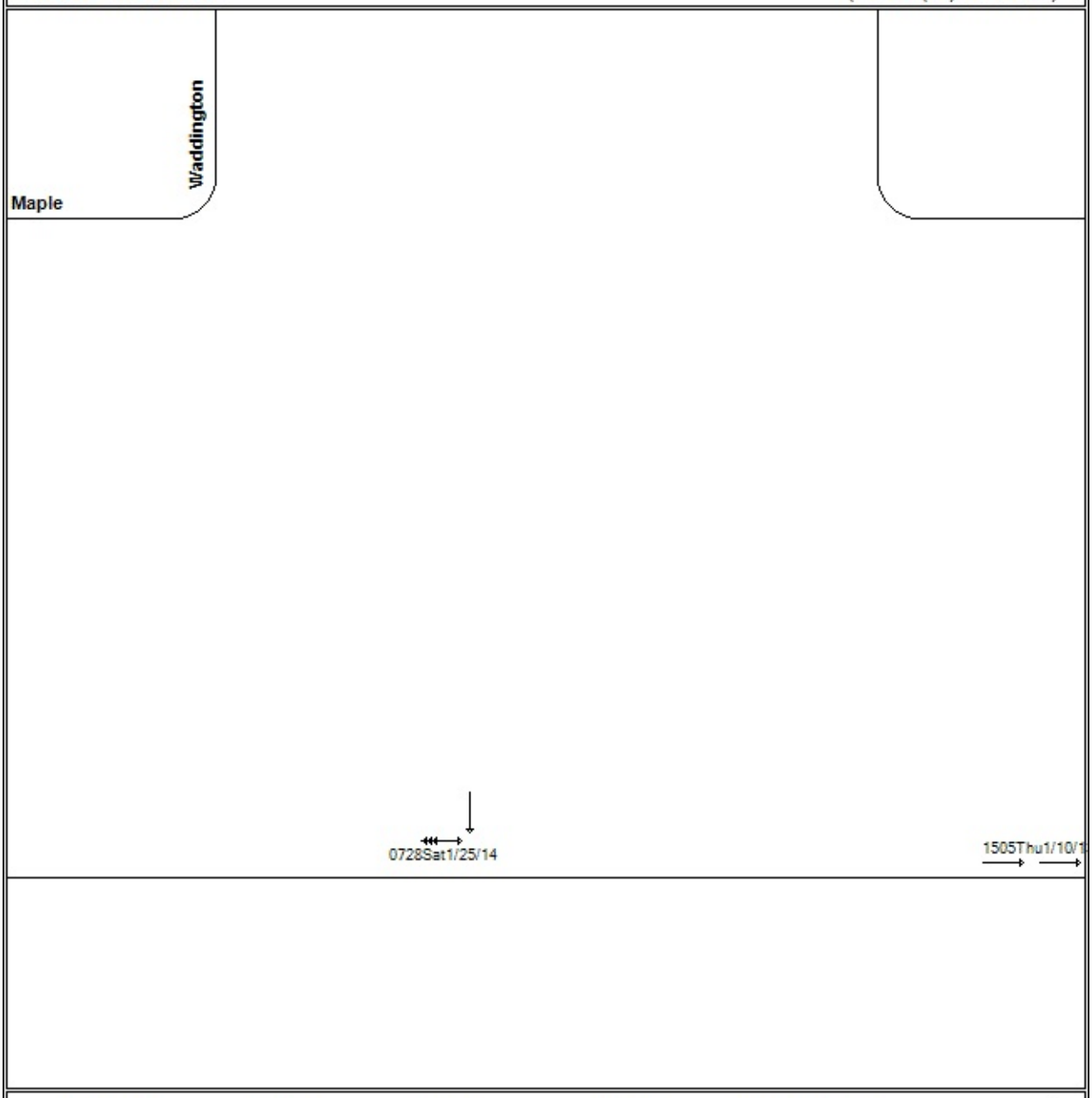


Straight	Backing	Erratic	Injury	S Sideswipe	
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/9/2015

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

Waddington

2 Crashes
(0 crash(es) not drawn)



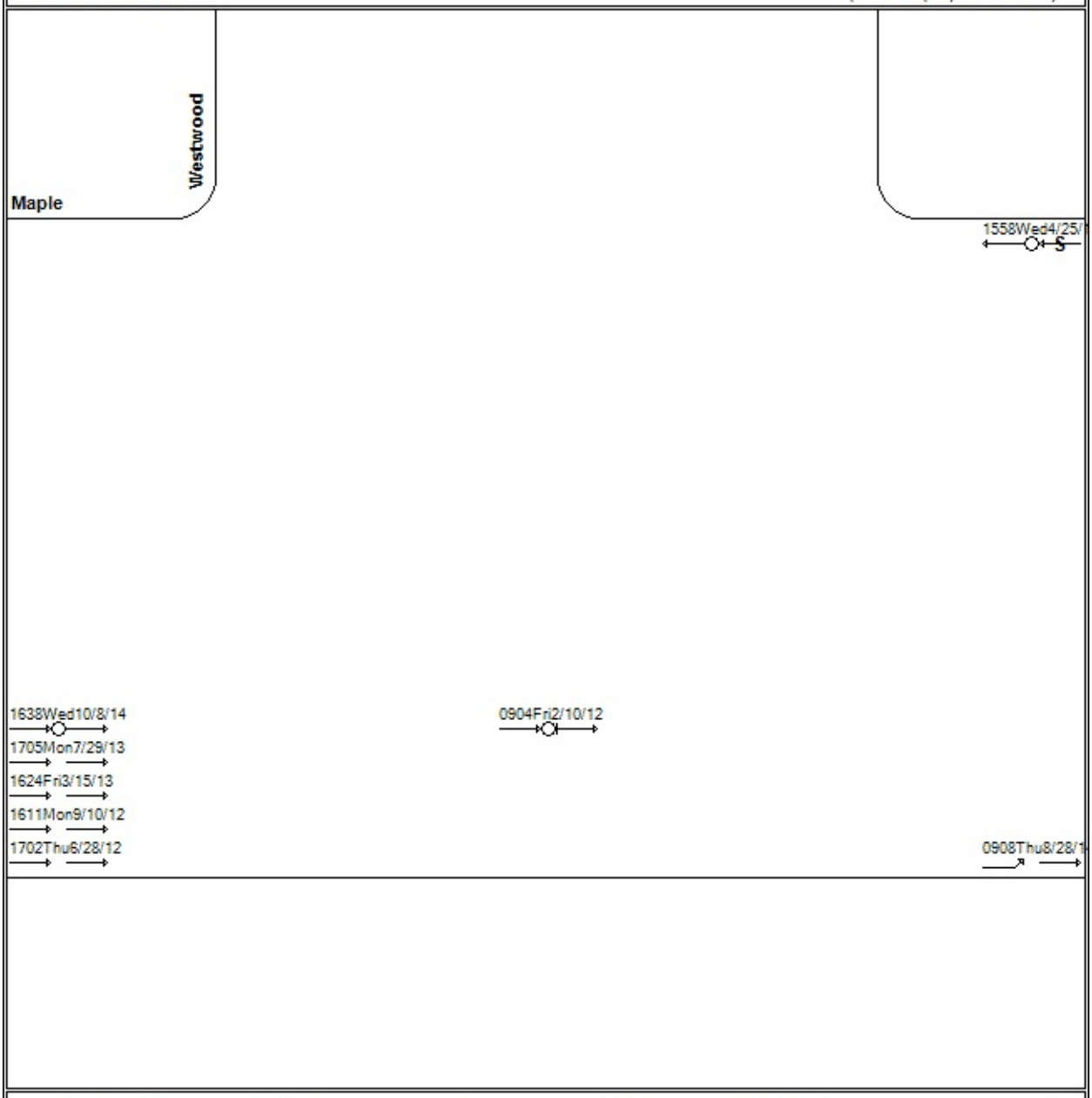
Straight	Backing	Erratic	Injury	S Sideswipe	
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/26/2015

N

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

Westwood

8 Crashes
(0 crash(es) not drawn)



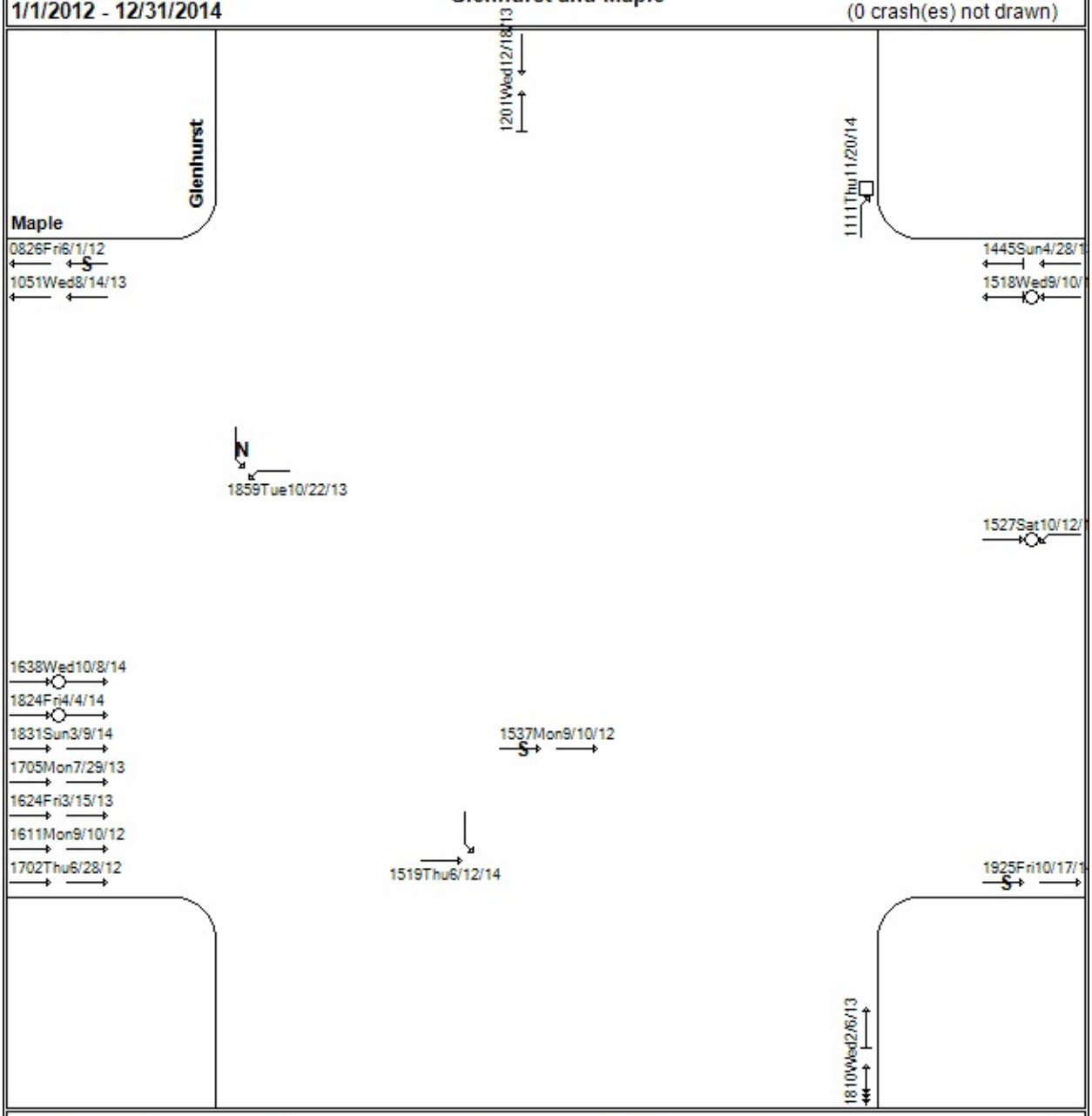
Straight	Backing	Erratic	Injury	S Sideswipe	
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/26/2015

N

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

Glenhurst and Maple

19 Crashes
(0 crash(es) not drawn)

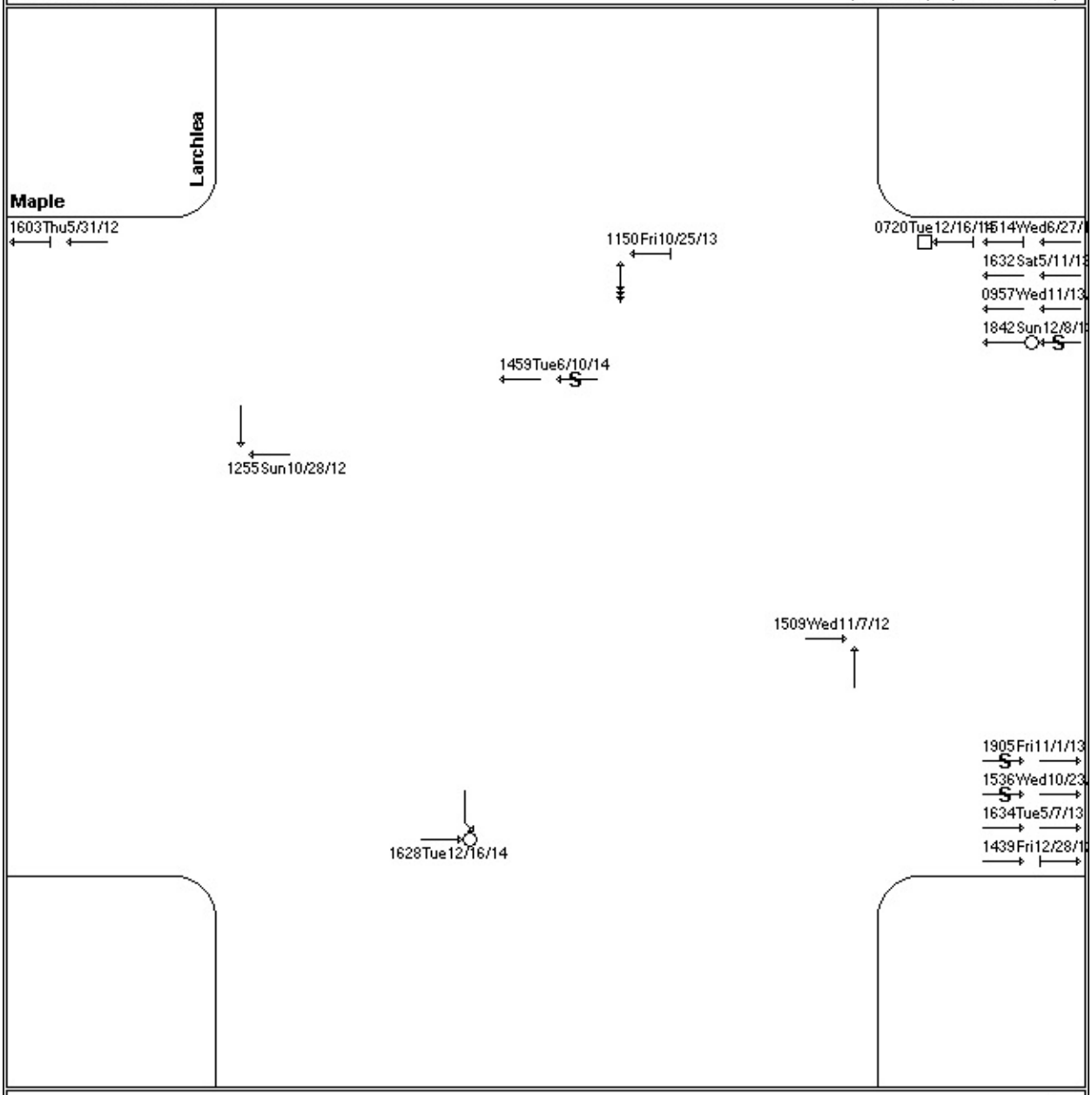


Straight	Backing	Erratic	Injury	S Sideswipe	N
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/26/2015

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

Maple

15 Crashes
(0 crash(es) not drawn)



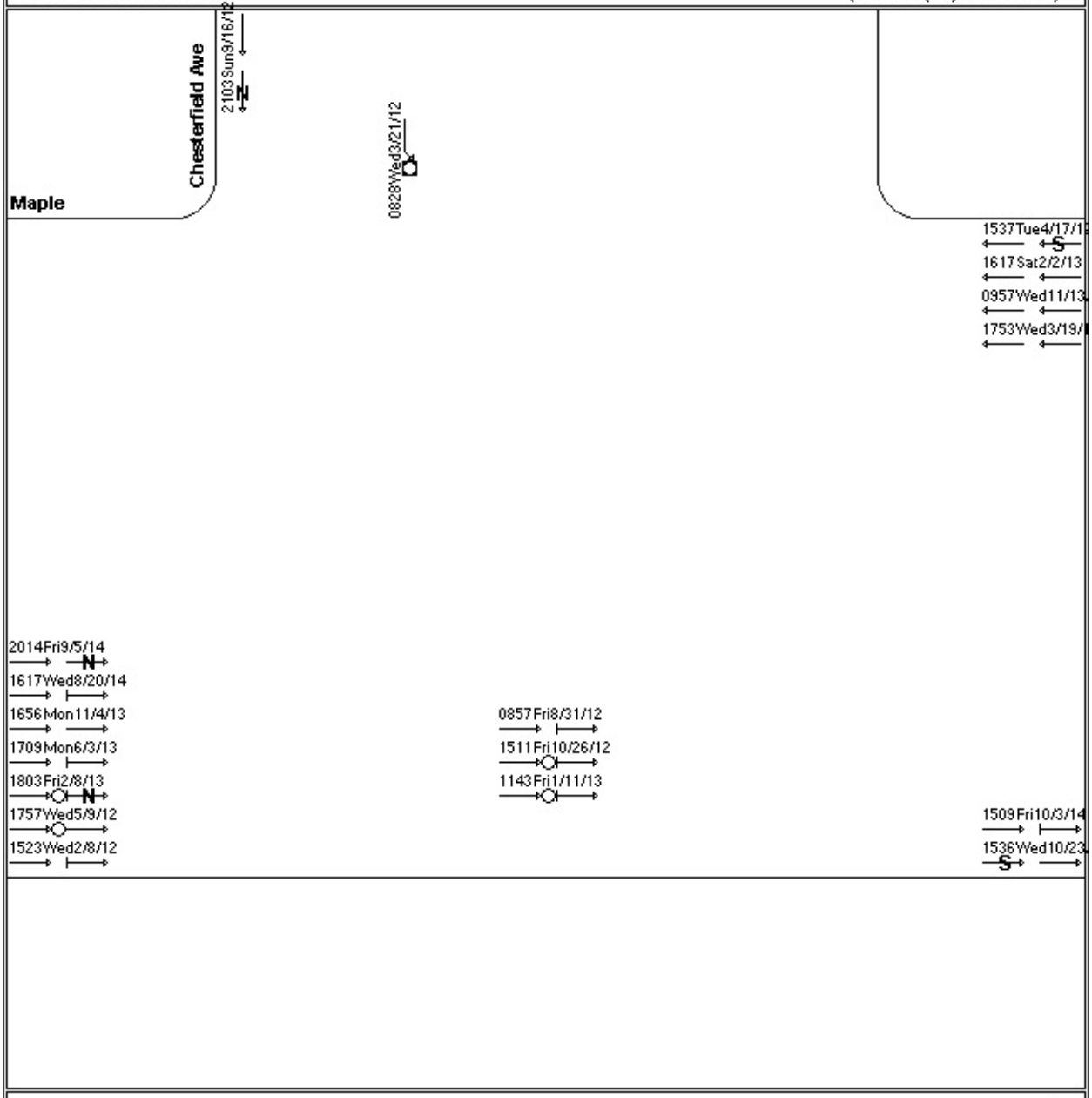
Straight	Backing	Erratic	Injury	S Sideswipe	
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/9/2015

N

Chesterfield Ave & Maple
1/1/2012 - 12/31/2014

Chesterfield Ave

18 Crashes
(0 crash(es) not drawn)

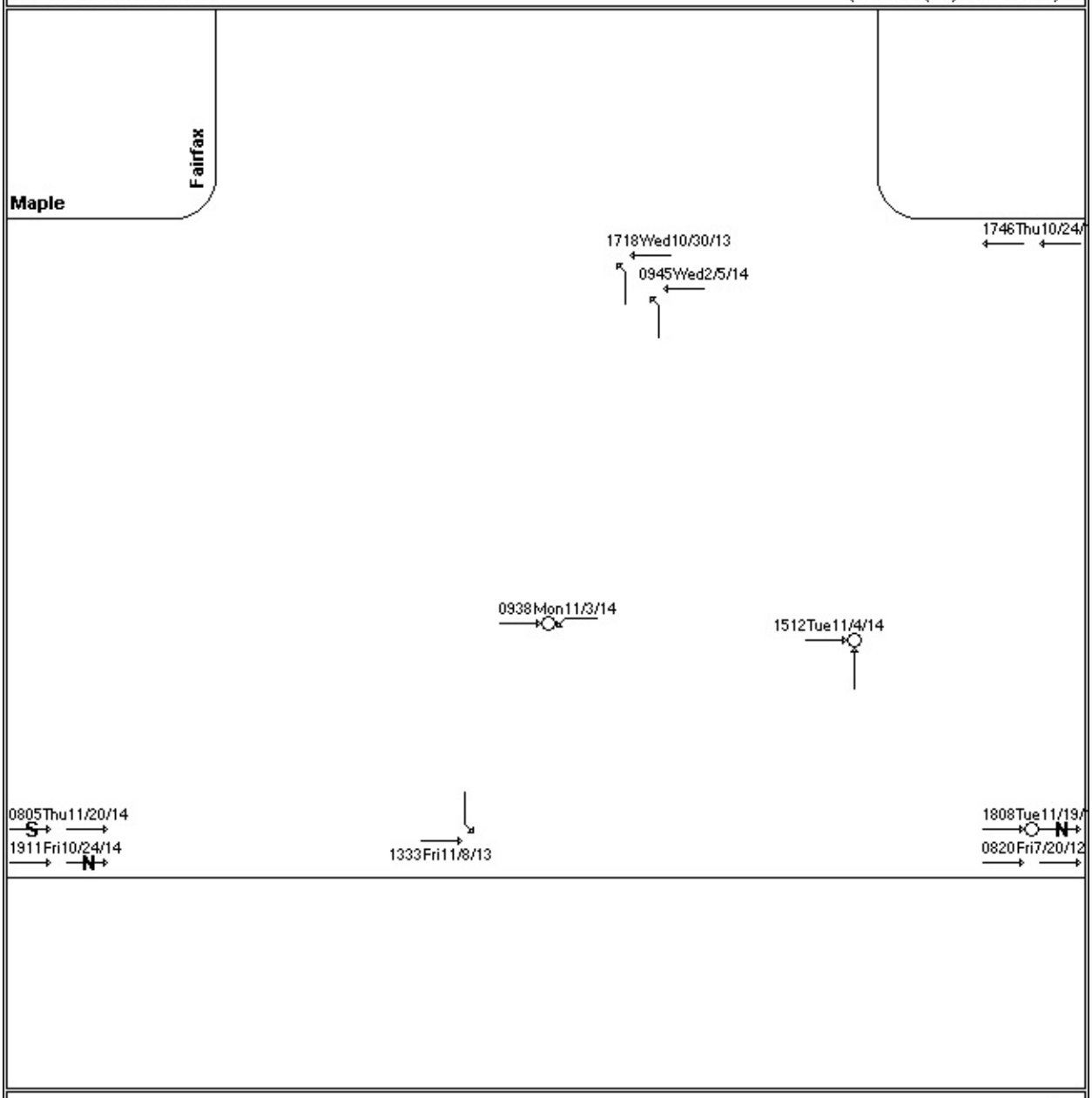


Straight	Backing	Erratic	Injury	S Sideswipe	
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/9/2015

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

Fairfax and Maple

10 Crashes
(0 crash(es) not drawn)



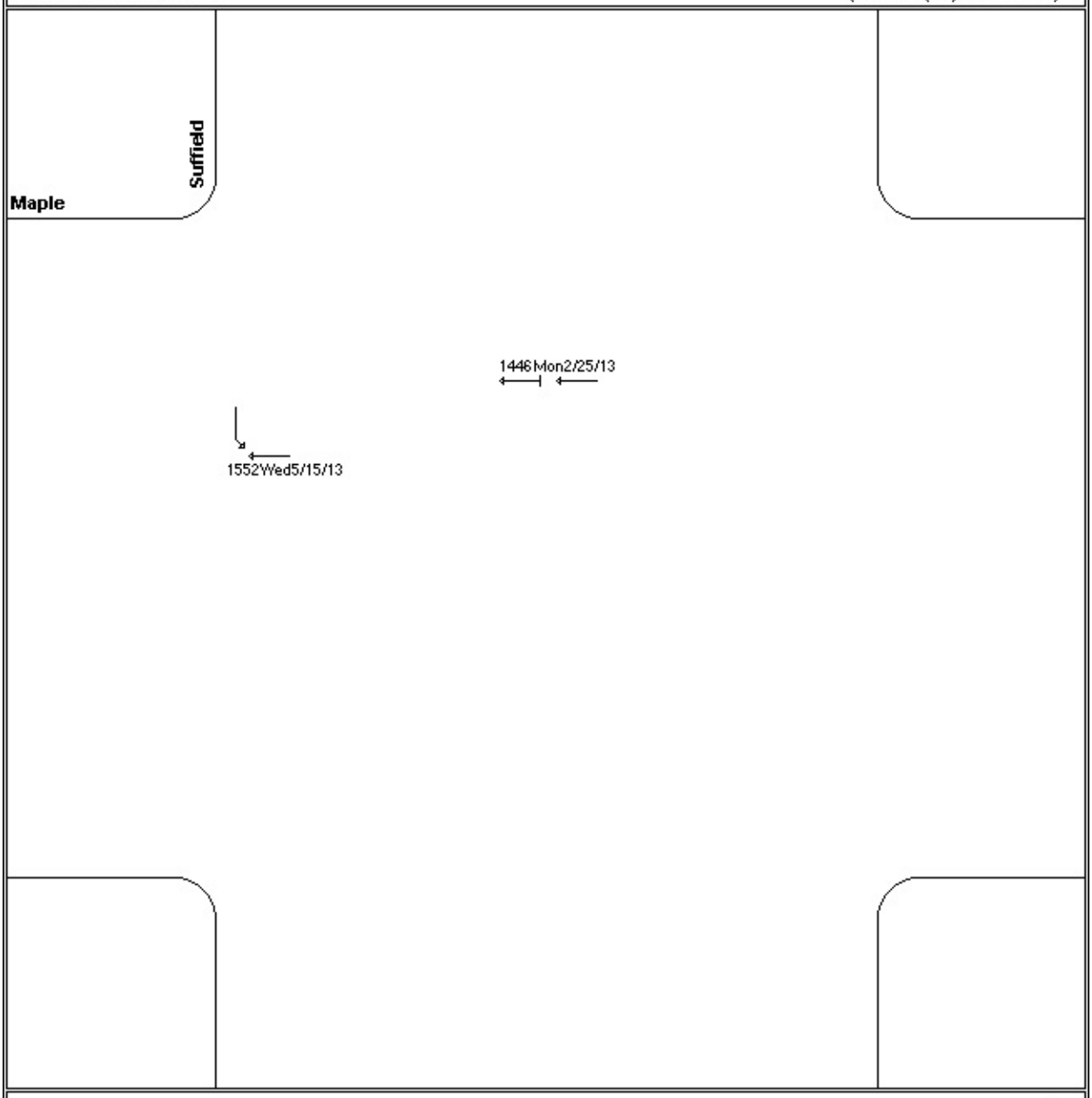
Straight	Backing	Erratic	Injury	S Sideswipe	
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/10/2015

N

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

Suffield and Maple

2 Crashes
(0 crash(es) not drawn)



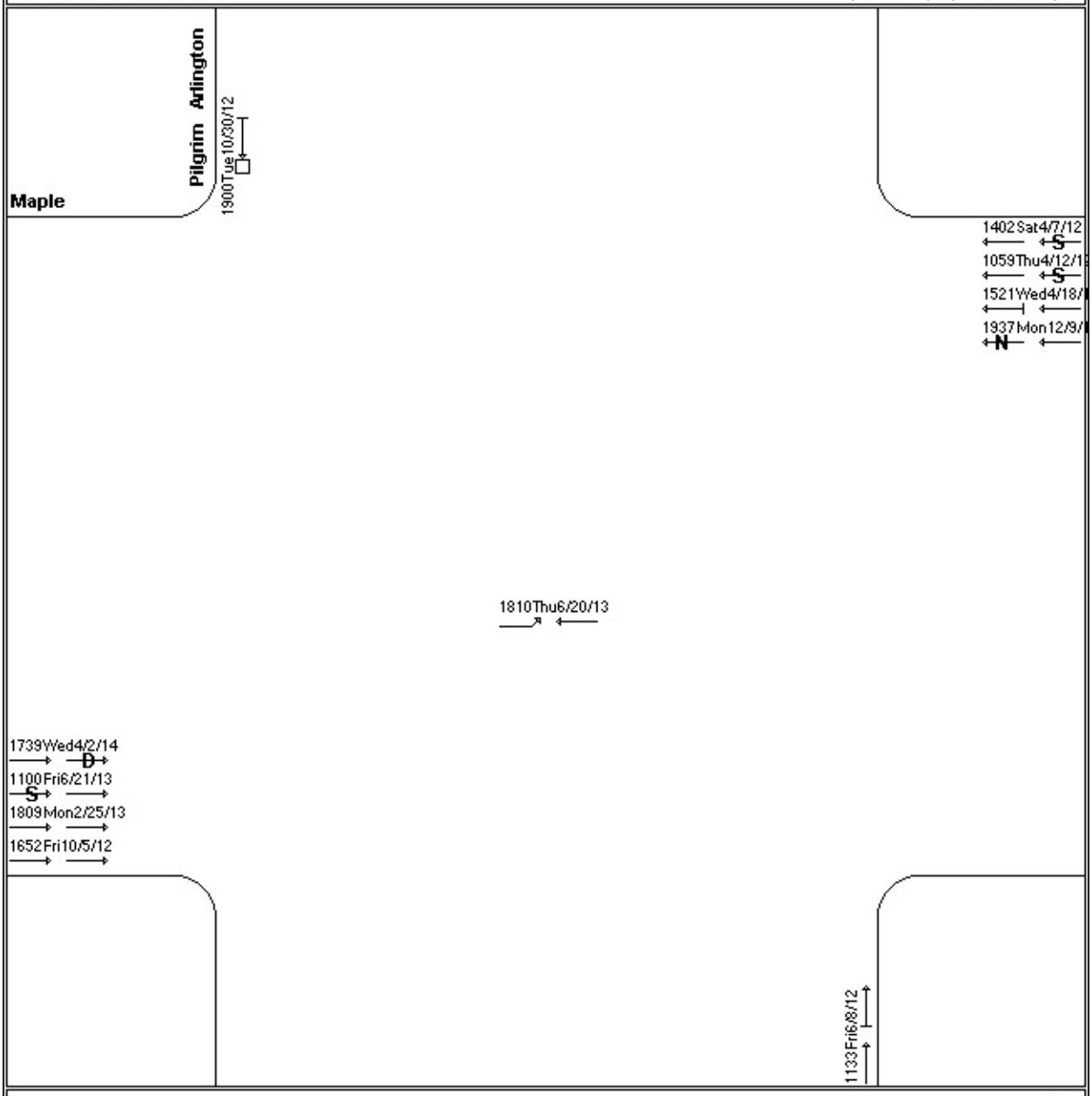
Straight	Backing	Erratic	Injury	S Sideswipe	
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/10/2015

N

Pilgrim Arlington & Maple
1/1/2012 - 12/31/2014

Pilgrim - Arlington and Maple

11 Crashes
(0 crash(es) not drawn)

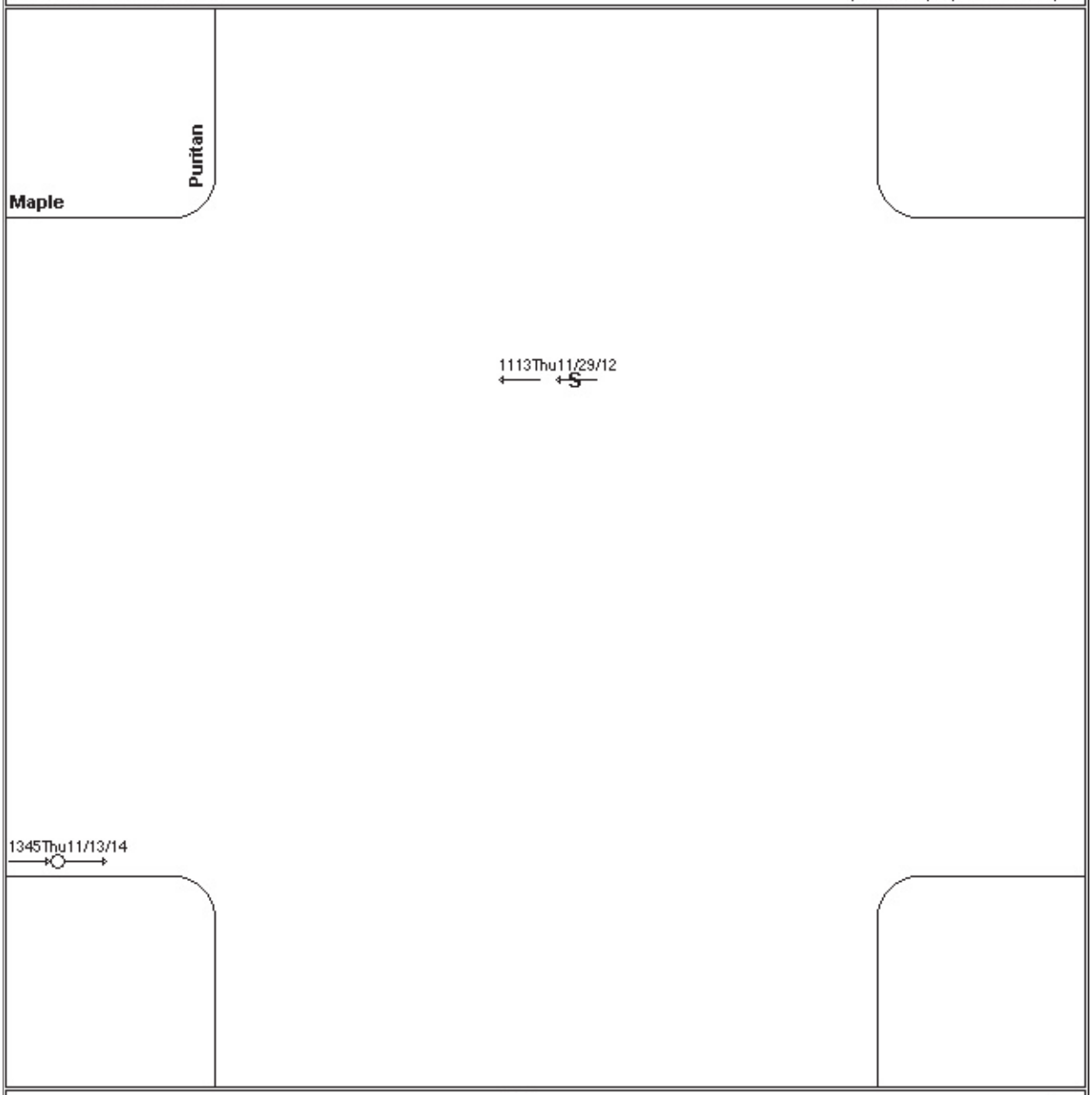


Straight	Backing	Erratic	Injury	S Sideswipe	N
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/10/2015

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

Puritan and Maple

3 Crashes
(0 crash(es) not drawn)



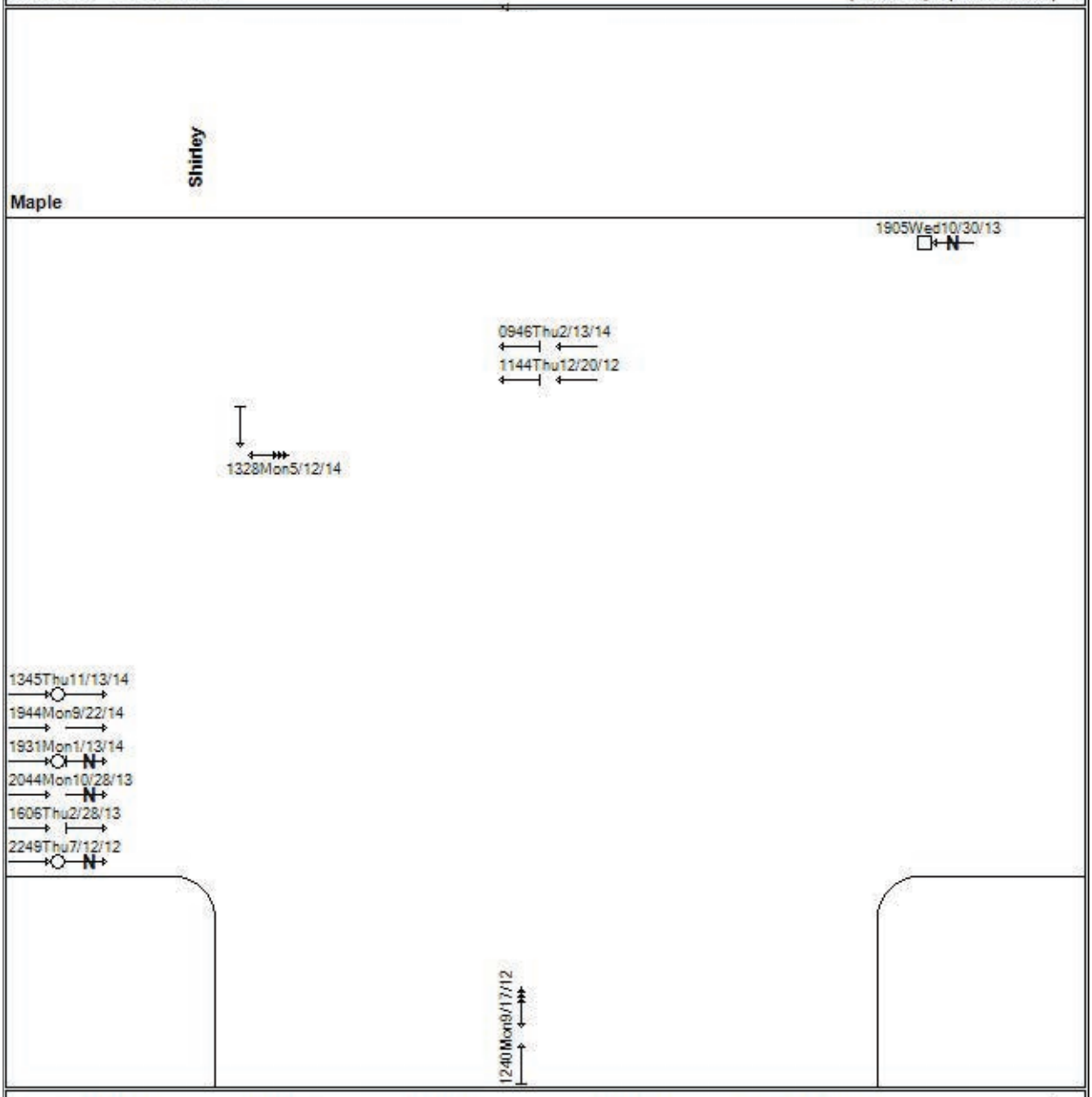
Straight	Backing	Erratic	Injury	S Sideswipe	
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/10/2015

N

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

Shirley and Maple

12 Crashes
(0 crash(es) not drawn)

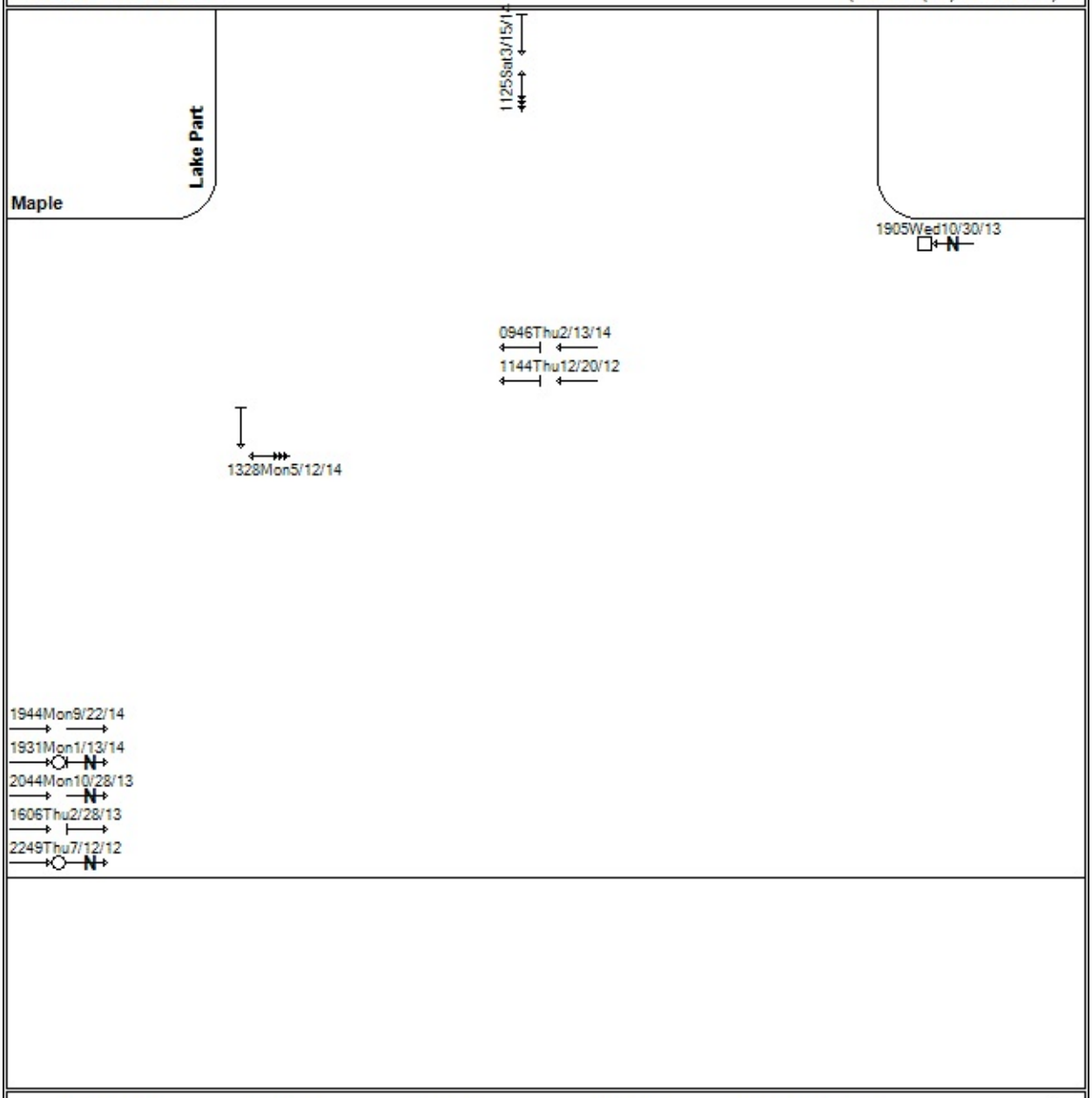


Straight	Backing	Erratic	Injury	S Sideswipe	
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/20/2015

Lake Part & Maple
1/1/2012 - 12/31/2014

Lake Park and Maple

10 Crashes
(0 crash(es) not drawn)

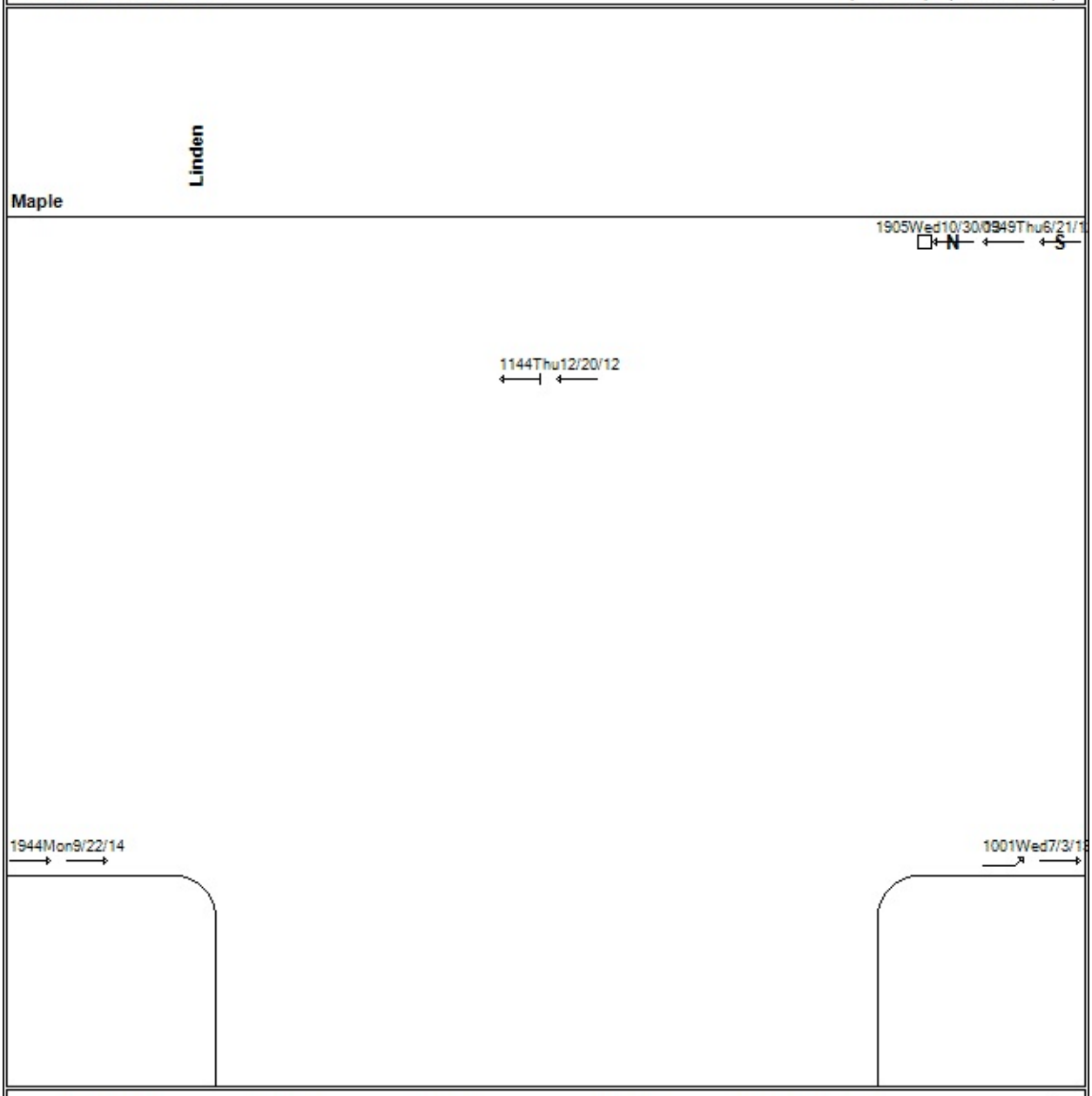


Straight	Backing	Erratic	Injury	S Sideswipe	
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/20/2015

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

Linden and Maple

5 Crashes
(0 crash(es) not drawn)



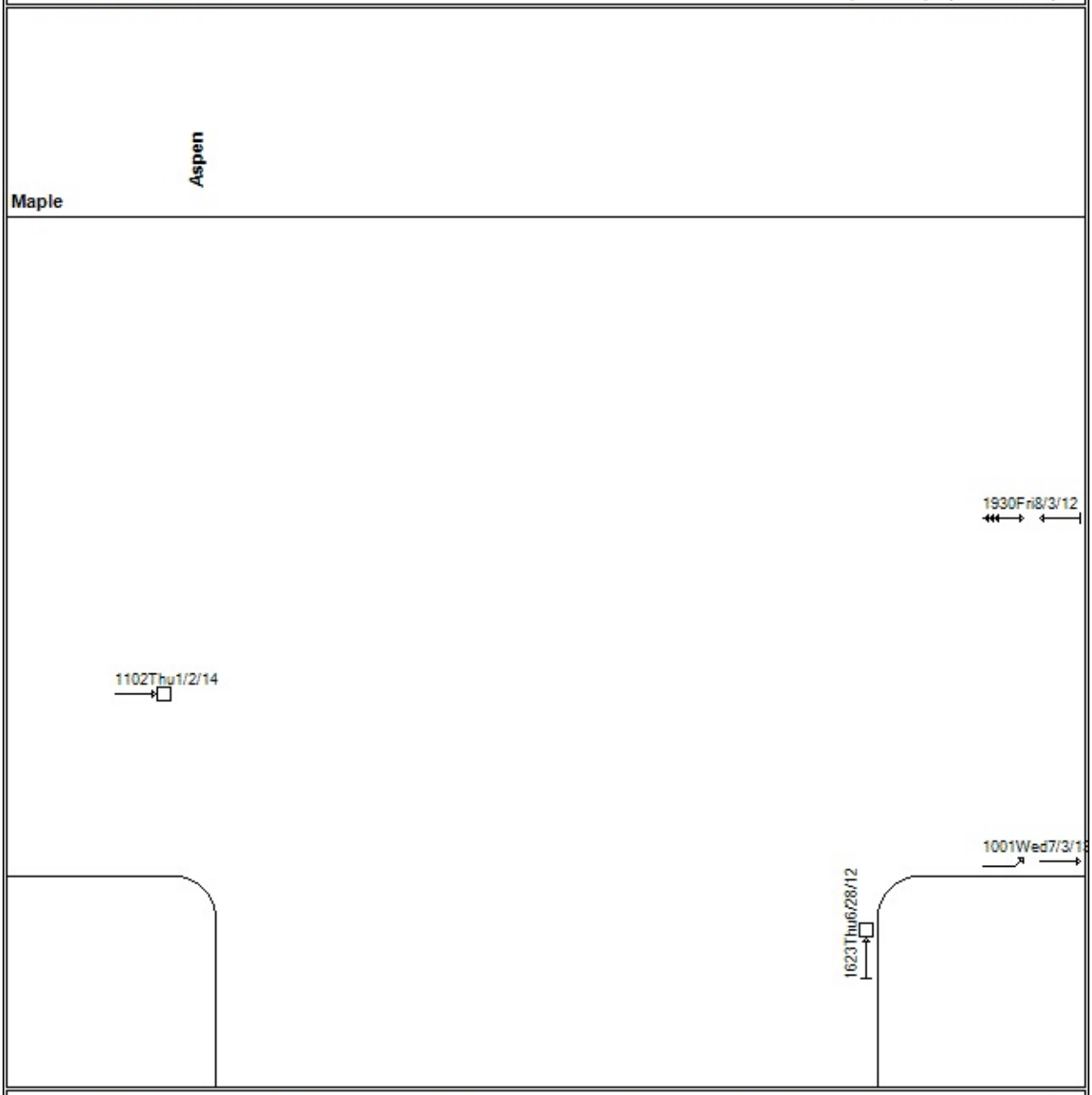
Straight	Backing	Erratic	Injury	S Sideswipe	
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/20/2015

N

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

Aspen and Maple

4 Crashes
(0 crash(es) not drawn)

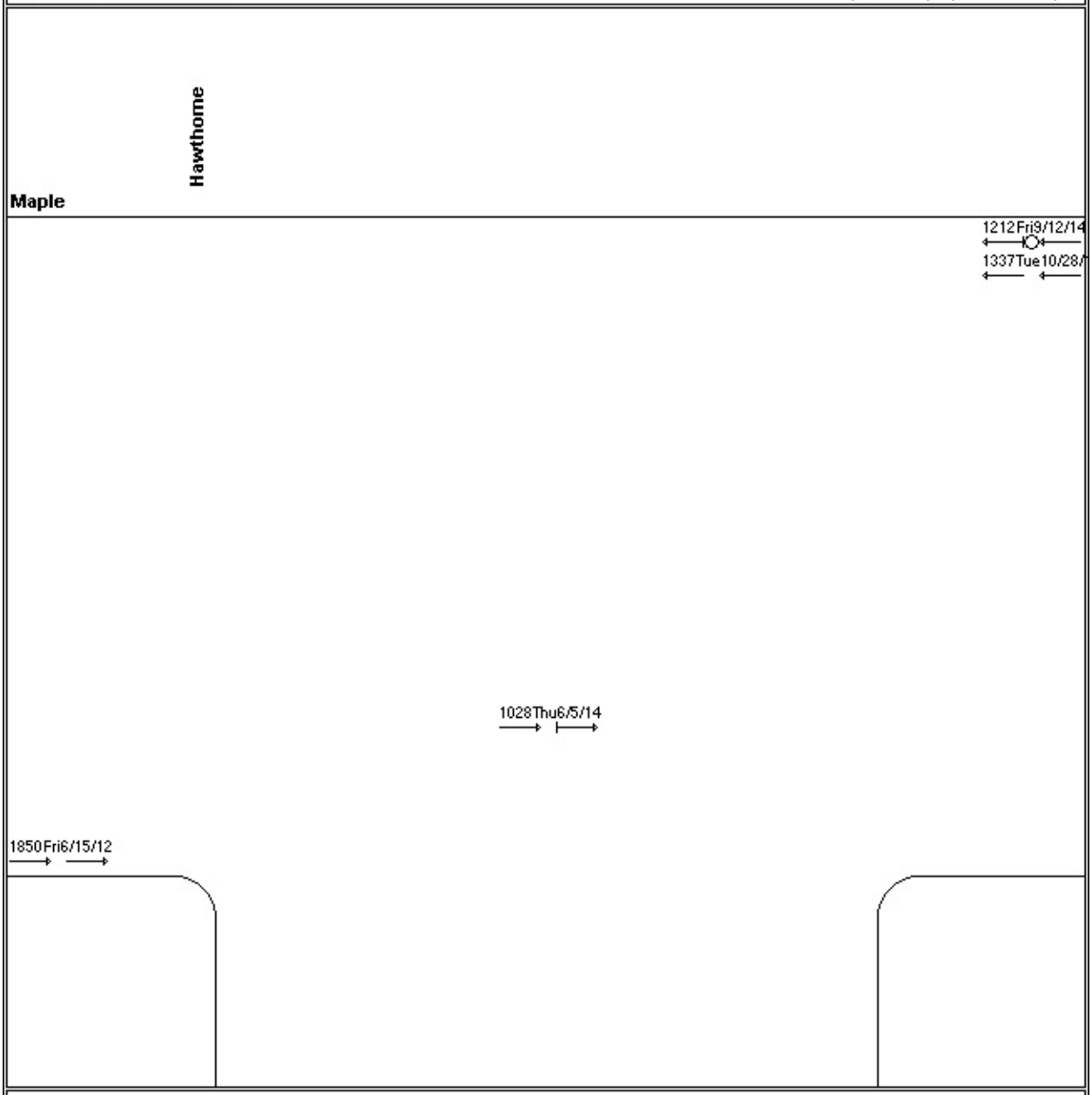


Straight	Backing	Erratic	Injury	S Sideswipe	N
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/20/2015

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

Maple and Hawthorne

4 Crashes
(0 crash(es) not drawn)



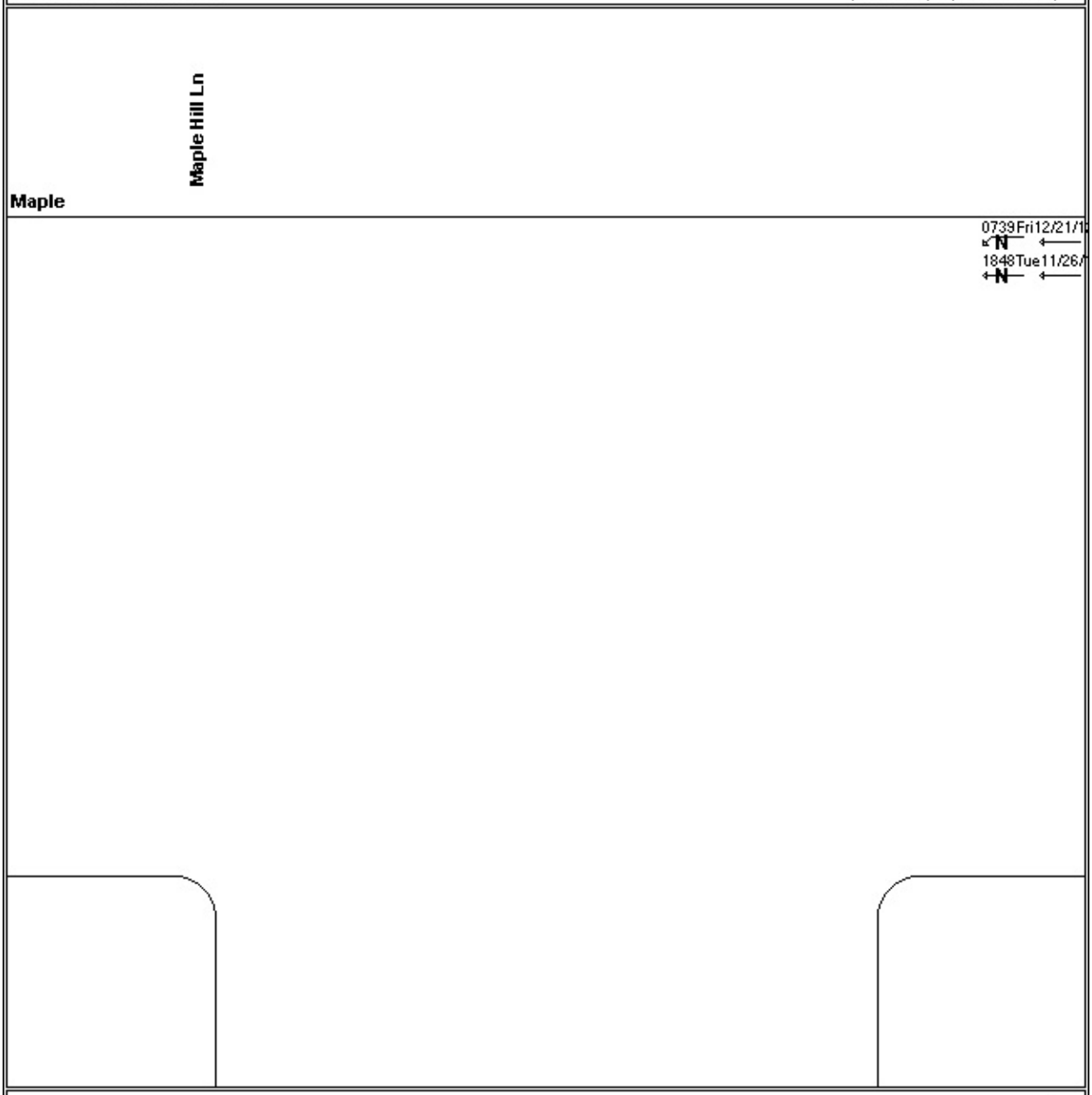
Straight	Backing	Erratic	Injury	S Sideswipe	
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/10/2015

N

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

Maple Hill Ln and Maple

2 Crashes
(0 crash(es) not drawn)



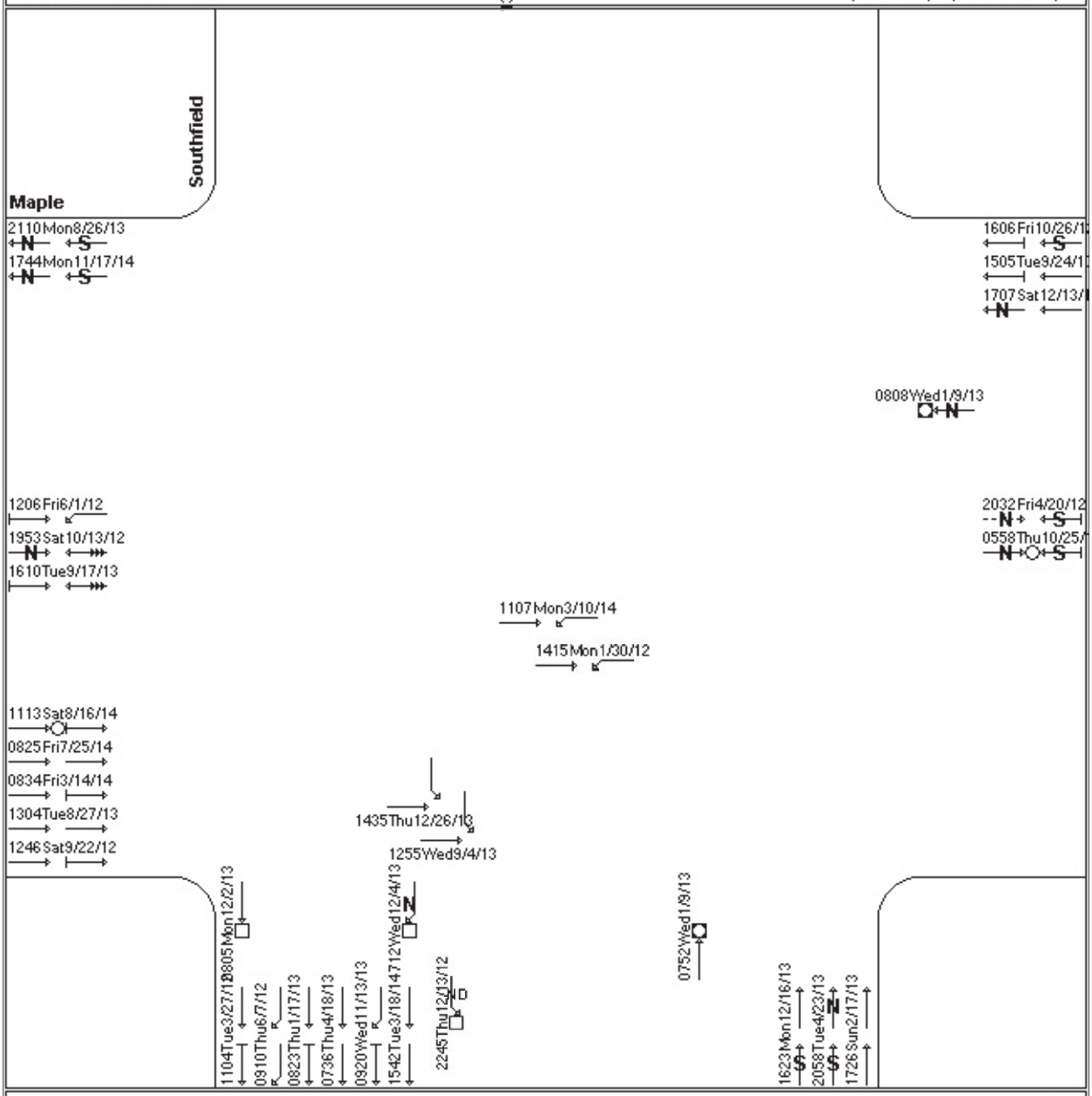
Straight	Backing	Erratic	Injury	S Sideswipe	
Right Turn	Passing	Out of Control	Fatality	N Nighttime	
Left Turn	U-Turn	Unknown	Pedestrian	D DUI	Not to Scale
Stopped	Parked	Fixed Object	Bicycle		Printed: 2/10/2015

Traffic Improvement Association of Michigan

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

Southfield and Maple

38 Crashes
(0 crash(es) not drawn)



Straight	Backing	Erratic	Injury	S Sideswipe	
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

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

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	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 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

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

APPROVED

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

APPROVED

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.

APPROVED

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.

APPROVED

City of Birmingham
A Walkable Community

MEMORANDUM

Engineering Dept.

DATE: **February 27, 2015**

TO: **Multi-Modal Transportation Board**

FROM: **Paul T. O'Meara, City Engineer**

SUBJECT: **S. Eton Rd. Corridor**

The Griffin Claw Brewery was opened as a new business at 575 S. Eton Rd. in 2013. The facility contains an on-site brewery, kitchen, and indoor and outdoor dining areas. Thanks to the relatively large parcel it was built on, the parking lot contained more parking spaces than what is required in the zoning ordinance. During the time that the business has been open, there has been some feedback from the residential neighbors to the west relative to street parking. Neighbors have expressed concerns in two areas:

1. The high demand for street parking on both sides of S. Eton Rd. has made it more difficult to see when attempting to access S. Eton Rd. from the adjacent local streets.
2. Patrons of the business sometimes park on the local streets in front of homes, instead of either in the designated parking lot.

The owner has applied for a permit to make modifications to the property. An addition to the main building, as well as a separate outbuilding at the rear of the property are proposed to allow the business to make whiskey on site, as well as slightly enlarge the outdoor dining area. The resulting changes would result in a loss of 18 existing parking spaces, which would still meet the requirements of the zoning ordinance.

The project plan was reviewed by both the Planning Board and the City Commission. Some neighbors have expressed concerns about the current conditions being exacerbated if this expansion is allowed to move forward. In order to appease the situation, the owner offered the following remedies, which became a condition to the final City Commission approval:

1. Formal shared parking agreements will be made with the adjacent businesses (Robot Garage and Whistle Stop), since those businesses tend to attract customers at different times of the day. Signs will be changed, and when necessary, staff will be present to encourage Griffin Claw customers to use these other parking lots, rather than the adjacent streets.
2. The owner will require all employees to park in the parking garage north of Villa Ave., which is owned by the same organization.

To further help the situation, the City Commission asked the Multi-Modal Transportation Board to prioritize the S. Eton Rd. corridor, and make recommendations for the future. The Board should consider the current problems that have been identified:

1. Parallel parking on southbound S. Eton Rd. is causing sight distance problems.

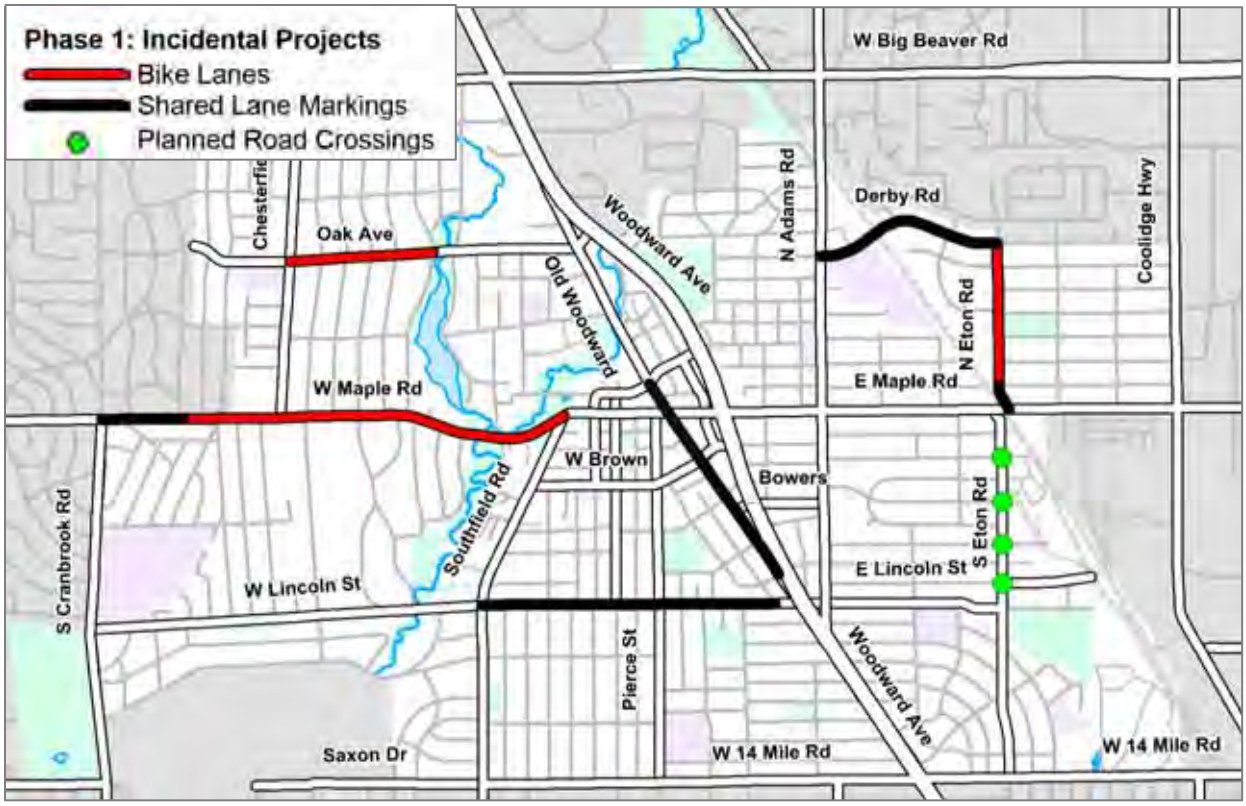
2. The general lack of parking in the area is causing problems for the adjacent residential area. Modifications to the road design should consider ways to increase parking capacity for this business and others that may come in the future. (The Commission specifically asked that the Board consider removing the parallel parking on the southbound side, and implementing angled parking on the north side.)

The direction to explore this issue was just received this week. To start the study, it is suggested that the Board review the Master Plan for this corridor, and to review the existing conditions via aerial photography. If appropriate, F&V can be directed to study the issue in further detail as needed so that the Board can ultimately make a recommendation for future changes.

The pertinent recommendations from the Master Plan are attached for your reference.

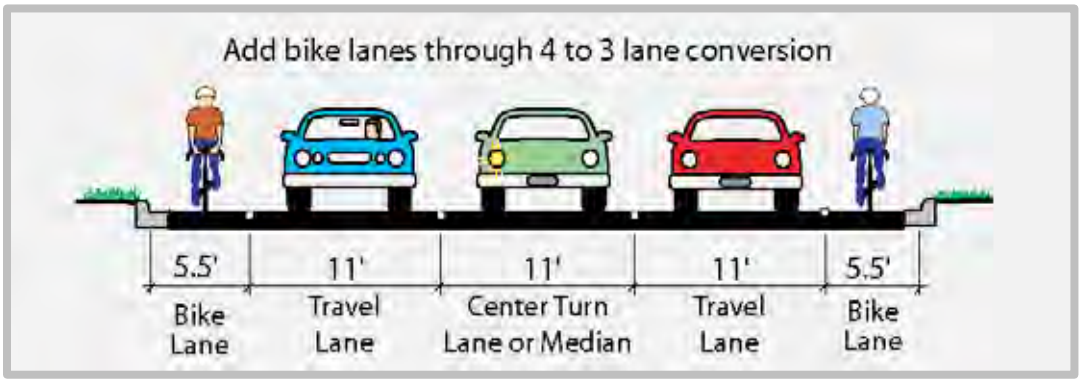
PHASE 1: INCIDENTAL PROJECTS

The following is a list of projects that could be implemented as part of the City's Capital Improvement Plan (CIP) with incidental costs.



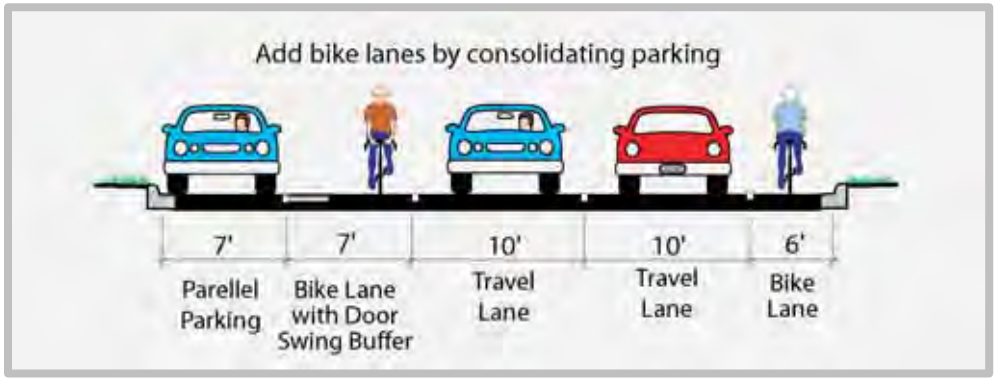
Add bike lanes to W Maple Road between Waddington Street and Southfield Road through a four-lane to three-lane conversion as part of the 2015 road resurfacing project.

W MAPLE ROAD

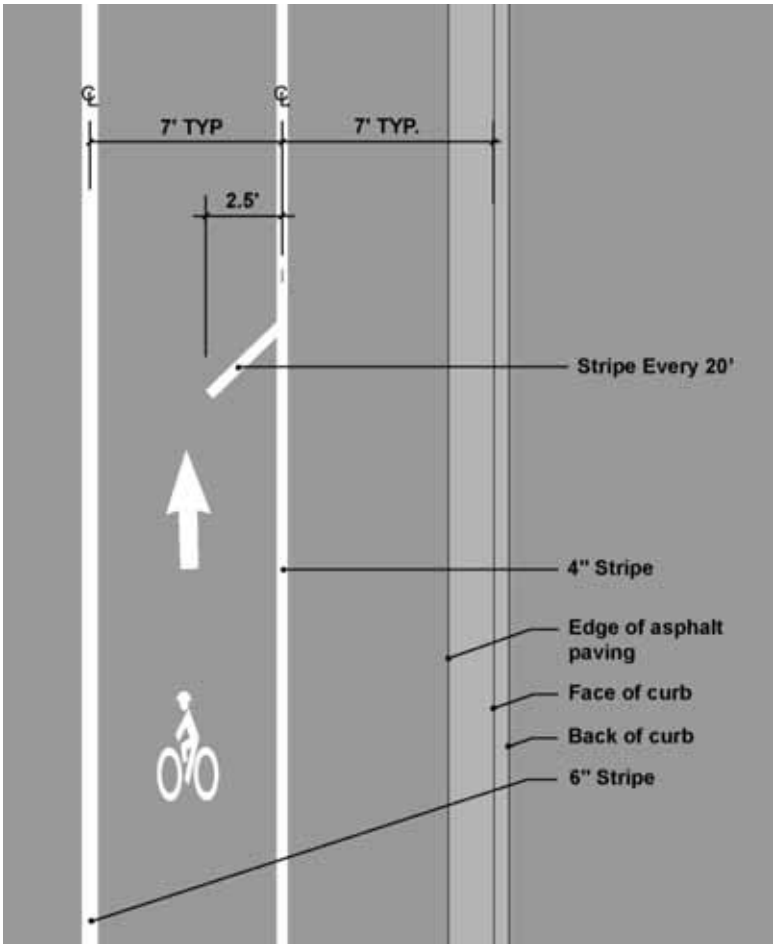


Add bike lanes to N Eton Road between Derby Road and Yorkshire Road by consolidating the parking to the west side of the road as part of the 2014 road reconstruction project.

N ETON ROAD



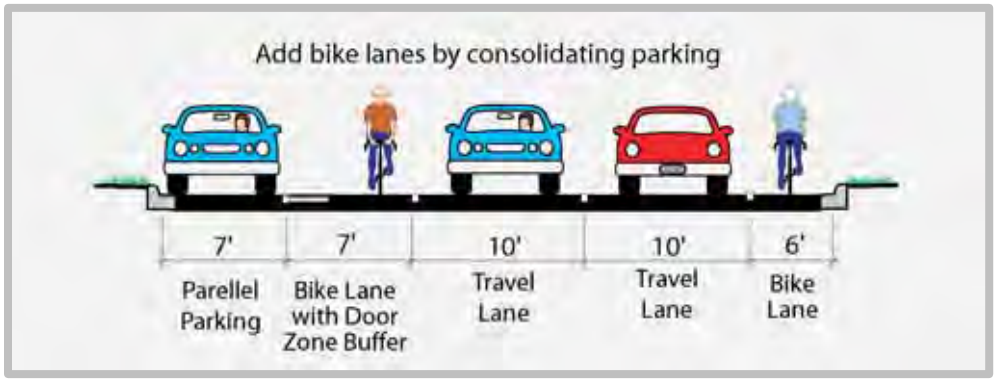
Markings for the door swing zone of the parked cars are proposed within the bike lane when it is adjacent to on-street parking.



Add bike lanes to Oak Avenue between Chesterfield Avenue and Lake Park Drive by consolidating the parking to one side of the road as part of the 2016 road reconstruction project. To provide additional traffic calming the consolidated parking should alternate from the north side of the road to the south side of the road every few blocks, changing sides where there are proposed curb extensions:

- Chesterfield Avenue to Suffield Avenue – Parking on south side
- Suffield Avenue to Puritan Avenue – Parking on north side
- Puritan Avenue to Lake Park Drive – Parking on south side

OAK AVENUE



Pavement markings for the door swing zone are proposed between the on-street parking and the bike lane. See previous page for details.

Add shared lane markings to the following corridors:

- Derby Road between N Adams Road and the Railroad Overpass (2013 reconstruction project)
- Derby Road between the Railroad Overpass and N Eton Road (2014 resurfacing project)
- Lincoln Street between Southfield Road and Ann Street (2014 resurfacing project)
- N Eton Road between Yorkshire Road and E Maple Road (2014 reconstruction project)
- W Maple Road between Cranbrook Road and Waddington Street (2015 resurfacing project)
- N Old Woodward Avenue between Willits Street and W Maple Road (2016 reconstruction project)
- S Old Woodward Avenue between W Maple Road and E Brown Street (2016 reconstruction project)
- S Old Woodward Avenue between E Brown Street and Landon Road (2017 reconstruction project)

Four new road crossings are planned on S Eton Road between E Maple Road and E Lincoln Street in 2013. The plans for these crossing include basic improvements such as pavement markings. As part of Phase 2 it is recommended that curb extensions be implemented at these crossing locations as well.

PHASE 1 INCIDENTAL PROJECTS:				
Road	From	To	Quantity	Unit
Bike Lanes:				
N Eton Rd	Yorkshire Rd	Derby Rd	0.40	MI
W Maple Rd	Waddington St	Southfield Rd	1.12	MI
Oak Ave	Chesterfield Ave	Lake Park Dr	0.40	MI
Shared Lane Markings (placed every 200' - 250'):				
Derby Rd	N Adams Rd	Railroad Overpass	0.17	MI
Derby Rd	Railroad Overpass	N Eton Rd	0.36	MI
Lincoln St	Southfield Rd	Ann St	0.80	MI
W Maple Rd	Cranbrook Rd	Waddington St	0.20	MI
N Old Woodward Ave	Willits St	W Maple Rd	0.10	MI
S Old Woodward Ave	W Maple Rd	E Brown St	0.17	MI
S Old Woodward Ave	E Brown St	Landon Rd	0.43	MI
Road Crossings				
S Eton Rd	at Villa Rd		1	EACH
S Eton Rd	at Bowers St		1	EACH
S Eton Rd	at Holland St		1	EACH
S Eton Rd	at Cole St		1	EACH

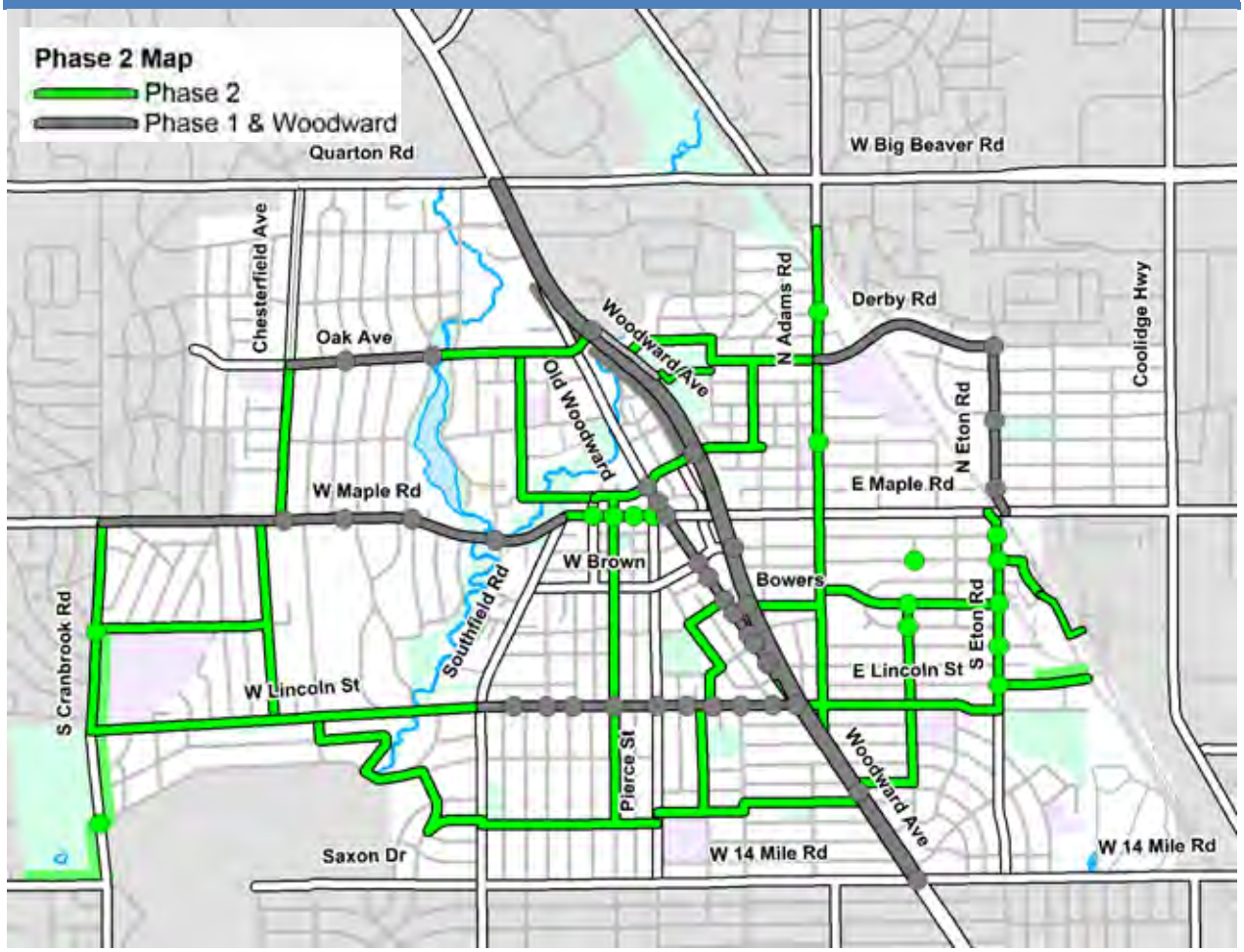
4.3 PHASE 2

PHASE 2: OVERVIEW

Phase 2 objective is to provide connections across the community and create a backbone for the City's long-range multi-modal system. This phase achieves this by building on the existing multi-modal system.

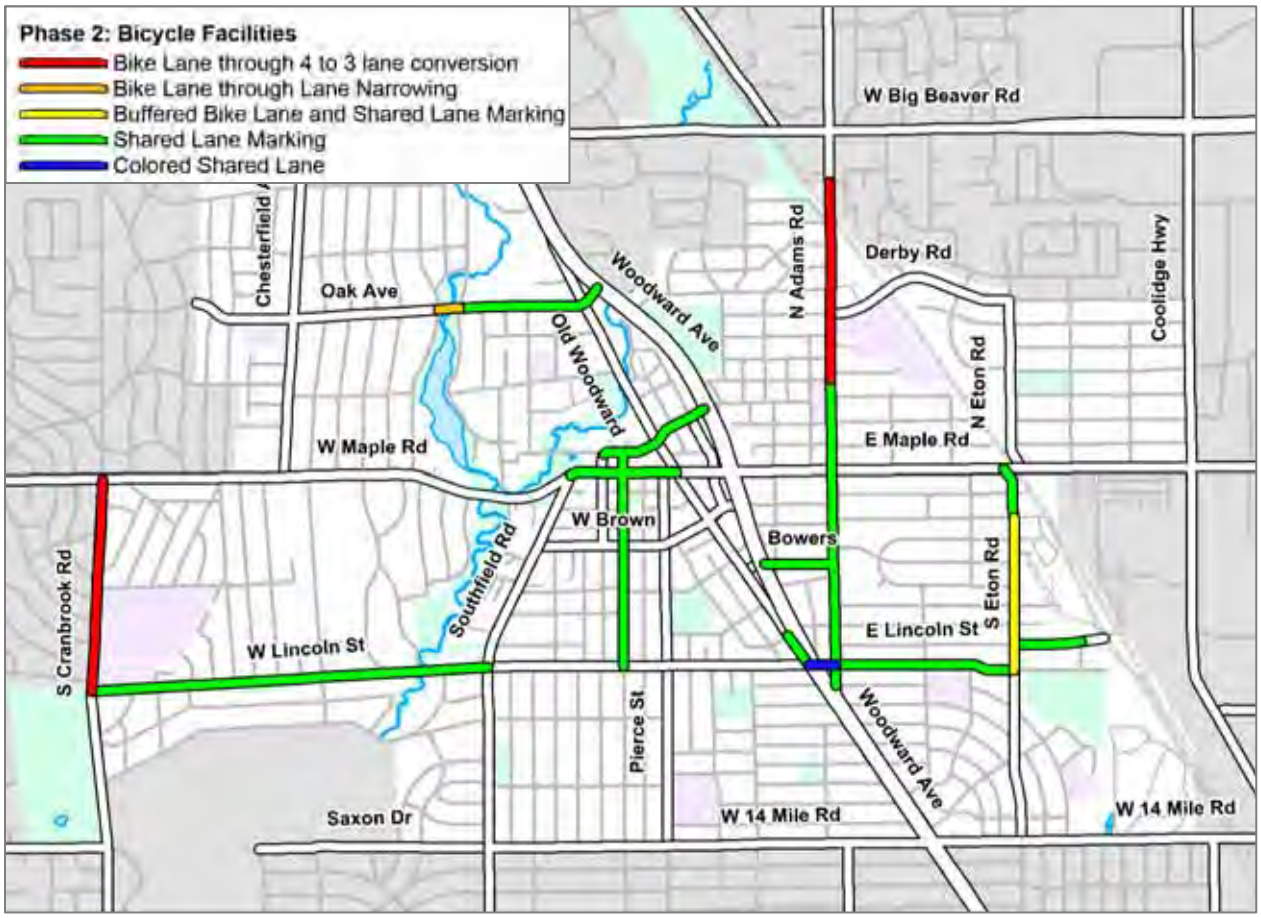
The following pages provide a more detailed breakdown of Phase 2.

FIGURE 4.3A. PHASE 2



PHASE 2: PROPOSED BIKE FACILITIES

The following provides a list of on-road bike facilities that can be implemented in the near-term with minimal changes to the roadway. Please note that at time of implementation all bike facilities should be accompanied by appropriate signage.

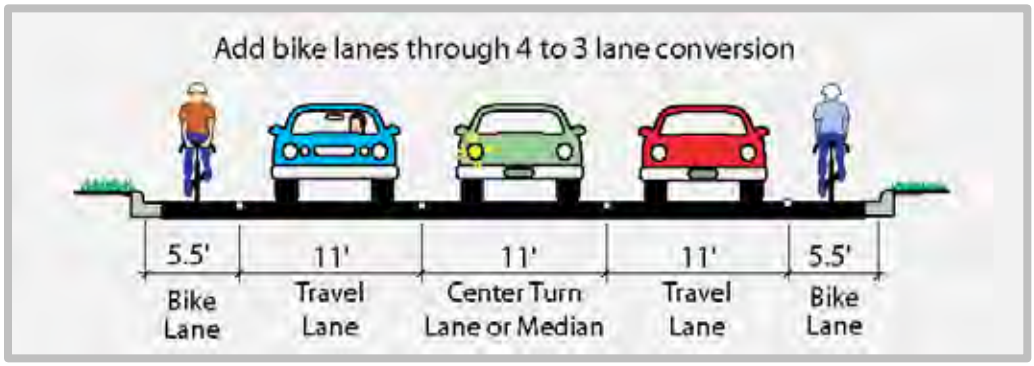


On S Eton Road between Yosemite Boulevard and E Lincoln Street, remove parking on the west side of the street and add a buffered bike lane. On the east side of the street keep on-street parking and add a shared-lane marking. The buffer between the bike lane and travel lane should be cross hatched.

S ETON ROAD

Add bike lanes to S Cranbrook Road between W Maple Avenue and W Lincoln Street through a four-lane to three-lane conversion. Add bike lanes to N Adams Road between Madison Street and Evergreen Drive through a four-lane to three-lane conversion. Please note that prior to implementation a micro-simulation may be necessary to see how school traffic timing affects both corridors.

S CRANBROOK ROAD AND N ADAMS ROAD



Add bike lanes to Oak Avenue between Lake Park Drive and Lakeside Drive by adding an edge stripe 6’ out from the curb on both sides of the road.

Add shared lane markings to the following roadways:

- W Lincoln Street between S Cranbrook Road and Southfield Road
- E Lincoln Street between Adams Road and S Eton Road
- S Eton Road between W Maple Rd and Yosemite
- N Eton Road between Yorkshire Road and W Maple Road
- Bowers Street between Woodward Avenue and Adams Avenue
- Oakland Avenue between N Old Woodward Avenue and Woodward Avenue
- Willits Street between N Chester Street and N Old Woodward Avenue
- W Maple Road between Southfield Road and N Old Woodard Avenue
- S Bates Street between W Lincoln St and Willits Street
- Cole Street east of S Eton Street
- Adams Road between Madison Street and Woodward Avenue
- Oak Avenue between Lake Park Drive and Woodward Avenue
- Chesterfield Avenue between Oak Avenue and W Maple Road
- One-way on S Old Woodward Ave between Landon Rd and E Lincoln St

Add colored shared lane markings to E Lincoln Street between Woodward Avenue and Adams Road.

PHASE 2 BICYCLE FACILITIES:				
Road	From	To	Quantity	Unit
Bike Lanes through 4 to 3 lane conversion (stripe removal, pavement markings and signage):				
S Cranbrook Rd	W Maple Rd	W Lincoln Rd	0.57	MI
N Adams Rd	Evergreen Dr	Madison St	0.55	MI
Buffered Bike Lane (pavement markings and signage in one direction)				
S Eton Rd	Yosemite Blvd	E Lincoln St	0.5	LF
Bike Lanes through Lane Narrowing:				
Oak Ave	Lake Park Dr	Lakeside Dr	0.06	MI
Shared Lane Markings (placed every 200' - 250'):				
W Lincoln St	S Cranbrook Rd	Southfield Rd	1.00	MI
E Lincoln St	Adams Rd	S Eton Rd	0.51	MI
S Eton Rd	W Maple Rd	Yosemite	0.07	MI
N Eton Rd	Yorkshire Rd	W Maple Rd	0.08	MI
Bowers St	Woodward Ave	Adams Rd	0.2	MI
Oakland Ave	N Old Woodward Ave	Woodward Ave	0.16	MI
Willits St	N Chester St	N Old Woodward Ave	0.15	MI
W Maple Rd	Southfield Rd	N Old Woodward Ave	0.27	MI
S Bates	W Lincoln St	Willits St	0.6	MI
Cole St	East of S Eton St		0.25	MI
Adams Rd	Madison St	Woodward Ave	0.9	MI
Oak Ave	Lake Park Dr	Woodward Ave	0.46	MI
Chesterfield Ave	Oak Ave	W Maple Rd	0.45	MI
Shared Lane Markings (placed every 200' - 250' in one direction):				
S Eton Rd	Yosemite Blvd	E Lincoln St	0.5	MI
S Old Woodward Ave	Landon Rd	E Lincoln St	0.12	MI
Colored Shared Lane Markings (placed every 200' - 250' with solid green paint the entire length):				
W Lincoln St	Woodward Ave	Adams Rd	0.10	MI

February 5, 2015

RECEIVED
FEB 17 2015
CITY OF BIRMINGHAM
COMMUNITY DEVELOPMENT DEPARTMENT

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

RECEIVED
FEB 17 2015
CITY OF BIRMINGHAM
COMMUNITY DEVELOPMENT DEPARTMENT

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>

Multi-Modal Transportation Board (MMTB) Meeting Summary

1 message

City of Birmingham, MI <socialmedia@bhamgov.org> Mon, Feb 9, 2015 at 10:17 AM
Reply-To: socialmedia@bhamgov.org
To: pomeara@bhamgov.org

Multi-Modal Transportation Board

Multi-Modal Transportation Board (MMTB) Meeting Summary

On February 5, 2015, the Multi Modal Transportation Board (MMTB) continued discussion on the upcoming capital improvement project to resurface W. Maple Road between Southfield and Cranbrook. City staff updated the MMTB on the selection of the steering committee members, indicating that all positions have been filled with residents from each of the different perspectives identified at the last MMTB meeting, and that all but one of the members attended the first steering committee meeting held on January 22, 2015. Presentations were conducted to provide an overview of multi-modal transportation concepts and guidelines, as well as transportation engineering concepts and data that will be reviewed. All steering committee members were also asked to share their perspective on the existing W. Maple corridor conditions. The committee reviewed all comments made and said they appreciated the condition of the sidewalks. They compiled a list of common findings among the group, which included the following areas of concern:

- This section of road is perceived as dangerous and does not feel safe.
- The speed of traffic on W. Maple
- Vehicles swerving to avoid other vehicles making turns along the corridor

- The difficulties of turning onto W. Maple from adjacent side streets
- Traffic backups at Southfield Road
- The difficulty for pedestrians to cross W. Maple

Steering 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 existing conditions worse, and should not increase cut-through traffic in the neighborhoods. Mike Labadie (from Fleis & Vandenbrink) also reviewed data he is in the process of gathering, and what methods will be used to conduct a study of existing and possibly different scenarios.

The MMTB members who attended the steering committee meeting felt it went well. Staff advised that the steering committee and then the MMTB will review all data collected regarding the existing conditions on W. Maple at their next meeting, to determine how the actual conditions relate to the public's perception of the corridor as it exists today.

The next steering committee meeting is scheduled for Thursday, February 26, 2015 at 6 p.m. The steering committee will continue to meet once per month, in between each regularly scheduled MMTB meeting, with the expectation that its job will be completed in April or May. The Multi-Modal Transportation Board meets the first Thursday of each month at 6 p.m. at the Municipal Building. For additional information on the Multi-Modal Board's meetings visit www.bhamgov.org.

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Jana Ecker <jecker@bhamgov.org>

Maple road proposal

1 message

Helen Smith <hpsmith50@gmail.com> Mon, Feb 9, 2015 at 3:55 PM
To: jecker@bhamgov.org

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

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

Jana Ecker <jecker@bhamgov.org>

Fwd: FW: James Mirro Letter of January 11, 2015 / West Maple Road Study

1 message

Joe Valentine <jvalentine@bhamgov.org> Tue, Feb 24, 2015 at 12:32 PM
To: Jana Ecker <Jecker@ci.birmingham.mi.us>, Mark Clemence <Mclemence@bhamgov.org>, Paul O'Meara <Pomeara@ci.birmingham.mi.us>
Cc: George Dilgard <gdilgard@hotmail.com>, Gordon Rinschler <gordon4bham@aol.com>, Mark Nickita <markforbirmingham@yahoo.com>, Racky Hoff <rackyhoff@hotmail.com>, Scott Moore <sdm984@sbcglobal.net>, Stuart Sherman <stuart.sherman@sbcglobal.net>, Tim Currier <tcurrier@bhlaw.us.com>, Tom McDaniel <mcdaniel_tom@hotmail.com>

Jana/Mark/Paul,

Please share this with the MMTB as requested.

Thanks,
Joe

From: Mike Clawson
Sent: Sunday, February 22, 2015 11:08 AM
To: 'jvalentine@bhamgov.org'
Subject: James Mirro Letter of January 11, 2015 / West Maple Road Study

Dear Mr. Valentine:

I just received and read a copy of the e-mail letter Mr. Mirro wrote to the City Commission dated January 11, 2015. I also attended that meeting of the Multi Modal Transportation Board and observed a decidedly different sequence of events. Towards the end of the agenda, the Chair of the meeting asked for public comment on issues which were not on the agenda and had not already been addressed. Rather than adhering to this request, Mr. Mirro and his group of neighbors got up and began complaining about how the City of Birmingham was wasting tax payer money on conducting the West Maple Study and demanding that the issue be abandoned, all issues which had been discussed earlier in the evening by him. When the chairperson politely asked them to adhere to the agenda and stick to comments which were not already discussed, Mr. Mirro became very unpleasant, confrontational and rude, and the chair had to adjourn the meeting. This was very unfortunate and unfair to those other citizens like me who sat through the meeting and may have wanted to address the Committee.

While I understand that there are strong feelings on the topic of West Maple Road, I am sure you know and the City Commission knows that the opinions of Mr. Mirro and his group of neighbors are not shared by everyone. In fact, many of my neighbors are in favor of the Plan or at least open to the completion of the study and a review of the recommendations. I ask that you please share this e-mail with the City Commission. The Multi Modal

Transporation Board and its members are doing a good job in a very difficult position. They were not rude to Mr. Mirro or anyone else in attendance. If anything, the opposite was true.

Best regards,

Mike Clawson

139 Pilgrim Ave.

Birmingham, MI 48009

--

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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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
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jvalentine@bhamgov.org

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Paul O'Meara <pomeara@bhamgov.org>

Fwd: FW: James Mirro Letter of January 11, 2015 / West Maple Road Study

1 message

Joe Valentine <jvalentine@bhamgov.org> Tue, Feb 24, 2015 at 12:32 PM
To: Jana Ecker <Jecker@ci.birmingham.mi.us>, Mark Clemence <Mclemence@bhamgov.org>, Paul O'Meara <Pomeara@ci.birmingham.mi.us>
Cc: George Dilgard <gdilgard@hotmail.com>, Gordon Rinschler <gordon4bham@aol.com>, Mark Nickita <markforbirmingham@yahoo.com>, Racky Hoff <rackyhoff@hotmail.com>, Scott Moore <sdm984@sbcglobal.net>, Stuart Sherman <stuart.sherman@sbcglobal.net>, Tim Currier <tcurrier@bhlaw.us.com>, Tom McDaniel <mcdaniel_tom@hotmail.com>

Jana/Mark/Paul,

Please share this with the MMTB as requested.

Thanks,
Joe

From: Mike Clawson
Sent: Sunday, February 22, 2015 11:08 AM
To: 'jvalentine@bhamgov.org'
Subject: James Mirro Letter of January 11, 2015 / West Maple Road Study

Dear Mr. Valentine:

I just received and read a copy of the e-mail letter Mr. Mirro wrote to the City Commission dated January 11, 2015. I also attended that meeting of the Multi Modal Transportation Board and observed a decidedly different sequence of events. Towards the end of the agenda, the Chair of the meeting asked for public comment on issues which were not on the agenda and had not already been addressed. Rather than adhering to this request, Mr. Mirro and his group of neighbors got up and began complaining about how the City of Birmingham was wasting tax payer money on conducting the West Maple Study and demanding that the issue be abandoned, all issues which had been discussed earlier in the evening by him. When the chairperson politely asked them to adhere to the agenda and stick to comments which were not already discussed, Mr. Mirro became very unpleasant, confrontational and rude, and the chair had to adjourn the meeting. This was very unfortunate and unfair to those other citizens like me who sat through the meeting and may have wanted to address the Committee.

While I understand that there are strong feelings on the topic of West Maple Road, I am sure you know and the City Commission knows that the opinions of Mr. Mirro and his group of neighbors are not shared by everyone. In fact, many of my neighbors are in favor of the Plan or at least open to the completion of the study and a review of the recommendations. I ask that you please share this e-mail with the City Commission. The Multi Modal

Transporation Board and its members are doing a good job in a very difficult position. They were not rude to Mr. Mirro or anyone else in attendance. If anything, the opposite was true.

Best regards,

Mike Clawson

139 Pilgrim Ave.

Birmingham, MI 48009

--

Joseph A. Valentine
City Manager
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151 Martin Street
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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

E6H

Ryder

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

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*y R. Hughes is a native
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ter understanding of race in America.

My own kids are having children of their own, but who's to say that this grandpa won't get an opportunity to teach his grandkids? Maybe your experience will help me do a better job. I hope it empowers other parents.

It was a powerful message, well said, and I thank you for sharing it.

Best wishes to you and your family.

David L. Ewick
Southfield

in a ruth.

... The unions are having a fit. They have been given extensions for now, but it's only a matter of time. Hang on, the worst is yet to come!

Mack Tario
Southfield

More to gain

I became upset after reading some of the cuts in Gov. Snyder's budget. In order to give corporations tax credits that were awarded under previous administra-

that the Republicans in the Legislature are planning to cut the state income tax rate down to 3.9 percent. while asking us to vote to increase the sales tax, which is a regressive tax. Is this fair? Remember the rich have more to gain by a reduction in income tax vs. increasing the sales tax.

Of course, this is my opinion. What do you think?

Joanne Braund
Royal Oak

GUEST COLUMN

Temper views on a reconfigured Maple

Sadly, I find opposition to even the *idea* of a re-configuration of West Maple Road between Uptown and Cranbrook Road unsurprising. Too often, people are loath to permit facts to get in the way of opinions. A petition drive claiming to be even-handed has deduced that 90 percent of nearby residents oppose it, which proves ...

Lex Kuhne
GUEST COLUMNIST

What? That people oppose it because they oppose it? Was it because the proposal was characterized as two lanes, instead of the suggested three lanes? Because "thousands of tax dollars are being spent," even though they would be spent in the same amount and manner, regardless of configuration? What did the petition signers know about updating West Maple, or past discussions about East Maple?

My guess: little or none. That's because when the final report of the initial Multi-Modal Committee was presented to the Commission, many citizen comments were framed as, "Did you even consider...?"

Really? Yes, we considered. A lot. We read a lot, and learned a lot. Just as every other Birmingham board volunteer does. They invest their time to bring their abilities to bear toward improving our community in an empathetic and balanced manner. They are doing their bit for a representative democracy. They're all intelligent, but when a professional expert is required, they pick the best from publicly solicited proposals, regardless of whether they're Birmingham-based.

So, to those doubters of the benefits a potentially re-configured West (and East) Maple would bring, I invite you to temper your position to neutral by considering that:

» MMC was motivated by the Commission's desire for Birmingham residents and businesses to use the publicly funded Troy Transit Center. Then more possibilities evolved, like a bike route around the city; or making the city more maneuverable for an aging, non-driving population; or stop West Maple from being a traffic moat impeding families to the north from the Nature Trail, and residents to the south from Quarton Lake.

In short, it's about using tax dollars to enable the best use of things tax dollars have already paid for, while also increasing property values.

» There is no "auto-pilot" plan. In fact, road re-construction has become a *more* collaborative process, the first fruits of which you can see on Lincoln between Woodward and Southfield Road. Nothing has been decided or drawn up regarding West Maple, but please review the MMC report, a version of which you can see and download at http://bit.ly/MMCRept.

» There is always something new to learn. When the MMC's traffic expert told us that years of studies indicated that a three-lane West Maple would handle the same volume of traffic as it does now, I was stunned. It is admittedly counter-intuitive, but when you watch the traffic solutions for the English town of Poynton at http://bit.ly/UKTotalRd, you'll realize that us Birminghamsters don't actually know everything.

» To those of you who claim that "Maple's always been this way," well, it wasn't until the 1950s and '60s, when its two lanes were doubled. That expansion, no doubt, was done because increased capacity seemed like the best plan at the time. Now, in a world that is evolving its relationship with the car, research tells us there are better, cost-neutral ideas to be used.

There are many moving parts to making Birmingham great, and many voices are necessary. However, I imagine there is nothing in your life you now would risk to a 60-year-old solution. It would be shame to saddle the residents of 2045 Birmingham with a sub-optimal West Maple Road because the majority's best reason was, "Because."

Lex Kuhne *is an attorney, a Quarton Lake resident, and chair of the Advisory Parking Committee.*

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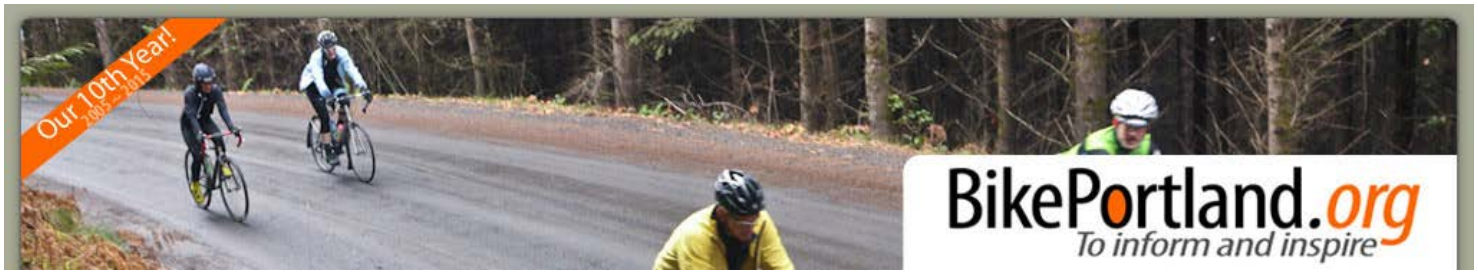
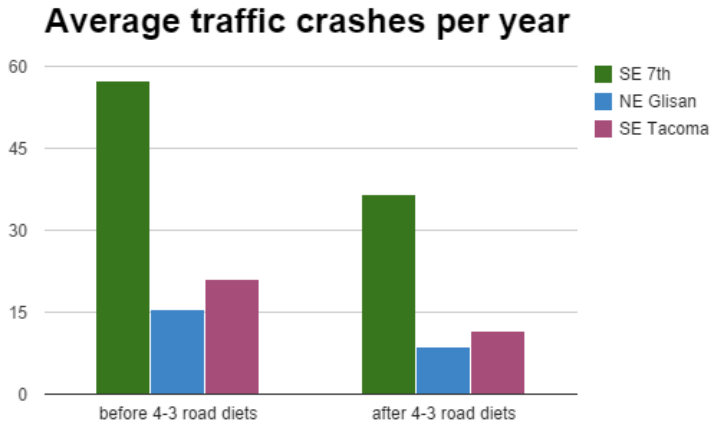


For less than $500,000, 3 Portland road diets are preventing 37 crashes every year

Posted by Michael Andersen (News Editor) on October 10th, 2014 at 2:45 pm



(Data: Portland Bureau of Transportation. Chart: BikePortland.)

A new city study shows the big payoff the city has quietly seen from a few uses of one of the least-understood tricks in traffic engineering: the 4-3 road diet.

Converting four general travel lanes to two plus a turn lane and (in some cases) painted bike lanes have prevented about 525 crashes on three Portland streets — Northeast Glisan from 22nd to 32nd; Southeast 7th from Division to Washington; and Southeast Tacoma from 6th to 11th — during the 16 years studied, the analysis released this week found. The number of traffic crashes on those streets dropped 37 percent.

Traffic volumes on those three streets, meanwhile, fell by an average 7.7 percent, suggesting that the safety and access improvements weren't accompanied by major new burdens on drivers' mobility.

The number of crashes being prevented on each of those streets, of course, continues to rise: by about 37 more every year among the three of them.

Southeast 7th Avenue got almost a mile of bike lanes as a result of a 1994-1996 road diet. Colored bike boxes followed in 2008. (Photo: J.Maus/BikePortland)

Gabriel Graff, operations and safety manager for the city's Active Transportation Division, said that though the benefits of 4-3 road diets are "counterintuitive," they ultimately work for a simple reason: people rarely have either a temptation or a reason to pass each other on a city street.

On streets with two lanes in each direction, Graff said, "the people who are going fast have the opportunity to kind of weave between the two lanes. That results in sideswipe crashes."

Letting left-turning cars sit in the center turn lane, meanwhile, prevents traffic backups and preserves road capacity.

In city jargon, the projects are sometimes referred to as "road reconfigurations."

Graff said the price of all five road diets considered in the city's analysis was "in the $100,000 range," or up to $120,000 or so for projects that added new median islands or other improvements.

"The cost/benefit is really high," he said. "For the cost of one improved crossing — a median improvement or rapid-flashing beacon that provides a point improvement, you can reduce crashes across 10, 20 blocks."

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In addition to the three road diets listed above, all of them completed between 1997 and 2003, the city looked at the results of two 2013 road diets: Northeast Glisan and Southeast Division, both between 60th and 80th avenues. Though those projects are too recent to show reliable crash data, the city did determine that typical auto speeds fell by 9.8 percent and traffic volumes fell 4.4 percent.

The road diets on inner Glisan, inner 7th and Division all added bike lanes. increasing street capacity and, in the case of 7th, creating one of the central east side's most important north-south bikeways. The outer Glisan and Tacoma road diets added auto parking.

Graff said road diets have become a standard tool in cities across the country and are now being enshrined in federal policy. Last month, Transportation Secretary Anthony Foxx announced that the Federal Highway Administration is preparing to release a national guide to instituting road diets.

"When we're on our game, we're able to combine a really significant safety improvement with some paving maintenance," Graff said. "So when you're resource-constrained like we are, that's a big help."

You can read the city's full analysis and dig into some of the numbers behind it on the city's website.

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Posted on October 10th, 2014 at 2:45 pm. Filed under Front Page and tagged with , ne glisan st, road diets, Safety, se 7th ave, se division st. You can skip to the end and leave a response. Pinging is currently not allowed.

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Comments

- Adam October 10, 2014 at 3:18 pm

  I love road diets! The central turning lane provides ample space for motorists to pass cyclists, and only having one lane of traffic each direction as opposed to two reduces the stop-gap time for bicyclists and pedestrians (and even motorists) to cross the road.

  And, although I know this is totally only anecdotal, oads on a road diet always *feel* as if the traffic is slower. With two lanes each direction of traffic, there are always one lane of cars racing past the other lane of slower cars, often too fast.

  Recommended 8

  Reply Link Quote

- ktmhz October 10, 2014 at 3:24 pm

  Wish 52nd had gotten a center turn lane, maybe instead of the parking lane. I can't recall a day when I have ridden on that road when I haven't seen someone in a car veer into the bike lane to pass a turning vehicle or to bypass a queue at a traffic light and turn right.

  Recommended 10

  Reply Link Quote

  - davemess October 12, 2014 at 8:37 am

    It for sure needs a turn lane at SE Steele. Traffic is getting really backed up at that intersection. They have the space (as there is a turn lane at SE Holgate).

    Recommended 1

    Reply Link Quote

- Alex October 10, 2014 at 3:31 pm

Can’t wait to see the numbers when Foster Rd goes on a diet.

Recommended 11

Reply Link Quote

-
  Gregg October 10, 2014 at 4:44 pm

  If I was one of the 37 crash victims saved, I want to thank PBOT for your forward thinking!

  Recommended 24

  Reply Link Quote

-
  Alex Reed October 10, 2014 at 5:15 pm

  If we keep reducing motor vehicle use, the road diet targets become almost endless! Powell Blvd. is down 10,000 cars per day over the last decade – from 35,000 to 25,000 ADT at 45th Ave. I believe the threshold for 4-3 road diet is about 21,000 ADT. Come on SE Portland, we can do it! (Next step after that is convincing ODOT but one thing at a time, right?)

  Recommended 13

  Reply Link Quote

  -
    9watts October 10, 2014 at 8:28 pm

    Yes! Hawthorne, too!

    Kind of amusing now, looking back and reading the naysayers’ comments - http://bikeportland.org/2013/08/01/city-will-begin-adding-new-bike-lanes-to-se-division-this-monday-91486

    Recommended 11

    Reply Link Quote

  - Beeblebrox October 11, 2014 at 10:31 am

    The best ODOT-owned candidate I can think of is Lombard between Columbia Park and MLK. That section has less than 20,000 cars a day if I remember correctly, and it has a 3-lane cross-section from Columbia Park west to St Johns anyway. It’s a no-brainer.

    Recommended 9

    Reply Link Quote

    -
      Noah Brimhall October 13, 2014 at 11:05 am

      This was one of the major recommendations to come out of the Lombard Re-Imagined project. One of the obstacles, as I recall, is that this is a designated route for over-sized freight, but I think that the groupe working on the project found that their contacts at ODOT didn’t think this would be a barrier to a 3-lane configuration. Also, it looks like there is going to be a Walktober event tomorrow about the Lombard Re-Imagined project which might be interesting to folks who have concerns about this stretch of road: http://walktoberpdx.org/event/re-imagine-lombard-street/?date=2014-10-14

      Recommended 0

      Reply Link Quote

    - paikiala October 13, 2014 at 12:18 pm

      Lombard w/Mississippi, 2008: 821/954 east v westbound peak hour trips.
      1000 is the standard high volume for one lane. It could go higher if bottlenecks were reduced – usually the signal intersections.

      Recommended 0

      Reply Link Quote

  - paikiala October 13, 2014 at 9:52 am

Actually, the threshold is not daily traffic, but peak hour. Downtown needs about 1 lane for each 800 peak hour trips, while the outer areas typically use 1,000 trips per lane as the threshold. Sizing roads for the worst times of day is another discussion Examples:

Diet
Glisan at 78th, 2013 peak volumes: 754/694
Burnside at 17th, 2010: 1089/631
Holgate at 100th: 768/499

Not yet
Glisan at 117th, 975/1017 (on the edge)
102nd at Wygant, 2010 volumes: 452/518 (doesn't need 4 lanes)
MLK at Ankeny, 2010: 1998 peak volume ('needs' 2 lanes)
Grand at Ankeny, 2010: 1361
Capitol Hwy at Alfred, 2012: 761/929
Chavez at Brooklyn, 2010: 868/997
Division at 68th, 2009: 901/747
Halsey at 152nd: 903/858

Recommended 3

Reply Link Quote

- Greg October 10, 2014 at 10:42 pm

  So bike portland can appreciate road diets as long as the street name doesn't start with 'B' and end with 'side'?

  Recommended 3

  Reply Link Quote

  - David Carlsson October 10, 2014 at 11:04 pm

    Or start with 'B" and end with 'arbur'

    Recommended 5

    Reply Link Quote

  - Terry D-M October 11, 2014 at 7:05 am

    Now, now…be nice. I know at least further east we support putting Burnside on a diet.

    Recommended 2

    Reply Link Quote

  - Alex Reed October 11, 2014 at 8:41 am

    Wait, you're eliding a point here. All of the streets highlighted in the article (except I'm not sure about Tacoma) had road diets with bike lanes added. The complaint on Burnside was that the road diet did not result in bike lanes. And I'm sure Jonathan and almost all the other posters here would say that (non-bike lane road diet) is better than (4-lane road forever). We just also think that (bike lane road diet) is better than (non-bike lane road diet). And we also think that the case for bike infrastructure is so strong and the need so urgent that PBOT should be shoehorning it into any project it can, instead of giving excuses as to why it can't do bike infrastructure and making projects that are focused on bike infrastructure so weak that they add up to only small improvements (e.g. 20s bikeway).

    Recommended 10

    Reply Link Quote

    - 9watts October 11, 2014 at 9:09 am

      Precisely.

      At the end of the day I think the question for PBOT is: are bikes the most important thing to focus on or are they a sideshow?

      Why should PBOT focus on bikes Über Alles?

      (1) a mile biked saves the city and all of us $$; a mile driven costs us $$;
      (2) biking is healthier, cheaper, safer than driving; those are benefits we could monetize or we could simply appreciate them as improvements in our quality of life;
      (3) we are on the hook to increase bike mode share to what is it? 25%?

(4) climate change is here; the car is rapidly becoming even more of an Albatross around our necks; anything we can do to ease the transition is money well spent;
(5) the end of CHEAP oil is also around the corner. Pretending it is not serves no useful purpose.*

PBOT does not appear to think in these terms, much less draw the kinds of conclusions that seem prudent. Taking bold steps away from automobility takes guts, takes leadership. But the writing is on the wall. What could we possibly have to lose?

*Oil companies are losing billions right now drilling for the hard to get stuff. The brief blip in US fracked oil and gas is the only net addition to the world's supply; when that starts to decline, as many suggest it will in the next few years, there's nowhere to go to make up for the declines in all the world's so-called conventional oil fields.

Recommended 5

Reply Link Quote

- paikiala October 13, 2014 at 9:54 am

  Focusing on one mode of transportation is making the same mistake that's been done for the last 100 years. Haven't we learned better?

  Recommended 1

  Reply Link Quote

  - 9watts October 13, 2014 at 12:44 pm

    Except that all modes are not created equal. There is no reason bikes couldn't keep working for 1,000 years. We don't need ancient sunlight to power them or us. Today's sunlight is just fine.

    Recommended 0

    Reply Link Quote

- Beeblebrox October 11, 2014 at 10:36 am

  Tacoma, Glisan (60th to 80th), and Burnside have now gotten road diets without putting in bike lanes. On-street parking is the major reason, though on Burnside it was also due to traffic analysis showing heavy eastbound volumes in the peak. So if people want more bike lanes, we need to have a larger conversation about prioritizing curb space in the city (and a respectful one, not an intense parking vs. bikes fight) and we need to change our traffic Level of Service standards.

  Recommended 1

  Reply Link Quote

- davemess October 13, 2014 at 9:05 am

  Alex, correct me if I"m wrong, but aren't/weren't you one of the folks saying you wouldn't use the new bike lanes on SE 52nd? Bike lanes added to Burnside would be pretty much the exact same set up (except you'd be in the door zone on both sides).

  I'm not trying to personally attack you, but I'm just concerned that many seem to be jumping on this Burnside project as being indicative of PBOT's disinterest in cycling. Would that many people actually use bike lanes on Burnside with Couch and Ankeny right next to Burnside? There are so many on this site clamoring for separated infrastructure, and we have that now for this section (and it works pretty well).
  I would agree that PBOT has messed up a number of projects, but I just find it odd that the Burnside project is really a major one to get people riled up.

  Recommended 1

  Reply Link Quote

  - Alex Reed October 13, 2014 at 10:13 am

    To be more exact, I said that I wouldn't use the door-zone side of the 52nd bikeway, and having tried using it, I don't like it and opt for other options instead. I do use the non-door-zone side of the 52nd bikeway, although I would of course like a wider lane and more separation.

    I do see plenty of other people using both sides of that bike lane. I think the extra foot of space does make it accessible to a slightly wider audience than a 5-foot bike lane (although not wide enough to include me).

    However, I also think protected or buffered bike lanes get you a lot more comfort and riders for your buck. I think there's space on Burnside for protected bike lanes. One motor vehicle lane each way, center turn line, parking on only one side. Voila!

    Sure, this is magical political thinking on my part given PBOT's failure to effectively engage, work with, and/or stand up to the

business community on 28th ave re: the parking issue. But these are the kind of transformative projects that need to get done in order to change the transportation situation markedly in Portland, and they're what I'll be advocating for.

Recommended 1

Reply Link Quote

- Jason October 11, 2014 at 8:47 am

  It would be interesting to know the net effect of these changes on surrounding roads as well. Did the savings come at the cost of making other arterials less safe?

  Recommended 2

  Reply Link Quote

- John R. October 11, 2014 at 8:51 am

  I place this at the feet of Mia Birk and other misguided Portland cycling activists who have stated that bikes should be on side streets instead of places like Hawthorne. Shameful that we have not had more road diets and shameful that they get "credit" when they deserve far less. Less crashes matter. Data matters.

  Recommended 9

  Reply Link Quote

  - Nick Falbo October 11, 2014 at 6:35 pm

    Who do you think put bike lanes on SE 7th Ave in 1994?

    Recommended 2

    Reply Link Quote

    - John R. October 12, 2014 at 7:33 am

      Hi Nick, Well SE 7th is hardly a major arterial. After Broadway went in, thoughts were that we would see similar treatment on other major streets in Portland. In fact that was the plan. That didn't happen though and a shift to bike boulevards happened. Fine.

      However Mia has personally spoken out against people biking on Hawthorne and from my perspective we took the easy over the good. Personally, given her business, I think she took the easy to sell over what is right.

      Why isn't SE Hawthorne one lane with a turn lane and bike lanes? Why after a great bike lane up to Burgerville are you shunted away from the businesses and homes you might want to visit and instead meander through a neighborhood? Maybe you think that's great, but I don't. Maybe our bike heroes are better at self promotion and their own businesses over what is right/best for the community. Self interest has a long tradition in American history.

      Recommended 6

      Reply Link Quote

      - davemess October 12, 2014 at 8:42 am

        bike lanes on Hawthorne (even with a 3 lane configuration) would be pretty skinny though Aren't Hawthorne lanes already substandard). Parking would have to be addressed to get bike lanes that most people would be happy with.

        Recommended 0

        Reply Link Quote

        - John R. October 12, 2014 at 9:00 am

          Actually no they would not. Two lanes, one turn lane, bike lanes. It's not that hard and if you measure the width of the road it could be done. At one time this was actually the plan, smdh.

          Recommended 5

          Reply Link Quote

- GlowBoy October 13, 2014 at 12:03 pm

  IIRC Hawthorne has 9.5′ wide lanes. That doesn't leave enough space for safe bike lanes if you reduce it from 4 general travel lanes to 3, especially since long stretches would be in the door zone. I think you still need to reduce parking from one side to make it work.

  That said, I'd love to see it. One problem with the current 4-lane configuration is that maybe 10% or so of drivers still try to go 30+mph, despite the fact that it's patently unsafe at those speeds. Cutting it to 1 lane each way would do a lot to rein in the blatant speeders.

  Such a road diet would also eliminate the regular impacts that currently happen on Hawthorne when opposing vehicles' mirrors hit each other (most often when one of those vehicles is a truck or bus that doesn't actually fit in the lane). I've witnessed one of these, and if you keep your eyes open you'll see there is often debris in the center of Hawthorne from these incidents.

  Recommended 4

  Reply Link Quote

  - davemess October 13, 2014 at 1:52 pm

    The link i attached below shows 9.5′ wide lanes across Hawthorne (I'm guessing the lanes haven't changed since 1997).

    Recommended 0

    Reply Link Quote

- davemess October 13, 2014 at 9:14 am

  https://www.portlandoregon.gov/transportation/article/65307

  Is there a newer plan than this one (which specifically says it does not recommend bike lanes)?

  Recommended 0

  Reply Link Quote

- Nick Falbo October 12, 2014 at 9:46 am

  Yes, I do work for Alta, a private firm that has very little to do with what happens here in in the city of Portland, Oregon. (should I add this to all of my posts?)

  I get your frustration with not seeing bike lanes on commercial streets, but I think it's misguided to imagine that the reason there are no bike lanes on Hawthorne is because Mia Birk once suggested that bicyclists might be better off riding on a bicycle boulevard instead of Hawthorne.

  If you are disappointed in the efforts to improve bicycling conditions in the City of Portland, look to those who have political power and responsibility within the City *today* rather than focusing your energy on someone who used to work there 15 years ago.

  In general, the City of Portland implements bicycle boulevards in house and only hires consultants (such as Kittelson, Alta Planning+Design, CH2M Hill, Nelson\Nygaaard and others) to assist on bike lane projects. Given this, there is no incentive for any of the private firms to promote bicycle boulevards over separated facilities.

  Recommended 4

  Reply Link Quote

- paikiala October 13, 2014 at 10:00 am

  FYI:
  Hawthorne at 33rd, 2011: 1127/587 east v. westbound peak trips. The traffic volumes would suggest a Burnside solution, 2+1 travel lanes, with a center turn lane.

  Recommended 2

  Reply Link Quote

- John R. October 12, 2014 at 7:36 am

  And Nick, since it looks like you work for Alta, good to call out your own conflicts of interest on this matter. Me? I have none, I don't even

live in Portland anymore.

Recommended 2

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- gutterbunnybikes October 11, 2014 at 9:01 am

  Let me preface this with I live off the section of Division which has recently been dieted and for the most part I like it a lot.

  Though I'm delighted in the reduction of accidents, I don't really trust the stats on most these studies on road safety. And I feel that there are some assumptions on these stats as presented. There are so many variables at work with these projects that it can be hard if not impossible to pin point what is really at work here. And some of this stuff is pretty important to figure out.

  First other than Tacoma (at 15% – the rest around 6%) the drop in auto traffic falls in line with the average drop in auto traffic that is occurring naturally everywhere across this country right now. So on a whole I doubt that redesigns really reduce traffic by much.

  Second and perhaps the most significant question is how much of the drop in collisions can really be attributed to road design over the drop in the speed limit that I believe accompanied all the thinned streets.

  I have a sneaking suspicion that the infrastructure does little, and most the attributed decrease in incidents has more to do with speed limit changes. Even a drop of 5 MPH is a huge effect on reaction times, stopping distances of an automobile, and the destructive power of a collision.

  How much cheaper would these redesigns have been if the original full outer lanes were shared bike/auto use (commercial greenway style) and the speed limits dropped to 25 mph across the board.

  Sure these projects were on the cheap by PDOT/ODOT standards, but if we could get bicycles full lane access with some legal maneuvering and drop the speed limits significantly and get 80-90% of the incident reductions with a few stickers and signs, we could get the same results for hundreds of dollars per mile.

  Recommended 3

  Reply Link Quote

  - Terry D-M October 11, 2014 at 9:36 am

    I know living on a stretch of Burnside that has NOT had a diet yet, but will when it gets repaved that just dropping the speed limit will do almost nothing.

    Most of the accidents I have seen occur are during commute time and are due to erratic turns and lane changes. It is obvious if you just watch the behavior. Just signing the speed limit to 30 or even 25 would do very little….it may drop the number of higher speed accidents at the off-times when the roadway is not congested…particularly at traffic lights…. but these types of accidents are not anywhere near as common.

    I would support the outer lane becoming Bikes and Buses ONLY, but not with cars. The configuration you mention, at least on Burnside, would be more dangerous than it is now. You could say "well if there was more enforcement"……but Traffic headquarters is just 3/4 of a mile down the street, and it has never slowed anyone down that I can tell.

    Recommended 3

    Reply Link Quote

  - Beeblebrox October 11, 2014 at 10:39 am

    Actually, research has consistently shown that simply changing speed limits without changing roadway design does absolutely nothing to change driver behavior. That's why speed limits are set based on observed or expected speeds, rather than on how fast we would like people to drive. Think about it–if you were driving on 82nd Ave as it is now, but they changed the speed limit signs to 25, would you actually drive 25? Probably not. Design is what determines speed, so the infrastructure is what is really important here, not speed limits.

    Recommended 3

    Reply Link Quote

    - Chris Anderson October 11, 2014 at 2:11 pm

      I won't let your argument stop me from wanting a blanket speed limit change down to 20 mph or less in our neighborhoods. It's just crazy that people think it's okay to go 25 mph on streets where children are supposed to be playing.

      Credit where it's due, these roads diets work.

      Recommended 11

      Reply Link Quote

- davemess October 12, 2014 at 8:46 am

  There is also the lack of police enforcement in this town.

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  Reply Link Quote

  - Alex Reed October 12, 2014 at 1:21 pm

    And the State of Oregon ban on 24-7 automated speed enforcement, which is used cheaply and effectively in other places.

    Recommended 5

    Reply Link Quote

- paikiala October 13, 2014 at 10:06 am

  B,
  Agreed, but if 82nd was one lane each direction and the speed was posted 25, I'm pretty sure the average 85th would decrease. Safe Systems is a holistic approach to reducing crash severity. The primary speed reducing benefit of a road diet is the elimination of legal, and unrestricted, passing opportunites two lanes in the same direction provides. Even without changing the layout of 82nd, if the new speed was more rigorously enforced, the speeds are likely to drop.

  Recommended 2

  Reply Link Quote

- paikiala October 13, 2014 at 10:13 am

  GB,
  I agree that total numbers can be misleading. The better before and after measure is crash rate, and in the case of corridors, crash rate per mile. This would compare the number of crashes relative to the number of users, so if the number of crashes went down as well as number of users, then the crash rate may not have changed at all. This would still only be one side of the story. The other side is the crash severity and how it may, or may not, have changed. Reducing total number of crashes is only a proxy to the real goal, reducing the number of severe injuries and fatalities.

  Recommended 0

  Reply Link Quote

- James October 11, 2014 at 9:39 am

  I'm all for road diets, but it'd be nice if they were accompanied by diverters to keep embittered motorists from using the bikeways.

  Clinton hardly deserves the distinction of "bikeway" anymore.

  Recommended 7

  Reply Link Quote

  - paikiala October 13, 2014 at 10:08 am

    Functional classification does not equal level of implementation. Bikeway is a label, Neighborhood Greenway is a standard, and Clinton has not yet been built to that standard.

    Recommended 0

    Reply Link Quote

- Bjorn October 12, 2014 at 9:27 am

  It would be nice if there were some way that the city could recover the money they have saved insurance companies with these road diets.

  Recommended 2

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