CITY COUNCIL ACTION REPORT

Date: October 23, 2015

To: Brian Kischnick, City Manager

From: Mark F. Miller, Director of Economic and Community Development
Steven J. Vandette, City Engineer
William J. Huotari, Deputy City Engineer/Traffic Engineer

Subject: Traffic Committee Recommendations and Minutes – October 21, 2015

At the Traffic Committee meeting of October 21, 2015, the following recommendation was made for City Council approval:

3. Request for Traffic Control – Melanie Lane at Michael Drive

RESOLVED, that Troy City Council hereby **AUTHORIZES** the intersection of Melanie Lane at Michael Drive be **MODIFIED** from NO traffic control to a YIELD sign on the southbound Michael Drive approach to Melanie Lane.

** This item was originally considered at the September 16, 2015 Traffic Committee meeting and a Stop sign was recommended. The item was brought back to the October 21, 2015 Traffic Committee meeting for reconsideration to allow for additional resident input and for explanation of the Safe Approach Speed calculation with supporting information provided by OHM Advisors relative to their study of the intersection.

The suggested resolution reflects the recommendation made at the October 21, 2015 Traffic Committee meeting.

Minutes of the meeting are attached.

A regular meeting of the Troy Traffic Committee was held Wednesday, October 21, 2015 in the Lower Level Conference Room at Troy City Hall. Pete Ziegenfelder called the meeting to order at 7:30 p.m.

1. Roll Call

Present: Tim Brandstetter
Mitch Huber
Al Petrulis
Pete Ziegenfelder

Absent: David Easterbrook
Richard Kilmer
Cynthia Wilsher
Katie Regan (Student Representative)

Also present: Allen Ferguson, 6737 Michael Drive
Jennifer Walters, 84 Melanie Lane
Roch Morin, 6725 Michael Drive
Kevin Nunning, 79 Melanie Lane
Justin John, 6756 Michael Drive
Lt. Eric Caloia, Fire Department
Sgt. Mike Szuminski, Police Department
Bill Huotari, Deputy City Engineer/Traffic Engineer

2. Minutes – September 16, 2015

Resolution # 2015-10-44
Moved by Petrulis
Seconded by Brandstetter

To approve the September 16, 2015 minutes as printed.

Yes: Brandstetter, Huber, Petrulis, Ziegenfelder
No: None
Absent: Easterbrook, Kilmer, Wilsher

MOTION CARRIED

REGULAR BUSINESS

3. Reconsideration – Request for Traffic Control – Melanie Lane at Michael Drive

The Traffic Committee recommended that a Stop sign be installed on the southbound Michael Drive approach to Melanie Lane at the September 16, 2015 meeting. This recommendation was brought back to the Traffic Committee for reconsideration to allow for additional resident input and for explanation of the Safe Approach Speed calculation with supporting information provided by OHM Advisors relative to their study of the intersection.

Kevin Nunning, 79 Melanie Lane, supports a Stop sign on Michael Drive. He reports that the cleaning service for his house was almost hit at the intersection and ended up in a front yard avoiding the crash.

Roch Morin, 6725 Michael Drive, stated that he is the president of Lamb's Other End subdivision. He supports no traffic control or a Yield sign at the intersection. Everyone must be vigilant when driving in a subdivision. He believes that a Stop sign may create a false sense of security as drivers on Melanie Lane may assume that a driver on Michael Drive is going to stop.

Jennifer Walters, 84 Melanie Lane, supports a Stop sign at the intersection. She reports that there are sixteen (16) children living on Melanie Lane. She has almost been involved in three (3) crashes at the intersection and ended up in the front yard of 43 Melanie Lane while avoiding a collision. There may not be reported crashes, but there have been several near misses. There is a "rush hour" in the subdivision as most residents have school age children and work. She defers to the expert recommendation by OHM Advisors. A three (3) foot tall child is much more difficult to see than a approaching vehicle.

Justin John, 6765 Michael, supports no traffic control or a Yield sign at the intersection. He rarely see traffic when he travels through the intersection, but knows to yield to oncoming traffic if present. He reviewed eighteen (18) intersections in the one-square mile section, centered on Livernois, and found that four (4) intersections had Stop signs; eight (8) had Yield signs; and the remaining intersections had no traffic control. He feels that a Stop sign is excessive for this location.

Al Ferguson, 6737 Michael Drive, is opposed to a Stop sign. He has counted the number of encounters he has had with opposing traffic since the original notice to residents was sent and he personally has had no conflicts with other vehicles in his over 50 trips through the intersection. The OHM Advisors recommendation is based on a Safe Approach Speed of 9.8 mph which is very near the 10 mph limit and he believes that a Yield sign should be permissable. He noted a "typo" in the original report delineating obstructions in the "northeast corner" when in actuality the obstruction used in the calculation is in the "northwest corner". The tree (obstruction) in question is 22 feet off the road and the measurement is inexact at best. Mr. Feguson referenced Mr. John's study of similar intersections and stated that other locations that have Stop signs have vision obstructions such as berms or trees that obstruct vision down to the ground.

Mr. Feguson continued that there have been no crashes at the intersection in his 12 ½ years living in this subdivision. He would support a Yield sign if that would provide more clear direction as to right-of-way at the intersection. Stop signs should not be installed at locations where they are not warranted. He travels through the intersection at all times of the day and does not feel there is an issue with right-of-way. Mr. Ferguson submitted a letter to the Traffic Committee opposed to the installation of a Stop sign. The letter was signed by ten (10) residents on Michael Drive.

Mr. Morin stated that when he sees kids on the roads or sidewalks he slows down or stops.

Mr. Ferguson asked that the Traffic Committee take into consideration the ten (10) residents on Michael Drive that signed the letter opposing a Stop sign. He stated that there is no data that supports a Stop sign. He feels that you should not place a sign based on one person's request.

There was general discussion regarding aggressive drivers and what assistance Troy Police could offer.

Mr. Huber asked about "Children at Play" signs. These types of signs are not installed in Troy as the Michigan Vehicle Code prohibits the installation of any sign that is not specified in the Michigan Manual of Uniform Traffic Control Devices (MMUTCD). These types of signs show no evidence of having reduced pedestrian crashes or vehicle speeds. "Children at Play" signs create a false sense of security for parents and children. Motorists have been found to pay little attention to them. Playing in the street is unsafe and illegal.

Resolution # 2015-10-45
Moved by Petrulis
Seconded by Brandstetter

WHEREAS, the Traffic Committee passed a resolution at its September 16, 2015 meeting recommending that the intersection of Melanie Lane at Michael Drive be MODIFIED from NO traffic control to ONE-WAY STOP control with a sign on the southbound Michael Drive approach to Melanie Lane; and

WHEREAS, the recommendation was brought back to the Traffic Committee for reconsideration to allow for additional resident input and for explanation of the Safe Approach Speed calculation with supporting information provided by OHM Advisors relative to their study of the intersection;

NOW THEREFORE, BE IT RESOLVED, that the Traffic Committee approves reconsideration of its recommendation for a traffic control deivce at the intersection of Michael Drive at Melanie Lane.

Yes: Brandstetter, Huber, Petrulis, Ziegenfelder
No: None
Absent: Easterbrook, Kilmer, Wilsher

Steve Dearing, traffic engineering consultant, was present at the meeting to discuss the report prepared by OHM Advisors for the intersection of Michael Drive at Melanie Lane. Mr. Dearing provided a history of traffic control devices and their use. In short, the Michigan Manual of Uniform Traffic Control Devices (MMUTCD) is adopted by the Michigan Vehicle Code and is the basis of law. He continued in discussing how, when and where do you pick a Stop vs a Yield sign vs uncontrolled.

Traffic control in a residential area can be very emotional and the goal behind the Safe Approach Speed (SAS) calculation is to make the placement of traffic control objective rather than subjective. The SAS goes back to the early 1960's when the concept was originally developed by AAA to determine if an intersection is restricted enough to limit a driver's ability

to see a conflict. Over the years a rational method was developed based on nomographs that was turned into a calculation. The calculation is conservative by nature and based on worst case scenarios. There is engineering judgment used as the calculation provides a value based on the input provided. There is no perfect safety and the placement of traffic control looks at risk management in a conservative nature. In the end, an intersection study is based on a judgment call.

Mr. Petrulis discussed driver behavior at Stop and Yield signs based on his experiences as a driver.

Mr. Ziegenfelder stated that he is always in favor of traffic control devices at an intersection. He believes that Stop signs provide much clearer guidance in the event of a crash.

Mr. Petrulis did review the intersection and said that he did not notice any significant obstructions on the corners. He feels that a Stop or Yield sign would be appropriate but has concerns about how effective a Stop sign would be if drivers don't believe it is warranted and may treat it as a Yield sign.

Mr. Brandstetter shared similar concerns in that a Stop sign my create a false sense of security at this particular location.

Resolution # 2015-10-46
Moved by Huber
Seconded by Brandstter

RESOLVED, that the intersection of Melanie Lane at Michael Drive be MODIFIED from NO traffic control to a YIELD sign on the southbound Michael Drive approach to Melanie Lane.

Yes: Brandstetter, Huber, Petrulis, Ziegenfelder
No: None
Absent: Easterbrook, Kilmer, Wilsher

MOTION CARRIED

A question was posed by Ms. Walters regarding liability of the City based on the published study by OHM Advisors recommending a Stop sign. Mr. Dearing addressed the question by discussing tort liability. The State has exempted executive decisions such as those of fundamental policy. Whether to install a traffic control device, such as a Stop or Yield sign, is an issue where you exercise judgment and so is considered protected from claims of tort liability. The judgment is based on information provided and the executive action or approval is based on the best interests of the City.

4. Public Comment

There was no additonal public comment.

5. Other Business

An update on the status of the pathway program was provided.

6. Adjourn

The meeting adjourned at 8:45 p.m.

Pete Ziegenfelder, Chairperson

Bill Huotari, Deputy City Engineer/Traffic Engineer

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City of Troy GIS Online

ITEM #3

417 0 208 417 Feet

Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.

ARCHITECTS. ENGINEERS. PLANNERS.

OHM Advancing Communities®

July 10, 2015

Mr William Huotari, PE
Deputy City Engineer
City of Troy
500 W. Big Beaver Rd
Troy, MI 48084

RE: Traffic Control Recommendation for Melanie Lane and Michael Drive
OHM JN: 0128-15-0180

Dear Mr. Huotari:

As requested, we have reviewed the Melanie Lane at Michael Drive intersection to determine the proper traffic control. The subject intersection is a 3-leg intersection (tee) located in the City of Troy approximately .5 miles south of W South Boulevard and 250 feet west of Livernois Road. The speed limit on both streets is 25 mph. There are currently no traffic control devices at this intersection. Reference the attachments for aerial and intersection photos.

Background on Traffic Control Determination
Based on the Michigan Manual of Uniform Traffic Control Devices (MMUTCD) there are four conditions where STOP signs may be warranted:

- At the intersection of a less important road with a main road where application of the normal right-of-way rule is unduly hazardous
- On a street entering a through highway or street.
- At an unsignalized intersection in a signalized area.
- At other intersections where a combination of high speed, restricted view, or crash records indicate a need for control by the STOP sign.

Many times STOP signs are installed where they may not be warranted. Traffic experts agree that unnecessary STOP signs:

- Cause accidents they are designed to prevent.
- Breed contempt for other necessary STOP signs.
- Waste millions of gallons of gasoline annually.
- Create added noise and air pollution.
- Increase, rather than decrease, speeds between intersections.

OHM Advisors
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F 734.522.6427
OHM-Advisors.com

The use of a YIELD sign is intended to assign the right-of-way at intersections where it is not usually necessary to stop before proceeding into the intersection. Conversely, the STOP sign is intended for use where it is usually necessary to stop before proceeding into the intersection.

The following conditions should be fully evaluated to determine how the right-of-way should be assigned:

- Traffic Volumes: Normally, the heavier volume of traffic should be given the right-of-way.
- Approach Speeds: The higher speed traffic should normally be given the right-of-way.
- Types of Highways: When a minor highway intersects a major highway, it is usually desirable to control the minor highway.
- Sight Distance: Sight distance across the corners of the intersection is the most important factor and is critical in determining safe approach speeds.

Crash Analysis
Based on information obtained through Traffic Improvement Association of Michigan, there were no crashes recorded in the past 5-years at the intersection of Melanie Lane and Michael Drive. The crash data does not constitute a compelling case for modifying the existing controls.

Approach Speeds
The approach speed limit on both streets is 25 mph. Speed limits alone cannot be used in this case to determine which direction of traffic should be assigned the right-of-way.

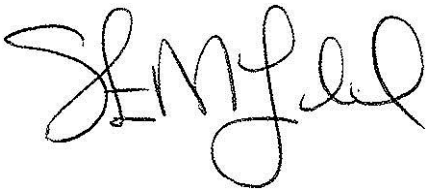
Types of Roadways
Both Melanie Lane and Michael Drive are considered local streets. Due to the geometry Melanie Lane would be considered the continuing roadway. It should be noted that currently there are no parking signs posted along eastbound Melanie Lane and southbound Michael Drive.

Sight Distance
The major potential sight distance obstructions at the intersection are a pair of trees and several shrubs in the northeast quadrant of the intersection. These obstructions come into play when determining the safe approach speeds for the intersection. The safe approach speed is the speed at which a vehicle can approach an intersection and still stop in time to avoid a collision with a vehicle on the cross street. Safe approach speeds are determined through calculations.

When the safe approach speed is found to be more than 10 mph, a YIELD sign is commonly used. In this case, the safe approach speed was found to be 9.8 mph for southbound Michael Drive; therefore a STOP sign is the recommended treatment. The safe approach speed calculation spreadsheet is attached for your reference.

Recommendation
OHM recommends that the intersection control be made a one-way STOP control. The sign should be placed on the southbound approach to the intersection on Michael Drive.

Sincerely,
Orchard Hiltz & McCliment, Inc.



Steve M. Loveland, PE, PTOE
Traffic Project Manager

Attachments:
- Aerial and Intersection Photos
- Safe Approach Speed Calculation Spreadsheet

City of Troy GIS Online

417 0 208 417 Feet

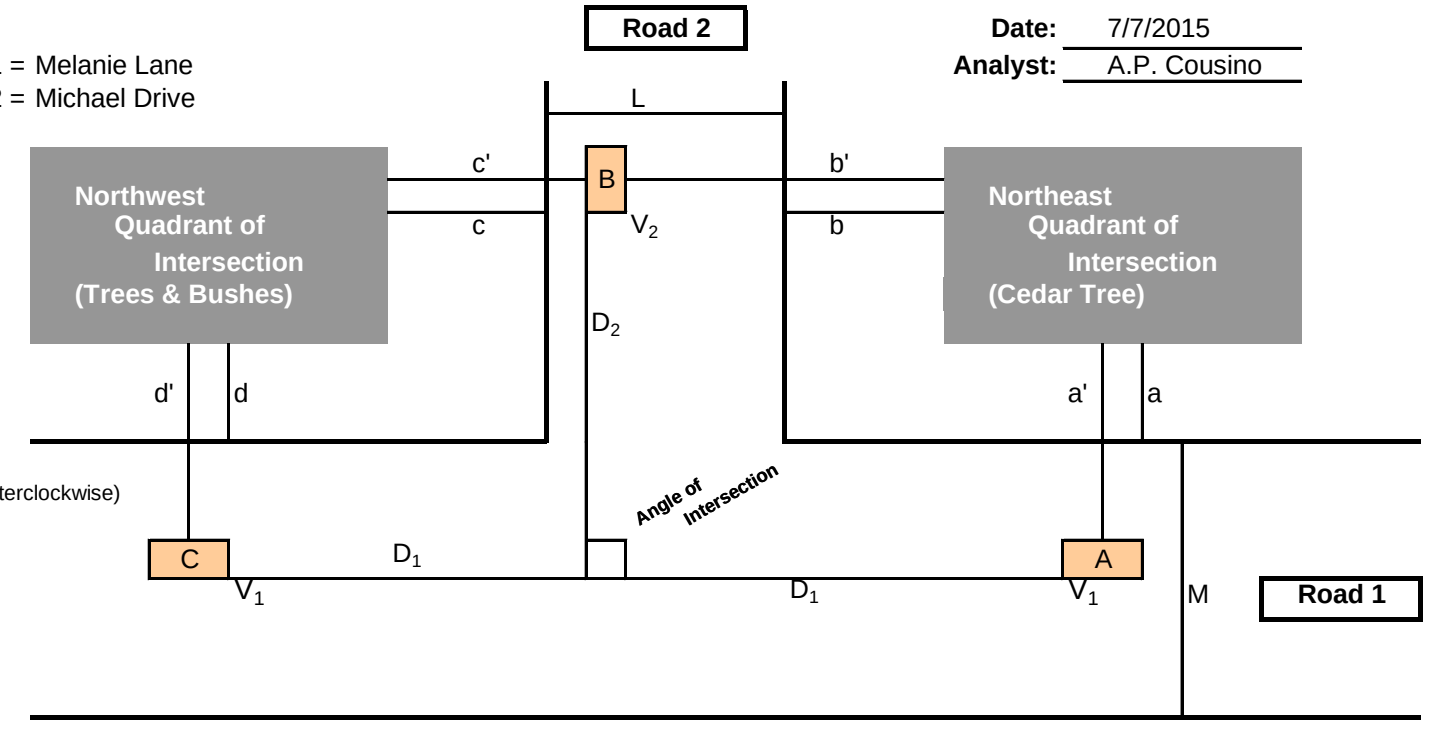
Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.

Safe Approach Speed Calculation

Melanie at Michael
City of Troy

Road 1 = Melanie Lane
Road 2 = Michael Drive

Date: 7/7/2015
Analyst: A.P. Cousino



Measured:

Width of Roads

Road 1 =	28	(ft)
Road 2 =	28	(ft)

Distance to Obstruction

a =	46	(ft)
b =	35	(ft)
c =	22	(ft)
d =	35	(ft)

Angle of Intersection

Delta =	90	(degrees, measure counterclockwise)

Road 1 Posted

Speed Limit =	25	(mph)

Assumed:

Speed of Vehicle A = Speed of Vehicle C
= Posted Speed Limit on Road 1

+	5	(mph)
V_1 =	30	(mph)

Perception / Reaction Time (AASHTO)

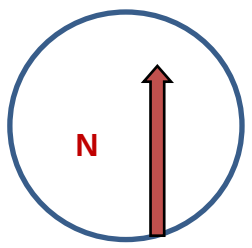
t =	2.5	(sec)

Deceleration rate (AASHTO)

A =	11.20	

Clearance distance in excess of safe stopping distance (AAA)

EC =	0	(ft)



Intermediate Calculations:

D_1=	196	a' =	57
D_{2A}=	77.5	b' =	52
D_{2C}=	44.9	c' =	33
		d' =	52

Based On $D_1 = (1.075\ V_1^{\ 2} / A) + 1.4667\ V_1\ t + EC$

$D_{2A} = \frac{a' * D_1}{(D_1 - b')}$ or $D_{2C} = \frac{c' * D_1}{(D_1 - d')}$

Calculated Safe Approach Speed for Vehicle B
Approaching on Road 2

V_2 =	15.1	(mph) [Based on Veh. A]
or V_2 =	9.8	(mph) [Based on Veh. C]

FALSE

Notes: Enter field measurements in yellow highlighted area.
Blue fields are std. default values; change only for cause.
Calculated by spreadsheet

Recommended ROW control for Road 2
based on safe approach speed : STOP Sign

Melanie Lane looking west

Melanie Lane looking east

Michael Drive looking southeast

Michael Drive looking southwest

Michael Drive looking north

September 21, 2015

Troy City Council
500 W. Big Beaver
Troy, MI 48084
RE: Traffic Committee Recommendation – Michael Drive and Melanie

Dear Council Members:

Before you is a recommendation to install a STOP sign on southbound Michael Drive. My family and I have been residents of 6737 Michael Drive for 12 ½ years. During that time there have been no traffic or pedestrian accidents at that intersection. There are 16 houses on Michael Drive and 12 houses on Melanie. There is one house currently under construction on each street.

The consultant report presented by OHM Advisors was commissioned at the request of one resident, which in itself seems inherently wrong for tax payers, will suggest that a STOP sign is warranted as the average approach speed is 9.8 mph instead of 10 mph that would allow for a YIELD sign. It also states a tree obstruction on the NE corner. There is one cedar bush that is offset from the corner, and one tree in the city right of way.

During the vast majority of egress from the subdivision you will not encounter ANY vehicles from Melanie. In fact in my last 26 exits and counting I haven't had to stop for a car approaching from Melanie.

While I feel there is no need for additional traffic control, I am willing to address the concern of the Melanie resident by endorsing a YIELD sign. I believe this is a reasonable solution that should be acceptable by all parties. This gives the single concerned resident on Melanie the satisfaction of knowing the onus is on the Michael Drive vehicle to yield, on the rare occasion when vehicles are approaching the intersection at the same time. This also allows the drivers on Michael Drive to safely proceed without making an unnecessary complete stop if no vehicle is present. This position is supported by numerous residents on Michael Drive.

Therefore, the residents of Michael Drive that have signed below respectfully request the Council modify the traffic committees recommendation for a STOP sign to a YIELD sign at the Michael Drive and Melanie intersection.

Your consideration is appreciated.

Allen Ferguson

Allen and Monica Ferguson
6737 Michael Drive

September 21, 2015

While we don't believe the data supports any traffic control, we can support a YIELD sign in lieu of a STOP sign.

Raymond and Eugenia
6749 Michael Drive

Debe and Dolapo
09/21/15. Awofala.
Ayodele and Dolapo Awofala
6708 Michael Drive

Dr. Phil and Melissa Zink
6768 Michael Drive

Matt and ~~Kristen~~ Kristi Giroux
Michael Drive 6785

ROCH L. MORIN & JACQUELINE MORIN
6725 MICHAEL DR.

6756 MICHAEL
JUSTIN & JOHN
09/23/15
6572 Michael Drive

Nader Mina
6761 Michael Dr.

Richard Inez Dearaujo
6684 Michael Dr.