



# **TRAFFIC COMMITTEE AGENDA**

**February 16, 2022 – 7:30 P.M.**

**Council Boardroom – Troy City Hall – 500 West Big Beaver**

1. Roll Call
2. Approval of Minutes – November 17, 2021 Traffic Committee

## **PUBLIC HEARINGS**

3. No Public Hearings

## **REGULAR BUSINESS**

4. Request for Traffic Control – Fabius Drive at Virgilia Drive
5. Public Comment
6. Other Business
7. Adjourn

### **Copy to:**

Item 4: Christal March, 251 Fabius; Properties within 300'

Traffic Committee Members; Sgt. Justin Novak, Police Department; Assistant Chief Paul Firth, Fire Department

## **TRAFFIC COMMITTEE**

### **MESSAGE TO VISITORS, DELEGATIONS AND CITIZENS**

The Traffic Committee is composed of seven Troy citizens who have volunteered their time to the City to be involved in traffic and safety concerns. The stated role of this Committee is:

- a. To give first hearing to citizens' requests and obtain their input.
- b. To make recommendations to the City Council based on technical considerations, traffic surveys, established standards, and evaluation of citizen input.
- c. To identify hazardous locations and recommend improvements to reduce the potential for traffic crashes.

Final decisions on sidewalk waivers will be made by the Committee at this meeting.

The recommendations and conclusions arrived at on regular items this evening will be forwarded to the City Council for their final action. Any citizen can discuss these recommendations before City Council. The items discussed at the Traffic Committee meeting will be placed on the City Council Agenda by the City Manager. The earliest date these items might be considered by City Council would normally be 10 days to 2 weeks from the Traffic Committee meeting. If you are interested, you may wish to contact the City Manager's Office in order to determine when a particular item is on the Agenda.

Persons wishing to speak before this Committee should attempt to hold their remarks to no more than 5 minutes. Please try to keep your remarks relevant to the subject at hand. Please speak only when recognized by the Chair. These comments are made to keep this meeting moving along. Anyone wishing to be heard will be heard; we are here to listen and help in solving or resolving your particular concerns.

## 2. Approval of Minutes – November 17, 2021 Traffic Committee

### PUBLIC HEARING

#### 3. No Public Hearings

### REGULAR BUSINESS

#### 4. Request for Traffic Control – Fabius Drive at Virgilia Drive

Christal March of 251 Fabius requests that the intersection of Fabius Drive at Virgilia Drive be reviewed for purposes of traffic control at the intersection. She stated that the lack of traffic control signage creates a hazardous situation.

### SUGGESTED RESOLUTIONS:

- a. RESOLVED, that the intersection of Fabius Drive at Virgilia Drive be **MODIFIED** from NO traffic control to a YIELD sign on the Virgilia Drive approach to the intersection.
- b. RESOLVED, that **NO CHANGE** be made at the intersection of Fabius Drive at Virgilia Drive.

#### 5. Public Comment

#### 6. Other Business

Mr. Kilmer requested that the traffic signal on Southbound Stephenson Highway be reviewed as he has observed it in flash mode during the weekdays during the hours of 5:00 – 5:30 AM when he passes through the intersection. However, on Sundays, the traffic signal has been operating and cycling between the same hours (i.e. 5:00 – 5:30 AM) on Sunday mornings and asks why it would only operate fully on Sunday mornings and not the weekdays.

Traffic Engineering referred the concern to the RCOC Traffic Signal Engineer for investigation. The following response was received on November 19, 2021, so traffic signal operations should be corrected:

*“Great spot, Mr. Kilmer is spot on – this signal was not going into flash on Sundays. There was an error in the set-up, which I have corrected. The hours of operation at Co 422: Rochester & Stephenson are 7 Days: Midnight – 6:00 AM”.*

#### 7. Adjourn

A regular meeting of the Troy Traffic Committee was held Wednesday, November 17, 2021 in the Council Boardroom at Troy City Hall. Pete Ziegenfelder called the meeting to order at 7:30 p.m.

**1. Roll Call**

Present: Richard Kilmer  
Cindy Nurak  
Al Petrulis  
Sunil Sivaraman (arrived at 7:32 PM)  
Abi Swaminathan  
Cynthia Wilsher  
Pete Ziegenfelder

Absent: Alankar Shende, Student Representative

Also present: Sgt. Justin Novak, Police Department  
Bill Huotari, City Engineer/Traffic Engineer

**2. Minutes – October 20, 2021**

Resolution # 2021-11-21

Moved by Kilmer

Seconded by Petrulis

To approve the October 20, 2021 minutes as printed.

Yes: Kilmer, Nurak, Swaminathan, Petrulis, Wilsher, Ziegenfelder

No: None

Absent: Sivaraman

**MOTION CARRIED****PUBLIC HEARINGS****3. No Public Hearings****REGULAR BUSINESS****4. Request for Traffic Control – Hartland Avenue at Ellenboro Avenue**

Traffic Committee member Kilmer requests that the intersection of Hartland Avenue at Ellenboro Avenue be reviewed for purposes of replacing the existing Yield sign on Ellenboro Avenue with a Stop sign. He stated that the rest of Hartland Avenue has Stop signs and the Yield sign creates confusion for drivers.

Mr. Kilmer spoke about Hartland and the area overall. Hartland is a primary cut-through for traffic and drivers use Hartland to cut-through on every block in this area. There is a lot of

school bus and traffic overall.

A short discussion ensued about the configuration of the intersection and most members expressed surprise that there was not a Stop sign at this intersection already.

Resolution # 2021-11-22

Moved by Petrulis

Seconded by Wilsher

RESOLVED, that the intersection of Hartland Avenue at Ellenboro Avenue be **MODIFIED** from a Yield sign on Ellenboro Avenue to a STOP sign on the Ellenboro Avenue approach to the intersection.

Yes: Kilmer, Nurak, Sivaraman, Swaminathan, Petrulis, Wilsher, Ziegenfelder

No: None

Absent: None

## **MOTION CARRIED**

### **5. 2022 Traffic Committee Meeting Schedule**

According to the City of Troy Traffic Committee By-Laws, Article IV – Meetings:

*“Regular meetings will be held on the third Wednesday of each month at 7:30 p.m. at the Troy City Hall, 500 West Big Beaver Road, Troy, Michigan.”*

There are no other by-laws or procedures that establish the actual dates of the meetings, but an annual calendar of meetings is published by the City so meeting dates need to be set for this purpose.

Resolution # 2021-11-23

Moved by Petrulis

Seconded by Wilsher

RESOLVED, that the Traffic Committee SHALL HOLD Regular Meetings in 2022 according to the following schedule at 7:30 PM:

- Wednesday, January 19
- Wednesday, February 16
- Wednesday, March 16
- Wednesday, April 20
- Wednesday, May 18
- Wednesday, June 15
- Wednesday, July 20
- August – NO MEETING
- Wednesday, September 21
- Wednesday, October 19
- Wednesday, November 16

- December – NO MEETING

Yes: Kilmer, Nurak, Sivaraman, Swaminathan, Petrulis, Wilsher, Ziegenfelder

No: None

Absent: None

## **MOTION CARRIED**

### **6. Public Comment**

There was no further public comment at the meeting.

### **7. Other Business**

Mr. Kilmer requested that the traffic signal on Southbound Stephenson be reviewed as he has observed it in flash mode during the weekdays during the hours of 5:00 – 5:30 AM when he passes through the intersection. However, on Sundays, the traffic signal has been operating and cycling between the same hours (i.e. 5:00 – 5:30 AM) on Sunday mornings and asks why it would only operate fully on Sunday mornings and not the weekdays. Traffic Engineering will refer the concern to the RCOC Traffic Signal Engineer for review and investigation

### **8. Adjourn**

The meeting adjourned at 7:43 PM.

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Pete Ziegenfelder, Chairperson

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William J. Huotari, City Engineer/Traffic Engineer

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## **TRAFFIC COMMITTEE REPORT**

January 28, 2022

TO: Traffic Committee

FROM: Bill Huotari, City Engineer/Traffic Engineer

SUBJECT: Request for Traffic Control – Fabius Drive at Virgilia Drive

### **Background:**

Christal March of 251 Fabius requests that the intersection of Fabius Drive at Virgilia Drive be reviewed for purposes of traffic control at the intersection. She stated that the lack of traffic control signage creates a hazardous situation.

The posted speed limit on both streets is 25 mph.

The intersection is currently uncontrolled.

Fabius Drive is presumed to be the major road, while Virgilia Drive is considered the minor road. Fabius Drive serves as a key route throughout the neighborhood.

There were no crashes recorded in the past full five (5) years within a 250' radius of the intersection.

Traffic counts were also collected on Fabius Drive near the intersection as Ms. March had concerns about speed in addition to traffic control signage. Speeds and volumes recorded do not meet minimum warrants for all-way STOP control. A copy of the speed study is attached as reference.

The major potential sight distance obstruction at the intersection is for a motorist traveling southbound on Virgilia Drive would be the house corners on the northwest and northeast quadrants of the intersection.

The safe approach speed for southbound vehicles on Virgilia Drive is 22.1 mph due to the permanent sight distance obstruction from the house corner on the northwest and northeast quadrants.

OHM recommends maintaining YIELD signs on the Virgilia Drive approach to the intersection.

The city requested that OHM review the intersection and provide their findings and recommendations (copy attached).

January 7, 2022

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

RE: Traffic Control Recommendation for  
Fabius Drive at Virgilia Drive

Dear Mr. Huotari:

As requested, we have reviewed the intersection of Fabius Drive at Virgilia Drive to determine the proper traffic control. Fabius Drive at Virgilia Drive is a 3-legged intersection located in the City of Troy. The speed limit on both streets under investigation is 25 mph. The intersection does not have any stop controlled approaches. Attached are aerial and intersection photos.

### **Types of Roadways**

Both Fabius Drive and Virgilia Drive are considered local streets. Fabius Drive runs east to west providing direct access to the neighborhood from Livernois Road. Virgilia Drive runs north ending in a cul-de-sac.

The surrounding land use is entirely single-family residential. On-street parking is permitted on the north and south sides of Fabius Drive and on the east and west sides of Virgilia Drive. Fabius Drive is presumed to be the major road, while Virgilia Drive is considered the minor road. Fabius Drive serves as a key route throughout the neighborhood.

### **Traffic Control Analyses**

Traffic control analyses described herein adheres to the requirements presented in the Michigan Manual on Uniform Traffic Control Devices (MMUTCD) that are considered mandates of state law. A reference document explaining the background behind the analyses is attached to this memo.

### **Crash Analysis**

Based on information obtained through the Traffic Improvement Association of Michigan, there were no crashes recorded in the past full five (5) years within a 250' radius of the intersection. The crash history does not constitute a compelling case for modifying the existing controls.





### Traffic Volumes

Traffic counts were collected in the vicinity of the intersection. Traffic volumes in residential areas are predominantly driven by the number of single-family residential homes in the neighborhood. Based on the residential nature and the number of homes in the surrounding area it is highly improbable that this location would satisfy any of the minimum volume warrants for an all-way STOP (see attached Reference Guide).

Traffic counts were collected on Fabius Drive near the intersection. Fabius drive does not meet the 300 vehicles per hour threshold for a minimum of 8 hours. The combined vehicular, pedestrian, and bicycle volumes entering from Virgilia Drive is similarly unlikely to average at least 200 units for any 8 hours. Additionally, speed data recorded on Fabius Drive shows the 85<sup>th</sup> percentile speeds as 28.5 mph for eastbound traffic and 33 mph for westbound traffic. The posted speed limit on Virgilia Drive is 25mph, so it is therefore reasonable to assume that the 85<sup>th</sup> percentile approach speed does not exceed 40mph; thus, the minimum vehicular volume warrants cannot be discounted to 70 percent of the values described previously. Therefore, the minimum volume criteria for an all-way STOP has not likely been met.

### Approach Speed Limits

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

### Sight Distance

The major potential sight distance obstruction at the intersection of Fabius Drive at Virgilia Drive for a motorist traveling southbound on Virgilia Drive would be the house corners on the northwest and northeast quadrants of the intersection. These obstructions impact the calculated 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 seen on the cross street.

When the safe approach speed is found to be less than 10 mph, a STOP sign is recommended. When the safe approach speed is found to be more than 10 mph, a YIELD sign is recommended. In this case, the safe approach speed for southbound vehicles on Virgilia Drive is 22.1 mph due to the permanent sight distance obstruction from the house corner on the northwest and northeast quadrants. Thus, based on the safe approach speed calculations, YIELD-control is the computed right-of-way control for Virgilia Drive approach. The safe approach speed calculation spreadsheet for the intersection is attached for reference.

### Recommendation

The preceding analysis did not determine that any criteria were met for all-way STOP-control. The safe approach speed calculations suggested YIELD-control would be appropriate for the minor street (Virgilia Drive) approach.

OHM recommends implementing a YIELD sign on the Virgilia Drive approach. The intersection should be reevaluated if traffic volumes increase, or crashes begin to occur.



Sincerely,  
**OHM Advisors**

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Ife Ogundeji  
Traffic Engineer



Attachments:

- Aerial Photo
- Safe Approach Speed Calculation Spreadsheet
- Intersection Photos
- Traffic Control Determination Reference Guide



# GIS Online

Legend:

-  Tax Parcel
-  Road Centerline Text



Notes:

Map Scale: 1=424  
Created: October 27, 2021



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

Fabius Drive and Virgilia Drive  
City of Troy

Date: 11/17/2021  
Analyst: Ife Ogundeji

Measured:

Width of Roads

Road 1 = 22 (ft)

Road 2 = 22 (ft)

Distance to Obstruction

a = 142 (ft)

b = 118 (ft)

c = 62 (ft)

d = 82 (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)

Calculated Safe Approach Speed for Vehicle B

Approaching on Road 2

50.1 (mph) [Based on Veh. A]

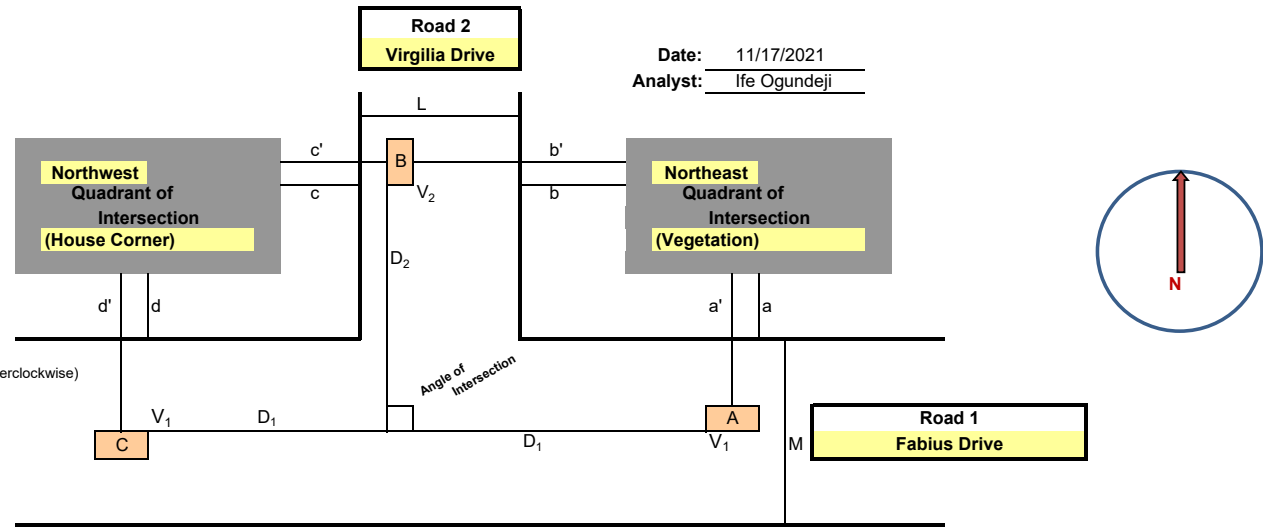
or  $V_2 = 22.1$  (mph) [Based on Veh. C]

Threshold of Safe Approach Speed (AAA, FHWA & NSC)

to Recommend STOP Control 10.0 (mph)

to Recommend YIELD Control 25.0 (mph)

Otherwise Recommends NO CONTROL.



Intermediate Calculations:

$D_1 = 196$

$D_{2A} = 425$

$D_{2C} = 127.9$

$a' = 148$

$b' = 128$

$c' = 68$

$d' = 92$

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

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 : YIELD SIGN





**Photograph No. 1:** Fabius Drive- Heading West  
**Date:** 11/17/2021      **Photographer:** Ife Ogundeji



**Photograph No. 2:** Fabius Drive- Heading West looking right  
**Date:** 11/17/2021      **Photographer:** Ife Ogundeji





**Photograph No. 3:** Virgilia Drive- Heading South  
**Date:** 11/17/2021      **Photographer:** Ife Ogundeji



**Photograph No. 4:** Virgilia Drive- Heading South looking right  
**Date:** 11/17/2021      **Photographer:** Ife Ogundeji





**Photograph No. 5:** Virgilia Drive - Heading South and looking left  
**Date:** 11/17/2021      **Photographer:** Ife Ogundeji



**Photograph No. 6:** Fabius Drive - Heading East  
**Date:** 11/17/2021      **Photographer:** Ife Ogundeji



**Photograph No. 7:** Fabius Drive- Heading East looking left  
**Date:** 11/17/2021      **Photographer:** Ife Ogundeji



## **Reference Guide on Traffic Control Determination in the State of Michigan**

### **Background**

This document is intended to be used as a reference guide for performing intersection traffic control studies of intersections on public roadways in Michigan. The document explains the procedure and requirements necessary to implement traffic control at an intersection as stipulated by the Michigan Manual on Uniform Traffic Control Devices (MMUTCD). Act 300 of Public Acts of 1949 (as amended) requires the adoption of this Manual, and further requires conformance to the manual for all state highways, county roads and local streets open to public travel.

Generally, the starting premise is an uncontrolled intersection. The first step would then be to verify if the intersection should remain uncontrolled or if YIELD or STOP controls on the minor street approach(es) should be provided. For locations with higher traffic volumes and /or crash issues, then an evaluation of the location for all-way STOP warrants would be performed. The appropriate analysis for each level of control described below.

### **YIELD Traffic Control Guidance**

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.

### **STOP Traffic Control Guidance**

Based on the 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.

In many cases 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.

There is also an explicit restriction in the MMUTCD that STOP signs are not to be used for speed control, in Section 2B.04.

Evaluation of All-Way STOP Traffic Control

Based on the MMUTCD there are four conditions where **all-way** STOP signs may be warranted:

- A. *Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.*
- B. *Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.*
- C. *Minimum volumes:*
  - 1. *The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and*
  - 2. *The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but*
  - 3. *If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.*
- D. *Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.*

## memorandum

**Date:** January 7, 2022

**To:** Bill Huotari, PE

**CC:** Sara Merrill, PE, PTOE

**From:** Ife Ogundeji

**Re:** Speeding Concern on Fabius Drive, between Livernois Road and Wright Drive

### Introduction

A resident raised a concern related to a perceived issue of speeding on Fabius Drive, between Livernois Road and Wright Drive. In response to this concern, the city requested that a speed and volume study be conducted on Fabius Drive.

### Speed and Volume Study

Speed and volume data has been collected, processed, and summarized for Fabius Drive. Attached to this memo is the actual data collected for both speed and volumes. The posted speed limit is 25 mph. Data was collected at a location approximately 1180 feet from the junction of Livernois Road and Wright Drive for a period spanning from November 10, 2021 to November 17, 2021.

**Table 1 - Speed Data Results**

Fabius Drive		
	Eastbound	Westbound
85 <sup>th</sup> Percentile (MPH)	28.5	33
Mean Speed (MPH)	24.1	26.9
10 MPH Pace Speed (MPH)	20-29	20-29
Percent in Pace (%)	69	53

Based on Table 1, the 85<sup>th</sup> percentile speed is higher than the posted speed limit of 25 mph for both directions. The 85<sup>th</sup> percentile speeds are generally considered the best representation of the prevailing speed on roads. If these were not local streets in residential areas, the 85<sup>th</sup> percentile values would be used to establish speed limits.



Table 2 is a day-by-day summary of the traffic volumes along Fabius Drive.

**Table 2 –Traffic Volumes**

<b>Fabius Drive</b>			
<b>Day</b>	<b>Eastbound</b>	<b>Westbound</b>	<b>Total</b>
Wednesday 11/10 <sup>1</sup>	84	76	160
Thursday 11/11	97	110	207
Friday 11/12	101	111	212
Saturday 11/13	77	104	181
Sunday 11/14	65	74	139
Monday 11/15	115	123	238
Tuesday 11/16	87	105	192
Wednesday 11/17	110	123	233
<b>Average Weekday Daily Traffic<sup>2</sup></b>	<b>98</b>	<b>113</b>	<b>210</b>
<b>Average Weekend Daily Traffic</b>	<b>71</b>	<b>89</b>	<b>160</b>

1. Partial Day Count

2. Thursday, Tuesday and Wednesday

On average, westbound traffic volumes (entering the neighborhood from Livernois Road) are 6 percent higher than the eastbound volumes entering the neighborhood from Wright Drive.

Table 3 shows the percentage of the total traffic in each speed range.

**Table 3 – Percent Traffic Volume in Each Speed Range**

<b>Fabius Drive</b>		
<b>Speed Range</b>	<b>Eastbound</b>	<b>Westbound</b>
1-15	9.8%	7.1%
16-20	18.2%	13.7%
21-25	37.1%	23.6%
26-30	25.0%	26.3%
31-35	8.8%	21.3%
36-40	1.1%	6.3%
41-45	0.0%	1.5%
46-50	0.0%	0.2%

As can be seen in Table 3, 34.9% of eastbound and 55.6% of westbound total traffic was traveling at speeds greater than the speed limit at the study location.

### **Traffic Calming**

Traffic calming measures are used to reduce vehicle speeds, volumes, or both to improve the safety and comfort of pedestrians and bicyclists. Lower traffic volumes reduce the number of potential conflicts between pedestrians or bikes and vehicles, while lower rates of speed reduce the likelihood of severe injury in the event a crash occurs, as well as provide more time to perceive and react to potential conflicts, such as a pedestrian crossing the road. However, installing calming measures



remains a trade-off, as it reduces the efficient travel of essential public services like police, fire trucks, school buses, and snow removal.

Most traffic calming measures include physical alterations intended to slow traffic, by forcing vehicles to maneuver around or over impediments. These alterations may consist of center islands, curb bulb-outs, chicanes, mini-roundabouts, and speed humps, to name a few. Calming measures to reduce traffic volumes involve restricting vehicle access, such as installing barriers or by street closures. However, because these also impact emergency vehicles, DPW maintenance, and other essential services, proposed measures must judiciously consider overall public safety and mobility needs.

The City of Troy has not developed its own criteria for the installation of traffic calming measures, specifically speed humps. Rather, it has chosen to use the guidance developed by the Road Commission for Oakland County (RCOC). The speed study data show that 85<sup>th</sup> percentile speeds on Fabius Drive were 28.5 mph (eastbound) and 33 mph (westbound) which is higher than the speed limit of 25 mph. Although the speeds exceed the posted speed limit, they do not meet the 35-mph threshold for speed hump installation utilized by RCOC. Had the observed 85<sup>th</sup> percentile speeds exceeded the 35-mph threshold, the next part of the RCOC criteria for speed hump installation is that the traffic volumes on the subject roadway meet or exceed 1,000 vehicles a day. Fabius Drive's volumes are significantly lower than the 1,000 vehicles a day called for by RCOC's criteria. Therefore, this location does not satisfy the RCOC criteria for speed hump installation.

OHM recommends applying strategies that do not physically modify the street, such as targeted enforcement by the Troy Police Traffic Safety Unit. Additionally, on-street parking tends to result in reduced travel speeds; encouraging residents to park on the side of the street would further help to reduce speeding.

# OHM Advisors

34000 Plymouth Road

Livonia, MI 48150

Advancing Communities

Site Code:

Start Date: 11/10/2021

End Date: 11/17/2021

Location 1: Fabius Dr

Location 2: 1180' W of Livernois Road

11/8/2021	11/8/2021		11/9/2021		11/10/2021		11/11/2021		11/12/2021		Weekday Average		11/13/2021		11/14/2021	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	*	*	*	*	0	0	0	0	0	0	1	1	1	1
1:00	*	*	*	*	*	*	0	0	0	0	0	0	0	1	0	0
2:00	*	*	*	*	*	*	0	0	0	0	0	0	1	1	0	1
3:00	*	*	*	*	*	*	0	0	0	0	0	0	1	0	0	0
4:00	*	*	*	*	*	*	1	1	0	0	0	0	0	0	1	1
5:00	*	*	*	*	*	*	0	1	1	1	0	1	0	0	0	1
6:00	*	*	*	*	*	*	1	3	3	0	2	2	0	2	0	0
7:00	*	*	*	*	*	*	6	5	5	11	6	8	1	3	0	3
8:00	*	*	*	*	*	*	8	11	7	8	8	10	1	5	1	2
9:00	*	*	*	*	*	*	3	9	7	10	5	10	4	10	3	4
10:00	*	*	*	*	*	*	4	5	4	2	4	4	5	10	4	4
11:00	*	*	*	*	*	*	6	5	5	10	6	8	8	10	11	7
12:00 PM	*	*	*	*	10	11	11	10	6	10	9	10	6	8	7	10
1:00	*	*	*	*	11	7	7	6	13	11	10	8	7	6	5	4
2:00	*	*	*	*	12	4	6	8	7	7	8	6	7	12	7	5
3:00	*	*	*	*	8	9	7	9	8	5	8	8	10	7	2	7
4:00	*	*	*	*	11	9	10	12	9	9	10	10	4	4	5	4
5:00	*	*	*	*	9	10	8	6	4	6	7	7	9	5	7	6
6:00	*	*	*	*	6	8	8	14	4	5	6	9	5	7	3	4
7:00	*	*	*	*	5	8	5	0	6	5	5	4	6	3	5	2
8:00	*	*	*	*	5	4	2	0	4	5	4	3	0	3	0	3
9:00	*	*	*	*	4	4	3	4	4	4	4	4	0	2	0	5
10:00	*	*	*	*	2	1	0	0	2	0	1	0	1	3	2	0
11:00	*	*	*	*	1	1	1	1	2	2	1	1	0	1	1	0
Total	0	0	0	0	84	76	97	110	101	111	104	113	77	104	65	74
Day	0		0		160		207		212		217		181		139	
AM Peak					12:00 PM	12:00 PM	12:00 PM	8:00	8:00	7:00	12:00 PM	8:00	11:00	9:00	11:00	12:00 PM
Volume	0	0	0	0	10	11	11	11	7	11	9	10	8	10	11	10
PM Peak					2:00	12:00 PM	12:00 PM	6:00	1:00	1:00	1:00	12:00 PM	3:00	2:00	12:00 PM	12:00 PM
Volume	0	0	0	0	12	11	11	14	13	11	10	10	10	12	7	10

# OHM Advisors

34000 Plymouth Road

Livonia, MI 48150

Advancing Communities

Site Code:

Start Date: 11/10/2021

End Date: 11/17/2021

Location 1: Fabius Dr

Location 2: 1180' W of Livernois Road

11/15/2021	11/15/2021		11/16/2021		11/17/2021		11/18/2021		11/19/2021		Weekday Average		11/20/2021		11/21/2021	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	0	0	1	0	0	0	*	*	*	*	0	0	*	*	*	*
1:00	0	0	1	0	0	0	*	*	*	*	0	0	*	*	*	*
2:00	0	0	0	1	0	0	*	*	*	*	0	0	*	*	*	*
3:00	1	0	0	0	0	1	*	*	*	*	0	0	*	*	*	*
4:00	1	1	1	0	1	0	*	*	*	*	1	0	*	*	*	*
5:00	2	0	1	0	1	0	*	*	*	*	1	0	*	*	*	*
6:00	1	1	1	2	2	1	*	*	*	*	1	1	*	*	*	*
7:00	6	11	5	8	6	7	*	*	*	*	6	9	*	*	*	*
8:00	7	9	5	12	9	11	*	*	*	*	7	11	*	*	*	*
9:00	13	10	3	4	4	7	*	*	*	*	7	7	*	*	*	*
10:00	3	10	5	7	5	11	*	*	*	*	4	9	*	*	*	*
11:00	5	7	0	5	12	7	*	*	*	*	6	6	*	*	*	*
12:00 PM	6	13	8	6	4	14	*	*	*	*	6	11	*	*	*	*
1:00	4	10	5	5	7	5	*	*	*	*	5	7	*	*	*	*
2:00	12	6	5	5	5	5	*	*	*	*	7	5	*	*	*	*
3:00	9	4	5	5	10	10	*	*	*	*	8	6	*	*	*	*
4:00	12	13	15	13	12	11	*	*	*	*	13	12	*	*	*	*
5:00	10	11	12	13	6	5	*	*	*	*	9	10	*	*	*	*
6:00	10	4	5	3	5	9	*	*	*	*	7	5	*	*	*	*
7:00	4	4	3	3	4	10	*	*	*	*	4	6	*	*	*	*
8:00	6	3	3	4	6	5	*	*	*	*	5	4	*	*	*	*
9:00	2	5	2	6	7	3	*	*	*	*	4	5	*	*	*	*
10:00	1	1	1	1	3	0	*	*	*	*	2	1	*	*	*	*
11:00	0	0	0	2	1	1	*	*	*	*	0	1	*	*	*	*
Total	115	123	87	105	110	123	0	0	0	0	103	116	0	0	0	0
Day	238		192		233		0		0		219		0		0	
AM Peak	9:00	12:00 PM	12:00 PM	8:00	11:00	12:00 PM					8:00	8:00				
Volume	13	13	8	12	12	14	0	0	0	0	7	11	0	0	0	0
PM Peak	2:00	12:00 PM	4:00	4:00	4:00	12:00 PM					4:00	4:00				
Volume	12	13	15	13	12	14	0	0	0	0	13	12	0	0	0	0
Comb Total	238		192		393		207		212		436		181		139	
ADT	ADT: 207		AADT: 207													

# OHM Advisors

34000 Plymouth Road

Livonia, MI 48150

Advancing Communities

Start Date: 11/10/2021

Location 1: Fabius Dr  
Location 2: 1180' W of Livernois Road

End Date: 11/17/2021

Direction: EB

11/10/2021 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	*	*	*	*	*	*	*	*	*	*	*	*	*	0
1:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
2:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
3:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
4:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
5:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
6:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
7:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
8:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
9:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
12:00 PM	1	1	3	4	1	0	0	0	0	0	0	0	0	10
1:00	1	3	2	3	2	0	0	0	0	0	0	0	0	11
2:00	3	2	5	0	2	0	0	0	0	0	0	0	0	12
3:00	3	2	2	1	0	0	0	0	0	0	0	0	0	8
4:00	1	4	4	1	1	0	0	0	0	0	0	0	0	11
5:00	3	3	0	1	2	0	0	0	0	0	0	0	0	9
6:00	0	0	3	3	0	0	0	0	0	0	0	0	0	6
7:00	0	1	3	1	0	0	0	0	0	0	0	0	0	5
8:00	2	0	2	1	0	0	0	0	0	0	0	0	0	5
9:00	0	2	0	2	0	0	0	0	0	0	0	0	0	4
10:00	0	1	0	0	1	0	0	0	0	0	0	0	0	2
11:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	14	19	25	17	9	0	0	0	0	0	0	0	0	84



# OHM Advisors

34000 Plymouth Road

Livonia, MI 48150

Advancing Communities

Start Date: 11/10/2021

Location 1: Fabius Dr  
Location 2: 1180' W of Livernois Road

End Date: 11/17/2021

Direction: EB

11/11/2021 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
7:00	0	1	3	1	1	0	0	0	0	0	0	0	0	6
8:00	1	2	2	3	0	0	0	0	0	0	0	0	0	8
9:00	0	1	0	1	1	0	0	0	0	0	0	0	0	3
10:00	0	1	0	2	0	1	0	0	0	0	0	0	0	4
11:00	1	2	3	0	0	0	0	0	0	0	0	0	0	6
12:00 PM	0	1	3	3	4	0	0	0	0	0	0	0	0	11
1:00	2	3	2	0	0	0	0	0	0	0	0	0	0	7
2:00	0	0	4	2	0	0	0	0	0	0	0	0	0	6
3:00	0	1	3	1	2	0	0	0	0	0	0	0	0	7
4:00	0	0	8	1	0	1	0	0	0	0	0	0	0	10
5:00	1	0	3	4	0	0	0	0	0	0	0	0	0	8
6:00	0	3	3	2	0	0	0	0	0	0	0	0	0	8
7:00	1	1	0	2	1	0	0	0	0	0	0	0	0	5
8:00	0	1	0	1	0	0	0	0	0	0	0	0	0	2
9:00	0	0	0	0	3	0	0	0	0	0	0	0	0	3
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Total	7	17	34	25	12	2	0	0	0	0	0	0	0	97

# OHM Advisors

34000 Plymouth Road

Livonia, MI 48150

Advancing Communities

Start Date: 11/10/2021

Location 1: Fabius Dr

Location 2: 1180' W of Livernois Road

End Date: 11/17/2021

Direction: EB

11/12/2021 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:00	1	0	1	1	0	0	0	0	0	0	0	0	0	3
7:00	0	0	4	1	0	0	0	0	0	0	0	0	0	5
8:00	0	3	2	2	0	0	0	0	0	0	0	0	0	7
9:00	1	2	3	1	0	0	0	0	0	0	0	0	0	7
10:00	0	2	1	1	0	0	0	0	0	0	0	0	0	4
11:00	0	2	1	2	0	0	0	0	0	0	0	0	0	5
12:00 PM	1	1	1	2	0	1	0	0	0	0	0	0	0	6
1:00	1	1	10	0	0	1	0	0	0	0	0	0	0	13
2:00	1	1	3	1	1	0	0	0	0	0	0	0	0	7
3:00	0	1	4	2	1	0	0	0	0	0	0	0	0	8
4:00	0	0	4	3	1	1	0	0	0	0	0	0	0	9
5:00	2	1	1	0	0	0	0	0	0	0	0	0	0	4
6:00	0	0	2	2	0	0	0	0	0	0	0	0	0	4
7:00	0	0	3	3	0	0	0	0	0	0	0	0	0	6
8:00	2	1	1	0	0	0	0	0	0	0	0	0	0	4
9:00	0	2	0	1	1	0	0	0	0	0	0	0	0	4
10:00	0	0	0	2	0	0	0	0	0	0	0	0	0	2
11:00	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Total	9	18	43	24	4	3	0	0	0	0	0	0	0	101

# OHM Advisors

34000 Plymouth Road

Livonia, MI 48150

Advancing Communities

Start Date: 11/10/2021

Location 1: Fabius Dr

Location 2: 1180' W of Livernois Road

End Date: 11/17/2021

Direction: EB

11/13/2021 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	1
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
9:00	1	1	2	0	0	0	0	0	0	0	0	0	0	4
10:00	0	1	2	2	0	0	0	0	0	0	0	0	0	5
11:00	0	4	2	2	0	0	0	0	0	0	0	0	0	8
12:00 PM	0	4	0	2	0	0	0	0	0	0	0	0	0	6
1:00	2	3	1	1	0	0	0	0	0	0	0	0	0	7
2:00	0	3	2	1	1	0	0	0	0	0	0	0	0	7
3:00	1	2	5	2	0	0	0	0	0	0	0	0	0	10
4:00	0	1	3	0	0	0	0	0	0	0	0	0	0	4
5:00	3	1	3	1	1	0	0	0	0	0	0	0	0	9
6:00	0	0	3	2	0	0	0	0	0	0	0	0	0	5
7:00	0	0	1	3	2	0	0	0	0	0	0	0	0	6
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	7	21	26	18	5	0	0	0	0	0	0	0	0	77

# OHM Advisors

34000 Plymouth Road

Livonia, MI 48150

Advancing Communities

Start Date: 11/10/2021

Location 1: Fabius Dr

Location 2: 1180' W of Livernois Road

End Date: 11/17/2021

Direction: EB

11/14/2021 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	1
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
9:00	0	0	1	0	2	0	0	0	0	0	0	0	0	3
10:00	0	1	0	2	1	0	0	0	0	0	0	0	0	4
11:00	0	1	2	5	3	0	0	0	0	0	0	0	0	11
12:00 PM	0	1	4	1	1	0	0	0	0	0	0	0	0	7
1:00	0	3	1	1	0	0	0	0	0	0	0	0	0	5
2:00	1	0	1	4	1	0	0	0	0	0	0	0	0	7
3:00	0	0	2	0	0	0	0	0	0	0	0	0	0	2
4:00	2	1	2	0	0	0	0	0	0	0	0	0	0	5
5:00	0	0	3	3	1	0	0	0	0	0	0	0	0	7
6:00	0	0	1	1	1	0	0	0	0	0	0	0	0	3
7:00	0	1	1	1	2	0	0	0	0	0	0	0	0	5
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	0	0	1	1	0	0	0	0	0	0	0	0	0	2
11:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	4	8	21	20	12	0	0	0	0	0	0	0	0	65

# OHM Advisors

34000 Plymouth Road

Livonia, MI 48150

Advancing Communities

Start Date: 11/10/2021

Location 1: Fabius Dr  
Location 2: 1180' W of Livernois Road

End Date: 11/17/2021

Direction: EB

11/15/2021 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
5:00	0	1	0	1	0	0	0	0	0	0	0	0	0	2
6:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:00	0	2	3	1	0	0	0	0	0	0	0	0	0	6
8:00	0	0	4	3	0	0	0	0	0	0	0	0	0	7
9:00	3	2	3	5	0	0	0	0	0	0	0	0	0	13
10:00	1	0	0	2	0	0	0	0	0	0	0	0	0	3
11:00	0	0	1	3	1	0	0	0	0	0	0	0	0	5
12:00 PM	0	0	2	2	1	1	0	0	0	0	0	0	0	6
1:00	1	0	2	0	1	0	0	0	0	0	0	0	0	4
2:00	2	3	5	1	1	0	0	0	0	0	0	0	0	12
3:00	0	3	4	1	1	0	0	0	0	0	0	0	0	9
4:00	1	2	8	1	0	0	0	0	0	0	0	0	0	12
5:00	2	3	3	2	0	0	0	0	0	0	0	0	0	10
6:00	1	0	7	0	2	0	0	0	0	0	0	0	0	10
7:00	1	0	2	1	0	0	0	0	0	0	0	0	0	4
8:00	0	1	2	2	1	0	0	0	0	0	0	0	0	6
9:00	0	0	2	0	0	0	0	0	0	0	0	0	0	2
10:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	12	17	51	26	8	1	0	0	0	0	0	0	0	115

# OHM Advisors

34000 Plymouth Road

Livonia, MI 48150

Advancing Communities

Start Date: 11/10/2021

Location 1: Fabius Dr  
Location 2: 1180' W of Livernois Road

End Date: 11/17/2021

Direction: EB

11/16/2021 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	1
1:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:00	1	0	3	0	1	0	0	0	0	0	0	0	0	5
8:00	1	1	1	2	0	0	0	0	0	0	0	0	0	5
9:00	0	1	1	1	0	0	0	0	0	0	0	0	0	3
10:00	0	1	0	3	1	0	0	0	0	0	0	0	0	5
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	1	0	2	4	1	0	0	0	0	0	0	0	0	8
1:00	0	1	3	1	0	0	0	0	0	0	0	0	0	5
2:00	2	1	2	0	0	0	0	0	0	0	0	0	0	5
3:00	2	1	2	0	0	0	0	0	0	0	0	0	0	5
4:00	1	2	7	5	0	0	0	0	0	0	0	0	0	15
5:00	3	2	3	2	2	0	0	0	0	0	0	0	0	12
6:00	0	0	4	1	0	0	0	0	0	0	0	0	0	5
7:00	0	0	1	1	1	0	0	0	0	0	0	0	0	3
8:00	0	1	1	1	0	0	0	0	0	0	0	0	0	3
9:00	0	0	1	0	1	0	0	0	0	0	0	0	0	2
10:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	11	13	32	22	9	0	0	0	0	0	0	0	0	87

# OHM Advisors

34000 Plymouth Road

Livonia, MI 48150

Advancing Communities

Start Date: 11/10/2021

Location 1: Fabius Dr  
Location 2: 1180' W of Livernois Road

End Date: 11/17/2021

Direction: EB

11/17/2021 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:00	0	0	1	1	0	0	0	0	0	0	0	0	0	2
7:00	0	1	2	2	1	0	0	0	0	0	0	0	0	6
8:00	1	3	2	2	1	0	0	0	0	0	0	0	0	9
9:00	1	0	1	2	0	0	0	0	0	0	0	0	0	4
10:00	0	1	1	2	1	0	0	0	0	0	0	0	0	5
11:00	1	2	4	5	0	0	0	0	0	0	0	0	0	12
12:00 PM	1	0	0	3	0	0	0	0	0	0	0	0	0	4
1:00	0	2	3	2	0	0	0	0	0	0	0	0	0	7
2:00	1	1	2	1	0	0	0	0	0	0	0	0	0	5
3:00	1	4	5	0	0	0	0	0	0	0	0	0	0	10
4:00	2	2	6	2	0	0	0	0	0	0	0	0	0	12
5:00	0	2	0	1	2	1	0	0	0	0	0	0	0	6
6:00	0	1	1	3	0	0	0	0	0	0	0	0	0	5
7:00	0	1	2	0	1	0	0	0	0	0	0	0	0	4
8:00	0	0	3	3	0	0	0	0	0	0	0	0	0	6
9:00	0	0	6	1	0	0	0	0	0	0	0	0	0	7
10:00	0	0	1	1	0	1	0	0	0	0	0	0	0	3
11:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Total	8	21	41	32	6	2	0	0	0	0	0	0	0	110
Grand Total	72	134	273	184	65	8	0	0	0	0	0	0	0	736

Stats	Percentile	15th	50th	85th	95th
	Speed	16.4	22.8	28.5	31.4
Mean Speed (Average)		24.1			
10 MPH Pace Speed		20-29			
Number in Pace		456			
Percent in Pace		69.0%			
Number > 25 MPH		257			
Percent > 25 MPH		38.6%			

# OHM Advisors

34000 Plymouth Road

Livonia, MI 48150

*Advancing Communities*

Start Date: 11/10/2021

Location 1: Fabius Dr  
Location 2: 1180' W of Livernois Road

End Date: 11/17/2021

Direction: WB

11/10/2021 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	*	*	*	*	*	*	*	*	*	*	*	*	*	0
1:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
2:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
3:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
4:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
5:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
6:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
7:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
8:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
9:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
12:00 PM	1	0	3	2	5	0	0	0	0	0	0	0	0	11
1:00	0	0	3	1	1	2	0	0	0	0	0	0	0	7
2:00	2	0	0	1	1	0	0	0	0	0	0	0	0	4
3:00	0	1	0	5	3	0	0	0	0	0	0	0	0	9
4:00	1	1	2	1	4	0	0	0	0	0	0	0	0	9
5:00	0	2	1	4	3	0	0	0	0	0	0	0	0	10
6:00	0	1	1	3	0	2	0	1	0	0	0	0	0	8
7:00	1	0	2	2	3	0	0	0	0	0	0	0	0	8
8:00	1	1	0	0	2	0	0	0	0	0	0	0	0	4
9:00	1	1	0	1	0	1	0	0	0	0	0	0	0	4
10:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
11:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Total	7	8	12	21	22	5	0	1	0	0	0	0	0	76



# OHM Advisors

34000 Plymouth Road

Livonia, MI 48150

Advancing Communities

Start Date: 11/10/2021

Location 1: Fabius Dr  
Location 2: 1180' W of Livernois Road

End Date: 11/17/2021

Direction: WB

11/11/2021 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
6:00	0	1	1	1	0	0	0	0	0	0	0	0	0	3
7:00	1	0	0	3	1	0	0	0	0	0	0	0	0	5
8:00	0	2	3	4	2	0	0	0	0	0	0	0	0	11
9:00	0	1	2	2	3	1	0	0	0	0	0	0	0	9
10:00	0	2	1	0	1	1	0	0	0	0	0	0	0	5
11:00	0	0	0	2	2	1	0	0	0	0	0	0	0	5
12:00 PM	0	2	2	3	3	0	0	0	0	0	0	0	0	10
1:00	0	3	1	2	0	0	0	0	0	0	0	0	0	6
2:00	1	2	3	2	0	0	0	0	0	0	0	0	0	8
3:00	1	2	3	2	1	0	0	0	0	0	0	0	0	9
4:00	2	2	4	2	1	1	0	0	0	0	0	0	0	12
5:00	0	0	1	4	1	0	0	0	0	0	0	0	0	6
6:00	0	4	3	2	5	0	0	0	0	0	0	0	0	14
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00	0	1	1	1	0	1	0	0	0	0	0	0	0	4
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Total	5	22	27	30	21	5	0	0	0	0	0	0	0	110

# OHM Advisors

34000 Plymouth Road

Livonia, MI 48150

Advancing Communities

Start Date: 11/10/2021

Location 1: Fabius Dr  
Location 2: 1180' W of Livernois Road

End Date: 11/17/2021

Direction: WB

11/12/2021 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	3	2	4	2	0	0	0	0	0	0	0	0	0	11
8:00	1	0	2	2	2	1	0	0	0	0	0	0	0	8
9:00	0	0	3	3	2	2	0	0	0	0	0	0	0	10
10:00	0	0	0	2	0	0	0	0	0	0	0	0	0	2
11:00	1	1	2	1	3	2	0	0	0	0	0	0	0	10
12:00 PM	0	3	3	0	4	0	0	0	0	0	0	0	0	10
1:00	0	1	2	3	4	1	0	0	0	0	0	0	0	11
2:00	0	0	0	3	2	2	0	0	0	0	0	0	0	7
3:00	2	0	1	1	1	0	0	0	0	0	0	0	0	5
4:00	0	1	4	1	2	0	0	1	0	0	0	0	0	9
5:00	0	1	2	0	1	2	0	0	0	0	0	0	0	6
6:00	0	1	2	2	0	0	0	0	0	0	0	0	0	5
7:00	1	0	2	0	2	0	0	0	0	0	0	0	0	5
8:00	1	1	0	2	1	0	0	0	0	0	0	0	0	5
9:00	0	1	0	1	2	0	0	0	0	0	0	0	0	4
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	1	0	0	1	0	0	0	0	0	0	0	2
Total	9	12	29	23	26	11	0	1	0	0	0	0	0	111

# OHM Advisors

34000 Plymouth Road

Livonia, MI 48150

Advancing Communities

Start Date: 11/10/2021

Location 1: Fabius Dr  
Location 2: 1180' W of Livernois Road

End Date: 11/17/2021

Direction: WB

11/13/2021 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	1
1:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
2:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00	0	0	1	0	1	0	0	0	0	0	0	0	0	2
7:00	0	2	0	0	0	1	0	0	0	0	0	0	0	3
8:00	2	1	2	0	0	0	0	0	0	0	0	0	0	5
9:00	0	2	1	5	2	0	0	0	0	0	0	0	0	10
10:00	3	1	2	3	0	1	0	0	0	0	0	0	0	10
11:00	1	2	2	0	5	0	0	0	0	0	0	0	0	10
12:00 PM	0	3	0	4	0	1	0	0	0	0	0	0	0	8
1:00	0	1	1	3	1	0	0	0	0	0	0	0	0	6
2:00	0	1	3	3	3	2	0	0	0	0	0	0	0	12
3:00	0	1	3	3	0	0	0	0	0	0	0	0	0	7
4:00	0	1	2	1	0	0	0	0	0	0	0	0	0	4
5:00	0	0	2	2	0	1	0	0	0	0	0	0	0	5
6:00	2	0	4	0	1	0	0	0	0	0	0	0	0	7
7:00	1	0	0	0	2	0	0	0	0	0	0	0	0	3
8:00	1	0	0	1	1	0	0	0	0	0	0	0	0	3
9:00	0	1	0	1	0	0	0	0	0	0	0	0	0	2
10:00	0	0	2	0	0	0	1	0	0	0	0	0	0	3
11:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Total	10	16	26	28	17	6	1	0	0	0	0	0	0	104

# OHM Advisors

34000 Plymouth Road

Livonia, MI 48150

Advancing Communities

Start Date: 11/10/2021

Location 1: Fabius Dr  
Location 2: 1180' W of Livernois Road

End Date: 11/17/2021

Direction: WB

11/14/2021 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	1
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	0	0	3	0	0	0	0	0	0	0	0	0	0	3
8:00	0	0	1	0	1	0	0	0	0	0	0	0	0	2
9:00	0	1	0	1	2	0	0	0	0	0	0	0	0	4
10:00	0	1	0	1	2	0	0	0	0	0	0	0	0	4
11:00	0	1	0	3	3	0	0	0	0	0	0	0	0	7
12:00 PM	0	1	3	1	4	1	0	0	0	0	0	0	0	10
1:00	0	0	0	2	1	0	1	0	0	0	0	0	0	4
2:00	0	0	1	1	3	0	0	0	0	0	0	0	0	5
3:00	0	1	3	3	0	0	0	0	0	0	0	0	0	7
4:00	1	0	0	2	1	0	0	0	0	0	0	0	0	4
5:00	1	1	2	1	1	0	0	0	0	0	0	0	0	6
6:00	0	0	1	1	2	0	0	0	0	0	0	0	0	4
7:00	0	0	0	0	1	1	0	0	0	0	0	0	0	2
8:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3
9:00	0	1	1	3	0	0	0	0	0	0	0	0	0	5
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	9	17	19	24	2	1	0	0	0	0	0	0	74

# OHM Advisors

34000 Plymouth Road

Livonia, MI 48150

Advancing Communities

Start Date: 11/10/2021

Location 1: Fabius Dr  
Location 2: 1180' W of Livernois Road

End Date: 11/17/2021

Direction: WB

11/15/2021 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
7:00	0	3	5	2	1	0	0	0	0	0	0	0	0	11
8:00	2	0	4	2	1	0	0	0	0	0	0	0	0	9
9:00	4	1	2	1	2	0	0	0	0	0	0	0	0	10
10:00	4	0	2	1	3	0	0	0	0	0	0	0	0	10
11:00	0	0	3	0	4	0	0	0	0	0	0	0	0	7
12:00 PM	1	0	3	3	3	3	0	0	0	0	0	0	0	13
1:00	0	0	4	6	0	0	0	0	0	0	0	0	0	10
2:00	2	1	1	0	0	0	2	0	0	0	0	0	0	6
3:00	0	0	2	0	1	1	0	0	0	0	0	0	0	4
4:00	1	3	2	5	1	0	1	0	0	0	0	0	0	13
5:00	1	0	3	2	3	1	1	0	0	0	0	0	0	11
6:00	0	1	0	1	1	1	0	0	0	0	0	0	0	4
7:00	1	2	0	0	0	0	1	0	0	0	0	0	0	4
8:00	0	0	1	1	1	0	0	0	0	0	0	0	0	3
9:00	0	0	2	1	1	0	1	0	0	0	0	0	0	5
10:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	16	11	35	27	22	6	6	0	0	0	0	0	0	123

# OHM Advisors

34000 Plymouth Road

Livonia, MI 48150

Advancing Communities

Start Date: 11/10/2021

Location 1: Fabius Dr  
Location 2: 1180' W of Livernois Road

End Date: 11/17/2021

Direction: WB

11/16/2021 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00	0	1	0	0	1	0	0	0	0	0	0	0	0	2
7:00	1	1	3	3	0	0	0	0	0	0	0	0	0	8
8:00	2	2	4	4	0	0	0	0	0	0	0	0	0	12
9:00	0	0	0	0	3	1	0	0	0	0	0	0	0	4
10:00	1	0	1	1	3	1	0	0	0	0	0	0	0	7
11:00	0	1	1	0	2	1	0	0	0	0	0	0	0	5
12:00 PM	0	0	1	2	0	2	1	0	0	0	0	0	0	6
1:00	0	0	1	2	1	1	0	0	0	0	0	0	0	5
2:00	1	1	1	1	1	0	0	0	0	0	0	0	0	5
3:00	0	0	2	3	0	0	0	0	0	0	0	0	0	5
4:00	0	3	1	6	1	1	1	0	0	0	0	0	0	13
5:00	1	5	2	3	2	0	0	0	0	0	0	0	0	13
6:00	0	0	1	1	1	0	0	0	0	0	0	0	0	3
7:00	0	0	0	2	0	1	0	0	0	0	0	0	0	3
8:00	0	1	0	0	2	1	0	0	0	0	0	0	0	4
9:00	0	0	4	2	0	0	0	0	0	0	0	0	0	6
10:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
11:00	0	0	1	0	1	0	0	0	0	0	0	0	0	2
Total	6	16	23	30	19	9	2	0	0	0	0	0	0	105

# OHM Advisors

34000 Plymouth Road

Livonia, MI 48150

Advancing Communities

Start Date: 11/10/2021

Location 1: Fabius Dr  
Location 2: 1180' W of Livernois Road

End Date: 11/17/2021

Direction: WB

11/17/2021 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
7:00	0	1	3	3	0	0	0	0	0	0	0	0	0	7
8:00	0	0	3	6	1	1	0	0	0	0	0	0	0	11
9:00	0	2	1	2	1	1	0	0	0	0	0	0	0	7
10:00	0	1	3	6	1	0	0	0	0	0	0	0	0	11
11:00	0	0	1	3	3	0	0	0	0	0	0	0	0	7
12:00 PM	1	2	2	4	2	3	0	0	0	0	0	0	0	14
1:00	0	0	1	1	3	0	0	0	0	0	0	0	0	5
2:00	0	3	0	0	1	1	0	0	0	0	0	0	0	5
3:00	0	1	3	1	5	0	0	0	0	0	0	0	0	10
4:00	3	0	4	2	2	0	0	0	0	0	0	0	0	11
5:00	0	1	1	0	2	0	1	0	0	0	0	0	0	5
6:00	0	2	0	4	0	2	1	0	0	0	0	0	0	9
7:00	0	5	3	2	0	0	0	0	0	0	0	0	0	10
8:00	0	0	1	2	2	0	0	0	0	0	0	0	0	5
9:00	0	1	0	2	0	0	0	0	0	0	0	0	0	3
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Total	4	19	26	39	25	8	2	0	0	0	0	0	0	123
Grand Total	59	113	195	217	176	52	12	2	0	0	0	0	0	826

Stats	Percentile	15th	50th	85th	95th
Speed		18.1	26.1	33	36.6
Mean Speed (Average)		26.9			
10 MPH Pace Speed		20-29			
Number in Pace		410			
Percent in Pace		53.0%			
Number > 25 MPH		459			
Percent > 25 MPH		59.8%			



**ROAD  
COMMISSION  
OPERATING  
INSTRUCTION**

BOARD OF COUNTY ROAD COMMISSIONERS  
OAKLAND COUNTY

EFFECTIVE DATE:  
DECEMBER 8, 2008

NUMBER:  
12, REV # 1

PREPARING ORGANIZATION:  
TRAFFIC SAFETY  
DEPARTMENT

SUPERSEDES  
NUMBER 12  
DATED 11-1-2006

**SUBJECT:**

**INSTALLATION OF SPEED HUMPS**

**I. PURPOSE:**

To establish guidelines for the installation of speed humps on subdivision streets.

**II. INFORMATION:**

There have been an increasing number of instances where vehicular traffic utilizes subdivision streets, in order to bypass congested intersections, avoid gravel roads or take advantage of a short cut. In addition, this same traffic, as well as residents that reside within the subdivision, often travels at speeds that significantly exceed the residential speed limit.

The installation of speed humps is increasingly being used as a method to deter speeding and "cut through" traffic. Speed humps are raised pavement sections that are between 3 to 4 inches in height and approximately 14 feet in length. When designed properly and installed in warranted locations, speed humps have been proven to reduce vehicle speeds and/or "cut through" traffic on subdivision streets.

In order for speed humps to be warranted, the 85<sup>th</sup> percentile speed must be equal to or greater than 35 miles per hour. In addition, the following criteria should be considered:

1. Traffic volumes in excess of 1000 vehicles a day, which includes a minimum of 25% "cut through" traffic.
2. Acceptable vertical and horizontal curvature.
3. Pavement width less than or equal to 40 feet.

In order to ensure consistency for speed humps which are installed on subdivision streets under its jurisdiction, the Road Commission for Oakland County establishes the following procedure:



DIRECTIVE TYPE	PREPARING ORGANIZATION	EFFECTIVE DATE	NUMBER	PAGE
OPERATING INSTRUCTION	TRAFFIC SAFETY DEPARTMENT	DECEMBER 8, 2008	12	2 OF 3

### III. PROCEDURE:

#### Responsibility

#### Action

Traffic-Safety Department Staff

1. Upon receipt of a written request from the homeowners association or interested residents of the area, shall meet with representatives from the subdivision, the Township, and local law enforcement, for the purpose of discussing the traffic concerns, along with the various countermeasures available, including the requirements for the installation of speed humps.

Traffic-Safety Department Staff

2. If it is agreed that speed humps are a potential countermeasure of interest, shall conduct the necessary traffic studies to determine whether or not the traffic speeds, volumes and "cut through" traffic, meet the above criteria for the installation of speed humps.

Traffic-Safety Department Staff

3. Shall hold a follow-up meeting with the representatives from the previous meeting to discuss the results of the traffic studies and whether or not the speed humps are warranted.

**Note:** If speed humps are warranted, the RCOC shall also provide cost estimates and proposed acceptable locations for the speed humps.

Traffic-Safety Department Staff

4. Shall inform the residents and the Township that to move forward with the installation of warranted speed humps, the following must be submitted to the Road Commission:
  - a. A Petition agreeing to the installation, to be signed by at least 75% of the homeowners on the subject segment of street(s) with the proposed speed humps; and
  - b. An appropriate Township Board Resolution supporting the installation of the speed humps.

DIRECTIVE TYPE	PREPARING ORGANIZATION	EFFECTIVE DATE	NUMBER	PAGE
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**Note:** The "subject segment" of street(s) shall be the segment determined by the Traffic-Safety Department staff as being significantly impacted by the proposed speed humps.

- Traffic-Safety Department Staff      5. Upon receipt of the above information, shall give the subdivision/homeowners authorization to proceed to have the speed humps designed by a consultant and constructed by a contractor, subject to review and approval by the RCOC Traffic-Safety and Permits & Environmental Concerns Departments, through the RCOC permit process.

**Note:** At its option, the RCOC may elect to construct the speed humps. In either event, the cost of installation (which includes signs and pavement markings as necessary) and, as appropriate, the removal of speed humps, will be at the subdivision's expense.

- Traffic-Safety Department Staff      6. Future maintenance costs of the speed humps, including the pavement markings, will be the responsibility of the subdivision. The RCOC will be responsible for the maintenance of the associated signs.

- Traffic-Safety Department Staff      7. Following installation, shall conduct follow-up traffic studies to determine the effectiveness of the speed humps.

Approved by: \_\_\_\_\_

Managing Director

12/2/08

Date