

**AGENDA**  
**TRAFFIC COMMITTEE MEETING**  
**JUNE 15, 2011 – 7:30 P.M.**  
**LOWER LEVEL CONFERENCE ROOM - TROY CITY HALL**  
**500 W. BIG BEAVER ROAD**

1. Roll Call
2. Minutes – March 16, 2011

**REGULAR BUSINESS**

3. Install STOP sign on Eastbound Rothwell at Provincial  
Requested by Neil Fletcher, 1120 Jefferson
4. Public Comment
5. Other Business
6. Adjourn

cc: Item 3: Neil Fletcher, 1120 Jefferson  
Residents within 300 feet of Rothwell at Provincial

Traffic Committee Members  
Lt. David Livingston, Police Department  
Lt. Eric Caloia, Fire Department  
William J. Huotari, Deputy City Engineer/Traffic Engineer

## 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 accidents.

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.

**REGULAR BUSINESS**

**3. Install STOP Sign on Rothwell at Provincial**

Neil Fletcher of 1120 Jefferson requests installation of a STOP sign on Rothwell at Provincial. See attached report.

**SUGGESTED RESOLUTIONS:**

- a. Recommend installation of a STOP sign on the Provincial northbound approach to Rothwell.
- b. Recommend no changes at the intersection of Rothwell at Provincial.

**4. Public Comment**

**5. Other Business**

**6. Adjourn**

A regular meeting of the Troy Traffic Committee was held Wednesday, March 16, 2011 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: John Diefenbaker  
Ted Halsey  
Gordon Schepke  
Pete Ziegenfelder

ABSENT: Sarah Binkowski  
Jan Hubbell  
Richard Kilmer

Also present: Bill Huotari, Deputy City Engineer/Traffic Engineer  
Lt. David Livingston, Troy Police Dept.

**2. Minutes – January 19, 2011****RESOLUTION 2011-03-07**

Moved by Diefenbaker  
Seconded by Halsey

To approve the January 19, 2011 minutes as printed.

YES: All-4  
NO: None  
ABSENT: 3 (Binkowski, Hubbell, Kilmer)  
MOTION CARRIED

**REGULAR BUSINESS****3. Right Turn Only Request at 3331 Rochester Road (Tim Hortons)**

Mr. Halsey has observed motorists leaving Tim Hortons and driving straight across three lanes of traffic to get to the turnaround. Police officers and the Traffic Engineer have observed this dangerous behavior and recommend installing signs at the Tim Hortons driveway and in the median directing all traffic to turn right only. See attached report.

**RESOLUTION 2011-03-08**

Moved by Halsey

Seconded by Schepke

To recommend installation of signage directing all traffic to turn right when exiting the Tim Horton's driveway (3331 Rochester Road) to southbound Rochester Road, and in the median area at the crossover.

YES: All-4

NO: None

ABSENT: 3 (Binkowski, Hubbell, Kilmer)

MOTION CARRIED

**4. Public Comment**

No one wished to address the committee.

**5. Other Business**

There was no other business.

**6. Adjourn**

The meeting adjourned at 7:38 p.m.

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Pete Ziegenfelder, Chairperson

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Laurel Nottage, Recording Secretary



# TRAFFIC COMMITTEE REPORT

May 19, 2011

TO: Traffic Committee

FROM: Bill Huotari, Deputy City Engineer/ Traffic Engineer *UBH*

SUBJECT: Rothwell at Provincial  
Stop Sign Request

## Background:

- Neil Fletcher of 1120 Jefferson requested that a STOP sign be installed on eastbound Rothwell at Provincial.
- The posted speed limit on both streets is 25 mph.
- Rothwell is considered the major road at this location due to its continuous nature, while Provincial is considered the minor road due to its termination at Rothwell.
- 24 hour traffic volumes were collected by city staff and indicate that the average daily traffic (ADT) on Rothwell was 139 with Provincial at 151.
- The highest peak hour volumes are 16 along each road.
- The volumes are well below the threshold levels for multi-way STOP sign warrants.
- There have been no crashes recorded at this intersection in the past four (4) years.
- 85<sup>th</sup> percentile speeds, are approximately 29 mph on Rothwell and 25 mph on Provincial.
- There are sight distance concerns with trees and landscaping, on private property, in the southeast quadrant.
- The city requested that our traffic engineering consultant (OHM) review the request and provide a report of their findings and recommendations (copy attached).
- The report recommends that a STOP sign be placed on the Provincial northbound approach to the intersection, based on their review and findings that the safe approach speed on Provincial is less than 10 mph.

## Recommendations:

- Staff concurs with our consultant's recommendation to modify the intersection control from "no traffic control" to a STOP sign on the Provincial northbound approach to Rothwell.

## Suggested Resolutions:

- a. Recommend installation of a STOP sign on the Provincial northbound approach to Rothwell.
- b. Recommend no changes at the intersection of Rothwell at Provincial.



**Legend**

I-75

**Road Centerline**

- Major Road
- Industrial Road
- Local Road

**Ponds and Basins**

**Streams and Creeks**

**Parcels**

**Aerial Photos - 2010**

- Red: Band\_1
- Green: Band\_2
- Blue: Band\_3

1:4,416

**Notes**

Rothwell at Provincial - STOP SIGN Request

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.



May 12, 2011



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

Subject: Traffic Control Recommendation for the intersection of Rothwell Drive and Provincial Drive  
OHM JN: 0128-11-0020

Dear Mr. Huotari:

As requested, we have reviewed the Rothwell Drive/Provincial Drive intersection to determine the proper traffic control. The subject intersection is a T-intersection located in the City of Troy, in the Stone Haven Woods Subdivision, south of Wattles Road and west of Crooks Road. Provincial Drive is a local street, which runs north-south forming a T-intersection at the north end with Rothwell Drive. Rothwell Drive is a local street running in the east-west direction. The speed limit on both streets is 25 mph. There is currently no traffic control on any of the approaches. Reference the attachments for an 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.

The use of "multiway-STOP" or "all-way" STOP sign installation is discouraged. The multiway-STOP warrant requires the volumes of traffic per approach leg on intersecting roads to be approximately equal.

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.

#### **Traffic Volumes**

24-Hour traffic volumes were provided by the City of Troy. The counts indicate the average daily traffic (ADT) on Rothwell Drive to be 139 with Provincial Drive at 155. The highest peak hour volumes along each road are 16 for Rothwell Drive and 16 on Provincial Drive. The MMUTCD indicates that multi-way STOP control could be warranted if there were at least 300 vehicles per hour from the major street approaches and 200 units (vehicles, pedestrians and bicycles) per hour from the minor street approaches for the same eight hours on an average day. Based on the peak hour volumes alone, the option of multi-way STOP control does not meet warrants.

With the pedestrian and vehicular traffic added together (assuming less than 20 pedestrians per hour) this location is still far below warrant thresholds for multi-way STOP control. All traffic counts are provided as an attachment to this letter. Pedestrian traffic has not been counted at the intersection.

#### **Crash Analysis**

Based on information provided by the City of Troy there have been no crashes reported at this intersection in the past four years.

#### **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 Highways**

Although both Rothwell Drive and Provincial Drive are considered local streets, Rothwell Drive should be assigned right of way in this case, as it is the continuing road and Provincial Drive terminates at Rothwell Drive. Driver expectation is that the continuing road does not have to stop and the terminating road must at a minimum slow to make the turn.

#### **Sight Distance**

The major sight distance obstructions at the intersection are the trees and landscaping in southeast quadrant. The trees, landscaping and sight distance 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 less than 10 mph for the minor road, a STOP sign is commonly used. In this case, the safe approach speed on Provincial Drive was found to be less than 10 mph; 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 modified from "no traffic control" to a STOP sign on the Provincial Drive northbound approach to the intersection. We recommend against modifying the intersection to multi-way STOP control.

Sincerely,  
Orchard Hiltz & McCliment, Inc.



Steven M. Loveland, PE, PTOE  
Traffic Project Engineer

**Attachments:**

- Aerial and Intersection Photos
- Traffic Counts
- Safe Approach Speed Calculation Spreadsheet



Northbound Provincial

05/09/2011



Eastbound Rothwell

05/09/2011



Northbound Provincial

05/09/2011



Westbound Rothwell

05/09/2011



Eastbound Rothwell

# Safe Approach Speed Calculation

Rothwell at Provincial  
City of Troy, MI

Major = Rothwell  
Local = Provincial

Date: 5/12/2011  
Analyst: S. Loveland

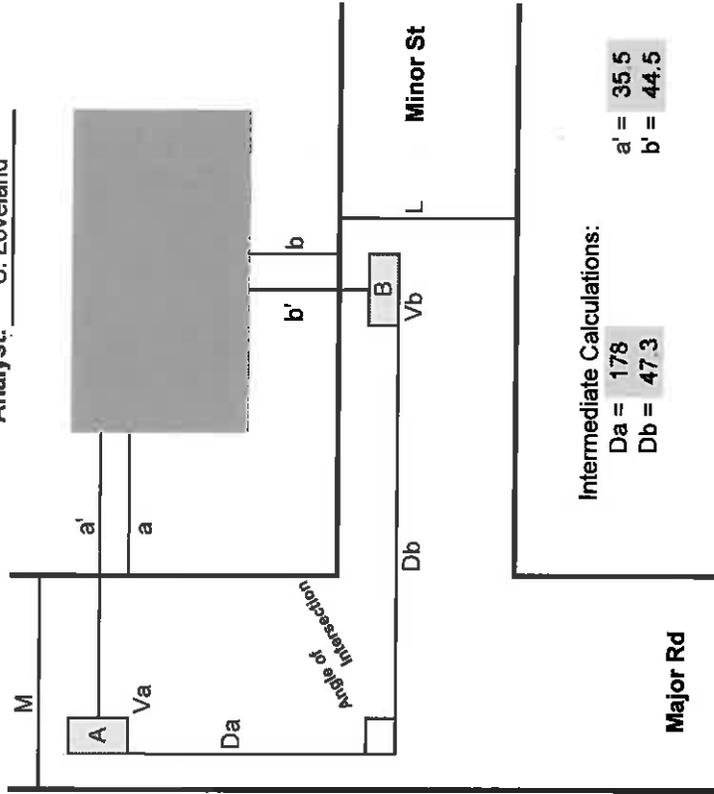
Measured:

Width of Roads	
Major: M =	29 (ft)
Local: L =	29 (ft)
Distance to Obstruction	
a =	24 (ft)
b =	27 (ft)
Angle of Intersection	
Delta =	90 (degrees)
Major Rd Posted	
Speed Limit =	25 (mph)

Assumed:

Speed of Vehicle A = Posted Speed Limit on Major Road +	5 (mph)
Va =	30 (mph)
Perception / Reaction Time (AASHTO)	t = 2.0 (sec)
Coefficient of friction (AASHTO)	f = 0.40
Clearance distance in excess of safe stopping distance (AAA)	C = 15 (ft)

Calculated Safe Approach Speed for Vehicle Approaching on Local Rd	Vb = 8.8 (mph)
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Intermediate Calculations:

Da =	178
Db =	47.3
a' =	35.5
b' =	44.5

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 local street  
based on safe approach speed :

**STOP Sign**