

## **AGENDA**

### **Traffic Committee Meeting**

**February 19, 2014 – 7:30 P.M.**

**Lower Level Conference Room – Troy City Hall**

**500 West Big Beaver Road**

1. Roll Call
2. Minutes – November 20, 2013

### **REGULAR BUSINESS**

3. Request for Traffic Control – Chancery at Little Creek
4. Request for Traffic Control – McClure at Banmoor
5. Request for Traffic Control – McClure at Muer
6. Public Comment
7. Other Business
8. Adjourn

- cc: Item 3: Lynda Fitzpatrick, 6735 Little Creek, Troy, MI 48085  
Properties within 300' of Chancery at Little Creek
- Item 4: Phyllis Williams, 3317 McClure, Troy, MI 48084  
Properties within 300' McClure at Banmoor
- Item 5: Phyllis Williams, 3317 McClure, Troy, MI 48084  
Properties within 300' McClure at Muer

Traffic Committee Members  
Captain Robert Redmond & Sgt. Mike Szuminski, 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 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.

**REGULAR BUSINESS****3. Request for Traffic Control – Chancery at Little Creek**

Lynda Fitzpatrick of 6735 Little Creek requests that traffic control be placed at the intersection of Chancery and Little Creek. Ms. Fitzpatrick states that the lack of Stop signs at the intersection creates a hazardous situation.

**SUGGESTED RESOLUTIONS:**

- a. **RESOLVED**, that the intersection of Chancery and Little Creek be modified from a YIELD sign on Chancery to a STOP sign on the Chancery approach to Little Creek.
- b. **RESOLVED**, that the intersection of Chancery at Little Creek be modified to All-Way STOP control.
- c. **RESOLVED**, that NO changes be made at the intersection of Chancery at Little Creek.

**4. Request for Traffic Control – McClure at Banmoor**

Phyllis Williams of 3317 McClure requests that traffic control be placed at the intersection of McClure at Banmoor. Ms. Williams states that the lack of Stop signs at the intersection creates a hazardous situation.

**SUGGESTED RESOLUTIONS:**

- a. **RESOLVED**, that the intersection of McClure and Banmoor be modified from a YIELD sign on Banmoor to a STOP sign on the Banmoor approach to McClure.
- b. **RESOLVED**, that the intersection of McClure at Banmoor be modified to All-Way STOP control.
- c. **RESOLVED**, that NO changes be made at the intersection of McClure at Banmoor.

**5. Request for Traffic Control – McClure at Muer**

Phyllis Williams of 3317 McClure requests that traffic control be placed at the intersection of McClure at Muer. Ms. Williams states that the lack of Stop signs at the intersection creates a hazardous situation.

**SUGGESTED RESOLUTIONS:**

- a. **RESOLVED**, that the intersection of McClure and Muer be modified from NO traffic control to a STOP sign on the McClure approach to Muer.
- b. **RESOLVED**, that the intersection of McClure at Muer be modified to All-Way STOP control.
- c. **RESOLVED**, that NO changes be made at the intersection of McClure at Muer.

6. **Public Comment**

7. **Other Business**

8. **Adjourn**

A regular meeting of the Troy Traffic Committee was held Wednesday, November 20, 2013 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: Sarah Binkowski  
Tim Brandstetter  
Ted Halsey  
Richard Kilmer  
Pete Ziegenfelder

ABSENT: Al Petrulis  
Stevan Popovic

Also present: Kevin Roach, 1638 Redbud  
Clarence & Lorraine Kufel, 6659 Forest Park  
Nancy Gierak-Taggart, 4586 Butler  
Lee Watkins, 2653 London  
Bill Huotari, Deputy City Engineer/Traffic Engineer

**2. Minutes – October 16, 2013**

**RESOLUTION # 2013-11-23**

Moved by Kilmer  
Seconded by Halsey

To approve the October 16, 2013 minutes as printed.

YES: 5 (Binkowski, Brandstetter, Halsey, Kilmer, Ziegenfelder)  
NO: None  
ABSENT: 2 (Petrulis, Popovic)

MOTION CARRIED

**REGULAR BUSINESS**

**3. Request for Traffic Control – Forest Park Drive at Redbud Drive**

Paul and Pearl Newcomer of 1639 Redbud Drive request that traffic control be placed at the intersection of Forest Park Drive and Redbud Drive. Mr. and Mrs. Newcomer state that lack of Stop signs in all directions creates a hazardous situation.

Kevin Roach of 1638 Redbud discussed the need for traffic control at the intersection for safety of residents and property in and around the intersection. He reported that his

mailbox has been damaged three times. He also discussed the long stretch of Forest Park from South Boulevard to the end with no traffic control in place. Additionally, the line of sight at the intersection is not good. He feels that by adding traffic control at the intersection that everyone would be safer.

Clarence Kufel of 6659 Forest Park supported Mr. Roach’s statements and also requested that traffic control be added to the intersection. Mr. Roach stated that there are drivers who cut through this area between Crooks and South Boulevard. The intersection is also the bus stop for both the elementary and middle school students.

Mr. Ziegenfelder added that Stop signs do not control speed.

Ms. Binkowski asked about the three crashes that have occurred at the intersection. Two of the crashes are reported as being types that could be attributed to lack of traffic control at the intersection.

Traffic Engineering did receive one email in support of traffic control at the intersection.

**RESOLUTION # 2013-11-24**

Moved by Binkowski  
Seconded by Kilmer

**RESOLVED**, that the intersection of Forest Park Drive and Redbud Drive be modified from NO traffic control to ALL-WAY STOP control.

YES: 5 (Binkowski, Brandstetter, Halsey, Kilmer, Ziegenfelder)  
NO: None  
ABSENT: 2 (Petrulis, Popovic)

MOTION CARRIED

**4. Request to Extend No Parking Zone – London Court**

Don Plachta of 2622 London Court and Tom Butcher of 2629 London Court request that the existing No Parking zone along London Court be extended to a point southeast of the driveway to 2629 London Court (approximately at the property line between 2629 London Court and 4586 Butler). Vehicles being parked in the cul-de-sac are causing issues with vehicular movement around the cul-de-sac as well as access to properties adjacent to the cul-de-sac.

Lee Watkins of 2653 London Court reports that garbage trucks can’t get around the island due to parked cars in the cul-de-sac and therefore drive over the island causing damage. The problem has been ongoing for quite some time. She supports moving the sign outside of the cul-de-sac so that the entire cul-de-sac is posted as No Parking. Nancy Gierak-Taggart of 4586 Butler discussed the same issues with vehicles having a

difficult time getting around the cul-de-sac when vehicles are parked in it. With winter coming the problem only gets worse as cars park further away from the curb due to snow that gets piled up along the curb.

Mr. Halsey stated that cul-de-sac's in general are not setup well for parking.

The No Parking signage needs to be upgraded even with no changes as the current signs in place are the basic No Parking symbol signs, rather than the current standard which is a No Parking Begins and No Parking Ends signage to better delineate the No Parking zone.

Traffic Engineering did receive two emails in support of extending the no parking zone; one email opposed and one email stating that the owner would not protest any decision made collectively by the majority of residents and Traffic Committee members.

**RESOLUTION # 2013-11-25**

Moved by Halsey

Seconded by Binkowski

**RESOLVED**, that the existing NO PARKING zone be extended to encompass the entire cul-de-sac; ending at a point approximately at the property line between 2629 London Court and 4586 Butler.

YES: 5 (Binkowski, Brandstetter, Halsey, Kilmer, Ziegenfelder)

NO: None

ABSENT: 2 (Petrulis, Popovic)

MOTION CARRIED

**5. Public Comment**

Lee Watkins of 2653 London Court asked about the Yield sign on westbound Butler at London/London Court. Mr. Ziegenfelder advised Ms. Watkins that she or any other resident could request that the intersection be reviewed for purposes of modifying the traffic control. Ms. Watkins did not request further action at this time, but did ask about increased police enforcement at this location and at other intersections.

The traffic safety unit was eliminated during the downsizing of the City and currently the police department provides these types of services when officers are not on higher priority activities. Direct enforcement is very limited. Traffic Engineering will contact the Police Department so that it can be noted and if officers are in the area and are available, then additional patrols may be made.

**6. Other Business**

Mr. Brandstetter questioned the traffic signal operation at the intersection of Square Lake

and Livernois. He noted that northbound Livernois experiences significant delays as compared to eastbound/westbound Square Lake during the evening peak hour (approximately 5:15 p.m.). Traffic Engineering will forward the concern to the Road Commission for Oakland County for investigation.

**7. Adjourn**

The meeting adjourned at 8:08 p.m.

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Pete Ziegenfelder, Chairperson

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Bill Huotari, Deputy City Engineer/Traffic Engineer

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## TRAFFIC COMMITTEE REPORT

February 4, 2014

TO: Traffic Committee

FROM: Bill Huotari, Deputy City Engineer/ Traffic Engineer

SUBJECT: Request for Traffic Control  
Chancery at Little Creek

### Background:

Lynda Fitzpatrick of 6735 Little Creek requests that traffic control be placed at the intersection of Chancery and Little Creek. Ms. Fitzpatrick states that the lack of Stop signs at the intersection creates a hazardous situation.

There is currently a Yield sign on Chancery at the intersection with Little Creek.

There has been one (1) crash reported at this intersection in the past five (5) years. Ms. Fitzpatrick reports that there have been several near crashes as well as vehicles that have slid through the intersection and ended up on her property.

The posted speed limit on both streets is 25 mph. Little Creek should be assigned right-of-way as it is in the continuing road while Chancery terminates at Little Creek.

There are sight distance obstructions in the two quadrants of the intersection. In the northeast corner, there is a bush planted at the corner of the resident's garage. For the southeast corner, a pickup truck parks in the driveway. It is a slightly greater restriction to sight distance than the vegetative hedge that runs along the property's sidewalk to the east of the driveway. These items come into play when determining the safe approach speed for the intersection.

The safe approach speed on Chancery was found to be more than 10 mph; therefore a YIELD sign is the recommended treatment.

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

### Recommendation:

Recommend that the intersection control should not be modified and should remain as a YIELD sign on the Chancery approach to Little Creek.

**William J Huotari**

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**Subject:** FW: Intersection of Little Creek and Chancery/Emerald Lakes

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**From:** Lynda McGill-Fitzpatrick [<mailto:lyndamcgillfitzpatrick@yahoo.com>]

**Sent:** Friday, December 27, 2013 11:51 AM

**To:** Timothy L Richnak; Kathleen Donovan

**Subject:** Intersection of Little Creek and Chancery/Emerald Lakes

Mr. Tim Richnak  
Public Works Director  
City of Troy Michigan  
Streets & Drain Department

Dear Mr. Richnak:

I wrote to you last year regarding problems that we have at the "T" intersection where my home is located. As you may recall, I reported that twice a vehicle was unable to stop and went up over the curb approximately 20 feet into my yard narrowly missing the electrical/utility boxes and my driveway.

This year I have had another incident, however this time it was a van that was unable to stop and went up over the curb, narrowly missing the tree that is planted on the right of way between the sidewalk and the street. This incident took place last week and this time it was on the South side of my drive instead of the North. I will have some yard repairs this spring when the snow melts.

Yesterday I was pleased to see the city truck with the brine solution out in the neighborhood where they sprayed it in one path on the street around the lake. I was surprised that the truck totally failed to spray the entire street of Chancery or the intersection where these problems are taking place.

If there is anyway that you could direct them to hit this trouble spot it would be greatly appreciated by me, and it could avert an injury accident.

I also think that a stop sign would be helpful instead of the yield sign that is in this location. Perhaps people are used to simply taking that curve too fast and then when the snow and ice come lose control of their vehicles.

Sincerely,

Lynda Fitzpatrick

cc: Kathleen Donovan, Emerald Lakes Village Homeowners Board

January 9, 2014

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 Chancery at Little Creek  
OHMJN: 0128-14-0010

Dear Mr. Huotari:

As requested, we have reviewed the Chancery at Little Creek intersection to determine the proper traffic control. The subject intersection is a tee intersection located in the City of Troy, approximately 0.12 miles west of John R Road and 0.26 miles south of South Boulevard. Both are local streets, with Chancery running in the east-west direction and Little Creek running north-south. The speed limit on both streets is 25 mph. There is currently a YIELD control for Chancery at the intersection. 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 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 has been one crash recorded in the past 5-years at this intersection. Occurring on January 16, 2008, it involved a single vehicle that loss control when the road was icy and hit a traffic sign.

### **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 are considered local streets, Little Creek Drive is the considered the major road at this intersection as it continues through the intersection, while Chancery terminates. Consequently, Little Creek should be given the right-of-way priority.

### **Sight Distance**

There are sight distance obstructions in the two quadrants of the intersection. In the northeast corner, there is a bush planted at the corner of the resident's garage. For the southeast corner, there appears to be a pickup truck that is chronically parked in the driveway. It is a slightly greater restriction to sight distance than the vegetative hedge that runs along the property's sidewalk to the east of the driveway. These items 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 Chancery was found to be more than 10 mph; therefore a YIELD sign is the recommended treatment. The safe approach speed calculation spreadsheet is attached for your reference.

### **Recommendation**

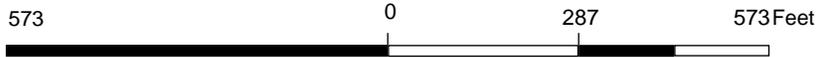
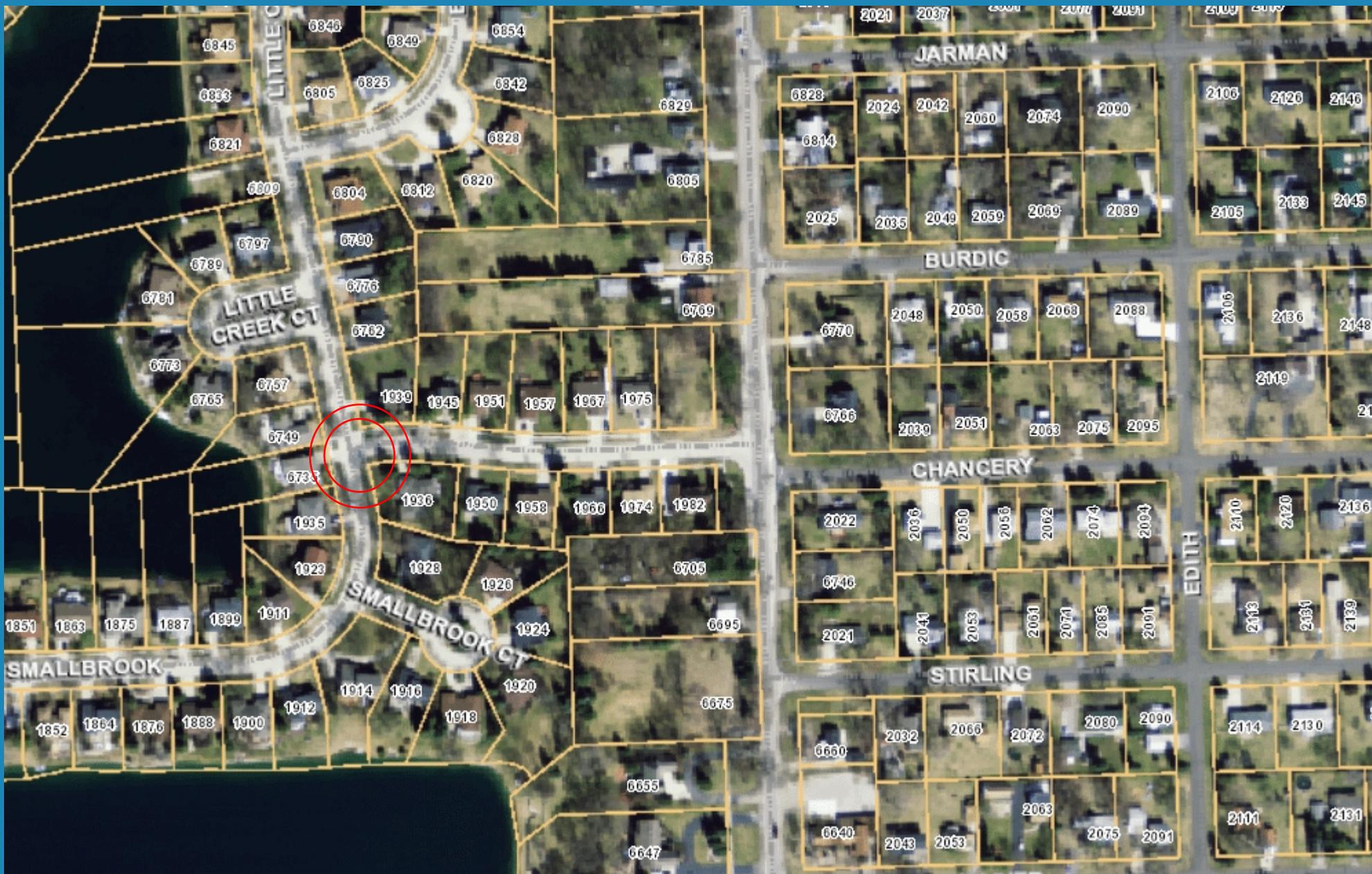
OHM recommends that the intersection control should not be modified, and should remain a YIELD sign on the Chancery approach to the intersection.

Sincerely,  
Orchard Hiltz & McCliment, Inc.

Stephen B. Dearing, PE, PTOE  
Manager of Traffic Engineering Services

### **Attachments:**

- Crash Data
- Aerial and Intersection Photos
- Safe Approach Speed Calculation Spreadsheet



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.



**Chancery looking at northeast corner of Little Creek**



**Chancery looking at southeast corner of Little Creek**



**Little Creek looking north to Chancery**



Traffic Improvement Association of Michigan

Crash Detail Report

Request #: 0021557

Printed By: Stephen Dearing

Printed On: 1/9/2014

ON_ROAD:	Little Creek Dr
AT_ROAD:	Chancery
STATE:	MI
COUNTY:	OAKLAND
COMMUNITY:	Troy
STAT_YEAR:	3-Year

#1 Location: CHANCERY (0.00) 7 feet E of Little Creek Dr

Crash ID: 6900885

Crash Date: 01/16/2008 Day: Wed Hour: 11am Weather: clear Roadway: icy Light: day  
 Injuries K: 0 Inj A: 0 Inj B: 0 Inj C: 0 Inj O: 1 How: single  
 CVT: Troy Area: straight HBD: N Drugs: N Complaint No: 082012

Unit No	Veh Dir	Action	Prior	Event 1	Event 2	Event 3	Event 4	Haz	Action	Veh Type	Damage
1	W	go straight		loss of control	hwy traffic sign post	none	none	speeding		car	ctrfront

UD-10: [080031837](#)

**Crash Type**

Count	Type
0	uncoded
1	single
0	head-on
0	head-on/lt
0	angle
0	rr-end
0	rr-end/lt
0	rr-end/rt
0	ss-same
0	ss-opp
0	unknown
<b>Totals:</b>	<b>1</b>

**Light Conditions**

Count	Type
0	uncoded
1	day
0	dawn
0	dusk
0	dark/lt
0	dark/unltd
0	unknown
<b>Totals:</b>	<b>1</b>

**Weather**

Count	Type
0	uncoded
1	clear
0	cloudy
0	fog/smoke
0	rain
0	snow
0	wind
0	sleet/hail
0	unknown
<b>Totals:</b>	<b>1</b>

**Road Condition**

Count	Type
0	uncoded
0	dry
0	wet
1	icy
0	snowy
0	muddy
0	slushy
0	debris
0	unknown
<b>Totals:</b>	<b>1</b>

**Crashes By Month**

Count	Type
1	January
0	February
0	March
0	April
0	May
0	June
0	July
0	August
0	September
0	October
0	November
0	December
<b>Totals:</b>	<b>1</b>

**Hazardous Action**

Count	Type
0	none
1	speeding
0	imprp/no signal
0	imprp backing
0	unable to stop
0	other
0	unknown
0	reckls driving
0	negl driving
0	spd too slow
0	failed to yield
0	disrgd traffic cntrl
0	wrong way
0	left of center
0	imprp passing
0	imprp lane use
0	imprp turn
<b>Totals:</b>	<b>1</b>

**Unit Type**

Count	Type
0	Bicyclist
0	Engineer
1	Vehicle
0	Pedestrian
<b>Totals:</b>	<b>1</b>

**Crashes By Year**

Count	Type
0	2000
0	2001
0	2002
0	2003
0	2004
0	2005
0	2006
0	2007
1	2008
0	2009
0	2010
0	2011
0	2012
0	2013
<b>Totals:</b>	<b>1</b>

**Crash Severity**

	FATAL	A	B	C	No Inj	Total
Persons	0	0	0	0	1	1
Crashes	0	0	0	0	1	1

**Alcohol in Crashes**

	FATAL	PI	PD	Total
Drinking	0	0	0	0
Not Drinking	0	0	1	1
Total	0	0	1	1

**Crashes per Hour by Day**

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Unknown	Total
12a - 1a	0	0	0	0	0	0	0	0	0
1a - 2a	0	0	0	0	0	0	0	0	0
2a - 3a	0	0	0	0	0	0	0	0	0
3a - 4a	0	0	0	0	0	0	0	0	0
4a - 5a	0	0	0	0	0	0	0	0	0
5a - 6a	0	0	0	0	0	0	0	0	0
6a - 7a	0	0	0	0	0	0	0	0	0
7a - 8a	0	0	0	0	0	0	0	0	0
8a - 9a	0	0	0	0	0	0	0	0	0
9a - 10a	0	0	0	0	0	0	0	0	0
10a - 11a	0	0	0	0	0	0	0	0	0
11a - 12p	0	0	0	1	0	0	0	0	1
12p - 1p	0	0	0	0	0	0	0	0	0
1p - 2p	0	0	0	0	0	0	0	0	0
2p - 3p	0	0	0	0	0	0	0	0	0
3p - 4p	0	0	0	0	0	0	0	0	0
4p - 5p	0	0	0	0	0	0	0	0	0
5p - 6p	0	0	0	0	0	0	0	0	0
6p - 7p	0	0	0	0	0	0	0	0	0
7p - 8p	0	0	0	0	0	0	0	0	0
8p - 9p	0	0	0	0	0	0	0	0	0
9p - 10p	0	0	0	0	0	0	0	0	0
10p - 11p	0	0	0	0	0	0	0	0	0
11p - 12a	0	0	0	0	0	0	0	0	0
Unknown Time	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>

# Safe Approach Speed Calculation

**Chancery at Little Creek  
City of Troy**

Road 1 = Little Creek  
Road 2 = Chancery

Date: 1/9/2014  
Analyst: S.B. Dearing

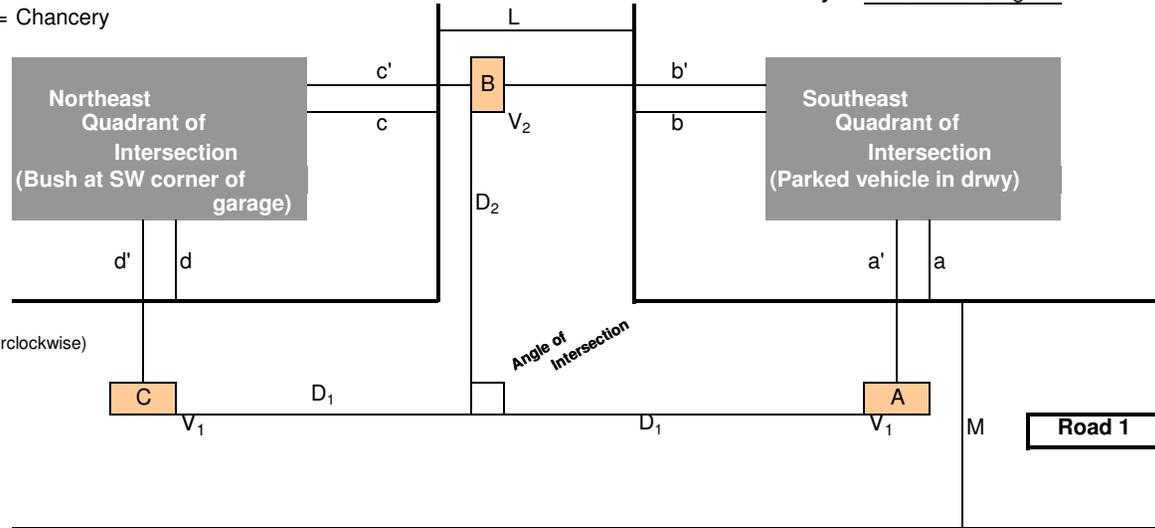
Measured:

Width of Roads  
Road 1 = 27 (ft)  
Road 2 = 27 (ft)

Distance to Obstruction  
a = 60 (ft)  
b = 21 (ft)  
c = 35 (ft)  
d = 33 (ft)

Angle of Intersection  
Delta = 85 (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

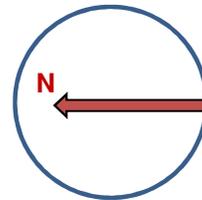
+ 5 (mph)  
V<sub>1</sub> = 30 (mph)

Perception / Reaction Time (AASHTO)

t = 2.5 (sec)

Deceleration rate (AASHTO)

A = 11.20



Road 2

Intermediate Calculations:  
D<sub>1</sub> = 196  
D<sub>2A</sub> = 87.6  
D<sub>2C</sub> = 61.1  
a' = 70.5  
b' = 37.5  
c' = 45.5  
d' = 49.5

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<sub>2</sub> = 16.6 (mph) [Based on Veh. A]  
or V<sub>2</sub> = 12.6 (mph) [Based on Veh. C]

TRUE

Notes: Enter field measurements in yellow highlighted area.

Blue fields are std. default values; change only for cause.

Calculated by spreadsheet

Using 85 degree angle to account for Chancery in curve prior to intersection.

Recommended ROW control for Road 2

based on safe approach speed : **YIELD Sign**



## TRAFFIC COMMITTEE REPORT

February 4, 2014

TO: Traffic Committee

FROM: Bill Huotari, Deputy City Engineer/ Traffic Engineer

SUBJECT: Request for Traffic Control  
McClure at Banmoor

### Background:

Phyllis Williams of 3317 McClure requests that traffic control be placed at the intersection of McClure at Banmoor. Ms. Williams states that the lack of Stop signs at the intersection creates a hazardous situation.

There is currently a Yield sign on Banmoor at the intersection with McClure.

There have been no crashes at the intersection in the past five (5) years. Ms. Williams reports that there have been several near crashes at the intersection and that traffic volume has increased on McClure over the past several years.

The posted speed limit on both streets is 25 mph. McClure should be assigned right-of-way as it is the continuing road while Banmoor terminates at McClure.

The major sight distance obstruction at the intersection is a large conifer tree in the southeast corner. The opposite northeast corner does not have any critical obstructions as it has been mostly cleared in preparation of the construction of a new home. These items come into play when determining the safe approach speed for the intersection.

The safe approach speed on Chancery was found to be less than 10 mph; therefore a STOP sign is the recommended treatment.

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

### Recommendation:

Recommend that the intersection control be modified from a YIELD sign to a STOP sign on the Banmoor approach to McClure.

January 30, 2014

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

Subject: Traffic Control Recommendation for the intersections of  
Banmoor Dr at McClure Dr and McClure Dr at Muer Dr  
OHM JN: 0128-14-0020

Dear Mr. Huotari:

As requested, we have reviewed the two intersections of McClure, at Banmoor Dr and at Muer Dr, to determine the proper traffic control. Both subject intersections are tee intersections located in the City of Troy, approximately 0.3 miles west of Crooks Road and from 0.3 to 0.4 miles north of Big Beaver Road. All are local streets, with Banmoor and Muer running in the east-west direction and McClure running north-south. The speed limit on all streets is 25 mph. There is currently a YIELD control for Banmoor at its intersection, but the intersection with Muer is not controlled at this time. 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.



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 have not been any crashes recorded in the past 5-years at or near the intersection of Banmoor and McClure. There has been one crash for the intersection of McClure at Muer. It occurred on Oct. 9, 2013 and involved a single eastbound vehicle that lost control and hit a mail box east of the intersection. We conclude that neither intersection has a chronic crash problem that would influence the selection of intersection traffic controls.

### **Approach Speeds**

The approach speed limit on all 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 all are considered local streets, McClure is considered the major road at its intersection with Banmoor as it continues through the intersection, while Chancery terminates. Consequently, McClure should be given the right-of-way priority at this location. For the same reason, however, Muer should be given the priority as McClure terminates at this more northern intersection.

### **Sight Distance**

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. Generally, when the safe approach speed of an intersection is found to be less than 10 mph for the minor road, a STOP sign is commonly used. If the safe approach speed is from 10 mph to less than 20 mph, a YIELD control is the recommended treatment.

There are sight distance obstructions in at least one quadrant of each of the two intersections. For McClure at Banmoor, there is a large conifer tree in the southeast corner. The opposite northeast corner does not have any critical obstructions; it has been mostly cleared in preparation for building a house. Based on this obstruction, the safe approach speed for Banmoor at McClure is about 9.4 mph. This suggests that a STOP control should be considered.



For McClure at Muer, there are several conifer trees in the southeast corner that restrict sight distance. Based on these obstructions, the safe approach speed for McClure at Muer is about 6.6 mph. This suggests that a STOP control should be considered. Safe approach speed calculation spreadsheets are attached for your reference for each location.

**Recommendation**

OHM recommends that the intersection controls at each location should be modified. Banmoor should STOP for McClure and McClure should STOP for Muer.

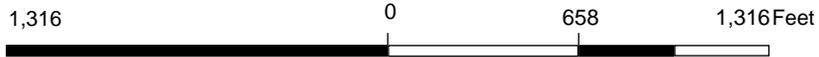
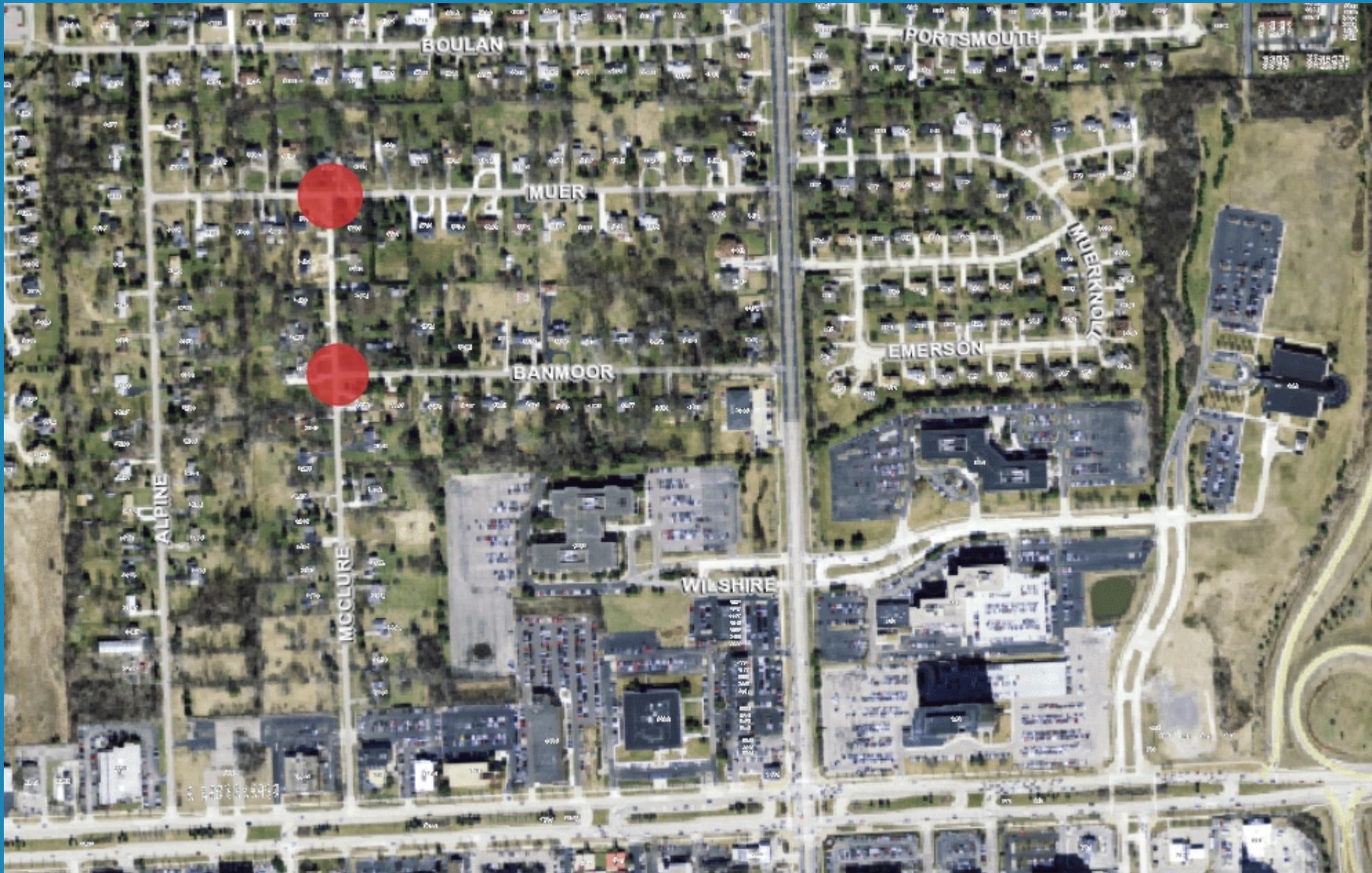
Please review this information and feel free to contact me if you have any questions.

Sincerely,  
Orchard Hiltz & McCliment, Inc.

Stephen B. Dearing, PE, PTOE  
Manager of Traffic Engineering Services

Attachments:

- Crash Data
- Aerial and Intersection Photos
- Safe Approach Speed Calculation Spreadsheets



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

**Banmoor at McClure**  
City of Troy

Road 1 = McClure Dr  
Road 2 = Banmoor Dr

Date: 1/30/2014  
Analyst: S.B. Dearing

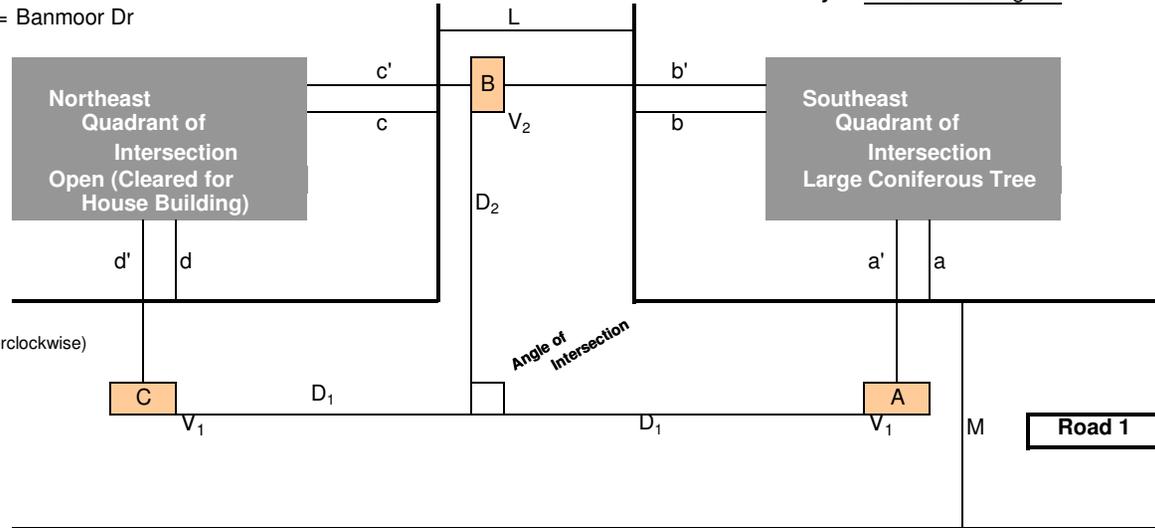
**Measured:**

Width of Roads  
Road 1 = 20 (ft)  
Road 2 = 20 (ft)

Distance to Obstruction  
a = 26 (ft)  
b = 33 (ft)  
c = 99 (ft)  
d = 99 (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<sub>1</sub> = 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

V<sub>2</sub> = 9.4 (mph) [Based on Veh. A]  
or V<sub>2</sub> = 35.1 (mph) [Based on Veh. C]

FALSE

**Recommended ROW control for Road 2**

based on safe approach speed : **STOP Sign**

Intermediate Calculations:  
D<sub>1</sub> = 196  
D<sub>2A</sub> = 43.1  
D<sub>2C</sub> = 246.7  
a' = 33  
b' = 46  
c' = 106  
d' = 112

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



## TRAFFIC COMMITTEE REPORT

February 4, 2014

TO: Traffic Committee

FROM: Bill Huotari, Deputy City Engineer/ Traffic Engineer

SUBJECT: Request for Traffic Control  
McClure at Muer

### Background:

Phyllis Williams of 3317 McClure requests that traffic control be placed at the intersection of McClure at Muer. Ms. Williams states that the lack of Stop signs at the intersection creates a hazardous situation.

There is currently no traffic control at the intersection of McClure and Muer.

There has been one (1) crash at the intersection in the past five (5) years. This crash is noted as not being influenced by the lack of traffic control. Ms. Williams reports that there have been several near crashes at the intersection and that traffic volume has increased on McClure over the past several years.

The posted speed limit on both streets is 25 mph. Muer should be assigned right-of-way as it is the continuing road while McClure terminates at Muer.

The major sight distance obstructions at the intersection are several conifer trees in the southeast corner that restrict sight distance. These items come into play when determining the safe approach speed for the intersection.

The safe approach speed on McClure was found to be less than 10 mph; therefore a STOP sign is the recommended treatment.

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

### Recommendation:

Recommend that the intersection control be modified from no traffic control to a STOP sign on the McClure approach to Muer.

January 30, 2014

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

Subject: Traffic Control Recommendation for the intersections of  
Banmoor Dr at McClure Dr and McClure Dr at Muer Dr  
OHM JN: 0128-14-0020

Dear Mr. Huotari:

As requested, we have reviewed the two intersections of McClure, at Banmoor Dr and at Muer Dr, to determine the proper traffic control. Both subject intersections are tee intersections located in the City of Troy, approximately 0.3 miles west of Crooks Road and from 0.3 to 0.4 miles north of Big Beaver Road. All are local streets, with Banmoor and Muer running in the east-west direction and McClure running north-south. The speed limit on all streets is 25 mph. There is currently a YIELD control for Banmoor at its intersection, but the intersection with Muer is not controlled at this time. Reference the attachments for aerial and intersection photos.

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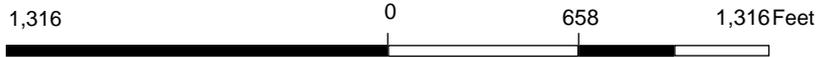
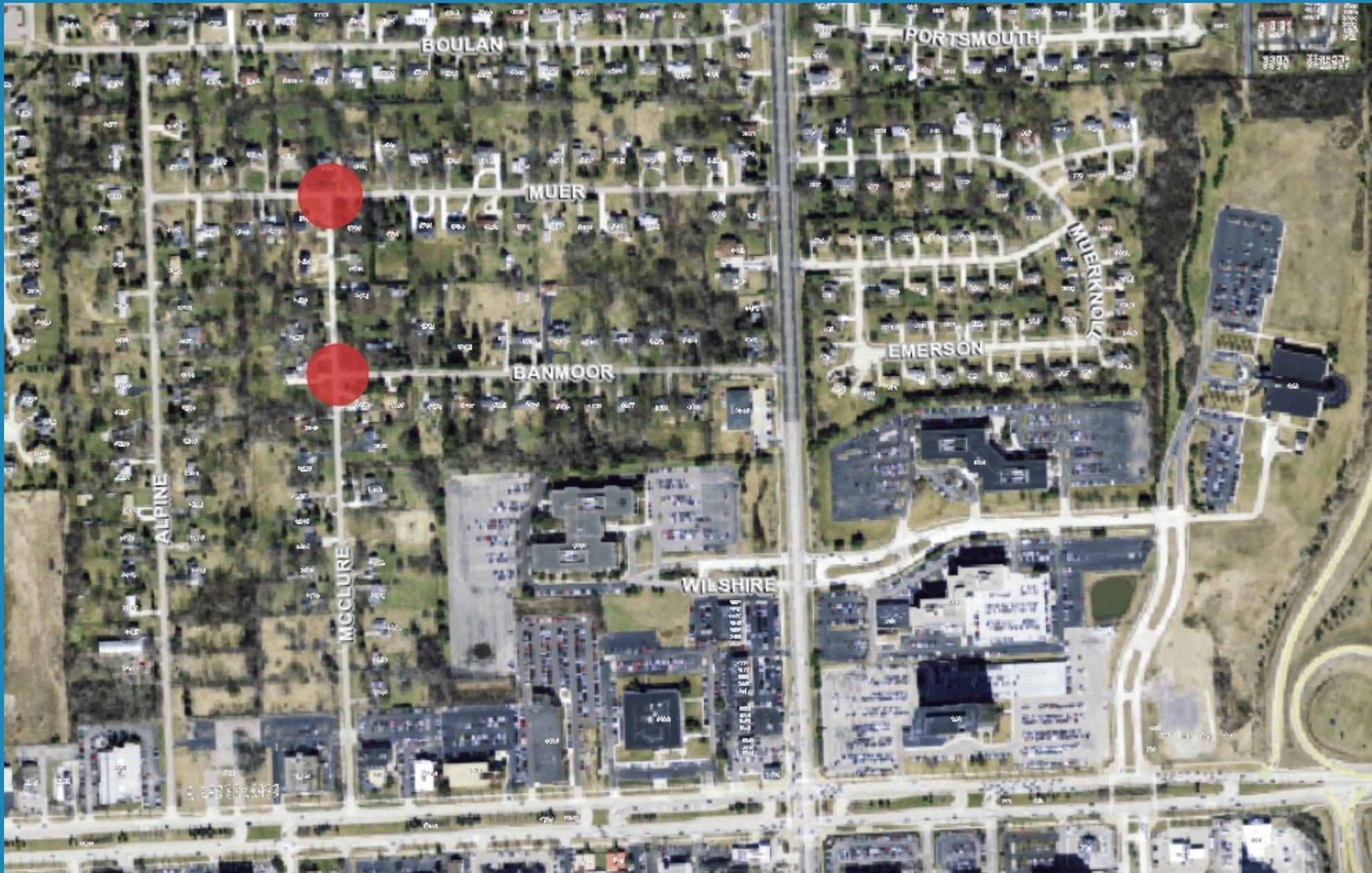
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# Safe Approach Speed Calculation

**McClure at Muer**  
City of Troy

Road 1 = Muer Dr  
Road 2 = McClure Dr

Date: 1/30/2014  
Analyst: S.B. Dearing

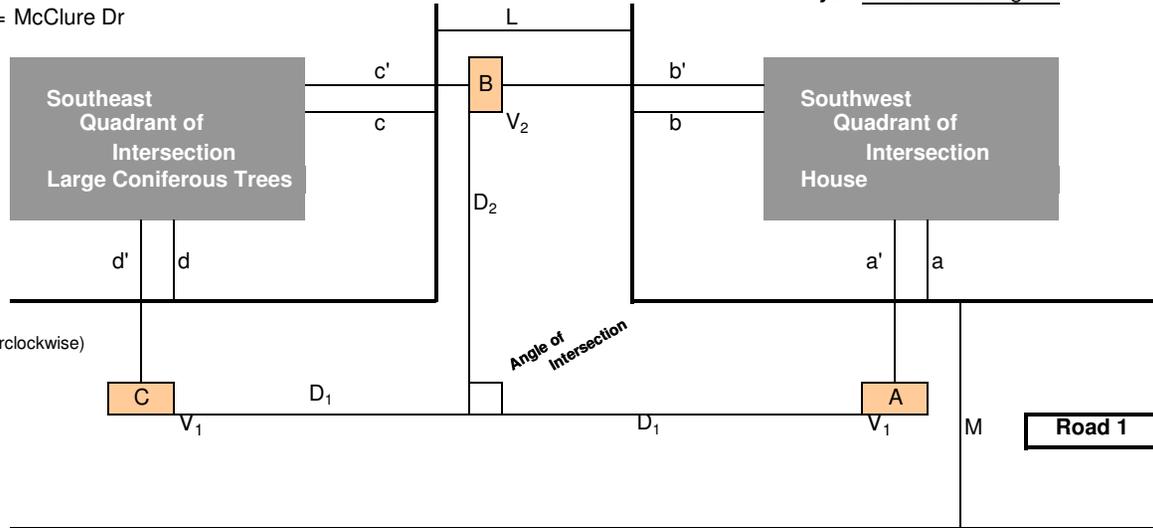
Measured:

Width of Roads  
Road 1 = 22 (ft)  
Road 2 = 22 (ft)

Distance to Obstruction  
a = 60 (ft)  
b = 65 (ft)  
c = 16 (ft)  
d = 16 (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<sub>1</sub> = 30 (mph)

Perception / Reaction Time (AASHTO)

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Deceleration rate (AASHTO)

A = 11.20

Clearance distance in excess of safe stopping distance (AAA)

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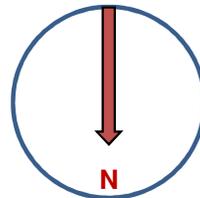
Calculated Safe Approach Speed for Vehicle B  
Approaching on Road 2

V<sub>2</sub> = 20.3 (mph) [Based on Veh. A]  
or V<sub>2</sub> = 6.6 (mph) [Based on Veh. C]

FALSE

Recommended ROW control for Road 2

based on safe approach speed : **STOP Sign**



Intermediate Calculations:

D<sub>1</sub> = 196 a' = 68

D<sub>2A</sub> = 114 b' = 79

D<sub>2C</sub> = 28.3 c' = 24

d' = 30

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

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