



# **TRAFFIC COMMITTEE AGENDA**

**September 21, 2022 – 7:30 P.M.**

**Lower Level Conference Room – Troy City Hall – 500 West Big Beaver**

1. Roll Call
2. Approval of Minutes – July 20, 2022 Traffic Committee

## **PUBLIC HEARINGS**

3. No Public Hearings

## **REGULAR BUSINESS**

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

## **Copy to:**

Item 4:                   James Bliskey 3419 Harmony; Properties within 300'

## **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 – July 20, 2022 Traffic Committee

### PUBLIC HEARING

## 3. No Public Hearings

### REGULAR BUSINESS

## 4. Request for Traffic Control – Harmony Drive at Crimson Drive

James Bliskey of 3419 Harmony requests that the intersection of Harmony Drive at Crimson Drive be reviewed for purposes of replacing the existing YIELD sign with a STOP sign on the Crimson Drive approach to the intersection. He stated that the existing Yield sign does not stop traffic or slow vehicles down when they make the turn. This creates a hazardous situation for drivers and pedestrians. He has had two cars hit, a tree hit, and his lawn run over several times along with many near misses with walkers.

### SUGGESTED RESOLUTIONS:

- a. RESOLVED, that the intersection of Harmony Drive at Crimson Drive be **MODIFIED** from YIELD control on the Crimson Drive approach to STOP control on the Crimson Drive approach to the intersection.
- b. RESOLVED, that **NO CHANGE** be made at the intersection of Harmony Drive at Crimson Drive.

## 5. Public Comment

## 6. Other Business

## 7. Adjourn

A regular meeting of the Troy Traffic Committee was held Wednesday, July 20, 2022 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  
Sunil Sivaraman  
Cynthia Wilsher  
Pete Ziegenfelder  
Tyler Koralewski, Student Representative

Absent: Al Petrulis  
Abi Swaminathan

Also present: Lt. Chuck Roberts, Fire Department  
Bill Huotari, City Engineer/Traffic Engineer  
Jim Heidt, 321 Hickory  
Harold Dallow, 338 Hickory  
Bill VanHorne, 384 Hickory  
Sharon VanHorne, 384 Hickory  
Fara Jensen, 3555 Bellows  
David Jensen, 3555 Bellows

**2. Minutes – May 18, 2022**

Resolution # 2022-07-16  
Moved by Kilmer  
Seconded by Wilsher

To approve the May 18, 2022 minutes as printed.

Yes: Kilmer, Nurak, Petrulis, Sivaraman, Wilsher, Ziegenfelder  
No: None  
Absent: Petrulis, Swaminathan

**MOTION CARRIED****PUBLIC HEARINGS****3. No Public Hearings****REGULAR BUSINESS****4. Request to Remove No Parking Restrictions – Hickory Drive, Plum Drive to Kirkton Drive**

Sharon VanHorne of 384 Hickory Drive requested that the No Parking restrictions on the south side of Hickory, from Plum Drive to Kirkton Drive be removed so that residents can park on one side of Hickory Drive. Ms. VanHorne reports that they and several other residents have multiple vehicles that do not fit in the driveway so they park along Hickory Drive and/or along Kirkton Drive thereby displacing parking spots for other residents.

Troy post office mail carriers provided the following input via a signed letter:

*City of Troy Traffic Committee*

*With regards to removing the no parking signs on Hickory dr from Plum to Kirkton.*

*We postal workers kindly request you don't, it makes it very hard at times if not impossible for us to make our mail deliveries.*

*Thank you  
Troy mail carriers*

[Letter was signed by eight (8) mail carriers]

Troy Police Sgt. Warzecha provided the following input via email:

*I do not agree with removing any parking signs on the south side of Hickory between Plum and Kirkton. I spent some time in the area over the past few weeks and observed the roadway to be very narrow and can understand why there is no street parking in the area. I did observe on several occasions the residence at 320 Hickory, 364 Hickory, and 384 Hickory parking in violation of the posted signs. Each time I observed the vehicles parking in violation of the posted signs I also observed that each of the driveways was either empty or there was plenty of room to park another vehicle. I did not take enforcement action as I was aware of the upcoming meeting about the potential change.*

Traffic Engineering received five (5) emails opposed to any changes and one (1) email in support of changing the No Parking restrictions, as follows:

*Hi Mr. Huotari,*

*I am writing you in response to object to the notice we received from the Traffic Committee. At the July 20th meeting they will discuss the removal of the no parking on the south side of Hickory Dr, between Plum Drive to Kirkton Drive. I live on the corner of Hickory and Kirkton and this parking restriction faces the front of my property where the mail is delivered. I am opposed to this as it is the side of the street that receives mail delivery. On many occasions people park on the south side even with the restrictions and we do not get mail delivery.*

*I am also apposed to the remove as there is a lot of traffic through the neighborhood as people use Hickory to cut through to the other main roads. The removal would make traffic a mess if people were parked along the street and I feel kids from the neighborhood would be*

*more likely to get hit, or cause accidents with cars and the narrow roads. There is also a elementary school that is at the dead end of Hickory. I believe if the no parking was removed, parents from the school would park there to pick up kids and make it an even bigger mess to get through the neighborhood.*

*if you remove the no parking restrictions can you switch it to remove the parking restrictions on the North side of Hickory instead? As that side of the road does not have mail delivery.*

*Please let me know how the meeting goes, I look forward to the outcome of the no parking on Hickory Dr.*

*Thank you,  
Karie Pasternak*

*To Whom it may concern,*

*There is no sidewalk there. People and kids on bikes or walking use the street to get by all up and down Hickory in that section. The street is narrow, visibility could be hampered. Especially seeing as Morse is just down the way.*

*There isn't enough Easement like they have on Cherry. If they did it wouldn't be so bad but, as it is, I don't think it's a great idea.*

*Regards,*

*Dan Bousho  
94 Hickory  
Troy, Mi, 40803*

*Dear William,*

*I am writing to you in response to the letter you sent regarding removing the “No Parking” restrictions on the south side of Hickory from Plum Drive to Kirkton Drive. I am against this happening due to ALL the mail boxes being located on the south side of the street. Should someone park in front of the mailboxes then the mail carrier will NOT deliver mail. I have witnessed this happen since I’ve been working from home. Please consider that this is a poor decision to make – especially since there is no parking on the north side and no mailboxes located on that side of the street. Many of these home lots are only 55 feet wide and not enough room to park cars without blocking a drive or the mailboxes. Another consideration is that Hickory is not as wide of a street as others in the area ( ie., Kirkton near 15 Mile & Hartshorn) that allow parked cars and still have enough space for two cars to pass each other. Please note that school busses come down our street several times a day which would make it difficult for two cars to be able to pass any parked cars. I do hope you get the post master’s opinion on how their workers like to work around parked cars in front of mail boxes.*

*Thank you for your consideration. Please feel free to call if you would like more information.*

Terri Myke

310 Hickory Drive, Troy MI 48083

*Thank you for this opportunity to speak regarding parking in both side of Hickory Dr..*

*I have attached a few pictures taken today of the steet, as you can see the street is very narrow and cars can hardly pass a school bus had to turn around, as I LOVE the idea of people having to drive slowly on our street. The people that use these streets as a drive thru from Maple Rd, to Livernois, and the apartments behind the school use these streets to short cuts. And we have been complaining to the city, about the speeds everyone drives on Hickory, and I am very serious about the speeds they can get up to 50-60, its rediuclas and dangerous, most neighborhoods have the kids play in back yards due to the danger or excessive speed.*

*Making parking available on the streets is just not wise, you really should have the streets monitored for speed and give tickets, that NEEDS to be done, please consider what people say in NOT parking on both sides of the streets.*

*Thanking you in advance*

Kathleen Gill

Sally Gill

Helen Bezwusczak

*To whom it may concern,*

*I am writing to you in regards to the request to remove the no parking signs on the southside of Hickory between Hickory between Plum and Kirkton. I currently share ownership of the property at 392 Hickory with my sister. This property is located at the corner of Hickory and Kirkton and the parking restriction faces the front of this property where the mailboxes are located. I am opposed to removing the parking restrictions.*

*Currently the parking restrictions are only during the day (Monday-Saturday) which will allow those who wish to park there after work hours and on Sunday when mail is not being delivered. Even though there are parking restrictions there have been several times recently that people have been parking there which in return has caused us not to receive mail.*

*With removing the parking restrictions I could see this causing additional issues as well.*

- Hickory is a main street that is used to cut through from Livernois to Rochester or Livernois to 15 mile road. With the additional people parking in the street this will cause an increase of traffic. Which will make it harder for emergency vehicles to safely maneuver through the streets.*
- With Hickory being an older street I feel the infrastructure is not made to accomodate for such parking. There is no shoulder and only a ditch. During winter months it will make it harder for snow plows to clear roads.*

- *With the school at the end of the street this will increase the amount of parents that park here to pick up their children instead of going to the school and waiting in line. This will cause even more traffic on Hickory. Also there are a lot of children walking home from school. Allowing parking will increase traffic and unsafe for children walking home from school.*

*Thanks,*

*Marcie Danis*

*I agree to the removal of the no parking signs. I don't see any reason why the signs are there to begin with some of the home don't have enough parking space if they have any guest.*

*Feris A. Seba*

Bill VanHorne of 384 Hickory has lived at his home since 1997. They never had a problem with parking until recently as they now have two (2) children who also drive. Mr. VanHorne and his son were ticketed recently on separate occasions even though they were only parking temporarily. He assumes that some neighbor called Troy Police to report them parking on the street. The family must "shuffle" cars and has to park one block away on Kirtkton. They do not block fire hydrants and/or mailboxes when parking on the street.

Sharon VanHorne of 384 Hickory added that there are eight (8) single driveways and four (4) double driveways along this section of Hickory.

Jim Heidt of 321 Hickory has lived at his home for 47 years. No parking signs were posted to avoid parked vehicles blocking the mailboxes. There is currently parking allowed after 6:00 PM and on Sundays. Mr. Heidt had children and they had to shuffle cars but figured it out based on the restrictions posted on Hickory. Mr. Heidt submitted a copy of a letter from Troy mail carriers.

Harold Dallow of 338 Hickory stated that no parking on Hickory represents safety and harmony in this neighborhood. Mail carriers will not deliver mail if the post office boxes are blocked and/or obstructed.

When this item was last considered [at the May 16, 2012 Traffic Committee meeting] the USPS would not consider moving mailboxes to the north side of Hickory. Traffic Engineering did not re-confirm this for the current request.

Mr. Ziegenfelder clarified that the north side is the fire hydrant side of the street and is posted as no parking at all times.

Ms. Wilsher has lived just to the south of this area on Maple Road since 1962. She had five (5) children and had to play "musical cars" when her children were driving as she could not park along Maple Road. Hickory is a very narrow street and has always been posted no parking. She stated that Troy Fire Department would have a very difficult time getting around parked cars.



Mr. Kilmer stated that Troy Police is opposed to the requested change. He supports keeping the signs as-is or posting Hickory as no parking at all times.

Resolution #  
Moved by Kilmer  
Seconded by Wilsher

RESOLVED, that the existing time limited No Parking zone on the south side of Hickory be **MODIFIED** to prohibit parking at all times.

Yes: Kilmer, Wilsher  
No: Nurak, Sivaraman, Ziegenfelder  
Absent: Petrulis, Swaminathan

### **MOTION FAILED**

Mr. Sivaraman asked for clarification of the motion and as to what residents were notified of.

Mr. Koralewski asked about parking in the greenbelt area between the edge of the road and areas where this is sidewalk.

Resolution # 2022-07-17  
Moved by Sivaraman  
Seconded by Nurak

**RESOLVED**, that **NO CHANGE** be made to the existing No Parking zone on the south side of Hickory Drive, from Plum Drive to Kirkton Drive.

Yes: Nurak, Sivaraman, Ziegenfelder  
No: Kilmer, Wilsher  
Absent: Petrulis, Swaminathan

### **MOTION CARRIED**

## **5. Request to Extend No Parking Zone – Bellows Court**

David Jensen of 3555 Bellows Court, requests that the No Parking zone be extended “*one (1) driveway over to allow the trucks to make the turn without having to drive up/over the island*”. Mr. Jensen adds “*Garbage disposal trucks are having a difficult time navigating the cul-de-sac on Bellows Court when cars are parked (legally) along the side*”.

Troy Police Sgt. Warzecha provided the following input via email:

*I agree with moving the no parking sign back on Bellows Court*

Traffic Engineering received one (1) email opposed to removing the no parking restrictions, as follows:

*I live at 3572 Bellows Court. I can't get out or onto my driveway due to people parking at the very end of my driveway and my neighbors. When there is a party or get-together the street going around the Court ISLAND gives no room to even try to get into the driveway. There is a fire hydrant that is on the island at the short oval end. Taking down the No Parking sign is a hazard for Emergency vehicles. When landscapers/mowers come around they can't get to their employers homes. Whenever there is an event at Barnard School the parents park around the entire court creating the afore mentioned problems. It is so overcrowded they park on both sides of Anvil and onto Niagara. PLEASE, DON'T TAKE AWAY THE NO PARKING ZONE. It has to have come from the new neighbors who moved in recently. They don't use their driveways and THEY park on the street. This has been a problem for years. I have called numerous times. It is awful at night. The Court is dark and having a black vehicle parked at the end of your driveway creates a difficult problem. Please don't change the zone just because of one person. This is not an OPEN Court. There is an island with large trees planted on them making it even darker along with the fire hydrant. We need a larger no parking sign rather than taking it down for just one household. The no parking court is the exact reason we moved herel It is a very safe place for children and this protection is more important than a lazy person who doesn't want to park in their garage or on their driveway.*

*Fran Morrison*

David Jensen of 3555 Bellows Court stated that he has lived at his home for 37 years and has enjoyed living on Bellows Court. When a vehicle parks near the start of the cul-de-sac larger vehicles, like a garbage truck, have a very difficult time navigating around the cul-de-sac and run over the island. He has repaired damage to the island several times over the years. He had six (6) children and they were able to navigate parking issues related to multiple vehicles. He has discussed his request with neighbors and there is support in the cul-de-sac.

Mr. Sivaraman asked for clarification of what was requested. The start of the no parking zone would be moved approximately one (1) lot.

Ms. Wilsher drove the area and there was a car parked in the cul-de-sac and it was difficult to navigate around the cul-de-sac and can't imagine how a garbage truck or fire truck would be able to make it around if a vehicle were parked in the cul-de-sac. She noticed tire tracks in the island.

Lt. Chuck Roberts stated that the cul-de-sac is very tight without vehicles parking and their emergency vehicles would not be able to navigate the cul-de-sac if a vehicle were parked. Troy Fire Department supports extending the no parking zone as requested.

Resolution # 2022-07-18  
Moved by Ziegenfelder  
Seconded by Sivaraman

**RESOLVED**, that the existing No Parking zone on Bellows Court be **MODIFIED** to start at the property line between 3555 Bellows Court and 3563 Bellows Court.

Yes: Kilmer, Nurak, Sivaraman, Wilsher, Ziegenfelder  
No: None  
Absent: Petrulis, Swaminathan

**MOTION CARRIED**

**6. Request for Traffic Control – Forge Drive at Kettle Drive**

Dennis Smith of 3812 Forge requests that the intersection of Forge Drive at Kettle Drive be reviewed for purposes of traffic control at the intersection. He stated that the existing Yield sign does not stop traffic and creates a hazardous situation for drivers and pedestrians. Mr. Smith would like to see the intersection be modified to ALL-WAY STOP control.

Troy Police Sgt. Warzecha provided the following input via email:

*I'm also in favor of changing the yield sign to a stop sign at Forge and Kettle.*

Mr. Ziegenfelder is in favor of Stop signs at all intersections.

Mr. Sivaraman stated that an ALL-WAY Stop would be way too much for this intersection.

Ms. Wilsher also does not support ALL-WAY Stop at this intersection, but does support replacing the existing Yield sign with a Stop sign.

Ms. Nurak supports replacing the existing Yield sign with a Stop sign only.

Mr. Koralewski does not see the need for ALL-WAY Stop at this intersection.

Resolution # 2022-07-19  
Moved by Ziegenfelder  
Seconded by Sivaraman

**RESOLVED**, that the intersection of Forge Drive at Kettle Drive be **MODIFIED** from YIELD control on the Kettle Drive approach to STOP control on the Kettle Drive approach to the intersection.

Yes: Kilmer, Nurak, Sivaraman, Wilsher, Ziegenfelder  
No: None  
Absent: Petrulis, Swaminathan

**MOTION CARRIED**

**7. Public Comment**

There was no further public comment at the meeting.

**8. Other Business**

Lt. Roberts discussed emergency access to the Zen apartments at 888 W. Big Beaver. Fire lanes need to be posted on the north side of the apartment complex to allow for fire department access in the event of an emergency. Lt. Roberts will follow up with a request for fire lanes at the September meeting.

**9. Adjourn**

The meeting adjourned at 8:13 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**

August 8, 2022

TO: Traffic Committee

FROM: Bill Huotari, City Engineer/Traffic Engineer

SUBJECT: Request for Traffic Control – Harmony Drive at Crimson Drive

### **Background:**

James Bliskey of 3419 Harmony requests that the intersection of Harmony Drive at Crimson Drive be reviewed for purposes of replacing the existing YIELD sign with a STOP sign on the Crimson Drive approach to the intersection. He stated that the existing Yield sign does not stop traffic or slow vehicles down when they make the turn. This creates a hazardous situation for drivers and pedestrians. He has had two cars hit, a tree hit, and his lawn run over several times along with many near misses with walkers.

The posted speed limit on both streets is 25 mph.

The Crimson Drive approach to the intersection is under YIELD control.

Harmony Drive is presumed to be the major road, as it continues through the intersection, while Crimson Drive is considered the minor road as it terminates there.

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

The major potential sight distance obstruction at the intersection for a motorist traveling westbound on Crimson Drive would be the house corners on the northeast quadrant corner of the intersection.

The safe approach speed for westbound vehicles on Crimson Drive is 15.8 mph due to the permanent sight distance obstruction from the corner of the house in the northeast quadrant.

OHM recommends retaining the YIELD sign on the Crimson Drive approach to the intersection.

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

August 2, 2022

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

RE: Traffic Control Recommendation for Crimson Drive at Harmony Drive

Dear Mr. Huotari:

As requested, we have reviewed the intersection of Crimson Drive at Harmony Drive to determine the proper traffic control. Crimson Drive at Harmony Drive is a 3-legged intersection located in the City of Troy. The speed limit on both streets under investigation is 25 mph. The Crimson Drive approach to the intersection is under a YIELD control. Attached are aerial and intersection photos.

### **Types of Roadways**

Both Crimson Drive and Harmony Drive are considered local streets. Crimson Drive runs east to west providing direct access to the neighborhood from John R Road. Harmony Drive runs north to south providing indirect access to the neighborhood from Big Beaver Rd by way of Hartland Ave.

The surrounding land use is entirely single-family residential. On-street parking is permitted on the north side of Crimson Drive and on the west side of Harmony Drive. For this analysis Harmony Drive is presumed to be the major road as it continues through the intersection, while Crimson Drive is considered the minor road as it terminates there. Both Crimson Drive and Harmony Drive serve as key routes 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 was no crash recorded in the past full five (5) years (January 1, 2017- December 31, 2021) 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 not 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).

Specifically, it is extremely unlikely that Crimson Drive meets and sustains the 300 vehicles per hour threshold for a minimum of 8 hours. The combined vehicular, pedestrian, and bicycle volumes entering from Harmony Drive is similarly unlikely to average at least 200 units for the concurrent 8 hours. Additionally, since the posted speed limit is only 25mph, it is reasonable to assume that the 85<sup>th</sup> percentile approach speed does not exceed 40mph on either road. Thus, the minimum vehicular volume warrants cannot be discounted to 70 percent of the values described previously. Finally, the study intersection is likely to fall significantly shy even of the reduced 80 percent volumes, based on expected trip generation for this neighborhood. Therefore, the minimum volume criteria for an all-way STOP have 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 Crimson Drive at Harmony Drive for a motorist traveling westbound on Crimson Drive would be the house corners on the northeast quadrant corner 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 westbound vehicles on Crimson Drive is 15.8 mph due to the permanent sight distance obstruction from the corner of the house in the northeast quadrant. Thus, based on the safe approach speed calculations, YIELD-control is the computed right-of-way control for Crimson 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 (Crimson Drive) approach.

OHM recommends retaining the YIELD sign on the Crimson 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:

Road Centerline Text



Notes:

Map Scale: 1=504

Created: June 22, 2022



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

Crimson Dr and Harmony Dr  
City of Troy

Date: 6/9/2022  
Analyst: Ife & Richard

### Measured:

Width of Roads  
Road 1 = 28 (ft)  
Road 2 = 28 (ft)

Distance to Obstruction  
a = 43 (ft)  
b = 63 (ft)  
c = 51 (ft)  
d = 43 (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)

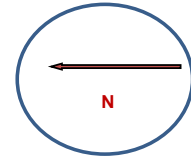
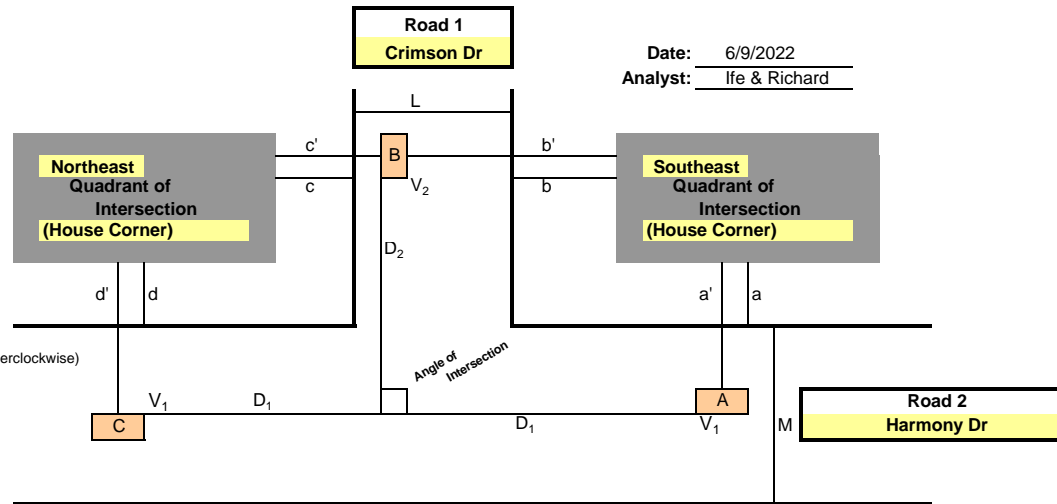
Deceleration rate (AASHTO)  
 $A = 11.20$

Clearance distance in excess of safe stopping distance (AAA)  
 $EC = 0$  (ft)

Calculated Safe Approach Speed for Vehicle B  
Approaching on Road 2

$V_2 = 15.8$  (mph) [Based on Veh. A]  
or  $V_2 = 15.7$  (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:

$D_1 = 196$   
 $D_{2A} = 82$   
 $D_{2C} = 81.5$

$a' = 49$   
 $b' = 79$   
 $c' = 57$   
 $d' = 59$

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:** Harmony Drive- Heading North  
**Date:** 06/09/2022 **Photographer:** Ife Ogundeji



**Photograph No. 2:** Harmony Drive- Heading North looking right  
**Date:** 06/09/2022 **Photographer:** Ife Ogundeji





**Photograph No. 3: Crimson Drive- Heading West**  
**Date: 06/09/2022 Photographer: Ife Ogundeji**



**Photograph No. 4: Crimson Drive - Heading West looking left**  
**Date: 06/09/2022 Photographer: Ife Ogundeji**





**Photograph No. 5:** Crimson Drive - Heading West looking right  
**Date:** 06/09/2022 **Photographer:** Ife Ogundeji



**Photograph No. 6:** Harmony Drive - Heading South  
**Date:** 06/09/2022 **Photographer:** Ife Ogundeji





**Photograph No. 7:** Harmony Drive - Heading South and looking left  
**Date:** 06/09/2022 **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.*