



TRAFFIC COMMITTEE AGENDA

November 18, 2020 – 7:30 P.M.

Remote Electronic Meeting

1. Roll Call
2. Proposed Resolution to Conduct Electronic Meeting
3. Approval of Minutes – February 19, 2020 Traffic Committee

PUBLIC HEARINGS

4. Request for Sidewalk Waiver – 3223 Helena (Sidwell # 88-20-22-354-027) & 3235 Helena (Sidwell # 88-20-22-354-026)
5. Request for Sidewalk Waiver – 1088 Boyd (Sidwell # 88-20-23-352-050) & 1102 Boyd (Sidwell # 88-20-23-352-051)
6. Request for Sidewalk Waiver – 85 Hickory (Sidwell # 88-20-27-154-033) & 95 Hickory (Sidwell # 88-20-27-154-034)
7. Request for Sidewalk Waiver – 1076 Boyd (Sidwell # 88-20-23-352-049)

REGULAR BUSINESS

8. Request for No Parking – Lakeside Drive at Shoreline Drive
9. Request for Traffic Control – Kirkton Drive at Starr Drive
10. Request for Traffic Control – Bridgepark Drive at Glendale Drive
11. Request for Traffic Control – Cliffside Drive at Highbury Drive
12. Request for Traffic Control – Trevino Drive/Garret Street at Willowgrove Drive
13. Request for Traffic Control – Napier Drive at Country Drive
14. Request for No Parking – Graefield Road, Witherbee Drive to South
15. 2021 Meeting Schedule

16. Public Comment

17. Other Business

18. Adjourn

Copy to:

Item 8: Properties within 300'

Item 9: Samantha Shelton, 2351 Kirkton; Properties within 300'

Item 10: Dan Cafferty, 930 Bridgepark; Properties within 300'

Item 11: Ron Borycki, 2147 Jeffrey; Properties within 300'

Item 12: Jeff Nichols, 1467 Trevino; Properties within 300'

Item 13: Dale Williams, 1256 Country; Properties within 300'

Item 14: Yelena Guzyayeva, 1740 Witherbee; Properties within 300'

Traffic Committee Members
Sgt. Justin Novak, Police Department
Lt. Eric Caloia, 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. Proposed Resolution to Conduct Electronic Meeting

Public bodies may conduct public meetings remotely during the COVID-19 pandemic pursuant to Public Act 228 of 2020. The suggested resolution must be approved at the start of the meeting.

SUGGESTED RESOLUTION:

RESOLVED, that the Troy Traffic Committee hereby allows all members to participate in public meetings by electronic means as allowed by Public Act 228 of 2020, since an in person meeting could detrimentally increase exposure of board members and the general public to COVID-19, and would also be difficult to facilitate in light of the recent Michigan Department of Health and Human Services epidemic orders protecting public health and safety.

Members participating electronically will be considered present and in attendance at the meeting and may participate in the meeting as if physically present. However, members must avoid using email, texting, instant messaging, and other such electronic forms of communication to make a decision or deliberate toward a decision.

RESOLVED, that the Troy Traffic Committee hereby establishes public participation rules to provide for two methods by which members of the public can be heard by others during meetings. Email sent to HuotariWJ@troymi.gov and received by 3:00 p.m. on the day of the meeting will be read during the public comment period of the meeting. Voicemail left at 248.524.3387 and received by 3:00 p.m. on the day of the meeting will be read into the record during the public comment period of the meeting. Both email and voicemail public comments will be limited to three minutes each.

3. Approval of Minutes – February 19, 2020 Traffic Committee

PUBLIC HEARING

4. Request for Sidewalk Waiver – 3223 Helena (Sidwell # 88-20-22-354-027) & 3235 Helena (Sidwell # 88-20-22-354-026)

Bahaa Kizy of 6191 Sheldon Road (Rochester Hills), requests a sidewalk waiver for the sidewalk at 3223 Helena (Sidwell # 88-20-22-354-027) and 3235 Helena (Sidwell # 88-20-22-354-026). Mr. Kizy states *“No Sidewalks in entire Subdivision. This sidewalk will not be connected to any other sidewalk on the block”*.

The Department of Public Works (DPW) recommends approving the waiver request and not requiring the installation of sidewalk *“Due to the lack of sidewalk on the surrounding parcels, the open drainage ditches and grading of the area”*, contingent upon the submission of a cash deposit for future construction and to assure consent and participation in any future sidewalk installation.

SUGGESTED RESOLUTIONS:

1. WHEREAS, City of Troy Ordinances, Chapter 34, allows the Traffic Committee to grant waivers of the City of Troy Design Standards for Sidewalks upon a demonstration of necessity; and

WHEREAS, Bahaa Kizy has requested a waiver of the requirement to construct sidewalk based on lack of sidewalk on surrounding parcels; and

WHEREAS, the Traffic Committee has determined the following:

- a. A waiver will not impair the public health, safety or general welfare of the inhabitants of the City and will not unreasonably diminish or impair established property values within the surrounding area, and
- b. A strict application of the requirements to construct a sidewalk would result in practical difficulties to, or undue hardship upon, the owners, and
- c. The construction of a new sidewalk would lead nowhere and connect to no other walk, and thus will not serve the purpose of a pedestrian travel-way.

NOW THEREFORE, BE IT RESOLVED, that the Traffic Committee **GRANTS** a waiver of the sidewalk requirement for 3223 Helena (Sidwell # 88-20-22-354-027) and 3235 Helena (Sidwell # 88-20-22-354-026) contingent upon the receipt of a cash deposit commensurate with the cost of sidewalk construction.

2. WHEREAS, the Traffic Committee has determined, after a public hearing, that Petitioner failed to establish the standards justifying the granting of a waiver,

NOW THEREFORE, BE IT RESOLVED, that the Traffic Committee **DENIES** a waiver of the sidewalk requirement for 3223 Helena (Sidwell # 88-20-22-354-027) 3235 Helena (Sidwell # 88-20-22-354-026).

5. Request for Sidewalk Waiver – 1088 Boyd (Sidwell # 88-20-23-352-050) & 1102 Boyd (Sidwell # 88-20-23-352-051)

Mike Johnson of 450 E. Square Lake, requests a sidewalk waiver for the sidewalk at 1088 Boyd (Sidwell # 88-20-23-352-050) and 1102 Boyd (Sidwell # 88-20-23-352-051). Mr. Johnson states “*Goes nowhere and connects to nothing*”.

The Department of Public Works (DPW) recommends approving the waiver request and not requiring the installation of sidewalk “*Due to the lack of sidewalk on the surrounding parcels*”, contingent upon the submission of a cash deposit for future construction and to assure consent and participation in any future sidewalk installation.

SUGGESTED RESOLUTIONS:

1. WHEREAS, City of Troy Ordinances, Chapter 34, allows the Traffic Committee to grant waivers of the City of Troy Design Standards for Sidewalks upon a demonstration of necessity; and

WHEREAS, Mike Johnson has requested a waiver of the requirement to construct sidewalk based on lack of sidewalk on surrounding parcels; and

WHEREAS, the Traffic Committee has determined the following:

- a. A waiver will not impair the public health, safety or general welfare of the inhabitants of the City and will not unreasonably diminish or impair established property values within the surrounding area, and
- b. A strict application of the requirements to construct a sidewalk would result in practical difficulties to, or undue hardship upon, the owners, and
- c. The construction of a new sidewalk would lead nowhere and connect to no other walk, and thus will not serve the purpose of a pedestrian travel-way.

NOW THEREFORE, BE IT RESOLVED, that the Traffic Committee **GRANTS** a waiver of the sidewalk requirement for 1088 Boyd (Sidwell # 88-20-23-352-050) and 1102 Boyd (Sidwell # 88-20-23-352-051) contingent upon the receipt of a cash deposit commensurate with the cost of sidewalk construction.

2. WHEREAS, the Traffic Committee has determined, after a public hearing, that Petitioner failed to establish the standards justifying the granting of a waiver,

NOW THEREFORE, BE IT RESOLVED, that the Traffic Committee **DENIES** a waiver of the sidewalk requirement for 1088 Boyd (Sidwell # 88-20-23-352-050) and 1102 Boyd (Sidwell # 88-20-23-352-051).

6. Request for Sidewalk Waiver – 85 Hickory (Sidwell # 88-20-27-154-023) & 95 Hickory (Sidwell # 88-20-27-154-034)

Pat Bismack of 2742 Powderhorn (Rochester Hills), requests a sidewalk waiver for the sidewalk at 85 Hickory (Sidwell # 88-20-27-154-023) & 95 Hickory (Sidwell # 88-20-27-154-034). Mr. Bismack states “*I would be the only sidewalk on the north side of Hickory*”.

The Department of Public Works (DPW) recommends approving the waiver request and not requiring the installation of sidewalk “*Due to the lack of sidewalk on the surrounding parcels, the open drainage ditches and grading of the area*”, contingent upon the submission of a cash deposit for future construction and to assure consent and participation in any future sidewalk installation.

Mr. Bismack has already paid the sidewalk waiver fee in lieu of constructing the sidewalk. This was done due to the Covid-19 Pandemic and due to the fact that Mr. Bismack is closing on these homes in 3 weeks. In order to get Final Grade Approval, the sidewalk waiver needs to be addressed prior to the closing.

Due to restrictions in place relative to public meetings and in accordance with the Governor’s Executive Orders and the Michigan Supreme Courts latest rulings, Traffic Committee meetings have been cancelled to date. We have worked with builders and developers to find solutions that allow work to continue during the Pandemic that would otherwise not be allowed, so the builder was permitted to pay the sidewalk waiver fee knowing that the payment would not guarantee that the sidewalk waiver would be granted by the Traffic Committee. If the Traffic Committee did deny the sidewalk waiver request, the funds would be refunded and the sidewalk would need to be constructed per the approved plot plan.

SUGGESTED RESOLUTIONS:

1. WHEREAS, City of Troy Ordinances, Chapter 34, allows the Traffic Committee to grant waivers of the City of Troy Design Standards for Sidewalks upon a demonstration of necessity; and

WHEREAS, Pat Bismack has requested a waiver of the requirement to construct sidewalk based on lack of sidewalk on surrounding parcels; and

WHEREAS, the Traffic Committee has determined the following:

- a. A waiver will not impair the public health, safety or general welfare of the inhabitants of the City and will not unreasonably diminish or impair established property values within the surrounding area, and
- b. A strict application of the requirements to construct a sidewalk would result in practical difficulties to, or undue hardship upon, the owners, and
- c. The construction of a new sidewalk would lead nowhere and connect to no other walk, and thus will not serve the purpose of a pedestrian travel-way.

NOW THEREFORE, BE IT RESOLVED, that the Traffic Committee **GRANTS** a waiver of the sidewalk requirement for 85 Hickory (Sidwell # 88-20-27-154-023) & 95 Hickory (Sidwell # 88-20-27-154-034) contingent upon the receipt of a cash deposit commensurate with the cost of sidewalk construction.

2. WHEREAS, the Traffic Committee has determined, after a public hearing, that Petitioner failed to establish the standards justifying the granting of a waiver,

NOW THEREFORE, BE IT RESOLVED, that the Traffic Committee **DENIES** a waiver of the sidewalk requirement for 85 Hickory (Sidwell # 88-20-27-154-023) & 95 Hickory (Sidwell # 88-20-27-154-034).

7. Request for Sidewalk Waiver – 1076 Boyd (Sidwell # 88-20-23-352-049)

Surendran Shanmugasundaram of 1076 Boyd, requests a sidewalk waiver for the sidewalk at 1076 Boyd (Sidwell # 88-20-23-352-049). Mr. Shanmugasundaram states “*No other walks in the area*”.

The Department of Public Works (DPW) recommends approving the waiver request and not requiring the installation of sidewalk “*Due to the lack of sidewalk on the surrounding parcels, the open drainage ditches and grading of the area*”, contingent upon the submission of a cash deposit for future construction and to assure consent and participation in any future sidewalk installation.

Mr. Shanmugasundaram’s builder (Troy Market Homes LLC) has already paid the sidewalk waiver fee in lieu of constructing the sidewalk. This was done due to the Covid-19 Pandemic and the need to issue Final Grade approval to allow for a deck permit to be issued.

Due to restrictions in place relative to public meetings and in accordance with the Governor’s

Executive Orders and the Michigan Supreme Courts latest rulings, Traffic Committee meetings have been cancelled to date. We have worked with builders and developers to find solutions that allow work to continue during the Pandemic that would otherwise not be allowed. The deck permit is technically unrelated to the sidewalk waiver request, but they are intertwined as part of the overall site approval, so the builder was permitted to pay the sidewalk waiver fee knowing that the payment would not guarantee that the sidewalk waiver would be granted by the Traffic Committee. If the Traffic Committee did deny the sidewalk waiver request, the funds would be refunded and the sidewalk would need to be constructed per the approved plot plan.

SUGGESTED RESOLUTIONS:

1. WHEREAS, City of Troy Ordinances, Chapter 34, allows the Traffic Committee to grant waivers of the City of Troy Design Standards for Sidewalks upon a demonstration of necessity; and

WHEREAS, Surendran Shanmugasundaram has requested a waiver of the requirement to construct sidewalk based on lack of sidewalk on surrounding parcels; and

WHEREAS, the Traffic Committee has determined the following:

- a. A waiver will not impair the public health, safety or general welfare of the inhabitants of the City and will not unreasonably diminish or impair established property values within the surrounding area, and
- b. A strict application of the requirements to construct a sidewalk would result in practical difficulties to, or undue hardship upon, the owners, and
- c. The construction of a new sidewalk would lead nowhere and connect to no other walk, and thus will not serve the purpose of a pedestrian travel-way.

NOW THEREFORE, BE IT RESOLVED, that the Traffic Committee **GRANTS** a waiver of the sidewalk requirement for 1076 Boyd (Sidwell # 88-20-23-352-049) contingent upon the receipt of a cash deposit commensurate with the cost of sidewalk construction.

2. WHEREAS, the Traffic Committee has determined, after a public hearing, that Petitioner failed to establish the standards justifying the granting of a waiver,

NOW THEREFORE, BE IT RESOLVED, that the Traffic Committee **DENIES** a waiver of the sidewalk requirement for 1076 Boyd (Sidwell # 88-20-23-352-049).

REGULAR BUSINESS

8. Request for No Parking – Lakeside Drive at Shoreline Drive

Troy Police request that the eyebrow and island area be posted as a No Parking zone at Lakeside Drive and Shoreline Drive. Troy Police recently responded to a crash in this area and found that parked vehicles were creating a hazardous condition and could potentially block the flow of traffic for large vehicles, delivery trucks, emergency vehicles, etc.

The south side of Lakeside Drive and the east side of Shoreline Drive is currently posted as No Parking due to fire hydrants located along the road.

In an effort to keep the eyebrow open for all travel, the recommendation is to install an additional sign within the eyebrow and two signs on the island. This would prohibit all parking in the eyebrow area.

SUGGESTED RESOLUTIONS:

- a. RESOLVED, that the eyebrow area of Lakeside Drive at Shoreline Drive be **MODIFIED** to prohibit all parking within the eyebrow area including around the island.
- b. RESOLVED, that **NO CHANGE** be made to the eyebrow area of Lakeside Drive at Shoreline Drive.

9. Request for Traffic Control – Kirkton Drive at Starr Drive

Samantha Shelton of 2351 Kirkton Drive states that the lack of ALL-WAY STOP control at the intersection of Kirkton Drive and Starr Drive creates a hazardous condition.

SUGGESTED RESOLUTIONS:

- a. RESOLVED, that the intersection of Kirkton Drive at Starr Drive be **MODIFIED** from Stop signs on the Kirkton Drive approaches to ALL-WAY STOP control at the intersection of Kirkton Drive at Starr Drive.
- b. RESOLVED, that **NO CHANGE** be made at the intersection of Kirkton Drive at Starr Drive.

10. Request for Traffic Control – Bridgepark Drive at Glendale Drive

Dan Cafferty of 930 Bridgepark Drive states that the lack of ALL-WAY STOP control at the intersection of Bridgepark Drive and Glendale Drive creates a hazardous condition.

SUGGESTED RESOLUTIONS:

- a. RESOLVED, that the intersection of Bridgepark Drive at Glendale Drive be **MODIFIED** from a YIELD sign on the Glendale Drive approach to ALL-WAY STOP control at the intersection of Bridgepark Drive at Glendale Drive.
- b. RESOLVED, that **NO CHANGE** be made at the intersection of Bridgepark Drive at Glendale Drive.

11. Request for Traffic Control – Cliffside Drive at Highbury Drive

Ron Borycki of 2147 Jeffrey Drive states that the lack of ALL-WAY STOP control at the intersection of Cliffside Drive and Highbury Drive creates a hazardous condition.

SUGGESTED RESOLUTIONS:

- a. RESOLVED, that the intersection of Cliffside Drive at Highbury Drive be **MODIFIED** from Stop signs on the Highbury Drive approaches to ALL-WAY STOP control at the intersection of Cliffside Drive at Highbury Drive.
- b. RESOLVED, that **NO CHANGE** be made at the intersection of Cliffside Drive at Highbury Drive.

12. Request for Traffic Control – Trevino Drive /Garret Street at Willowgrove Drive

Jeff Nichols of 1467 Trevino Drive states that the lack of a STOP sign on the Garrett Street approach to the intersection of Trevino Drive and Willowgrove Drive creates a hazardous condition.

SUGGESTED RESOLUTIONS:

- a. RESOLVED, that the intersection of Trevino Drive/Garrett Street at Willowgrove Drive be **MODIFIED** to **ADD** a new STOP sign on the Garrett Street approach to Willowgrove Drive while retaining the existing STOP sign on the Trevino Drive approach.
- b. RESOLVED, that **NO CHANGE** be made at the intersection of Trevino Drive/Garrett Street at Willowgrove Drive.

13. Request for Traffic Control – Napier Drive at Country Drive

Dale Williams of 1256 Country Drive states that the lack of STOP signs at the intersection of Napier Drive and Country Drive creates a hazardous condition. He reports that the intersection of Napier Drive at Denton Drive has an ALL-WAY STOP and is a mirror image of Napier Drive at County Drive and should be posted the same way as an ALL-WAY STOP controlled intersection.

SUGGESTED RESOLUTIONS:

- a. RESOLVED, that the intersection of Napier Drive at Country Drive be **MODIFIED** to **ADD** a new YIELD sign on the Napier Drive approach to Country Drive.
- b. RESOLVED, that the intersection of Napier Drive at Country Drive be **MODIFIED** to ALL-WAY STOP control at the intersection of Napier Drive at Country Drive.
- c. RESOLVED, that **NO CHANGE** be made at the intersection of Napier Drive at Country Drive.

14. Request for No Parking – Graefield Road, Witherbee Drive to South

Yelena Guzyayeva of 1740 Witherbee Drive requests that the current time limited No Parking zone on the west side of Graefield Road, from Witherbee Drive to the south property line of 1740 Witherbee drive be modified to prohibit parking at all times.

The request is based primarily on construction vehicles parking along the west side of Graefield Road to load and unload equipment and the damage that is being done to their property.

SUGGESTED RESOLUTIONS:

- a. RESOLVED, that the existing time limited No Parking zone on the west side of Graefield Road be **MODIFIED** to prohibit parking at all times from Witherbee Drive to the south property line of 1740 Witherbee Drive.
- b. RESOLVED, that **NO CHANGE** be made to the existing No Parking zones at 1740 Witherbee Drive.

15. 2021 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.

SUGGESTED RESOLUTION:

- a. RESOLVED, that the Traffic Committee **SHALL HOLD** Regular Meetings in 2021 according to the following schedule at 7:30 PM:
 - Wednesday, January 20
 - Wednesday, February 17
 - Wednesday, March 17
 - Wednesday, April 21
 - Wednesday, May 19
 - Wednesday, June 16
 - Wednesday, July 21
 - August – NO MEETING
 - Wednesday, September 15
 - Wednesday, October 20
 - Wednesday, November 17
 - December – NO MEETING

16. Public Comment

17. Other Business

18. Adjourn



PROPOSED RESOLUTION

November 3, 2020

TO: Traffic Committee

FROM: Bill Huotari, City Engineer/ Traffic Engineer

SUBJECT: Proposed resolution to conduct electronic meeting

Public bodies may conduct public meetings remotely during the COVID-19 pandemic pursuant to Public Act 228 of 2020. The suggested resolution must be approved at the start of the meeting.

SUGGESTED RESOLUTION:

RESOLVED, that the Troy Traffic Committee hereby allows all members to participate in public meetings by electronic means as allowed by Public Act 228 of 2020, since an in person meeting could detrimentally increase exposure of board members and the general public to COVID-19, and would also be difficult to facilitate in light of the recent Michigan Department of Health and Human Services epidemic orders protecting public health and safety.

Members participating electronically will be considered present and in attendance at the meeting and may participate in the meeting as if physically present. However, members must avoid using email, texting, instant messaging, and other such electronic forms of communication to make a decision or deliberate toward a decision.

RESOLVED, that the Troy Traffic Committee hereby establishes public participation rules to provide for two methods by which members of the public can be heard by others during meetings. Email sent to HuotariWJ@troymi.gov and received by 3:00 p.m. on the day of the meeting will be read during the public comment period of the meeting. Voicemail left at 248.524.3387 and received by 3:00 p.m. on the day of the meeting will be read into the record during the public comment period of the meeting. Both email and voicemail public comments will be limited to three minutes each.

A regular meeting of the Troy Traffic Committee was held Wednesday, February 19, 2020 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: Don Johnson
Richard Kilmer
Cindy Nurak
Sunil Sivaraman
Cynthia Wilsher
Pete Ziegenfelder
Alankar Shende, Student Representative

Absent: Al Petrulis

Also present: Rachel & Lilianna Giuffrida 2666 Creek Bend
Sgt. Justin Novak, Police Department
Lt. Eric Caloia, Fire Department
Bill Huotari, City Engineer/Traffic Engineer

2. Minutes – January 15, 2020

Resolution # 2020-02-03
Moved by Kilmer
Seconded by Nurak

To approve the minutes as printed.

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

MOTION CARRIED**PUBLIC HEARINGS****3. No Public Hearings****REGULAR BUSINESS****4. Request for Traffic Control – Crooks Road at Wilshire Drive**

The traffic signal at the intersection of Crooks Road and Wilshire Drive is currently undergoing a modernization. During the design phase of this project, Road Commission for Oakland County (RCOC) and the City of Troy agreed that left turns allowed at this intersection during off peak traffic periods when the signal is in the flash mode of operation should be prohibited to improve safety.

With recent development on Wilshire Drive more traffic is being generated that uses this intersection. This additional traffic has the potential to cause significant conflicts with opposing left turning traffic movements due to the boulevard geometry of the intersection. The crossovers on Wilshire Drive, west and east of Crooks Road, provide a convenient location for indirect left turn movements.

The recommended treatment is to prohibit all left turns to/from Wilshire Drive to/from Crooks Road.

Mr. Kilmer led a discussion of what the issue is and what the recommendation would do. He agrees that left turns should be made east and west, within the existing boulevard section, just like other boulevard intersections.

Mr. Johnson asked about the process as the Committee has not reviewed many of these types of requests.

RCOC Traffic Control Order No. TP 102-22-86, Revision #2, prohibits all left turns for northbound Crooks Road at eastbound Wilshire Drive and southbound Crooks Road at westbound Wilshire Drive, and further prohibits all turns for northbound Crooks Road at westbound Wilshire Drive and southbound Crooks Road at eastbound Wilshire Drive.

The RCOC approved the turn prohibitions at their meeting of January 9, 2020. Wilshire Drive is a City road so a Traffic Control Order is required to prohibit left turns to/from Wilshire Drive and make it enforceable.

Essentially, the intersection will now perform as boulevard intersections are designed with indirect left turns. All left turn movements will now be required on Wilshire Drive within the existing boulevard.

Mr. Sivaraman discussed operational issues at the intersection and traffic.

Sgt. Novak stated that the new traffic signal is now in place.

Resolution # 2020-02-04

Moved by Sivaraman

Seconded by Johnson

RESOLVED, that intersection of Crooks Road at Wilshire Drive be **MODIFIED** to prohibit all left turns to/from Wilshire Drive to/from Crooks Road.

Yes: Johnson, Kilmer, Nurak, Sivaraman, Wilsher, Ziegenfelder

No: None

Absent: Petrulis

MOTION CARRIED

5. Request for Traffic Control – Crooks Road at Premier Drive

Crooks Road at Premier Drive was identified as an intersection where prohibiting certain turning movements during some specified hours of the day may help to reduce the pattern of crashes being reported as part of the Road Commission for Oakland County (RCOC) Annual Safety Review for the years 2016-2018.

Eastbound Premier Drive at Crooks Road had seven (7) crashes involving left turning traffic accessing Crooks Road to head north. Two (2) of the crashes occurred during the lunch time period, 12:00 to 1:00 PM, with the remainder occurring during the peak hour period of 4:00 to 7:00 PM.

Crooks Road is under the jurisdiction of the RCOC. Premier Drive is a City road so a TCO is required to prohibit left turns from Premier Drive to Crooks Road and make it enforceable.

The recommended treatment is to prohibit left turns from eastbound Premier Drive to northbound Crooks Road, between the hours of 4PM and 7PM, Monday through Friday.

Ms. Wilsher discussed traffic in and around this area.

Mr. Kilmer requested clarification on the request and the process.

Ms. Nurak noted that the request was for specific hours (i.e. peak hour from 4:00 PM – 7:00 PM)

Resolution # 2020-02-05

Moved by Sivaraman

Seconded by Nurak

RESOLVED, that the intersection of Crooks Road at Premier Drive be **MODIFIED** to prohibit left turns from eastbound Premier Drive to northbound Crooks Road, between the hours of 4PM and 7PM, Monday through Friday.

Yes: Johnson, Kilmer, Nurak, Sivaraman, Wilsher, Ziegenfelder

No: None

Absent: Petrulis

MOTION CARRIED

6. Public Comment

No public comment

7. Other Business

Mr. Kilmer discussed the new IHOP on Rochester Road and Urbancrest and his concerns about off-site parking along Urbancrest. The south side of Urbancrest is already posted as No Parking. The north side of Urbancrest is posted No Parking from approximately the end of the residential area at the east end to Rochester Road.

Additional no parking restrictions, on the north side of Urbancrest, would impact the existing residential properties on the east end of Urbancrest. If additional no parking is desired it should be initiated by the property owners on the east end of Urbancrest.

Mr. Kilmer requested information on several new developments and discussed traffic related issues.

Mr. Kilmer noted that the Stop signs placed over the past few months have helped in his neighborhood.

Mr. Johnson requested information on the pedestrian cross walk locations discussed last year (i.e. Altair/Troy Sports, City Hall and Somerset Collection). The pedestrian crossing at Altair/Troy Sports was partially completed with the traffic signal on the north side. The median improvements and traffic signal improvements on the south side are on hold while Altair works on redevelopment plans. The other two locations are on hold pending completion of I75 construction and further design considerations.

Discussion of I75 Segment 2 took place. New information has been added to the MDOT website (www.modernize75.com) including additional information on the DDI at 14 Mile and Big Beaver as well as 2020 construction information.

MDOT is holding an Open House in Room 305 of the Community Center on Thursday, February 20, 2020 from 4PM – 7PM.

8. Adjourn

The meeting adjourned at 8:11 p.m.

Pete Ziegenfelder, Chairperson

William J. Huotari, City Engineer/Traffic Engineer

May 18, 2020

TO: The City of Troy Traffic Committee

FROM: Kurt Bovensiep, Public Works Director
Scott Carruthers, Streets and Drains Operations Manager

SUBJECT: Request for Waiver of Sidewalk Requirement
Sidwell Numbers 88-20-22-354-027 and 88-20-22-354-026

Per the attached waiver form, Bahaa Kizy is requesting a waiver for the sidewalk on the properties located at 3223 Helena Ave., Sidwell Number 88-20-22-354-027 and 3235 Helena Ave., Sidwell Number 88-20-22-354-026 in the Eyster's Beaver Gardens Subdivision

Chapter 34 City of Troy Sidewalks and Driveway Approaches Ordinance # 34-07 requires, all owners of lots and premises abutting dedicated streets open to the public shall be required to construct sidewalks and driveway approaches at the time of construction of any new buildings or structures, or additions to buildings or structures, or at the time a nonconforming use changes to a permitted use in the Zoning District. No occupancy permit shall be issued until such time as the owners of said property have complied with the requirements of this provision provided only that the Director of Building and Zoning may extend the time for completion of the required sidewalks and driveway approaches in accordance with established procedure.

City of Troy Sidewalks and Driveway Approaches Ordinance # 34.07.01 also requires that a sidewalk be installed in conjunction with the development of a parcel due to a recent lot split, combination of parcels or a re-platting.

Please be advised that there is currently not a sidewalk to the north of 3223 Helena or south of 3235 Helena or across the street.

Due to the lack of sidewalk on the surrounding parcels, the open drainage ditches and grading of the area, we recommend that the sidewalk not be installed at 3223 and 3235 Helena, as per ordinance #34.07.

If the sidewalk requirements were to be waived, we recommend the approval be subject to the submission of a cash deposit for future construction to assure consent and participation in any future sidewalk installation.



City of Troy
Mr. Kurt Bovensiep
Public Works Director
4693 Rochester Road
Troy, MI 48098

Mr. Bovensiep,

I am/we are the owner(s) of the property at 3223 , 3235 Helena St,

Lot number Lot 60 , 61,

Subdivision Name Eyster Beaver Gardens,

Sidewell Number 88-20-22-354-027 , 88-20-22-354-026

I/we would like to request a sidewalk variance for the following reasons:

No Sidewalks in entire Subdivision, This sidewalk will not be connected to any other sidewalk on the block.

See attached plan/sketch.

I/We can be contacted at 586-615-4737
Phone Number

bahaa@kizysignature.com
Email Address

Bahaa Kizy
Name

6191 Sheldon Rd
Address

Rochester Hills, MI 48306
City, State, Zip

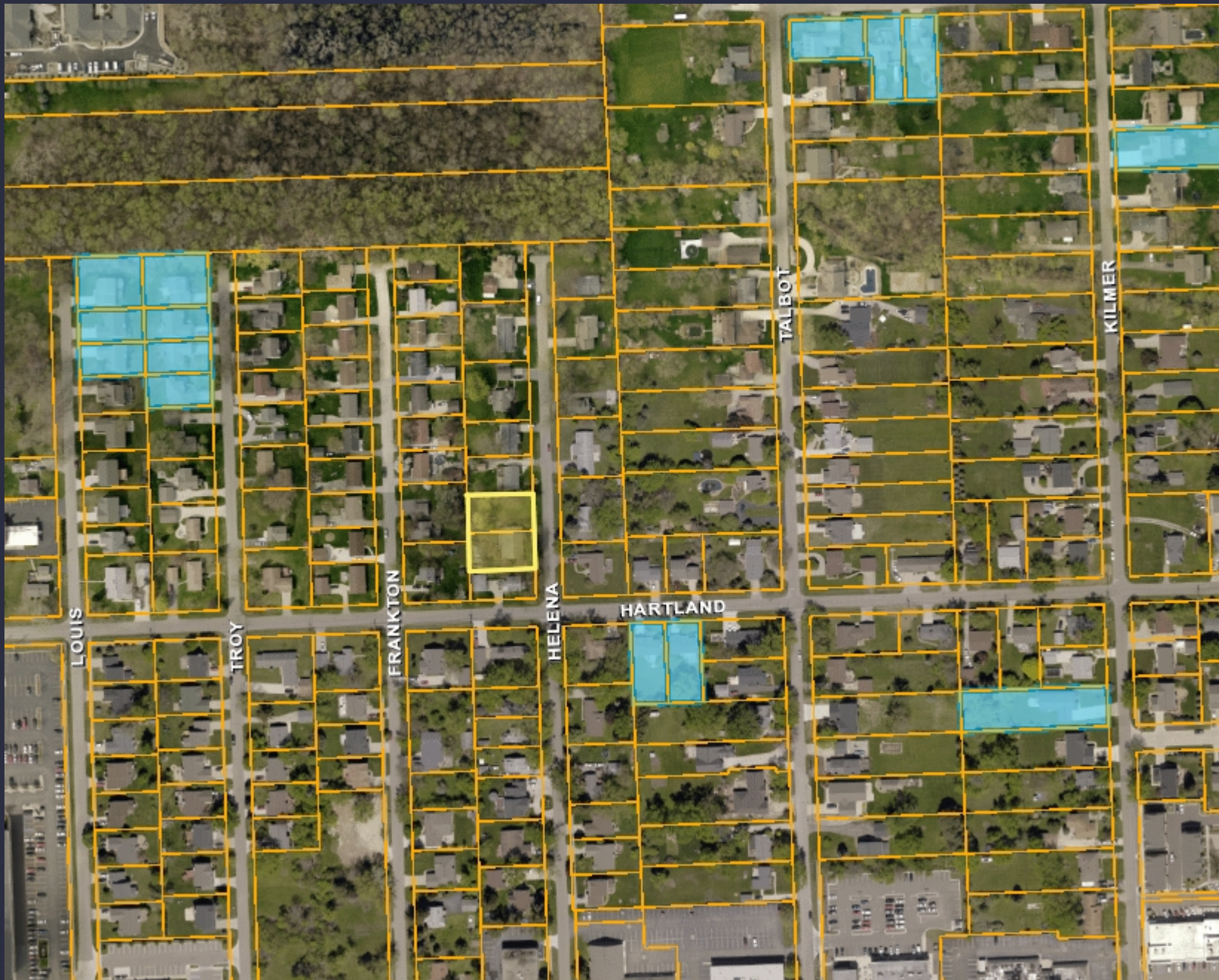
Bahaa Kizy
Signature



GIS Online

Legend:

 Sidewalk Waiver



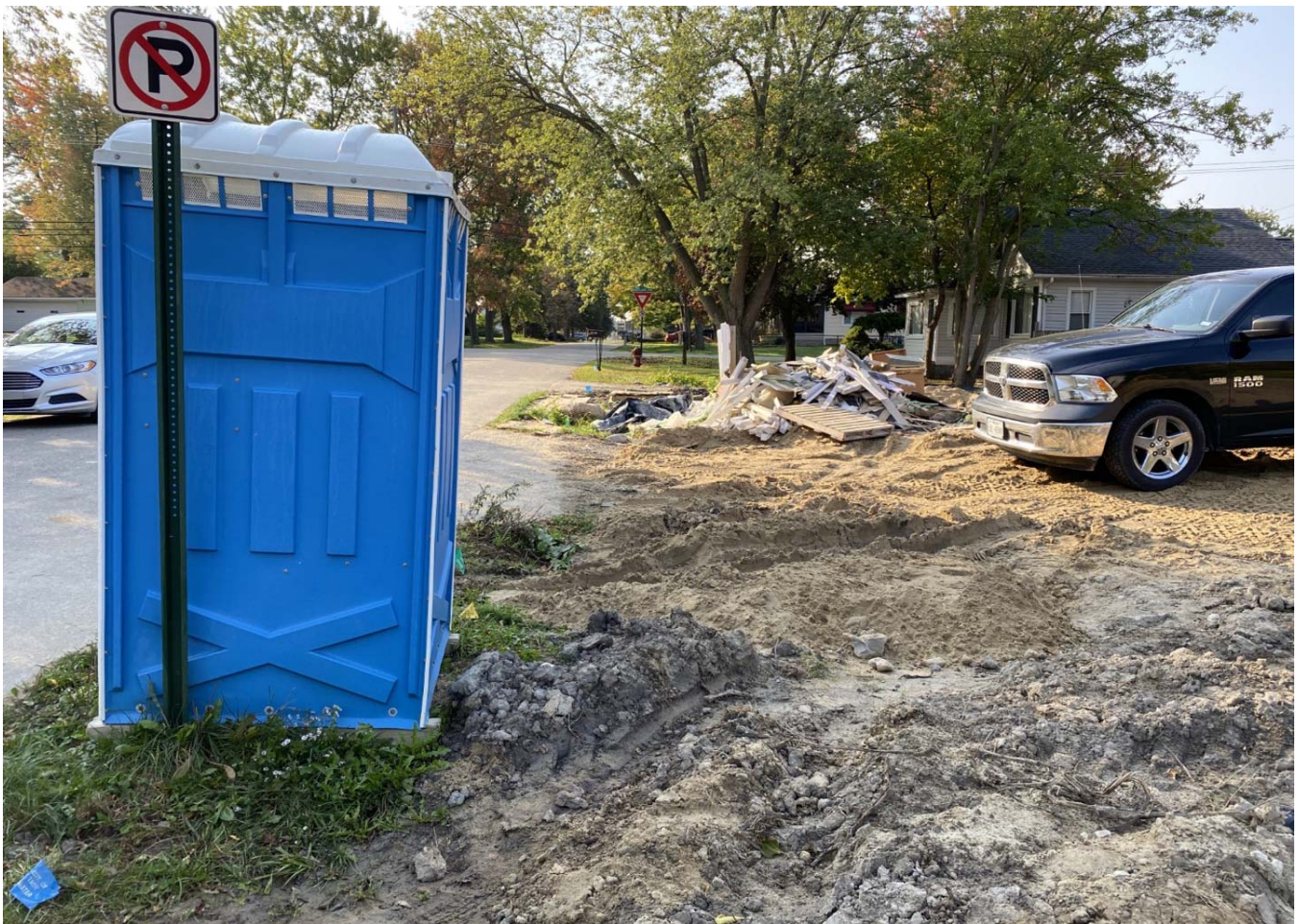
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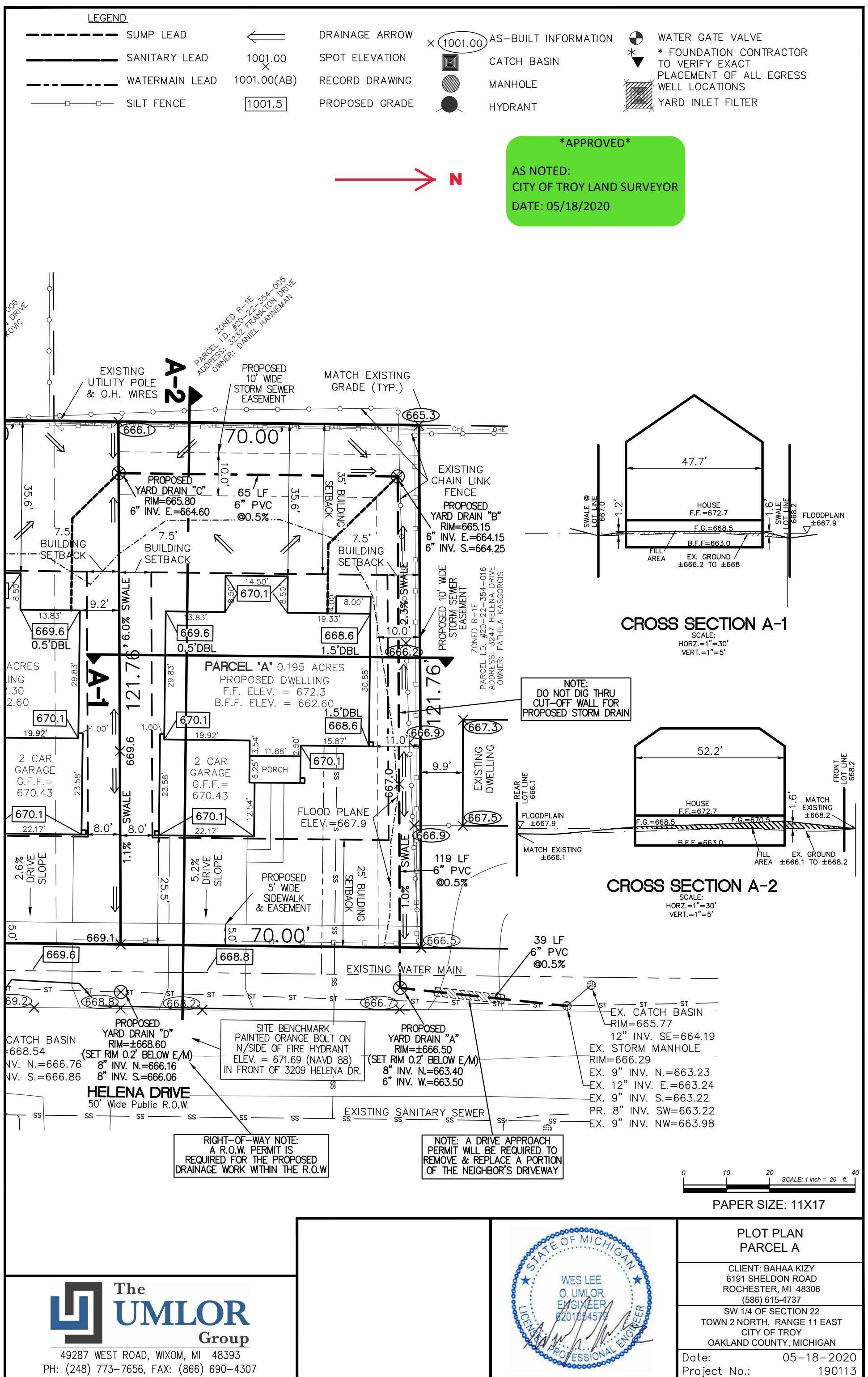
Map Scale: 1=358

Created: October 13, 2020



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.











PUBLIC WORKS
4693 Rochester Rd
Troy, Michigan 48085

July 13, 2020

TO: The City of Troy Traffic Committee

FROM: Kurt Bovensiep, Public Works Director 
Scott Carruthers, Streets and Drains Operations Manager 

SUBJECT: Request for Waiver of Sidewalk Requirement
Sidwell Number 88-20-23-352-050

Per the attached waiver form, Mike Johnson is requesting a waiver for the sidewalk on the property located at 1088 Boyd, 88-20-23-352-050 in the Beaver Run Subdivision.

Chapter 34 City of Troy Sidewalks and Driveway Approaches Ordinance # 34-07 specifies that all owners of lots and premises abutting dedicated streets open to the public shall be required to construct sidewalks and driveway approaches at the time of construction of any new buildings or structures, or additions to buildings or structures, or at the time a nonconforming use changes to a permitted use in the Zoning District. No occupancy permit shall be issued until such time as the owners of said property have complied with the requirements of this provision provided only that the Director of Building and Zoning may extend the time for completion of the required sidewalks and driveway approaches in accordance with established procedure.

Please be advised that Boyd does not have a sidewalk on either the north or south sides of the street.

Due to the lack of sidewalk on the surrounding parcels, we recommend that the sidewalk not be installed at 1088 Boyd as per ordinance #34.07.

If the sidewalk requirements were to be waived, we recommend the approval be subject to the submission of a cash deposit for future construction to assure consent and participation in any future sidewalk installation.



PUBLIC WORKS

4693 Rochester Rd
Troy, Michigan 48085

July 13, 2020

TO: The City of Troy Traffic Committee

FROM: Kurt Bovensiep, Public Works Director *KB*
Scott Carruthers, Streets and Drains Operations Manager *SC*

SUBJECT: Request for Waiver of Sidewalk Requirement
Sidwell Number 88-20-23-352-051

Per the attached waiver form, Mike Johnson is requesting a waiver for the sidewalk on the property located at 1102 Boyd, 88-20-23-352-051 in the Beaver Run Subdivision.

Chapter 34 City of Troy Sidewalks and Driveway Approaches Ordinance # 34-07 specifies that all owners of lots and premises abutting dedicated streets open to the public shall be required to construct sidewalks and driveway approaches at the time of construction of any new buildings or structures, or additions to buildings or structures, or at the time a nonconforming use changes to a permitted use in the Zoning District. No occupancy permit shall be issued until such time as the owners of said property have complied with the requirements of this provision provided only that the Director of Building and Zoning may extend the time for completion of the required sidewalks and driveway approaches in accordance with established procedure.

Please be advised that Boyd does not have a sidewalk on either the north or south sides of the street.

Due to the lack of sidewalk on the surrounding parcels, we recommend that the sidewalk not be installed at 1102 Boyd as per ordinance #34.07.

If the sidewalk requirements were to be waived, we recommend the approval be subject to the submission of a cash deposit for future construction to assure consent and participation in any future sidewalk installation.

City of Troy
Mr. Kurt Bovensiepe
Public Works Director
4693 Rochester Road
Troy, MI 48098



Mr. Bovensiepe,

I am/we are the owner(s) of the property at 1088 Boyd

Lot number 77

Subdivision Name BEAVER RUN

Sidewell Number 88-20-23-352-050

I/we would like to request a sidewalk variance for the following reasons:

GOES NO WHERE AND CONNECTS
TO NOTHING

See attached plan/sketch.

I/We can be contacted at 248-866-0080 mike@menjenguest

Phone Number

Email Address

MIKE JOHNSON

Name

450 E SQUARE LK

Address

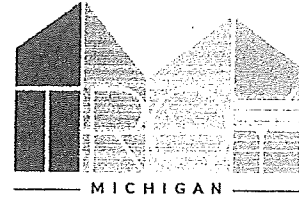
TROY MI 48085

City, State, Zip

[Signature]

Signature

City of Troy
Mr. Kurt Bovensiep
Public Works Director
4693 Rochester Road
Troy, MI 48098



Mr. Bovensiep,

I am/we are the owner(s) of the property at

1102 Boyd

Lot number

76

Subdivision Name

BEVERLY ROW

Sidewell Number

88-20-23-352-051

I/we would like to request a sidewalk variance for the following reasons:

GOES NO WHERE AND CONNECTS TO
NOTHING

See attached plan/sketch.

I/We can be contacted at

248-866-0080 MIKE@EMERGENCYEGRESS

Phone Number

Email Address

Name

MIKE JOHNSON

Address

450 E SQUARE LA

City, State, Zip

TROY MI 48065


Signature

[Signature]



GIS Online

Legend:

 Sidewalk Waiver



Notes:

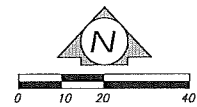
Map Scale: 1=358

Created: October 13, 2020



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.

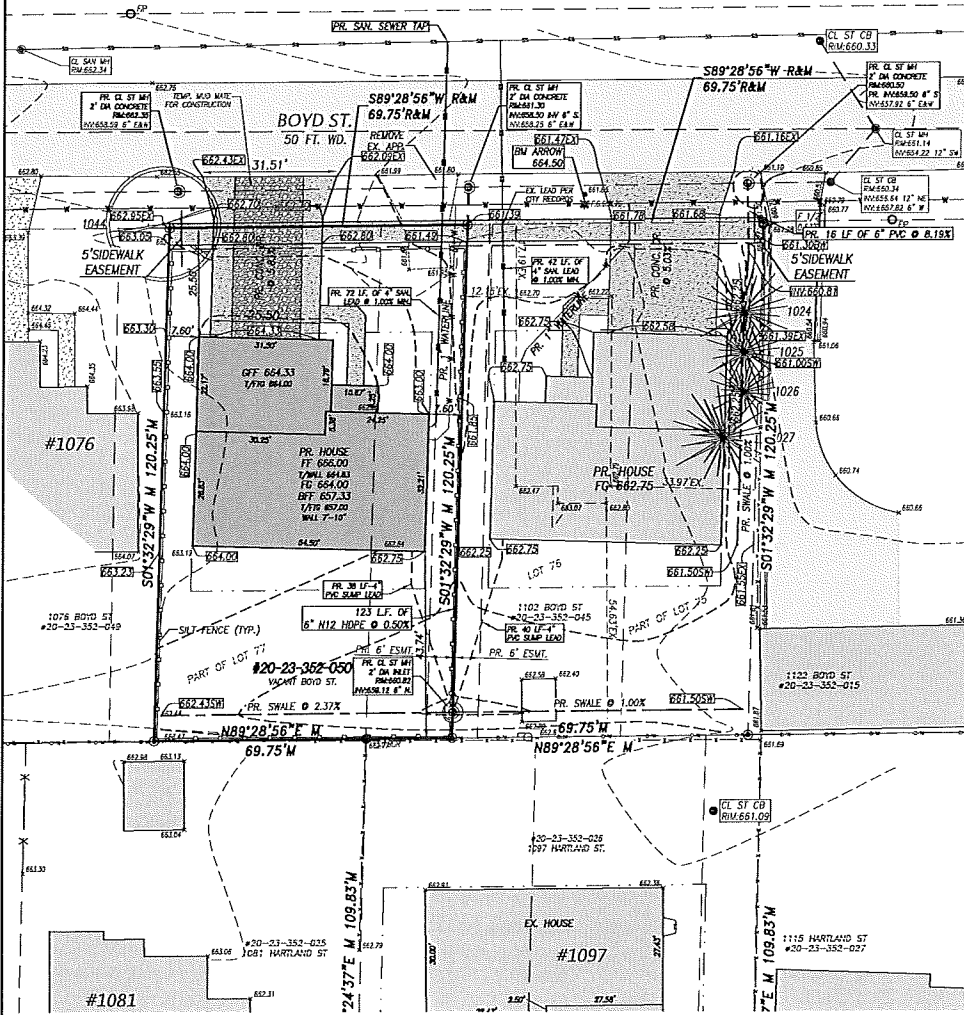
PLOT PLAN



SCALE: 1" EQ. 20'
THIS SURVEY WAS DONE WITHOUT THE BENEFIT OF A TITLE POLICY OR DEED THEREFORE, ALL EASEMENT OF RECORD AND OTHER FACTORS RELEVANT TO TITLE MAY NOT BE SHOWN. CLIENT PROVIDED DESCRIPTION FOR PROPERTY.

LEGEND:

- FOUND IRON
- SET IRON
- R RECORD DISTANCE
- M MEASURED DISTANCE
- ▨ EXISTING BUILDING
- ▨ EXISTING CONCRETE
- ▨ EXISTING ASPHALT
- ▨ EXISTING LANDSCAPED AREA
- ▨ EXISTING STORM SEWER
- ▨ EXISTING SANITARY SEWER
- ▨ EXISTING WATERMAIN
- ▨ EXISTING OVERHEAD WIRES
- ▨ EXISTING FENCE
- ▨ EXISTING UTILITY POLE
- ▨ EXISTING WATER SHUT OFF
- ▨ EXISTING GATE VALVE
- ▨ EXISTING HYDRANT
- ▨ EXISTING WELL
- ▨ EXISTING GAS SHUT OFF
- ▨ EXISTING SANITARY STRUCTURE
- ▨ EXISTING STORM STRUCTURE
- ▨ EXISTING DOWN SPOUT
- ▨ EXISTING UTILITY PEDESTAL
- ▨ EXISTING GRADE
- ▨ PROPOSED GRADE
- ▨ PROPOSED CONCRETE
- ▨ PROPOSED BUILDING
- ▨ PROPOSED SILT FENCE
- ▨ PROP. DRAINAGE ARROW
- ▨ PROP. MAJOR CONTOURS
- ▨ PROP. MINOR CONTOURS



1. INSTALL SOIL EROSION CONTROLS PRIOR TO CONSTRUCTION.
2. COMPLETE ALL EARTH DISRUPTION.
3. RIGHT-OF-WAY, ALL SWALES AREAS, ALL SLOPES GREATER THAN 1 ON 5 AND 10' AROUND ALL STRUCTURES MUST BE STABILIZED PRIOR TO FINAL GRADE INSPECTION.
4. AFTER PERMANENT EARTH STABILIZATION IS COMPLETE, REMOVE EROSION CONTROL MEASURES.
5. SOIL EROSION CONTROL WILL BE MAINTAINED WEEKLY AND AFTER ANY MAJOR STORM EVENT BY MIKE JOHNSON
6. SUMP LEAD TO BE CONNECTED TO AN APPROVED DRAINAGE SYSTEM.
7. DRIVE APPROACH NOT TO CROSS PROPERTY LINE PROJECTED.

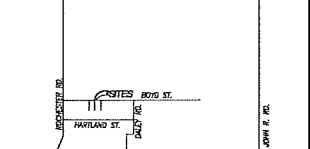
SOIL TYPES: 63A
NAME OF NEAREST WATERCOURSE: STURGIS DRAIN
DISTANCE TO NEAREST WATERCOURSE IN FEET: ± 879FT. TO STURGIS DRAIN
NAME(S) AND PHONE NUMBER(S) FOR THE PERSON(S) RESPONSIBLE FOR THE MAINTENANCE OF ALL TEMPORARY SOIL EROSION CONTROL MEASURES:
MIKE JOHNSON (248) 866-0080

APPROXIMATE START DATE: 4/15/20
APPROXIMATE COMPLETION DATE: 10/1/20
TOTAL ACRES DISTURBED = 0.192 ACRES
I UNDERSTAND MY RESPONSIBILITY OUTLINES UNDER THESE GUIDELINES.

LANDOWNER'S SIGNATURE _____ DATE _____
JOB ADDRESS: VACANT BOYD ST., TROY, MI 48085
PARCEL I.D.: 20-23-352-050

BENCHMARK:
BN ARROW: ARROW ON HYDRANT LOCATED ON THE SOUTH SIDE OF BOYD ST.; ON SITE IN FRONT OF EX. HOUSE #1102
ELEVATION: 664.50 NAVD88 DATUM

LOCATION MAP:



NOTE:

1. ALL WORK SHALL CONFORM TO THE CURRENT REQUIREMENTS OF THE CITY OF TROY, OAKLAND COUNTY WATER RESOURCES COMMISSIONER, DEPARTMENT OF EGLE AND ANY OTHER APPLICABLE AUTHORITIES.
2. PROPOSED SANITARY TO SERVE TAX ID #20-11-126-005
3. SANITARY PROPOSED WITHIN RIGHT OF WAY THEREFORE, NO EASEMENT REQUIRED.
4. NO TREES PROPOSED TO BE REMOVED. IF THIS CHANGES CONTRACTOR MUST CONTACT CITY OF TROY AND GET APPROVAL OF ANY INDIVIDUAL TREE BEING REMOVED.

REICHERT SURVEYING INC.
P 248.651.0592
F 248.656.7099
Mail@ReichertSurveying.com
140 Flumerfelt Lane
Rochester, MI 48306

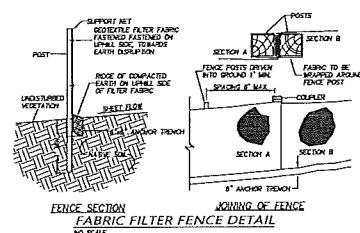
SCALE	1"=20'	DRAWN	B.G.R.
DATE	3/23/20	CHECK	G.H.R.
JOB #	20-034	SHEET	1 OF 1

NO.	DATE	DESCRIPTION	BY	SEAL
1	5/19/20	ADD SIDEWALK	PER	
2	6/14/20	REV. HOUSE PER OWNER	PER	

PREPARED FOR:

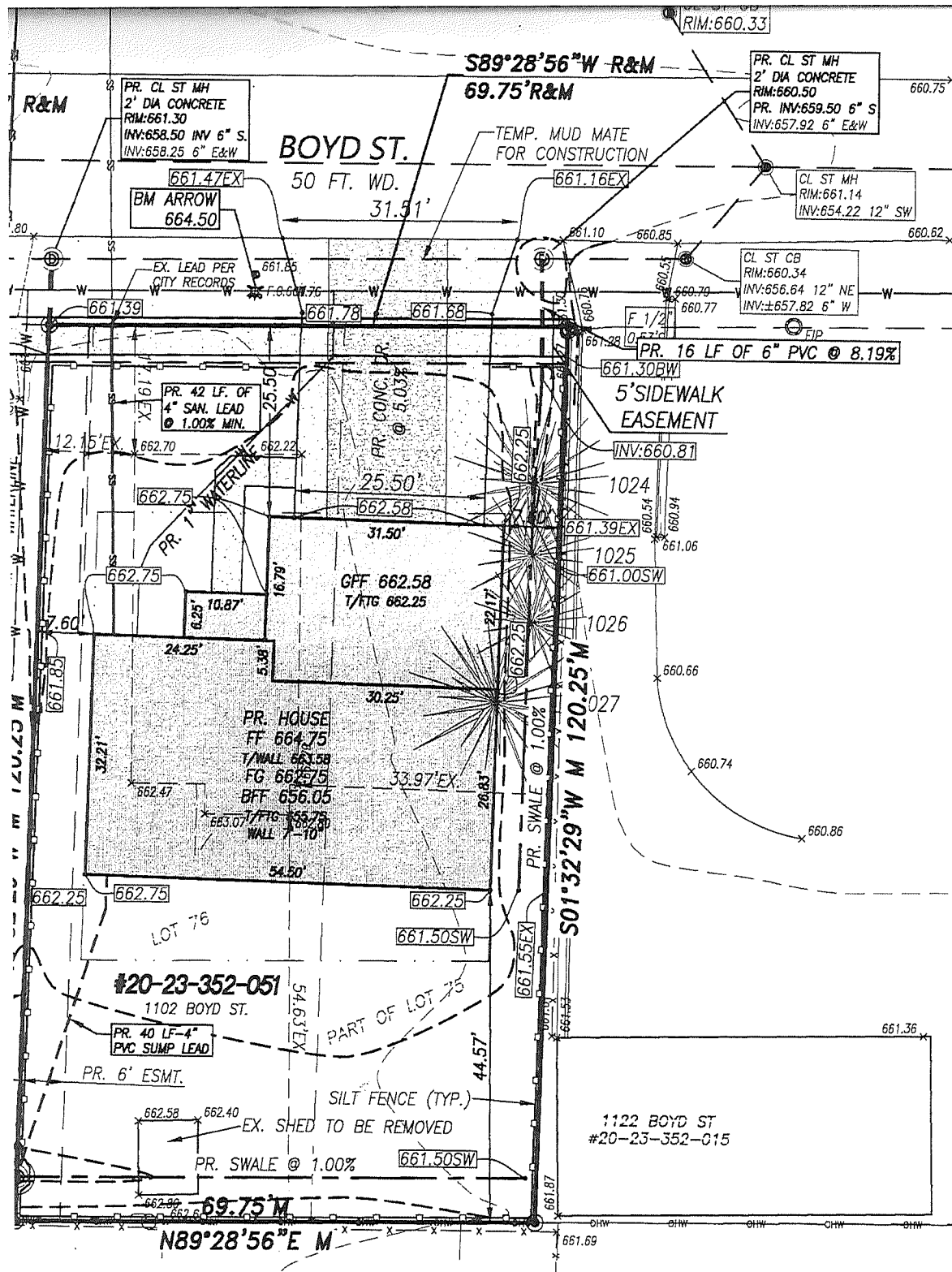
EMERGENCY EGRESS, LLC
450 E. SQUARE LAKE
TROY, MI 48085
(248) 866-0080

LEGAL DESCRIPTION: THE W. 20.25 FT. OF LOT 76, & E. 49.50 FT. OF LOT 77 OF "BEAVER RUN SUBDIVISION" PART OF S.W. 1/4 SEC. 23 & PART OF S.E. 1/4 SEC. 22 T.2N., R.11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN AS RECORDED IN L.46 OF PLATS, P.27 O.C.R.



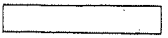

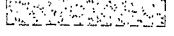

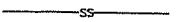
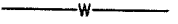
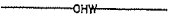











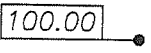
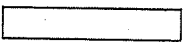

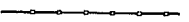

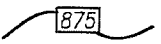



3 FULL WORKING DAYS BEFORE YOU DIG CALL
811
Know what's below
Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net





TREE TABLE		
#	DESC.	ELEV.
1024	11" PINE	661.30
1025	9" PINE	661.31
1026	8" PINE	661.18
1027	12" PINE	661.18

- | | |
|---|-------------------------|
|  | SET IRON |
| R | RECORD DISTANCE |
| M | MEASURED DISTANCE |
|  | EXISTING BUILDING |
|  | EXISTING CONCRETE |
|  | EXISTING ASPHALT |
|  | EXISTING LANDSCAPE |
|  | EXISTING STORM SEWER |
|  | EXISTING SANITARY SEWER |
|  | EXISTING WATERMAIN |
|  | EXISTING OVERHEAD WIRE |
|  | EXISTING FENCE |
|  | EXISTING UTILITY POLE |
|  | EXISTING WATER SHUT OFF |
|  | EXISTING GATE VALVE |
|  | EXISTING HYDRANT |
|  | EXISTING WELL |
|  | EXISTING GAS SHUT OFF |
|  | EXISTING SANITARY SEWER |
|  | EXISTING STORM SEWER |
|  | EXISTING DOWN SPOUT |
|  | EXISTING UTILITY PEG |
| x 655.00 | EXISTING GRADE |
|  | PROPOSED GRADE |
|  | PROPOSED CONCRETE |
|  | PROPOSED BUILDING |
|  | PROPOSED SILT FILL |
|  | PROP. DRAINAGE |
|  | PROP. MAJOR CONDUIT |
|  | PROP. MINOR CONDUIT |





TRAFFIC COMMITTEE REPORT

November 2, 2020

TO: Traffic Committee

FROM: Bill Huotari, Deputy City Engineer/ Traffic Engineer

SUBJECT: Request for Sidewalk Waiver – 1088 and 1102 Boyd
Resident Input

Richard Jegersky of 1264 Boyd called to state that he opposes the waiver and would like to see sidewalk installed on Boyd. He thinks sidewalks would look good and provide an area for people to walk rather than on the road.

October 13, 2020

TO: The City of Troy Traffic Committee

FROM: Kurt Bovensiepe, Public Works Director
Scott Carruthers, Streets and Drains Operations Manager

SUBJECT: Request for Waiver of Sidewalk Requirement
Sidwell Numbers 88-20-27-154-033 and 88-20-27-154-034

Per the attached waiver form, Pat Bismack is requesting a waiver for the sidewalk on the properties located at 85 Hickory Street, Sidwell Number 88-20-27-154-033 and 95 Hickory Street, Sidwell Number 88-20-27-154-034 in the Greenough Heights Subdivision

Chapter 34 City of Troy Sidewalks and Driveway Approaches Ordinance # 34-07 requires, all owners of lots and premises abutting dedicated streets open to the public shall be required to construct sidewalks and driveway approaches at the time of construction of any new buildings or structures, or additions to buildings or structures, or at the time a nonconforming use changes to a permitted use in the Zoning District. No occupancy permit shall be issued until such time as the owners of said property have complied with the requirements of this provision provided only that the Director of Building and Zoning may extend the time for completion of the required sidewalks and driveway approaches in accordance with established procedure.

City of Troy Sidewalks and Driveway Approaches Ordinance # 34.07.01 also requires that a sidewalk be installed in conjunction with the development of a parcel due to a recent lot split, combination of parcels or a re-platting.

Please be advised that there is currently not a sidewalk to the east of 95 or west of 85 Hickory or across the street.

Due to the lack of sidewalk on the surrounding parcels, the open drainage ditches and grading of the area, we recommend that the sidewalk not be installed at 85 and 95 Hickory, as per ordinance #34.07.

If the sidewalk requirements were to be waived, we recommend the approval be subject to the submission of a cash deposit for future construction to assure consent and participation in any future sidewalk installation.

City of Troy
Mr. Kurt Bovensiep
Public Works Director
4693 Rochester Road
Troy, MI 48098



Mr. Bovensiep,

I am/we are the owner(s) of the property at 85 & 95 HICKORY

Lot number 86 & 87

Subdivision Name GREENOUGH HEIGHTS

Sidewell Number 20-27-154-033 AND 20-27-154-034

I/we would like to request a sidewalk variance for the following reasons:

I WOULD BE THE ONLY SIDEWALK ON THE
NORTH SIDE OF HICKORY

See attached plan/sketch.

I/We can be contacted at 810 397 5327
Phone Number

BISMACK@SBCGLOBAL.NET
Email Address

PAT BISMACK
Name

2742 POWDERHORN
Address


ROCK HILLS MI 48309
City, State, Zip

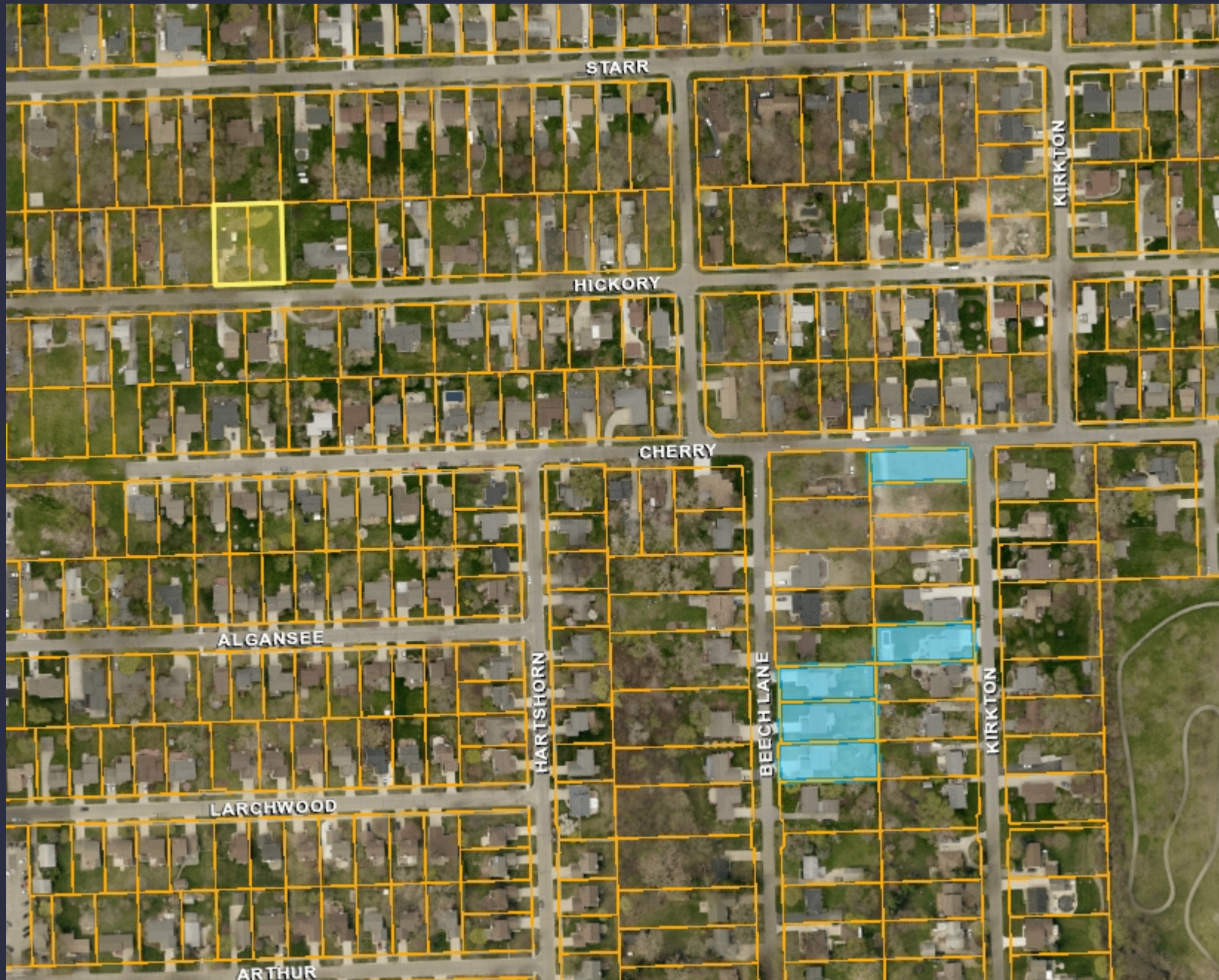
[Signature]
Signature



GIS Online

Legend:

 Sidewalk Waiver



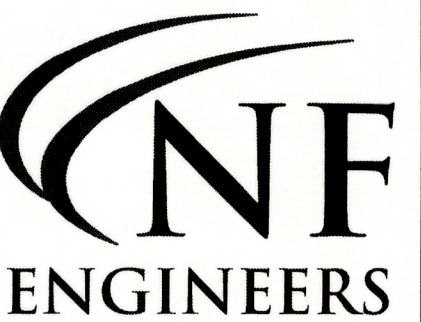
Notes:

Map Scale: 1=358

Created: October 13, 2020



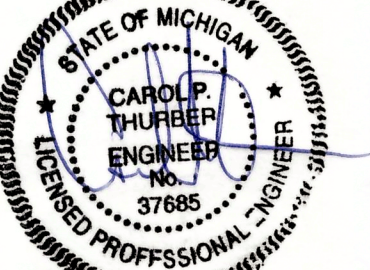
Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.



CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

NOWAK & FRAUS ENGINEERS
43279 SCHOENHERR RD. OFC 1
STERLING HTS., MI 48313
TEL. (586) 739-0939
FAX. (586) 739-6994
WWW.NOWAKFRAUS.COM

SEAL



PROJECT

Lot 85 Hickory, Also the West 1/2 of Vacated Troy Street Adjacent to Lot 87 of "Greenough Heights Subdivision"

CLIENT

PAT BISMACK

(810) 397-5327

bismack@sbcglobal.net

PROJECT LOCATION

Land Situated in the City of Troy, Oakland County, Michigan described as : Lot 86 and 87, Also the West 1/2 of Vacated Troy Street Adjacent to Lot 87 of "Greenough Heights Subdivision", as Recorded in Liber 27, of Plats, Page 14, Oakland County Records.

SHEET

Paving & Grading Plan



Know what's below
Call before you dig.

REVISION

02-13-2020 Per City of Troy

DRAWN BY:

T. Fox

DESIGNED BY:

T. Fox

APPROVED BY:

T. Dehondt

DATE:

1/24/2020

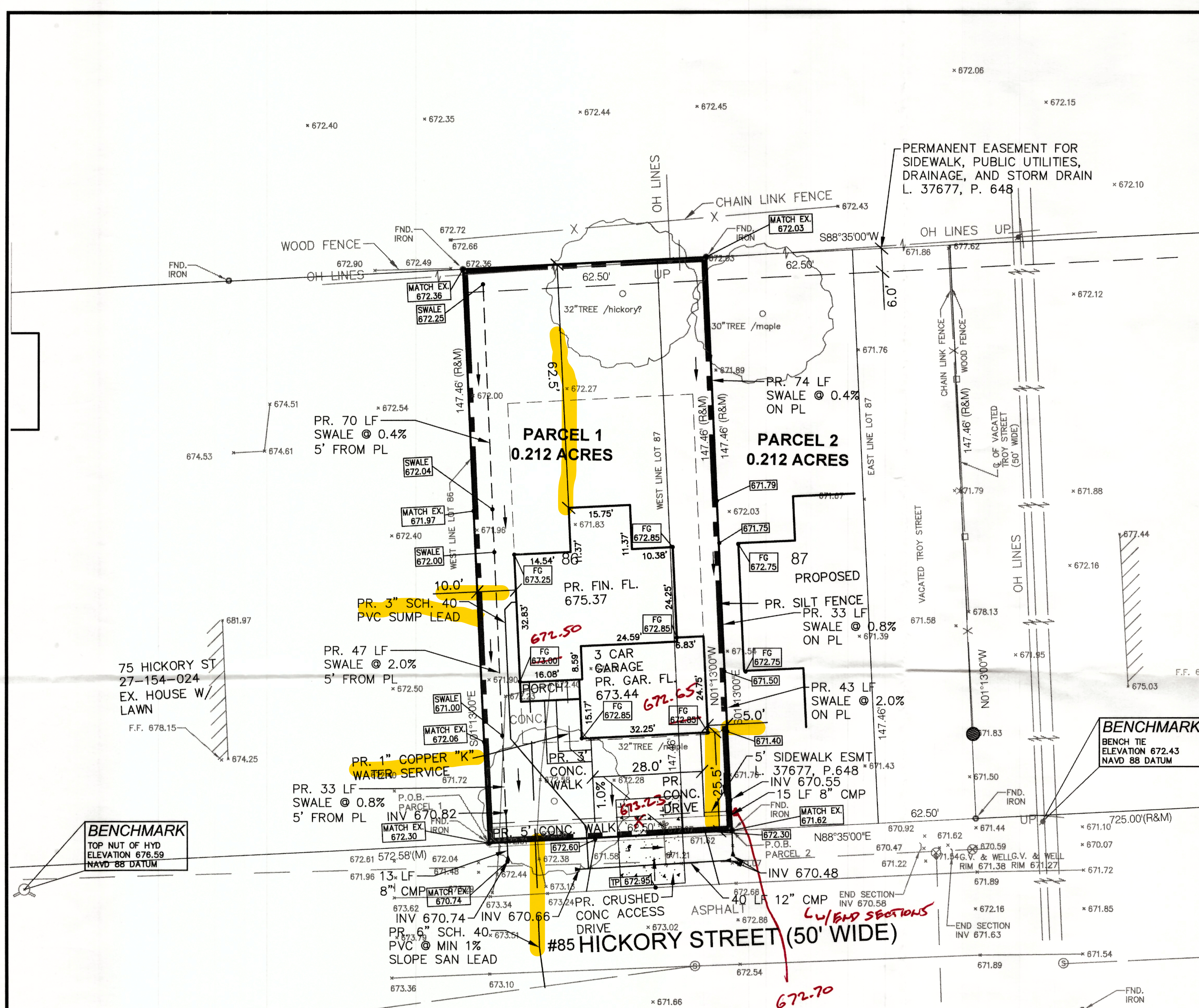
SCALE: 1" = 20'

20 10 0 10 20

NFE JOB NO. SHEET NO.

L465

1



DESCRIPTION OF PROPERTY (20-27-154-023) AS RECORDED

LAND SITUATED IN THE CITY OF TROY, OAKLAND COUNTY, MICHIGAN DESCRIBED AS : LOT 86 AND 87, ALSO THE WEST 1/2 OF VACATED TROY STREET ADJACENT TO LOT 87 OF "GREENOUGH HEIGHTS SUBDIVISION", AS RECORDED IN LIBER 27, OF PLATS, PAGE 14, OAKLAND COUNTY RECORDS.

NOTE: BEARING RELATE TO DESCRIPTION OF RECORDS FOR "TWO ACRE FARMS SUB"

NOTE: NOWAK & FRAUS ENGINEERS ASSUMES NO RESPONSIBILITY FOR BUILDING DIMENSIONS PROVIDED BY CLIENT. OWNER/BUILDER MUST VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

NOTE: DRIVEWAY PLACEMENT AS SHOWN IS FOR CONCEPTUAL PURPOSES ONLY. SEE BUILDER SPECIFICATIONS FOR FINAL DRIVEWAY LAYOUT.

NOTE: THIS PLOT PLAN WAS PREPARED WITH PLANS FROM THE CITY. FIELD WORK WAS PERFORMED. APPROVAL OF THIS PLAN DOES NOT RELIEVE THE OWNER/BUILDER OF COMPLIANCE WITH ALL APPLICABLE CODES AND/OR ORDINANCES.

NOTE: DRIVEWAY PLACEMENT AS SHOWN IS FOR CONCEPTUAL PURPOSES ONLY. SEE BUILDER SPECIFICATIONS FOR FINAL DRIVEWAY LAYOUT.

NOTE: SUMP PUMP DISCHARGE, WATER SERVICE LEAD, AND SANITARY SEWER LEAD SHALL REMAIN THE SAME.

EROSION CONTROL MEASURES & SEQUENCE OF CONSTRUCTION

1. INSTALL CRUSHED CONCRETE ACCESS DRIVE.
2. INSTALL TEMPORARY SOIL EROSION CONTROL MEASURES AND SILT FENCE AS INDICATED ON PLAN AND AT ADDITIONAL AREAS AS NECESSARY.
3. INSTALL GEOTEXTILE FILTER FENCE ON EXISTING REAR YARD CATCH BASINS.
4. MAINTAIN A 15 FT. BUFFER OF VEGETATION WHERE POSSIBLE AROUND PERIMETER OF SITE.
5. STRIP AND STOCKPILE TOPSOIL FROM PROPOSED PAVED AREAS. STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE COURSES AND SHALL BE GRADED AND SEEDED.
6. INSTALL UTILITIES.
7. CONSTRUCT BUILDING.
8. FINAL GRADE, REDISTRIBUTE STOCKPILED TOPSOIL, ESTABLISH VEGETATION AND/OR LANDSCAPE ALL DISTURBED AREAS NOT BUILT OR PAVED UPON.
9. CLEAN PAVEMENT AND REMOVE ALL TEMPORARY EROSION CONTROL MEASURES. RE-ESTABLISH VEGETATION AS NECESSARY.
10. ALL DIRT AND MUD TRACKED ONTO PUBLIC ROADS SHALL BE REMOVED DAILY.

CITY OF TROY STANDARD NOTES:

- NOTIFY THE CITY OF TROY ENGINEERING DEPARTMENT AND SEWER AND WATER DEPARTMENT A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
- ALL CONSTRUCTION MUST BE CONFORMING TO THE CURRENT STANDARDS AND SPECIFICATIONS ADOPTED BY CITY OF TROY.
- CALL MISS DIG (1-800-482-7171) A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
- ALL SOIL EROSION AND SILT MUST BE CONTROLLED AND CONTAINED ON SITE.
- ALL EXCAVATION UNDER OR WITHIN 3 FT. OF PUBLIC PAVEMENT, EXISTING OR PROPOSED SHALL BE BACKFILLED AND COMPACTED WITH SAND (CLASS II MDOT MINIMUM).
- THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL CITY OF TROY PERMITS INCLUDING A PERMIT TO OCCUPY PUBLIC UTILITY EASEMENTS OR PUBLIC RIGHTS-OF-WAY.
- TRENCH BACKFILL IN COUNTY R.O.W. SHALL CONFORM TO R.C.O.C. REQUIREMENTS AND BE SUBJECT TO THE APPROVAL OF THE R.C.O.C. ENGINEER.

NOTE: LOT COVERAGE = 22.4%
MAX COVERAGE = 30%

AREA OF DISTURBANCE
±0.212 ACRES

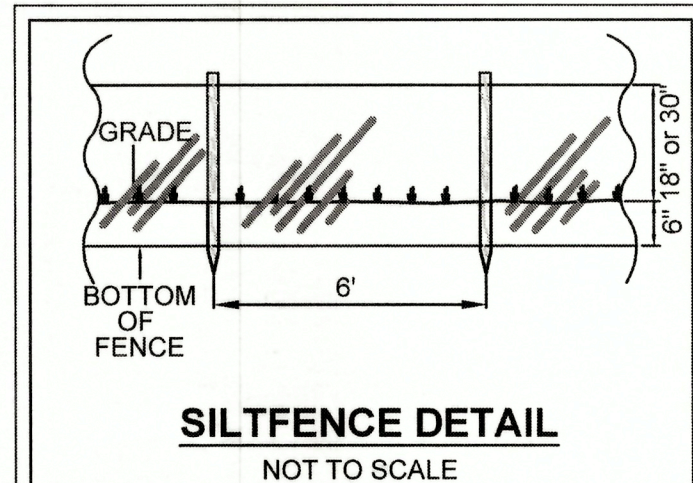
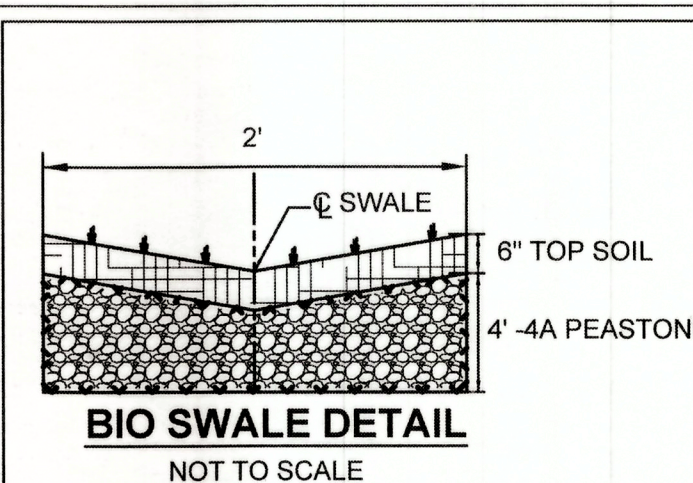
DISTANCE TO THE SPENCER DRAIN
±500'

NOTE: ONSITE SOILS CONSISTS OF 56A

CONTACT NAME:
PAT BISMACK
(810) 397-5327
BISMACK@SBCGLOBAL.NET

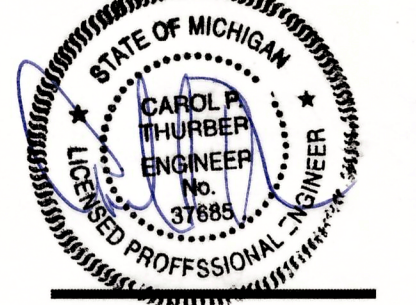
APPROVED

AS NOTED:
CITY OF TROY LAND SURVEYOR
DATE: 02/14/2020





SEAL



PROJECT

Lot 95 Hickory, Also the West 1/2 of Vacated Troy Street Adjacent to Lot 87 of "Greenough Heights Subdivision"

CLIENT

PAT BISMACK

(810) 397-5327

bismack@sbcglobal.net

PROJECT LOCATION

Land Situated in the City of Troy, Oakland County, Michigan described as: Lot 86 and 87, Also the West 1/2 of Vacated Troy Street Adjacent to Lot 87 of "Greenough Heights Subdivision", as Recorded in Liber 27, of Plats, Page 14, Oakland County Records.

SHEET

Paving & Grading Plan



REVISION

02-13-2020 Per City of Troy

DRAWN BY:

T. Fox

DESIGNED BY:

T. Fox

APPROVED BY:

DATE:

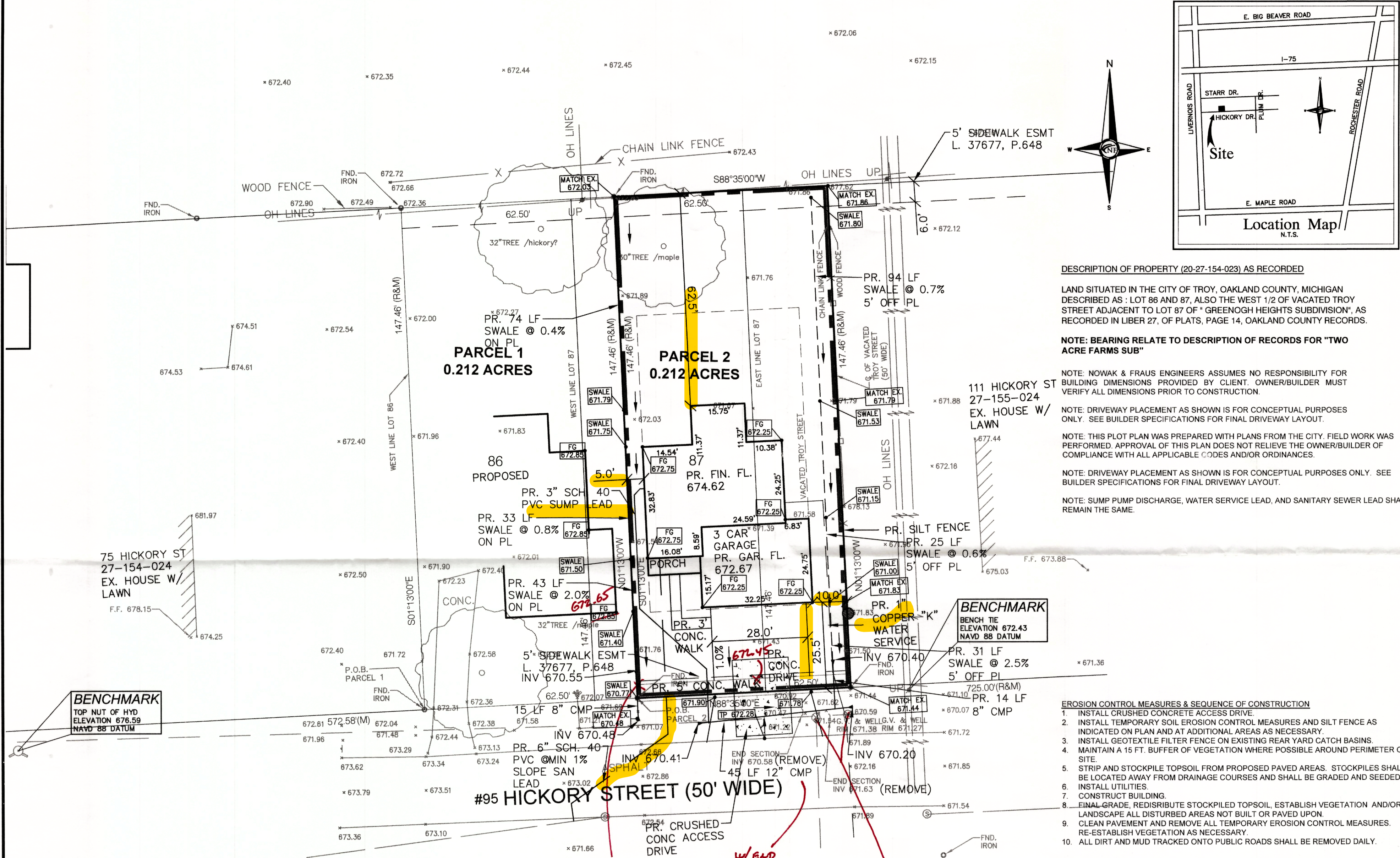
SCALE: 1" = 20'

20 10 0 10 20

NFE JOB NO. SHEET NO.

L465

1



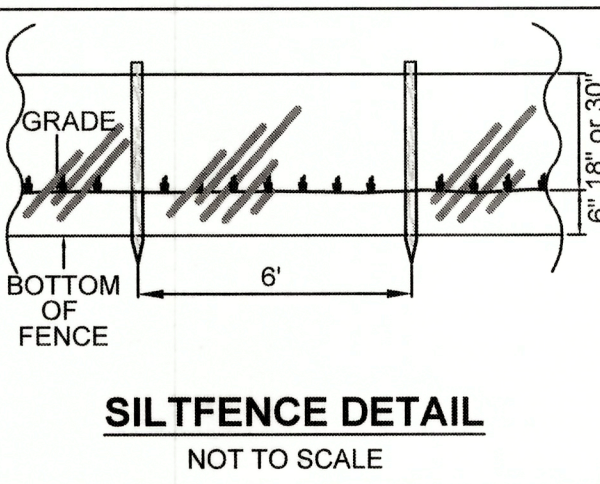
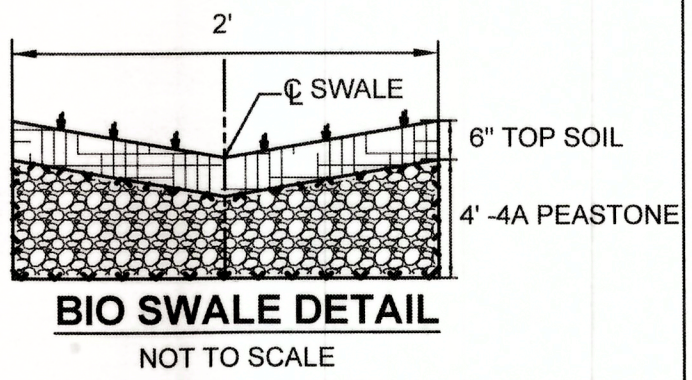
NOTE:
LOT COVERAGE = 22.4%
MAX COVERAGE = 30%

AREA OF DISTURBANCE
±0.212 ACRES

DISTANCE TO THE SPENCER DRAIN
±500'

NOTE: ONSITE SOILS CONSISTS OF 56A

CONTACT NAME:
PAT BISMACK
X
(810) 397-5327
BISMACK@SBCGLOBAL.NET



APPROVED
AS NOTED:
CITY OF TROY LAND SURVEYOR
DATE: 02/14/2020



William J Huotari

From: Charlene Coppock <ccoppock@servicar.org>
Sent: Thursday, October 29, 2020 9:25 AM
To: William J Huotari
Subject: Regarding: Sidewalk Waiver for 95 Hickory and 85 Hickory

To whom it may concern;

On behalf of my mother Darlene M. Losey @ 111 Hickory, Troy, MI 48083

Regarding the Applicant Pat Bismack,

We have had numerous issue and problems with constant property damage to my mothers ditch area, were his drivers and big equipment semi trucks and trailers would park all over her ditch and damaged it with tire tracks and ruts from their tires that he never repaired the damage.

He tried to get away with in proper drainage system which called a water problem in my mothers basement right after we just did a remodel of the whole interior of the Basement. For a sewer back up problem from in proper street clean out.

As far as side walks goes they have fought over and over, years after years with this issue, to keep the side walks off this side of the street.

They have sidewalks across the street for children to walk to and from school and for walkers of the neighborhood.

We don't want are property damaged any more with digging, just like the side of my mothers lot was done by this builder that was not necessary and then did a half

Job replacing the damage sod on her property by not smoothing the and raking the area. They just threw sod on top of the mess they made and left it all full of rocks and tire marks from their digging equipment. I wanted it smoothed out, top soil put on right then sod or instant grass seed. But wasn't done right.

I hope these houses are complete soon so we can get rid of this builder and his crews!!!!

We don't want sidewalks on our side of Hickory!

We will be glad when this builder is done, we are tired of the disrespect he has given to our neighborhood and by his workers.

Kind Regards;

Charlene Coppock in care of Darlene Losey

111 Hickory

Troy, MI 48083



TRAFFIC COMMITTEE REPORT

October 29, 2020

TO: Traffic Committee

FROM: Bill Huotari, Deputy City Engineer/ Traffic Engineer

SUBJECT: Request for Sidewalk Waiver – 85 & 95 Hickory
Resident Input

The Berry residence at 57 Hickory called to state that they support the sidewalk waiver requested for 85 & 95 Hickory. There is an existing sidewalk on the south side of Hickory already and they don't feel that another sidewalk is necessary on the north side of Hickory.

October 6, 2020

TO: The City of Troy Traffic Committee

FROM: Kurt Bovensiep, Public Works Director
Scott Carruthers, Streets and Drains Operations Manager

SUBJECT: Request for Waiver of Sidewalk Requirement
Sidwell Number 88-20-23-352-049

Per the attached waiver form, Surendran Shanmugasundaram is requesting a waiver for the sidewalk on the property located at 1076 Boyd, Sidwell Number 88-20-22-352-049, in the Beaver Run Subdivision

Chapter 34 City of Troy Sidewalks and Driveway Approaches Ordinance # 34-07 requires, all owners of lots and premises abutting dedicated streets open to the public shall be required to construct sidewalks and driveway approaches at the time of construction of any new buildings or structures, or additions to buildings or structures, or at the time a nonconforming use changes to a permitted use in the Zoning District. No occupancy permit shall be issued until such time as the owners of said property have complied with the requirements of this provision provided only that the Director of Building and Zoning may extend the time for completion of the required sidewalks and driveway approaches in accordance with established procedure.

City of Troy Sidewalks and Driveway Approaches Ordinance # 34.07.01 also requires that a sidewalk be installed in conjunction with the development of a parcel due to a recent lot split, combination of parcels or a re-platting.

Please be advised that there is currently not a sidewalk to the east or west of 1076 Boyd or across the street.

Due to the lack of sidewalk on the surrounding parcels, the open drainage ditches and grading of the area, we recommend that the sidewalk not be installed at 1076 Boyd, as per ordinance #34.07.

If the sidewalk requirements were to be waived, we recommend the approval be subject to the submission of a cash deposit for future construction to assure consent and participation in any future sidewalk installation.



City of Troy
Mr. Kurt Bovensiepe
Public Works Director
4693 Rochester Road
Troy, MI 48098

Mr. Bovensiepe,

I ~~am~~ we are the owner(s) of the property at 1076 BOYD ST,
Lot number _____ TROY, MI 48083
Subdivision Name _____
Sidewell Number _____

☒ We would like to request a sidewalk variance for the following reasons:

NO OTHER WALKS IN THE AREA

See attached plan/sketch.

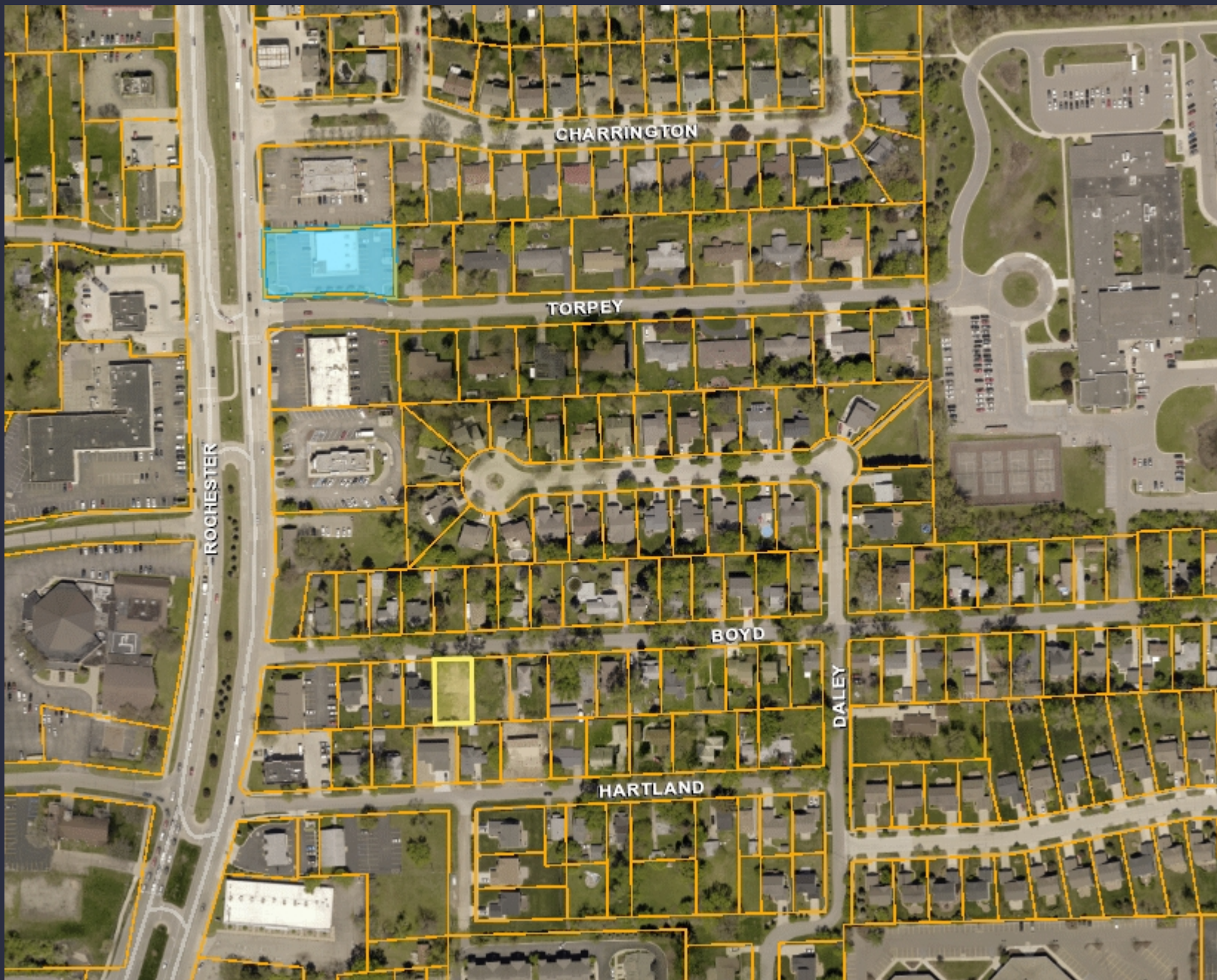
I/We can be contacted at 972 832 0157 SUREN.S126
Phone Number Email Address
SURENDRAN SHANMUGASUNDARAM @GMAIL.CO
Name RAJALAKSHMI PRIYANKA RAJENDRAN
1076 BOYD ST,
Address
TROY, MI 48083
City, State, Zip
S. Surendran
Signature
[Signature]



GIS Online

Legend:

 Sidewalk Waiver



Notes:

Map Scale: 1=358

Created: October 14, 2020



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.

1076 ~~1078~~ BOYD





TRAFFIC COMMITTEE REPORT

March 3, 2020

TO: Traffic Committee

FROM: Bill Huotari, City Engineer/ Traffic Engineer

SUBJECT: Request for No Parking
Lakeside Drive at Shoreline Drive

Background:

Troy Police request that the “eyebrow” and island area be posted as a No Parking zone at Lakeside Drive and Shoreline Drive.

Troy Police recently responded to a crash in this area and found that parked vehicles were creating a hazardous condition and could potentially block the flow of traffic for large vehicles, delivery trucks, emergency vehicles, etc.

The south side of Lakeside Drive and the east side of Shoreline Drive is currently posted as No Parking due to fire hydrants located along the road.

In an effort to keep the “eyebrow” open for all travel, the recommendation is to install an additional sign within the “eyebrow” and two signs on the island. This would prohibit all parking in the “eyebrow” area.



GIS Online



Legend:

Fire Hydrant

- Out of Service
- Online

Water Valve

- Pressure Reducing Valve
- Air Release Valve
- Isolation Valve
- Gate Valve
- Butterfly Valve
- Tapping Sleeve and Valve
- Blow Off Valve
- Post Indicator Valve
- Service Valve
- Vault

Water Main

- Transmission Main
- Proposed, Out of Service or Standby
- Distribution Main

- Water Pressure Reducing Valve
- Road Centerline Text

Notes:

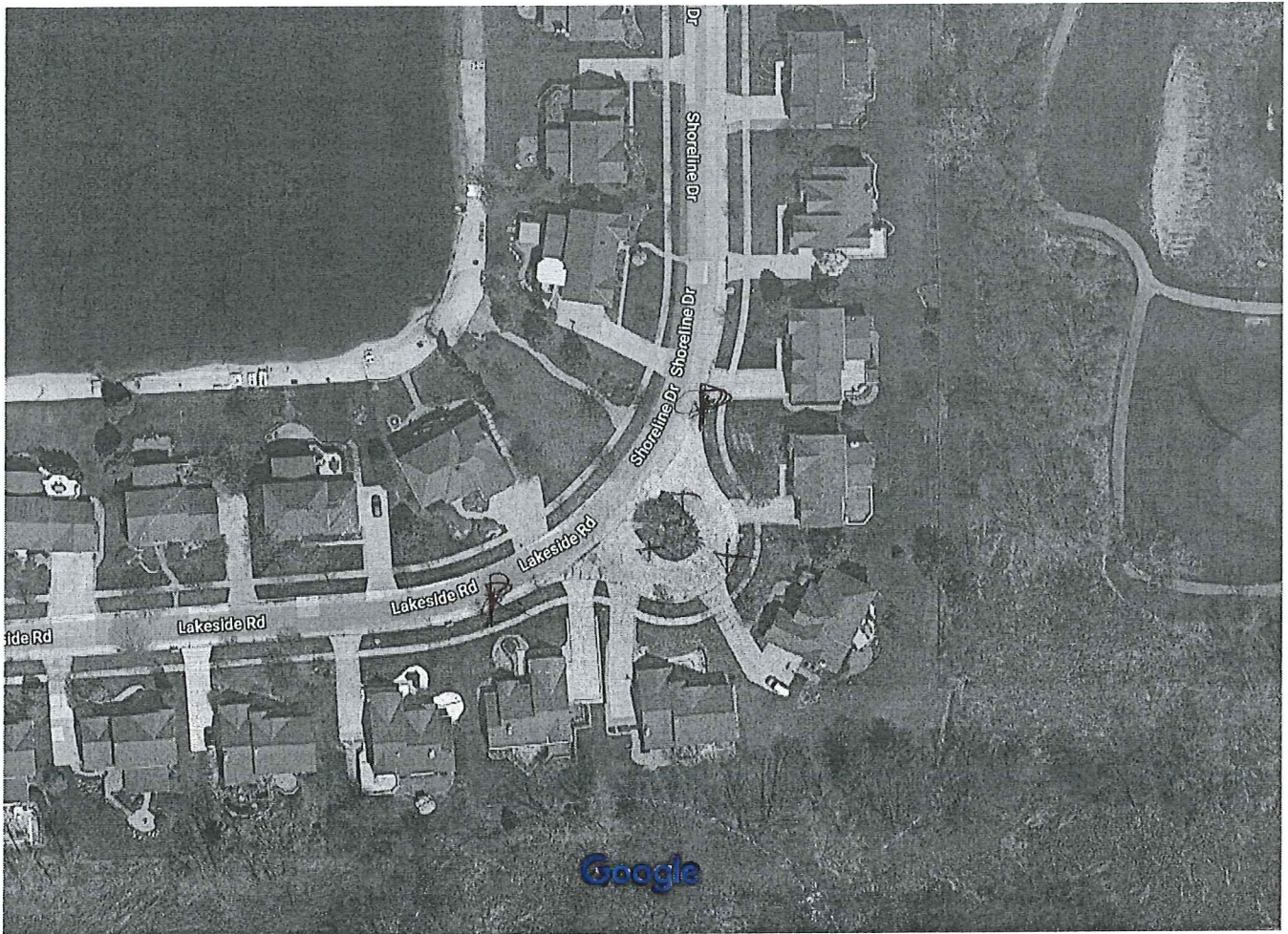
Map Scale: 1=252

Created: February 13, 2020



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.

Google Maps



Imagery ©2020 Maxar Technologies, U.S. Geological Survey, Map data ©2020 50 ft

f - NEEDS NO PARKING SIGNS
INCLUDING ON THE ISLAND

P - CURRENT SIGNS

DFC. MORSE

SEAN
MORSE

Lakeside Looking East



Eyebrow Looking South



Eyebrow Looking North



Shoreline Looking North





TRAFFIC COMMITTEE REPORT

March 3, 2020

TO: Traffic Committee

FROM: Bill Huotari, City Engineer/ Traffic Engineer

SUBJECT: Request for Traffic Control
Kirkton Drive at Starr Drive

Background:

Samantha Shelton of 2351 Kirkton Drive states that the lack of ALL-WAY STOP control at the intersection of Kirkton Drive and Starr Drive creates a hazardous condition.

Kirkton Drive is currently controlled by Stop signs, while Starr Drive is uncontrolled.

There were two (2) crashes recorded in the past five (5) years.

The posted speed limit on both streets is 25 mph.

Starr Drive would be considered the major road as it provides access to Livernois Road.

The major potential sight distance obstruction at the intersection is the northeast house corner at the southwest quadrant of the intersection.

For a vehicle traveling on Kirkton Drive, the safe approach speed was found to be 9.0 mph and 11.3 mph for southbound and northbound vehicles, respectively. Stop-control is appropriate for the Kirkton Drive approaches.

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

February 25, 2020

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

RE: Traffic Control Recommendation for
Kirkton Drive at Starr Drive
OHM JN: 0128-19-0240

Dear Mr. Huotari:

As requested, we have reviewed the intersection of Kirkton Drive at Starr Drive to determine the proper traffic control. Kirkton Drive at Starr Drive is a 4-legged intersection located approximately 3,200 feet north of Maple Road and about 2,200 feet east of Livernois Road. The speed limit on both streets under investigation is 25 mph. Kirkton Drive is STOP-controlled on both approaches to Starr Drive. Attached are aerial and intersection photos.

Types of Roadways

Both Kirkton Drive and Starr Drive are considered local streets. Starr Drive runs east / west, providing access to / from the local neighborhood and Livernois Road (minor arterial) via Plum Drive and Kirkton Drive. Kirkton Drive runs north / south, providing indirect access to Morse Elementary school to the east and Livernois Road to the west via Starr Drive, Hickory Drive and Cherry Drive. Both Kirkton Drive and Starr Drive dead end only a few hundred feet north and east of the subject intersection respectively.

The surrounding land use is entirely single-family residential. On-street parking is permitted on the south side of Starr Drive west of the intersect and on the north side of Starr Drive east of the intersection. Parking is also allowed on the east side of Kirkton Drive in the vicinity of the intersection. Kirkton Drive is currently under STOP-control and would be considered the minor road at the intersection, while Starr Drive would be considered the major road as it provides direct access to Livernois Road and its dead end provides access to more houses.

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 two (2) crashes recorded in the past full five (5) years at the intersection of Kirkton Drive at Starr Drive. Key information on the crashes are described below. Given that less than the recommended minimum of five



(5) crashes susceptible to correction by all-way STOP-control did not occur during a 12-month period, the crash data does not compel OHM Advisors to modify the existing controls.

In any case, both crashes that occurred in the vicinity of this intersection were trucks backing and colliding with legally parked vehicles, unrelated to the traffic control at the intersection.

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, as well as the fact that both Starr Drive and Kirkton Drive are dead-end streets, it is highly improbable that this location would satisfy any of the minimum volume warrants for an all-way STOP. Further explanation within the context of the minimum volume constraints is provided next.

It is extremely unlikely that Starr 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 Plum Drive is similarly unlikely to average at least 200 units for any 8 hours. Additionally, since the posted speed limit is only 25 mph, it is reasonable to assume that the 85th percentile approach speed does not exceed 40 mph 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 has not been met.

Approach Speed Limits

The approach speed limit on all study 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.

Sight Distance

The major potential sight distance obstruction at the intersection of Kirkton Drive at Starr Drive for a motorist traveling southbound on Kirkton Drive is the southwest house corner of the property on the northeast quadrant of the intersection. The major potential sight distance obstruction for a motorist traveling northbound on Kirkton Drive is the northeast house corner at the southwest quadrant of the intersection. Reference the attachments for intersection photos. These obstructions impact calculating 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 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 speeds on Kirkton Drive were 9.0 mph and 11.3 mph for southbound and northbound vehicles, respectively. Thus, based on the safe approach speed calculations, STOP-control is appropriate for the Kirkton Drive approaches. The safe approach speed calculation spreadsheets for the intersection is attached for your reference.

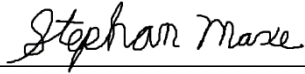
Recommendation

The preceding analyses did not determine that any criteria were met for all-way STOP-control. Additionally, the safe approach speed approach calculations determined that STOP-control would be the appropriate traffic control treatment on the Kirkton Drive approaches. OHM recommends retaining the



existing STOP signs. The intersection should be reevaluated if traffic volumes increase or more crashes begin to occur.

Sincerely,
OHM Advisors

Handwritten signature of Stephan Maxe in black ink.

Stephan Maxe, PE
Project Engineer

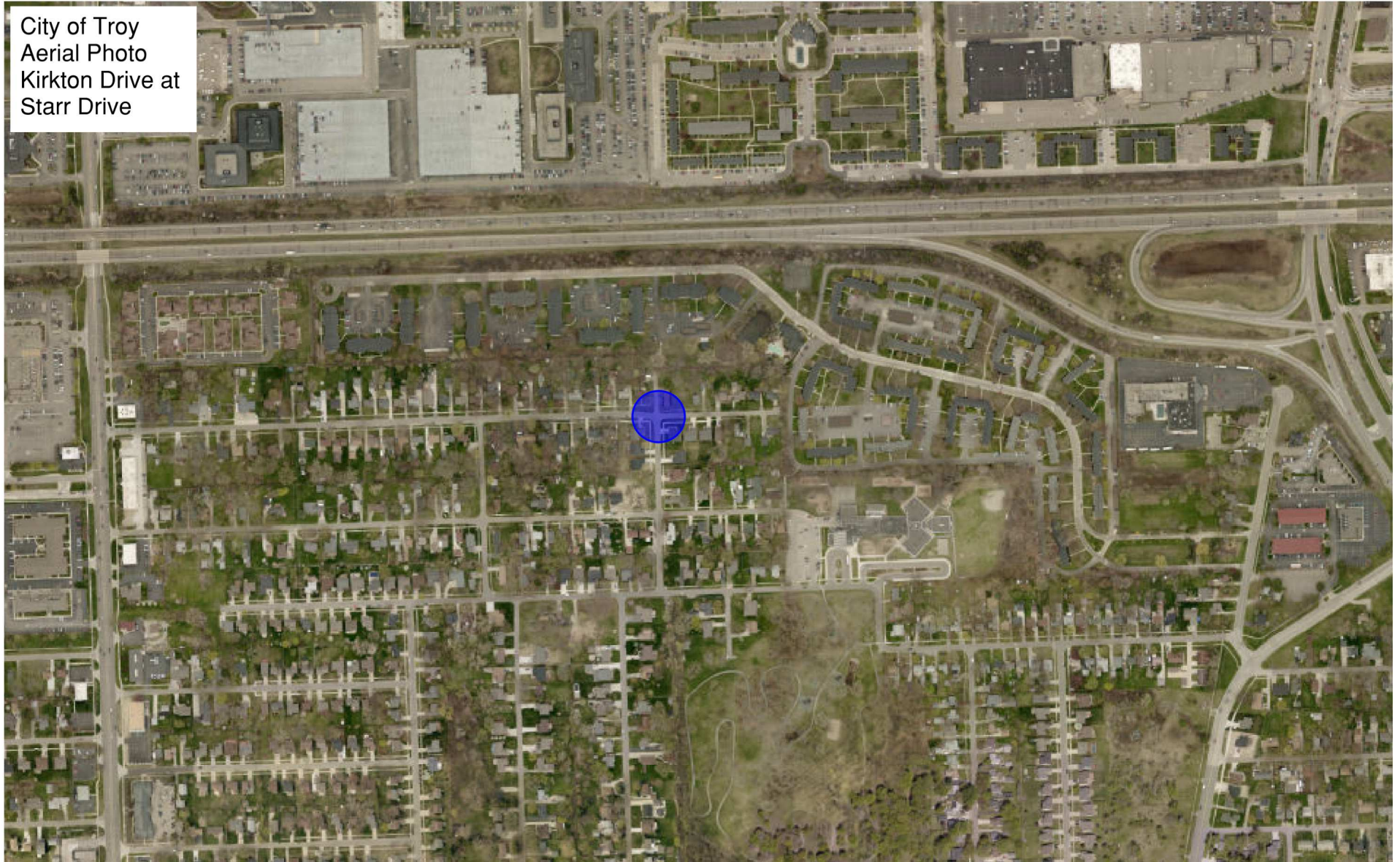
Handwritten signature of Sara A. Merrill in black ink.

Sara Merrill, PE, PTOE
Traffic Project Manager

Attachments:

- Aerial Photo
- Safe Approach Speed Calculation Spreadsheets
- Intersection Photos
- UD-10 Crash Reports (2)
- Traffic Control Determination Reference Guide

City of Troy
Aerial Photo
Kirkton Drive at
Starr Drive



Safe Approach Speed Calculation

Starr Dr and Kirkton
Your City

Date: 2/19/2020
Analyst: Ricardo Freshley

Measured:

Width of Roads

Road 1 = 22 (ft)

Road 2 = 22 (ft)

Distance to Obstructions

a = 28 (ft) e = 33 (ft)

b = 23 (ft) f = 43 (ft)

c = 34 (ft) g = 36 (ft)

d = 67 (ft) h = 39 (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)

V₁ = 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

V₂ = 9.0 (mph) [Based on Veh. A]

or V₂ = 13.3 (mph) [Based on Veh. C]

Calculated Safe Approach Speed for Vehicle D

Approaching on Road 2

V₃ = 11.7 (mph) [Based on Veh. A]

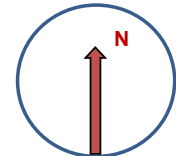
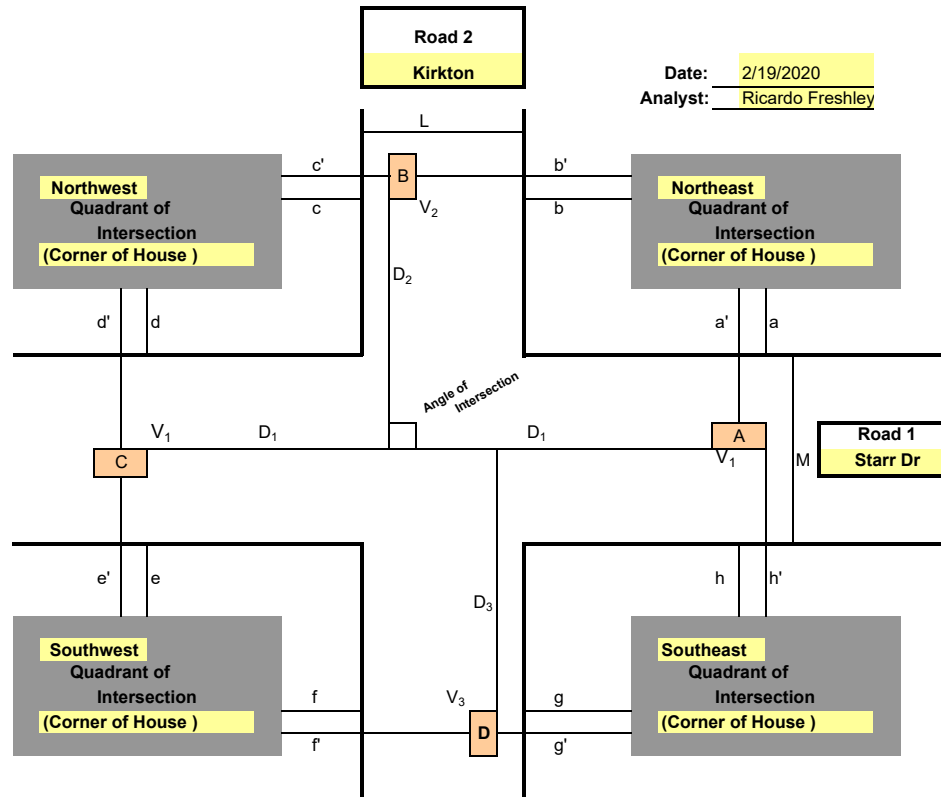
or V₃ = 11.3 (mph) [Based on Veh. C]

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:

D₁ = 196 a' = 34 e' = 39

D_{2A} = 40.9 b' = 33 f' = 53

D_{2C} = 65.8 c' = 40 g' = 42

D_{3A} = 56.0 d' = 77 h' = 49

D_{3C} = 53.4

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 $D_{2C} = \frac{c' * D_1}{(D_1 - d')}$ or $D_{3A} = \frac{g' * D_1}{(D_1 - h')}$ or $D_{3C} = \frac{e' * D_1}{(D_1 - f')}$

Notes: Enter field measurements in yellow highlighted area.

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

Calculated by spreadsheet

Recommended ROW control for Road 2

based on safe approach speed :

STOP Sign



Photograph No. 1: Kirkton Drive – Heading North
Date: 2/19/2020 **Photographer:** Ife Ogundeji



Photograph No. 2: Kirkton Drive - Heading North and Looking Left
Date: 2/19/2020 **Photographer:** Ife Ogundeji



Photograph No. 3: Kirkton Drive - Heading North and Looking Right
Date: 2/19/2020 **Photographer:** Ife Ogundeji



Photograph No. 4: Kirkton Drive - Heading South
Date: 2/19/2020 **Photographer:** Ife Ogundeji



Photograph No. 5: Kirkton Drive - Heading South and Looking Left
Date: 2/19/2020 **Photographer:** Ife Ogundeji



Photograph No. 6: Kirkton Drive - Heading South and Looking Right
Date: 2/19/2020 **Photographer:** Ife Ogundeji



Photograph No. 7: Starr Drive – Heading East
Date: 2/19/2020 **Photographer:** Ife Ogundeji



Photograph No. 8: Starr Drive – Heading East and Looking Left
Date: 2/19/2020 **Photographer:** Ife Ogundeji



Photograph No. 9: Starr Drive – Heading East and Looking Right
Date: 2/19/2020 **Photographer:** Ife Ogundeji



Photograph No. 10: Starr Drive - Heading West
Date: 2/19/2020 **Photographer:** Ife Ogundeji



Photograph No. 11: Starr Drive - Heading West and Looking Left
Date: 2/19/2020 **Photographer:** Ife Ogundeji



Photograph No. 12: Starr Drive - Heading West and Looking Right
Date: 2/19/2020 **Photographer:** Ife Ogundeji

Authority: 1949 PA 300, Sec.257-622
Compliance: Required MSP UD-10E
Penalty: \$100 and/or 90 days (Rev 11/2006)

External # 0571370
Crash ID 9332434

Page 01 of 01
Incident # 150022967 File Class 93001

STATE OF MICHIGAN TRAFFIC CRASH REPORT

ORI: MI 6378400		Department Name Troy Police Department				Incident Disposition Closed	
Crash Date 07/13/2015	Crash Time 15:54	No. of Units 02	Crash Type Sideswipe-Opposite	Special Circumstances <input type="checkbox"/> School Bus <input checked="" type="checkbox"/> None <input type="checkbox"/> Hit and Run <input type="checkbox"/> Deer <input type="checkbox"/> Fleeing Police	Special Checks <input type="checkbox"/> Fatal <input type="checkbox"/> Non-Traffic Area <input type="checkbox"/> ORV/Snowmobile		
County 63 - Oakland	Traffic Control None	Relation to Roadway On Road	Special Study	Weather Clear	Area 10 - NON-FRWY Straight roadway		
City/Twsp 84 - Troy	Construction Zone (if applicable) Type Lane Closed Activity		Light Daylight	Road Condition Dry	Total Lanes 02	Speed Limit 25	
					Posted Yes		

LOCATION	Prefix	Road Name KIRKTON	Road Type ST	Suffix	Divided Roadway
	Distance 40 Feet S	Traffic Way 01 - Not physically divided		Access Control 01 - No access control	
	Prefix	Intersecting Road STARR	Road Type DR	Suffix	Divided Roadway

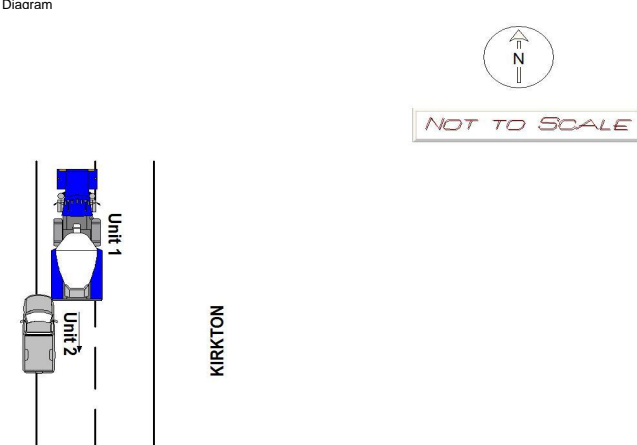
UNIT/DRIVER	Unit Number 01	Unit Known Yes	State MI	Driver License Number #####	Date of Birth (Age) ##/##/#### (56)	License Type <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Chauffeur <input type="checkbox"/> Moped	Endorsements <input type="checkbox"/> Cycle <input type="checkbox"/> Farm <input type="checkbox"/> Recreation	Sex M	Total Occupants 01	Hazardous Action 11 - Improper backing
	Unit Type MV	Driver Information ##### ##### CLARKSTON, MI 48346-1907 (###) ###-####				Injury O	Position 01	Restraint 04	Hospital NONE	
	Driver Condition <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 99				Interlock No	Ejected	Trapped	Airbag Deployed Not Equipped	Ambulance NONE	
	Alcohol <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Test Type <input type="checkbox"/> Field <input type="checkbox"/> PBT <input type="checkbox"/> Not offered <input type="checkbox"/> Breath <input type="checkbox"/> Blood <input type="checkbox"/> Urine				Test Results		Drugs <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Test Type <input type="checkbox"/> Blood <input type="checkbox"/> Urine	Test Results		Citation Issued <input checked="" type="checkbox"/> Hazardous <input type="checkbox"/> Other
	Vehicle Registration #####	State MI	Insurance / Policy # #####		Towed To/By		Special Vehicles 0	Private Trailer Type	Vehicle Defect	
	VIN #####	Vehicle Description ADVANCE	Make MIXER	Model BLUE	Year 2005	Vehicle Type Truck/Bus				
	Location of Greatest Damage 06	First Impact 06	Extent of Damage 1	Driveable Yes	Vehicle Direction S	Vehicle Use 02 - Commercial(business)	Action Prior 07 - Backing			

Sequence of Events (● indicates MOST harmful event)	First ● 17 - Motor veh in transport	Second	Third	Fourth
--	--	--------	-------	--------

PASSENGERS	Passenger Information		Date of Birth (Age)	Sex	Position	Restraint	Hospital
			Injury	Airbag Deployed	Ejected	Trapped	Ambulance
	Passenger Information		Date of Birth (Age)	Sex	Position	Restraint	Hospital
			Injury	Airbag Deployed	Ejected	Trapped	Ambulance
	Passenger Information		Date of Birth (Age)	Sex	Position	Restraint	Hospital
			Injury	Airbag Deployed	Ejected	Trapped	Ambulance
	Passenger Information		Date of Birth (Age)	Sex	Position	Restraint	Hospital
			Injury	Airbag Deployed	Ejected	Trapped	Ambulance
	Passenger Information		Date of Birth (Age)	Sex	Position	Restraint	Hospital
			Injury	Airbag Deployed	Ejected	Trapped	Ambulance
	Passenger Information		Date of Birth (Age)	Sex	Position	Restraint	Hospital
			Injury	Airbag Deployed	Ejected	Trapped	Ambulance

TRUCK/BUS	Carrier Information VAN HORN BROTHERS 3770 AIRPORT RD WATERFORD, MI 48329				Carrier Source Driver	GVWR 99,999	ICCMC	USDOT 000001720945	MPSC
	Driver's CDL Type Group A				Endorsements <input type="checkbox"/> H <input type="checkbox"/> P <input type="checkbox"/> T <input checked="" type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> X	CDL Exempt <input type="checkbox"/> Farm <input type="checkbox"/> Other	CDL Restrictions <input type="checkbox"/> 28 <input type="checkbox"/> 29 <input type="checkbox"/> 30 <input type="checkbox"/> 35 <input type="checkbox"/> 36		
	Interstate/Intrastate Intrastate	Vehicle Type BB	Type & Axle Per Unit First 6 Second Third Fourth	Cargo Body Type 5	Medical Card Yes	Hazardous Material <input type="checkbox"/> Placard <input type="checkbox"/> Cargo Spill	ID #	Class #	

OWNERS	Owner Information				Owner Information			
	Person Advised of Damaged Traffic Control Contact Name: Contact Date: Contact Time:				Damaged Property			Public
					Owner & Phone			

UNIT / DRIVER	Unit Number 02	Unit Known No	State MI	Driver License Number #####	Date of Birth (Age) ###/##/####	License Type <input type="radio"/> Operator <input type="radio"/> Chauffeur <input type="radio"/> Moped	Endorsements <input type="radio"/> Cycle <input type="radio"/> Farm <input type="radio"/> Recreation	Sex	Total Occupants 00	Hazardous Action		
	Unit Type MV	Driver Information ##### (###) ###-####				Injury	Position	Restraint 09	Hospital NONE			
	Driver Condition 01 02 03 04 05 06 07 08 09 099				Interlock No	Ejected	Trapped	Airbag Deployed Not Equipped	Ambulance NONE			
	Alcohol 0 Yes <input checked="" type="radio"/> No <input type="radio"/> Refused <input type="radio"/> Not offered <input type="radio"/> PBT <input type="radio"/> Breath <input type="radio"/> Blood <input type="radio"/> Urine				Test Results				Drugs 0 Yes <input type="radio"/> No <input type="radio"/> Test Type <input type="radio"/> Blood <input type="radio"/> Urine	Citation Issued <input type="radio"/> Hazardous <input type="radio"/> Other		
	Vehicle Registration #####		State MI	Insurance / Policy # #####		Towed To/By			Special Vehicles 0	Private Trailer Type	Vehicle Defect	
	VIN #####		Vehicle Description CHEVROLET		Make SILVERADO	Model	Color	Year 2009	Vehicle Type Pickup truck			
	Location of Greatest Damage 02		First Impact 02	Extent of Damage 2	Driveable Yes	Vehicle Direction N	Vehicle Use 01 - Private		Action Prior 23 - Parked			
	Sequence of Events ● 17 - Motor veh in transport (● indicates MOST harmful event)											
	PASSENGERS	Passenger Information				Date of Birth (Age)	Sex	Position	Restraint	Hospital		
Injury				Airbag Deployed	Ejected	Trapped	Ambulance					
Passenger Information				Date of Birth (Age)	Sex	Position	Restraint	Hospital				
Injury				Airbag Deployed	Ejected	Trapped	Ambulance					
Passenger Information				Date of Birth (Age)	Sex	Position	Restraint	Hospital				
Injury				Airbag Deployed	Ejected	Trapped	Ambulance					
Passenger Information				Date of Birth (Age)	Sex	Position	Restraint	Hospital				
Injury				Airbag Deployed	Ejected	Trapped	Ambulance					
Passenger Information				Date of Birth (Age)	Sex	Position	Restraint	Hospital				
Injury				Airbag Deployed	Ejected	Trapped	Ambulance					
TRUCK / BUS	Carrier Information					Carrier Source GVWR	ICCMC	USDOT	MPSC			
	Driver's CDL Type					Endorsements OH OP OT ON OS OX	CDL Exempt <input type="radio"/> Farm <input type="radio"/> Other	CDL Restrictions 028 029 030 035 036				
	Interstate/Intrastate	Vehicle Type	Type & Axle Per Unit First Second Third Fourth		Cargo Body Type	Medical Card	Hazardous Material <input type="radio"/> Placard <input type="radio"/> Cargo Spill		ID #	Class #		
OWNERS	Owner Information ##### ##### #####, ## ####-#### (###) ###-####					Owner Information						
	Witness Information					Witness Information						
WITNESS	Investigated at Scene Yes					Reported Date (Time) 07/13/2015 (15:54)		1st Investigator Name (Badge) C. HUCK (85)		2nd Investigator Name (Badge)		Photos By
	Narrative WHILE BACKING DOWN KIRKTON TO DELIVER A LOAD OF CONCRETE, VEHICLE 1 BACKED INTO VEHICLE 2, WHO WAS PARKED ON THE WEST SIDE OF THE ROADWAY.					Diagram 						

Authority: 1949 PA 300, Sec.257-622
Compliance: Required MSP UD-10E
Penalty: \$100 and/or 90 days (Rev 01/2016)

External # 0906664
Crash ID 1435476

Page 01 of 01
File Class 93001

Incident # 180022587

Reviewer SZUMINSKI (100902)

STATE OF MICHIGAN TRAFFIC CRASH REPORT

ORI MI 6378400		Department Name Troy Police Department								
Crash Date 07/12/2018	Crash Time 14:20	No. of Units 02	Crash Type Other	Special Circumstances <input checked="" type="radio"/> None <input type="radio"/> Fleeing Police <input type="radio"/> Hit and Run <input type="radio"/> Unknown <input type="radio"/> School Bus <input type="radio"/> Animal			Special Checks <input type="radio"/> Fatal <input type="radio"/> Non-Traffic Area <input type="radio"/> ORV/Snowmobile			
County 63 - Oakland	Traffic Control None		Relation to Roadway On the Road		Weather Cloudy		Area NON-FRWY Straight Roadway			
City/Twsp 84 - Troy	Contributing Circumstances 1st None		2nd		Light Daylight	Road Surface Condition Dry	Total Lanes 02	Speed Limit 25	Posted Yes	
Work Zone (if applicable) Type Workers Present Activity Location										

LOCATION	Prefix	Primary Road Name STARR	Road Type RD	Suffix	Divided Roadway
	Distance / Direction 40 Feet E				
	Trafficway Not Physically Divided				
	Prefix	Intersecting Road Name KIRKTON	Road Type	Suffix	Divided Roadway

UNIT / DRIVER	Unit Number 01	Unit Known Yes	State MI	Driver License Number #####	Date of Birth (Age) ###/###/#### (50)	License Type <input type="radio"/> Operator <input checked="" type="radio"/> Chauffeur <input type="radio"/> Moped	Endorsements <input type="radio"/> Cycle <input type="radio"/> Farm <input type="radio"/> Recreation	Sex M	Total Occupants 02	Hazardous Action Improper Backing
	Unit Type MV	Driver Information ##### STERLING HEIGHTS, MI 48310-5210 (###) ###-####				Driver is Owner No	Injury O	Position Front - Left		Restraint Shoulder and Lap Belt
	Driver Condition at Time of Crash 1st Appeared Normal				2nd		Driver Distracted By Unknown		Ejected	Trapped
	Hospital NONE				Ambulance NONE					
	Alcohol Suspected No	Contributing Factor No	Alcohol Test Type <input type="radio"/> Breath <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> PBT <input type="radio"/> Refused <input checked="" type="radio"/> Not Offered			Alcohol Test Results <input type="radio"/> Pending		Test Results: Interlock Device No		
	Drug Suspected No	Contributing Factor No	Drug Test Type <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> Refused <input checked="" type="radio"/> Not Offered			Drug Test Results <input type="radio"/> Pending		Test Results: Citation Issued <input type="radio"/> Hazardous <input type="radio"/> Other		
	Vehicle Registration BA38938		State MI	Vehicle Description Year 2007		Make PETERBILT	Model 335	Color YELLOW		
	VIN 2NPLLD9XX7M677395		Vehicle Type Truck / Bus		Special Vehicles Not Applicable		Private Trailer Type	Vehicle Defect		
	Automation System(s) in Vehicle		Automation System Level in Vehicle				Automation System Level Engaged at Time of Crash			
	Insurance Company #####			Insurance Policy # #####			Towed By		Towed To	
Location of Greatest Damage 04		First Impact 04	Extent of Damage (Power Unit and/or Trailers) Minor Damage		Vehicle Direction E	Vehicle Use Commercial (Business)		Action Prior Backing		
Sequence of Events First ● 18 - Parked Motor Vehicle (● indicates MOST harmful event)										

PASSENGERS	Passenger Information				Date of Birth (Age)	Sex	Position	Restraint
					Injury	Ejected	Trapped	Airbag Deployed
	Hospital				Ambulance			
	Passenger Information				Date of Birth (Age)	Sex	Position	Restraint
					Injury	Ejected	Trapped	Airbag Deployed
	Hospital				Ambulance			

TRUCK / BUS	Carrier Information TRINGALI SANITATION INC. 33373 DEQUINDRE TROY, MI 48083				USDOT 000001634930		MC	MPSC
					Driver's CDL Type Group A	Endorsements <input type="radio"/> H <input type="radio"/> P <input type="radio"/> T <input type="radio"/> N <input type="radio"/> S <input type="radio"/> X	CDL Exempt <input type="radio"/> Farm <input type="radio"/> Other	
	GVWR/GCWR <input type="radio"/> 10,000 lbs. or Less <input type="radio"/> 10,001 - 26,000 lbs. <input checked="" type="radio"/> Greater than 26,000 lbs.		Vehicle Configuration Single-Unit 3+ Axles		Cargo Body Type 7	Medical Card Yes	Hazardous Material <input type="radio"/> Placard <input type="radio"/> Cargo Spill	ID #

OWNERS	Owner Information				Owner Information			

Damaged Property	Public	Owner & Phone

UNIT / DRIVER	Unit Number 02	Unit Known No	State Driver License Number #####		Date of Birth (Age) ##/##/####	License Type ○ Operator ○ Chauffeur ○ Moped	Endorsements ○ Cycle ○ Farm ○ Recreation	Sex	Total Occupants 00	Hazardous Action		
	Unit Type MV	Driver Information ##### (###) ###-####				Driver is Owner No	Injury	Position		Restraint		
	Driver Condition at Time of Crash 1st 2nd				Driver Distracted By Unknown		Ejected	Trapped	Airbag Deployed			
	Hospital NONE				Ambulance NONE							
	Alcohol Suspected No	Contributing Factor No	Alcohol Test Type ○ Breath ○ Blood ○ Urine ○ Field ○ PBT ○ Refused ○ Not Offered			Alcohol Test Results ○ Pending Test Results:		Interlock Device No				
	Drug Suspected No	Contributing Factor No	Drug Test Type ○ Blood ○ Urine ○ Field ○ Refused ○ Not Offered			Drug Test Results ○ Pending Test Results:		Citation Issued ○ Hazardous ○ Other				
	Vehicle Registration 4KAVITA	State MI	Vehicle Description 2017	Year	Make TOYOTA	Model HIGHLANDER	Color BLACK					
	VIN 5TDJZRFH5HS434838	Vehicle Type Passenger Car, SUV, Van		Special Vehicles Not Applicable		Private Trailer Type	Vehicle Defect					
	Automation System(s) in Vehicle		Automation System Level in Vehicle			Automation System Level Engaged at Time of Crash						
	Insurance Company #####			Insurance Policy # #####			Towed By PRIVATE TOW		Towed To			
Location of Greatest Damage 08	First Impact 08	Extent of Damage (Power Unit and/or Trailers) Disabling Damage		Vehicle Direction W	Vehicle Use Private		Action Prior Parked					
Sequence of Events ● First ● 17 - Motor Veh in Transport (● indicates MOST harmful event)										Second	Third	Fourth
PASSENGERS	Passenger Information				Date of Birth (Age)	Sex	Position		Restraint			
					Injury	Ejected	Trapped	Airbag Deployed				
	Hospital				Ambulance							
	Passenger Information				Date of Birth (Age)	Sex	Position		Restraint			
				Injury	Ejected	Trapped	Airbag Deployed					
Hospital				Ambulance								
TRUCK / BUS	Carrier Information				USDOT	MC	MPSC					
					Driver's CDL Type OH OP OT ON OS OX	Endorsements	CDL Exempt ○ Farm ○ Other					
GVWR/GCWR ○ 10,000 lbs. or Less ○ 10,001 - 26,000 lbs. ○ Greater than 26,000 lbs.				Vehicle Configuration		Cargo Body Type	Medical Card	Hazardous Material ○ Placard ○ Cargo Spill		ID # Class #		
OWNERS	Owner Information ##### ##### #####, ## #####-#### (###) ###-####				Owner Information							
WITNESS	Witness Information				Witness Information							
Investigated at Scene Yes	Reported Date (Time) 07/12/2018 (14:20)	1st Investigator Name (Badge) M. STANSBURY (24)			2nd Investigator Name (Badge)			Photos No				
Narrative DRIVER #1 WAS BACKING AND STRUCK VEHICLE #2. NO CITATION ISSUED.					Diagram 							

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.*



TRAFFIC COMMITTEE REPORT

July 15, 2020

TO: Traffic Committee

FROM: Bill Huotari, City Engineer/ Traffic Engineer

SUBJECT: Request for Traffic Control
Bridgepark Drive at Glendale Drive

Background:

Dan Cafferty of 930 Bridgepark Drive states that the lack of ALL-WAY STOP control at the intersection of Bridgepark Drive and Glendale Drive creates a hazardous condition.

Glendale Drive is currently controlled by a Yield sign, while Bridgepark Drive is uncontrolled.

There were two (2) crashes recorded in the past five (5) years.

The posted speed limit on both streets is 25 mph.

Bridgepark Drive would be considered the major road as it is a "half-mile" road which provides direct access to Crooks Road.

The major potential sight distance obstruction at the intersection would be a house corner on the northeast quadrant of the intersection.

For a vehicle traveling on southbound on Glendale Drive, the safe approach speed was found to be 16.3 mph.

The OHM recommendation is to retain the existing YIELD sign on the Glendale Drive approach to the intersection.

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

July 15, 2020

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

RE: Traffic Control Recommendation for
Bridge Park Drive at Glendale Drive

Dear Mr. Huotari:

As requested, we have reviewed the intersection of Bridge Park Drive at Glendale Drive to determine the proper traffic control. Bridge Park Drive at Glendale Drive is a 3-legged intersection located approximately 420 feet east of Crooks Road and about 3,000 feet south of South Boulevard. The speed limit on both streets under investigation is 25 mph. Glendale Drive is YIELD-controlled on approach to Bridge Park Drive. The west leg comes in at a slight skew. Attached are aerial and intersection photos.

Types of Roadways

Both Bridge Park Drive and Glendale Drive are considered local streets. Bridge Park Drive runs east / west, providing direct access between the existing local neighborhood and Crooks Road. Glendale Drive runs north / south, providing access to Selby Drive, which connects to the northern part of the neighborhood. Glendale Drive ends at a cul-de-sac only a couple hundred feet north of the subject intersection.

The surrounding land use is entirely single-family residential. On-street parking is permitted on the south side of Bridge Park Drive and on the east side of Glendale Drive. Glendale Drive is currently under YIELD-control on the southbound approach and would be considered the minor road at the intersection, while Bridge Park Drive would be considered the major road as it is a "half-mile" road which provides direct access to Crooks Road.

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 two (2) crashes recorded in the past full five (5) years within a 250' radius of the intersection. One crash was a head-on collision between a vehicle sweeping too wide while turning right onto Bridge Park Drive from Glendale Drive striking a vehicle traveling east on Bridge Park Drive. There were no injuries reported. The second crash involved a vehicle backing out of their driveway onto Bridge Park Drive and a vehicle



turning left from Glendale Drive onto Bridge Park Drive. Again, no injuries were reported. 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 due to the ongoing COVID-19 pandemic response and the subsequent effect of diminished traffic volumes. 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).

Historical traffic volumes on westbound Bridge Park Drive at Crooks Road were reviewed. These volumes are available from the RCOC Traffic Count Database System, collected via SCATS traffic signal detection. Average daily traffic volumes for westbound traffic throughout 2018 and 2019 were typically under 300 vehicles per day, with a peak hour of less than 50 westbound vehicles. Traffic volumes for eastbound were not available, but are expected to be about the same volume, just at different times of day.

It is therefore extremely unlikely that Bridge Park 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 Glendale Drive is similarly unlikely to average at least 200 units for any 8 hours. Additionally, since the posted speed limit is only 25mph, it is reasonable to assume that the 85th 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 has not been met.

Approach Speed Limits

The approach speed limit on all study 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.

Sight Distance

The major potential sight distance obstruction at the intersection of Bridge Park Drive at Glendale Drive for a motorist traveling southbound on Glendale Drive would be a house corner on the northeast quadrant of the intersection. Reference the attachments for intersection photos. 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 on Glendale Drive is 16.3 mph for southbound vehicles. Thus, based on the safe approach speed calculations, YIELD-control is appropriate for the Glendale approach. The safe approach speed calculation spreadsheet for the intersection is attached for your reference.



Recommendation

The preceding analysis did not determine that any criteria were met for all-way STOP-control. The safe approach speed calculations determined that YIELD-control would be the appropriate traffic control treatment on the Glendale Drive approach.

OHM recommends retaining the existing YIELD sign on the Glendale Drive approach. Finally, we would recommend posting a “No Parking Here to Corner” sign on the east side of Glendale Drive to prevent parked vehicles from obstructing the 25’ clear sight triangle. The intersection should be reevaluated if traffic volumes increase or more crashes begin to occur.

Sincerely,

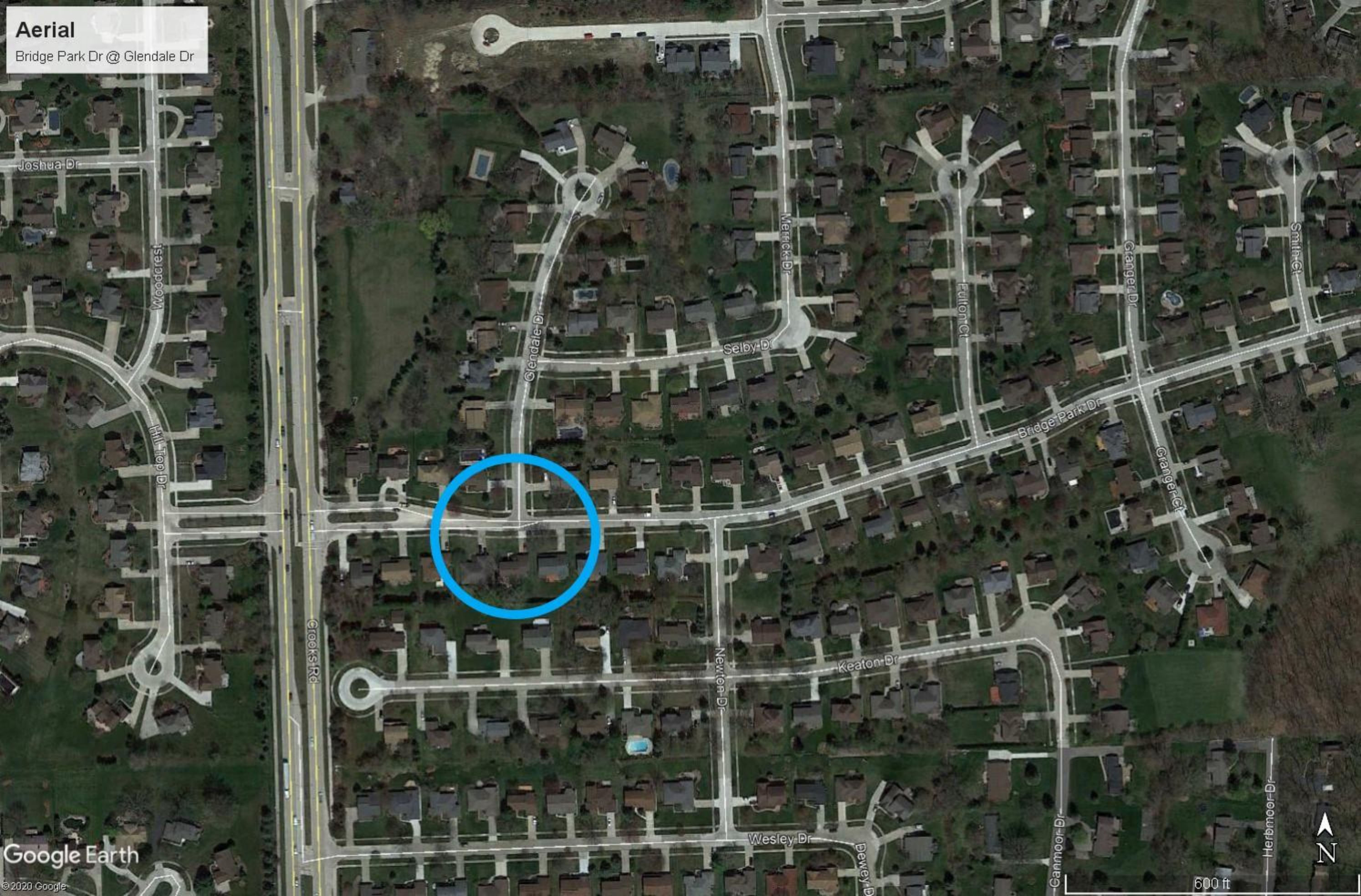
OHM Advisors

Matt Clark, EIT
Traffic Engineer

Sara Merrill, PE, PTOE
Traffic Project Manager

Attachments:

- Aerial Photo
- Safe Approach Speed Calculation Spreadsheets
- Intersection Photos
- Traffic Control Determination Reference Guide
- UD 10 Crash Reports



Safe Approach Speed Calculation

Bridgepark at Glendale City of Troy

Measured:

Width of Roads

Road 1 = 28 (ft)

Road 2 = 28 (ft)

Distance to Obstruction

a = 50 (ft)

b = 51 (ft)

c = 50 (ft)

d = 55 (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

TRUE 16.3 (mph) [Based on Veh. A]

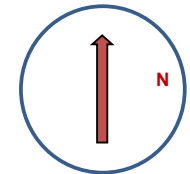
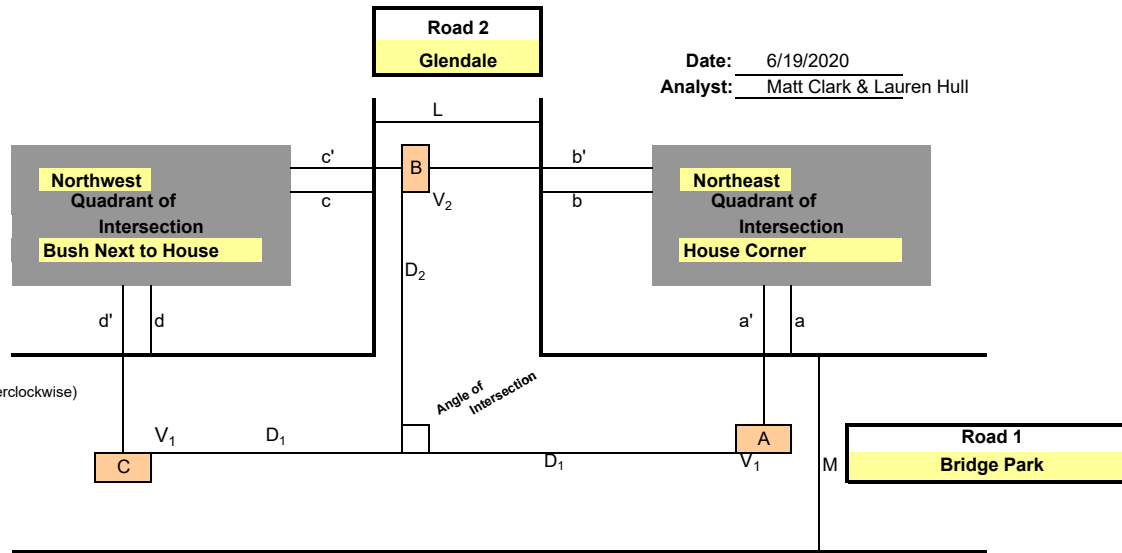
FALSE or $V_2 = 16.7$ (mph) [Based on Veh. C]

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:

$D_1 = 196$

$D_{2A} = 85$

$D_{2C} = 87.7$

a' = 56

b' = 67

c' = 56

d' = 71

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: Bridge Park Drive- Heading East and Looking Left
Date: 06/19/2020 **Photographer:** Matt Clark



Photograph No. 2: Bridge Park Drive- Heading East
Date: 06/19/2020 **Photographer:** Matt Clark



Photograph No. 3: Bridge Park Drive- Heading West and Looking Right
Date: 06/19/2020 **Photographer:** Matt Clark



Photograph No. 4: Bridge Park Drive- Heading West
Date: 06/19/2020 **Photographer:** Matt Clark



Photograph No. 5: Glendale Drive- Heading North
Date: 06/19/2020 **Photographer:** Matt Clark



Photograph No. 6: Glendale Drive- Heading South and Looking Left
Date: 06/19/2020 **Photographer:** Matt Clark



Photograph No. 7: Glendale Drive- Heading South and Looking Right
Date: 06/19/2020 **Photographer:** Matt Clark



Photograph No. 8: Glendale Drive- Heading South
Date: 06/19/2020 **Photographer:** Matt Clark

Reference Guide on Traffic Control Determination in the State of Michigan

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- 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.*

Authority: 1949 PA 300, Sec.257-622
Compliance: Required MSP UD-10E
Penalty: \$100 and/or 90 days (Rev 01/2016)

External #
0968032

Crash ID
1631902

Page 01 of 01
File Class C3145

Incident #
190004092

Reviewer
VILLEROT (139109)

STATE OF MICHIGAN TRAFFIC CRASH REPORT

ORI MI 6378400		Department Name Troy Police Department								
Crash Date 02/02/2019	Crash Time 12:00	No. of Units 02	Crash Type Other	Special Circumstances <input checked="" type="radio"/> None <input type="radio"/> Fleeing Police <input type="radio"/> Hit and Run <input type="radio"/> Unknown <input type="radio"/> School Bus <input type="radio"/> Animal			Special Checks <input type="radio"/> Fatal <input type="radio"/> Non-Traffic Area <input type="radio"/> ORV/Snowmobile			
County 63 - Oakland	Traffic Control None		Relation to Roadway On the Road		Weather Clear		Area INTR Within Intersection			
City/Twsp 84 - Troy	Contributing Circumstances 1st None		2nd		Light Daylight	Road Surface Condition Dry	Total Lanes 02	Speed Limit 25	Posted Yes	
Work Zone (if applicable) Type Workers Present Activity Location										

Prefix	Primary Road Name BRIDGE PARK	Road Type DR	Suffix	Divided Roadway
Distance / Direction AT		Trafficway Not Physically Divided		
Prefix	Intersecting Road Name GLENDALE	Road Type	Suffix	Divided Roadway

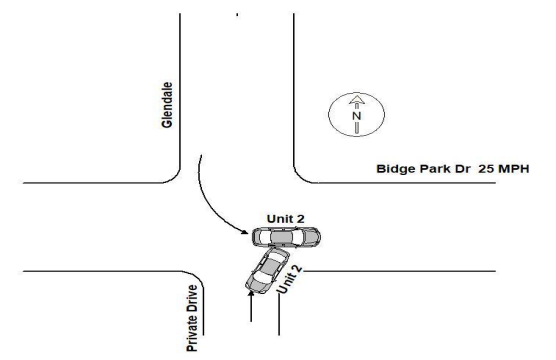
Unit Number 01	Unit Known Yes	State MI	Driver License Number #####	Date of Birth (Age) ###/##/#### (63)	License Type <input checked="" type="radio"/> Operator <input type="radio"/> Chauffeur <input type="radio"/> Moped	Endorsements <input type="radio"/> Cycle <input type="radio"/> Farm <input type="radio"/> Recreation	Sex M	Total Occupants 01	Hazardous Action Improper Backing	
Unit Type MV	Driver Information ##### ##### TROY, MI 48098-1857 (###) ###-####				Driver is Owner Yes	Injury O	Position Front - Left		Restraint Shoulder and Lap Belt	
Driver Condition at Time of Crash 1st Unknown				2nd		Driver Distracted By Unknown		Ejected	Trapped	Airbag Deployed Not Deployed
Hospital NONE		Ambulance NONE								
Alcohol Suspected No	Contributing Factor No	Alcohol Test Type <input type="radio"/> Breath <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> PBT <input type="radio"/> Refused <input checked="" type="radio"/> Not Offered			Alcohol Test Results <input type="radio"/> Pending Test Results:		Interlock Device No			
Drug Suspected No	Contributing Factor No	Drug Test Type <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> Refused <input checked="" type="radio"/> Not Offered			Drug Test Results <input type="radio"/> Pending Test Results:		Citation Issued <input type="radio"/> Hazardous <input type="radio"/> Other			
Vehicle Registration A43PZ	State MI	Vehicle Description 2018	Make BMW	Model 340	Color RED					
VIN WBA8B7C59JA573081	Vehicle Type Passenger Car, SUV, Van		Special Vehicles Not Applicable	Private Trailer Type	Vehicle Defect					
Automation System(s) in Vehicle		Automation System Level in Vehicle			Automation System Level Engaged at Time of Crash					
Insurance Company #####		Insurance Policy # #####			Towed By		Towed To			
Location of Greatest Damage 04	First Impact 04	Extent of Damage (Power Unit and/or Trailers) Minor Damage		Vehicle Direction N	Vehicle Use Private		Action Prior Backing			
Sequence of Events First ● 17 - Motor Veh in Transport (● indicates MOST harmful event)										

PASSENGERS	Passenger Information			Date of Birth (Age)	Sex	Position	Restraint
				Injury	Ejected	Trapped	Airbag Deployed
	Hospital			Ambulance			
PASSENGERS	Passenger Information			Date of Birth (Age)	Sex	Position	Restraint
				Injury	Ejected	Trapped	Airbag Deployed
	Hospital			Ambulance			

TRUCK/BUS	Carrier Information			USDOT	MC	MPSC	
				Driver's CDL Type	Endorsements <input type="radio"/> H <input type="radio"/> P <input type="radio"/> T <input type="radio"/> N <input type="radio"/> S <input type="radio"/> O <input type="radio"/> X	CDL Exempt <input type="radio"/> Farm <input type="radio"/> Other	
	GVWR/GCWR <input type="radio"/> 10,000 lbs. or Less <input type="radio"/> 10,001 - 26,000 lbs. <input type="radio"/> Greater than 26,000 lbs.	Vehicle Configuration		Cargo Body Type	Medical Card	Hazardous Material <input type="radio"/> Placard <input type="radio"/> Cargo Spill	ID #

OWNERS	Owner Information ##### ##### #####, ## #####-#### (###) ###-####			Owner Information		
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Damaged Property	Public	Owner & Phone
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UNIT / DRIVER	Unit Number 02	Unit Known Yes	State MI	Driver License Number #####	Date of Birth (Age) ##/##/#### (30)	License Type <input checked="" type="radio"/> Operator <input type="radio"/> Chauffeur <input type="radio"/> Moped	Endorsements <input type="radio"/> Cycle <input type="radio"/> Farm <input type="radio"/> Recreation	Sex F	Total Occupants 01	Hazardous Action None
	Unit Type MV	Driver Information ##### ##### TROY, MI 48098-2408 (###) ###-####				Driver is Owner Yes	Injury O	Position Front - Left		Restraint Shoulder and Lap Belt
	Driver Condition at Time of Crash 1st Unknown				2nd Driver Distracted By Unknown		Ejected	Trapped	Airbag Deployed Not Deployed	
	Hospital NONE					Ambulance NONE				
	Alcohol Suspected No	Contributing Factor No	Alcohol Test Type <input type="radio"/> Breath <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> PBT <input type="radio"/> Refused <input checked="" type="radio"/> Not Offered			Alcohol Test Results <input type="radio"/> Pending	Test Results:		Interlock Device No	
	Drug Suspected No	Contributing Factor No	Drug Test Type <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> Refused <input checked="" type="radio"/> Not Offered			Drug Test Results <input type="radio"/> Pending	Test Results:		Citation Issued <input type="radio"/> Hazardous <input type="radio"/> Other	
	Vehicle Registration DHR4594	State MI	Vehicle Description Year 2017	Make FORD	Model FUSION	Color WHITE				
	VIN 3FA6P0HD5HR156372	Vehicle Type Passenger Car, SUV, Van		Special Vehicles Not Applicable	Private Trailer Type	Vehicle Defect				
	Automation System(s) in Vehicle		Automation System Level in Vehicle			Automation System Level Engaged at Time of Crash				
	Insurance Company #####		Insurance Policy # #####			Towed By		Towed To		
Location of Greatest Damage 03	First Impact 03	Extent of Damage (Power Unit and/or Trailers) Minor Damage		Vehicle Direction E	Vehicle Use Private		Action Prior Going Straight Ahead			
Sequence of Events First <input checked="" type="radio"/> 17 - Motor Veh in Transport Second Third Fourth (<input checked="" type="radio"/> indicates MOST harmful event)										
PASSENGERS	Passenger Information				Date of Birth (Age)	Sex	Position		Restraint	
					Injury	Ejected	Trapped	Airbag Deployed		
	Hospital				Ambulance					
	Passenger Information				Date of Birth (Age)	Sex	Position		Restraint	
					Injury	Ejected	Trapped	Airbag Deployed		
	Hospital				Ambulance					
TRUCK / BUS	Carrier Information				USDOT	MC	MPSC			
					Driver's CDL Type OH O P O T ON O S O X	Endorsements OH O P O T ON O S O X	CDL Exempt <input type="radio"/> Farm <input type="radio"/> Other			
	GVWR/GCWR <input type="radio"/> 10,000 lbs. or Less <input type="radio"/> 10,001 - 26,000 lbs. <input type="radio"/> Greater than 26,000 lbs.		Vehicle Configuration		Cargo Body Type	Medical Card	Hazardous Material <input type="radio"/> Placard <input type="radio"/> Cargo Spill		ID #	Class #
OWNERS	Owner Information ##### ##### #####, ## #####-#### (###) ###-####				Owner Information					
	Witness Information				Witness Information					
WITNESS	Investigated at Scene No				Reported Date (Time) 02/02/2019 (12:00)		1st Investigator Name (Badge) D KITTENDORF (581)		2nd Investigator Name (Badge)	
	Photos No									
Narrative VEH #2 TURNED EAST ON BRIDGE PARK FROM GLENDALE. VEH #1 BACK FROM PRIVATE DRIVE AND STRUCK VEH #2 ON PASSENGER SIDE REAR DOOR.					Diagram 					

Authority: 1949 PA 300, Sec.257-622
Compliance: Required MSP UD-10E
Penalty: \$100 and/or 90 days (Rev 01/2016)

External #
1062150

Crash ID
1914265

Page 01 of 01
File Class 93001

Incident #
190043705

Reviewer
NOVAK (104493)

STATE OF MICHIGAN TRAFFIC CRASH REPORT

ORI MI 6378400		Department Name Troy Police Department							
Crash Date 12/19/2019	Crash Time 07:02	No. of Units 02	Crash Type Head On	Special Circumstances <input checked="" type="radio"/> None <input type="radio"/> Fleeing Police <input type="radio"/> Hit and Run <input type="radio"/> Unknown <input type="radio"/> School Bus <input type="radio"/> Animal		Special Checks <input type="radio"/> Fatal <input type="radio"/> Non-Traffic Area <input type="radio"/> ORV/Snowmobile			
County 63 - Oakland	Traffic Control Yield Sign	Relation to Roadway On the Road		Weather Clear		Area INTR Within Intersection			
City/Twsp 84 - Troy	Contributing Circumstances 1st None		2nd		Light Dark-Unlighted	Road Surface Condition Dry	Total Lanes 02	Speed Limit 25	Posted Yes
Work Zone (if applicable) Type Workers Present Activity Location									

Prefix	Primary Road Name BRIDGE PARK	Road Type DR	Suffix	Divided Roadway
Distance / Direction AT		Trafficway Not Physically Divided		
Prefix	Intersecting Road Name GLENDALE	Road Type RD	Suffix	Divided Roadway

Unit Number 01	Unit Known Yes	State MI	Driver License Number #####	Date of Birth (Age) ###/###/#### (17)	License Type <input checked="" type="radio"/> Operator <input type="radio"/> Chauffeur <input type="radio"/> Moped	Endorsements <input type="radio"/> Cycle <input type="radio"/> Farm <input type="radio"/> Recreation	Sex F	Total Occupants 01	Hazardous Action Drove Left of Center	
Unit Type MV	Driver Information ##### ##### TROY, MI 48098-1719 (###) ###-####				Driver is Owner No	Injury O	Position Front - Left		Restraint Shoulder and Lap Belt	
Driver Condition at Time of Crash 1st Appeared Normal				2nd		Driver Distracted By Unknown		Ejected	Trapped	Airbag Deployed Not Deployed
Hospital NONE		Ambulance NONE								
Alcohol Suspected No	Contributing Factor No	Alcohol Test Type <input type="radio"/> Breath <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> PBT <input type="radio"/> Refused <input checked="" type="radio"/> Not Offered			Alcohol Test Results <input type="radio"/> Pending Test Results:		Interlock Device No			
Drug Suspected No	Contributing Factor No	Drug Test Type <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> Refused <input checked="" type="radio"/> Not Offered			Drug Test Results <input type="radio"/> Pending Test Results:		Citation Issued <input type="radio"/> Hazardous <input type="radio"/> Other			
Vehicle Registration DTJ6930	State MI	Vehicle Description 2015	Year	Make HYUNDAI	Model SONATA	Color GRAY				
VIN 5NPE24AF8FH232447	Vehicle Type Passenger Car, SUV, Van		Special Vehicles Not Applicable		Private Trailer Type	Vehicle Defect				
Automation System(s) in Vehicle No		Automation System Level in Vehicle No Automation			Automation System Level Engaged at Time of Crash No Automation					
Insurance Company #####		Insurance Policy # #####			Towed By PRIVATE		Towed To			
Location of Greatest Damage 08	First Impact 08	Extent of Damage (Power Unit and/or Trailers) Disabling Damage		Vehicle Direction W	Vehicle Use Private		Action Prior Turning Right			
Sequence of Events First ● 17 - Motor Veh in Transport (● indicates MOST harmful event)										

PASSENGERS	Passenger Information			Date of Birth (Age)	Sex	Position	Restraint
				Injury	Ejected	Trapped	Airbag Deployed
Hospital				Ambulance			
PASSENGERS	Passenger Information			Date of Birth (Age)	Sex	Position	Restraint
				Injury	Ejected	Trapped	Airbag Deployed
Hospital				Ambulance			

TRUCK/BUS	Carrier Information				USDOT	MC	MPSC		
					Driver's CDL Type	Endorsements OH OP OT ON OS OX	CDL Exempt <input type="radio"/> Farm <input type="radio"/> Other		
	GVWR/GCWR <input type="radio"/> 10,000 lbs. or Less <input type="radio"/> 10,001 - 26,000 lbs. <input type="radio"/> Greater than 26,000 lbs.				Vehicle Configuration	Cargo Body Type	Medical Card	Hazardous Material <input type="radio"/> Placard <input type="radio"/> Cargo Spill	ID #

OWNERS	Owner Information				Owner Information			

Damaged Property	Public	Owner & Phone

UNIT / DRIVER	Unit Number	02	Unit Known	Yes	State	MI	Driver License Number	#####	Date of Birth (Age)	###/###/#### (16)	License Type	<input checked="" type="radio"/> Operator <input type="radio"/> Chauffeur <input type="radio"/> Moped	Endorsements	<input type="radio"/> Cycle <input type="radio"/> Farm <input type="radio"/> Recreation	Sex	F	Total Occupants	01	Hazardous Action	None					
	Unit Type	MV	Driver Information							Driver is Owner	No	Injury	O	Position	Front - Left	Restraint									
	##### ##### WATERFORD, MI 48329-2877 (###) ###-####																								
	Driver Condition at Time of Crash									Driver Distracted By					Ejected	Trapped	Airbag Deployed								
	1st Appeared Normal									2nd Not Distracted					Not Deployed										
	Hospital										Ambulance														
	NONE										NONE														
	Alcohol Suspected	No	Contributing Factor	No	Alcohol Test Type					Alcohol Test Results					Interlock Device										
	<input type="radio"/> Breath <input type="radio"/> Field <input type="radio"/> Blood <input type="radio"/> PBT <input type="radio"/> Urine <input type="radio"/> Refused <input checked="" type="radio"/> Not Offered					<input type="radio"/> Pending Test Results:					No														
	Drug Suspected	No	Contributing Factor	No	Drug Test Type					Drug Test Results					Citation Issued										
<input type="radio"/> Blood <input type="radio"/> Field <input type="radio"/> Urine <input type="radio"/> Refused <input checked="" type="radio"/> Not Offered					<input type="radio"/> Pending Test Results:					<input type="radio"/> Hazardous <input type="radio"/> Other															
Vehicle Registration	EDX9025	State	MI	Vehicle Description	Year	2019	Make	HONDA	Model	HR-V	Color	BLACK													
VIN	3CZRU6H34KG728491			Vehicle Type	Passenger Car, SUV, Van			Special Vehicles	Not Applicable			Private Trailer Type	Vehicle Defect												
Automation System(s) in Vehicle				No				Automation System Level in Vehicle				No Automation				Automation System Level Engaged at Time of Crash				No Automation					
Insurance Company				#####				Insurance Policy #				#####				Towed By				A & M TROY					
Towed To																									
Location of Greatest Damage	08	First Impact	08	Extent of Damage (Power Unit and/or Trailers)					Disabling Damage					Vehicle Direction	E			Vehicle Use	Private			Action Prior	Going Straight Ahead		
Sequence of Events				First				Second				Third				Fourth									
<input checked="" type="radio"/> 17 - Motor Veh in Transport (• indicates MOST harmful event)																									
PASSENGERS	Passenger Information								Date of Birth (Age)		Sex	Position			Restraint										
									Injury	Ejected	Trapped	Airbag Deployed													
	Hospital								Ambulance																
	Passenger Information								Date of Birth (Age)		Sex	Position			Restraint										
								Injury	Ejected	Trapped	Airbag Deployed														
Hospital								Ambulance																	
TRUCK / BUS	Carrier Information								USDOT				MC		MPSC										
									Driver's CDL Type				Endorsements				CDL Exempt								
									<input type="radio"/> H <input type="radio"/> P <input type="radio"/> T <input type="radio"/> N <input type="radio"/> S <input type="radio"/> X				<input type="radio"/> Farm <input type="radio"/> Other												
	GVWR/GCWR				<input type="radio"/> 10,000 lbs. or Less <input type="radio"/> 10,001 - 26,000 lbs. <input type="radio"/> Greater than 26,000 lbs.				Vehicle Configuration		Cargo Body Type		Medical Card		Hazardous Material		<input type="radio"/> Placard <input type="radio"/> Cargo Spill		ID #	Class #					
OWNERS	Owner Information								Owner Information																
WITNESS	Witness Information								Witness Information																
Investigated at Scene	Yes	Reported Date (Time)	12/19/2019 (07:02)			1st Investigator Name (Badge)			M. STANSBURY (24)			2nd Investigator Name (Badge)						Photos	No						
Narrative										Diagram															
DRIVER #1 DROVE LEFT OF CENTER COLLIDING WITH VEHICLE #2. THE FATHER OF DRIVER #1 ARRIVED ON SCENE AND THE STEPMOTHER OF DRIVER #2 ARRIVED ON SCENE.																									



TRAFFIC COMMITTEE REPORT

July 15, 2020

TO: Traffic Committee

FROM: Bill Huotari, City Engineer/ Traffic Engineer

SUBJECT: Request for Traffic Control
Cliffside Drive at Highbury Drive

Background:

Ron Borycki of 2147 Jeffrey Drive states that the lack of ALL-WAY STOP control at the intersection of Cliffside Drive and Highbury Drive creates a hazardous condition.

Highbury Drive is currently controlled by Stop signs, while Cliffside Drive is uncontrolled.

There were two (2) crashes recorded in the past five (5) years.

The posted speed limit on both streets is 25 mph.

Cliffside Drive was considered the major road as it is uncontrolled at the intersection.

The major potential sight distance obstruction at the intersection for a motorist traveling southwest-bound on Highbury Drive would be a house corner on the west quadrant of the intersection.

For a vehicle traveling southwest-bound on Highbury Drive, the safe approach speed was found to be 15 mph.

OHM did also review a resident concern about the high crown of the road at the intersection and concurs that the slight grade breaks do indeed require drivers to slow down when approaching the intersection and OHM did witness this during their review.

While this behavior could confuse drivers already stopped on Highbury Drive, who may perceive that the intersection is under ALL-WAY STOP control, there are no documented crashes in the past 10+ years relating to this condition. Rather, it appears that the need for traffic on Cliffside Drive to decelerate through the intersection provides a traffic calming effect, reducing vehicular speeds in the immediate vicinity.

OHM recommends retaining the existing STOP signs on Highbury Drive.

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

July 22nd, 2020

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

RE: Traffic Control Recommendation for
Cliffside Drive at Highbury Drive

Dear Mr. Huotari:

As requested, we have reviewed the intersection of Cliffside Drive at Highbury Drive to determine the proper traffic control. Cliffside Drive at Highbury Drive is a 4-legged intersection located approximately 0.25 miles east of John R Road and about 0.35 miles south of Square Lake Road. The speed limit on both streets under investigation is 25 mph. Highbury Drive is STOP-controlled on approach to Cliffside Drive. Attached are aerial and intersection photos.

Types of Roadways

Both Cliffside Drive and Highbury Drive are considered local streets. Cliffside Drive runs northeast / southwest, providing access to / from Square Lake Road (minor arterial). Highbury Drive runs northwest / southeast, providing access to / from John R Road (minor arterial).

The surrounding land use is entirely single-family residential. On-street parking is permitted on the southwest side of Highbury Drive and on the northwest side of Cliffside Drive. Highbury Drive is currently under STOP-control on the northwest and southeast approaches. For the present analysis, Cliffside Drive was considered the major road as it is uncontrolled at the intersection.

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 two (2) crashes recorded in the past full five (5) years within a 250' radius of the intersection. Both crashes were a result of backing. One of the backing crashes occurred between a vehicle backing up in the middle of the intersection on eastbound Highbury Drive due to a missed turn and striking a vehicle traveling southbound on Cliffside Drive. There were no injuries reported. The second crash involved a vehicle backing out of their driveway onto Cliffside Drive when they struck a parked vehicle on the opposite side of the street. Again, no injuries were reported. 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 due to the ongoing COVID-19 pandemic response and the subsequent effect of diminished traffic volumes. Traffic volumes in residential areas are predominantly driven by the number of single-family residential homes in the neighborhood. Based on the residential nature, the number of homes in the surrounding area and multitude of alternative access points to the surrounding major road system it is highly improbable that this location would satisfy any of the minimum volume warrants for an all-way STOP (see attached Reference Guide).

It is extremely unlikely that Cliffside 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 Highbury Drive is similarly unlikely to average at least 200 units for any 8 hours. Additionally, since the posted speed limit is only 25mph, it is reasonable to assume that the 85th 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 has likely not been met.

Approach Speed Limits

The approach speed limit on all study 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.

Sight Distance

The major potential sight distance obstruction at the intersection of Cliffside Drive at Highbury Drive for a motorist traveling southwest-bound on Highbury Drive would be a house corner on the west quadrant of the intersection. Reference the attachments for intersection photos. These obstructions impact the calculated safe approach speeds (SAS) for the intersection. The SAS 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 SAS is found to be less than 10 mph, a STOP sign is recommended. When the SAS is found to be more than 10 mph, a YIELD sign is recommended. In this case, the SAS on Highbury Drive is 15.0 mph for southwest bound vehicles. Thus, based on the SAS calculations, YIELD-control is appropriate for the Highbury Drive approaches. The SAS calculation spreadsheet for the intersection is attached for your reference.

Additional Observations

The request to evaluate traffic control included a citizen observation:

“Cars heading north or south on Cliffside have to slow down for the intersection due to the high crown of the road in the intersection (otherwise you bottom your car out). Cars that are stopped on Highbury believe these cars are stopping, not just slowing down & will often start to pull out into the intersection, thus causing near accidents”.

During our field review, we confirmed this observation to be a valid concern, particularly approaching from the southwest. The slight grade breaks do indeed require drivers to slow down when approaching the intersection. OHM witnessed this during the review.



While this behavior could confuse drivers already stopped on Highbury Drive, who may perceive that the intersection is under all-way STOP-control, there are no documented crashes in the past 10+ years relating to this condition. Rather, it appears that the need for traffic on Cliffside Drive to decelerate through the intersection provides a traffic calming effect, reducing vehicular speeds in the immediate vicinity.

Recommendation

The preceding analysis determined that the all-way STOP-control criteria were not met. Additionally, the safe approach speed calculations determined that YIELD-control would be the appropriate traffic control treatment on the Highbury Drive approaches, rather than the existing STOP-control.

OHM recommends retaining the existing STOP signs on Highbury Drive. The intersection should be reevaluated if traffic volumes increase or more crashes begin to occur.

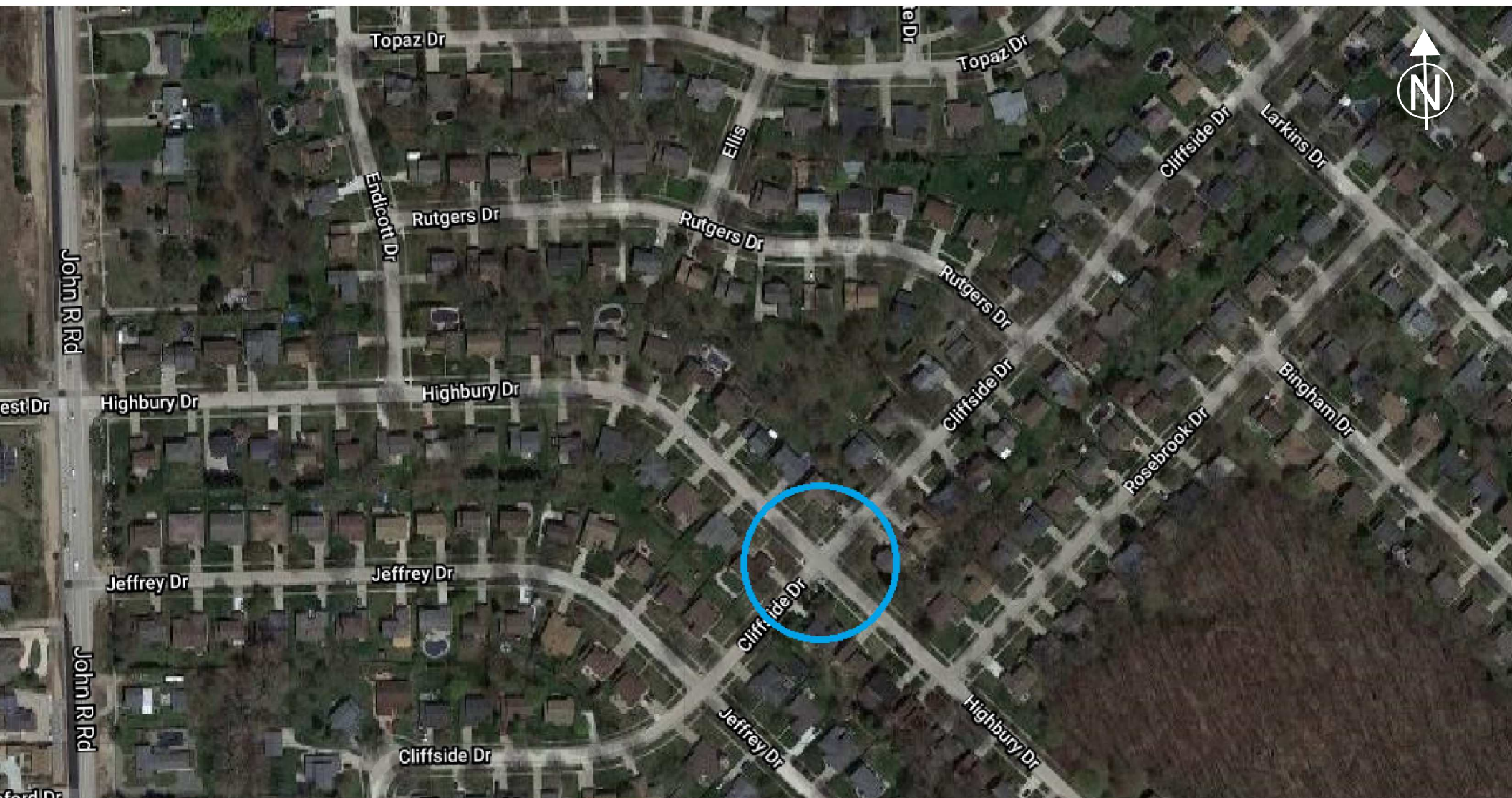
Sincerely,
OHM Advisors

Matt Clark, EIT
Traffic Engineer

Sara Merrill, PE, PTOE
Traffic Project Manager

Attachments:

- Aerial Photo
- Safe Approach Speed Calculation Spreadsheets
- Intersection Photos
- Traffic Control Determination Reference Guide
- UD 10 Crash Reports



Safe Approach Speed Calculation

Cliffside and Highbury
City of Troy

Date: 6/25/2020
Analyst: Lauren Hull

Measured:

Width of Roads

Road 1 = 28 (ft)

Road 2 = 28 (ft)

Distance to Obstructions

a = 45 (ft) e = 48 (ft)

b = 62 (ft) f = 65 (ft)

c = 47 (ft) g = 47 (ft)

d = 45 (ft) h = 50 (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)

V₁ = 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

V₂ = 16.2 (mph) [Based on Veh. A]

or V₂ = 15.0 (mph) [Based on Veh. C]

Calculated Safe Approach Speed for Vehicle D

Approaching on Road 2

V₃ = 15.5 (mph) [Based on Veh. A]

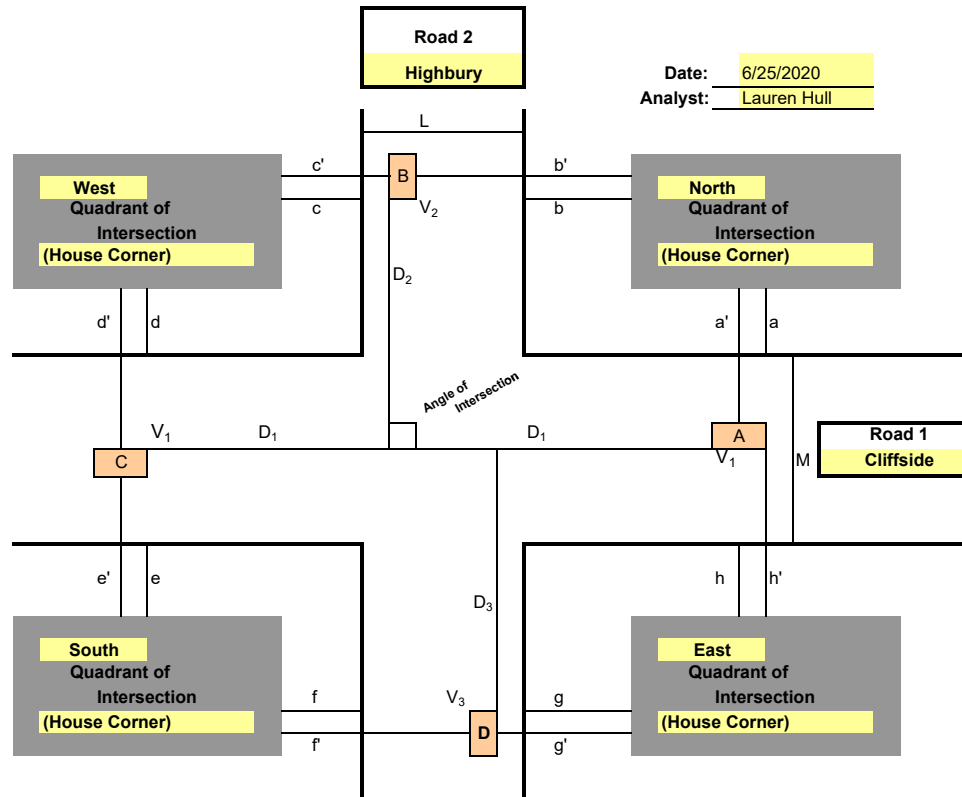
or V₃ = 17.3 (mph) [Based on Veh. C]

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:

D₁ = 196 a' = 51 e' = 54

D_{2A} = 84.6 b' = 78 f' = 81

D_{2C} = 76.9 c' = 53 g' = 53

D_{3A} = 79.8 d' = 61 h' = 66

D_{3C} = 91.9

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

$$D_{2A} = \frac{a' * D_1}{(D_1 - b')} \text{ or } D_{2C} = \frac{c' * D_1}{(D_1 - d')} \text{ or } D_{3A} = \frac{g' * D_1}{(D_1 - h')} \text{ or } D_{3C} = \frac{e' * D_1}{(D_1 - f')}$$

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: Cliffside Drive- Heading Northeast
Date: 06/25/2020 **Photographer:** Lauren Hull



Photograph No. 2: Cliffside Drive- Heading Northeast and Looking Right
Date: 06/25/2020 **Photographer:** Lauren Hull



Photograph No. 3: Cliffside Drive- Heading Northeast and Looking Left
Date: 06/25/2020 **Photographer:** Lauren Hull



Photograph No. 4: Highbury Drive- Heading Southeast
Date: 06/25/2020 **Photographer:** Lauren Hull



Photograph No. 5: Highbury Drive- Heading Southeast and Looking Right
Date: 06/25/2020 **Photographer:** Lauren Hull



Photograph No. 6: Highbury Drive- Heading Southeast and Looking Left
Date: 06/25/2020 **Photographer:** Lauren Hull



Photograph No. 7: Cliffside Drive- Heading Southwest
Date: 06/25/2020 **Photographer:** Lauren Hull



Photograph No. 8: Cliffside Drive- Heading Southwest and Looking Right
Date: 06/25/2020 **Photographer:** Lauren Hull



Photograph No. 9: Cliffside Drive- Heading Southwest and Looking Left
Date: 06/25/2020 **Photographer:** Lauren Hull



Photograph No. 10: Highbury Drive- Heading Northwest
Date: 06/25/2020 **Photographer:** Lauren Hull



Photograph No. 11: Highbury Drive- Heading Northwest and Looking Right
Date: 06/25/2020 **Photographer:** Lauren Hull



Photograph No. 12: Highbury Drive- Heading Northwest and Looking Left
Date: 06/25/2020 **Photographer:** Lauren Hull

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.*

UNIT/DRIVER	Unit Number 02	Unit Known No	State Driver License Number #####		Date of Birth (Age) ##/##/####	License Type <input type="radio"/> Operator <input type="radio"/> Chauffeur <input type="radio"/> Moped	Endorsements <input type="radio"/> Cycle <input type="radio"/> Farm <input type="radio"/> Recreation	Sex	Total Occupants 00	Hazardous Action	
	Unit Type MV	Driver Information ##### ##### (###) ###-####				Driver is Owner No	Injury	Position		Restraint	
	Driver Condition at Time of Crash 1st 2nd				Driver Distracted By Unknown		Ejected	Trapped	Airbag Deployed		
	Hospital NONE				Ambulance NONE						
	Alcohol Suspected No	Contributing Factor No	Alcohol Test Type <input type="radio"/> Breath <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> PBT <input type="radio"/> Refused <input checked="" type="radio"/> Not Offered			Alcohol Test Results <input type="radio"/> Pending	Test Results:		Interlock Device No		
	Drug Suspected No	Contributing Factor No	Drug Test Type <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> Refused <input type="radio"/> Not Offered			Drug Test Results <input type="radio"/> Pending	Test Results:		Citation Issued <input type="radio"/> Hazardous <input type="radio"/> Other		
	Vehicle Registration #####		State MI	Vehicle Description 2007	Make FORD	Model 82154 A		Color BLACK			
	VIN #####		Vehicle Type Pickup Truck		Special Vehicles Not Applicable		Private Trailer Type		Vehicle Defect		
	Insurance Company #####			Insurance Policy # #####			Towed By		Towed To		
	Location of Greatest Damage 07		First Impact 07	Extent of Damage (Power Unit and/or Trailers) Functional Damage		Vehicle Direction S	Vehicle Use Private		Action Prior Parked		
Sequence of Events First ● 17 - Motor Veh in Transport (● indicates MOST harmful event)											
PASSENGERS	Passenger Information				Date of Birth (Age)	Sex	Position		Restraint		
					Injury	Ejected	Trapped	Airbag Deployed			
	Hospital				Ambulance						
	Passenger Information				Date of Birth (Age)	Sex	Position		Restraint		
					Injury	Ejected	Trapped	Airbag Deployed			
	Hospital				Ambulance						
	Passenger Information				Date of Birth (Age)	Sex	Position		Restraint		
					Injury	Ejected	Trapped	Airbag Deployed			
	Hospital				Ambulance						
	TRUCK/BUS	Carrier Information				USDOT		MC	MPSC		
				Driver's CDL Type		Endorsements <input type="radio"/> H <input type="radio"/> P <input type="radio"/> T <input type="radio"/> N <input type="radio"/> S <input type="radio"/> X	CDL Exempt <input type="radio"/> Farm <input type="radio"/> Other				
GVWR/GCWR <input type="radio"/> 10,000 lbs. or Less <input type="radio"/> 10,001 - 26,000 lbs. <input type="radio"/> Greater than 26,000 lbs.		Vehicle Configuration		Cargo Body Type		Medical Card	Hazardous Material <input type="radio"/> Placard <input type="radio"/> Cargo Spill		ID # Class #		
OWNERS	Owner Information ##### ##### #####, ## #####-#### (###) ###-####				Owner Information						
WITNESS	Witness Information				Witness Information						
Investigated at Scene Yes		Reported Date (Time) 10/31/2016 (09:47)		1st Investigator Name (Badge) B. HANCOCK (108)		2nd Investigator Name (Badge)		Photos No			
Narrative UNIT 2 PARKED LEGAL ON CLIFFSIDE DR S/O Highbury Dr. UNIT 1 BACKING OUT OF PRIVATE DRIVEWAY ON CLIFFSIDE. UNIT 1 STATED THEY DID NOT SEE UNIT 2 PARKED IN STREET.					Diagram 						

Authority: 1949 PA 300, Sec.257-622
Compliance: Required MSP UD-10E
Penalty: \$100 and/or 90 days (Rev 01/2016)

External # 1057768
Crash ID 1902655

Page 01 of 01
File Class 93001

STATE OF MICHIGAN TRAFFIC CRASH REPORT

ORI MI 6378400		Department Name Troy Police Department				Incident # 190042052			
Crash Date 12/05/2019		Crash Time 08:56	No. of Units 02	Crash Type Backing		Special Circumstances <input checked="" type="radio"/> None <input type="radio"/> Fleeing Police <input type="radio"/> Hit and Run <input type="radio"/> Unknown <input type="radio"/> School Bus <input type="radio"/> Animal		Special Checks <input type="radio"/> Fatal <input type="radio"/> Non-Traffic Area <input type="radio"/> ORV/Snowmobile	
County 63 - Oakland		Traffic Control Stop Sign		Relation to Roadway On the Road		Weather Clear		Area INTR Within Intersection	
City/Twsp 84 - Troy		Contributing Circumstances 1st None		2nd		Light Daylight		Road Surface Condition Dry	
Total Lanes 02		Speed Limit 25		Posted Yes					
Work Zone (if applicable) Type Workers Present Activity Location									

Prefix CLIFFSIDE		Primary Road Name CLIFFSIDE		Road Type DR		Suffix Divided Roadway			
Distance / Direction 5 Feet W		Trafficway Not Physically Divided							
Prefix HIGHBURY		Intersecting Road Name HIGHBURY		Road Type DR		Suffix Divided Roadway			

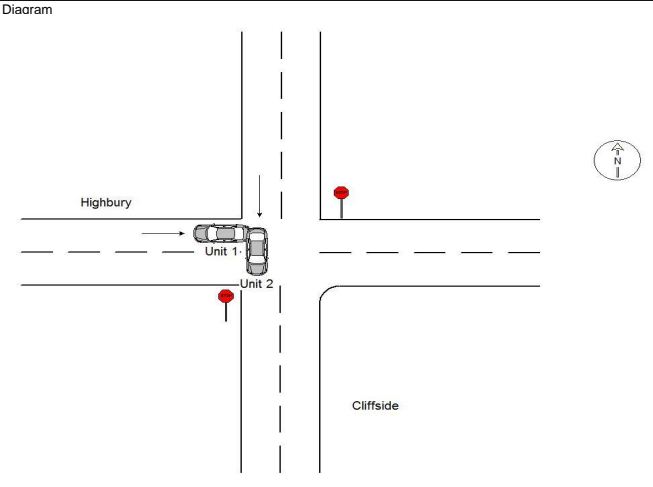
Unit Number 01	Unit Known Yes	State MI	Driver License Number #####		Date of Birth (Age) ###/###/#### (65)		License Type <input checked="" type="radio"/> Operator <input type="radio"/> Chauffeur <input type="radio"/> Moped		Endorsements <input type="radio"/> Cycle <input type="radio"/> Farm <input type="radio"/> Recreation		Sex F	Total Occupants 01	Hazardous Action Improper Backing	
Unit Type MV	Driver Information ##### ##### TROY, MI 48085-4086 (###) ###-####					Driver is Owner No	Injury O	Position Front - Left			Restraint Shoulder and Lap Belt			
Driver Condition at Time of Crash 1st Appeared Normal					2nd		Driver Distracted By Not Distracted			Ejected	Trapped	Airbag Deployed Not Deployed		
Hospital NONE		Ambulance NONE												
Alcohol Suspected No	Contributing Factor No	Alcohol Test Type <input type="radio"/> Breath <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> PBT <input type="radio"/> Refused <input checked="" type="radio"/> Not Offered				Alcohol Test Results <input type="radio"/> Pending		Test Results:		Interlock Device No				
Drug Suspected No	Contributing Factor No	Drug Test Type <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> Refused <input checked="" type="radio"/> Not Offered				Drug Test Results <input type="radio"/> Pending		Test Results:		Citation Issued <input checked="" type="radio"/> Hazardous <input type="radio"/> Other				
Vehicle Registration CRP673		State MI	Vehicle Description 2008		Make BUICK		Model LUCERNE			Color RED				
VIN 1G4HD57218U186708		Vehicle Type Passenger Car, SUV, Van		Special Vehicles Not Applicable			Private Trailer Type		Vehicle Defect					
Automation System(s) in Vehicle No		Automation System Level in Vehicle No Automation					Automation System Level Engaged at Time of Crash No Automation							
Insurance Company #####			Insurance Policy # #####					Towed By			Towed To			
Location of Greatest Damage 05		First Impact 05	Extent of Damage (Power Unit and/or Trailers) Functional Damage			Vehicle Direction E	Vehicle Use Private			Action Prior Backing				
Sequence of Events First ● 17 - Motor Veh in Transport (● indicates MOST harmful event)														

PASSENGERS	Passenger Information				Date of Birth (Age)		Sex	Position		Restraint	
					Injury	Ejected	Trapped	Airbag Deployed			
	Hospital				Ambulance						
PASSENGERS	Passenger Information				Date of Birth (Age)		Sex	Position		Restraint	
					Injury	Ejected	Trapped	Airbag Deployed			
	Hospital				Ambulance						

TRUCK/BUS	Carrier Information				USDOT		MC		MPSC	
					Driver's CDL Type		Endorsements OH OP OT ON OS OX		CDL Exempt <input type="radio"/> Farm <input type="radio"/> Other	
	GVWR/GCWR <input type="radio"/> 10,000 lbs. or Less <input type="radio"/> 10,001 - 26,000 lbs. <input type="radio"/> Greater than 26,000 lbs.		Vehicle Configuration		Cargo Body Type		Medical Card		Hazardous Material <input type="radio"/> Placard <input type="radio"/> Cargo Spill	

OWNERS	Owner Information				Owner Information			

Damaged Property		Public	Owner & Phone	

UNIT / DRIVER	Unit Number 02	Unit Known Yes	State MI	Driver License Number #####	Date of Birth (Age) ###/##/#### (24)	License Type ● Operator ○ Chauffeur ○ Moped	Endorsements ○ Cycle ○ Farm ○ Recreation	Sex M	Total Occupants 01	Hazardous Action None
	Unit Type MV	Driver Information ##### ##### TROY, MI 48085-3817 (###) ###-####				Driver is Owner No	Injury O	Position Front - Left	Restraint Shoulder and Lap Belt	
	Driver Condition at Time of Crash 1st Appeared Normal				Driver Distracted By Not Distracted		Ejected	Trapped	Airbag Deployed Not Deployed	
	Hospital NONE					Ambulance NONE				
	Alcohol Suspected No	Contributing Factor No	Alcohol Test Type ○ Breath ○ Blood ○ Urine ○ Field ○ PBT ○ Refused ● Not Offered			Alcohol Test Results ○ Pending	Test Results:		Interlock Device No	
	Drug Suspected No	Contributing Factor No	Drug Test Type ○ Blood ○ Urine ○ Field ○ Refused ● Not Offered			Drug Test Results ○ Pending	Test Results:		Citation Issued ○ Hazardous ○ Other	
	Vehicle Registration ECG9311	State MI	Vehicle Description Year 2010	Make FORD	Model EDGE	Color BLACK				
	VIN 2FMDK3JC8ABB57664	Vehicle Type Passenger Car, SUV, Van		Special Vehicles Not Applicable	Private Trailer Type	Vehicle Defect				
	Automation System(s) in Vehicle No		Automation System Level in Vehicle No Automation			Automation System Level Engaged at Time of Crash No Automation				
	Insurance Company #####		Insurance Policy # #####			Towed By		Towed To		
Location of Greatest Damage 04	First Impact 04	Extent of Damage (Power Unit and/or Trailers) Functional Damage		Vehicle Direction S	Vehicle Use Private		Action Prior Going Straight Ahead			
Sequence of Events ● First ● 17 - Motor Veh in Transport (● indicates MOST harmful event)										
PASSENGERS	Passenger Information				Date of Birth (Age)	Sex	Position		Restraint	
					Injury	Ejected	Trapped	Airbag Deployed		
	Hospital				Ambulance					
	Passenger Information				Date of Birth (Age)	Sex	Position		Restraint	
					Injury	Ejected	Trapped	Airbag Deployed		
	Hospital				Ambulance					
TRUCK / BUS	Carrier Information				USDOT		MC	MPSC		
					Driver's CDL Type		Endorsements OH OP OT ON OS OX	CDL Exempt ○ Farm ○ Other		
	GVWR/GCWR ○ 10,000 lbs. or Less ○ 10,001 - 26,000 lbs. ○ Greater than 26,000 lbs.		Vehicle Configuration		Cargo Body Type	Medical Card	Hazardous Material ○ Placard ○ Cargo Spill		ID #	Class #
OWNERS	Owner Information				Owner Information					
WITNESS	Witness Information				Witness Information					
Investigated at Scene Yes		Reported Date (Time) 12/05/2019 (08:56)		1st Investigator Name (Badge) R. BARROWS (101)		2nd Investigator Name (Badge)		Photos No		
Narrative #1 WAS E/B ON Highbury AND MISSED HER TURN ON CLIFFSIDE. # 1 THEN BACKED UP TOWARD CLIFFSIDE AND STRUCK #2 WHO WAS S/B ON CLIFFSIDE.					Diagram 					



TRAFFIC COMMITTEE REPORT

July 17, 2020

TO: Traffic Committee

FROM: Bill Huotari, City Engineer/ Traffic Engineer

SUBJECT: Request for Traffic Control
Trevino Drive / Garrett Street at Willowgrove Drive

Background:

Jeff Nichols of 1467 Trevino Drive states that the lack of a STOP sign on the Garrett Street approach to the intersection of Trevino Drive and Willowgrove Drive creates a hazardous condition.

Garrett Street is a new street currently utilized for construction vehicle access to the Oak Forest 4 development. Garrett Street and Trevino Drive are offset approximately 10 feet.

Trevino Drive is currently under STOP control, while Garrett Drive and Willowgrove Drive are uncontrolled. Willowgrove Drive would be considered the major road as it is a "half-mile" road which provides direct access to Square Lake Road.

There were no crashes recorded in the past five (5) years.

The posted speed limit on both streets is 25 mph.

The major potential sight distance obstruction at the intersection is a hedgerow abutting the sidewalk along the property on the northwest quadrant of the intersection for a motorist traveling eastbound on Trevino Drive.

For a vehicle traveling on eastbound on Trevino Drive, the safe approach speed was found to be 6.3 mph for eastbound vehicles.

OHM recommends retaining the existing STOP sign on the Trevino Drive approach and installing a STOP sign on the Garrett Street approach.

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

July 16, 2020

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

RE: Traffic Control Recommendation for
Trevino Drive / Garrett Street at Willow Grove Drive
OHM JN: 0128-19-0240

Dear Mr. Huotari:

As requested, we have reviewed the intersection of Trevino Drive / Garrett Street at Willow Grove Drive to determine the proper traffic control. Trevino Drive / Garrett Street at Willow Grove Drive is a 4-legged intersection located approximately 2,650 feet east of Rochester Road and about 2,500 feet south of Square Lake Road. The speed limit on both streets under investigation is 25 mph. Trevino Drive is STOP-controlled on approach to Willow Grove Drive. Garrett Street is a new street currently utilized for construction vehicle access to the Oak Forest 4 development. Garrett Street and Trevino Drive are offset approximately 10'. Attached are aerial and intersection photos.

Types of Roadways

Both Trevino Drive / Garrett Street and Willow Grove Drive are considered local streets. Trevino Drive / Garrett Street runs east / west, providing access to / from the existing local neighborhood, the new Oak Forest 4 development, Demaret Drive, Casper Drive, and Littler Drive. Willow Grove Drive runs north / south, providing access to /from the existing local neighborhood, the new Oak Forest 4 development, and Square Lake Road. Willow Grove Drive dead ends only a couple hundred feet south of the subject intersection.

The surrounding land use is entirely single-family residential. On-street parking is permitted on the south side of Trevino Drive west of the intersection and on the east side of Willow Grove Drive. Trevino Drive / Garret Street is currently under STOP-control on the eastbound approach and would be considered the minor road at the intersection, while Willow Grove Drive would be considered the major road as it is a "half-mile" road which provides direct access to Square Lake Road.

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 (0) crashes recorded in the past full five (5) years at the intersection of Trevino Drive at Willow Grove Drive. Given that less than the recommended minimum of five (5) crashes susceptible to correction by all-way STOP-control did not occur during a 12-month period, the crash data does not compel OHM Advisors to modify the existing controls.

Traffic Volumes

Traffic counts were not collected in the vicinity of the intersection as part of this traffic control study due to the ongoing COVID-19 pandemic response resulting in significantly reduced travel demand. However, traffic counts were collected by OHM Advisors on Trevino Drive just west of Willow Grove Drive from Monday, February 19 to Monday, February 26, 2018 as part of a traffic impact study (TIS) performed for the then proposed Oak Forest 3 & 4 developments. The TIS report and appendices (including traffic counts) are attached to this memo.

The average daily entering traffic observed on the eastbound Trevino Drive approach was approximately 70 vehicles, with a maximum hourly volume of 14 vehicles occurring between 4:00 to 5:00 PM on Wednesday, February 21. Included as part of the TIS, OHM Advisors performed a site trip generation analysis for the completely built-out Oak Forest development, including the existing Golf Trails Subdivision and future development along Willow Grove Drive, in accordance with the methodologies published in the ITE Trip Generation Manual: 10th Edition. Under these conditions, the study estimated that Willow Grove Drive may see 15 inbound and 44 outbound vehicles during the AM Peak hour, and up to 49 inbound and 29 outbound vehicles during the PM Peak hour.

Given the vehicle volumes observed and forecasted, one can reasonably ascertain that Willow Grove (considered the major roadway) falls well below the 300 vehicles per hour threshold required for all-way STOP-control for even one hour, let alone the minimum of eight hours. Additionally, the combined vehicular, pedestrian, and bicycle volumes on Trevino Drive/ Garrett Street (considered minor roadway) are highly unlikely to average at least 200 units for any eight hours.

Additionally, since the posted speed limit is only 25 mph, it is reasonable to assume that the 85th percentile approach speed does not exceed 40 mph 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 the expected trip generation for this neighborhood. Therefore, the minimum volume criteria for an all-way STOP has not been met.

Approach Speed Limits

The approach speed limit on all study 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.

Sight Distance

The major potential sight distance obstruction at the intersection of Trevino Drive / Garrett Street at Willow Grove Drive for a motorist traveling eastbound on Trevino Drive is a hedgerow abutting the sidewalk along the property on the northwest quadrant of the intersection. Reference the attachments for intersection photos. 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 on Trevino Drive is 6.3 mph for eastbound vehicles. Thus, based on the safe approach speed calculations, STOP-control is appropriate for the Trevino Drive / Garrett Street approaches. The safe approach speed calculation spreadsheet for the intersection is attached for your reference.

Recommendation

The preceding analysis did not determine that any criteria were met for all-way STOP-control. The safe approach speed approach calculations determined that STOP-control would be the appropriate traffic control treatment on the Trevino Drive / Garrett Street approaches. Trevino Drive / Garrett Street was selected as the road to control due to the offset between approaches, which act as a traffic calming feature. Controlling these approaches would further enhance safety at the intersection.

OHM recommends retaining the existing STOP sign on the Trevino Drive approach and immediately installing a STOP sign on the Garrett Street approach. We also recommend trimming the sight obstructing vegetation on the northwest quadrant of the intersection. Finally, construction vehicles and equipment serving the Oak Forest 4 development must not obstruct the 25' clear sight triangles at the intersection.

The intersection should be reevaluated once the properties in the Oak Forest 4 development are complete to ensure landscaping nor other obstructions are placed in the 25' clear sight triangles at the intersection. The intersection should also be reevaluated if traffic volumes increase or more crashes begin to occur.

Sincerely,

OHM Advisors

Matt Clark, EIT
Traffic Engineer

Sara Merrill, PE, PTOE
Traffic Project Manager

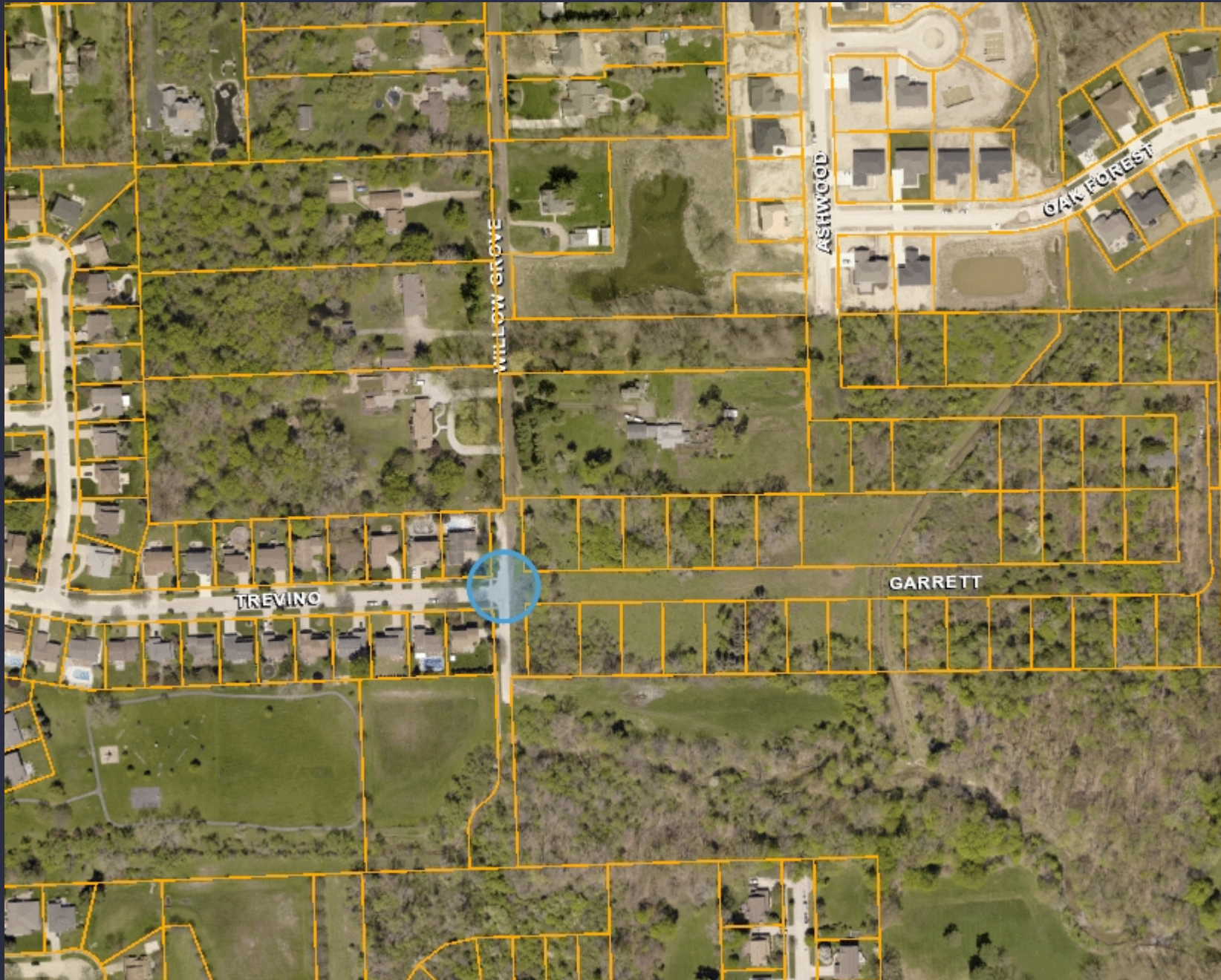
Attachments:

- Aerial Photo
- Safe Approach Speed Calculation Spreadsheets
- Intersection Photos
- Traffic Control Determination Reference Guide
- Oak Forest Development TIS



GIS Online

Legend:



Notes:

Map Scale: 1=358
Created: June 3, 2020



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

Willow Grove and Trevino / Garrett
City of Troy

Date: 6/5/2020
Analyst: Matt Clark

Measured:

Width of Roads

Road 1 = 23.2 (ft)

Road 2 = 28 (ft)

Distance to Obstructions

a = 16 (ft)

e = 100 (ft)

b = 19 (ft)

f = 100 (ft)

c = 46 (ft)

g = 100 (ft)

d = 41 (ft)

h = 100 (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)

V₁ = 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

V₂ = 6.3 (mph) [Based on Veh. A]

or V₂ = 14.1 (mph) [Based on Veh. C]

Calculated Safe Approach Speed for Vehicle D

Approaching on Road 2

V₃ = 34.9 (mph) [Based on Veh. A]

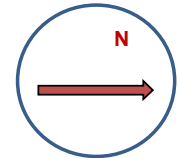
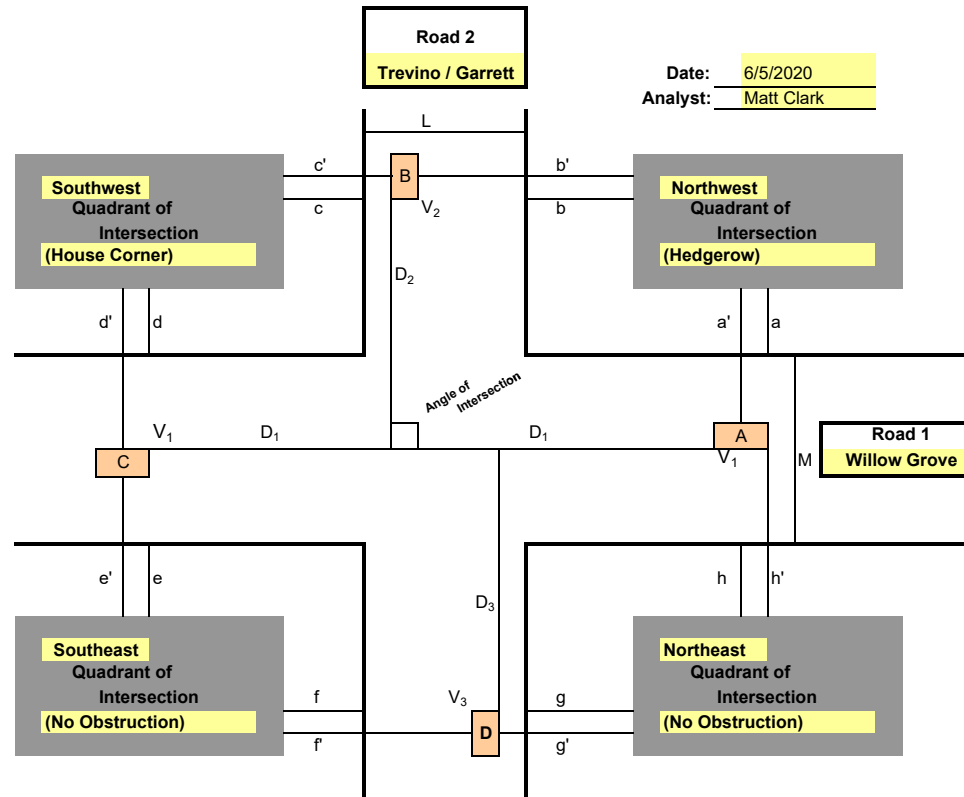
or V₃ = 36.2 (mph) [Based on Veh. C]

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:

D₁ = 196 a' = 22 e' = 106

D_{2A} = 26.8 b' = 35 f' = 116

D_{2C} = 70.8 c' = 52 g' = 106

D_{3A} = 244.4 d' = 52.2 h' = 111

D_{3C} = 259

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

$$D_{2A} = \frac{a' * D_1}{(D_1 - b')} \quad \text{or} \quad D_{2C} = \frac{c' * D_1}{(D_1 - d')} \quad \text{or} \quad D_{3A} = \frac{g' * D_1}{(D_1 - h')} \quad \text{or} \quad D_{3C} = \frac{e' * D_1}{(D_1 - f')}$$

Notes: Enter field measurements in yellow highlighted area.

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

Calculated by spreadsheet

Recommended ROW control for Road 2

based on safe approach speed :

STOP Sign



Photograph No. 1: Trevino Drive – Heading East
Date: 06/05/2020 **Photographer:** Matt Clark



Photograph No. 2: Trevino Drive – Heading East and Looking Right
Date: 06/05/2020 **Photographer:** Matt Clark



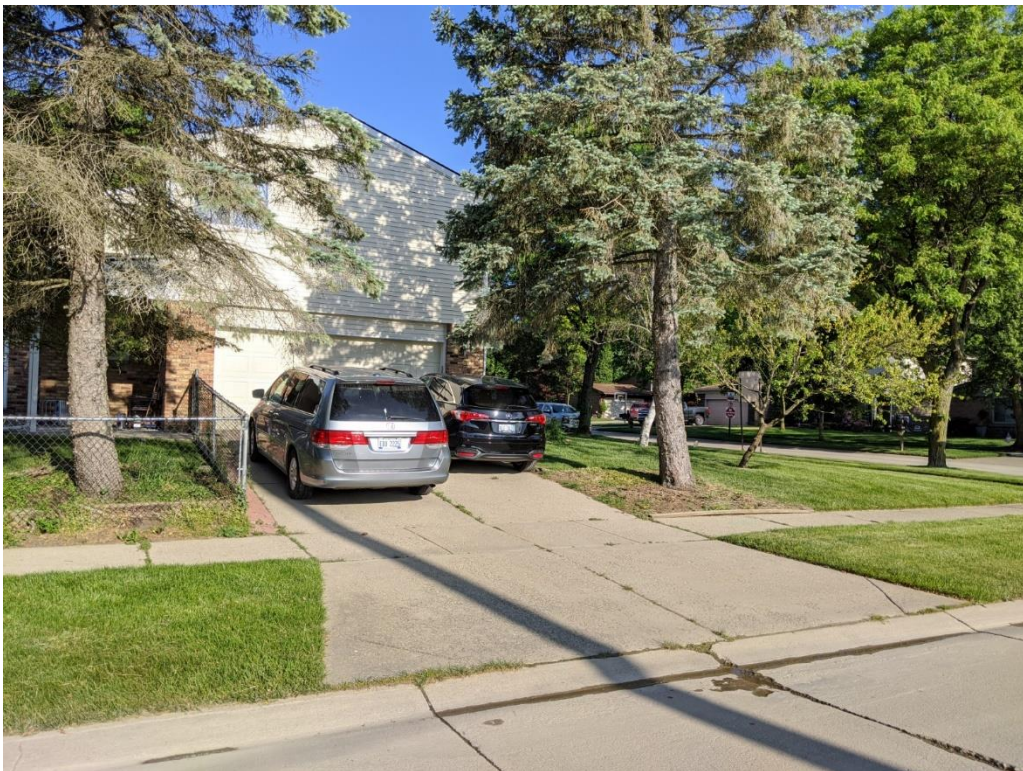
Photograph No. 3: Trevino Drive – Heading East and Looking Left
Date: 06/05/2020 **Photographer:** Matt Clark



Photograph No. 4: Willow Grove Drive – Heading North
Date: 06/05/2020 **Photographer:** Matt Clark



Photograph No. 5: Willow Grove Drive – Heading North and Looking Right
Date: 06/05/2020 **Photographer:** Matt Clark



Photograph No. 6: Willow Grove Drive – Heading North and Looking Left
Date: 06/05/2020 **Photographer:** Matt Clark



Photograph No. 7: Garrett Drive – Heading West
Date: 06/05/2020 **Photographer:** Matt Clark



Photograph No. 8: Garrett Drive – Heading West and Looking Right
Date: 06/05/2020 **Photographer:** Matt Clark



Photograph No. 9: Garrett Drive – Heading West and Looking Left
Date: 06/05/2020 **Photographer:** Matt Clark



Photograph No. 10: Willow Grove Drive – Heading South
Date: 06/05/2020 **Photographer:** Matt Clark



Photograph No. 11: Willow Grove Drive – Heading South and Looking Right
Date: 06/05/2020 **Photographer:** Matt Clark



Photograph No. 12: Willow Grove Drive – Heading South and Looking Left
Date: 06/05/2020 **Photographer:** Matt Clark

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: February 2, 2018

To: William Huotari, PE

cc: Stephen Dearing, PE, PTOE

From: Dean Keffer

Re: Traffic Study; Oak Forest Development

Introduction

There is a controversy concerning the impact of the final phases of the Oak Forest Development, and whether the layout of Phase 4 should be altered regarding its connecting to Willow Grove Drive and Trevino Drive. To provide information to the decision makers, this traffic study identifies the future site-generated vehicle trips during AM and PM peak hours that will result based on the next phases of the Oak Forest development. We also consider the likely future development potential of vacant / underdeveloped parcels along Willow Grove Drive.

The study area is the northern half of Section 11, located between John R Road and Rochester Road, south of E Square Lake Road, within the north eastern quadrant of Troy, Michigan. The study encompasses six developments, including Oak Forest 1, 2, 3, and 4, Willow Grove Drive and Golf Trail. Golf Trail is fully developed, and Oak Forest phases 1 and 2 have only a few houses left to build ("Existing Condition"). Oak Forest phase 3 has been approved, but not yet constructed, and phase 4 is awaiting approval. It is anticipated that Willow Grove Drive will be developed with an additional 42 dwelling units, at which point the road will be paved to improve connectivity with Square Lake Road. The area of study, once completed, will be comprised of 391 residential units ("Future Condition").

The primary focus of this study is to identify the site-generated trips that will pass through five access points of the neighborhood (Willow Grove Drive, Hilmore Drive, and Ashwood Drive to the north, Oak Forest Drive to the east, and Player Drive to the west) if the entirety of the area is internally linked. The site-generated trips were broken down by entering and exiting for the peak morning and evening commuter periods.

Travel Volumes and Patterns

The ITE Trip Generation Manual: 10th Edition^[1] was used to determine the peak number of trips originating in the study area for both existing and future conditions. Trips are calculated from the total number of dwelling units that would be in the existing and future developments as shown in Table 1. Appendix B includes the ITE Trip Generation information on Vehicle Trip Ends for the AM and PM peak periods.

Golf Trail has two points of access, one of which is signalized. To more accurately distribute the trips between Player Drive and Hilmore Drive, traffic volumes were collected on Player Drive from January 23, 2018 to January 30, 2018. This data is shown in Appendix A. From the trips counted at Player Drive, we



assumed that the balance of the trip generation for the peak hour trips for the Golf Trail site were using Hilmore Drive. These values are shown in Figure 1.

The distribution and direction of the commuting trips for the City of Troy are based on data obtained from the U.S. Census Bureau, and the American Community Survey, 2006-2010 and 2009-2013, as published by SEMCOG ^[2] (Southeast Michigan Council of Governments). The census data shows where the residents of Troy travel to and from. The data is shown in Appendix C.

This information was used to establish how many residents travel in what directions by percentages. Combining the trips generation shown in Table 1 with the percentages of trips in each direction, the future condition is shown in Figure 2.

Table 1: Site Trip Generation

Land Use	Site Description	ITE Code	# of Dwelling Units	AM Peak Hour			PM Peak Hour		
				Average # of Vehicle Trips			Average # of Vehicle Trips		
				Enter	Exit	Total	Enter	Exit	Total
Single-Family Detached Housing	Existing								
	Golf Trail	210	198	36	107	143	120	70	190
	Willow Grove Drive	210	13	2	7	9	8	5	13
	Hilmore Drive	210	25	4	14	18	15	9	24
	Oak Forest 1 & 2	210	76	14	41	55	46	27	73
	Sub-Total:		312	56	169	225	189	111	300
	Future								
	Willow Grove Drive	210	42	8	22	30	25	15	40
	Oak Forest 3	210	12	2	7	9	8	4	12
	Oak Forest 4	210	25	4	14	18	15	9	24
	Sub-Total:		79	14	43	57	48	28	76
Total:			391	70	212	282	237	139	376

Summary

By comparing the existing conditions to the future conditions, as shown in Figures 1 and 2, it can be seen that there will be a modest net increase in traffic on Player Drive.

Presently, during the average weekday AM peak (“rush”) hour, there are 64 vehicles exiting the subdivision – just over 1 vehicle per minute. In the future, after Oak Forest 3 & 4 are fully built, and after Willow Grove has been developed and paved, the expected average climbs to 78 vehicles exiting Player Drive to Rochester Road, or 1.3 vehicles per minute. This increase is nearly imperceptible to the average person, representing approximately 1 additional outbound vehicle every 4 minutes.

Similarly, in the PM peak (“rush”) hour, the number of inbound vehicle entering the subdivision on Player Drive will climb from 66 vehicles to 88 vehicles – a difference of 0.37 vehicles per minute, or one additional vehicle approximately every 3 minutes.

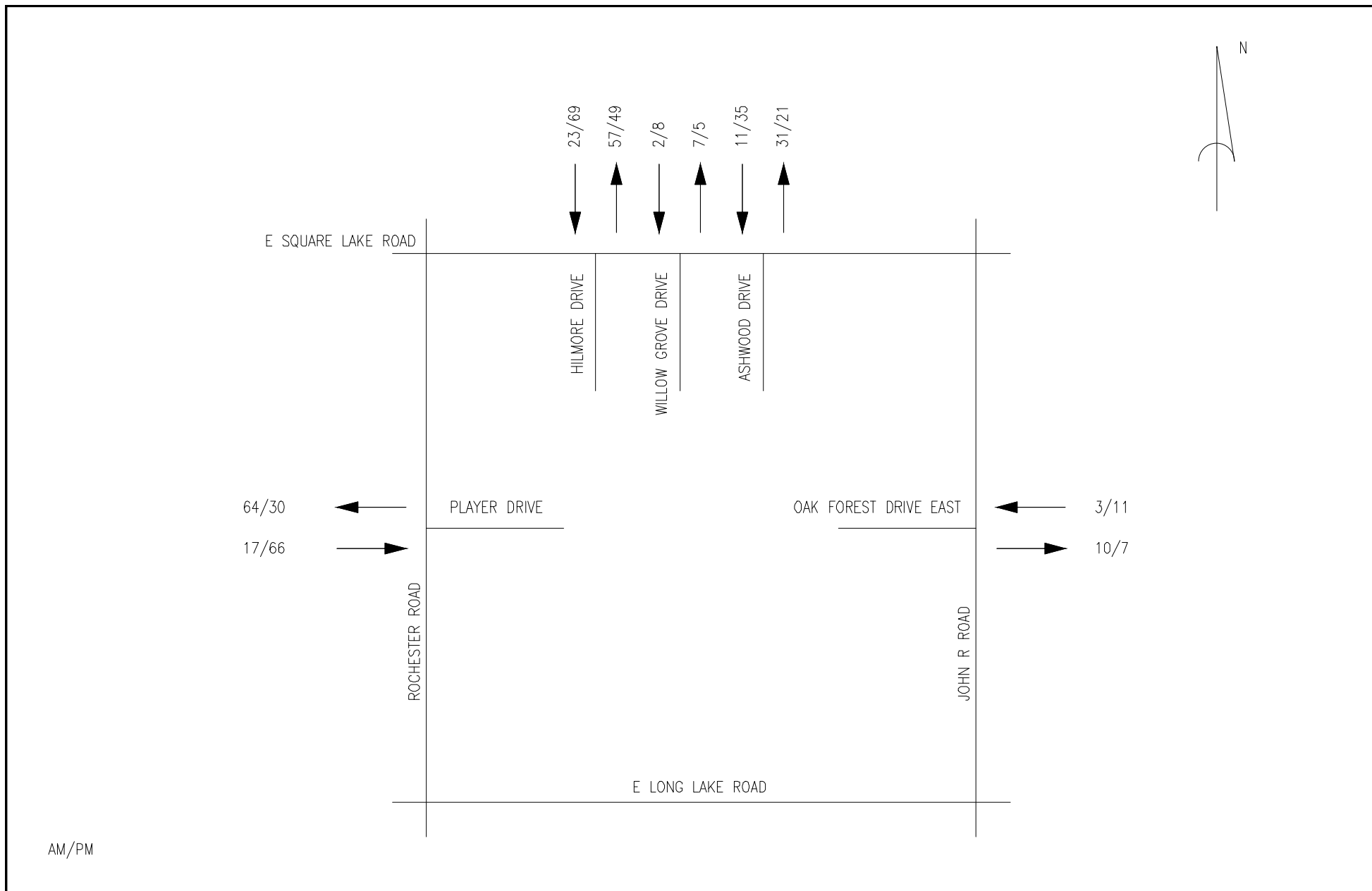
It is worth noting that, based on the commuting patterns from census data, existing traffic volumes on Player Drive are much less than expected, indicating that a significant amount of traffic from the Golf Trail subdivision currently use Hilmore Drive instead. This deviation results from deficiencies in the existing roadway network, such as back-ups at the traffic signal on Player Drive, this analysis assumes that modifications or improvements will be made for the future condition, restoring expected traffic patterns



such most vehicles would utilize the shortest route to a destination. This redistribution of diverted traffic accounts for much of the projected future increase in traffic on Player Drive. Absent such changes, vehicles that today divert to take “longer but quicker” routes (e.g., Hilmore Drive instead of Player Drive) would likely continue to do so.

Sources

1. ITETripGen Web Based App; <https://itetripgen.org/Query>
SEMCOG (Southeast Michigan Council of Governments);
<http://maps.semcog.org/CommutingPatterns/>



EXISTING CONDITIONS
TRAFFIC STUDY
FIGURE 1

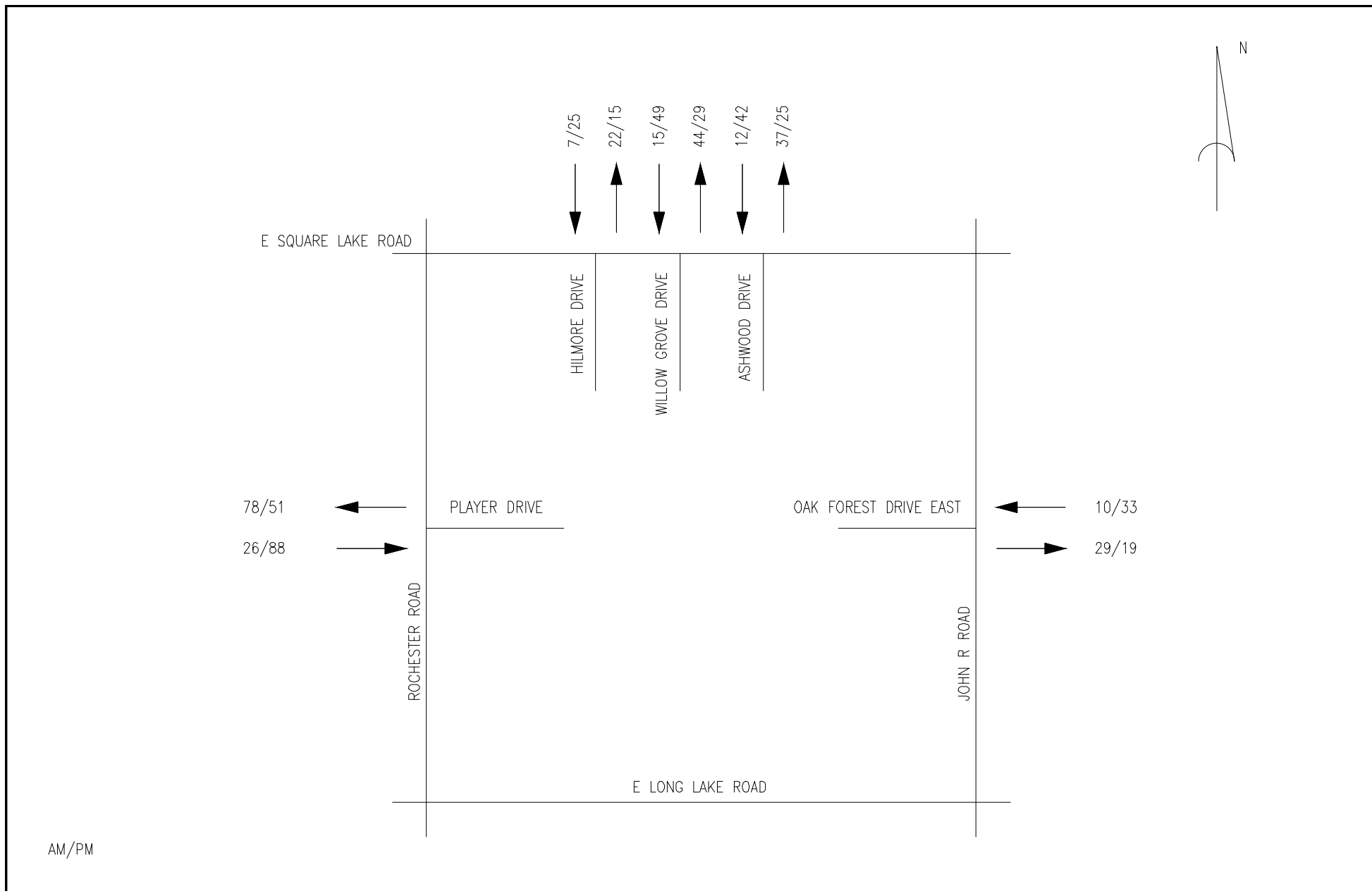
SCALE	
H NTS	V NTS
SHEET	
1	



CLIENT:
CITY OF TROY

PROJECT #
0128-17-0170

34000 Plymouth Road | Livonia, MI 48150 | P (734) 522-6711 | F (734) 522-6427 | WWW.OHM-ADVISORS.COM



FUTURE CONDITIONS
TRAFFIC STUDY
FIGURE 2

SCALE	
H NTS	V NTS
SHEET	
2	



CLIENT:
CITY OF TROY

PROJECT #
0128-17-0170

34000 Plymouth Road | Livonia, MI 48150 | P (734) 522-6711 | F (734) 522-6427 | WWW.OHM-ADVISORS.COM



Appendix A

OHM Advisors

34000 Plymouth Rd
Livonia, MI, 48150

Advancing Communities

Date Start: Tuesday, January 23, 2018

Player Drive at Rochester Road

Troy, MI, 48085

Weather: Overcast/ Snow

Start	Tuesday, January 23, 2018		Wednesday, January 24, 2018		Thursday, January 25, 2018		Friday, January 26, 2018		Monday, January 29, 2018		Tuesday, January 30, 2018		Weekday Average	
Time	East	West	East	West	East	West	East	West	East	West	East	West	East	West
12:00 AM	-	-	9	2	7	1	13	5	4	5	5	3	8	3
1:00	-	-	0	1	2	2	0	1	2	1	2	1	1	1
2:00	-	-	1	0	0	0	2	0	3	0	1	1	1	0
3:00	-	-	2	0	0	0	2	2	1	0	2	0	1	0
4:00	-	-	3	2	1	1	1	1	3	1	2	1	2	1
5:00	-	-	0	2	2	2	1	5	0	2	2	1	1	2
6:00	-	-	0	13	0	13	1	11	0	11	1	15	0	13
7:00	-	-	4	45	4	37	2	44	6	48	5	43	4	43
8:00	-	-	16	78	20	66	20	56	16	60	14	58	17	64
9:00	-	-	14	42	19	54	22	43	14	46	13	43	16	46
10:00	-	-	16	30	9	38	16	40	20	38	15	37	15	37
11:00	-	-	14	23	17	35	17	23	18	26	15	30	16	27
12:00 PM	-	-	17	21	24	25	22	27	24	26	21	22	22	24
1:00	-	-	19	17	20	25	38	28	18	25	25	23	24	24
2:00	-	-	34	29	32	34	27	26	41	16	26	34	32	28
3:00	48	27	44	24	49	25	46	32	37	14	-	-	45	24
4:00	54	31	50	25	38	20	63	32	29	22	-	-	47	26
5:00	66	23	62	29	63	27	75	41	46	26	-	-	62	29
6:00	64	29	80	26	63	34	57	34	54	20	-	-	64	29
7:00	69	35	61	31	82	28	66	37	52	18	-	-	66	30
8:00	28	25	36	21	44	28	45	36	40	16	-	-	39	25
9:00	35	5	38	14	41	17	33	25	28	11	-	-	35	14
10:00	26	8	22	7	33	9	35	12	18	6	-	-	27	8
11:00	16	4	10	8	9	5	23	7	14	6	-	-	14	6
Total Day	406	187	552	490	579	526	627	568	488	444	149	312	560	505
	593		1042		1105		1195		932		461		1066	
AM Peak	-	-	8:00 AM	8:00 AM	8:00 AM	8:00 AM	9:00 AM	8:00 AM	10:00 AM	8:00 AM	10:00 AM	8:00 AM	8:00 AM	8:00 AM
Vol.	-	-	16	78	20	66	22	56	20	60	15	58	17	64
PM Peak	7:00 PM	7:00 PM	6:00 PM	7:00 PM	7:00 PM	2:00 PM	5:00 PM	5:00 PM	6:00 PM	12:00 PM	-	-	7:00 PM	7:00 PM
Vol.	69	35	80	31	82	34	75	41	54	26	-	-	66	30



Appendix B

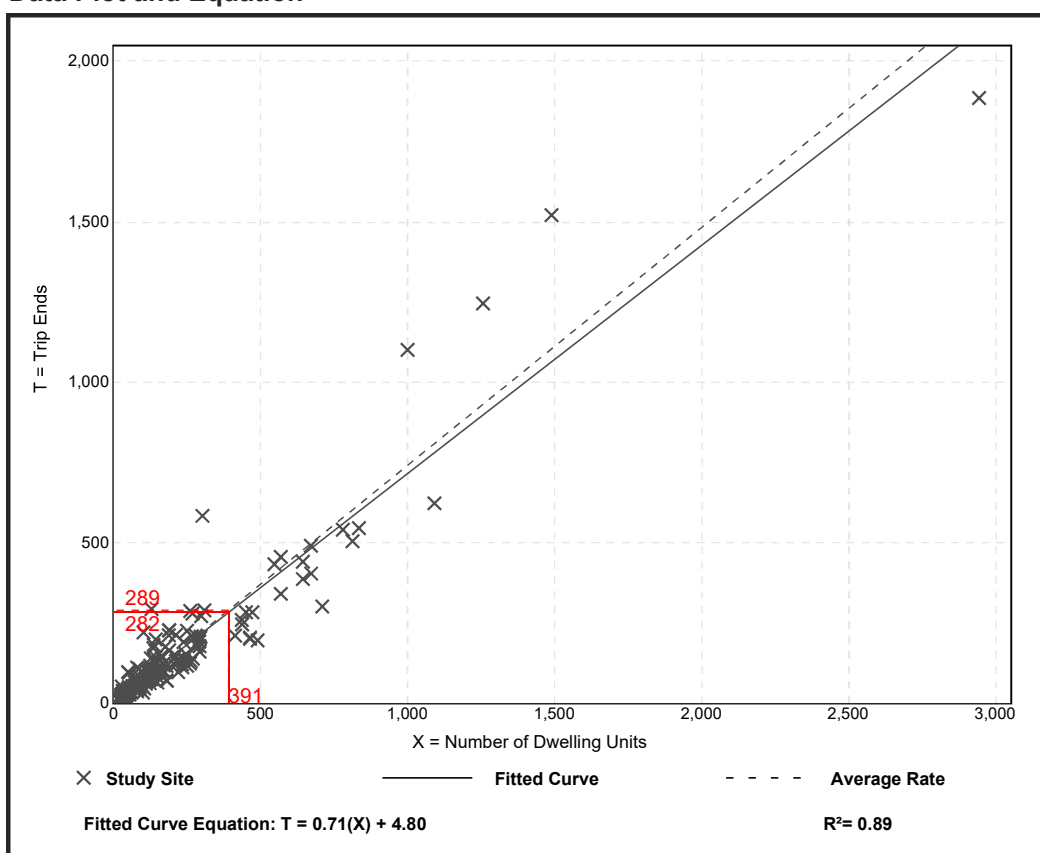
Single-Family Detached Housing (210)

Vehicle Trip Ends vs: Dwelling Units
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 173
 Avg. Num. of Dwelling Units: 219
 Directional Distribution: 25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.74	0.33 - 2.27	0.27

Data Plot and Equation



Trip Generation Manual, 10th Edition • Institute of Transportation Engineers

Single-Family Detached Housing (210)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 190

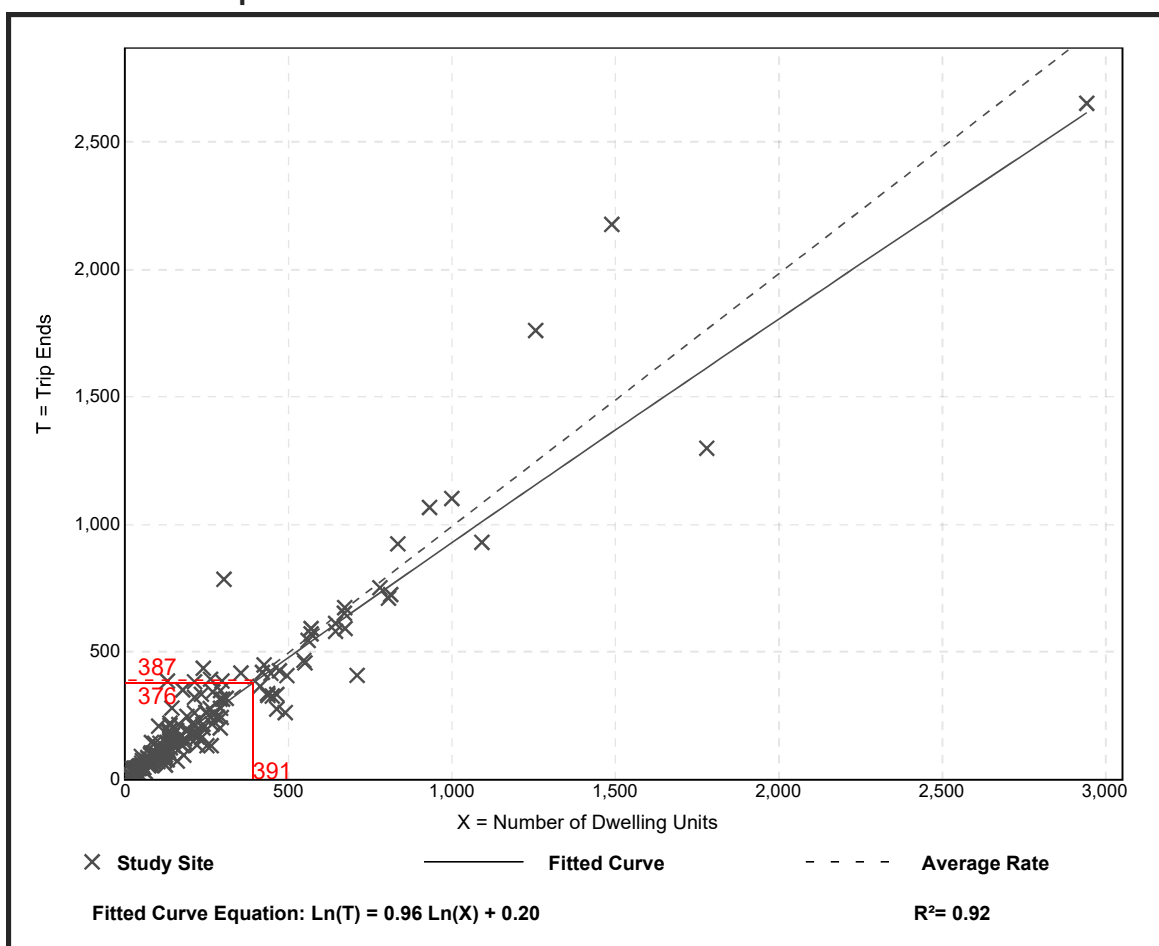
Avg. Num. of Dwelling Units: 242

Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.44 - 2.98	0.31

Data Plot and Equation



Trip Generation Manual, 10th Edition • Institute of Transportation Engineers



Appendix C

Troy
Commuting Patterns
2013 Outflow Data

Destination	# of Trips	Percentage	Direction
Troy	10432	28% NSEW	
Detroit	4338	11% W	
Auburn Hills	2257	6% NW	
Warren	2125	6% SE	
Southfield	1773	5% SW	
Royal Oak	1716	5% S	
Sterling Heights	1250	3% E	
Rochester Hills	1032	3% N	
Farmington Hills	957	3% W	
Birmingham	899	2% SW	
Madison Heights	802	2% SE	
Pontiac	760	2% NW	
Dearborn	756	2% SW	
Bloomfield Hills	539	2% W	
Bloomfield Township	459	2% W	
Southfield Township	394	1% SW	
Rochester	389	1% N	
Novi	372	1% W	
Clinton Township	348	1% E	
Livonia	295	1% SW	
Shelby Township	287	1% NE	
Clawson	282	1% S	
West Bloomfield Township	272	1% W	
Oak Park	183	0% SW	
Wixom	163	0% W	
Ann Arbor	160	0% SW	
Plymouth Township	146	0% SW	
Ferndale	141	0% S	
Total #	37767		

Total %

N	NE	E	SE	S	SW	W	NW
3%	3%	3%	3%	3%	3%	3%	3%
0%	0%	0%	0%	0%	0%	11%	0%
0%	0%	0%	0%	0%	0%	0%	6%
0%	0%	0%	6%	0%	0%	0%	0%
0%	0%	0%	0%	0%	5%	0%	0%
0%	0%	0%	0%	5%	0%	0%	0%
0%	0%	3%	0%	0%	0%	0%	0%
3%	0%	0%	0%	0%	0%	0%	0%
0%	0%	0%	0%	0%	0%	3%	0%
0%	0%	0%	0%	0%	2%	0%	0%
0%	0%	0%	2%	0%	0%	0%	0%
0%	0%	0%	0%	0%	0%	0%	2%
0%	0%	0%	0%	0%	2%	0%	0%
0%	0%	0%	0%	0%	0%	2%	0%
0%	0%	0%	0%	0%	1%	0%	0%
1%	0%	0%	0%	0%	0%	0%	0%
0%	0%	0%	0%	0%	0%	1%	0%
0%	0%	0%	0%	0%	1%	0%	0%
0%	1%	0%	0%	0%	0%	0%	0%
0%	0%	0%	0%	1%	0%	0%	0%
0%	0%	0%	0%	0%	0%	1%	0%
0%	0%	0%	0%	0%	0%	0%	0%
0%	0%	0%	0%	0%	0%	0%	0%
0%	0%	0%	0%	0%	0%	0%	0%
0%	0%	0%	0%	0%	0%	0%	0%
8%	5%	8%	12%	10%	18%	25%	14%



TRAFFIC COMMITTEE REPORT

October 7, 2020

TO: Traffic Committee

FROM: Bill Huotari, City Engineer/ Traffic Engineer

SUBJECT: Request for Traffic Control
Napier Drive at Country Drive

Background:

Dale Williams of 1256 Country Drive states that the lack of STOP signs at the intersection of Napier Drive and Country Drive creates a hazardous condition. He reports that the intersection of Napier Drive at Denton Drive has an ALL-WAY STOP and is a mirror image of Napier Drive at County Drive and should be posted the same way as an ALL-WAY STOP controlled intersection.

The intersection of Napier Drive at Country Drive is uncontrolled.

There were no crashes recorded in the past five (5) years.

The posted speed limit on both streets is 25 mph.

Country Drive would be considered the major road as it has continuity and is a "half-mile" road which provides access to Crooks Road.

The major potential sight distance obstruction at the intersection is the bush next to the house corner on the southwest quadrant. It was also noted that two vehicles were parked front-to-back in the northern portion of the driveway for the property on the southeast quadrant.

The safe approach speed on Napier Drive is 17.7 mph for northbound vehicles due to the permanent sight distance obstruction from the bush next to the house corner on the southwest quadrant. While the parked vehicles previously described cannot be considered permanent fixtures, OHM performed a supplemental analysis using both a front-to-back or side-by-side parking arrangement. The results of that analysis determined the safe approach speed of 10.5 mph under the more limiting scenario of the two cars parked front-to-back.

The preceding analysis did not determine that any criteria were met for ALL-WAY STOP control. OHM recommends that a YIELD sign be installed on the Napier Drive approach to the intersection.

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

October 6, 2020

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

RE: Traffic Control Recommendation for
Napier Drive at Country Drive

Dear Mr. Huotari:

As requested, we have reviewed the intersection of Napier Drive at Country Drive to determine the proper traffic control. Napier Drive at Country Drive is a 3-legged tee intersection located approximately 930 feet west of Crooks Road and about 2,600 feet north of W Square Lake Road. The speed limit on both streets under investigation is 25 mph. There are no controlled approaches at the intersection. Attached are aerial and intersection photos.

Types of Roadways

Both Napier Drive and Country Drive are considered local streets. Napier Drive runs north / south, providing direct access between the existing local neighborhoods. Country Drive runs east / west, providing access to Basswood Drive, which connects to the western part of the neighborhood. Country Drive turns into Hill Top Drive to the east of the intersection and connects to Crooks Road via Bridge Park Drive.

The surrounding land use is entirely single-family residential. On-street parking is permitted on the south side of Country Drive and on the west side of Napier Drive. Napier Drive would be considered the minor road at the intersection (stem of tee), while Country Drive would be considered the major road as it has continuity and is a "half-mile" road which provides access to Crooks Road.

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 zero (0) 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 not collected in the vicinity of the intersection due to the ongoing COVID-19 pandemic response and the subsequent effect of diminished traffic volumes. 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).

Historical traffic volumes on westbound Bridge Park Drive on the east leg of the intersection with Crooks Road were reviewed. These volumes are expected to be similar to the west leg of the intersection and are likely a reasonable approximation of the volumes on Country Drive. These volumes are available from the RCOC Traffic Count Database System, collected via SCATS traffic signal detection. Average daily traffic volumes for westbound traffic throughout 2018 and 2019 were typically under 300 vehicles per day, with a peak hour of less than 50 westbound vehicles. Traffic volumes for eastbound were not available, but are expected to be about the same volume, just at different times of day.

It is therefore extremely unlikely that Country 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 Napier Drive is similarly unlikely to average at least 200 units for any 8 hours. Additionally, since the posted speed limit is only 25mph, it is reasonable to assume that the 85th 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 has not likely been met.

Approach Speed Limits

The approach speed limit on all study 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.

Sight Distance

The major potential sight distance obstruction at the intersection of Napier Drive at Country Drive for a motorist traveling northbound on Napier Drive would be the house corner on the southeast quadrant and a bush next to the house corner on the southwest quadrant of the intersection. During the field visit, it was observed that two vehicles were parked front-to-back in the northern portion of the driveway for the property on the southeast quadrant. These vehicles are also observed parked side-by-side against the face of the garage in the Google Earth satellite and street view images. Reference the attachments for intersection photos. 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 on Napier Drive is 17.7 mph for northbound vehicles due to the permanent sight distance obstruction from the bush next to the house corner on the southwest quadrant. While the parked vehicles previously described cannot be considered permanent fixtures, we performed a supplemental analysis using both a front-to-back or side-by-side parking arrangement. The results of that analysis determined a safe approach speed of 10.5 mph under the more limiting scenario of the two cars parked



front-to-back. Thus, based on the safe approach speed calculations, YIELD-control is appropriate for the Napier approach. The safe approach speed calculation spreadsheet for the intersection is attached for your reference.

Recommendation

The preceding analysis did not determine that any criteria were met for all-way STOP-control. The safe approach speed calculations determined that YIELD-control would be the appropriate traffic control treatment on the Napier Drive approach.

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

Sincerely,

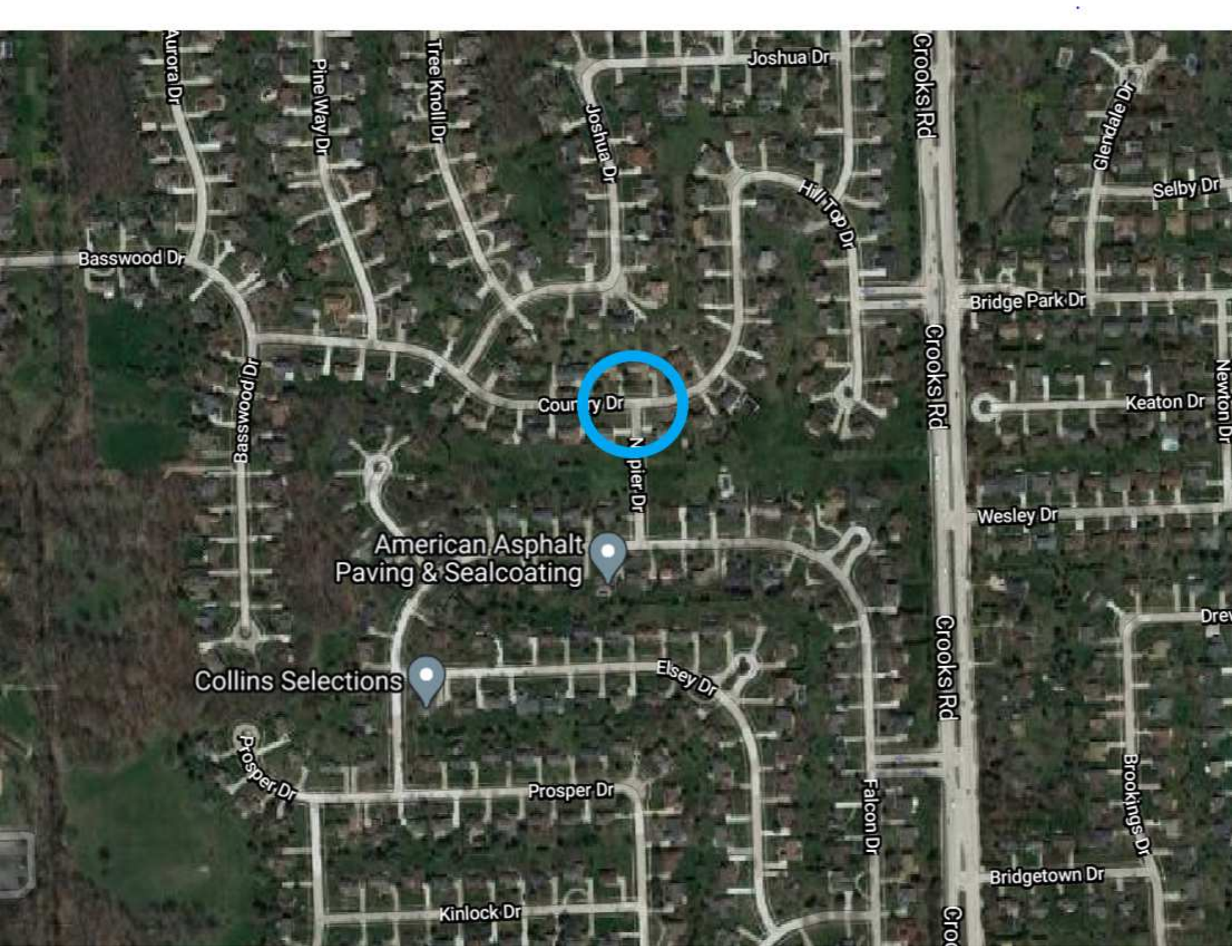
OHM Advisors

Matt Clark, EIT
Traffic Engineer

Stephen Dearing, PE, PTOE
Practice Leader - Traffic

Attachments:

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



Basswood Dr

Pine Way Dr

Tree Knoll Dr

Joshua Dr

Joshua Dr

Hill Top Dr

Crooks Rd

Glendale Dr

Selby Dr

Bridge Park Dr

Keaton Dr

Newton Dr

Wesley Dr

Drev

Brookings Dr

Bridgetown Dr

Falcon Dr

Elsey Dr

Prosper Dr

Kinlock Dr

Prosper Dr

Collins Selections

American Asphalt
Paving & Sealcoating

Country Dr

N. Pier Dr

Crooks Rd

Crooks Rd

Crooks Rd

Safe Approach Speed Calculation

Napier Dr at Country Dr
City of Troy

Measured:

Width of Roads

Road 1 = 28 (ft)

Road 2 = 28 (ft)

Distance to Obstruction

a = 54 (ft)

b = 56 (ft)

c = 54 (ft)

d = 58 (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

TRUE 17.7 (mph) [Based on Veh. A]

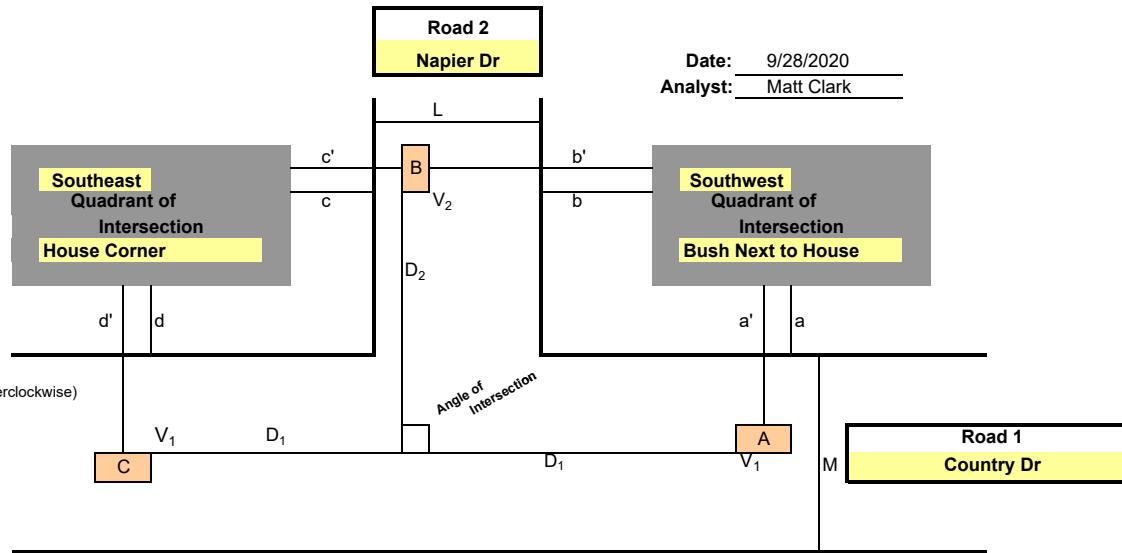
FALSE or $V_2 = 17.9$ (mph) [Based on Veh. C]

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:

$D_1 = 196$

$D_{2A} = 94.7$

$D_{2C} = 96.3$

a' = 60

b' = 72

c' = 60

d' = 74

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

Safe Approach Speed Calculation

Napier Dr at Country Dr
City of Troy

Measured:

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

Distance to Obstruction
a = 54 (ft)
b = 56 (ft)
c = 37 (ft)
d = 74 (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

TRUE 17.7 (mph) [Based on Veh. A]

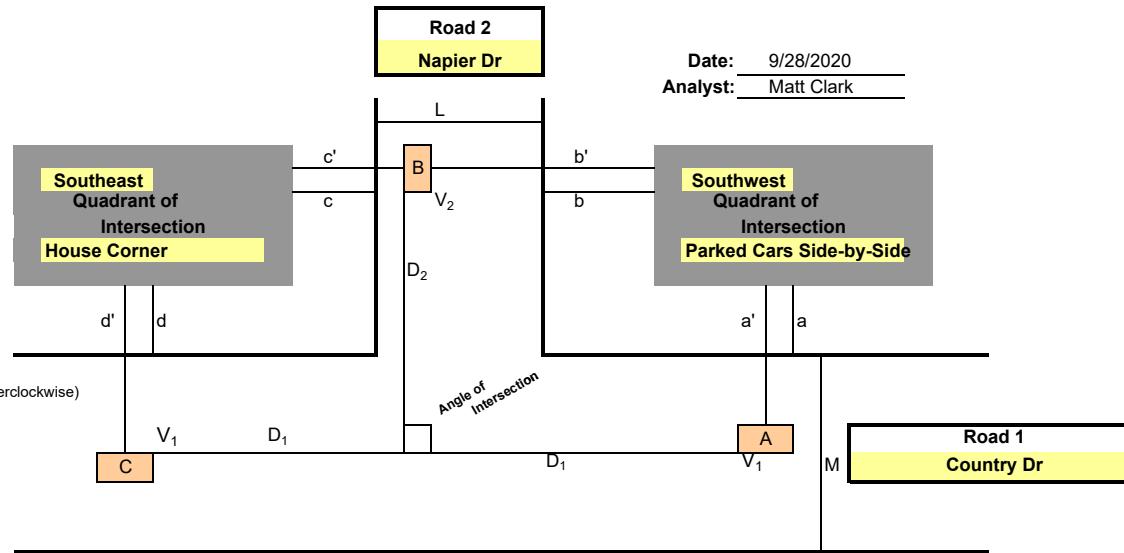
FALSE or $V_2 = 15.4$ (mph) [Based on Veh. C]

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:

$D_1 = 196$

$D_{2A} = 94.7$

$D_{2C} = 79.4$

$a' = 60$

$b' = 72$

$c' = 43$

$d' = 90$

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

Safe Approach Speed Calculation

Napier Dr at Country Dr
City of Troy

Measured:

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

Distance to Obstruction
a = 54 (ft)
b = 56 (ft)
c = 23 (ft)
d = 65 (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

TRUE 17.7 (mph) [Based on Veh. A]

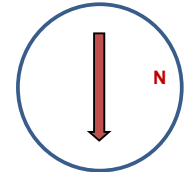
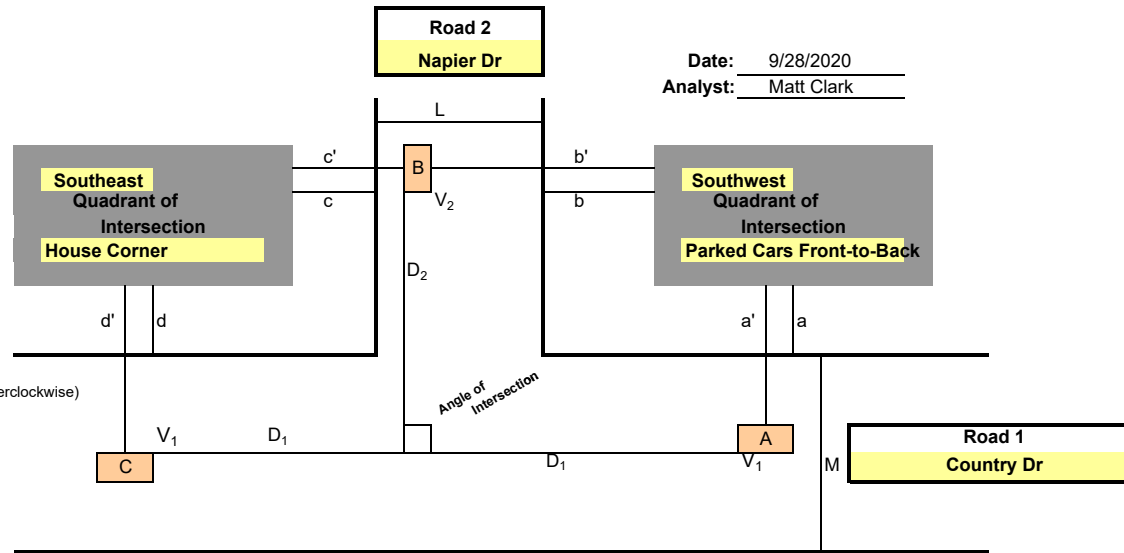
FALSE or $V_2 = 10.5$ (mph) [Based on Veh. C]

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:

$D_1 = 196$

$D_{2A} = 94.7$

$D_{2C} = 49.4$

a' = 60

b' = 72

c' = 29

d' = 81

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: Country Drive- Heading East
Date: 09/29/2020 **Photographer:** Matt Clark



Photograph No. 2: Country Drive- Heading East and Looking Right
Date: 09/29/2020 **Photographer:** Matt Clark



Photograph No. 3: Napier Drive- Looking South
Date: 09/29/2020 **Photographer:** Matt Clark



Photograph No. 4: Napier Drive- Heading North
Date: 09/29/2020 **Photographer:** Matt Clark



Photograph No. 5: Napier Drive- Heading North and Looking Right
Date: 09/29/2020 **Photographer:** Matt Clark



Photograph No. 6: Napier Drive- Heading North and Looking Left
Date: 09/29/2020 **Photographer:** Matt Clark



Photograph No. 7: Country Drive- Heading West
Date: 09/29/2020 **Photographer:** Matt Clark



Photograph No. 8: Country Drive- Heading West and Looking Right
Date: 09/29/2020 **Photographer:** Matt Clark

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.*



TRAFFIC COMMITTEE REPORT

October 13, 2020

TO: Traffic Committee

FROM: Bill Huotari, City Engineer/ Traffic Engineer

SUBJECT: Request for No Parking
Graefield Road, Witherbee Drive to South

Background:

Yelena Guzyayeva of 1740 Witherbee Drive requests that the current time limited No Parking zone on the west side of Graefield Road, from Witherbee Drive to the south property line of 1740 Witherbee drive be modified to prohibit parking at all times.

The request is based primarily on construction vehicles parking along the west side of Graefield Road to load and unload equipment and the damage that is being done to their property.

A similar request was made by the same property owners at the Traffic Committee meeting of August 10, 2010. At that time, their request was based on vehicles parking along the west side of Graefield Road related to school activities.

At the 2010 meeting, a discussion ensued and the Traffic Committee subsequently recommended that the property be posted as No Parking zones but in order to be consistent with parking regulations around other Troy schools, the committee would rather prohibit parking only during school arrival and dismissal times.

The 2010 Traffic Committee recommendation was to establish No Parking zones along both sides of 1740 Witherbee Drive but limit the restrictions to the hours of 8:15 – 9:15 AM and 3:15 – 4:15 PM.



GIS Online

Legend:



Notes:

Map Scale: 1=212
Created: October 19, 2020



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.

William J Huotari

From: William J Huotari
Sent: Tuesday, October 13, 2020 9:59 AM
To: William J Huotari
Subject: FW: Request for No Parking signs added to Troy's section of Graefield Rd
Attachments: 1 (Medium).jpg; 2 (Medium).jpg; 3 (Medium).jpg; 4 (Medium).jpg

From: Sergey Guzyayev
Sent: Monday, October 12, 2020 3:15 PM
To: Scott J Carruthers
Cc: Ethan Baker
Subject: Request for No Parking signs added to Troy's section of Graefield Rd

Gentlemen,

We live at the address 1740 Witherbee Dr.

On the adjacent street, Graefield, the City of Birmingham has installed 'No Parking' signs on their jurisdiction, which unfortunately for us is just past where our property ends. There are no signs on the Troy side where our property resides.

And now all the cars coming to school are trying to park under the windows of our bedroom. This always leads to problems as the many cars that cycle in and out leave behind trash and potentially ride up on the curb onto our lawn. After the last repair/re-pavement of the road surface this past summer, all the curbs became below the level of the road itself which has worsened the problem as the cars are even more likely now to drive past the curb onto our lawn. Over time this has led to damage - our irrigation system is out of order, the grass cover is disfigured.

But the worst was yet ahead - due to the numerous reconstructions of nearby houses, a section of Graefield street (from the intersection with Witherbee to where the current Birmingham 'No Parking' signs are) turned into a platform for unloading and loading construction equipment. In the photos are only a couple examples of this. The constant rumble, dust and exhaust fumes are actually much worse than we expected, and the drivers of the heavy-duty vehicles of course park past the curb (see photos). Our master bedroom faces the street and the obscene noise and dust is affecting me especially since I am in a turbulent state of health since beginning cancer treatment early this year. Also, we are left to deal with the damage to the lawn since whatever lowest-bidder contracting company is parking those vehicles is most certainly not going to pay for it without lawyers involved. I don't even want to have to think about that anymore.

We will be very, very grateful if the Troy city authorities decide to help us out by extending the 'No Parking' signs into "our part" of the street and/or adjusting the curb so it sits as a natural barrier for vehicle tires again. Our guess is that the signs are probably the cheapest, easiest, and most effective solution and we have had signs added to "our part" of Witherbee Dr in the past which was a wonderful breath of fresh air. Although it was too late to save our lawn irrigation system for a decent price, the difference in trash laying around and damage to our lawn was clear.

With respect and hope for a quick solution to our problem,

Yelena Guzyayeva and family

Guzyayeva@gmail.com (me) / sergey.guzyayev@gmail.com (my son)

(248) 515-7583 (my cell) / (248) 925-6880 (my son's cell)

William J Huotari

From: William J Huotari
Sent: Monday, October 12, 2020 6:01 PM
To: Sergey Guzyayev
Cc: Beth L Tashnick; Ethan Baker; Guzyayeva@gmail.com; Scott J Carruthers
Subject: Re: Request for No Parking signs added to Troy's section of Graefield Rd

I'll work with Scott to get another sign installed and will keep you updated as we move towards a November meeting.

Thanks, Bill

Sent from my Phone

On Oct 12, 2020, at 5:55 PM, Sergey Guzyayev <sergey.guzyayev@gmail.com> wrote:

Okay, sounds good. Let's get the sign up as soon as you guys have a chance and I'll make a note in my calendar for the upcoming meeting on November 18th. Please do keep us updated on the exact time and format of the meeting when we get closer to the date.

Thank you!
Sergey

On Mon, Oct 12, 2020 at 5:48 PM William J Huotari <HuotariWJ@troymi.gov> wrote:

A sign could be placed now if it has the same restrictions as what is currently displayed on the existing signs (8:15-9:15 AM and 3:15-4:15 PM) as it would be compliant with the existing TCO and just be clarification in the field that the No Parking zone starts at Witherbee and ends at the existing sign to the south.

Any change to that would require review and recommendation by the Traffic Committee and then approval by City Council.

Thanks, Bill

Sent from my Phone

On Oct 12, 2020, at 5:22 PM, Sergey Guzyayev <sergey.guzyayev@gmail.com> wrote:

Mr. Huotari,

Thank you for your rapid response. I'm glad the email made its way to the right people, we weren't sure who to send it to.

I recall being at the meeting, even so long ago. I even recall how well the TCO resolved the issue we were having. We have actually since had no issues at all with any Pembroke Elementary School traffic!

That said, the problem we are having now is caused by these aforementioned construction equipment vehicles, and it only happens on Graefield Rd. We do not have any issues on Witherbee Dr. It is important for me to note that neither we nor (as far as I have seen) any of our neighbors use this section of Graefield to park personal vehicles. The only two dwellings on this side of Graefield in question are our house and our neighbor living behind us, he parks vehicles further up the road closer to Derby which is not in the scope of the TCO and we do not ever park vehicles on the road.

Upon reviewing what Yelena said in the original email I believe we mistakenly stated the sign currently on Graefield is in Birmingham's jurisdiction, but hopefully that just goes to show that it is indeed a bit far from Witherbee. After speaking to her and my father and understanding their frustrations I think given what I stated above and what you have outlined an additional sign is necessary.

However, my parents also understandably wish to push for the change to 24/7 No Parking for "our" side of Graefield. Do please note that if the meeting will be in-person Yelena will not be able to attend due to her health conditions putting her in a very high risk group for not only COVID but any infectious diseases. My father and I would be happy to attend and vouch for our proposal.

So, this does leave one logistical question: Would the additional sign be placed now with the current school arrival/dismissal restrictions or not until after the meeting is held and the committee makes their decision? The extra sign ASAP could potentially be helpful.

Thanks again for hearing us out.

Sergey Guzyayev

On Mon, Oct 12, 2020 at 4:19 PM William J Huotari <HuotariWJ@troymi.gov> wrote:

Yelena, your email was forwarded to me for review.

There is a current Traffic Control Order in place (TCO # 10-02-P) that approved a No Parking Zone on the south side of Witherbee, from Graefield to the west property line of 1740 Witherbee and on the west side of Graefield, from

Witherbee to the south property line of 1740 Witherbee, during schools days only, between the hours of 8:15-9:15 a.m. and 3:15-4:15 p.m.

There are No Parking signs along both streets currently with the time restrictions noted on the signs (see pictures below). An additional sign can be added closer to the intersection to clarify that the west side of Graefield is indeed a No Parking zone but it would have the same time restrictions as approved by the current TCO.

Is your request to modify the No Parking Zone on the west side of Graefield to remove the time restrictions and make this area a permanent No Parking zone (i.e. No Parking allowed at any time)? This would mean that no one would be able to park in this location at any time, including you or guests to your house.

As you may be aware, you made this request of the Traffic Committee at their meeting of August 10, 2010 (Item #4). The agenda item that was presented and the minutes of the meeting are attached.

At the meeting, a discussion ensued that the Traffic Committee would recommend that both sides of your property be posted as No Parking zones but in order to be consistent with parking regulations around other Troy schools, the committee would rather prohibit parking only during school arrival and dismissal times.

The subsequent Traffic Committee recommendation was to establish No Parking zones along both sides of your property but limit the restrictions to the hours of 8:15 – 9:15 AM and 3:15 – 4:15 PM.

A change to the current times, or a change to No Parking 24/7, would require that the request be heard before the Traffic Committee.

I anticipate that the next available Traffic Committee meeting will be held on November 18th but at this time I do not know if the meeting will be in-person or virtual.

If you desire to modify the No Parking zone beyond what is already in place, please confirm and I can prepare an agenda item for the November Traffic Committee meeting.

If an additional sign, closer to the intersection, would solve the concern we can have that installed in short order.

Thanks, Bill

<image001.png>

William J. Huotari, PE
City Engineer | Traffic Engineer

City of Troy
248.524.3387

<image002.png>

<image003.png>

<image004.png>

<image005.png>

<image006.png>

<image013.png>

<image014.png>

From: Scott J Carruthers
Sent: Monday, October 12, 2020 3:40 PM
To: William J Huotari <HuotariWJ@troymi.gov>
Subject: FW: Request for No Parking signs added to Troy's section of Graefield Rd

Hi Bill,

I am forwarding this to you as the Mayor is copied on it.

Thank you.

<image007.png>

Scott Carruthers

**Operations Manager
Streets and Drains| City of Troy**

O: 248.524.3501

C: 248.841.3892

<image008.png>

<image009.png>

<image010.png>

<image011.png>

<image012.png>

From: Sergey Guzyayev <guzyayeva@gmail.com>

Sent: Monday, October 12, 2020 3:15 PM

To: Scott J Carruthers <Scott.Carruthers@troymi.gov>

Cc: Ethan Baker <>

Subject: Request for No Parking signs added to Troy's section of Graefield Rd

Gentlemen,

We live at the address [1740 Witherbee Dr.](#)

On the adjacent street, Graefield, the City of Birmingham has installed 'No Parking' signs on their jurisdiction, which unfortunately for us is just past where our property ends. There are no signs on the Troy side where our property resides.

And now all the cars coming to school are trying to park under the windows of our bedroom. This always leads to problems as the many cars that cycle in and out leave behind trash and potentially ride up on the curb onto our lawn. After the last repair/re-pavement of the road surface this past summer, all the curbs became below the level of the road itself which has worsened the problem as the cars are even more likely now to drive past the curb onto our lawn. Over time this has led to damage - our irrigation system is out of order, the grass cover is disfigured.

But the worst was yet ahead - due to the numerous reconstructions of nearby houses, a section of Graefield street (from the intersection with Witherbee to where the current Birmingham 'No Parking' signs are) turned into a platform for unloading and loading construction equipment. In the photos are only a couple examples of this. The constant rumble, dust and exhaust fumes are actually much worse than we expected, and the drivers of the heavy-duty vehicles of course park past the curb (see photos). Our master bedroom faces the street and the obscene noise and dust is affecting me especially since I am in a turbulent state of health since beginning cancer treatment early this year. Also, we are left to deal with the damage to the lawn since whatever lowest-bidder contracting company is parking those vehicles is most certainly not going to pay for it without lawyers involved. I don't even want to have to think about that anymore.

We will be very, very grateful if the Troy city authorities decide to help us out by extending the 'No Parking' signs into "our part" of the street and/or adjusting the curb so it sits as a natural barrier for vehicle tires again. Our guess is that the signs are probably the cheapest, easiest, and most effective solution and we have had signs added to "our part" of Witherbee Dr in the past which was a wonderful breath of fresh air. Although it was too late to save our lawn irrigation system for a decent price, the difference in trash laying around and damage to our lawn was clear.

With respect and hope for a quick solution to our problem,

Yelena Guzyayeva and family

Guzyayeva@gmail.com (me) / sergey.guzyayev@gmail.com (my son)

(248) 515-7583 (my cell) / (248) 925-6880 (my son's cell)



TRAFFIC COMMITTEE REPORT

July 26, 2010

TO: Traffic Committee

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

SUBJECT: 1740 Witherbee Drive – NO Parking Signs Request

Background:

- Mr. Sergey Guzyayev of 1740 Witherbee requests that NO Parking signs be installed along his property fronting Witherbee as well as Graefield.
- 1740 Witherbee is located directly across from Pembroke Elementary School.
- Mr. Guzyayev reports that during the school year, vehicles park near his property when dropping off or picking up children from the school.
- He also reports that vehicles have driven across his lawn causing damage to his irrigation system five (5) times which he has paid to repair.
- His issues became exacerbated when No Parking signs were installed on the south side of Witherbee, from Eton to Graefield (TCO #06-01-P, Council approval November 13, 2006).
The north side of Witherbee is currently posted No Parking due to fire hydrants located along the north side of the road.
- When TCO #06-01-P was considered at the October 18, 2006 Traffic Committee meeting, affected residents attended the Traffic Committee meeting to oppose full-time parking prohibition on the south side of Witherbee.
- A compromise was reached at that meeting and No Parking signs were subsequently approved, but the restrictions were limited to School Days Only, between the hours of 8:15 – 9:15 a.m. and 3:15 – 4:15 p.m.

Recommendations:

- Staff recommends that No Parking signs be installed as requested by the resident on both sides of the property at 1740 Witherbee with the following limitations, to be consistent with the previously approved TCO #06-01-P:
 - Prohibit parking on the south side of Witherbee from Graefield to the west property line of 1740 Witherbee and on the west side of Graefield, from Witherbee to the south property line of 1740 Witherbee during school days only between the hours of 8:15 – 9:15 a.m. and 3:15 – 4:15 p.m.

Suggested Resolutions:

- a. Recommend that a NO PARKING zone be established on the south side of Witherbee, from Graefield to the west property line of 1740 Witherbee and on the west side of Graefield, from Witherbee to the south property line of 1740 Witherbee during school days only between the hours of 8:15 – 9:15 a.m. and 3:15 – 4:15 p.m.
- b. Recommend no changes at 1740 Witherbee.

Mr. William J. Huotari
Deputy City Engineer/Traffic Engineer
500 West Big Beaver
Troy, MI 48084

In addition to our conversation in City Hall, we report:

During the schooldays of Pembroke Elementary School, many different private cars park near our property for dropping off and picking up kids to and from school. The curbs on the streets outside our home on the streets Witherbee and Graefield are very low. Because of that, the cars always drive onto our lawn, and the kids walk on the grass. This by itself is not a problem, but there is always garbage left behind, and tire tracks on our lawn. The situation became worse a couple years ago when near almost all the houses on our main street, Witherbee, "no parking" signs were set up. We have repaired our sprinkler system, which has been damaged by cars driving onto the lawn, 5 times. Another major issue with cars parking near our house is all the cars block the view of kids crossing the street, and more importantly block the view of cars driving by. This is a safety hazard that the schoolchildren acting as "crossing guards" **cannot** handle, especially such high volumes of traffic all cramped in one lane.

Because of the reasons stated above, we ask that you please set up "no parking" signs on our territory on the streets Witherbee and Graefield. It will be a modification well worth any time or money spent.

I have included picture of the streets mentioned on page 2 of this document. Thank you very much for your interest in our matter.

Sincerely,

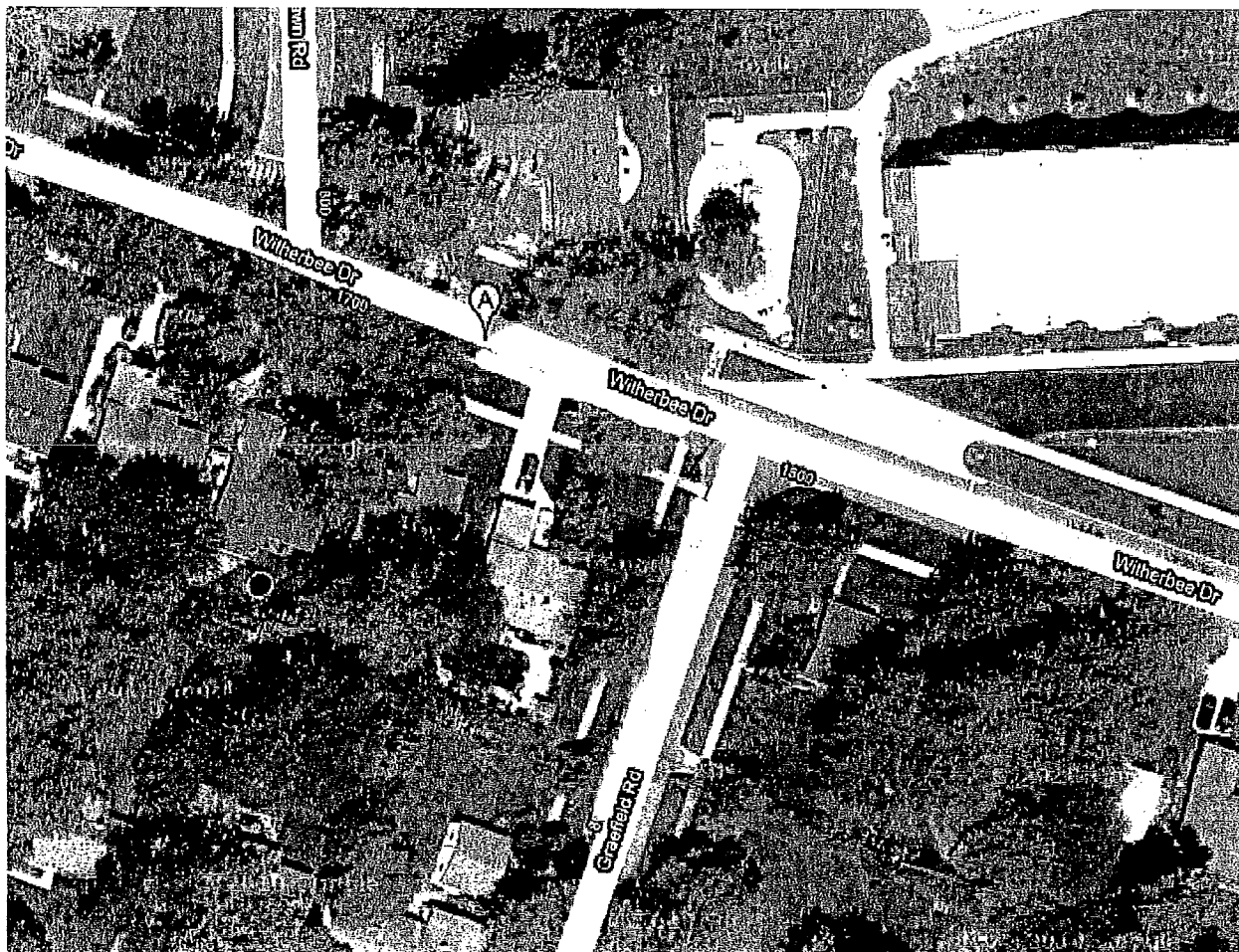
Sergey Guzyayev and Yelena Guzyayeva

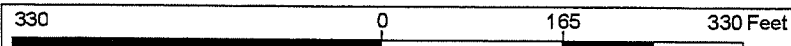
1740 Witherbee Dr.

Troy, MI 48084

sergey.guzyayev@gmail.com

Yellow lines indicated which areas to be blocked off.





City of Troy Geographical Information Systems - Department of Information Technology

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.



Legend

Street Signs

- <all other values>
- AAR
- B3-1
- B3-3 - INTERSTATE HIGHWAY 75
- B4-5
- B5-1L
- B5-1R
- B6-2R - INTERSTATE HIGHWAY 7
- BUS
- CITYLIMITS - CITY LIMITS
- CUSTOM SIGN
- D1-1
- D1-2
- D1-3A
- D10-2 - MILEPOST (2 DIGIT)
- D11-1
- D2-3
- D3-1
- D3-2
- D4-2
- D7-1
- D7-2
- D9-1
- D9-14
- D9-1A
- E1-3
- E1-4
- E6-2A
- GAS
- M1-1
- M1-4 - US ROUTE MARKER
- M2-2 - JUNCTION SIGN
- M3-1 - NORTH AUXILIARY MARK
- M3-2 - EAST AUXILIARY MARK
- M3-3 - SOUTH AUXILIARY MARK
- M2-4

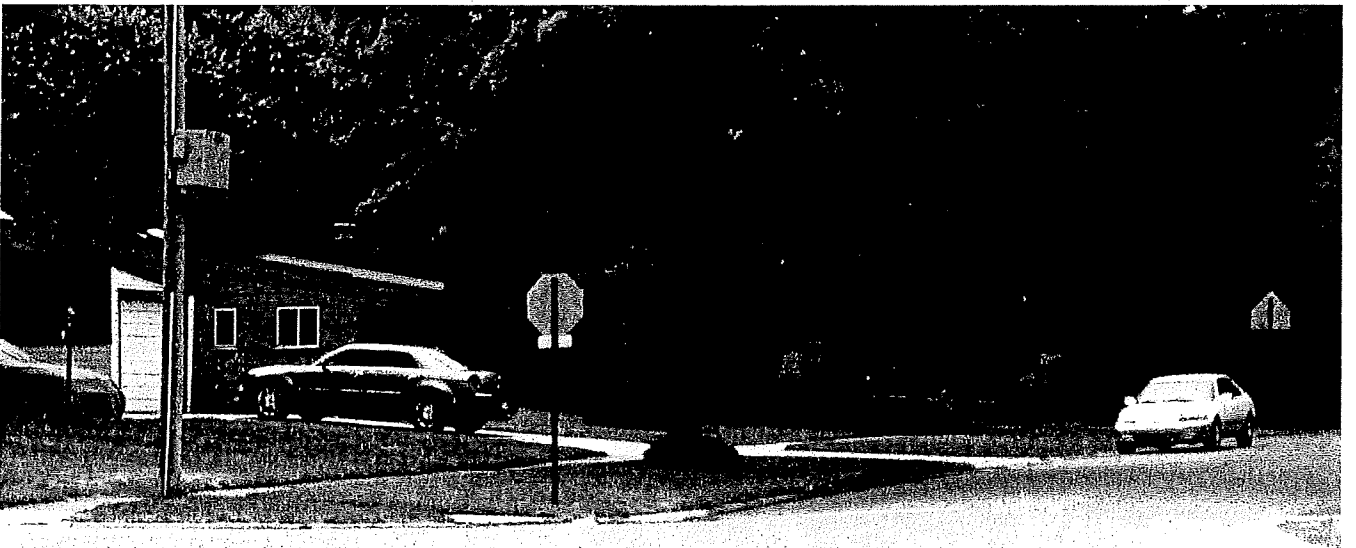
1: 1,980



Notes

Enter Map Description

ITEM 4



A regular meeting of the Troy Traffic Committee was held Wednesday, August 18, 2010 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
Ted Halsey
Richard Kilmer
Pete Ziegenfelder

ABSENT: John Diefenbaker
Jan Hubbell
Gordon Schepke

Also present: Bill Huotari, Deputy City Engineer/Traffic Engineer
Yelena Guzyayeva, 1740 Witherbee
Frank Mediati, 3855 Fairfax Drive

2. Minutes – January 20, 2010

RESOLUTION #2010-08-03

Moved by Kilmer

Seconded by Binkowski

To approve the January 20, 2010 minutes.

YES: All-4

NO: None

ABSENT: 3 (Diefenbaker, Hubbell, Schepke)

MOTION CARRIED

REGULAR BUSINESS

3. Install STOP Sign on Fernleigh at Cottonwood

Norbert Weinert of 3668 Fernleigh requests installation of a STOP sign on Fernleigh at Cottonwood. See attached report.

RESOLUTION #2010-08-04

Moved by Halsey

Seconded by Kilmer

Recommend installation of a STOP sign on eastbound Cottonwood at Fernleigh.

YES: All-4
NO: None
ABSENT: 3 (Diefenbaker, Hubbell, Schepke)
MOTION CARRIED

4. **Install NO PARKING Signs in front of 1740 Witherbee and along the side of the Property on Graefield.**

Sergey Guzyayev and Yelena Guzyayeva, of 1740 Witherbee, request that NO PARKING signs be installed along their property which fronts on Witherbee as well as Graefield. There is adequate parking on the Pembroke School property, but Ms. Guzyayeva told the committee that school visitors prefer to park on the street, half on her lawn, leaving trash, damaging the lawn and breaking their sprinkler system. The cars parked there also become a sight obstruction, making it difficult to see cars coming along Witherbee. She would prefer that parking be prohibited at all times.

In order to be consistent with parking regulations around other Troy schools, the committee would rather prohibit parking only during school arrival and dismissal times.

RESOLUTION #2010-08-05

Moved by Binkowski
Seconded by Halsey

Recommend that a NO PARKING zone be established on the south side of Witherbee, from Graefield to the west property line of 1740 Witherbee and on the west side of Graefield, from Witherbee to the south property line of 1740 Witherbee, during school days only, between the hours of 8:15 – 9:15 a.m. and 3:15 – 4:15 p.m.

YES: All-4
NO: None
ABSENT: 3 (Diefenbaker, Hubbell, Schepke)
MOTION CARRIED

5. **Establish Fire Lanes at 130 Town Center**

Section 8.28, Chapter 106, Troy City Code, provides for the establishment of fire lanes on private property. The Fire Department recommends that the fire lanes shown on the attached sketch be provided to allow proper deployment of and travel by emergency vehicles (fire, police, medical).

RESOLUTION #2010-08-06

Moved by Halsey
Seconded by Kilmer

Recommend establishing fire lanes/tow away zones at 130 Town Center, as recommended by the Fire Department.

YES: All-4
NO: None
ABSENT: 3 (Diefenbaker, Hubbell, Schepke)
MOTION CARRIED

6. Establish Fire Lanes at 5903-5953 John R

Section 8.28, Chapter 106, Troy City Code, provides for the establishment of fire lanes on private property. The Fire Department recommends that the fire lanes shown on the attached sketch be provided to allow proper deployment of and travel by emergency vehicles (fire, police, medical).

Frank Mediati, manager of the shopping center at 5903-5953 John R, addressed the committee. He objected to the usual Fire Lane signs, saying that vendors have to load and unload behind the shopping center. He proposed that the signs eliminate the words NO STANDING OR STOPPING, and proposed signs indicating FIRE LANE, NO PARKING, TOW AWAY ZONE. Lt. Caloia of the Fire Department and Lt. Livingston of the Police Department agreed that this was an acceptable compromise to allow vendors' vehicles to remain for a few minutes to load and unload.

RESOLUTION #2010-08-07

Moved by Halsey
Seconded by Binkowski

Recommend establishing fire lanes/tow away zones at 5905 John R, as recommended by the Fire Department.

YES: All-4
NO: None
ABSENT: 3 (Diefenbaker, Hubbell, Schepke)
MOTION CARRIED

7. Public Comment

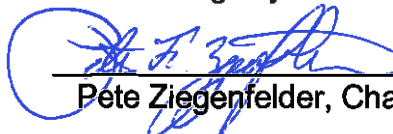
No one wished to address the committee.

8. Other Business

There was no other business.

9. Adjourn

The meeting adjourned at 8:10 p.m.


Pete Ziegenfelder, Chairperson


Laurel Nottage, Recording Secretary







TRAFFIC COMMITTEE REPORT

October 1, 2020

TO: Traffic Committee

FROM: Bill Huotari, City Engineer/ Traffic Engineer

SUBJECT: 2021 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.

Recommended dates for 2021 Traffic Committee meetings are detailed below:

- Wednesday, January 20
- Wednesday, February 17
- Wednesday, March 17
- Wednesday, April 21
- Wednesday, May 19
- Wednesday, June 16
- Wednesday, July 21
- August – NO MEETING
- Wednesday, September 15
- Wednesday, October 20
- Wednesday, November 17
- December – NO MEETING