

## **AGENDA**

### **Traffic Committee Meeting**

**April 15, 2015 – 7:30 P.M.**

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

1. Roll Call
2. Minutes – March 18, 2015

### **PUBLIC HEARINGS**

3. Request for Sidewalk Waiver – 5026 Somerton – Sidwell #88-20-10-477-051
4. Request for Sidewalk Waiver – 5038 Somerton – Sidwell #88-20-10-477-050

### **REGULAR BUSINESS**

5. Request to Remove No Parking Zone – Fieldstone, South Boulevard to Nuthatch
6. Request for Traffic Control – Diamond at Bonito
7. Request for Traffic Control – Waltham at Post
8. Request for Traffic Control – Delta at Westpointe
9. Public Comment
10. Other Business
11. Adjourn

- cc: Item 3 & 4: Safet (Sam) Stafa, 1612 Muer Drive  
Properties within 300'
- Item 5: Melissa Acton, 6956 Fieldstone  
Properties within 300'
- Item 6: Sharon Standifer, 2540 Bonito  
Properties within 300'
- Item 7: Richard Karlis, 2491 Waltham  
Properties within 300'
- Item 8: Cindy Graves, 6270 Emerald Lake  
Properties within 300'

#### Traffic Committee Members

Captain Robert Redmond & Sgt. Mike Szuminski, Police Department  
Lt. Eric Caloia, Fire Department  
William J. Huotari, Deputy City Engineer/Traffic Engineer

## TRAFFIC COMMITTEE

### MESSAGE TO VISITORS, DELEGATIONS AND CITIZENS

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

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

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

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

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

**PUBLIC HEARINGS**

**3. Request for Sidewalk Waiver – 5026 Somerton – Sidwell #88-20-10-477-051**

Sam Stafa requests a sidewalk waiver for the sidewalk at 5026 Somerton (Sidwell #88-20-10-477-051). Mr. Stafa states that there are no sidewalks along Somerton Drive, nor within the Crystal Springs Subdivision, nor within Crystal Springs Subdivision No. 1 to the north. He further states that having no sidewalk along the subject property would be consistent with current neighborhood conditions and also consistent with the subdivision in which it is located.

The Department of Public Works (DPW) recommends denying this waiver request per the attached memo from the Director and Public Works Manager.

**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**, Sam Stafa has requested a waiver of the requirement to construct sidewalk based on no other existing sidewalk on Somerton; 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 5026 Somerton (Sidwell #88-20-10-477-051).

- 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 5026 Somerton (Sidwell #88-20-10-477-051).

**4. Request for Sidewalk Waiver – 5038 Somerton – Sidwell #88-20-10-477-050**

Sam Stafa requests a sidewalk waiver for the sidewalk at 5038 Somerton (Sidwell #88-20-10-477-050). Mr. Stafa states that there are no sidewalks along Somerton Drive, nor within the

Crystal Springs Subdivision, nor within Crystal Springs Subdivision No. 1 to the north. He further states that having no sidewalk along the subject property would be consistent with current neighborhood conditions and also consistent with the subdivision in which it is located.

The Department of Public Works (DPW) recommends denying this waiver request per the attached memo from the Director and Public Works Manager.

**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**, Sam Stafa has requested a waiver of the requirement to construct sidewalk based on no other existing sidewalk on Somerton; 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 5038 Somerton (Sidwell #88-20-10-477-050).

- 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 5038 Somerton (Sidwell #88-20-10-477-050).

**REGULAR BUSINESS**

**5. Request to Remove No Parking Zone – Fieldstone, South Boulevard to Nuthatch**

Melissa Acton of 6956 Fieldstone requests that a No Parking zone be removed from the west side of Fieldstone, between South Boulevard and Nuthatch. Ms. Acton states that the No Parking zone was established when the Heartland Health Care Center was changing its use to a higher percentage of rehabilitation patients which required more parking. Employees were parking on Fieldstone as the site at that time did not have adequate parking. In 2011, Heartland Health Care expanded their facility and constructed additional parking on their site to

accommodate their needs. She feels that offsite parking from Heartland Health Care, on Fieldstone, is no longer an issue and is causing her a hardship by not allowing parking on the road by residents. The east side of Fieldstone is already posted No Parking due to the location of fire hydrants.

**SUGGESTED RESOLUTIONS:**

- a. **RESOLVED**, that the No Parking zone be removed on the west side of Fieldstone, between South Boulevard and Nuthatch.
- b. **RESOLVED**, that NO changes be made on Fieldstone.

**6. Request for Traffic Control – Diamond at Bonito**

Sharon Standifer of 2540 Bonito states that the existing traffic control at the intersection of Diamond and Bonito is not adequate to assign right-of-way. Ms. Standifer reports that the traffic control at the intersection creates a potentially hazardous condition.

**SUGGESTED RESOLUTIONS:**

- a. **RESOLVED**, that the intersection of Diamond at Bonito be modified from an existing YIELD sign on Bonito to a STOP sign on Bonito at the approach to Diamond.
- b. **RESOLVED**, that NO changes be made at the intersection of Diamond at Bonito.

**7. Request for Traffic Control – Waltham at Post**

Richard Karlis of 2491 Waltham states that the existing traffic control at the intersection of Waltham and Post is not adequate to assign right-of-way. Mr. Karlis reports that the traffic control at the intersection creates a potentially hazardous condition.

**SUGGESTED RESOLUTIONS:**

- a. **RESOLVED**, that the intersection of Waltham at Post be modified from existing YIELD signs on the Post approaches to the intersection to two-way STOP control on the Post Drive approaches to Waltham.
- b. **RESOLVED**, that NO changes be made at the intersection of Waltham at Post.

**8. Request for Traffic Control – Delta at Westpointe**

Cindy Graves of 6270 Emerald Lake states that the lack of traffic control at the intersection of Delta and Westpointe creates a potentially hazardous situation.

**SUGGESTED RESOLUTIONS:**

- a. **RESOLVED**, that the intersection of Delta at Westpointe be modified from No traffic control to a YIELD sign on the Delta approach to Westpointe.

b. **RESOLVED**, that the intersection of Delta at Westpointe be modified from No traffic control to a STOP sign on the Delta approach to Westpointe.

c. **RESOLVED**, that NO changes be made at the intersection of Delta at Westpointe.

**9. Public Comment**

**10. Other Business**

**11. Adjourn**

A regular meeting of the Troy Traffic Committee was held Wednesday, March 18, 2015 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: Tim Brandstetter  
Al Petrusis  
Cynthia Wilsher  
Pete Ziegenfelder

Absent: David Easterbrook  
Richard Kilmer

Also present: James Dumont, 683 Trombley  
Brad Manning, Clearview Homes  
Arek w/ Jenmax Homes  
Veronica Valentino & David Recker, 5810 Sussex  
Sgt. Mike Szuminski, Police Department  
Lt. Eric Caloia, Fire Department  
Bill Huotari, Deputy City Engineer/Traffic Engineer

**2. Minutes – January 21, 2015**

**RESOLUTION # 2015-03-03**

Moved by Brandstetter  
Seconded by Petrusis

To approve the January 21, 2015 minutes as printed.

YES: All 4 (Brandstetter, Petrusis, Wilsher, Ziegenfelder)

NO: None

ABSENT: 2 (Easterbrook, Kilmer)

MOTION CARRIED

**PUBLIC HEARINGS**

**3. Request for Sidewalk Waiver – 5810 Sussex – Sidwell #88-20-07-102-037**

Veronica Valentino requests a sidewalk waiver for the sidewalk at 5810 Sussex (Sidwell #88-20-07-102-037). Ms. Valentino states that there are no sidewalks on Sussex or adjacent streets. The proposed sidewalk would lead to nowhere and connect to nothing.

Ms. Valentino was in attendance at the meeting and discussed the request for a waiver. She stated that Sussex and the surrounding roads in the area were gravel with no improvements. There is no other sidewalk in the area and a sidewalk at this property would lead to nowhere and connect to nothing.

Mr. Petrulis stated that it would not make sense to have sidewalk installed at this location as the roads are not paved. It would not make sense to have a single parcel with sidewalk. He felt that it could take away from the aesthetics in the area and that it would look odd.

Ms. Wilsher discussed that this is a beautiful area and different than other subdivisions and a sidewalk at this location could impact existing trees. She also agreed that a sidewalk would be out of place and would lead to nothing.

**RESOLUTION # 2015-03-04**

Moved by Brandstetter  
Seconded by Petrulis

**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**, Veronica Valentino has requested a waiver of the requirement to construct sidewalk based on no other existing sidewalk on Sussex; 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 5810 Sussex (Sidwell #88-20-07-102-037).

YES: 3 (Brandstetter, Petrulis, Wilsher)  
NO: 1 (Ziegenfelder)  
ABSENT: 2 (Easterbrook, Kilmer)

MOTION CARRIED

Mr. Petruilis made a motion to discuss the sidewalk waivers at 2962, 2974 and 2986 Iowa as one (1) item and 587, 640 and 650 Trombley as one (1) item. There was unanimous consensus from the Traffic Committee members.

**4. Request for Sidewalk Waiver – 2962 Iowa – Sidwell #88-20-36-227-072**

Arek with Jenmax Homes requests a sidewalk waiver for the sidewalk at 2962 Iowa (Sidwell #88-20-36-227-072). Arek states that no other homes in the neighborhood have a sidewalk. The proposed sidewalk would lead to nowhere and connect to nothing.

Mr. Arek was in attendance at the meeting and discussed the request. He stated that there were no other sidewalks in the area. The sidewalk would connect to nothing and lead to nowhere. Mr. Arek also stated that a sidewalk could create a trip/fall hazard as there is no other sidewalk that it would connect to.

Mr. Ziegenfelder asked if the homes were already built or sold. Mr. Arek replied that they have not been built or sold.

Ms. Wilsher discussed the desire to have a walkable community, where feasible. She continued that there are businesses along Dequindre that pedestrians may walk to. Ms. Wilsher stated that she could see sidewalk as a benefit in this area and considers sidewalks as a safety issue.

Mr. Petruilis stated that there would still be a lot between these properties and Dequindre with no sidewalk, should these waivers be denied. He is concerned about the lack of connection and does not believe that there would be support for sidewalks in this area.

Mr. Brandstetter discussed apparent drainage issues in the area relative to sidewalk installation. He also had concerns about the ability of a resident to be able to park in the driveway without overhanging the sidewalk.

Ms. Wilsher asked about sidewalk widths required by the city in residential areas. Five (5) foot wide sidewalks are standard in residential areas.

Mr. Brandstetter noted that DPW recommended approving the sidewalk waiver request.

**RESOLUTION # 2015-03-05**

Moved by Petruilis

Seconded by Brandstetter

**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**, Arek with Jenmax Homes has requested a waiver of the requirement to

construct sidewalk based on no other existing sidewalk on Iowa; 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 2962 Iowa (Sidwell #88-20-36-227-072).

YES: 3 (Brandstetter, Petrulis, Wilsher)

NO: 1 (Ziegenfelder)

ABSENT: 2 (Easterbrook, Kilmer)

MOTION CARRIED

**5. Request for Sidewalk Waiver – 2974 Iowa – Sidwell #88-20-36-227-073**

Arek with Jenmax Homes requests a sidewalk waiver for the sidewalk at 2974 Iowa (Sidwell #88-20-36-227-073). Arek states that no other homes in the neighborhood have a sidewalk. The proposed sidewalk would lead to nowhere and connect to nothing.

Mr. Arek was in attendance at the meeting and discussed the request. He stated that there were no other sidewalks in the area. The sidewalk would connect to nothing and lead to nowhere. Mr. Arek also stated that a sidewalk could create a trip/fall hazard as there is no other sidewalk that it would connect to.

Mr. Ziegenfelder asked if the homes were already built or sold. Mr. Arek replied that they have not been built or sold.

Ms. Wilsher discussed the desire to have a walkable community, where feasible. She continued that there are businesses along Dequindre that pedestrians may walk to. Ms. Wilsher stated that she could see sidewalk as a benefit in this area and considers sidewalks as a safety issue.

Mr. Petrulis stated that there would still be a lot between these properties and Dequindre with no sidewalk, should these waivers be denied. He is concerned about the lack of connection and does not believe that there would be support for sidewalks in this area.

Mr. Brandstetter discussed apparent drainage issues in the area relative to sidewalk installation. He also had concerns about the ability of a resident to be able to park in the driveway without overhanging the sidewalk.

Ms. Wilsher asked about sidewalk widths required by the city in residential areas. Five (5) foot wide sidewalks are standard in residential areas.

Mr. Brandstetter noted that DPW recommended approving the sidewalk waiver request.

**RESOLUTION # 2015-03-06**

Moved by Petruilis

Seconded by Brandstetter

**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**, Arek with Jenmax Homes has requested a waiver of the requirement to construct sidewalk based on no other existing sidewalk on Iowa; 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 2974 Iowa (Sidwell #88-20-36-227-073).

YES: 3 (Brandstetter, Petruilis, Wilsher)

NO: 1 (Ziegenfelder)

ABSENT: 2 (Easterbrook, Kilmer)

MOTION CARRIED

**6. Request for Sidewalk Waiver – 2986 Iowa – Sidwell #88-20-36-227-074**

Arek with Jenmax Homes requests a sidewalk waiver for the sidewalk at 2986 Iowa (Sidwell #88-20-36-227-074). Arek states that no other homes in the neighborhood have a sidewalk.

The proposed sidewalk would lead to nowhere and connect to nothing.

Mr. Arek was in attendance at the meeting and discussed the request. He stated that there were no other sidewalks in the area. The sidewalk would connect to nothing and lead to nowhere. Mr. Arek also stated that a sidewalk could create a trip/fall hazard as there is no other sidewalk that it would connect to.

Mr. Ziegenfelder asked if the homes were already built or sold. Mr. Arek replied that they have not been built or sold.

Ms. Wilsher discussed the desire to have a walkable community, where feasible. She continued that there are businesses along Dequindre that pedestrians may walk to. Ms. Wilsher stated that she could see sidewalk as a benefit in this area and considers sidewalks as a safety issue.

Mr. Petruilis stated that there would still be a lot between these properties and Dequindre with no sidewalk, should these waivers be denied. He is concerned about the lack of connection and does not believe that there would be support for sidewalks in this area.

Mr. Brandstetter discussed apparent drainage issues in the area relative to sidewalk installation. He also had concerns about the ability of a resident to be able to park in the driveway without overhanging the sidewalk.

Ms. Wilsher asked about sidewalk widths required by the city in residential areas. Five (5) foot wide sidewalks are standard in residential areas.

Mr. Brandstetter noted that DPW recommended approving the sidewalk waiver request.

**RESOLUTION # 2015-03-07**

Moved by Petruilis

Seconded by Brandstetter

**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**, Arek with Jenmax Homes has requested a waiver of the requirement to construct sidewalk based on no other existing sidewalk on Iowa; 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 2986 Iowa (Sidwell #88-20-36-227-074).

YES: 3 (Brandstetter, Petrulis, Wilsher)

NO: 1 (Ziegenfelder)

ABSENT: 2 (Easterbrook, Kilmer)

MOTION CARRIED

**7. Request for Sidewalk Waiver – 587 Trombley – Sidwell #88-20-22-253-018**

Brad Manning of Clearview Homes requests a sidewalk waiver for the sidewalks at 587 Trombley (Sidwell #88-20-22-253-018). Mr. Manning states that there are no existing sidewalks on the street. The proposed sidewalk would lead to nowhere and connect to nothing.

Mr. Manning was in attendance at the meeting and discussed the request. He stated that there were no other sidewalks in the area. The sidewalk would connect to nothing and lead to nowhere. Mr. Manning stated that future connections in this area is unlikely.

Mr. Jim Dumont of 683 Trombley was in attendance at the meeting and stated that he was not in favor or opposition to the request. His concern is for the children in the area and believes that the city should construct sidewalks or develop a plan to construct sidewalks in this area.

Ms. Wilsher agreed that children do walk in the street in this area. She considers sidewalks in this area as a safety concern due to the proximity to Wattles Elementary.

Mr. Petrulis asked about physical difficulties in constructing a sidewalk at these locations due to existing utility poles and roadside drainage ditches. He has concerns about physically placing a sidewalk. Mr. Petrulis noted that DPW recommended approving the sidewalk waiver request.

**RESOLUTION # 2015-03-08**

Moved by Petrulis

Seconded by Brandstetter

**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**, Brad Manning of Clearview Homes has requested a waiver of the requirement to construct sidewalk based on no other existing sidewalk on Trombley; 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 587 Trombley (Sidwell #88-20-22-253-018).

YES: 2 (Brandstetter, Petrulis)  
NO: 2 (Wilsher, Ziegenfelder)  
ABSENT: 2 (Easterbrook, Kilmer)

MOTION DENIED

**8. Request for Sidewalk Waiver – 640 Trombley – Sidwell #88-20-22-401-097**

Brad Manning of Clearview Homes requests a sidewalk waiver for the sidewalks at 640 Trombley (Sidwell #88-20-22-401-097). Mr. Manning states that there are no existing sidewalks on the street. The proposed sidewalk would lead to nowhere and connect to nothing.

Mr. Manning was in attendance at the meeting and discussed the request. He stated that there were no other sidewalks in the area. The sidewalk would connect to nothing and lead to nowhere. Mr. Manning stated that future connections in this area is unlikely.

Mr. Jim Dumont of 683 Trombley was in attendance at the meeting and stated that he was not in favor or opposition to the request. His concern is for the children in the area and believes that the city should construct sidewalks or develop a plan to construct sidewalks in this area.

Ms. Wilsher agreed that children do walk in the street in this area. She considers sidewalks in this area as a safety concern due to the proximity to Wattles Elementary.

Mr. Petrulis asked about physical difficulties in constructing a sidewalk at these locations

due to existing utility poles and roadside drainage ditches. He has concerns about physically placing a sidewalk. Mr. Petruilis noted that DPW recommended approving the sidewalk waiver request.

**RESOLUTION # 2015-03-09**

Moved by Petruilis  
Seconded by Brandstetter

**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**, Brad Manning of Clearview Homes has requested a waiver of the requirement to construct sidewalk based on no other existing sidewalk on Trombley; 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 640 Trombley (Sidwell #88-20-22-401-097).

YES: 2 (Brandstetter, Petruilis)  
NO: 2 (Wilsher, Ziegenfelder)  
ABSENT: 2 (Easterbrook, Kilmer)

MOTION DENIED

**9. Request for Sidewalk Waiver – 650 Trombley – Sidwell #88-20-22-401-098**

Brad Manning of Clearview Homes requests a sidewalk waiver for the sidewalks at 650 Trombley (Sidwell #88-20-22-401-098). Mr. Manning states that there are no existing sidewalks on the street. The proposed sidewalk would lead to nowhere and connect to nothing.

Mr. Manning was in attendance at the meeting and discussed the request. He stated that there were no other sidewalks in the area. The sidewalk would connect to nothing and lead

to nowhere. Mr. Manning stated that future connections in this area is unlikely.

Mr. Jim Dumont of 683 Trombley was in attendance at the meeting and stated that he was not in favor or opposition to the request. His concern is for the children in the area and believes that the city should construct sidewalks or develop a plan to construct sidewalks in this area.

Ms. Wilsher agreed that children do walk in the street in this area. She considers sidewalks in this area as a safety concern due to the proximity to Wattles Elementary.

Mr. Petruilis asked about physical difficulties in constructing a sidewalk at these locations due to existing utility poles and roadside drainage ditches. He has concerns about physically placing a sidewalk. Mr. Petruilis noted that DPW recommended approving the sidewalk waiver request.

**RESOLUTION # 2015-03-10**

Moved by Petruilis

Seconded by Brandstetter

**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**, Brad Manning of Clearview Homes has requested a waiver of the requirement to construct sidewalk based on no other existing sidewalk on Trombley; 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 650 Trombley (Sidwell #88-20-22-401-098).

YES: 2 (Brandstetter, Petruilis)  
NO: 2 (Wilsher, Ziegenfelder)  
ABSENT: 2 (Easterbrook, Kilmer)

MOTION DENIED

Ms. Wilsher made a motion to reconsider the Trombley sidewalk waiver requests to discuss a cash deposit in lieu of sidewalk construction. There was unanimous consensus from the Traffic Committee members.

Ms. Wilsher discussed the desire to have sidewalks throughout the city, but agreed that it may not be the right time for sidewalks on Trombley. She further asked about the option of a cash deposit for future construction to assure consent and participation if there is a future sidewalk installation.

Discussion among the members ensued and this option has been used in the past.

It was stated that the estimated price used for sidewalk by the city is \$3.50 per square foot in a residential setting.

Mr. Brandstetter stated that there was one (1) phone call received supporting the sidewalk waiver and one (1) email received opposed to the sidewalk waiver.

Mr. Manning stated that he was in favor of a cash deposit in lieu of constructing the sidewalk for the three (3) lots on Trombley.

**RESOLUTION # 2015-03-11**

Moved by Wilsher  
Seconded by Brandstetter

**WHEREAS**, there was consensus to reconsider the sidewalk waiver resolution at 587 Trombley;

**NOW THEREFORE, BE IT RESOLVED**, that the Traffic Committee grants a waiver of the sidewalk requirement for 587 Trombley – Sidwell #88-20-22-253-018, contingent upon the receipt of a cash deposit from Clearview Homes commensurate with the cost to construct sidewalk.

YES: 4 (Brandstetter, Petrulis, Wilsher, Ziegenfelder)  
NO: None  
ABSENT: 2 (Easterbrook, Kilmer)

MOTION CARRIED

**RESOLUTION # 2015-03-12**

Moved by Wilsher  
Seconded by Brandstetter

**WHEREAS**, there was consensus to reconsider the sidewalk waiver resolution at 640 Trombley (Sidwell #88-20-22-401-097);

**NOW THEREFORE, BE IT RESOLVED**, that the Traffic Committee grants a waiver of the sidewalk requirement for 640 Trombley (Sidwell #88-20-22-401-097), contingent upon the receipt of a cash deposit from Clearview Homes commensurate with the cost to construct sidewalk.

YES: 4 (Brandstetter, Petrulis, Wilsher, Ziegenfelder)  
NO: None  
ABSENT: 2 (Easterbrook, Kilmer)

MOTION CARRIED

**RESOLUTION # 2015-03-13**

Moved by Wilsher  
Seconded by Brandstetter

**WHEREAS**, there was consensus to reconsider the sidewalk waiver resolution at 650 Trombley (Sidwell #88-20-22-401-098).

**NOW THEREFORE, BE IT RESOLVED**, that the Traffic Committee grants a waiver of the sidewalk requirement 650 Trombley (Sidwell #88-20-22-401-098), contingent upon the receipt of a cash deposit from Clearview Homes commensurate with the cost to construct sidewalk.

YES: 4 (Brandstetter, Petrulis, Wilsher, Ziegenfelder)  
NO: None  
ABSENT: 2 (Easterbrook, Kilmer)

MOTION CARRIED

**6. Public Comment**

No members of the public made any comments.

**5. Other Business**

Ms. Wilsher discussed the traffic signal at Maple and Livernois. Specifically, that there is not sufficient time for left turns. She also has concerns about vehicles making a left turn out of the SpeedWay gas station on the northeast corner of Maple and Livernois.

Mr. Ziegenfelder brought up the poor condition of Dequindre Road, northbound to westbound Wattles (left turn lane).

Ms. Wilsher asked about the dog park. She stated that there are a lot of seniors interested in the park but don't have enough information or don't know where to go to get more information. The Traffic Engineer will relay the message to the dog park members to see if a more active engagement at locations such as the Community Center.

**6. Adjourn**

The meeting adjourned at 8:26 p.m.

\_\_\_\_\_  
Pete Ziegenfelder, Chairperson

\_\_\_\_\_  
Bill Huotari, Deputy City Engineer/Traffic Engineer



500 W. Big Beaver.  
Troy, MI 48084  
248.524.3300  
troymi.gov

3-24-2015

TO: The City of Troy Traffic Committee

FROM: Timothy Richnak, Public Works Director   
Kurt Bovensiepe, Public Works Manager 

SUBJECT: Request for Waiver of Sidewalk Requirement  
Sidwell Number 88-20-10-477-051

Per the attached waiver form, Safet Stafa, is requesting a waiver for the sidewalk on the property located on part of Lot 47 at 5026 Somerton Drive, 88-20-10-477-051, in the Crystal Springs 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 this parcel because of a recent lot split, combined and re-platted

**Please be advised that currently, there are sidewalks installed along Long Lake as well as in front of properties along Somerton, to the north of 5026. Installing sidewalks at this location would provide opportunity for future pedestrian accessibility and connectivity to this area.**

We recommend that the sidewalk should be installed on Somerton as per ordinance #34.07. If the sidewalk requirements were to be waived, we recommend the approval be subject to the execution and recording of an "Agreement for Irrevocable Petition for Sidewalk", or the submission of a cash deposit for future construction to assure consent and participation if there is future sidewalk installation.



City of Troy  
Mr. Timothy L. Richnak  
Public Works Director  
4693 Rochester Road  
Troy, MI 48098

Mr. Richnak,

I am/we are the owner(s) of the property at 5026 Somerton Drive

Lot number Part of Lot 47

Subdivision Name Crystal Springs Sub.

Sidewell Number 20-10-477-051

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

No sidewalks exist along Somerton Drive, nor within the Crystal Springs Sub., nor within Crystal Springs Sub. No. 1 to the north. Having no sidewalk along the subject property would be consistent with current neighborhood conditions and also consistent with the subdivision in which it is located.

See attached plan/sketch.

I/We can be contacted at 248-890-8421  
Phone Number

Safet (Sam) Stafa  
Name

1612 Muer Drive  
Address

Troy, MI 48084  
City, State, Zip

  
Signature

**LEGEND**

	EXISTING GRADE		PROPOSED GRADE
	EXISTING CONTOURS, 1' INTERVAL		AS-BUILT GRADE
	EXISTING ASPHALT PAVEMENT		DIRECTION OF SURFACE DRAINAGE
	EXISTING CONCRETE PAVEMENT		EXISTING TREE TO REMAIN
	PROPOSED CONCRETE PAVEMENTS		EXISTING TREE TO BE REMOVED
	SILT FENCE & LIMITS OF EARTH DISTURBANCE		TEMPORARY YARD INLET FILTER & SEDIMENT TRAP

CONSTRUCTION SEQUENCE	OPERATION TIME SCHEDULE											
	2015											
	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.
A SOIL EROSION CONTROL MEASURES												
B SEWER & HOUSE CONSTRUCTION												
C DRIVEWAY & SIDEWALK CONSTRUCTION												
D FINAL GRADING												
E PERMANENT VEGETATIVE RESTORATION												

NOTE: THIS TIMING AND SEQUENCE CHART IS TO BE VERIFIED BY THE BUILDER PRIOR TO SUBMITTAL FOR SOIL EROSION PERMITTING.

**SEQUENCE OF CONSTRUCTION**

- INSTALL ALL SOIL EROSION CONTROL MEASURES PRIOR TO THE START OF CONSTRUCTION. ALL SOIL EROSION MEASURES ARE TO BE INSTALLED PRIOR TO ANY GROUNDBREAKING OR EARTH MOVEMENT.
- REMOVE EXISTING TREES, ETC. INDICATED ON THE PLAN TO BE REMOVED.
- BEGIN HOUSE CONSTRUCTION.
- INSTALL UTILITY LEADS AND UNDERGROUND UTILITIES.
- FINISH HOUSE CONSTRUCTION, INSTALL DRIVEWAY, AND ESTABLISH FINISH GRADE INCLUDING YARD SWALES.
- RIGHT-OF-WAY MUST BE STABILIZED PRIOR TO FINAL GRADE INSPECTION.
- ALL SWALES GREATER THAN 1-5 AND 10' AROUND STORM SEWER STRUCTURES MUST BE STABILIZED PRIOR TO FINAL GRADE INSPECTION.
- AFTER PERMANENT EARTH STABILIZATION IS COMPLETED, REMOVE ALL TEMPORARY SOIL EROSION CONTROL MEASURES. NO PERMANENT SOIL EROSION MEASURES (ASIDE FROM FINAL VEGETATIVE STABILIZATION) APPLIES TO THIS PARCEL.

**SOIL EROSION NOTES**

- LIMITS OF EARTH DISTURBANCE WILL BE CONTAINED ON SITE TO ACHIEVE POSITIVE DRAINAGE AWAY FROM THE PROPOSED HOUSE.
- EXISTING DOMINANT LAND FEATURES ARE VACANT GRASSED RESIDENTIAL PROPERTY WITH A FEW MATURE TREES.
- SOIL EROSION CONTROL MEASURES WILL BE MAINTAINED ON A WEEKLY BASIS AND AFTER EACH STORM EVENT BY THE BUILDER.
- SEED & MULCH OR SOO SHALL BE PROVIDED ON ALL DISTURBED AREAS AS PERMANENT VEGETATIVE RESTORATION.

**SOILS**

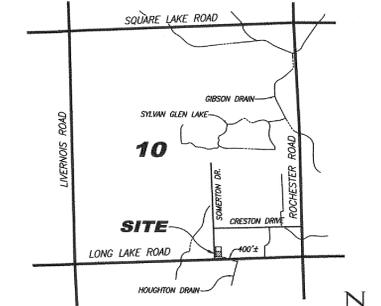
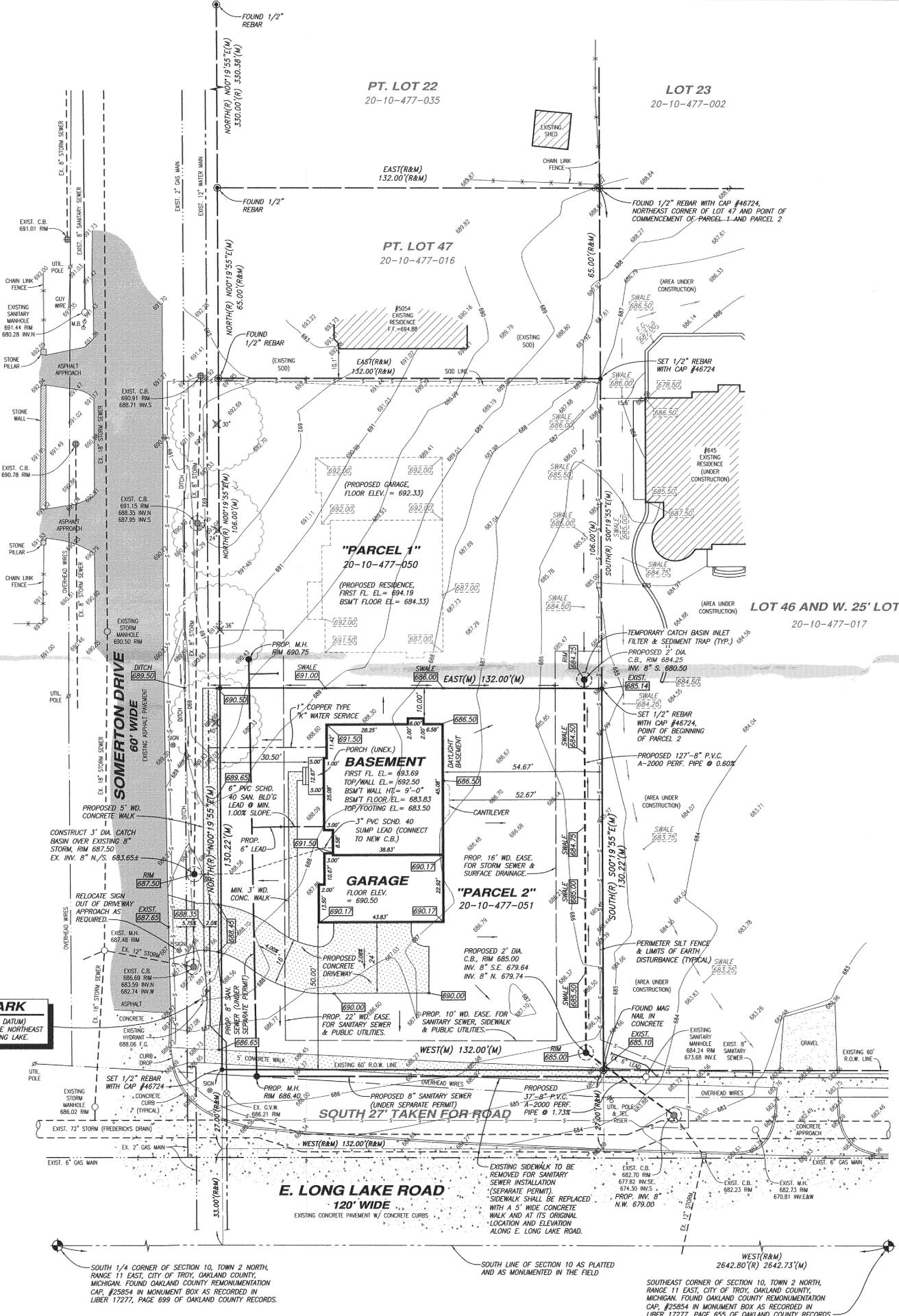
52A SELF-RIDGE LOAMY SAND (0% TO 3% SLOPES).  
 0"-9" VERY DARK GRAYISH BROWN LOAMY SAND; 9"-32" BROWN AND LIGHT YELLOWISH BROWN MOTTLED SAND; 32"-41" BROWN MOTTLED LOAM; 41"-60" GRAYISH BROWN MOTTLED LOAM. LOW SURFACE RUNOFF, SOMEWHAT POORLY DRAINED, MODERATELY SLOW PERMEABILITY.

**NOTE**

REFER TO SHEET TO THE STANDARD CITY OF TROY SOIL EROSION DETAIL SHEET FOR SOIL EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS.

**SITE BENCHMARK**

ELEVATION = 690.71 (NAVD 88 DATUM)  
 TOP ARROW OF HYDRANT AT THE NORTHEAST CORNER OF SOMERTON AND LONG LAKE.



**LOCATION MAP**

SCALE: 1"=2000'

**PROPERTY DESCRIPTIONS**

"PARCEL 2", PARCEL NO. 20-10-477-051 PART OF LOT 47, "CRYSTAL SPRINGS SUB.", PART OF THE SOUTHEAST 1/4 OF SECTION 10, TOWN 2 NORTH, RANGE 11 EAST, CITY OF TROY, OKLAND COUNTY, MICHIGAN AS RECORDED IN LIBER 28, PAGE 23, OKLAND COUNTY RECORDS, EXCEPT THE NORTH 171 FEET, ALSO EXCEPT THE SOUTH 27 FEET TAKEN FOR ROAD, AND MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE NORTHEAST CORNER OF SAID LOT 47; THENCE ALONG THE EAST LINE OF SAID LOT 47 SOUTH 00 DEGREES 19 MINUTES 55 SECONDS EAST (DUE SOUTH RECORD) 171 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING ALONG THE EAST LINE OF SAID LOT 47 SOUTH 00 DEGREES 19 MINUTES 55 SECONDS EAST (DUE SOUTH RECORD) 130.22 FEET TO THE NORTH RIGHT OF WAY LINE OF EAST LONG LAKE ROAD (120 FEET WIDE); THENCE DUE WEST 132.00 FEET ALONG SAID NORTH LINE OF EAST LONG LAKE ROAD TO A POINT ON THE WEST LINE OF SAID LOT 47; THENCE ALONG THE WEST LINE OF SAID LOT 47 NORTH 00 DEGREES 19 MINUTES 55 SECONDS WEST (DUE NORTH RECORD) 130.22 FEET; THENCE DUE EAST 132.00 FEET TO THE POINT OF BEGINNING AND CONTAINING 17,189 SQUARE FEET (0.395 ACRE) OF LAND, MORE OR LESS.



**PLAN SCALE: 1" = 20'**

**SITE CRITERIA**

- PARCEL SUMMARY:** ADDRESS: #5026 SOMERTON DRIVE PARCEL ID NO.: 20-10-477-051 EXISTING ZONING: R-1C AREA OF SITE: 17,189 S.F. (0.395 ACRE) AREA OF HOUSE FOOTPRINT: 2,913 S.F. LOT COVERAGE ALLOWED: 30% LOT COVERAGE PROPOSED: 16.9% TOTAL AREA OF EARTH DISTURBANCE: 0.83 ACRE DISTANCE TO NEAREST WATER BODY: APPROX. 400 FEET TO THE HOUGHTON DRAIN TO THE SOUTHEAST (REFER TO LOCATION MAP).
- SETBACK SUMMARY:** FRONT (TO SOMERTON): 30' FRONT (TO E. LONG LAKE): 50' REAR: 40' SIDE: 10' MIN., 20' TOTAL

**NOTES**

- THE CONTRACTOR SHALL VERIFY THE EXISTENCE OF ALL UNDERGROUND UTILITIES AND CONTACT "MISS DIG" PRIOR TO START OF CONSTRUCTION.
- ALL CONSTRUCTION MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE LOCAL MUNICIPALITY, COUNTY, AND STATE.
- THE CONTRACTOR SHALL VERIFY HOUSE DIMENSIONS & FINISH FLOOR ELEVATIONS WITH FINAL APPROVED BUILDING CONSTRUCTION DRAWINGS PRIOR TO THE START OF CONSTRUCTION.
- THE BUILDER AND/OR OWNER SHALL REVIEW PLOT PLAN WITH SUBDIVISION ASSOCIATION PRIOR TO THE START OF CONSTRUCTION, IF APPLICABLE.
- A CURRENT TITLE POLICY HAS NOT BEEN FURNISHED AT TIME OF SURVEY, THEREFORE EASEMENTS AND/OR ENCUMBRANCES AFFECTING SUBJECT PARCEL MAY NOT BE SHOWN.

**BENCHMARKS**

- BM#0451 ELEVATION = 689.923 (CITY DATUM) ARROW 1/HYD #15-148 SOUTH SIDE OF LONG LAKE ROAD 75'± EAST OF CENTERLINE OF SOMERTON DRIVE @ HOUSE #4978, AS PER CITY OF TROY ENGINEERING DEPT.
- BM#0452 ELEVATION = 677.959 (CITY DATUM) ARROW 1/HYD #15-149 SOUTH SIDE OF LONG LAKE ROAD 130'± WEST OF DRIVE TO BLDG #720, AS PER CITY OF TROY ENGINEERING DEPT.
- BM#0892 (SITE BENCHMARK) ELEVATION = 690.714 (CITY DATUM) ARROW 1/HYD #10-5 @ N.E. CORNER OF SOMERTON & LONG LAKE RD., AS PER CITY OF TROY ENGINEERING DEPT.

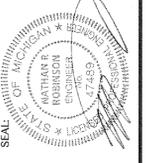
**CONTRACTOR'S NOTE**

The locations of existing underground utilities are shown in an approximate way only. The contractor shall determine the exact location of all existing utilities before commencing work. He agrees to be fully responsible for any and all damages which might be occasioned by his failure to exactly locate and preserve any and all underground utilities.

**3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG**  
 1-800-462-7171 (TOLL FREE) for the location of underground utilities.

The contractor shall be responsible for adhering to all applicable local, state, and federal standards, specifications, and guidelines for construction.

REVISIONS: 9/16/15 REVISED PER CITY ENGINEER  
 CLIENT: MR. SALET STAFFA, STERLING CONSTRUCTION, INC. 1015 W. MUEHLER, TROY, MI 48068 (248) 890-8427  
 JOB NO: 14-035  
 DATE: 2-27-15  
 DRAWN BY: N.P.R.



**HORIZON ENGINEERING LLC**  
 CIVIL ENGINEERING, SITE PLANNING & LAND DEVELOPMENT CONSULTING  
 P.O. Box 182158, Shelby Township, Michigan 48018  
 Phone 586-453-8097 Fax 586-580.0053

PROJECT: Part of Lot 47 "Crystal Springs Sub."  
 #5026 SOMERTON DRIVE  
 PARCEL 20-10-477-051  
 PART OF THE S.E. 1/4 OF SECTION 10, T.2N., R.11E., CITY OF TROY, OKLAND COUNTY, MICHIGAN

PLAN: **PLOT PLAN**

SHEET: **1** OF: **1**  
 MUNICIPAL REVIEW NUMBER: **RECEIVED**  
 MAR 18 2015  
 CITY OF TROY BUILDING DEPT.









500 W. Big Beaver.  
Troy, MI 48084  
248.524.3300  
troymi.gov

3-24-2015

TO: The City of Troy Traffic Committee

FROM: Timothy Richnak, Public Works Director   
Kurt Bovensiepe, Public Works Manager 

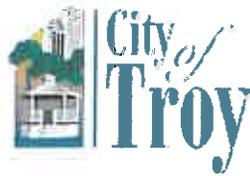
SUBJECT: Request for Waiver of Sidewalk Requirement  
Sidwell Number 88-20-10-477-050

Per the attached waiver form, Safet Stafa, is requesting a waiver for the sidewalk on the property located on part of Lot 47 at 5038 Somerton Drive, 88-20-10-477-050, in the Crystal Springs 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 this parcel because of a recent lot split, combined and re-platted

**Please be advised that currently, there are sidewalks installed along Long Lake as well as in front of properties along Somerton, to the north of 5038. Installing sidewalks at this location would provide opportunity for future pedestrian accessibility and connectivity to this area.**

We recommend that the sidewalk should be installed on Somerton as per ordinance #34.07. If the sidewalk requirements were to be waived, we recommend the approval be subject to the execution and recording of an "Agreement for Irrevocable Petition for Sidewalk", or the submission of a cash deposit for future construction to assure consent and participation if there is future sidewalk installation.



City of Troy  
Mr. Timothy L. Richnak  
Public Works Director  
4693 Rochester Road  
Troy, MI 48098

Mr. Richnak,

I am/we are the owner(s) of the property at 5038 Somerton Drive

Lot number Part of Lot 47

Subdivision Name Crystal Springs Sub.

Sidewell Number 20-10-477-050

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

No sidewalks exist along Somerton Drive, nor within the Crystal Springs Sub., nor within Crystal Springs Sub. No. 1 to the north. Having no sidewalk along the subject property would be consistent with current neighborhood conditions and also consistent with the subdivision in which it is located.

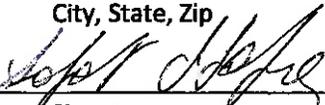
See attached plan/sketch.

I/We can be contacted at 248-890-8421  
Phone Number

Safet (Sam) Stafa  
Name

1612 Muer Drive  
Address

Troy, MI 48084  
City, State, Zip

  
Signature

**LEGEND**

	EXISTING GRADE		PROPOSED GRADE
	EXISTING CONTOURS, 1' INTERVAL		AS-BUILT GRADE
	EXISTING ASPHALT PAVEMENT		DIRECTION OF SURFACE DRAINAGE
	EXISTING CONCRETE PAVEMENT		EXISTING TREE TO REMAIN
	PROPOSED CONCRETE PAVEMENTS		EXISTING TREE TO BE REMOVED
	SILT FENCE & LIMITS OF EARTH DISTURBANCE		TEMPORARY YARD INLET FILTER & SEDIMENT TRAP

CONSTRUCTION SEQUENCE	OPERATION TIME SCHEDULE											
	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.
A SOIL EROSION CONTROL MEASURES												
B SEWER & HOUSE CONSTRUCTION												
C DRIVEWAY & SIDEWALK CONSTRUCTION												
D FINAL GRADING												
E PERMANENT VEGETATIVE RESTORATION												

NOTE: THIS TIMING AND SEQUENCE CHART IS TO BE VERIFIED BY THE BUILDER PRIOR TO SUBMITTAL FOR SOIL EROSION PERMITTING.

**SEQUENCE OF CONSTRUCTION**

- INSTALL ALL SOIL EROSION CONTROL MEASURES PRIOR TO THE START OF CONSTRUCTION. ALL SOIL EROSION MEASURES ARE TO BE INSTALLED PRIOR TO ANY GROUNDBREAKING OR EARTH MOVEMENT.
- REMOVE EXISTING TREES, ETC. INDICATED ON THE PLAN TO BE REMOVED.
- BEGIN HOUSE CONSTRUCTION.
- INSTALL UTILITY LEADS AND UNDERGROUND UTILITIES.
- FINISH HOUSE CONSTRUCTION, INSTALL DRIVEWAY, AND ESTABLISH FINISH GRADE INCLUDING YARD SWALES.
- RIGHT-OF-WAY MUST BE STABILIZED PRIOR TO FINAL GRADE INSPECTION.
- ALL SWALES GREATER THAN 1-5 AND 10" AROUND STORM SEWER STRUCTURES MUST BE STABILIZED PRIOR TO FINAL GRADE INSPECTION.
- AFTER PERMANENT EARTH STABILIZATION IS COMPLETED, REMOVE ALL TEMPORARY SOIL EROSION CONTROL MEASURES. NO PERMANENT SOIL EROSION MEASURES (ASIDE FROM FINAL VEGETATIVE STABILIZATION) APPLIES TO THIS PARCEL.

**SOIL EROSION NOTES**

- LIMITS OF EARTH DISTURBANCE WILL BE CONTAINED ON SITE TO ACHIEVE POSITIVE DRAINAGE AWAY FROM THE PROPOSED HOUSE.
- EXISTING DOMINANT LAND FEATURES ARE VACANT GRASSED RESIDENTIAL PROPERTY WITH A FEW MATURE TREES.
- SOIL EROSION CONTROL MEASURES WILL BE MAINTAINED ON A WEEKLY BASIS AND AFTER EACH STORM EVENT BY THE BUILDER.
- SEED & MULCH OR SOO SHALL BE PROVIDED ON ALL DISTURBED AREAS AS PERMANENT VEGETATIVE RESTORATION.

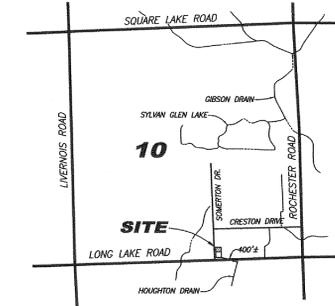
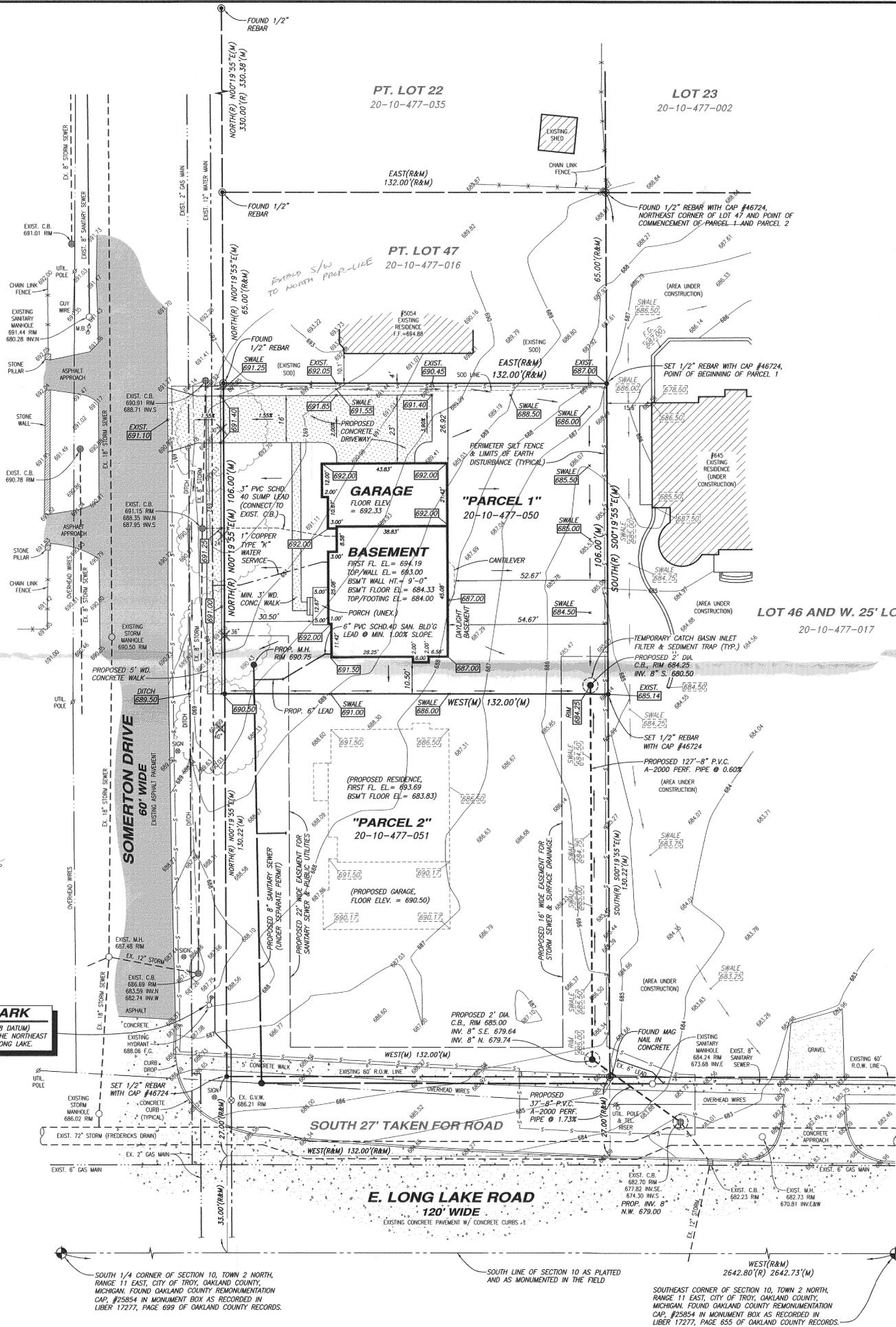
**SOILS**

52A SELF-RIDGE LOAMY SAND (0% TO 3% SLOPES).  
 0"-9" VERY DARK GRAYISH BROWN LOAMY SAND; 9"-32" BROWN AND LIGHT YELLOWISH BROWN MOTTLED SAND; 32"-41" BROWN MOTTLED LOAM; 41"-60" GRAYISH BROWN MOTTLED LOAM. LOW SURFACE RUNOFF, SOMEWHAT POORLY DRAINED, MODERATELY SLOW PERMEABILITY.

**NOTE**

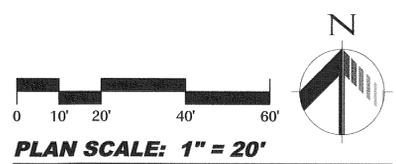
REFER TO SHEET TO THE STANDARD CITY OF TROY SOIL EROSION DETAIL SHEET FOR SOIL EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS.

**SITE BENCHMARK**  
 ELEVATION = 690.71 (NAVD 88 DATUM)  
 TOP ARROW OF HYDRANT AT THE NORTHEAST CORNER OF SOMERTON AND LONG LAKE.



**LOCATION MAP**  
 SCALE: 1"=2000'

**PROPERTY DESCRIPTIONS**  
 "PARCEL 1", PARCEL NO. 20-10-477-050 THE SOUTH 106 FEET OF THE NORTH 171 FEET OF LOT 47, "CRYSTAL SPRINGS SUB.", PART OF THE SOUTHWEST 1/4 OF SECTION 10, TOWN 2 NORTH, RANGE 11 EAST, CITY OF TROY, OKLAHOMA COUNTY, MICHIGAN, AS RECORDED IN LIBER 28, PAGE 23, OKLAHOMA COUNTY RECORDS, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE NORTHEAST CORNER OF SAID LOT 47; THENCE ALONG THE EAST LINE OF SAID LOT 47 SOUTH 00 DEGREES 19 MINUTES 55 SECONDS EAST (DUE SOUTH RECORD) 65.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING ALONG THE EAST LINE OF SAID LOT 47 SOUTH 00 DEGREES 19 MINUTES 55 SECONDS EAST (DUE SOUTH RECORD) 106.00 FEET; THENCE DUE WEST 132.00 FEET TO A POINT ON THE WEST LINE OF SAID LOT 47; THENCE ALONG THE WEST LINE OF SAID LOT 47 NORTH 00 DEGREES 19 MINUTES 55 SECONDS WEST (DUE NORTH RECORD) 106.00 FEET; THENCE DUE EAST 132.00 FEET TO THE POINT OF BEGINNING AND CONTAINING 13,992 SQUARE FEET (0.321 ACRE) OF LAND, MORE OR LESS.



**SITE CRITERIA**

- PARCEL SUMMARY:**  
 ADDRESS: #5038 SOMERTON DRIVE  
 PARCEL ID NO.: 20-10-477-050  
 EXISTING ZONING: R-1C  
 AREA OF SITE: 13,992 S.F. (0.321 ACRE)  
 AREA OF HOUSE FOOTPRINT: 2,848 S.F.  
 LOT COVERAGE ALLOWED: 30%  
 LOT COVERAGE PROPOSED: 20.4%  
 TOTAL AREA OF EARTH DISTURBANCE: 0.83 ACRE  
 DISTANCE TO NEAREST WATER BODY: APPROX. 400 FEET TO THE HOUGHTON DRAIN TO THE SOUTHEAST (REFER TO LOCATION MAP).
- SETBACK SUMMARY:**  
 FRONT (TO R.O.W. LINE): 30'  
 REAR: 40'  
 SIDE: 10' MIN., 20' TOTAL

**NOTES**

- THE CONTRACTOR SHALL VERIFY THE EXISTENCE OF ALL UNDERGROUND UTILITIES AND CONTACT "MISS DIG" PRIOR TO START OF CONSTRUCTION.
- ALL CONSTRUCTION MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE LOCAL MUNICIPALITY, COUNTY, AND STATE.
- THE CONTRACTOR SHALL VERIFY HOUSE DIMENSIONS & FINISH FLOOR ELEVATIONS WITH FINAL APPROVED BUILDING CONSTRUCTION DRAWINGS PRIOR TO THE START OF CONSTRUCTION.
- THE BUILDER AND/OR OWNER SHALL REVIEW PLOT PLAN WITH SUBDIVISION ASSOCIATION PRIOR TO THE START OF CONSTRUCTION, IF APPLICABLE.
- A CURRENT TITLE POLICY HAS NOT BEEN FURNISHED AT TIME OF SURVEY, THEREFORE EASEMENTS AND/OR ENCUMBRANCES AFFECTING SUBJECT PARCEL MAY NOT BE SHOWN.

**BENCHMARKS**

- BM#0461  
 ELEVATION = 689.923 (CITY DATUM)  
 ARROW 1/HYD #15-148 SOUTH SIDE OF LONG LAKE ROAD 75' EAST OF CENTERLINE OF SOMERTON DRIVE @ HOUSE #4978, AS PER CITY OF TROY ENGINEERING DEPT.
- BM#0462  
 ELEVATION = 677.959 (CITY DATUM)  
 ARROW 1/HYD #15-149 SOUTH SIDE OF LONG LAKE ROAD 130'± WEST OF DRIVE TO BLDG #720, AS PER CITY OF TROY ENGINEERING DEPT.
- BM#0892 (SITE BENCHMARK)  
 ELEVATION = 690.714 (CITY DATUM)  
 ARROW 1/HYD #10-5 @ N.E. CORNER OF SOMERTON & LONG LAKE RD., AS PER CITY OF TROY ENGINEERING DEPT.

**CONTRACTOR'S NOTE**

The locations of existing underground utilities are shown in an approximate way only. The contractor shall determine the exact location of all existing utilities before commencing work. He agrees to be fully responsible for any and all damages which might be occasioned by his failure to exactly locate and preserve any and all underground utilities.

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 (TOLL FREE) for the location of underground utilities

The contractor shall be responsible for adhering to all applicable local, state, and federal standards, specifications, and guidelines for construction.

REVISIONS: 9/16/15 REVISED PER CITY ENGINEER

CLIENT: MR. SAFFET STAKA, STERLING CONSTRUCTION, INC. 1012 W. MUEHLER, TROY, MI 48064 (248) 890-8423

JOB NO: 14-035  
 DATE: 2-27-15  
 DRAWN BY: N.P.R.



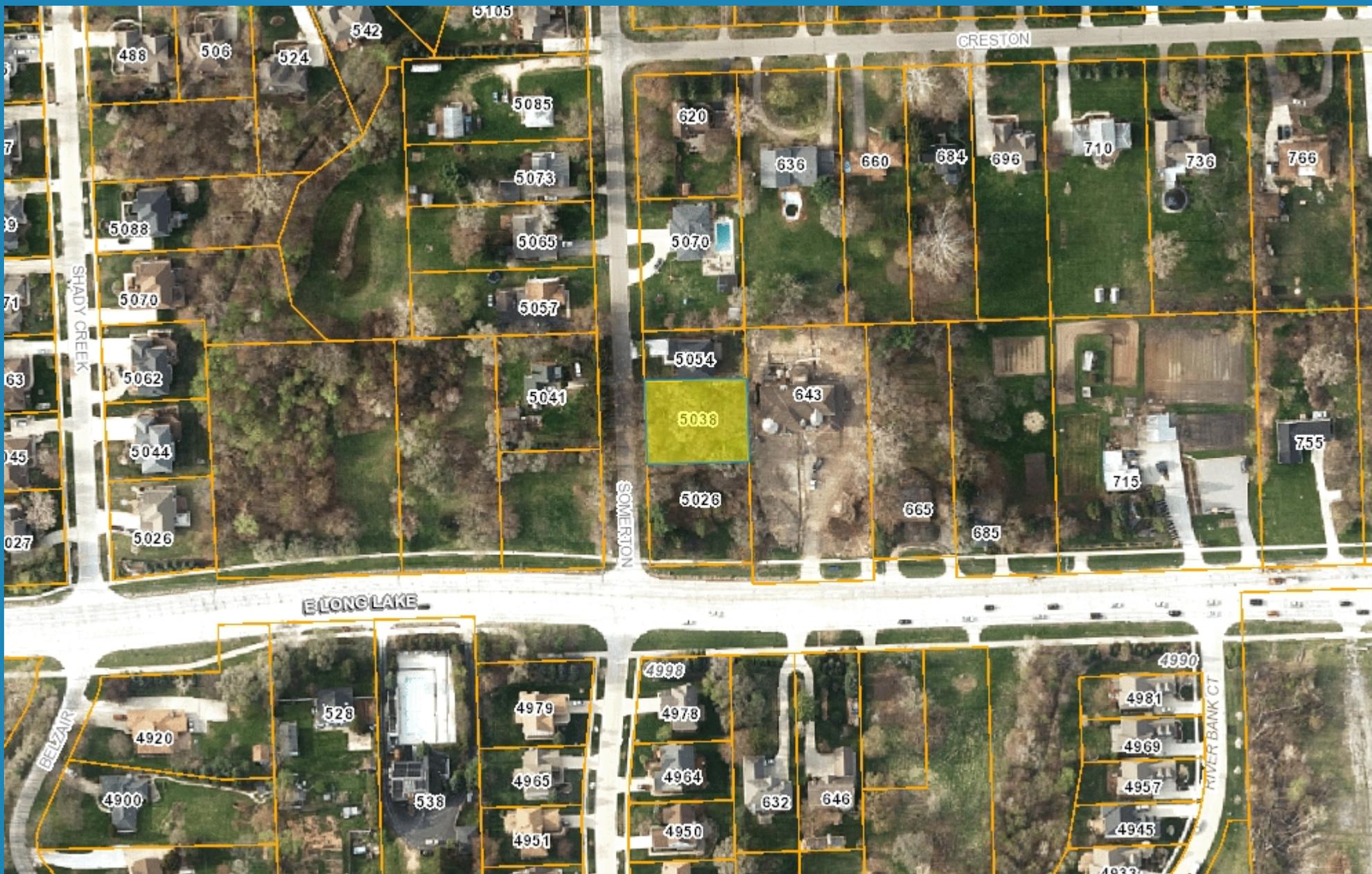
**HORIZON ENGINEERING LLC**  
 CIVIL ENGINEERING, SITE PLANNING & LAND DEVELOPMENT CONSULTING  
 P.O. Box 182158, Shelby Township, Michigan 48018  
 Phone 586.453.8097 Fax 586.580.0053

PROJECT: Part of Lot 47 "Crystal Springs Sub."  
 #5038 SOMERTON DRIVE  
 PARCEL 20-10-477-050  
 PART OF THE S.E. 1/4 OF SECTION 10, T.2N., R.11E., CITY OF TROY, OKLAHOMA COUNTY, MICHIGAN

PLAN: **PLOT PLAN**

SHEET: **1** OF: **1**

MUNICIPAL REVIEW NUMBERS: **RECEIVED**  
 MAR 18 2015  
 CITY OF TROY BUILDING DEPT.



465 0 232 465 Feet



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.







## TRAFFIC COMMITTEE REPORT

March 23, 2015

TO: Traffic Committee

FROM: Bill Huotari, Deputy City Engineer/ Traffic Engineer

SUBJECT: Request to Remove No Parking Zone  
West side of Fieldstone, South Boulevard to Nuthatch

### Background:

Melissa Acton of 6956 Fieldstone requests that the existing No Parking zone on the west side of Fieldstone, between South Boulevard and Nuthatch be removed. She feels that it places an undue hardship on the residents in the area that need to park on the street but cannot do so as both sides are posted No Parking.

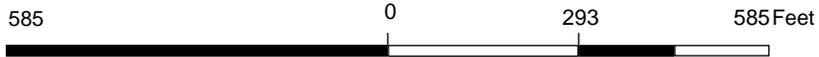
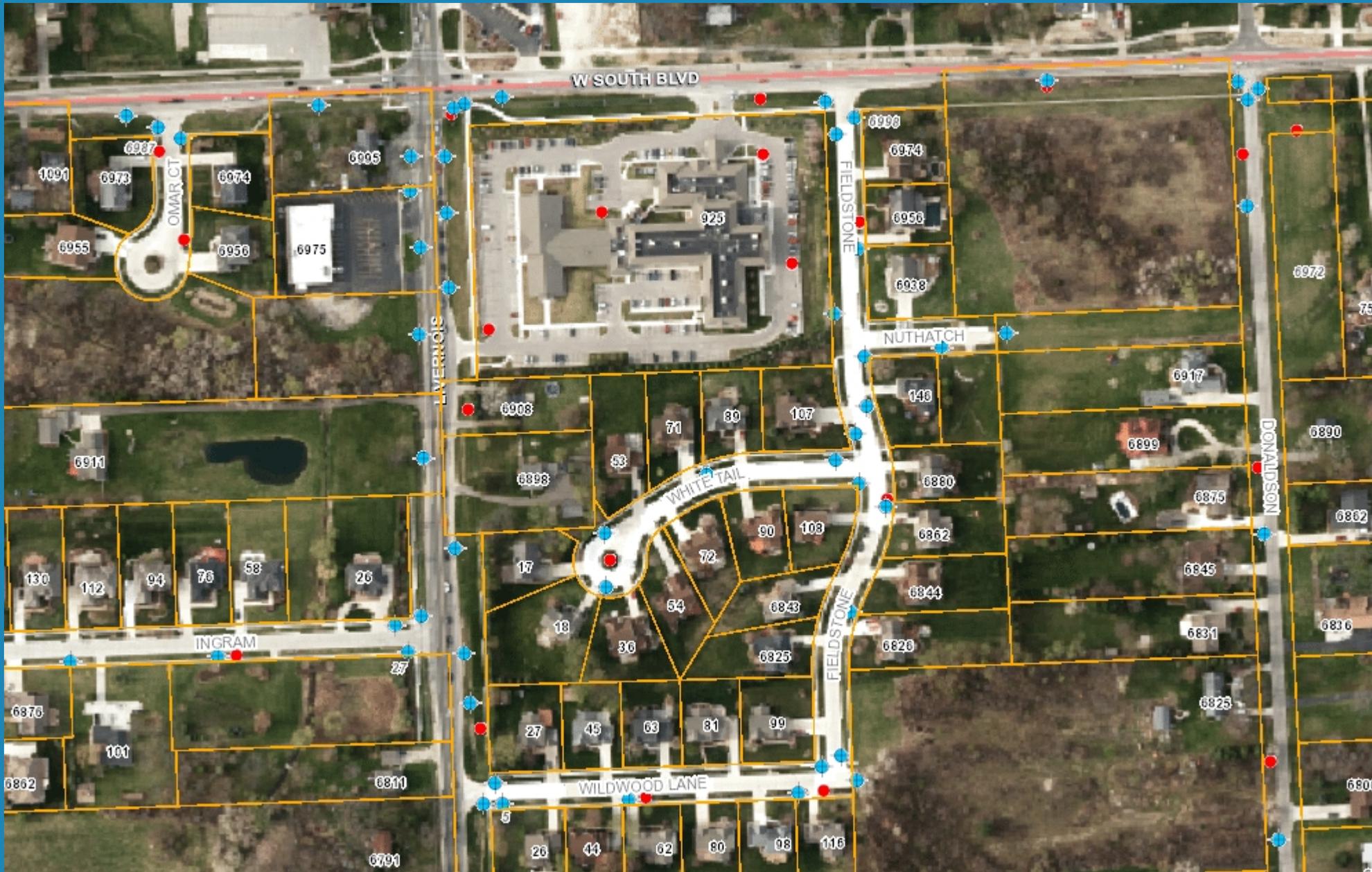
The east side of Fieldstone is the fire hydrant side of the street and is posted No Parking at all times. The west side of Fieldstone was posted No Parking, Monday – Friday, 7 AM to 5 PM, in accordance with City Council Resolution #2008-05-156, dated May 12, 2008 (Traffic Control Order is attached).

The item was originally discussed at the Traffic Committee meeting of April 16, 2008 (minutes of the meeting are attached). At that time, the Heartland Health Care facility was changing to a higher percentage of rehabilitation patients, which required much more parking. Field observations at that time indicated that up to 20 vehicles were parking on Fieldstone on any one day.

In 2011, Heartland Health Care expanded their facility and constructed additional parking on their site to accommodate their needs.

A field review the week of March 16, 2015 did not note any vehicles parking on Fieldstone. The parking lot at Heartland Health Care was very full but it did appear that some spaces were available for parking at the time the field visit was made.

A mailing was sent to all residents in the Meadowland Estates Subdivision notifying them of the request to remove the No Parking restrictions as the original request contained signatures from 24 residents.



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.

## MOTION CARRIED

**3. Approval of Updated By Laws**

Mr. Ziegenfelder had presented additional suggestions for revision of the by-laws via email to the Traffic Engineering office. The matter will be tabled pending review by the City Attorney.

**RESOLUTION #2008-04-20**

Moved by Hubbell

Seconded by Halsey

To table consideration of revision of the By-Laws until the additional suggestions by the chairman are reviewed by the City Attorney.

YES: All-6  
NO: None  
ABSENT: 1 (Diefenbaker)  
MOTION CARRIED

**REGULAR BUSINESS****4. Install NO PARKING Signs on Fieldstone Drive**

Robert G. Naiman, of 6938 Fieldstone Drive, requests NO PARKING signs on both sides of Fieldstone, in the Meadowland Estates Subdivision. Mr. Naiman reports that the neighboring Heartland Healthcare facility at 925 South Boulevard does not have adequate parking, and vehicles park on Fieldstone on a daily basis. He says that the cars park very close to South Boulevard, creating a hazard to residents entering Fieldstone from South Blvd. and from their driveways. The Naimans have contacted several City departments and since it is legal to park on the west side of Fieldstone, the situation has not changed.

Field observations indicate that during three field visits there were up to 20 vehicles at a time parked on Fieldstone on any one day. Some vehicles were parked very close to the South Blvd. intersection/crosswalk, and the Police Department was informed.

Our Building Inspections Department has been in contact with Heartland Healthcare, and is aware that the facility has inadequate parking. Originally the facility was approved for a nursing home-type and rehabilitation facility that wouldn't require a large number of parking stalls. However, the facility now has changed to a higher percentage of rehabilitation patients, necessitating much more parking. The facility is actively looking at reconfiguring their site to add more parking spaces.

Anthony Naiman addressed the committee and presented a petition signed by 24 neighbors requesting that parking be restricted on Fieldstone.

**RESOLUTION #2008-04-21**

Moved by Halsey  
 Seconded by Hubbell

Recommend installing “NO PARKING Mon.-Fri. 7 a.m.- 5p.m.” signs on the west side of Fieldstone from South Boulevard to White Tail Drive.

YES: All-6  
 NO: None  
 ABSENT: 1 (Diefenbaker)  
 MOTION CARRIED

**5. Study Item – Review of Traffic Crashes on Crooks between Big Beaver and Wilshire**

At the last Traffic Committee meeting, Richard Kilmer requested a review of traffic crashes on Crooks Road between Big Beaver and Wilshire. This item was considered by the committee a few years ago to determine the need for left turn restrictions to and from the businesses on Crooks Road in this area.

Traffic crash reports were examined for 2005, 2006, and 2007, and attached are the summaries and collision diagrams for the three years. With more businesses added north of Einstein’s Bagels and Osborne Square developments, there seem to be more crashes, spread over all driveways on Crooks Road between Big Beaver and Wilshire.

Year	Total	Rear End	Right Angle	Head-On	Sideswipe	Out of Control
2005	20	6	13	0	1	0
2006	10	0	4	0	3	3
2007	20	12	7	0	1	0

The right-angle crashes in most cases involve vehicles making left turns.

This is presented to the Traffic Committee as a study item to determine if we need to make any recommendations to City Council on traffic control in the future.

One of the major concerns is that the driveway at Osborne Square is wider than usual, at times resulting in a conflict between two vehicles trying to exit the parking lot at the same time, while other vehicles are trying to turn into the driveway. The driveway is on private property, which precludes the City from taking direct action to correct it. The Traffic Engineer has tried to gain cooperation from the property owners in the past, but the situation has not changed. The Traffic Engineer suggested that the DDA might be able to work with the property owners to encourage them to make physical changes to the property.

Mr. Halsey suggested that the City might be able to narrow the approach in the City’s right of way.

Another suggestion is to build a median on Crooks to force traffic to Wilshire.

**TRAFFIC CONTROL ORDER #08-02-P**

LOCATION

Fieldstone, west side, South Blvd. to White Tail Drive

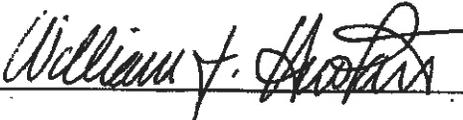
REQUIREMENT OF ORDER

Resolved, that Traffic Control Order No. 08-02-P is hereby approved for the installation of NO PARKING Mon.-Fri. 7 a.m.-5 p.m. signs on the west side of Fieldstone from South Boulevard to While Tail Drive

DATE OF COUNCIL APPROVAL

5/12/08

Res. No. 2008-05-156



William J. Huotari  
Deputy City Engineer

WORK ORDER SENT TO

DPW

Date

5-13-08

FIRE DEPT.

5-21-08  
DATE INSTALLED

By:



Authorized Signature

**WHEN COMPLETED, PLEASE RETURN ORIGINAL TO TRAFFIC ENGINEERING**

Traffic Engineering Dept. will distribute copies after installation to:

Date

Police Dept.

5-28-08

City Clerk

"

Fire Dept.

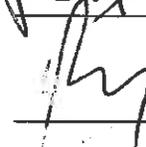
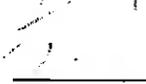
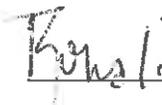
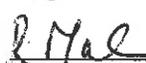
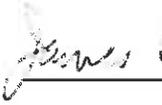
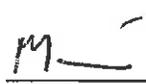
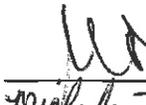
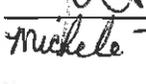
"



THE UNDERSIGNED, PROPERTY OWNERS IN MEADOWLAND ESTATES SUBDIVISION, REQUEST THE CITY OF TROY PLACE RESTRICTED PARKING SIGNS ALONG THE WEST SIDE OF FIELDSTONE DRIVE FROM SOUTH BOULEVARD TO WHITETAIL COURT AS FOLLOWS:

NO PARKING MONDAY THROUGH FRIDAY 9 A.M. TO 5 P.M.

IT IS A FURTHER REQUEST THAT THIS MATTER BE PLACED ON THE AGENDA FOR CONSIDERATION AT THE NEXT MEETING OF THE APPROPRIATE DEPARTMENT.

<u>SIGNATURE</u>	<u>PRINTED NAME</u>	<u>STREET ADDRESS</u>
	R.G. NAIMAN	6938 FIELDSTONE DR.
	Scott Poney	6956 FIELDSTONE DR.
	Treiza Romay	6974 Fieldstone Dr.
	Ronald Ross	146 Nuthatch Dr.
	RENGASWAMY SRINIVASAN	107 WHITETAIL CT.
	RITTFERRAUS JAMES	36 Whitetail Ct.
	OAKLEY	72 WHITETAIL CT.
	MARIA DAVISON	6880 FIELDSTONE DR.
	C. DONELKO	6826 FIELDSTONE DR.
	U.K. MARKER	18 Whitetail Ct. Troy, MI 48085
	Michele Toger	89 whitetail ct.
	Leslie Krajewski	62 Wildwood Dr Troy, 48085

CONTINUATION SHEET TO REQUEST FOR RESTRICTED PARKING

SIGNATURE

PRINTED NAME

ADDRESS

Susan D Klaz Susan D Klaz 108 whitetail Ct. Troy MI 48085

William A. Gembicki WILLIAM GEMBIICKI 6825 Fieldstone

Julie Hill Julie Hill 63 Wildwood Troy, 48085

Asim Shuttari ASIM SHUTTARI 45 Wildwood Dr Troy, MI 48310

Ghazi Shaffiq Ghazi Shaffiq 27 Wildwood 48098

Rita Peterson Rita Peterson 26 Wildwood Troy MI 48085

Dorothy Loverde DOROTHY LOVERDE 80 Wildwood Troy MI 48085

Ravi Vora Ravi Vora 6843 Fieldstone Troy MI 48085

Tommy Wojcik Tommy Wojcik 71 Whitetail Ct Troy MI 48085

Splia Issa Splia Issa 53 Whitetail Ct. Troy, MI 48085

54 whitetail ct. VACANT

90 whitetail ct. VACANT

6862 Fieldstone Dr. VACANT

6844 Fieldstone Dr. VACANT

116 Wildwood Dr. VACANT



## Laurel Nottage

---

**From:** John K Abraham  
**Sent:** Friday, March 28, 2008 3:51 PM  
**To:** Laurel Nottage  
**Subject:** FW: Request to Restrict Parking

---

**From:** R.G. Naiman [mailto:macvsog@excite.com]  
**Sent:** Friday, March 28, 2008 9:43 AM  
**To:** John K Abraham  
**Subject:** Request to Restrict Parking

John - my son spoke to you last week concerning the placement of signs to restrict parking on Fieldstrone Dr in Meadowland Estates Subdivision. The request for this is being circulated throughout the subdivision commencing this weekend and I expect to complete this process by mid-week. Please place this item on the agenda for the April 16th meeting of the traffic committee. Please advise if homeowners need to be present for this item to be considered. Thank you and God Bless.

Bob

R.G. Naiman, J.D. (SFC)  
President  
The Nova Title Agency, LLC  
586.412.2220  
586.412.2331

DE OPPRESSO LIBER

IF YOU CAN READ THIS, THANK A TEACHER. IF YOU CAN READ THIS IN ENGLISH, THANK A VETERAN.

IN THE END WE WILL NOT REMEMBER THE WORDS OF OUR ENEMIES, BUT THE SILENCE OF OUR FRIENDS  
(M.L.K.)

DON'T BE AFRAID THAT YOUR LIFE WILL END, BE AFRAID THAT IT WILL NEVER BEGIN.

"CONGRESSMEN WHO WILLFULLY TAKE ACTIONS DURING WARTIME THAT DAMAGE MORALE, AND UNDERMINE THE MILITARY ARE SABOTEURS AND SHOULD BE ARRESTED, EXILED OR HANGED." - Abraham Lincoln~

"AN APOLOGY, IN MANY INSTANCES, IS THE BEST WAY TO HAVE THE LAST WORD." - B. Naiman

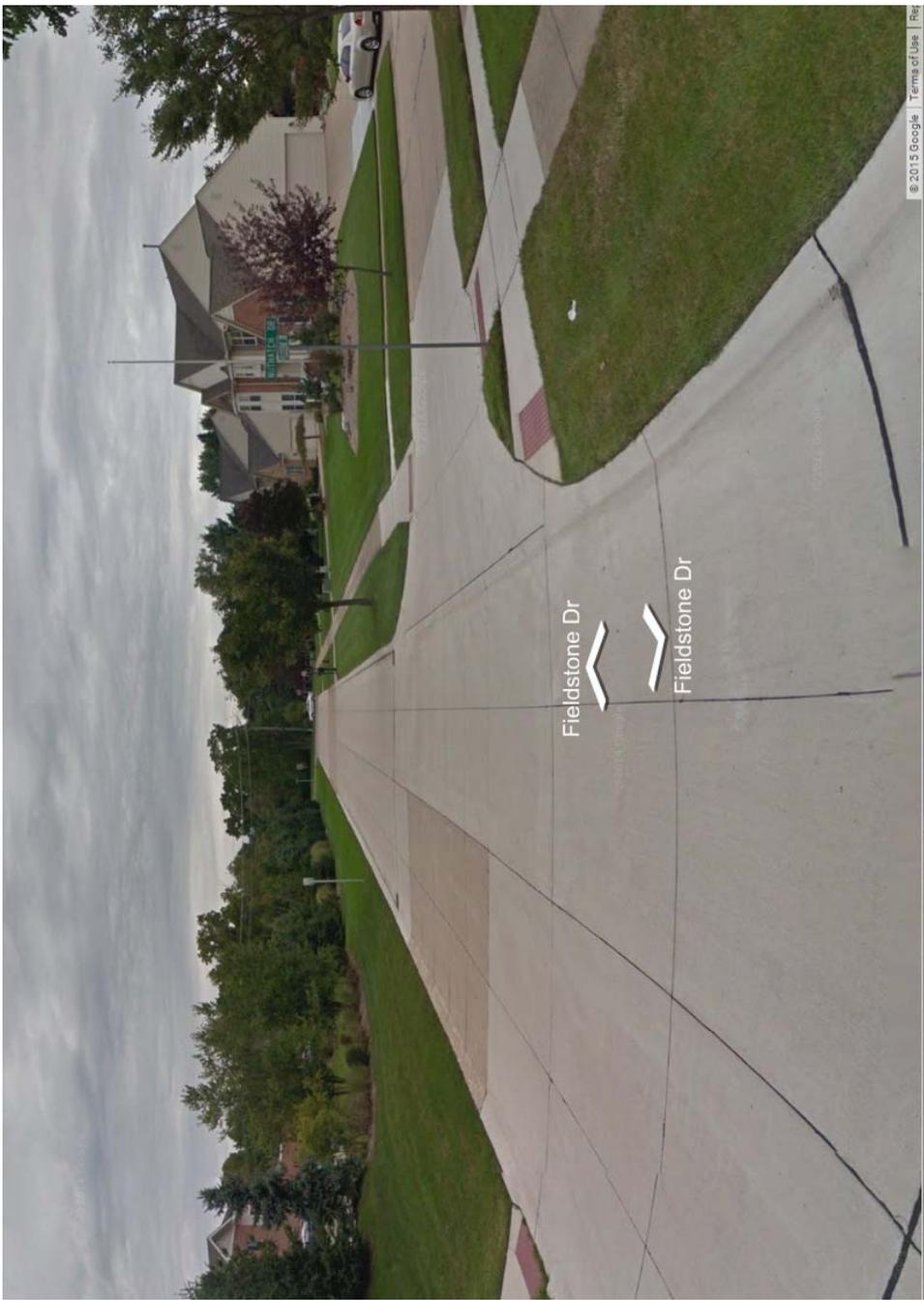
"HOPE SEES THE INVISIBLE, FEELS THE UNSEEN, AND ACHIEVES THE IMPOSSIBLE." - B. Naiman

---

**Join Excite! - <http://www.excite.com>**  
The most personalized portal on the Web!









## TRAFFIC COMMITTEE REPORT

March 27, 2015

TO: Traffic Committee

FROM: Bill Huotari, Deputy City Engineer/ Traffic Engineer

SUBJECT: Request for Traffic Control  
Diamond at Bonito

### Background:

Sharon Standifer of 2540 Bonito requests that the existing YIELD sign on Bonito be replaced with a STOP sign. Ms. Standifer states that drivers do not yield at the sign creating a potentially hazardous condition. There is an existing YIELD sign on the Bonito approach to Diamond.

There have been no crashes reported at this intersection in the past five (5) years.

The posted speed limit on both streets is 25 mph. Diamond Drive should be assigned right-of-way as it is the continuing road and Bonito Drive terminates at Diamond Drive.

The major sight distance obstruction at the intersection is the landscaping bed in the northeast quadrant. The landscaping comes into play when determining the safe approach speeds at the intersection.

The safe approach speed was found to be 9.5 mph; therefore a STOP sign is the recommended treatment.

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

March 26, 2015

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

Subject: Traffic Control Recommendation for the intersection of Bonito Dr. at Diamond Dr.  
OHM JN: 0128-15-0050

Dear Mr. Huotari:

As requested, we have reviewed the Bonito Dr. at Diamond Dr. intersection to determine the proper traffic control. The subject intersection is a T-intersection located in the City of Troy approximately 0.1 mile south of Square Lake Rd and ½ mile east of John R Rd. Both Bonito Dr. and Diamond Dr. are local streets with Diamond Dr. running in the north-south direction and Bonito Dr. running east-west. The speed limit on both streets is 25mph. There is currently a yield sign on the westbound approach to the intersection along Bonito Dr. Reference the attachments for an aerial and intersection photos.

#### **Background on Traffic Control Determination**

Based on the *Michigan Manual of Uniform Traffic Control Devices (MMUTCD)* there are four conditions where STOP signs may be warranted:

- At the intersection of a less important road with a main road where application of the normal right-of-way rule is unduly hazardous.
- On a street entering a through highway or street.
- At an unsignalized intersection in a signalized area.
- At other intersections where a combination of high speed, restricted view, or crash records indicate a need for control by the STOP sign.

Many times STOP signs are installed where they may not be warranted. Traffic experts agree that unnecessary STOP signs:

- Cause accidents they are designed to prevent.
- Breed contempt for other necessary STOP signs.
- Waste millions of gallons of gasoline annually.
- Create added noise and air pollution.
- Increase, rather than decrease, speeds between intersections.



The use of a YIELD sign is intended to assign the right-of-way at intersections where it is not usually necessary to stop before proceeding into the intersection. Conversely, the STOP sign is intended for use where it is usually necessary to stop before proceeding into the intersection.

The following conditions should be fully evaluated to determine how the right-of-way should be assigned:

- Traffic Volumes: Normally, the heavier volume of traffic should be given the right-of-way.
- Approach Speeds: The higher speed traffic should normally be given the right-of-way.
- Types of Highways: When a minor highway intersects a major highway, it is usually desirable to control the minor highway.
- Sight Distance: Sight distance across the corners of the intersection is the most important factor and is critical in determining safe approach speeds.

### **Crash Analysis**

Based on information obtained through Traffic Improvement Association of Michigan, there were no crashes recorded in the past 5-years at the Bonito / Diamond intersection.

### **Approach Speeds**

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

### **Types of Highways**

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

### **Sight Distance**

The major sight distance obstruction at the intersection is the landscaping bed in the northeast quadrant. The landscaping comes into play when determining the safe approach speeds for the intersection. The safe approach speed is the speed at which a vehicle can approach an intersection and still stop in time to avoid a collision with a vehicle on the cross street. Safe approach speeds are determined through calculations.

When the safe approach speed is found to be more than 10 mph, a YIELD sign is commonly used. In this case, the safe approach speed was found to be 9.5 mph; therefore a STOP sign is the recommended treatment. The safe approach speed calculation spreadsheet is attached for your reference.

### **Recommendation**

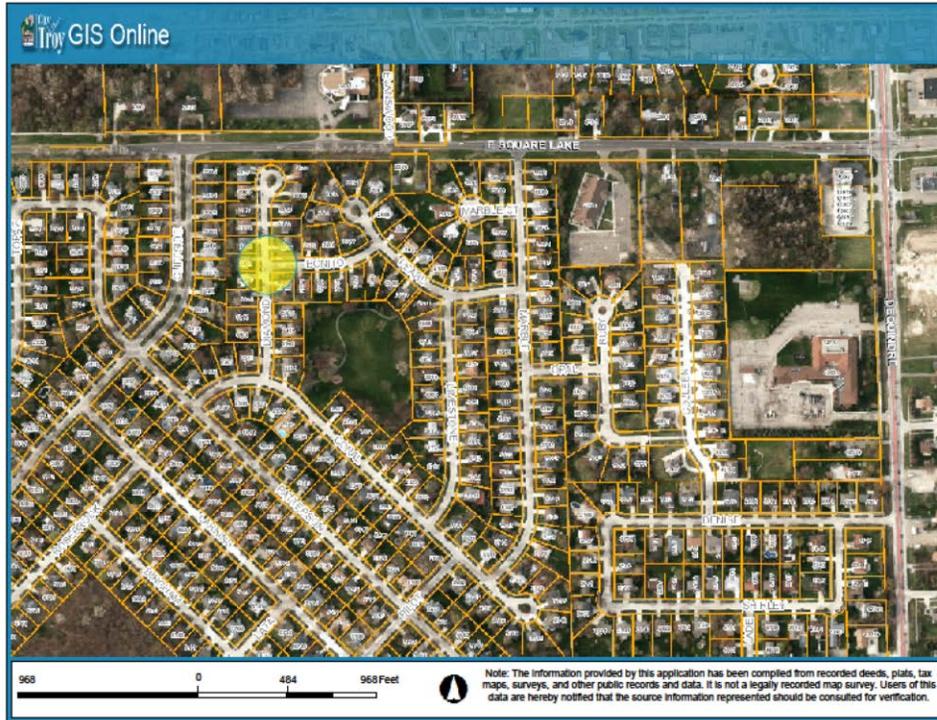
OHM recommends that the intersection control be changed to a STOP sign on the Bonito Dr. approach to the intersection.

Sincerely,  
Orchard Hiltz & McCliment, Inc.

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

Attachments:

- Aerial and Intersection Photos
- Safe Approach Speed Calculation Spreadsheet



Aerial of location



Diamond Dr. looking north at Bonito Dr.

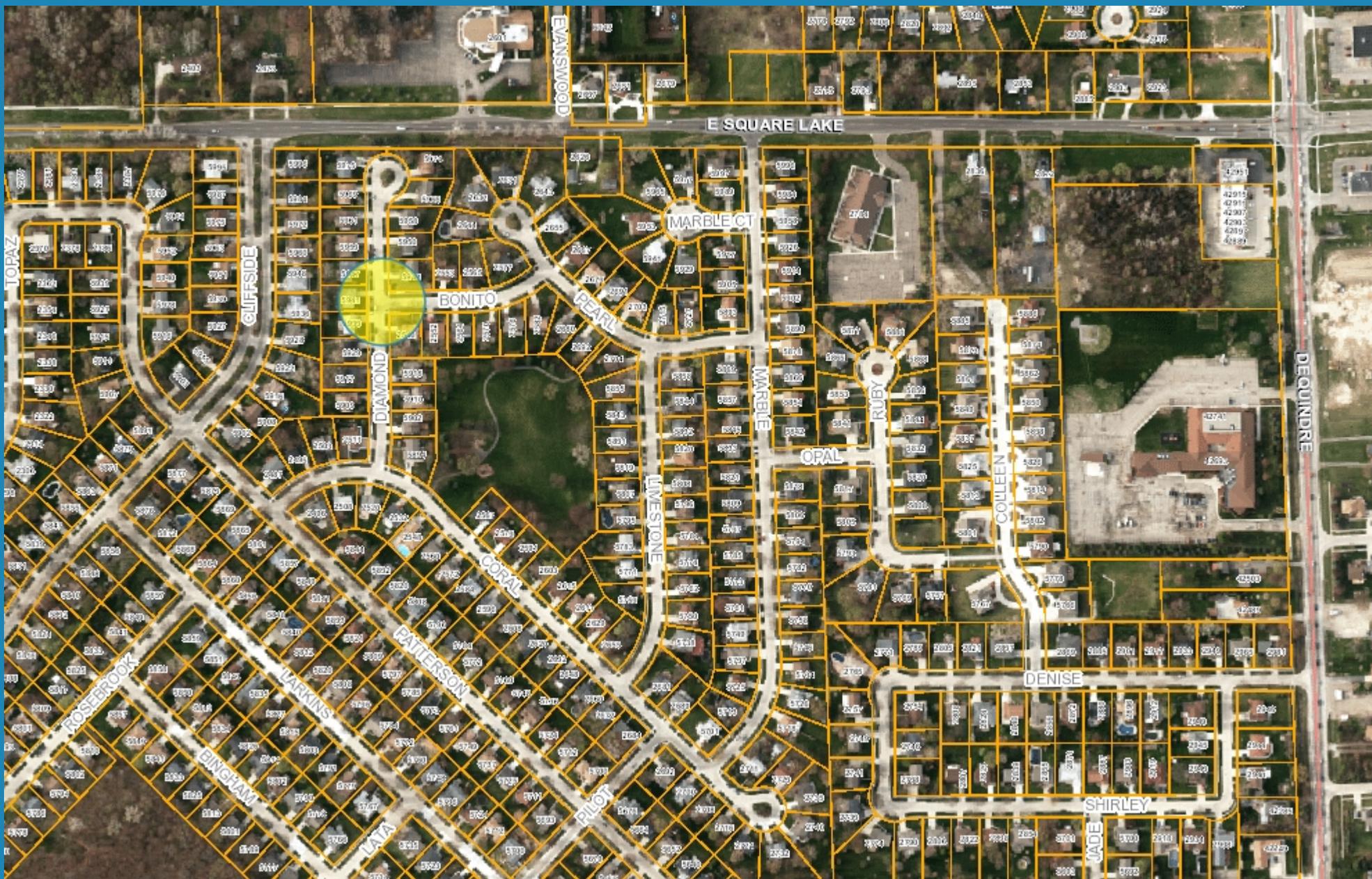


Bonito Dr. looking west toward Diamond Dr.



Close up of sight obstruction in northeast corner of intersection





968 0 484 968Feet



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.







## TRAFFIC COMMITTEE REPORT

March 27, 2015

TO: Traffic Committee

FROM: Bill Huotari, Deputy City Engineer/ Traffic Engineer

SUBJECT: Request for Traffic Control  
Waltham at Post

Background:

Richard Karlis of 2491 Waltham requests that the existing YIELD signs on Post be replaced with a STOP signs. Mr. Karlis states that drivers do not yield at the signs creating a potentially hazardous condition. There are existing YIELD signs on the Post approaches to Waltham.

There have been two (2) crashes reported at this intersection in the past five (5) years. The crash data does not constitute a compelling case for modifying the existing controls.

The posted speed limit on both streets is 25 mph. Post Drive and Waltham Drive are both local streets and both could be considered continuing roadways, so there is no compelling case for which should be assigned right-of-way. At this time, Post Drive is the controlled road.

The major potential sight distance obstruction at the intersection is a hedge row of bushes lining the sidewalk along Post Drive in the northeast quadrant of the intersection. The hedge row comes into play when determining the safe approach speeds at the intersection.

The safe approach speed was found to be 7.6 mph; therefore a STOP sign is the recommended treatment.

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

March 26, 2015

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

Subject: Traffic Control Recommendation for the intersection of Post Dr. at Waltham Dr.  
OHM JN: 0128-15-0060

Dear Mr. Huotari:

As requested, we have reviewed the Post Dr. at Waltham Dr. intersection to determine the proper traffic control. The subject intersection is a cross intersection located in the City of Troy approximately 0.4 miles south of Long Lake Rd and 0.4 miles east of John R Rd. Both Post Dr. and Waltham Dr. are local streets with Post Dr. running in the north-south direction and Waltham Dr. running east-west. The speed limit on both streets is 25mph. There are currently yield signs on the north and southbound approaches to the intersection along Post Dr. Reference the attachments for an aerial and intersection photos.

#### **Background on Traffic Control Determination**

Based on the *Michigan Manual of Uniform Traffic Control Devices (MMUTCD)* there are four conditions where STOP signs may be warranted:

- At the intersection of a less important road with a main road where application of the normal right-of-way rule is unduly hazardous.
- On a street entering a through highway or street.
- At an unsignalized intersection in a signalized area.
- At other intersections where a combination of high speed, restricted view, or crash records indicate a need for control by the STOP sign.

Many times STOP signs are installed where they may not be warranted. Traffic experts agree that unnecessary STOP signs:

- Cause accidents they are designed to prevent.
- Breed contempt for other necessary STOP signs.
- Waste millions of gallons of gasoline annually.
- Create added noise and air pollution.
- Increase, rather than decrease, speeds between intersections.

The use of a YIELD sign is intended to assign the right-of-way at intersections where it is not usually necessary to stop before proceeding into the intersection. Conversely, the STOP sign is intended for use where it is usually necessary to stop before proceeding into the intersection.



The following conditions should be fully evaluated to determine how the right-of-way should be assigned:

- **Traffic Volumes:** Normally, the heavier volume of traffic should be given the right-of-way.
- **Approach Speeds:** The higher speed traffic should normally be given the right-of-way.
- **Types of Highways:** When a minor highway intersects a major highway, it is usually desirable to control the minor highway.
- **Sight Distance:** Sight distance across the corners of the intersection is the most important factor and is critical in determining safe approach speeds.

### **Crash Analysis**

Based on information obtained through Traffic Improvement Association of Michigan, there were two crashes recorded in the past 5-years at the Post / Waltham intersection. One involved an eastbound vehicle sideswiping a parked vehicle just east of the intersection. The second was an angle collision, with a northbound vehicle striking a westbound vehicle during a winter (snow) event. The crash data does not constitute a compelling case for modifying the existing controls.

### **Approach Speeds**

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

### **Types of Highways**

Both Post Dr. and Waltham Dr. are considered local streets, and as both could be considered continuing roadways, there is no compelling case for which should be assigned right of way. As this time, Post Dr. is the controlled road.

### **Sight Distance**

The major potential sight distance obstruction at the intersection is a hedge of bushes lining the sidewalk along Post Dr. in the northeast quadrant of the intersection. The safe approach speed is the speed at which a vehicle can approach an intersection and still stop in time to avoid a collision with a vehicle on the cross street. Safe approach speeds are determined through calculations.

When the safe approach speed is found to be more than 10 mph, a YIELD sign is commonly used. In this case, the safe approach speed was found to be 7.6 mph; therefore a STOP sign is the recommended treatment. The safe approach speed calculation spreadsheet is attached for your reference.

### **Recommendation**

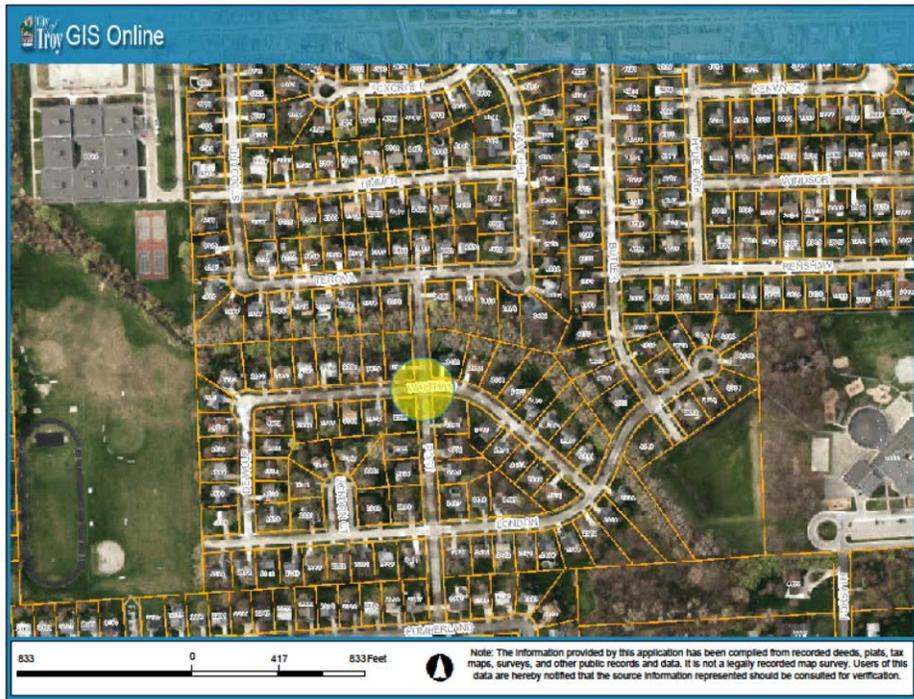
OHM recommends that the intersection control be changed to two-way STOP control signs on the Post Dr. approach to the intersection.

Sincerely,  
Orchard Hiltz & McCliment, Inc.

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

### **Attachments:**

- Aerial and Intersection Photos
- TIA Crash Printout
- Safe Approach Speed Calculation Spreadsheet



Aerial of Location



Post Dr. looking southeast toward Waltham Dr.



Post Dr. looking southwest toward Waltham Dr.



## Traffic Improvement Association of Michigan

## Crash Detail Report

Request #: 0027390

Printed By: Stephen Dearing

Printed On: 3/25/2015

ON_ROAD:	Post Dr
AT_ROAD:	Waltham Dr
STATE:	MI
COUNTY:	OAKLAND
COMMUNITY:	Troy
STAT_YEAR:	3-Year

#1 Location: POST ST (0.14) 100 feet S of Waltham Dr **Crash ID: 5933346**

**Crash Date:** 01/28/2005 **Day:** Fri **Hour:** unknown **Weather:** clear **Roadway:** dry **Light:** dark/unltd  
**Injuries K:** 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 0 **How:** ss-opp  
**CVT:** Troy **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 053249

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	unknown	veh parked	veh parked	none	none	reckls driving	uncoded	
2	S	nodriver parked	veh in transpt	none	none	none	none	car	lftside
3	S	nodriver parked	veh in transpt	tree	none	none	none	car	ctrfront

UD-10: [055453788](#), [055453864](#)#2 Location: WALTHAM ST (0.12) 15 feet E of Post Dr **Crash ID: 6123902**

**Crash Date:** 09/30/2005 **Day:** Fri **Hour:** 8am **Weather:** clear **Roadway:** dry **Light:** day  
**Injuries K:** 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** angle  
**CVT:** Troy **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 0534576

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unknown	car	lftside
2	S	go straight	veh in transpt	none	none	none	unknown	bike	

UD-10: [055651873](#)#3 Location: WALTHAM DR (0.12) 20 feet E of POST RD **Crash ID: 8387299**

**Crash Date:** 07/05/2012 **Day:** Thu **Hour:** 11am **Weather:** clear **Roadway:** dry **Light:** day  
**Injuries K:** 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 1 **How:** ss-same  
**CVT:** Troy **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:**

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh parked	none	none	none	other	pickup	rtside
2	E	nodriver parked	veh in transpt	none	none	none	unknown	car	lftfront

UD-10: [8387299](#)#4 Location: WALTHAM DR (0.12) 5 feet E of POST RD **Crash ID: 9120911**

**Crash Date:** 11/19/2014 **Day:** Wed **Hour:** 3pm **Weather:** snow **Roadway:** snowy **Light:** day  
**Injuries K:** 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 2 **Inj 0:** 0 **How:** angle  
**CVT:** Troy **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 140035691

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	slow/stop on rd	veh in transpt	none	none	none	speeding	car	ctrfront
2	W	go straight	veh in transpt	none	none	none	none	car	lftside

UD-10: [9120911](#)



**Crash Type**

Count	Type
0	uncoded
0	single
0	head-on
0	head-on/lt
2	angle
0	rr-end
0	rr-end/lt
0	rr-end/rt
1	ss-same
1	ss-opp
0	unknown
<b>Totals:</b>	<b>4</b>

**Light Conditions**

Count	Type
0	uncoded
3	day
0	dawn
0	dusk
0	dark/lt
1	dark/unltd
0	unknown
<b>Totals:</b>	<b>4</b>

**Weather**

Count	Type
0	uncoded
3	clear
0	cloudy
0	fog/smoke
0	rain
1	snow
0	wind
0	sleet/hail
0	unknown
<b>Totals:</b>	<b>4</b>

**Road Condition**

Count	Type
0	uncoded
3	dry
0	wet
0	icy
1	snowy
0	muddy
0	slushy
0	debris
0	unknown
<b>Totals:</b>	<b>4</b>

**Crashes By Month**

Count	Type
1	January
0	February
0	March
0	April
0	May
0	June
1	July
0	August
1	September
0	October
1	November
0	December
<b>Totals:</b>	<b>4</b>

**Hazardous Action**

Count	Type
3	none
1	speeding
0	imprp/no signal
0	imprp backing
0	unable to stop
1	other
3	unknown
1	reckls driving
0	negl driving
0	spd too slow
0	failed to yield
0	disrgd traffic cntrl
0	wrong way
0	left of center
0	imprp passing
0	imprp lane use
0	imprp turn
<b>Totals:</b>	<b>9</b>

**Unit Type**

Count	Type
1	Bicyclist
0	Engineer
8	Vehicle
0	Pedestrian
<b>Totals:</b>	<b>9</b>

**Crashes By Year**

Count	Type
0	2000
0	2001
0	2002
0	2003
0	2004
2	2005
0	2006
0	2007
0	2008
0	2009
0	2010
0	2011
1	2012
0	2013
1	2014
0	2015
<b>Totals:</b>	<b>4</b>

**Crash Severity**

	FATAL	A	B	C	No Inj	Total
Persons	0	0	0	2	3	5
Crashes	0	0	0	1	3	4

**Alcohol in Crashes**

	FATAL	PI	PD	Total
Drinking	0	0	0	0
Not Drinking	0	1	3	4
Total	0	1	3	4

**Crashes per Hour by Day**

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

# Safe Approach Speed Calculation

Waltham Dr. and Post Dr.  
City of Troy

Date: 3/26/2015  
Analyst: S.B. Dearing

Measured:

- Width of Roads
  - Road 1 = 28 (ft)
  - Road 2 = 28 (ft)
- Distance to Obstructions
  - a = 17 (ft)
  - b = 15 (ft)
  - c = 30 (ft)
  - d = 40 (ft)
  - e = 55 (ft)
  - f = 45 (ft)
  - g = 45 (ft)
  - h = 72 (ft)
- Angle of Intersection
  - Delta = 90 (degrees, measure counterclockwise)
- Road 1 Posted
  - Speed Limit = 25 (mph)

Assumed:

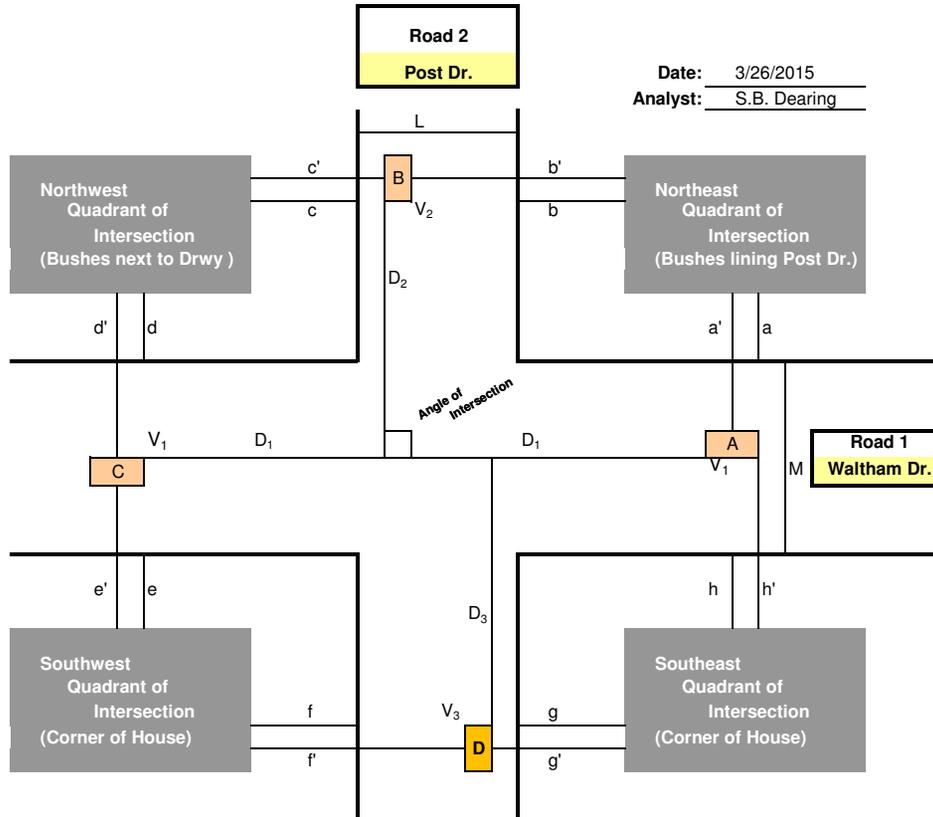
- Speed of Vehicle A = Speed of Vehicle C = Posted Speed Limit on Road 1
  - + 5 (mph)
  - V<sub>1</sub> = 30 (mph)
- Perception / Reaction Time (AASHTO)
  - t = 2.5 (sec)
- Deceleration rate (AASHTO)
  - A = 11.20
- Clearance distance in excess of safe stopping distance (AAA)
  - EC = 0 (ft)

Calculated Safe Approach Speed for Vehicle B  
Approaching on Road 2

FALSE V<sub>2</sub> = 7.6 (mph) [Based on Veh. A]  
or V<sub>2</sub> = 12.0 (mph) [Based on Veh. C]

Calculated Safe Approach Speed for Vehicle D  
Approaching on Road 2

V<sub>3</sub> = 18.7 (mph) [Based on Veh. A]  
or V<sub>3</sub> = 17.9 (mph) [Based on Veh. C]



Intermediate Calculations:

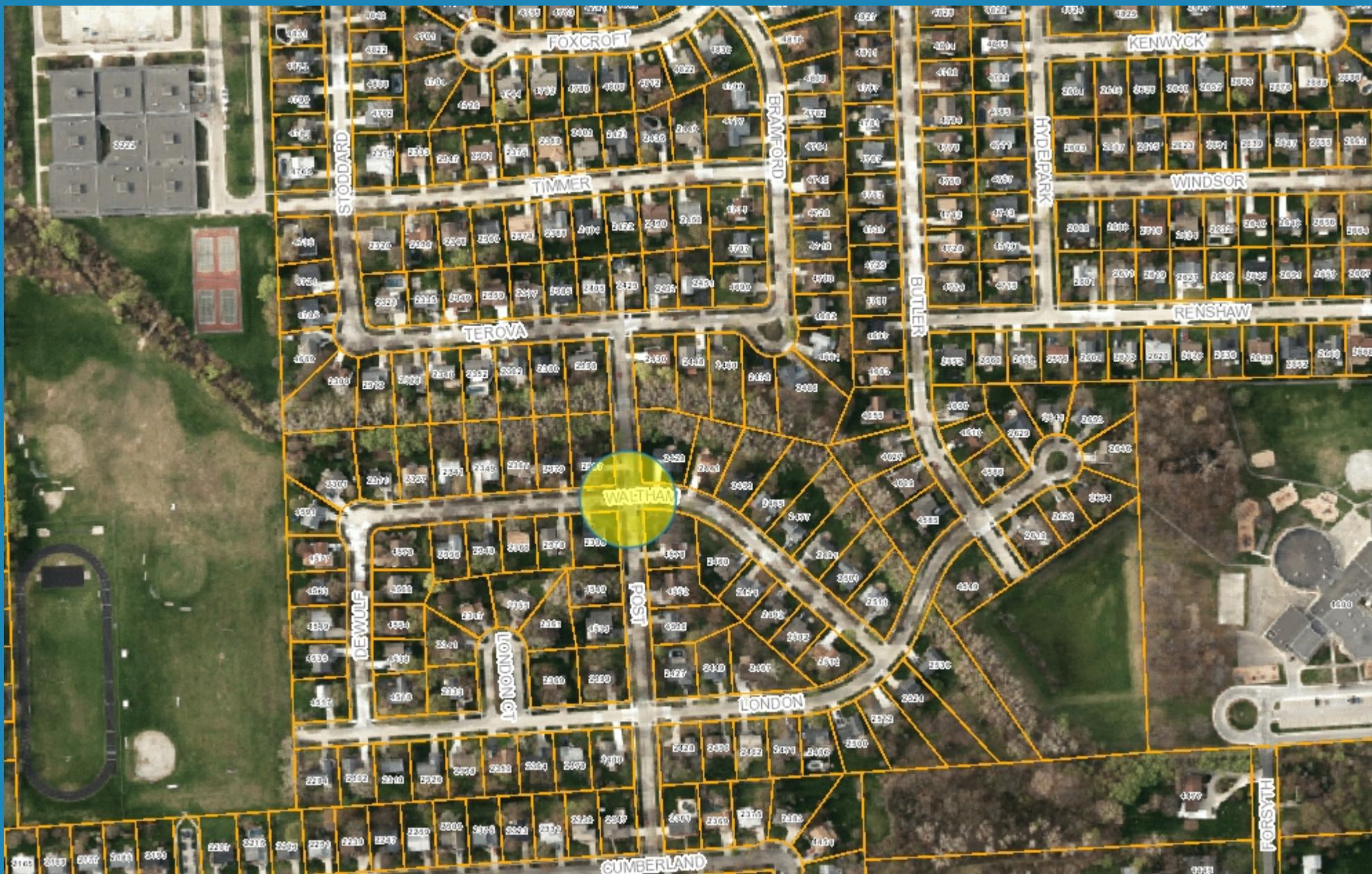
D <sub>1</sub> = 196	a' = 28	e' = 66
D <sub>2A</sub> = 33.5	b' = 32	f' = 62
D <sub>2C</sub> = 57.8	c' = 41	g' = 56
D <sub>3A</sub> = 102.4	d' = 57	h' = 89
D <sub>3C</sub> = 96.5		

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

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



833 0 417 833Feet



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.







## TRAFFIC COMMITTEE REPORT

March 27, 2015

TO: Traffic Committee

FROM: Bill Huotari, Deputy City Engineer/ Traffic Engineer

SUBJECT: Request for Traffic Control  
Delta at Westpointe

### Background:

Cindy Graves of 6270 Emerald Lake requests that traffic control be placed at the intersection of Delta and West Point. Ms. Graves states that the lack of traffic control at the intersection creates a potentially hazardous condition.

There is currently no traffic control at the intersection of Delta at West Point.

There have been no crashes reported at this intersection in the past five (5) years.

The posted speed limit on both streets is 25 mph. Westpointe Drive should be assigned right-of-way as it is the continuing road and Delta Drive terminates at Westpointe Drive.

The major potential sight distance obstruction at the intersection is a car parked in the driveway of the house in the southwest quadrant. The parked car comes into play when determining the safe approach speeds at the intersection.

The safe approach speed was found to be 13.8 mph; therefore a YIELD sign is the recommended treatment.

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

March 26, 2015

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

Subject: Traffic Control Recommendation for the intersection of Delta Dr. at Westpointe Dr.  
OHM JN: 0128-15-0060

Dear Mr. Huotari:

As requested, we have reviewed the Delta Dr at Westpointe Dr intersection to determine the proper traffic control. The subject intersection is a T-intersection located in the City of Troy approximately 400 feet south of South Blvd and 1/3 mile west of John R Rd. Both Delta Dr and Westpointe Dr are local streets with Westpointe Dr running in the north-south direction and Delta Dr running east-west. The speed limit on both streets is 25mph. There are currently no intersection controls at this intersection for either Delta Dr. or Westpointe Dr. Reference the attachments for an aerial and intersection photos.

#### **Background on Traffic Control Determination**

Based on the *Michigan Manual of Uniform Traffic Control Devices (MMUTCD)* there are four conditions where STOP signs may be warranted:

- At the intersection of a less important road with a main road where application of the normal right-of-way rule is unduly hazardous.
- On a street entering a through highway or street.
- At an unsignalized intersection in a signalized area.
- At other intersections where a combination of high speed, restricted view, or crash records indicate a need for control by the STOP sign.

Many times STOP signs are installed where they may not be warranted. Traffic experts agree that unnecessary STOP signs:

- Cause accidents they are designed to prevent.
- Breed contempt for other necessary STOP signs.
- Waste millions of gallons of gasoline annually.
- Create added noise and air pollution.
- Increase, rather than decrease, speeds between intersections.

The use of a YIELD sign is intended to assign the right-of-way at intersections where it is not usually necessary to stop before proceeding into the intersection. Conversely, the STOP sign is intended for use where it is usually necessary to stop before proceeding into the intersection.



The following conditions should be fully evaluated to determine how the right-of-way should be assigned:

- Traffic Volumes: Normally, the heavier volume of traffic should be given the right-of-way.
- Approach Speeds: The higher speed traffic should normally be given the right-of-way.
- Types of Highways: When a minor highway intersects a major highway, it is usually desirable to control the minor highway.
- Sight Distance: Sight distance across the corners of the intersection is the most important factor and is critical in determining safe approach speeds.

### **Crash Analysis**

Based on information obtained through Traffic Improvement Association of Michigan, there were no crashes recorded in the past 5-years at the Delta / Westpointe intersection.

### **Approach Speeds**

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

### **Types of Highways**

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

### **Sight Distance**

The major potential sight distance obstruction at the intersection is a car parked in the driveway of the house in the southwest quadrant. The safe approach speed is the speed at which a vehicle can approach an intersection and still stop in time to avoid a collision with a vehicle on the cross street. Safe approach speeds are determined through calculations.

When the safe approach speed is found to be more than 10 mph, a YIELD sign is commonly used. In this case, the safe approach speed was found to be 13.8 mph; therefore a YIELD sign is the recommended treatment. The safe approach speed calculation spreadsheet is attached for your reference.

### **Recommendation**

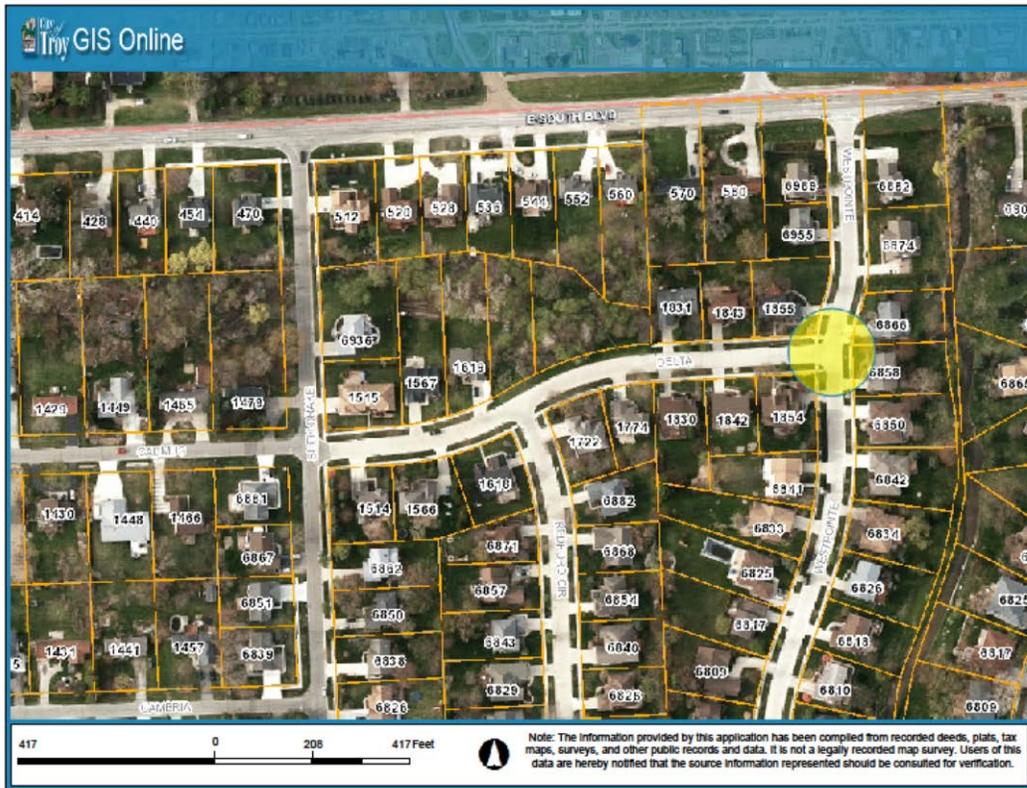
OHM recommends that the intersection control be set as a one-way YIELD sign on the Delta Dr approach to the intersection.

Sincerely,  
Orchard Hiltz & McCliment, Inc.

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

### **Attachments:**

- Aerial and Intersection Photos
- Safe Approach Speed Calculation Spreadsheet



Aerial of Location



Westpointe Dr. looking south to Delta Dr.



Westpointe Dr. looking north to Delta Dr.



Delta Dr. looking east to Westpointe Dr.

# Safe Approach Speed Calculation

Delta at Westpointe  
City of Troy

Road 1 = Westpointe  
Road 2 = Delta

Date: 3/25/2015  
Analyst: S.B. Dearing

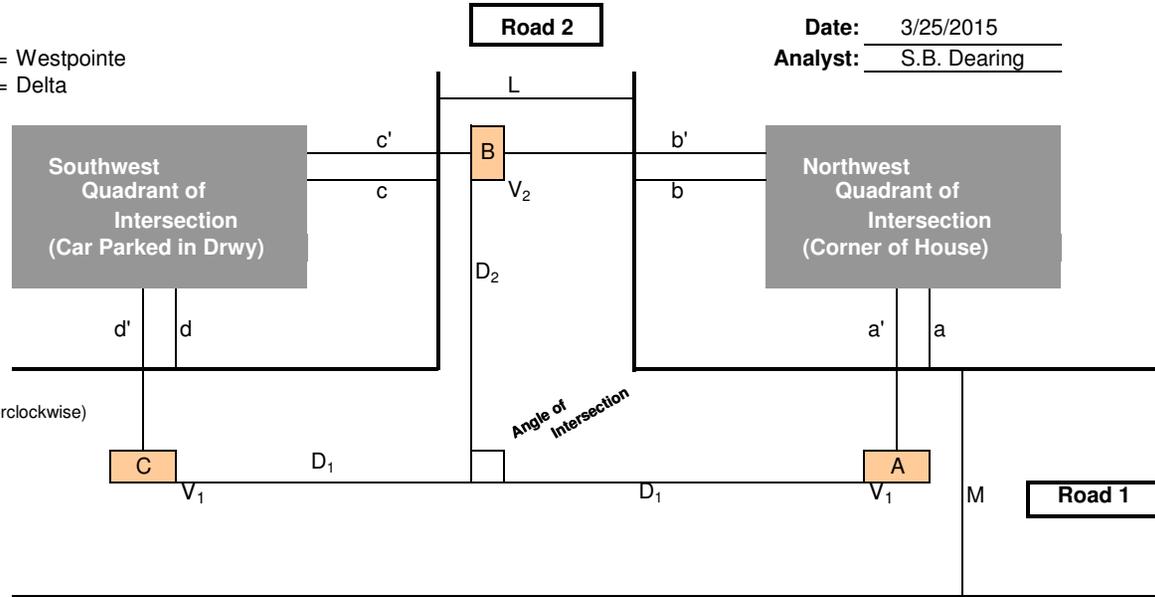
Measured:

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

Distance to Obstruction  
a = 45 (ft)  
b = 42 (ft)  
c = 45 (ft)  
d = 19 (ft)

Angle of Intersection  
Delta = 90 (degrees, measure counterclockwise)

Road 1 Posted  
Speed Limit = 25 (mph)



Assumed:

Speed of Vehicle A = Speed of Vehicle C  
= Posted Speed Limit on Road 1

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

Perception / Reaction Time (AASHTO)

t = 2.5 (sec)

Deceleration rate (AASHTO)

A = 11.20

Clearance distance in excess of safe stopping distance (AAA)

EC = 0 (ft)

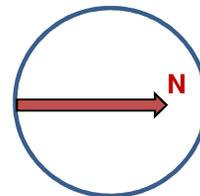
Calculated Safe Approach Speed for Vehicle B  
Approaching on Road 2

V<sub>2</sub> = 15.5 (mph) [Based on Veh. A]  
or V<sub>2</sub> = 13.8 (mph) [Based on Veh. C]

TRUE

Recommended ROW control for Road 2

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



Intermediate Calculations:

D<sub>1</sub> = 196  
D<sub>2A</sub> = 80  
D<sub>2C</sub> = 68.6  
a' = 56  
b' = 59  
c' = 56  
d' = 36

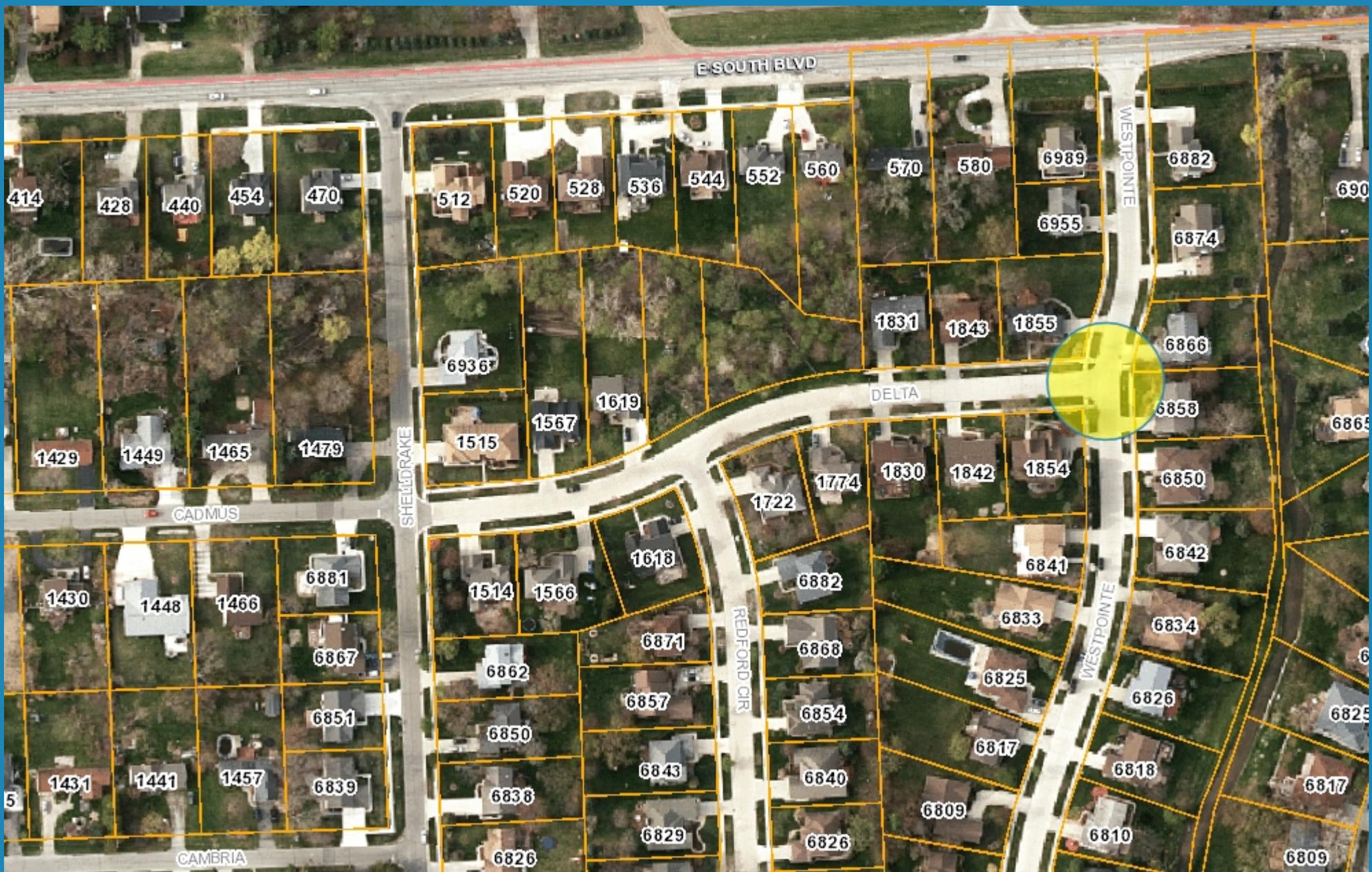
Based On  $D_1 = (1.075 V_1^2 / A) + 1.4667 V_1 t + EC$

$D_{2A} = \frac{a' * D_1}{(D_1 - b')}$  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



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.



