

Agenda
Royal Oak Citizens Traffic Committee Meeting
City Commission Room 315
City Hall, 211 Williams Street
Royal Oak, MI 48067
www.romi.gov

January 22, 2019

7:00 P.M. Citizens Traffic Committee

1. Roll Call

2. Previous Minutes – November 27, 2018

3. Public Comment – Items Not on the Agenda

4. Rescheduled Items

5. Business Items

5A. Request to install “Stop” signs on Woodslee Drive at Eton Cross, or install “No Thru Traffic” signs on Woodslee at Woodward Avenue and 13 Mile Road

5B. Request to install “Stop” signs at the intersections of Oliver Road and Glenview Road, and Oliver Road and Glenwood Road

5C. Evaluation of bump-out installations on Crane Avenue for site distance issues

6. Information Only Items

6A. Re-evaluate speeding and cut-thru issues on Woodside Road between Main Street and Rochester Road when school is in session

7. Other Business

8. Adjourn

Contact:

Matthew J. Callahan, P.E. – City Engineer

E-mail: mattc@romi.gov

Office: 248.246.3260

Citizens Traffic Committee Meeting

January 22, 2019 7:00 P.M.

Agenda Explanation

1. Roll Call

Preamble

"The Traffic Committee consists of Royal Oak property owners appointed by the City Commission. We are volunteers and are not paid or elected. What we decide tonight is merely a recommendation to the City Commission. If you do not agree with the findings or decisions of this committee, you may go before the City Commission and petition and/or discuss your issue with them. At this meeting you will be given an opportunity to speak during your item on the agenda. However, at the City Commission meeting, you must be recognized during "public comment" on their agenda, not when the Traffic Committee resolutions are being voted upon. Otherwise you will not be able to voice your concerns.

It is important to understand that professionals make preliminary recommendations to the Traffic Committee. They consist of civil and traffic engineers, outside consultants and public safety officials. You may have been informed that these professionals have denied your request or petition. This denial does not mean that this committee will vote that way; however, we are committed to discussing the issues at hand in a pragmatic and sensible manner. Our ultimate recommendation to the City Commission will be one that benefits our citizens and community as a whole."

2. Minutes – November 27, 2018

3. Public Comment – Items Not on the Agenda

4. Rescheduled Items

5. Business Items

5.A. Request to install "Stop" signs on Woodslee Drive at Eton Cross, or install "No Thru Traffic" signs on Woodslee at Woodward Avenue and 13 Mile Road

A request was received from Thomas Dunne of 2923 Woodslee Drive to review cut-thru and speeding issues on Woodslee Drive between Woodward Avenue and 13 Mile Road. He states motorists speed down Woodslee Drive, using it to avoid the intersection of Woodward Ave, 13 Mile Road and Coolidge Highway. He recommended the installation of "Stop" signs on Woodslee Drive at Eton Cross, or as an alternative, install "No Thru Traffic" signs on Woodslee Drive at Woodward Avenue and 13 Mile Road.

The Staff Traffic Committee has reviewed this request and determined that:

1. Woodslee Drive is a 27' wide concrete road with integral curb and gutter.
2. Woodslee Drive is classified as a LOCAL road.
3. Parking is allowed on both sides of Woodslee except for 9 a.m. to 5 p.m. weekdays between Woodward and Eton Cross. Parking is not restricted on Woodslee between Eton Cross and Guilford. Parking is prohibited on the west side of Woodslee between 13 Mile and Guilford.
4. There were no accidents reported at this location for the years 2015-2017 (3-year accident report) which is the main warrant required for a traffic change. Traffic accidents are the main reason for installing traffic regulatory devices such as stop signs.
5. The city requested traffic measurements from the TIA for volumes and speeding. The results for the measurements are summarized in the table below:

| Woodslee Drive Traffic Statistics November 27, 2018 – November 29, 2018 | | |
|--|-------------------------------|-----------------------|
| Location | Speed (85 th %) | Vehicle Volumes |
| Woodslee – Woodward to Eton Cross NORTHBOUND/EASTBOUND | 28 MPH | 230 (41 at 4-5 PM) |
| Woodslee – Woodward to Eton Cross SOUTHBOUND/WESTBOUND | | 97 (17 at 5-6PM) |
| | | 327 |

6. The 85th percentile speed is 28MPH which is the high end of at the acceptable limit. The city concurs with the MMUTCD that the purpose of regulatory signs is to promote safe traffic and pedestrian movements and actions. The city also concurs with national studies that indicate inappropriately placed stop signs do not necessarily lessen speeding and have resulted in higher speeds. Staff will notify police of this concern regarding speeding.
7. Traffic volumes on Woodslee are within acceptable range for a residential street. Traffic volumes are in the bottom third of acceptable volumes (0 to 600 vehicles per day) for residential areas/local streets. The majority of traffic is heading eastbound from Woodward towards 13 Mile indicating that some traffic may be avoiding the traffic signal lights at Coolidge and Woodward. Based on the number of homes on the street, 250 to 300 vehicles per day would be expected.
8. “No Thru Traffic” signs are nearly impossible to enforce and are not recommended. Other options considered by staff include:
 - a. Prohibiting turns on to Woodslee from Woodward:
This would negatively affect residents as well as businesses east of the alley and would not be recommended.
 - b. Prohibiting entry to Woodslee east of the alley during certain hours:
Similar to Mohawk Avenue at Dondero Avenue, this could prevent some thru traffic and would only negatively affect residents of Woodslee and relatively easy to enforce. This signage could be requested via petition.
 - c. Partially blocking off Woodslee east of the alley:
Essentially making Woodslee a one-way street westbound at the intersection of the alley, this could prevent some thru traffic and would only negatively affect residents of Woodslee. This construction could be requested via petition. Funding recommended would be special assessment.

Suggested Staff Recommendation:

To deny the requests to install “Stop” signs on Woodslee Drive at Eton Cross and “No Thru Traffic” signs.

Estimated city cost: \$0

Moved by: Greg Rassel

Supported by: Doug Hedges

5.B. Request to install “Stop” signs at the intersections of Oliver Road and Glenview Road, and Oliver Road and Glenwood Road

A request was received from Pam Steinmetz of 1800 Lloyd Avenue to install stop signs at the intersections of Oliver Road and Glenview Road, and Oliver Road and Glenwood Road. She states there is currently no signs at these intersections and she has experienced several almost accidents due to this.

The Staff Traffic Committee has reviewed this request and determined that:

1. Oliver Road is a 36’ wide composite road at the intersection of Glenview Road and 36’ wide concrete road with curb and gutter at the intersection of Glenwood Road.
2. Glenwood Road and Glenview Road are both 31’ wide concrete roadways with curb.
3. All three streets are classified as LOCAL roads.
4. There were no accidents reported at this location for the years 2015-2017 (3-year accident report) which is the main warrant required for a traffic change. Traffic accidents are the main reason for installing traffic regulatory devices such as stop signs.
5. These two “T” intersections currently have no traffic regulatory devices. While there are currently no stop or yield signs at these locations for Oliver, and eastbound Glenview or Glenwood traffic, it is unusual to have unrestricted movement at an intersection for more than one direction. It is appropriate to have a “stop” sign when approaching a “T” intersection, which would be consistent with other similar locations within the city.

Suggested Recommendation:

To approve the request to install “Stop” signs on Glenview Road and Glenwood Road at Oliver Road.

Estimated city cost: \$350

Moved by: Greg Rassel

Supported by: Doug Hedges

5.C. Evaluation of bump-out installations on Crane Avenue for site distance issues

Per traffic committee resolution on November 27, 2018 – Staff was to evaluate bump-out options for the intersection of Crane Avenue and N Washington Avenue and review site distance issues.

A request was originally received by Joel Jonas of 325 Crane to review the site distance because of the difficulty of exiting Crane Avenue at N Washington due to site distance issues from on-street parking and speeding motorists.

The Staff Traffic Committee evaluated the bump-out option and determined that:

1. The installation of bump-outs allows drivers exiting Crane to move approximately 12 feet further east positioning them for greater visibility to the north and south past the potential parked vehicles. Installing bump-outs would increase sight distance as follows:
 - a. 228’ to the north eliminating one space, and
 - b. 226’ to the south eliminating no spaces.
2. Bump-outs would be a significant improvement compared to just eliminating parking. Eliminating one additional parking space to the north (two total) would increase sight distance to recommended distance, however this could be done later if necessary.
3. Complaints regarding morning blocking of the intersection by school traffic can be addressed by installing “Do Not Block Intersection” signs for southbound Washington Traffic

Suggested Recommendation:

To recommend the installation of bump-outs, with rain gardens, on the west side of N Washington Avenue at the intersection of Crane Avenue, eliminating one parking space to the north of the intersection achieving at least 225 feet of site distance, and installing a “Do Not Block intersection” sign on the west side of N Washington Avenue at Crane Avenue.

Estimated city cost: \$45,000

Moved by: Greg Rassel

Supported by: Doug Hedges

6. Information Only Items

6.A. Re-evaluate speeding and cut-thru issues on Woodside Road between Main Street and Rochester Road when school is in session

Per traffic committee resolution on July 24, 2018 - Woodside Road between Main Street and Rochester Road was to be re-evaluated for speeding and traffic volumes when school was in session.

A request was originally received from Ann Bush of 232 Woodside to evaluate speeding and cut-thru issues on Woodside Road.

The Staff Traffic Committee has reviewed the data and determined that:

1. The road is **now** posted for 25MPH speed limit per TC resolution 07/24/18.
2. On November 27-29, 2018, TIA re-collected vehicle counts and speed measurements, as shown below. There is little change in the overall traffic volume or speed including the number of vehicles exceeding 28 MPH.

| Woodside Road between Main St and Rochester Road Drive Traffic Statistics | | |
|--|--------------------------------------|----------------------------------|
| Date | Speed (85th %) | Vehicle Volumes (ADT) |
| June 18, 2018 – June 21, 2018 | 26 MPH | 797 |
| Vehicles exceeding 28 MPH | | 84 |
| November 27, 2018 – November 29, 2018 | 26 MPH | 734 |
| Vehicles exceeding 28 MPH | | 89 |

7. Adjourn

Matthew J. Callahan, City Engineer

Cc: Traffic Committee Members, Inc. Ex-Officio Members:
Dan Godek, Chairperson Richard Karlowski
Rob Moore Amanda Morris Smith
Belem Morales Matthew McCuen
(open position) Thomas Allen

Royal Oak City Commission
Shelly Kamp, Chamber of Commerce
Shawn Lewis-Lakin, Royal Oak Schools
Candi Drouillard, PTA Council President
Corrigan O'Donoghue, Police Chief
Deputy Chief of Operations
Sergeant Chris Annetta, Police Traffic Liaison
Dave Cummins, Fire Chief
Tim Thwing, Director of Community Development
Greg Rassel, Director of Recreation and Public Services

- 5A. Thomas Dunne, 2923 Woodslee – tad33@wowway.com
- 5B. Pam Steinmetz, 1800 Lloyd, Royal Oak, MI 48073
- 5C. Joel Jonas, 325 Crane – jwjonas1@yahoo.com



**Citizens Traffic Committee Meeting Minutes
 November 27, 2018**

A regular meeting of the Royal Oak Citizens Traffic Committee was held on Tuesday, November 27, 2018, in the city hall, 211 Williams Street, Royal Oak. The meeting was called to order by Chairperson Dan Godek at 7:00 p.m.

Chairperson Dan Godek recited the Traffic Committee preamble:

"The Traffic Committee consists of property owners of Royal Oak appointed by the City Commission. We are volunteers and are not paid or elected. What we decide tonight is merely a recommendation to the City Commission. If you do not agree with the findings or decisions of this committee, you may go before the City Commission and petition and/or discuss your issue with them. At this meeting you will be given an opportunity to speak during your item on the agenda. However, at the City Commission meeting, you must be recognized during "public comment" on their agenda, not when the Traffic Committee resolutions are being voted upon. Otherwise you will not be able to voice your concerns.

It is important to understand that professionals make preliminary recommendations to the Traffic Committee. They consist of civil and traffic engineers, outside consultants and public safety officials. You may have been informed that these professionals have denied your request or petition. This denial does not mean that this committee will vote that way; however, we are committed to discussing the issues at hand in a pragmatic and sensible manner. Our ultimate recommendation to the City Commission will be one that benefits our citizens and community as a whole."

1. Roll Call:

Present

Dan Godek, Chairperson
 Richard Karlowski
 Matthew McCuen
 Thomas Allen
 Amanda Morris-Smith
 Belem Morales, alternate

Also Present

Matthew J. Callahan P.E., City Engineer
 Holly Donoghue P.E., Engineering

Absent

Rob Moore
 Police traffic liaison

2. Approval of Traffic Committee Meeting Minutes of September 25, 2018

Motioned by Thomas Allen
 Seconded by Richard Karlowski

Adopted Unanimously

3. Public Comment

4. Rescheduled Items/Old Business - None

5. Business Items

5.A. Request to close crossover of Northwood Boulevard at Galpin Avenue due to traffic issues on Galpin Avenue

A request was received from Anne Vaara of 2449 Galpin Avenue to close off the crossover on Northwood Boulevard at Galpin Avenue. She states Galpin Avenue is used as a cut-thru street and there are many new families with children on the block.

The findings of the Staff Traffic Committee were presented by Matthew J. Callahan, P.E.

Mr. Godek opened the floor to those interested in speaking on this issue. No one came forward.

The Citizens Traffic Committee recommends denying the request to close the crossover of Northwood Boulevard at Galpin Avenue and further recommends traffic calming options be evaluated for Galpin Avenue when it is scheduled for future road improvements (2022).

Moved by: Amanda Morris-Smith

Supported by: Thomas Allen

Motion adopted unanimously

5.B. Request to install additional speed limit signs on Northwood Boulevard between Woodward Avenue and Crooks Road

A request was received from Ellen Kehoe of 2000 Northwood Boulevard to install speed limit signs along Northwood Boulevard between Woodward Avenue and Crooks Road. Her concern is that Northwood is being used as a cut-through street and she has witnessed vehicles speeding along this corridor. She states there is currently zero speed limit signs along Northwood Boulevard and only one Stop sign at the intersection of Bonnie View Drive.

The findings of the Staff Traffic Committee were presented by Matthew J. Callahan, P.E.

Mr. Godek opened the floor to those interested in speaking on this issue:

- Ellen Kehoe of 2000 Northwood Boulevard re-iterated her concerns about the speeding on Northwood Boulevard and approved of the staff's recommendations.

The Citizens Traffic Committee recommends approving the request to install speed limit signs on Northwood Boulevard just east of Woodward Avenue and just west of Crooks Road, and further recommends traffic calming options be evaluated for Northwood Blvd. when it is scheduled for future road improvements (2020/2022).

Moved by: Richard Karlowski

Supported by: Thomas Allen

Motion adopted unanimously

5.C. Request to remove “No Parking” signs from the north side of Samoset Road and “No Parking 8PM – 6AM” signs from the south side of Samoset Road between Woodward Avenue and Cooper Avenue

A request was received from Norman McKenzie of 4108 Samoset to remove the no parking signs on the north and south side of Samoset Road between Woodward Avenue and Cooper Avenue. The city created a petition to circulate and it was turned into the engineering division with 80% of the residents in favor.

The findings of the Staff Traffic Committee were presented by Holly Donoghue, P.E.

Mr. Godek opened the floor to those interested in speaking on this issue:

- Doug Baltz of 4133 Samoset spoke regarding the lack of need for the parking prohibitions. He also read aloud a letter written by his neighbors who were also in support of the removal of the parking prohibitions.
- Alberta MacKenzie of 4108 Samoset spoke regarding the history of the no parking signs, which the neighbors had requested back when there was a parking hardship due to a bar at the corner of Samoset and Woodward. Bar patrons were filling up all the street parking on the block and being disorderly. She is in support of the removal of the parking prohibitions now that the bar is gone, and Woodward Avenue business patrons are not parking on their street.

The Citizens Traffic Committee recommends approving the request to remove the parking prohibition signs on Samoset Road between Woodward Avenue and Cooper Avenue.

Moved by: Matthew McCuen

Supported by: Thomas Allen

Motion adopted unanimously

5.D. Request to install “Stop” signs on N. Wilson Avenue at E. Houstonia Avenue

A request was received from Dan Camelet and Cheryl Feldman of 2028 N. Wilson Avenue to install “Stop” signs on N. Wilson Avenue at E. Houstonia Avenue due to speeding issues

The findings of the Staff Traffic Committee were presented by Matthew J. Callahan, P.E.

Mr. Godek opened the floor to those interested in speaking on this issue. No one came forward.

The Citizens Traffic Committee recommends denying the request to install “Stop” signs on N. Wilson Avenue at E. Houstonia Avenue and recommend traffic calming options are evaluated for N. Wilson Avenue when it is scheduled for future road improvements (2020).

Moved by: Amanda Morris-Smith

Supported by: Richard Karlowksi

Motion adopted unanimously

5.E. Request to review site distance issues on Crane Avenue at Washington Avenue

A request was received from Joel Jonas of 325 Crane Avenue requesting a review of site distance issues on Crane Avenue at Washington Avenue. He lives on the block west of Washington Avenue and when exiting his street, he can often not see oncoming traffic due to the vehicles parked on the street on Washington Avenue. He has had many close calls when pulling onto Washington Avenue due to speeding vehicles, and large vehicles affecting his sight distance.

The findings of the Staff Traffic Committee were presented by Holly Donoghue, P.E.

Mr. Godek opened the floor to those interested in speaking on this issue:

- Pamela Murry & Marc Beauregard of 319 Crane spoke about the traffic back-ups from the school and difficulty to see oncoming traffic. Marc stated large vehicles parked on N Washington make seeing oncoming traffic very difficult, would be ok with removing 2 spaces to the north removed and 1 to the south.
- Fred Kaiser of 917 N Washington submitted some photos he took of the intersection showing that parking is utilized consistently by residents and that no reasonable alternative is available to them.
- Brian & Hannah Pike of 919 N Washington were in favor of removing one parking space on N Washington but no more due to the residents that rely on it for parking. They stated concerns about the difficulty of pulling out during school drop off/pick up due to the traffic back-ups.
- Sharlan Douglas of 813 N Washington wants none of the parking removed. She asked the committee to uphold the previous decision of giving this parking to residents on N Washington, as there is a need for it.
- Joel Jonas & Patty Stamler of 325 Crane spoke about the safety concerns for vehicles exiting Crane. Joel believes the only solution safety-wise is to remove the parking completely. He also spoke of speeding on N Washington which affects the site distance recommendations. He explained how in the winter exiting is especially difficult to exit due to the road conditions as N Washington is plowed first since it is a school route. Patty stated this is not a Crane VS Washington issue but a safety VS parking issue. She re-iterated their concerns about the traffic back-ups from the school and the difficulty of pulling out onto N Washington.
- Christina Eising of 807 N Washington spoke about the need for the parking on N Washington for the residents there.
- Jeannine Caesar of 930 N Washington re-iterated her neighbors concerns and that the parking is used daily by residents.
- Craig Varady of 219 Crane spoke about the speeding issues on N Washington and how that makes it even more difficult to pull out on Crane.

- Lori Smith of 918 N Washington was in favor of removing one parking space but stated the residents use and need the on-street parking.
- Brian Logsdon of 410 Crane spoke about the difficulty to pull out of Crane during school drop-off times and re-iterated this is a safety VS parking issue.
- Celeste Hamm of 409 Crane spoke about the safety issue of trying to pull out of Crane, she would like to see one parking spot removed from the south as well as one from the north.

Member McCuen motioned to remove 5 parking spaces to the north of Crane Avenue and 4 parking spaces to the south of Crane Avenue to meet the recommend stopping site distance standards.

The motion received no support, and the motion failed.

Member Allen motioned to remove 2 spaces to the north of Crane Avenue and 2 paces to the south of Crane Avenue to provide improve the existing stopping site distance and a compromise between parking and safety.

Member Richard Karlowski supported.

Members discussed with engineering staff. City Engineer Callahan proposed evaluating some other options including the installation of curb bump-outs on the west side of Washington both north and south of Crane Avenue that would allow vehicles on Crane to pull out further, potentially creating a condition that improves the stopping site distance.

Member Thomas Allen withdrew his motion and Mr. Karlowski withdrew his support for the current motion so that staff could evaluate other options.

Member McCuen motioned the following:

The Citizens Traffic Committee recommends the engineering division evaluate bump-outs for the west side of the intersection of Crane Avenue and N Washington Avenue and re-review the site distances to bring to the next traffic committee meeting.

Moved by: Matthew McCuen

Supported by: Thomas Allen

Motion adopted unanimously

6. Information Only Items

Adjourn

Upon the motion of Belem Morales, seconded by Matthew McCuen, and adopted unanimously, the regular meeting was adjourned at 8:45 p.m.

Cc: Traffic Committee Members, Inc. Ex-Officio Members:

Shelly Kamp, Chamber of Commerce
Mary Beth Fitzpatrick, Royal Oak School Superintendent
Candi Drouillard, PTA Council President
Corrigan O'Donoghue, Police Chief
Lieutenant Chris Annetta
Dave Cummins, Fire Chief
Tim Thwing, Director of Community Development
Greg Rassel, Director of Recreation and Public Services

- 5A.** Anne Vaara, 2449 Galpin – amvaara33@gmail.com
- 5B.** Ellen Kehoe, 2000 Northwood Blvd – ekehoe82@gmail.com
- 5C.** Norman Mackenzie, 4108 Samoset – ndm42944@aol.com, eastpine5@aol.com
- 5D.** Cheryl Feldman & Dan Camelet, 2028 N Wilson – dan.camelet@gmail.com
- 5E.** Joel Jonas, 325 Crane – jwjonas1@yahoo.com

Caudill, Jennifer

From: Tad Dunne <tad33@wowway.com>
Sent: Wednesday, October 24, 2018 11:31 AM
To: GeneralEng, Engineering
Subject: FW: Stop sign needed - Eton Cross at Woodslee

Friends:

In my email below, I suggested that a stop sign is needed at the corner of Eton Cross and Woodslee Dr.

Another option would be to put "No Thru Traffic" signs at Woodward and Woodslee and at 13-Mile and Woodslee.

Thanks for looking into this. I'd appreciate a confirmation that you received this (second) message.

-Thomas Dunne

248-549-3366

From: Tad Dunne [mailto:tad33@wowway.com]
Sent: October 24, 2018 10:52
Subject: Stop sign needed - Eton Cross at Woodslee

Friends:

I live on Woodlsee Drive, just north of Eton Cross.

Woodslee is a 2-block street running between Woodward and 13 Mile.

Some cars going north on Woodward will turn on Woodslee as a short-cut to eastbound 13 Mile. The majority of them are going over the speed limit. Our neighbors are concerned about this as well.

It would help slow that traffic if there were a stop sign at the corner of Eton Cross and Woodslee. Then, those who are accustomed to cut through via Woodslee would more likely continue on Woodward, turn right at Coolidge, and turn right again onto eastbound 13 Mile.

Could you please confirm that your received this request?

Thanks,

Thomas Dunne & Dorothy Seebaldt

2923 Woodslee Dr.
Royal Oak, MI 48073

248-549-3366

RECEIVED

OCT 30 2018

Engineering Department

From: [Cawley, Patrick \(TIA\)](#)
To: [Callahan, Matthew](#)
Cc: [Caudill, Jennifer](#); [Odonohue, Corrigan](#); [Donoghue, Holly](#)
Subject: RE: TRAFFIC AND SPEED REQUESTS
Date: Thursday, November 08, 2018 4:20:19 PM

Hi Matt,

We are looking to put counters out next week. Still TBD as the forecast does have the "S" word in it next week.

I just looked at the 5 year history for Woodslee – there were zero crashes.

Once we get the speed data for Main Street we can discuss the report. I would suggest utilizing the USLIMITS program and going off it's recommended speed. It is up to you but that is a fair way to include the subjective criteria.

Thanks
Pat

Patrick M. Cawley, P.E., PTOE

Chief Operating Officer
Senior Transportation Engineer
Transportation Improvement Association
100 E. Big Beaver Rd., Suite 910
Troy, Michigan 48083
1-248-334-4971 Office
1-248-475-3434 Fax
pcawley@tiasafety.us
www.tiasafety.us

From: Callahan, Matthew [mailto:MattC@romi.gov]
Sent: Wednesday, November 7, 2018 10:15 AM
To: Cawley, Patrick (TIA) <pcawley@tiasafety.us>
Cc: Caudill, Jennifer <CaudillJ@romi.gov>; Odonohue, Corrigan <CorriganO@romi.gov>; Donoghue, Holly <HollyD@romi.gov>
Subject: TRAFFIC AND SPEED REQUESTS

Hi Pat,

A. I would like to get the following traffic data

- 1. Traffic counts and speeds in two locations on Woodslee between 13 and Woodward due to a speeding and cut through complaint. Please measure Woodslee traffic and speeds halfway between Woodward and Eton Cross and halfway between Guilford and 13 Mile. I would also like to get accident reports for this stretch not including Woodward or 13 Mile.**

B. I would also like to order a speed study appropriate for establishing speed limits

on N. Main Street between 12 Mile and 13 Mile as well as between 13 Mile and Chippewa. This would be an official study/report required in accordance with state law for establishing speed limits in these two areas. Please let me know what actions I may need to take regarding this.

Matthew J. Callahan, P.E.

City Engineer

Community Development Department, Engineering Division

248.246.3260

mattc@romi.gov

211 S. Williams Street / Royal Oak, MI 48067

What's going on with the civic center development project? Find out at www.rethinkro.com



Transportation Improvement Association

100 E. Big Beaver Road, Suite 910
Troy, MI 48326

Site Code: WOODSLEE 1
Station ID: Wdward to Eton Cross

| NEB | Start Time | 1 | 3 | 4 | 6 | 7 | 9 | 10 | 12 | 13 | 15 | 16 | 18 | 19 | 21 | 22 | 24 | 25 | 27 | 28 | 30 | 31 | 34 | 37 | 39 | 40 | 85th Percent | 95th Percent | | |
|----------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|--------------|----|---|
| 11/28/18 | 00:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 32 | 32 | |
| | 01:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | * |
| | 02:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | * |
| | 03:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | * |
| | 04:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | * |
| | 05:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | * |
| | 06:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 0 | 0 | 1 | 1 | 0 | 7 | 29 | 37 | |
| | 07:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 7 | 3 | 3 | 6 | 6 | 6 | 5 | 5 | 1 | 1 | 0 | 0 | 0 | 26 | 28 | 32 | |
| | 08:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 3 | 1 | 4 | 4 | 4 | 4 | 3 | 0 | 0 | 0 | 18 | 33 | 35 | |
| | 09:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 4 | 3 | 4 | 4 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 10 | 31 | 32 | |
| | 10:00 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 9 | 26 | 31 | |
| | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 25 | 26 | |
| | 12 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 7 | 3 | 3 | 3 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 16 | 26 | 28 | |
| | 13:00 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 3 | 4 | 4 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 15 | 26 | 30 | |
| | 14:00 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 3 | 4 | 4 | 4 | 4 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 18 | 26 | 28 | |
| | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 2 | 4 | 4 | 4 | 7 | 7 | 1 | 1 | 0 | 0 | 19 | 29 | 33 | | |
| | 16:00 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 3 | 5 | 5 | 4 | 4 | 9 | 9 | 12 | 12 | 3 | 3 | 2 | 0 | 0 | 1 | 41 | 26 | 30 | | |
| | 17:00 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 3 | 3 | 5 | 5 | 9 | 7 | 7 | 7 | 2 | 2 | 1 | 0 | 0 | 0 | 31 | 26 | 29 | | |
| | 18:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 2 | 3 | 3 | 2 | 2 | 0 | 0 | 0 | 0 | 11 | 27 | 29 | | |
| | 19:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | * |
| | 20:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | * |
| | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 17 | 17 | |
| | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | * |
| | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | * |
| | Total | 4 | 1 | 1 | 2 | 2 | 2 | 4 | 4 | 7 | 7 | 21 | 21 | 36 | 36 | 51 | 51 | 52 | 52 | 30 | 30 | 15 | 5 | 1 | 1 | 1 | 230 | | | |
| | Percent | 1.7% | 0.4% | 0.9% | 0.9% | 1.7% | 1.7% | 1.7% | 1.7% | 3.0% | 3.0% | 9.1% | 9.1% | 15.7% | 15.7% | 22.2% | 22.2% | 22.6% | 22.6% | 13.0% | 13.0% | 6.5% | 2.2% | 0.4% | 0.4% | 0.4% | | | | |
| | AM Peak | | | | | | | 10:00 | 10:00 | 10:00 | 10:00 | 07:00 | 07:00 | 07:00 | 07:00 | 07:00 | 07:00 | 07:00 | 07:00 | 07:00 | 07:00 | 08:00 | 08:00 | 06:00 | 06:00 | 07:00 | | | | |
| | Vol. | | | | | | | 1 | 1 | 1 | 3 | 3 | 3 | 7 | 7 | 3 | 3 | 6 | 6 | 5 | 5 | 4 | 3 | 1 | 1 | 26 | | | | |
| | PM Peak | 13:00 | 14:00 | 13:00 | 14:00 | 13:00 | 14:00 | 17:00 | 17:00 | 16:00 | 16:00 | 16:00 | 16:00 | 17:00 | 17:00 | 16:00 | 16:00 | 16:00 | 16:00 | 15:00 | 15:00 | 16:00 | 15:00 | 15:00 | 16:00 | 16:00 | 16:00 | | | |
| | Vol. | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 5 | 5 | 5 | 5 | 9 | 9 | 12 | 12 | 7 | 7 | 2 | 1 | 1 | 1 | 41 | | | | |

Transportation Improvement Association

100 E. Big Beaver Road, Suite 910
Troy, MI 48326

Site Code: WOODSLEE 1
Station ID: Wdward to Eton Cross

| NEB Start Time | 1 | | 4 | | 7 | | 10 | | 13 | | 16 | | 19 | | 22 | | 25 | | 28 | | 31 | | 34 | | 37 | | 40 | | 85th | | 95th | | | |
|----------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|--|
| | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 | 39 | 42 | 45 | 48 | 51 | 54 | 57 | 60 | 63 | 66 | 69 | 72 | 75 | 78 | 81 | 84 | 87 | 90 | 93 | | | |
| 11/29/18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 01:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 02:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 03:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 04:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 05:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 06:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 07:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 08:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 09:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 10:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 11:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| 12 PM | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| 13:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| 14:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| 15:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| 16:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| 17:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| 18:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| 19:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| 20:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| 21:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| 22:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| 23:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Percent | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | |
| AM Peak | 06:00 | | 08:00 | | 08:00 | | 08:00 | | 07:00 | | 07:00 | | 07:00 | | 08:00 | | 08:00 | | 08:00 | | 08:00 | | 06:00 | | 08:00 | | 08:00 | | 08:00 | | 08:00 | | 08:00 | |
| Vol. | 2 | 3 | 5 | 5 | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 4 | 4 | 4 | 4 | 5 | 5 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| PM Peak | 06:00 | | 08:00 | | 08:00 | | 08:00 | | 07:00 | | 07:00 | | 07:00 | | 08:00 | | 08:00 | | 08:00 | | 08:00 | | 06:00 | | 08:00 | | 08:00 | | 08:00 | | 08:00 | | 08:00 | |
| Vol. | 2 | 3 | 5 | 5 | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 4 | 4 | 4 | 4 | 5 | 5 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |

| Total | 8 | 2 | 2 | 8 | 11 | 45 | 70 | 108 | 103 | 64 | 26 | 12 | 2 | 1 | 462 |
|-------------------|-------------------------------------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|------|-----|
| Percent | 1.7% | 0.4% | 0.4% | 1.7% | 2.4% | 9.7% | 15.2% | 23.4% | 22.3% | 13.9% | 5.6% | 2.6% | 0.4% | 0.2% | |
| 15th Percentile : | 17 MPH | | | | | | | | | | | | | | |
| 50th Percentile : | 23 MPH | | | | | | | | | | | | | | |
| 85th Percentile : | 28 MPH | | | | | | | | | | | | | | |
| 95th Percentile : | 31 MPH | | | | | | | | | | | | | | |
| Stats | 10 MPH Pace Speed : 19-28 MPH | | | | | | | | | | | | | | |
| | Number in Pace : 302 | | | | | | | | | | | | | | |
| | Percent in Pace : 65.4% | | | | | | | | | | | | | | |
| | Number of Vehicles > 55 MPH : 0 | | | | | | | | | | | | | | |
| | Percent of Vehicles > 55 MPH : 0.0% | | | | | | | | | | | | | | |
| | Mean Speed(Average) : 23 MPH | | | | | | | | | | | | | | |

Transportation Improvement Association

100 E. Big Beaver Road, Suite 910
Troy, MI 48326

Site Code: WOODSLEE 1
Station ID: Wdward to Eton Cross

| SWB | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | Total | 85th Percent | 95th Percent | | | | | | | | | | | | |
|------------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|--------------|-------|--------------|-------|-------|-------|-------|-------|-------|-------|---|---|--|
| Start Time | 11/27/18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total | 79 | 85th Percent | * | 95th Percent | * | | | | | | | | | |
| 01:00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | * | * | | | | | | | | | | | | |
| 02:00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | * | * | | | | | | | | | | | |
| 03:00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | * | * | | | | | | | | | | | |
| 04:00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | * | * | | | | | | | | | | | |
| 05:00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | * | * | | | | | | | | | | | |
| 06:00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | * | * | | | | | | | | | | | |
| 07:00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | * | * | | | | | | | | | | | |
| 08:00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | * | * | | | | | | | | | | | | |
| 09:00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | * | * | | | | | | | | | | | | |
| 10:00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | * | * | | | | | | | | | | | | |
| 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| 12 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | |
| 13:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| 14:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 18:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 19:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 20:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Total | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | | | |
| Percent | 0.0% | 1.3% | 1.3% | 1.3% | 1.3% | 1.3% | 2.5% | 2.5% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% | | | | |
| AM Peak | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vol. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PM Peak | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | | | |
| Vol. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |

Transportation Improvement Association
 100 E. Big Beaver Road, Suite 910
 Troy, MI 48326

Site Code: WOODSLEE 1
 Station ID: Wdward to Eton Cross

| SWB | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | Total | 85th Percent | 95th Percent | | | | |
|--------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|-------|--------------|--------------|------|------|------|---|
| Start Time | 3 | | 6 | | 9 | | 12 | | 15 | | 18 | | 21 | | 24 | | 27 | | 30 | | 33 | | 36 | | 39 | | 42 | | 45 | | 48 | | 51 | | 54 | | 57 | | 60 | | | | | | | | |
| 11/29/18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | | |
| 01:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | | |
| 02:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | | |
| 03:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | | |
| 04:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | | |
| 05:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | | |
| 06:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | | |
| 07:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | | |
| 08:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | | |
| 09:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | | |
| 10:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | | |
| 11:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 12 PM | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 13:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 14:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 15:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 16:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 17:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 18:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 19:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 20:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 21:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 22:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 23:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | |
| Percent | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | |
| AM Peak Vol. | 0 | 03:00 | | 0 | 09:00 | | 0 | 14:30 | | 0 | 19:00 | | 0 | 24:00 | | 0 | 28:00 | | 0 | 08:00 | | | | | | | | | | | | 08:00 | | | | | | | | | | | | | | | |
| PM Peak Vol. | 0 | 09:00 | | 0 | 13:00 | | 0 | 17:00 | | 0 | 21:00 | | 0 | 25:00 | | 0 | 29:00 | | 0 | 08:00 | | | | | | | | | | | | 08:00 | | | | | | | | | | | | | | | |

| | |
|--------------------------------|-----------|
| 15th Percentile : | 15 MPH |
| 50th Percentile : | 20 MPH |
| 85th Percentile : | 26 MPH |
| 95th Percentile : | 29 MPH |
| 10 MPH Pace Speed : | 18-27 MPH |
| Number in Pace : | 127 |
| Percent in Pace : | 64.5% |
| Number of Vehicles > 55 MPH : | 0 |
| Percent of Vehicles > 55 MPH : | 0.0% |
| Mean Speed(Average) : | 21 MPH |

Transportation Improvement Association

100 E. Big Beaver Road, Suite 910
Troy, MI 48326

Site Code: WOODSLEE 1
Station ID: Wdward to Eton Cross

| NEB, SWB | 1 | 2 | 3 | 4 | 6 | 7 | 9 | 10 | 12 | 13 | 15 | 16 | 18 | 19 | 21 | 22 | 24 | 25 | 27 | 28 | 30 | 31 | 34 | 36 | 37 | 39 | 40 | Total | 85th Percent | 95th Percent | | | | | | | | |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Start Time | 1 | 2 | 3 | 4 | 6 | 7 | 9 | 10 | 12 | 13 | 15 | 16 | 18 | 19 | 21 | 22 | 24 | 25 | 27 | 28 | 30 | 31 | 34 | 36 | 37 | 39 | 40 | | | | | | | | | | | |
| 11/27/18 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | | | | |
| 01:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | | | | |
| 02:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | | | |
| 03:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | | |
| 04:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | |
| 05:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | |
| 06:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | |
| 07:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | |
| 08:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | |
| 09:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | |
| 10:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | |
| 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| 12 PM | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| 13:00 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 14:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 15:00 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 16:00 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 18:00 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 19:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 20:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 2 | 3 | 3 | 4 | 4 | 3 | 4 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| Percent | 1.6% | 0.8% | 1.2% | 1.2% | 1.6% | 1.6% | 1.2% | 1.6% | 1.6% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% |
| AM Peak | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vol. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PM Peak | 15:00 | 16:00 | 12:00 | 12:00 | 18:00 | 18:00 | 12:00 | 12:00 | 18:00 | 12:00 | 12:00 | 13:00 | 13:00 | 16:00 | 16:00 | 18:00 | 18:00 | 18:00 | 18:00 | 17:00 | 17:00 | 18:00 | 18:00 | 17:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 | 18:00 |
| Vol. | 2 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 8 | 8 | 13 | 13 | 11 | 11 | 13 | 13 | 5 | 5 | 4 | 4 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |

Transportation Improvement Association

100 E. Big Beaver Road, Suite 910
Troy, MI 48326

Site Code: WOODSLEE 1
Station ID: Wdward to Eton Cross

| NEB, SWB | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | Total | 85th Percent | 95th Percent | | | | | | | | |
|------------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|--------------|-------|-------|-------|-------|---|--|--|--|
| Start Time | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 999 | 0 | 0 | * | | | | | | | | | |
| 11/29/18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | | | | | | |
| 01:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | | | | | | |
| 02:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | | | | | | |
| 03:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | | | | | | |
| 04:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | | | | | | |
| 05:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | | | | | | |
| 06:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | | | | | | |
| 07:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | | | | | | |
| 08:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | | | | | | |
| 09:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | | | | | | |
| 10:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | | | | | | |
| 11:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | |
| 12 PM | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | |
| 13:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | |
| 14:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | |
| 15:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | |
| 16:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | |
| 17:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | |
| 18:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | |
| 19:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | |
| 20:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | |
| 21:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | |
| 22:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | |
| 23:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | | | |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Percent | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | | | | |
| AM Peak | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vol. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PM Peak | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vol. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 12 | 3 | 7 | 13 | 22 | 33 | 44 | 55 | 66 | 77 | 88 | 99 | 110 | 121 | 132 | 143 | 154 | 165 | 176 | 187 | 198 | 209 | 220 | 231 | 242 | 253 | 264 | 275 | 286 | 297 | 308 | 319 | 330 | 341 | 352 | 363 | 374 | 385 | 396 | 407 | 418 | 429 | 440 | 451 | 462 | 473 | | | | | |
| Percent | 1.8% | 0.5% | 1.1% | 2.0% | 3.3% | 4.4% | 5.5% | 6.6% | 7.7% | 8.8% | 9.9% | 11.0% | 12.1% | 13.2% | 14.3% | 15.4% | 16.5% | 17.6% | 18.7% | 19.8% | 20.9% | 22.0% | 23.1% | 24.2% | 25.3% | 26.4% | 27.5% | 28.6% | 29.7% | 30.8% | 31.9% | 33.0% | 34.1% | 35.2% | 36.3% | 37.4% | 38.5% | 39.6% | 40.7% | 41.8% | 42.9% | 44.0% | 45.1% | 46.2% | 47.3% | 48.4% | 49.5% | | | | |
| AM Peak | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vol. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PM Peak | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vol. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Stats | Value |
|------------------------------|-----------|
| 10 MPH Pace Speed | 19-28 MPH |
| Number in Pace | 427 |
| Percent in Pace | 64.8% |
| Number of Vehicles > 55 MPH | 0 |
| Percent of Vehicles > 55 MPH | 0.0% |
| Mean Speed(Average) | 23 MPH |

Transportation Improvement Association

100 E. Big Beaver Road, Suite 910
Troy, MI 48326

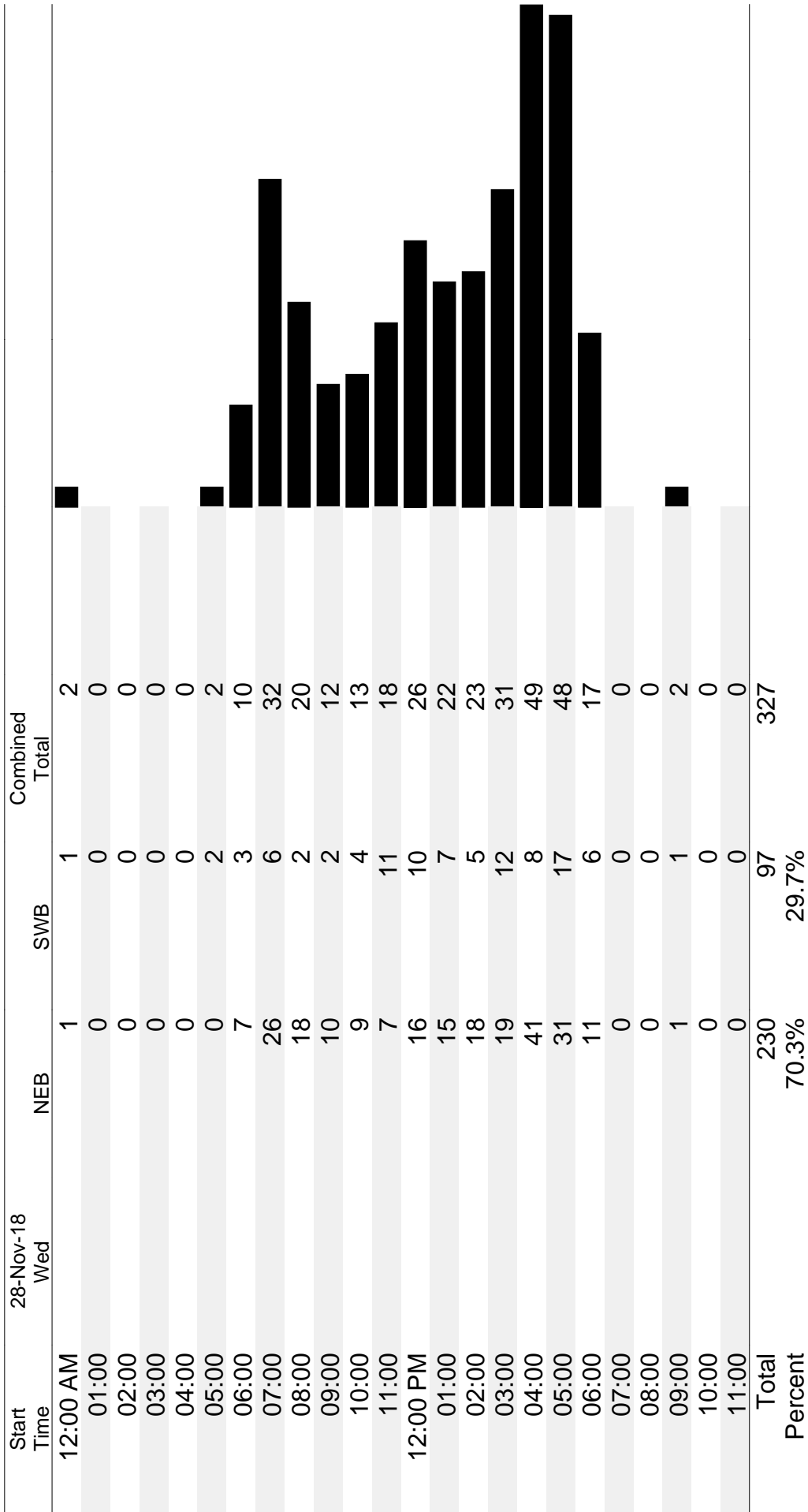
Site Code: WOODSLEE 1
Station ID: Wdward to Eton Cross

| Start Time | 27-Nov-18 Tue | NEB | SWB | Combined Total |
|----------------|------------------|--------------|--------------|-------------------|
| 12:00 AM | | * | * | * |
| 01:00 | | * | * | * |
| 02:00 | | * | * | * |
| 03:00 | | * | * | * |
| 04:00 | | * | * | * |
| 05:00 | | * | * | * |
| 06:00 | | * | * | * |
| 07:00 | | * | * | * |
| 08:00 | | * | * | * |
| 09:00 | | * | * | * |
| 10:00 | | * | * | * |
| 11:00 | | 7 | 3 | 10 |
| 12:00 PM | | 13 | 5 | 18 |
| 01:00 | | 22 | 6 | 28 |
| 02:00 | | 6 | 5 | 11 |
| 03:00 | | 10 | 13 | 23 |
| 04:00 | | 16 | 14 | 30 |
| 05:00 | | 27 | 8 | 35 |
| 06:00 | | 40 | 9 | 49 |
| 07:00 | | 21 | 4 | 25 |
| 08:00 | | 11 | 3 | 14 |
| 09:00 | | 4 | 8 | 12 |
| 10:00 | | 0 | 1 | 1 |
| 11:00 | | 0 | 0 | 0 |
| Total | | 177 | 79 | 256 |
| Percent | | 69.1% | 30.9% | |

Transportation Improvement Association

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Troy, MI 48326

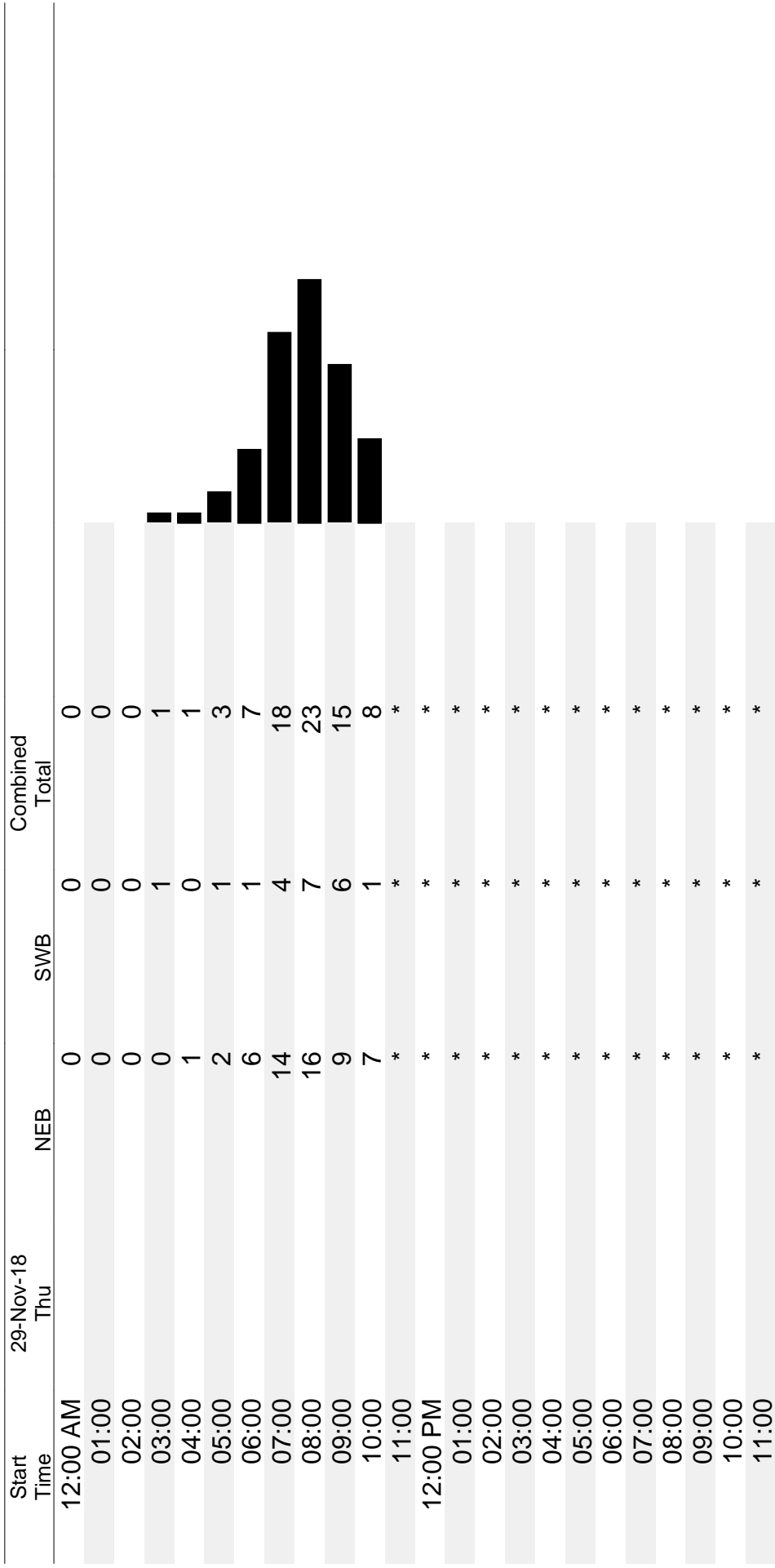
Site Code: WOODSLEE 1
Station ID: Wdward to Eton Cross



Transportation Improvement Association

100 E. Big Beaver Road, Suite 910
Troy, MI 48326

Site Code: WOODSLEE 1
Station ID: Wdward to Eton Cross



RECEIVED

NOV 28 2018

Engineering Department

November 14, 2018

I am inquiring about getting some STOP signs put up on these inter-sections

Oliver / Glenwood

AND

Oliver / Glenview

I take Oliver every night to go home and have several times almost gotten hit at these two spots.

Royal Oak Resident

Pam Steinmetz

1800 Lloyd

Royal Oak, Mi. 48073

(248) 542-9386

From: [Cawley, Patrick \(TIA\)](#)
To: [Caudill, Jennifer](#)
Cc: [Callahan, Matthew](#)
Subject: RE: request - Oliver Road
Date: Friday, November 30, 2018 7:13:50 AM

Hi Jennifer,

I just ran queries for both locations and they had zero crashes in the last three years (2015-2017). I checked back 5 years and it still had no reported crashes.

Thanks
Pat

Patrick M. Cawley, P.E., PTOE

Manager
Engineering
Transportation Improvement Association
100 E. Big Beaver Rd., Suite 910
Troy, Michigan 48083
1-248-334-4971 Office
1-248-475-3434 Fax
pcawley@tiasafety.us
www.tiasafety.us

From: Caudill, Jennifer [<mailto:CaudillJ@romi.gov>]
Sent: Wednesday, November 28, 2018 10:38 AM
To: Cawley, Patrick (TIA) <pcawley@tiasafety.us>
Cc: Callahan, Matthew <MattC@romi.gov>
Subject: request - Oliver Road

Pat,

Can we please get a 3-year accident history of the following locations/intersections:

- Oliver Road at Glenwood Road
- Oliver Road at Glenview Road

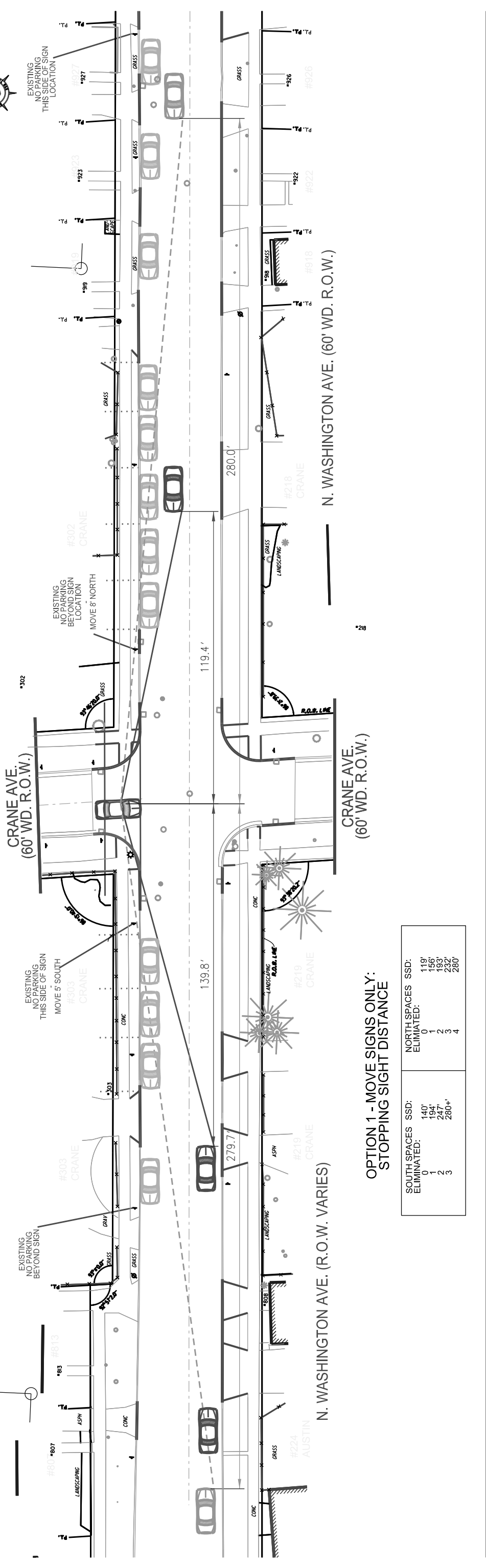
Thanks!

Jennifer Caudill
Clerk III, Engineering Division
Community Development

248.246.3260
caudillj@romi.gov
211 S. Williams Street / Royal Oak, MI 48067

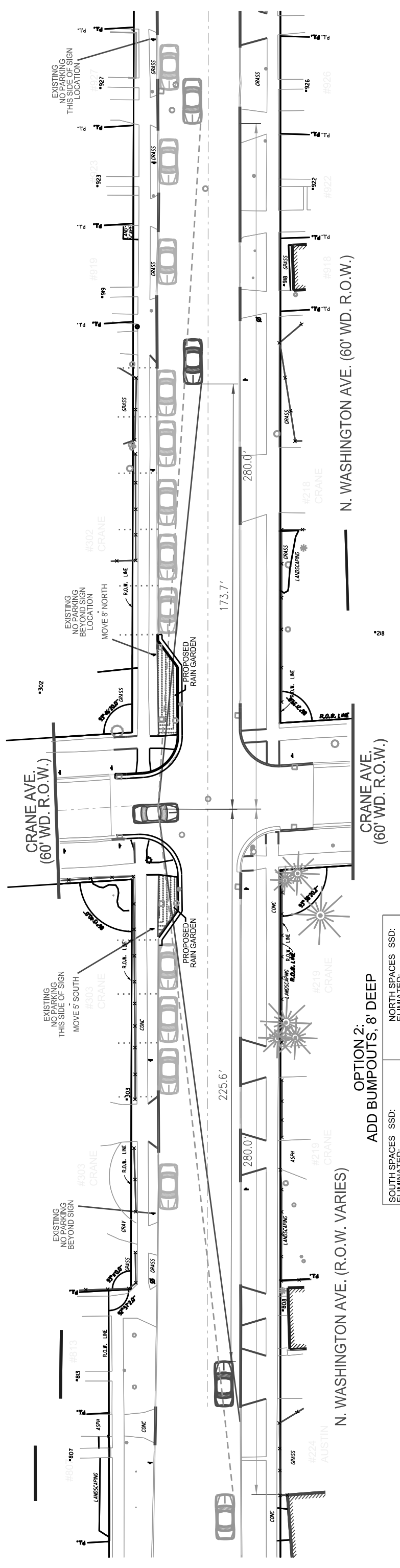
What's going on with the civic center development project?
Find out at rethinkkro.com

CRANE AVENUE AT N. WASHINGTON AVENUE SITE DISTANCE OPTIONS



OPTION 1 - MOVE SIGNS ONLY:
STOPPING SIGHT DISTANCE

| SOUTH SPACES ELIMINATED: | SSD: | NORTH SPACES ELIMINATED: | SSD: |
|--------------------------|-------|--------------------------|------|
| 0 | 140' | 0 | 119' |
| 1 | 194' | 1 | 156' |
| 2 | 247' | 2 | 193' |
| 3 | 280'+ | 3 | 247' |
| 4 | 280'+ | 4 | 280' |



OPTION 2:
ADD BUMPOUTS, 8' DEEP

| SOUTH SPACES ELIMINATED: | SSD: | NORTH SPACES ELIMINATED: | SSD: |
|--------------------------|-------|--------------------------|-------|
| 0 | 226' | 0 | 174' |
| 1 | 280'+ | 1 | 228' |
| | | 2 | 280'+ |

Transportation Improvement Association

100 E. Big Beaver Road, Suite 910
Troy, MI 48326

Site Code: WOODSIDE
Station ID: Main to Roch

| EB | Start Time | 1 | 3 | 4 | 6 | 7 | 9 | 10 | 12 | 13 | 15 | 16 | 18 | 19 | 21 | 22 | 24 | 25 | 27 | 28 | 30 | 31 | 34 | 37 | 39 | 40 | Total | 85th Percent | 95th Percent | |
|----|------------|-------|------|---|------|-------|------|-------|------|-------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|----|-------|-------|--------------|--------------|--|
| | 11/27/18 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 01:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 02:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 03:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 04:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 05:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 06:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 07:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 08:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 09:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 10:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 11:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 12 PM | 4 | 0 | 0 | 0 | 2 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 9 | 6 | 3 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 23 | 25 | |
| | 13:00 | 3 | 0 | 0 | 0 | 0 | 1 | 2 | 6 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 20 | 27 | 30 | |
| | 14:00 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 5 | 0 | 2 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 11 | 27 | 29 | | |
| | 15:00 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 5 | 11 | 6 | 11 | 6 | 6 | 1 | 1 | 0 | 0 | 0 | 0 | 29 | 25 | 26 | | |
| | 16:00 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 3 | 2 | 3 | 6 | 4 | 6 | 4 | 4 | 2 | 1 | 1 | 0 | 0 | 0 | 22 | 26 | 29 | | |
| | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 0 | 6 | 3 | 6 | 3 | 6 | 6 | 4 | 2 | 1 | 0 | 0 | 0 | 23 | 28 | 29 | | |
| | 18:00 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 2 | 0 | 0 | 0 | 10 | 7 | 7 | 7 | 7 | 7 | 2 | 2 | 0 | 0 | 0 | 0 | 31 | 25 | 27 | | |
| | 19:00 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 18 | 26 | 28 | | |
| | 20:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 26 | 26 | | |
| | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 23 | 23 | | |
| | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 2 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 26 | 26 | | |
| | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | |
| | Total | 11 | 5.6% | 0 | 0.0% | 4 | 2.0% | 9 | 4.6% | 14 | 7.1% | 12 | 6.1% | 41 | 20.9% | 45 | 23.0% | 42 | 21.4% | 15 | 7.7% | 3 | 1.5% | 0 | 0 | 0 | 196 | | | |
| | AM Peak | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Vol. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PM Peak | 12:00 | 4 | | | 12:00 | 2 | 12:00 | 3 | 13:00 | 6 | 16:00 | 3 | 18:00 | 10 | 15:00 | 11 | 18:00 | 7 | 17:00 | 4 | 13:00 | 1 | 18:00 | 4 | 18:00 | 31 | | | |
| | Vol. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Transportation Improvement Association

100 E. Big Beaver Road, Suite 910
Troy, MI 48326

Site Code: WOODSIDE
Station ID: Main to Roch

| EB | Start Time | 1 | 4 | 7 | 10 | 13 | 16 | 19 | 22 | 25 | 28 | 31 | 34 | 37 | 40 | 85th Percent | 95th Percent |
|----|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|--------------|
| | | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 | 39 | 999 | Total | |
| | 11/28/18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 26 |
| | 01:00 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 20 |
| | 02:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * |
| | 03:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 29 |
| | 04:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 26 |
| | 05:00 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 25 |
| | 06:00 | 0 | 0 | 0 | 1 | 1 | 4 | 0 | 3 | 0 | 2 | 1 | 0 | 0 | 0 | 12 | 28 |
| | 07:00 | 1 | 0 | 1 | 0 | 2 | 1 | 3 | 4 | 3 | 1 | 1 | 1 | 0 | 0 | 18 | 27 |
| | 08:00 | 2 | 0 | 0 | 1 | 0 | 4 | 7 | 7 | 8 | 4 | 3 | 1 | 0 | 0 | 37 | 28 |
| | 09:00 | 2 | 0 | 1 | 1 | 2 | 2 | 6 | 3 | 3 | 1 | 1 | 0 | 0 | 0 | 21 | 24 |
| | 10:00 | 1 | 0 | 0 | 1 | 1 | 2 | 3 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 12 | 28 |
| | 11:00 | 2 | 1 | 1 | 0 | 0 | 2 | 2 | 1 | 5 | 2 | 2 | 0 | 0 | 0 | 18 | 28 |
| | 12 PM | 2 | 0 | 0 | 1 | 1 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 15 | 23 |
| | 13:00 | 3 | 0 | 0 | 2 | 0 | 3 | 2 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 16 | 24 |
| | 14:00 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 6 | 6 | 1 | 1 | 0 | 0 | 0 | 21 | 26 |
| | 15:00 | 2 | 0 | 1 | 0 | 2 | 6 | 4 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 21 | 23 |
| | 16:00 | 0 | 0 | 0 | 0 | 1 | 2 | 7 | 6 | 5 | 0 | 1 | 0 | 1 | 0 | 23 | 26 |
| | 17:00 | 1 | 0 | 0 | 3 | 4 | 5 | 9 | 15 | 5 | 1 | 2 | 0 | 1 | 1 | 47 | 25 |
| | 18:00 | 2 | 0 | 0 | 1 | 1 | 4 | 7 | 8 | 3 | 1 | 2 | 0 | 0 | 0 | 28 | 25 |
| | 19:00 | 2 | 0 | 2 | 2 | 0 | 4 | 3 | 3 | 5 | 1 | 0 | 0 | 0 | 0 | 22 | 25 |
| | 20:00 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 7 | 26 |
| | 21:00 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 32 |
| | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 26 |
| | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 26 |
| | Total | 20 | 1 | 6 | 13 | 17 | 43 | 62 | 71 | 57 | 19 | 16 | 2 | 2 | 1 | 330 | |
| | Percent | 6.1% | 0.3% | 1.8% | 3.9% | 5.2% | 13.0% | 18.8% | 21.5% | 17.3% | 5.8% | 4.8% | 0.6% | 0.6% | 0.3% | | |
| | AM Peak | 08:00 | 11:00 | 07:00 | 06:00 | 07:00 | 06:00 | 08:00 | 08:00 | 08:00 | 08:00 | 08:00 | 07:00 | | | 08:00 | |
| | Vol. | 2 | 1 | 1 | 1 | 2 | 4 | 7 | 7 | 8 | 4 | 3 | 1 | | | 37 | |
| | PM Peak | 13:00 | | 19:00 | 17:00 | 17:00 | 15:00 | 17:00 | 17:00 | 14:00 | 12:00 | 17:00 | 16:00 | 17:00 | 17:00 | 17:00 | |
| | Vol. | 3 | | 2 | 3 | 4 | 6 | 9 | 15 | 6 | 1 | 2 | 1 | 1 | 1 | 47 | |

Transportation Improvement Association

100 E. Big Beaver Road, Suite 910
Troy, MI 48326

Site Code: WOODSIDE
Station ID: Main to Roch

EB

| Start Time | 1 | 4 | 7 | 10 | 13 | 16 | 19 | 22 | 25 | 28 | 31 | 34 | 37 | 40 | Total | 85th Percent | 95th Percent |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 11/29/18 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 | 39 | 40 | 1 | 17 | 17 |
| 01:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | * |
| 02:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 29 | 29 |
| 03:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | * |
| 04:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 32 | 32 |
| 05:00 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 35 | 35 |
| 06:00 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 1 | 1 | 0 | 1 | 0 | 0 | 8 | 29 | 34 |
| 07:00 | 0 | 0 | 0 | 0 | 0 | 3 | 6 | 10 | 10 | 2 | 2 | 1 | 0 | 0 | 34 | 26 | 31 |
| 08:00 | 1 | 0 | 1 | 0 | 2 | 1 | 8 | 5 | 6 | 2 | 2 | 0 | 0 | 0 | 28 | 26 | 30 |
| 09:00 | 1 | 0 | 0 | 1 | 0 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 12 | 27 | 29 |
| 10:00 | 2 | 0 | 0 | 2 | 0 | 1 | 3 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 12 | 24 | 26 |
| 11:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 12 PM | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 13:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 14:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 15:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 16:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 17:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 18:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 19:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 20:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 21:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 22:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 23:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| Total | 4 | 0 | 1 | 3 | 3 | 8 | 21 | 22 | 21 | 8 | 5 | 3 | 0 | 0 | 99 | | |
| Percent | 4.0% | 0.0% | 1.0% | 3.0% | 3.0% | 8.1% | 21.2% | 22.2% | 21.2% | 8.1% | 5.1% | 3.0% | 0.0% | 0.0% | | | |
| AM Peak | 10:00 | 08:00 | 10:00 | 08:00 | 08:00 | 07:00 | 08:00 | 07:00 | 07:00 | 07:00 | 07:00 | 05:00 | 07:00 | 07:00 | 07:00 | | |
| Vol. | 2 | 1 | 1 | 2 | 2 | 3 | 8 | 10 | 10 | 2 | 2 | 1 | 1 | 1 | | | |
| PM Peak | | | | | | | | | | | | | | | | | |
| Vol. | | | | | | | | | | | | | | | | | |
| Total | 35 | 1 | 11 | 25 | 34 | 63 | 124 | 138 | 120 | 42 | 24 | 5 | 2 | 1 | 625 | | |
| Percent | 5.6% | 0.2% | 1.8% | 4.0% | 5.4% | 10.1% | 19.8% | 22.1% | 19.2% | 6.7% | 3.8% | 0.8% | 0.3% | 0.2% | | | |
| Stats | | | | | | | | | | | | | | | | | |
| 10 MPH Pace Speed | | | | | | | | | | | | | | | | | |
| Number in Pace | | | | | | | | | | | | | | | | | |
| Percent in Pace | | | | | | | | | | | | | | | | | |
| Number of Vehicles > 55 MPH | | | | | | | | | | | | | | | | | |
| Percent of Vehicles > 55 MPH | | | | | | | | | | | | | | | | | |
| Mean Speed(Average) | | | | | | | | | | | | | | | | | |

Transportation Improvement Association

100 E. Big Beaver Road, Suite 910
Troy, MI 48326

Site Code: WOODSIDE
Station ID: Main to Roch

| WB | 1 | 2 | 3 | 4 | 6 | 7 | 9 | 10 | 12 | 13 | 15 | 16 | 18 | 19 | 21 | 22 | 24 | 25 | 27 | 28 | 30 | 31 | 33 | 34 | 36 | 37 | 39 | 40 | Total | 85th Percent | 95th Percent | | | | | | |
|----------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|-------|--------------|--------------|------|------|------|----|---|---|
| 11/27/18 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | |
| 01:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | |
| 02:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| 03:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| 04:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| 05:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| 06:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| 07:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| 08:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 09:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 10:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 11:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 12 PM | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 2 | 6 | 3 | 4 | 4 | 9 | 9 | 12 | 4 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 41 | 26 | 26 | | |
| 13:00 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 0 | 0 | 0 | 5 | 5 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 0 | 0 | 23 | 23 | 25 | | | |
| 14:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 7 | 7 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 19 | 26 | 28 | | | |
| 15:00 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 5 | 5 | 5 | 5 | 9 | 9 | 19 | 5 | 5 | 5 | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 52 | 24 | 30 | | | |
| 16:00 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 1 | 1 | 1 | 8 | 8 | 8 | 5 | 5 | 3 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 31 | 26 | 29 | | | |
| 17:00 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 3 | 3 | 3 | 10 | 10 | 8 | 7 | 8 | 5 | 4 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 44 | 27 | 29 | | | |
| 18:00 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 1 | 2 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 0 | 0 | 23 | 27 | 29 | | | |
| 19:00 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 4 | 2 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 17 | 0 | 0 | 17 | 30 | 36 | | | | |
| 20:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 7 | 26 | 28 | | | |
| 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 27 | 29 | | | |
| 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 30 | 32 | | | |
| 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | |
| Total | 15 | 0 | 0 | 0 | 0 | 2 | 0 | 7 | 23 | 23 | 8.6% | 29 | 29 | 48 | 48 | 72 | 44 | 44 | 17 | 17 | 6.3% | 10 | 10 | 3.7% | 0 | 0 | 1 | 0 | 268 | 0 | 0 | 0 | 268 | 26 | 26 | | |
| Percent | 5.6% | 0.0% | 0.0% | 0.0% | 0.0% | 0.7% | 2.6% | 8.6% | 8.6% | 10.8% | 10.8% | 10.8% | 10.8% | 17.9% | 17.9% | 26.9% | 16.4% | 16.4% | 6.3% | 6.3% | 0.0% | 3.7% | 0.0% | 0.0% | 0.0% | 0.4% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|-------|---|---|---|---|---|---|---|----|----|-------|-------|----|----|----|-------|----|----|----|----|-------|-------|----|------|---|---|---|-------|-----|---|---|-------|-----|----|----|
| AM Peak Vol. | 15 | 0 | 0 | 0 | 0 | 2 | 0 | 7 | 23 | 23 | 8.6% | 29 | 29 | 48 | 48 | 72 | 44 | 44 | 17 | 17 | 6.3% | 10 | 10 | 3.7% | 0 | 0 | 1 | 0 | 268 | 0 | 0 | 0 | 268 | 26 | 26 |
| PM Peak Vol. | 13:00 | 5 | 0 | 0 | 0 | 2 | 0 | 2 | 6 | 6 | 12:00 | 14:00 | 7 | 10 | 10 | 15:00 | 8 | 8 | 5 | 5 | 17:00 | 15:00 | 3 | 0 | 0 | 0 | 1 | 15:00 | 0 | 0 | 0 | 15:00 | 52 | 52 | 52 |

Transportation Improvement Association

100 E. Big Beaver Road, Suite 910
Troy, MI 48326

Site Code: WOODSIDE
Station ID: Main to Roch

| WB | Start Time | 1 | 3 | 4 | 6 | 7 | 9 | 10 | 12 | 13 | 15 | 16 | 18 | 19 | 21 | 22 | 24 | 25 | 27 | 28 | 30 | 31 | 34 | 37 | 40 | 85th Percent | 95th Percent | |
|----|------------|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--------------|--------------|---|
| | 11/29/18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 26 | |
| | 01:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | |
| | 02:00 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 26 | |
| | 03:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | |
| | 04:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | |
| | 05:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 26 | |
| | 06:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 6 | 27 | |
| | 07:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 5 | 8 | 9 | 9 | 9 | 4 | 4 | 1 | 1 | 0 | 1 | 0 | 28 | 28 | |
| | 08:00 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 5 | 3 | 4 | 1 | 4 | 4 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 30 | 25 | |
| | 09:00 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 3 | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 13 | 24 | |
| | 10:00 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 13 | 27 | |
| | 11:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| | 12 PM | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 13:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 14:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 15:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 16:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 17:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 18:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 19:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 20:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 21:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 22:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |
| | 23:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------|-------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|-------|
| Total | 6 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 0 | 3 | 11 | 17 | 17 | 24 | 24 | 24 | 22 | 22 | 9 | 9 | 2 | 2 | 0 | 1 | 0 | 97 |
| Percent | 6.2% | 0.0% | 0.0% | 2.1% | 0.8% | 2.1% | 0.0% | 0.0% | 0.0% | 3.1% | 11.3% | 17.5% | 17.5% | 24.7% | 24.7% | 22.7% | 22.7% | 9.3% | 9.3% | 2.1% | 2.1% | 0.0% | 1.0% | 0.0% | 0.0% | |
| AM Peak | 08:00 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 8 | 8 | 9 | 9 | 7 | 7 | 4 | 4 | 1 | 1 | 1 | 1 | 08:00 |
| Vol. | 3 | 0 | 0 | 1 | 1 | 1 | 0 | 2 | 2 | 2 | 5 | 5 | 5 | 8 | 8 | 9 | 9 | 7 | 7 | 4 | 4 | 1 | 1 | 1 | 1 | 30 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------|-------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Total | 40 | 2 | 6 | 6 | 16 | 48 | 87 | 154 | 196 | 131 | 67 | 17 | 2 | 1 | 0 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 769 | |
| Percent | 5.2% | 0.3% | 0.8% | 0.8% | 2.1% | 6.2% | 11.3% | 20.0% | 25.5% | 17.0% | 8.7% | 2.2% | 0.3% | 0.3% | 0.0% | 1.0% | 0.3% | 0.3% | 0.1% | 0.3% | 0.3% | 0.3% | 0.1% | 0.1% | 0.1% | |
| PM Peak | 08:00 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 8 | 8 | 9 | 9 | 7 | 7 | 4 | 4 | 1 | 1 | 1 | 1 | 08:00 |
| Vol. | 3 | 0 | 0 | 1 | 1 | 2 | 5 | 5 | 8 | 8 | 9 | 9 | 8 | 8 | 9 | 9 | 7 | 7 | 4 | 4 | 1 | 1 | 1 | 1 | 30 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|------|------|------|------|------|-----------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|
| Total | 40 | 2 | 6 | 6 | 16 | 48 | 87 | 154 | 196 | 131 | 67 | 17 | 2 | 1 | 0 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 769 | |
| Percent | 5.2% | 0.3% | 0.8% | 0.8% | 2.1% | 6.2% | 11.3% | 20.0% | 25.5% | 17.0% | 8.7% | 2.2% | 0.3% | 0.3% | 0.0% | 1.0% | 0.3% | 0.3% | 0.1% | 0.3% | 0.3% | 0.3% | 0.1% | 0.1% | 0.1% | |
| 15th Percentile : | | | | | | 15 MPH | | | | | | | | | | | | | | | | | | | | |
| 50th Percentile : | | | | | | 21 MPH | | | | | | | | | | | | | | | | | | | | |
| 85th Percentile : | | | | | | 26 MPH | | | | | | | | | | | | | | | | | | | | |
| 95th Percentile : | | | | | | 29 MPH | | | | | | | | | | | | | | | | | | | | |
| 10 MPH Pace Speed : | | | | | | 18-27 MPH | | | | | | | | | | | | | | | | | | | | |
| Number in Pace : | | | | | | 510 | | | | | | | | | | | | | | | | | | | | |
| Percent in Pace : | | | | | | 66.3% | | | | | | | | | | | | | | | | | | | | |
| Number of Vehicles > 55 MPH : | | | | | | 0 | | | | | | | | | | | | | | | | | | | | |
| Percent of Vehicles > 55 MPH : | | | | | | 0.0% | | | | | | | | | | | | | | | | | | | | |
| Mean Speed(Average) : | | | | | | 21 MPH | | | | | | | | | | | | | | | | | | | | |

Transportation Improvement Association

100 E. Big Beaver Road, Suite 910
Troy, MI 48326

Site Code: WOODSIDE
Station ID: Main to Roch

| EB, WB | 1 | 4 | 7 | 10 | 13 | 16 | 19 | 22 | 25 | 28 | 31 | 34 | 37 | 40 | Total | 85th | 95th |
|------------|------|------|------|------|------|------|-------|-------|-------|------|------|------|------|------|---------|---------|------|
| Start Time | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 | 39 | 999 | Percent | Percent | |
| 11/27/18 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 01:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 02:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 03:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 04:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 05:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 06:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 07:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 08:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 09:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 10:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 11:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 12 PM | 6 | 0 | 4 | 4 | 7 | 4 | 18 | 7 | 7 | 0 | 1 | 0 | 0 | 0 | 69 | 23 | 25 |
| 13:00 | 8 | 0 | 0 | 4 | 9 | 2 | 5 | 7 | 5 | 2 | 1 | 0 | 0 | 0 | 43 | 24 | 28 |
| 14:00 | 0 | 0 | 1 | 0 | 3 | 7 | 7 | 3 | 5 | 4 | 0 | 0 | 0 | 0 | 30 | 26 | 28 |
| 15:00 | 5 | 0 | 0 | 3 | 6 | 7 | 14 | 30 | 11 | 2 | 3 | 0 | 0 | 0 | 81 | 25 | 28 |
| 16:00 | 2 | 0 | 0 | 1 | 5 | 4 | 11 | 14 | 9 | 5 | 2 | 0 | 0 | 0 | 53 | 26 | 29 |
| 17:00 | 1 | 0 | 0 | 2 | 1 | 5 | 16 | 16 | 14 | 9 | 3 | 0 | 0 | 0 | 67 | 27 | 29 |
| 18:00 | 3 | 0 | 1 | 1 | 3 | 5 | 13 | 8 | 14 | 6 | 0 | 0 | 0 | 0 | 54 | 26 | 28 |
| 19:00 | 1 | 0 | 0 | 1 | 2 | 7 | 5 | 8 | 6 | 2 | 2 | 0 | 1 | 0 | 35 | 26 | 31 |
| 20:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 9 | 1 | 0 | 0 | 0 | 0 | 12 | 26 | 28 |
| 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 1 | 0 | 0 | 0 | 0 | 8 | 23 | 28 |
| 22:00 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 6 | 0 | 1 | 0 | 0 | 0 | 12 | 26 | 31 |
| 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * |
| Total | 26 | 0 | 6 | 16 | 37 | 41 | 89 | 117 | 86 | 32 | 13 | 0 | 1 | 0 | 464 | | |
| Percent | 5.6% | 0.0% | 1.3% | 3.4% | 8.0% | 8.8% | 19.2% | 25.2% | 18.5% | 6.9% | 2.8% | 0.0% | 0.2% | 0.0% | | | |

| AM Peak | Vol. | 12:00 | 13:00 | 14:00 | 15:00 | 17:00 | 19:00 | 15:00 | 15:00 |
|---------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| Vol. | 8 | 4 | 9 | 7 | 30 | 14 | 1 | 3 | 81 |

Transportation Improvement Association

100 E. Big Beaver Road, Suite 910
Troy, MI 48326

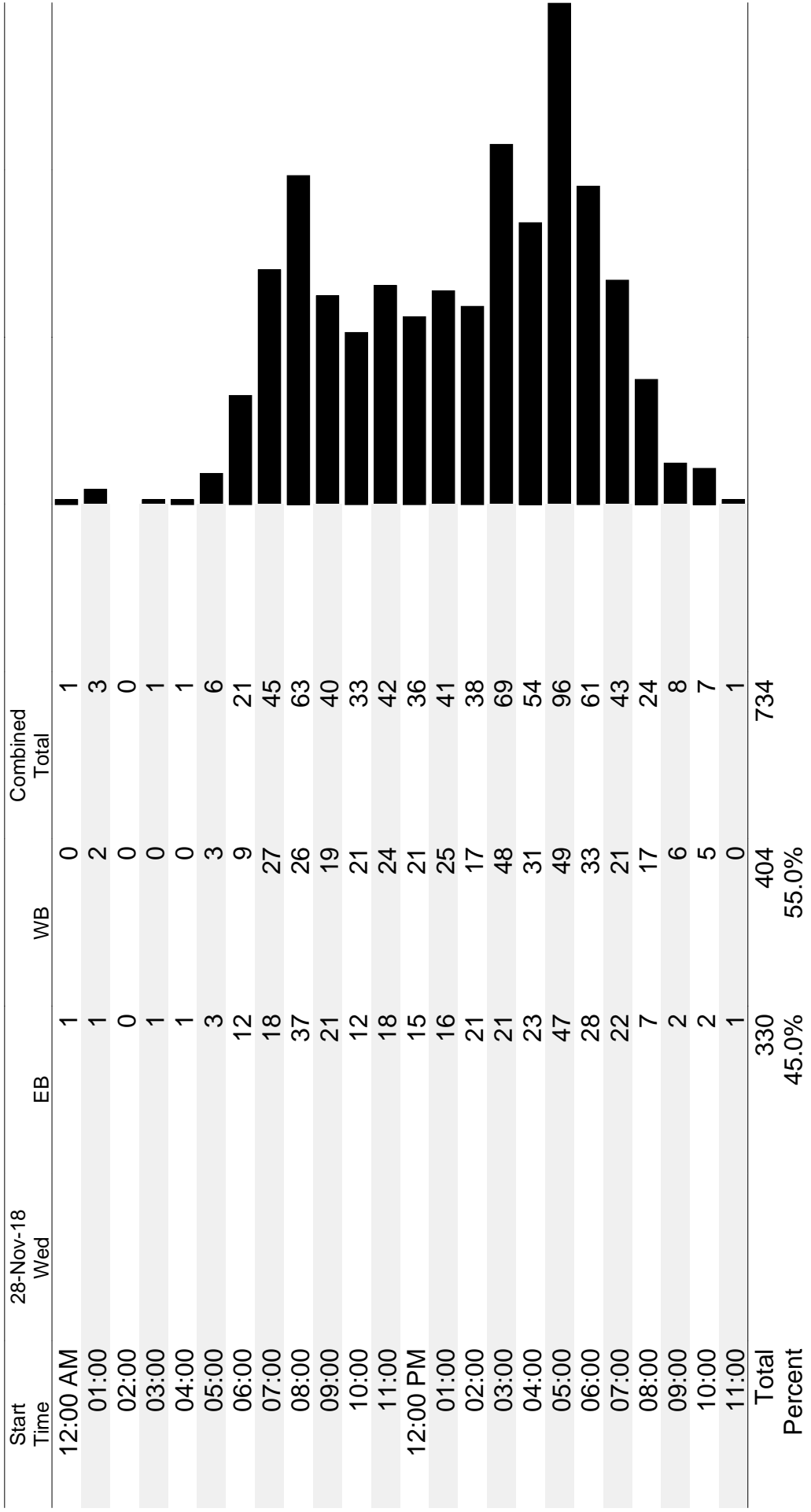
Site Code: WOODSIDE
Station ID: Main to Roch

| Start Time | 27-Nov-18 Tue | EB | WB | Combined Total |
|----------------|------------------|--------------|--------------|-------------------|
| 12:00 AM | | * | * | * |
| 01:00 | | * | * | * |
| 02:00 | | * | * | * |
| 03:00 | | * | * | * |
| 04:00 | | * | * | * |
| 05:00 | | * | * | * |
| 06:00 | | * | * | * |
| 07:00 | | * | * | * |
| 08:00 | | * | * | * |
| 09:00 | | * | * | * |
| 10:00 | | * | * | * |
| 11:00 | | * | * | * |
| 12:00 PM | | 28 | 41 | 69 |
| 01:00 | | 20 | 23 | 43 |
| 02:00 | | 11 | 19 | 30 |
| 03:00 | | 29 | 52 | 81 |
| 04:00 | | 22 | 31 | 53 |
| 05:00 | | 23 | 44 | 67 |
| 06:00 | | 31 | 23 | 54 |
| 07:00 | | 18 | 17 | 35 |
| 08:00 | | 5 | 7 | 12 |
| 09:00 | | 3 | 5 | 8 |
| 10:00 | | 6 | 6 | 12 |
| 11:00 | | 0 | 0 | 0 |
| Total | | 196 | 268 | 464 |
| Percent | | 42.2% | 57.8% | |

Transportation Improvement Association

100 E. Big Beaver Road, Suite 910
Troy, MI 48326

Site Code: WOODSIDE
Station ID: Main to Roch



Transportation Improvement Association

100 E. Big Beaver Road, Suite 910
Troy, MI 48326

Site Code: WOODSIDE
Station ID: Main to Roch

| Start Time | 29-Nov-18 Thu | EB | WB | Combined Total |
|--------------------|------------------|----------------|--------------|-------------------|
| 12:00 AM | | 1 | 2 | 3 |
| 01:00 | | 0 | 0 | 0 |
| 02:00 | | 1 | 2 | 3 |
| 03:00 | | 0 | 0 | 0 |
| 04:00 | | 1 | 0 | 1 |
| 05:00 | | 2 | 3 | 5 |
| 06:00 | | 8 | 6 | 14 |
| 07:00 | | 34 | 28 | 62 |
| 08:00 | | 28 | 30 | 58 |
| 09:00 | | 12 | 13 | 25 |
| 10:00 | | 12 | 13 | 25 |
| 11:00 | | * | * | * |
| 12:00 PM | | * | * | * |
| 01:00 | | * | * | * |
| 02:00 | | * | * | * |
| 03:00 | | * | * | * |
| 04:00 | | * | * | * |
| 05:00 | | * | * | * |
| 06:00 | | * | * | * |
| 07:00 | | * | * | * |
| 08:00 | | * | * | * |
| 09:00 | | * | * | * |
| 10:00 | | * | * | * |
| 11:00 | | * | * | * |
| Total | | 99 | 97 | 196 |
| Percent | | 50.5% | 49.5% | |
| Grand Total | | 625 | 769 | |
| Percentage | | 44.8% | 55.2% | |
| ADT | | ADT 719 | | AADT 719 |